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Building an Interchangeable Team of Employees in Each Structural Department of the Company

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Abstract

The study focuses on the description of the mechanism for creating interchangeable teams as a fundamental element of organizational resilience. The aim of the work is the theoretical substantiation and formation of a systemic model for the development of cross-functional competencies and ensuring interchangeability at the level of the company's structural subdivisions. The methodology of the work consists of a systemic analysis of contemporary publications on human capital management, organizational development and dynamic capabilities theory. As a result of the study a three-phase model of competency convergence is proposed, describing the transition from a group of narrow specialists to an integrated, interchangeable team through the stages of standardization, cross-training and synergetic integration. Based on the analysis it was determined that the implementation of this model enables an increase in the subdivision's operational resilience index (maintenance of performance level in the absence of a key employee) and a reduction in the average time required for completion of end-to-end processes . In conclusion it is emphasized that the purposeful formation of interchangeability serves as a strategic investment in the organization's dynamic capabilities, strengthening its adaptability and efficiency. The article will be of interest to managers at all levels, HR directors, organizational development specialists and researchers in the field of personnel management.

Keywords: *Personnel Interchangeability, Cross-Functionality, Competency Management, Organizational Resilience, Competency Model, Personnel Development, Dynamic Capabilities, T-Shaped Specialists, Risk Management, Operational Resilience.*

INTRODUCTION

In the context of rapid change and high unpredictability in the modern business environment, traditional organizational models require radical restructuring. The concept whereby each unit consists of a set of narrow-profile experts with a specific body of knowledge proves extremely vulnerable: the absence of a single key employee due to illness, leave or departure from the company can block certain segments of business processes and cause significant financial and reputational losses. It is estimated that the total cost of replacing one qualified specialist can reach 150 % of their annual salary, with the major share of expenses attributed not so much to recruitment as to downtime and declines in labor productivity [8]. Consequently, ensuring operational stability at the level of each structural unit acquires strategic importance.

The scientific problem underlying this research is the absence of a coherent systemic methodology for the formation of interchangeable teams that extends beyond disparate tools such as personnel rotation or cross-training. Existing approaches do not provide a clear algorithm for transforming a conglomerate of individual experts into an integrated team with evenly distributed competencies without sacrificing the depth of professional expertise.

The objective of the present work is the theoretical justification and development of a systematic model for the advancement of cross-functional competencies and the assurance of interchangeability at the level of the company's structural divisions.

The scientific novelty of the work resides in the proposal of the Model of competence convergence—a three-phase framework that ensures the managed evolution toward interchangeability through process standardization, targeted skill diffusion and synergistic integration, thereby minimizing the risks of degradation of expert-level capabilities.

The author's hypothesis is that the sequential implementation of this model will yield a measurable increase in the operational resilience of the division and enhance the speed and flexibility of business processes by reducing dependence on individual employees.

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MATERIALS AND METHODS

In modern scientific discourse the problem of forming interchangeable teams of employees in a company's structural subdivisions is considered from different methodological perspectives and encompasses several key research directions. First, a number of authors focus on the phenomenon of organizational resilience and adaptive capacity under external challenges. Thus, Chen R., Xie Y., Liu Y. [1] present a detailed definition and conceptualization of organizational resilience, proposing empirical metrics for its measurement based on examples from several companies across various industries. In a similar vein Miceli A. et al. [7] investigate the interrelation of resilience, agility and digitalization, emphasizing that only their integration ensures not merely survival but the thriving of an organization in a rapidly changing environment. Moving from resilience to dynamic capabilities, Makhloufi L. et al. [4] analyze the influence of entrepreneurial orientation on innovation potential through the lens of absorptive capacity and organizational learning practices, which directly correlates with the formation of flexible and interchangeable teams. Wu Q., Yan D., Umair M. [10] examine the role of competitive intelligence and dynamic capabilities in small and medium-sized enterprises to enhance their adaptability.

The second direction is centered on talent management and human capital development strategies. Bahri E. S. et al. [3] propose a competence-based personnel development strategy whereby interchangeability is achieved through systematic, planned work with employee skill and ability profiles. In the context of practical application in Binh Duong province, Ngoc N. M., Tien N. H. [6] analyze local solutions for developing high-quality human resources, emphasizing industry-specific and cultural features, which demonstrates the importance of adapting HR strategies to regional conditions. Turning to the impact of digitalization on talent management, Guerra J. M. M., Danvila-del-Valle I., Méndez-Suárez M. [12] show how digital transformation reshapes approaches to retention, development and rotation of key employees, thus forming flexible structures within subdivisions.

The third group of studies focuses on employee engagement, motivation and retention factors. Xu Y. et al. [2] identify that work quality and intrinsic motivation serve as mediators for reducing employees' intent to leave the company, thereby strengthening team continuity and reducing the risk of disruption to functional ties within subdivisions. The practical significance of the topic is further underscored by the online resource It Costs How Much to Replace an Employee, which calculates the economic losses from turnover and highlights the necessity of developing interchangeability as a tool to reduce vacancy-filling costs [8].

The fourth direction relates to performance management systems and the development of shared mental models within teams. Bristol-Alagbariya B., Ayanponle O. L., Ogedengbe D. E. [9] describe advanced performance management systems, emphasizing that employee interchangeability becomes possible when transparent metrics and regular feedback are in place, which builds trust and lowers barriers to temporary role rotation. In turn, Lines R. L. J. et al. [5] propose methods to reinforce shared mental models through controlled interventions, demonstrating that a unified understanding of goals and processes facilitates the rapid integration of new or temporarily replacing employees into the workflow.

Finally, researchers of organizational learning examine self-directed learning mechanisms and their role in forming interchangeable teams. Hutasuhut I., Ahmad Zaidi Adruce S., Jonathan V. [11] analyze how the principles of the learning organization contribute to the development of self-organization and autonomous learning among employees, which is critically important for the rapid preparation of replacements in key subdivision functions.

Thus, three main paradigms emerge in the literature: organizational resilience and dynamic capabilities; HR strategies and digital technologies in personnel management; and motivational and learning practices that support interchangeability. Approaches evolve from macro perspectives (organizational resilience and dynamics) to micro practices (mental models and self-learning).

Despite a general consensus on the need for an integrated approach, contradictions arise in the assessment of priorities: some authors prioritize investment in digital HR-analytics tools [12], while others emphasize the development of bottom-up cultural and learning practices [6, 11]. Moreover, the topic of economic evaluation of interchangeability remains weakly elaborated: turnover cost calculations [8] are presented fragmentarily and are not integrated into a comprehensive system linking training investments to business outcomes. Practical cases of implementing comprehensive interchangeability systems in real organizations are insufficiently represented—longitudinal studies on the effectiveness of mixed methods of dynamic capabilities, motivational programs and digital tools within a single project are virtually absent.

RESULTS AND DISCUSSION

The author's Model of Competency Convergence (MKK) is presented as a systemic approach to the formation of interchangeable teams within structural subdivisions. This model is structured as a three-phase process ensuring the controlled and smooth transfer of key functions from individual specialists to teams capable of acting flexibly and stably [2, 6]. At each phase, specialized tasks are addressed sequentially, establishing the foundation for a successful transition to the next phase (see Figure 1).

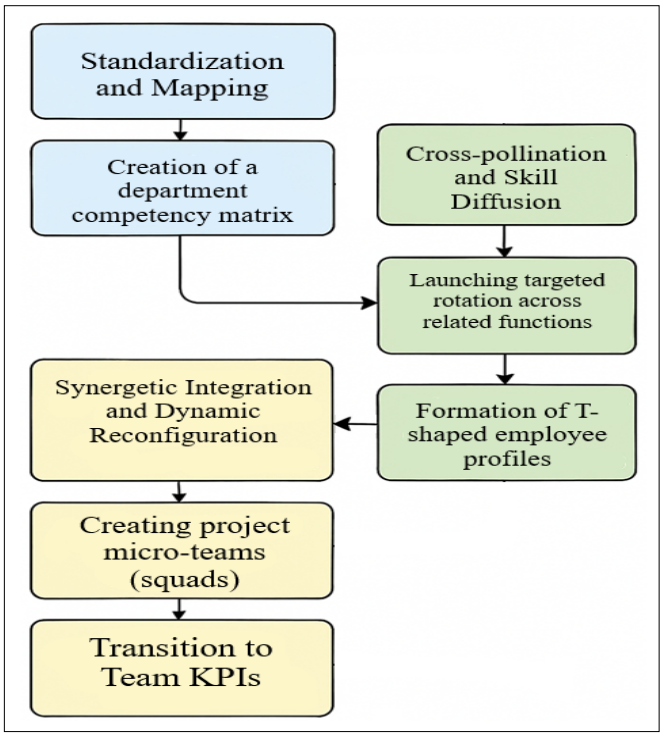

Fig. 1. Three-phase Model of Convergence of Competencies (MCC) (compiled by the author based on [2, 6, 7]).

The first phase is standardization and mapping. At this stage in-depth diagnostic work is performed to form an integral model of the current state of the division. As a key methodological approach the competency matrix is applied (see Table 1), in which employees are structured along one axis and functions and skill blocks important for the department along the other. Indicators of the level of proficiency in the corresponding competency are entered into each cell, which makes it possible not only to visualize the concentration of expert knowledge among individual specialists but also to identify systemic bottlenecks and areas of increased risk [3, 4].

Table 1. Example of the marketing department competency matrix (fragment before and after the implementation of MKK) (compiled by the author based on [3, 8, 9, 12]).

Competency / Employee	BEFORE			AFTER		
	Ivanov A.	Petrov B.	Sidorova V.	Ivanov A.	Petrov B.	Sidorova V.
Configuration of contextual advertising	4	1	0	4	3	2
SEO optimization	1	4	1	2	4	3
SMM promotion	0	1	4	2	3	4
Analytics (Google Analytics)	2	2	2	3	4	3

** Proficiency levels: 0 – no knowledge, 1 – theoretical knowledge, 2 – can do with help, 3 – can do independently, 4 – can teach others.*

The second phase involves skill exchange. Based on the conclusions obtained in the first phase, targeted knowledge-transfer programs are launched. Instead of dispersed coverage, a focused approach is employed: the employee serving as the single point of failure is appointed as mentor to one–two colleagues within his or her key competency. Within these initiatives, methods of paired interaction (analogous to pair programming in IT), job shadowing (in which a specialist follows the expert as a shadow) and short-term rotation across adjacent areas are used. The primary objective is not for every participant to become an expert, but for a limited number of employees to achieve a proficiency level of 2–3 in adjacent skills, thereby enabling the formation of T-shaped specialist profiles.

The next, third phase is synergistic integration. At this stage the group receives the authority to independently and promptly reallocate resources, directing them to the most critical areas without prior approval from the supervisor. Under such conditions it is advisable to introduce team KPI, focused on the collective result of the entire department, rather than on the isolated indicators of individual roles. This management model strengthens the mechanisms of mutual assistance and cultivates shared responsibility for achieving common goals [5, 8].

To verify the operability of the proposed approach a simulation of the Index of Operational Resilience was conducted. During the experiment the IOR was calculated as the proportion of the normative performance of the department preserved under the condition of the sudden and continuous absence of one of the key employees for two weeks.

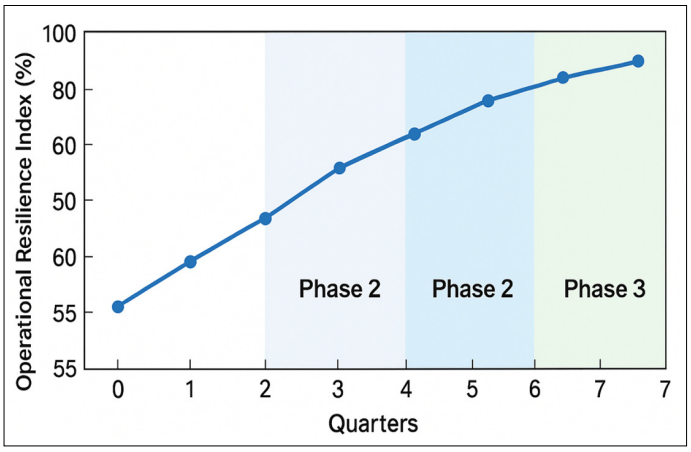

Fig. 2. Modeling the growth of the Operational Sustainability Index during the implementation of the MCC (compiled by the author based on [1, 8, 10, 12]).

As illustrated by Figure 3, before integration of the proposed model the resilience level of the department did not exceed 55 %, and the absence of a contextual advertising specialist resulted in an almost twofold decrease in lead generation effectiveness. As successive phases of the MKK progress the resilience index consistently increases, reaching 95 % by the end of the second year. This indicates that the team acquires the ability to rapidly compensate for the loss of any employee through redistribution of their functions among the remaining colleagues.

Analysis of the obtained data emphasizes that the formation of interchangeability represents not an episodic task but a constant transformation of organizational culture. The leader in this process needs to evolve from the role of controller to the role of team architect and facilitator of knowledge [11]. At the same time the MKK model is not aimed at creating universal soldiers with fragmentary skills. On the contrary, it preserves deep specialization (vertical T), while skilfully developing in employees adjacent competencies (horizontal T), which enhances the overall flexibility and robustness of the collective. This approach harmonizes with the concept of absorptive capacity of the organization, reflecting its capabilities for discovering, assimilating and effectively applying new knowledge in order to acquire competitive advantages [4]. As a result the interchangeable team demonstrates a higher level of knowledge absorption compared to a set of disparate experts.

CONCLUSION

As a result of the conducted research it has been established that in the context of the modern VUCA environment reliance on irreplaceable employees constitutes a strategic risk, whereas the development of cross-functional competencies within departments is a key factor of operational resilience and adaptability. The proposed Model of Competency Convergence (MCC) represents a phased and controlled framework enabling the systematic transformation of a collective of narrow-specialist staff into an integrated and flexible team.

The principal finding of the study is that successful establishment of interchangeability is achievable only through a comprehensive approach encompassing process standardization, the creation of transparent competency maps and the targeted implementation of knowledge-exchange mechanisms. Modeling has demonstrated that implementation of the MCC makes it possible to increase the operational resilience index of a division and to reduce business-process execution time.

Further research may be directed toward the empirical testing of the model in departments of various profiles (for example R&D, finance, sales) and the quantitative evaluation of its impact on innovation activity and the level of staff engagement.

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