

Competency-Based Framework Development and Implementation: Current and Future Perspectives

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Abstract: A competency-based framework (CBF) is a standardized metric facilitating various HR functions including recruitment, assessment, training, performance evaluation, and career development. This paper aims to investigate the process of developing CBF, the benefits and the challenges associated with its development and implementation. The paper explores some of the key issues encountered and lessons learned from the practical application of competency frameworks within organizational settings. This paper offers recommendations to guide practitioners and researchers in navigating the complexities associated with CBF implementation. It also guides those endeavoring to develop competency-based frameworks, offering a comprehensive step-by-step process. The focus is on fostering stakeholder engagement, aligning frameworks with organizational objectives, and leveraging technological advancements to enhance integration and effectiveness within the evolving landscape of digital transformation and innovation driven by AI. Additionally, future research opportunities are highlighted to assist organizations in navigating the changing dynamics of the digital era.

Keywords: *AI, Competency-based Framework, Competency Models, Human Resources, Assessment.*

1. Introduction and Background

Competency-based frameworks (CBF) are recognized as effective tools for identifying, developing, and managing work performance efficiently. They serve various purposes including: facilitating the recruitment and selection of new employees through assessments and selection procedures (Bartram et al., 2002); aiding in the training of employees through tailored courses focused on competency development; managing employee information by utilizing competency models to document and store employee skill, training, and job experience data (Campion et al., 2011); structuring pay differences between jobs or evaluating employees for pay increases (Zingheim et., 1996); evaluating employee performance by aligning the appraisal instrument with competencies (Posthuma & Campion, 2008); establishing promotion criteria based on competencies (Morgeson et., 2009); and guiding career development by using competency models to inform job assignments and other career decisions (Groves, 2007).

Competencies, in organizational contexts, encompass a combination of skills, knowledge, and attributes crucial for successful job performance. They are characterized by observable behaviors demonstrated in the workplace (Benayoune, 2017; Beardwell & Holden, 2011; Holt & Perry, 2011). They are often developed to distinguish top performers from average performers and are defined as "winning behaviors" driving individual and organizational performance (Spencer & Spencer, 1993). McClelland (1973) emphasizes the significance of evaluating competence based on demonstrated behaviors and skills relevant to real-world performance, advocating for a shift away from reliance solely on measures of general intelligence. While McClelland's research initially targeted the educational sector, it sparked greater interest and applicability in business and industry contexts (Rothwell & Lindholm, 1999). Sadvika (2024) reported that several competency models and frameworks have been used in various industries to assess competencies, enhance employee retention, and address unique challenges faced by businesses. Today, nearly every organization employs some form of competence-based management, particularly those with dedicated human resource departments. The simplicity and clarity of competencies serve as a universal language within the organization, making them comprehensible to all employees regardless of their position or educational background (Skinjaric, 2022).

Competencies are categorized into core competencies, job family competencies, technical or functional competencies, and leadership competencies, each serving distinct organizational functions (Bartram et al., 2002) as shown in Figure 1. Competency typically comprises a title, definition, proficiency levels, and behavioral indicators (Benayoune, 2017; Draganidis & Mentzas, 2006). Whereas, a competency profile, which consists of a collection of competencies defining critical behaviors for effective job performance, is essential for competency-based frameworks (Lucia & Lepsinger, 1999). Campion et al. (2011) noted that a competency

library facilitates the efficient development of competency profiles by providing organizations with a standardized repository of competencies to draw from. Benayoune (2017) highlighted the motivation behind the introduction of CBF in organizations is driven by the anticipated benefits, which include:

- Shifting the focus of employee promotions from seniority alone to performance-based criteria.
- Aligning job requirements with organizational strategic goals.
- Establishing a clear roadmap for employee development and career planning.
- Fostering a common language and shared understanding of the behaviors necessary to achieve organizational objectives.
- Reducing training costs by accurately identifying real training needs through the identification of competency gaps.

While the competency approach is widely regarded by many researchers, practitioners, and consultants as an effective tool for enhancing organizational performance, there are some skeptics within the academic discourse. Sparrow (1995) critically reviewed attempts at integrating competency-based approaches within organizations and observed that these efforts have lagged behind advances in strategic human resource management, suggesting a need to shift towards more future-oriented and strategic contexts. Mirabile (1997) cautioned that while competency models offer valuable information, their effectiveness hinges on the presence of a coherent and systematic implementation strategy to leverage this information effectively. This entails having the right content, processes, and support structures in place. Garavan and McGuire (2001) argued that while competency-based approaches possess strengths, they also exhibit weaknesses. Despite substantial investments by organizations in competency frameworks, they have not consistently yielded the anticipated outcomes.

Despite this skepticism, competency development has garnered significant attention across various industries, leading organizations across various industries, and prompting organizations to embrace CBF to enhance organizational performance (Benayoune, 2017). Drawing from the author's extensive experience in developing CBF across diverse sectors including energy, banking, and utilities, this paper aims to discuss the process of CBF development, highlighting challenges and practical issues encountered during competency development and implementation. CBF can be effectively applied across a wide range of industries, including banking, energy, education, healthcare, and logistics. The objective is to provide valuable insights to HR managers and practitioners for effectively developing and implementing competency-based management practices, while also offering researchers and educators avenues for further exploration. The research objectives encompass:

- Examining the Process of CBF Development and Implementation
- Exploring key issues and lessons learned at both the development and implementation phases.
- Providing recommendations for practitioners and researchers to navigate the complexities associated with CBF implementation.
- Discuss AI-Driven Competency Frameworks and their implications for future directions.

2. Competency-Based Framework Development Process

This section outlines the systematic approach required to effectively manage a typical CBF project, including stakeholder engagement, framework design, implementation, and evaluation. The project methodology is based on the author's personal experience in the development of competency-based framework projects within organizational contexts. It is essential to acknowledge that the insights presented in this paper are primarily experiential rather than empirically derived. They are derived from the author's extensive engagement with various organizations and supplemented by relevant literature. Furthermore, the discussion is confined to a specific cultural context, and the inherent limitations of this approach are duly acknowledged.

Stakeholder Engagement

Effective Stakeholder Engagement is crucial for the success of competency development initiatives. Key stakeholders involved in competency management, including employees, managers, HR professionals, and organizational leaders, must be identified, clarifying their roles, responsibilities, expectations, and objectives regarding competency development.

Engaging diverse stakeholders with differing perspectives, expectations, and priorities is a challenge, requiring

effective communication and collaboration. Understanding stakeholders' perceptions of the importance of competency management to organizational success and anticipating potential challenges is essential for effective engagement. Ultimately, this engagement leads to more effective implementation and sustained support for competency initiatives.

The result of this phase is the development of a stakeholder communication plan. This plan entails categorizing stakeholders based on their level of influence, involvement, or the potential impact of change on them. Workshops are conducted to ensure that all relevant stakeholders receive the necessary information to effectively implement each stage of the competency project.

Industry Benchmarking

This phase involves conducting a best practices analysis and benchmarking with similar industries. This entails reviewing pertinent research articles, and case studies related to competency frameworks and talent management. Benchmarking with similar industries allows for a comparison of best practices and lessons learned, providing a deeper understanding of effective competency-based initiatives across various organizational contexts. This process enables the identification of industry standards and innovative approaches that can be adapted to meet the specific needs of the organization. However, adapting these practices to meet the specific needs of the organization requires careful consideration and may pose challenges in terms of feasibility and applicability.

Framework Development

The decision on whether organizations should utilize generic competency models or develop their own is a critical one. Given the lengthy and complex nature of developing a competency framework, many organizations choose to leverage existing on-the-shelf competency libraries. They then proceed to tailor these frameworks with the assistance of consultants to better suit their specific environment and align with their unique business objectives. This approach combines the advantages of established models with the flexibility to adapt and customize as needed, ensuring a more efficient and targeted implementation process.

This phase also involves defining core competencies required for various roles and levels within the organization, considering both technical skills and behavioral attributes at five levels. The process of customization and data gathering involves several key steps:

Structured Interviews: Top managers are interviewed to gather insights into the strategic direction of the organization and to ascertain their comprehension of the objectives of the CBF project, as well as their expectations from the initiative. This also includes identifying key managerial and leadership competencies along with critical behavioral indicators across all five proficiency levels.

Desktop Analysis: Key competencies are identified by reviewing documents such as job descriptions, KPIs, staff performance reviews, and the strategic plan. This phase also includes analyzing job roles, tasks, and responsibilities to determine the essential skills and knowledge required for effectively performing the job.

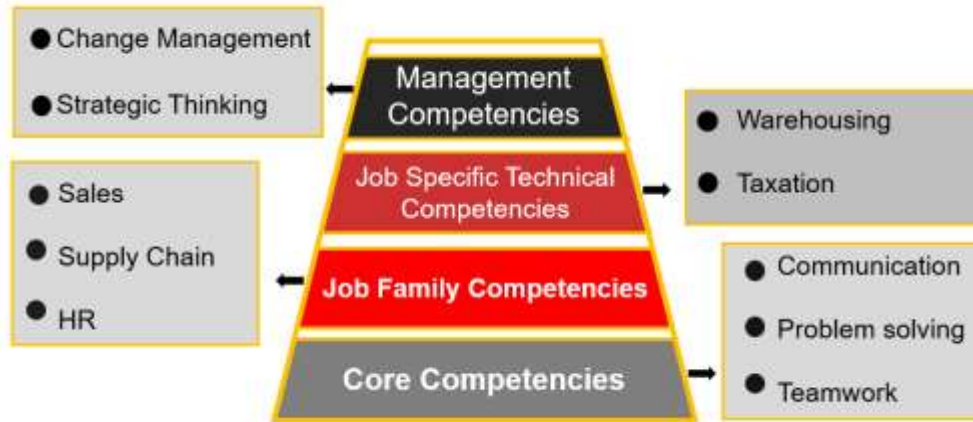
External Benchmark Data: Data from similar organizations is compared using existing competency libraries to inform the process.

Focus Groups: Subject matter experts (SMEs) familiar with job families and roles provide input through focus groups. These SMEs may include experienced job incumbents, managers of job incumbents, and human resources personnel. Drafts of competencies and competency profiles are reviewed by SMEs before focus groups, and revisions are made based on their feedback. This ensures that each job in the organization has its competency profile tailored to its specific tasks.

The framework is tailored to meet the specific needs of the organization while also reflecting industry best practices and standards to ensure the competency framework effectively supports talent management and organizational development initiatives. Subsequently, this information is presented to the subject matter expert panel. The panel engaged in structured review sessions using a technique of opinion convergence, where they discussed and adjusted their opinions based on input from others. This phase focuses on mapping

identified competencies to specific job roles and functions to establish clear expectations and performance criteria. A sample of CBF for the logistics sector is shown in Figure 1.

Figure 1: Sample of CBF for the logistics sector



Determining Optimal Competency Quantity for Job Profiles: Determining the ideal number of competencies per job profile is a common doubt among organizations, and while there's no one-size-fits-all answer, several experts offer valuable insights. Boyatzis (1982) suggests that a competency profile should ideally contain no more than 12 competencies to maintain manageability. Exceeding this threshold can make the framework cumbersome to utilize and administer. Schippmann (2010) further notes that, depending on the nature of work and organizational context, a job typically requires a group of 7 to 9 total competencies. A high number of competencies can complicate evaluation processes.

However, there's a common misconception that a detailed model with numerous competencies is superior. This belief often results in the identification of an excessive number of competencies, leading to an unwieldy and convoluted framework where the significance of competencies becomes blurred. The challenge extends beyond determining the appropriate number of competencies; it also involves the number of behavioral indicators describing each proficiency level. The author has encountered instances where job profiles contained up to twenty-five competencies, each with four or five behavioral indicators per proficiency level, resulting in over a hundred criteria for rating individuals in a single role. This complexity leads to lengthy and burdensome assessments.

For practicality, it is imperative to simplify and reduce the number of competencies to a manageable level. An excess of competencies makes it difficult for employees to recall them, let alone remember the associated behavioral indicators. Streamlining the framework ensures its effectiveness and usability in evaluating employee performance accurately.

Competency Assessment

This phase involves developing assessment tools, such as competency-based interviews, behavioral assessments, and 360-degree feedback mechanisms, to evaluate employee proficiency against defined competencies. By so doing, organizations can ensure that employees understand what is expected of them and how their performance will be evaluated. Additionally, these assessment tools provide valuable insights into employees' strengths and areas for development, enabling targeted interventions to support their growth and success within the organization. Importantly, each identified competency is linked to relevant training courses or on-the-job training initiatives aimed at bridging competency gaps effectively. However, ensuring alignment between assessment outcomes and targeted interventions for employee development can be challenging, particularly when addressing complex competency gaps or diverse learning needs across the workforce.

Training and Development Programs

This stage of the process involves communicating to all employees how the organization intends to utilize the competency framework as a multifaceted tool for training, career development, remuneration, and more. This

phase encompasses developing a comprehensive communication program aimed at ensuring all employees are informed about the purpose, significance, and practical applications of the competency profiles within the organization. This plan outlines strategies for effectively disseminating information, providing training sessions, and facilitating discussions to promote understanding and engagement among employees at all levels.

This stage also focuses on designing and implementing training and development programs tailored to address competency gaps identified through assessments. It includes providing employees with opportunities for skill development, learning, and career advancement aligned with organizational competencies and strategic priorities. These programs also serve to empower employees and increase retention rates by demonstrating a commitment to investing in their continuous development and career progression within the organization. However, allocating sufficient resources, including time, budget, and personnel, for the development and implementation of training and development programs can be challenging. Balancing competing priorities and ensuring adequate support for ongoing learning initiatives amidst other organizational demands requires strategic planning and effective resources.

Integration with HR Systems and Processes

Despite the meticulous process involved in creating competency-based frameworks (CBFs), their true value lies in their accessibility and integration within organizational systems. This step involves integration with HR systems and processes, focusing on seamlessly incorporating the competency framework into various HR systems and processes, including recruitment, performance management, succession planning, and talent development. Integration ensures that the competencies identified and defined in the framework are effectively utilized throughout the employee lifecycle, from recruitment to career development. It also involves ensuring alignment with existing HR practices and policies to facilitate smooth implementation and adoption across the organization, streamlining talent management practices, enhancing decision-making related to employee selection and development, and fostering a culture of competency-based performance evaluation and continuous improvement.

One potential mistake is when organizations postpone this phase until the end, only to realize the challenge of integrating the system with existing organizational systems, potentially resulting in project failure.

Establishing Effective Performance Metrics for Competency Framework Evaluation

It is essential to establish metrics and key performance indicators (KPIs) to evaluate the effectiveness of a competency framework in driving organizational outcomes. These metrics and KPIs should align with organizational goals and objectives, reflecting the impact of the competency framework on key areas such as employee performance, talent development, and organizational productivity. For instance, KPIs related to employee performance could include a percentage increase in productivity, a reduction in performance issues, or an improvement in employee satisfaction scores. In terms of talent development, KPIs might include the percentage increase in employees participating in competency-based training programs or the reduction in turnover rates among high-potential employees. For organizational productivity, KPIs could encompass metrics such as revenue growth attributed to improved employee competencies or the reduction in errors and defects in processes.

Regular monitoring and evaluation of these KPIs are imperative to accurately assess the competency framework's effectiveness. This involves soliciting feedback from stakeholders at various levels of the organization and making necessary adjustments to enhance efficacy. Additionally, fostering a culture of continuous improvement is essential by actively seeking opportunities to refine and optimize the competency framework based on evolving organizational needs and external trends. Organizations must ensure that the competency framework remains relevant, impactful, and aligned with organizational goals over time. Figure 2 provides a concise overview of the key phases involved in developing and implementing a CBF within an organizational context.

Figure 2: Competency-Based Framework Development Process and Implementation



3. Key Issues and Lessons Learned

Consultants and HR practitioners acknowledge that while some organizations successfully develop Competency-Based Frameworks (CBFs), they often face challenges in implementing them effectively. One major issue is the lack of integration with other talent management systems. Successful implementation requires addressing technology and infrastructure issues, competency foundation requirements, and organization/people concerns. Typically, competency libraries, job profiles, and assessment data are not stored in the core Human Resource Management System (HRMS), as it is usually obtained from different vendors. To ensure data synchronization, organizations need to ensure that the application they plan to use can be fully integrated with their HRMS. Additionally, the lack of integrated competency-related data makes analysis and utilization difficult (Benayoune, 2017; Stone, Webster, & Schoonover, 2013).

Another issue is the lack of an appropriate level of specificity in competencies. Some competencies are too broad to be effectively measured or communicated, while others are overly detailed and overwhelming for users. Consequently, organizations may need to revise and simplify competencies to gain employee acceptance.

Based on the author's experience, additional implementation issues include competencies not being fully explained and understood by employees, a lack of resources, and no designated champion for the project. Questions also arise regarding the clear process for updating and maintaining the CBF as the organization evolves, as well as how to measure the success of CBF implementation.

Furthermore, many Subject Matter Experts (SMEs) do not see a direct link between competency improvement and job performance, questioning whether enhancing competency levels directly leads to improved job performance. While existing research claims such a link exists, empirical data supporting this claim is limited. Therefore, further investigation into this issue is necessary (Benayoune, 2017).

Developing a CBF also involves navigating various challenges and complexities inherent in organizational change. Some key challenges and issues include:

Resistance: Resistance during the development phase must be anticipated, as observed in the author's experience. Like other change management projects, some level of resistance is to be expected. Lucia &

Lepsinger (1999) categorize resisters in Competency-Based Framework (CBF) projects into two groups: active and passive resisters. Active resisters may strongly oppose the project by withholding cooperation, delaying actions, or refusing to supply necessary information or personnel. On the other hand, passive resisters may superficially comply with project requirements while subtly undermining its progress. Overcoming this resistance requires effective communication and change management strategies to garner buy-in and facilitate adoption.

Through interactions with managers, Subject Matter Experts (SMEs), and employees involved in various competency projects, the author has noted a prevailing perception among key stakeholders that competency-based frameworks are primarily an HR initiative, a sentiment echoed in Stone's findings (Stone et., 2013). Consequently, these employees may not fully engage in the process. To mitigate this resistance, the competency project team must underscore in every project stage that it is an organizational strategic initiative and business imperative rather than solely an HR project. Involving other departments from the project's inception can help alleviate this resistance and foster broader organizational buy-in.

Resource Constraints: Limited budgets and insufficient personnel allocation pose significant challenges in developing and implementing a CBF. The HR department, often tasked with this responsibility, may face constraints in terms of financial resources and dedicated staff, hindering the framework's development and management.

Stakeholder Engagement: Engaging key stakeholders across various organizational levels is essential for the CBF's success. However, difficulty in securing involvement from senior managers or line managers in defining competencies or providing feedback can impede progress. Establishing clear communication channels and emphasizing the framework's benefits are crucial in fostering stakeholder buy-in and participation.

While competency-based approaches are often considered effective, there remains skepticism among scholars and practitioners regarding their application within organizational contexts (Sparrow, 1995; Mirabile, 1997). Criticisms typically center around the necessity of a coherent and systematic implementation strategy to effectively leverage competency models (Lucia & Lepsinger, 1999).

Before implementation, the legal considerations surrounding the application of a competency-based Framework must be addressed. When these frameworks are used for employment decisions, such as hiring, promotions, compensations, terminations, and certifications, they must adhere to rigorous standards. The organization's ability to defend these decisions relies heavily on the reliability and validity of the competency model, and it may be required to demonstrate adherence to acceptable professional standards (Marrelli et., 2005).

4. AI-DRIVEN Competency Framework

The landscape of work, the workforce, and the workplace has been dramatically reshaped by technological advancements such as chatbots, self-service platforms, and HR service centers. Among these innovations, artificial intelligence (AI) has emerged as a transformative force, revolutionizing various aspects of workforce development and rapidly reshaping HR functions (Gaikwad & Khang, 2023; Benayoune et al., 2022).

Digitalization has also fundamentally changed how organizations collect, store, and analyze vast amounts of data related to employee performance, skills, and competencies. This data-driven approach enables organizations to more effectively identify and assess competency gaps, tailor training programs to individual needs, and make informed decisions about talent management and development strategies.

AI is expected to automate repetitive and routine tasks, thereby enabling employees to concentrate on higher-value activities that demand critical thinking, creativity, and problem-solving skills. Consequently, certain competencies may become obsolete. AI technologies, including machine learning algorithms, offer great potential to enhance competency assessment. AI-powered tools can analyze extensive datasets to identify patterns and trends in employee performance, predict future skill requirements, and offer personalized recommendations for skill development and career advancement. AI-enabled platforms streamline

competency assessment processes by automating tasks like competency mapping, assessment scoring, and feedback generation, improving efficiency, reducing bias, and ensuring consistency in evaluation procedures.

According to a survey conducted by the author as a part of a competency-based assessment project, HR professionals indicated that AI could potentially replace human judgment in competency assessment and provide valuable insights into employee performance and potential. AI could also accurately assess the competencies of job applicants and help reduce human biases. Participants agreed that the benefits of using AI in competency assessment outweigh the potential risks.

However, respondents highlighted several challenges associated with the use of AI in competency assessment. These include a lack of transparency and interpretability of AI models, risks of bias in the data used to train AI models leading to biased competency assessments, difficulties in ensuring the ethical and responsible use of AI, and a lack of technical skills among HR practitioners and managers to effectively understand and use AI in competency assessment. Furthermore, there is a lack of regulation and standards for the use of AI in competency assessment.

5. Conclusion and Recommendations

Based on the findings and insights presented in this paper, several recommendations can be proposed for practitioners, HR managers, researchers, and educators:

- Actively involve key stakeholders throughout the CBF development and implementation process. Ensure clear communication channels, foster collaboration, and garner support for the initiative.
- Ensure that competencies identified in the framework are closely aligned with organizational objectives and strategic priorities.
- Embrace technological advancements, particularly within the realm of digital transformation and AI-driven innovation, to optimize competency selection and assessment.
- Offer comprehensive training and development programs to employees to enhance their understanding of competency frameworks and their relevance to their roles and career development.
- Integrate competency frameworks seamlessly into existing HR systems and processes, including recruitment, performance management, succession planning, and talent development. This integration ensures that competencies are effectively utilized throughout the employee lifecycle and contributes to strategic workforce planning and development initiatives.
- Anticipate and address implementation challenges proactively, including resistance to change, resource constraints, and the lack of specificity in competencies. Develop change management strategies, allocate sufficient resources, and revise competencies as needed to ensure successful implementation.
- Refine and optimize the competency framework based on evolving organizational needs and external trends. Regular monitoring, evaluation, and feedback from stakeholders help in identifying areas for improvement and ensuring the framework's ongoing relevance and effectiveness.

Conclusion

Competency-based frameworks are important tools for enhancing various HR functions within organizations, including recruitment, training, performance evaluation, and career development. This paper has discussed the complex process of developing CBFs and has explained the challenges encountered during their development and implementation phases. The paper has explored key issues and lessons learned from the practical application of competency frameworks within organizational settings. It was found that organizations that actively involved key stakeholders reported greater success in aligning competency frameworks with organizational objectives and garnering support for their adoption. Regular communication with stakeholders is crucial to ensure a common understanding of competencies and their significance. Additionally, organizations should allocate adequate resources and designate a champion responsible for overseeing the development, implementation, and maintenance of the CBF. Clear processes for updating and reviewing the framework should be established to accommodate organizational changes and ensure its relevance over time. Furthermore, efforts should be made to bridge the gap between competency improvement and job performance through empirical research and data analysis, providing evidence of the effectiveness of CBFs in driving organizational outcomes. The paper acknowledges the transformative impact of digitalization and AI

on competency-based frameworks. Digitalization has revolutionized data collection and analysis, enabling organizations to identify competency gaps and tailor training programs more effectively. AI technologies offer immense potential to enhance competency assessment and development processes, streamlining assessment procedures and providing personalized recommendations for skill development. However, organizations must also address challenges associated with AI-enabled platforms, including data privacy concerns and ethical implications. Further research in this area is required to comprehensively investigate these issues.

It is important to highlight that the insights and challenges presented in this paper are primarily experiential rather than empirically derived. They stem from the author's extensive engagement with various organizations and are supplemented by relevant literature. Furthermore, it is essential to note that the discussion is confined to a specific cultural context, and the inherent limitations of this approach are duly acknowledged.

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