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DEVELOPMENT OF THE KEY COMPETENCIES OF EXPERTS FOR INDUSTRY

4.0

Čermáková, J.

Abstract

This work focuses on the professional development of the key competencies of four professionals working in the key work positions in the conditions of Industry 4.0. To fulfill the first and second goal of the thesis, the specification of the term Industry 4.0 and its definition in the field of human resources development in organizations in the Czech Republic and defining the concept of competencies for Industry 4.0 and determining competencies for experts in the key work positions from the perspective of Industry 4.0 is part of the theoretical overview of the work. As part of the qualitative research, this professional development is captured in the form of the case studies. To achieve maximum success during the fifteen-month research, the author uses coaching methods according to international coaching approaches, leadership and mentoring. From the qualitative research in the form of coaching interviews, the work shows the professional development of experts by an average of two levels for each competency separately on the ten-point scale, which is based on the primary questionnaire survey based on self-evaluation of experts. The coaching method has been confirmed in the case studies as the most effective method of developing competencies for Industry 4.0 compared to leadership and mentoring. The lifelong learning competency is the fundamental competency for successful coaching and for fulfilling the professional development of experts for Industry 4.0. The use of 360-degree feedback with graphical interpretation in the form of competency models confirms the results achieved by the author in the case studies. The methods for the proposal, implementation and control of human resources development in the key job positions in the conditions of Industry 4.0 were successfully captured and the goals were fulfilled.

Key words: Competencies for Industry 4.0, coaching, leadership, 360 degree feedback, competency model

JEL Classification: A14, A29, M51, M53, O30, O32, O33, O34

1 Introduction

The author approaches to the attitude in fulfilling the Industry 4.0 framework similarly to Hecklau et al. (2016), who claim that work activities will not decline in the future, but there will be a change in their content. The trend is to focus on the competencies of employees who think in context, strategically and use creativity and innovation. Strategic management of competencies is essential to successfully meet these challenges.

Human capital is one of the areas that organizations are actively involved in and will involve in the future. The business environment places high demands on the professionals who work in the organization at all managerial levels. Experts are expected to have a quality education in the field, professional competency, the ability to deal with unexpected situations in their own and a foreign language and creative thinking for the development of the organization. Experts must be able to respond to any situation, even if they have never encountered it before.

In order for people to withstand the demanding conditions of today's society and maintain or gain their position in the labor market, they cannot rely solely on their initial qualifications and achieved expertise. It is essential that they are equipped with the ability to act successfully in the context of various tasks and life situations. In other words, they need to have the appropriate competencies (Havlová, 2010).

The constant pressure to increase the qualifications of professionals in the conditions of Industry 4.0 in the Czech Republic is the current topic, which in the coming years will determine the main competitive advantage of organizations. The use of the Industry 4.0 concept represents an unique opportunity for organizations to ensure their long-term competitiveness in the global environment. It is for this reason that the core requirements are placed on the competencies, with which the individual should be equipped and with which they must be able to dispose. Despite this, the introduction of Industry 4.0 ideas in organizations is the great opportunity to maintain their national or international competitiveness (Rolínek, 2019).

Thanks to the acceleration of production, innovation and economic processes, Hecklau (2016) specifies the integration into Industry 4.0 of the automation and strategies needed for higher qualification. To meet these expectations, intelligent manufacturing systems are implemented that create the required flexibility and capacity. Simple and monotonous processes are automated, while other processes become more complex and interconnected. Therefore, qualification strategies for the current workforce are required. Employees must be able to take on more strategic, coordinating and creative activities.

One of the key prerequisites for the successful operation of an organization in the conditions of Industry 4.0 is the selection of the right people for the right places. Choosing the right people with the required competencies (knowledge, abilities and skills) is primary. Today's times are more in favor of personalities than products. Invaluable in the organization are experts who are able to manage and adapt to change, effectively use technical, communication and technological systems, deepen their knowledge and experience, change their way of thinking and acting, manage a diverse workforce, be creative, work in a team, develop relationships and, last but not least, learn the acquired knowledge, skills and abilities to pass on. (Čermáková, 2020)

The aim of this article is to develop the competencies of experts holding key job positions related to the introduction of Industry 4.0 in organizations in the Czech Republic.

2 Theoretical background

2.1 Industry 4.0 and human resources development

Within the fulfillment of the first goal of this work, there is the brief definition of the term Industry 4.0 in the field of human resources development in organizations in the Czech Republic. The author focuses mainly on the interconnection with the use of technologies for Industry 4.0.

Nieuwenhuis&Katsifou (2015) approach to Industry 4.0 as the revolutionary concept of processes oriented to new technologies, which interconnect device automation with digital data and insert them into intelligent systems. This concept is illustrated by Dorst, W., et al. (2015), which describe Industry 4.0 as the growing digitization of a complex value chain and, as a result, the interconnection of people and systems through the exchange of data at a given time. „Industry 4.0 will become the global driver for ensuring the sustainability of the industry“ (Rolínek, 2019).

Kagermann, et al. (2013) state in the German government the term Industry 4.0, which is associated with the fourth industrial revolution, when the term Industry 4.0 was first appeared in 2011 in Hanover. „Thanks to a competition from all over the world, innovative capacity and short time to the market become necessary“ (BMBF, 2014). Spath et al. (2013) specify the components of Industry 4.0, such as object and human storage, intelligent data collection, including the complete autonomy of self-monitoring, decentralized objects, including the design of intelligent systems, and draws attention to security measures. Thanks to the acceleration of innovation, production and economic processes, Hecklau (2016) specifies the integration into Industry 4.0 of the strategies and automation that are needed for higher qualification: "To meet these expectations, intelligent manufacturing systems are in place that create the required flexibility and capacity. Simple and monotonous processes are automated, while other processes become more complex and interconnected. Therefore, qualification strategies for the current workforce are required. Employees must be able to take on more strategic, coordinating and creative activities." Hecklau et al. (2016) present the essential elements of Industry 4.0 as closely interconnected digital processes that society across industries must learn to work with. Work activities will not decline in the future, but there will be the change in their content. The trend is to focus on the competencies of employees who think in context, strategically and use creativity and innovation. The author agrees with the position of Hecklau et al. (2016), who see the need to successfully manage these challenges in

the strategic management of competencies of professionals holding key positions in Industry 4.0.

2.2 Competencies for Industry 4.0

Part of meeting the second goal of the research is to define the concept of competencies for Industry 4.0 and to determine the key competencies of experts in the key positions from the perspective of Industry 4.0.

There are many definitions of the concept of competency for Industry 4.0. The difference in terms of skill, ability, responsibility or competency is often unclear. From the perspective of history, Sinclair (1995) defines the concept of competency as the ability to do something effectively or well. Man, et al (2002) define competencies for Industry 4.0 as the overall ability to successfully perform job roles. Volpentesta & Felicetti (2011) understand the concept of competency as the relationship between tasks and the individual for the performance of professional activities. As the result, it is the skills and knowledge needed to effectively practice a particular profession. "Competencies are defined as the combination of organizational, behavioral and technical skills that give managers and employees the potential to effectively implement prescribed processes." (Patalas-Maliszewska&Kłos, 2018)

Kinkel et al. (2017) add that key competencies are based on the activation, combination and use of personal resources, on social aspects and behaviors that can be developed in the future. These are knowledge, cognitive and practical skills that do not capture the character of man.

It is cognitive and practical skills and knowledge that are necessary for the development of competencies in the conditions of Industry 4.0. According to Freitas & Odelius (2018), the key competency is potential or observable behavior that demonstrates personality attitudes, knowledge, skills or synergy between them. These are demonstrable personality results, which corresponds to the added value for other individuals, networks, teams, departments, organizations in accordance with the adopted strategy and available resources.

Based on the above-mentioned approaches to the term competency for Industry 4.0, the author defines the concept of competency for Industry 4.0 as the disposition, ability and readiness of an individual to act independently and successfully for unstructured, new or complex work challenges and ability to develop ideal solutions for future situations characteristic for Industry 4.0.

Table 1 List of the competencies with their specifics for Industry 4.0

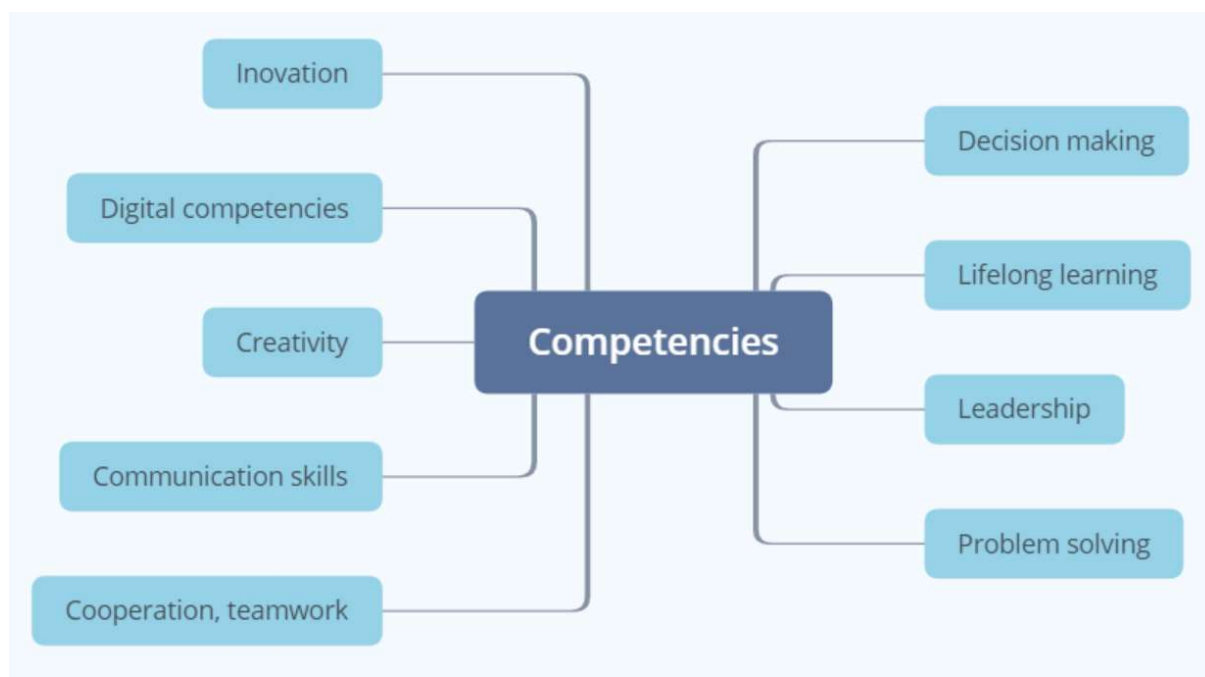
název kompetence	interpretace
1. Digital competency	ability to use information and communication technology tools
2. Systematically analyze	analytical ability of logical thinking, ability to analyze complex facts
3. Innovation	ability to create original, useful and appropriate news
4. Creativity	ability to think creatively
5. Setting priorities	the art of simply formulating priorities, the ability to prioritize work in accordance with goals
6. Negotiation in own language	ability to lead a discussion creating an environment for collaboration
7. Negotiation in a foreign language	ability to conduct a discussion in a foreign language, which creates an environment for collaboration
8. Problem solving	ability to negotiate and resolve conflicts appropriately
9. Effective communication	ability to listen, ask questions, express ideas and concepts effectively
10. Cooperation	ability to work with different people, teams, ability to actively participate in achieving common goals
11. Establishing employment relationships	ability to create and maintain a network of contacts
12. Decision making	ability to make good, unambiguous and rapid decisions based on incomplete information and to be responsible for their decisions
13. Lifelong learning	ability to lifelong learning, monitoring and implementation of one's own educational needs, ability to learn from one's own mistakes
14. Extensive knowledge in a specific field	ability to increase qualifications in the field
15. Orientation in information	ability to use multimedia technologies to search, store, create, present, sort and exchange useful information, ability to absorb and understand complex information, ability to find facts
16. Compliance with deadlines	ability to meet agreed deadlines
17. Reconciliation of work and private life	ability to balance in work and private life
18. Flexibility	ability to work in changing situations, adapt to change
19. Result orientation	ability to set and achieve positive and effective goals, to work intensively and persistently to achieve goals
20. Self-discipline	ability to self-control, ability to self-motivate to achieve success, to persevere
21. Professionalism	ability of diplomacy, professional conduct and behavior
22. Motivation and support of others	ability to motivate individuals, groups
23. Workload management	ability to withstand stress, work under pressure, stay calm under pressure, do not give up easily, overcome challenges and failures
24. Economic awareness	market knowledge
25. Empathy	reflect on their behavior, ability to show tolerance, express and understand different opinions, ability to empathize and ability of interpersonal sensitivity to treat everyone honestly, with dignity and consideration, to inspire confidence
26. Active approach	ability to maintain a positive attitude, to treat new problems as opportunities, to be open to new possibilities, to accept challenges
27. Taking responsibility for the work	ability to take responsibility for one's own mistakes, ability to take responsibility for what I do and what I am responsible for
28. Leadership	ability to implement strategy, budget, lead, mentor, delegate

Source: Own processing according to Andrews&Higson (2008); Casner-Lotto, J. & Barrington, L. (2006); Hroník, F. (2007); Kyllonen (2012); Li (2009); Miller, et al. (2012); Mitchelmore & Rowley (2010); Robles&Rodrígueza (2014); Veteška& Tureckiová (2008); Vrchota (2012)

The key competencies for Industry 4.0 are based on Table 1 from the established overview of competencies. (Fig. 1). These key competencies for Industry 4.0 are included in the study due to the most frequent occurrence in professional publications. More information is provided

by scientific publications Čermáková, et al. (2020); Čermáková&Rolínek (2020); Čermáková&Rolínek&Slabová (2020).

Fig. 1 The key competencies for Industry 4.0



Source: Own processing according to Čermáková, et al. (2020); Čermáková&Rolínek (2020)

The positive trend in the development of competencies can be observed in the work of Jaschke et al. (2014), where Industry 4.0 radically changes the work and competency profiles of workers. For this reason, it will be necessary to implement appropriate training strategies and organize work in the way that supports the professional development of competencies for Industry 4.0. Based on this framework, Canetta et al. (2018) analyze the effects of digitization on the formation of a new work environment with impacts on individuals. It is necessary to take into account the required key competencies and social consequences such as new forms of employment, work-life balance and job satisfaction. To integrate the concept of key competencies for industry 4.0 Kaasinen et al. (2019) refer to qualified professionals of the future who automated systems will be assisted to provide sustainable relief from mental stress and develop their innovative, creative and improvisational competencies without compromising the strategic goals of the organization. Imran & Kantola (2018) found that organizations focus on

employees who contribute innovatively and creatively to the organization while demonstrating the improvement of their competencies.

Overall, Industry 4.0 requires more flexible work environment in organizations and the associated new attitudes, knowledge, skills, which means competencies for leading new technologies.

3 Objective and methods

This work proposes the development of human resources within the personnel strategy, which is focused on the key job positions related to the introduction of Industry 4.0 in organizations in the Czech Republic. This whole concept is based on the research and development of existing lifelong learning, experience and key competencies, which means the abilities and skills of professionals who use work systems within Industry 4.0.

3.1 Objective

At the beginning of the research, the topic was chosen and the basic research questions were determined, which are suitably modified during the research. The main goal of this work is to propose the tool for the development of the competencies and evaluation of their implementation in terms of ensuring the required development of the key employees in the conditions of Industry 4.0.

To fulfill the goal of the work, the following sub-goals were set:

1. Definition of the term Industry 4.0 in the field of human resources development in organizations in the Czech Republic. (subchapter: Definition of the term Industry 4.0)
2. Defining the concept of the competencies for Industry 4.0 and determination the key competencies of experts in the key positions from the perspective of Industry 4.0. (subchapter: Competencies for Industry 4.0)
3. The proposal for the development of human resources in the key job positions in the conditions of Industry 4.0. (subchapter: Coaching and Leadership)
4. The implementation of human resources development for the selected job positions. (subchapter: Coaching and Leadership)
5. The control of effective development of human resources based on the improvement of selected competencies. (subchapter: 360degree feedback method and competency model)

The first two goals are part of the theoretical overview of the work. Within the research of professional publications and methodologies, brief overviews with references to the author's scientific publications are structured in the work.

The fulfillment of the third to fifth goals is the part of the case studies, where proposals, implementation and control of professional development of human resources in the key job positions in the conditions of Industry 4.0 are individually recorded.

3.2 Research questions

In order to compile research questions, it was necessary to design and evaluate the tool for the development of competencies in terms of ensuring the required professional development of professionals holding the key job positions in the conditions of Industry 4.0.

The following research questions were set to fulfill the aim of the work:

1. Is the coaching method effective in developing competencies for Industry 4.0?
2. Is the competency lifelong learning the key competency for Industry 4.0?
3. Does the 360degree feedback and competency model confirm the results achieved by the author in the case studies?

3.3 Methods

"The general methodological approach to solving the research question is the research strategy. Types of research strategies can be categorized in different ways. It is recognized that the two main categories are qualitative and quantitative research strategies. " (Hendl, 2016)

The methodology is elaborated in connection with individual partial goals and research questions. The following methodological description is the brief summary of the methods used. Their more detailed specification is the part of each chapter separately.

To meet the first and second goals, which are part of the theoretical overview of the work, the author studied the Czech and foreign professional sources. For this purpose, the study of Czech and foreign professional literature, consultations with experts, participation in scientific and corporate conferences were used. From this spectrum, the following competencies were found, which became the part of the online questionnaire survey (Table 1).

During the planning phase, the author recorded the data obtained by the online survey and selects suitable specialists corresponding to the conditions of Industry 4.0. It uses methods of data collection and analysis of this data, which it collects and analyzes simultaneously. To organize the data, the author uses Google Docs tools to send questionnaires to suitable

specialists and the MS Office program, where the dates and places of data collection are specified. The MS office has prepared documents for statistical surveys, including graphs, tables and contingency tables. The data collection itself is performed systematically by the author according to several sources. It records the individual phases of data collection, indexes and marks data for efficient retrieval. When interpreting the data, the author examines the connection between the data and research questions.

The online pilot research was created in the first phase in November 2019 from the competencies listed in the literature review. This pilot questionnaire survey was submitted to the narrower circle of thirty relevant respondents in order to determine the individual level of individual competencies of experts holding key job positions in the conditions of Industry 4.0.

As Sieber (1973) demonstrates, the exploratory interviews and observations that precede the conduct of the statistical survey provide valuable information about respondents' access to their basic views on competencies. In this part of the pilot testing, the author focuses on improving the questionnaire using information obtained from the pilot research. Based on the information obtained, the scope of the questionnaire is expanding. It is true that the more the researcher is informed about the target population, the more adequately compiles the questionnaire and prepares the whole event.

Following subsequent adjustments, at the beginning of 2020, this **online questionnaire** was available to the wider range of experts holding key positions for Industry 4.0. The questionnaire is available at this link <https://docs.google.com/forms/d/1zpViGAI42XUXxDOQZTnhJYB42uYY3ZDOyPkhZXJzBn0/edit>. The questionnaire presents the methods of self-evaluation of respondents on a scale of 1-10.

According to Smith & Morse (2005), the explicit definition of key knowledge or skills is reflected in the research of the literature on business and managerial competencies and the subsequent assessment of respondents' own level of competencies or the level of agreement with the competency statement. Miller, et al. (2012) complements the opportunity for respondents to enroll in competencies that, according to the survey, are missing.

After the opposite data collection, the quantitative research are presented in the studies of Čermáková et al. (2020) and Čermáková & Rolínek (2020). These researches focus on the nine key competencies for Industry 4.0. The list of these competencies and their specifications is shown in Table 2.

3.4 Qualitative research

The author approaches to the concept of the qualitative research in the similar way to Creswell (1998), who states that a qualitative research is a process of seeking understanding based on different methodological traditions of examining a given social or human problem. We create a complex holistic picture, analyze different types of texts, inform about the opinions of research participants and perform research in natural conditions. Long-term search and analysis of relevant information and collection of the qualitative and the quantitative data is essential.

The qualitative research is based on basic theories, methods and applications of Hendl (2016) and uses inductive forms of scientific methods, in-depth study of individual cases, various forms of interviews, which the author deals with subsequently and qualitative observations. It is not just interviews with experts, the author also uses regular consultations with people who do not participate in research to identify blind spots. The research plan is flexible. The research plan is developed from the given basis, changes depending on the results obtained so far and adapts to the circumstances. The quantitative research, on the other hand, is based on the solid plan represented by various methods of statistical research. Part of the qualitative research is descriptive research, which used techniques such as field **observations and case studies**.

As the part of applied research, the author works with action research, which seeks change, that is, the realization of the concrete result that improves the living conditions of selected experts. The research is not only about improving competencies using coaching methods, the research aims at professional development across the entire personality of the interviewee. These competencies are evaluated on the 10point scale within the evaluation questionnaire survey. The concept of random selection is based on purposeful sampling, which Patton (1990) describes as the choice of information-rich cases for deeper study. The number of cases and their selection depends on the purpose of the study. As part of the qualitative survey, 5 experts meeting the conditions of Industry 4.0 have been involved in the research since December 2019. Due to the extensive case studies, this work captures the professional development of 4 professionals holding professions in the conditions of Industry 4.0. It is a typology of groups of experts presenting organizations in the Czech Republic in key positions in top management (directors, owners), middle management (for example represented by financial manager - head of finance department) and specialists (such as project manager, marketing specialist) and

administrative staff (for example represented by an accountant, a technical assistant, etc). The qualitative research was carried out on the basis of the method of self-assessment of the key competencies of experts, including the use of the 360 ° feedback method. For the objectivity of the data, each competency of the key position expert was assessed by his colleagues, superiors or subordinates. From the individual results of determining the level of key competencies, the competency models of experts in the conditions of Industry 4.0 were compiled. More information is provided in the case studies.

Verification and control of the set lifelong learning development with its updating according to the needs of organizations in the Czech environment in the conditions of Industry 4.0 is part of the conclusion of qualitative research. The work also takes into account the current situation in the professional development market with the aim of minimum costs and maximum benefits for individuals and entire organizations in the Czech Republic in terms of Industry 4.0.

3.5 Case studies

According to Hendl (2016), the case study is a detailed study of one case or a few cases. While in a statistical survey we collect a relatively limited amount of data from many individuals, in a case study we collect a large amount of data from one or a few individuals. The case study is about capturing the complexity of the case, about describing the relationships in their entirety. It is assumed that the thorough examination of one case will give us the better understanding of other similar cases. At the end of the study, the case is classified in the broader context. the case is compared with other cases and the validity of the results is also assessed. The author uses 360° feedback to verify the results. The result of the qualitative research is not to reveal the seemingly infinite diversity of unique human beings, but to shed light on the professional development in the conditions of Industry 4.0 of several well-chosen experts.

The work uses **the intrinsic case study** described by Stake (1988), where the researcher wants to know the case and describes in depth selected aspects of the case. The aim is to have the holistic understanding of the case and to understand the interconnection of its individual parts and to enable the critical assessment of the course of the study.

In designing the case study, the author relies on the methods of Yin (2003). The quality case study is intended to bring significant enrichment with complete information, different perspectives, but also to point out limitations. Yin (2003) emphasizes the demonstration of data validity and the authenticity of the source of the data provided. Hindle & Yencken (2004) add

that qualitative methods such as case studies and in-depth interviews are a good approach to take into account the process and behavioral perspectives of managerial competencies and note that qualitative work is lacking in the field of managerial competencies. According to Mitchelmore & Rowley (2010), these methodologies provide an insight into competencies from the point of view of the process, which do not appear in traditional quantitative methods.

In the case study, the author comes out of the research of Miller et al. (2012), where respondents were asked to provide the ranking of the most important competencies from the list of competencies.

The author approaches the description of case studies in a similar way to Miles and Huberman (1994), who consider the case study to be the minimum requirement:

1. explain what the research is about;
2. clearly inform about **the social context of the environment**, where the research was conducted;
3. communicate the natural history of research so that it is known what was done, who did it and how;
4. contain the **basic data in the form of short narratives**, organized excerpts from interviews usually in the form of **key statements marked with quotation marks** so that the reader can draw his own conclusions in parallel with the author;
5. **formulate conclusions and describe their broader significance for science** or in relation to the effects they may have.

According to Hendl (2016), the author follows

1. **maintain the dictionary used by the participants;**
2. to include **coach's interpretations** among the excerpts from the interviews;
3. use **the narrative approach for detailed description and narration**. The author compares the narrative with the available theories.

The description of case studies is approached by Miles and Huberman (1994), who state the rule that 50-70 % of case studies should relate to storytelling and episodes, the rest should be more theoretical and shed light on the links and effects of variables. The analytical framework and the annotated qualitative data are to permeate each other. Erickson (1986) adds that in the detailed description, the author should constantly ask which perspective use. If author takes on the role of the observer, then she incorporates her own experience into the text. If she writes from the perspective of the participants, she processes opinions and interpretations, which

documents excerpts from the data material (eg interviews). For this purpose, it also processes short narratives of certain events, which are not merely descriptions, but contain the analytical component.

Methodologist and researcher Stake (1995) organizes his case study reports into sections in the following order:

1. An introductory realistic snapshot or story to engage the reader. The reader should immediately gain a vivid experience, the sense of place and time.
2. Problem identification, description of the purpose of the study and methods. The researcher should also reveal something about herself and what she thinks can help the reader understand the case.
3. Extensive narrative description for the deeper definition of the case and its context. Controversial data are also presented. Interpretations can also be given in places.
4. Development of the line of key problem areas with possible references to other similar works and authors (so far without generalization, but to understand the complexity of the case).
5. Some particularly important aspects need the deeper interpretation. This is followed by other descriptive details, documents, citations, triangulation of data (mentioning the author's efforts to confirm and refute her own observations and conclusions).
6. Generalization and claims of the author. The reader has already made up his mind on the case. Now it's the author's turn with her conclusions and attempts to generalize the individual information submitted earlier, indicating their validity.
7. Concluding remarks emphasizing the subjectivity of the report on the complex case.

In **the individual case studies**, the author works, coaches and researches 4 suitable experts, 4 experts who use Industry 4.0 systems in their work and who run their work in the Czech Republic. One of the reason for choosing the right experts was to maximize the effort to get the right sample. This is the following list of requirements that respondents meet:

- **Experts hold key job positions in organizations in the Czech Republic.**
- Respondents have **the positive attitude towards the self development of their work competencies** that they have specified in the quantitative research. They want to develop

these competencies and improve them through recommended techniques and methods during qualitative research.

- These experts work with **technologies** that are used after 2011, when the interdisciplinary term Industry 4.0 has stabilized. This happened at the conference in Hanover held in 2011.
- Experts do not work independently. Some have co-workers, superiors or subordinates. This is the reason for the insight into the research from several sides within the objective evaluation **using the 360 ° feedback method** and the subsequent use of **the competency model**.

The qualitative research is based on the case studies based on controlled semi-structured interviews with experts in the key positions in organizations in the Czech Republic. The author based the semi-structured informal questioning on a specific prepared syllabus in points and made electronic notes during the interview.

The following basic syllabus for conducting the semi-structured informal interview is based on **the GROW method** and on the internal provisions resulting from the completed courses (more in the coach introduction section) and is conducted in **the interview chronologically**¹:

1. The brief introduction to the expert, including the presentation of the systems for Industry 4.0 with which the expert works.
2. Selection of **4-6 competencies for long-term professional development** (the length of the program was set at 15 months from the date of the first meeting).
3. The importance of the specific competency for the client must exceed 50 %. If it is lower, the client usually does not have enough motivation to change this competency according to Rock (2006).
4. Based on the questions, the coach finds out the real causes of the evaluation of the determined competency thanks to the following questions:
 - What steps have you taken so far to improve your competencies?

¹ Questions and interview progress may vary slightly during the coaching. The procedure and questions can be omitted slightly or some chronological steps, if the client has taken the clear position on the individual step in advance. For this reason, the coaching interview is included as the method of semi-structured informal questioning.

- We are looking for reasons for the client's self-assessment: Why did you rate yourself, for example, on the scale 1-10 with the number 8?
5. Together with the client, the coach and the client determine the possibilities for improvement on the basis of techniques known to her/him.²
 6. The following is the procedure for permanently including the selected technique in professional life.
 7. The subsequent meeting of the coach and the client serves to check, specify or change the established technique so that it effectively meets the client's requirements.

To keep the attention of both actors, the semi-structured survey did not exceed the limit of 2 hours. For the fulfillment of all aspects of coaching meetings, the time disposition was usually around 1.5 hours of work of the coach and the client.

Special attention was paid to the beginning of the interview, when it was appropriate to break through any mental barriers and ensure consent to the record. At the beginning of each interview, an informed consent was signed, which contains information about the impossibility of predicting all events. For this reason, the modified form was prepared, where the content changes during the research.

3.6 Coaching

Proposal and implementation of human resources development in the key jobs in Industry 4.0 is the third and the fourth goal of this work.

Based on the professional experience and according to Whimore (2004), Rock (2006) and Parma (2006), the author chose the method of coaching to meet this goal and at the same time to meet the relevant research question. The results of this research are recorded in individual case studies.

Coaching is the modern tool aimed at unlocking the client's potential with the focus on maximizing client's performance. This is ensured by appropriately asked questions specified, for example, in the publication Stejskalová & Rolínek (2008).

² At this stage, it is possible to recommend the suitable technique to the client for testing if the client wants to advise on the choice of technique or method and the coach knows and has experience with the technique that is suitable for the client.

The work uses coaching methods in order to make individual development plans of experts in Czech companies in the conditions of Industry 4.0. It is based on the study of current educational opportunities with the aim of developing the competencies of these key people in Czech organizations. To this end, long-term cooperation has been agreed with experts in key positions who will participate in qualitative research.

Within the case studies belonging to qualitative research, the author is based on the following coaching approaches, which complement each other:

koučování na základě neurovědy D. Rocka,

1. coaching based on D. Rock's neuroscience (2006),
2. systemic coaching from the knowledge of P. Parma (2006),
3. Whitmore's GROW methods (2004)

3.6.1 Coaching according to D. Rock

When planning the length of cooperation with experts, the author uses Rock (2006) 's finding that learning new competencies takes time. The development of human resources in Czech organizations for specific professionals was designed for 15 months on the basis of planned gradual steps and methods within coaching sessions with individually defined steps. The basic premise is the fact that professionals are motivated by themselves to work on their competencies.

Brain-based coaching according to the founder David Rock (2006) is based on the fact that there is currently the wealth of neuroscience knowledge that can explain how coaching works at the brain level. From the physiological point of view, we proceed from the approach to coaching in the same way as Rock (2006). Specifically, these are the following opinions, which we take into account primarily in individual coaching:

- the individual needs to come up with his/her own answers,
- the task of the coachee is to **listen without evaluation**,
- **the focus on the result** is stronger than on solving problems,
- The positive feedback affects the brain, how we decide what happens when we set goals, etc.

3.6.2 Coaching according to P.Parma

Systemic coaching is the most common direction of coaching in the Czech Republic. The founder Petr Parma (2006) sees the characteristics of systemic coaching in emerging new fields and in changing thinking, which is also reflected in coaching. Systemic coaching offers the opportunity to expand our thinking by encouraging us to think about our thinking differently and thus also change it. The coach learns to reflect on why and how he/she thinks. Coaching also teaches us to think about our actions, which is the prerequisite for change. The coach must first focus on his/her thinking and actions so that she/he can then offer this competency to clients. Coaching teaches the client to think of themselves as the competent, full-fledged system. The basis of coaching is to increase the client's competency to start deciding on the things he/she is able to decide.

Kahn (2011) sees systemic orientation in working with relational interfaces between the coach, the coachee and the organization in order to ensure compliance with organizational reality. These interfaces are perceived in three dimensions: the environment, the individual, and the coaching relationship. These dimensions exist on an axis that the coach can follow thematically. The practical dialogue process is offered for invoking knowledge and testing actions systematically along this axis.

Parma (2006) sees the essence of coaching in helping to find the solution that is suitable for the development of the company and that corresponds to the possibilities and abilities of the coachee. It is a pragmatic model that tests the most effective procedures such as increasing competency and looks for an ideal procedure from a wide portfolio. The result of such an approach is higher productivity, efficiency and change in the professional and personal spheres of life of the client and the coach.

According to the author E. Haberleiter (2009), the systemic approach focuses on relationships between people and the complexity of time. The systemic view understands personal topics in their connection with others. There is no objective truth in relationships. We live in the subjective worlds of our own realities, which differ from each other. This theory corresponds to the constructivist approach. According to Charmazová (2001), the constructivist-oriented interview emphasizes the construction of concepts, situations and events by respondents, looking for assumptions and implicit meanings to capture an understanding of the meaning of a particular competency.

3.6.3 Coaching according to J. Whitmore

„Coaching helps to learn rather than teach something.“

This Whitmore's (2004) approach does not focus on the mistakes that have been made, but on the opportunities that will come. The essence of coaching is complemented by Gallwey (2010) in unlocking the person's potential, which allows him/her to maximize performance. The coach's goal is to improve the perception of reality, create and strengthen responsibility and self-confidence. To strengthen self-confidence, it is important to be able to make decisions, act successfully and be aware of responsibility for our decisions and actions. Coaching-oriented management and the corresponding culture lead to people working well 250 days a year, developing and increasing their self-confidence. Coaching allows us to permanently improve our perception of reality, higher concentration allows for higher performance. The result of coaching is self-confidence, inner motivation, self-choice, understanding, responsibility and activity.

In Table 3, we see the focus of coaching on four different areas:

- **GOAL** means focusing on both the goal of the meeting and short-term and long-term goals. In the case of coaching sessions with experts, it is the increase in the self-assessment of 4-6 selected competencies on the scale of 1-10 points with the help of development techniques, which they determine together with the coach.
- The starting point finds out the real state of affairs, the **REALITY** check. The coachee and the coach focus on the scale where the client is currently in coaching.
- This is followed by the choice of alternative pathways or procedures and activities (**OPTIONS**) for the development of the identified competencies.
- The coachee determines in what way, by what steps and with what will (**WILL**) the methods for professional development will be implemented in professional life.

Table 3 GROW method



Source: adapted, by Kmošek (2017)

Appropriate goals according to Whitmore (2004) are specific, measurable, agreed, realistic, spread over time, positively formulated, well understood, relevant, ethical, demanding, legal, environmentally friendly, proportionate and recorded.

Construction of questions

In constructing the questions for the interview, the author draws on the recommendations of Patton (1990) and Hendl (2016), who emphasize the coach's approach to asking relevant questions:

- There are no precise rules for sorting questions when organizing interviews.
- Informal conversation relies on spontaneously generating questions in the natural course of the interaction.
- It is important to build the conversation from the beginning on the positive facts about the presence in order to create a credible supportive environment.
- Questions can be individualized to achieve in-depth communication and to take advantage of the situation and to enhance the specificity and immediacy of the conversation.
- Questions are worded clearly and intelligibly and require skill, sensitivity, concentration, interpersonal understanding and discipline.
- The coach maintains attention and sensitivity to how the interviewee is affected by the interview.
- The coach self-critically monitors whether he does not put his own evaluation into the interview.

- The coach listens carefully and leaves the interviewee enough time to answer.
- The coach maintains a neutral attitude towards the content of the communicated data.
- The data collected varies from interview to interview, taking into account individual differences and changes in the situation.

Kmošek (2017) adds the competencies of a coach:

- Reflect the respondent's assumptions.
- Facilitate a two-way discussion.
- Be able to structure a conversation in the certain direction.
- Know and control when to stop providing advice and enable and set further steps.

Whitmore (2004) complements the following essential coaching characteristics.

Fig. 2 Coach characteristics



Source: Own processing according to Whitmore (2004)

3.7 Leadership

Proposal and implementation of human resources development in the key jobs in Industry 4.0 is the third and the fourth goal of this work.

Smith & Morse (2005) state the need to implement strategy in organizations within the topic of leadership and propose to develop **strategic programs**, budgets, procedures for effective evaluation of personnel performance. Miller, et al. (2012) complement the **leadership strategy** not only the **ability of the leader to mentor, lead and develop others**, but also to **lead the overall development of the business strategy within the leadership**. Li (2009) prefer the strong **emphasis on research and development, technical leadership and innovation**, where the leader integrates ideas, problems and observations into more general contexts. Kyllonen (2012) highlights the characteristics of a leader who has the talent for influencing people within ethical rules, works well in team settings, helps others with individual feedback, can manage social situations, and has the ability to lead, delegate and act responsibly. Casner-Lotto & Barrington (2006) complements the leader's competencies to **coach and develop others** to take on professional roles that require them to make decisions and consider the consequences of those decisions.

Leader should be able to **develop the strengths** of others to achieve common goals and use interpersonal competencies effectively. Emotional intelligence has been considered a hallmark of successful leaders for nearly three decades, according to Van Oosten et al. (2019). **Executive coaching** has proven to be a beneficial resource for developing leaders in organizations. Emotional and social competencies and coaching of executives can have a significant impact on the commitment and satisfaction of leaders' careers. Other results of this study indicated a direct link between the quality of the coaching relationship and the development of the potential of the leader. The results of this study have important implications for scientists and professionals interested in emotional competency and executive coaching. Organizations focused on developing leadership through coaching.

Veteška&Tureckiová (2008) see the professional competencies of a leader in objective self-evaluation and effective self-influence, decision-making, presence of mind, high emotional intelligence, communication and presentation skills in multiple languages, knowledge of personalities, style management, motivation and evaluation of others. Hroník (2007) add leadership competencies to select chosen people and build talented teams, support people's interest and build organizations capable of learning and development. Leadership is in the

organizational principles for the successful promotion of the culture of innovation. As the result, leaders are playing the key role in moving the paradigm shift to Industry 4.0. The result of the study by Guzmán et al. (2020) there are four groups of leadership competencies, which are cognitive skills, interpersonal, business and strategic competencies. Organizations may view these competencies as leadership requirements in the process of transition to Industry 4.0.

Table 4 lists the key competencies of a leader. This list is used for the chronological conduct of a coaching interview according to the individual competencies of the leader, which are specified in more detail in the table.

Table 4 The key competencies of a leader for conducting the coaching interview

Competencies for leadership	Interpretation
Coaching and mentoring	Using and transferring the experience of a leader, for example in the roles of internal lecturers, mentors, coaches, project managers, etc. (Veteška & Tureckiová, 2008); Leadership and development of professional relationships, including evaluation, cooperation with others (Kyllonen, 2012)
Talent management	Acquiring talented employees and professional skills to work with different personality types, create a development environment, support the creativity of others. (Veteška&Tureckiová, 2008)
Forming effective relationships and teams	Establishing and maintaining positive working relationships, building effective cooperation with others, developing and mentoring teamwork. (Kyllonen, 2012)
Delegation	Effective Delegation, Coworker Management, and Non-Directive Management. (Li, 2009)
Building trust and respect	Developing an atmosphere of long-term trustworthy relationships with others. (Casner-Lotto & Barrington, 2006); An environment that should be creative and based on mutual trust, openness, predictability of reactions. (Vrchota, 2012)
Set strategic goals, strategic thinking	Ability to strive intensively and tenaciously to achieve strategic goals and seek their continuous improvement. (Robles, Zárraga-Rodrígueza, 2014)
Business awareness	The competency to ensure the smooth running of the organization. Be aware of the expected directions of the industry and changes in the market with a possible impact on the company. (Li, 2009); Knowledge of the market, ability to conclude business contracts and agreements. (Robles, Zárraga-Rodrígueza, 2014)
Financial literacy	Financial Capital Management (Miller, et al., 2012); Personal financial responsibility, eg budgetary skills. (Casner-Lotto&Barrington, 2006)

Source: Own processing

3.8 360 ° feedback method

To meet the fifth research goal for the control of effective human resources development based on the improvement of selected competencies, the 360 ° feedback method serves as the final control of the effective human resources development.

The outputs of this review are part of the case studies and serve for objective anonymous feedback from stakeholders. Part of this output control is the compilation of the individual competency model (see subchapter below).

From the point of view of the experts' communication, the use of the 360 ° feedback method is supported by the considerable personal maturity of the leader, who is willing and able not only to rise above his personal level, but also to accept anonymous feedback from his colleagues / subordinates / superiors. At the same time, the professional maturity of the expert is evident from the willingness and realization to integrate the findings into their professional life. To reduce the evaluated subjectivity, according to Dewi et al. (2020) uses the 360 ° feedback method. Specifically, it is an evaluation process that comes from different stakeholders. From the design of the 360 ° feedback method, it is clear how this process of evaluating employee performance is faster, more transparent and the evaluation system has the high level of credibility. The results of the Lukman (2020) study showed that a 360degree feedback system has the positive effect on employee performance, talent management and the significant impact on employee development. These results are underlined by the research of Cheng, Wu (2020), where the implementation of the 360degree evaluation brings benefits in improving leadership efficiency. Investment in human capital, especially in leadership development programs, has become the focus of many corporations. Due to the lack of proper evaluation of human resource development, many companies are unable to measure their impact, according to the study by Lantu et al. (2020). Through a 360 ° feedback assessment, companies can identify part of human capital development that can be subsequently improved. According to research by Wen, He (2020) one of the key problems in the development of an organization is to find employees who share its basic features with the organization. The 360 ° feedback has become an excellent tool, providing managers of organizations with an effective tool for selecting and evaluating employees.

3.9 Competency model

The competency model was conceived on the basis of the 360° feedback method. The competency model constructed according to Chal et al. (2021). This competency model on individual axes does not capture competencies, but a job position compared to the version of the competency model we have chosen. The most suitable concept for the purposes of this work is captured by the competency model according to DASA (2021). It is clear from it that it captures on the one hand the self-evaluation of the expert and at the same time for the possibility of comparison the evaluation of his colleagues / subordinates / superiors. Further specification is part of individual case studies.

At the end of the thesis, according to the instructions of Hendl (2016), extended existing knowledge and new perspectives in the field of human resources development are discussed and interpreted. The results are linked to the objectives of the work. What can be transferred to a larger or different population is discussed. The context of the study is described in detail so that the reader can decide whether he can use the results in his own environment.

4 Expert case studies

Personal case studies involve the detailed research and the subsequent development of selected expertise competencies. The point structure of semi-structured informal questioning is the content of the work methodology.

4.1 Introduction of the coach

The author of the thesis, Julie Čermáková, is the person responsible for conducting coaching interviews, analysis and evaluation of information obtained from the experts. Her professional career in conducting coaching interviews began eight years ago with the six-month systemic training course by the coaching lecturer at the Coaching-experts company founded by Leoš Kubíček (2021). Knowledge about the work of the brain, the supersonic attitude and the approach to professional topics were the impetus for the beginnings of the work of the coach for career orientation and professional growth of students in the university environment. This was followed by other courses focused directly on a brain work according to the neuroscience research based on the principles of NeuroLeadership by the founder Vladimír Tuka (2021). Since 2015, Julie Čermáková has provided over 250 coaching sessions for 73 clients from companies, non-profit organizations and private individuals. Since 2017, she has been working in the field of coaching in the international corporate environment, where she was responsible for implementing the HR strategy. Key people participating in coaching interviews include key employees, talent, potential and current leaders. Since 2019, Julie Čermáková has transferred her knowledge to the field of the science and the research at the Faculty of Economics of the University of South Bohemia in České Budějovice, under whose auspices she conducts research in the field of human resources development in the conditions of Industry 4.0.

4.2 Presentation of experts

The following case studies present the detailed profile of the selected experts, their professional development based on the implementation of the coaching, mentoring and leadership method, including the 360degree feedback method and the resulting competency models.

4.2.1 Financial Manager Ms. A

The client has the master's degree with the focus on accounting. After graduating from university, she gained five years of professional experience in accounting and finance in the small company in the Czech Republic. Ms. A has been working for 17 years as the financial manager in the international company with the Czech branch with over 1,000 employees. Its team consists of 8 employees aged 26-47, with different levels of education and length of practice in the position in the organization. The client has 12 colleagues from the ranks of top management and, together with the company's directors, forms the strategic core of the Czech branch. There is no frequent employee turnover in the company. Professional development is supported by the company's management. For 5 months, 5 coaching meetings were held with Ms. A.

Ms. A's client uses the following systems for Industry 4.0 in her work (systems and programs that the client did not use in her profession before 2011):

- MS Teams – agile project system (past tasks, the procedure of how to solve the task and "see it all connected at once"³).
- Newly used SAP secure payment system, where all banking transactions can be clearly seen in one place.
- Banks have accessed bank keys to mobile phones, so instead of the explorer browser, which is not supported in many business cases, the client uses the Google Chrome browser, Mozilla Firefox.

The client's grasp of some competencies is very intertwined, for example the competency of problem solving and negotiation in her own language. Each of these competencies contained different topics to be addressed and therefore were addressed separately.

The first selected competency that the client has set for her goal is to improve the negotiation competency in her own language. Ms. A marked this competency on the 10point scale with the number 7. In order to reach the number 9, Ms. A set herself the goal of improving business negotiations, specifically contract negotiations. In this area, the client worked on her confident professional expression and had the goal of reaching, in 80% of cases, the two-way agreement regarding the negotiation of discounts with business partners.

³ The direct communication of the client is mirrored in quotation marks. The coach's narration is marked without quotation marks.

The client Ms. A evaluates **the problem-solving competency** on the ten-point scale number 6. After 15 months "she would like to see herself at the number eight", which not only succeeded, but thanks to the move to the online environment she manages this competency better and the client achieved 9 (on the scale of 1-10). In tense work situations, the client initially claimed that it was the question of her self-confidence or internal security. At that moment, she needs to organize her emotions so that she doesn't let herself be "decided, stay in her midst, depersonalize herself, inhale, and support herself with the words calm, I can do it." During the coaching interviews, the client chose the technique to deal with this situation, which she knew could be effective, but had not used it very often until then. The coaching interview allowed her to use the technique completely automatically during tense working moments. Mrs. A usually holds a pencil in her hand, into which she inserts the "aggression and negative energy" associated with these work situations. During the 15-month duration of the project with the transition to the online environment, the client realized that the cause of problem solving was in communication "face to face". The move to the online environment, which will largely remain in her profession in the future, gives her time to think through the verbal reaction. According to her, it is necessary to listen more when solving problems online. In the online environment, the client is more focused on the verbal message of the other party and the non-verbal component such as body language is not essential. According to her description, it is harder to support inactive people in the team in the online platform. On the other hand, the client chose the different problem-solving system based on coaching. "For example, a person on the team presents results with which I do not agree. I do not interfere with her/him, after the meeting I go through all the information about the case and then we set up an individual consultation for the explanation. " In conclusion, it can be added that the specified techniques allow the client the more effective orientation and the approach to solving problems of a wide range of professional issues.

In the introductory interview, the client is evaluated in mastering **digital competency** on the scale of 1-10 on the number 7. Her goal was to reach the number 10. After the initial skepticism "it will probably not be for me, I perceive it as a desire to try something new in my profession, but it is not my priority", the client perceives that she is glad that during the duration of the research her internal pressure to manage this competency disappeared at all costs. After 15 months of the research with the initial attitude of "I don't have to know everything", the client moved to number 8 in mastering digital competency thanks to the acquired basics of working with WordPress software and the company-wide business support program. The client is

satisfied with the achieved result and feels motivated to continue gaining knowledge from the digital environment in the future.

Leadership

In the introduction it is necessary to outline the strategic approach of the company for top management, which includes Ms. A. This approach is included in the program called "corporate leadership".

The client was evaluated at the introductory coaching meeting in mastering the leadership competency on the scale of 1-10 by 8. The goal was to reach level 9. Like any leader, she wants to be the best within her professional possibilities and thanks to trends in leadership she needs to constantly improve. After fifteen months, Ms. A's goal was exceeded and after the final coaching interview, she reached the level 10 in the leadership competency self-assessment on the ten-point scale. The fulfillment of this goal is organized into individual parts and described in more detail in the text below.

According to her, Mrs. A approaches the topic of **mentoring** liberally. In the case of operational work tasks, the client leaves the responsibility in the hands of employees with the words "within the agreed time, I give employees space to deal with the tasks themselves and set the procedure for solving individual situations. If necessary, I am available to them either in daily team online meetings or we deal with the work situations individually at the agreed time." This approach has worked best for the client over the period of fifteen months of work.

"The team solves more difficult tasks in the form of brainstorming. I leave the team reasonable time to solve tasks individually or in groups without my presence. Although I have the six-month coaching course, I can't apply the coaching questions due to time constraints. Based on my professional experience, she thinks about it relatively quickly and I know how to complete the established situation effectively and successfully. Because people in the team would not come up with difficult work tasks on their own, I show them how to solve work situations step by step. This is one of the ways to move the whole team forward professionally.

I develop talent management for my clients after coaching sessions by **delegating** responsible and specific tasks to talents, for which they have to think more. This gives them the opportunity to learn in the specific work situations. As the part of working with talents, I prepare **successors** and I dare say that it is better than me, at least in communication with people. There

is the **respect** between me and the possible successor based on the mutual working **trust**, supported by four years of successful cooperation.

After the possibilities arising from coaching, I support **team motivation** as the leader in the current online environment, at least by using the thumbs up and applause symbols in written form for team communication in MS teams software, and I am happy for the team's small progress. I also try to praise more than criticize. As part of my personal development, I found that the written form suited me better than the colloquial form. In the online environment, I realize that I need to **listen more**. I have to focus especially on some people and perceive in my voice how they say they actually think. **Empathy** is very important! When I see that the team or an individual is emotionally down, I try to charge them with motivational speeches and vice versa, when they are happy, I save with words.

After the **coaching** as the leader, I take care to make clear the direction of priorities. In the online environment, from my point of view, communication has the higher level. From time management, it seems easier to watch online in timekeeping online. Therefore, so that I do not speak alone as the leader, everyone was given the task of leading the given topic for one day a week and the associated team discussion.

I build **the trust and the respect** in the team through open communication, even though I realize that I am more directive based on the experience. I ask a lot and I realize that I am further than I was ten years ago.

I implement my **business awareness** in the working role. Strategic goals are defined by the holding company so that it is generally more efficient. **Strategic thinking** is underlined by the vision that, as the Czech branch, we know where we can move, but we are waiting for the individual steps to be implemented and anchored in the parent company based abroad. Strategic steps are encouraged by the company's human resources department."

The 360 ° feedback method and the competency model

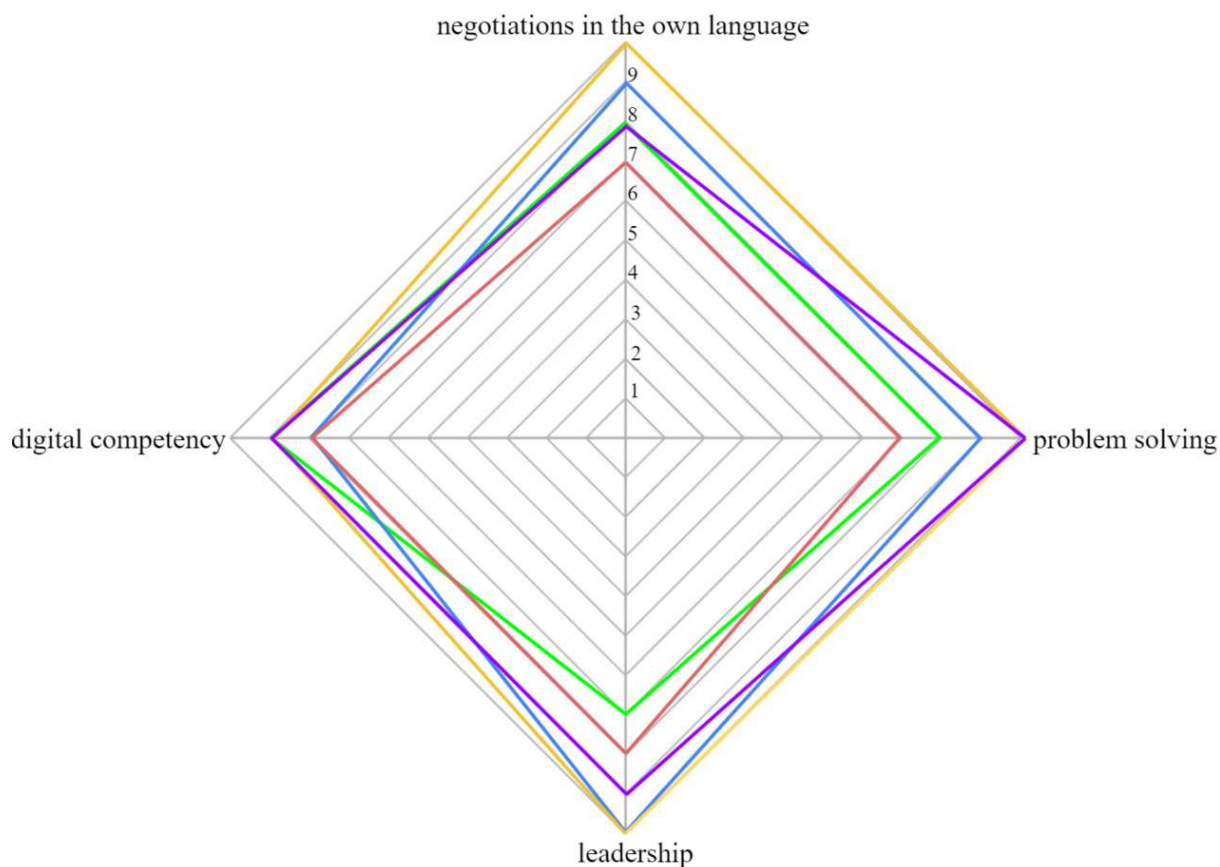
The table 6 shows the graphical interpretation of the outputs of anonymous employee evaluation based on the 360° feedback methodology. Table 6 shows the self-evaluation of the coached person, Mrs. A, in comparison with her subordinates and two colleagues from the ranks of TOP management. At the end of Table 6, you can see the average value determined from all previous evaluations.

Table 6 The evaluation of Mrs. A by the 360° feedback method

Competencies	Evaluation					average value
	self-assessment	colleague A	colleague B	subordinate A	subordinate B	
negotiations in their own language	9.0	8.0	7.0	9.0	8.0	8.2
problem solving	9.0	8.0	7.0	10.0	10.0	8.8
digital competency	8.0	9.0	8.0	9.0	9.0	8.6
leadership	10.0	7.0	8.0	10.0	9.0	8.8

Source: Own processing





Fig. 3 The competency model of Mrs. A



Source: Own processing

Legend 1 The explanation of individual parts of the graph

Self-assessment

Evaluation by the colleague A 
Evaluation by the colleague B 
Evaluation by subordinates A 
Evaluation by subordinates B 

At the final coaching meeting, only anonymous numbers are presented to Ms. A, including anonymous evaluation of persons A, B, C, D. The reason is to clean up the data from possible personal misunderstandings. The goal is the professional development based on the feedback from colleagues. The author directly specifies the results of the 360 ° feedback method with the division into colleagues and subordinates in the work due to the accurate interpretation of the data for research purposes.

In Table 6 and in the following Fig. 3 within the example of **the competency model**, there is the clear self-evaluation of Mrs. A, which is above average. Finally, Ms. A positively assessed the development of her competencies for Industry 4.0, which is also reflected in the positive feedback from subordinates. The similar evaluation as Mrs. A is reflected in colleague A. Only in the case of leadership competency is its evaluation below average. It is possible that both colleagues evaluate the leadership competency below average due to the fact that they did not come into direct contact with this competency in Ms. A, unlike the subordinate employees of the organization. The positive change in Ms. A's chosen competencies after the research period of 15 months is primarily reflected by her subordinates. Ms. A greatly appreciates the feedback received from colleagues and subordinates and continues to work with her as the part of her professional development.

4.2.2 Audit Manager Ms. B

Ms. B's client gained 21 years of experience in the corporate environment in publishing periodicals in the Czech Republic. Thanks to her previous work experience, Ms. B has been working in the managerial audit position for two years and is responsible for the complete operation of the small audit firm providing services for publishers of periodicals in the Czech Republic. This small company is subsidized by the number of corporations operating in this field. Ms. B's team consists of 2 employees aged 35-45, with different levels of education and length of practice in the current job position exceeding 10 years. The client has one superior from the periodical publishing house. For strategic reasons, the post of superior changes every

two years. Professional development is in the hands of each individual person. Six coaching meetings were held with Ms. B for 15 months.

Ms. B's client uses the following systems for Industry 4.0 in her work (systems and programs that the client did not use in her profession before 2011):

- Helios green - accounting system
- Micro post - the system to support the creation of orders
- MS access supporting production orders
- CMS system - content management system for company data processing. With the help of this system, information is published, specifically costs on the company's external server. The system is connected to the company's website.
- cloud storage - use for shared online sharing

In mastering **the negotiation competency in her own language**, Ms. B is assessed on the scale of 1-10 by the number 7. Ms. B set the goal for 15 months at 9. Ms. B considers it the real improvement of this competency by 2 levels in her self-evaluation.

"I need good negotiation skills, but I can't react verbally as fast as I would like to be. I'm not the tough negotiator, I want to be able to negotiate better terms, but not at the expense of the other, I want to be in the WIN - WIN situation. I am well acquainted with the field. I primarily aim to increase my knowledge of methodologies from professional sources." Ms. B is also motivated by the fact that in the case of negotiations with her two subordinates, who hold their job position longer than her, Ms. B perceives the lack of knowledge in the field. "After 15 months, I evaluate myself in mastering the competency of negotiation in my language number 8. I feel not that I would argue better thanks to the acquisition of the necessary knowledge, but I can correctly explain the real situation, express myself aptly and quickly. Thanks to the wiped and direct communication that I set up with me thanks to the coaching sessions, negotiation is easier and clearer for me. If I deal with subordinates and superiors individually face to face, communication is now much easier for me. "

At the beginning of the research, Ms. B was rated on the scale of 1-10 by number 2 **in the competency foreign language negotiations**. After 15 months, Ms. B set her goal of mastering this competency at level 5. At the moment when I need to communicate fluently, I can't use the acquired knowledge. At congresses, I would need to be able to simply converse on professional topics. What helps me develop this competency is regular 1,5 hours weekly lessons with the native speaker." During the coaching interviews, Ms. B set the priority for these lessons. "I will have the new schedule, from the morning I will have the personal English lesson with the

lecturer, when my brain is still fresh." After 2 months, Ms. B manages to introduce personal lessons with the lecturer, from which she not only feels good, but sees the first results. "As part of my profession, I need to learn better orientation in information in English, especially orientation in English methodologies. My goal is also to be able to easily write English e-mails. I have to orient everything within working hours, I am not able to keep attention in the home environment. After 15 months, I feel that I have done the piece of work. In my self-assessment of mastering this competency, I am now at number 4. Thanks to professional coaching guidance, I have found that I tend to learn long-term and slowly. I still have reserves in oral negotiations in the foreign language due to the transfer to the online environment and the absence of direct meetings at conferences. I dare say that I have improved in writing in this competency. After 15 months of conscious work in improving this competency, I am able to fill out forms and write simple e-mails. As the part of my profession, I can now use information and phrases in English better. With the native speaker, the lessons moved to the online environment within 15 months. I see improvements in my communication and better learning of foreign words. During the coaching sessions, I found out that I needed the support of the teacher to teach English grammar, ideally to go somewhere for the course or currently take advantage of online courses." which are reflected in her profession.

The competency of establishing employment relationships is assessed by Mrs. B on the scale of 1-10 at the level of number 5. Her goal is to achieve an improvement of 2 levels, namely the number 7. On the contrary, I would need to strengthen professional ties within my field. We know clients and external colleagues, but systematic work is needed **to build the trust.**" For this reason, Ms. A chose as an ideal option for recording basic information related to specific clients. In the final self-assessment, the client is at the level of number 6 thanks to the chosen technique. "I made the table in Excel and I write down the key information shortly after the audit. I always come back to this information before the next meeting." Thanks to the introduction of this technique at the beginning of Ms. A's work with the coach 15 months ago, the client presents greater clarity, system and professional approach obtained from the notes taken.

In the area of **the result-oriented competency**, Ms B is limited by circumstances. At the beginning of the coaching session, the self-assessment of this competency is at level 6. Mrs. B has set and also reached the level 7." It is important for me to have the realistic goal. When the goal is hard to reach, I start to get lost. Sometimes that goal even makes sense to me. My current goal is to keep the audit company economically as long as possible. It is important to act

transparently in public. It is important to maintain the positive mood. It motivates me to do my job well, in the field of auditing the printed costs of magazines and dailies. The goal is the maximum for that.”

The competency to motivate and support others is closely linked to the competency leadership. This competency is chosen separately due to the fact that it is mainly support in the form of financial evaluation. Ms. A noted the improvement in professional development in this area of the competency from the level 7 to the level higher to the number 8.” I will achieve this spontaneously, it will be natural, I take care of my employees. Subordinates motivated are financially rewarded. I want to behave professionally enough to motivate them with my approach. When there's a work problem, I'm always here to help them grind out. I negotiate language lessons, the 13th salary and electronic meal vouchers for employees as the part of the rewards. The employees know that I can't go beyond the border. Everything I negotiated came into force during the research. There is no money in the budget, I can easily explain it to them. I motivate them by giving them freedom within the home officers.”

Leadership

Ms. B's client applies **the leadership competency** in close cooperation with her two subordinates. The introductory coaching meeting resulted in the self-assessment of this competency on the scale of 1-10 by the number 6. Mrs. B set the goal after fifteen months at the number 8. The author below presents the coaching approach that helped the client to reach this level.

The priority theme at the beginning of the coaching interviews was to improve dealings with clients. Her subordinate verbally intervened in the conversation, which was annoying to Mrs. B. During the coaching session, Ms. B came up with the most suitable solution, the so-called "paper form of expression of thoughts of subordinates". After clarifying the possibilities of how to deal with these situations in coaching interviews, Ms. B handed over the responsibility to her subordinates and delegated to her the recording of all relevant information arising from negotiations with clients. The aim was to clearly define the responsibilities of the subordinate so as not to interfere in the negotiations leading to its negotiating role. The registration of professional complaints by subordinates was the part of this registration. The minutes are then used to assess negotiations with clients. Ms B draws further steps from these measures. "Thanks to this change, I perceive the better position for subsequent group meetings, where we only deal

with details and discrepancies. At the same time, I found out how important the space is between individual meetings with subordinates and subsequent group meetings. At this time, I also let my colleague interpret the space of my ideas in the structured way during our personal session. In 15 months of working with the coach, I gained more **trust and respect** from my subordinates through these steps."

Ms. B sees **the motivation** of her subordinates in her approach to communicating with them as much as possible about work topics. "I appreciate the importance of their work, I involve them in work processes within the production of documents. I retain decision-making powers. The employees know their job and I support them in their job positions to feel free and comfortable. Thanks to the 10 years of experience of colleagues, work responsibility is purely under their full **responsibility**. After 15 months of research, there is better transparency in communication with subordinates, which was not in the beginning. Greater **trust** has developed between us thanks to frequent communication and above-standard online communication, which was introduced after coaching interviews within the covid situation. As far as possible, I also included informal meetings outside the company as the part of joint celebrations, photo shoots. I am also interested in their hobbies and I support them in that. "

Thanks to the coaching sessions after fifteen months, Ms. A perceives the professional development in the field of **mentoring** as follows. "It simply came to our notice then. I know when someone doesn't understand me, I'm able to give it exactly. I ask hidden control questions, make sure he understands. "

The coaching interviews provided support for the introduction of **innovations**, which have not yet been taken into account in the company. "To implement these changes, we have the supplier for the website and we solve this change within the annual budget. We also intervened in the methodology for shortening audits. We act on the basis of brainstorming, where we discuss together whether the change makes sense. After a while, we will make the conclusion and in the last step for the implementation of the change, I discuss and have this variant approved by the commission with the superior who protects the company. "

Ms. B perceives coaching as very supportive when she formulated the set goals into the written form. "It's important for me to write down my goals. One time I will look at them and clarify what is important to me. After reading the set goals after fifteen months of working with the coach, I evaluate these goals, I realize that it is easier to achieve these goals."

The 360 ° feedback method and the competency model

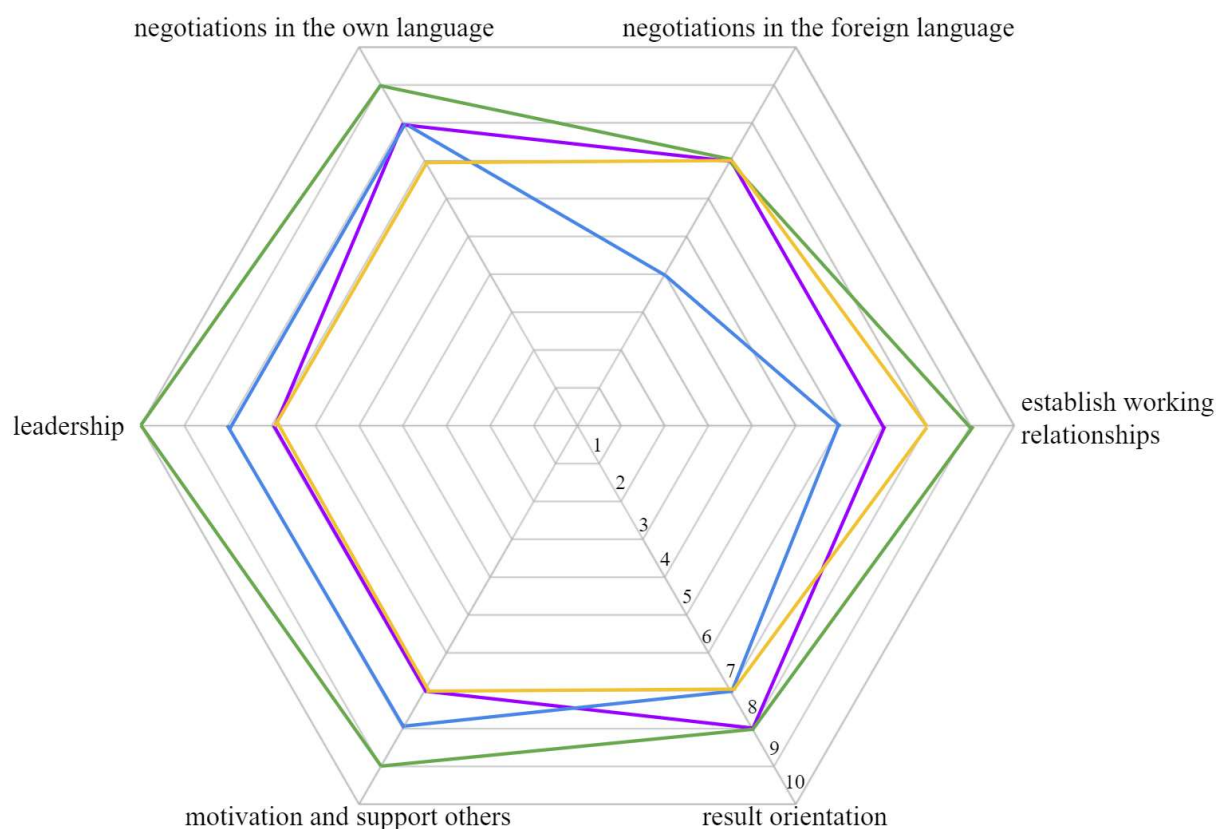
The table 7 shows the graphical interpretation of the outputs of the anonymous evaluation of colleagues based on the 360° feedback method. The table 7 shows the self-evaluation of the coached person, Mrs. B, in comparison with her two subordinates and a superior. At the end of the Table 7, the average value determined from all previous evaluations is seen.

Table 7 Evaluation of Mrs. B by the 360° feedback method

Competencies	Evaluation				
	self-assessment	superior	subordinate A	subordinate B	average value
negotiations in the own language	8	9	7	8	8
negotiations in the foreign language	4	8	7	7	6,5
establishing working relationships	6	9	8	7	7,5
result orientation	7	8	7	8	7,5
motivation and support of others	8	9	7	7	7,8
leadership	8	10	7	7	8

Source: Own processing

Fig. 4 The competency model of Mrs. B



Source: Own processing

Legend 2 The explanation of individual parts of the graph

- Self-assessment
- Evaluation by the superior
- Evaluation by subordinates A
- Evaluation by subordinates B

In the Table 7 and in the following the Fig. 4 in the example of the competency model, Ms. B is evaluated herself on average in comparison with colleagues. Overall, Ms. A evaluates the great benefit of the coaching interviews and after fifteen months perceives the professional shift above average. The best evaluation is recorded by the superior who has been cooperating with Ms. B for many years and was the great support to her during the research. Deviations are noticeable especially in the case of self-evaluation within the framework of improving language skills in negotiations. It is possible that this evaluation reflects the move to the online environment, where due to the absence of conferences, the possibilities of using this competency are minimal. With regard to the evaluation of subordinates, Ms B's goal is to

continue her professional development. In the future, the support of the coach in the professional development of Ms. B is already agreed and thanks to this Ms. B is motivated to continue working in her professional development.

4.2.3 Process Manager Mr. C

Mr. C has gained 9 years of experience as the process manager, including the last three years in the international environment. Mr. C is very busy at work and sees the main points of improvement in his submission in the effective setting of changes, which are based on meetings with his colleagues and with colleagues from foreign headquarters. The main part of his cooperation with colleagues is the conduct of meetings for the implementation of key proposals on the topics of digitization, robotization of business processes. The client has one superior and the team of colleagues from an international environment. Five coaching meetings were held with Mr. C for 15 months.

Mr. C's client uses the following systems for Industry 4.0 in his work (systems and programs that the client did not use in his profession before 2011):

- ATTIS software - use of process maps and models
- Esri technology - for managing successful projects in the Czech Republic
- SAP system - administration of new systems for process management
- Xmind - program for creating mind maps
- Google Docs and cloud - use for online storage and sharing with colleagues

In mastering the competency **setting priorities**, Mr. C is evaluated on the scale of 1-10 by the number 8. His goal in 15 months is the maximum achieved level, namely the number 10. Mr. C considers this goal to be realistic.

"I'm not clear about setting priorities. I've never used lists, they never suited me. It happens to me that I work on five tasks at once at one time." This technique seemed simple to him and was often used in the original profession of project manager. He has now returned to this technique in the form of the xmind program. "It's easier for me to quickly draw up projects on the paper that I have to leave at that moment. This system seems simple to me and I'm used to it over the years. Where to catch up quickly and continue. The mind map technique has saved me the time I invest elsewhere."

In the competency of **negotiating in the foreign language**, Mr. C was evaluated at the introductory meeting on the scale of 1-10 by number 6. After 15 months, Mr. C set the goal at level 9, which corresponds to "being able to lead meetings effectively with short preparation".

During the first two coaching meetings, Mr. C was able to accurately identify opportunities to improve this competency and take the first steps to fulfill it:

1. Add the business course with the focus on presentation.
2. To plan and implement the private conversation lesson and implement one of the three dates set by Mr. C.
3. To organize the intensive 14-day course abroad, specifically in August as the part of the company holiday.
4. Before the meeting have preparation in the key words in English "it also improves my vocabulary".
5. Immediately after the meeting, sit down and write down key points in English.

After 15 months of working on individual points and supporting the coach in coaching interviews, Mr. C is evaluated in mastering the competency of negotiating in a foreign language on the scale of 1-10 number 9. He managed to comply with the above points of 80% and under non-standard covid conditions on home office added to listen to international business events that were online and was able to participate by moving to the online environment. On the contrary, the number of personal meetings decreased, so the preparation was not so effective.

The competency **effective communication** is assessed by Mr. C on the scale 1-10 with the number 6. He managed to achieve the goal of reaching the level of the number 8. At the introductory coaching meeting, Mr. C set the following goals in the guided meetings:

- say essential information and avoid ballast,
- identify key points for action,
- learn to ask questions correctly and involve colleagues in the discussion,
- simply capture and highlight the individual benefits of the participants,
- send basic information by the e-mail 2 days before the meeting.

Mastering this competency was especially important for Mr. C for conducting business meetings, when the coach got on the topic of verification questions during coaching interviews. Thanks to the questions, Mr. C made sure that during the meetings "everyone is on the same page". More information on the issues is part of the leadership competency.

Leadership

Over the 15-month period, Mr. C was able to rapidly improve the leadership competency from the level 6 to the level 9 on the ten-point scale through the use of coaching tools and techniques, which were subsequently reflected in the 360-degree feedback method in peer reviews (Table 8).

Mr. C gained **the respect and the trust** of his colleagues thanks to his learned coaching techniques. He also benefited from conducting trainings and meetings according to the settings he managed to use.

In the case of coaching, Mr. C needed to learn the appropriate questions for his work. During the coaching interview, Mr. C managed to implement these set questions in such the way that he would automate him in the future during business meetings and training. In case Mr. C needed to hear the opinion of colleagues, he most often used the form of questioning "Is it useful for you, what am I saying?" He also often needs to encourage colleagues to talk. In this case, questions like "Speaking here, what do you think? How do you think about that? What do you already know about that?" On the contrary, when his colleagues talked, questions like "How would you put it simply? What is important about what you say?" At the end of the meeting, he individually asked everyone about the key information he was taking away from the meeting. During the research, Mr. C also began to make more use of keyword summaries and highlights.

Mr. C used the form of **mentoring** to demonstrate news or communicate essential information from the field. The participants of the mentoring are his colleagues from abroad and from the Czech Republic. During the training, when he began to get lost, working with the flipchart helped Mr. C. He anchored himself in time and simply managed to summarize the key points so far and also automated the form of "smoking as fulfilled." Each participant knew exactly where he was moving during the training, what had been discussed so far and what was left."

Mr. C encouraged his colleagues' motivation by aptly choosing current information and innovations from the field. During the non-standard covid situation, Mr. C gained more time to focus in his field on this area, which there was no time for during personal meetings.

The 360 ° feedback method and the competency model

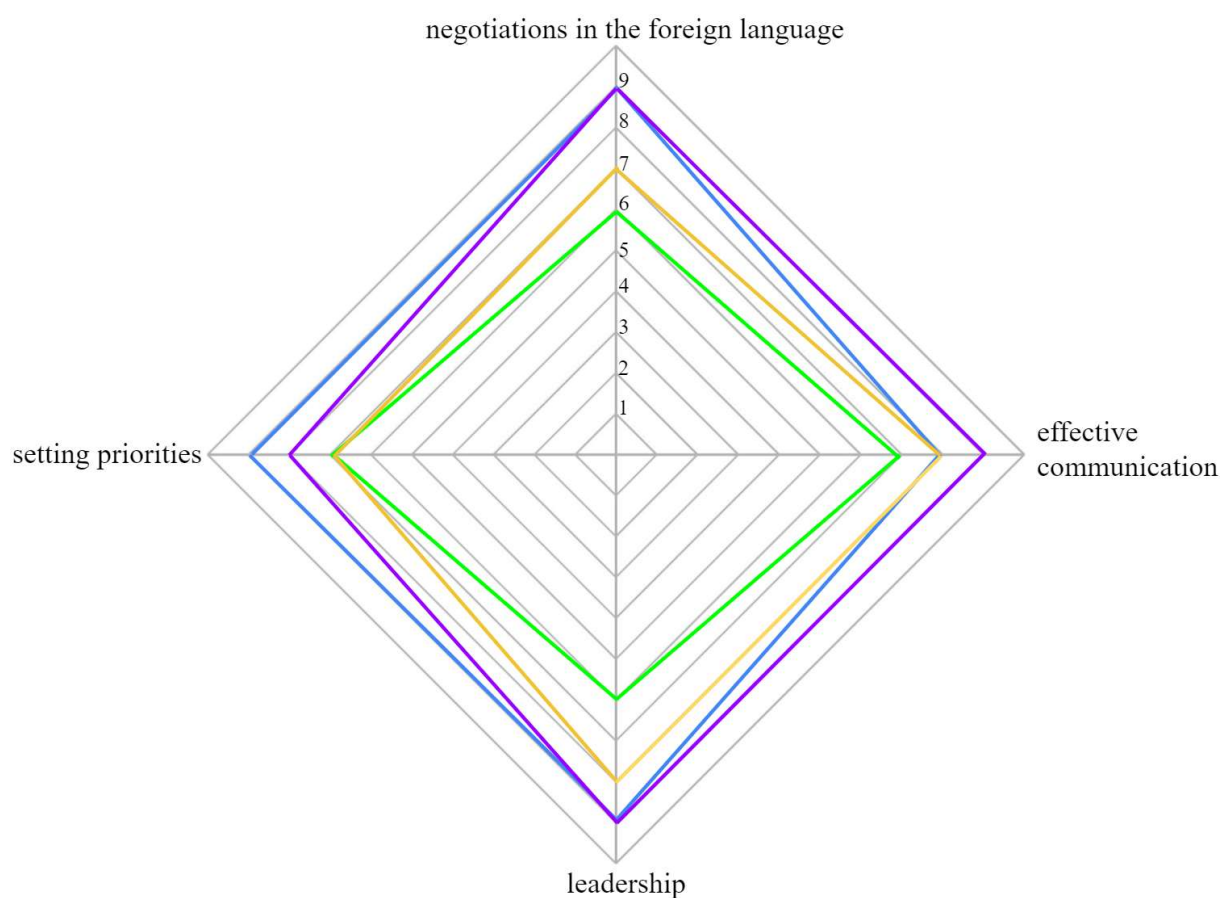
The table 8 shows the graphical interpretation of the outputs of the anonymous evaluation of colleagues based on the 360 ° feedback method. Table 8 shows the self-evaluation of the coached person, Mr. C, colleagues from the Czech Republic, colleagues from the foreign headquarters and superiors. At the end of the table you can see the average value determined from all previous evaluations.

Table 8 Evaluation of Mr. C by the 360 ° feedback method

Competencies	Evaluation				
	self-assessment	superior	colleague CR	colleague A	average value
setting priorities	9,0	7,0	7,0	8,0	7,8
negotiation in the foreign language	9,0	6,0	7,0	9,0	7,8
effective communication	8,0	7,0	8,0	9,0	8,0
leadership	9,0	6,0	8,0	9,0	8,0

Source: Own processing

Fig. 5 The competency model Mr. C



Source: Own processing

Legend 3 Explanation of individual parts of the graph

- Self-assessment
- Evaluation by the superior
- Evaluation by the colleague ČR
- Evaluation by the colleague A (abroad)

In the Table 8 and in the following Figure 5, as part of the demonstration of the competency model, Mr. C is evaluated above the average in terms of mastering the set competencies in comparison with his colleagues. Thanks to the professional shift and the inclusion of coaching questions in mentoring, Mr. C received the very good evaluation from colleagues. In particular, the colleague from abroad assessed his shift in the area of acquired competencies the best of all participants. On the contrary, the leader of Mr. C evaluates the shift in the determined competencies the worst. This assessment may be matched by the fact that Mr. C's leader does not attend meetings where Mr. C performs coaching techniques. Mr. C perceives his

professional shift positively. He was so interested in coaching techniques that he enrolled in the six-month coaching course.

4.2.4 Personnel Manager Ms. D

Ms. D gained 16 years of experience as the human resources manager at the Japanese corporate company focusing on the production of automotive bearings. In this single subsidiary with representation in the Czech Republic, Ms. D works in top management, where there are the total of four people: human resources, quality manager, financial manager and operations manager. The client has two subordinates and as the senior director from the international environment. Employee turnover is usually kept at 10 %. Due to significant changes in the pace of work and the constant readjustment of the selected coaching options, 7 coaching meetings were held with Ms. D for 15 months.

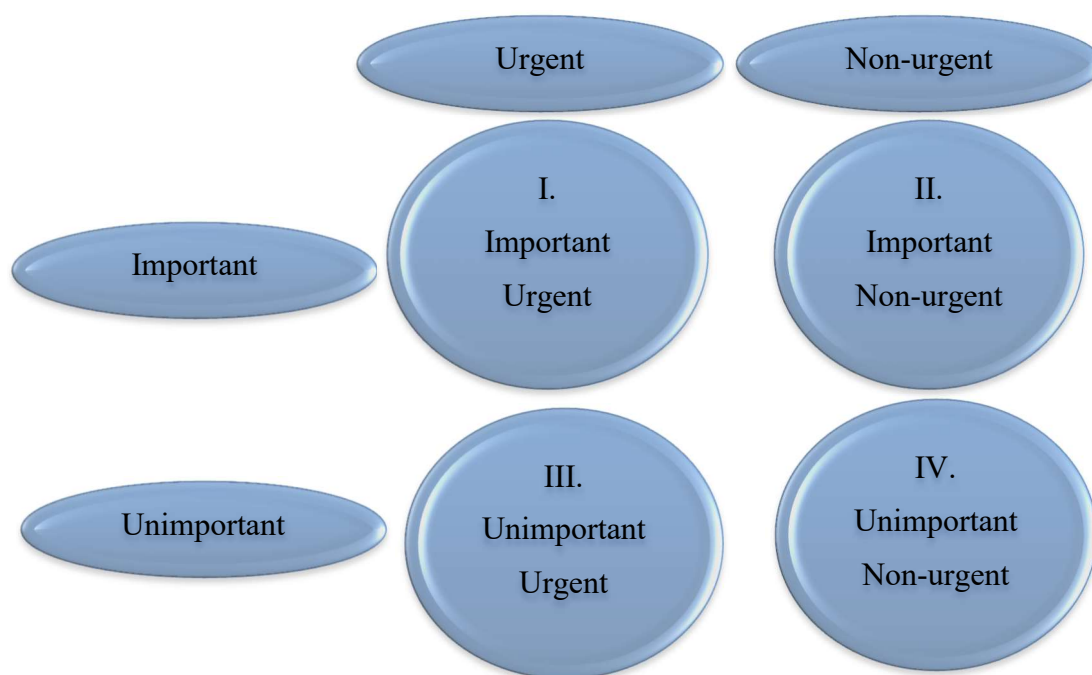
Ms. D's client uses the following systems for Industry 4.0 in her work (systems and programs that the client did not use in her profession before 2011):

- Target personnel system from the company Mpro: software for personnel management of the company
- System for Industry for training and education <https://www.tuvsud.com/cs-cz>
- TWY training system <https://www.dmc-cz.com/twi-training-within-industry>
- Shared folders within an innovated international internal system

In the competency of **flexibility**, Ms. D was evaluated at the introductory meeting on the scale of 1-10 by the number 5. The goal of Ms. D was to reach the level of number 9 after fifteen months. "Every day from the beginning, the conditions in the number of tasks processed and the high demand for performance changed. When something changed, I had to go back to the beginning and reconsider everything. Five projects were developed. When I changed everything after fifteen months and set it according to priorities, the desired fruit came. "

"Massive relocations have taken place as part of the human resources and the European Technical Center relocation project. The Japanese moved to the Czech Republic, as the part of human resources, I dealt with the provision of housing and visas for newcomers. We also sent Czech students to Japan for one year. I had to get students visas, housing and complete security in Japan. "In order for the client to handle everything, we **set precise priorities** during the coaching interview. After the research period, the client got from the level 5 to level 9. "I determined the individual work tasks every morning according to the matrix for what is burning (I. Important urgent), then I solved II. which is important but not urgent. I have delegated unimportant urgent work tasks. I moved unimportant non-urgent work matters indefinitely, or I also delegated them to subordinates. Within a year, the building was also built for the arriving Japanese, and the goals were met from the tent priorities.

Fig. 6 The golden rule of setting your priorities



Source: Convey (2014)

With regard to the competency of **negotiating in the foreign language**, Ms D moved from the level 5 to the number 8 during the year, thanks to daily negotiations in English with both the Japanese parent company and the British subsidiary. "The snag was that the Japanese didn't speak English. In the first phase, I had to choose a translator from Japanese to English. Thanks to the settings within the coaching sessions, I was able to adapt the English language so that I would be able to communicate with the Japanese bosses. I improved my language skills, improved my professional vocabulary, thanks to which we understood each other better. I also slowly managed to pinpoint my changes when I had to choose the simple dictionary with the Japanese and then quickly change to communicating with the British branch. I also used professional consultations with the native speaker."

Reconciling **private and professional life** is very closely related to these competencies for Ms D. On the 10point scale, she moved from the level 6 to the level 9. The client bounced back from the initial chaos and set clear limits within her priorities. "I worked out my own and it was important for me to leave at exactly the hour I set."

Leadership

In mastering the **leadership** competency, Ms. D is rated on the scale of 1-10 by the number 8. In 15 months, her goal was the level of the number 10. Ms. D met this goal. "I led the **mentoring in the spirit of delegation**. I set up meetings every week. As the part of mentoring, I trained subordinates for the given innovations or provided appropriate training. Subsequently, for example, I conducted interviews with them and finally I passed on the responsibility for conducting interviews to subordinates.

I used **external coaching** to select key professionals. I also used external coaching in the area of **talent management to motivate** for a professional job position. "

The formation of effective relationships and teams was achieved in the form of family days, open days, programs for children, Christmas parties, teambuilding. **Motivation** for employees is established in the spirit of "Let's do it when people are nice, good core, it goes by itself, we are motivating each other, we are open to the world." This approach has also proven to build trust and respect in the company.

The setting of strategic goals and strategic thinking has manifested itself most in the field of education. Within the framework of EU funds, the company has invested and implemented the management system according to the competencies and evaluation of employees since Hroník (2006). "I was able to come up with the **innovation** that I saw elsewhere that works

effectively. I also had the budget to organize everything from A-Z for education. I had to get managers first to see the benefits and return on investment soon. For this occasion, I chose the TWY training system <https://www.dmc-cz.com/twi-training-within-industry>, which seemed very complicated. I have seen this system in competing companies where this training system is in place. When a new employee comes to the company, they train very quickly thanks to this system. I got my colleagues on my side thanks to the tour of this system in other Czech companies. The introduction of this system has improved relationships, accelerated training and thus saved money. We have ISO in place, which has also forced us to constantly improve the system. The certification expert TÜV SÜD Czech, more at <https://www.tuvsud.com/cs-cz>, described us as the exceptional company.

We keep **business awareness** in the spirit we all sell in all jobs. Especially in automotive, it is absolutely essential to focus primarily on the customer.

I included **financial literacy** in setting salaries and remuneration in all job positions, which is related to the overall planning of the company. "

The 360 ° feedback method and the competency model

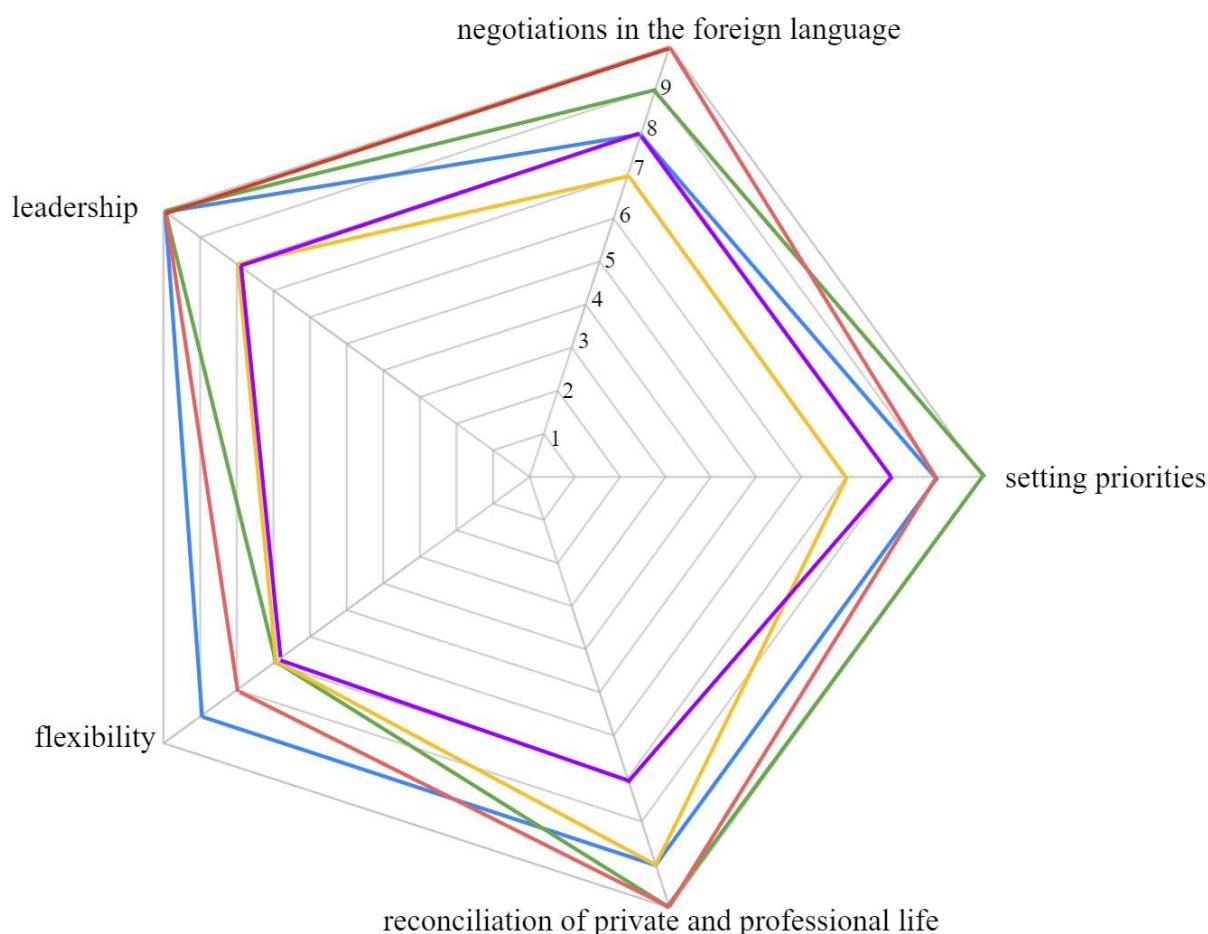
Table 9 shows the graphical interpretation of the outputs of the anonymous evaluation of colleagues based on the 360 ° feedback method. Table 9 shows the self-evaluation of the coached person by Mrs. D subordinates, colleagues and superiors. At the end of the table it can be seen the average value determined from all previous evaluations.

Table 9 Evaluation of Mrs. D by the 360 ° feedback method

Competencies	Evaluation					
	self-assessment	subordinate A	subordinate B	colleague	superior	average value
flexibility	9.0	7,00	8,00	7,00	7,00	7,25
negotiations in the foreign language	8.0	9,00	10,00	7,00	8,00	8,50
reconciling private and professional life	9.0	10,00	10,00	9,00	8,00	9,25
setting priorities	9.0	10,00	9,00	7,00	8,00	8,50
leadership	10,00	10,00	10,00	8,00	8,00	9,20






Source: Own processing

Fig. 7 The competency model of Mrs. D



Source: Own processing

Legend 4 Explanation of individual parts of the graph

Self-assessment	
Evaluation by subordinates A	
Evaluation by subordinates B	
Evaluation by the colleague	
Evaluation by the superior	

In the Table 9 and in the following Figure 7 in the example of the competency model, Ms. D is evaluated in terms of mastering the set competencies in comparison with colleagues on the average level. Thanks to the inclusion of coaching questions in her profession, Ms. D received an above-average rating from subordinates. Only in the case of competency did the flexibility subordinates assess the competency below. Ms D commented at the final coaching meeting that in some cases her subordinates needed her more support. Mrs D will now work on that. The

colleague assessed the shift in the area of acquired competencies of Mrs. D of all participants worst. The Japanese director assessed Ms. D's career development rather positively. The fact that it is established in Japanese culture: "the first is always a man, then a woman, may correspond to this evaluation. It took me two years to catch up. We all get along well, we're all on the same boat. We have excellent relations now. "

Thanks to coaching techniques, Ms. D feels more stable in her "chaotic work pace and plans to work with the coach in the future."

5 General overview of the case studies

The levels of scaling are clear from the case studies. At the beginning of the research, clients most often rated themselves above the average on the 1-10 scale, that means above the level of 5. In fifteen months of professional development with the support of coaching techniques, clients considered it the real improvement of their competencies on the 1-10 scale by two levels. In about half of the cases, the level of competencies mentioned was improved. The most common improvement was one level on the ten-point scale. In some cases, the set level of competencies was even exceeded. An example is exceeding one level and fulfilling the highest score of the number 10 in mastering the leadership competency and exceeding the set level in the problem-solving competency of Ms. A.

Regarding to the interpretation of the individual case studies. The "masculine" presentation in the case of Mr. C seems more apt, sometimes even austere, less also involved verbal expressions such as "I feel, I perceive". Overall, Mr. C's speech was structured with clear goals.

Table 10 General overview of case studies

Experts	Evaluation during the research		
	beginning	End	statements
Manager Mrs A	7,0	9,0	"I develop talent management for my clients after coaching sessions by delegating responsible and specific tasks to talents, for which they have to think more. This gives them the opportunity to learn in the specific work situations."
Manager Mrs B	5,5	6,8	"It's important for me to write down my goals. One time I will look at them and clarify what is important to me. After reading the set goals after fifteen months of working with the coach, I evaluate these goals, I realize that it is easier to achieve these goals."

Manager Mr C	6,5	8,8	During the training, when I began to get lost, I work with the flipchart. I anchored myself in time and simply manage to summarize the key points so far and also automate the form of "smoking as fulfilled."
Manager Mrs D	5,8	9,0	"Every day from the beginning, the conditions in the number of tasks processed and the high demand for performance changed. When something changed, I had to go back to the beginning and reconsider everything. Five projects were developed. When I changed everything after fifteen months and set it according to priorities, the desired fruit came. "

Source: Own processing

Table 10 shows the average values in the self-assessment of the managers at the beginning and end of the research. Each manager is accompanied by the statement that clearly characterizes his / her approach to managing competencies and a shift in personal approach to professional development in the terms of Industry 4.0.

At the beginning of the research, Ms. B was rated the lowest on the scale of 1-10 by the number 5.5. This was due to the very low self-esteem in mastering the competency of negotiating in the foreign language, which at the beginning of the research was on the scale of 1-10 on the number 2.

Ms. D rated herself best in shifting her professional competencies. As the case study outlined, Ms. D experienced the very dynamic work environment and needed help in the form of coaching. As can be seen from Table 10, Ms. D has made the big leap in her professional development.

6 Conclusion

The part of the theoretical overview of the work was the fulfillment of the first goal of the work, namely the specification of the term Industry 4.0 and its definition in the field of human resources development in organizations in the Czech Republic and the fulfillment of the second goal of the work, respectively defining the concept of competency from the perspective of Industry 4.0. The author focused mainly on the interconnection of human resources development in the form of competency development in the conditions of Industry 4.0.

To meet the following goals and research questions related to the design and implementation of competency development tools in terms of ensuring the required professional development of professionals holding key positions in Industry 4.0 in the Czech Republic, coaching approaches and key competencies of the leader were chosen and applied in the individual case studies.

To fulfill the second research question, whether the coaching method is effective in terms of developing competencies for Industry 4.0, the author relied on the methods of Whitmore (2004), Rock (2006) and Parma (2006). These authors work with the concepts of coaching, leadership and mentoring, which are applied in the case studies. From these case studies, it can be noted that coaching is a more effective method than mentoring and leadership, especially in terms of developing all the key competencies of industry 4.0 experts. As Casner-Lotto & Barrington (2006) mention, the leadership and the mentoring use coaching methods. The coaching is the method that is increasingly used in the leadership. In this work based on the study of Van Oosten et al. (2019) was proven executive coaching as the beneficial resource for the development of the leaders in organizations. The experts focused on developing leadership through coaching. Thanks to the research, the form of coaching became maximally effective, leading to the fulfillment of the goals and at the same time to the fulfillment of the second research question.

It is clear from the case studies that the lifelong learning as the key competency for Industry 4.0 is absolutely indispensable for the development of the key competencies of the experts for Industry 4.0. The coaching method directly motivates and encourages coached persons to make efforts to change the well-established regime of their profession, find appropriate information, acquire the necessary competencies leading to professional growth and automate them. Lifelong learning is therefore the indispensable key competency for Industry 4.0.

Studies may be transferred to the larger or different population with the respect to the sample examined. For leaders, experts and executives who use systems for Industry 4.0, the coach can

be treated similarly to the submitted case studies. In other fields, the procedure can be modified according to the needs of the examined sample.

To fulfill the last goal in the evaluation of the development of the competencies in the key job positions in organizations in the conditions of Industry 4.0, the author processed the anonymous feedback from the method of 360 ° feedback and graphical interpretation within the competency models. At the same time, it is possible to answer the research question whether the 360degree feedback and the competency model confirm the results achieved by the author in the case studies. The application of 360° feedback methods and competency models met two goals. The first goal was the objective view of the self-evaluation of the selected competencies. This view deviated in the case of the evaluation of colleagues by the maximum of three levels and confirms the professional maturity of the experts in the key positions in the organizations in the Czech Republic who meet the conditions for the use of technology for Industry 4.0. The second goal was the professional approach and the stimulus for the subsequent professional development of professionals. Most of the coached people were very positive about the evaluation of the colleagues' competencies. As the part of the final coaching interview, clients were presented with the anonymous competency models for follow-up work. At this session, clients also clarified their professional attitude, the greater transparency in providing feedback across levels in the organization and the resulting opportunities for professional growth. At this stage, the research in terms of meeting the objectives was completed.

The facts obtained by this work lead to reflection in the continuation of further research. The researched sample of the case studies resulted in information that needs to be explored in the dissertation with the help of quantitative research.

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8 Resources

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