



IT SERVICE DESIGN IN PUBLIC SECTOR ORGANIZATIONS

The NXT Implementation Approach

WHITEPAPER



ABSTRACT

This whitepaper covers key challenges faced by information technology (IT) departments of public sector organizations from an IT service delivery perspective and proposed an approach from TechM to address these challenges by establishing an IT service design practice as a part of these organizations.

The paper also covers details of latest information technology trends that are adopted implemented by public sector organizations across the globe and the need for IT service design principles to enable successful realization of business benefits from these latest technologies.

KEY TAKEAWAYS

The key areas covered in this whitepaper are as follows:

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INTRODUCTION

Public sector organizations across the globe are faced with challenges to increase efficiency, comply with regulations, ensure security of citizen data, and provide citizen centric services/ platforms. In addition to these, they are faced with an increase in demand for online services due to COVID-19 pandemic.

The citizens across various countries are now expecting better quality of online services. They are expecting an omnichannel experience with better interoperability across various departments of governments.

Public sector organizations generally establish IT departments within their organizations and can also involve third party vendors to deliver IT services/projects. These

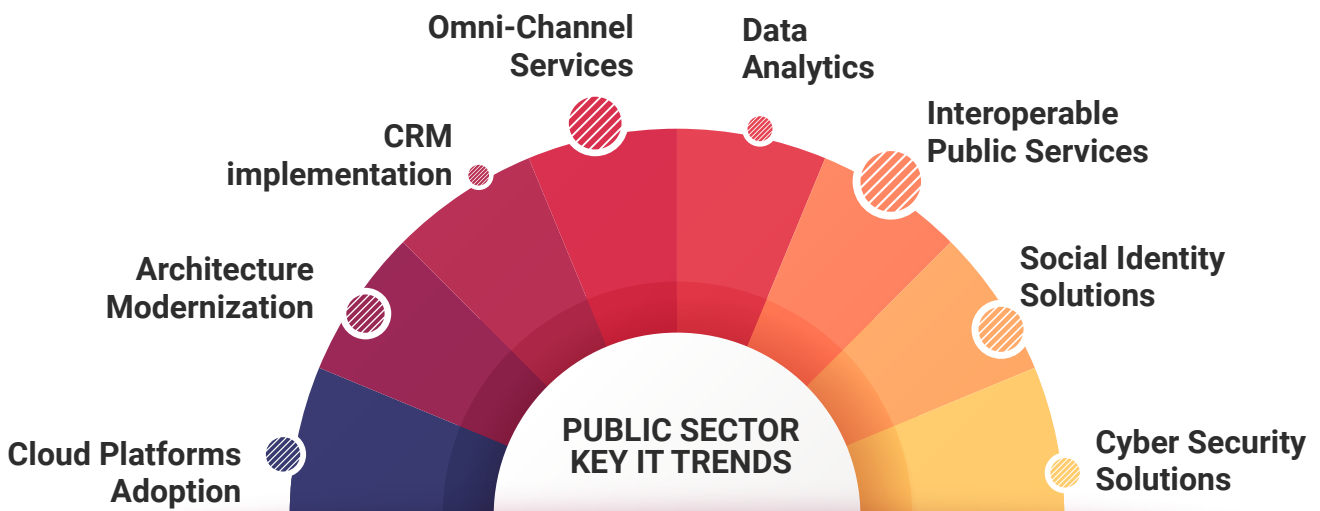
IT services can be related to delivering better online services/experiences to their citizens and can also be targeted to achieve sustainable development goals (ex. IT services enabling smart meters deployment across the country that supports real-time monitoring and reduction in energy consumption).

Effective and efficient development and delivery of these IT services can be achieved by following IT service design practices in alignment with standard Information Technology Infrastructure Library (ITIL) principles. This white paper covers details around IT service design approach that IT departments of public sector organizations should follow to deliver IT services to their citizens.

MARKET STUDY COVERING KEY TECHNOLOGY AND IT TRENDS

Across the globe, government IT spending is growing rapidly year on year. Similar growth is expected during and beyond 2022.

Below mentioned are the latest technology trends in public sector organizations:



The government organizations across the globe are moving towards



Cloud Adoption

Cloud-first strategy across IT services of government departments



Architecture Modernization

Modern and modular architectures reduce IT cost pressure



Customer Relationship Management (CRM) Implementation

Focus on developing CRM solutions to enable effective delivery of various services for its citizens



Omnichannel Services

Focus on developing citizen services to be delivered across various channels (mobile, web, chat, etc.) to improve citizen satisfaction



Data Analytics

Adopting advanced analytics technologies like artificial intelligence (AI), machine learning (ML), and data mining to improve efficiency, effectiveness, and consistency of decision making



Interoperable Public Services

Enabling connected public services by sharing data across various departments. This is achieved with the help of multiple technologies, tools, or platforms to automate business and IT processes.



Social Identity Solutions

Developing social identity solutions to deliver government services efficiently for the citizens.



Cyber Security Solutions

Cyber security solutions to ensure security of citizen data across various services provided by them.

Delivering these technologies require in-house or vendor-provided IT professionals who can develop functional specifications (per requirements of government executives or policymakers) and deliver those requirements.

In most organizations, the key focus is always on developing functional requirements/specifications. But sometimes there is a lack of focus on non-functional or post-go-live service delivery aspects. This can lead to serious issues/challenges after the solutions are live and citizens start using those services.

IT services developed by government organizations are used at national, state, or district levels and any outage or issues with these services can impact millions of citizens and can have a very high impact on overall citizen services. Hence, it is very important to consider effective service design during the lifecycle of IT projects that deliver the above-mentioned key technologies.

The focus of this white paper is to highlight the need for effective service design from a non-functional or post-go-live service delivery perspective and provide a holistic approach to establishing service design practices within any government organization.

NEED FOR IT SERVICE DESIGN FROM PUBLIC SECTOR PERSPECTIVE

Public sector organizations around the world face many challenges including budget cuts, high expectations from the public, and increasing challenges in vital areas such as health and education. While service design is well set practice in private sector, public sector is often viewed as slow to respond and even slower to adapt the service design principles, practices, and methods.

Below mentioned diagram covers key challenges faced by public sector organisations and how service design practices can help effective delivery of IT services post deployment of these solutions/ services.

Challenges	Description	How Service Design Approach can help
Poorly Designed IT Services	Services not designed per standard industry practices and a holistic approach covering internal teams, vendors & partners not developed	A comprehensive class of service model development Standard Service Design approach across the organization to be followed for new product/service launches
Lack of Business – IT Alignment Across Services	Lack of alignment with business stakeholders regarding SLAs for IT services	Service Level Agreement development as per standard ITIL practices to ensure Business-IT alignment
Revenue Loss Due to Incidents	Lack of effective resolution of high priority incidents can cause revenue loss across various government departments	A comprehensive and agreed support model to address such high priority incidents
Unplanned Downtime Causing Poor Citizen Experience	Ineffective management of planned maintenance activities can cause significant downtime for IT services	Service Design practice can develop an effective change management process to address such issues
SLA Alignment Issues with Vendors	Ineffective design of operational processes between the organization and vendors	Underpinning contracts and operating level agreement development with vendors to ensure SLA alignment
Lack of Service Performance Analytics	Service performance metrics not aligned with business expectations. Lack of regular & ongoing reporting/ analytics	A comprehensive service level requirements framework to design and deliver service performance reporting/ analytics

IT SERVICE DESIGN – VALUE PROPOSITION AND BENEFITS

IT service design is rooted in design thinking which engages with both service users and service delivery teams to gain an understanding of the service as well as how to establish holistic and effective IT service management (ITSM) processes that support the ongoing delivery of services to citizens.

The following are some key value propositions related with IT service design practices to be implemented in public sector organizations.

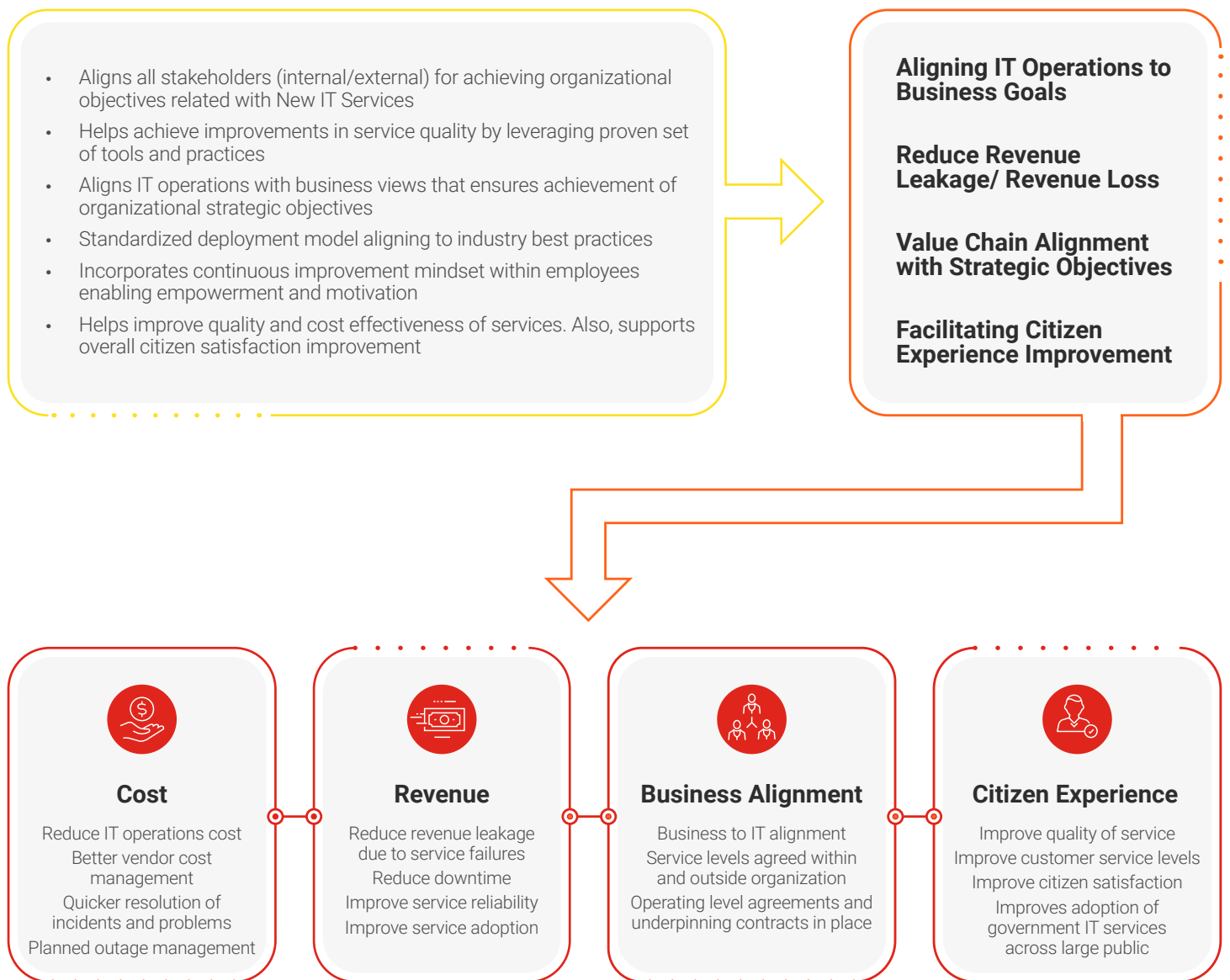


Figure 3: Service Design value proposition

IT Service design in public sector organizations can provide benefits ranging from operational cost reduction, revenue loss reduction/revenue enhancement, business- IT alignment, and overall improvement of citizen experience with various IT services.

IT SERVICE DESIGN – TECHM OPERATING MODEL

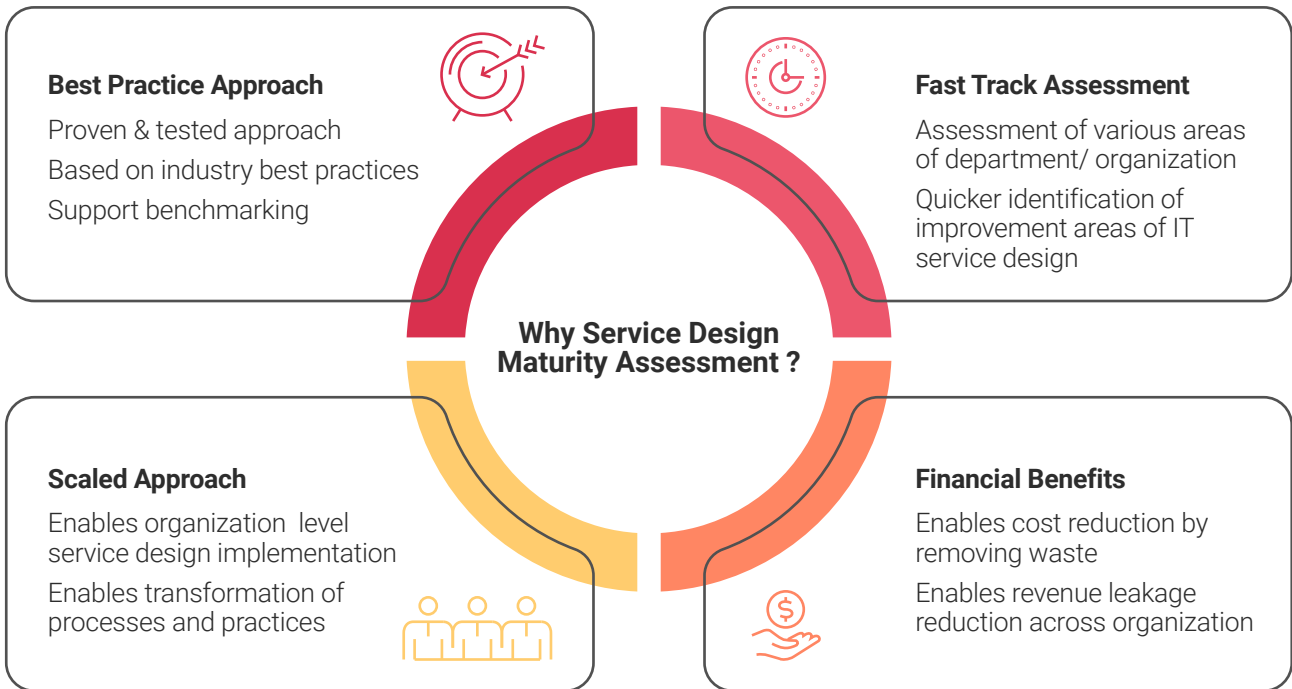
As service design brings along principles, processes, and tools to improve customer experience, it is most important to adapt the right operating model for establishing effective service design practice in an organization.

The following are some key steps in establishing the IT service design operating model.

IT Service Design Maturity Assessment

The assessment model is based on key industry best practices (ITIL, Prince 2, ISO 20000, and ISO 27001) and on TechM's experience of establishing and executing service design practices for organizations across the globe. The outcome will provide information regarding current maturity of the organization across domains and sub-domains.

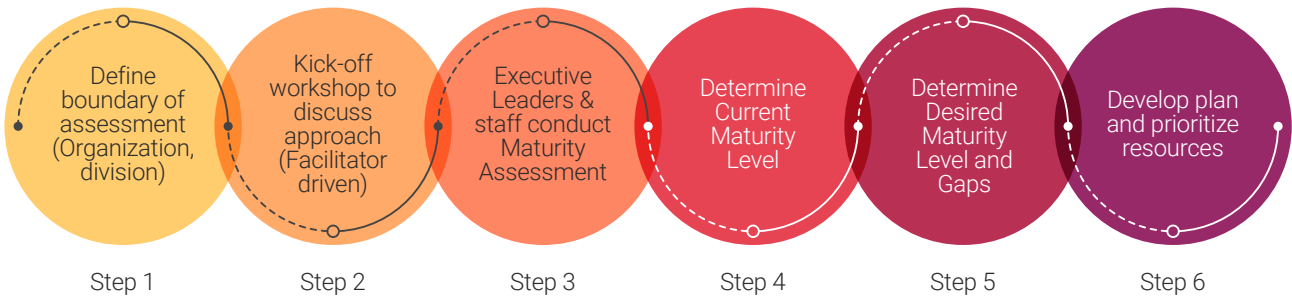
The below diagram provides additional details regarding the need for service design maturity assessment, methodology for conducting assessment and an indicative view of service design maturity assessment model.



Key Aspects

- Assessment will cover various capabilities under 3 main areas
- Each capability will need to be scored on a scale of 1 to 5
- Assessment will need to be done by senior stakeholders and operational employees
- Improvement roadmap will be created based on capability gaps

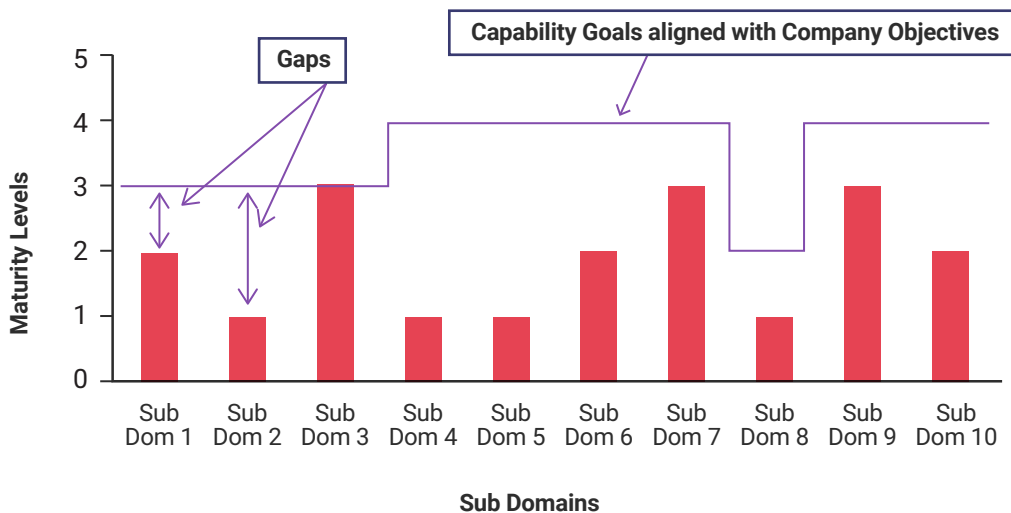
Methodology for SD Maturity Assessment



SD Capability Maturity Assessment Model – 4 Industry Standards based

ITIL	Prince2	ISO 20000	ISO 27001
Domains - 4	Domains - 7	Domains - 13	Domains - 14
Sample Sub-Domains Service Design Service Transition Service Operations Asset Management Change management	Sample Sub-Domains Starting up Project Initiating Project Directing Project Closing Project Create the Project Plan	Sample Sub-Domains IT Service Continuity Management Event Management Knowledge Management Incident Mgt	Sample Sub-Domains Information Security management Access management and Control Operations Security

Assessment



Overall service design maturity of the organization shall be assessed at six levels i.e., Level 0 (non-existent) to Level 5 (optimized). This will provide current maturity of the organization.

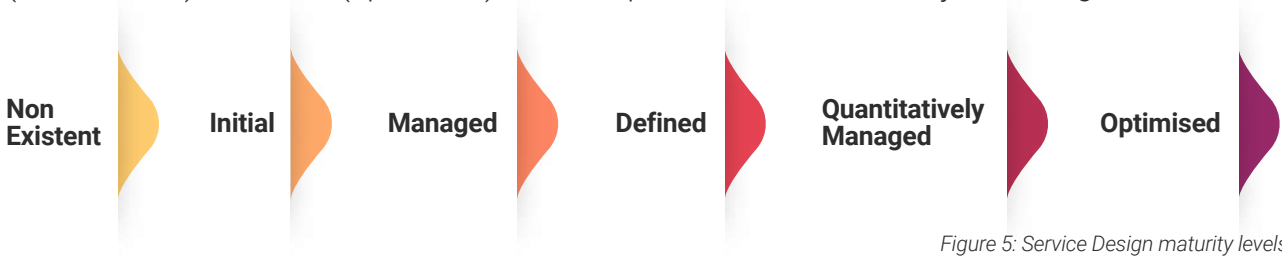


Figure 5: Service Design maturity levels

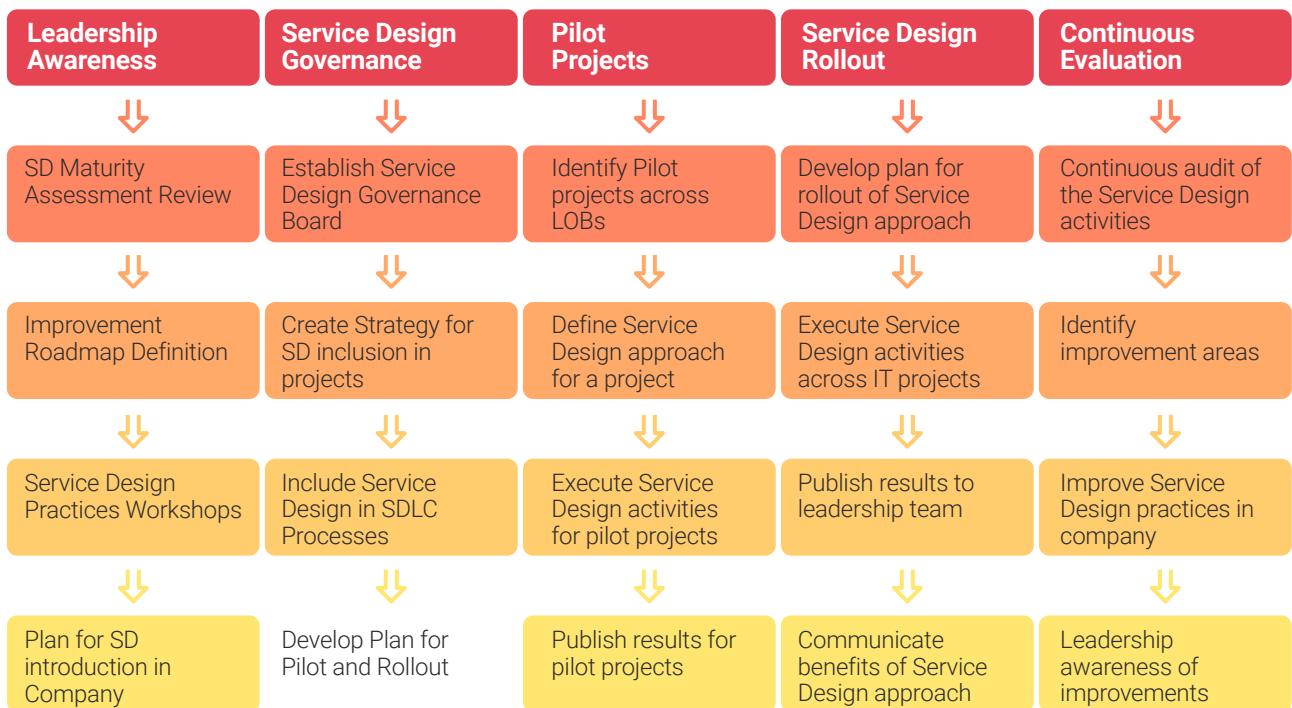
Based on discussion with the IT leadership team, target maturity state for service design practices shall be finalized and a roadmap shall be created to achieve target state. The roadmap should focus on improving maturity of various domains and sub-domains that have lower maturity level compared to target maturity level.

IT Service Design Practice Establishment Approach

Once the service design maturity assessment is complete, a roadmap should be defined for enhancing/establishing the service design practice within an organization.

Below diagram provides additional details regarding the approach for service design practice establishment and key enablers developed by TechM to assist with this approach.

Approach



The IT service design practices/processes developed as part of this step should be followed across the organization and all IT projects

Following are some key roles from a service design practice perspective and their responsibilities:

1. Service Designer: This is the key role and will be responsible for setting up service design practices
2. Service Design Lead: Will be responsible for design governance and IT leadership reviews
3. IT Leadership team: Will provide funding and ensure acceptance of service design principles across organization

IT Service Design – Project Level Execution Approach

IT departments of public sector organizations should follow a standard service design approach for individual projects. The below diagram provides details regarding project level approach and some key deliverables that are produced by a service designer while working on various IT projects.

Approach

Project Initiation/ Engagement

Service design engagement
 Project scope review
 Service design impact assessment
 Organization level Service Catalogue update

Business-IT Alignment

Business / IT alignment for Service Level Requirements finalization
 NFR requirements finalization with business/ service management
 Service reporting finalization

Operational Support Design

Class of Service/ Service Levels finalization
 Vendor contract negotiations and SLA alignment
 Underpinning contract/ OLA definition
 Operational support model agreement

ITSM Processes Design

Major incident management process finalization
 Change management process finalization
 Business Continuity management process finalization
 Event/ Incident/ Problem management process finalization

Service Level Reporting Setup

Capacity management and reporting finalization
 New product related Service level reporting finalization
 IT Service Management tool setup

Operational Acceptance

Service/Product management acceptance of service
 Operational support acceptance
 Service transition and deployment management

Key Deliverables



Service Design Audit Framework & Templates



Service Design Pack



Support Model



Fault Management Tables



Service Level Requirement



Service Level Agreement



Underpinning Contract



Operating Level Agreement



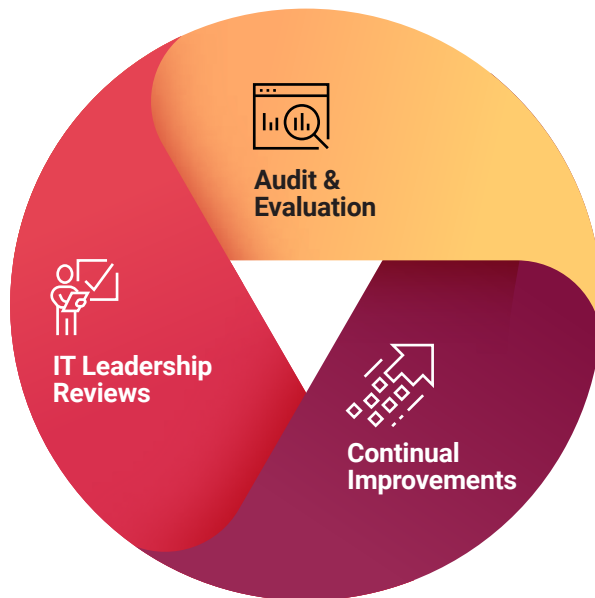
Configuration Management data



Major Incident Database

IT Service Design – Governance Approach

An IT service design governance approach should be established by public sector organizations to ensure effective execution of services design practices and realization of expected business benefits from these practices.



The above diagram provides a view of key tenets of IT service design governance approach that should be developed by IT Departments of any public sector organization.

Audit and Evaluation: The service design team should develop an effective audit and evaluation framework to check adherence to service design procedures and practices established by the IT department. These audits should highlight conformance to practices and any gaps in compliance

Continual Improvements: Service designers working across various IT projects across the organization should continually identify opportunities for improving/enhancing service design procedures/ practices. These should be fed back to the senior IT leadership team





IT Leadership Reviews: The service design team should be conducting regular (ex. quarterly) reviews with senior IT leadership team to highlight service design performance across various IT projects, audit and evaluation results, and improvement opportunities identified. These reviews can help to ensure continued focus from IT leadership team for service design practice within an organization

CASE STUDY: NXT.NOW™ APPROACH

Europe Government Department

A Government department of a European country wanted to implement smart metering solution across the country with the help of Tier 1 UK telco (that was supporting IoT Services and IT services).

Tech Mahindra has been enabling Tier 1 telco providers to implement service design practices for the smart metering implementation program delivered for a European government department

IT Services / Products	Description	Solution/Approach	Benefits
Smart Metering Implementation Program (SMIP)	A govt department of a European country wanted to implement smart metering solutions across the country with the help of Tier 1 UK telco (that was providing IoT services and IT services). Smart metering solution is expected to reduce energy consumption and thereby reduce carbon footprint across the country.	<ul style="list-style-type: none"> TechM has helped Tier 1 Telco provider to establish it service design practice for the SMIP program TechM service designers established ITSM processes/practices and delivered key service 	 <p>Increase in revenue and profits</p>  <p>Improved customer experience by reducing down time of IT Services</p>
MS Azure Cloud Implementation	Tier 1 UK telco was planning to introduce Microsoft Azure cloud solution for storing transactions related data for the smart metering IoT service delivered to European govt department. The cloud solution was expected to help bring scalability and to reduce capex cost for the company	<ul style="list-style-type: none"> TechM had helped Tier 1 UK Telco provider to implement service design practices for this project TechM service designers ensured alignment between service requirements from business and SLAs provided by cloud vendor Various ITSM processes including operational support process was 	 <p>Operational cost reduction</p>  <p>Omni-channel experience for customers</p>

Going Forward

In the light of what we discussed here, it is evident that service design practices can enable IT departments of public sector organizations to deliver IT Services that have higher citizen satisfaction, sustainable post-go-live performance, low downtime, low operational cost overruns, and higher business stakeholder satisfaction.

Hence, IT departments of public sector organizations should focus on establishing IT service design practices within their organization and ensure IT projects across various portfolios follow the set practices and principles.

This can help public sector organizations to achieve their objectives of providing reliable services to their citizens and ensure overall citizen satisfaction.

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