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# **Rapid Intrapreneurship with a Human Touch**

Short Paper

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### Abstract

The pace of change in digital organisations necessitates the adoption of rapid innovation practices. While rapid innovation is typically reactive to external uncertainties and shocks, firms that are capable of generating internal disruptions and innovating quickly can gain a competitive edge. This research investigates the role of intrapreneurship in promoting rapid innovation within an organisation's proprietary framework, employing an employee-led, human-centric approach. To explore this concept, the qualitative case study approach will be utilised, with MoMo, Vietnam's leading E-Wallet, serving as a prime example of an organisation that has successfully implemented such practices. Through an analysis of MoMo's internal processes and culture, this research aims to uncover the factors that contribute to the success of intrapreneurial endeavours and rapid innovation within digital organisations.

**Keywords:** Intrapreneurship, rapid innovation, layered modular architecture, digital entrepreneurship

### Introduction

The focus of digital innovation research in the Information Systems (IS) discipline has changed over time, from creating new products and features to more intangible aspects such as processes and business models (Berger et al., 2021; Nambisan et al., 2017). Digital innovation has undergone further transformations as businesses must adapt to the dynamic digital environment to maintain or enhance their competitiveness. This has sparked a growing interest in rapid innovation, which allows companies to match or exceed market leaders in developing new products, services or processes (Huang et al., 2017; Nambisan, 2017). As an example, the rapid advancement in artificial intelligence, exemplified by the chatbot ChatGPT, presents a challenge to Google's 224.47 billion U.S. dollars in search and advertisement revenue, which has remained relatively stable over the past decade (Bianchi, 2023).

The importance of rapid innovation in the practitioner world is mirrored in emerging IS literature. Rapid innovation can bring several benefits to firms, such as scaling their user base and achieving a dominant market position, essential for product survival and competitive advantage by being first-to-market (Au et al., 2018; Huang et al., 2017). Additionally, rapid innovation facilitates the integration of new infrastructure and capabilities into organisational workflows, as seen with the adoption of mobile phones in the early 2000s, enabling businesses to reach consumers in novel ways (Sørensen & Landau, 2015). In recent years,

emerging technologies such as IoT, cloud infrastructure and artificial intelligence have grown in popularity, and firms that quickly adopt and integrate these technologies into their operations can gain a competitive edge over their rivals (Kranz et al., 2016; Lee et al., 2020).

The primary focus of rapid innovation in IS literature is based on external uncertainties and disruptions, which are shocks caused by factors outside the control of an organisation (Chang et al., 2019; Chung et al., 2019). Changes in consumer preferences are a common source of external uncertainty where consumer requirements deviate from the existing status quo, leading to organisations rapidly innovating in light of new consumer preferences (Dong et al., 2019). The studies in IS research, focusing on external uncertainties and disruptions demonstrate a highly reactive approach to rapid innovation. Intrapreneurship presents an alternative approach by fostering internal ideation and the creation of new products and services within an organisation, diverging from the prevailing reliance on external uncertainties to rapidly innovate. Intrapreneurship empowers the organisation with greater control and pace of their innovations. A notable example of successful intrapreneurship is Google's practice of allocating 20% of employee time to pursue ventures beyond their regular job responsibilities (Murphy, 2020). This initiative led to the development of Gmail, the second most widely used email client, commanding a significant 28% market share (Petrov, 2023). Moreover, the rate of innovation through intrapreneurship is rapidly increasing with faster deployment of software releases as exemplified by the deployment of ChatGPT iterating from version 3.5 to version 4, within a year (Ortiz, 2023). This demonstrates the emergence of rapid innovation driven by intrapreneurship, as organisations strive to innovate and release products ahead of their competitors.

The emergence of rapid innovation driven by external uncertainties has led to the development of two rapid innovation dimensions, process and architecture dimensions. The process-driven dimension is grounded in agile principles, which involve the adoption of software development methodologies like SCRUM and Xtreme programming (Aldave et al., 2019). In contrast, the architecture-driven dimension focuses on designing the IS artefact with a layered modular architecture, allowing for the customisation and modification of independent IS features (Kranz et al., 2016; Nambisan et al., 2017). However, the human dimension is often overlooked as a secondary factor in the development of rapid innovation. By prioritising the human dimension through intrapreneurship, we can strengthen the significance of both top-down and bottom-up innovation, enabling ideas to emerge from employees at all levels of the organisation. (Rabl et al., 2022; Reibenspiess et al., 2022), thus leading to the proposal of our research question: "*How can rapid innovation be driven from within a digital venture?*"

This study will present the case of MoMo, a digital venture valued at \$2 billion USD that provides a multitude of financial innovations through its e-wallet mobile application (Reuters, 2021). This e-wallet applications contains over 100 mini-apps or standalone applications that can be access via the MoMo super-app. The rapid growth of innovation and development of these mini-apps highlights the highly innovative culture of MoMo promoted heavily within the organisation. Given the highly innovative culture, this paper will adopt an intrapreneurship lens that explores the employee-led entrepreneurial agency within organisational boundaries.

### **Literature Review**

### Different Approaches to Rapid Innovation

Digital innovation, as highlighted by Nambisan (2017), "has radically changed the nature and structure of new products and services." This change in the IS innovation literature commences with the introduction of the term digital, offering IS researchers a valuable opportunity to scrutinise the foundations with respect to the actors, artefact and nature of the innovation (Berger et al., 2021; Kohli & Melville, 2019). The fast pace nature of technological advancements underscores the importance of rapid innovation characterised by speed and agility, thereby creating additional prospects for advancing academic discourse from digital innovation to rapid innovation (Huang et al., 2017; Kranz et al., 2016).

The current IS discourse on rapid innovation is driven by external uncertainties and a reactive approach. External uncertainties are seen as a key driver of innovation, as they prompt organisations to respond to changing circumstances and adopt new technologies and practices (Chang et al., 2019). Amidst the COVID-19 pandemic spanning from 2019 to 2021, there has been a significant increase in scholarly works documenting the event-based COVID-19 as the external uncertainty that spurred rapid innovation in the development of digital personal protective equipment (PPE) capabilities, adoption of digital practices and

virtual spaces to facilitate social distancing and integration of business analytics in addressing change management (Gkeredakis et al., 2021; Oborn et al., 2021; Zamani et al., 2022). Outside of the pandemic, emerging technology has been regarded as a prime disruptor to existing business models. As such, the adoption of new IT artefacts into the firm's existing core capabilities is essential and continuous adoption of technology mitigates the risk of running business operations on an obsolete legacy system (Kranz et al., 2016; Sørensen & Landau, 2015). Furthermore, external actors are also widely discussed across IS papers. Government regulations promote evolution in innovation as demonstrated by GDPR, leading to the rapid integration of new privacy (Martin et al., 2019). Other external actors also studied in IS include the use of open-source software configurations where external developers to the organisation bring innovative ideas from different entities and enterprises in building a customised solution (Dong & Götz, 2021; Dong et al., 2019).

IS literature suggests that external uncertainty motivates rapid innovation, which can be achieved through either a process-driven or an architecture-driven approach. Process-driven innovation is supported by agile principles, including Scrum or Xtreme programming software-development methods, which enable incremental and rapid releases of new features and updates (Aldave et al., 2019; Kranz et al., 2016). Start-ups often adopt this approach with an entrepreneurial mindset, utilising shorter and more agile trial-and-error cycles (Zamani et al., 2022). This allows start-ups to adapt quickly to changing requirements from external market conditions. However, studies based on external uncertainty and the process-driven approach highlight the risk of a top-down approach to rapid innovation, where senior leadership directives may neglect grassroots employee-based initiatives. The process-driven approach is also demonstrated in open-source software (OSS), where external parties from different entities share the same platform to deliver rapid innovation (Dong & Götz, 2021; Dong et al., 2019). The openness to innovation empowers the firm to rapidly acquire new talent and capabilities for faster integration of new features. Nevertheless, top-level management must establish a clear strategy that mitigate the loss of intellectual property when collaborating with external developers.

Underlying the architecture-driven innovation is the layered modular architecture introduced by Yoo et al. (2010). Layered modular architecture defines a separation of different software and hardware layers. This architectural framework emphasises the "homogenisation of data," allowing a seamless combination of various types of digital content, including audio, video, text, images, and logic, to deliver a wide range of services (Lee et al., 2020). Modularisation helps with the development of new products to rapidly verify the changes from external uncertainty without impacting the underlying value propositions (Kranz et al., 2016; Yoo et al., 2010). This approach allows organisations to experiment with new ideas and iterate quickly without significant risk, compared to traditional application architecture, where all functions and features are highly dependent. This modular approach has been incorporated into the theorisation of numerous artefacts allowing the creation of standalone modules and actively reducing the dependencies between functionalities, thus promoting a greater level of agility for rapid innovation to occur (Muthukannan et al., 2021). However, further research into the human dimension of rapid innovation is still required as innovative approaches in standalone modules require a different approach to creativity and collaboration. Additionally, firms, particularly in highly regulated industries, are required to keep their datasets and development process in-house (Martin et al., 2019).

Both the process and architecture dimensions of rapid innovation centre on external uncertainties, leading to a highly collaborative effort with external resources and entities (Dong et al., 2017). These studies highlight a process of co-collaboration to create new products as well as examine modular architecture to experiment with changes based on conditions external to the organisation's control. There is an opportunity to put the human dimension in focus, in light of rapid innovation through intrapreneurship. The focus on internal resources and human capital may lead to a more sustainable approach to innovation, as companies can rely on their existing talent pool rather than seeking out external partnerships. This approach also allows for greater control over the innovation process and ensures that the company's values and goals are reflected in any new software or features developed as opposed to diverging objectives from external developers (Reibenspiess et al., 2022).

#### Intrapreneurship Lens

Intrapreneurship has emerged as an important area of research for examining opportunities for employeeled innovation. It refers to the practice of fostering entrepreneurial agency within the proprietary boundaries of an organisation (Henfridsson & Yoo, 2014). Adopting intrapreneurship as a research lens provides an avenue to investigate an organisation's innovative culture, which encompasses creativity, risktaking, and autonomy, thus bringing the human dimension into focus (Rabl et al., 2022; Reibenspiess et al., 2022). Intrapreneurship can enable organisations to navigate uncertainty and foster innovation that is centred on employees. This approach recognises that innovation can emerge from any level of the organisation, not just from the top-down decision-making (Rabl et al., 2022). Moreover, it acknowledges the importance of empowering employees to take risks and act as agents of change.

Despite the emphasis on promoting ideation, intrapreneurship still differs from entrepreneurship, due to the proprietary boundaries of the organisation (Rabl et al., 2022). Intrapreneurship focuses on innovating within an organisation's proprietary boundaries, which implies that all innovation and entrepreneurial activities need to be conducted within the organisation, requiring alignment with organisational values (Reibenspiess et al., 2022). Intrapreneurship is different from entrepreneurship in this aspect since entrepreneurs are not bounded by an organisation's culture, values, or resources, and therefore have more freedom to pursue their innovative ideas without organisations to encourage innovation and creativity among their employees and to capitalise on the untapped potential of their workforce, while at the same time retaining control over the innovation process and the resulting intellectual property.

The implementation of intrapreneurship in an organisation is complex and highly challenging, requiring a substantial investment of time, resources, and effort. To create a culture of innovation, it is critical for organisations to provide intrapreneurs with the necessary resources, such as sufficient time to balance regular work and intrapreneurial tasks and access to advanced technologies, to foster the exploration and development of their innovative ideas (Huang et al., 2021). Furthermore, the success of intrapreneurship is also heavily reliant on the willingness of management to provide support and endorse the initiatives of the intrapreneurs (Reibenspiess et al., 2022). While our research highlights the importance of grassroots innovation, it is essential to acknowledge the involvement of management at all levels in shaping the intrapreneurial strategy. Specifically, there is a focus on transformational leadership that fosters a shared organizational vision while equipping individuals with empowering resources to encourage risk-taking, experimentation, and embracing failure as a means to swiftly cultivate a supportive intrapreneurial culture (Gerards et al., 2021; Moriano et al., 2014).

# **Research Method**

### Case Study and Background

The research presented in this paper adopts a case study method for two primary reasons. Firstly, the overall complexity and multitude of perspectives required to analyse the phenomenon. Secondly, the exploratory nature of the research question requires addressing the "how" and "why" aspects relating to how rapid innovation occurs within an organisation and why it is so successful (Pan & Tan, 2011). To meet these criteria, the selected case study must fit two requirements: an organisation that is highly innovative and where innovation primarily occurs in-house. The chosen company, MoMo E-Wallet adopts a modular layered architecture where all users are required to log in via the application layer, which is the primary layer that shares all the common features and functionalities (Yoo et al., 2010). The application layer serves as the foundation for the mini-app layer, which houses smaller and more modular applications, providing a competitive edge for innovating rapidly. The rapid pace of innovation focused primarily on an in-house development strategy has seen MoMo grow to become Vietnam's market-leading e-wallet valued at over 2 billion USD (Reuters, 2021), thus making it an extreme case based on these unique factors (Gerring, 2008). In contrast to larger organisational structures, MoMo takes pride in maintaining a flat organisational hierarchy where numerous direct reports have the ability to directly reach out to the CTO and C-Suite executives. This approach aims to foster employee empowerment by facilitating direct communication during the ideation stages.

### Data Collection and Analysis

In August 2022, our team was granted access to the MoMo research site, where we conducted a two-stage research process. The first stage involved preparation based on secondary sources such as blog posts, YouTube videos, and media articles. These sources provided us with contextual information on MoMo e-wallet, used to create a draft of questions for our second phase of research (Pan & Tan, 2011), focused on fieldwork. During the fieldwork stage, we conducted semi-structured interviews in Vietnam using a hybrid

method of in-person and face-to-face interviews. Our data collection involved 17 interview informants, who were selected using a chain referral sampling technique (Biernacki & Waldorf, 1981) which included representatives from leadership to various business units, with a focus on the IT department. During the fieldwork stage, we conducted semi-structured interviews in Vietnam using a hybrid method of in-person and face-to-face interviews. All interviews were digitally recorded and transcribed to ensure the accuracy and completeness of our data (Walsham, 1995).

Based on the case study research method, our research team concurrently performed data collection and data analysis. Underpinned by our literature review on intrapreneurship, core dimensions and secondary themes were conceptualised into open, axial and selective coding (Strauss & Corbin, 1998). The process of open coding was utilised to discover and confirm theoretical concepts such as entrepreneurial elements, while axial coding was employed to validate both new and pre-existing second-order themes that correspond to the modified dimensions of intrapreneurship, such as balanced autonomy. Selective coding was then utilised to refine our case evidence into primary categories, which were subsequently assigned to the suitable dimensions and themes. This ongoing study will continue to iterate through the process of data analysis and collection to ensure theory development is validated with future interviewees, reaching a level of theoretical saturation (Eisenhardt, 1989).

# **Preliminary Findings**

The preliminary findings summarised in Figure 1 demonstrate that the achievement of rapid innovation within an organisation based on MoMo E-Wallet is anchored in three key concepts of autonomy, risk-taking and creativity. The culture of intrapreneurship, although draws similarities with entrepreneurship, is bounded by active organisational controls, namely in defined team structure, modular experimentation and centralised resourcing. Based on the enacted intrapreneurial culture, MoMo E-Wallet was able to develop a diversified layered modular architecture, that facilitated the rapid speed of numerous innovations (Yoo et al., 2010). Moreover, MoMo's architecture is empowered by their human dimension of employee-led innovation to achieve a highly diversified strategy across different features, value propositions and markets.



### Autonomy

Across MoMo's leadership, autonomy has been highly stressed as a key factor of the innovative spirit. However, unlike traditional entrepreneurship where teams are developed organically from interactions between founders, co-founders and their initial employees, MoMo's intrapreneurial setting is based on defined team structures known as "cell teams" which are smaller teams formed to develop Mini-Apps and their corresponding features. As part of MoMo's senior leadership, one MoMo's AI directors highlights "every cell team should consider themselves as a small start-up or a business ... they should make their own decisions." Despite providing extensive liberty to each cell team, the CTO at MoMo promoted balanced diversity of capabilities and perspectives across two key divisions in MoMo "there should be at least one person from the product team and one person from the technology team in forming a cell team ... product team focuses on the customer and technology team needs to understand our technology". The structural diversity enforced by technology and product roles during cell team formation ensures balanced autonomy during the idea generation stage.

Additionally, we noticed that implementing cell teams with balanced autonomy led to rapid innovation in the mini-app layer. This approach empowered each cell team while also ensuring that core requirements were met, placing the customer at the forefront and leveraging the developers' expertise to accelerate ideation to implementation process.

#### **Risk-Taking**

A common mantra across MoMo is encapsulated by their *underdog* mentality in a market where large institutional establishments such as banks have dominated MoMo's E-wallet core value proposition including credit lending and funds transfer. To compete and ultimately survive during its start-up stages, the CTO has noted on numerous occasion "**we have to try... we need to take risks**." This risk-taking mentality is clearly reinforced by middle management and entry-level employees as one of the middle management team members highlighted "**I don't know why but they entrust me with my crazy ideas...yes they are crazy and yes they might fail but the management believes in us.**" This form of risk-taking develops a strong sense of trust and support between senior leadership and employees at every level. However, as the firm continues to grow, more advanced and measured forms of risk-taking have been developed. Unlike traditional entrepreneurship where the core product is based on a specific value proposition, and as such, risk-taking requires risking the entire application or an "all-in" approach, MoMo's modular architecture is able to isolate the risks. These isolation methods are complemented with modular experimentation methods including AB-Testing, and piloting of features and functionalities within each mini-app.

In the pursuit of isolating the risk-taking consequences to each mini-app and its corresponding cell teams, MoMo allows for rapid innovation across a diversified portfolio of applications. The low technical as well as financial dependencies between each application promote rapid innovation without institutional bureaucratic red-tape, thus reinforcing the idea of autonomy that was discussed earlier.

### Creativity

Just like most entrepreneurship, creativity and innovation was clearly mentioned by a managers from the product department, "**creativity is in the gene (of MoMo) and it is required in the culture as well as every execution**". This is reinforced by one of MoMo's four core values of innovation which is also synonymous with the employee's ability to constantly come up with new ideas. Compared to traditional digital entrepreneurship where creativity is unbounded, MoMo's ability to support their employees with investment into growing their knowledge and funding for new technology creates a framework that guides employee creativity. This is particularly evident in the adoption of AI technology where the department grew from "40 employees to now over 160 employees and from 1 director of AI to 4 directors of AI in just over a year." This exponential growth rate and corresponding investment into AI clearly demonstrates a shift in capabilities to an AI first company leading to new flagship products such as credit scoring based on AI technology. Another example of centralised resources is based on the ability for MoMo to standardise beneficial features on their application layer which is highlighted by a senior analyst at the company, "if the feature can benefit multiple mini-apps, we can consider implementing it in our application layer to share it across the platform."

The literature suggests that a layered modular architecture promotes rapid innovation by separating and making functions independent. However, our study also found that these isolated functions, developed quickly in risk-taking mini-apps, can be incorporated into a centralised layer over time. This integration enables all mini-apps and cell teams to benefit from the new innovations. Thus, it is crucial for companies to balance their approach to resourcing centralisation in a layered modular architecture.

### **Potential Contribution and Future Studies**

The main theoretical contribution of our paper is threefold. Firstly, this paper offers an opportunity to evaluate the distinction and transformation between entrepreneurship and intrapreneurship based on three different organisational controls defined by team structure, modular experimentation and centralised resourcing. Secondly, in answering the initial research question of achieving rapid innovation within the organisational context, the research findings demonstrate the key imperatives of pursuing employee-led intrapreneurship outcomes of balanced autonomy, isolated risk-taking and guided creativity under the constraints and opportunities offered by organisational controls. Our research further demonstrates how focusing on the human dimensions of rapid innovation within an organisational context complements existing IS studies on the process and architecture-based approaches to achieving rapid innovation. Finally, this research demonstrates how intrapreneurship based on the human dimension enables the firm to pursue diversification strategies for layered modular architecture. For practitioners, we have identified the importance of elevating intrapreneurship at various levels of leadership. It is critical for leaders to promote a clear vision of the organisational team structures (cell teams), encourage a greater level of independent risk-taking (modular experimentation) and promote a clear mandate to aggregate support for creativity (centralised resourcing).

In light of the preliminary nature of our study, we acknowledge the need for additional data points to thoroughly comprehend the applicability of organisational controls to various entrepreneurship constructs, which could facilitate insights into new intrapreneurial capabilities. As such, we recommend that future research should extend the scope of our model by exploring a broader range of industries that aim to achieve an internally driven diversification strategy. Such an approach would enable us to confirm the validity of our model and refine it further based on the results obtained. Additionally, it is important to recognise the context-specific nature of the Vietnamese market and the unique characteristics of MoMo E-wallet Super-App. It is crucial to acknowledge that these findings may have limitations in their generalisability to different regions and industries.

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