

## **Information Assurance of the Procedure of Development of Management Decision-Making**

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### **Abstract**

The environment of modern business specifies new demands to management, among which the most significant one is rapid and proper response to changes. Due to its key role, first of all changes in the quality of management decisions in the system of management is required, which is determined in many ways by the level of information assurance. The analysis of main sources of information for management decision-making showed, that all of them have significant risks of loss of information quality. Methods of system and comparative analyses, trend extrapolation and dynamic pattern, methods of risk assessment, used in the study, made it possible to make a conclusion, that to provide with proper quality it is necessary to use all possible sources of information in reference to each other. The following main restrictions in the procedures of management decision-making were revealed: craving for standardization of management situations without regard to environment change; ignoring of tools of psychological theory of decisions; decision-making on the basis of incomplete or incorrect information, unreasonably high assessment of significance of certain sources and craving for handling information of certain source – the attempts of transition to linear relationship and linear thinking. Researches of management problems also confirm some typical mistakes (conventional “formats”) and think that strategic creativity as symbiosis of analysis and free stream of ideas is required for success. Focused specialization in big companies can lead to segregation of subdivisions and reduces system specifications of information assurance and thereby, quality of management decisions. One of the tools of improvement of quality of information assurance of management processes is controlling. Nowadays efficient management implies introduction and assurance of balance between stability and flexibility under constant conditions as the key for development of high-quality management decisions and their good implementation.

**Keywords:** management decisions; information assurance of management processes; changes of environment factors; stability and flexibility; adaptation, specialization and segregation.

### **Introduction**

By universal consent of experts the world speeds up rapidly. Adaptivity has vital importance for modern business in the context of successive functioning and development of in complex (multifactorial) and variable (dynamic) business environment with high level of uncertainty, which is

considered for the purposes of adequacy of management efficacy to changes and response speed to such changes. I. Adizes thinks that the main task of management nowadays is the management of change and significance of this job will only increase in future (Adizes, 2017).

Adequacy of management efficacy in the process of changes is assessed by several authors as the ability to cope with difficulties (Lindgren, and Bandkhold, 2009, p. 7). Response speed and adequacy of reaction is revealed in the procedures of preparation, making and implementation of management decisions, the objective of which is either problem solving or use of new opportunities, generated by changes (Mullakhmetov, 2016). Deviations, which can be identified as a problem or an opportunity according to criterion “the threat for pursuing an objective”, are revealed by means of comparison of desired (planned) and actual states of subject to control. Correct definition of the problem is very important, because as it is known, good decision (not accurate) of the problem which was determined in the wrong way is much better than satisfactory implementation of a well-defined problem.

Quality of information, determined by the following factors: authenticity, timeliness and completeness, as well as its relevancy (demand for problem solution) play a key role for making high-quality management decisions.

## **Methodology**

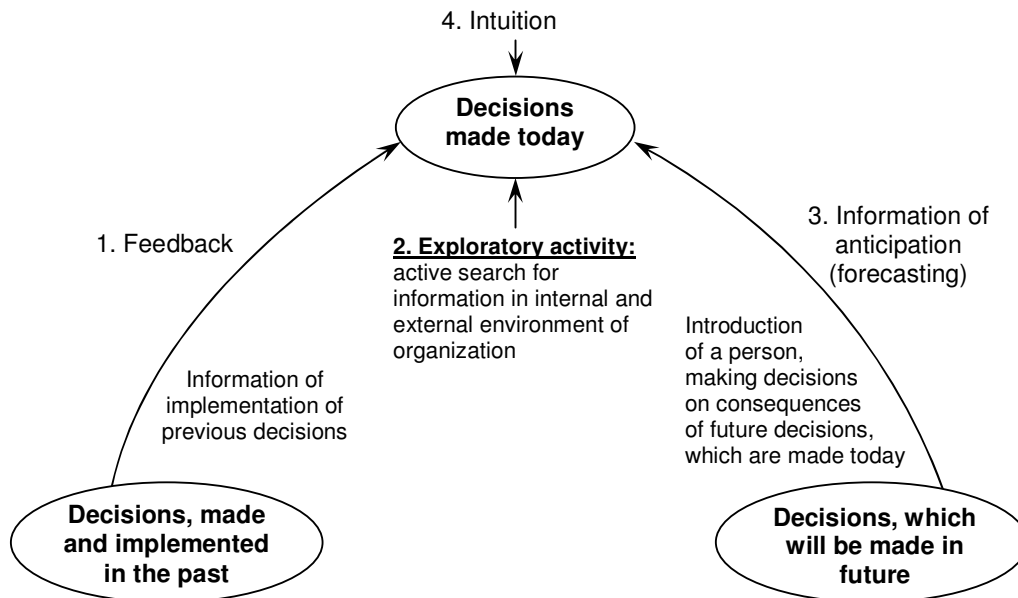
In scientific and popular-scientific literature development, making and implementation of management decisions is considered both generally and properly. For example, in his works about the science of decision-making Herbert Simon determines management decision as the process, compared with management process. Some authors consider management decision as the choice from available alternative variants of problem solutions (Mescon *et al.*, 2002), (Raizberg *et al.*, 2007).

From our point of view broad understanding of development process, making and implementation of management decisions, when it is associated with the whole management activity, is the most reasonable under present functioning conditions and organization development: as a matter of fact in multifactorial and fast-paced environment of modern business with high level of uncertainty of the choice of the alternative variant of problem solution, which guarantees the best achievement of organization objectives, is only one of the stages in the system of management decisions procedures (Mullakhmetov, 2015a), (Mullakhmetov, 2016).

Competence of any manager is determined by his ability to make high-quality (that is relevant to problem) management decisions are in the heart of management activity. Decisions are “personal product” of the manager, as only he can make decisions on issues, which are within his cognizance; organize their implementation and regardless cultivated styles, methods, technologies of management, development, making and execution of decisions to be responsible for the results (Mullakhmetov, 2013, p. 83).

Management is a continuous information and communication process: solution of problems in different functional corporate profiles of organizations, the system of management generates management decisions; for development and making of management decision relevant information is required (Mullakhmetov, 2016), (Korableva *et al.*, 2017, 2018).

Information assurance of development, making and implementation of decision can be presented schematically in the following way (figure 1) (Mullakhmetov, 2016).



**Figure 1: Information assurance of decisions**

As we can see from presented figure, decisions, which are made today, are based on information about results of implementation of previous decisions (feedback); introduction of a person, making a decision on consequences of future decisions, which are made and implemented today (information of anticipation /forecasting); information received as the result of active search in internal and external organization of environment of organization (in bases and banks of data), analytical efforts, methods of competitive intelligence and others) (exploratory activity); as well as on intuition. First three sources present the approach, based on the analysis of the above mentioned blocks in their interrelation, taking into account their strategy of functioning and development of organizations and available restrictions (let's call it analytical or structured approach), the fourth source is intuitive approach. According to researches of psychological problems of uncertainty, intuitive approach, it affects processing of information received from other sources.

## Results and Discussion

All the sources of information, applied in the procedures of management decisions, have significant restrictions of information quality, which creates high level of uncertainty of the results of made decisions. The analysis of available restrictions on sources of information is shown in our previous publications on the theme (Mullakhmetov, 2015a), (Mullakhmetov, 2016). Their brief presentation is given in table 1.

**Table 1: Sources of information in the process of making decisions**

	<b>Approaches to study of a problem</b>	<b>Source of information</b>	<b>Content</b>	<b>Mechanism of use of information</b>	<b>Main factor, which reduces the quality of information</b>	<b>Prevailing impact on factor of quality of information</b>
1	Structured approach (analytical)	Feedback	Information on the results of previously made decisions	Trend extrapolation and dynamic pattern of changes of factors, which the problem, for future period, on the assumption that they won't be changed significantly	Impossibility of forecasting of sudden changes of trends and dynamics of influencing factors. Errors of information perception, related to human reasoning.	Authenticity
2		Exploratory activity	Active search of information in external and internal environment of organization	Collection, processing and arrangement of information on a problem, formation of conclusions (rules) and development of management decisions on their grounds.	Restriction of human knowledge on the problem; reevaluation of knowledge of a person, which makes it	Completeness
3		Information of anticipation (forecasting)	Introduction of a person, making decisions on consequences of implementation of future decisions, which are made today	Based on assessment of the concept of consequences, correction of made decisions or refusal of making decision	Impossibility of forecasting of new factors, which revolutionarily change operational environment and development of organizations.	Timeliness
4	Intuitive approach	Intuition	Impulsive presentation of problem solution, which, as a rule is impossible justified in the context of conventional thinking	On the assumption of "craving for risk" and situational factors of making or refusal of making decisions.	High risk level. (Big positive or big negative effect in comparison with other methods of making decisions)	Ambiguity

Main conclusions in the context of our research are the following.

1. In the process of assessment of information of the feedback changes, which occurred during this period are underrated. As a consequence, decisions which were made yesterday and decisions, which are being made today on the basis of one and the same information, have significantly different qualities. Extrapolation method, applied in this case, push managers for the use of successful practice, without including characteristics of modern business environment.
2. The battery of psychological theory of decision-making, which describes how people make decisions on practice, what mistakes they do and their reasons, is used occasionally. The knowledge of optimal decision-making theory is enough for making efficient decisions.
3. Active search of additional information in external and internal business environment often becomes inappropriate in view of environmental characteristics and can't be applied in common use.
4. Forecasting of consequences of decisions, which are made today or will be made in the future, for a variety of reasons is carried out based on incomplete or unreliable information. In this case errors are interlinked by both natural restriction of intellectual abilities of managers (there is the limit of intellectually achieved ones), and in some cases by deliberate distortion of information for achievement of group and personal goals.
5. Intuition, as the source of information for decision-making is underexplored and information on the basis of intuition must be filtered according to criterion of criterion of practicability, and decisions made on the basis of such information, must be experience-based ("empiric rule").

The knowledge of existing restrictions and mechanisms of their influence on the procedures of management decisions makes it possible to decrease the level of uncertainty and exclude ungrounded risk; hereby it allows increasing quality of management.

I. Adizes distinguished the following environmental factors among the main ones.

1. Technological progress as one of the engines of changes.
2. Quality changes of human capital characteristics.
3. Globalization and integration processes, which together with other factors lead to acceleration of all processes, increase intensity of management activity, specify strict requirements to management.
4. Certainty of conflicts in virtue of change of financial and social status of firmly established groups of market relations; raises significance of conflict-management.
5. Changes in the society and economics lead to changes of system of values in different social groups cause the necessity of search of new approaches, technologies and management methods (Adizes, 2017).
6. Russian business environment has its specificity both by reason of undevelopment of market institutes and in virtue of fundamental characteristics of command-and-control management methods, received by us (Sadriev et al., 2016b), (Krotkova et al., 2016).

The circumstances require quality change of information management systems, development of new components and their efficient support.

The authors of work "Scenario planning: connection between the future and strategy" distinguish the question "How is it possible to compete in ever-changing conditions" as the most frequently asked one. As a general answer they present the review of "strategic flexibility", pointing to their practical restriction (table 2) (Lindgren and Bandkhold, 2009, p. 5-6). There are also works, which reveal

correlation between the process of decision-making and results, which once again make the theme under consideration actual.

**Table 2: The review of “strategic flexibility” concept**

Concept	Source
Strategic maneuvering	(D'Aveni, 1994)
Strategic reactivity	(Bettis, Hitt, 1995)
Dynamic core capability	(Lei, Hitt et al., 1996)
Dynamic potential	(Teece, Pisano et al., 1997)
Constant innovation	(Chakravarthy, 1997)
Strategic flexibility	(Hitt, Keats et al., 1998); Хамел (Hamel, 2000)
OODA [1] cycle	(Haeckel, Nolan, 1993); (Blaxill, Hout, 1998)
Innovation of strategy	(Hamel, 1998)
Competition on the edge	(Brown, Eisenhardt, 1998)
“Healthy” adaptability	(Beinhocken, 1999)
Business in “funky style” [2]	(Nordstrom, Ridderstrale, 1999)

Simon Sinek thinks that sometimes we judge about the world around us on the ground of incomplete or fake information; make suggestions and decisions on their ground (Sinek Simon, 2017, p. 17-21). The author also indicates that qualitative information awareness by itself doesn't guarantee the quality of decisions, emphasizing that decision-making is a complex and multiobjective problem.

Luc De Brabander and Alan Ini write that though mental models, which we create and take to, help in standard situations, can restrain us and prevent from noticing changes, which are in process. Many of us don't want to risk and follow well-trodden paths, not admitting the fact that everything changes instantaneously around us. The authors think that strategic creativity, which they call “thinking in a new style”, as the process, consisting of pragmatic analysis and free flow of ideas (Luc De Brabander, Alan Ini, 2017, p. 8-10).

Gillian Tett thinks that one of the obstacles for making qualitative decisions is disconnection of functional structures in big organizations, which increases according to the growth of business levels. The authors' opinion is unexpected in contrast to one, which is generally accepted by the expert community: it is believed that globalization and Internet create single markets of economics, destroy national boundaries and are the factors of integrity. With the help of specific examples the author shows how specialization is made more profound, communications are lost, horizontal communications in the management system are interrupted and efficiency of information systems is decreased in the process of company, national and municipal structures growth (Gillian Tett, 2017).

Control, the main procedure of which is comparison of desired and actual state of objects and processes of management, revealing and assessing deviations, provides management system with information on problems and opportunities, thereby initiating making of corresponding management decisions (Mullakhmetov, 2005), (Mullakhmetov et al., 2014). Today concept of controlling is widely implemented in leading Russian companies. In general terms it is understood as information assurance focused on the result of company management (Mullakhmetov, 2015b). Dietger Hahn considers controlling as the tool of integrated planning and control, based on a constant flow of internal and external information (Hahn, 1997). Peter Horvath and Roland Gleinch think that controlling is a complex interfunctional concept of management, the goal of which is coordination of planning, control and information assurance systems (Horvath&Partners, 2005). Systematic approach included into the concept of controlling, proceeds from the fact that the reasons of deviations (lack of troubleshooting, noncompliance with the plan and failure to achieve goals), besides unsatisfactory management decisions and their low-quality implementation can be significant changes of organization environment factors.

## Summary

Today the models of management, which have been efficient recently and provided companies with competitiveness, raise certain questions. They don't respond to challenges of market environment. Only those companies will be successful tomorrow, which will make adequate decisions and adapt to changes more quickly than others. Provided that adaptation is not the result, but it's a continuous accelerating process.

Technologies make it possible to make decisions more rapidly, and only rapid and adequate responses of management can deliver success. The growth of number and quality of factors, which significantly affect company's activity in case of their mutually dependant changes, decreases the quality of forecasts (information of anticipation) and plans. In such circumstances the loss of quality in the process of goal-setting can be compensated only by increase of flexibility to make a rapid change of aspects of work in case of sudden changes (Adizes, 2017). Under conditions of uncertainty the requirement to transparence of information is raised: to make quality management decisions the information must be available, intelligible and it must be concentrated in decision points (responsibility centers).

The significance of horizontal (coordination) communications, which make it possible to exchange information quickly and accelerate decision-making, grows in the system of management. Besides, cooperation of staff and management ranks, which are at the same level of management (for example, designers and technologists or workshop chiefs of different plants of companies, which are in one technological chain) shifts hierarchic relations to another level: the assessment of colleagues and those who work with you becomes more important; significance of determined not by the position, but by contribution to common goal. These circumstances promote adequacy of decisions to problem, increase management efficiency.

All system features of management are reflected in its subsystems. The drawbacks in the procedures of development and making of management decisions on the whole and those related to information assurance of the process of decision-making in particular are the consequence of the level of development of theory and practice of management (Sadriev et. al., 2016a), (Mullakhmetov et. al., 2016). According to the results of undertaken study inactivity of management system can be singled out as one of the main factors of loss of efficiency of management decisions; ignoring of well-established theoretical foundation, which has positive experience of application; ignoring of permanent significant environment changes. Russian companies are additionally characterized by undeveloped horizontal and ineffective vertical return of experience, which decreases the speed and quality of information flows and makes it difficult to make decisions in abnormal situations.

Application of systemic approach in management initiated formation of controlling concept, which can be interpreted as the system of information assurance, oriented to the result of management (Mullakhmetov, 2011). Controlling integrates functions of planning and control in the system of management on the basis of constant monitoring of internal and external information flows and is designed for solution of problem of functional segregation of very specialized subdivisions of large corporations.

## Conclusion

Changes in the society and economics cause new requirements for the system of management. Solution of fundamental problem of management is increase of efficiency of controlled objects – in modern business environment with its characteristics of complexity, dynamism and uncertainty in general is confined to search of balance, stability and flexibility. Adaptation, as necessary condition of survival in turbulent market environment, requires rapid and adequate solutions for changes; stability is the condition for quality implementation of made decisions.

In all procedures of development and making of management decisions starting from identification of problem and ending with estimation of success of implementation of made decision collection of

quality and relevant information, its analysis, conclusions based on analytical procedures and development of proved management decisions are of great importance.

Expressing in other way a well-known statement “accuracy of calculations can’t be higher than accuracy of source data”, we can declare that the quality of management decisions can’t be higher than the quality of source information, on the ground of which they were made, as well as skills of a person, making a decision (his competence, experience and attitude to problem).

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### **Endnotes**

[1] Observation, orientation, decision, action

[2] Word “fanky” can be defined as modern, fashionable, interesting

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