Abstract

Increased global competition caused the organizations in order to survive, not only try to use the methods that reduce the cost, but also meet the needs of their customers. Nowadays, in the world more emphasis is on the ability to adapt to changes in the environment and a proactive approach to understand the needs and new methods of cooperation such as virtual organizations. One of the most widely used concepts in the field is the concept of Agility. Agility in organization is of many sizes. This paper presents a conceptual model for agile implementation and maintenance of the organizations. For this purpose various aspects of agile net has been studied in the organization And by using expert opinions action is taken to extract related indicators with the known concept.

Keywords: Maintenance, Agile, power of response, flexibility, promptitude, qualification.

1. Introduction

NET concept is particularly important in organizations because supply of equipment In addition to being expensive is a very difficult task too. Then there should be a good plan to maintain current equipment and the maximum benefit of them should always be considered by support authorities and Net. In this regard using the suitable programs of Net could be effective.

NET concept has long been of interest to researchers and organizations, and maintenance management and repair has become an integral part of the organizations that deal with the equipment. On the other side, for so many years the concept of agility has known as one of the recovery methods and is considered to increase their efficiency. So far Agility has taken into consideration the different aspects of the research, Agile Project Management, Agile Assessment, etc, but this concept has not yet found its place in the maintenance topic which is one of the very important concepts in levels of organizations. Until now there have been many definitions of Agility in organization. Abilities of producer for rapid reaction to sudden and unpredictable changes [29] is a pre-action answer to the changes [30], profitability from environment [29], Interoperability and rapid reshaping [30]. Taking advantage of changes as The opportunities inherent in turbulent environments [1], Creating a virtual organization and use of market knowledge [30], Ability to respond effectively to customer [30], Ability to survive and prosper in an environment of continuous and unpredictable changes[31],is of the definitions that has been proposed in the literature. In order to implement this concept in the organization should always consider its 4 important dimensions. The dimensions are given in Figure 1.
As is evident in Figure, one of the main factors in mastering change and uncertainty is one of the main factors that organization faces with. After this concept there lies cooperation in order to increase competitiveness. Because providing a complete solution for each customer set to the sources of the company cannot be achieved by itself alone and is just possible with inside and outside cooperation. Leverage the impact of people and information refers to the organization's ability to respond quickly to changes in comparison to other competitors [30]. In the present competitive market instead of the product, solutions must be provided to the problem (issues) of the customers and should focus on the received value of the customers from product. This indicates that customer is satisfied.

Considering the above mentioned aspects of Agility, this paper presents a model for implementation of agile Net on organizations. It should be said that the presented model is suitable for the organizations that inherently are agile in Organizational operations and have implanted the above mentioned concepts in other organizational operations. According to the conceptual model below [1]. It should be noted that the organizations in order to reach to such a place should have had passed the required steps to achieve agility.

As is also visible in Figure, everything begins with Agility stimulus which is in fact changes that have come from environment to the organization and forces the organization to change. Moreover there are agile abilities
which are the abilities that should be created in organization so that the organization has the power to respond to the changes. Power to response means: The ability to recognize and respond quickly to changes, qualification, flexibility and promptitude of next indicators. Qualification in fact means: Wide range of abilities, provides productive activities in order to achieve the goals of the organization. Flexibility includes: ability to produce and provide various products and reach to different goals with the same sources and equipment. Promptitude as it is clear from its name means: Ability to perform operations in the shortest possible time. And at last, Agility producers are: organization, manpower, technology, innovation, which in fact are counted as agility causes in organization.

2. The proposed model

2.1. Indicators

As mentioned above this paper presents a conceptual model for implementing Agile Net in organizations. For this purpose, evaluation indicators of this concept must be extracted in organization first. Extraction method of these indicators is the use of the expert opinions. For this purpose after a review of agility in different areas like agile organizations and manufacturing, Questionnaire with 25 indicators developed and was distributed among 20 people of Net experts. The following table describes the output of the questionnaire:

<table>
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<th>Agility indicator</th>
<th>result</th>
<th>Comments percentage</th>
<th>Number of respondents</th>
<th>Number of comments</th>
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<td>√</td>
<td>100</td>
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<td>100</td>
<td>20</td>
<td></td>
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<td>23</td>
<td>17</td>
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<td>High Tech</td>
<td>√</td>
<td>54</td>
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</table>

By analyzing the above questionnaire which has been completed by Net experts based on Teaching methods and surveys we can conclude that the indicators of agile Net is in coordination with agility indicators overall. For the maintenance of an organization’s agility most indicators should be improved and become agile. So in the agile Net model these indicators have been put in three category of: staff, equipment and mechanized Net, and for their continuous agility solutions have been presented.

Model principles
For making agile the Net in organizations there should be some changes in the 4 main areas of organization including: (management, staff, central mechanized Net core, and technology) that these changes in the context of Agility has been shown in the following conceptual model which have been modeled from Ganaskaran model (1998).

![Figure 3 Conceptual model of agile net](image)

In this section we discuss the description, how to make agility and main and important subsections of each 4 main area.

2.2. Management

Director is of the undeniable pillars of any organization. In order to making agility Net in organization some activities of agility is only possible by the guidance and support of the senior director of the organization. All of the activities that should be done in making agility in the area of management are as follows:

1- Change in management culture: culture of agility should run in the organization by the support of the director.

2 - Using virtual organization: management can give some repairs collections and standalone systems according to some contracts for other net related organizations and get help from the technical and repair ability which exists out of organization to accelerate the implementation of Net duties.

3- Concurrent Engineering: In compliance with this principle in net, agility in performing inefficient activities minimizes. And management with the guidance of this task prevents the wasting of sources.

4- Planning: planning for carrying out the periodic time checks, substitution plan of long life components, repair controls, etc and Fields related to its Net agility is of basic role.

5- Team work: Net director with the creation of work teams for various states of organization and equipment must predict the necessities.

6- Continuous Improvement: management in agile Net should think of improvement continuously. Continuous improvement in net is done by different ways such as: Improvement in the activity performance, improvement of activity periods, improvement of faster response to organization in return for performed Net, Update this processes, Reconstruction and upgrading equipment, etc.

7- Empowerment: in order to predict and identify specialty needs of customers, it is done by empowering the staff and creation of special abilities.

8- Risk Management: in agile net, director analysis all of the important and basis activities of net due to the process of risk management and predict a progressive plan for reducing risk of each activity from the view of vital risks, and also other risks such as lost time, which in some organizations like Military Organizations are of high importance.

9- Flexibility of organization: director by predicting different needs should organize its organization in a way that Net staff could adapt themselves with the flexibility of organization and show appropriate reaction to the possible changes.
2.3. Staff

Manpower is an important source of organization and its importance in more advanced theories of management becomes more and more critical by the day by day that the experts consider manpower as one of the critical resources of the organization. Any organization to make any changes after determination of the correct strategy for change should rely on its staff ability. In order to succeed in net agility Staff should have the ability to create innovation and creativity.

Related indicators with staff in net agility are as follows:
1- Qualification: in net, there should be a great focus on the manpower qualification, because NET activity is not possible without the participation of qualified manpower. For this purpose besides using the qualified manpower there should be an investment on the increment of personnel qualification by performing continuous experiments.
2- Knowledge workers: One of the key factors in the successful implementation of Agile net is the use of knowledge. Existence of a cultural knowledge makes a knowledgeable organization out of the organization which is of a great importance in net agility.
3- Multi-skilled Staff: Since increase in skill leads to Increase in pace and reduce repair time, Organizations that are going to be agile. Promote the trained personnel of great motivation, by using correct set of skills, experience and knowledge.
4- Staff training: in Productive System, it has given a great importance to the selection of suitable manpower and training. With the training of the productivity personnel, deficiencies that we face with compensated through proper utilization and according to exact repair instructions, preventive repair, and intensive cares, and also with Strong supervision and monitoring.

2- Staff welfare: to increase efficiency of staff in order to reach to the agile net targets attention to the welfare of skilled a trained staff is very necessary, and if not paid attention to their welfare they could probably will not use their whole potency and motivation which leads to inaccuracies in performing duties and consequently results in Negative response as a net negative effect on Agile net principles.
5- Flexible staff: in order to agility, organization should become flexible in a way that instead of Motion based prediction and fixing things organize its movement to have the readiness to response to every single need or happening.

3. Main mechanized net core

To create an agile net existence of an active agile mechanized net in organization is one of the Prerequisite. Because net agility means: doing the activities of net in the right, exact, fast and on time way possible, that the mechanized net has an essential role to get to this important point. In order to make agility the mechanized net these activities must be done seriously: most important factors of mechanized net are:
1- Quality of work: in agile net doing quality work is of basic principles, because lack of quality leads to extra pause in equipment and rework, and this problem is in contrast with speed in agility.
2- Response: Response in net means; Rapid and accurate identification of equipment requirements under the cover of system and appropriate response to them. Actually Implementation of preventive and predictive net could be known as the response to the net customers (operation).
3- Promptitude: Agile net, is not only able to be flexible while facing change in activities, but also able to respond quickly to the demands and needs of customers (operation).
4- Simplification: In agile net maximum utilization of specialty and manpower should be used, so that there would be no need to see more specialists, but different activities should be done by just one person.

4. Technology

In the world today, utilization and apply of technology has become a common Procedures, and any organization in order to perform its mission better tries to Benefit from the most advanced technologies. In net agility, by using existing technologies we can also improve the promptitude and quality. For this purpose followings are intended:
All factors related to the technology are as follows:
1- Equipment: Equipment that are used in most net activities should have the latest technology so as to enhance the accuracy and speed of work.

2- Software: investment in modern and appropriate software, in order to improve and speed up the network is of essential requirements in agile net.

3- Information technology: In agile net, because of use of predictive strategies there is more need of using information technology like: internet, intranet and use of multi-media equipment.

4- Networks: In an integrated net system cases such as: Personnel system, wage and salary, cash control and stockroom, property control, and also the geographical distribution of the various units of organization and such cases exist that can be controlled easily by using the network.

5. Requirements for agility

To implement agile net there should be prepared requirements; some of these prerequisites are as follows:

1- Active mechanized net
2- Internal network
3- Motivated staff
4- suitable place and space
5- Tools and Equipment
6- Materials and Components
7- Organizational Culture
8- Knowledge Management
9- Regular training programs
10- Creative and Innovative Management

6. Continuous agility model of net system

In most organizations, due to the specific conditions, doing any new work is really hard and can be done by overcoming a lot of problems. In order to agility of such organizations the below model is presented. Where agility is making the journey of continuous improvement. Because organizations nowadays are constantly being revised in structure and the use of better equipment with newer efficiency and technology.

![Continuous agile net model of net system](image)

Figure 4: Continuous agile net model of net system

7. Agility of staff:

In equipping organizations, staff has an important role in the use of equipment. In this section, agile ways of relating to the net will be briefly described.

7.1. Manpower that uses equipment
Equipment users in relation to their duties about preventive activities should be completely justified, in order to perform their duties correctly with full speed and care. For this purpose Training users to perform all especial activities of members in class A is necessary.

7.2. Manpower repairman

The staff in agile net by becoming multi-skilled can make the net Agile. For this purpose sending out the repair workers to the training centers for spending higher level trainings from their own operating net units is under the attention.

7.3. Training of staff

In a general category if the staff according to their level of skill is as follows:
1- Know nothing
2- Are familiar with theory, but don’t know practical work
3- Know both theory and practical
4- Are expert and are capable of training others too

In agility the trainings should be in a way that the staff could be classified in 4 categories. To do this performing of the trainings in a stimulated way is effective.

8. Making agile the equipment

In equipping organizations, equipment exist in two sections; main equipment that are used as operation tools and production, and especial equipment of performing net activities that are used for the purpose of the performing properly preventive and corrective activities.

9. Original organization equipment

In the process of agility should use the contained information of net system about the Weakness of their equipment and components then make agile the organization equipment by optimization.

10. Instrument and repair equipment

In agility of net system, equipment and instrument should be optimized and updated as much as possible. To do this we can optimize instruments and also class 2, 3 instruments and conceding repair ateliers and recovery vehicle to the units.

11. Mechanized net agility

Implemented net systems in organizations in net agility has some pillars, actually we are looking for agile net mechanized system, because the system after implementation has provided its efficiency and also deficiencies of system has been identified completely. And at this time we can maximize the Efficiency and effectiveness of the system by overcoming deficiencies and the use of agile net principles. In the following we refer to the ways of doing this.

12. Net system software

Creating network inside operational units and between different units, installation of mechanized system of activities recording and creating barcodes on various forms of net are of the ways to achieve this importance.

530
13. Process of doing net activities

In net agility Processes is reviewed and it is tried to improve processes. And in this passage some of the processes are removed, modified or integrated so that work pace is carried out carefully.

14. Organization:

In net agility, creation of virtual organizations in different units and conceding the various tasks of organization to members by the senior director of organization should be considered.

15. Classification

Using published data on mechanized net system, classification of net and net activities could be optimized and go forward to the two level net.

16. Mechanization of stockrooms

In agile net according to importance of speed in performing activities Supply of materials and components, should be done systematic and with suitable speed and pace.

17. Discussion and conclusion

In this article we tried to examine all important indicators in agile organizations both in production and service. And since agile net has not been used in organizations as an strategy for all indicators there has been a definition and almost all indicators for agile net has been confirmed and approved by experts. it should be noted that in order to implement agile net system in an equipping organization following actions seems necessary for preparation:

1- Forming the strategic implementation committee with the responsibility of the senior commander of the organization.
2- Initial training of operational personnel and operational net units
3- Creating a suitable organization for the operational net units section
4- Investigation in order to prepare and install the required software and hardware
5- Creating a network between operational units

References

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