SERVICE PROVISIONING
- Insights in a digital business context

Purpose

This position paper presents an overview of key insights in relation to the provisioning of IT services in the digital business context. These insights, as derived from relevant academic and practitioner literature and engagement with patrons and members of the Innovation Value Institute (IVI) global consortium, have informed the development of IVI's IT-CMF Service Provisioning (SRP) Critical Capability (CC). Additionally, changes to the SRP CC improve the alignment of the capability with the ISO 20000 standard and the ITIL framework. They also reflect digital changes such as the virtualization, automation, and orchestration of IT infrastructure, and support the growing prevalence of Agile and DevOps approaches [1].

Relevance of IT Service Provisioning in the Digital Context

The ability to effectively and efficiently identify IT services to satisfy a business need and to then package, implement, and manage these services within a constantly changing operational environment is a significant challenge for organizations. Many businesses rely on the availability of interconnected IT services and applications, whose stability and scalability are critical to successful business operations. During a digital transformation, organizations additionally seek to test and launch digital services faster and at a lower cost. Delivering value to customers at an accelerated pace drives continuous deployment and related practices [2]. This development adds extra complexity to IT service provisioning. IT functions need to find a balance between the opposing demands for speed, to enable rapid innovation releases, and stability, to maintain a reliable IT service architecture. This capability is referred to as IT 'ambidexterity' in the academic literature [3] and as a 'bi-modality' by practitioners [4]. A recent study of 258 IT executives concluded that IT agility is a main driver of the IT function's ability to support digitization [3].

Effective IT service management significantly improves IT's engagement and alignment with its business partners. An effective IT service provisioning capability should package all of the technologies, processes, information, and IT support needed to deliver a specific business outcome, while hiding the technical complexity [5]. Classifying IT services by user needs allows users to navigate the service catalogue based on their business objectives. This improves IT's ability to communicate the IT function's value to the rest of the business and also to improve cost transparency, thereby enabling more informed cost management by IT service users.

IT service provisioning works to ensure that the organization's strategy and objectives are supported by reliable and effective IT services, while also supporting digital innovation, i.e. 'the application of digital tools, technology, and digital infrastructure in new products, services, and business models that offer customers enhanced or unique value' [6].

Key Insights in Relation to IT Service Provisioning in the Digital Context

Advances in digital technologies mean that the role of IT services has changed from increasing operational efficiency and making information readily available across the organization to one where it is fundamentally transforming business strategies, business processes, and organizational capabilities [7]. There is a growing strategic focus on using digital technologies and digital innovation to create a competitive advantage [3]. As organizations increasingly rely on digital technology and innovations to deliver almost all aspects of IT services, it is becoming clear that IT service management today needs to cover a wider remit than the traditional IT function. A strategic vision, with a holistic view of the IT services and an understanding of potential threats to the wider business, is required [8]. For successful digital transformations, organizations need to coordinate, align, and combine the traditional IT resources and capabilities with using agile methods and lean processes to react faster to the needs for change [3].

Customer experience is key to the success of a digital business. The IT service customers, that is the service owners and service users, have become a strategic focus in the digital business environment. The evolution of a 'digital first' [9] agile work culture in IT can deliver IT services that fit the customers' needs and have a real impact on their day-to-day work. Developing a 'digital first' agile work culture of sensing and responding to customer needs enables processes and methodologies to be effectively leveraged and enables meaningful experiences to be created for the customer. This in turn builds customer satisfaction (or loyalty) and collaboration for the IT service provider [9]. Skills such as communication, negotiation, relationship development, critical thinking, and organizational change management help in understanding how to adapt IT services to meet the needs of customers, and increase the business value delivered [8]. Having a real understanding of customers' needs gives an insight into what will make the business successful [10].

Culture is important in successfully delivering IT services. There needs to be mutual respect and trust, with honesty and collaboration between IT service provisioning and their customers, since long-lasting relationships are fueled by trust and integrity [10]. There also needs to be shared ownership of IT service development with clear communication and expectations, and the IT service personnel need to be empowered and supported in learning new skills [11]. There are many new approaches, such as DevOps [1], employed in IT solutions development [12] and a multitude of new infrastructures available to enable and support IT services [13]. While these developments increase complexity, they can also offer new and agile ways of working. The most prevalent new infrastructure, i.e. cloud computing, can support IT service continuity and provides new methods for automated IT service request and for service life cycle management [14].

A recent study on the future of IT support reflects the need for support personnel at the IT service desk to know, and be able to do, more complex things - as IT self-service and automation are being used for the simpler and more repetitive aspects of the role. This includes the ability to deal with a variety of more complex issues and requests due to the 'consumerization of IT' [15]. Users are driving this need, bringing their 'consumer-world' experiences and expectations into the workplace and the IT service

'experience' provided to users is expected to become just as important as, or perhaps even more important than, the IT services provided [15].

Managing IT Service Provisioning in the Digital Context

To be a successful service-oriented business in the digital era, an organization needs to establish an IT service strategy, and document and make available the governance criteria and processes required for the provision of IT services [16]. Critical stakeholders need to be identified in order to gather and clarify IT service requirements and understand competing stakeholder priorities. There needs to be a greater emphasis on developing relationships with these stakeholders in order to optimize IT services to meet current and future business needs and to agree on more effective and efficient IT service solutions. Regular communication with IT service stakeholders helps to develop a mutual understanding of IT service constraints and opportunities, and allows for discussion around cost and value trade-offs for IT service investment and development. An IT service desk is required to interact with the service users and respond to customers' needs.

IT service offerings should be presented to users in business language terms so that they can easily connect the services on offer to their needs. IT service offerings, and the supporting technical service capacity to meet business demands, must be planned and managed in an agile way – iteratively listening and responding to user feedback. Deployment of IT service releases to deliver the changes and/or new functionality required by the business needs careful management to ensure the protection and integrity of the existing IT services. IT service events, incidents, and requests still need to be managed, but in a more transparent way. Experimentation and iteration are key ways that organizations respond to digital disruption. Both successes and failures in this should be recognized and used to learn and drive change across the organization [17]. With the emphasis of digital business on exploratory and minimum viable product (MVP) approaches [18][19], continuity management and disaster recovery planning for IT services become even more important. IT service provisioning recognizes that risk is a business decision and that good detective, corrective, and preventative action can mitigate that risk.

Performance management can also mitigate risk. By measuring, recording, and tracking various performance indicators, an overall view of IT service performance can be established, and data on IT service usage can be analyzed to identify potential improvements and under-utilized resources for potential redeployment. Customer-centred measures of performance for service level agreements need to be determined, agreed, and reported upon. In order to remain competitive in digital service provisioning, continuous service improvement should be embedded across the full IT service life cycle [20][21].

Additions and Modifications to the SRP CC to Reflect Digital Landscape Changes

The SRP CC artefacts have been developed and updated to reflect IVI patron and member feedback and industry changes, and to meet the challenges of the digital age. The CC has been greatly expanded, from two categories and five CBBs, to five categories and seventeen CBBs. This reflects a wider scope

of coverage in the IT service management domain. Some key changes to the CC structure include the following:

- The addition of a 'performance management' category
- The expansion of the coverage of 'service operations management'
- A strategic focus on stakeholder relationships as a means of creating value through the service to the IT customer
- The expansion of the 'service transition' category to include new 'change management', 'service validation and testing', 'release and deployment management' and 'configuration management' Capability Building Blocks (CBBs).

Conclusions

Digital transformation is not just about technology; it also requires changes related to people, processes, and methodologies [3]. Digital business moves quickly, and therefore requires high levels of collaboration across boundaries, and involves considerable ambiguity and constant change [17]. The SRP capability helps to ensure that the organization's strategy and objectives are supported by reliable and effective IT services while enabling people to think and act differently, and to collaboratively innovate and adapt to digital transformation.

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About IVI

The Innovation Value Institute (IVI) is a multi-disciplinary research and education establishment co-founded by Maynooth University and Intel Corporation. IVI researches and develops management frameworks to assist business and IT executives deliver digitally enabled business innovation. IVI is supported by a global consortium of likeminded peers drawn from a community of public and private sector organizations, academia, analysts, professional associations, independent software vendors, and professional services organizations. Together, this consortium promotes an open ecosystem of research, education, advisory support, international networking, and communities-of-practice. IVI is supported through Enterprise Ireland's and IDA's Technology Centre programme.

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