Critical roles in balancing customer expectations and software product development: a business perspective

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Abstract. In the quest for organisational agility in product development, critical roles emerge as vital connectors between client expectations and organisational capabilities. This paper explores the dynamic interplay of roles like product owners, innovation champions, and cross-functional teams in aligning innovation, technology, and people to meet client demands. These roles serve as vital connectors, bridging the gap between client expectations and product development constraints. Within the context of business agility and Agile methodologies, they orchestrate a harmonious balance that fuels innovation, enhances client satisfaction, and ensures success in today's rapidly evolving business landscape. By fostering a culture of adaptability and collaboration, organisations can strike a balance that drives innovation, enhances client satisfaction, and ensures success in today's rapidly evolving business landscape.

1. Introduction

In the dynamic landscape of contemporary business, the pursuit of excellence in product development remains a paramount goal for organisations striving to remain innvative and competitive. However, the modern product development landscape is not without its inherent challenges. At the core of this tension lies the fragile balance between the ever-evolving demands and expectations of clients and the pragmatic constraints of product development processes.

In this era of heightened client-centricity, clients' requirements and expectations are becoming increasingly diverse and intricate. They demand not only products that meet their immediate needs but also solutions that are adaptable, scalable, and able to anticipate their future requirements. This, in turn, places immense pressure on organisations to continuously adapt and evolve their product development strategies to meet these ever-shifting demands.

Simultaneously, the world of product development is constrained by resource limitations, budget constraints, and the need for efficient timelines. These constraints necessitate organisations to make trade-offs between delivering a feature-rich product and meeting project deadlines and financial constraints. In such a scenario, organisations are confronted with a critical question: How can they reconcile the seemingly opposing forces of evolving client expectations and the constraints of product development while striving for business agility and adopting Agile methodologies?

The solution to this complex issue involves recognition and empowerment key roles within organisations that can navigate this intricate web of challenges and opportunities. The synergy og organisational agility with various hybrid methodologies present a promising path forward. By fostering

a culture of adaptability, collaboration, and responsiveness, organisations can enhance their ability to satisfy clients' evolving needs while ensuring the efficient execution of product development processes.

This article explores the critical roles that play a pivotal part in orchestrating the harmony between client requirements and product development constraints. It examines the key individuals and teams responsible from an organisational standpoint for guiding, implementing, and optimizing product development practices in the pursuit of organisational agility. By shedding light on these roles and their interplay, this article aims to provide insights into how organisations can strike a balance that not only satisfies their clients but also drives innovation and growth in an ever-evolving business landscape.

2. Organisational agility and its correlation with key drivers

The current research primarily focuses on organisational agility, as we define as *the ability to be proactive, to learn, to understand a volatile and uncertain context, and to quickly reconfigure strategies, processes, and technologies in a fluid environment supported by an innovative, collaborative, resilient, and ego-free team committed to the development of organisational competitiveness* [1]. To achieve this agility, organisations seek to synchronize their efforts across various dimensions, such as innovation, technology, and people, all while keeping customer expectations at the forefront.

The manner in which the dynamics of theses factors can facilitate organisational agility can be analysed through an examination of their interplay and and impact on an organisation's capacity to respond swiftly and adeptly to changing market conditions and evolving client expectations:

2.1. Innovation:

Integration of portfolios: a significant facet of organisational agility is the integration of portfolios. By aligning various product and service portfolios with overarching organisational goals, companies can ensure that their innovation efforts are strategically focused [2]. This enables the organisations to prioritize initiatives that not only address immediate client needs but also anticipate and prepare for future market trends, thus allocating resources more effectively.

Proactive research and development: to align with the ever- evolving expectations of their customers, organisations should proactively engage in research and development activities, simultaneously coordinating these efforts with marketing and design functions. This proactive approach serves to maintain a strong and responsive connection between product development and the dynamically shifting landscape of market demands. Furthermore, organisations can enhance their proactive strategy by adopting systemic practices for scanning the domain and anticipating changes in the market. By engaging in comprehensive monitoring of the relevant context and trend analysis, tehy can gain valuable insights into emerging client expectations and market trends. [3] These practices not only facilitate a deeper understanding of the evolving landscape but alsoempower organisations to stay ahead of the curve in addressing client needs.

Product accreditation and licensing: organisations can strategically leverage innovative products as competitive instruments. By acquiring accreditations and licenses for innovative products, they can not only enhance their market position but also align their offerings more closely with customer expectations. This strategic approach positions organisations to not only meet but often surpass client demands, thereby fostering a more robust and mutually beneficial client relationship.

2.2. Technology:

Organisational agility necessitates that organisations not only maintain an appropriate, sufficient, and controlled mix of technologies but also emphasize the seamless integration of these systems. This strategic technological orchestration not only guards against technological ecosystem entrapment but also empowers organisations with the agility to swiftly adapt and tailor their product development processes. By fostering an integrated technological ecosystem, organisations can more effectively align with evolving expectations and rapidly respond to market shifts, thereby strengthening their competitive edge in the ever- changing business landscape.

The practice of tailoring products to meet individual customer needs, known as mass customization, represents a technology-driven approach that can effectively align product offerings with the client needs. Such customizable solutions are consistently regarded as being inherently more customer-centric, as they prioritize the delivery of precisely what clients desire, thus enriching the overall client experience and fostering brand loyalty.

2.3. People:

Inclusive decision-making: to foster agility, organisations should involve employees at all levels in decision-making processes. This not only empowers individuals but also ensures that decisions are informed by a diverse range of perspectives, including those directly connected to customer expectations. [4]

Encouraging and rewarding initiative: organisational agility thrives when innovation is not confined to a select few, but rather encouraged and rewarded at all levels of the organisation. [5] Teams should be empowered to experiment, iterate, and come up with creative solutions that meet evolving customer demands. Reward systems based on skills and contributions rather than rigid job descriptions or requirements can motivate employees to continually enhance their capabilities, ultimately benefiting the organisation's ability to meet customer expectations. Recognizing and rewarding collaborative teamwork fosters a culture of cooperation and ensures that teams are aligned in their efforts to meet customer needs.

Empowerment and education: empowering employees with trust, training, and access to education equips them with the skills and knowledge required to innovate and adapt in response to changing customer expectations.

Strategic alignment: ensuring that employees are well-informed about the company's strategy, plans, challenges, and opportunities is essential for aligning their efforts with customer expectations and organisational goals.

3. Critical Roles and Teams to Align with Customer Expectations

Specific for IT companies is the way the company organize the work-based on projects structure. PMBOOK [6] define the project as balanced matrix when company structure is balanced between functional and project oriented, based on five indicators: the authority of project manager, resource availability, budget owner, the project manager role allocation and admin project stuff allocation. Defining and full staffing the project manager role is first important step to create this balance, but this balance doesn't reflect customer expectation. As a reaction Agile methodology [7] highlight the importance of the teams by defining specific roles to act.

Single point of contact in the project, strongly connected with business objectives and guided by contract regulation, the project manager is the critical role in the project team to align with customer expectation. But this approach only defends the classical project structure and conserve the status quo. Product owner is the Agile critical role that enhance the importance of customer expectations towards product. Not only translating customer expectations into actionable product development goals and priorities within the Agile framework, but invite development team to learn and understand more of customers business to understand their needs and optimize product delivered.

These roles are not the only one in close contact with the customer but the most critical in reflect the two diametral opposite approaches in regards with business agility.

In summary, achieving business agility in product development necessitates a holistic approach that integrates innovation, technology, and people that act in specific critical roles. Key drivers in each of these dimensions can help organisations better align with customer expectations and respond swiftly to changes in the market. Critical roles and teams play a vital part in orchestrating this alignment, ensuring that organisations remain nimble and customer-centric in their pursuit of excellence.

4. The challenge of enhancing organisational agility driver impact in a demanding client landscape

Enhancing the impact of the drivers (innovation, technology, and people) upon people in the context of demanding client expectations can introduce a specific tension within organisations. This tension arises from the need to balance the pursuit of innovation and technological advancement with the well-being, capabilities, and adaptability of the workforce. Here are some key aspects of this tension:

4.1. The pace of change vs. employee adaptation:

Rapid innovation and technology advancements have become defining features of the contemporary business landscape, fueled by the clients' demand for cutting-edge solutions. The pace of technological change is accelerating exponentially [8] and digital transformation efforts across industries have seen a remarkable increase, with 84% of organisations fast- tracking their digital adoption due to COVID-19 pandemic [9].

Furthermore, a survey conducted by McKinsey [10] highlights that 70% of organisations have accelerated their digital transformation efforts, with a notable 60% of respondents indicating that the pandemic has brought about changes in their organisational structure and ways of working. While such rapid innovation is undeniably essential to meet the increasingly demanding expectations of clients, it simultaneously presents formidable challenges within organisations. Employees who are at the forefront of implementing these technological advancements are frequently confronted with a never-ending stream of new tools, processes, and systems. The resulting adjustment period can be difficult, with employee engagement surveys [11] indicating that up to 44% of employees report feelings of stress and apprehension during times of significant technological change. Moreover, resistance to change, a common byproduct of this rapid transformation is estimated to affect nearly 30% of employees, posing a substantial difficulty to seamless adaptation.

4.2. Skill training and development vs. immediate client needs:

To remain competitive, organisations recognize the imperative of investing in the continuous training and development of their workforce. The significance of this investment is substantiated by data illustrating [12] its direct impact on organisational success. Companies that offer comprehensive training programs are 24% more likely to report higher operational margins than those that do not prioritize employee development and demonstrating strong committment to employee development lead to ouperfroming their competitots by up to 20%.

Nevertheless, the allocation of time and resources for employee training can introduce a challenging juxtaposition within organisations. In the pursuit of quick responses and solutions demanded by clients, organisations often face the dillema of balancing immediate client needs with the long-term benefits of skill development. This change is further accentuated by data [13] which highlights that 43% of employees feel overworked and stressed due to highjob demands. Moreover, client-centric pressure has been identified as a leading cause of work-related stress, underscoring the difficulty organisations encounter in reconciling the demands of client expectations with the imperative of employee training.

4.3. Innovation pressure:

The pressure to innovate can sometimes result in overworking employees or setting unrealistic expectations. This can lead to burnout and decreased employee well-being, which, in turn, affects their ability to innovate effectively. While teamwork is crucial for innovation and meeting client expectations, individuals may also feel the pressure to perform exceptionally on their own. Balancing individual accountability with collaborative teamwork can create tension within teams.

4.3.1. Competitive edge vs employee job security. Organisations often emphasize innovation as a competitive edge. However, this focus on innovation can sometimes amplify anxiety among employees regarding the stability of their roles within the team. The fear of automation, artificial intelligence or outsourcing can foster resistance or reluctance to fully embrace innovation initiatives. 72% of employees express concerns [14] about job security in the wake of emerging technologies. This apprehension poses

a dual challenge for organisations: nurturing a culture of innovation while simultaneously addressing employees' legitimate concerns about job stability. To navigate this fragile balance, organisations must engage in transparent communication, offering reskilling and upskilling programs to empower their workforce and thrive in the era of technological advancement.

4.3.2. Client-centric pressure vs. employee well-being: The relentless focus on meeting client demands can place immense pressure on employees to work longer hours or take on more significant workloads, impacting their work-life balance. This pervasive phenomenon, commonly referred to as the "always-on" culture [15], reveals the detrimental efects of this work culture on employee well-being. research findings reveal that employees who regularly work extended hours face a heightened risk of burnout, diminished job satisfaction and compromised work- life balance.

Balancing these tensions requires a thoughtful and strategic approach that considers both the organisation's need for innovation and technology and the well-being, capabilities, and adaptability of its workforce. It involves clear communication, training, support mechanisms, and a culture that values both innovation and employee satisfaction. Ultimately, organisations that navigate this tension effectively are better equipped to meet demanding client expectations while fostering a positive and productive work environment.

5. Open conclusions regarding the business agility perspective for the critical roles in product development

In conclusion, the pursuit of organisational agility in product development is an intricate and multi-faceted endeavor. The critical roles identified in this context serve as the linchpins that hold together the various dimensions of innovation, technology, and people while addressing the ever-evolving demands of clients. These roles play a pivotal part in achieving a harmonious balance between client expectations and the constraints and opportunities presented by the rapidly changing business landscape.

From the product owners who translate client needs into actionable development goals to the innovation champions who drive creative problem-solving, these roles are essential for guiding the organisation towards success. Scrum masters facilitate Agile processes, ensuring adaptability and responsiveness to client feedback, while cross-functional teams harness diverse skills to address complex challenges.

The successful alignment of these critical roles with client expectations relies on a commitment to fostering a culture of adaptability, collaboration, and employee empowerment. It involves recognizing the significance of innovation, the strategic use of technology, and the value of people as key drivers in the pursuit of business agility.

Ultimately, organisations that embrace these critical roles and their interplay within a framework of business agility are better positioned to navigate the complexities of modern product development [16]. They can meet demanding client expectations, drive innovation, and nurture a workforce that is not only adept at managing change but also motivated and engaged in the pursuit of excellence.

As the business landscape continues to evolve at an accelerated pace, the importance of these critical roles will only grow. Organisations that invest in cultivating these roles and fostering agility will find themselves better equipped to thrive, innovate, and deliver exceptional value in an ever-changing world.

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