



## Survey about Preventive Maintenance System

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### Abstract

*The gap between the processes of preservation in order to prevent sudden events in the successful samples, are obtained through the process of mapping processes and system flowchart. It is worth to say that one of the biggest obstacles in performance of preservation and maintenance systems is to present an inappropriate diagram or an unsuitable pattern that may negatively affect the whole system. Present proposal has been formed by a case study on the introduction of the preservation system and strategic planning in universities and under the processes of reengineering system and the modeling of Harvard model.*

**Keywords:** Preventive maintenance, establishing, survey.

### Introduction

One of the practical purposes of the preservation and maintenance system is to optimize the manpower capabilities and machinery that is used for achieving maximum production and reduce the risks that threaten the system. Similar research projects have been conducted inside and outside Iran that were about designing and strategic planning of different systems, but in this proposal has used the method of reengineering process and modeling of Harvard model. So this proposal has the certain aspects of innovation<sup>1</sup>.

Seyyed Hosseini presented a research plan on the design and establishment of maintenance systems in manufacturing and related industries in 1376 that included goals such as acceptance of the preservation system and prevention affairs. The researcher also noted other types of maintenance and operational procedures including improvement of the equipment, repair of broken machines and disabled ones, Maintenance to prevent downtime and other preventive affairs. Also it is noteworthy that Raeisy in the 1384 performed a study which compared the preventive maintenance procedures. It should be said that one of foreign records of the present plan is Oakland's research in 1384. He offered the modeling in reengineering and its process. He believed that launching is a very important affair in reengineering projects. Note that for checking a system, matters such as the evaluation process, improvement of the system and improvement of the reengineering method should be considered. Thus as for the concept of process, it must have parameters in line with the preventive maintenance system.

Processes can perform in 2 ways: Good continuous process improvement methods (CPI) and poor processes and procedures required reengineering (BPR)<sup>2</sup>.

### Main Body

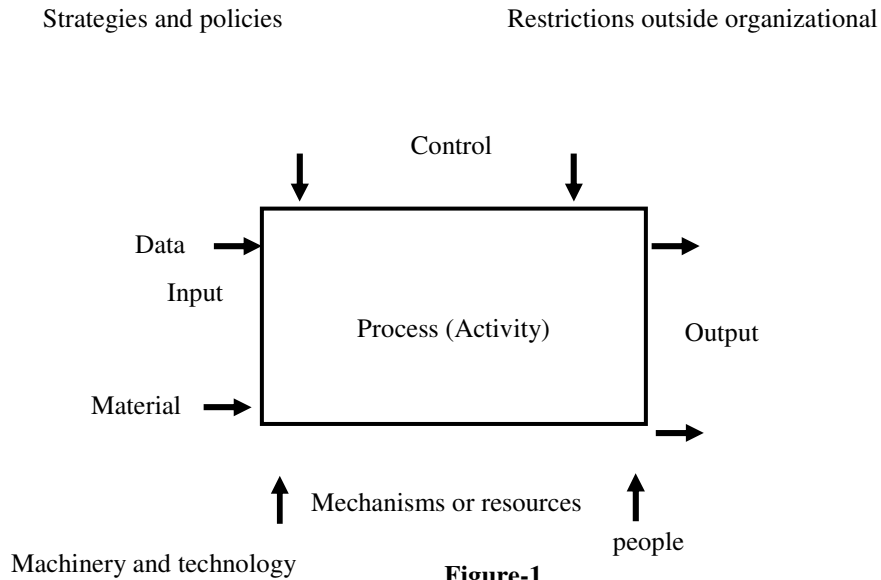
This plan has several techniques to analyze process which partially explains their deals. The mapping process: IDEFO model used for process analysis this model has a hierarchical set of diagrams and texts.

In fact this model is a schematic model with rectangles, processes and arrows to understand the contents to researchers and readers. It should be said that this technique is widely used in reengineering projects and has an important role in the process of continuous improvement and data integration process<sup>2</sup>. According to figure 1, the schematic model has input, processing and output which is visible in figure.

Drawing up the work flow diagram: If the recovery process was improved, first, current methods have been recorded. This process can be achieved by drawing flow chart and its modeling is considered according to the process and research activities of Oakland. According to figure 2, also the flow chart is a schematic model which has appendices and descriptions. This model is a step by step picture of the main activities of the process which is designed based on researches and documentations of Wan Chang<sup>3</sup>.

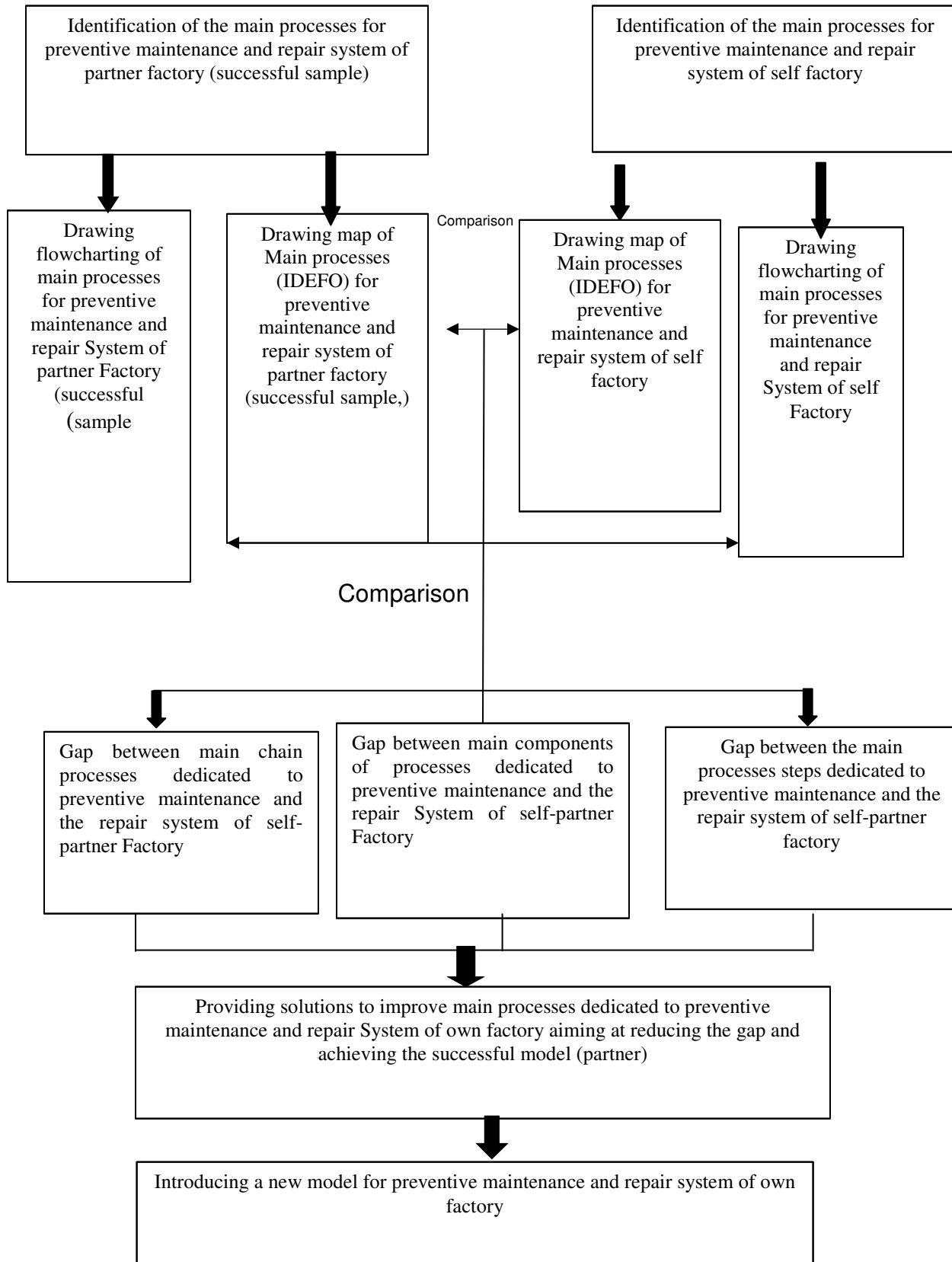
Conceptual model of the research is also according to figure 3 with shapes and arrows trying to investigate the series of the research steps and expressing the main concepts of the plan as a comparison or independent.

In this plan the questionnaires have a new design which is a concept of demographic and has to describe the personal information. This personal information include Sex, age, education, experience, job type, business unit, etc. Also a series of questions about measurement of variables and assumptions were designed that contained components and process chain<sup>4</sup>.



Explanation	Name	symbol
Shows start and end points of work flow chart	Circle	
Workflow of each activity for each rectangle should contain a brief description of the desired activity	Rectangle	
Point of decision. Each lozenge should have a question with a (yes) or (no) answer	lozenge	
A small circle with a letter, for connecting one activity to another in the workflow chart	Interface	
Transfer (or result) of a document or a written paper	Document/ paper	
Electronic transfer of data	Zigzag Arrow	
Direction of process flow	Straight Arrow	

**Figure-2  
 Work flow chart**



**Figure-3**  
**Series of steps**

At the same time the five-degree model of Likert was used that considers codes 1-5 for parameters such as totally disagree, disagree, no comment, I agree, totally agree.

Also it should be said that for proposals in the field of data analysis about 25 percent of the samples should be selected to distribute and collect in the domain of validity and in the final questionnaire Cronbach's alpha should be considered when using analysis software spass.

The current population of each plant personnel will be considered as community statistics which are different and have different Gay units.

Therefore, units such as electrical and electronics, mechanics, operation, installation, technical offices, systems and various references in the planning and implementation PM, can be considered as the statistical society<sup>5</sup>.

## Results and Discussion

This project used questionnaires to collect information from individuals and then entered the information in the conceptual model. Accordingly, considered the followings: i. Measure of respondents in the gap between the process of maintaining system and preventive maintenance tasks of the factory and the successful factory sample. ii. The Measures of the respondents for the listed process components. iii. They measure the gap between the chain process of preventive maintenance system of the factory and the successful factory sample.

It is noteworthy that this questionnaire has had high flexibility and is designed so that it can be considered closed, opened and semi-opened and the open type has been considered in this study for statistical analysis.

The statistical sample size in this study was selected based on Krjssy table, Morgan and Kuhkan. This expression describes the research findings that the issues considered in the analysis of the test results are based on the summary of research findings. Also parameters such as improvement of preservation and maintenance system of the factory are considered that include

the following categories. Categories that included very important parameters when analyzing, such as Demographic results, Results between questions and hypotheses, Demographic questions, Results of hypothesis, the results of plan questions, Ranking and importance and the necessity degree of questions<sup>6</sup>.

## Conclusion

It should be pointed to test results obtained in the system of preventive maintenance in the factory. This new system will include new model IDEFO and workflow diagrams and solutions such as training for PM, job descriptions for the PM, responsible for implementing the PM, activity executive, mode of operation, activities performed, volume of repetitive and additional activities of PM, activity time, software communications, inspection, executive agencies, safety and other issues.

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