

# **INNOVATION IN HUMAN RESOURCE MANAGEMENT: CREATION OF THE NEW QUALIFICATION STANDARD „WORKFORCE PLANNER“ IN THE CONTEXT OF THE NATIONAL REGISTER OF QUALIFICATIONS OF THE CZECH REPUBLIC**

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## **Abstract**

This article focuses on innovation in human resource management in Czech Republic through the creation of an entirely new qualification standard "Workforce Planner" within the National Register of Qualifications of the Czech Republic. The study is based on comprehensive research into the needs of employees working in shift operations and an extensive survey of Czech companies' requirements in the areas of flexibility, planning, and workforce management. The research revealed a growing demand for specialized professionals capable of effectively planning and optimizing human resource utilization, particularly in the context of time flexibility and changing working conditions. Based on the data obtained, comparison, and analysis of current trends, a unique detailed qualification standard was created, defining the key competencies, knowledge, and skills necessary for the role of a workforce planner. The article describes the methodology used in developing this standard, the process of implementation into the National Register of Qualifications of the Czech Republic, and the potential impacts on the labor market and the efficiency of human resource management in Czech enterprises. In conclusion, the perspectives for the development of this qualification and its significance for the future of work in the era of digitalization and automation are discussed.

**Key words:** Working time, Shift planner, Qualification standard, Profession innovation, National register of qualifications of the Czech Republic

**JEL Code:** J22, J53, J80

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## **Introduction**

Human resource management is becoming an increasingly complex discipline in today's rapidly changing economy, requiring innovative approaches and continuous development of competencies for professionals in this field. One of the key aspects of modern workforce

management is strategic workforce planning, which allows organizations to effectively anticipate and respond to changing labour market demands.

In connection with workforce planning, the concept of work flexibility is also gaining importance. The ability of organizations to flexibly respond to changing market conditions and adapt their workforce accordingly is becoming a key competitive advantage. (Atkinson & Sandiford, 2016). Workforce planners must be able to design and implement flexible work arrangements, such as part-time positions, job sharing, or remote work, while optimizing the use of human resources in line with the organization's needs. This skill is therefore an essential component of the qualification standard for this position.

The article focuses on the process of creating a qualification standard for the position of 'Workforce Planner' within the National Qualifications Framework of the Czech Republic. This new qualification reflects the growing importance of planning and organizing human resources in organizations and the need for specialized experts in this field (Ulrich et al., 2012). The process of creating this standard represents an innovative approach to developing competencies in the field of human resource management, which combines theoretical knowledge with practical labour market requirements.

The following text analyses the essential aspects of creating the qualification standard, including the identification of key competencies, collaboration with industry experts, and the integration of international trends in workforce planning and management.

## **1 Research methodology**

The conducted research utilizes a combination of quantitative and qualitative research methods, including general methods such as analysis, synthesis, induction, and deduction.

The first step involves conducting a comprehensive literature review on working time flexibility, shift planning systems, and their impact on employee satisfaction and company performance. Relevant scholarly articles, research papers, and books were gathered from databases like Web of Science and Scopus. This literature review provided a theoretical framework for understanding the concepts and theories related to workforce management.

Furthermore, a questionnaire survey was conducted among employees, which was carried out with 80 employees of a selected company involved in passenger transportation in the Czech Republic. This company was deliberately chosen due to the difficulty of planning and organizing shifts in this industry. The survey focused on two main aspects: a) The need for

time flexibility among employees. b) The need and importance of the workforce planner position from the employees' perspective.

A questionnaire survey was also conducted among 107 companies in the Czech Republic that use shift work schedules. The main objectives of this survey were: a) To identify the areas of HR in which companies want to develop. b) To determine whether companies see purpose and need in the position of workforce planner.

To create a draft of the qualification standard for "workforce planner," a panel of five industry experts (professional working group) was also assembled. The proposed standard was subsequently reviewed and approved by the commission of the Ministry of Education and the National Pedagogical Institute of the Czech Republic. The process included: a) Brainstorming and discussion among experts. b) An iterative process of drafting and revising the proposal. c) Consultations with relevant institutions.

A comparative analysis was conducted within the competency models for the position of "workforce planner" in six European countries. This analysis served primarily to: a) Identify common and different elements in the competency models. b) Assess the relevance and applicability of foreign approaches in the Czech context. c) Enrich the Czech qualification standard with best international practices.

Triangulation of methods and data sources was used to ensure the validity and reliability of the research results. This comprehensive methodological approach allowed for a holistic examination of workforce planning issues and the creation of a robust qualification standard that reflects both practical needs and international trends in this field.

## **2 Literature overview**

The literature overview focuses on a theoretical evaluation of the discussed issues through research. Its content focus creates the initial prerequisites for defining the basic framework of the topic being addressed.

### **2.1 The bibliographic analysis**

As part of the study, a bibliographic analysis was conducted using two significant academic databases - Web of Science and Scopus. The aim was to map research trends and publication activity in the field of workforce planning and management. The analysis focused on five key terms: "workforce planner", "shift planner", "human resources planner", "shift manager", and "workforce manager".

The tables summarize the frequency of occurrence of keywords in both databases, including the time range of publications and the geographical distribution of research.

**Tab 1: Frequency of keyword occurrence in the Scopus database (first 6 positions displayed)**

Workforce Planner	1988 - 2024	Shift Planner	2011 - 2022	Human Resources Planner	1990 - 2023	Shift Manager	1995 - 2023	Workforce Manager	1997 - 2023
UK	34	USA	2	South Korea	12	USA	6	USA	13
Australia	32	Belgium	1	Australia	3	Germany	4	UK	5
US	15	Japan	1	Canada	3	Canada	2	Australia	4
New Zealand	4			Germany	1	Denmark	2	Africa	3
Ireland	3			India	1	Japan	2	Canada	2
Belgium	2			Iran	1	Spain	2	Norway	2
TOTAL SUM	104	TOTAL SUM	4	TOTAL SUM	25	TOTAL SUM	26	TOTAL SUM	36

Source: Own processing

**Tab. 2: Frequency of keyword occurrence in the Web of Science database (first 6 positions displayed)**

Workforce Planner	1991 - 2024	Shift Planner	1990 - 2024	Human Resources Planner	1977 - 2024	Shift Manager	1967 - 2024	Workforce Manager	1990 - 2024
USA	109	USA	487	USA	287	USA	3 097	USA	1 283
Australia	58	UK	114	UK	80	UK	859	Australia	722
UK	47	Australia	113	China	77	Australia	715	UK	719
Canada	26	China	109	India	64	Canada	558	Canada	232
Germany	14	Canada	103	Australia	63	China	472	India	197
China	12	India	86	Canada	54	Germany	342	China	196
TOTAL SUM	306	TOTAL SUM	1 373	TOTAL SUM	854	TOTAL SUM	9 010	TOTAL SUM	4 716

Source: Own processing

The analysis reveals the following findings:

Time range of research: The longest history of research is in the area of "shift manager" (since 1967 in Web of Science) and "human resources planner" (since 1977 in Web of Science). Research related to other terms began to develop more significantly from the 1990s.

Volume of publications: The most publications are associated with the term "shift manager" (9,010 in Web of Science), followed by "workforce manager" (4,716 in Web of Science). The least number of publications is associated with the term "shift planner" (4 in Scopus, 1,373 in Web of Science).

Geographical distribution: The United States dominates research for all examined terms in both databases. Other significant countries include the United Kingdom, Australia, Canada, and China. European countries (e.g., Germany, the Netherlands, Italy) are also significantly represented, especially in research related to the terms "shift manager" and "workforce manager".

Differences between databases: Web of Science generally shows a significantly higher number of publications in all categories compared to Scopus. The geographical distribution is similar in both databases, with slightly greater diversity of countries in Web of Science.

This bibliographic analysis provides a valuable overview of the state of research and significance in the field of workforce planning and management. It shows a growing interest in this topic in recent decades and identifies countries leading research in this area. These findings served as a starting point for further, more detailed analysis of content and trends, as well as for creating a practical proposal in the published research.

## **2.2 Theoretical ground of workforce management**

Workforce management is a critical component of human resource management, focusing on optimizing employee productivity and organizational performance. It encompasses various processes including workforce planning, scheduling, time and attendance tracking, and performance management. The fundamental goal of workforce management is to ensure that the right people with the right skills are in the right place at the right time to meet organizational objectives efficiently and cost-effectively.

The theoretical underpinnings of workforce management draw from several disciplines, including operations research, industrial engineering, organizational psychology, and human resource management. One of the key concepts in workforce management is the idea of workforce optimization, which aims to balance labour supply with demand while considering factors such as employee skills, preferences, and labour regulations (Van den Bergh et al., 2013).

Research in workforce management has evolved significantly over the past few decades, driven by advancements in technology and changing workplace dynamics. Early studies focused primarily on mathematical models for staff scheduling and rostering (Ernst et al., 2004). However, more recent research has expanded to include considerations of employee well-being, work-life balance, and the impact of flexible work arrangements on organizational outcomes (De Menezes and Kelliher, 2011).

The importance of effective workforce management has been underscored by studies highlighting the negative consequences of poor scheduling practices. For instance, irregular work schedules have been associated with increased stress, work-family conflict, and reduced job satisfaction (Golden et al., 2015). Conversely, research has shown that flexible work arrangements and employee involvement in scheduling decisions can lead to improved job satisfaction, reduced turnover, and increased productivity (Thompson et al., 2015).

Technological advancements have played a crucial role in shaping modern workforce management practices. The advent of sophisticated workforce management software has enabled organizations to implement more complex and data-driven approaches to scheduling and workforce planning. These systems often incorporate artificial intelligence and machine learning algorithms to predict labour demand, optimize schedules, and even suggest personalized work arrangements based on employee preferences and performance data (Whysall et al., 2019).

Despite these advancements, workforce management continues to face challenges, particularly in industries with highly variable demand patterns or those requiring 24/7 coverage. Balancing organizational needs with employee preferences and well-being remains a key area of focus for both researchers and practitioners in the field (Van der Veen et al., 2020).

The theoretical ground of workforce management is multifaceted, drawing on diverse disciplines to address the complex challenge of aligning human resources with organizational goals. As workplace dynamics continue to evolve, particularly in light of trends towards remote work and increased workforce flexibility, the field of workforce management is likely to remain an active area of research and innovation.

### **3 Analysis of the need for a new qualification standard**

In an era of rapid technological changes and fluctuating economic conditions, effective workforce planning is becoming a key factor in the success of organizations. This assertion was verified through an analysis of the need to create a new qualification standard in the Czech Republic for the position of workforce planner, which would reflect both current and future market requirements.

For a comprehensive assessment of this need, an analysis was conducted through a questionnaire survey from two different perspectives.

### 3.1 Findings about topic from Employees' perspective

In this part, the research focuses on employees of a specific company to determine their perception of current qualification standards and the need for their update in the area of working time management.

The selected company operates in the field of passenger transportation. This market segment was intentionally chosen because, like the healthcare sector for example, it has long been facing the greatest challenges in managing working hours with regard to flexibility. At the same time, the process of planning and time management in this sector has not been innovated for the past several decades.

In an anonymous questionnaire survey, 70 responses were obtained from a diverse composition in terms of age, gender, and family status. Among other things, four basic questions were asked, where it was possible to choose one or more answers, and where the first three aimed to verify the need for time flexibility among employees and the last one directly addressed the need for a new job position of workforce planner in the company. To the question **"What is currently the most significant reason for you to leave shift work?"**, respondents reacted as follows. "Inability to balance work with private life" (43 %) appears to be the most serious problem. This suggests that employees strongly prefer work-life balance, i.e., time and time flexibility is a key factor and simultaneously a working condition influencing an employee's decision when choosing an employer.

"Night work" (29 %) represents a burden for employees. This factor can have a negative impact on the health and overall well-being of workers, which is another key criterion in employees' decision-making.

"Other reasons unrelated to shift work" and "I have no reason to leave" (both at 14 %) play a significantly smaller, though still not negligible role.

The majority of respondents (71 %) cited specific reasons related to shift work as a potential cause for leaving their current employer. This suggests that shift work presents a significant challenge for employee retention and simultaneously points to an area that needs to be addressed as employees' greatest need.

The next question, **"Time and time flexibility in shift work (i.e., the free ability to plan your own shifts) is for me when deciding about employment"** with the option to answer a) more important than money, b) at least as important as money, c) time and flexibility is the second most important after salary, d) time and flexibility is not important to me, clearly showed that for a large majority of respondents (71%), time and time flexibility is a significant factor (need) when deciding about employment.

The results suggest that employees significantly value the ability to influence their work schedules and have control over their time. This may be a consequence of the growing emphasis on work-life balance in contemporary society (which is also confirmed by the result of the first question).

Time and time flexibility are key factors for most employees when evaluating the attractiveness of employment. Employees are simultaneously pointing to a currently unresolved need they have within the working conditions of shift work. Employers who can effectively respond to this demand may gain a significant competitive advantage in the labour market.

Responses to the question **'If you had the opportunity to create a shift schedule according to your own needs, what would you consider the biggest advantage of such an option?'** show that employees value various aspects of flexibility in organizing work time, with a strong preference for overall process autonomy and the ability to choose work days (71%).

Employees most desire overall control over their work time and the ability to adapt it to their personal needs (86%). The emphasis on choosing work and non-work days then shows the importance of aligning work with personal life.

The results of this question again suggest that time flexibility and the way shift work is organized is a key need that should be secured in a professional manner to achieve the desired goal.

Employers who can offer these options, i.e., organize the planning and management of working hours at a professional level, can expect increased employee satisfaction.

The final and crucial question, **'Should there be a separate professional position of workforce planner in the company that would take into account the health and needs of employees when organizing shifts, as well as the efficient use of working time, including preventing unnecessary overtime?'**, which follows up on the needs of employees and the possibilities of addressing these needs, clearly shows very strong support for creating a separate professional position of workforce planner. Out of the total number of 70 respondents in the selected company, the vast majority (91 %) expressed a positive attitude towards this idea.

These data provide a strong argument for considering the creation of a specialized workforce planner qualification. Employees clearly perceive the potential benefits of this role not only for their working lives but also for the overall efficiency of the organization.

### **3.2 Findings about topic from Employer's perspective**

The need for a new qualification standard was also verified from the employers' perspective through a questionnaire survey among 107 companies using shift work regimes from various



industry segments. The survey included a series of questions on the topic of flexibility and organization of shift work, where the following 3 were formulated in connection with the companies' need for a new work qualification. Again, it was possible to select one or more answers.

The results related to the question **'Increasing the efficiency of human resource management processes in shift work in relation to flexibility is mainly hindered by:'** show various obstacles preventing effective human resource management in shift work, which underlines the complexity of this issue and the potential benefit of a specialized workforce planner position. In particular, 'insufficient management support' and 'employee engagement' (17 and 14 %) indicate the need for a role that could effectively communicate between different levels of the organization. Also, 'lack of innovative activities and executive action' (17 %) directly points to a gap that a qualified workforce planner could fill. 'Lack of knowledge in workforce management' then clearly indicates the need for specialized qualifications in this area.

Furthermore, a question was asked: **'When organizing human resources work, problems and losses most often stem from:'**, which pointed to the need for experts capable of effectively aligning the amount of work with available human resources ('capacity planning problems' 33 %). 'Lack of a workforce management system' (18 %) then indicates the need for experts themselves with comprehensive knowledge in this area. The response 'Insufficient flexibility' (21 %) also suggests the need for experts who can implement more flexible shift planning systems.

The question **'Within planned projects and improvement measures for shift work, we see the future path mainly in:'** pointed to a high interest in 'innovative methods' and 'special software' (38 and 31 %), which leads to the need for experts who would effectively implement and utilize these tools and approaches. The direct mention of 'creating a workforce planner position', although less frequent (13 %), shows a growing awareness of the need for this specialization. Interest in 'outsourcing' (16 %) suggests that organizations recognize the need for expert knowledge in this area.

The survey results support the need for the emergence of a specialized qualification for workforce planners, even though this need is not always explicitly expressed. Organizations are clearly moving towards using advanced methods and tools for workforce management, which requires experts with comprehensive knowledge and skills. Qualified workforce planners could play a key role in implementing and optimizing these innovative approaches, thereby contributing to more efficient human resource management in shift work. Creating this

qualification could help organizations better utilize the potential of new technologies and methods, thus increasing their competitiveness and operational efficiency.

#### Partial conclusion

From the conducted analysis of employees and employers and the obtained findings, recommendations emerge for creating a comprehensive qualification standard in the HR field - workforce planner, which will reflect the identified obstacles.

## **4 Proposed qualification standard**

In designing the new qualification standard, the authors drew from a synthesis of all insights derived from the applied research methods and a generally formulated competency model for the position of workforce planner.

**Tab. 3: Initial competency requirements for the formulation of the qualification standard**

<b>Competency title</b>	<b>Description</b>
Analytical skills	Ability to analyse complex workforce data - Predictive modelling and forecasting (Cappelli, 2009).
Strategic thinking	Ability to link workforce planning with long-term organizational goals - Understanding labour market trends (Collings & Mellahi 2009).
Technological literacy	Knowledge of HR information systems and analytical tools - Ability to work with big data (Marler & Boudreau, 2017).
Communication skills	Ability to present complex data in an understandable way - Effective communication with various stakeholders (Ulrich & Dulebohn, 2015).
Financial literacy	Understanding the financial implications of workforce decisions - Ability to conduct cost-benefit analyses (Cascio & Boudreau, 2011).
Knowledge of legal regulations	Understanding labour law and employment regulations - Ability to ensure compliance with legal requirements (Boxall & Purcell, 2011).
Cultural intelligence	Ability to work in a multicultural environment - Understanding global workforce trends (Tarique & Schuler, 2010).
Innovative thinking	Ability to design creative solutions for workforce challenges - Openness to new approaches and methods (Thunnissen, Boselie & Fruytier, 2013).

Source: Own processing

The comparative analysis of competency models from selected European countries revealed significant differences in the examined area, see Table 4.

**Tab. 4: Key differences in competency models of selected European countries**

Country	Difference / emphasis on
Germany	Emphasis on technical skills and precision - High level of knowledge in labour law - Ability to work with a dual education system.
France	Strong emphasis on social dialogue and relations with trade unions - Knowledge of a complex labour law system - Ability to navigate in a centralized education system.
United Kingdom	Flexibility and adaptability due to a less regulated labour market - Emphasis on diversity management and inclusivity - Strong analytical skills for working with data.
Sweden	Strong emphasis on work-life balance and employee wellbeing - Ability to implement a participative management style - Knowledge of collective bargaining and cooperation with trade unions.
Italy	Ability to navigate a complex system of labour relations - Knowledge of regional differences in the labour market - Emphasis on family values and their integration into work life.
The Netherlands	Strong intercultural competencies due to the international nature of many companies - Ability to implement flexible work arrangements - Emphasis on innovation and creativity in HR processes (Boselie & Paauwe, 2005).

Source: Own processing

The proposed qualification standard (see Table 5) was also based on the requirements of the Methodology for Fulfilling the National Qualifications Framework and the requirements of the National Pedagogical Institute of the Czech Republic. The standard is classified in the group of Economics fields (code: 62), and the authorizing body was the Ministry of Labor and Social Affairs of the Czech Republic. Table 5 presents five independent competencies, indicating both knowledge and skill requirements (verification criteria), which are verified during the examination and are necessary to fulfil this new occupational qualification.

**Tab. 5: Proposal for the qualification standard of Workforce Planning Specialist**

ORIENTATION IN WORKFORCE PLANNING ISSUES		Method of verification
Verification criterion	Explain the place and importance of workforce management.	oral
	Describe the requirements and principles of workforce planning and management.	oral
	Explain the function of planning, planning levels, and planning approaches in workforce planning.	oral
	Explain the economic, social, and health aspects of workforce planning.	oral
	Clarify HR risks associated with workforce planning, including their management.	oral

<b>CREATING AND MAINTAINING A WORKFORCE PLANNING SYSTEM IN THE ORGANIZATION</b>		<b>Method of verification</b>
Verification criterion	Creation of a workforce planning system.	practical and oral
	Creation of planning units.	practical and oral
	Creation of a strategy for capacity coverage of the work curve.	practical and oral
	Creation of a planning formula for the purpose of developing a shift model.	practical and oral
	Selection of planning method/approach.	practical and oral
	Combining work regimes.	practical and oral
	Clarify the creation of planning processes and related company documents.	oral
	Explain the process of implementing and maintaining tailored solutions in an organization.	oral
<b>CREATING AND MAINTAINING A SYSTEM OF MEASURABILITY AND EVALUATION OF PERFORMANCE INDICATORS IN WORKFORCE PLANNING</b>		<b>Method of competency verification</b>
Verification criterion	Search for and analyse data in the area of workforce planning.	practical and oral
	Create and qualitatively or quantitatively evaluate measurable performance indicators.	practical and oral
	Conduct risk assessment within the framework of workforce planning.	practical and oral
	Identify and evaluate risks in the area of workforce planning.	practical and oral
<b>UTILIZING MODERN KNOWLEDGE IN WORKFORCE PLANNING</b>		<b>Method of verification</b>
V. c.	Explain the need, method of monitoring, and utilization of new, modern insights in relation to workforce planning and management.	oral
<b>UTILIZATION OF IT/IS PLANNING SYSTEMS</b>		<b>Method of verification</b>
Verification criterion	Navigate specific software solutions for workforce planning.	oral
	Evaluate and select specific software solutions according to the needs of the organization.	oral
	Explain the process of implementing planning software in an organization.	oral
	Operate planning software.	practical and oral

Source: Own processing

## Conclusion

The presented research was not conducted merely as a theoretical study, but also had a significant practical goal, namely the creation of a new qualification standard in the National Qualifications Framework of the Czech Republic.

The creation of a qualification standard for the position of workforce planner represents a concrete step towards formalizing and standardizing this important role in organizations. This step has several key benefits.

Official recognition: The inclusion of this qualification in the national system provides official acknowledgment of the importance of this role in modern human resource management.

Standardization of competencies: The qualification standard defines clear competencies and knowledge that a workforce planner should master, which contributes to a uniform understanding of this role across organizations.

Support for education: The existence of the standard enables educational institutions to create targeted programs for preparing experts in this field.

Facilitation of recruitment: Employers will have a clearly defined competency profile available when searching for suitable candidates for this position.

Professional development: Individuals will be able to better plan their professional development with respect to the clearly defined requirements of this qualification.

Quality improvement: Standardization of the qualification will lead to an increase in the overall quality of workforce planning in Czech organizations.

International competitiveness: The creation of this standard can help Czech organizations achieve a level of human resource management comparable to international standards.

The implementation of this qualification standard has the potential to significantly contribute to improving human resource management practices, increasing organizational efficiency, and strengthening the competitiveness of Czech businesses on a global scale. The new qualification standard also reflects the growing importance of strategic human resource planning in a modern and innovative business environment and prepares the Czech labour market for future challenges in workforce management, including the digitalization of this process.

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