# DECISION MAKING MODELS DURING THE INNOVATIVE MANAGEMENT IN SERVICE FIELD

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**Abstract -** In the given work there are discussed the models used during the decision made by innovative management in the field of service, there is described the stages of decision making process, complications in the said process and their resolving ways. The aim of study was to work out the references, which would simplify the management of innovations in the service providing companies, for these purposes the theoretical and practical research was conducted. During the research process, the communication was made between the middle and upper management, the research method was deepened interview, the given method was selected by complexity of its topic, we were interested to know if how the innovations is being managed in service rendering companies in Georgia.

**Keywords -** Innovation, Innovation Processes, Service Innovation, Innovation management

## ANNOTATION

For existence in XXI century - in the world of desperate competition and globalization, any company needs the continuous care of improvement its product and business processes, thus it can achieve the success and maintain the existence in long-term period. The improvement of products and business-processes is always related to the innovation. By itself, any of innovations presents the result of decisions` cascade, acquired by the management. The decision made is depended on manager`s knowledge, experience and presents the result of process grounded on well-considered objective factors. Today, when the competitive environment demand from the companies to make much and risky decisions in a small amount of time, the necessity to study the issues related to management decision making, especially increases. In many of Georgian companies, which operate in service delivery field, the management decision making isn`t made efficiently during the innovation management, that is very problematic and needs to be eradicated (fixed). The aim of our research is to resolve exactly such mentioned problems, in particular – to study the topic of how should the effective management decision making process be conducted during the innovative management, what kind of obstacles and issues should exist in the mentioned process, how is like the their management best practice in the world and which are the modern approaches regarding to them.

**The acceptable models during the innovations management**

In order to be able to work out innovations management model, which would be more perfect, than the models existed before, firstly, it is necessary to find out if where the mankind went for today and what kind of innovations management models exist, characterize them. In table 1.1 there is given the chronology of innovation process model`s evolution (which constitutes the J.Gagloshvilis adopted version).

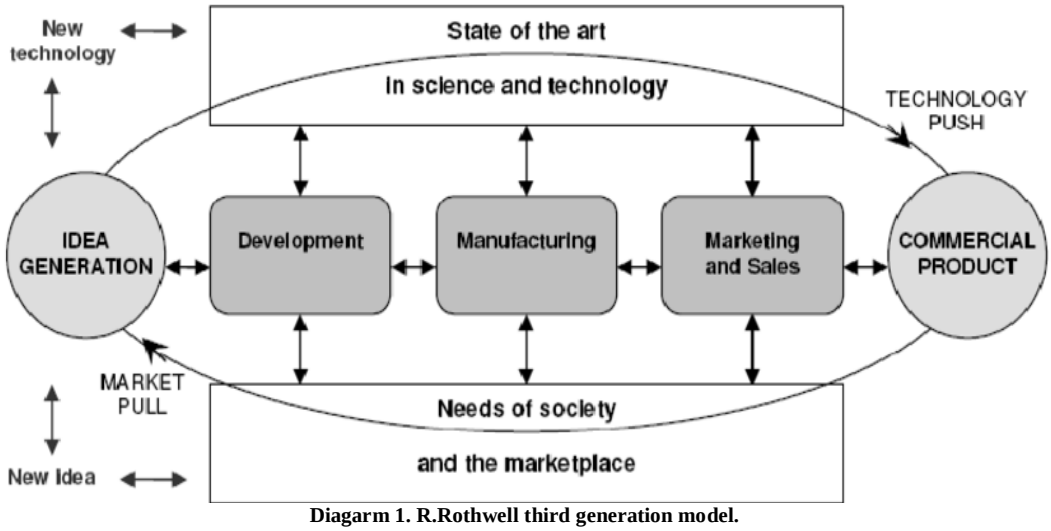
| Year | Model / Research | Author |
|---|---|---|
| Early 20's | The introduction of the concept of "innovation" | Schumpeter |
| 1920 - 1950 | Linear models "Technology Push" (G1) | |
| 1960 - 1970 | Linear models "Market Pull " ( G2) | |
| 1978 | A dynamic model of process and product innovation | Abernathy, Utterback |
| ½ 1970 - ½ 1980 | Coupling Model (G3) | |
| 1985 | Transilience maps | Clark, Abernathy |
| 1985 | Chain linked model | Kline, Rosenberg |
| 1980's | Integrated/ Parallel Model (G4) | |
| 1986 | Stage-Gate | Cooper |
| 1990's | System Integration & Networking (G5) | |
| 1990 | Identify the relationship between time, expenses and Innovations | Wilemon, Gupta |
| 1992 | Innovation Funnel | Wheelwright, Clark |
| 1993 | Classification of innovation models (G1 - G5) | Rothwell |
| 2002 | Cyclic Innovation Model | Berkhout |
| 2003 | Open innovation model | Chesbrough |

**Table 1.1. Chronology of the development of innovation process models**

If we present differently, for today, there is created five generation models of innovation management.
According to the first generation linear models, the process begins from organization`s research and development department, that`s why they are called as "technological push" linear models.
The second generation linear models were created as a result of researches made in 60-70 years of XX century. The mentioned studies have made clear, that innovation process might be influenced much not only with "technological push", but also the demand existing on the market.

At the end of 70`s of XX century, the scientists were discussing first and second generation models, like individual cases and partially, as one of the huge and complex process, which itself united the science, technology and the markets.
The British scientist – Roy Rothwellhas made the quite significant contribution in innovation study process, he has separated an additional model of three types: third generation (G3) – united model, fourth generation (G4) – model of integrated business processes and fifth generation (G5) – model of integrated business systems and networks.

Third generation R.Rothwell model is following:




**Diagarm 1. R.Rothwell third generation model.**

The fourth generation models were created in the beginning of 80`s of XX century, they are called as "models of integrated business processes". In the given models are underlined the integration of studies and inventions, that they should be more closely interconnected with manufacture and consumers, suppliers. The different branches of company are being integrated in order to form new product, which will give the possibility to the company to decrease of innovations creation terms and at a time decrease the costs. Simultaneously significantly increases the cooperation with other companies on the horizontal level, in order to create united enterprise or strategic alliance.
The fifth generation model of an innovative process, presents not only the results of relations between the functional groups, but it also have the multi-institutional, network-type character, nature.
At the end, we can state those main differences, which differs the linear (first and second generation) models from non-linear models: (J. Gagloshvili, 2016 year):

- In non-linear models, the innovative idea can be raised at any stages of innovation`s creation.
- New technologies is being created by particular organizations and not in "general technological flatness".
- The main role in innovative processes play the process subjects and interconnection between them as well.
- The innovative processes can be essentially regulated. Which is caused by the multiplicity of relations of the participant parties and between them, also the mentioned relations` complexity.

As we have mentioned above, we have conducted the practical research besides the theoretical party. During the interview with company`s representatives, we were interested if how the innovation management process goes in Georgian companies. In particular, who makes the decision about the implementation of new idea, which actions is being exercised in organization, after the ides is chosen, which is the person responsible for the idea`s examination (testing) and what had become the main reason of innovation`s implementation.
As we have seen above, according to non-linear models, the organization under the environmental influence, which pushes (forces) to create the innovation. Our respondents` answers also coincides (agrees) with given thesis and as the main reason for innovation`s implementation was named as changes into the technological environment. Except the technological factor, as the main external stimuli was

named the changes in consumers` behavior and changes in world trends. Coming out of the activity`s specificity, we have learned the auditor`s companies and we found out, that the significant influence on changes were because of the changes in economy and legislation as they are directly connected with business-sector`s ability to purchase and their desire to meet the legislation related to tax and accounting.
As the study has revealed, the relevant department heads are in charge for the innovative managements in the companies, the said heads are controlled by top management. It was also interesting, that regarding to the innovation management, the distinct formulation was owned by the respondent companies, though they hadn`t it prescribed for a long-time such as one or more years. As the respondents had mentioned, they aren`t about to test under the classical understanding before they aren`t implemented in the innovation market, though there can be made an analysis coming out of the experience accumulated into the network of an international auditor`s companies, which has a quite good support and the discussions with stuff is held regarding to the decrease of risks and thus – see the potential scenario.

During the innovations implementations, the financial resources are only the internal sources and not the credits, loans, grants, other funds (foundations).
Implementation of innovation into the company is "result of particular separated project" or the part of company`s whole action plan? All of the respondents answered, that discovery and implementation of innovation is being under the continuous regime.

## CONCLUSION

Main issues, which were revealed during the study process, is because of non-existence of innovation strategy (or there exists the distinct look, that innovation is good, but the strategy often isn`t written down on the paper), that according to our consideration significantly decreases the company`s possibilities and our reference should be, that distinct strategy should be worked out in the innovations field, which will be in coincidence with organization`s united strategy, this significantly increase the company`s results and besides, the innovation management process shouldn`t have the spontaneous character.
Also problematic is, that often companies aren`t able to maintain the created innovations and it can be easily by acquired the competitors.
Often the management faces the obstacles while applying the innovation with staff, for what we have brought the methodical advices and instruments in order to overcame the mentioned obstacles.
Coming out of the service`s heterogeneous character, the management during the innovation`s implementation into the service field, necessary needs more dynamic approach, rather than it is necessary in manufacture field.
It`s important company`s management to perform the contributions into staff`s study and creation of their knowledge bank, as it is one of the basis to efficiently manage the innovation

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