

**Reducing Risk in
‘Preservation Project Management’:
Re-definition of the ‘Assessment Phase’**

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Abstract

The aim of this study is to redefine the pre-assessment phase as a sub-task that is ‘pre-requisite’ to the implementation and design phases of the preservation project, and to re-construct an effective project framework by emphasizing the role of the risks for the achievement of qualitative objectives. The main goal in constructing the scope of the project and the framework is to attain the synthesis of two different disciplines, namely management science and preservation.

Cultural properties have significant ‘values’ such as having been preserved and transmitted to subsequent generations. Hence the cultural property keeps its originality; it is also required to provide for the preservation of all sorts of valuable architectural elements and values which are indicators of cultural characteristics and historical identity. When observed from a conceptual point of view, ‘values’ cause the divergences in the preservation process, which are named the pre-requisites in this dissertation.

In regard to this dissertation, the preservation process differs from that of a construction process with regard to design and implementation phases on the one hand, and the legal requisites on the other. The seriously higher ratio of unexpected, unestimated, and unidentified input naturally entails indefiniteness in the preservation process. The most important parameter that shapes a preservation process appears to be ‘risks’ that consist of those indefinite input preventing the project from a proper definition of its context. The project components that debar scope definition in initial phases of the preservation process increase the risk margin in implementation process as well as intervention decisions and priorities.

The Preservation Process is the preservation of the cultural property within an effective project system, which is aimed at attaining the total quality as a result of a synthesis of the technology, technique, and material originally deployed with those of the present. This preservation project, in addition, may be defined as a document that halts the deterioration, exterminates present structural deficiencies, and

combines the study, research, evaluation, decision and implementation mechanisms needed to identify the intervention to be performed after research on and identification of the reasons for deterioration of the cultural property are completed. In order to achieve sound preservation, it is essential to obtain comprehensive, accurate, utilizable, and relevant information about the context in the pre-assessment phase, which takes place prior to the projecting phase of the preservation process. The pre-assessment phase is concerned with investigation, analysis, definition, understanding, and solution of the problems that will be the precise input of the priorities. The essential aim of pre-assessment phase is to differentiate the indefinite initial information about the risks in order to prevent the intervention priorities from causing any refractory consequences. Thus, prerequisites of the preservation project will be determinant in forming vertical correlation of project management tools.

While approaches offered by the field of preservation occupy center stage in this dissertation, the project management will augment and support the main field. Management of the preservation projects will be in the end attainable for preservation of the cultural identity in a proper way by means of accurate decisions and establishment of interventions priorities. The more the re-definition of data in line with the preservation process has been attempted, the more the data of the preservation project will be re-organized and re-defined in order to analyze the risks by means of the utilization of the sub-tasks of Project Management. By means of redefinition of these components with respect to the preservation prerequisites, process of preservation project will be re-organized, as well as re-defined in order to reduce risks, within legal framework.

The legal tools, which are the most influential in determining the main framework of the preservation process, are also influential in decision priorities and types of implementation of preservation work. It is primarily required to analyze all legal input including the laws and terms of reference upon which the process of preservation is dependent besides international laws, laws, regulations, by-laws of Higher Council for Preservation of Cultural Natural Entities, notes of the plans, and decisions of sites and groups by Preservation Councils, implementation principles

and the unit price lists and material definitions. Those tools that have been classified as constituting the process that precedes the initiation of projecting process, projecting process, the process of approval, and implementation and post-implementation processes, have been discussed in terms of their respective impact upon preservation projects and challenges encountered.

It is essential to achieve appropriate intervention decisions, priorities and methods of the preservation project with a process chart of pre-assessment phase besides the appropriate implementation depending on these decisions. There will be a main sentence in the chart as, “There may be some re-orientations in the pre-assessment phase whereas project management tools and preservation process are integrated in terms of defined flexibility.”

Öz

Kültürel devamlılığın sağlanması açısından, tarihi yapıların yaşamını sürmesi gerekmektedir. Koruma olgusu, eyleme dönüştürülmeye çalışıldığında, sayılan tüm bu asal değerler dışında, korunması gerekli yapının korunmuşluk derecesi, fiziksel durumu, kullanılma olanakları ve bunlar için gerekli ekonomik olanaklar etkin olmaya başlamaktadır. Koruma projesi, varolan teknoloji, teknik ve malzemenin, günümüz teknoloji, teknik ve malzemeleri ile sentezlenerek, bu kültürel mirasın, sonuçta hedeflenen niteliğe ulaşan etkin bir sistemle onarımıdır. Tez kapsamında, koruma sürecindeki veriler, aynı zamanda, koruma sürecindeki farklılaşmayı yaratan, müdahale karar ve önceliklerine ve koruma uygulamasına etki eden “değerler” olarak tanımlanmıştır. Kültür varlığının bozulma nedenleri araştırıldıktan ve tanımlandıktan sonra, bozulmanın durdurulması, eğer varsa strüktürel aksaklıkların giderilebilmesi ve gerekli müdahalelerin belirlenmesi için yapılan gerekli etüd, analiz, değerlendirme, karar ve uygulama mekanizmaları kuramla bütünleştirilmiş bir ön hazırlık sürecinden söz edilmektedir.

Koruma sürecinde karşılaşılan farklı parametreler, koruma projesinin kendine özgü bazı açılımları olmasını gerektirmektedir. Yeni bir uygulama projesinden farklı olarak, koruma sürecinde bağlayıcı olan bütün somut parametrelerin ötesinde, proje başlangıcında, çok sayıda tanımsız girdinin bulunması, proje kapsam tanımının yapılamamasına neden olmakta ve risk oranını arttırmaktadır. Her parametrenin bünyesinde barındırdığı riskler, koruma projesi için, sonuç ürün, zaman ve maliyet konusunda tutarlı olmayı ve bunlara bağlı olarak da bir iş programı oluşturmayı engellemektedir.

Bir koruma projesinde, müdahale öncelikleri, müdahale kararları ve biçimleri önemli girdi oluşturmaktadır. Müdahale öncelik ve kararları, müdahale biçimlerini; müdahale biçimleri de yapılacak uygulamanın niteliğini belirlemektedir. Müdahale karar ve önceliklerini belirleyebilmek için, ayrıntılı bir belgeleme ve analiz

alışmasını ieren proje ncesi bir n hazırlık ařamasına gerek bulunmaktadır. Bu belgeleme ve analizlerin asıl amacı, Proje sreci sonunda yanlış sonulara yol amaması iin, risklerin olabildiğince tanımlanmasını saėlamaktır. Korunması gerekli yapı ile ilgili riskler tanımlandıka, yapıya karřı takınılacak tavır da belirginleřmeye bařlayacaktır.

Yasal aralar, bugnk koruma srecine dolaysız etki eden, ancak, proje kurgusunda kontrol edilemeyen, projenin kendi i dinamikleri dıřında baėımsız geleiřim gsteren ve sonuta hedeflenen rn etkileyen en nemli girdiler arasındadır. Koruma srecinin ana kurgusu kapsamında, genel ereve ve sınırları belirleyen her zaman iin yasal aralar olmaktadır. Yasal aralar, aynı zamanda da, en byk risk parametrelerinden birini oluřturmaktadırlar. Kltr varlıėının statsn belli eden bu yasal aralar, yasalar, ynetmelikler, yksek kurul ilke kararları, plan notları ve koruma kurulunun sit ve grup kararları olarak sıralanabilir.

Bu alıřmada, koruma srecini interdisipliner olarak yeniden kurgulayabilmek ve koruma olgusunun gerekelerini de ortaya koyabilmek iin, ncelikle koruma srecini farklı kılan koruma nkořulları irdelenmiřtir. Uygulama ve tasarım srecinin, nkořullu bir alt girdisi olarak, n hazırlık srecini yeniden tanımlamak ve buna baėlı olarak da etkin bir proje kurgusu oluřturmak amalanmaktadır. Koruma ve restorasyon sreci, uygun proje ynetimi kavramları ile desteklenerek, koruma yaklařımları ana disiplin olarak ele alınmıřtır. Proje bařlangıcında bilgi akıř srecinin saėlanabilmesi iin, proje ynetimi kriterleri kullanılarak, koruma sreci risk baėlamında zelleřtirilmiř ve detaylandırılmıřtır.

Tez kapsamında sonu rn olarak ortaya konması hedeflenen, yasal aralarla sınırları belirlenmiř olan koruma projesi sre tanımını, koruma sreci iin yeniden tanımlanan project management bileřenleri ile oluřturabilmektir. Tez alıřması bařlangıcında ortaya atılan tanımsız girdinin, tm gerekeleri ile tanımlanması, nitelendirilmesi ve iřlenerek ‘koruma projesi n hazırlık sreci sre akıřı’ formatında bir yntem nerisi olarak geliřtirilmesidir.

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CHAPTER 1

Introduction

Cultural property which is the architectural reflection of cultural heritage, make up the documents of urban and architectural characteristics of a settlement, structural techniques, and the lifestyle of a specific time period. All sorts of precautions taken for their continued existence and survival with traditional, historical, memorial, symbolic, spiritual and impression values besides authenticity, originality, aesthetic, multi-layered and documentary values are called “preservation activities.”

Once the phenomenon of preservation is put into practice, the level of preservation, physical conditions, and the functional availability of the buildings to be preserved and the economical conditions required for realization begin to be effective throughout the process. One exception to factors excluded from the preservation process is the abstract values.

The Preservation Process may be defined as the preservation of the cultural heritage within an effective system. This effective system is aimed at attaining the total quality as a result of a synthesis of the technology, technique, and material originally deployed with those of the present. Each preservation project constitutes a unique operation. Every preservation project, in other words, ought to possess clearly temporal starting and ending points. It is, moreover, circumscribed in a special financial framework as well as special processes necessary for attaining the temporal customized product.

Thus, peculiar aspects of the preservation project necessitate different parameters during the implementation process. At this point, the question to be discussed is why a preservation process is different than the new construction process. This phenomenon may be handled by examining the respective nature of those two fields. As far as the main characteristics are concerned, the cultural properties may be replaced with a new one when the former has disappeared due to

various impacts, whereas new buildings can be modified, revised and even can be totally changed during the implementation phase. In the preservation process, the “object” exists and the aim is to preserve and hand it down to future generations. This causes numerous restrictions when dealing with the preservation and enhancement of these objects. In other words, the interventions to be pursued are defined prior to anything else whereas both the design and implementation phases of new buildings, the designer may apply principles, trends, and approaches more freely. Another difference resides in the fact that the value of the object (cultural property) subjected to preservation is acquired beforehand, whereas new buildings acquire these values after completion of the entire process.

The subject that concerns the pre-requisites of preservation process may be handled in a different way as well: At the beginning, every project involves a risk parameter. Similarly in the context of every project, there exists the opportunity not only to estimate the cost and the timing in the beginning of the process but also to clarify the quality of the end product from the beginning. In every project, it is possible to define the project context and keep the deviation from the adopted target at a minimum. The reason is that the assumed risk percentage is kept within the low range and that the possibility to meet surprises in constructing the details of project operation and its sub-task¹ definitions. The end product of the construction process is identified at the beginning theoretically there are no unexpected input, and the possible risks (if any) may be estimated beforehand. As far as the preservation process is concerned, the ratio of unexpected, unestimated, and unidentified input are seriously higher than the construction process. This naturally entails indefiniteness in the preservation process.

The physical and social changes in time and factors such as the aging of the Existing Building as the most important input in preservation, give way to differences in the scope, process, and types of input in the project. The legal tools,

¹ Technical level in work breakdown structure in project management. The levels are in sequence total program, project, task, sub-task, work package, and level of effort (see chapter 4.2.2.1).

which are influential in determining the main framework of the preservation process, are also influential in decision priorities and types of implementation of preservation work.

Quite differently from what is the case in mere construction projects, the international charters and terms of references, regulations of the Higher Council and of the Preservation Council, and unit price definitions of the Ministry of Culture and the General Directorate of Foundations are inseparably involved in the stage of the definition of the project.

In addition to the legal tools and the specific parameters deriving from the cultural property itself, there are a number external parameters that are also binding. Such external parameters as required materials and technology, specified and skilled individuals who may be needed at various phases of implementation too may bear direct or indirect impact upon the framework and process of the project. This constitutes major difference between of preservation process and construction process: the external parameters directly bear upon decisions, priorities, and types of intervention within the frame of the theory of preservation. Moreover, material selected and techniques of preservation should conform with and give support to the existing material and techniques of the building to be preserved. Material and techniques originally used in general are of no interest except to a limited number of skilled individuals who apply these materials and techniques. Nevertheless –and again in a way that widely differs from the construction process- most productions are included under the category of specific implementation.

Beyond such parameters, which are binding to the process of preservation, the greatest difficulty, at least in the initial phases, consists of the fact that the preservation project admits of no ‘scope’ definition since it is highly probable that there arises numerous indefinite input. On the other hand, the project components that debar scope definition in the initial phases of the preservation process increase the risk margin in the implementation process as well as intervention decisions and priorities. With the addition of problems of the existing building, the exigencies of the legal framework renders it increasingly difficult to ‘design an operation program’

for the project. Pursuit of the regular procedural steps of an architectural project- namely definition, planning, design and construction- in the context of preservation will ensure that indefinite, unestimated, and unexpected input hold risky status and the project be insufficiently detailed. This will result in the deviation of the end product. For this reason, in preservation projects, the balance and proportions of sub-tasks of the process ought to be specified in the context of ‘a process of specialties’.

Prior to even the first step in the preservation process, there necessarily comes the phase of pre-assessment which is concerned with the investigation, analysis, definition, understanding, and solution of the problems of the existing building. This constitutes a phase that is not present in the construction process since the ‘object’ is there. This necessity stems from the fact that all physical problems and the social status of the historical building to be preserved have direct impact upon the design process of the preservation project. Besides, on condition that the building keeps its originality, it is also required to provide for the preservation of all sorts of architectural elements that render the building valuable. In order to provide for the sustainability of the building, the decision for the most appropriate function and due preservation required for the allocation of this function should again be ratified in accordance with the principle of minimum intervention. A preservation project that conforms to the legalistic framework should definitely be considered along with every design input including those imposed upon the building by the environment.

As in all projects, in order to achieve the ‘end product’² with the least deviation possible, the preservation projects ought to be planned, designed, organized, controlled, integrated, and communicated by means of decision-making tools, executed, and audited. The project necessarily includes a creative process and methodology in order to obtain maximum efficiency, effectiveness, and high probability of success.

² End product: a technical term in Project Management, which expresses the final object at the end of the implementation process of the construction.

Full reports consolidate all the information collected with regard to the building and identify the causes of decay and propose cures. They should be accompanied by specifications and estimates of cost in the form required for any governmental grants which may be sought.³

Management of the said process in preservation projects will be in the end attainable for preservation of the cultural identity in a proper way by means of correct decisions and establishment of interventions priorities. The parameters prevent from taking full control of the project, both at the end of and within the process in question. The risks inherent in each parameter prevent the preservation project from maintaining consistency in terms of the end product, time and costs, and in relation to, and in coordination of, an operation program.

Definition of the Problem:

The most important parameter that shapes both a preservation project and its process appears to be those “risks” that consist of indefinite input preventing the project from a proper definition of its context. Risk parameter is absolutely present in the scope of each project. Moreover, it is also possible to accomplish time estimation of the starting and ending dates as well as cost estimation. Besides, the quality of the product may also be determined in the beginning of the process of a project. It is available both to identify the scope of the project and to minimize the deviation from quality of the final product. These are because of the benefits of the low ratio of risk in the scope of the project. In addition to, the possibility of confrontation the surprises of unidentified data will be lower in identifying the sub-tasks of the project and detailing process of work. Unfortunately, in the consistency of preservation project, the numerous number of unidentified data⁴ in the beginning of the process and the high ratio of risk, which depends upon these unidentified data,

³ Feilden, Bernard M. *Conservation of Historic Buildings*. (London: Architectural Press (Elsevier Ltd.), 2001) p.187

⁴ In project management, data is the raw material of information.

cause the identified and unestimated phases in the entire process of preservation project. The process of preservation differs from that of a construction process with regard to design and implementation on the one hand, and the legal requisites on the other. The detailed preliminary work necessitates specialized knowledge and knowledge of implementation details. Consequently, it becomes impossible to make any estimation about the time, cost or quality of the end product which in this case is the preservation process of the cultural property.

One of the most important input in the preservation project are the priorities of the intervention to be held, as the latter will determine the decisions and types of intervention during the implementation phase of the preservation project. Other important input that constitute the intervention priorities and intervention decisions are attributed to the types of interventions as well as these types of interventions render the quality of the implementation. These priorities and decisions should be clarified in a pre-assessment phase which includes analyses and the documentations about the cultural property and takes place prior to the projecting phase of the preservation process. The essential aim of this pre-assessment phase is to differentiate the indefinite initial information about data relevant to the origin of the risks in order to prevent the intervention priorities from causing any refractory consequences from occurring at the end of the project process. In order to achieve a sound decision for preservation, it is essential to obtain comprehensive, correct, utilizable, and applicable information about the context in the pre-assessment phase. Hence, this preservation priorities should be considered prominently during the decision making process, which is, in turn, completely intertwined with the pre-assessment phase as the first and prior sub-task of entire preservation project.

Thus the important issues emerge as the production of utilizable information⁵ through the parameters of the design process as mentioned above; and the structuring

⁵ The concept of ‘utilizable information’ is borrowed from Altınöz Bilgin, *Assessment of Historical Stratification in Multi-layered Towns as a Support for Conservation Decision-making process; A geographic information Systems (GIS) Based Approach Case Study: Bergama*. (Ankara: ODTÜ Yayınları, 2002). pp.4-12.

and processing of raw data that constitute the evidence provided by the building and the environment. These significant issues should be considered particularly in light of the legal tools. An appropriate integration of this information in the decision-making process of the preservation task is as important as being in possession of the appropriate method and tool to handle the information for the pre-assessment phase.

The more the risks related to the building to be preserved are identified, the more the attitude to be adopted for that cultural property in question will become definite. This will determine the intervention decisions and priorities for the implementation process of the preservation of the buildings. To the extent that input that bear risks may be differentiated, the intervention decisions may be taken of the preservation project on condition that the “minimum intervention – maximum preservation” principle is observed:

Interventions practically always involve some loss of a ‘value’ in cultural property, but are justified in order to preserve the objects for the future. Conservation involves making interventions at various scales and levels of intensity which are determined by the physical condition, causes of deterioration and anticipated future environment of the cultural property under treatment. Each case must be considered as a whole, and individually, taking all factors into account. Always bearing in mind the final aim and the principles and rules of conservation, particularly that the minimum effective intervention is always the best.⁶

The aim of the preservation project is to render the values of the cultural property sustainable. Hence the interventions to the cultural property ought essentially depend on qualified consolidation or adequate preservation, not on the transformation of the present building into a structure for contemporary utilization. In other words, utilization is a tool whereas the preservation of the values is an aim. Therefore, the level of “minimum intervention” will be different for each preserved building depending on the physical and social conditions. Over against the “minimum intervention” approach, the “maximum preservation” approach represents

⁶ Feilden, *ibid*, p.8.

that approach to the cultural property that pursues identical processes for the structure's physical condition as well.

The problem investigated in this dissertation will comprise not only insufficiencies in determining intervention decisions and intervention priorities, but also the effects of these insufficiencies on the implementation phase. The present study also includes issues relevant to the results of unidentified risks in the beginning of the preservation process.

The assessment for the definition of the process of the preservation project should be based on proper, correct and sufficient information and the utilization of this information through the pre-assessment phase in a correct way. It is also essential to achieve appropriate intervention decisions, priorities and methods of the preservation project besides the appropriate implementation depending on these decisions.

Aim of the Study

The aim of this study is to redefine the pre-assessment phase as a sub-task that is pre-requisite to the implementation and design phases of the preservation project, and to re-construct an effective project framework by emphasizing the role of the risks for the achievement of qualitative objectives. The main goal in constructing the scope of the project and the framework is to attain the synthesis of two different disciplines, namely management science and preservation. While approaches offered by the field of preservation occupy center stage in this dissertation, the project management will augment and support the main field. The redefinition of the pre-assessment phase of a preservation project will be oriented toward an efficient schedule, regular inspection, and continuous maintenance within the framework of legal tools by using managerial aspects to minimize risks as well as problems.

Stated as such, the adopted aim will provide for an analytical project system that operates in the context of project management. The latter is to be redefined for the preservation process and rendered effective so that it may ultimately become

available for preservation due to the cultural property. This cultural property will be restored in a way as to properly represent its educative and informative values while at once sustaining its environmentally symbolic values and unique characteristics. Continuity may be maintained only on condition that the preservation process is designed in a manner that will integrate all old and new technologies and materials. The process of preservation should at the same time be supported by suitable concepts of project management.

Under these circumstances, through the use of the criteria of project management, the preservation process should be establishing the criteria for determination of priorities in the context of risks. This ought to be so detailed as to arrive at the most effective solution. In current practice, it is required to minimize the riskratio and eliminate such challenges or deficiencies as much as possible. Those issues have been originating from indefinite risks of a high ratio and directly affecting the process. The minimization of such risks of high ratio constitutes the second most important objective that supports the main objective in preservation implementations.

On the other hand, the pre-requisites render the preservation process different from the process of the construction of a new building. As the latter ought to be the criteria of project management that will take place as an interdisciplinary context to this study. Both should necessarily be defined as the supporting infrastructure for objectives of the second degree.

The support provided by concepts of project management pertaining to the process of 'projecting' will help attain an effective framework.

Efficient and economical preservation work needs to be organized and managed by means of choices and dialogue between the "project process" and the "program definition."

The supporting objectives may be structured upon these two aspects. As the first supporting objective, the process of the information flow ought properly and elaborately be defined at the beginning of the project. Only then may the flow of unnecessary information or any interruption in information flow be prevented. In

defining the process of information flow in desired detail for a preservation project, required parameters are more complex and differ from the existing parameters of new construction phase. In that case, this indicates re-definition of the design and the implementation processes for flow of information properly. Thus, there will be need for more extensive time interval.

The second supporting objective may be taken as the constitution and revealing of information: The obtained data are distilled through specific steps to be taken for attaining the status of an end product. In the pre-assessment process that constitutes the first sub-step, collection of the correct data will be the basic step of the re-defined process. This data, then, will be transformed into detailed and accurate information through the proper process. Accurate information will eliminate numerous potential problems that may arise in implementation. For this reason, there is need not only for more time, but also for a more detailed pre-assessment process. Consequently, it may be called as 'Preservation Project Management' (PPM) to the preservation project, of which process is tried to be managed scientifically, methodically, or systematically.

The Preservation Project Management (PPM) may result in improving the productivity besides increasing the demand and reducing the expense of a preservation project.

At this stage, the issues to be answered will aid in definition of the problem:

In order to determine all the objectives, it is primarily required to analyze all legal input including those laws and terms of reference upon which the process of preservation is dependent. Legal input is the only framework to establish and limit any process of a preservation project at the very first stage of a preservation idea.

As soon as the scope definition of the project is made, which is directly influence intervention decisions, the first question asked ought to address the question of what will be preserved and for how long. Adopting the point of departure from the principle of 'minimum intervention-maximum preservation' and taking the criteria of reversibility, durability, sustainability, etc. into consideration, the cultural property is necessarily restored within an appropriate function in accordance with the

legal framework. Those parameters that restrict and structure the design will at the same time imply the scope definition of a preservation project. In order to arrive at the scope definition of a preservation project, indefinite input have to be minimized.

One of the sub-aims is to figure out the differences and priorities between new constructions and the preservation project. Remarks on the definition of a new preservation process entail an explanation of the reason why the Preservation Project should become specific in terms of the sub-titles of project management. A re-definition may be made following the determination of specific points where sub-titles prove insufficient. It is beneficial for the Preservation Project to reveal the priorities of project management required for the framework of projecting the project.

As the mentioned parameters are added to the high risk range in preservation projects, the balanced relations in the content of project management necessarily become subject to change. The fact that some sub-titles come to the fore in the process of decision-making and require re-definition is rather crucial for the success of the project as well as the quality of the end product in the Preservation Project.

Methodology and Structure of the Study

An increased amount and complexity of utilizable information for achieving the decisions and priorities of preservation project are necessary for producing the proposals by means of the impact of managerial aspects, as well as the emphasis upon the multi-disciplinary characteristics of the preservation process.

The methodology adopted herein involves definition of the inner dynamics and the scopes of two different disciplines first, and then in order for an interdisciplinary method to be constructed -a re-definition that encompasses these parameters will be produced.

In connection with the definition of one of these disciplines, the concept of preservation has been primarily discussed and this discussion has then been followed

by the operation and priorities of the process in the Second Chapter. The differences and indefinite, unestimated, and unexpected aspects that have to be considered as risks in the process of preservation have accordingly been inspected. At the same time, the importance of risk input has been indirectly implied as hidden information within the context of this chapter. The deviation in the implementation phase of the process in use at present is revealed to be originating from undervaluing the risk factor.

In addition, in regard to Second Chapter, the reasons for preservation are rendered as ‘values’ in priority. The preservation project, carrying a wide range of risk, has to be taken into consideration over against these values that have been revealed as the result of the preservation phenomenon. In other words, there exists a paradoxical situation of losing the values throughout the implementation process while trying to preserve. This probability of this paradoxical situation will be discussed in Second Chapter by means of identifying and quantifying all input. The analysis will constitute a basis for the project management tools, which are going to be re-defined in the consistency of the preservation process. One further result of this analysis within the scope of this dissertation will be to render the re-definitions of the components of both disciplines in the course of the constitution of a method.

The Third Chapter will reveal the tools that determine the limits and borders of the preservation project before the initiation of the process. Apart from the internal dynamics of operation in the preservation process, there also exist certain authorized institutions beyond control. All decisions taken have to be approved and monitored by these institutions. Apart from these institutions, there are also regulations and terms of reference that outline the framework of the project and international laws, by-laws and implementation principles that directly affect these laws and terms of reference. Another legal tool to which to conform is the unit price lists and material definitions published by the Ministry of Culture and the General Directorate of Pious Foundations. For the proposed re-definition to attain a sound functioning in the context of the process, all these legal tools have to be effective at each step. Hence, the legal tools that have been defined in the Third Chapter are

considered as the most important input of preservation projects next to the cultural property to be preserved. Those tools that have been classified as constituting the process that precedes the initiation of projecting process, projecting process, the process of approval, and implementation and post-implementation processes, have been discussed in terms of their respective impact upon preservation projects and challenges encountered.

As for the Fourth Chapter, Project Management has been regarded as a supporting discipline with described and defined sub-titles where its importance in and contribution to the new process to be proposed is emphasized. The problems involved in collecting data, processing input into utilizable information and providing for the flow and dissemination of this utilizable information throughout the entire preservation process would be solved by means of the “project management tools” with their due priorities. There are exactly nine selected tasks to be taken into consideration under the project management approach:⁷ Integration Management, Risk Management, Time Management, Cost Management, Scope Management, Communication Management, Procurement Management, Quality Management, and Human Resources Management.

After analyzing and evaluating these nine tasks in the consistency of construction process, the latter is to render the re-definition of these tasks within the context of the preservation process. This chapter aims at verifying the necessity and significance of selected tasks of Project Management whereas the tasks will be utilized as one of the two main components of the database of the process chart, which will be rendered in the Sixth Chapter.

In regard of the Fifth Chapter, the more the re-definition of this data in line with the preservation process has been attempted, the more the data of the preservation project will be re-organized and re-defined in order to analyze the risks by means of the utilization of the sub-tasks of Project Management. The re-defined

⁷ Dengiz, Murat, Erceiş, M. Aydın, Karadağ, Osman, Şahmalı, Erkan. *Proje Yönetimi Bilgi Kitabı: Proje Yönetiminde Profesyonelliğe Doğru*. (Ankara: Proje Yönetim Derneği, 1998). p.7-8.

synthesized process will be structured upon the following four major sub-tasks of risk management:

1. Identification of risks: a distinctive and elaborate definition to be made; decomposition of risks
2. Quantification of risks: definition of risk priorities; estimation of risk possibilities and of costs with regard to these risks
3. Current Plans for risks: deciphering of risk stimulators
4. Management of risks by means of interpreting and prioritizing the risk parameters.

In other words, decoding the risks means at the same time achieving the pre-requisites of the restoration work:

Pre-requisites definitely indicate the vertical correlation of the project management tools. The re-arrangements in the process will not only directly affect the design and implementation processes, but also reduce potential risks. The more risks are reduced, the more time and cost estimates increase.

The decision to develop a project for maintenance, rehabilitation or comprehensive restoration is processed in order to be transformed into utilizable information. The use of such information will be available for shaping the intervention decisions and priorities as well as the types of interventions for a much sounder manner in the preservation project.

The Fifth Chapter is the synthesis of the previous three steps. In other words, management policy should be constituted for specified restoration work. The specialties and the prerequisites of preservation project management will be proved by means of a structured process for collecting and distilling information as the input of decision-making. Thus, prerequisites of the preservation project will be determinant in forming the vertical correlation of project management tools:

Table 0.1 - The vertical and horizontal relation of Project Management Components.⁸

Risk management		
	Scope management	
Time management	Cost management	Integration management
Procurement management		Communication management
	Human resource management	
Quality Management		

The process chart given in the Sixth Chapter displays the proposed method. In the scope of this method, the sub-process will be identified as “pre-assessment phase” which consists of all pre-inspections, pre-investigations, or pre-implementations as well as documentation, analysis, and the synthesis of a preservation process as a step prior to the initiation of the projecting phase. There will be a main sentence in the chart as, “There may be some re-orientations in the pre-assessment phase whereas project management tools and preservation process are integrated in terms of defined flexibility.” The pre-assessment phase is revealed as the most significant step and pre-requisite of the entire process.

Expected Conclusions

In connection with the identification of the scope and limits of this dissertation, it is obvious that the end product will carry numerous advantages. These secondary expectations have been rendered in order to constitute the utilizable information from the outset of the study in the description of the scope of the dissertation:

⁸ In the course of arrangement of project management components, the corruptions, interruptions, and deviatitons may be tolerated in the consistency of preservation process.

- **Interrelation and interaction between the preservation project and project management tools:**

The process chart of the pre-assessment phase is the targeted end product. Throughout the constitution of this phase in the consistency of the preservation process, two dissimilar disciplines will be not only interacted but also interrelated. For the establishment of this interrelation and interaction, numerous components and input that are going to be utilized in the process chart are to be determined and re-defined in sequence. This double task, moreover, ought be conducted in line with both Project Management tools and the preservation process. By means of this interaction, re-definitions will be both the synthesis and the most significant parameters of the interpretation of the preservation process. This interpretation will give a definite character to the process chart as well. On the other hand, the interrelation will clarify the pre-requisites of preservation, which will form a database for the utilizable information.

However, the reason for the precautions in the past was only to keep the building surviving, to get the integrity in forms by restoring or repairing the demolished parts and to have necessary additions for the current functions, not the values. In this century, conservation has developed into a multidisciplinary profession in which modern scientific methods have augmented craft traditions. Today conservation is highly specialized and yet demands a broad knowledge of many subjects, including art history, studio art, science, and materials technology.⁹

- **Reduction of risks**

Reducing the risk parameters will aim at controlling the deviations as well as the indefinite, unexpected, and unestimated data throughout the entire process in the scope of the process chart.

The vertical and horizontal correlations will be established in order to render the process chart in this dissertation.

⁹ <http://www.presserv.no/engelsk/Tjenester1.htm>

- **Achievement of a proper method of Preservation Project Management**

Consequently, the aim is to constitute and uncover a method that consists of data collection, data processing, the implementation of an information system, and detaining flow of the utilizable information within the scope of the process chart of the pre-assessment phase in the consistency of the preservation process.

CHAPTER 2

Preservation Project

In regard to the dissertation, the prerequisites that make a difference to the preservation process should be considered first at a length. The aim here is to edit the preservation process from an interdisciplinary aspect. This will also put forth the reasons for the preservation event for consideration. When defining the scope of the preservation project, one must be aware of the essential fact: the important input in the process will directly affect the decisions, priorities and the types of interventions of the cultural property.

The phenomenon of preservation may be described as a physical process that depends on conceptual facts. When observed from a conceptual point of view, ‘values’ cause the divergences in the preservation process, which are named the prerequisites in this study. At the same time, the input of the preservation project are ‘values’ that are to be taken into consideration:

Conservation must preserve and if possible enhance the messages and values of cultural property. These values help systematically to set overall priorities in deciding proposed interventions, as well as to establish the extent and nature of the individual treatment. The assignment of priority values will inevitably reflect the cultural context of each historic building.¹⁰

When the values are classified, it is possible to examine them under two sub-headings, namely ‘cultural values’ and ‘socio-economic values’.

Cultural values carry emotional and physical points of view. The emotional context of course depends on recognizing and remembering while physical context depends on direction of research. They are indicators of cultural characteristics and

¹⁰ Feilden, *ibid*, p.3-6

historical identity. ‘Cultural values’ moreover explains the meanings attributed to the cultural property, which meanings will be preserved, and the reasons for their preservation. The subheadings relevant to emotional values may be enumerated as follows (Uçar/Feilden, 1-6, 243-254): traditional values, the continuity value which is a consequence of the concern for providing cultural continuity, the historical value as a result of the production of all the cultural items in time and at specific periods, the symbolic value that is identical with historical event, people or movements, and the impression value that is formed as a result of the combination of cultural properties and the other values. The other subheading, physical values, which includes corporal parameters, may be enumerated as the uniqueness value, the architectural value, which is a combination of architectural, morphological, and typographical characteristics of the cultural identity, the aging value which is related with historical value as well, the latter value (*çokluk değeri*) which is the opposite of uniqueness and is brought about by the presence of many other examples of its own, the environmental value that formed equally by the natural environment or of human making, the utilization value that is brought about by meeting the needs of the societal layers at specific periods, the documentary value which is the reflections of those societies, and mode of life on that property, and last but not the least, the economic value that is infallibly valid for all other cultures and periods.

The traditional value that gives way to the constitution of the concept of preservation and originality, authenticity, scarcity values and the concepts of spirituality and continuity affect each other. The state of being original and authentic may be regarded as input that strengthen traditionalism. Values such as authenticity, aesthetics or being historical (being aged) are cultural notions which the property to be preserved possesses and which are expected to be transmitted to subsequent generations. A structure that is regarded as ‘historical’ bears documentary quality, besides being spiritual and impressive, because of its architectural difference and environmental values as well as the cultural features that it possesses and reflects. Educational and documentary values have been identified because of the need to preserve historical identity. Providing for cultural continuity bears utmost importance for it emphasizes as well the historical value. At the same time, the

values of authenticity, originality and uniqueness strengthen the documentary, educational, spiritual, and the continuity values. Authenticity, originality and uniqueness values strengthen the documentary, educational and spiritual values besides the continuity value. As document value is tangible evidence of human history, it strengthens educational value.

Therefore,” writes Meltem Uçar in an unpublished paper of 2003, “it is of the highest importance and urgency that, within each culture, recognition be accorded to the specific nature of its heritage values and the credibility and truthfulness of related information sources.”¹¹

The key concept related to the subject under study, along with the values needed for a structure to have the qualities of a cultural property is the “value/risk” paradox. Cultural properties have significant qualities such as having been preserved and transmitted to subsequent generations. As a significant paradox, they may especially emerge as bearing risk during the preservation process. For instance, apart from the documentary value reflecting recognition of time when the historic building was first constructed, it is also important to preserve all interventions of all additional periods. Consequently, failure to identify the periods the historic building has undergone, complete the interventions adequately that symbolizes those periods will mean to lose documents during the implementation process. In other words, documentary value is not a direct risk in implementation, but an indirect risk factor that emerges when it is not studied efficiently. Another example may be given concerning the originality value. Originality value may be defined as the value of a structure that provides accurate and adequate representation of the period when the structure was first built or according to another point of view, of a later period when other interventions were made. In this case, during the process of intervention, it may lose all or some of its qualities so with the result that they may never be observed again unless adequate research or analysis is made. Consequently, the originality value should be considered as a ‘hidden risk’ which must never be overlooked.

In order to sustain the values of the cultural property, the type of intervention, to be applied ought be a kind of intervention that will provide maximum preservation with minimum intervention. Sustainability and reversibility are technical concepts which support conception of the necessity of providing for the continuity of the building's values. They enable dismantling any restoration that has been implemented without causing deterioration in the historic building. Cultural property that has uniqueness value requires special treatment not to lose its characteristic.

For transmitting the continuity of life to subsequent generations, it is necessary to utilize all layers of heritage and render them a part of the new city.

The phenomenon of preservation in terms of its physical aspects is the state of transferring the concept of preservation into action so that the cultural property, which has all these values, may continue its existence. A cultural property necessarily possesses aging value which is caused by being used and being aged. For this reason, material deformation, material loss, conveyor system deterioration, and changes made because of usage may be observed in these buildings. At this stage, preservation projects must be devised to keep these structures alive with all their richness.

The preservation project may be defined as a document that halts the deterioration, exterminates present structural deficiencies, and combines the study, research, evaluation, decision and implementation mechanisms needed to identify the intervention to be performed after research on and identification of the reasons for deterioration of the cultural property are completed. As points out:

Following the research on and determination of the deterioration reasons of the historical building, the required interventions should be determined to stop the deterioration and overcome the structural deficiencies if any. As the place of work is a building worth being preserved, the main rules to be obeyed include the realization of repair with the least intervention upon the pattern possible, careful

¹¹ Special thanks to Miss Uçar for sharing an unpublished document. (2003), "Value Assessment in Historical Buildings and Sites", edited by Uçar, Meltem Unpublished Paper.

consideration of compatibility between the new and the old construction techniques, no changes to be made in interior spatial organization of the building and no damage to be caused upon spatial integrity.¹²

Within the preservation process, the stage of identifying which of the above values is most important is followed by the stage where one decides the type of intervention needed to preserve the structure. However, preliminary inspection should be conducted in order to identify the outstanding values and to determine the physical condition of the building.

Providing the continuation of these traditional ways is an important input in the preservation process for making preservation decisions.

In order to determine types of intervention and techniques of restoration, any sort of analysis, synthesis and design research should be presented for approval to the preservation council along with the package for Measured Survey-Restitution-Restoration Project.

Phases of the Preservation Process as Represented in the Extant Law

According to Act 2863 in Preservation of Cultural and Natural Entities, approval of a given implementation of preservation project package is to be obtained by a Measured Survey-Restitution-Restoration project. The purpose of this control mechanism is to minimize intervention and maximize preservation in the cultural property that bears the values enumerated above. Thus the preservation process remains, in the present law, unidentified with risk ratios in spite of the detailed definitions included.

¹² By-law dated 30.01.2000 numbered 31/2 of Central Board of Directors of the Chamber of Architecture in Turkish Union of Chambers of Architects and Engineers, Terms of Contract on Relevé-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff.

There is a process for forming the project package. Prior to the project phase, there are two further preliminary phases needed. The first phase is to define the project as it is done in every project. Within the project definition, in order to formulate the technical and administrative specifications determining the implementation process in a given preservation project and the definitions peculiar to the very structure, should be put forward together with the scope of the project. This is called the terms of reference in the consistency of the legal framework.

Within the second phase, the preservation process starts to become differentiated. This phase may be termed the pre-assessment phase in which first analytical observations are determined. Preliminary inspections concerning the consistency of the pre-assessment phase will take place before the outset of the main phases of the preservation process. Owing to this pre-assessment phase, qualified function approval may be given while, at the same time, the scope of the implementation process entailed by the preservation project defined. This phase, which directly affects keep nature of the intervention decisions, and helps determine the intervention types, bears great importance for the preparation of the infrastructure of the project phase. Feilden records the following relevant observation:

Legislation, listing and scheduling cultural property gives the framework and structure of conservation. Inspections and reports give the facts as they relate to each individual building and if previous reports are available, they are invaluable evidence and helpful in assessing the rate of change and in making decisions making an inspection is generally the first encounter the architect will have with an historic building and is excellent way of getting to know a building well. Inspections are the basis of future action, so it is important that they should be thorough and accurate.¹³

The two main attitudes of implementation may be enumerated as maintenance and intervention according to the physical conditions of the building.¹⁴ Maintenance is that cultural property which is not physically in poor condition whereas the

¹³ Feilden, *ibid*, p.185.

implementations of preservation are proper to that cultural property which physically calls for extensive maintenance. According to the Architecture Chamber of Commerce Tariff, there are two sub-techniques for the implementation of preservation. In general, the restoration techniques have been defined along the subheadings of “Consolidation, Integration, Renovation, Reconstruction, Cleaning, and Transmitting.”¹⁵

Pre-Assessment Work in the Beginning of Preservation Process

It is possible to examine the pre-assessment phase under two sub-headings, each representing a phase. These headings set the basis for the preservation process by enabling the shaping of the decisions and priorities of the intervention.

The first phase of the preservation process before the project making consists of the technical studies of defining the task. Besides, the scope of the project should be defined in terms of legislation. The legal status of the structure has a great importance in arriving at these two definitions. Legal documents relevant to the

¹⁴ See Chapter 3.4.

¹⁵ By-law dated 30.01.2000 numbered 31/2 of the Central Board of Directors of the Chamber of Architecture of the Turkish Union of Chambers of Architects and Engineers, the Terms of Contract on Relevé-Restitution-Restoration Services rendered on Cultural Entities to be Preserved and the Minimum Values Tariff defines the relevant terms as follows:

Consolidation: consolidating the conveyor system and the other materials of the cultural property. *Integration*: integrating a structure, this is deteriorated partially or destructed completely in accordance with the factual constructional input, using traditional or contemporary materials so as it would regain its original state. *Renovation*: it is the updating of the aging historic properties through an adaptation of a different function or conveniences of conditions. *Reconstruction*: it is the reconstruction of totally destroyed or partially deteriorated cultural properties so as to be based on documentation. An accurate and efficient restitution project has to be formed in reconstruction. *Cleaning*: it is purifying the cultural property from the extensions having no value or ruining its effect. The authorisation of making decisions on removing the extensions belongs to Preservation Boards. *Transmitting*: when it is not possible to preserve the cultural property at its current location (because of public works activities, geological structure or natural disasters), the cultural property may be transmitted to an appropriate location to enable its existence.

condition of the structure should be examined and the latter be adapted to the former. The documents should be reorganized so as to meet the needs of the structure in order to run this phase correctly. At this stage, legal difficulties, as entailed by extant law, emerge as the first risk factor in the preservation process. The technical and administrative specifications mentioned should be directed accurately at this stage. Thereby, necessary precautions will be taken for future administrative risks that may come up as the phase proceeds. However, the present documents are not sufficient for creating accurate specifications. For one, most of them describe a fixed set of fundamentals for the implementation disregarding the specificity of the structures. No matter what the type or the quality of the structure is, the same principles, the law declares, are to be pursued. These documents that are about the preservation process and bear names such as “Technical Specifications” and “Administrative Specifications,” are cast keep one type as for a new construction and their titles are, “Unit Price Definitions, Unit Price Analysis and Unit Prices” . However, it is obvious that the present legal documents, describing construction techniques and materials in terms of their context in the implementation phase, because the properties of preservation have their own additional potentials and problems besides the principle of “each construction is handled within its own problems and conditions under the light of universal theoretical principles”. The analysis and the comment on these documents will be handled in the following sections, in Chapter 3.2.

The second phase is comprised of the physical part of the pre-assessment process. The physical phase of the pre-assessment process of the preservation project consists of the examination, documentation, and treatment of data deriving from the existing historical construction. This phase will be the base of the design and implementation phases. The main data that will direct the preservation process may be obtained by a number pre-implementations, analysis or documentation, which will be conducted at this stage. Once this data is examined, the conditions and materials are assessed and remedial treatments recommended to arrest deterioration. The inspection should be worked in four dimensions: length, breadth, height, and time (Feilden, 185). The data obtained are transformed into information and support the completion of the construction’s preservation process. If this sub-phase is completed

in sufficient detail, deviations in the process caused by unpredictable and unknown factors and attendant risks will be minimized, and the method that provides minimum intervention with maximum preservation will be determined.

Treatment documentation is important because it provides information to future archivists and conservators about what was done to records in the past. Some of the treatments that might be performed on a record include cleaning, removing damaging materials (e.g. mold, tape, or deteriorating adhesives), mending tears, deacidifying records at risk from acid deterioration, and providing custom housing made from stable materials.¹⁶

There are some precautions to be taken in order to preserve a construction. First of all, the physical condition of the construction should be determined. The physical condition is an important input that directly affects the decisions, priorities, and types of interventions. In order to determine the physical condition accurately, prior to drawing of the project, some analysis and drilling about the structure and the material should be done during the pre-assessment process.

The law requires that no physical interference should be prior to the Preservation Council's approval of the project. Therefore, the pre-assessment process is a sort of an infrastructural preparation involving historic and social research and drawings. Some physical interference is needed such as digging, drilling or scraping that may be named pre-implementation after the approval stage and before the project making. Feilden enumerates the contexts for the use of non destructive technology as follows:

1. Evaluation of total structural performance.
2. Evaluation of the building envelope.
3. Analysis of the properties of individual building materials, e.g. moisture content, porosity, permeability, and strength in shear tension, torsion and bending.
4. Detection of voids, cracks, and discontinuities.
5. Detection of concealed details and elements.
6. Analysis of the chronology of the fabric for archaeological and historical purposes.

¹⁶ <http://www.presserv.no/engelsk/Tjenester1.htm>, last accessed: may 2003.

7. Site exploration, hidden services in the ground.¹⁷

At the end of pre-implementation stage, second approval may be obtained from the Preservation Council for continuing with the projecting phase. This, again, emerges as a risk factor in the preservation process. Forming documentation, which will be the base of analysis without interfering in the property, means gathering the input that will be used for decisions, priorities and types of interventions inadequately. This will also cause false results in the specifications prepared before the project making and in the description of the work. Besides, suggesting a new function carries the risk that the features of the construction will not be well-identified.¹⁸

In addition to this, same necessary comparative research has been conducted; the legal status has been examined as has been the construction's history, architectural features and values, technical features (construction techniques, material and conveyor system) apart from the documentation provided within the present pre-assessment process.

This research usually carried out together with the Measured Survey, aims at the thorough recognition of the construction.

The Necessity of Documentation

As it is in all other project processes, the preservation process also starts with the definition of scope. As explained in the First Chapter, there are a number of differentiations implicit in the process of the preservation project. The intensity of the values mentioned before, as well as the need for evaluating the construction's

¹⁷ Feilden, *ibid*, p.215.

¹⁸ See chapter 2.2.3.

potentials and its unique problems, prove that there should be another phase before documentation. What is understood through the pre-assessment phase such as it is in use at present, are those phases when all analysis of the preserved property will be applied and the Measured Surveys, which document the construction's present condition, prepared. However, how to handle this phase in other words the necessity of collecting written, drawn and visual materials and determining quality and scale, which will also affect the other phases, should be regarded as an equally important stage. This preliminary study, which will enable to identify the outlines of the construction and to line up the problems and the potentials of it in a global context, bears utmost importance for the preparation of the documents with an adequate scale and quality that will form a base for future restitutions, restorations, and uses.

Documentation procedures are to record the condition of an object before, during, and after treatment and to outline treatment methods and materials in detail. This recorded information, formed by a combination of drawings and photographs, should provide a clear and exact picture of the building:

The methodology of all conservation depends upon making an inspection and report at regular intervals on all items of cultural property, recording the visible defects factually, in order to diagnose the causes of decay and propose an effective cure that involves only the minimum intervention.¹⁹

Any information build-up as well as the availability of this information are necessary for the continuity of the values and importance of cultural property.

Documentation is one of the main compounds of the pre-assessment process. The Measured Survey should be formed for any kind of research, analysis or pre-assessments supporting these. These documents should clarify and define the construction, its physical condition and the problems inherent in it. The documents produced will constitute a base for the process, for they reflect the latest condition of the building. As pointed out in the Mediterranean Action Plan, Priority Actions Programme held in Split, Croatia, in 1992:

The context, scale and presentation types of the documents that will be produced at the end of the architectural study should be determined in accordance with the goal of the study and with the kind of information it requires. Architectural study should include all the information known and seen about a construction or a site and should present with the same details. This study will have scales about historic settlement, historic centre, unique constructions and architectural elements of constructions.²⁰

It is possible to generalize the context of Measured Survey. Documents must consist of the location plan of the near surroundings, storey plans, roof plan, all visible façades, adequate number of sections, construction system and system sections for the differentiation of the material usage and system details, architectural element typology and typical decoration details of the structure.

It is also possible to consider the preparation process of the Measured Survey in two phases. The first phase may be termed preliminary documentation. This phase comprises a pre-assessment stage based on preliminary documentation in order to determine the structure's quality and to reach some basic decisions towards the project coverage and the description of the work. In fact, Measured Survey is a phase that is started before the process of project making. At this stage the scale, quality and preparation methods of the further projects will be determined.

The alteration and deterioration process of the cultural property varies in itself. The reasons for alteration and deterioration are aging, natural disasters, human related deterioration, economic related deterioration, administrative and planning based deterioration²¹. Intervention attitude in each deterioration type entails a different scope. The deterioration caused by the above reasons must be determined in detail in order to find out the type of intervention which the project requires and to put forth the aim of the project accurately.

¹⁹ Feilden, *ibid*, p.185.

²⁰ *Mediterranean Action Plan, Priority Actions Programme*, (Split, 1992).

²¹ *Mediterranean Action Plan, Priority Actions Programme*, (Split, 1992).

The phase after pre-documentation may be regarded as the analytical documentation phase. In the main documentation phase, the present condition of the construction must be determined by sensitive measurement techniques, where at the pre-documentation phase it suffices to use scaled drawings. The aim of this phase is to recognize the construction. The input collected will set a base to determine the qualified and technical staff needed for special applications and for the technique and the material that will be used. In addition to these, Analytical Measured Survey has the aim of determining the nature of the building and its transformation process. For this reason, it may require excavation, wall and ground drilling, examination of the chemical and physical nature of conveyor materials for recognition and determination of the extensions which were fixed later on, in terms of pre-implementation.

For the subsequent phase, utilization of ultimate Measured Survey drawings must be utilized as the basis for the analyses. These analyses are studies determining the physical condition of the construction such as: construction system and deterioration, variety of materials, usage and wrong usage, workmanship, extensions of the period, changes made at the original scheme or at its architectural elements, destructions and ways of use. Analyses ensure gathering the input by transforming them into information while organizing the work schedule and the scope of the project. Feilden pointed out that importance of this basic documentation as:

It is highly desirable to have an accurate survey drawing of a building before making a final report of recommendations for alterations. This not only assists in identification of features, pricing of necessary Works and easy interpretation of the report for someone, possibly a layman, who does not know the building, but can also be a useful working tool in diagnosis of structural defects.²²

At the same time, the aim of this analysis is to gather input to produce information to be used for determining the decisions, priorities and types of interventions. For the architectural values of the building, technical constitutional

²² Feilden, *ibid*, p.204.

system and its qualities, construction techniques and material differentiation, basic horizontal and vertical conveyor elements, filling elements, horizontal and vertical coating elements, covering materials and techniques, typological or morphological elements, original and existing usages together with the problems they cause, sources of these problems, restorations and other interventions, improvements, and the analysis of the quality of physical appearance must be accomplished. These technical analyses will bring out constructional firmness, the level of its condition and deterioration reasons such as the deterioration of plaster, structural deformation due to over-weight, oppression, cracking, settlement, rise in humidity, loss of function in roof and eaves. Besides, it is necessary to examine the structure's residential improvement, to comprehend designing principles and to apply accurate intervention types. As well as determining historic and environmental qualities and values of the structure, its place in the urban texture, basic qualities of the surrounding, accessibility, social structure, economic status of the nearby residents must be well recognized. Additionally, history of the structure and its basic function, present usage (such as over-usage or abandonment) should be gathered as input within the coverage of the analysis. All visual materials such as drawings, projects or paintings that are previously produced carry importance in terms of gathering accurate and detailed information about the building.²³

It is also necessary to define the characteristics of the material (pressure, pull, bend, absorption, dilatation) used in the construction of the cultural property in order to evaluate the current state of it. It is further important to determine the source of the materials (stone, brick, adobe, wood, mortar, metals, and paints) and their chemical and physical characteristics.

When determining the types of intervention towards the preservation of the cultural property, it is necessary to examine the original construction components, the evaluation of the reutilization of the original material, the chemical/visual

²³*Mediterranean Action Plan, Priority Actions Programme*, (Split, 1992) and www.restorasyon.org , last accessed may 2003.

accordance and discordances that may occur due to the usage of the original materials together with new materials.

Samples from convenient places are taken in order to conduct laboratory test for the definition of the existing material. These tests are made in order to determine the composition of the material, its structure, its construction techniques, how the deterioration took place, and to define the mechanisms of the physical, chemical, and biological factors.²⁴ The characteristic differences obtained by the tests may provide clue about different construction periods and the restorations which the property has undergone until that point in time. It is equally important to compare the type, color, and treatment characteristics of the material with the material of other known historical properties. It is necessary to examine the cause of the material deterioration and to use the right material according to material deterioration in order to prevent the interventions to cause any harm to the property.

Apart from the Measured Survey, old photographs of the structure, birds-eye-view photographs of the area, engravings, maps, city plans, foundation record book for expenditure and income if any, renovation investigations, or record books of expenses and observations in investigators' notes help resolve a number of complicated matters.

It is also necessary to mark on the measured survey drawings the interventions that were applied to the property at different times, to group them according to their periods, the information or traces of elements that no longer exist on the property, and to decide whether the period supplementations are of characteristics worthy of being preserved.

After the phase of collecting, registering detailed input by documentation and analysis, the "restitution project" of the cultural property will be prepared using these input.

The Restitution Project

Plans, cross-sections, semblance and expositions with axonometric drawings or models of the situation at the first design or at a specific date of the changed, partly destroyed or vanished elements, properties or settlements made using archive records, traces on the property, photographs or drawing of the property or settlement in order to explain the original design, examine its historical evolution and achieve a better understanding of the remnants are called restitution.²⁵

Once the documentation is completed, besides the definition of the problems of the property to be preserved as well as the necessary historical research for the restitution project may be considered complete.

The aim of the restitution project is to synthesize the information obtained from the property with other information obtained from the environment in order to explain the original design principles of the cultural property, defining the architectural and historical development and changes and thus decompose it into its preservation periods.²⁶ As the restitution forms one of the most important input of the implementation phase, it is a project phase that has to be practiced in light of the by-law dated 30.01.2000, numbered 31/2 of Central Board of Directors of the Chamber of Architecture of the Turkish Union of Chambers of Architects and Engineers, Terms of Contract on measured survey-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff.

The Mission the restitution projects take upon themselves is to transmit accurate information about the original state of the property. At this phase, it is

²⁴ Böke, Hasan. “Restorasyon Bilimsel bir Süreç Olmak Zorundadır”, *Yapı*, Volume 105 (1990), p.35.

²⁵ By-law dated 30.01.2000 numbered 31/2 of Central Board of Directors of the Chamber of Architecture in Turkish Union of Chambers of Architects and Engineers, Terms of Contract on Relevé-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff

²⁶ According to the principle resolution, Restitution Project Drawings have to consist of storey plans, roof plans, sides, at least two Cross- sections and details in order to be approved.

important to be careful when the acquired input is to be transformed into information, because during the preservation of cultural property, the decisions about the changes of the property may only be made according to the level of information available about the restitution. This point shows that an inadequately prepared restitution project may create a risk through the preservation project.

While preparing a restitution project, it is possible to determine the transformations of the property by making use of the traces on the property. Parts that have preserved its originality will unveil the value of the property. These preserved parts will also form the reliable information of the restitution project. The soundness of this information may be evaluated in comparison to information available on similar properties. It is also possible to restore destroyed, resized or filled openings, windows or doors to their original order by making comparative studies (TMMOB, The Minimum Values List, p.3).

The Implementation Project

The final part of the tripartite preservation project is the implementation project. This is the project that transmits the decisions, priorities and types of interventions after processing the present input into information. It is the determination of the necessary interference to remove the problems of the property after revealing the cause of demolition in light of analyses obtained by means of the Measured Survey drawings.²⁷ In order to perform the implementation accurately, the determined types of interventions shall be stated in detail with plans-cross-sections-semblances. A 1/50 sized appropriate implementation project of the property that will be preserved shall be submitted to the Council along with a report stating

the 1/20-system details and required spot details, and the materials and techniques for the implementation (TMMOB, The Minimum Values List, pp.3 - 4). The prepared implementation project shall be formed according to the preservation theories and to preserve the values of the property:

As it is worked on a property that shall be preserved the performance of the restoration with minimum intervention to the original structure, the use of construction techniques that are similar/concordant to the original, the preservation of the internal structure of the property, and preservation of the place integrity are the main rules to be followed.²⁸

But as the risk ratio during the preservation process is high, meaning that the continuous existence of the unknown is ever present, the project shall be repeatedly revised until it is completed.

The preservation project not only reinforces the structure and states the technologies to be used; it also contains suggestions for the reuse of the historical property. The conformity of the suggested function to the property shall be investigated and it shall be avoided that the reuse project brings any additions and alterations that might cause the deterioration of the mass or place originalities of the property. The aim of the preservation is the preservation of the property. Reutilization is only a tool (Venice Charter article: 5).²⁹

²⁷ By-law dated 30.01.2000 numbered 31/2 of Central Board of Directors of the Chamber of Architecture in Turkish Union of Chambers of Architects and Engineers, Terms of Contract on Relevé-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff: "The proposed interventions shall be stated on the restoration map with a legend. To create a better explanation of the post-restoration state of the property and to show its relation to the environment normal and axonometric perspectives and models are used in addition to the restoration project."

²⁸ By-law dated 30.01.2000 numbered 31/2 of Central Board of Directors of the Chamber of Architecture in Turkish Union of Chambers of Architects and Engineers, Terms of Contract on Relevé-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff.

²⁹ By-law dated 30.01.2000 numbered 31/2 of Central Board of Directors of the Chamber of Architecture in Turkish Union of Chambers of Architects and Engineers, Terms of Contract on Relevé-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff: "Issues like the location of services related to contemporary usage, the fitting of the property to earthquake conditions, fire precautions, removing of obstacles to facilitate the entrance of disabled people at buildings that have acquired new functions should be solved at the project phase."

In the regard of the preservation project, it is possible to take up the preservation approach in two groups. The preservation project for the physical preservation of the property may be considered as belonging to one of these groups. This prepared project provides explanation of the acts to be taken (types of intervention) for the physical, in other words structural and material, maintenance of the property. The utilization project for contemporary usage may be considered in terms of the second group. It contains the definition of the contemporary function that the property may assume. These two groups have to develop one within another and in tandem with each other. Restoration implementations, types of intervention based on the right thesis and a preservation project that is integrated with the functional potential of the property will remove any input that might jeopardize continuity of the values of the cultural property that arise from the choice of function.

Within the scope of the preservation projects, at the phase of intervention decisions the necessities, principles and types shall be stated. Renovations, conservations, integrations, corrections of deformations, reinforcement of the structure, the cleaning of the property from strange elements, precautions to facilitate the care of the property, precautions to delay the deterioration of the property and the precautions to solve problems shall take place in the project in detail. Due to the determination of the present physical state of the cultural property, the first intervention decisions towards preservation and the decision of the implementation phases are the input that must be prepared in order to progress to the implementation phase.

Preservation Prerequisites

This thesis intends to alert to the change of the preservation process. The changes within the scope of the process form the pre-requisites of the preservation project. At the same time these changes expose the causes of the risks contained in the process. When the preservation facts are studied, the facts underneath the

changes are more clearly understood. The changes of the preservation process that will be re-established with the support of different disciplines as a consequence of this study must be discussed. Differences form the dynamics of the establishment of the preservation process. While some of these dynamics emerge from the parameters within the project, others emerge from external factors. The internal dynamics that emerge within the project may be controlled in accordance with the definition of the scope of the project and the establishment of the formation of the work flow chart. However, it is not always possible to control the external dynamics. They independently join the process from the outside of the project establishment. External dynamics may be defined under two subtitles: convertible and inconvertible external dynamics. Convertible external dynamics may be converted into controllable external dynamics by precautions taken during the pre-assessment process.

Table 0.1- Chart of the risk dynamics.

DYNAMICS		
Internal	External	
	convertible	inconvertible
*Present cultural property *Re-functioning *Terms of references (definition of the sub-tasks) *Cost & time estimations	*Legal tools Terms of references (technical and administrative legislations) *Implementation -Specified individual -Procurement of the material *Communication with the legal authorities (municipality, preservation councils, etc.)	*Legal tools -Related laws -Higher Council -Principal decisions -Decisions of the preservation councils -local authorities as municipality and social pressure *Values of the cultural property

Legislation

The first and most important differences which one faces in the preservation process are the differences in legislative operations. The obligations of legitimate vehicles define the limits of the scope of the work before the project definition is made. The preservation process is established within these limits in the definition of

the preservation project. Considering that these limits also contain the parameters emerging from the project itself, it must be accepted that this difference is an external dynamic that creates an important risk.

Existing Building

The preservation process must start with the decision concerning the aim of the intervention and which aim the building will serve. As stated in Chapter 1, the preservation process differs from the construction process of the new. That the product already exists is the most important input that creates this difference. All of the phases the existing building has undergone starting from the constructing phase up to the present and the current physical and social status increase number of parameters necessary for the scope and establishment of a project. Within the scope of the preservation project, the form and intensity of the relation between these multiple parameters brings unidentified, unexpected, and un-estimated data along with it. These unidentified, unexpected, and un-estimated data cause the familiar planning process to change in the course of the designing process. Besides, these unidentified, unexpected and un-estimated data prevent the infrastructure, which latter are necessary to proceed to the project phase after the planning, from being established. It is impossible to make plans towards a project and implementation and to set a target for the end product in a situation with too many unidentified, unexpected, and un-estimated data, as the risk input is too high. All of the unidentified, unexpected, and un-estimated data form a risk at every phase of the scope of the process. Besides, these risks are not independent from each other and will cause the target deviation ratio to increase in the subsequent phase. Within the scope of the preservation project the most important difference after the existing building are the numerous unidentified, unexpected, and un-estimated parameters that increase the risk ratio. They hinder an accurate work definition according to time, cost, and quality.

Reutilization Project

Another important difference is the reutilization to which the existing building will be subjected. The building has to be in use in order for it to survive. It is inevitable for every type of utilization to convert the building from its original state. This reutilization, however, has to be in accordance with the physical and social values of the building which ought not be harmed. Due to this fact, a reutilization project, which is parallel to the preservation project, necessarily emerges within the scope of the preservation process. The reutilization that is chosen when the work definition is made at the beginning of the preservation process brings some risks along with it.

1. While shaping the re-utilization project the most important input is the capacity of the potential originating from the values of the building, to be in accordance with the function with which the building will now be endowed. The new function that will be implemented should not cause the loss of any of the values that must be preserved. Otherwise the re-utilization project will emerge as an important risk in the scope of the implementation process as it will be in contradiction with the preservation project, whose original aim was and remains to preserve the building.
2. Other problems that will occur because the social and cultural burden of the building was not defined in the beginning are the irreversible risks emerging from decisions that contradict this potential during the preservation process. Irreversibility may be defined as the risk that will jeopardize the structure of the building and is therefore inapplicable, which is in turn caused by the necessity of a change that emerges from unidentified, unexpected, and unestimated input that may occur at any point of the implementation and cause the utilization scheme to change.
3. There are also some risks that emerge because some reutilization change requests keep be implemented after a specific phase of preservation process.

The determination of intervention decision and types without sufficient research and analysis prior to the implementation process creates a problem at this phase. Problems are especially encountered in the revisions of the installation projects that are made to update the comfort conditions.

The preservation status of the building must be considered when deciding the reutilization aim. The establishment of the preservation process must be made according to the decisions and priorities of intervention. The decisions and priorities of intervention determine the type of intervention and the scope of the preservation project that is going to be implemented. The type of intervention and the changes required by the reutilization must be integrated with the scope of the preservation project.

Types of Intervention

Another difference in the scope of the preservation process is to decide for the types of intervention prior to the project phase. The technical structural scheme of the building, the structural sufficiency, the connection between the existing carrier system and the structural system that is to going to be implemented, the state of the material that forms the existing structure, the alteration and deterioration of the material, the preservation of the original, possibilities of intervention, the interoperability of the new and the old materials, and the conditions for the use of new materials and techniques shall be defined. In order to decide for the types of interventions, the intervention priorities and decisions must be determined. The accurate determination of intervention decision and priorities depends on the correct synthesis of the analysis made at the documentation and pre-assessment phase. The preservation implementation is a technical implementation that reflects an assessment of all of the values of the property. This functions like a chain reaction. Every phase forms the prerequisites of the next. The work has to be coordinated accurately at the beginning so that the chain may function without defect. The

greatest risk this difference brings along with it is that every mistake increasingly reflects on the subsequent phase.

The pre-assessment process is also one of the internal dynamics that could be easily structured. The necessities of pre-investigations should be analyzed not only in order to resolve existing problems, but also to foresee future problems. This causes risk reduction.

Which ever the type of intervention selected for a historical property, its main preservation principle should be minimum intervention – maximum preservation. As work on a property worthy of preservation is continued, attention must be paid that the preservation process is performed with minimum intervention in the original structure, that the building techniques are suitable to the existing building, that the original plan scheme of the building is not being altered, and that the spatial integrity of the building is not damaged.³⁰ Within the scope of the preservation process materials of predictable performance and treatments are designed so as to be reversible and as minimally interfering as possible.

Material Source

The procurement of material and qualified personnel, the establishment of a team that can perform the determined techniques may be considered as other risk carrying internal dynamics. Besides, the different disciplines (static project, installation project, infrastructure project) that will become operative in the project should come together in a common terminology and every person who will work at the site should be in command of this terminology. The different terminologies which the preservation approaches have arisen from the cultural values that the property has. In addition, there are some technical terms of traditional treatments or

³⁰ By-law dated 30.01.2000 numbered 31/2 of Central Board of Directors of the Chamber of Architecture in Turkish Union of Chambers of Architects and Engineers, Terms of Contract on Relevé-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff

materials that have lost their currency but have been restored and are being used. Except for these technical input, there are also some internal dynamics strictly related to the process. These are about the timing and the establishing of the budget. In order to define the project target, it is hard to speak about a detailed timing within the scope of the preservation project. As most of the treatments will be defined as, “specific implementation,” it will not be clear what kind of economic framework should be established. In order to arrive at the definition of the work as well as devise the work chart, however, it is necessary to convert these unidentified, unexpected, and un-estimated data into the scope of the project.

Other risk carrying differences are the binding parameters that occur during the work chart establishment. These take place in the convertible external dynamics as the accurate planning of the work times of the qualified personnel that will perform the special treatment, conduct the research during the pre-assessment phase of the reserves of the new material that has been decided to be used due to its accordance with the traditional material, the determination of a source as near to the site as possible and which also has great reserves, acting according to the minimum intervention – maximum preservation principle, and the detailed and accurate preparation of the project in order to get permission for the treatment.

Cost and Time Estimation

The most important risk at the beginning of the preservation process is not being able to make time and cost estimations. Even if technical and administrative specifications are being prepared specifically for the property, it is not possible to establish a “time chart” or to make a “cost estimate” because the risk parameters at the beginning are not definable. It is customary to have the construction process ordered as production, prepare the value estimation, ratify the results the results with a consensus, and subsequently go further to the next stage. In the preservation process, it is better to obtain consensus before the work has been done because of the

possibility of declination of the cost analyses. Cost estimates mostly depends on the implementations that would be in the consideration of “specific implementation”:

The road with portico in Side. The contractor has made a price analysis for the specific implementation. Material and craftsmen connections for the process have been made. An example implementation has been made. A unit has been established. But the cost analysis has not been accepted. The reason was the official cost analysis. Scientific infrastructure and the cost policy of the government have collided. Loss of time and labor. (SAYKA construction, the road with portico in Side Renovation and Surrounding Arrangements, 2000)

Inconvertible external data could not hinder the process:

The road with porticos in Side: There are about 20 pieces of art in front of the Side museum, of a weight of nearly 3 tons. The consent of the museum for the removal is taken. It is added to the project. Time and work definitions are made within the scope of the project. The system is being established within the process, but the director is being removed from the job. Work stops. Under these conditions the work chart is interrupted at that point. Consent of the ministry needs to be taken.

Internal dynamics consist of expected factors that occur in the beginning of the process. These are under control. Responsibilities under control are the ones that can be managed skillfully and well tolerated by the project team.

General Evaluation

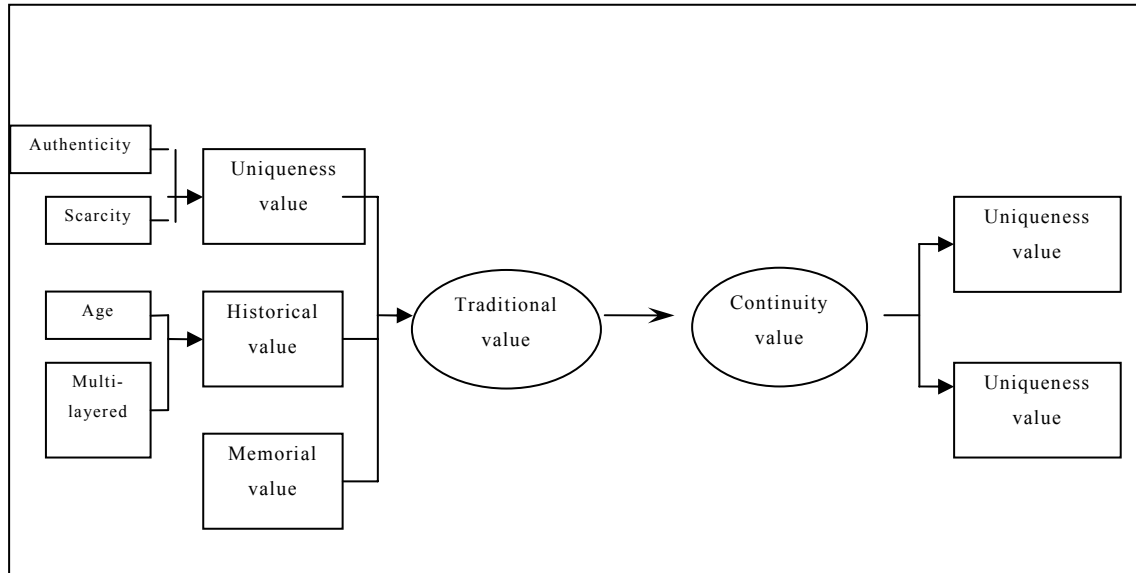
An examination of the values of Cultural Properties indicates that the values that emerge reside within in the scope of this thesis. The values that emerge affect the project and implementation processes as well as the pre-assessment phase where the establishment of the entire process and the scope of the project are defined. As the authenticity, originality, and scarcity values and multi-layered and environmental values emerge under the title of age, architectural, art and craft, uniqueness in the physical values group, continuity, traditional, historical, memorial, symbolic and impression values become evident in the scope of emotional values. Due to the scope of the project and in order to make the work definition, the emerging values should

be integrated within this classification. At the same time, as this integration will be a response to the reasons of the preservation approach, it is necessary to make a value assessment at the beginning of the process.

The properties may have survived until today, preserving their original structure or might as well have undergone a variety of alterations. It is inevitable that the cultural property has changed and been converted since the day it has been constructed. A great part of the additions and interventions that have converted the property are an additional value of their period. Taking into consideration the fact that the phenomenon of preservation is a whole, the analysis to be conducted should cover these values, too.

During this integration analysis the tradition value, which is part of the emotional values group, should be one of the two values that will be considered as binding among all the emerging values. Uniqueness (authenticity, originality, scarcity), architectural, and art and craft values, which are part of the group of Physical values, may be considered values of second grade within the scope of traditional values. These values set the reasons for the preservation of the cultural property. Another group that supports the set of traditional values is the historical and memorial values. Age and multi-layered values may be considered as the historical values. The continuity of the traditional value must be conserved. According to this, the continuity may be considered as the second central value. The continuity can only be obtained by the implementation of the preservation. Based on the environmental value, the realization of the preservation activity will create a symbolic value, which will increase the impression value of the property.

Table 0.2 - Evaluation of the values.



These values underline the importance of the property to be preserved, as well as effecting the decisions and priorities and thus the types of intervention because of the risks it creates. For instance, the risk input of the age value may be defined as the excess material deterioration, the difficulties to find the qualified personnel who can restore or renovate the material, the loss of up-to-datedness of the implemented techniques and materials or the difficulties to attain the convenient material source. The risk that the originality value carries may be considered a result of the fact that the intervention resides in the scope of specific or unique implementation and the difficulty of its definition at the beginning of the process. The risks which the continuity value carries are the contradictions emerging from the fact that the techniques and materials must be implemented according to both the principles of reversibility and resistance.

Architectural works CAN tolerate fairly extreme modifications in their physical structure and appearance. This 'mutability' of architectural structure generates a set of curious problems in the preservation process.

Evaluation of the Pre-Assessment Process in Connection with Risk Parameters

For the above reasons, it is not very effective to define the scope of the project and work chart or to establish administrative and technical specifications at the beginning of the process without knowing the property very well. The first step to be taken should be the definition of the encountered risks right after defining the framework of the legislation. That the risk parameters are considered as the most important input at the pre-assessment phase, which will be redefined within the scope of the thesis, will explain the difficulties that will be encountered during the preservation process. It will be thus possible to reduce the risks or problems that may be encountered in future phases of the process to accomplish the preservation project with minimum deviation from the targeted renovation type. Considering this, the time for the pre-assessment phase should be longer than usual. This long time should include some pre-implementations like excavation, drillings, and plaster scraping except from the recommended pre-implementations, documenting and analysis. In this way it will be possible to define the scope of the project and the work to be implemented, at the beginning of the preservation process.

Pre-implementations, like the physical analysis of the property to be preserved, the drawings containing the present status of the property upon which this analysis will be marked, pre-implementations like plaster scrapings, drilling excavations in order to form these analysis are the main elements of the pre-assessment phase.

Pre-implementations are a base element that needs to be defined in the scope of this work. They especially need to take place in the pre-assessment phase. Pre-implementations all of the physical examinations made on the property in order to determine whether the property is convenient for the reutilization, to collect all input that are important for the property, to minimize the risks by analyzing the physical state of the property which affect the decisions, priorities and types of intervention. It is necessary to make physical interventions in order to understand whether the

constructional system is undamaged, whether there is any material deterioration due to humidity rising from the ground or water leaking from the roof, and to examine the fungus and mildew in closed areas. Pre-implementation may be considered a small implementation model within the scope of the project. Drillings, excavations made in order to understand whether there is need for suspensions or temporary supports, examining excavations to understand the depth and width of the fundament may be considered among the pre-implementations. The scrapping of the plaster or taking samples from the plaster in order to examine the state of the wall or to determine the type of the wall (stone, brick, timber, etc.) underneath the plaster will set a base for the decisions, priorities and types of interventions. If excavation, scrapping and similar implementations will be applied, it is important to document the state before the examinations with photographs and drawings.

It is equally important to conduct the examinations without harming the property. For instance, radars, sounds created with mechanical strokes, ultrasound or seismic tools should be used in order to understand cavities and material differences in a wall. It is possible to make use of gamma rays in order to determine the location and state of metal elements (clamps and metal bars) that are used for the fixation of stone blocks in the plait of a wall or in architectural elements like columns. With the help of computers, it is possible to determine the load distribution of the building, and the points where the pressure and pull tension is high and might cause risk during an earthquake. Issues like seasonal humidity and temperature, ground water level changes, crack movements, earthquake effects may be observed and recorded with the help of contemporary technologies. It is also possible to make immediate, precise and detailed recordings with the commonly used photogrammetry method that can be studied later. The main advantages of photogrammetry could be summarized as speed in recording, precision and uniformity in measurements, saving time and money, the possibility of measuring delicate objects, surveying the dangerous buildings, revealing distortions. In this way it is possible to make recordings of many sites and buildings prior to unexpected alterations and deteriorations.

All these pre-implementations for the analysis are made in order to collect input needed to form a base for the project process. Because of the values mentioned in the beginning of Chapter two, the actual preservation of a cultural property may prove economically much more expensive than a new implementation project, for the construction techniques and the used material of the historical property have lost their up-to-datedness

Evaluation of the Concept of the “Unidentified” in Connection with Risk Parameters

In regard of the preservation process the concept that draws the most attention once the risk parameters are established is the concept of the “unidentified”. The parameters that cannot be clearly defined at the beginning of the preservation process render the preservation process ambiguous because of their majority to the new implementation project, as well as their interwoven relation to each other. Besides, it is impossible to define these input without a detailed pre-assessment process at the definition phase of the project. As this will broaden the scope of the pre-assessment process and change the priorities, it will affect the entire process.

It is important to identify the numerous unidentified parameters at the beginning of the process as the process progresses, and to minimize them. To eliminate them is not possible because of the nature of the concept of preservation. However, producing a detailed definition at the beginning of the process, in other words as part of the pre-assessment process, will increase the number of unidentified parameters in the course of the process. Besides, a detailed pre-assessment process will enable an accurate definition of the scope of the project. Risks that have been prevented from the beginning will not cause greater hindering at the following phases.

When the preservation project is compared with the classification of “Formulation, analysis, search, decision, specification and modification in the construction projects,”³¹

1. it is accepted that the design and construction process should be managed by an architectural restorer;
2. the main goal in the preservation project is to preserve the existing cultural property. The preservation process lets the building survive, including its own behavior and all architectural characteristics besides all values with a new function. They are the documents of their own period-age;
3. each cultural property has its own physical and functional capacity filtered through its informative value besides the transformative capacity;
4. preservation activities should be designed to minimize the physical and chemical deterioration of records and to prevent the loss of informational content;
5. restoration work is much more expensive and time consuming process than the constructions;
6. preservation activities include carrying out technical and scientific studies on objects, stabilizing the structure and reintegrating the appearance of deteriorated cultural artifacts and establishing the environment in which artifacts are the best preserved. Preservation projects encompass interdisciplinary approaches.

Continuity is the base of the preservation phenomenon. That is why, in order to obtain the continuity of a cultural property, the definition and analysis of the preservation project should develop their own contents. These contents, in turn, should depend on a common specific terminology as well as be disseminated constantly and sufficiently.

³¹ Hendrickson, C., Au, T, *Project Management for Construction*. (Boston: Cbi Pub Co, 1989).

Description and management of the design and construction process in any preservation project requires detailed study with particular interventions or implementations and specific knowledge of the existing construction, by using an efficient schedule in order to minimize the risks and the problems from the beginning of the idea to the end of the process completely.

A regular and well-documented program of the preservation process should depend on the thorough baseline of information about the preserved construction and its physical condition.

CHAPTER 3

LEGAL TOOLS

Legal tools are among those input, which indirectly affect the current preservation process, but which can not be controlled in the project framework. Moreover, legal tools are developed independently from the inner dynamics of the project and thus affect the final product. The process in a preservation project is shaped within the legal framework. The legal operations to be followed and the legal tools that provide for designating the main framework are more complex than those of the new implementation projects. In efforts to re-organize the preservation process, those legal tools that have impacts upon definition of the process should be scrutinized elaborately. Besides, those legal tools, which entail establishment of the status of the cultural property, may be enumerated as laws, regulations, by-laws of Higher Council for Preservation of Cultural Natural Entities, notes of the plans, and decisions of sites and groups by Preservation Councils.

In the context of this chapter, while the articles of related laws are evaluated, the impact of the other legal tools upon the operation of the process will be also be emphasized.

In Turkey, all implementation decisions as well as in-principle decisions related with preservation in other words, all legal tools in effect are either based on or address the current Act No. 2863 in Preservation of Cultural and Natural Entities. The purpose of this law is:

To determine the definitions related to movable and immovable cultural and natural entities to be preserved, to organize the procedures and activities to be held, and to set up the foundation and duties of the institution that will make the due principles and implementation decisions.

The circumstances where the legal tools influence the preservation projects may be divided into five phases as the pre-projecting phase, the projecting phase, the

approval phase, the implementation phase, and the post-implementation phase. In addition, there also exist such definitions and documents as shall be taken into consideration prior to the projecting process.

In the context of Act No. 2863³², the issues requiring consideration prior to the projecting phase are also of concern to this study and may be summarized as follows:

- Definitions:

The definition of immovables in context of cultural entities to be preserved and definition of preservation;

All movable and immovable entities taking place above ground, underground or underwater pertaining to science, culture, religion and fine arts of pre-historian and historian ages,

Natural entities to be preserved and the immovables dating until the end of nineteenth century,

Immovables dating to the specified period required to be preserved by the Ministry of Culture and Tourism by consideration of their importance and characteristics,

Immovable cultural entities located within the preservation site.³³

However, those immovables, which are not regarded as worthy of preservation by the Higher Preservation Council, are not recognized as immovable cultural entities to be preserved.

- Mechanisms in Designation of Principles:

With respect to the phenomenon of preservation, the most responsible institution of the present period is the Higher Council for the Preservation of Cultural and Natural Entities. In the context of the purpose and legislative grounds of

³² Act No. 2863 in Preservation of Cultural and Natural Entities

³³ “Preservation site”; are those areas to be preserved by specified natural characteristics, places where important historical events have occurred and those cities and their remains reflecting the social, economical, architectural etc. characteristics of their periods as products of various civilizations from prehistorian ages until the present time.

the By-law No. 20065, dated 30.01.1989, in Preservation Councils and the Higher Council for Preservation of Cultural Natural Entities, among the powers and duties part of the Preservation Council takes place the designation of the implementation principles for the restoration and due preservation of immovable cultural and natural entities to be preserved. In order to assist the Ministry by providing opinion based on the assessment of general problems emerging during implementation, the By-law also makes provisions for opinions through assessment of general problems emerging during implementation due to decisions given by the Preservation Councils.

The in-principle decisions of The Higher Council, which amount to the highest level of documents that identify the process of projecting and implementation phases in building scale, have taken place as a result of two different processes in Turkey. The first one consists of specific fundamental decisions reflecting the main attitudes to preservation of the Higher Council for Historical Real Estates and Monuments. These main attitudes constitute the decision-making mechanism related to principle designation, project approval and preservation implementations of the period since the 1960s. For instance, the proliferation of new demands for allocation of new use and preservation of civil architecture samples have caused the Higher Council to arrive at inconsistent decisions varying among buildings with similar problems. In order to prevent this divergence of legal decision-making, the buildings have been grouped by their qualities and problems so that similar decisions may be taken for similar buildings. This issue has been re-considered after 1983 in the new law amendment where the new Higher Council has been entrusted with the legislation of principles and with the help of previous experience and accumulated knowledge, the in-principle decisions have been constituted. Another in-principle decision group consists of those that have been designated in tandem to changes in conception of preservation.

International Documents

In the context of this dissertation, the two international documents that may be regarded as models are the ‘Convention for the protection of the architectural heritage of Europe’ and the ‘European convention on the protection of the archaeological heritage’.

Convention for the Protection of the Architectural Heritage of Europe – Granada, 1985, CE³⁴

Architectural heritage not only is an irreplaceable expression of the richness and diversity of cultural heritage, but also bears inestimable witness to the past besides being a common heritage of a given society. The value of conserving the architectural heritage depends upon being both an element of cultural identity and a source of inspiration and creativity for present and future generations. With regard to this recognition, the importance of reaching agreement concerning the main thrust of a common policy ought to be for the conservation and enhancement of the architectural heritage had been acknowledged in the Granada convention. As it focused on the identification of the properties of architectural heritage to be protected, it was propounded that inventories be maintained in order to prepare appropriate documentation at the earliest opportunity. Within the frame of documentation, this implies taking statutory measures in order to make provision for the protection of the architectural heritage.

The Granada Convention maintained that legislative aspects should be taken into consideration for the protection of the architectural heritage on condition that the requirement of the competent authority for preventing the disfigurement, dilapidation, demolition, or alteration of the cultural property besides the substantial

³⁴ Madran, Emre; Özgönül, Nimet, ed., *International Documents Regarding the Preservation of Cultural and Natural Heritage*, (Ankara: METU Faculty of Architectural Press, 1999), p.284-290.

alterations, which impair the character of the buildings. Infringement of the law protecting the architectural heritage must be halted with a relevant and adequate response by competent authority.

The convention also uphold that, with a view to limiting the risks of the physical deterioration of the architectural heritage, scientific research should be supported for identifying and analyzing the harmful effects and for defining ways and means to reduce or eradicate these effects.

Another important point in this convention was the adaptation of old buildings for new uses on the condition of the use of protected properties in the light of the needs of contemporary life.

According to the consequence of the convention, private initiatives for maintaining and restoring the architectural heritage should be encouraged in terms of fiscal measures to facilitate the preservation process. The development of traditional skills and materials should be fostered as being essential to the future of the architectural heritage.

In light with the integrated conservation policies, protection of the architectural heritage should be taken into account at all stages both in the development plans and in the procedures for authorizing the work. The possibilities afforded by new technologies should be evaluated in order to identify and record the architectural heritage and combat the deterioration of materials as well as in the fields of scientific research, restoration work and methods of managing and promoting the heritage.

These parameters of the preservation process are to be organized in the needs of reducing the risks by identifying the input,

With a view to widening the impact of public authority measures for the identification, protection, restoration, maintenance, management and promotion of the architectural heritage, each party undertakes:

To establish in the various stages of the decision-making process, appropriate machinery for the supply of information, consultation and co-operation between the states, the regional and local authorities, cultural institutions and associations, and the public.³⁵

European Convention on the Protection of the Archaeological Heritage – Valetta, 1992³⁶

The objectives that were mentioned in this convention could approximately be adjusted to the process of architectural heritage. The main intersection spot of both conventions is the protection of cultural heritage. In the preserving project of architectural heritage, there should be a preliminary assessment in order to identify the risk parameters including such excavations.

Legal framework and system should be structured for the maintenance of an inventory of the heritage and the mandatory reporting to the competent authorities. It is important to institute appropriate administrative and scientific supervision procedures.

It should also be ensured the allocation of sufficient time and resources for an appropriate scientific study to be made of the site and for its findings to be documented. It is to be ensured that non-destructive methods of investigation should be applied in the field inspections.

Material resources should be increased by taking suitable measures for the total costs of any necessary implementations and by making provisions in the budget for the preliminary study and prospection including a scientific record.

³⁵ Madran, Emre; Özgönül, Nimet, ed., *International Documents Regarding the Preservation of Cultural and Natural Heritage*, (Ankara: METU Faculty of Architectural Press, 1999), p.287.

³⁶ Madran, Emre; Özgönül, Nimet, ed., *International Documents Regarding the Preservation of Cultural and Natural Heritage*, (Ankara: METU Faculty of Architectural Press, 1999), p.413-419.

For the purpose of dissemination of knowledge, it is to bring up to date surveys, inventories and maps in the areas within its jurisdiction.

Evaluation of Legal Tools Prior to the Projecting Process

Prior to the projecting process, the preliminary step to be taken is to define the work within the legal framework.

The technical and administrative terms of contracts should be constituted. These terms of contracts should involve the descriptions and analyses that reveal the context of the preservation work to be held. The unit price analysis and the written documents including the poses by the Ministry of Culture and General Directorate of Foundations, are to be utilized. The unit price lists of the Ministry of Public Works, may be utilized, contingent, where these prove inadequate. In written documents of the General Directorate of Foundations, there is an article stating that, “For those operations that are not listed in the Ancient Monuments Unit Price List that of the Ministry of Public Works is to be referred to.” Thus, accompanying the definition and scope of the project and identification of material and technique, the costs are also clarified

In the unit price analysis, there is information for the salaries of the craftsmen. In ‘Unit Price List’, it is possible to find the renovated prices for each year.

‘Ancient Monument Unit Price Descriptions’ (*Eski Eser Birim Fiyat Tarifleri*) and ‘Ancient Monument Price Analyses’ (*Eski Eser Fiyat Analizleri*) consist of the three main categories of, the construction process, interventions in materials, interventions in architectural elements.

As the projects are yet not approved by the Preservation Council as these definitions are formulated, there should be no physical intervention made in the building. The preservation project, however, is also to be prepared in accordance with these terms of contracts.

The greatest disruption at this stage is neglecting the pre-projecting stage required for a preservation project. Contrarily though, the process of preservation starts well before the projecting stage. At this point, the preliminary considerations amount to legislative operations and the fundamental principles of the terms of contract. In order to analyze the insufficiency of the terms of contracts, it remains appropriate to initiate the examination from the content of documents including Descriptions and Analyses. However, the written documents to be used for definitions of the terms of contracts do not fall in line with contemporary theory and recent technology of material. Due to loss of their currency, the definitions in context of the terms of contracts and the special circumstances emerging in later stages of projecting and implementation (such as use of material, specific details, technique or qualified staff) do not match one another. Though they do not create any problem for the materials used in implementation of preservation, those productions that are specific to preservation should indeed be clarified.

Another crucial point is that the measurement surveys and preservation projects, the detailed drawings and the entire engineering work in the context of project are mentioned only as bound to the technical terms of contract. The context of measurement surveys and preservation projects should have been handled in more detail. The main concepts that constitute the details and the detail drawings directly affecting the unit price description and analyses, in other words the preservation decisions, are required to be defined at the beginning of implementation.

A general consideration of Descriptions and Analyses manifests that all explanations, definitions or analyses are open to interpretation and far more flexible than required. When related with theory, this endangers implementation in terms of its continuity, because as already stated in Articles 3 and 4 of the Venice Charter Regulations, “the intention in conserving and restoring monuments is to safeguard them no less as works of art than as historical evidence. It is essential to the conservation of monuments that they be maintained on a permanent basis”.

The “Description and Analysis” booklets should bear such characteristics as providing for an effective and easy use of the document instead of monitoring the

construction site process. In structuring the booklets based on the documents of The Ministry of Public Works, The General Directorate of Foundations and The Ministry of Culture have taken into consideration three different categories independent from each other, namely the work to be held, restoration by material, and restoration based on architectural element. This inevitably results in more difficult use of sources.

Apart from these, it also is a rather difficult task to establish connections between descriptions and analyses of unit prices. In other words, there occurs adaptation difficulty in that the number of poses do not match one another and the formats differ while the “table of contents” remains the same. For instance, the inclusion of all the details for moving formulas given in the introductory part is not necessary at all. Under the same title, some specific moving formulas regarding an architectural element as a historical monument could have been given instead. The scope of measurement surveys of preservation project and detail drawings could have been more explicitly set forth. Besides, one of the most striking categories included in the “Descriptions” document has been the definitions for mould and scaffolding. Nevertheless, in recent construction sites, it is generally the movable metal scaffolds owing to their practicality, economy, and re-usability. In this sense, there exist such analyses as await revision and are almost out of implementation. At this point, connection with the theory would repeatedly reveal that recourse to all sciences and techniques of considerable contribution should be achieved. (Venice Charter, Article 2 and Article 10).

Likewise in some articles, while there takes place no circumstance specific to the implementation of preservation, in the ‘general terms’ of the introductory part, it has been The Ministry of Public Works that constituted a rather general reference given for some preservation implementations. For instance, in poses numbered 1601 – 1602, the production of a marble step and its placement have been described. However, there is no necessity for this article to be included in the booklet.

Most importantly of all, it should be noteworthy that use of cement is absolutely forbidden. In this respect, it is not correct to have all the references directed to The Ministry of Public Works for the section on mortar. The mortars and

plasters may be far more important than rough-walling of rubble and mortar in preservation implementations.

The documents in use have an index of their own. On the other hand however, this index does not only facilitate work but also involves inner conflicts. For instance, in the section on material values, the pose for ‘sawn-timber manufacturing in all sorts of timber’ (pose number 208 in descriptions, but pose number 206 in analyses), also comprises the ‘Ceilings and Separation’ described in poses 1990-1998, the ‘Doors and Windows’ in poses 2005-2054, and ‘Mould and Scaffolding’ in poses 202-207. Considering that timber technology has also shown substantial progress in the present time, this article remains outworn.

With the intention easily to decipher the components of the analysis on the other hand, the ‘task-subtask-work package’ may be utilized. For instance, in analysis of the work ‘plaster-depth embankment to corrupted old plain and curved surfaces with powdered brick mortar’ as included in unit prices, 1 m³ of powdered brick mortar and lime-cement mortar should be first acquired separately. Then, the value for the amount required for on-going implementation should be estimated. All these steps taken merely for one category of work definitely result in loss of time. Instead, however, a unit value can be added to the pose number in each category of analysis.

As the language of expression is also quite old, it proves rather difficult to decipher these resources. The possibility of easy and effective use by the last generation of conservators is almost impossible. The language of expression is in need of most urgent simplification. For instance, “limitation” may be used instead of “restriction”, “straightening and placement of existing corner flèche casing of average 20 cm. to the depth of freestone” instead of “amelioration and placement of existing corner flèche casing of roughly 20 cm. to the depth of broad stone”, “...according to the detail drawings to be prepared by the undertaker and approved by the administration and to the form of the existing sample at site...” instead of “...according to the picture of particulars to be prepared by the supervisor and certified by the management and to the shape and dimensions of the current sample

at site...,” or “...with complete adjustment..” instead of “...with complete adaptation..” may be used.

In result, in the name of facilitating their use, the ‘Unit Price Descriptions and Analyses’ shall take on a specific schema of their own so as to be different from The Ministry of Public Works.

Tools Related to the Projecting Process

The process of projecting is defined as the interval during which the preservation projects, the measurement surveys, restitution and preservation projects shall be prepared in adequate scale and detail as denoting the documentation of the existing conditions of the building prior to the implementation permission is received in accordance with the in-principle decision of The Higher Preservation Council of Cultural and Natural Entities numbered 660 and dated 05.11.99., the identification of problems, investigation of new use opportunities, basic approach of preservation, designation of intervention decisions, priorities and types, and the interventions required by the new use, in order to then be approved by The Preservation Council. The measurement surveys-restitution-restoration projects of the buildings to be restored and the contents and scales of other related documents are all determined by The Preservation Council.

The process of projecting may be conducted in accordance with the status of the cultural property by means of regulations of legal tools. This status ought to be defined in the context of environmental and building scale.

This status of that cultural property directly concerns not only the priorities, decisions and types of intervention but also the decision of new function. When a cultural property has been registered, this means, it carries spatial and physical characteristics to be preserved. New function that is offered should bear to continue these values of the cultural property. The principle of minimum intervention-maximum preservation ought to be resided. On the other hand, there may be a building texture where the characteristics and values of environment must be

preserved if cultural property has been preserved because of the environmental values. In that case, building to be preserved may not carry impressive physical and spatial characteristics of its own. It becomes important to preserve it as well as to attain a preserved texture. Those cultural properties provide for reasonable interventions besides bearable new functions. Hence, the status of a cultural property will be acquired by means of environmental, physical, and spatial values.

In accordance with the by-law of Central Board of Directors of the Chamber of Architecture in Turkish Union of Chambers of Architects and Engineers numbered 31/2 and dated 30.01.2000, the details and techniques the projects may be prepared by have been declared in the Terms of Contract on Measured Surveys-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff. The interventions should be determined in line with the specific conditions of each building to be preserved. The projects shall be maintained in accordance with the ‘Measured Surveys-Restitution-Restoration Project Preparation Regulations’ given in the appendix of in-principle decision numbered 660 of The Higher Council.

In article 57/b of Act 2863 in Preservation of Cultural and Natural Entities, one of the duties of Preservation Councils is stated to be the grouping of cultural entities required to be preserved. Since every building to be preserved is of genuine character, this originality implies its own values, problems and risks. With the intention to decide on the best particular intervention type for the building to be preserved, categorization is to be held in accordance with the in-principle decision numbered 660 and dated 05.11.99 of Higher Council of Cultural and Natural Entities. The buildings to be preserved have been grouped into two as, “those buildings, which are bound to be preserved with all historical, symbolic, memorial and aesthetical characteristics within the cultural setting constituting the physical history of the community”³⁷ and “those buildings that reflect the local style of life constituting the cultural setting that contributes to the identity of city and

³⁷ See appendix 4, for in-principle decision of The Higher Preservation Council of Cultural and Natural Entities, numbered 660 and dated 05.11.99, building groups – definition of 1st Group Buildings.

environment”³⁸. In article 18 of the law, the categorization of buildings is declared as intended for determination of fundamental principles of preservation and building and the types of intervention. The Preservation Councils have been entrusted with the power and duty to enact this categorization.

In case the group of preservation for the building to be restored is unknown at the start, a folder including the cadastral status on scale 1/500, measured survey on scale 1/50, and photographs are to be presented to the Preservation Council of Cultural and Natural Entities of that locality. The presentation must be accompanied by a request for designation of the building’s status. In those projects including the measured drawings presented to the Council for categorization, the material types and preservation levels of architectural components should be accompanied by explanations of historical, esthetical and technical investigations in the measured drawings.³⁹

In accordance with the by-law of The Central Board of Directors of the Chamber of Architecture in The Turkish Union of Chambers of Architects and Engineers, numbered 31/2 and dated 30.01.2000, the Terms of Contract on measured survey-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff, prior to the process of preservation, the past photographs and measured drawings, preservation projects and decisions all included in due folder of the Preservation Council responsible for the specific locality of the building to be preserved, will all be scrutinized to inform about past procedures and decisions concerning the Legal Status of Cultural Entities.

³⁸ See appendix 4, for in-principle decision of The Higher Preservation Council of Cultural and Natural Entities, numbered 660 and dated 05.11.99, building groups – definition of 2nd Group Buildings.

³⁹ www.restorasyon.org, last accessed june-2003.

Evaluation of the Tools in the Projecting Process

Consciousness of preservation undergoes continuous change. Even though the initial approaches have been based on building restoration, they gradually have begun to adopt autonomous ways of behavior in preservation of cultural entities. This has found its reflections in processes of both projecting and implementing of preservation. There exist serious differences in the new implementation process with regard to both legislative grounds and the project processes, and these differences continue to develop and change. For this reason, it appears to be much beneficial for legal tools related with preservation also constantly to be updated. The more the effort to structure the preservation process within such a constantly changing point of view, the more difficult to act in line with the principle approaches in legal tools. This affects all stages starting from the projecting process.

According to the in-principle decision numbered 660, it is up to the Preservation Council to decide whether the prepared project context is regarded as adequate. In this case, prior to striving at this in-principle decision, the members of the Preservation Council are assumed to be experts in the subject to judge adequacy.

The inability to intervene in the building to be preserved outside of an approval by the Preservation Council directly affects the process of preservation. In order to reduce the high risk rate at the start of the process and take due measure for the process by transforming certain risks into defined categories, it may be necessary physically to intervene in the building during the pre-assessment stage. Hence, the data required for projecting CAN then be collected in detail. The collected data are to be processed in context of projecting stage (sub-task) to be converted into information. The information obtained will then be influential in the implementation stage of the preservation process. Proper operation of the implementation process will be as sound as to the extent the data is processed so that deviation from the targeted quality of product will have been minimized in the end.

Restitution phase is the most appropriate process to utilize information obtained efficiently. Restitution forms a base for the priorities of intervention, which

produce the types of interventions. From this point of view, the maturity of a restitution project is directly proportional to how comprehensive the pre-assessment phase is and how insightful the documentation and analysis are. In the example of Konak Pier Project, laxity to the restitution project becomes a typical case in point in the preservation process. In the consistency of a decision, numbered 6880 and dated 1997, the measured drawings and restoration projects had been approved without including the restitution part. It is revealed in the decision of the preservation council, numbered 8547 and dated 2000, that restitution projects had been asked for as a missing document. This is the consequence of not taking into consideration of the entire process specifically. Similarly, in the decision of the council, numbered 2214 and dated 2000, the importance of restitution project has been emphasized.⁴⁰ Unfortunately, restitution project termed as a missing document three years after the approval of the projects for implementation. In the course of this legal process, the implementation phase has been carrying on. Lack of a mature restitution project reveals risks that are both in control and beyond control throughout the entire process. These risks entail the interruptions and corruptions of the flow of work.⁴¹

It is noteworthy that the grouping mentioned in the in-principle decision of The Higher Council of Cultural and Natural Entities, numbered 660 and dated 05.11.99, and in Article 57/b, will be affecting not only the intervention decisions and priorities, but also the types of intervention during the projecting stage of the preservation process. However, the in-principle decision does not emphasize impacts of these building groups upon the types of intervention. There has been no designation made as to what kind of a privilege is created by the grouping of the buildings to be preserved either as monument or as civil architectural sample in terms of the types of intervention cited in the in-principle decision, numbered 660. The grouping in this in-principle decision stems from the law article that envisages solely building groups of 1 and 2 as bearing various privileges. Contrariwise

⁴⁰ See appendix 12

⁴¹ See the decision of Preservation Council of Izmir, numbered 6880 and dated 16.07.1997, in appendix 7.

however, contemporary preservation theory involves distinct preservation interventions to be held separately for each building and this in turn renders the approach that identifies the “quality (or value) of building” with “the intervention type of preservation” as non-valid. Parallel to the categorization criteria, the types of intervention including the subtitle of Maintenance and Restoration may be shaped in context of the in-principle decision. Then, the process will be facilitated via correct and rapid transmit of information within the sub-process until the stage of the intervention priorities and decisions entire preservation process.

However, there resides a basic input related with the law, which precedes input of these entire legal tools: The legal status of the cultural property within the context of regulations of legal tools. Without this basic input, it is quite complicated to propound a comprehensive preservation project. In addition, the status of any cultural property must reside permanent. If it depends upon the authorities of the preservation council, the criteria of preservation emerge as ambiguous and indefinite. In other words, the preservation project will be failed to provide for the responses of consistency and features of preservation. The ambiguous and indefinite issues of the status may be revealed in a significant example of Konak Pier Project, which carries a preservation process of old customs building in Izmir.

This cultural property, which originally carried the function of customs, resides within the boundaries of conservation plan of the urban conservation zone in accordance with the decision of The Higher Preservation Council, numbered 348 and dated 1984, as well as in the urban historical site in accordance with the decision of Preservation Council, numbered 4840 and dated 1994. Furthermore, the building is regarded as the group ‘1-a’ within the consistency of preservation groups in accordance with the decision of Preservation Council, numbered 5837 and dated 1995. Consequently, in accordance with the decision of Preservation Council, numbered 8349 and dated 2000, it is consisted by the conservation (development) plan of the urban historical conservation site of Konak and Kordon.⁴²

⁴² See appendix 10.

This cultural property had carried an unestimated and unexpected transformation in its status in the course of the process of intending the projects of Measured Drawings-Restitution-Restoration. In the year of 1984, the building had not been registered although it was in the consistency of preservation area of urban historical site in accordance with decision numbered 348 of Higher Preservation Council. It was regarded to re-utilize as a touristic activity center by preservation council in 1984. The council also approved the alterations in the front façade in 1989 as the building was not registered yet. These alterations carried the removal of front façade at least 20 m. by pulling back the entrance wall, which means corruption in the original plan scheme and alteration in structural details.⁴³ Three months after this decision, the building was beared to reside in the second preservation group by the same council.⁴⁴ This is the first legal transformation of the status. In the consistency of the decision that concerns this transformation, alterations both of the material and in the structural system were regarded by the council unless there ought to be changes in both the altitude and the organization of the façades of the building. Another preservation project in accordance with the new legal status was entailed to produce. This new project had been approved by the council in 1990.⁴⁵ A general decision was taken by the preservation council attendant with the urban historical site that includes this old customs building in 1994.⁴⁶ Consequently, this historical building was beared as a cultural property with the preservation group of ‘1-a’ by canceling the previous decision numbered 1813 and dated 1995.⁴⁷ This decision, as well, arrived at a serious transformation in the status of the cultural property which has been trying to be preserved. All the projects that had been casted in the course of six years were cancelled in order to produce another new preservation projects for the last new status. From the projecting point of view, this ambiguous, unstable

⁴³ See the decisions of Preservation Council of Izmir, numbered 1017 and 1227, in appendix 7.

⁴⁴ See the decision of Preservation Council of Izmir, numbered 1378 in appendix 7.

⁴⁵ See the decision of Preservation Council of Izmir, numbered 1813 in appendix 6.

⁴⁶ See the decision of Preservation Council of Izmir, numbered 4840 in appendix 6.

⁴⁷ See the decision of Preservation Council of Izmir, numbered 5837 in appendix 7.

indefinite, unestimated, and unexpected legal process causes the loss of time, cost and work of at least six years period. Moreover, in the year of 2000, the conservation plan of the urban historical site in-between Konak and Kordon regions was approved by the council in the course of implementation.⁴⁸ This transformation of the status entails to halt the implementation phase until the decision was approved. It would be failure to identify the scope of the preservation project against to this ambiguous legal process. When the unstable circumstances are taken into consideration from the point of view of the cultural property, this loss will certainly cause more deterioration as well as issues attendant to aging.⁴⁹

Tools Relevant to the Approval Process

Projects of all scales and qualities prepared of the preservation process shall be approved by Preservation Councils. For a proper execution of implementation, the intervention type selected for each element should explicitly be indicated on due maps (plan-section-elevations). The project on scale 1/50 prepared as conforming to the criteria determined by the Preservation Council is to be presented to the Council as including the system details on scale 1/20 and the report where individual details and the materials and techniques to be used in implementation are explained.⁵⁰ These mentioned scales of the projects are relevant to the architectural drawing standards in projecting in order to constitute terms of reference within the context of preservation project. However, the preservation council possesses the authority to conduct essential revisions depending on the circumstances of the case. This essential flexibility reveals another input that resides a significant component of the pre-requisites of preservation process. As an instance, if a Roman public bath in the

⁴⁸ See the decision of Preservation Council of Izmir, numbered 8349 in appendix 7.

⁴⁹ See appendix 6.

⁵⁰ By-law of Central Board of Directors of the Chamber of Architecture in Turkish Union of Chambers of Architects and Engineers, numbered 31/2 and dated 30.01.2000, the Terms of Contract on Relevé-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff

consistency of an archaeological heritage does not have a superstructure, then, a plan of superstructure may not be regarded by the preservation council in the course of documentation of the building.

In accordance with the article 57/b of Act 2863 in Preservation of Cultural and Natural Entities, the public institutions and organizations (including the municipalities) together with the natural and judicial persons, all have to obey the decisions of Preservation Councils. According to article no. 18, the local governments only have the right to audit conditions of health and physical environment in terms of their appropriateness to legislative framework.

Besides the spatial, formal and structural characteristics, the type and qualities of the intervention required to preserve the original status within its environment are also determined by the Preservation Council.⁵¹ For those buildings to carry new functions allocated there will firstly be draft projects prepared to be presented for consideration to the Preservation Council. It is entailed for preservation councils to carry overall point of view of preservation project which is attributed to the values of a cultural property. This will prevent to reduce those values in the course of approving the priorities and decisions of the intervention as well as the types of implementation. The continuity of the cultural property is the most essential pre-requisite by carrying all the values.

Without approval of Preservation Councils, there can be no intervention in the cultural property to be preserved. The extent of this intervention involves designation of building problems to be considered in pre-assessment stage, deciphering the building, inquiries as excavations or any directly-made physical inquiries to the building (plaster rasp, partial dismantling, and the like) all in the name of clarification of the original plan scheme. Apart from these, for restitution work to constitute basis for the preservation project, all works of preservation have to be prepared as grounded upon these preliminary interventions to be established as a

⁵¹Ahunbay, Zeynep. *Tarihi Çevre Koruma ve Restorasyon*, (Istanbul: YEM Yayınları, 1996). p.164.

result of comparative research on documents as well. If it is not possible for such work to be established prior to preservation, in light of the new data emerging after the approval of the preservation project, there will be corrections on the preservation project to be presented again for approval of the Preservation Council.⁵² The problematic parts emerging during preparation of the measured survey projects are to be indicated on the measured survey project. These points to be analyzed further may be approved by the Preservation Council such that preliminary permission for work is given.

As the preliminary works will be regarded as preliminary implementations, permission should be received before any intervention in the building, but with this permission such small-scale interventions related to gathering information as excavation, inquiry, or rasping may be conducted:

(dated 17.6.1987 and altered 3386 S.K.) In accordance with the in-principle decisions of Higher Preservation Council, it is forbidden regarding immovable cultural and natural entities to be preserved, to have all sort of constructional and physical interventions, to allocate new functions or to change their uses contrarily to the decisions given by preservation councils. Restoration, construction, installation, boring, partial or complete demolition, excavation etc. works are deemed as constructional and physical interventions.⁵³

Preservation Councils

Until 1983, while the only organization obliged to solve the problems of preservation was the Higher Council for Historical Real Estates and Monuments, the regional councils established in accordance with Act 2863 aimed at solving the subjects at their own location. As the centralist approach executed by the Higher Council for Historical Real Estates and Monuments proved insufficient for the

⁵² Article II/D of the in-principle decision of The Higher Preservation Council of Cultural and Natural Entities, numbered 660 and dated 05.11.99, and Tarihi Çevre Koruma Ve Restorasyon - Zeynep Ahunbay, p.165.

⁵³ Act 2863 in Preservation of Cultural and Natural Entities, Article 6 – Intervention Without Permission and Prohibition of Use.

preservation process of cultural entities in the entire country, it has instead been the regional councils established to facilitate the process of decision-making.

In order to have a well-functioning preservation mechanism, the Preservation Councils have been founded for availability for working on regional scale and maintaining control.

Article 57 of the law determines the duties and organizes the power and working methods of preservation councils. The powers and duties of preservation councils are limited by the in-principle decisions of the Higher Preservation Council.

In the context of duties of preservation councils⁵⁴, the following issues arise: to register the cultural and natural entities to be preserved as determined by the Ministry and the cultural and natural entities to be preserved as determined by the General Directorate of Foundations; to establish the grouping of the cultural entities to be preserved; within one month following their registration to designate the building regulations for the transition period in preservation sites; to examine and approve the implementation plans of preservation and all sorts of changes involved; to designate the conservation sites for immovable cultural and natural entities to be preserved; if original characteristics are lost, to remove the registration enrollment of such immovable cultural entities to be preserved; to decide on the use of immovable cultural and natural entities to be preserved and their areas of conservation, and on the changes in ways of use, and on whether there CAN be constructions and installations established at these sites; if obliged to be moved elsewhere, to consider related implementation procedures of cultural entities to be preserved; and for the plots of immovable cultural entities to be preserved, to decide on separation and merging procedures as to leave no impact upon characteristics of immovable cultural entities.

⁵⁴ By-law on Preservation Councils and the Higher Council for Preservation of Cultural Natural Entities, The Official Gazette Date: 30.01.1989, Number: 20065, first part-Purpose, Legal Base and Abbreviations, Article 6.

Evaluation of the Tools in Approval Process

Thus, the new implementation process is initiated with a short pre-investigation analyzing the possibility of the project. The latter may be enumerated as: The projecting and implementation sub-processes as well as the revisions of the details in the projects during implementation process. It is regarded that the data can be transformed into accurate information in the process of a project. The final product is attained only with quite minor deviations where flow of such information is sustainable in a sound manner. In contrast, however, in preservation projects this is not likely to be the case. For all sorts of interventions to be held, the measured survey-restitution-preservation projects on due scales must be approved by the council at the beginning of the process. The fact, however, that this approval mechanism takes place at both the start and the end prevents the preservation process, in which parameters and relations are very numerous and keep functioning well. No matter what the type of intervention, contingent, if the council does not approve the work upon completion, it may decide to have all disassembled and be re-implemented. However, in the course of approval process, preservation council should suspiciously inspect the proposed project in order to reveal the objectives of regarding or declination the project precisely. In other words, the issues that are hindering the flow chart of the process ought to be identified by the council obviously in order to provide for a modification and integration throughout the scope of the project. Otherwise, this indeed amounts to a serious deviation from the determined target of the preservation project. In the context of the process, this is a risk that will make for loss of time, money, labor and quality in the final product. Furthermore, the facts that there exists no common language and terminology between preservation councils, that a preservation approach to be adopted in one region is regarded as inappropriate in another, and that there may arise inconsistencies between different decisions, may be the cause of important risks in particularly the project stage and entailed by these risks, there may be loss of time and money.

For, regional preservation problems can not be handled by a single central institution. The fact that there similarly is lack of coordination between the regional preservation councils also constitutes a risky situation with respect to the process of preservation.

In addition, the decisions taken by the preservation councils need to entail to be stabilized in the course of implementation phase. As it is emerged in Konak Pier Project, which is given as an example in Chapter 3.3.1, the legal status of the cultural property with the values to be preserved is transformed three times by the council: not bearable for the registration, registration as a second degree of preservation groups, regarding in the preservation group of ‘1-a’. According to the first decision of the status, this historical building possesses only the front façade with the values to be preserved. On the other hand, according to the final decision, the building is regarded as a cultural value including all values for a preservation phenomenon entails to carry.⁵⁵ This means to produce different projects for each of the status in the course of projecting process. It is obvious that, each phase is the pre-requisite of the latter. In other words, obtained information of each phase constitutes a database for the subsequent stage. This unstable situation of the legal status in the course of projecting process directly affects the flow of implementation phase. In order to prevent such a loss not only in time and cost but also in values of the cultural properties, the Higher Preservation Council should provide for a coherent legal process by being constantly in touch with the preservation councils. Transformation of a legal status three times in six years is quite noticeable issue for the sake of cultural identity.

Lack of any common language between councils, moreover, results in inconsistency among similar decisions of different councils. This is revealed during interpretation of and the effort to render more flexible the statements of the acquired written legal documents.

⁵⁵ See the decisions numbered 1017, 1378, and 5837 of Preservation Council of Izmir in appendix 7.

The definitions in the Terms of Contract on measured survey-Restitution-Restoration Services of Cultural Entities to be Preserved and the Minimum Values Tariff have been formulated with the intention to arrive at a common language in context of preservation projects. Lack of any common project language and terminology as one of the greatest disruptions in the context of preservation projects impedes the process.

Another kind of trouble pertaining to the legal tools is that the statements in their contexts involve general approaches and do not comprise explicit definitions. With respect to consideration of different preservation cases, it is acknowledged that it is difficult to adopt any standardization. Still however, if there is the effort to preserve the cultural heritage by way of a central institution, then in regional implementations these decisions should be rendered flexible, without, of course, loss legitimate ground. Otherwise, with regard to an implementation type where no standardization is possible, a general consideration may not entail a sensitive solution.

Cultural identity, the necessitate of continuity, and the aim of preservation ought precisely be perceived in the decisions of preservation councils. This will support and maintain the determination and attitude of preservation councils. In addition, it will remind to the project team that minimum (relevant) intervention-maximum preservation is the basic principle.

Prior to the activity of Preservation mentioned in in-principle decision, numbered 378 and dated 28.02.1995, concerning Preservation Maintenance and Preservation of Immoveable Cultural Entities, the council should give permission to pre-implementation for the preliminary assessment phase so that the process may attain a sound functioning system. With regard to the pre-assessment phase for the preservation project, in case preliminary interventions cannot be made, it is then not possible to reduce the risks faced in the initial stage of the process. In absence of any pre-implementation, it will not be possible to prepare the measured survey-restitution-restoration projects with adequate information.

Following the approval of these projects by the council, all sorts of pre-implementation acts to be established will require revision in the projects. In contrast however, as the project context and the new function to be allocated are determined prior to project approval, the extent to which the foreseen revisions will bear adverse impact upon the project context and the entire process is set forth as an additional risk implicit in the process of preservation. Furthermore, the inability to fully accomplish pre-assessment threatens not only the allocation decision of a new function, but also the intervention priority and decisions.

As Konak Pier Project is emerged as case in this point, it is resorted a number of times to preservation council in the course of implementation for approval of either additional measured drawings or revision of implementation details. The last approval of revision of projects is in accordance with decision, numbered 1053 and dated 2003.⁵⁶ The reason of these revisions depends upon both physical difficulties of cultural property and insufficient documentation without any relevant pre-implementation in pre-assessment phase at the beginning. As the council declined the approval of pre-implementation that precedes projecting phase, the initial measured drawings consists of applicable and attainable parts, details, or spaces of cultural property. The latter, the definition of new function and decisions and types of interventions have been constituted depending upon these insufficient measured drawings. Projects with indefinite and ambiguous information are revealed. In addition, these projects were approved by the council. In the course of implementation phase, the revisions of projects are inevitably entailed: the unestimated and unexpected details, techniques, or materials are emerged from unattainable, inaccessible, and unobtainable spaces of cultural property. The preservation council halts the implementation process until approving the revisions in order to prevent incorrect (!) intervention as in the decision of council, numbered 7723.⁵⁷ The approval process of revisions are caused interruptions and delays in the time schedule of implementation phase as the project team had informed council in

⁵⁶ See appendices 6, 7, 11, 12, 13, 14, 16, and 20.

⁵⁷ See appendix 10.

the report, numbered 3207. If preservation council allows project team carrying pre-implementations in the frame of legislation, there will be no interruptions and delays originated from insufficient documentation and analysis. If preservation council takes seriously into consideration of pre-assessment phase, there will emerge comprehensively precise obtained information for conducting and auditing implementation phase. Besides, the council fails to approve these revisions at once due to a number of statements. Since sustaining the process is hindered, this time loss will absolutely deteriorate and alter the cultural property.

A further approval issue that interrupts and corrupt implementation phase is declining the approval of revisions or sustaining the process before obtaining the major decisions of superior scales. For instance, in the decision of preservation council, numbered 1951 and dated 2002, it is propounded that evaluation of revisions of projects is impossible unless the approval of conservation plan with the scale of 1/1000 has been revealed.⁵⁸ However, the revisions of an implementation project are unrelated to a conservation plan in environmental scale as this conservation plan includes the refunctioning of that customs building. This reveals the illegal process and infraction of rules in the process of preservation. These kinds of decisions taken by the council will always cause a serious amount of time and cost loss.

In the consistency of the preservation projects, all legal institutions should obtain comprehensive information at the same detail from projects. In other words, projects must be intelligible in quality. This means documentation entails regarded architectural drawing scales although it is irrelevant to establish a number of standards for quite dissimilar cases of preservation. Hence, decisions of preservations should depend upon these documentations in order to obtain comprehensive and sufficient information: In Konak Pier project mentioned in Chapter 3.3.1, the initial project that was approved by the council possesses the scale of 1/250.⁵⁹ This will emerged as a further risk in preservation process. This scale is

⁵⁸ See appendix 17.

⁵⁹ See the decision of Preservation Council, numbered 6880, in appendix 7.

insufficient for proposing an appropriate function as well as producing priorities, decisions, or types of intervention.

If the pre-implementation to be held is within knowledge of the Council and if the obtained data may be delivered to the Council in an intermediary phase prior to the submission of projects, then the approval process may attain a more sound system of functioning. While collaboration between the Preservation Council and like project group admits of establishing an almost completely accurate work flow chart and ensures reduction of deviations from the final product. This collaboration, moreover, prevents loss of time, money and quality. The share of decoding risks existing in the body of the building transforms the risk input that are dependent upon legal tools. Those legislative input can not be audited except for the project process and render them emerge as convenient and in control.

Even merely, the purpose of auditing the conditions of health and physical environment is in terms of conforming the legislative framework. The appropriateness of the conditions is approved by the municipality. In addition to this collaboration, terms of reference for this municipal approval should be privatized in terms of preservation criteria. This privatization will be providing for the integration of preservation projects. The fact that municipal audits of health and physical environment in line with article No. 18 are not defined via privatization in context of legislation specific to ancient monuments will influence the types of intervention.

Besides, the fact that the municipalities are involved in only one part of the preservation process will cause them to lack of the ability to arrive at the right decisions with respect to the decision-making process under their responsibility, since they cannot audit the entire project context. With this objective, the execution of approval and auditing process of preservation projects by the council may be entailed in coordination and in communication by interacting with the local authorities. However, it is obvious that the projects that are approved by the council may not be revised or declined by the local authorities. Precedence for approving belongs to preservation council.

Apart from that, the implementations in line with the decisions taken may result in buildings subjection to damage as well. This in turn will result in such conflict between the municipality and the preservation council as may affect the project process as a risk that was not anticipated and for which there is no compensation. Accompanying the deviation from the quality of final product, it will to a great extent be the cause of loss of time, money and labor as well.

As a further example, in Konak Pier Project, the duration of the process is determined as 665 days in accordance with the time schedule by the supervisors and the owners of the project. Unfortunately, the interruptions and delays originated by indefinite and unexpected input in the course of both projecting process and approval process cause the loss of six years time at the beginning of the process.⁶⁰ These indefinite, unestimated, and unexpected input emerge as risks that are beyond control. In addition, there reveals risks originated from insufficiencies of the definition of scope of the preservation process.

As revealed in article II/d of in-principle decision numbered 660, the projects have to be prepared with such documents acquired via pre-projecting procedures including plaster rasp, partial dismantling, physical inquiry, etc. The underlying reason is the obligation that the preservation projects be based absolutely on documents. It is not possible for a project to be realistic if prepared irrespective of pre-research. If there exists no opportunity for such studies to be held prior to preservation, then the statement where the projects are to be presented to the council after having been altered is not practical. As there will be a constant flow of input obtained in those projects prepared in the absence of pre-assessment and pre-implementation, the projects will continuously be altered and repeatedly be presented to the council. Besides, the probability of newly emerging data to influence the main decisions of the project is rather high. The preservation process will be repeatedly disrupted and the rate of deviation from the target determined for the context of the project will continue to increase.

⁶⁰ See appendix 6.

A more detailed definition of the criteria for designation of the principles concerning preservation of cultural entities in context of the related bylaw will be more effective in terms of the functioning of the preservation process. If a clearly defined legal framework were in question, then the preservation principles would have occupied more explicit place in the bylaw.

Preservation council should sensitively conduct the preservation of the values, the consciousness of cultural identity and continuity, and the quality of projects as well as legislation is completely effective. All preservation activities are entailed to integrate throughout the entire process in case a historical building is determined to be preserved as a cultural property. Each intervention which is approved and regarded by the council should carry to possess a scientific and theoretical base. In the consistency of Konak Pier Project, the significance of front façade of the cultural property is noteworthy without any statement in the decision of the council, numbered 6762 and dated of 1997. The further values to be preserved are undervalued. Concept of construction of a pedestrian road through the cultural property is approved in the case of preserving the front façade.⁶¹

Legal approval process entails complete projects. The aim approval of the projects should carry the preservation of values of the cultural property. However, preservation council approved incomplete and ambiguous projects in accordance with the decision, numbered 1378, although incompleteness of the documents is mentioned. On the other hand, the defects of the project are not identified. This decision causes interruptions, corruptions, and delays throughout the implementation phase besides affecting the scope of the project.⁶² If these ambiguous and indefinite documents are not beared, the risks that are beyond control will be reduced in the course of implementation phase.

Anticipating the reduction of risks entails to make current the initiatives and flexibilities of preservation councils. The risks as in Konak Pier Project may be

⁶¹ See appendix 6.

⁶² See the decision of Preservation Council, numbered 1378, in appendix 7.

eradicated by conducting approval process in terms of identified values of preservation. At least, there should be a conscious pre-assessment phase and detailed documentation as well as comprehensive, precise, and operative decisions of interventions.

Tools Related to the Implementation Process

In the context of the preservation process, the stage following the approval of projects by preservation councils is that of implementation. Article 57/g of Act 2863 on the Preservation of Cultural and Natural Entities is related to decision-making for implementations of immovable cultural and natural entities to be preserved and their areas of conservation. The preservation councils have been entrusted with this task. The preservation councils have determined the types of intervention and granted permission for the framework of the implementations to be established. Concerning the building to be preserved, there can be no implementation held without the approval of projects by preservation councils.

In preservation implementations, types of intervention concerning the building are determined according to the physical conditions of the building to be preserved. The decisions on intervention are ranked according to impaired or aged material or loss of material and structural deformations resulting from aging, extremely-dense use or disuse of the building.

There accordingly exist two categories: those interventions, which only intend to sustain the life of building and require no alteration in design, material, structure and architectural elements (maintenance); and those which do require the mentioned alterations (restoration). In accordance with the decision of the preservation council, the implementation of maintenance is to be accomplished under audit of municipalities and the relevant branch of the Directorate of Museums. Following the completion of implementation, due reports and photographic documents are to be delivered to the preservation council. Those maintenance implementations that are regarded as inappropriate are to be renewed.

Cultural property is a deteriorated and altered old construction. Interruptions may be destructive and risky to the building. This indicates conducting a sensitive and careful process of implementation. The scope of implementation should be planned in order not to deteriorate more. This will reduce the risks as well as prevent the loss of values.

Incorrect implementation originated from insufficient and ambiguous projects will cause irreversibility and loss of values. The more comprehensive projecting and sensitive approval, the more efficient implementation phase will be.

Audit of Implementation

In-principle decision of the Higher Preservation Council of Cultural and Natural Entities, numbered 660 and dated 05.11.99, it is noteworthy under the subtitle of “maintenance and restoration” that the implementations are to be made, in line with the preservation council decision, under audit of municipalities or if any, directorate of preservation council, or if none, by the related museum directorate.

In explanations included under the title “audit of implementation” of the same in-principle decision, it is also noteworthy that the architect as supervisor of the project may undertake the professional audit responsibility required for the implementation to conform to the council decisions.

In both alternatives, auditing is to constitute the basis of implementation and is to refer to those projects regarded by the Chamber of Architects as conforming to minimum drawing standards, on the one hand, and as having been presented to and approved by the preservation council, on the other.

Evaluation of the Tools in the Implementation Process

The most serious trouble with preservation councils is that this institution does not operate within an auditing mechanism. However, in the context of the

Preservation Project, the preservation council shall become involved prior to start of the project process while the context of the project is still being defined. Yet during the definition phase of the project, informing the council about the project supported with proportioned drafts will provide sound and continuous auditing of the process. The preservation council should approve the project context so that the studies to be held for implementation projects may be initiated.

In the course of the preservation project, implementation may be divided into two sub-groups: pre-implementation in the consistency of pre-assessment phase⁶³ and the main implementation stage following the projecting. The main implementation stage is taken into consideration by the preservation council. All prepared projects as well attain a position supporting this stage. At the end of the implementation stage, when the council makes a comparison between the projects and their implementation, each has to accord with the other. In case there exists a contrary implementation, the council is to have the implementation dismantled for re-construction. As no approval by the council is required at intermediary stages, it appears to be a risk to await such a council decision until the end. If the preservation council were to monitor every stage of implementation, then the final product of the main implementation would bear no surprises. The council's decision for dismantling the applied implementation amounts to deviation from the adopted target of the project context. This in turn results in loss of money, labor and quality. Another adverse issue is that the council does not interfere in intermediary stages.

The process of collecting data should be completed comprehensively and thoroughly in order to sustain the implementation phase without interruptions or delays within the frame of legislation. The risky inputs that will cause these interruptions or delays should be identified in and before the projecting phase. When

⁶³ Pre-Implementation: with the intention to question whether the existing building is appropriate for the new function, to minimize the Risks through analysis of the building's physical conditions, and to collect all the data concerning the building, pre-implementation may be deemed as a small-scale implementation model (such as plaster rasp, trial boring excavation, etc.) referring to research in physical terms that affect the decision-priority-types of the main intervention.

a small detail of an indefinite input is neglected, this negligence will transform into a serious issue as a risk that is beyond control.

Those types of risks originated from collecting insufficient data are confronted in the implementation phase of Konak Pier Project. The first risk group may be termed as ‘legal and external’. These risks indicate interruptions, changes, and delays in the time schedule of implementation phase. The source of risk depends upon the legal input in the course of approval process as it is explained in Chapters 3.4.1 and 3.4.2: Pre-implementation, which precedes the approval of the projects by the council, is not allowed in accordance with Act No. 2863 in Preservation of Cultural and Natural Entities. This law absolutely entails revisions of project whenever the building is attainable. In the consistency of report, numbered 3207, by the supervisor of project, a number of revision projects are submitted to the council for approval.⁶⁴ In the course of implementation, any step may reveal new details that could not be documented before the projecting. These new details should be documented and approved by the council. Besides, those input may indicate a revision in the priorities and decisions of intervention as it is mentioned in the decision, numbered 7723, of preservation council in Konak Pier Project.⁶⁵

The other risk group may be termed as ‘internal’ as the risk is originated from negligence of project team. The pre-assessment phase may not adequately be taken into consideration unless the process of preservation is well-known. In this case, the indefinite data resides as an internal input, which means under the control. Unfortunately, this data may be transformed into an external risk that is beyond control when ambiguous and indefinite documentation and analysis was conducted in pre-assessment phase. Consequently, this indicates additional revision projects, which indicates additional time and money. Changes in cost estimation and time schedule will cause a deviation in the final product.

⁶⁴ See appendix 9.

⁶⁵ See appendix 10.

The final risk group mentioned above may be termed as ‘specific’: To complete the significant and articulated architectural elements or details may be determined as to be documented thoroughly. If this element is not noteworthy at the initial documentations and analysis, no matter whether implementation is sustaining, preservation council will certainly require for it. In the decision of preservation council, numbered 3306, one of the most significant ornaments of Konak Pier, *tuğra* on the front façade, is not documented. Besides, there exists no preservation decision for *tuğra*.⁶⁶ The implementation is halted in order to document this element as well as produce the priorities and decisions of intervention for it. At the moment implementation is halted, the time schedule fails. The source of this risk is originated from insufficient documentation and analysis that precedes the projecting phase. The planning and scope of implementation phase in the course of pre-assessment phase will provide for these transformed risks.

Any revisions in the project will deteriorate the cultural property, affect the quality of final product as well as cause interruptions and delays throughout the entire process. Lingering at the council for approval means halting the implementation. As it is mentioned in the decision of the council, numbered 10145 and dated 2002, revision request for restoration projects will not be approved unless the necessities of previous decision, numbered 9037, fulfilled.⁶⁷ At the moment, the operation of cleaning the corrosion of the unique wrought iron pillars may be sustaining. Halting this operation will certainly deteriorate the material as this must continuously be completed in 24 hours without any fracture. If the step of the operation could not be handled within this time limitation, the historical unique structure of building stays defenseless against external effects. Unfortunately, this is irreversible although in the context of preservation, the implementations must be reversible.

⁶⁶ See appendix 18.

⁶⁷ See appendix 13.

Prior to the projecting process, such pre-implementations of the pre-assessment as foundation boring, plaster rasp and trial boring excavations for parts below-level are those interventions that are absolutely necessary for sound functioning of the preservation process. These are established to collect data to make up the infrastructure required for the information to be used in context of the preservation project.

Absence of the council in the maintenance of the implementation process, its inability to function as a continuous mechanism of audit, causing repetition of the unapproved intervention in the end, amount to loss of time, make for additional cost and labor.

Environmental data, on the other hand, constitute a design input that are as effective as the parameters/data sheltered by the building itself. There involves risk in these environmental input at least as in the body of building.

The audit of implementation is as important as the project approval of and decision upon the types of intervention. It is of direct influence upon the preservation process. The periodical audits to be held in the context of the implementation process decrease error rate and risk possibility. However, in in-principle, numbered 660, the only statement used has been, “under audit of” and no further information has been given as by whom this audit is to be executed. In the context of the process of the preservation process, the matter of how the auditing mechanism will be handled should also be defined with respect to the particular preservation. If preservation councils at least decide on the periodical audit to be made on the basis of implementation, then the implementation process may be relieved from any dismantling at the end of the implementation, of unapproved maintenance and restoration. This in turn will reduce the deviation from final product revealed in the definition of the project context.

The facts of auditing of implementation may be enumerated as: the projects are approved by the preservation council at the beginning of the process; the council does not get involved in between different stages of process on the condition that there exist such unidentified data as risks; and these risks leave impacts upon the

preservation project at every stage of the process. All these facts (input) indicate that the audit mechanism cannot fully be affective. As a chain reaction, the very limited time for the beginning process causes the audit mechanism to function inefficiently and therefore disrupts the implementation process.

No continuous audit can be realized in functioning of the preservation council. In occasional audits, only precautions are made for specific defects of the project.

Vakıf Institution and Preservation

The original characteristics of the vakıf institution have necessitated an analysis to be elaborated under a separate sub-title of maintenance and preservation processes.

Having undergone through its most productive and splendid period during the classical era of the Ottoman Empire, the institution of the vakıf has played a crucial role in the analysis of changes and developments in the field of construction and restoration of the past. This institution has particularly facilitated the construction and restoration of all public monuments of architecture. At the end of the eighteenth century, the first steps were taken to gather the vakıfs under shelter of a central administration. Hence, following the political reformation period (1839-1876) of the Ottoman Empire, the services have been collected in one unit. The requirement of applying for approval from the Ministry of Awqaf (plural of vakıf) for large-scale (fundamental) restorations was introduced as part of the centralization. One of the most important characteristics of the Ottoman vakıf institution is that the monetary resources have been under continuous use so that the buildings were able to sustain their lives by way of continuous maintenance without any emerging need for restoration.⁶⁸

⁶⁸ Madran, Emre. *Tanzimattan Cumhuriyete Kültür Varlıklarının Korunmasına İlişkin Tutumlar ve Düzenlemeler: 1800-1950*. (Ankara: ODTÜ Mimarlık Fakültesi, 2002). pp 9, 10, 35, 39.

The institution of the vakıf was an important characteristic of Islamic social, economic and religious life. It is still the specifically Islamic Form of property maintenance; with some internal restructuring, it could be the mainstay of preservation and conservation efforts. As an example, a government organization (General Directorate of Pious Foundations) established as the descendant of old vakıf institutions (and an intermediate nineteenth century Ministry of Awqaf) has been moderately successful in maintaining the monuments/institutions under its aegis and has expanded its activities into the fields of restoration, reconstruction and adaptive reuse.⁶⁹

As it has been in effect also during the Republican period, the institution today functions as the General Directorate of Foundations. Some privileges of the phenomenon of the vakıf have also found their reflection in Act 2863 in Preservation of Cultural and Natural Entities. According to this Act,

Following the preservation council decisions, the preservation and assessment of those immovable cultural and natural entities belonging to orderly/recorded and amended/added vakıfs under governing or audit of General Directorate of Pious Foundations and those cultural entities such as mosque, turbeh, caravansary, medresseh, khan, Turkish bath, masjid, small dervish lodge, lodge used by Mevlevi dervishes, fountain etc. under ownership of natural and judicial persons are to be executed by General Directorate of Foundations.⁷⁰

Accompanied by the Ministry of Culture, the General Directorate of Pious Foundations is one of the two important institutions holding information and authority in the field of preservation in Turkey. With the advantage that it constitutes a venerable institution, it bears settled rules and priorities. The “Ancient Monuments Unit Price Descriptions”, “Ancient Monuments Price Analyses” and “Unit Prices”, were all constituted under authority of the General Directorate of Foundations and The Department of Monuments and Building Works (Abide ve Yapı İşleri Daire Başkanlığı) related with preservation implementations, are such written legal tools that are in effect irrespective of law and in-principle decisions. In addition, they are

⁶⁹ The Aga Khan Award for Architecture - Conservation as Cultural Survivor, Architectural Transformation in the Islamic World (proceedings), İstanbul Sept. 26-28, 1978, p 9.

⁷⁰ Article 10 of Act 2863 in Preservation of Cultural and Natural Entities – Authority and Method.

known to be the most fundamental documents that shape restoration implementations.

These documents consist of not only the list of the preparation cost of materials, destruction-scraping work, consolidation work, mould and catwalk applications, metal works, floor and wall productions but also description of *yonu taşı* and marble work, plaster works, roof coverings, ornamentations; door & window works, by analyzing components on the basis unit price of each.

The first document, which includes the preservation of monumental buildings only, refers to the unit price document of the Ministry of Public Works. As it is an old document, generally the implementation, which is peculiar to each building, should be defined and prepared the price analysis with reference to the document of the Ministry of Public Works or by comparing the price with those indicated in the publications of The Ancient Monument Building Works (*Abide ve Yapı İşleri Daire Başkanlığı*). Finally, measured drawings, preservation projects and the details should be prepared according to the technical contracts. In addition to the technical contracts, there are a number of sub-contracts involved which concern application and general transportation. Unfortunately, the descriptions and definitions used in terms of reference of the preservation project were not consisted by the documents of 'Ministry of Public Works'.

As the unit price descriptions and analyses given by The General Directorate of Pious Foundations have lost their currency, they no longer cohere with, and are capable of guidance in, requisites of implementation. Despite the fact that they have been approved by the preservation council, material or technical decisions necessitated by Implementation in technical terms of contract or unit price analyses are not compensated, for they have not been included in unit price descriptions. Even though pre-assessment of adequate detail will have been accomplished at the beginning of the process, out of date and incomprehensive legal documents constitutes serious risk concerning the implementation stage. In this case, all sorts of works to be conducted until the implementation stage will result in loss of time and money since the foundations will not advance any payment. Even though the

approval of the project is due to the body of Preservation Council, the unit price descriptions of the General Directorate of Foundations are not under audition of the Preservation Council. This in turn causes the *vakıf*'s immediately to rank prior to the council within the mechanism of approval and auditing. In the context of the project, the interventions proposed in line with preservation theories are approved by the preservation councils. But in the implementation stage, when the general directorate of foundations audits in order to determine those interventions of the project that do not take place within the foundation's unit price terms of contract, the project will collapse. Spending efforts to conform to the descriptions included in foundation documents do not appear possible under current conditions. Besides, the facts that the general directorate of foundation manage rules of its own and that personal values play an effective role in audit mechanism, both result in collapse of the working organization.

Due to quite well-known past vakif institution, its ways of functioning by settled rules and priorities and its inability to monitor the process all increase risks of the mechanism. It is not possible to stretch these rules and the definitions in unit price descriptions and analyses. The fact that the type of intervention emerging as a result of the analyses and borings are not included in descriptions is synonymous with destroying the entire package of work conducted until then.

General Scope of Legal Framework

As serious risks within the preservation process, all disruptions stemming from legal tools prevent defining the project context and constituting a working programme particular to preservation.

Consideration of the critiques mentioned throughout this chapter displays the intention as concerned with providing a proper functioning of the preservation process devoid of any disruptions. A process of which the continuity has been attained with the prevention of disruptions may be assumed to be going to

accomplish the end of preservation. As for the proper functioning of the process, it will be preventing loss of time, money, and labor.

As can be depicted in effect on the basis the legal framework, the phenomenon of preservation has been neglected in Turkey. In the process of preserving cultural properties, establishment of the criteria for the preservation of values as well as the scope of these preservation criteria will be elaborated within the framework of legal structure. Whilst clarifying the work description and project context of the preservation implementation, the legal tools will be of considerable help. However, when the current legal framework of preservation matters is considered, it can be monitored that the legal tools have either become insufficient or have lost their currency.

Prior to Act 2863 in Preservation of Cultural and Natural Entities, the Act 1710 in Ancient Monuments had come into effect in 1973.⁷¹ Prior to 1973, the only legal framework for preservation in the Republic of Turkey had been the *Asar-ı Atika Nizamnamesi* (Regulations on Ancient Monuments).⁷² This law has borne considerable impact upon the current regulations. For instance;

[...] in article 2 of the second part of the regulations there appears the list of the immovable and movable monuments. Mentioning - Enumerating monuments together with their number, name, and definition will be the matter of Acts 1710 and 1863. The interesting thing is that while ‘houses’ are regarded as ancient monuments in the regulations, 67 years after this, the house has not been included as an element to be preserved in Act 1710 in re Ancient Monuments.⁷³

As manifest hereby, the disruptions in legal tools concerning preservation to some extent depend on the inconsistency of relations among these tools.

Within the framework of the preservation process, another reason of disruption in legal tools directly affecting the stages of projecting and

⁷¹ Bektaş, Cengiz, *Koruma Onarım*, (Istanbul: Literatür Yayınları, 2001). p.97.

⁷² Madran, *ibid*, pp.41-43.

⁷³ Madran, *ibid*, p.44.

implementation is the generalizing approach in articulating definitions. By virtue of the inadequate descriptions contained in the definitions made in this general approach, there inevitably occur disruptions in the process. Contrarily however, no standardization may possibly be valid for the phenomenon of preservation. Every implementation shelters different undefined issues and different risks. Any definition that would be entailed in a legal tool shall bear such flexibility as comprising the differences in preservation projects, without permitting any generalization that may pave the way for new indefiniteness in the context of project.

All decisions of the council in the consistency of Konak Pier Project carry the same difficulties in legal expressions. The statements of decisions are not clarified the incomplete or incorrect parts of the projects as well as the requests or requirements. If these statements of requirements are established precisely and comprehensively, the conflicts of decisions will be reduced. In addition, the project teams will be interacted and in touch with the council. Interaction will provide for a common terminology, which entails the consciousness of preservation process. In the decision, numbered 9209 and dated 2001, it is written that, "...to restore in accordance with the physical characteristics of original façade and superstructure..."⁷⁴ This expression is unclear to obtain the priorities, decisions, or types of intervention to be implemented. In other words, the point is whether the requirement of this expression is included by the produced project. This expression depends upon the preservation point of view, intelluactuality, and sensitivity of one who should receive. However, the definition of the type and decision of intervention should have been expressed.

Another issue that has remained inadequate with regard to legal tools is the values of cultural properties. The inevitability of preserving the cultural properties has been defined but it has been left unclear the aim of this preservation. The reasons for preserving the cultural entities are the values they possess, as already mentioned in Chapter 2. These reasons shape the intervention decision, priority and types as

⁷⁴ See appendix 15.

crucial data required for context and definition of the preservation project. On condition of inadequate definition, the process may end up with mistaken preservation implementations.

The values of cultural property may be categorized by the preservation council in terms of evaluation criteria. These criteria will provide for terms of reference as well as a specified common terminology. Terms of reference and terminology by means of legal tools are entailed to improve the consciousness of request for re-definition preservation process. Legal documents should depend upon scientific statements. Within the context of pre-assessment process, the values of the cultural property should be requested including scientific proofs and requirements by the council. This means completed comprehensive pre-assessment work and operational documentation. In the decision, numbered 5837, a number of these values are noteworthy. The statement of emphasizing is increase in the category of cultural property. In other words, the group 2 is transformed into the preservation group '1-a'. If the pre-assessment phase had comprehensively completed, as it is necessary, and if the council conducted sensitively and consciously, this building had already resided as a cultural property.⁷⁵

Konak Pier Project, which is given as spot samples as this cultural property carries a very complicated preservation process besides being a difficult structure to intervene and implement. In addition, the scope of the legal process includes substantial types of issues and risks as well as conflicts and corruptions. These are the reasons for determination of this cultural property in the consistency of this dissertation. Both the preservation process and the legal process have been sustaining since 1989. There exists substantial number of decisions taken by the preservation council. These decisions are comprehensive, incorrect, contradictory, unstable, ambiguous, unexpected, or estimated. Along with these decisions, it is unattainable to reveal a common sense. There is no integration in legal documents of this cultural property although each decision constitutes a pre-requisite to the latter. In this case,

⁷⁵ See the decision of Preservation Council, numbered 5837, in appendix 7.

the proposed temporary solutions reveal permanent issues throughout the entire process and unestimated obstacles that are beyond control. Consequently, the preservation process is emerged as awkward.

As a further example, the request of revision projects reveals while the implementation phase is sustaining as the types of intervention depends upon the indefinite, incomplete, and insufficient documentations, analysis, restitution and restoration projects. In addition, it is entailed to obtain a license for implementing the revisions (*tadilat ruhsatı*) from the municipality. This license carries the pre-requisite of possessing another license for construction. At that moment, this cultural property does not possess that construction license as the construction date is in 19th century. According to the legislation, it is not allowed having revision license without construction license. There pertains no legal tool taking into consideration whether the building is a cultural property or a new construction. Since the building was not registered, at the same time, it is in the filling area determined by The Ministry of Public Works. The building has been registered as a cultural property as soon as possible and this saved its life. Hence, the constitution of conservation plan in the scale of 1/1000 and the revisions in the conservation plan in the scale of 1/5000 is entailed in order to be approved as a cultural property. After all the approvals are completed, the revision projects of building scale could be approved by the council. Until, the implementation should be halted.⁷⁶ This adventure causes substantial loss in time, cost, and work.

In legal tools, the cause-result relation cannot be evidently constructed. Consideration of this on the basis of samples results in indefiniteness and risks possibly to occur in the process. The undefined issues and consequent impasses of the legal tools appear to be the cause of undefined and indefinite input in context and layout of the preservation process.

Finally, the legislation is entailed to be specified in terms of preservation. The differences between cultural property and the new construction must be clarified.

⁷⁶ See appendices 16 and 17.

The following tables as an interpretation, consist of the issues that are the essential reasons, responsables for those issues, and the risks of Konak Pier Project. The issues are enumerated in the first column while the risks take place in the third. In addition, the final column is pertained to the proposed precautions which will be the essential principles in the re-definition of pre-assessment phase of preservation process. Each table represents the sub-process of legislation within the frame of Chapter 3. This format of the tables will provide for a database for further cases. Each case will carry a few additional risks as each project resides unique. Consequently, this table will transform a checklist for the pre-assessment phase:

Table 0.1 -Table of issues in terms of ‘Before Projecting Sub-Process’ in accordance with Konak Pier Project.

	ISSUES	Responsible for	RISKS	Proposal
Before projecting sub – process	Not taking into consideration of the phase of pre-assessment precisely (from the point of view of time estimation).	Project Team & Preservation council	Interruptions & postpones in implementation phase; Deviation in the final product.	Detailed investigation will prevent internal input to transform into risks that are beyond control.
	Not conducting detailed documentation, pre-implementations, and analysis	Project team	Unexpected and unestimated risks in the course of implementation phase; Ambiguous intervention priorities and Inappropriate preservation decisions.	Detailed and operative documentation and analysis will provide for maturity in restitution; Conscious pre-implementation will directly affect priorities & decisions of intervention.
	Insufficient definition of scope of project.	Project team.	Failure in preserving values; Failure in cost & time estimation.	Defining ambiguous, unestimated, & unexpected data will reduce deviation.
	Failure in cost estimation	Project team & legislation	Loss in total quality of final product	Defining unestimated, unexpected, and indefinite data will enable estimating costs; High total quality in final product means preserving values
	Out of date written legal documents	legislation	Failure to define scope of project; Failure in cost and time estimation; Communication problems with legal authorities.	Legal documents should become current; Common terminology will provide for essential communication

Table 0.2 -Table of issues in terms of ‘Projecting Sub-Process’ in accordance with Konak Pier Project.

	ISSUES	Responsible for	RISKS	Proposal
P r o j e c t I n g s u b - p r o c e s s	Insufficient measured drawings that are not constituting a database for projecting phase.	Project team & preservation council	Insufficient projects; Initiating implementation phase with incomplete projects; Interruptions in both implementation & projecting phases in order to complete & detail ambiguous parts	Detailed pre-investigation will reduce risks throughout entire process.
	Insufficient & incorrect projecting	Project team & preservation council	Interruptions in flow of information; Inoperative priorities & decisions of interventions; Improper interventions & implementations; Deviations in final product.	Obvious & comprehensive investigation & analysis will constitute essential information as an input for projecting phase.
	Transformation in legal status	Preservation council	Loss in time & work; Failure in producing projects;	Constitution of terms of reference in the context of preservation will provide for definite projecting process.
	Criteria of projecting	legislation	Obstacles for fulfilment of pre-requisites of preservation; Constitution of incorrect & indefinite input; Obstacles in expressing aim & scope for decision priorities.	Attaining precise & explicit new criteria of projecting phase; redefining projecting process in the consistency of preservation; & taking into consideration of pre-requisites will provide proper terms of reference.
	Discounting restitution projects	Preservation council	Inaccuracy in intervention priorities & decisions; Incorrect implementations.	Detailed pre-assessment will provide for a mature restitution; Mature restitution will prevent interruptions & obstacles in implementation phase besides deviation.

	Approaches without consisting of preservation of cultural identity & cultural property.	Project team	Insufficient documentation & analysis; Inaccuracy in restitution; Interruptions in flow of information; Incorrect implementation; Loss of values & deviation in final product.	Constitution of integrity will provide for definition of scope of project; Will provide for anticipating entire process; Will provide for attaining desired preservation quality at the end.
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Table 0.3 -Table of issues in terms of ‘Approval Sub-Process’ in accordance with Konak Pier Project.

	ISSUES	Responsible for	RISKS	Proposal
A p p r o v a l s u b - p r o c e s s	Transformation in legal status	Preservation council	Loss in time, cost, & work; Unstable, ambiguous data to produce priorities & decisions of intervention; Inoperative projects; Loss of values; Deterioration & alteration at cultural property.	Being determined & stable of preservation council will help to obtain aim & scope of project; coherent decisions of council will entail constitution of terms of reference.
	Ambiguous, indefinite, unexpected & decisions of preservation council.	Legislation & written legal documents.	Loss in time, cost, & work; Deterioration & alteration at cultural property; Delays in process; Failure in identifying scope of project.	Decisions of council should be stable; Constitution of terms of reference will provide for this stability.
	Effectiveness of local authorities in decisions of council	Preservation council	Illegal process; Deviation in focus of pre-preservation pre-requisites.	Working in communication with local authorities will provide for auditing.
	Decisions not intersecting & coinciding with theory of preservation.	Preservation council.	Incorrect implementations; Irreversibility in interventions	Terms of reference, redefinition of preservation criteria, & concentrating on pre-requisites will provide for an accurate decision.
	Organization, mechanism, & process of preservation council	legislation	Unstable, indefinite, & unestimated decisions; input beyond control; Interruptions & delays; Irreversibility in interventions.	Re-organization & re-definition of process of preservation council is essential.

Table 0.4 -Table of issues in terms of ‘Implementation Sub-Process’ in accordance with Konak Pier Project.

	ISSUES	Responsible for	RISKS	Proposal
I m p l e m e n t a t i o n s u b - p r o c e s s	Input beyond control	Project team	Transformation of internal data to the input beyond control; Interruption & postpones in implementation process; Failure to complete project.	Reducing the indefinite data in the beginning will reduce risks throughout entire process; Detailed & conscious pre-investigation and pre-implementation will define ambiguous data.
	Delays & changes in time schedule	Project team & preservation council	Inaccuracy in cost estimation; Loss of values; Deterioration and alteration at cultural property; Deviations in final product.	Mature, coherent, & conscious pre-assessment will prevent these delays besides reducing indefinite data.
	Insensitive implementations	Project team	Irreversibility of interventions; Failure in continuity of values; Incorrect implementations; Deterioration & alteration of cultural property because of breaking down incorrect interventions.	Mature, coherent, & conscious pre-assessment will provide for proper & precise interventions; Constantly auditing of council will prevent inaccuracy besides loss of time, cost, & work.
	Lack of auditing	Preservation council	Irreversibility of interventions; Failure in continuity of values; Incorrect implementations.	Mature, coherent, & conscious pre-assessment will provide for proper & precise interventions; Constantly auditing of council will prevent inaccuracy besides loss of time, cost, & work.
	Breaking down interventions by council	Preservation council & project team	Deterioration & alteration of cultural property; Loss of values; Delays & failure in time schedule; Failure in cost estimation.	Not only being in communication with council regularly but also constantly auditing of council will prevent inaccuracy besides loss of time, cost, & work.

	Interruptions in entire implementation phase.	Project team & preservation council	Delays & failure in time schedule; Failure in cost estimation; Failure in scope & integration of project.	Reducing indefinite data will provide for flow of process.
	Incorrect implementations	Project team	Loss of values; Deterioration & alteration of cultural property; Irreversibility of interventions; Failure in continuity of values.	Appropriate intervention priorities & decisions depending on a mature restitution besides detailed & conscious pre-assessment phase will prevent inaccuracy.
	Revisions of projects in the course of implementation phase.	Project team	Interruptions & delays in time schedule; Failure in cost estimation.	Detailed pre-assessment phase will provide essential information.

There may be revealed three different types of risk that is defined related with legal tools: internal risks which may be controlled, external risks which are beyond control, and internal risks which may transform into external risks.

The most serious disruption within the legal framework may in fact be monitored in the course of the functioning of the preservation council. The fact that the preservation councils create risk as an important external input to the preservation process emerges as a crucial pre-condition, which exists in no other process and shall indeed be solved. The unsound functioning of the mechanism of preservation councils can be derived from the frequent changes in decisions taken, the repeated interruptions to the implementation process and the mistaken implementations attained in the end.

The functioning of the preservation councils should be re-considered and the existing working systematic be made current in line with the sub-titles elaborated in the context of the present chapter. Meanwhile, lack of common terminology and concepts, as an outstanding matter for the preservation councils, should as well be overcome. The fact that the documents prepared by the institution defining the due work are not in harmony with the requirements of the preservation council also prevents the creation of a common language between the legislator and the

implementer within the preservation process. Furthermore, a common language also appears to be a necessity with reference to different professional groups in the body of the council.

The combination of the members of the Preservation Council as consisting of experts of different fields who have the right to comment not only within the confines of their specific fields of expertise, but on all preservation decisions demanded by the council, also constitutes a risk in terms of attaining unmistakable decisions. Such a structure to the preservation council gives rise to rather discontinuous and heterogeneous decisions in similar projects. The grouping of projects to be considered by the preservation council and approval of these groups by a council comprising experts on subjects related to the context are necessary for the well functioning of the process.

This amounts to the existence of no single council to approve of preservation projects where the different commissions meet for discussion of specific issues in their own fields of expertise and arrive at a decision or where the members of the council can flexibly be changed due to consideration of context. This means that those risks specific to preservation councils as originating from legal tools within the entire preservation process will to a great extent be solved. As different commissions will be meeting on different days, the preservation councils will have the opportunity to provide for decisions concerning preservation projects to be taken within closer intervals so that loss of time originating from agglomeration in preservation councils will have been eliminated. However, such densification in the working systematic of the preservation council entails increase in quality and quantity of the members who are influential in functioning of the preservation council.

The preservation council should constitute the essential part of each stage of the preservation process and render its audition continuous. Frequent auditions will help monitor both the projecting and implementation processes so as to eliminate risks from the functioning of the system without causing much of a disruption.

As the target has been to have such preservation councils that are excluded from the central system to attain a more dominating position with regard to problems

of preservation, the functioning ways of preservation councils seem to be left inadequate. There is need for a new and radical approach related to “Ancient Monument Unit Price Descriptions”, “Ancient Monument Price Analyses” and “Unit Prices” used to define the project context prior to the projecting stage of the preservation process under the body of The General Directorate of Foundations and Ministry of Culture. Leaving a conservationist attitude aside, the documents should constantly be kept up to date and a balance within the general context be attained.

In addition, all these written documents aiding the preparation of technical and administrative terms of contracts prior to projecting, definition of work category and the determination of the project context, should all be related with one another. In this way, the included information may be used more systematically. The confusion among descriptions and analyses are at the same time reflected on “Unit Prices”. Unless the problem of financial resources can be solved, all other services are also subject to disruptions. This in turn implies a need for a new strategy for financing. The document of Descriptions and Analyses, which is organized within a proper structure and is open to development, shall be established. Even though no complete standardization may be in question for preservation implementations, a general draft possibly may be prepared. Within such a purpose, data or raw information are needed in order to settle the main descriptions and analyses. These collected data may be assessed and filtered to take place in due documents as analyses or descriptions that hold a pose number. Regional differences can be taken into consideration as based on these documents and special implementations can be described specific to the region. When continuous flow of information from the regions may be maintained, such implementations as those popular ones specific to preservation or those whose uses have become rare but are included in the catalogue of main descriptions and analyses, will be revealed. At the same time, the current exaggerated or inadequate descriptions for valid poses will become manifest. While new articles will be added to the draft, outworn ones will have been eliminated. This information may be emphasized by means of a symbolic legend as accompanying the description and analyses. Thus the general articles and generalized regional implementations will be distinguished. As this approach will provide parallels within the preservation

councils aim of solving the regional problems of preservation, the legal framework upon which the council will base its decisions will as well become clarified. This will then minimize the risks emerging from written documents.

Hence the definition, context and scope of the preservation works prior to the projecting phase in the context of preservation process will have been constituted. On condition that the realized implementations are achieved as required and the accomplished works described, collected information may be regarded as “input”. In context of technical and administrative terms of contract to be prepared, required descriptions may be made with adequate detail.

Following the procedures in the course of which the preservation council’s mode of functioning and the written documents are made current for parallel use, the sub-stages of the preservation process will be defined. The pre-assessment stage that occupies crucial position prior to the projecting stage will stand out in the context of the legal framework.

Hence it will then be possible to eliminate the adverse impacts of legal tools upon the context and process of the preservation. Besides, those risks upon preservation projects created by legal tools will as well become controllable:

The contemporary regulations required for preservation and rehabilitation of cultural heritage shall involve the following issues:

- A vertical administration system between the local and central governments,
- Implementer staff consisting of multi-disciplined institution and persons.⁷⁷

If these stages in context of the legal framework are analyzed in a sound manner, then the preservation process as envisaged by this dissertation CAN be structured to minimize the risks.

⁷⁷ *Mediterranean Action Plan, Priority Actions Programme*, (Split, 1992).

CHAPTER 4

Project Management

In this chapter, the project management components will to be clarified in order to be utilized from the outset of the preservation process. By means of these components, the process of the preservation project could be reorganized, as well as redefined, within the legal framework. These definitions are going to be the basis of the process of the preservation project management on condition that all the project management components will be redefined with respect to the preservation prerequisites.

The Definition of Project Management Throughout the Components

A project is a unique operation that carries specific objectives to be completed with certain specifications as well as a multi-functional process by being in contact with different disciplines (Kerzner 2). The expected information of designing and construction processes in a project should be arranged and organized to obtain maximum efficiency, proper speed, and quality with minimum cost and loss.

In connection with the context of a project, ‘Project Management’ could be described as an organizational approach of ongoing operations within the allocated time period and the budgeted cost. In order to achieve predetermined objectives of scope, cost, time, and quality, the resources should effectively and efficiently be utilized on a proper performance level. Effective project management requires an understanding of quantitative tools and techniques besides organizational structures (Kerzner 9). It is to make decisions and to acquire the financial and material resources for the operation. Planning, scheduling and controlling time and cost;

reporting and forecasting time duration; cost reporting and forecasting total expenditures are the fundamental work topics in project management.

Project management could be modified for each kind of process involved in a project on condition that managerial components are clarified according to the type and scope of the problem in a project. Architectural Project Management is to achieve the architectural design process with an efficient schedule cost-effectively, consists of the design practice, the coordination role, construction dispute resolution including planning, organizing, directing and controlling. The aspects of management are planning functions which include forecasting, predicting, organizing and preparing; executive functions, which consists of motivating, commanding, controlling, coordinating, and communicating. Planning, scheduling, controlling time and cost; program reporting, besides the total expenditures, forecasting the time duration and the use of computers should be accepted as the sub-tasks of 'Architectural Project Management':

Project management is the planning, organizing, directing, and controlling of company resources for a relatively short-term objective that has been established to complete specific goals and objectives.⁷⁸

Project management comprises the establishment of the objectives besides the decision making process and the information system that needs to issue the knowledge, organization of the resources and staffing⁷⁹, application of the innovations for alternative actions, and remaining flexible, which is the most important input for the process of any project after identification of the scope of the project.

On the other hand, project management involves project planning and project monitoring which consist of the definition of work requirements, quantity and quality of work by means of the definition of the resources needed. Beyond all these, early identification of problems is important in creating the corrective actions during the

⁷⁸ Kerzner, Harold, *Project Management, A Systems Approach to Planning, Scheduling, and Controlling*. (New York: John Wiley & Sons Inc., 2001). p. 4.

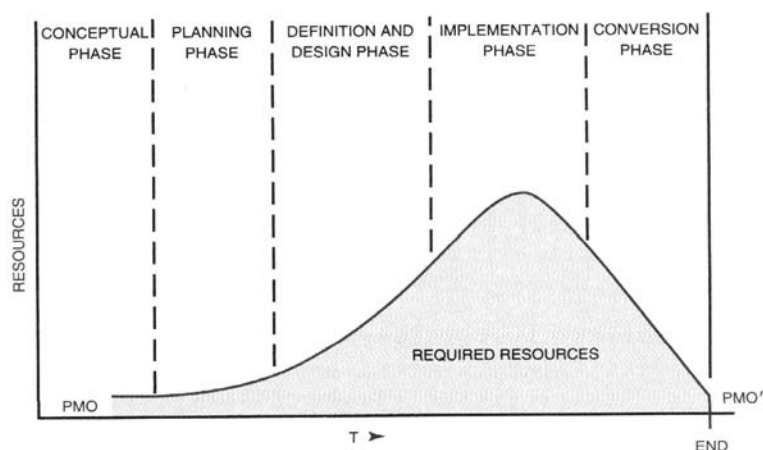
⁷⁹ Kerzner, *ibid*, p. 72.

process indeed. Unfortunately, the result cannot be achieved without overcoming the obstacles such as project complexity, requirements and scope changes, organizational restructuring, project risks, and changes in technology.⁸⁰ Project management allows accomplishing more work in less time and with fewer people.

The starting aim of the project is to achieve excellence at the end of the process. This fundamental aim will assist in identifying the deviations early enough. Excellence may become possible by virtue of maturity of input analyses, which implies the proper establishment of tools, techniques, and processes.

Each project implies specific phases of development, which are known as life-cycle phases in a repetitive process and which are the object of the methodology of project management. According to the theoretical definitions, the life-cycle phases of a system consist of five sub-tasks such as the tasks of conceptualizing, planning, testing, implementation, and closure.

Table 0.1 - Definition of a project's life-cycle (Kerzner, 83).



⁸⁰ Kerzner, *ibid*, p. 3.

The sub-task of conceptualizing includes the preliminary evaluation of the idea besides the preliminary analysis of the risk, which is the most important input, and the resulting impact on the time, cost, and performance requirements.

The planning sub-task, which is the most important component from the approach of project management, is mainly a refinement of the elements described under the conceptual sub-task. The planning sub-task requires an identification of the resources with the establishment of realistic time, cost, and performance parameters. This phase also includes the initial preparation of all documentation necessary to support the system.

Planning is the action of the arrangement of the defined work in a limited time period in order to be taken into consideration the process of the time and cost extensions in sequence. Work defined in terms of time limits not only controls the organizational chart of the project but also supports the changes in the decision-making system. The aim and scope of the planning sub-task involve the determination of the process of design and steps of implementation, estimation in time-resource-cost input, and the establishment of communication and information system.⁸¹ The definition and scope of the Project, collecting data, analysis and evaluation of data and forming information, updating the information, organization of resources, time planning, cost estimation, decision making are the subjects of the planning sub-task.

The basic work plan of to the planning sub-task depends on four components: input, processing, output, and feedback. ‘Input’ means collecting raw data. Raw data should be collected about the characteristics of the problem created by concentrating on the appropriate information. This information needs to be formulated as ‘relevant facts’.

“Processing” converts these raw facts into a more meaningful form by classifying, arranging, and calculating. The second step is to record and analyze all

⁸¹ Proje Planlama Çalışmaları Gerekli mi? - Dr.Murat Kuruoğlu ve İnş.Müh. Alptekin Özvek).

relevant facts with the help of the Outline of Process Chart, which is for providing an overall view of all activities as well as for a 'Flow Process Chart'. The latter is a detailed study that sets out the sequence of the flow of procedure by recording all events. It consists of three groups: man type, for finding out the different professions; material type, for providing the necessary and various types of adequate materials, equipment, and resources for realizing the necessity and priority of equipment, including all cost analysis and information.

"Output" transmits processed information to where it will be used. This information should be examined critically and in sequence including a search for potential solutions. This implies systematic analysis of the purpose, place, sequence and people at every stage of operation to obtain satisfactory answers and render the information available to use as a basis for developing an improved method by the help of the information system. After searching and examining, the most practical, economic and effective method will be developed by evaluating and comparing the decisions in order to obtain the best solution.

"Feedback" is output which is returned to the appropriate sections of the organization to evaluate and refine the input stage. There is usually 'feedback' to revise the information and to develop the method during the project evaluation process. This is one of the types of routine work that arises regularly until the end of the construction.

The testing sub-task requires that all documentation be completed in order to integrate the results in the implementation phase, which includes the introduction, growth, maturity, and deterioration levels of the product. The implementation phase is directly equivalent to the directing step of the management functions, which means carrying out the approved plans that are necessary to achieve the objectives. Project Management in architecture is the management of the architectural design process, which encompasses the management of the implementation phase. Construction projects are intricate and time consuming undertakings. The total development of a project consists of several phases requiring a diverse range of specialized services

and phases such as planning and definition, design and procurement, and the construction phases.⁸²

The final sub-task includes the re-allocation of resources. The closure sub-task evaluates the efforts exerted upon the entire system and serves as provide of input to the conceptual phase constituting the subsequent step.⁸³ The closure sub-task could be matched by the controlling step of management functions⁸⁴ while, at the same time, evaluating and correcting steps other than the measuring step. The measuring step operates through the formal and informal reports concerning progress toward objectives. The evaluating step determines the causes and possible ways of action when significant deviations from the planned performance arise. Correcting implies acting so as to take control not only to realize an unfavorable trend but also to take advantage of a favorable trend. These steps are necessary for the accomplishment of the objectives in a project to close up the life-cycle of the process of the project management:

The aspects of management are planning functions, which includes forecasting and predicting, planning, organizing or preparing; executive functions which consists of motivating or commanding, controlling and co-coordinating; and communicating. “The term planning appeals by its suggestion of considered orderly and national action. It implies tidiness, method, system discipline, regularity and a measure of exactness. It gives the impression that someone responsible is in charge, has a hand on the wheel, and a sense of direction and destination. It represents co-operation and co-ordination, and contrasts with the inevitable disorder which generally obtains when men act independently in their own interests with no overall framework into which they are constrained to fit...”⁸⁵

Preparing the projects is the second fundamental step of an operation. It involves using gathered, selected and evaluated data as input, which helps forming

⁸² Clough, H. R., & Sears, G. *Construction Project Management*, (1991). p.59.

⁸³ Kerzner, *ibid*, p.78-79.

⁸⁴ Kerzner, *ibid*, p.232.

⁸⁵ 'Now For a Perfect System Nobly Planned' by George Schwartz, Sunday Times-Introduction to Building Management.

the design criteria and concepts after establishment of the life-cycle phase. This is the 'developing' part of the operation including cost X potential advantages, the aim of the investigations and limitations, maintenance of quality standards, practicability, and maintenance.

With the evaluated projects, there comes the third main step of the operation as 'construction supervision and appraisal'. This is the installation part that is ratified by adapting the project to the bidding documents and to the construction itself.

Finally, there is the installation process that serves to develop a new method for arriving at minimum cost with the least interruption by eliminating the possibilities to ensure the provision. Maintaining verifies at regular intervals to achieve improved method, design and manpower with better conditions. The cost of maintenance will always be less than that of a major preservation effort after a period of long neglect. George Schwartz confirms the same:

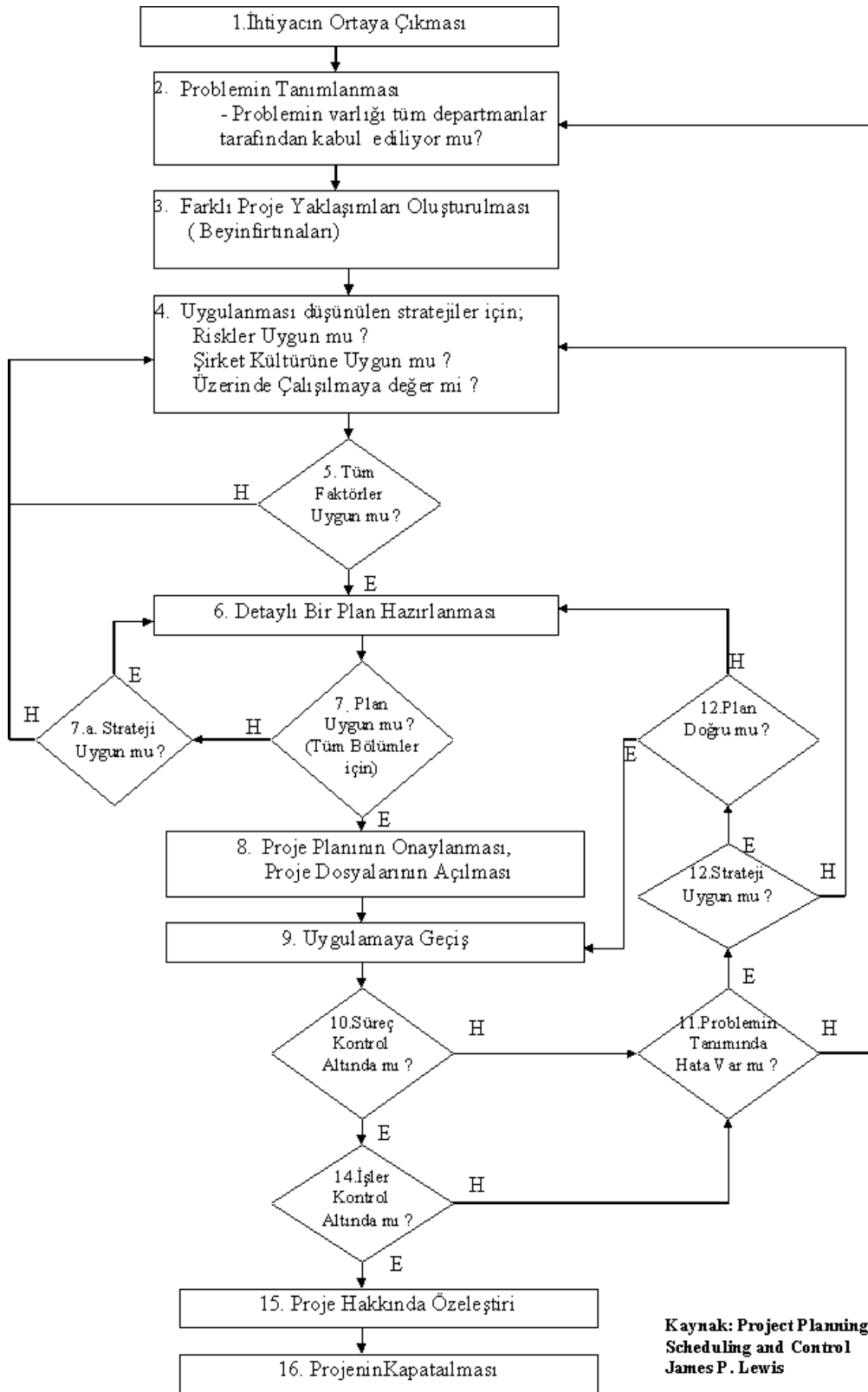
The term planning appeals by its suggestion of considered orderly and national action. It implies tidiness, method, system discipline, regularity and a measure of exactness. It gives the impression that someone responsible is in charge, has a hand on the wheel, and a sense of direction and destination. It represents co-operation and co-ordination, and contrasts with the inevitable disorder which generally obtains when men act independently in their own interests with no overall framework into which they are constrained to fit...⁸⁶

After describing the operation, an organization chart should be formed in order to succeed and achieve the goals of good design in the project.

Finally, it is expected from the methodology of project management to lower overall project risks, better decision-making process, and better control of the scope of the project. In other words, the maturity of the management function helps raise the level of satisfaction in the capabilities, size, nature, and the life-cycle of the project (Kerzner, 245).

⁸⁶ 'Now For a Perfect System Nobly Planned' by George Schwartz, Sunday Times-Introduction to Building Management.

Table 0.2 - General approach for a project management model.



Technological Properties of the Process

Other than the components described above, project management commands a series of fundamental sub-tasks in order to clarify the process of a project. These sub-tasks are expected to hold the ability to be flexible so as to adjust to the type of the project. In general, it is evident that these sub-tasks are deployed in a horizontal hierarchy on condition that parallel phases take place throughout the entire process of the project both simultaneously and in sequence.

Nine main sub-tasks are involved in all aspects of a project that as proposed in this dissertation: risk, integration, time, cost, scope, communication, procurement, and human resource managements. Selected management components will be identified below as specialized concerns comprising the process of the preservation project.

Risk Management

Risk analysis is performed to show what happens if the project does not proceed according to the plan due to potential risks and furthermore, it captures all feasible options and analyses various outcomes of any decision.

Risk is a measure of probability and consequence of not achieving a defined project goal. Risk management helps to identify, mitigate or avoid the project risk factors which are the potential effects of unwanted negative consequences affecting the project objectives, and to develop proactive, contingency and risk response plans. The goal of risk management is to anticipate and eliminate the risks. Öztaş and Öktem definitely informed what accurately qualifies risk:

Risk best qualifies the situations in which there are past records and experience, and decisions are made under the prediction of what is the chance or probability of the outcome. All definitions in literature share two common elements: indeterminacy and loss. In other words, in order to discuss the existence of risk; first, there must always be at least two possible outcomes and second, at least one of the possible

outcomes must be undesirable. For instance, if it is known that a loss will occur definitely, there cannot be any risk.⁸⁷

Risk management involves a methodology capable of identifying, quantifying, and responding to the risks of the project without any material impact on the project's objectives (Kerzner, 84). The identification phase of risk management implies understanding the typical problem that might adversely affect the project throughout the process although not all risks CAN be identified or mitigated contiguously.

“The risk management process,” writes Kerzner, “should be designed to do more than just identify the risk. The process must also include: a formal planning activity, analysis to quantify the like hood and, predict the impact on the project, a handling strategy for selected risks, and the ability to monitor the progress is reducing these selected risks to desired level.”⁸⁸

Risk management without control, records control, identifying non-conforming conditions, corrective/preventive action is subject to fail unless risk methodology are an integral part of each program. The management system team can integrate these components into the structure of each sub-system in the quality sub-system for other management sub-systems such as responsible care, process safety, health and safety, environment, materials transportation, etc.⁸⁹

Risks should be qualified in order to develop a response plan. In other words, risk priorities should be assessed in order to evaluate the risks and to plan risk response for avoiding deviations and taking precautions. Risk quantification could be possible by monitoring the identified risks during the process. It is better to establish the rules of risk management in the beginning of the process as well as scope management. Risk quantification determines the interrelation between or among risks

⁸⁷ Öztaş, Ahmet; Ökmen, Önder. “Risk analysis in fixed-price design–build construction projects,” *Building and Environment* 39 (2004): 229-237.

⁸⁸ Kerzner, ibid, p.904

⁸⁹ Holdsworth, Rodger, “Practical applications approach to design, development and implementation of an integrated management system”, *Journal of Hazardous Materials* 104: 1-3 (2003), 193-205.

and is followed by risk response development and risk response control. There should be always flexible time period options against any unidentified risk parameter. The sub-tasks in the scope of the risk management could be accepted as communication between different project phases, resources of the risks, cost and time estimations.

Scheduling, manpower resources, equipment and facilities, capital expenditures, costs, priorities, administrative procedures, responsibilities and personality clashes cause conflicts that are the significant components of risk management.

Scope Management

The approach of scope management is provided to fulfill all activities in order to achieve the goal of the project to be succeeded. Scope management involves the definition of the work in the consistency of the process of any project. “Any project,” Kerzner adds, “should be systematic, flexible enough to handle unique activities, disciplined through reviews and controls and capable of accepting multifunctional input. Project planning is an iterative process.”⁹⁰

Scope planning, which is one of the main sub-tasks of scope management, should develop a basic written scope statement for future decisions. Scope statement constitutes basic information concerning the decisions of the project. In addition, observation and subdivision of the project objectives and project decisions will provide for the flow of the main chart of the project. Being the input for decision phase means to generate a clear product description by involving supporting details of all identified assumptions and constraints. Foreseeing the problems to minimize the risks will improve the accuracy of cost and time estimates.

⁹⁰ Kerzner, *ibid*, p.549.

Scope management constitutes the frame and territory of the project, indeed by means of a project charter which serves as a constraint in the process of implementation with the limitations.

Work Breakdown Structure (WBS)

In order to manage the process of the project, this work should be divided into the manageable pieces that are called 'work breakdown structure' (WBS). In other words, sub-tasks and sub-projects of the main project will be constituted in the consistency of scope management in order to decompose and provide criteria for the evaluation of existing individual data. Program definition will also be within the scope of WBS including schedules for defining specific requirements.

Playing prominent role in scope planning, work breakdown structure entails a scientific approach that begins with a complete analysis of the project down to its smallest component part. It is best described in terms of the optimum material and of taking account of the resources available such as, respectively, task, subtask, work packages, level of efforts. WBS may be utilized to provide the responsibility matrix, network scheduling, costing, risk analysis, organizational structure, and coordination of objectives.

The successful accomplishment of both contract and corporate objectives requires a plan that defines all effort to be expended, assigns responsibility to a specially identified organizational element, and establishes schedules and budgets for the accomplishment of the work.⁹¹

⁹¹ Kerzner, *ibid*, p.573

Integration Management

Integration management means coordination between plan development, execution and control. It is utilized in constituting project-planning methodology of an ongoing operations and corrective actions - constant feedback. Integration management involves establishment of the terms of reference and terminology besides communication between the functional specialties such as civil, mechanical or electrical engineers. It is to provide a baseline for the project control.

Throughout the process of the project, there should be maintained the structural flexibility for the coordination of efforts, adaptation of changes, effective strategic planning, and accurate communications in the scope of integration management. Integration of the process of the project will provide the external buffering against the external parameters.

Integration management includes the terms of the management information system and work breakdown structure in order to maintain control over the ongoing operations of the process and to provide effective information.

Management Information System (MIS)

Information, which is a critical consideration, is essential not only to the design and execution of decisions allocating resources but also for the operation of any enterprise in the management of the project. A decision coming out of the planning phase of the project should be based on timely and relevant information (Cleland, 265).

Planning outputs of each functional unit should be integrated in order to obtain this relevant information. This integration is possible by the Management Information System (MIS), which consists of the tools and techniques to collect and disseminate the outputs. Project planning function in the consistency of MIS establishes a structure and a methodology for managing the information resources which encompass its flow, reviewing information quality, controlling its use and

source, and providing a focal point for the project information policies (Cleland, 271). It is used to support all aspects of the project with both automated and manual systems as the flow of information should be incomplete and sequential. Cleland emphasizes the significance of information systems as follows:

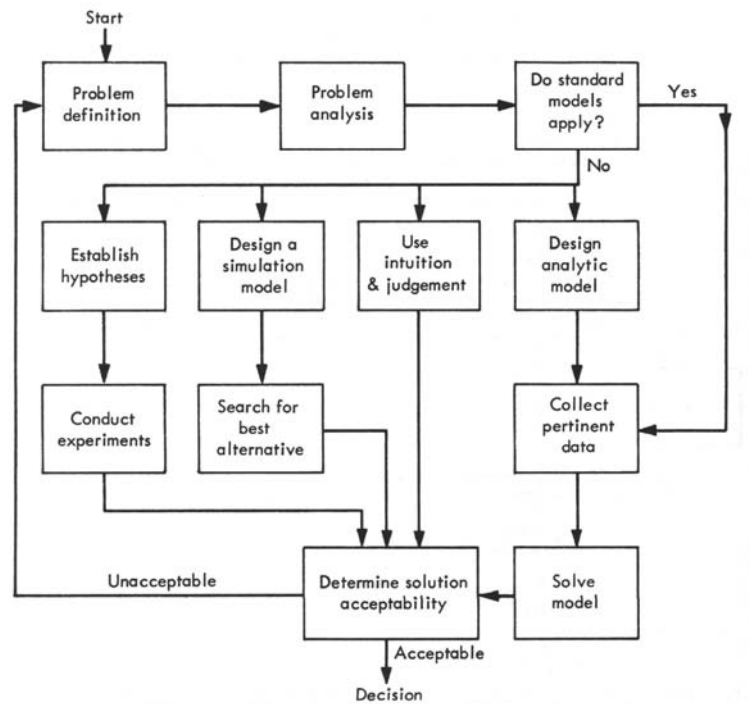
The objective of information system is to provide basis to plan, to monitor, to integrate project evaluation, and interrelationships of cost, schedule, and technical performance for entire project and for strategic direction of organization. In addition, information should provide a prospective view, to identify project problems before they occur, so they CAN be avoided or their results minimized.⁹²

Decision-making, which is at the center of the functions comprising the management process, filters through the entire process of management (Terry, 133-136). The decision-making system involves planning activity, which is a required management function to facilitate the comprehension of problems. On the other hand, decision-making may be described as the function of selecting the objectives, policies, procedures, and programs necessary in the project besides establishing predetermined course of actions. Decision-making System has three categories as certainty, risk, and uncertainty. Under certainty, all necessary information may be available to assist making the proper decision with the prediction of the outcome. When the category of risk comes out, probability of confidence limits could be obtained from well-defined experimental distributions. In uncertainty, no probabilities of meaningful assignments are possible (Kerzner, 907-910). MIS also contains intelligence essential to the organization, directing, and control of the project (Cleland, 265).

The decision-making system collects the information of the outputs of the definition of the problem, objectives, criteria, and constraints as well as making assumptions concerning the system.

Table 0.3 - Decision-making approaches, (Terry, 150).

⁹² Cleland, David I. *Project Management - Strategic Design and Implementation*. (New York: McGraw Hill, 2002), p. 268



The other main departments are directly related to MIS for carrying main tasks such as those carried out by the Finance Department including accounting, procurement, budgeting; Technical and Construction Departments with designers, engineers, area managers dealing with all projects, drawings at each step by monitoring the construction and organizing the site layout for an efficient work; Personnel Departments related with Staff, Safety and Labor works.

Job Description

Work Break Structure (WBS) is necessary to issue the identified operations in the scope of the project. WBS will lead to establishment of the job description in the consistency of all sub-tasks and activities of the project. There should be a job classification before establishing the job description. Job description should be picked over this classification in order to adapt the personnel of the project (Kerzner, 432). For constituting this match between the classified jobs and the personnel, there

should be a detailed evolution of both sub-tasks and human resource quantification for the compatibility with the experience.

Time Management

Time management is the definition of allocated time period throughout all activities of a project by preparing a time chart. The time chart documents sequentially the special time intervals in the needs of each sub-task of the process. These time intervals depend on the complexity of the performance list of the project. Activities should be sequenced accurately in order to support later development of a realistic and achievable schedule. Identifying and documenting interactivity dependencies will be termed activity sequencing, which is one of the sub-tasks of time management (Dengiz, Erceiş, Karadağ, Şahmalı, 73-75).

Conducting a time analysis, classifying the activities, and establishing the priorities are the objectives for efficient time management in connection with the management of risk, scope, integration and cost.

It is quite important to estimate the work periods of individual activities and time duration as a whole throughout the process in the beginning of the project. It will clarify the start and finish dates besides creating the project schedule in cooperation with cost management. The time interval of each activity and interrelation between them constitute the time chart belonging to the entire process. The project schedule includes at least planned start and expected finish dates for each detail activity. The Gantt chart shows start and end dates as well as the durations.

There are three types of dates belonging to the duration of the process and the time intervals of the sub-tasks. First one is the current date which is constituted by estimation of temporary finish dates. They are generally utilized for the comparative study of actual dates and estimated dates.⁹³ The second type of date is the actual date,

⁹³ In project management, actual means definite while current means approximately.

which indicates the exact start and finish dates of sub-tasks or even the project itself. The last date is the baseline date which represents the outline of the time intervals of sub-tasks.

Time management is in relation between risk management as the output of risk identification will directly affect the changes in the time schedules. The output of the time chart will allow the updates in work breakdown structure.

Cost Management

‘Project Cost Management’, including resource planning, cost estimating, cost budgeting and cost control, describes the process within the expected budget by considering effects of project decisions on cost.

In other words, cost management is the process that ensures that the project is completed within the approved budget by having regard to predicting and analyzing the prospective financial performance. In the scope of cost management, the picture of the profitability and financial position of the project by managing the money in an efficient way and is bidden to evaluate the advantages and disadvantages. It should be determined how much and from where money needed for the project is to be obtained by determining the place, timing and amount of the financing.

Cost Estimating

Cost estimating, which is the most important sub-task in the consistency of cost control and cost management, involves developing an assessment of the likely quantitative result. In the scope of cost estimating, financial information has to be contributed in order to make decisions and control economic activities. Effective cost estimating involves thorough planning of the tasks to be performed to complete the project and clear communication of the scope of required tasks. Cost estimating is intended not only to develop an approximation of the costs of the resources but also to consider the effects of project decisions on the cost. Cost estimation constitutes

the cost baseline depending upon the data coming from each activity for cost budgeting (Dengiz, Erceiş, Karadağ, Şahmalı, 93-105).

Cost budgeting means preparing budgets and revising them continually during the process by examining the project process. Cost budgeting is utilized with work breakdown structure (WBS) in order to achieve the resource planning. Resource planning is to determine what resources (people, equipment, materials) and what quantities of each should be used to perform project activities. Effecting performance measurements by controlling operations and comparing actual performance with the planned budget will determine the resources and the best use of these resources.

Cost analysis, scheduling techniques such as CPM, and cost control by obtaining information from the technical department could be constituted with the help of project progress reports, performance reports, and time, cost and resource schedules. This bottom-up estimating is conducted for the purpose of estimating the cost of individual items, and further implies summarizing or rolling-up the individual estimates in order to obtain the total cost of the project in the beginning of the process. As in time management, cost budgeting should allocate the overall cost estimate to individual work (Dengiz, Erceiş, Karadağ, Şahmalı, 93-105). While cost budgeting is dealing with recording and reporting of all transactions, this information should be utilized in preparing financial statements, analyses and interpretation as financial forecasting. The latter are tantamount to an evaluation of the project economically. It obtains the information needed, from all departments.

Through the entire process, these bidding estimates of each phase should be abreast of the changes in the scope of the project. Supervision of construction is directly affected from these bidding documents as it consists of network analysis, precedence analysis, project cost control and quality control. Cost control of the changes and revision of the cost estimates involve monitoring the cost performance in terms of the needs of budget updates. Effective pricing begins with preliminary customer requirements, well-understood subtasks, and a top-down estimate with should-cost targets while approximate or definitive types of estimations are taken into consideration. Approximate estimate consists of non-detailed data while

definitive estimate requires well-defined data including fairly complete plans, specifications, and unit prices (Kerzner, 742).

Types of Contracts

Construction planning is generally concerned with completing a contract in the shortest possible time compatible with economy and quality. While gathering the raw facts, which are the input of the first step of the process generally, data is collected for the bidding estimates and evaluation in order to decide the type (lump-sum, unit-price or cost-plus) of the contract and form it to advantage.

Cost-saving may be increased through specialized services and products. This change will require knowledge necessary for improvement, which comes from the outside.

There are mainly three types of contracts, which are taken into consideration in the present dissertation, in consequence of bidding estimations; lump-sum, cost plus, and unit price (Kerzner, 1139-1155).

In the lump-sum (fixed-fee) type of contract, full responsibility has been assumed in the form of profits or losses for timely performance and for all costs under or over the fixed contract price. The target cost should carefully be estimated, where a great risk is assumed. This contract provides the ultimate cost of the project although the lump-sum type of contract includes an excessive amount of contingency.

Cost plus is a fixed-fee type of contract where the profit is fixed, rather than the price. In this type, the construction contractor bids a fixed profit for the services to be supplied at the actual cost on condition that materials and field labor costs are to be reimbursed. This fixed fee is usually a small percentage of the total cost. This form of bid CAN be prepared quickly at minimal expense as well as entailing the advantage of quick completion of the job.

Unit price is offered whenever it is impossible to constitute actual or current total cost estimates. It should be worked on cost accounting at the same time by establishing the unit cost prices and measuring the efficiency of the production process for use in decisions while bidding on the contracted products.

Communication Management

Communication management is the process of conducting or supervising the exchange of information by means of a number of providing for applications as decision-making systems (Kerzner, 277-279).

Communication management should involve collection, storage, determination, distribution, and dissemination of the ultimate disposition of information. These activities are only possible in the establishment of inter-relation and coordination in terms of the immediacy of the requirement for information in each unit throughout the process of the project.

The general terms of reference of the project and the terms of reference of each sub-task should be described in order to derive that ultimate information from the raw data already in the beginning of the process.

For the need of frequently updated information through the phases of the process, performance reporting for organization should describe where the project stands, what has been accomplished in order to predict the future status and progress. The communication systems should be established at the beginning of the process of the project.

Since it is also a source for controlling the process, typical objectives of effective communications include an exchange of information, an act or instance of transmitting information, a proper technique for expressing ideas, and a common system of symbols to be interrelated (Kerzner, 272).

Procurement Management

Procurement management is acquiring goods, documenting requirements, and identifying potential sources as well as organizing the resources in order to be utilized effectively and efficiently.

Procurement management is directly related to cost management as the consideration of potential subcontracts are the basic outputs for the total cost estimation of the project on condition that contract types has been selected as lump sum or unit price. It deals with the request for quotation and proposal for these sub-contracts as far as caring for the initial response of the sub-contractors.

In the scope of procurement management, technical and financial capacities of the resources should be clarified in order to establish current work flow charts, actual time charts, and cost baselines.

Procurement is quite necessary to keep up with the process without any deviations. The most important objectives of procurement management involve the preparation of material needs, preparation of purchase orders, contacting the vendors, placement of purchase orders, authorization of expenditures, inspection of raw materials, quality control testing, updating the inventory files, preparation of inventory reports, and finally withdraw materials.⁹⁴ Finally, procurement management is to share resources across organizational units in the consistency of project.

Quality Management

Quality management involves identification of the quality standards that are relevant to the project. It involves above all the determination of the ways in which the quality standards relevant to the technical contracts are ratified. The outputs of

⁹⁴ Kerzner, *ibid*, p. 241

the other sub-managerial groups are utilized as input of quality planning, where the scope statement is a key input since it documents major project deliverables as well as the objectives.

Evaluation of the project performance, utilizing specific application standards and having regulations are the objectives of this managerial approach in order to achieve the identification and the quantification of the quality.

Specific project results should be monitored to determine their compatibility with relevant quality standards as well as identifying the ways to eliminate the causes of unsatisfactory performance.

The aim of quality is to minimize the deviation from the target. The criteria for this aim are:

1. Strategic planning to create an effective performance management system
2. Information and analysis to examine the defectiveness of use of data
3. Human resource management to develop and utilize the objectives
4. Process management to examine the key aspects including product, support, and supplier processes.

Human Resources Management

Human Resource Management deals with working people for providing working and income conditions as these should not be below average standards in construction areas. The human resource is responsible for the protection of all executed works, materials or equipment. Hence all should be taken necessary safety precautions, accident prevention and health protection measures which are syntheses of technological, organizational and educational measures, to avoid any damage to workers.

The science of directing and coordinating human resources throughout the project by utilizing administrative and behavioral knowledge is geared to achieving

the predetermined project objectives of scope, cost, time, and quality managements. Personnel performance represents a change in the way of arranging the process. Providing for individuals directly affect the time schedule and flow chart. This means that the types and the number of essential individuals from each category as well as the time interval of these individuals are needed should be revealed in terms of scope of the project (Kerzner, pp.161-166, 191).

Flow chart of the project in terms of both scope and integration management aims at making use of the specified individuals in the most effective and expeditious manner possible.⁹⁵

In summary, effective personnel is a critical determinant in project success.

General Evaluation

Project management should produce the relevant information to achieve the target at the end of the process. It is essential to disseminate that information through comprehensive just-in-time information systems to the functional units that were formed by work breakdown structure. The latter comprise manageable small pieces. Information is constantly produced by means of unprocessed data from the outset of the process. Hence, transformation of knowledge in revised information is necessary for the definition of the limits of the project. Thus, this definition is constituted vis-à-vis the organizational flow chart of the project. The limits of the project will change according to the characteristics of any project that should be mentioned through approaches provided by scope management. The tasks of project management will shed light on the process of the project in order to reduce the deviations from the end product as well as to succeed in terms of references throughout the process. In order to succeed in the management of a project, establishment of a defined principle of flexibility is essential. The same is essential for achieving the proper flow chart in the consistency of the scope of the project. In

⁹⁵ <http://www.4pm.com/books/pmi.pdf>, last accessed; may 2003

other words, project management has the flexibility to be utilized in any type of project on the condition that the sub-tasks of the management process are redefined according to the parameters of the proposed Project. Kerzner confirms:

The need for flexibility has become apparent since no two projects are ever alike from a Project management point of view. There are always differences in technology in the locations, in the client approach, in the contract terms and conditions, in the schedule, in the financial approach to the project, and in a broad range of international factors, all of which require a different and flexible approach to managing each project.⁹⁶

Evaluation of PM Components in Terms of the Preservation Process

Flexibility of the process becomes essential to the process of preservation project because of the indefinite, unexpected and unestimated parameters at stake both at the beginning and throughout the process. With this flexibility, the main components of project management should be redefined by having regard to the characteristics of the preservation project in sequence.

The most important characteristics which are caused by indefinite, unexpected and unestimated data have been the risk parameters, whereas those data may turn into dangerous barriers that systematically interrupt the flow of the process. The more such data have been clarified, the more clarity the scope of the process achieves. Identified risk parameters are also in need of quantification in order to develop the precautions directly related to the characteristics of preservation project.

There is an interrelation between risk and scope management as the definition of the main project components (pre-assessment, projecting, and implementation phases) has been obtained in relation to scope management. Moreover, principles of scope management have been at work from the outset of the process specifically while performing the tasks of the identification and quantification of the risk parameters. Hence, the work breakdown structure of the pre-assessment phase will

⁹⁶ Kerzner, *ibid*, p. 59

reduce the risks that are originated in the establishment of the process. In the context of risk management, scope management will be taken into consideration in order to detail the main components of the project into the tasks, sub-tasks, and work packages as soon as the risks are identified.

In the consistency of scope management, tasks, sub-tasks, or work packages of the preservation project should be interrelated not only with one another but also with external input that are mandatory all through the process as legal tools. Sound establishment and grasp of these interrelations may be achieved by taking into consideration identified and quantified risk parameters.

For the continuity of the flow chart of preservation management, integration management will constitute the terms of references, which will be constituted by means of expressions of management information systems (MIS). The decision-making system as among the main sub-task of MIS will redefine the preservation process in needs of the special terminology in terms of flexibility. This will definitely form the job description within the process of the preservation project. To the extent the job classification may indicate certain functional responsibilities, the job description is essential to support the implementation of unique details besides the cost and time estimation of these unique implementations.

It is impractical to render an actual time estimation throughout the preservation process whereas the risk parameters can neither be removed entirely nor be taken under control by developing risk response. Utilization of, not actual, but current dates for starting and finishing periods is directly related to the risk identification and risk response activities in so far as information of the baseline dates is concerned. Nevertheless, time management will constitute the definite time intervals for each sub-task of the preservation project by estimating the duration of the unique details, which are implemented by specified individuals.

The risk parameters of the preservation process will hinder making cost estimates and cost budgeting in the consistency of cost management. Hence a cost baseline consisting of specific or unique implementations could be possibly constituted in connection with WBS.

Procurement management in the preservation process will both document the material needs and prepare the purchase orders. The transformation is in need of both definition of original materials and techniques, and of providing compatible proposed materials and techniques. As well, it necessitates quantification and provision of specified individuals, which are aspects entrenched in the scope of procurement management.

Communication management has to establish the specified terminology among the project team and external authorities in the process of preservation management.

Human resource management becomes essential for the preservation project in the case of determining the specified individuals for a specific or unique implementation of the cultural property.

Finally, the quality of preserved cultural property is the hidden target of the preservation project. It aims at the achievement of sufficient implementation with regard to the involvement of the value preservation by reducing the deviations that are caused by the risk parameters.

CHAPTER 5

Evaluation of “Project Management Criteria” in the Preservation Process

In the previous chapters, two separate disciplines were defined through the explanations of the preservation process, the prerequisites of the preservation process (Chapter 2) and PM definitions (Chapter 4). In the scope of the preservation process, the parameters within the functioning of legal tools were described (Chapter 3). In the present chapter the aim is to integrate these two separate disciplines, and to resolve the preservation problematic that has been described in the definition of the problem of this dissertation in relation to the action of integration. The deviations in the process are aimed at determining and resolving in light of the decisions and approaches of the preservation councils as well as the laws or decision principles. Therefore the components of project management have been redefined in the scope of preservation process. Feilden and Jokilehto confirm the refined applicability of management techniques to diverse fields and describe the method of interdisciplinary interpretation:

Management techniques can be applied at any level of technical sophistication and can be used to raise levels of technical competence. All proposed activities must be based on interdisciplinary collaboration using conservation theory to evaluate alternative proposals. The management plan will consist of several interrelated resource project plans. Each technical group applies the principles given in these guidelines according to the degree of sophistication in management that can be made efficient and effective.⁹⁷

⁹⁷ Feilden, Bernard M., & Jokilehto, Jukka, *Management Guidelines for World Cultural Heritage Sites*, (Rome: Iccrom, Unesco, Icomos, 1993).

The preservation project can be identified as a consolidated project, since the process of the preservation project involves numerous hidden ongoing projects. It is possible to analyze these sub-projects in different typological manners. The first essential sub-projects are the implementation and reutilization projects. In other words, the implementation phase is to be projected, as well as the physical correspondence of the proposed new function with the utilization aspects of the building, with an eye to the values of the cultural property.

There are risks involved for every project in the beginning of the operation. In preservation projects, the ratio of risk is higher than in construction projects. This is due to the fact that 'preservation projects' are involved in unidentified, unexpected, and unestimated requirements throughout the entire process. This in turn indicates that dissolving the risk parameters is secondary sub-project of the consolidated preservation process. It is obvious that the process of management science can be established for the needs and prerequisites of the preservation project. For this purpose, the project components of management will be utilized in the establishment of the process of the preservation project so that the flow of the main organization chart may be achieved. Upon this basis, a number of sub-tasks will acquire much importance, viz. for taking the necessary precautions in order to avoid deviations. Technical aspects for the implementation sub-process –such as providing the specified individuals and material resources- bring out the difficulty of making an organizational process chart for the reduction of deviations throughout the process of preservation projects. The probability of the deviations depends on the high ratio of the risk parameters of the preservation process. The risk factors originate not only in the infra-structural surprises that may, and will, arise, but also from the body of the existing building itself, as well as from external input. Finally, in order to achieve preservation of the values of the cultural property by means of the minimum intervention-maximum preservation principle, this interdisciplinary organizational system will be put to work in the reduction of the risk parameters; and it will be put to work in each phase.

Determination and Reduction of Risks

Chapter 2 discussed the necessity of the constitution of a database prior to the design phase to analyze the existing structure and to carry on the proposed preservation project into the implementation phase. Among the topics investigated within the framework of preservation criteria for the structure of the process to be adapted in the appropriate way are: the material and structural circumstances of the structure in physical manner, whether or not the original plan scheme of the structure has been preserved, the propriety of the new function that has been or is to be decided for the re-utilization of the cultural heritage, the adaptation of the structure to present physical and social conditions. In order to meet these uncertainties at least halfway, the unexpected and unestimated data giving way to the risks as well as to prevent those risks must be identified. Therefore the risk management in the scope of preservation project becomes the most important sub-task.

Detailed and efficient investigation methods are necessary during the pre-assessment phase in order to reduce the risks before the design process has been initiated. For the reduction of the risks throughout the entire process, the mentioned parameters should be investigated in order to establish the precautions from the outset of the process. These initial inspections, including initial implementations and the sum of all kinds of analysis will provide both resources and input to make the preliminary estimates. At this point it must be kept in mind that these preliminary estimates will still express reasonable doubt. All risks should be clearly identified, determined and documented -as well as the characteristics of the structure- on a regular basis throughout the entire process. These identified risks should be evaluated, including the sources, potentials, tolerance limits and cost estimates.

[...] the conservator CAN never afford to skimp on field investigations because the critical and unique features may be missed. Let the physical evidence speak for itself...⁹⁸

In project management, it is generally possible to state that the definition of the problem should have priority, accompanied by the issue, the impact, the alternative, and the recommendations. To define the problem of the project can become feasible only by identifying and quantifying the risks as the initial operation in the process of preservation projects. Risk Management should increase the results of positive events while decreasing the consequences of adverse events

Risk Identification and Quantification

Each Project is a unique operation. In construction projects, it is possible to determine the proportion of the risk parameters. The unexpected or unestimated parameters in both design and implementation processes of construction projects are not as unidentified as in the process of the preservation project. In the preservation project, it is not possible to decode all risk parameters, neither at the beginning of the process nor through the process. However, it is possible to identify the risk groups in the beginning of the construction process. It is necessary for the sake of the process to render the risks that are going to affect the process directly and to clarify the characteristics of those risks. In order to identify the risk parameters, the resources of the risks must be detected.

Risk identification is establishing causes and effects; that is to say, determining and documenting the functional and physical characteristics of potential risk parameters on a regular basis, depending on all positive and negative outcomes. Risk identification should address both internal and external risks. Internal risks may be controlled by the project team. However, external risks at this point will have become beyond control.

⁹⁸ Weaver, M. E., & Matero, F. G. *Conserving Building-Guide to Techniques and*

Table 0.1 - Types of risk quantification.

R i s k Q u a n t i f i c a t i o n			
Building resources			Legal tools
Unidentified data of the building	Scope and Program of the preservation project		
present physical conditions of structure and material techniques and materials used in the building	not overlapping with values and types of intervention	determination of appropriate intervention decisions and proper priorities for new function	preservation council's operations

In order to be able to include the preventive measures into the process, it is necessary to classify those risks of which the sources have been identified. This action will result in the constitution of a general attitude towards risks in each group.

The source of the risks generated by external measures is the legal tools. The reason behind legal tools giving way to such great factors of risk owes to the possibility of “interpretation”. In construction projects, regulations are comparatively definite; it is possible to obtain the implementation license on keep basis of the conditions and regulations requiring adherence. Hence in preservation projects, there exist generalized expressions in the consistency of the principle decisions in order for them to be interpreted in light of the characteristics of each case in any region. Due to the variety of the cultural property in Turkey, it is not possible to constitute a single specified principle decision that could be valid for all cases. Besides, it is also challenging to solve problems of the cultural property in terms of preservation within the domination of a single center. Hence regional preservation councils have the right to interpret these principles in correspondence with each preservation case. However, this interpretation generally causes risks in both designing and implementing processes, since determination of the limits of scope of the project are completely dependent on the legal procedures.

There revealed external risks, which are beyond control and, in the consistency of Konak Pier Project. These external risks are not only caused interruptions, delays, but also halted the process: The unstable legal status, which extended both the projecting and the implementation process at least six years. The initial restoration project of the building was approved in accordance with the decision of preservation council, numbered 6880 and dated 1997. However, the license for implementing the revisions, which is attributed by the municipality, could not be beared until the approval of both conservation (development) plan of historical conservation site of Konak-Kordon with the scale of 1/5000 in accordance with the decision, numbered 8349 and dated 2000. Besides, the implementation process was halted until the approval of revisions in the conservation plan with the scale 1/1000.⁹⁹ This defect is explained in Chapters 3.3.1 and 3.4.2 in detail.

In addition to the external risks that are obtained from Konak Pier case, written legal documents that are out of date is a failure to define scope of project and in cost and time estimation as well as communication problems with legal authorities.

The further significant external risk that is revealed in the projecting and approval sub-processes is the lack of terms of reference as well as failure in utilizing a common terminology. Both discounting the restitution projects by the preservation council and lack of auditing may, moreover, be regarded as external risk as this is directly related to the organization, mechanism, & process of preservation council.

The internal risks that the structure creates in the parameters of its own constitution may be evaluated in two groups. The first group consists of the risks that exist within the nature of the preservation project, since the existing structure gives way to the risks of its own. In order to decode and interpret the risk factors, first of all it is necessary to analyze the existing cultural property.

From the beginning of the process of the preservation project, numerous data have to be appreciated and obviated. Mainly, these input are: all alterations and

⁹⁹ See appendices 10 and 16.

deteriorations of the structure, all architectural editions from the construction date until the day it will be restored as the reflections of social formations, the transformations and changes in any architectural element, the architectural value and historical continuity of the main body, use of materials and construction techniques of its own period. These input will exhibit and also underline the value of the cultural property.

As it is evaluated in table of Chapter 3.5, internal risks, which are arised in Konak Pier case, may be enumerated as follows: unintelligible pre-assessment phase, insufficient measured drawings that are not constituting a database for projecting phase, insufficient & incorrect projecting. In the consistency of before-projecting sub-process, not conducting detailed documentation, pre-implementations, and analysis operations in pre-assessment phase as well as intending insufficient definition of scope of project will emerge unexpected and unestimated risks in the course of implementation phase, ambiguous intervention priorities and inappropriate preservation decisions, failure in cost & time estimation.

Failure to interact with the council throughout the entire process besides failure to handle the pre-implementations emerge incorrect implementations, break-down decisions of the council. This may be originated from failure in the definition of the scope of the project as well as failure to reveal the circumstances and pre-requisites of preservation in projects. In addition, there is another failure to procure the specific individuals depending upon the incomprehensible project management.

The significant paradox that reveals in this process is the conflict between the values of cultural properties and the risk parameters of the preservation process. In the definition of the scope of the preservation project, the existence of such values constitutes a risk factor as well. Such values have direct influence on priorities and decisions of intervention as well as types of intervention, respectively. If the definition of the value is not properly decoded, the implementation will result in impropriety, and the cultural property will directly and irreversibly face a loss of value. Therefore it is necessary to define the risk input deriving from internal dynamics rigorously. An essential data-base for the decision of the types of

interventions will be constituted for the identification of these risks by means of all kinds of pre-inspection, pre-implementation, and analyses. Furthermore, as elaborated in Chapter 2, necessary risk response development will be rendered just as convertible risks will enable the clarification of the scope of the project.

The other risk group has originated from the incapability to identify both the scope and the structure of the project specified for the preservation process. This incapability derives from the unidentified, unexpected and unestimated data of the cultural property. This insufficient input influences the entire process in sequence. Furthermore, this will be the reason of the corruption in the flow of information in terms of the lack of the specific terminology in the consistency of the structure of the project. Hence the necessities of management science must be clearly identified in the definition of the scope of the process. Therefore, one of the most essential sub-tasks specified for the preservation process is the establishment of this specific terminology in line with project management tools in order to disseminate the utilizable information. It is impossible to process the collected data and provide the flow of that processed data without any established terminology.

In the consistency of preservation projects, each indefinite input will absolutely reveal as a risk throughout the entire process. These inputs may be propounded as data that have capability to be identified in the pre-assessment phase. However, identification of all risks in the beginning will not remove risk and contingent issues. This entails to take utmost precautions and get ready against the external ones. This indefinite input, which reveals as risk in the implementation process, will cause to transform substantial risks that are beyond control. This is the impact of legislation as well as preservation councils on the definition of scope and aim of the project.¹⁰⁰ This group may be identified a sub-group of risks in accordance with input obtained from Konak pier Project: internal risks which carry capability to transform into external risks. All internal input hinder to render a mature restitution project, which is an essential database for the flow of information obtained in the

¹⁰⁰ See appendiz 6.

course of implementation phase. Lack of maturity in restitution phase transforms an internal risk to an external risk.

All risks will physically cause ambiguous intervention priorities and inappropriate preservation decisions; inaccuracy in intervention priorities and decisions; incorrect implementations; loss in time, cost, and work; interruptions and delays in implementation phase; deviation in the final product and loss of quality. Theoretically, failure in expressing aim and scope for decision priorities; inaccuracy in restitution; interruptions in flow of information; unstable, indefinite, and unestimated decisions; obstacles for fulfillment of pre-requisites of preservation; constitution of incorrect and indefinite input; loss of values to be preserved and failure in continuity of values; irreversibility will be the consequences of the risks .

Evaluating Risk Interactions and Risk Analysis

In the scope of PM, the risks that are identified in the conceptual sub-task can be quantified in the consistency of the sub-task of planning, which is one of the sub-tasks of the life-cycle. In other words, identification of groups of risk parameters may be utilized in constituting the flow chart of the process for the implementation of the project. This utilization should be conducted in light of both quantification and priorities of the identified risk parameters in order to become effective and efficient in intervention decisions. The contents of risk analysis may possess are enumerated as follows in order to categorize the risks in terms of preservation:

Risk analysis techniques are grouped into two parts: quantitative and qualitative. They both benefit from the data produced by risk identification but the qualitative approach consumes the gathered information through direct judgment, ranking options, comparing options, and descriptive analysis. In contrast, some of the quantitative risk analysis techniques are used in performing statistical models and simulations in order to reach numerical results that show the effects of risks.¹⁰¹

¹⁰¹ Öztaş, Ahmet; Ökmen, Önder (2004), *ibid*, 229-237.

These risks may be questioned and identified at the beginning, contingent, if the prerequisites of the preservation process are well known. For example; the reason for transformations of the legal status three times resides not been registered in terms of conservation plan. The preservation council refuses to approve each kind of projects (initial or revisions) without approval of the revisions of the conservation plan if exists. On the other hand, the license for implementing the revisions can not be attributed by the municipality, contingent, if there is no construction license. The buildings before 1990 do not possess the construction license. If all data is collected comprehensively and defined as well as processed in order to render sufficient input, this information will be obtained at the beginning. This means attendant precautions will be arisen in the pre-assessment phase.¹⁰²

- **Establishment of criteria for determination of priorities of risks**

Among the varying qualifications of the risks, the priority should be on those related to legal tools. As long as risks related to the preservation councils are not deciphered, it will be pointless trying to solve the internal risks, since the working process of the project will be terminated. If risks related to laws and principle decisions are disregarded, the project or implementation will not obtain approval of the preservation councils. Therefore, the priority of the risks must be the ones deriving from the legal tools. The second range of risks are those risks of internal and convertible character that originate in the building itself. The bearing of this group of risks is directly proportional to that of risks that stem from the implementation process. Necessary precautions, on the other hand, are taken into consideration in order to reduce risks arising within the implementation phase.

It is achievable to identify another sub-group of risks related to the legal tools. This group includes competent detailed projects in order to conduct the intending of implementation process. Constitution of pre-assessment phase as a proper and precise as well as definite data collecting phase will provide for reducing the interruptions, corruptions, delays or obstacles in the course of implementation phase. As it is

¹⁰² See appendices 6, 9, 16 and 17.

informed in the beginning of this chapter, these are internal risks, which carry the contingency to transform into external risks depending upon the scope of the pre-assessment phase. This pertains to the compulsive approval of each project by the preservation council. As an example in Konak Pier Project, an architectural detail on the front façade, *tuğra*, is independently entailed to be documented as well as constitution of preservation decisions. Unfortunately, the initial projects did not include this detail. Hence, this request arised within the implementation phase. In addition, rendering that documentation did cause interruption in the flow chart and delay in the time schedule.¹⁰³

The following risk group has been derived from the dissemination of all kinds of revealed utilizable information. This group has an important sub-task: terminology. The constitution of common terminology is essential to the flow of the organizational chart of the process.

Risk response development is necessarily both improved and imposed in light of priorities of each of internal and external risk groups. In this case, it is possible to constitute the ultimate intervention decisions and priorities in order to clarify the types of intervention at the end of the pre-assessment process.

- **Risk response development**

The corruption in the correlation of input-processing-output-feedback approaches should be prevented. All the main phases that are essential and significant for all kind of projects, also apply to the preservation projects on condition that the transformations will occur dependent upon priorities and pre-requisites. Hence risks encountered both from the outset and throughout the process of preservation projects give way to deviations within the continuity of the process.

In the scope of preservation projects, as is done in construction projects, contingency planning may be substituted for an actual risk response development plan. Since risks continue to be identified within the process of the project, it is

¹⁰³ See appendix 6.

impossible to remove the risk parameters entirely. Consequently, precautions may be taken in order to reduce risk input, which implies possession of a defined flexibility for the establishment of the scope of the project.

Required Managerial Aspects for Preservation Work

The selected main components of project management, such as integration, scope, time, cost, quality, human resource, communication, and risk and procurement managements, are generally either interrelated or correlated horizontally. Hence, for the consistency of preservation pre-requisites, they should also be interrelated vertically in sequence as well as constituting their priorities. The integration of these components will be shown, in the finale of this dissertation, to constitute an interdisciplinary organizational ‘process chart’.

Scope of the Preservation Project

Other criteria that arise together with risk management are the most important PM components with respect to the preservation process: Scope Management criteria. In scope management, the preservation project is defined as having abstract goals and is prioritized with reference to categories entailing wide range of risk. The abstract goal transforms itself into a necessity in preservation projects, such as the physical preservation of the structure. For the phenomenon of preservation to be achieved, the scope of the project must be identified properly. The description of the scope of the preservation project within legal tools is a definition -foreseeing the risks- of the implementation to be executed. Such types of intervention should be rendered in a way that will minimize the risks of the sub-tasks. For this configuration, the existing conditions of the sub-tasks must be thoroughly defined.

In order to provide accuracy in the definition of the scope management, cost, time and resource estimates should be obtained for supporting the development

measurements and controls. The latter will in turn ensure the consistent description of the basic levels and distributing responsibilities.

The scope management comprises the reasons to initiate a project. These may be enumerated as, market necessities, job requirements, client wishes, technological advances, and necessities of the law. The actual reason for initiating the process of a preservation project is the danger of losing an existing cultural property with historical values due to aging, misuse or disuse.

Each project entails to possess the definition of scope of the project. This definition will provide for the quality of the final product. Moreover, scope of the project carries the time and cost estimation. The balance of these requirements is failed by the internal and external risks within the frame of preservation project: There bears a contract of determining the duration of the work as 665 days in the consistency of Konak Pier Project as well as including implementation phase and details, all technical sub-contracts between the supervisor and the owner of the project. However, the external risks cause six years loss in time at the beginning of the process yet. When the process is overlooked, the internal risks moreover affect the flow chart of the process independently.¹⁰⁴ Consequently, the adventure of this cultural property could be completed partially in the year of 2003. Any of the risks could not be identified beforehand throughout the entire process by the supervisor. This means the project had been failed.

All phases that the process of a project as well as the entire process must be well known in order to arrive at the definition of scope of the project. Convenient definition entails the reduction of risk of high ratio as possible. All definitions should be definite, comprehensive, in sequence, and relevant to the input of the preservation process, which reside substantial and complicated: Lack of restitution projects was not taken into consideration in the approval of the projects within the process of Konak Pier Project. However, the maturity of restitution projects is directly proportional to the decisions of intervention. This renders the types of

¹⁰⁴ See appendix 6.

intervention. This negligence will cause the interruption in the flow chart of the information.¹⁰⁵

The scope of a preservation project may be defined in connection with the correlation between risk and scope managements. The scope of the project, which is simultaneous and of equivalent value with risk identification, may be rendered as well as constituted more accurately and in greater detail once the identified risks are.

The aim of scope management is to document, describe, and establish all necessary activities of the work in context of the reasons for preserving as well as the description of the limits and borders of the process. These descriptions will be directly proportional with risk identification and quantification. The scope of the preservation project should be flexible in order to provide fulfillment of all activities under uncertain, unexpected and unestimated conditions. Flexible scope planning will constitute a scope baseline with the definition of the main sub-tasks of the preservation process as pre-assessment, projecting the project, intervention decisions and priorities, and implementation phases. The pre-assessment phase should in particular carry first priority in the consistency of scope management as most of the definitions of each activity and identification and quantification of the risks will be taken into consideration in this phase that marks the beginning of the process.

Another issue defined by scope management is strategic and tactical planning. While strategic planning works with upper-level organizations, tactical plans work with implementations. They comprise, in other words, short-term plans. The process described -and the process chart built in this dissertation- is the result of tactical planning. Each piece of information in need of scope planning will constitute data (but 'data' that has not yet been transformed into information) for other project management processes.

Planning as a work package in scope management constitutes a balance within the preservation project. Providing accurate, detailed, and coherent flow of information as well as the efficient utilization of time prior to the initiation of the

¹⁰⁵ See the decision of Preservation Council, numbered 6880, in appendices 6 and 9.

implementation phase is, of course, important. But so are evaluating the outcomes of the objectives or determining how often and in which way the modifications will take place. Absence of planning will likely cause one of these three tasks to take priority and the other two to be neglected. Planning, on the other hand, will ensure balanced attention.

Simultaneously with scope planning, product analysis, financial analysis and all other attendant options need to be defined. Product analysis here is employed to obtain better comprehension of the product that is to be produced. However, in preservation projects, the aim of the analysis is the investigation and restoration of the existing structure. Yet all kinds of structural and material analyses, the gathering of every piece of available information for the preservation project is not in fact understanding and comprehending the project itself better, but for constructing the project in the best way possible.

Time and Cost Estimates

Risk and scope managements should be structured so as to obtain the functioning of time and cost managements. Due to the prominence of the risk range, it is difficult to arrive at estimates on cost and time managements. As long as the scope of the project and the identification of the risks are sufficiently ratified, relevant input will be constituted for the cost and time estimates within the requirements of the work.

Time estimate is further inhibited due to the fact that unknown, unestimated and unexpected data hinder the full clarification of the scope of the project. The inhibition of timing in turn directly affects cost estimates. The main input for cost management is the operation that is to be carried out as well as how much time that operation will require. It is essential to re-define this trio (unknown, unestimated and unexpected) in terms of preservation process. Depending on the eminence of the risk ratio, the time estimation becomes constrained; however, the actual undefined restraints in preservation projects are the results of external dynamics.

These unidentified input give way to risks that impede factors which would eventually lead to preliminary cost estimates. Scarce materials and skills, unique details -which will comprise the “specific implementations”- are noteworthy risks in cost estimation besides their capacity to forecast the flow of the preservation process.

To arrive at realistic estimates, an approximation of the cost of the proposed preservation work should be calculated. Cost management may be taken into consideration directly after the definition of the scope of the preservation project, in so far as most risk parameters are clarified in the beginning of the process. Since each building is unique, it is essential to command flexibility in the cost estimations in order to arrange a proper contract form. The lump sum type of contract is the most suitable form for a preservation project, while it is quite difficult to achieve realistic costs of the implementations with high ratio of risks. Feilden elucidates the reasons there of:

Expensive mistakes can be made due to the lack of an initial inspection which considers the building in its setting as a whole, to wrong diagnosis, to restrictive codes of practice, to clumsy administrative and contractual procedures, to lack of flexibility and poor supervision, and above all to bureaucratic delays, due to the lack of specific responsibility.¹⁰⁶

Calculating time and cost estimation means to clarify detailed information on all types of procurement. Meanwhile, integration management and communication management become a part of the operation. They not only help integrate all the information that come from each section of the project, but also convey this information to all sections of the operation constantly by the aid of the management information system.

¹⁰⁶ Feilden, *ibid*, p.255.

Integration of Preservation Process

As determined by the priorities placed in rational sequence, the next sub-title is integration management. During the realization of the design phase of the project, “schedule development” should be revealed as soon as the time and cost estimates begin to be rendered in the process. The aim of this management is to constitute the projection of the project. The results of the risk, scope, time, and cost planning processes should be gathered in a coherent and harmonious documentation and also be properly coordinated. This may be achieved during the reconstruction of the preservation process in light of the procurement and communication managements that are taken into consideration within the scope of integration management.

The process of integration management pertaining to the preservation project will be equivalent to the process of restitution project. After rendering the information from the collected data and processed input, integration in a preservation project resides constitution of the priorities, decisions, and types of the intervention. Thus, a restitution project is deliberately emerged as a hidden node of the preservation project. Constitution and rendering a mature restitution project will mean projecting of the preservation project. At the same time, this means conducting and revealing a determined schedule and a competent flow chart.

Procurement management traces the sources of both original and proposed materials and techniques. Since the intervention in this phase is approximately “specified”, it is essential that the resource of material to be utilized should be sufficient enough as well as the technology –most commonly what is available will be technique and equipment that are out of date– and qualified individuals should take adequate role in the implementation procedure. Compared to all fields of preservation, the specialty of procurement management owes to the fact that the interventions heavily demands “specific implementation”.

In the scope of the communication management, the expectancy is the constitution of a common terminology and the coordination of accurate information flow. There also exist terms and implementations that are no longer taken into

consideration in new constructions, but only in preservation procedures. It is obligatory for the entire project team to be professionally adapted to the terminology and to have acquired its proper workings through the flow of accurate information.

In an exhaustive theory of organization, communication occupies central role, while the structure, extensiveness and scope of the organization are determined to a great extent by communication techniques. The fact that the sub-tasks of procurement and communication management are classifiable under the heading of integration management contributes to avoiding the risks that might occur in the design process of the project.

MIS in the Flow Chart of the Preservation Project

MIS is the process of acquiring and utilizing information toward the collection of accurate data. It synthesizes this data so that it produces and distributes the information that will be utilized in each level of the effort. The basis for redefinition is that the correct information of the preservation process cannot be accurately defined in the beginning of the process. Therefore it is necessary to create an “information management” approach specifically for preservation. Although information and decision-making are two fundamental tasks of project management, these two basic input can be modified for the preservation process by the interpretation of the needs of this process. Since it is certain that unforeseen problems introducing unexpected, unidentified, and unestimated data will arise in the course of the preservation project, data-processing becomes essential for the achievement of utilizable information in terms of establishing the flow chart of the process. The quality of the decision-making process as well as the quality and appropriateness of the decisions that are achieved, depend directly on the quality and sufficiency of available information (Bilgin Altınöz, 20).

The design flexibility of any new application process does not inhere in the process of the preservation project. Therefore, it is important that the data gathered within preservation be processed correctly, as well as being interpreted carefully.

The information that results from such interpretations will distinguish the limits of design flexibility within preservation. There exists design flexibility within the limits of preservation. The most important input of this flexibility is whether or not the appropriate preservation theories have been applied.

Subsequently, the information resourced from risk quantification should be processed by means of decision-making and decision-supporting systems in order to constitute useful interpretation for intervention decisions and priorities.

Terms of Reference in the Consistency of the Pre-assessment Process

“Terms of reference” must be redefined on two different scales within the preservation process. The first one of these is the technical and administrative specifications that occur in the project process. In the early stages of the process, these specifications are generated from the structural framework of the process, description and the extent of the project, within the borders of the legal regulations. However, the material and/or technical necessities required for the application procedure must be in accordance with the specifications.

The other scale of preservation processes is a sub-scale that includes phases within. All phases described in the preservation process are bound to unique “terms of reference”. Since each phase is the prerequisite of the subsequent phase, these “terms of reference” must be dependent on the data produced in the preceding phase, and should produce the data to become the reference for subsequent phase. Through the deployment of data obtained in one phase as the reference for the subsequent phase, the malfunctionings deriving from the discordance among the phases will be eliminated.

In the consistency of Konak pier Project, it is obvious from the decisions of the preservation council that there exists no terms of reference: The approved projects carry the scale of 1/250 in accordance with the decision, numbered 6880.¹⁰⁷

¹⁰⁷ See the decision of Preservation Council, numbered 6880 in appendices 6 and 7.

That peculiar scale that hinder the time and cost estimation can not, of course, possess all required relevant information. The insufficiency of this scale will absolutely be revealed in the implementation process. In addition, this indicates the revision projects throughout the entire process.

Job Description

It is possible to create job descriptions in the extent of the process in relation to WBS and MIS. In order to obtain the distribution of data in an accurate way, it is essential to make use of the job description and the job classification stages as binding elements, following the formation of adequate useful information.

General Scope of Preservation Process

As a result of the re-definition of PM components for the preservation process, the aim becomes both to constitute and to render a process chart to serve as the basis for all preservation projects.

In light of the evaluation of these re-definitions, risk management (having the first priority), scope management, and integration management will be either distinguished or differentiated among the other approaches offered by management science.

Once the priorities are classified, constitution of numerous groups, each comprising nine selected components, will reveal and render the vertical correlation of these components of PM. The nine components, and their groupings, are, of course, selected in light of both efficiency and accuracy. In order to describe these groups in their particularity, the most important group will be taken into consideration, as the group whose components are subject to risk management. This methodological fact has been, and will be, frequently reiterated in the present dissertation. Once the interrelation between the risk identification and the scope of the project is identified, the parameters and objects of scope management will be

constituted i.e., the latter will be constituted by the former. The aim is, in other words, to constitute, and thereby to reveal the utilizable information needed for WBS.

The second group that has been constituted under the heading of integration management involves two sub-tasks. The first sub-task is aimed at rendering cost and time estimates by means of the informational outputs deriving from the WBS approach. The second sub-group, on the other hand, will process this output of WBS, as well as the estimates, as an input in order to attain the ultimate terms of reference in addition to obtaining the job description. Hence, procurement and communication managements will be taken into consideration including a number of transformations in their contents in this group of integration management.

Finally, the last group of project management components in light of the preservation project is aimed at attaining a cultural property that work on which is geared toward ultimate implementation by means of both proper re-utilization of decisions and sufficient intervention in decisions and priorities. This re-description provides the requirements of quality management in terms of the preservation phenomenon. This group of quality management should involve all the decisions taken for the use of the implementation phase as well as the priorities and quantifications.

CHAPTER 6

Conclusion

With the interpretation of all parameters and input that influence the preservation process, it may be surmised that the prerequisites of the preservation project –ranked according to priority– require a different, if not unique, definition of scope and structure of the process. This different process has to be redefined in such a way that the ‘management science components’ –within the preservation phenomenon– support the process as well as include the flexibility needed to re-adapt the preservation systematic.

At this point, four main ‘keywords’ have been revealed. In the scope of the present dissertation, the ‘risk’ factor comprises both the most effective and predominant among the other keywords. Without decoding the risk parameters, it is not possible to render an operative preservation process. The more the risk parameters are identified in the consistency of risk management, the more the amount of unexpected, unestimated, unidentified data will be reduced prior to the beginning of the implementation phase. As long as the structure of risk identification is constructed in the first phase, the constitution of the database required by the preservation process will be possible. All input about risk will channel the redefinition of the structure of the preservation process.

The second keyword exhibits the reasons for preservation and portrays the “values” of the cultural property. The values of the cultural property give way to a paradox since they constitute risks for the projecting process. Subsequently, the value which the cultural property contains and will transfer is the source of the risk that is ventured in the scope of the preservation project.

Another keyword, although it is not as predominant as the risk parameter, conveys the form of the process in an oblique way. This is a ‘hidden’ keyword that

results from the comparative evaluation among two separate disciplines. This parameter is 'defined flexibility' which is obliged to exist on every 'level of effort' ranging from risk identification to the constitution of the process chart. It is beneficial and compulsory for the preservation process to have defined flexibility whereas the risks have been reduced already: there is always a possibility that risk will influence the process. The reason for 'defining' flexibility derives from the fact that risks should be under control in all phases of the project from the task within the project to the level of effort.

The last important keyword within the extent of this dissertation is 'legal tools'. This is due to the fact that legal tools are the most operative and invariant input in the preservation process. It is not possible to redefine the preservation process with its diversities and prerequisites without making use of legal tools. Legal tools are evermore the determinants of main or general frames and limits of the preservation process. On the other hand, legal tools constitute one of the largest risk parameters. The most fundamental reason for giving way to the constitution of risk parameters is because the scope of the legal tools is open to interpretation. Due to the values of the cultural property that have to be preserved, there is no possibility of standardization within legal tools. Since each case has unique values and risk parameters, the legal frame must have certain extent of flexibility for each project.

The intermediate element that will correlate these four keywords is 'information systems'. The flow of the information system should be specialized adequately for the preservation process, either for collecting data or disseminating information. Since the main input for this specified information system will be the result of processing the risk data (including all keywords), the sub-process of identifying and quantifying the risk parameters will continue throughout the entire process. Once all information that has been the output of each level of effort has attained the degree of maturity enabling not only rendering the estimations more probable but also decreasing the deviations, the risks should become tolerable in the flow of the information system. In order to achieve this, it is advantageous to predicate the information system on a well-defined terminology. Consideration of the

vitality of comprehensive information in achieving the proper process for executing the preservation project constitutes preservation of the values within the legal frame despite the risk parameters.

The process chart, which is intended to constitute the end product of this dissertation, contains these keywords within its structure as well as reviewing the preservation process from a managerial perspective. With the regeneration of the redefinition of the PM components within the scope of the preservation process, this process chart has been delivered that both contains the definition of the preservation process and predicates the limits determined by legal tools.

Therefore, in the course of defining the framework of the process chart of the preservation project, the terminology of management science has been re-defined and structured so as to handle the dissemination of processed data as utilizable information.

Subsequently, a comparative study table evaluating the collected data and information extracted through processing (by means of the level of efforts in preservation process) has been constituted to provide for the accurate flow of utilizable information from the outset of the process chart.

Table of Comparative Study (CST) Between Project Management and the Preservation Process

The aim of this table that has been developed for summarizing and evaluating the information that has been processed throughout the present dissertation is to render a comparative evaluation of data procured. Thus all information that has been discussed within the scope of this dissertation is extracted so that it supports the process chart by means of this table.

In forming the systematics of the table, four different information comparison methods, as seen in table 7, have been deployed:

Table 0.1 - Methodology of the comparative study table.

Project Management Components	
In Construction Process	In Preservation Process
Present – <i>the same</i>	Present – <i>the same</i>
Present	Present – <i>change in definition</i>
Present	-- <i>(it is not included within the process)</i>
-- <i>(it is not included within the process)</i>	Present
Present	Present & supplementary explanation (but interpreted, modified, transformed, or has additional expressions)

In the first method of comparison, it may be observed that both project management input are the same. This is usually valid for the headings of the tasks and sub-tasks. Difference and transformation in each work package and level of effort inevitably come under every sub-task in the preservation process. This group of information is defined with black color in the main table below.

In the second informing type, the input existing in both construction and preservation processes are expressed. However, unlike the first group, the different parameters or data within the preservation project result in diversity among the definitions. Since this group CAN be conceived as an outcome of the first group, it has been represented with the color grey in the main table.

The comparison of the third type of information clarifies that not each sub-task within the construction process is valid for the preservation process. This diversity within the process stems from unidentified, unestimated, and unexpected data inherent to the preservation process. These work packages or levels of effort, which have no equivalent in the scope of the preservation process, utilize definite and actual information as input. The third group of information has been represented with the color green in the main table.

The fourth comparison indicates that an input specified in the preservation process does not exist in the scope of the construction process. It is possible to collect the information that gives way to the diversities in the entire process in two sub-groups. These two sub-groups are the risk parameters and the legal tools. In any case, these two types of information are always already the most operative input in shaping the preservation process. This group of information has been represented with the color blue in the main table.

The final type of comparison represents that an input which exists in both groups specializes in the needs and the scope of preservation process. On the other hand, the explanations and references within the text, of these specified preservation input, are placed in the last column of the table. Since the information in the final group conveys preservation pre-requisites and risk groups, they are represented with the color red in the main table.

Process Chart

Supported by information deriving from the comparative study table, a process chart proposal has been developed for redefining the scope of the preservation process. Within this chart in which the proposed structure of the preservation process has been described with an eye to the interpretations of keywords foreseen by the dissertation, a new methodology has been proposed to reduce the difficulties and deviations in the functioning mechanism.

Another parameter which the process chart reveals is the vitality of the ‘pre-assessment phase’ among all other sub-tasks (pre-assessment, design and projecting, implementation) of the preservation project. As emphasized in the aim of the study, the pre-assessment phase must be redefined thoroughly for reducing the risks in the preservation process and ascertaining the reduction of the malfunctioning caused by these risks. Since PM components will be utilized in this re-defined process together with the work breakdown structure approach, it is necessary to accelerate the rate of the pre-assessment phase within the entire process.

Methodology of the Process Chart

The process chart of the pre-assessment phase is formed by three main phases and three transition-zone stages. Each one of these phases is related to both the preservation process and project management criteria. Furthermore, PM components have been redefined and reorganized in the scope of the preservation process. In these main and transition phases, redefined PM components have been placed within the process as well as the integrating the two separate disciplines.

From the first main phase towards the third main phase, the density of the work packages and levels of effort within the phases will decline. The first phase has emerged as the densest in relation to its scope, and the most complex in relation to its connections. This owes to the fact that the first phase makes up the basis for all intervention decisions and priorities, as well as for the types of intervention that will be constituted. The synthesizing of this data takes place in the second phase,

followed by the decision-making and realization of the designing stage of the project in the final phase.

The flow chart that expresses the preservation process has been shown to as overlapping with a methodological grid that emphasizes the main and transition phases. The keyword that describes each square of this grid that overlaps in the main chart has been represented in 'bold'. Thus it will be with another easier to relate the process chart correlations to the methodology table.

The only input that is excluded from this grid are the legal tools and the cultural property to be preserved, which two provide the only main data that are stable and inflexible. Legal tools are defined by means of the keywords such as 'limits and borders'. Limits and borders zone has two main connections with the process chart. One of these connections is the legal tools, which need to be informed in order to inspect, audit, and revise the project process in each transition phase. Although this parameter directly influences the process, it does not take place within the process itself. The other connection initializes the process, and links it to the first main phase, which is the pre-assessment phase. This connection contains the fundamental elements that are needed for the process.

Phases of the Process Chart

The main phases, which are the three main input of the Process Chart, contain two main sub-tasks: PM and preservation process zone. These two sub-tasks are both related and integrated. These syntheses and interpretations constitute the work packages defined within these sub-tasks. Every phase has a goal that has been predicated within its own extent. This output functions as the input for the subsequent stage. In addition, ‘binding elements’ and ‘levels of effort in the transition zone’ have been created for supporting each input. These binding elements provide flexibility of structure in the process of project.

Pre-assessment and Risk Phase

The aim of the first main phase is to construct the concept of the ‘scope of the project’. Each ‘levels of effort’¹⁰⁸ that is realized in this phase will be evaluated in order to re-define the scope of the project. This phase has been generated on the basis of risk identification and quantification for defining the scope as well as the structure of the project. Work packages aiming at collecting data have been constituted under PM and preservation process sub-tasks.

Within the first work package, early data deriving from limits and borders will reveal the outline of ‘job description and terms of reference’.

Within the second work package, the realization of pre-inspection analyses and early authenticated drawings, such as scaled sketches, has been stipulated. The goal of this step is to collect data that will identify unexpected and unestimated parameters. Simultaneously, supporting the database is necessary for quantifying and classifying unexpected and unestimated input, which are invoked within the limits and borders zone. Such support of the database will include the risk management

¹⁰⁸ See section ‘B.2’ in the comparative study table.

components. Another suggested work package is to compose the decision of appropriate re-utilization in light of information deriving from these analyses.

Risk management enters the scene operatively in the organization of PM components. In accordance with this introduction, it becomes possible to develop ultimate utilization proposals by harnessing the first information group. Eventually, basic principles for the definition of the scope of the project are constituted.

The first main phase consists of the processing of raw data and transforming the latter into information. This leads to the identification of risk that exists in both the scope and extent of the work. Hence, the first phase of the process chart is at the very beginning point directly describing the problem, the pre-requisites of the preservation work and decoding the physical circumstances of the building by means of the vertical correlation of project management tools. Viewed from the perspective of project management, the forthcoming phenomena are the definitions of the ‘job description’ and ‘terms of reference’. The definition of the scope of the job description may be reduced to the risk identification and risk quantification sub-titles.

As a result of the evaluation of this phase, the definition of the scope of the project provides the database for the constitution of utilizable information within the entire preservation process, and especially in the implementation phase. This database that enables the definition of the risk parameters in early stages also provides the reduction of risks throughout the process.

In between the second main phase and the first transition zone, information that has been processed and evaluated are revealed as the first ‘basic outputs’. Further in this intermediate zone, the parts of the existing structure constituting risks are investigated through pre-implementations. At this point, legal authorities may be presented with the basic outputs that are supported with this information, and thus acknowledged.

Determination and Integration Phase

The objective of the second phase is to attain a well-defined job description and terms of reference. Therefore, every data that has been collected and analyzed should be integrated, processed and transformed into ‘utilizable information’; and consequently be disseminated without deviation. For the ‘utilizable information’ to be achieved by the correct work packages under a sub-task, ‘actual levels of effort’ needs to be defined. Accordingly, the binding elements of the second main phase are the MIS and WBS approaches.

Prior to the activation of the work packages, the description, distribution, and dissemination of the work must be fulfilled thoroughly and in detail. The detailing may only be achieved through the gathering of actual information. This information derives from the pre-implementations of the first intermediate zone. The distribution of all this collected information -in other words a well-organized MIS- may be achieved through the established use of a common terminology.

The synthesis and overlapping of the information resulting from analyses, quantification of risk parameters, first ‘time and cost estimates’ and operational documentation –with the support of well-defined WBS and well-organized MIS– may be regarded as the work packages of the second main phase. In order to compose the job description and terms of reference, aside from the mentioned input, the sources that will be used in the consistency of the scope of the process should be supplied. The possibilities of supplying the requirements of preservation implementations, specific work, specific individuals, and relevant material should be clarified within their common context. This data will be in interaction with cost and time estimations.

Project management components that are operative in this stage are respectively: integration, communication, procurement, cost and time managements. Integration management contains within its structure other managerial approaches as well.

The information emerging prior to the third main phase, i.e., within the second transition phase, constitutes the ‘intervention priorities’. Further in this transition

phase, the outlines formed in the pre-assessment and risk phases will be revised as well as more actual definitions be generated with the addition of current information. Sharing this generated information with legislative authorities is necessary for the inspection and auditing of the process.

Types of Intervention and Quality Phase

The third phase of the process chart prior to the implementation phase produces the intervention decisions for an appropriate preservation project. These intervention decisions and the restitution project –the project as it is realized in the third intermediate phase– are utilized for the determination of the types of intervention. The database necessary for intervention decisions is constituted in the preceding phase through the level of effort studies, for the clarification of the intervention priorities.

The binding element that is utilized for supporting the work packages of the third phase is the ‘contingency planning’. Thus flexibility among the levels of effort, work packages, and sub-tasks vertically as well as horizontally will be provided for prior to the final phase set aside for design and process. This flexibility is also valid only for the risks which one was not able to define until this phase of the overall process. Flexibility is now inserted into the entire process in order for that process to tolerate the deviations that might occur in the scope of the implementation sub-process.

Due to these reasons, the third phase contains two major work packages. The first one is the intervention decisions that were mentioned above. The second one is the ‘projection of the project’. In the design phase of the project, the collection and processing of all kinds of data have been completed. Meanwhile, unidentified, unexpected, and unestimated data will keep coming in, albeit with a decrease in amount, and the ‘utilizable information’ whose processing is still continuing is constantly and flawlessly disseminated. This work package, within well-defined and

flexible circumstances, is the stage in which types of interventions are determined and appropriate implementation projects are rendered.

The result of this phase is the transformation of the raw data into ‘utilizable information’. In other words, the unidentified, unexpected, and unestimated data in the beginning of the dissertation has been defined, qualified and refined along with the development of a methodological proposal in the form of a ‘process chart for the pre-assessment phase of preservation project’.

Outputs of the Conclusion

This dissertation has invented, explained, and tabulated an information and decision-making system, which it has shown to derive from the results of all the data collected and processed through the scope of the study. The main components of this system are rendered by a comparative study table that has been constituted by referring to the main body text, and a process chart that refers to the comparative study table.

In regard to this system, the main body of the text is the first phase containing the widest range of information. All the needed analyses, synthesis, and evaluations may be found in the body text. Within the second phase of the system -the comparative study table (CST) - the utilization and interpretation of the data that have been processed are expounded. Among this trio, of which each leg is pre-requisite for the other, the chart is the one which contains the most compressed and interpreted information. In other words, the processed utilizable information has been expressed through the process flow chart.

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