Moving from Traditional Service Design to Digital Service Design
Abstract

This whitepaper covers key challenges faced by organizations that are on the journey of transforming their traditional IT services into digital IT services. The proposed approach from TechM is to address these challenges by establishing digital IT service design practices. This paper also covers details of design thinking principles, digital service design methodologies and trends that can be adopted by organizations who are aiming to provide digital services to improve their customer’s experience.

Key Takeaways

The key areas covered in this whitepaper are as follows:

Introduction ................................................................................................................. 02
Market Study Covering Digital Service Design Trends ............................................. 02
Opportunity for Service-Oriented Organizations to Move from ......................... 04
Traditional Service Design to Digital Service Design

   Traditional Service Design Lifecycle ................................................................. 05
   Digital Service Design Lifecycle ................................................................. 06
      Service Empathy Maps .............................................................................. 06
      Service Prototype (Support Model) ....................................................... 07
      Service Acceptance Criteria ................................................................. 07

   Digital Service Design – Value Proposition/ Benefits .................................. 08

   Digital Service Design – TechM Operating Model ................................. 08

      Digital Service Design Maturity Assessment ........................................ 08
      Digital Service Design Practice Establishment Approach ................... 09
      Digital Service Design - Project-Level Execution Approach ............. 09

   Conclusion ......................................................................................................... 11

   About the Authors ............................................................................................ 12
Introduction

Service-oriented organizations across industries are facing challenges to improve customer experience, ensure the security of customer data, and provide digital services/platforms. In addition to these, they are faced with an increase in intensity and demand for digital services to compete with current market trends. Organizations across the globe are now expecting better digital services. They are anticipating an approach to enhance the overall quality of interoperability between customer organization and vendor organization. Service-oriented organizations generally establish customer-centric design departments within their organizations to build services to meet their business demands and involve third-party vendors to deliver better services. These services can be related to delivering better digital services/ user experiences to their customers and can also be targeted to achieve business goals. Effective and efficient development and delivery of these digital services can be achieved by following digital service design thinking principles in alignment with standard information technology infrastructure library (ITIL) principles. This white paper covers details around the digital service design approach customer-centric design departments within the service-oriented organizations can follow to deliver digital services to their customers.

Market Study Covering Digital Service Design Trends

Information and communications technology (ICT) spending by service-oriented organizations across is growing rapidly and is expected to grow during and beyond 2023.

Some of the latest technology trends adopted in service-oriented organizations are as follows.

![Figure 1: Technology trends adopted in service-oriented organizations](image-url)
Cloud Platform Adoption
Cloud technology adoption across service-oriented organisations to minimize IT infrastructure cost.

Data Analytics
Data analytics allow organizations to analyse existing service issues and risks to manage them well and minimize their impact on processes and outcomes.

Artificial Intelligence and Machine Learning (ML)
Adopting advanced analytics technologies like artificial intelligence (AI) and machine learning (ML) to improve efficiency, effectiveness, and consistency of decision-making.

Internet of Things (IoT)
IoT has scope for plenty of offers including predictive maintenance, asset tracking, and advanced process automation.

Cybersecurity
Cybersecurity solutions to ensure the security of customer data across various services provided by the service-oriented organization.

Robotic Process Automation (RPA)
Robotic process automation enables to automate software and office operations. It encompasses an ecosystem of interaction with other technologies such as AI, credential encryption, and business process management which enhances further decision-making capabilities as well.

Examples:

Virtual Assistant (AI) is used to help in completing customer journeys. Digital service design will facilitate in defining key customer journeys to improve customer experience.

Chatbots (RPA) is used to support/resolve the issues in customer journeys. Digital service design will facilitate in defining intelligent support model with respective incident scenarios for faster resolution and improving seamless customer experience.

Delivering these technologies requires in-house or commercial off-the-shelf (COTS) products which can meet business demands rapidly.

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-launch service delivery aspects. This can lead to critical issues/challenges after the solutions are live and customers start using those services.
Opportunity for Service-oriented Organizations to Move from Traditional Service Design to Digital Service Design

Service-oriented organizations across various industries face many challenges including cost-cutting, high expectations from their customers, and increasing challenges in business areas such as sales and service, middle office, back office, and vendor organizations. While most service-oriented organizations are practicing traditional service design methodologies they still face various challenges which are explained in the following table. This covers key challenges faced by service-oriented organizations and how digital service design practices can facilitate effective and efficient delivery of digital services post-launch of these solutions/services.

<table>
<thead>
<tr>
<th>Challenges in Traditional Service Design</th>
<th>Description</th>
<th>How Digital Service Design Approach Helps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate/Insufficient run and operate requirements</td>
<td>It is often observed that Business requirements are captured thoroughly in function requirements and most of the time run and operate requirements are ignored at the time of designing the product and solution which has repel impact and leads to bad user experience with the issues identified after the service is launched.</td>
<td>A comprehensive design document that accommodates both functional and detailed run and operate requirements to be practiced for existing and new digital services.</td>
</tr>
<tr>
<td>Lack of service Blueprint</td>
<td>Non-adherence to service blueprint practice can introduce challenges in identifying customer journeys, interactions, and touchpoints.</td>
<td>The practice of service blueprint provides a complete picture of how the service and user experience is delivered-to-end end customer journeys, front office to back office, and across different components/elements.</td>
</tr>
<tr>
<td>Well described vision and design principles are not practiced</td>
<td>Service design thinking principles such as user-focused, collaborative, Comprehensive, Demonstrating, and Iterative concepts are not fully practiced while designing and developing the service.</td>
<td>The vision of service design is to prepare both customer-facing office and support office proposals that meet the customers’ needs in the most relevant way while remaining financially viable for the service provider.</td>
</tr>
</tbody>
</table>

Products and services developed by service-oriented organizations are used by retail, enterprise, and SME customers, and any outage or issue with these services can impact a large customer base and can have an exceedingly high impact on overall customer experience. Hence, it is important to consider effective digital service design during the lifecycle of projects that deliver the above-mentioned trending technologies.

This white paper aims to address the need for effective digital service design covering all aspects including non-functional or post-launch service delivery perspective. It aims to provide a comprehensive approach to establishing digital service design practices within the service-oriented organization.
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<tr>
<td>Lack of service prototype</td>
<td>Cost overruns for the services to be built and no mechanism to validate the design and collect feedback from the customer before the launch.</td>
<td>Service prototypes play a vital role before launching service into the market, it allows designers to refine and validate designs quickly and without the massive capital expenses associated with the development of entire solutions. Prototypes assist in understanding from breakdowns, collect responses and gradually enhance the services to meet the customer expectations</td>
</tr>
<tr>
<td>Siloed ways of working across the business areas</td>
<td>In today's world organizations are facing challenges towards siloed ways of working which causes an adverse impact on the delivery of products and services. Siloes ways of working are not yielding the best results due to actions not aimed at practical issues, over expenditure of funds and time, repetition of efforts, possibility of errors and adverse effects on relationships and communication</td>
<td>Cost, time, and quality can be managed efficiently by building collaboration between IT departments, business functions, and suppliers</td>
</tr>
</tbody>
</table>

**Traditional Service Design Lifecycle**

Traditional service design is the activity of planning and organizing the business's resources (people, products, and processes) manually to improve the customer's experience.

![Figure 2: Traditional service design lifecycle](image-url)

*Figure 2: Traditional service design lifecycle*
Digital Service Design Life Cycle

Digital service design is the activity of planning and organizing the business’s resources (people, products, and processes) by adopting digital technologies and using design thinking principles to provide best in class customer experience.

<table>
<thead>
<tr>
<th>Empathy</th>
<th>Define</th>
<th>Ideate</th>
<th>Prototype</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activities:</strong></td>
<td>Gather operational user stories</td>
<td>It involves collating data from the Empathise stage to define the design problems and operational support challenges.</td>
<td>In this phase all operational stakeholders will participate in brainstorming session to gather ideas to address operational problems.</td>
<td>Perform readiness check for service Launch.</td>
</tr>
<tr>
<td><strong>Deliverable:</strong></td>
<td>Service Support Empathy Map</td>
<td>Baseline Operational User Stories</td>
<td>Service Blueprint</td>
<td>Service Readiness</td>
</tr>
</tbody>
</table>

**Activities:**
- Perform readiness check for service Launch.
- Service Readiness
- Service Design pack
- Intelligent Reporting (e.g., BI Reporting/MicroStrategy Reports)

**Deliverable:**
- Service Readiness Service Design pack
- Intelligent Reporting (e.g., BI Reporting/MicroStrategy Reports)

**Service Empathy Maps**

*S* Says
- I want to automate my repetitive daily tasks
- The current process was easy!
- I really like that existing process

*T* Thinks
- This process is tedious
- How is it different from current way of working?
- Is this really beneficial?

**OPERATIONAL USER**

**D** Does
- Make Decisions
- Share feedbacks
- Completes processes

**F** Feels
- Excited
- Confuse
- Curious

Figure 3: Service empathy maps
Keep Customer Informed (KCI) is a process of sharing right information at right time (e.g., order/ticket status) as per defined SLA.

**Service Blueprint**

**Customer Journey**
- Discover
- Buy
- Get Started
- Use
- Manage
- Leave/Stay

**Line of Interaction**

**Virtual Assistant (AI)**
- Place Order
- Activate Order Activation
- Pay As You Use
- Customer Change Request
- Answer Customer Queries
- Provide Solution for Complaints
- Service Termination/Retainment

**Line of Visibility**

**Respond to chat queries (Chatbots)**
- Customer Journey Management
- Customer Billing Info
- Manage Logistics
- Customer Billing Issues
- Fraud Management
- Revenue Assurance Management
- Billing Operations

**Line of Internal Interaction**

**Analytics logs**
- Customer Self Service
- Customer Support Management
- Customer Complaint Management

**Service Prototype (Support Model)**

**Components**
- Technical Components

**Entry Points**
- Chatbots (Auto Ticket Assignment)

**1st Line Support**
- Email/Push Notification

**2nd Line Support**
- Email/Push Notification
- Resolution/Reassignment

**3rd Line Support**
- Email/Push Notification
- Resolution/Reassignment

**3rd Parties**
- Email/Push Notification
- Resolution/Reassignment

Figure 4: Service blueprint

Figure 5: Service Prototype (Support Model)
Digital Service Design – Value Proposition/Benefits

Digital service design is based on design thinking principles in both service delivery and operations teams to obtain an understanding of the service as well as how to establish holistic and effective digital IT service management processes that supports the continuous delivery of digital services to their customers.

Key value propositions from digital service design practices are indicated below:

**Cost**
- Reduce IT operations cost
- Better vendor cost management
- Quicker resolution of incidents and problems
- Planned outage management

**Customer Experience**
- Improve quality of service
- Improve customer service levels
- Improve customer satisfaction

**Business Alignment**
- Business to IT alignment
- Service levels agreed within and outside the organization
- Operating level agreements and underpinning contracts in place

Digital Service Design – TechM Operating Model

As service design brings along principles, processes, and tools to improve customer experience, it is most important to adopt and caputulate the right operating model for establishing effective service design practices in an organization. The following are some key steps in establishing the digital service design operating model.
Digital Service Design Maturity Assessment

Service-oriented organizations with a superior level of digital service design maturity will have advantages like Business performance indicators, return on investment, go-to-market, cost efficacy, product value, and customer experience. Organizations with no digital service design maturity will strive to achieve business benefits.

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

Methodology for Digital Service Design Maturity Assessment

Define boundary of assessment (organization, division)
Kick-off workshop to discuss approach (facilitator driven)
Executive leaders and staff conduct maturity assessment
Determine current maturity level
Determine Desired maturity level and gaps
Develop plan and prioritize resources

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 the current maturity of the organization.

The outcome of the maturity assessment will provide a future roadmap for improving identified business areas that have lower maturity levels when matched with the target maturity level.

Digital 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. The below diagram provides additional details regarding the approach for service design practice establishment and key enablers developed by TechM to assist with this approach.
A roadmap for enhancing/establishing digital service design practice is an outcome of service design maturity assessment.

**Digital Service Design – Project-Level Execution Approach**

Service-oriented organizations should follow a standard digital service design approach for strategic projects. The below diagram provides details regarding the project-level approach and some key deliverables that are produced by a service designer while working on various digital projects.

<table>
<thead>
<tr>
<th>Digital Project Initiation/Engagement</th>
<th>Business IT Alignment</th>
<th>Operational Support Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service designer engagement</td>
<td>Business / IT alignment for service level</td>
<td>Class of service/ service levels finalization</td>
</tr>
<tr>
<td>Project scope review</td>
<td>Requirement finalization</td>
<td>Vendor contract negotiations and SLA alignment</td>
</tr>
<tr>
<td>Service design impact assessment</td>
<td>Non-functional requirements finalization with business</td>
<td>Underpinning contract/ OLA definition</td>
</tr>
<tr>
<td>Organization-level service catalogue update</td>
<td>Service management</td>
<td>Service blueprint</td>
</tr>
<tr>
<td></td>
<td>Service reporting finalization</td>
<td>Operational support model agreement (service prototype)</td>
</tr>
<tr>
<td></td>
<td>Service empathy map</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ITSM Processes Design</th>
<th>Service Level Reporting Setup</th>
<th>Operational Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major incident management process finalization</td>
<td>Capacity management and reporting finalization</td>
<td>Service/product management acceptance of service</td>
</tr>
<tr>
<td>Change management process finalization</td>
<td>New product related Service level reporting finalization</td>
<td>Operational support acceptance</td>
</tr>
<tr>
<td>Business continuity management process finalization</td>
<td>IT service management tool setup</td>
<td>Service transition and deployment management</td>
</tr>
<tr>
<td>Event/ incident/ problem management process finalization</td>
<td></td>
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</tbody>
</table>

**Digital Service Design – Governance Approach**

A digital service design governance approach should be established by service-oriented organizations to ensure the effective execution of services design processes and procedures which will deliver value to the business.
Service designers working across various digital projects across the organization should continually review the gaps identified in the audit and work towards addressing those gaps to improve/enhance existing service design procedures/practices. These improvements need to be communicated to the customer management team.

Continuous Service Improvement

The service design team should conduct regular (ex. monthly, quarterly, and ad-hoc basis) reviews with the customer management team to highlight service design performance across various portfolios. The outcome of audit and evaluation leads to improvement opportunities. These reviews can help to ensure focus from the customer management team in the service design area.

Conclusion

Considering what we discussed here, digital service design practices can enable customer-centric design departments of service-oriented organizations to deliver improved services that have enhanced customer experience, maintenance and support post-launch, minimal interruption, low operational cost, and greater business stakeholder satisfaction. Therefore, customer-centric design departments of service-oriented organizations should focus on establishing digital service design practices within their organization and ensure projects across various portfolios follow the set digital practices and design thinking principles. This can help service-oriented organizations to achieve their business objectives/goals by providing digital services to enhance customer experience.
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