Prodapt Chase Extraordinary

Experience can make a huge difference – Get it right

Mastering the implementation of digital capabilities is the key to overcome experience disconnect

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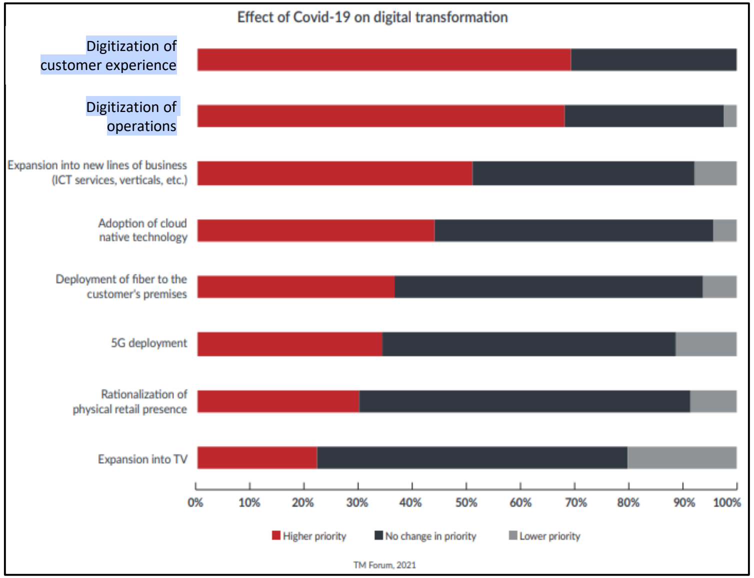
Building robust digital capabilities can deliver huge benefits, but DSPs may fail to realize this due to a **poor implementation strategy**



A recent TMForum survey shows that building digital capabilities (including digitization of customer experience and operations), is the highest post-pandemic priority for DSPs. These digital capabilities can improve **EBITDA and customer satisfaction by up to 30%** and **employee satisfaction by more than 50%.** At the same time, it can **reduce operational waste by as much as 50%.**

The painful reality is that most DSPs **fail to unlock value from digital initiatives** due to **poor implementation strategies**

A Mckinsey research shows that **70% of complex digital initiatives fail** to reach their stated goals due to the gap between strategy formulation and strategy implementation

An incorrect implementation decision taken at beginning of the project can increase **architectural technical debt** and cause expensive repercussions in the long run

Lack of insights in the implementation journey makes it difficult for DSPs to answer tough questions such as:

Where to start ?

How to start ?

How to get a head start ?

This mandates DSPs **to plan their implementation much more methodically** in order to **unlock full value** and maximize their limited resources.

Key focus areas for successful implementation of digital capabilities

1 Leverage customized **digital maturity assessment framework** to critically evaluate and implement telco-specific digital use cases

2 **Set up a clear transition architecture** to smoothly upgrade the digital maturity level

- Avoid design pitfalls that can degrade performance in the long run

3 **Define clear demarcations & layering** to create a balanced architecture

- Allows super rapid changes in each of the layers, without unwanted dependencies

4 **Use relevant industry standards** and best practices to guide through the implementation and give a right head start

How to start ?

Where to start ?

How to get a head start ?

This insight details the key focus areas that can help DSPs to **make first-time-right implementation choices and maximize its value.**

It highlights the major challenges any DSP might face in their implementation journey and provides proven recommendations to address them.

Use customized **digital maturity assessment framework** to critically evaluate and implement telco-specific digital use cases

Customize the **general** TM Forum maturity model to create an assessment framework that is more **focused** on tangible digital capabilities. Critically evaluate the current maturity level (low, medium, high) for **digital capabilities** and the underlying **enablers** to further plan the transition steps.

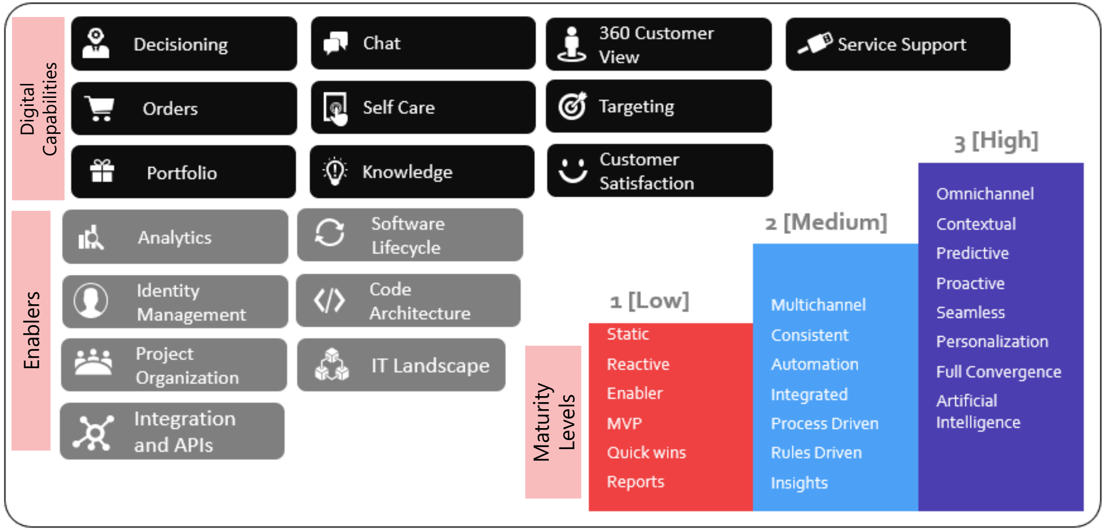


Fig: Customized digital maturity assessment framework

Digital Maturity Exercise Do's & Don'ts

Do's	Don'ts
Consider **business drivers** to set priorities and target maturity levels	Define high target maturity levels for all domains and aspects of the business
Try to **evolve all the domains** ensuring alignment & co-relation between them	Define extremely mature target in one domain and completely ignore another
Use this as an opportunity to **innovate, reinvent, differentiate** and transform customer experience	Increase maturity linearly driven by employees needs, addressing current limitations

Establish a clear digital vision

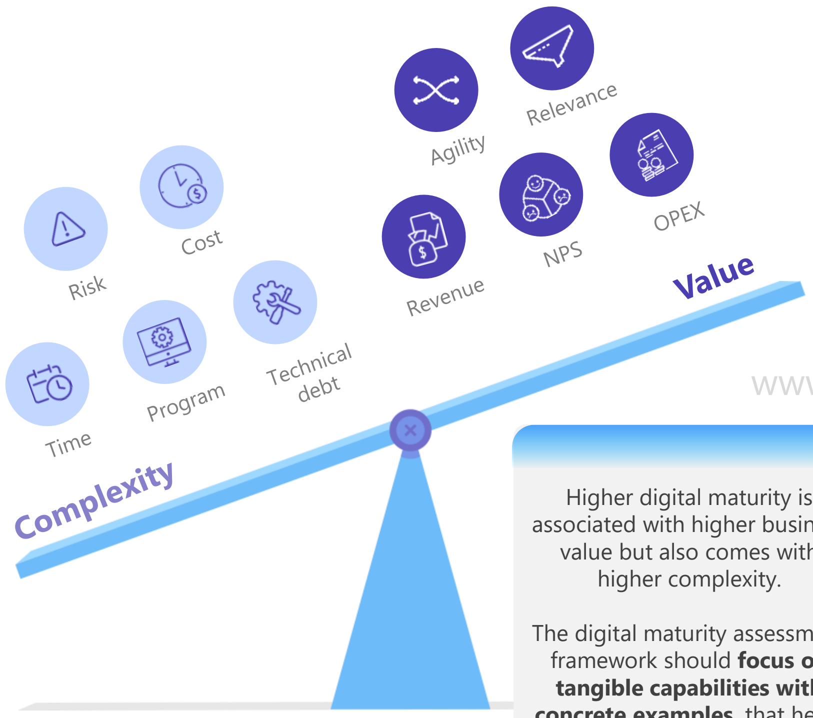
- A generic vision statement can be ambiguous and difficult for people to buy into and act
- Creating a vision that's meaningful and easy to understand is actionable
- This should provide tangible capabilities with concrete examples (detailed in next slide)

Focus on business priorities like revenue growth, customer satisfaction or operational efficiency to be truly transformative

- Resist jumping straight to solving technology related issues – This might lead to lengthy IT modernization project that may not address the business objective
- Instead, clearly understand what business outcome is and plan initiatives centre on business priorities

Assessing the digital maturity levels - complexity vs. value

1 2 3 4 A B



Higher digital maturity is associated with higher business value but also comes with higher complexity.

The digital maturity assessment framework should **focus on tangible capabilities with concrete examples**, that helps DSPs to build clear transition steps and upgrade it's digital maturity level.

Examples – Maturity levels for digital capabilities and enablers

Self Care – Bills, Products, Orders, Services

Value / Complexity

1 [Low] – Enabled

Enablement of multiple self-service channels like self-care portal and app

Exposure with basic use cases

2 [Medium] – Consistent

Consistent information across self-care channels with common sources of information

Possibility to do the most frequent use cases by a customer in a self-service channel

3 [High] – Everywhere

Higher personalization to have relevant information

Customers are fully empowered

Optimized experience and transitions between self-service channels

Self care everywhere – dedicated widgets to be displayed everywhere on the site, app and social platform

Integration and APIs

Value / Complexity

1 [Low] – API-enabled

APIs exposed internally

Limited reusability for integration

High amount of batch processes

2 [Medium] – Open APIs

Partial exposing of APIs

Introduction of API analytics

API gateways used for security

Introduction of microservices for certain customer-related processes

3 [High] – API Ecosystem

Ecosystem management of APIs

Telco participating in the API economy

Entirely event-driven architecture

Legacy monoliths are broken into microservices

Set up clear transition architecture to smoothly upgrade the maturity level

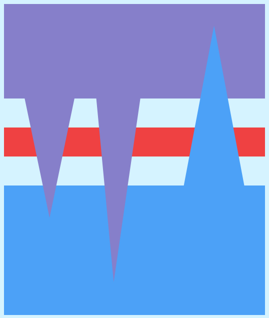
Avoid design pitfalls that can degrade performance in the long run

Typical Current Architecture

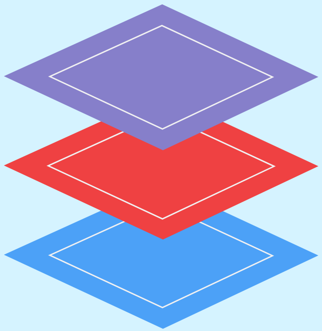
Either the frontend or the backend or both are typically blown-up, with logic scattered across. Has many different patterns and multiple technologies

Integration layer is very thin with minimal or no logic

Backend is often adjusted to serve the frontend. This highly convolutes the back-end design & its responsibilities



Ideal Target Architecture



All layers are in proportion with logic residing in each layer, with clear boundaries & responsibilities

Required logic should be built in the digital enablement layer to serve the frontend requirements

Backend should focus on serving the frontend but **not necessarily adjusting to it**. It should expose its data & seamlessly integrate with it when necessary

Key Recommendation for building transition architecture

During the transition it is important to **support both the current and the target architecture in parallel** to avoid any negative impact on the business and customer experience

Understand the entire customer journey and focus on complete e2e use case

Consider options that works cohesively in the journey. E.g.: While transitioning a login journey or a usage/invoicing journey, fix the whole journey and not just the single API or a single screen/page/function

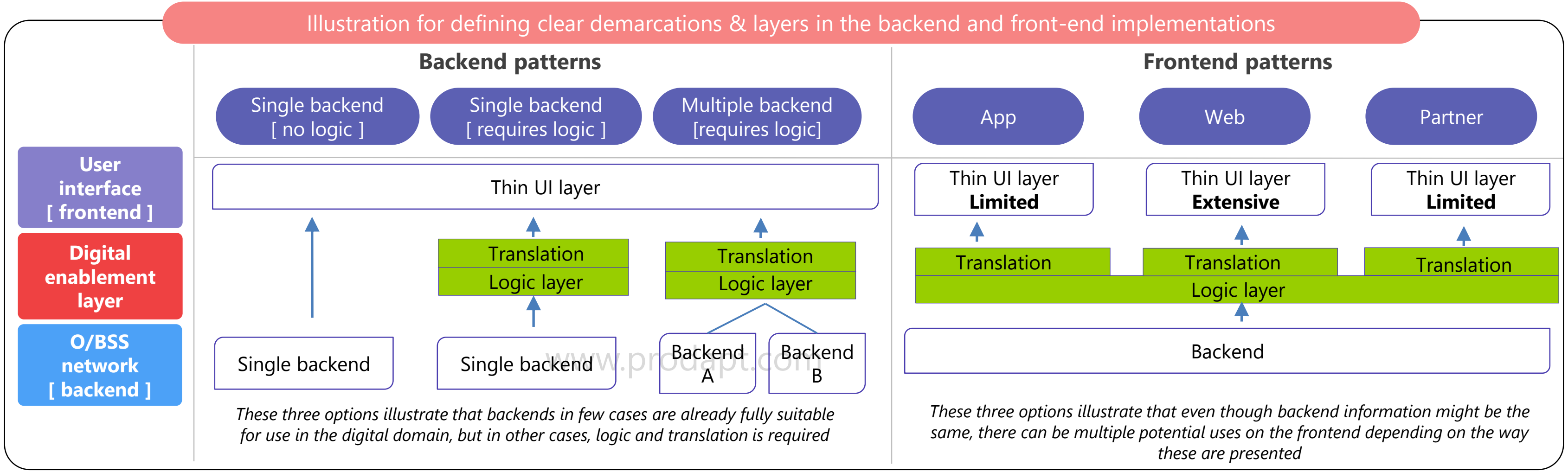
Identify call drivers and customer feedback to prioritize the implementation

- For most operators, **60-70%** of customer queries are related to **usage and invoice**. So, a digital self-care to provide usage and invoice details can be an ideal module to start with
- Pick a scope that has a clear MVP. Focus on a clear operational and commercial pain point to create measurable results

Define clear demarcations & layering to create a balanced architecture

Solve the logic in the right layer to avoid creating a top-heavy or bottom-heavy architecture

Digital enablement layer **bridges** the UI and backend. When required, it **combines multiple sources, adds business logic and translates** and presents to the UI layer.



Backend Pattern Examples

- **No Logic**: Getting customer details from the CRM
- **Single backend with logic**: Getting the product details but only displaying the data bundles
- **Multi backend with logic**: Getting commercially installed base and usage information OR getting customer details from two BSS

Recommendations

- For some backends, business logic and translation is required. Here, the **digital enablement layer should focus on hiding the back-end complexity** and do the required translation
- Backend should only focus on exposing the data but in a format and logic that belongs to the domain

Frontend Pattern Examples

- In the **app,** only the first name of the customer is displayed, while on the **web,** the full name is shown
- Limiting the search capabilities of **partners** (to prevent them from searching customers they don't 'own')

Recommendations

- Here, the **digital enablement layer should focus on abstraction and serving the frontend**
- Presentation differentiation across technology platforms and/or user groups can be done in the UI layer

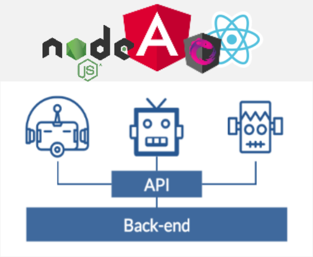
Use industry standards and best practices to guide the implementation

1 2 3 **4**

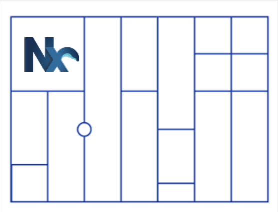
Building the front-end, core and integration capabilities from scratch can become a daunting task for DSPs. Thus, it is crucial to leverage the right industry standards (based on the requirements) that can give a head start, saving lot of time and effort in the process.

Standards for frontend capabilities

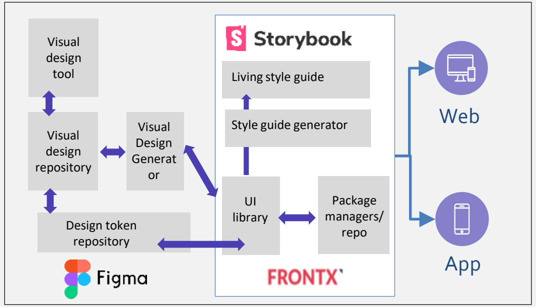
Implement a **headless architecture** that is lean and allows greater flexibility in developing applications



Build **mono-repository** for all apps like Angular, React, Node.js and web components. This promotes transparency, reuse & collaboration, reducing future development and maintenance effort. Use **domain driven design** to ensure scalability



Develop **design systems** to support consistent user experience across different brands and OpCos



Standards for core digital capabilities

- **TM forum open APIs** enable inter-operability, open digital architectures and seamless end-to-end management of complex digital services
- **TM forum information framework** provides standard definitions for all the information that flows through the enterprise, in-between the service providers and their business partners
- Open-source software projects like **Open Web Application Security Project (OWASP) foundation** ensure **digital security** across the IT stack

Standards for integration capabilities in microservices & cloud-native apps

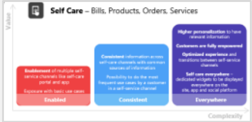
Select the right **digital integration patterns** based on requirements:

- Use **direct API** *for* channel applications and partner integrations, with simpler transactions and minimal operational complexity
- Use **messaging** for integrating with applications that need to be decoupled, to ensure guaranteed delivery
- Use **events** *for* managing distributed transactions with high resiliency, performance, and availability

Analyse integration capabilities while building microservices or cloud-native applications to pick the right technology or framework based on the requirements:

- For **complex orchestration logic,** select a framework that is easy to write those kinds of compositions
- For **long-running** service, select a framework that has built-in support for workflows and compensations

Sample use case: A potential implementation pattern for **self-care** (usage and invoice)



Digital maturity assessment enables DSP to:
- Calculate **current** maturity based on evaluation criteria
- Define **target** maturity score

Proper demarcation and layering will allow super rapid changes in each layer, without unwanted dependencies.

Identify the tangible capabilities that are essential for transitioning to higher maturity level

Customers want insights about their out-of-bundle usage and costs to compare them with the previous month.

If an **invoice is higher than expected**, a customer may want to understand the reason. Providing insights explaining the spikes will reduce customer care calls and dissatisfaction.

*Your subscription +1 9999 8888 has **used $14,43 out of the bundle.** The monthly charge is $30. This will be invoiced on 15th of June 21*

*In comparison to last month, this is high and **caused due to 2 international calls and travel** to a foreign country once*

*Your second subscription +1 4444 5555 has no out-of-bundle usage. The invoice will be the **standard** amount of **$25** per month and invoiced on 1st of June*

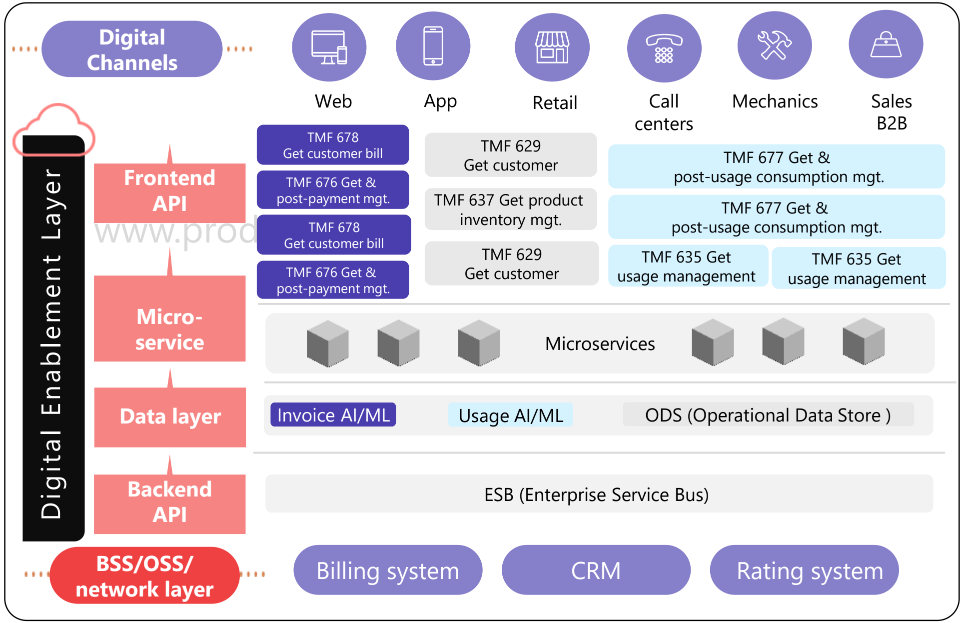


Fig: Implementation pattern for Self-Care (usage & invoice)

Invoice | Supporting API | Usage

The **channels** are focused on presentation and customer experience

The **APIs** exposed to the frontend serve the UI and add security & authentication

Microservices provide logic for the transformation from frontend to backend

The **data layer** can prepare logic offline, when needed, using AI/ML and operational data store concepts

The **backend API** acts as the gateway towards the BSS/OSS

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Business benefits achieved by a leading DSP in Europe after the successful implementation of digital capabilities

Leveraging the **key focus areas** detailed in this insight**,** helped the DSP to overcome complexities, generate **higher value** and **improve customer experience**.

Increased Value Realization

Increased annual channel portal revenue by **50%**

Increased sales conversion rates for eCom channel via portal by **20-30%**

Reduced time-to-market by **35%**

Increased orders-to-visitors higher than the annual average! **33%**

Improved Customer Engagement

Enhanced user experience

Improved Net Promoter Score (NPS) by **3X**

Increased mobile app rating from **3 to 4.7**

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