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## ORGANIZATIONAL STRUCTURE AND PERFORMANCE

*The article focuses on organizational design and organizational structure in the context of assessing the strength of the influence of external and internal factors on changes in organizational structure of large enterprises in Czech Republic. Monitoring of relationship between organizational structure and organization's performance has been a part of empirical research back in 2012, in which top managers of 98 large Czech companies have taken part as respondents.*

*Keywords: organizational structure; firm performance; Czech Republic; top managers survey.*

Павліна Кржібікова

## ОРГАНІЗАЦІЙНА СТРУКТУРА ТА ПРОДУКТИВНІСТЬ

*У статті описано організаційний дизайн та організаційну структуру в контексті оцінювання сили впливу зовнішніх та внутрішніх факторів на зміни в організаційній структурі великих підприємств Чеської Республіки. Вивчення взаємозв'язку між організаційною структурою та продуктивністю підприємств стало частиною дослідження, яке також включало опитування топ-менеджерів 98 чеських компаній.*

*Ключові слова: організаційна структура; продуктивність фірми; Чеська Республіка; опитування топ-менеджерів.*

*Рис. 5. Табл. 2. Літ. 12.*

Павліна Кржібікова

## ОРГАНИЗАЦИОННАЯ СТРУКТУРА И ПРОДУКТИВНОСТЬ

*В статье описаны организационный дизайн и организационная структура в контексте оценки силы влияния внешних и внутренних факторов на изменения в организационной структуре больших предприятий Чешской Республики. Изучение взаимосвязи между организационной структурой и продуктивностью предприятий стало частью исследования, которое также включало опрос топ-менеджеров 98 чешских компаний.*

*Ключевые слова: организационная структура; продуктивность фирмы; Чешская Республика; опрос топ-менеджеров.*

**Introduction.** In the historic past, people were isolated physically and used "smoke signals" to communicate. Today thanks to information and communication technologies, we know too much and get information too quickly. Any problem occurring anywhere in the world might become global in a very short time period. Competition is growing fast, mainly in Asia, technological development is making product life cycle faster and new business models make environment even more dynamic. Such circumstances put organizations under higher pressure as it comes to performance and competitiveness. The way each organization reacts to external conditions trying to adapt to them and searching for the way to survive makes it unique. Environment (external conditions) might be the same but strength of individual factors impacting the organization is perceived differently by them. Organizations try to face those conditions, adapt to them and harmonize them with a situation inside the organization. In this way particular organizational architecture is being built – organizational design, which can become a certain competitive advantage because of its uniqueness which competitors are not able to imitate. Organizational theory says that if organization is not able to arrange its elements in a suitable way and determine their

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impact in organization, then qualified employees, advanced technology or sufficient market information are of no use. Is there any relation between organizational structure (elements arrangement) and organizational performance? How organization perceives the impact of environment factors on the change of its organizational structure? Those are the questions this article tries to give answers to based on the authors' empirical research.

The aim of this article is to provide the description of organizational structure as one of the key factors in organizational success and to determine the impacts of changes on it. Another goal is to prove or disprove the hypothesis whether any relation between organizational structure and organizational performance exists using the results of empirical research being realized at large enterprises of Czech Republic.

**1. Organizational design.** Organization is considered to be an open system reacting to impulses, changes of its environment. R. Ackoff (1971) defines organization as a goal-directed system including at least two elements having a common purpose. At least one system subset has the leading function. Organization arranges its key elements – people, work, technologies and information. In this way organizational structure is created. "Structure involves a net of roles and relationships helping to ensure collective effort to achieve specific aims" (Armstrong, 2009: 365). Organizational structure is not perceived separately anymore; currently, organizational architecture or organizational design, previously isolated terms, are considered in a more complex way. Organizational architecture consists of soft and hard elements. Hard elements are created by working positions (arranged as formal organizational structure) and procedural organization arrangement (purposeful order of logically connected operations). Soft elements are created by informal organizational structure (social network), human resources and organizational culture. Organizational strategy is the connecting and managing factor. For organizational structure, shared values are important in guiding and adjusting employees' behavior towards a desirable direction. Figure 1 presents organizational design.

A. Chandler (1962) stated that organizational structure follows the strategy, and further created models have been dealing with the relation between structure and other elements of organization. Those models present organizational structure as one of the key factors for organization's success; at the same time, they stress that the change of organization does not lead to expected success without further changes of its basic elements. While effective organization is being built, harmonization of the key components has to be taken into consideration, the so-called Star model, Figure 2. There exist more versions of this model, also other models can be used such as McKinsey's "7S" or Leavitt's diagram. Today each consulting company has its own version of Star model or 7S using them in practice. Their aim is to achieve the harmony of all elements not only among them but with organization's environment as well and thus – to achieve higher effectiveness and performance.

Similar view on the effective organization building belongs to J. Plaminek (2014) who considered the vitality pyramid of organizational system. Organization has to begin with useful operations, to build its strategy and further changes on it, namely changes in organizational structure. Vitality pyramid involves usefulness, effectiveness, stability and dynamics. Basing on the abovementioned it can be said that organizational structure is an important element but changes made in organizational

structure do not guarantee health, vitality and performance of the organization. If changes in structure are made separately from other changes, they tend to return to original status. To make changes sustainable the organizational structure has to be made the last one in the chain; first of all, it is important to understand those factors making organization's reaction to changes slower in the past and thus made adaptation to turbulent environment slower as well. Generally saying, problems in management, the way of decision making, information flow and keeping qualified human resources become the most often problems. First of all, organization should eliminate non-productive operations (even meetings if they do not provide fundamental information), determine responsibility and provide changes in the rewarding system (aiming to make employees' motivation higher). G. Neilson et al. (2015) have found out that information flow and decision making responsibility impact the aims realization the most. Organizational design should be built in the way to have employees take responsibility for their work without being under constant micromanagement influence. Decision making authority should be determined clearly and information flow has to be fast and understandable from top management level down to business units, departments or positions.

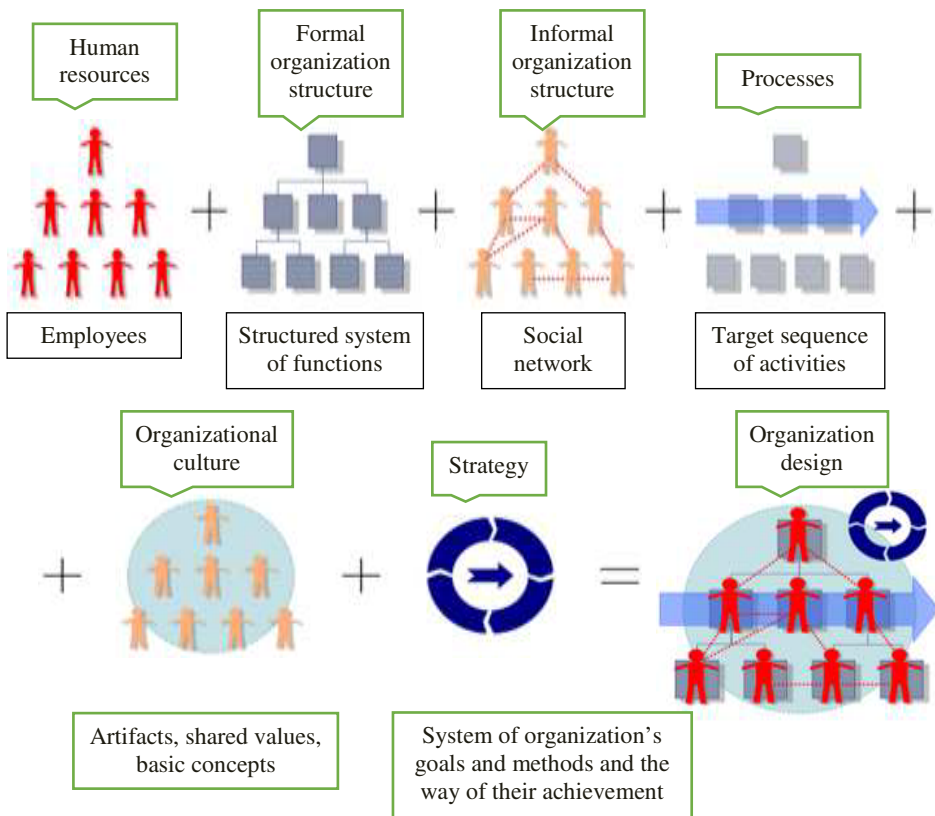


Figure 1. **Organizational design**, modified by the author from (Management mania, 2010)

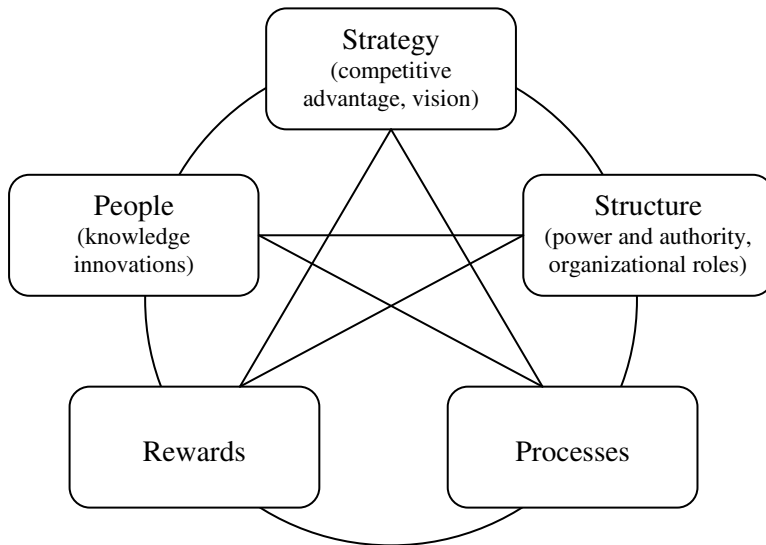


Figure 2. **Star model** (Galbraith et al., 2002: 2)

**2. Factors influencing organizational structure.** For successful organization of the 21st century it is necessary to create conditions for knowledge management system implementation, supporting the culture of permanent learning, creating flexible organizational structure and making the process of changes easy. Becoming acquainted with external and internal environment and organization's ability to cooperate with specialists in organizational development will be the deciding factor in maintaining enterprise's competitiveness in this century. The author of this article uses the conclusions of the contingent school<sup>2</sup> – structure and the way of operations of an organization are the conditions of function, under which the organization exists. If current external environment would be considered it is clear that individual impacts affect not only concurrently but there is a causal dependence between them; the change of one causes the changes in the others. Organizational environment varies so it is not possible to monitor only the impact of technology or market dynamics. While literature has been analyzed, there has been found out that authors differ when it comes to the factors influencing organizational structure. The author has paid attention to wider range of impacts being divided into external and internal ones. To make those factors only of general knowledge, they will be only named. Impact of technologies, permanent changes, creation of partnership and alliances, work structure, diversification and demographic changes are considered. Situation inside organization can be characterized by the factors having a relation to internal life of organization, and its changes can also influence the organizational structure. Organizational strategy, technology used, organization's size (or employees number), the change of organization's life cycle and management style are also thought of.

<sup>2</sup> The representatives of this school are Barns and Stalker (1961), Woodward (1965), Lawrence and Lorsch (1969) who analyzed different organizations and stated that their structure and the way of functioning are the function of conditions, in which they exist. They do not agree with the opinion that there is only one best way of organizational design.

The empirical research based on the questionnaire and being carried out in April 2012 at large enterprises of Czech Republic investigated how the respondents (top managers of the companies with more than 150 employees) evaluate the impact of the abovementioned factors on their organizations. The respondents could use the Likert scale 1–5: 1 = any impact of a given factor, 5 = very strong impact of a given factor. They were asked to evaluate the impact of certain factors in a given year (2012) and their estimate after 3 years, i.e., in 2015. The results are presented in Figures 3 and 4.

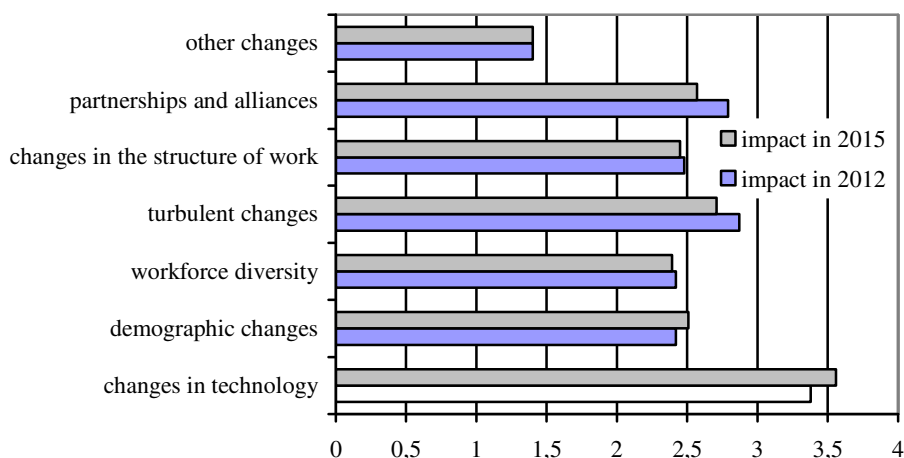


Figure 3. Average impact of external factors on the change in organizational structure, processed by the author

The respondents thought their organization would be influenced the most in 2015 by technological changes; this impact would be high (3.58). The impact of turbulent changes would be little lower in 2015, this impact is the second highest one. The estimated impact of partnership and alliances would be lower in 2015. The respondents feel the danger mainly in technological environment; the reason probably is in the necessity to invest while making changes in technology. On the other hand, the other impacts should not be overlooked because if an organization overlooks foundation of its competitors' alliance, its existence can be endangered. The same applies to demographic impacts – there should be enough qualified employees. Turbulent impacts as accidental and non-systemized changes can be foreseen only in hard way, therefore most respondents evaluate this impact as weak one.

As for internal factors (Figure 4), the respondents considered the change of organizational strategy to have the most significant impact (3.57), in both 2012 and 2015, they estimated the impact of this factor would become higher (3.82). Impact of management style (3.08) and its intensification to 3.11 is the third strongest factor. Impact of used technology is considered to become higher from 3,06 in 2012 up to 3.26 in 2015. The impact of other factors has been thought of almost the same significance with a slight decrease of organization's lifecycle in 2015. As far as the change of organizational structure is considered, the most significant impact on it has organizational strategy, which proves Chandler's opinion that the structure follows the strategy. Management style and technology have significant impact, too.

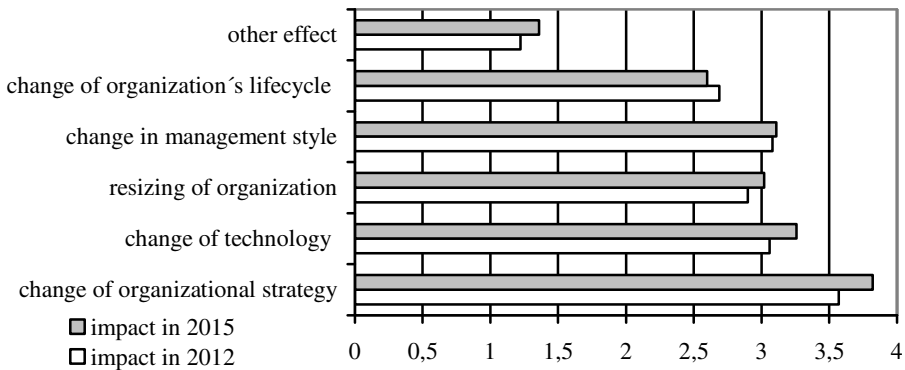


Figure 4. Average impact of internal factors on organizational structure change, processed by the author

In conclusion, considering the part dealing with the influence of internal and external impacts on organizational structure there is a graph showing their average impact in %. There is the limit of 60% in the graph to point out the level being thought significant<sup>3</sup>. This limit is exceeded by the impact of technology, company technology, strategy and management style (Figure 5).

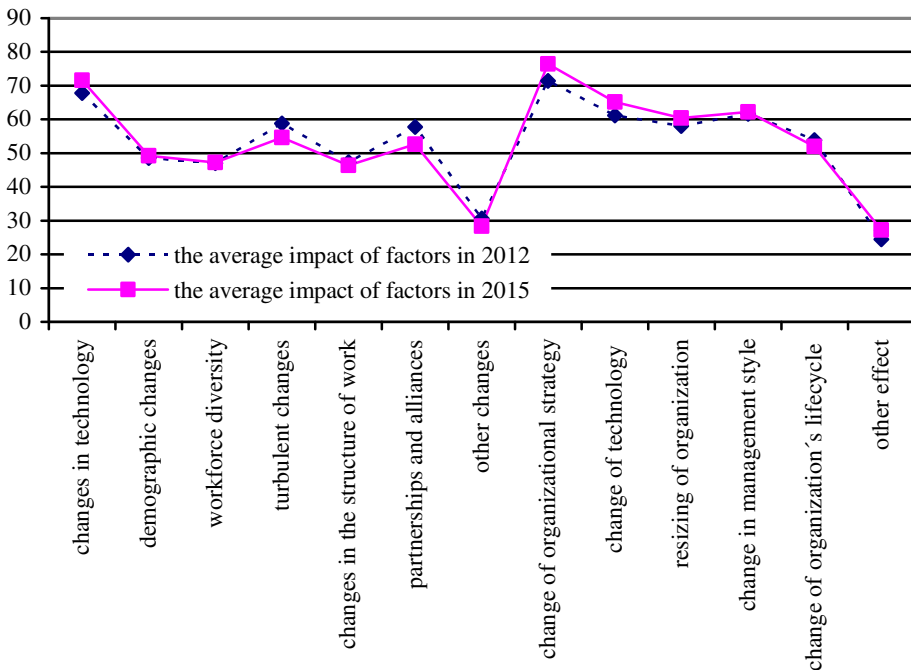


Figure 5. Average impacts of internal and external factors, %, processed by the author

<sup>3</sup> This limit is considered significant according to the methodology of quality measuring system VDA 6.1.

Fast environmental changes create a conflict between the environment itself and the current status of organization. To solve this conflict a new balanced status is to be found thus the adaptation of organization to changed environment, e.g., by the change of organizational structure as the one of organizational design elements. As stated above, such change should not be isolated. Organizational structure has to support the growth of organizational performance, processes and operations guaranteeing effective organization's functions. N. Mansoor (2012) also states that the change of organizational structure is the one of possible organization's reactions to environment changes, which should lead to harmony with environment and better performance. Here we can face the question whether changes in organizational structure lead to performance increase. The existence of relation between organizational structure and performance is the core of the abovementioned research.

**3. Organizational structure and performance.** As stated above, organizational structure is one of the critical factors when it comes to organization's success and as the element of organizational design should be in accordance and support of other elements – strategy, organizational culture, processes etc. in order to maintain performance and effectiveness of organization. Because performance can be evaluated in both quantitative and qualitative aspects, first of all, those terms are to be briefly characterized.

The term "organization's performance" is considered in many different ways. Performance means the rate of results achieved by individuals, processes, systems and products thus the level of organization's aims fulfilment (Daft et al., 2010). There are several views on performance. For customers, it is the ability to satisfy his/her needs and to offer quality products for reasonable prices matching the idea (in terms of quality, delivery term or price). For managers, performance is high when the company prospers, its market share is stable, it has permanent customers, costs are low, it is liquid etc. (evaluation is based on the ability to react to environment changes and new business opportunities). The owner evaluates organization's performance by invested capital (added value, investment return, profitability etc.). It is clear that performance is not objective. The approach to performance evaluation depends on the relation between an interest group and an organization, their preferences and relations, which is fundamental when it comes to interpretation of information on performance (Pavelkova et al., 2009). R. Daft et al. (2010) further states that effectiveness of organization can be also evaluated by other aspects rather than quantitative (hard) data. S. Keller et al. (2011) talk about performance and health of organization. Performance means what organization provides owners (shareholders) with as represented by finances and operations and is measured by such indicators as operating income, ca-pital return, investments profitability, investments, operating costs etc.

Organization's health is its ability to harmonize, manage and restore itself faster than competitors do in order to keep its unique performance in time. These activities involve basic organizational abilities and skills such as leadership, coordination or external orientation where traditional metrics are not suitable. Based on their researches and experience, the authors say that just organization's health "drives" its performance and that minimum of 50% of long-term successes is managed by its health.

Because the respondents were not willing to comment (saying this information is considered as confidential) in evaluating the performance in the questionnaire

research realized by this article's author, non-quantitative perception of performance was used to show that health and performance of organization are correlated.

Performance was related to non-quantitative evaluation of impact of organizational structure change on its performance as managers see it. The respondents expressed their subjective opinions whether the change of organizational structure has positive, neutral or negative impact on organization's performance. They evaluated how they perceive the given change (without using hard data), whether they were able to create conditions to make organization function after the change and whether the organization is able to face competition (which can be proved by the fact that organization is not facing insolvency so far). It can be said that this evaluation is rather close in meaning to the term organization's health. With regard to strong correlation between performance and health and qualitative perception of performance being not based on financial analysis indicators, the author thinks that the respondents' answers can be considered relevant for the evaluation of impact of organizational structure change on performance. The results are summarized in Table 1.

**Table 1. Organizational structure and impact of its change on performance (contingent table of absolute frequencies, the base for Chi-square test), author's**

		Impact of changes in organizational structure on performance			Total
		positive	negative	neutral	
New organizational structure	classical	19	2	17	38
	flexible	43	0	17	60
Total		62	2	34	98

In Table 1 it can be seen that 62 respondents (63%) evaluate the impact of organizational structure change on performance as a positive one.

In order to prove the hypothesis H: *Implementation of flexible elements to organizational structure of large companies has positive impact on their performance* (i.e. there exists a relation between organizational structure and performance under current turbulent environment makes organization's performance higher), this hypothesis has been transformed into statistical form:

H<sub>0</sub>: There is no relation between organizational structure and performance (structure has no impact on performance).

H<sub>1</sub>: There is a relation between organizational structure and performance (structure has impact on performance).

As nominal variable is considered, Chi-square has been used.

**Table 2. Chi-square test results (the modified output from SPSS program), author's**

	Value	df	Asymptotic significance
<b>Pearson Chi-square</b>	6,689	2	,030
<b>Likelihood Ratio</b>	7,329	2	,026
<b>Fisher's Exact Test</b>	6,196		,030
<b>N of valid Cases</b>	98		

df = degree of freedom; SPSS = Statistical Package for the Social Science.



Based on the test results, the alternative hypothesis can be accepted assuming the relation between organizational structure and its performance. By low values of coefficients (Cramer's V, Contingency Coefficient) evaluating a strength of this relation, it can be stated that the relation between organizational structure and its performance is weak. Other elements of organizational design and other impacts influencing organization's performance are the reason for this. Relation between structure and performance (health) is more difficult of course, it is not direct but is mediated, meaning that suitable organizational structure makes e.g. communication, learning, innovations easier; it should influence the performance and long-term perspective of organization (its health). In practice, it means the option to react to customers' needs in flexible ways, make processes shorter, make quality higher (more suitable structure leads to less mistakes) etc.

According to the respondents, the impact of organizational structure change on its performance cannot be perceived only through financial indicators, because positive impact does not have to be seen immediately but often in longer time. The respondents said they see the change of structure in a positive way although financial indicators do not show any changes so far but this change has solved the problem monitored. The interest in relation between organizational structure and its performance in different fields and countries is linked to the conclusions about the relation between formal structure and organization's performance, namely, a company with organic structure and free networking of employees is more efficient in dynamic environment. Organizations with mechanistic (bureaucratic) structure, in which work is divided among specialized positions within clearly defined hierarchy, are more suitable for static environment. Many researches have provided investigations proving this opinion. An unequivocal answer to the question "what organizational structure the organization should choose" does not exist. Uniqueness of each organization lies in the uniqueness of its arrangement being influenced by the factors of both external and internal environments.

**Conclusion.** Organizational structure is considered to be the significant factor influencing decision-making, communications, coordination, specialization, knowledge sharing and managing; organization's health and its performance reflect those aspects. Many case studies prove both direct and indirect impacts of organizational structure on performance as well as the impact of environment on organizational structure. To make the organization function optimal, other elements have to be in accordance with organizational structure.

The respondents identified the external factors influencing the change of organizational structure in Czech companies: technological changes, turbulent changes and efforts to create partnership and alliances. Internal factors influencing organizational structure include: strategy, technology used in a company and management style.

Incorrect organizational design and structure lead to chaos, insufficient coordination of positions, failure in ideas and knowledge sharing as well as poor decision-making bringing thus difficulties, stress and conflicts between managers. Top management should not leave such problems unsolved since they often lead to organization's performance decrease.

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