

**DCCM Scope of Work**

**Elitecore Solution Proposal (V1.0)**

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# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Change Description |
| 6.3 | March 20, 2019 | Sanket Handa | Merged epics for on-boarding and self care for retail and enterprise |
| 6.38 | 27/03/2019 | Neel Shah | Restructuring of Epic : personalization |

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# Common Acceptance Criteria, Specifications to be met

1. Perform all business / operations activities from web portal and app
2. Experience that is suitable & responsive for Web and Mobile app and runs on all commonly used browsers & its versions
3. System must be accessible across devices (PC, Tablet, Mobile)
4. Device and Network Adaptations – makes the portal viewable and usable at all times in any device and over any network
5. System to have dynamic Mobile version
6. System must be compatible across OS (Windows, iOS, Android, Blackberry)
7. Versions – Apache, DB
8. Load & process pages in under <2 seconds
9. Multi-lingual support for Customer Portal in all text of menu, buttons, message box, etc. is required
10. System must support multiple languages (mention languages)
11. System must provide reporting dashboards
12. System must perform all functionalities from a single UI (no multiple logins /windows)
13. Multi-Service Customer Management (Single customer to have multiple service types)
14. Provide an interactive self-service portal on the web and mobile APP application to support customers, partners and telco to perform a range of self-service functions.
15. All APIs & microservices should be Omnichannel
16. All steps in journeys should be fully digitized and automated with option to configure a step or steps as offline by Telco from backoffice
17. Consistent experience across all channels for customers and partners
18. Portal should be progressive
19. Progressive Web App/portal Checklist:

* Progressive Web App/portal Checklist
* Site is served over HTTPS
* Pages are responsive on tablets & mobile devices
* All app URLs load while offline
* Metadata provided for Add to Home screen
* First load fast even on 3G
* Site works cross-browser
* Page transitions don't feel like they block on the network
* Each page has a URL
* Site's content is indexed by Google
* Content doesn't jump as the page loads
* Pressing back from a detail page retains scroll position on the previous list page
* When tapped, inputs aren't obscured by the on screen keyboard
* Content is easily shareable from standalone or full screen mode
* Site is responsive across phone, tablet and desktop screen sizes
* The Add to Home Screen prompt is intercepted
* Site uses cache-first networking
* Site appropriately informs the user when they're offline
* Provide context to the user about how notifications will be used
* UI encouraging users to turn on Push Notifications must not be overly aggressive.
* Site dims the screen when permission request is showing
* Push notifications must be timely, precise and relevant
* Provides controls to enable and disable notifications
* User is logged in across devices via Credential Management API
* User can pay easily via native UI from Payment Request API.

1. Mandatory and optional input fields should be supported for configuration by Telco backoffice administrator.
2. Password for all personas should comply with Telco Password policy and should be configurable by Telco. Guide customer on password setting requirements (e.g. alphanumeric, min –max length etc)
3. Online guidance is available to customer / partner / Telco administrators at all times during their interaction with the product either on UI or via online help
4. All (relevant) functionalities should support the below offerings of Telco
   * Retail requirements like Prepaid, Postpaid, Prepaid to Postpaid, Mobile number portability, Device, Device + Prepaid, Device + Postpaid, Device(s) + Plan(s), Fixed line, Triple play, Quad play, IoT, bundled offerings, Add ons.
   * Enterprise requirements like Mobility, FTTX, Metro Ethernet, Metro-E + DIA, SD WAN, SD WAN + DIA, IoT, Anti DDOS, IP VPN, BoD, Triple play, Quad play, IoT, bundled offerings, Add ons.
5. Integration with Sterlite and 3rd party products via standard open TM forum compliant APIs that can be reused without any changes in product
6. Adaptor based integration between Sterlite DCCM and 3rd party products
7. Open API compliance and readiness
8. GDPR compliance
9. PCI DSS compliance
10. One should be able to integrate all functionalities for a fully automated E2E lead to activation process with option to change a functionality as a manual step / offline
11. Common platform for B2C and B2B extensions and add ons
12. Features and functionalities that are fully reusable across all DCCM versions, B2B and B2C products e.g. extensions, add-ons
13. Extensions & Addons reusable across Hybris 6.4 version & onwards
14. Necessary field validations in place
15. Customer can start and pause the journey at any stage, logout and then login later to continue with the journey either using the same machine or different one (laptop, desktop, mobile of any OS)
16. Customer agent must be able to view the same view / details as customer views it
17. Authentication and Registration – controls which end users are allowed to access the portal. Critical when allowing the user to purchase content
18. Web Channel – makes the mobile portal accessible as a part of the regular web site
19. Omnichannel enabled – needs to have the required API architecture to integrate with an omnichannel engine
20. Loose coupling of functions - Maximize investment by reusing assets, components & infrastructure (ST-075)
21. At any point of time no existing functionality should break
22. All systems should be device independent, support mobility, support offline mode, B2B, B2B2C, B2C, Partnerships
23. Dynamic and Flexible APIs
24. Means of creating and customizing forms, views and functionalities
25. Users and operational functionality security control
26. Solution architecture shall be based on open standards so that it is possible for Telco to develop and customize new features, functions and facilities related to the Customer, Partner Relationship solutions, Product catalog solutions required by Telco also including the Telco users relationships (TKL 209, 310)
27. Customer preference for notification is configurable in terms of events & notification mode
28. Notification in any feature should be sent as per customer preference
29. Customer Experience (Customer Journey) centric: customer Journey should be configurable, loosely coupled and should be event driven
30. Fully automated End to end lead to activation process – Any of the steps/widgets should be added or removed through configuration
31. ASM should be aligned for any new pages in journey
32. Data cleansing and migration from legacy systems (centralized data repository)
33. System should support multi-currencies. Also one default currency should be defined
34. For other currency rate, the latest rate will be imported from third party system.
35. Order not in default currency will be followed by Supplier / Partner Sales for certain predefined approval workflow.
36. View all options should be there in functionalities wherever limited no of rows are displayed
37. System should have Filter by created /resolved date & range, type, status, raised by in case of tickets, interaction, Enquiry etc.
38. All user activities shall be auditable with before and after action /change. Actions performed by users with timestamp are necessary to keep track for audit purpose. Changes to be recorded but not limited to:
39. User account related activities
40. Bill related activities
41. Quotation and order related activities
42. System activities
43. API auditing
44. Approvals
45. Access control changes & role assignments
46. Capture the user browsing activities and habits by cookie. Tracing setting should be configurable. User’s acceptance may be necessary before allowing to capture the information and must be configurable in back office in terms of text to be displayed and consent taken before proceeding.
47. The captured activities shall also be included, along with other parameters being used for product offering recommendations.
48. Support Single-Sign-On (SSO) if more than one graphical user interface is provided.
49. Single signon between Sterlite product(s) for ease of administration and management
50. System should have OTP authentication framework which gives telco the flexibility to link OTP to any purpose. Some of the Examples are for verification during sign-up, login, change profile details, reset password and other purposes like recharge, address change

# Design and Development Guidelines

### **Design**

* Place all functionality related to a particular feature into one extension.
* Depending on the size of the implementation of the feature, consider splitting the extension into several different ones.
* Avoid cyclic dependencies between extensions.
* Consider placing APIs in separate extensions from their implementation(s).
* Minimize coupling between extensions.
* Prefer functional cohesion to logical cohesion (which is better than no cohesion).
* Exclude unused extensions.
* Define the data model for a related set of extensions (for example a specific feature) in one of those extensions' items.xml file.
* Do not define the entire data model of the full customization into only one items.xml file, unless the solution is small enough.
* To ease maintenance and troubleshooting, keep the list of ignored pattern centralized at the root of the repository. Put a .gitignore file at the root of your repository and version it. Do not put any other .gitignore file in your repository.
* Every exposed API must have a version, which is just a MAJOR number, such as v1.
* Before starting customization, an Accelerator should be generated using ant modulegen.

### **Extension Development**

**Creation Process**

* Use ant extgen to generate new extensions by selecting an appropriate template.
* Use ant modulegen to generate the extensions required for Accelerator or OCC web services customization.
* Remove unused artifacts that were generated during extension creation.
* Remove unnecessary web and hMC module configuration from extensioninfo.xml.
* Do not version files that are generated during the build process.

**Naming Conventions**

* Add a project, brand or customer specific prefix to each custom extension, preferably a short one.
* Take care to name the extension so that it accurately describes its functionality.
* Avoid names that are too abstract or too specific.

**Package Layout**

* Package Java classes that are either used/re-used together or changed together inside the same package.
* Follow the same guidelines as for extension design which is described above, with regards to coupling, cohesion and cyclic dependencies.

### **Add-Ons**

* Minimize customizations to the Accelerator source code. Prefer making these customizations in Add-Ons and accompanying extensions.
* Place frontend customizations in an Add-On and place business logic in regular extensions on which the Add-On depends.
* Specify data model changes related to a specific feature in the related Add-On's or related extension's items.xml and beans.xml.

### **Caching**

* Frequently used or slow changing resources should, if possible, be served from the local browser cache
* For greater scalability and throughput, it is recommended that static content is served from a dedicated web-server tier where possible
* Consider using web storage API to cache more data locally, and optimize the performance of your site.
* Fine-Grained Caching Control for Static Content
* Page Fragment Caching is intended to optimize the processing carried out when rendering a WCMS based front-end page.
* DTO caching solution, that can provide caching on any DTO types
* specific entities (ComposedTypes) with their own dedicated Entity Cache Region
* Each node should have specific entities (ComposedTypes) with their own dedicated Entity Cache Region that is used to enable models to be reused and fetched from a local EhCache region rather than hitting the database on each request.

### **Security**

Ensure your solution is addressing the OWASP Top Ten critical web application security flaws in the scope of a Hybris Commerce implementation.

* A1 Injection
* A2 Broken Authentication and Session Management
* A3 Cross-Site Scripting (XSS)
* A4 Insecure Direct Object References
* A5 Security Misconfiguration
* A6 Sensitive Data Exposure
* A7 Missing Function Level Access Control
* A8 Cross-Site Request Forgery (CSRF)
* A9 Using Components with Known Vulnerabilities
* A10 Unvalidated Redirects and Forwards

# NFR

### **Performance**

**Capacity :**

* Define maximum values for the total number of items which will be stored in the Hybris Commerce DB, as this impacts database performance, e.g. total number of orders, products. Large data can also slow down storefront or batch performance depending on the filtering logic used.
* Consider that some metrics may require different NFRs for maximum and average specifically for items with relationships, e.g. order lines in an order
* Define metrics which capture the data complexity, like product relationships, product attributes, categories and catalog depth.
* "Define maximum values of user journey criteria which will be used for creating performance testing scripts, including:
  + Number of order lines in an order
  + Reference definitions for the breakdown of customers, order types, page types"
* Instead of concurrent users, which can be interpreted by business users differently, define concurrent user sessions as measured by the number of active JSESSIONS in Hybris Commerce. This measurement is much preferred as it can be measured and monitored easier.
* "Define maximum values for incremental changes like:
  + catalog or pricing updates
  + custom data imports and integration points according to specific schedules (daily, hourly, etc)
* Include maximum number of orders and page views in a period of time (second, minute or hour), against a specific load type which should be defined

### **Time Behavior : NFRs in this category should reference a specific load type from Definitions.**

**Page Response Times**

* Maximum response times should be measured for a specific percentile of users (e.g. 90th percentile) and never for all users
* Time measurements should exclude:
  + Communication between user browser and the first layer of the solution (e.g. Akamai cache server/Varnish cache server/load balancer/web-server)
  + Download time for static files if a Content Distribution Network is used in Production
  + Calls to 3rd parties like payment providers. Mocks can be used during performance tests to exclude these delays
* Decide if page requests include static items and AJAX requests, static files or are HTML only. Content delivered by the solution should be included in the original page request time.
* Add separate response times and concurrent users for back office applications (e.g. Cockpits)

**Batch**

* Synchronisation
  + Define duration for each synchronization type (e.g. product, price, availability) for a standard mix synchronization job
  + Define duration for full synchronization - depending on the documented total volumes"
* Search indexing
  + Define duration of full index based on the standard catalog contents
  + Define duration of incremental indexing, based on the standard incremental index job contents
* Based on specific client requirements, add performance against specific volumes for integration points, like batch stock updates, batch availability updates.

**Resource Utilisation**

* Define hardware and software resource utilization metrics that should not be exceeded while the system is running at its maximum capacity, like CPU or memory.

### **Compatibility**

* Detail the specific versions of software or applications, including minor versions and processor architecture (32 bit vs 64 bit).
* Co-existence: software applications, hardware appliances, operating systems, which may impact the solution
  + Versions of applications delivered with Hybris Commerce: Solr, Tomcat
  + Versions of applications that will support the solution: DB, operating system, Java version
  + Hardware details, if applicable, to distinguish virtualised environments from native ones
* Interoperability: details on restrictions to integrate with other systems

### **Usability**

* Consider documenting the exact accessibility level supported.

### **Reliability**

### **Portability**

* Adaptability: Key items to include the supported: browsers, including versions and mobile/tablet support, JavaScript deactivated and blocked cookies, window size and color depth, encoding, languages

# Dimensioning Details

1. System dimensioning for hardware and software will have to be done based on below mentioned parameters:
   1. The following assumptions are to be made while estimating the hardware requirements

|  |  |  |  |
| --- | --- | --- | --- |
| **a) Assumptions for DCCM** | | | |
| **S.No.** | **Parameter** | **Value** |
| 1.1 | Total No. of customer accounts (including inactive) | Existing 2.0 crore (future additions to be incorporated) |
| 1.2 | Total No. of services | 2 \* total active customers |
| 1.3 | Total no. of existing active customer accounts | 2 crores |
| 1.4 | Max Concurrent DCCM users at peak time | 12,000 |
| 1.5 | Total Number of Service requests per day (includes new connection, disconnection, shift, value added service request, etc.) | 0.1% of Total No. of Services |
| 1.6 | Service requests to process in a busy Hour | 0.05% of total no. of services |
| 1.7 | Total Number of Complaints per day | 0.2% of Total No. of Services |
| 1.8 | Complaints to process in a busy hour | 0.1% of Total No. of Services |
| 1.9 | Online retention of normal / service orders | (1+3) months |
| 1.1 | Online retention of trouble tickets | (1+2) months |
| 1.11 | Online retention of inactive customer accounts | (1+6) months |
| 1.12 | Response time of CSR terminal to display required information | 2 seconds |
| 1.13 | User logins for Document Management System | 20,000 |
| 1.14 | Concurrent user logins for Document Management System | 2,000 |
| 1.15 | CTI Integration - No. Of inbound calls per Hour | 30,000 |
| 1.16 | CTI Integration - No. Of outbound calls per Hour | 48,000 |
| **2. Product Catalogue :** | | | |
| **S.No.** | **Parameter** | **Value** |
| 2.1 | Total number of users to Product Catalogue | 1000 |
| 2.2 | Number of concurrent users for Product Catalogue | 100 |
| 2.3 | No of products | 5,000 unique products |
| 2.4 | No of commercial packages | 10,000 |
| 2.5 | Frequency of new product offer launch | 2 to 3 days |
| 2.6 | No of releases in a month | 15 |
| 2.7 | No of systems that requires product catalog integration | 10 |
| 2.8 | No of concurrent requests from the channels to Product Catalogue API | 20 TPS on a normal day and 100 TPS on an event day |
| 2.9 | Product Configuration to be federated into the following systems | DCCM , Order manager , Billing |
| **3. Assumptions for Customer Self-care (Web / Mobile app) :** | | | |
| [**S.No**](http://s.no/) | **Total no. of Registrations to be supported** | **70% of Total Customers** |
| 3.1 | Max no. of concurrent users | 10% |
| 3.2 | Max Time taken to authenticate | 2 secs |
| 3.3 | Max Response time per click | 1 secs |
| **4. PRM (Partner Relationship Management):** | | | |
| **S.No.** | **Parameter** | **Value** |
| 4..1 | Number of Partner managers | 2,000 |
| 4..2 | Number of Concurrent users of Partner Management | 500 |
| 4..3 | Number of Franchisee users (accessing over Internet) | 20,000 |
| 4..4 | Number of Concurrent users of Franchisee users( accessing over Internet) | 8,000 |
| 4..5 | Average no.of logins per Franchisee | 2 |
| **5. Mobile Application:** | | | |
| **S.No.** | **Parameter** | **Value** |
| 5..1 | Number of Subcribers using the Mobile App | 10 % of Total Subscribers |
| 5..2 | Number of times the Mobile App will be used by the user per day | 2 |
| 5..3 | Maximum Respoonse time expected for a query from Mobile App | 1 Sec |
| **6. Chatbot:** | | | |
| **S.No.** | **Parameter** | **Value** |
| 6..1 | Total Number of daily hits on Website | 2 lakh hits per day |
| 6..2 | Total chat sessions | 10% of Daily hits |
| 6..3 | Total Concurrent Chat Sessions | 1% of Daily Hits |
| 6..4 | Response time to user query | 2 seconds |
| **7. API Management:** | | | |
| **S.No.** | **Parameter** | **Value** |
| 7.1 | Number of API calls per second | 50 |
| **8. Assumptions for Messaging/Email Solutions** | | | |
| [**S.No**](http://s.no/) | **Parameter** | **Values** |
| 10.1 | SMS/Email per sec | 500 |
| **9. Assumptions for Help desk** | | | |
| [**S.No**](http://s.no/) | **Parameter** | **Values** |
| 11.1 | Min. No. of concurrent support users | 240 |
| 11.2 | No. of concurrent help desk end users (for response time <5 sec) | 500 |
| 11.3 | Online Retention of history data in system | 1 year |
| **10. Application performance Management:** | | | |
| [**S.No**](http://s.no/) | **Parameter** | **Values** |
| 20.1 | Number of Applications to be monitored | 20 |
| 20.2 | Number of Web transactions to be monitored | 10 |
| 20.3 | Number of End user Locations to capture the response time | DC , DR , CSR locations ( 500 unique locations) |

Epic - Flexi journey & OOTB journeys (MVP 1)

As Telco Business Team, I want to have flexibility to change Journey sequence without any dependency on IT or vendor to roll out changes in real time.

**Differentiator**

Ability for business user to customize journey sequence, change look n feel, hide /display information or controls in real time

## Flexi Lead to Activation framework and capability (Q1 FY20)

As Telco Business Team, I want to have flexibility to change sequence, information, controls of on-boarding journeys for retail and enterprise segments without any dependency on IT or vendor to roll out changes in real time.

**Acceptance criteria**

1. Ability to configure new journey from UI
2. Ability to customize a journey sequence, clone & update
3. Real time flexibility to change UI, look n feel, widgets per screen (change, remove, hide, show, add)
4. APIs to update /align accordingly based on UI flow /changes
5. Necessary validations included and configurable by telco business user from UI (in addition to support from backend)
6. Fully automated and guided online digital journeys for Straight through purchase. Option to configure each step in journey as online or offline and provide relevant experiences & actions to customer, partner or backoffice person.
7. Widget based pages (journey sequencing, configurable content)
8. Configurable business process and journey
9. Decoupled front end, backend & APIs, Micro services as applicable
10. UI can be different across web & mobile app android, mobile app iOS
11. Customer Experience (Customer Journey) centric: Deliver configurable, loosely coupled event driven customer journeys. (D-029)
12. All steps, fields, text, notifications, medium of communication are fully configurable by Telco

## OOTB journeys for Retail segment (Q1 FY20)

As Telco Team, I want to have OOTB journeys for all possible offerings for retail segments to adapt them my needs without having to create a journey from start to save time.

Acceptance criteria

1. OOTB journeys for retail segment - Prepaid, Postpaid, Prepaid to Postpaid, Mobile number portability, bundled offerings, Add ons.
2. Ability to configure new journey from UI or customize /clone / update an OOTB journey
3. All capabilities of Flexi L2A framework should be available

Note – Refer sample workflows

## OOTB journeys for Enterprise segment (Q1 FY20)

As Telco Team, I want to have OOTB journeys for all possible offerings for Enterprise segment to adapt them my needs without having to create a journey from start to save time.

Acceptance criteria

1. OOTB journeys for Enterprise segment – FTTX, Metro Ethernet, bundled offerings, Add ons.
2. Ability to configure new journey from UI or customize /clone / update an OOTB journey
3. All capabilities of Flexi L2A framework should be available

Note – Refer sample workflows

Epic - Lead to Activation process for Retail customer (MVP 1)

As a telco, I want to deliver a complete paperless and delightful lead to activation process for B2C customers so that I can

* Automation of telco buying process to potentially increase sales
* Reduce on-boarding time by 50%
* Reduce customer acquisition cost by 40%
* Improve operational efficiency through streamlined operations

Brief

* Fully paperless and seamless experience for lead to activation
* Deliver experience that parallels experience of Amazon & Uber
* Fully configurable by Telco to sequence the lead to activation flow
* Notify and guide customer & telco team at each step
* Recommend suitable products and add-ons to prospects and customers



## Browsing (pre-registration /on-boarding) (Q1 FY20)

As a non-customer of Telco, I want to view Telco product(s) and plans /details before signing up or giving any details

As a non-customer of Telco, I want to download Telco app and browse it to see what content it offers, telco and beyond before signing up or giving details

As a Telco, I want to allow my prospect customers to browse my product /service /plan offerings and view offered content list from web portal and app without asking prospect to signup or give any details

Acceptance criteria

1. As a user, I should be able to see the price simulation on the plan that I would like to consider even before signing up (TKL 1)
2. As a user, I should be able to download Telco app on a iOS or Android device
3. As a non-user, I should be able to see content of the apps, telco and beyond telco without sign up or give any details (TKL 175)

## Inquiry Management (Q1 FY20) (ST-112)

As a customer, I want to express my interest in Telco product(s) or service(s) and have Telco representative call me for next steps.

As a telco, I want to give ability to customers to fill an online sales lead form to express their interest and have responsible customer agent or account manager reach out for further steps.

Acceptance criteria

1. Provide online Sales Lead form for customer to fill in their request & associated information for service/product offering of their interests for capturing customer interest and acquire sales leads. The captured Sales Lead will be passed to designated users per configured flow e.g. responsible sale team of designated industry segment, for further sales assignment & follow ups.
2. Online sales lead form with necessary fields (up to 15 fields)
3. Contact & address details. Company details as applicable
4. Allow customer to choose the LOBs, products, services, plans, subscriptions, bundles, contracts they are interested in

## Signup & login (Q1 FY20)

As a *retail* customer, I want a flexible and easy signup & login mechanism to create a Telco account in minimum steps with minimum details.

As a Telco backoffice administrator, I want the flexibility to configure sign-up & login modes, password policy, consent, notification text from backoffice UI so that I don’t have to depend on IT team or vendor to make changes.

Acceptance Criteria

1. Allow registration of Customer Portal User Account from different ways.

* Visitor or Customer can signup user access account via the Customer Portal or app
* Telco agents or Partners can register a prospect /customer Telco account on their behalf

1. Customer

* As a new user, I should be able to signup to Telco services through a web/app portal (TKL 3)
* As a new user, I should be able to signup to Telco services through e-commerce platform (TKL 4)
* As a returning user, I should be able to log in to my account (TKL 5)
* Allow new subscribers to sign-up using email, social media, or phone number from web portal or app (TKL 262)
* Customer is able to create account using
  + - Mobile number or Email with OTP
    - Mobile number or email with password (OTP for validation)
    - Facebook credentials (OR) Google credentials (OR) Twitter credentials (OR) eCommerce platform credentials
  + As a user, I should be able to use my email, facebook, google, twitter, mobile number as username (TKL 20)
  + As a user, I should be able to create password (TKL 22)
  + As a user, I should be able to receive OTP to validate my email and mobile number (TKL 23)
  + Guided experience for customer at all steps with necessary notifications
  + Ability to login to customer account based on the details provided during sign-up or later that includes Email, Mobile number, Password or OTP, Facebook, Google, eCommerce platform
  + On signup using social media credentials the minimal & mandatory info from user accounts can be leveraged for creating the account. On entering credentials for Google or Facebook, customer views permission page educating about the personal information that will be accessed to generate the customer account. Customer has option to accept or reject the permission.
  + If configured by Telco, portal user / app user should perform first time login as account activation and forced to reset password. Password should comply with Telco password policy. Send out account activation email /sms notification to registered new users with unique system generated password or one time password.
  + User has to provide consent of their details being correct and captured by Telco for compliance purposes if configured by Telco to be displayed.
  + Enter Capthca recognition on registration page if configured by Telco
  + Existing subscribers can sign-up in similar way but validation using OTP on the Telco mobile number with details match (e.g. subscription number, email id) or other means as necessary.

1. Telco back office administrator
   * Telco backoffice administrator can configure which sign-up and login modes to allow to customer, fields to expose, field labels and type, password policy. Mandatory and optional input fields should be supported for configuration by Telco user.
   * Ability to manage the authentication for the Email, Social media, or phone number that subscribers use to sign up with, login credentials and customer authentication flows (TKL 265)
   * As an app administrator, I should be able to validate facebook and google account (TKL 25)
   * As an app administrator, I should be able to send OTP to user's email or mobile number (TKL 26)
   * As an app administrator, I should be able to validate user's account using OTP (TKL 27)
   * Permission page for social media info access is configurable from UI
   * Password policy is configurable by telco backoffice administrator
   * Backoffice administrator can configure if the account activation is automatic upon filling details (and validation) or a manual activation via email / sms link to set password. Default is automatic for mobility, fixed line.
   * Telco can define whether to display Terms and Conditions during sign-up for consent mgmt. The text for consent / T&C must be fully configurable by Telco with ability to hyperlink one or more words to open URL(s), checkbox
   * Telco can configure whether to display captcha validation during sign-up and /or login. Default – OFF
   * A lead is generated in DCCM viewable by user assigned the rights to view it by admin or designated users by product /location / service type, user group etc, and the lead information is passed on to CRM
   * All necessary records available with telco personnel to view lead information in backoffice and support customer
   * Provide customer identification function to build the association between the Portal User Account and Prospect/Customer.
   * Telco team can view leads in backoffice and can configure to get email / sms notification to select teams, users, per service type.
2. Notifications

* Notify customer of account creation, account activation (if configured accordingly)
* Notify telco team of lead creation & customer interests
* Configurable separately for customer & Telco in terms of subject line, text, link(s), over email / sms, per service type, which Telco teams and users receive notifications
* Notify subscriber when their account does not exist or subscriber has entered the wrong credentials (TKL 275)
* Preview notification capability

1. Integration adaptor
   * OTP authentication for sign-up & login
   * Social media - Facebook, Gmail, Twitter, Whatsapp, eCommerce Platform
   * SMS authentication (refer SMS integration)
   * Email (refer Email integration)

## Product selection and bundling & Search (Q1 FY20)

As a customer, I want to search and locate plans suitable to me in minimal time.

As Telco, I want to give new and returning customers a paperless, seamless and best experience to view relevant products and get necessary details for selected product(s) to increase chances of purchase, and have flexibility to showcase product(s) per LoB, offering, service, product type, location, customer segment, channel and medium.

KPIs

* Customer chooses product(s) in < 10 seconds without any help and chooses plan in < 1 minute
* Paperless automated system to gather necessary details for the product(s) (as necessary) selected without any human interaction
* Customer and Telco always aware of chosen product(s) and can view them at any time

Acceptance criteria

1. Customer is able search the desired products and choose a product, service, plan, plan, contract which can be a single or a bundled offering
2. Customer can also enter or select usage attributes that are mapped to one or more plans and show suitable plan(s) accordingly
3. As a user, I should be get few quick questions that could help me identify my user preferences and that should provide me a suggested plan based on the answer (TKL 11)
4. As a Telco administrator , I should be able to modify questions based on which plans are suggested to the user (TKL 12)
5. Show products relevant to the interest, background and need of the customer
6. Customer can view the plan details on the screen in single view. E.g. data, voice, sms size for local, International & roaming charges, any apps quota or free, price, 3G /4G
7. Ability to view product / plan / contract /service & details in single view
8. Customer can view which plan(s) are recommended and most commonly sold as tagged
9. Customer has option to select from vanilla product(s) and plans or choose an option to choose a custom plan
10. As a user, I should be able to order SIM card only or any other product/ service /offering or any bundles – post or pre sign-up (TKL 8)
11. As a user, I should be able to choose from range of pre-configured package (TKL 10)
12. As a user, I should be able to get social media and chatting apps to be X GB free quota for data quota consumption (TKL 13)
13. User should enquire available services based on certain automated filtering, such as Inputted service keywords, customer segment, industry and location, recommendation, etc. (but not limited to). Allow performing Upselling or Cross-selling.
14. Support graphic view to display the inter-related services and products, as configured in Product Catalog Management and linked up upon order was issued & processed.
15. All the recommended/selected product offerings details shall be clearly illustrated or drill in for details during the offer/product selection steps.
16. On each product offering, the proposed solution shall provides detail descriptions of the offering, with product offering details, product specification, pricing details, terms and remarks, etc., as retrieved from Product Catalog.
17. Users shall be able to manage the products & offers selection easily with different associated user operations allowed, e.g. view, add, delete and update quantity, etc.
18. On each product offering, the proposed solution shall provides detail descriptions of the offering, with product offering details, product specification, pricing details, terms and remarks, etc., as retrieved from Product Catalog.
19. Ability to select one or more product(s), service(s), bundle(s), contract(s) in single workflow
20. Telco has option to configure or upload B2C products and plans
21. Telco should have the capability to define showcasing products & plans based on customer type (existing, new, customer demographics & profile)
22. Support Guided selling, allow to configure questions and answers per product type or line, customer segment and sales channel as such to recommend product offerings based on questions and answers flow. Allow the configuration of different guiding scenarios as required, e.g. base on different product line or types, etc., in order to facilitate inexperience users to correctly determine the appropriate products & offers as needed.
23. Support Offer/Product selection by entering of Configuration and Specification required, base on location, required technology, configuration specification and parameters, etc. The proposed solution shall identify and show possible and suitable product offerings base on rules & settings defined in Product Catalog, and then guide users onwards for entering the subsequent correlated details to continue with the order process.
24. Telco user should be able to configure the products displayed to the customer from DCCM product cockpit
25. Plans visibility can be based on channels eg Plans some plans are visible on Portal but *not* on Mobile App and vice versa or some plans are available on both. Different plans can be visible on Android and iOS. Pricing of the plans should also be configurable based on channels. Configurable – Different plans for web & mobile
26. Capture lead information in DCCM and CRM

## Number selection (Q1 FY20)

As a customer, I want to get a number of my choice which is easy to remember, read out and understand

As a customer, I want to view a number assigned to me for prepaid or postpaid mobile connection with option to change, search and filter so that I can get a number of my choice.

As a telco backoffice administrator, I want flexibility to integrate and /or upload numbers, configure number type available for a given service, and enable customer to search and choose a number of their choice.

Acceptance criteria

1. Telco user has option to upload the numbers for prepaid, Post paid manually in DCCM and also integrate it with downstream system from where the respective number(s) can be fetched. These numbers can be regular or VIP numbers (chargeable of different types e.g. Gold, Silver etc as defined by Telco)
2. Customer views a proposed mobile connection number which
3. isn’t visible to any other prospect (configurable by Telco)
4. is an easily memorisable number & spell-able by default
5. by default is a regular number
6. Customer has option to choose another number from the list of regular and VIP numbers or both. The VIP numbers are visually identifiable as VIP numbers with type (e.g. Gold, Silver etc as defined by Telco) and displays the cost associated to buy the VIP number.
7. Customer can search and filter a preferred number by starting series, ending series, full number
8. As the customer moves to search a number, prompt user to inform that the previously shown number will now be available for everybody. Clicking ok allows the user to proceed. Clicking cancel takes customer back to the previously displayed number.
9. The numbers not selected by customer are available to other prospects
10. The numbers chosen are not available to other users for purchase
11. As a user, I should be able to select or randomize number (TKL 14)
12. As a user, I should be able to input preferred phone number (TKL 15)
13. As an app administrator, I should be able to provide list of number (TKL 16)

## Makemyplan (Q1 FY20)

As a customer, I want to configure a custom plan /service /product /contract that suits my need of consumption levels and price.

As a backoffice administrator, I want to enable customer to create a plan /service in real time of their choice and have flexibility to apply necessary rules based on multiple criteria.

Acceptance Criteria

1. Customer can choose to configure a custom plan/service /product /bundle (e.g. for prepaid or postpaid) from a range of available customizable offerings
2. As a user, I should be able to modify the suggested plan (TKL 160)
3. As a user, I should be able to customize my data, voice, and SMS package (TKL 9)
4. As a user, I should be able to give custom name to my plan (TKL 161)
5. As a user, I can choose which apps (20 apps) that I want dedicated quota will apply (TKL 180)
6. As a user, I can customize data dedicated for each apps (TKL 182)
7. As a user, I should be able to name my telco package (TKL 184)
8. As a user I should be able to create my own plan /package using the modules available for creation of the plan. The plan creation rules should be configurable where prices are created in realtime and bundling also happens in real time.
9. Customer has option to choose start with – price limit, consumption, answer type of consumption to recommend a plan accordingly
10. If the customer chooses start with price limit
    * Customer can drag a slider to set the price limit /cutoff for makemyplan or enter it manually
    * Customer can then change the data, voice, sms, roaming, bandwidth consumption limits and arrive at a price. If that price goes beyond the cutoff, prompt that the maximum price is reached
    * Ability to add select add ons and VAS
11. If the customer chooses to start with consumption levels
    * Customer can change the values of data, voice, sms, roaming levels that automatically updates the price value on the same screen
    * Option to add select add ons and VAS
12. Customer has option to confirm to proceed or reset or cancel
13. Telco administrator provides easy to use and intuitive GUI on web portal and app to enable customer to choose and customize plans / packages
14. Allow customer to configure the selected Product/Service. The required configurations are driven by Product setup in Product Catalogue Management. The proposed solution shall be capable to have dynamic configuration page based on selected Product/Service. Different products can have different parameters and should be configurable.

## Verification & eKYC (Q1 FY20)

As a customer, I should be able to enter my personal or business identification details & attach them as asked by Telco by uploading or taking photo using phone camera so that Telco can do a verification and check.

As a Telco backoffice administrator,

* I want to be able to do eKYC of customer purchasing SIM card, Device or bundle for regulatory requirements
* I want to be able to verify and validate credibility of a customer /business requesting enterprise services and choose next steps accordingly

Acceptance criteria

1. Telco user can configure
   * If they want eKYC to be performed (default – yes)
   * One or more eKYC parameters e.g. Indonesian or other country’s ID card, passport number, social security number, Aadhar card, Makani id, business id to be entered by customer
   * Up to 3 such eKYC parameters can be asked to the customer per individual or group of product(s) /service(s) sold by Telco
   * The names of ekyc parameters are editable
   * If the step is enabled, atleast 1 eKYC must be enabled
   * One or more photo(s) /file sample of document to be uploaded with item to enter highlighted in it e.g. Aadhar card in India, business documents
   * Asking customer to upload file of id one or more card(s) (configurable)
   * As an app administrator, I should be able to check ID in the national database, credibility in another database (third party and /or internal) (TKL 44)
   * Whether to do eKYC online or offline per service, product, plan, customer type
   * Define different workflows depending on the results returned during eKYC check e.g. after repeated <n> unsuccessful attempts of eKYC for mobility customer redirect to customer care
   * Check if the customer is blacklisted or risk and trigger different workflows based on that
2. Customer can

* Fill the id card number & details – atleast the ones that are mandatory
* As a user, I should be able to put in my ID card and /or family card number to do verification (TKL 42). Atleast these ID cards must be supported – Indonesia, Aadhar, MakaniID
* Upload image file (or any other format) of one or more ID card(s)
* As a user, I should be notified if any of the ID card details are valid or invalid (TKL 43)
* Attach the document(s) – atleast the ones that are mandatory
  + By uploading a file of any format up to size <2> MB. Size is configurable by Telco.
  + By clicking option to take photo that brings up the phone camera to shoot the eKYC document
* Customer can view the sample eKYC document image with parameter to be entered highlighted in the sample
* As a user, I should be able to re-enter my ID card and family card if it is invalid, max <x> times (TKL 45)
* Receive OTP and input on screen. Proceed with successful match. Error if does not match. Max <x> retries. If mismatch error after max retries then redirect customer to customer care. Backoffice agent can view (and filter) details of such a customer, journey selections with mistmatch attempts in backoffice. (TKL 46)

1. eKYC integration adaptor - DCCM integrates with Government or third party database and /or national database using API integration to verify if the eKYC & name details, and address details match (configurable by Telco user), credibility check and returns a success or failure. Success allows to proceed to next step. Failure returns and error. Max <5> retries for invalid results allowed post which user is redirected to customer care (configurable by Telco). The max number is configurable by Telco user. (TKL 44, TKL 45, TKL 46)
2. Support OCR for the image uploaded for verification. Fields should be auto populated from the image on the UI (storefront, backoffice – configurable).
3. By regulation, all subscribers are required to scan or input their ID card as part of the registration process. Solution shall be able to do this process and could support ID authentication process through the integration with existing Telco system (TKL 274)
4. Integrate API with verification system
5. Receive OTP and fill it mode of authentication through SMS and Email to be applied on page load

## Delivery mode (Q1 FY20)

As a customer, I should be able to choose the mode of my delivery from range of options like doorstep delivery, pickup in telco store, pickup in convenience store, Courier, Ride hailing, pickup in store with store locator, pickup point locator capabilities and ability to view see cost of delivery & est time of arrival of SIM.

As a customer, I should be able to choose different delivery modes and addresses for product(s), packages within single order and even within a bundle /contract e.g. Device + SIM

As a Telco backoffice administrator, I want to give flexibility to customer to choose the delivery mode(s) during the order journey based on their convenience and urgency

As a Telco backoffice administrator, I want to choose which delivery modes should be available to customers based on multiple criteria with details to be provided by customer for each mode.

Acceptance criteria

1. Telco user can configure
   * Which modes of delivery should be available to customer for delivery (per service, customer segment, product, location) from doorstep delivery, courier, pickup in telco store, pickup in convenience store, Ride hailing. Default = door step delivery, pickup from telco store enabled to be given as options
   * What details or ask customers when a delivery mode is selected. Fully configurable in terms of label, value type.
   * Decide if customer can view cost of delivery and est time of arrival of product(s) like SIM or device on per product basis. Default = yes
   * Define which users, groups and roles should have access to the backoffice functionality
   * Each component in the order can have a different delivery mode & address and must be tracked separately
   * Telco user should be informed about all unserviceable addresses / pin codes
   * Telco can define workflow to suggest customer to enter another address or choose a different delivery mode if the entered address by customer isn’t serviceable
2. Customer can
   * Customer can choose an option from the below delivery options (TKL 178)
     + Doorstep delivery (free)
     + Doorstep delivery (premium)
     + Courier
     + Ride hailing
     + Delivery to pickup point
     + Pickup in store
     + Pickup in convenience store
     + Pickup in mini market
     + Free and premium options in above modes
   * Door step delivery
     + Enter pin code. Clicking check verifies if the pin is serviceable for delivery
     + Enter contact & address details
     + Display estimated time & cost of delivery
     + If the pin code or address isn’t serviceable by telco for door step delivery ask for alternate address or ask customer to choose other modes of delivery /pick-up
   * Courier
     + Enter contact & address details
     + Display estimated time & cost of delivery
   * Ride hailing
     + Enter pin code. Clicking check verifies if the pin is serviceable for delivery
     + Enter contact & address details
     + Display estimated time & cost of delivery
   * Pick up in store
     + Ability to locate store near me or in same or another city on the map with address & contact details
     + Ability to select a store from where I can collect the SIM or product
     + View estimated time when the SIM /product will be available at the store for collection
   * Pickup point locator
     + Ability to locate pickup point from designated pick-up points or convenience stores near me or in same city (or another city) on the map with address & contact details & timings
     + Ability to select a store from where I can collect the SIM or product
     + Display estimated time & cost of delivery
   * Customer has option to edit or cancel or change the delivery mode & details
   * As a user, I should be able to input my address and choose my delivery option (ride hailing and courier) (TKL 28)
   * As a user, I should be able to input my address and choose my delivery option (pick up in store) (TKL 29)
   * User should be able to view /search stores on google map and also in tabular format
   * As a user, I should be able to see the cost of delivery and estimated time arrival of my shipment (can include SIM or any other product) (TKL 31)
   * Locate store and availability status in service center / connect store
   * As a user I can choose the time slot (and date) when I would like to have it delivered at my door step or pickup. The time slots are picked and shown based on integration with other systems. Step is configurable by Telco.
   * As a customer I want ability to select separate delivery mode(s) and /or addresses for different components in the same order ad even within the bundle e.g. Device and SIM
   * As a customer, I would like to be guided and prompted to enter another address (e.g. office address or relative’s address) or choose another delivery mode (e.g. pickup from store nearby) if my previously entered address is not serviceable.
3. Integration with logistic partner system, maps, store & pickup point locator systems, google map, courier systems

## Appointment booking (Q1 FY20)

As a customer, I want to book a time slot for purposes like shipment collection at doorstep or pickup point or store, site survey during feasibility check, installation etc.

As a Telco, I want to book an appointment online with customer to fix a time slot for shipment, pickup at store, site survey, installation to save operational cost, avoid manual process, and deliver better experience.

Acceptance criteria

1. Telco should be able to use appointment booking for multiple purposes during customer and partner engagement. Fully configurable by Telco.
2. Customer should be able to select date and time slots
3. The timeslots shown to customer are based on availability of different type of Telco resources depending on the purpose for which appointment is being scheduled
4. A timeslot is chosen by default from available slots and shown to customer with option to change it
5. Customer should be able to set the appointment date (subject to available resources) via the portal and /or app and has option to change or cancel the appointment.
6. Integration adaptors for appointment booking for multiple purposes
7. The proposed solution shall support real-time interface to enquire from Workforce Management / logistics partner(s) to
   * get available timeslot for appointment
   * reserve timeslot for making appointment
   * enquire appointment details & status
   * cancel appointment
8. Backoffice should have ACL-based ability to select and book appointment slot on behalf of customer for different purposes.
9. Real-time interface to enquire from Workforce Management or Logistics (depending on purpose) to

* get available timeslot for appointment
* reserve timeslot for making appointment
* enquire appointment details & status
* cancel appointment

1. It is possible that separate appointment slots are scheduled in same order e.g. multiple locations requiring fixed line connection, products within same bundle or different products / services within order getting delivered at different addresses and /or at different times

## Cart management (Q1 FY20)

As a customer, I want to add items to cart and manage them

As a Telco, I want to enable customers to manage their cart with multi-order support.

Acceptance criteria

1. Allow to add /update /remove multiple items to cart within same order
2. Allow to add /update /remove multiple orders to cart before checkout
3. Ability to save items in cart for later so that they can be pulled up soon if needed
4. Ability to choose and checkout orders /items in cart
5. Telco agent should be able to view items in cart
6. Ability to add VAS / addons during buying journey or later
7. Telco can configure reminder notifications for customer and Telco users for items pending in cart since x days
8. Telco agent can continue journey on behalf of customer to check out their cart item(s) if customer approves

## Order Preview / Order Summary (Q1 FY20)

As a customer, I want to view a summary of my order before I proceed for payment step, and make any changes in order details as necessary.

As a Telco, I want to enable customer to view order summary before payment and order confirmation with flexibility to change order details if they wish to.

Acceptance criteria

1. Customer can
   * Order preview with plan, number, product(s), service(s), delivery mode, shipment address or pickup point details, cost of delivery and estimated time of arrival of my shipment or start of a subscription
   * Option to update the details from the same screen
   * Go to previous step(s) to update details as necessary
   * View and accept T&C
   * Add more product(s) or service(s) to the same order
   * Go back or edit inline to change order or shipment details
   * Remove one or more product(s) or service(s)
   * As a user, I should be able to see the overview of my chosen plan and number or the product /service /contract / bundle I selected (TKL 17)
   * As a user, I should be able to go back to previous step(s) to revise plan and number or the chosen product /service /contract / bundle (TKL 19)
   * As a user, I should be able to see my overview plan and, what are the total cost and its breakdown (TKL 32)
2. Telco can
   * View all the opportunity related details in DCCM & downstream systems (like CRM)
   * View same details as the end customer
   * T&C configurable by Telco – Hide / Display, text with ability to hyperlink one or more words to open URL(s), checkbox
   * Configure which details to be shown in order preview
   * As an app administrator, I should be able to generate overview of plan and number or product /service /contract / bundle (TKL 18)

## Online Payment (Q1 FY20)

As a customer, I should be able to make online payment using a range of available online modes or decide to pay offline if I get the option.

As a Telco backoffice administrator, I want to configure which online and offline payment modes should be supported for customer(s).

Acceptance criteria

1. Customer
   * See overview plan and, what are the total cost and its breakdown
   * Choose to make payment via one of the below mediums
     + Seamlessly make payments with Credit Card, Debit Card, Online banking, and E-Wallet, ATM, mobile banking, mobile money, EVD, loyalty points
     + Seamlessly make payments with e-commerce payment (TKL 34)
     + Make cash payment at convenience store or Telco store or any other store (TKL 35)
   * See receipt confirmation ID (QR code) and tracking details on my order
   * Use my receipt confirmation ID (QR code) to pick up SIM card or a product at a store (TKL 37)
   * As a user, I should be able to see my receipt confirmation ID (QR code) and tracking details on my order
   * As a user, I should be able to pay in instalments if the option is available
   * As a user, I should be able to pay advance deposit if asked for
   * As a user, I should be able to seamlessly make payments with e-commerce payment (TKL 34)
   * As a user, I should be able to use my points for purchases (TKL 86)
   * As a user, I should be able to change my rewards to extra data, voice, or sms (TKL 133)
   * As a user I can download payment receipt after payment (or even later) and get it over email
   * As a user, I want to view GSM, mobile money wallet information, EVD, loyalty points at the point of loading
   * As a user, I should be able to recharge my balance using e-wallet or any other payment medium (TKL 150, 154, 155)
   * Customer should be able to make online payment with credit card or any other medium (or offline payment) when upfront payment is required. e.g. but not limit to:
     + subscribing product offering requires a deposit/prepayment/advance payment as defined in Product Catalogue, or,
     + a special customer deposit is required, e.g. customer in bad credit rating.

* Make online payments in <3 clicks. Option to save details to simplify future payment
* Integration with e-wallet partners

1. Telco backoffice administrator
   * Configure which payment modes and if instalment support must be exposed as global settings or per product, service, customer type, location or its combination.
   * As an app administrator, I should be able to reconcile payment and pick up at convenience store (TKL 39)
   * As an app administrator, I should be able to make sure that my user's credit card information is encrypted safely
   * As an app administrator, I should be able to make sure that my payment system comply with regulation
   * Configurable payment settings to enable making online (using any medium) and offline payment when upfront payment is required. e.g. but not limit to:
     + subscribing product offering requires a deposit/prepayment/advance payment as defined in Product Catalogue, or,
     + a special customer deposit is required, e.g. customer in bad credit rating.
2. Integration with mobile money platforms, bank payment gateway, payment gateways, ecommerce payment mediums, systems that deals with store
3. Customer can make cash payment at convenience store
4. Admin can reconcile payment and pick up at convenience store (TKL 39)
5. Integration with payment management systems for supporting multiple payment modes , Hence require to build PMS integration adaptor
6. Receipt & order confirmation is sent to user over Email with the order details including receipt confirmation ID (QR code), delivery details and payment details.
7. SMS is sent to user with order id
8. Payment terms to be administrative and configurable
9. Solution shall be capable to update the payment method of their account, such as autopay by credit card/bank etc. or using any other medium
10. Solution shall be capable to enquire the rebate fund balance with expiry date

## Online ordering (Q1 FY20)

As a customer, I want to place my order for the product(s) and service(s) chosen earlier with delivery mode & shipment details entered earlier.

As a Telco, I want to offer online ordering capability to customers to increase digital sales to reduce lead to activation time and operational effort.

Acceptance criteria

1. Ability to confirm or cancel the order placement with one or more products / services / bundles
2. Telco should be able to configure when lead is generated, converted to order.
3. Telco can configure /introduce (and manage) stages within lead to order life cycle and map it to the intermediate steps /processes. Ability to define and manage this on a per LoB, offering, service, customer type basis.
4. Action - Confirm
   * Lead is converted to order in DCCM
   * Order information is passed on to downstream system(s)
5. Action – Cancel
   * Allows user to cancel one or more or all items in the cart / order list
   * Prompts user to check if they want to surely cancel order
   * If user decides to cancel
     + All products or services then user lands on the product selection page
     + Select product(s) or service(s) then the those products are removed from order list / cart
     + Relationships between the products (e.g. compatibility) are handled with appropriate guidance for user when taking an action.
   * If user decides not to proceed with order cancellation they land on online ordering page
6. Action – Modify
   * Go back or edit inline to change order or shipment details
7. Ability to add, modify, cancel order for customer and Telco backoffice users (on behalf of customer)
8. Send notification if no progress on lead or opportunity or order in x time
9. Expire order if no progress on lead or opportunity or order with prior notification to customer and Telco staff

## Store locator (Q1 FY20)

As a customer, I want to locate stores & pickup points nearby me, from my preferred location to check product /service availability, or for pickup.

As a customer, I want to locate store nearby, within city or another city /country with address details & start /closing time & contact details

As a Telco, I want to provide prospects & customers the flexibility to locate Telco stores & pickup points nearby them or from preferred address for product inquiry, availability of product(s) or choosing as pickup point.

Acceptance criteria

1. Customer can Search and choose a store to pickup up an order from store with appointment booking
2. Customer can see nearest pickup point from my current position and my preferred location (TKL 179)
3. Customer should be having ability to search store location near me or preferred milestone, address, location
4. As a user, I should be able to locate the closest pick up point in my area (TKL 30)
5. Display store & pickup points nearby the user (or preferred address) browsing the locate store capability
6. Customer can view store(s) within city, another city, another country
7. Customer can view address of store, start /closing times & contact details
8. View store locations on Google map. Also Option to view as list (Tabular form). View by list of stores by geography and other parameters
9. Ability to search & View availability status of product / plan / service in a service centre / connect store & contact details , timings
10. Customer is able to select a store for picking up their shipment and choose a date /time slot for pickup
11. Telco can configure the stores in DCCM or integrate with downstream system
12. Service centres connect stores or agents closest to the customer and contact details of the same for effective and quick resolution of queries that would not otherwise be resolved through a call.
13. Show suitable date /time slots for pickup when the item will be available at the store (if not available already) and temporarily reserve the item for that customer
14. Store locator integration adaptor that can be seamlessly integrated with any system using APIs & microservices
15. System should also integrate with PoS by building up PoS integration adaptor (Q1 FY20)
16. System should have integration with Stock management system using Stock management integration adaptor (Q1 FY20) , which will be responsible for

* Availability of stock in a service center, connect store
* Device count
* Stock at PoS
* Stock view with partner

## Fulfilment (Q1 FY20)

As a customer, I want to receive or pickup my order without any hassles.

As a Telco, I want to fufill customer order of delivering product or service or bundle in timely, guided and best possible manner

Acceptance criteria

1. Customer can collect the order at the shipping address or store /pick-up point by showing order number, receipt confirmation id, QR code, verification id
2. As a user, I should be able to use my receipt confirmation ID (QR code) to pick up SIM card or a product at convenience store (TKL 37)
3. As an app administrator, I should be able to reconcile payment and pick up at convenience store (TKL 39)
4. The person delivering the order scans the order id which informs the downstream system that the order has been fulfilled. The fulfilment status is visible in the order tracking system to the customer & telco user
5. The representative at telco store or pickup point
   * Logs in to DCCM back office or PoS portal
   * Search by customer name or order id or email id or mobile number or combination of these
   * Confirm the identity of the person collecting the order and capture details – name, number, date, verified by <name>
   * The fulfilment status is visible in the order tracking system to the customer & telco user
6. Logistics integration adaptor or external delivery services (Q1 FY20) (e.g. triggering delivery services when one chooses option for home delivery)
7. triggering external delivery services when someone chooses an option for delivery of SIM card or any other product /bundle /offering (TKL 214)
8. System should have integration with Order management system

## SIM or Service Activation (Q1 FY20) (MVP 1)

As a customer, I want to activate my SIM or services on my own

As a Telco, I want to activate the services for customer following fulfilment of the order so I can start billing the customer

Acceptance criteria

1. Customer
   * As a user, I should be able to input my login credentials and ICCID to activate SIM card (TKL 48)
   * As a user I should be able to de-activate / activate services on my own if supported by Telco and underlying systems
   * As a user I should be able to terminate services on my own and in the process provide necessary details
2. Telco
   * Telco has option to configure if the SIM activation is system based activation or SIM activation by customer or both
   * As an app administrator, I should be able to ensure that once user credential is input, system can connect plan and chosen number to blank SIM card (TKL 49)
   * Ability to activate service upon system and /or manual trigger
   * As a Telco, I want the system to collect and reconfirm all required service details to deactivate or terminate a service. The system should acknowledge customers and follow-up deactivation or termination and also pass it to designated users e.g. sales, per predefined workflow
3. Integration
   * Integrate with downstream systems for SIM activation status
   * Integrate with downstream systems for activation, deactivation, reactivation, termination of services

## Leads & Orders (Q1 FY20)

As a Telco, I want to capture lead, opportunity and order information in DCCM & CRM systems and make it available to my Sales teams & Customer Support agents for necessary action.

Acceptance criteria

1. Ability for Telco to define stages in between the lead to order cycle and mapping to business process /steps to define when lead is captured, when
2. System must provide customer identification function to build association between portal user account and prospect / customer
3. Lead - Capture, edit, track & display lead & status to Telco agents
4. Order - Capture, tracking, integration with order orchestration system for fulfilment, status
5. System shall auto create new customer when new installation order issuance. Part of customer information should be pre-filled.
6. Lead
   * Ability to capture, edit, track, and display lead information. - DCCM will be frontend to showcase progress of Lead by integrating with different system to get status update
   * ability to monitor lead history throughout the sales life cycle
   * Ability to convert quote to an order for the customer in the sales cycle.
7. Order
   * All selected product offerings, inputted product configuration, selected service request date, selected appointment timeslot, etc. should carry forward to Customer Order automatically.
   * Complete OLM functions such as COM, SOM, ROM and Fulfilment like from Order capturing, negotiation, Order quotation till fulfilment) - DCCM to integrate with order orchestration system & fetch status updates to provide real time view to the customer
   * Design time OM module (template base order creation) - DCCM to integrate with Order management system to fetch template definition
   * The solution must capture status and data of an incomplete order from any channel and allow the order to be completed by any other channel
   * The solution must support the capture and submission of orders. The solution shall have the ability to define attributes to be captured against End-Customers during ordering and be able to receive updates on these attributes from and/or to external systems, for example information from a Credit Vetting solution
   * The Business Process should be configurable through UI like a drag and drop.
   * Automated and manual order mgmt..
   * Sales Force function used by CSR’s, Field Sales, Sales Administrators and Managers must be able to generate and qualify sales opportunities, generate revenue, maintain and optimize the sales process, territories, quotes and forecasts.
   * SFA shall provide following functionalities:
     + From management perspective the SFA tool shall offer following:
       - * Offer Company dashboards, Traceability and KPI monitoring.
         * Business user, group and role management
         * Hand-over between sales reps
         * Comprehensive support for the Lead to Order process flow, including relevant bookmarks/GUIs and necessary additional information/links.
       - Ability to capture, edit, track, and display lead information.
       - Ability to monitor lead history throughout the sales life cycle
       - One-click interface within the lead functionality that allows users to convert a lead to an account, opportunity.
       - Capabilities for assigning leads/opportunity manually or automatically using workflows based on lead criteria.
       - The solution shall provide lead process management workflow rules that will route a lead through lead scoring, qualification, augmentation, and distribution based on a variety of criteria.
   * The solution shall have the capability to handle order requests to:
     + Register a new customer
     + Create, modify or disconnect a product instance, which may or may not result in a change to a network service
     + The solution shall provide the ability to customize the product offerings and their components on the sales order such as override price, discount percentage, waiver of one-time or recurring charges based on the user generating the order

## Business interaction (Q1 FY20)

In the course of doing business, a service provider interacts with customers, employees and partners. All interactions with the customer are recorded by CRM as business interactions. The following capability shall be supported:

* + - * The system shall support capturing all interactions that are coming from customer or going to the customer through different channels
      * The system shall support all types of business interactions with customer that includes request, order, inquiry, complain and activity/notification
      * It must be possible for the agent to create a request to follow up an action that is required to answer a question or solve a problem for the customer
      * The solution shall support request for modification of customer information or the subscription
      * The solution shall support attachments of image, document and map types
      * The solution shall support inquiry requests from the customer, answered by querying information in CRM, Order Management System or Billing System
      * The solution must support the capture and submission of orders. The solution shall have the ability to define attributes to be captured against End-Customers during ordering and be able to receive updates on these attributes from and/or to external systems, for example information from a Credit Vetting solution
      * The solution must capture status and data of an incomplete order from any channel and allow the order to be completed by any other channel
      * The solution shall have the capability to handle order requests to:
        + Register a new customer
        + Create, modify or disconnect a product instance, which may or may not result in a change to a network service
        + The solution shall provide the ability to customize the product offerings and their components on the sales order such as override price, discount percentage, waiver of one-time or recurring charges based on the user generating the order

## Drop link, Abandon cart & Assisted sales (Q1 FY20)

As a customer, I want to resume my buying journey from where I left on web portal and mobile app

As a Telco, I want to have drop link support for mobile app as I have on web portal to know which customers dropped during the buying journey or left unfinished orders in the cart, so that I can contact them to help them finish journey & convert to a sale.

As a Telco, I want to identify customers that have left a product /service purchase in their cart for a configured time interval and no further action in backoffice UI and provide reminders & drop link to customer to help them complete journey or assist them to complete journey on their behalf

Acceptance Criteria

1. As a returning user, I should be able to get back to where I left (on mobile app and portal) (TKL 7)
2. Drop link generated in DCCM
3. View leads with drop links in backoffice
4. Notify customer asking them to continue with journey on in-app push notifications / sms /email with link to continue with journey from where they left it. Customizable notification text at each stage of drop
5. Tiny URL support for link to be embedded in sms, email and in-app notifications. Support to embed URL in text.
6. Customer decides to continue journey on their own
   * continue with journey from where they left it
7. Customer agent
   * Views list of customers that have dropped during the journey or abandoned cart
     + Customer details
     + Buying which product(s) or service(s)
     + What user filled at other steps
     + Step where they dropped
     + Ability to call customer
   * Views the status & screens same as the customer views it and can
     + Guide the customer to complete the journey where customer takes the steps. The actions, progress & status done at the customer side can be viewed by customer support agent
     + View what customer is viewing in real time
     + Complete the journey themselves on behalf of customer after customer’s confirmation
   * Update the status of the lead or opportunity with comments
   * Drop link support across all journeys, all steps, input channels, all device(s)
   * Identify customers that have left a product /service purchase in their cart for a configured time interval and no further action in backoffice UI. Send reminders & drop link to customer to help them complete journey or assist them to complete journey on their behalf
8. Solution must allow internal users (Telco employees, Partners) to access same GUI as end-customer (on the selfcare and the mobile application and taking into account GDPR regulation)
9. Reports for drop link and abandon cart are available to Telco user

Epic - Retail Self care

### **General requirements**

* + - * Presentation – controls which services are available, when, and to whom. This means creating the appropriate discovery structure, as well as creating pages and adding services and content to them
      * Branding – creation of a selling Look-and-Feel that not only eases the navigation activities, but also contributes to making the portal look more attractive
      * Delivery – ensures that requested resources reach the device, either using HTTP download or OMA download
      * Commerce – enables the consumer to purchase services and content. This includes management of premium resource types, products and offers
      * Personalization – Adapt the portal to the user and his or her needs, and also allow the end user to have control over some aspects of the portals. This includes My Favorites as well as My Look-and-Feel
      * Device and Network Adaptations – makes the portal viewable and usable at all times in any device and over any network
      * Customer Care – resolving customer issues in purchases and post purchase
      * Full Text Search – language-aware searching of pages and services on the portal
      * Searchable knowledge base (ST-404)
      * Authentication and Registration – controls which end users are allowed to access the portal. Critical when allowing the user to purchase content
      * Media Management – ingestion, management and access of media assets
      * Web Channel – makes the mobile portal accessible as a part of the regular web site
      * Omnichannel enabled – needs to have the required API architecture to integrate with an omnichannel engine

### **Customer & Partner Management**

Customer and Partner Management shall maintain customer and partner data for all applications in one place and supply all information regarding those customers. It must provide functionality and interfaces to create and maintain customers, provides an inventory of purchased products and services, and supports the creation of contracts in order to model business relations between the operator and its customers. In general simple and composite products exist which can be assigned, removed or taken over. Resources, like MSISDNs and SIM cards and services can be created and assigned

The functionality of customer and partner management must be provided through the following services:

* + - * Business Logic Services to controls the consistency of the data and handles the lifecycle of the entities.
      * Data Management Services to create and maintain customer data
      * Batch Services
      * Customized Services for execution of customized flows to extend/update existing Business logic service.
      * Flow Management Service  
        To create and read of customized flows. The flows shall be designed using Business Process Model and Notation (BPMN)
      * ID Translation Services in order to provides a service to translate;  
        - external entity types to public IDs used by Customer and Partner Management  
        - external resource types to public customer and contract IDs used by Customer and Partner Management
      * Scheduler (as Internal Service)  
        Triggering of future tasks

High-level capabilities:

* + - * Life-cycle management of installed customers, contract and products (including e.g. pre-activation, trial period and minimum commit), i.e. the service registry.
      * Triggers subscription life-cycle notifications
      * Support of multiple billing accounts per customer and contract
      * Shared plan within contract e.g. for family
      * Handling of scheduled activities for contracts and products including configurable business actions for recurring charging
      * Personalization of attributes e.g. notification limits, lists for Family and Friends, product prices
      * Workflows for customization of business logic
      * Workflows with business logic to support Order Management, Order Negotiation and Customer Care§



## My Profile & MyAccount (Q1 FY20)

As a customer, I want to have flexibility to edit my profile details like email, phone, communication preferences, social media in MyAccount

As a customer, I want to associate multiple product(s), service(s), subscription(s), mobile numbers that can belong to my home, family or contacts to a single MyAccount so that all can be managed from same account.

As a Telco, I want to give flexibility to customer to update their contact details, communication preferences and add multiple services and subscriptions to the same MyAccount for easy self-management and reduce dependency on Telco

Acceptance Criteria

1. Telco
   * As an app administrator, I should be able to request user to enter their personal details (name, birthday,xx) and preferences (TKL 50)
2. MyProfile has 2 sections
   * Personal Details
   * Account Details
3. Personal details
   * As a user, I should be able to enter my personal details and preferences (TKL 51)
   * Customer can do following actions in MyProfile
     + A user should be able to view and update personal details
       - email, phone, address, birthday, name etc
       - Email and address are editable. Editing any of these prompts the user to enter password or OTP (configurable by Telco user)
     + A user should be able to set and update communication preferences per purpose
       - e.g. communication mediums like email, phone, sms, app notifications, social media
       - e.g. purpose like bills, offers, promotions
       - Telco backoffice administrator should be able to configure which communication mediums and preferences should be exposed to customer(s) per segment /service /product /subscription.
     + A user should be able to provide and pull back consent anytime they want for storing customer data and sending notifications /communications
     + Customer should be able to change their Telco account password anytime they want by entering existing password, new password (with re-confirmation) and with OTP confirmation. This password must comply with Telco’s password policy.
     + Telco backoffice administrator should be able to set Password policy /criteria to be exposed per customer & product /service type.
     + As a user, I should be able to link my account with my social media account (TKL 52)
     + Customer should be able to link their social media account in Telco MyAccount. Configurable by Telco backoffice administrator.
     + Ability to choose languages (English – Default) as exposed by Telco backoffice administrator.
   * Manage Address book
     + Customer can add, update and manage billing information /address(es) and shipping address(es) [upto 10 shipping addresses]
     + These addresses are available anytime for selection to a customer when placing an order where shipment or installation is needed
   * Customer receives Email & SMS notification upon updates on personal details or preferences
   * Customer should be able to upload their photo / avatar, preview and change it. This photo/ avatar will be visible to other members of family in the group and connected friends
   * Payment Methods
     + Shows list of saved details of payment medium e.g. credit card, debit card details, wallet
     + Action – Edit details, Delete, Mark as favourite
   * Others
     + As a user, I should be able to put data limit on certain apps (TKL 60)
     + As a user, I should be able to input my topics of interest (TKL 75)
     + As a user, I should be able to add friends from social media
     + As a user, I should be able to input my mood (TKL 81)
     + As a user, I should be able to create my shareable profile consist of: Name, interest, activities, telco package summary, loyalty status (TKL 185)
     + As a user, I should be able to see other users' plan and historical usage (TKL 84)
     + As a user, I should be able to refund my unused quota to balance (TKL 139)
     + As a user, I should be able to adjust my plan for next period (TKL 141)
     + As a user, I should be able to see other users' activities of interest (TKL 77)
     + As a user, I should be able to see my colleagues' plan and best plan combination (TKL 145)
     + As an app administrator I should be able to provide zero-rating into xx apps (TKL 122)
     + As a user, I should be able to unsubscribe my plan when I decided to leave (TKL 162)
     + As a user, I should be able to keep my account for 60 days after plan expired (TKL 163)
     + As an app administrator, I should be able to deactivate a user account when their account have expired (TKL 164)
     + Include Customer Account View to provide customer profile enquiry, contact profile enquiry and maintenance, service profile information enquiry and contract enquiry.
     + As a user, I should have an option for automatic renewal on the same plan (TKL 136)
4. Account Details
   * Shows list of all services and products bought under this customer account
   * Ability to add account
     + Select type of account – Mobile, Fixedline, Device, IPTV, Broadband, Landline, Triple play
     + Each account can be matched with a service offered by Telco
     + Adding an account type = Mobile number
       - Enter mobile number
       - Select account type – Personal, Business, Family, Friend
       - Enter account name (customizable) – optional field. Default will be mobile number
       - Ask to enter OTP sent to the mobile number associated with this account for validation
       - Link to where I find mobile number
       - Default summary view (collapsed)
         * Account name
         * Mobile number
         * Owner name
         * Customer id (if any)
         * Service type – Prepaid, Postpaid
       - Expanded view additionally shows
         * Tariff Plan with activation date
         * Status – Active / Deactive
         * Address
         * Add on with activation date with status. Option to buy a previously bought add-on
         * Email
     + Adding an account type = Broadband (fixed line), Triple play, Digital TV
       - Enter service id
       - Select account type – Personal, Business, Family, Friend
       - Enter account name (customizable) – optional field. Default will be mobile number
       - Ask to enter OTP sent to the mobile number associated with this account for validation
       - Link to where I find service id
       - Fixed line / Broadband
         * Default summary view (collapsed)

Account name

Service id

Owner name

Customer id (if any)

Service type – Fixed line

* + - * + Expanded view additionally shows

Activation date

Contact number

Status – Active / Deactive

Address

Email

Add on with activation date with status. Option to buy a previously bought add-on

* + - * Triple play
        + Default summary view (collapsed)

Account name

Service id

Owner name

Customer id (if any)

Service type – <IPTV, Broadband, Content>

* + - * + Expanded view additionally shows

Activation date

Contact number

Status – Active / Deactive

Address

Email

Adds on with activation date with status. Option to buy a previously bought add-on

* + Ability to link products /services bought under other customer account to this customer account
  + View Plan & subscription summary
  + Provide validations when updating customer profile or account details
  + subscribers should have capability to update their account information through the self-service channels if they wish to do so (TKL 253)
  + solution shall be able to manage the account status and subscribers' information (TKL 268)
  + Allow to maintain Contact Profile by authorised user. i.e. add, update and remove of contact information, for different contact purposes i.e. by service, by purpose. Set one as primary contact.
  + Only limited billing account profile information is allowed to be updated by customer and validation checking is necessary
  + The proposed solution shall be capable to update the payment method of their account, such as autopay by credit card/bank, etc.
  + Allow subscribers to change their profile, login credentials, and billing information (TKL 270)
  + The proposed solution shall be capable to view / enquire the rebate fund balance with expiry date, view loyalty points and able to redeem them

1. Provide real-time APIs to all required modules or external systems to
   * terminate subscribed product and service profile
   * retrieve customer profile
   * retrieve bill account profile
   * Retrieve subscribed product and service profile.

## Bills (Q1 FY20)

As a customer, I want to view, analyse and download bills for self management so I don’t have to call customer care.

As a customer, I want to be notified and reminded of bill payment(s) on email /sms /app as per my preferences to pay them in time

As a Telco, I want to notify & enable customer to view, analyse and download bills and make payments to reduce calls to customer care support center.

Acceptance Criteria

Customer can view in Self Service

1. Customer can view an itemized bill(s)
2. Get notifications and reminders on email, sms, app to recharge in time to enjoy continuity of services.

* Request based itemized bill. Give configurable to telco (send over email automatically or user can download from portal)

1. One time charge added to bill and /or recurring charges

* View summary - Summary - Paid last, unpaid bill, pending, credit limit & duration
* Ability to view bill breakdown
* View last n bills
* View bill details - service / number, amount, month
* System sends bill over email and app automatically on generation x days before it is due payment. Notify on SMS.
* Option to download bills, print bills, email bills
* Support for ebill with option to revert back to printed bills
* Option to request resending paper bill in hard copy with extra charges
* Display bill per subscription. Option to consolidate in single bill for all subscriptions with breakdown .
* statement of accounts - invoice + payment

1. Sample bill with explanation

* Customer has ability to view sample bill with explanation.
* Telco has capability to
  + Enable / disable display of bill sample
  + Upload bill sample image or pdf
  + Per offering /service /per customer type /geography

1. Video to understand bill

* Customer has ability to view sample bill video.
* Telco has capability to
  + Enable / disable display of bill video
  + Link bill video
  + Per offering /service /per customer type /geography

1. Ability for customers to drill down bill to nth level of detail to analyse on their own
2. Ability to create support ticket directly from bill with relevant ticket categories and sub-categories and option to attach screen sample automatically of screen from where user is creating ticket
3. Ability to compare bills with differences and outliers highlighted to easily understand why the bill amount or consumption has increased or reduced from standard amount /usage.
4. Ability for customers to view, download, email bills in language of their preference – Multi-lingual support
5. Telco agent is able to view the bill information from backoffice
6. View total bills with split of unpaid, upcoming, paid
7. Ability to get bills on email, app or Ebill support (with inputs as email address)
8. On-demand bills and invoices
9. Flexibility to change billing cycle
10. Bill & Payment enquiry

* Provide sufficient bill related enquiry function to support customer’s query. Billing account profile with bill and payment method, invoice history, bill image shall also be provided.
* Bill enquiry information should include but not limited to enquiry account status, bill date, bill language, bill media, payment method and bill address.
* Only limited billing account profile information is allowed to be updated by customer and validation checking is necessary
* Display the pool sharing and/or group set up of involved services & billing accounts (but not limited to same customer account), for the relevant product offering subscribed.
* Alert user /customer when request for transfer of ownership is raised & fulfilled and split billing is disconnected
* provide Rebate Fund Enquiry function to inquiry the outstanding balance and expiry date
* provide deposit history, payment history and adjustment history enquiry function
* Provide dunning history enquiry function of selected account during specific period. The transaction shall include, but not limited to, dunning action, description, action date and time, release date, submit status, collector name and assigned period.
* Support real-time interface from Billing & Revenue Management to
  + Display bill account profile
  + Enquire bill account credit information
  + Enquire bill summary and details
  + Reprint and resend bill
  + Display associated charges of specific requests (e.g. paper bill reprint)
  + Enquire billed / unbilled usage summary and details
  + Enquire pool sharing related billing information
  + Enquire payment history
  + Enquire adjustment history
  + Enquire deposit history (for fixed line)
  + Display split bill details
  + Change bill cycle
  + Display subscription grouping & pool sharing details under subscribed product offering (not involve switch of product offering)
* Ability to update the payment method of their account, such as autopay by credit card/bank, etc.
* Support to enquire the rebate fund balance with expiry date
* Inquiry function of billed and unbilled charges, usage pooled sharing summary

1. Bill and invoice enquiry function shall be provided, such as (but not limited to)

* current outstanding balance
* invoice summary
* bills for past months
  + number of months will be configurable

1. Reprint bill

* Capability to reprint / resend bill by specific account and bill date, etc. bill or resend request by Customer via the portal. Resent paper bill in hardcopy needs to have extra charge.

1. Ebill

* Capable to download eBill image or selected fields can allow to download in predefined format.

1. Usage enquiry

* Billed and unbilled usage enquiry (e.g. IoT related service) are required in summary view or detail view.

1. Bills (Tabular Format – By Default last 10 bills)

* Bill number
* Bill date
* Amount
* Due Date
* Actions (Make Payment, Download Bill, Raise a Ticket)
* Product
* Charge Type (Subcription, Standard)

1. Bills (Graph – By Default last 12 months)
   * Total Amount vs. months
   * Search by year
   * Search By Cost Centre/Department
   * Search By Products
2. System must be able to generate invoice in real time for both any product or service or subscription
3. prepaid customer can also request for a call detail statement which details out a detailed report of the charges incurred by the customer for the requested period.
4. View bill history for each invoice(Billing) account and drilling further to the itemized bills for each service account/MSISDN
5. View bill – consolidated, subscription-wise, breakdown and details
6. Bill Cycle, payment media, payment method should be included in Billing account profile, but not limited to, which can be configurable. Validation should have when capturing information.
7. provide validations when updating billing account profile. For example, if selected email as bill media, email address should be inputted and format should be correct.
8. Bill account profile can only be updated by authorised user. Some fields, such as account status or credit status but not limited to, can only modified by Revenue Management.
9. Change of Bill cycle is allowable by authorised user. The proposed solution shall generate the coming bill with original bill day and generate following next bill with next bill day. Detail is in Billing and Revenue Management Area

## Payments (Q1 FY20)

As a customer, I should be able to make online payment mode using a range of available online modes and view payment history.

As a Telco, I want to enable customer to pay online using various mediums to reduce support calls, walk-in in the Telco stores, reduce channel dependency for customer payments.

Note – All requirements & acceptance criteria related to payments in on-boarding section apply here as well.

Acceptance criteria

1. Customer can
   * See overview plan and, what are the total cost and its breakdown
   * Choose to make payment via one of the below mediums
     + Seamlessly make payments with Credit Card, Debit Card, Online banking, and E-Wallet, ATM, mobile banking, mobile money, EVD, loyalty points (TKL 33)
     + Seamlessly make payments with e-commerce payment (TKL 34)
     + Make cash payment at convenience store or Telco store (TKL 35)
   * View points for purchases
   * Upon payment, customer can see receipt confirmation ID (QR code) and tracking details on their order (TKL 36)
   * As a user, I should be able to change my rewards to extra data, voice, or sms (TKL 133)
   * As a user, I should be able to recharge my balance using e-wallet (TKL 150)
2. Telco admin
   * Choose which payment modes must be exposed
   * As an app administrator, I should be able to reconcile payment and pick up at convenience store (TKL 39)
   * As an app administrator, I should be able to make sure that my user's credit card information is encrypted safely (TKL 40)
   * As an app administrator, I should be able to make sure that my payment system comply with regulation (TKL 41)
3. Integration with payment gateway, ecommerce payment mediums, systems that deals with store
4. Integration with e-wallet partners
5. Configurable terms and conditions with administrative access only if payment partner supports it
6. B2C - payment installments if the payment partner supports the same
7. View payment history for each invoice(Billing) account and drilling further to the itemized bills for each service account/MSISDN
8. Recharge payments & for what services /products. Invoices for bundled offers
9. One time and recurring charges for products, services, subscriptions
   * Online Payments for one or more services / plans /add ons /bundled offers (on-boarding journey, post purchase)
   * Payment receipt (online payment)
   * Email / SMS with payment receipt & other details
   * payment for bills
   * Payment history for last x months (including adjustments)
   * Payment enquiry - payment history
   * Payment - Select one or more services, View total, Payment methods, download receipt
10. Standing Instruction / Auto-pay
    * Customer can decide to pay automatically or manually. Default is manual payment
    * Customer can enable Auto-pay which prompts to choose from saved payment methods with option to add new payment method
    * Customer can select date for auto-pay which should be before due date of bill
    * Customer can turn off auto-pay and go back to manual payment
    * Capability to update the payment method of their account, such as autopay by credit card/bank, etc.
11. Payment history
    * Payment history for x months (configurable for number of months) are required for customer enquiry.
12. Online payment
    * Provide online payment function that is PCI-Compliance for Customer to pay instantly for a specific bill
13. Payment reminder
    * The proposed solution shall have payment reminder, after X days (configurable) of bill date or Y days (configurable) before due date, will be sent to customer via Inbox/alert and dashboard page on Customer Portal web version, Push notification for App version.
14. Postpaid - Early payment notification giving benefits of discount to realize early value
    * Customer gets notification to pay
      + within <x> days and get <y> discount or rebate within certain time or on next bill
      + within <x1> days and get <y1> discount or rebate within certain time or on next bill
    * Telco can configure whether to offer this capability, customer type to which this must be offered, and configure the values & rules within DCCM
    * Integrate with Analytics system & notification
    * Option to decide if this should be visible on web portal or mobile app or both
15. Payment terms to be administrative and configurable
16. Instalments functionality
17. Ability to make full or partial payment
18. Complete payment history
19. Account statement with bill and payments done against it
20. History of payment adjustments
21. Provide a lighter portal to act as the web redirection page should customer run out of data to browse with use cases not limited to below: (ST222-ST230)
    * OTP mode of authentication through SMS and Email to be applied on page load
    * View all available data offers for purchase using multiple payment modes
    * View all service, subscription, payment and points related information at the point of loading e.g. customer GSM and Mobile Money Wallet information
    * Telco branded page and personalized based on the information available in customer profile
22. Support payment via IVRS or by calling customer care support or any channel
23. Telco agent is able to take payment from customer online or offline from backoffice or PoS
24. Solution shall allow customer to make online payment with credit card when upfront payment is required. e.g. but not limit to:
    * subscribing product offering requires a deposit/prepayment/advance payment as defined in Product Catalogue, or,
    * a special customer deposit is required, e.g. customer in bad credit rating.
25. Recommend payment mode that gives best discount, rebate, points to customer, benefits
26. Display payment per plan / service duration to highlight benefits / savings
27. Integration with payment management systems for supporting multiple payment modes , Hence require to build PMS integration adaptor
28. Customer can make cash payment at convenience store
29. Admin can reconcile payment and pick up at convenience store (TKL 39)
30. Make Payment (Partial/Full)

* List of Products with outstanding amount with checkbox
* Total Bill
* Payment Method (Net banking, Credit Card, Debit Card)
* Download Payment Receipt from Success Page

## Change Plan, Manage Plan (Q1 FY20)

As a customer, I want the flexibility to change my existing plan /services online in minimal time without any hassles or dependency on customer support.

As a Telco, I want to enable customers to change their plan online to the extent my underlying systems support it.

Acceptance Criteria

1. Customer can switch plan / subscription from Self Service Portal or mobile app
2. As a customer, I want to update, deactivate or terminate a plan / service / subscription e.g. switch from prepaid to postpaid & vice versa, switch within prepaid or within postpaid plans or fixed line, one plan to another in fixed line, top up, add on during billing cycle and at start of billing cycle
3. Prepaid to Prepaid
   * Customer can refund my unused quota to balance
   * Customer can adjust my plan for next period (TKL 141)
4. Postpaid to Postpaid
   * Customer can transfer my prorated balance to another plan
   * If usage exceeds quota, then additional bill amount is carried forward
5. Prepaid to Postpaid
   * Customer can refund my unused quota to balance
6. Postpaid to Prepaid
   * Customer can transfer prorated balance to another plan
7. Add new subscription
8. Add additional services and /or products
9. Change configuration
10. Change of services and /or products
11. VAS add-on and removal
12. Disable (with option to restart) or terminate a service, subscription
13. OTP validation before submission of change plan
14. Notify customer on successful request submission of change plan
15. Customer knows if his request for change plan submission has been successful and when it can be fulfilled and if there is an action for them to be done.
16. Customer can be led to change plan from promo scheme, directly by logging into Self Service Portal, Mobile app
17. Telco can define which type of switching is allowed, what plans to allow to switch to an existing customer, whether refund, adjustment should be allowed and for what type of plan change
18. Integrate with necessary systems to update the subscribed plan
19. Telco user can view the switch done by customer(s) in plan per customer and on aggregated basis
20. As a user, I should have flexibility to change my plan anytime (convert data-voice-SMS with the same balance that I have paid for) (TKL 137)
21. As a user, I should be able to purchase additional plan (data, voice, SMS, roaming) (TKL 138)
22. As a user, I should be able to adjust my plan for next period (TKL 141)
23. As a user, I should be able to see my colleagues' plan and best plan combination (TKL 145)
24. As an app administrator, I should be able to give plan suggestion based on usage history (TKL 147)
25. As an app administrator, I should be able to show colleagues' plan to user (TKL 148)
26. As an app administrator, I should be able to show best plan combination to user (TKL 149)
27. As a user, I should be able to share my plan details using social media and chatting apps (TKL 159)
28. As a user, I should be able to modify the suggested plan (TKL 160)
29. As a user, I should be able to give custom name to my plan (TKL 161)

## Add on (Q1 FY20)

As a Customer, I want ability to purchase different add ons / value added services on-demand to avail available telco services like roaming, caller tunes, top ups etc.

As a Telco, I want to provide & promote add ons that customer can subscribe /purchase on-demand to increase my ARPU

Acceptance Criteria

1. Customer is able to view and choose add ons /VAS & top ups
2. The add ons / VAS can be related to the base products /plan /services bought by customer. Customer can choose to buy other product(s) or service(s)
3. Customer can browse through the different categories of the pack, defined as below as appropriate to the service / product offering:

* Data Packs
* ISD Packs
* Talk time
* Roaming
* Caller tunes
* Smart Recharge
* Unlimited Packs
* Best Selling Packs
* Top ups
* Bandwidth
* Content Packs
* Fixed line services

1. Show the list of the available add on packs to the customer with details like validity of the pack, price of the add on, services/ quota offers
2. Compatibility Check with the base plan of the customer
3. Payment method in case of Postpaid can be Pay now or Add to Bill
4. In case of Prepaid it can be deduct from my balance or pay now
5. Support manual and auto-renewal of the Add ons
6. As a user, I should be able to turn on and off roaming features and purchase roaming packs (TKL 67)
7. As a user, I should be able to view roaming status and monitor usage on roaming packages (TKL 68)
8. As a user, I should be able to view add ons, view add on details, choose add on(s), view its cost, buy add ons relevant to my plan /service
9. Ability to show most relevant add ons so that chances of purchase are higher
10. As a user I should be able to purchase or subscribe to one or more add ons or value added services on-demand
11. As Telco, I want to showcase relevant add-ons to customers during the journey or on self care portal /app to increase chances of it being bought to increase cross sell / upsell.
12. Ability to showcase add-ons intelligently based on multiple parameters
13. As a Telco, I want to show relevant add-ons to customer based on their consumption & usage patterns, history, subscribed products, consumption in billing cycle /date vs. capacity
14. As a Telco, I want flexibility & configuration to suggest and recommend add ons to customers over web, app, sms, email, social media, community, chatbot & communication tools

## Recharge & balance (Q1 FY20)

As a Customer, I want to recharge my account by amount, plan or voucher to avail different services

As a Telco, I want to enable customer to recharge online on their own or via a reseller

Acceptance Criteria

1. Recharge my account with amount, plan, voucher or points to avail different services
   * Recharge By Amount
     + Add Amount
     + Show +/- 10 % matching pack with the entered amount (Upselling scenario)
   * Recharge By plan
     + Select a recharge plan
   * Recharge By Voucher, coupons or points
     + Enter voucher code or points
   * Recharge by account
2. Compatibility Check with Basic Plan
3. Payment Method - Deduct from my balance, Pay now
4. Pay now - redirect to payment gateway
5. Partial Payment – deduct from balance + payment gateway
6. Payment Receipt
7. Notifications on email and sms
8. Updated Balance in case of Recharge By Amount
9. Payment methods can be credit card, debit card, e-wallet, ATM, online and mobile banking, minimarket, operator’s authorized Dealer, voucher, loyalty points
10. Email and SMS Notification regarding recharge success/ failure
11. Integration with E-commerce platforms like Paytm, Phone Pe etc for recharge (White labelling)
12. Display updated subscription status post recharge attempt
13. Recharge my balance using any payment medium – online or offline or ATM or at minimarket / store
14. As a user, I should be able to recharge my balance using credit or debit card (TKL 154)
15. As a user, I should be able to recharge my balance using online and mobile banking (TKL 155)
16. As a user, I should be able to recharge my balance at Telco authorized dealer (TKL 158)
17. As a user I should be able to recharge my balance using ATM (TKL 152)
18. As a user, I should be able to recharge my balance at minimarket (TKL 156)

## ATM integration adaptor (Q1 FY20)

1. As a user I should be able to recharge my balance using ATM (TKL 152)

## Renewals (Q1 FY20)

As a customer, I should be able to review my plan, services or contract to enjoy its continuity.

Acceptance criteria

1. Customer can renew on their own or via partner or minimarket or store (TKL 156)
2. Ability to renew plan, service, contract, as supported using any payment medium allowed by Telco
3. On completion of plan /service or advance or intermediate as supported in product catalogue
4. Lighter portal to act as the web redirection page should customer run out of data to browse with use cases not limited to below: (ST222-ST230)
   * OTP mode of authentication through SMS and Email to be applied on page load
   * View all available data offers for purchase using any payment medium
   * View customer GSM and Mobile Money Wallet information at the point of loading
   * Page should be Telco branded and personalized based on the information available in customer profile
5. Option for automatic renewal or manual on the same plan (TKL 136)
6. Ability to renew in advance, within x duration before expiry, on expiry
7. Ability to view renewal history and action

## Balance Transfer (Q1 FY20)

As a customer, I want to transfer a particular amount to my friend / family member having prepaid connection of the same operator.

Acceptance criteria

1. Ability to transfer amount to friend /family having prepaid connection of same operator
   * + Select Amount (Can not be more than the available balance of the customer account)
     + Select To mobile number
     + OTP Verification
     + Transfer
2. Balance Transfer History
   * Show all the previous transferred balance with amount, to mobile number and transfer date time and option to transfer the balance again
3. Both sender and receiver should be able to clearly view balance status before and after balance transfer
4. Notification via email and sms to both sender and receiver

## My Plan & Services (Q1 FY20)

As a Customer, I want to view my plan details, service details & contract details, and activate or deactivate the available telco services so that I can manage my subscription and services easily.

As a Telco, I want to enable customers to view and manage their services on their own or via Telco partner to deflect call center and store traffic.

Acceptance criteria

1. View all active (and historical) subscriptions, products, plans through a self service experience using web and app channel (TKL 254)
2. Solution shall extract all information (but not limited to) about subscribed Product Offerings, Service line, Product Profiles, Equipment, regardless if they are pending active/active/inactive. System shall be able to tell the service and subscription status
3. Information shall include (but not limited to) status, effective date, termination date, SLA plan, offer details, contracts, agreement, related orders, etc.
4. Graphical and tabular view of all plans, services, subscriptions and products
5. Ability to activate and deactivate services, plans, contracts to manage them easily
6. View plan, product & service details for all Telco services, offerings bought by customer e.g.
   * Prepaid, & Postpaid
     + Details like activation date, valid upto, included services, bundled quota, rate card charges, QoS, Contract Details if applicable, Deactivate/Terminate Plan, all service components with capacity
   * Broadband, IP TV, Fixed line e.g. fixed line bandwidth assigned, consumed etc
   * Information shall include (but not limited to) status, effective date, termination date, SLA plan, offer details, contracts, agreement, related orders, etc.

* As a Customer, I should be able to unsubscribe my plan when I decided to leave (TKL 162)
* As a Customer, I should be able to keep my account for 60 days after plan expired (TKL 163)

1. Purchase & Subscription History :

As a user, I should be able to see my purchase history of data, voice, SMS in the last 3 months (TKL 63)

* + Base Plan
    - Plan , Status of the Plan, Activation Date, End Date
    - Show Active Plan on the top of the list and then previously subscribed plans
  + Add Ons
    - Add on name, Status of the Add on (Active/Inactive), Activate Date, End Date
    - Show Active Add ons on the top of the list and then previously subscribed Add ons
    - Option to purchase the add on again
    - Manage Auto renewal of the add ons
  + VAS (Caller Tunes, MMS, Videos etc )
    - Name of the subscribed service with activation date, end date
    - Show Active VAS on the top of the list and then previously VAS
    - Option to purchase the VAS again
  + Display related Order summary information, such as order status, order summary, appointment date and time, etc.

1. My Services :
   * International Roaming – Activate / Deactivate
   * DND
   * Option to add addons & VAS
   * Option to deactivate an add on or VAS or service

## Usage Tracking (Q1 FY20)

As an existing user, I should be able to monitor usage of the subscribed services (Data, voice, sms, bandwidth) using my mobile app/ web portal

Acceptance Criteria

1. Monitor usage of the subscribed services (Data, voice, sms) using my mobile app/ web portal
2. View remaining plan /capacity levels. E.g. voice, sms, data, bandwidth and how much is consumed
3. Ability to monitor consumption patterns and trends and get recommendation on optimizing usage or better suited plans /services
4. As a user, I should be able to monitor usage per apps (TKL 61)
5. As a user, I should be able to monitor data tethering (TKL 62)
6. Usage Dashboard :
   * Used Data out of total available quota
   * Used Voice Minutes out of total available quota
   * Used SMS out of total available quota
   * Used bandwidth /date of available quota
7. Ability to monitor expiry date
8. Ability to monitor my plan validity period (TKL 57)
9. Drill down with CRD Details on click – show last 10 days CDR by default with an option to search for particular dates
10. Voice – Capabilities to filter by Local, ISD, International Roaming
11. Get notifications when my data, voice, or sms quota runs out or before that on crossing configurable thresholds (charging system to perform this action) (TKL 58)
12. Provide a lighter portal to act as the web redirection page should customer run out of data to browse with use cases not limited to below: (ST222-ST230)
    * OTP mode of authentication through SMS and Email to be applied on page load
    * View all available data offers for purchase using payment modes like but not limited to: Mobile Money, Credit/debit card, EVD, Loyalty points, View customer GSM and Mobile Money Wallet information at the point of loading
    * Page should be Telco branded and personalized based on the information available in customer profile
13. Raise a request to rollover my unused quota to the next month (TKL 69)
14. Raise a request to refund my unused quota to balance (TKL 70)
15. Monitor my usage on data, voice and sms (TKL 55)
16. Monitor my expiry date, plan validity period, usage per apps, data tethering (TKL 56, 57, 62)
17. Get notifications when my data, voice, or sms quota runs out
18. Put data limit on certain apps (TKL 60)
19. Suggest alternative plans based on customer usage
20. Display app wise usage
21. Monitor unbilled usage

## My Activity (Q1 FY20)

1. As a user, I should be able to see summary of my activities both for beyond telco and telco (TKL 187)

## Order tracking & Order History (Q1 FY20)

As a customer, I want the ability of real-time tracking of my order and view history of orders I have placed with ability to repeat an order.

As a Telco, I want to provide customer the ability to order in real time to deliver better experience

As a Telco, I want to provide customers the ability to view their order history.

Acceptance criteria

1. Customer should be able to view order status and history with enough details without any need to call support or visit store
   * Order history
   * Track order status with steps completed, current stage, remaining with estimated time & cost
   * Complete historical records of order, contract, services and payments
2. As a returning user, I should be able to track my delivery status of the order of the pending orders (TKL 6)
3. Real time order tracking status should be visible to customer with estimated time of receiving order / installation and est time to reach each level /step within the process
4. Customer should be able to view if the order is struck at any stage and get contact details for inquiry /query and quote order id or confirmation id during inquiry
5. Customer can have option to change the shipping address depending until the point of no return or with certain charge as defined by Telco
6. Ability to track order status by entering order id or confirmation id without login
7. As a user, I should be able to see my receipt confirmation ID (QR code) and tracking details on my order (TKL 36)
8. As a Telco, I want to offer real time status view of in-flight orders /services to customer with predictability of when it will be delivered /installed to offer tracking similar to modern eCommerce players.
9. As a returning user, I want to have a look at my previous orders
10. Provide a dashboard view with quick vision for customer to enquire the pending/outstanding orders status and progress, which would be drilled into order details to view and monitoring the progress as needed
11. Ability to view order details of the orders with current order status and the estimated Delivery Date Time
12. The order status is derived and updated in real time based on the real status
13. Each product or service or subscription in the order is tracked and shown separately
14. Ability to raise a query related to the open order / Chat with chatbots
15. Show list of all the orders placed by customer in last 6 months with basic details like Order ID, Order Status, Order placement Date, Option to repeat the order
16. Ability to view purchase history of data, voice, SMS in the last <3> months /years
17. Complete historical records of order, contract, services and payments

## Case Management (Q1 FY20)

As a customer, I want to create, view and track tickets to get assistance on the issues I face

* Ticket categories (inquiry, service check, bills & payments, request, order, compliant etc) & sub categories
* Create ticket - choose category, sub category, priority, issue details
* Integration with other systems to fetch requested info - e.g. fulfilment system, billing system etc
* Ticket history & status
* Ability to cancel ticket, comment on existing ticket, reopen ticket
* Upload screenshots, document, excel, image, any file type while generating ticket (TKL 99)
* Ticket creation by customer and by CS agent (role-wise per category /sub-category, function, service etc).

Customer Case Management must be a one stop, web-based application that shall provide a complete view of all customer interactions regardless of channel to the CSR representative along with possible remedies, offers, or actions to improve each customer relationship.

Acceptance Criteria

1. Customer or Telco can create a ticket /case
   * Choose a ticket category (inquiry, service check, bills & payments, request, order, compliant etc)
   * Choose a sub category under the category
   * Select priority
   * Enter issue details
   * Customer /Telco can monitor ticket status
   * Integration with other systems to fetch requested info - e.g. fulfilment system, billing system etc
   * Ticket history & status
   * Ability to cancel ticket, comment on existing ticket, reopen ticket
   * Upload screenshots, document, excel, image, any file type while generating ticket
   * Ticket creation by customer and by CS agent (role-wise per category /sub-category, function, service etc).
2. Record every activity regarding the problem management (TKL 241)
3. All subscriber complaints must be logged, prioritized and made trackable to the subscriber if desired by the subscriber (TKL 249)
4. All issues or complaints should be categorized and have a resolution target SLA based on category and subscriber type (platinum, gold , silver etc) (TKL 250)
5. Telco can configure DCCM to store ticket information in DCCM in scenarios where CRM isn’t deployed separately. Default = off (TKL 242)
6. Ticketing management capabilities for proper tracking for: (TKL 243)
   * subscribers' complaint handling purposes, for example subscribers raise complaint via live chat and this complaint will be given a ticket number/reference for tracking purposes
   * internal Telco problem handling purposes, for example there is a revenue anomaly and internal Telco staff will raise this problem to be investigated. This problem thus will be given a ticket and sent to the related team
7. Subscribers shall be able to specify if the FAQ, Community, e-mail or live chat has solved their problem. Ability to track all unsolved problems and notify Telco’s admin / subscriber service staff (TKL 239)
8. Proper integration capability (open interaces/APIs etc) to integratre to other 3rd party ticketing system (such as core or Radio network ticketing system or 3rd party content provider) in case any issue needs to be reported to respective groups (TKL 247)
9. complaints logged by customers in the same location with current customer along with current status and what Is currently being done against those complaints to ensure that one version of truth is communicated to all customers on similar complaints.
10. Telco centers connect stores or agents closest to the customer and contact details of the same for effective and quick resolution of queries that would not otherwise be resolved through a call.
11. Ability to create case from any part of self care or mobile app with relevant options on ticket category / sub-category and option to automatically attach screenshot of the screen from which ticket is being raised
12. Provide solution to build a knowledge database using existing subscriber issues problems and incidents with appropriate resolution, which can be used in future for rectifying issues if similar issue arises with other subscribers (TKL 256)
13. Allow problem ticket to be extracted to other format (e.g. Excel, PDF, etc) for selected parameters (e.g. time, ticket id, subscriber name, priority, etc.) (TKL 259)
14. Solution tracking system shall be able to have atleast these fields with option to add more fields as needed by Telco. Fully configurable to display / hide fields. (TKL 260)
    * a. Ticket ID
    * b. Submitter of the problem (name, email, other id etc)
    * c. Problem summary
    * d. Problem detail description
    * e. Service that is being query
    * f. Priority level (based on subscribers level, problem urgency, etc)
    * g. Status (Assigned, In progress, Resolved, Closed)
    * h. Resolution details
    * i. PIC
15. Flexible case management and GUI configuration that can incorporate the needs of each Operator
16. Integration ability to plug into existing upstream and downstream systems
17. Alert & notification
    * Support for various modes of communication(SMS, facebook, email, whatsapp, Twitter, Google) with the customer not limited to the below scenarios:
      + Create case
      + Notifying customers on case update and resolution status
      + General communication to the entire base on planned downtime, changes in regulation etc
18. Exposure of an API Interface to the OMNI channels and self care for customer to view all complaints and status of the same ever logged by the customer.
19. Allow users to create, assign, and manage cases across multiple channels.
20. Cases can be easily assigned to an individual or a group.
21. Workflows can be used to automatically route or assign a case to an agent, team.
22. Cases can be automatically escalated to a specific person or team, based on priority or some other configured condition by using a workflow.
23. Once the case has been assigned the relevant agent can take care of corrections in backend systems.
24. Customer should be able to enquire the case information, status and progress for x months (configurable). Summary view can display in Dashboard and allow to drill down in details.
25. Case shall be capable to create, update, add supplementary information via text or attachment, cancel, close by designated user(s).
26. Provide sufficient bill related enquiry function to support customer’s query. Billing account profile with bill and payment method, invoice history, bill image shall also be provided.
27. Provide searching function to search interaction log by (but not limited to) customer, type, date period, etc.
28. Ability to display interaction log within specific date range.
29. Multi-purpose enquiry capability e.g. bills, plans, renewals etc
30. Ability to trigger survey at end of case closure based on multiple criteria
31. Customer should be able to enquire the case information, status and progress for x months (configurable). Summary view can display in Dashboard and allow to drill down in details.
32. Create case via customer portal. Customer in designated role can fill in necessary information and upload supplement attachment (if any) to create a case.
33. allow subscribers to raise problems or ask questions through e-mail, live chat, social media channels community forums etc (TKL 232)
34. Ability to create a case either manually or automatically. It should also have the ability to automatically populate the required data in the case based on the context.
35. Case Life Cycle Management (Create, Modify, Hold, Duplicate, Resolve, Close, Reopen)
36. Queue Management-This functionality gives the ability to configure queues, define allocation criteria, assign roles and agents to queue. It also provides the ability to monitor the queue
37. Case Tracking :Ability to view & Track case details
38. History Tracking -Ability to search historical cases based on various parameters like customer, case type etc.
39. Auto Distribution (Skills, Time, etc.)-Ability to automatically distribute the case to agents or queues based on parameters like agents skills, availability, proficiency, scoring etc.
40. Auto Notifications: Provides an ability to configure various types of notification based on configurable rules. The notifications should be generated automatically upon satisfying the rules.
41. It should provide an ability to send notifications both internally (to agent, supervisor etc.) and externally (customers)
42. Aggregated summary of all cases - Total open, Total close, Average time to resolve, Right first time, case breakdown by priority
43. Ability to create a case on behalf of customer
44. Ability to view case details
45. Ability to view assign case to someone with internal comments and get acceptance confirmation
46. Ability to change case status
47. Ability to call or email or sms customer
48. Ability to understand how cases simialr to this have been handled - resolution, still open, questions / concerns
49. Ability to view case history
50. Link case to FAQ, knowledge base, self learning guides
51. Ability to learn how to handle a case
52. Ability to define workflow of case handling
53. Ability to copy case to account manager or another telco user
54. System should have capability to integrate with email gateway & SMS Gateway to
    1. Expressing interest in Telco services by customers & partners
    2. Allow subscribers to raise problems or ask questions through e-mail, live chat, social media channels community forums etc (TKL 232)

Hence require to build Inbound Email/SMS integration adaptor (Q1 FY20)

1. Integrate with Telco IVRS platform to support customer interactions, e.g. balance inquiry, payment due date and log problem cases , Hence require to build “IVRS integration adaptor”(Q1 FY20)

## Customer interaction & history (Q1 FY20)

As a Customer, I want to have a view of all the interaction with Telco.

1. As a user, I should be able to view my customer care communication history (TKL 66)
2. All Communication history including customer care communication
3. Ticket history (created in DCCM & other systems)
4. The system shall support capturing all interactions that are coming from customer or going to the customer through different channels - Integration with CRM , CRM will maintain history of interaction & DCCM as a frontend can display that
5. Last 10 (configurable in product by Telco) interactions with Call centre, web, and mobile app across all systems are visible upfront with option to view more.
   * Name
   * Interaction Type (Product Inquiry, Service, Ticket, Orders, Quote, Search etc.)
   * Current Status
   * DateTime Raised
   * DateTime Resolved
   * Interaction Description
6. Option to view all interactions.
7. Filter by created /resolved date & range, type, status, raised by
8. Text search from interaction description
9. Provide interaction log capturing to keep track all interaction communications including, but not limited to, email, IVR, chatter, chatbot, phone call, complaint, case creation, etc.. And also capturing all interaction such as contract, order creation, customer inquiry, etc.
10. Provide API to other modules or external system to capture Interaction log. The information should capture, but not limited to, the interaction date, time, participants, description, interaction type, status, etc.
11. Display interaction log within specific date range.
12. provide searching function to search interaction log by (but not limited to) customer, type, date period, etc.
13. Create/search & enquire/update follow-ups task
14. Create interaction log
15. Search & enquire/update interaction log (not to Customer Portal)
16. Purchase history with option to repeat purchase
17. Rules will identify the interactions to be displayed on the Timeline (eg the business could decide not to display in the timeline of the view all the SMS notifications received)
18. Have multiple levels of information display for tracking interactions

> summary information visible directly on the follow-up

> detailed information accessible in 1 click

1. Provide real-time APIs to all required modules or external systems to

o create/search & enquire/update follow-ups task

o create interaction log

o search & enquire/update interaction log (not to Customer Portal)

## Deactivation (Q1 FY20)

As a customer, I want to be able to de-activate or terminate my services, subscription and /or contract so that I can activate it later or any other reason.

As a Telco, I want to enable customer to request termination or deactivation of service, subscription or contract and auto-approve or manual review as necessary.

Acceptance criteria

1. As a user, I should be able to unsubscribe my plan when I decided to leave (TKL 162)
2. As a user, I should be able to keep my account for 60 days after plan expired (TKL 163)
3. As an app administrator, I should be able to deactivate a user account when their account have expired (TKL 164)
4. Deactivate or terminate service, plan, connection or contract
5. For Service Termination, the system shall collect and re-confirm all the required service details. The proposed solution shall acknowledge customers the termination will be properly followed up, and pass also to designate users, e.g. sales, per pre-defined workflow.

## Others

As a user, I should be able to diagnose network condition (TKL 64)

As an app administrator, I should be able to suggest user what to do based on network diagnostic result (TKL 65)

Vote for ideas – Give feedback and share ideas

Epic – Chatbot and Community (MVP 1)

As a customer, I want a self service mechanism with human like assistance with self-learning capabilities to ask queries, on-boarding journeys, know info and transact for bill details, ticket creation & tracking etc to avoid calling Telco center or walkin their store to reduce calls /queries that require support person interaction and ultimately eliminate any human support.

As a Telco, I want to have an automated self service mechanism that acts as 24\*7 support front line to reduce the calls landing on my customer support and generate customer delight.

Acceptance criteria

1. Availability on web and mobile SDK, mobile app
2. 24\*7 first line of support with real time & live assistance
3. Live chat to agent transfer or distribute to IVRS / Chatter
4. Multi-language support
5. Support for Transactional queries & FAQs
6. Assistance for all on-boarding journeys, Sales queries, all self care capabilities e.g. Billing /payment & account services, recharge /renewal /roaming /change plan assistance, troubleshooting advisor, create ticket and view status / resolution with auto-creation and close support
7. Automatically enrich knowledge base across chatbot, community forum & contact center
8. System must have the capability to integrate to knowledge management platform to assist Customer Care, power self Service with Faqs etc
9. Support & Business team at Telco can create conversational flow for bots on their own
10. Sentiment analysis for churn prediction, pro-active retention & recommendations
11. Upsell - Cross sell using NBO. Next best action for pro-active and reactive resolution
12. Voice based assistance. Integration with Google assistant, Siri & Amazon Echo
13. Personalizing conversation based on individual preferences & history analysis in real time
14. Integrate with survey & feed into satisfaction survey
15. Chat and voice based virtual assistance
16. Community based platform support
17. Capabilities such as but not limtied to FAQs, Commonly occuring problems & their resolution, troubleshooting guides

Features

1. Knowing customer intent
2. Chatbot integration adaptor for mobility use cases on-boarding
3. Chatbot integration adaptor for mobility use cases selfcare
4. Chatbot integration adaptor for fixed line use cases
5. Chatbot integration adaptor for Enterprise on-boarding & self care use cases
6. Chatbot integration adaptor for Partners
7. Conversation insights
8. KM integration adaptor
9. Stitching Chatbot, KM and Selfcare
10. Stitching Chatbot, KM, Community
11. Voice assisted Chatbot

## Knowing customer intent (Q1 FY20)

As a customer, I would be happy to share my purpose of interaction with virtual assistant for relevant and faster assistance

As a Telco, I want to know customer information and intent to assist them in best possible way

Acceptance criteria

1. DCCM is integrated with Chatbot for assistance
2. Identify customer by asking relevant questions and know their intent. Some examples below
   * Existing or new customer or Partner
   * Wanted to inquire something – general or regarding their account
   * New customer – Inquiry or purchase for themselves or purchase for their organization
     + Purchase – prepaid or postpaid connection or fixed line or MNP
     + Show relevant plans and give option to choose
   * Existing customer
     + Get customer details
     + Intent for retail customer – Buy new connection or change plan or raise support ticket or prepaid to postpaid (if applicable) or inquire or others
     + Intent for enterprise customer
3. Telco should be able to define the flow for customer intent for each type of customer on their own
   * Configure chatbot for customer intent, Knowledgebase, FAQs
   * View conversation analysis & insights
   * Redirect customer to live agent or another function for complex operations
4. Channel the customer to chatbot from IVR to continue inquiry and log case accordingly
5. Chatbot support is available on web portal, customer portal, partner portal, website and mobile app
6. Chatbot integration adaptor that enables to easily integrate with any Chatbot solution. Seamless integration with AmplifyReach.
7. Chatbot should support 7x24 automated customer service as first line customer support with predefined response, problem solving, guidance for customer queries. It shall be capable to distribute to IVRS or Chatter if applicable.

## Chatbot assistance for mobility on-boarding (Q1 FY20)

As a customer, I want an immediate human-like assistance for mobility on-boarding journeys, inquires and actions.

As a Telco, I want to reduce the calls landing on customer care for on-boarding journeys and related queries by providing automated virtual assistance that acts 24\*7 as first line of support.

Acceptance criteria

1. DCCM is integrated with Chatbot for assistance
2. Support on-boarding journeys for prepaid, postpaid, device, bundles, MNP, Prepaid to Postpaid
3. All steps on web portal should be available for Telco to define the journey on Chatbot
4. Telco should be able to define the flow for on-boarding journey per service /offering / customer type on their own
   * Configure chatbot for on-boarding journeys, Knowledgebase, FAQs
   * Sales use-cases - Identify suitable plans, sales query, all on-boarding journeys, buying journey, Self-servicing product inquiry and ordering
   * View conversation analysis & insights
   * Redirect customer to live agent or another function for complex operations
   * Identifying suitable plans and services by asking relevant questions
   * Recommend services, plans and subscriptions to existing customers
   * Full on-boarding & ordering journeys of B2B and B2C can be done using chatbot e.g. Prepaid, Postpaid, Fixed line, Makemyplan, Bundles, ILL, Ethernet, DIA, BoD, IoT and others
   * Integrate with respective systems to fetch information for processing and display, integrate with sales systems, ordering systems and other systems as necessary
   * Self servicing product enquiry
5. Chatbot support is available on web portal, customer portal, partner portal, website and mobile app
6. Chatbot integration adaptor that enables to easily integrate with any Chatbot solution. Seamless integration with AmplifyReach.
7. Chatbot should support 7x24 automated customer service as first line customer support with predefined response, problem solving, guidance for customer queries. It shall be capable to distribute to IVRS or Chatter if applicable.
8. Chatbot must enable to
   * Identify customer by asking relevant questions and know their intent
   * Sales use-cases - Identify suitable plans, sales query, all on-boarding journeys, buying journey, Self-servicing product inquiry and ordering
   * Ask questions on on-boarding, any step in buying journey, Plans, new connection
   * Input text, voice, upload file - text, image, pdf, csv, xls, any.
   * Interact in real time without any lag.
   * Fill in survey or feedback
   * Sales lead input
   * Provide live agent support
   * Chatter function for customer to seek for assistance from Telco supporting parties

## Chatbot assistance for mobility self care (Q1 FY20)

As a customer, I want an immediate human-like assistance for mobility self care and eCare, inquires and actions.

As a Telco, I want to reduce the calls landing on customer care for mobility self care and related queries by providing automated virtual assistance that acts 24\*7 as first line of support.

Acceptance criteria

1. DCCM is integrated with Chatbot for assistance
2. Support on-boarding journeys for prepaid, postpaid, device, bundles, MNP, Prepaid to Postpaid
3. All steps on web portal should be available for Telco to define the journey on Chatbot
4. Telco should be able to define the flow for on-boarding journey per service /offering / customer type on their own
   * Configure chatbot for self care, Knowledgebase, FAQs
   * All self care and eCare capabilities supported with Chatbot interaction
   * Provide live agent support
   * Chatter function for customer to seek for assistance from Telco supporting parties
   * View conversation analysis & insights
   * Redirect customer to live agent or another function for complex operations
5. Chatbot support is available on web portal, customer portal, partner portal, website and mobile app
6. Chatbot integration adaptor that enables to easily integrate with any Chatbot solution. Seamless integration with AmplifyReach.
7. Chatbot should support 7x24 automated customer service as first line customer support with predefined response, problem solving, guidance for customer queries. It shall be capable to distribute to IVRS or Chatter if applicable.
8. Chatbot must enable to
   * Identify customer by asking relevant questions and know their intent
   * Sales use-cases - Identify suitable plans, sales query, all on-boarding journeys, buying journey, Self-servicing product inquiry and ordering
   * Billing & Payment - Current bill amount and details, Previous bill amount and details, Bill payment, bill due date
   * Service /plan - Current plan / service details, Recommended plans & services, Recommended offers, current data / account balance, expiry date, renewal date, contract expiry date
   * Recharge - Make recharge, last recharge
   * Roaming - Roaming status, suggest best roaming packs
   * Ask questions on on-boarding, any step in buying journey, Plans, roaming, bills, contract, services, roaming, recharge, contact, new connection
   * Input text, voice, upload file - text, image, pdf, csv, xls, any.
   * Interact in real time without any lag.
   * Create support ticket
   * Case creation, enquiry, update
   * Fill in survey or feedback
   * Sales lead input
   * Provide live agent support
   * Chatter function for customer to seek for assistance from Telco supporting parties
9. All Self care use-cases
   * Billing and Payment use cases
     + E.g. Current bill amount and details, Previous bill amount and details, Bill payment, bill due date

|  |  |  |
| --- | --- | --- |
| **Use Case Name** | **Use Case Description** | **Flow** |
| Current Bill Amount | Customer can ask their current bill amount | Request -> Bill amount is fetched, read and shown to the user -> Prompt if bill details required or not -> If yes, read and show bill details |
| Current Bill Details | Customer can ask details / summary about the current month’s bill | Request -> Fetch and read bill amount details -> Prompt if previous bill amount details are required -> If yes, read and show previous bill details |
| Previous Bill Amount | Customer can ask previous bill amount and get a comparison with current bill amount | Request -> Fetch and read previous bill amount and compare it with current bill amount |
| Previous Bill Details | Customer can ask details / summary about previous month’s bill | Request -> Fetch and read previous bill details |
| Bill Payment | Customers can initiate a payment for their current bill | Request -> If mobile devices & portal, read and show bill amount and then take user to app/web with auto populated MSISDN and Bill Amount |
| Bill Due Date | Customers can know when is their next bill due date | Request -> Fetch and read bill due date for the current cycle -> If due date <10 days and bill not paid, prompt for bill payment -> If yes, initiate bill payment journey |

* + All self care capabilities related to Recharge, Roaming, Balance Transfer,
    - E.g. roaming - Roaming status, suggest best roaming packs, Enable / Disable roaming
      * e.g. Roaming pack
      * Request country of travel -> Request days of travel -> Recommend the most relevant roaming pack for the customer -> Prompt for purchase -> If No, promote MVA/MIA / If Yes, confirm whether to activate now or late -> If now -> activate and take to web/app / If later, confirm date and take to web/app thank you page.
  + Service / Plan use-cases like (but not limited to)
    - Current plan / service details, Recommended plans & services, Recommended offers, current data / account balance, expiry date, renewal date, contract expiry date

## Chatbot integration adaptor (Q1 FY20)

As a customer, I want an immediate human-like assistance for guidance, resolutions by interaction for on-boarding journeys, sales queries, self care inquiries and actions.

As a Telco, I want to reduce the calls landing on customer care by providing automated virtual assistance that acts 24\*7 as first line of support for onboarding journeys, sales queries, self care inquiries and actions.

Acceptance criteria

1. DCCM is integrated with Chatbot for chat assistance and voice assistance
2. Chatbot support is available on web portal, customer portal, partner portal, website and mobile app
3. Chatbot integration adaptor that enables to easily integrate with any Chatbot solution. Seamless integration with AmplifyReach.
4. Chatbot should support 7x24 automated customer service as first line customer support with predefined response, problem solving, guidance for customer queries. It shall be capable to distribute to IVRS or Chatter if applicable.
5. All on-boarding journeys and self service capabilities can be supported via Chatbot
6. Customer /Prospect must be notified (if necessary) about conversation being recorded. Text for such a message to be displayed in chatbot should be configurable by telco on their own
7. Telco should be able to
   1. Configure chatbot for Knowledgebase, FAQs by linking URL(s) where faqs are uploaded, upload csv or combination of both
   2. View conversation analysis & insights
   3. Redirect customer to live agent or another function for complex operations such as bill payment or order capture
   4. Channel the customer to chatbot from IVR to continue inquiry and log case accordingly
8. With sufficient information captured via chatbot, the system should be able to auto-open and auto-close a case in customer problem & case mgmt.
9. Chatbot launches automatically if user is inactive for a certain duration or taking time at any step in the journey or attempts to drop out of the journey
10. Customer is able to launch chatbot manually
11. Integrate to downstream systems to support customer identification and assessment
12. Log all interactions, conversations and business process or actions triggered via chatbot.
13. FAQ - Access FAQ to solve common problems, Search through FAQ about my problems (TKL 87, 89)
14. As an app admin, I should be able to generate exhaustive list of FAQ (TKL 91)
15. ~~As a user, I should be able to do live chat for predefined problems and menu that I could not find in FAQ (TKL 92)~~
16. ~~As a user, I should be able to ask chatbot for predefined problems and menu that I could not find in FAQ (TKL 93)~~
17. ~~As an app admin, I should be able to make sure chatbot collect basic information about customer's problem (TKL 94)~~
18. ~~As a user, I should be able to do live chat with customer service for problems that I could not find in FAQ or unanswered problem with chatbot (TKL 95)~~
19. As an app admin, I should be able to make sure customer service know the basic information of users (TKL 96)
20. As an app admin, I should be able to call customer to solve their problem (TKL 97)
21. As an app admin I should have ability to remove customer care number from the app (TKL 98)
22. As a user, I should be able to submit ticket and screenshots of my screen to the app (TKL 99)
23. System should support Digital Assistant capabilities to drive conversational interface , provide for uptake of more self service features (ST-012)
24. Conversation interface to support both chat and voice
25. Support live chat with subscriber support through web or mobile apps. APIs to connect to external system (TKL 231)
26. Support advanced chatbots using AI to help users with their problems (TKL 236)
27. Multi lingual support (TKL 237)
28. In the case that image, any text or document or excel or any file type, audio or video file is involved, Chatbot solution shall be able to handle and process this subscribers' complaint handling purposes, for example subscribers raise complaint via live chat and this complaint will be given a ticket number/reference for tracking purposes (TKL 238, TKL 243)

## Knowledge Management (Q1 FY20)

1. Capability to integrate to knowledge management platform to assist Customer Care, power self Service with Faqs etc
2. Ability to search knowledge base from chatbot, self care portal and view answer without having to open a separate knowledge mgmt URL or system (ST-404)
3. Searchable knowledge base (ST-404)
4. As a user, I should be able to access FAQ to solve common problems (TKL 87)
5. As a user, I should be able to search through FAQ about my problems (TKL 89)
6. As an app admin, I should be able to generate exhaustive list of FAQ (TKL 91)
7. Support FAQ to solve subscribers' problems (TKL 230)
8. Ability to build a knowledge database using existing subscriber issues problems and incidents with appropriate resolution, which can be used in future for rectifying issues if similar issue arises with other subscribers (TKL 256)

Epic – Personalization

As a Telco, I want to offer personalized services & promotions to my customers for better experience, high CSAT score and higher ARPU

Achieve Predictive and proactive customer experience & sales functionalities

* Consumption and usage based
* Location wise
* Content Delivery
* Cross selling / Upselling
* Customer personalization via social feeds
* Analytics integration adaptor

## Feature: Contextual offers, promotions, NBO, Cross Sell / Up Sell

Benefit:

1. Increase insight into customers’ behaviour and respond in real-time with actions i.e. recommending a new offer(ST-093)
2. Predictive and proactive customer experience & sales functionalities(ST-008)
3. Improve customer experience through real-time insight in balances and charges (ST-019)
4. Analyze customer behaviour and purchasing habits to identify major patterns and drivers

As a user, I want to get personalized offers

As a Telco, I want to peach contextual offers to the customers

As a Telco Admin, I want to prepare Rules on the basis of system defined analytic parameters  
As a user, I should be able to get insight or suggestion on my data, voice, SMS usage behaviour (TKL 83)

As a user, I should be able to get suggestion of my next plan based on current usage (TKL 143)

As a user, I should be able to see my colleagues' plan and best plan combination (TKL 145)

As an administrator, I should be able to give plan suggestion based on usage history (TKL 147)

As an administrator, I should be able to show colleagues' plan to user (TKL 148)

As an administrator, I should be able to show best plan combination to user (TKL 149)

As a user, I should be able to get content suggestion based on my behaviour (video, podcast, song) (TKL 71)

As an app administrator, I should be able to suggest content based on user behaviour (commute, activities) (TKL 72)

As an administrator, I should be able to suggest content based on user location (TKL 73)

As a user, I should be able to see feeds of content and events based on my interest (TKL 76)

As a user, I should be able to see other users' activities of interest (TKL 77)

As an administrator, I should be able to suggest content based on user's mood (TKL 82)

As a user, I should be able to get insight or suggestion on my data, voice, SMS usage behaviour (TKL 83)

Acceptance criteria:

1. The proposed solution shall provide diverse recommendation types. For example, but not limited to,
2. campaign
3. regular promotion
4. new services
5. upsell
6. cross sell
7. System shall support interface for targeted decisions based on below inputs :

Different channels such as IVR

Customer insight & profile

-Customer industry

-Market segment

-Reported cases

Past actions (subscriptions / Recharge / Renewals etc.)

Locations

Current subscriptions

All analytic parameters

Consumption pattern

1. System should support different types of offers/Recommendation such as

NBO

Limited time offers

Content suggestion

Prepaid plans to postpaid customer

1. Recommended offering for promotion, upsell, cross sell shall come from
2. Configurable recommendation rules in UPC
3. API external feed from external analytic system or Campaign Management System
4. User should enquire available services based on certain automated filtering, such as Inputted service keywords, customer segment, industry and location, recommendation, etc. (but not limited to) The proposed solution shall allow performing Upselling or Cross-selling.
5. Rule Management to fetch offers to be showcase
   1. System is able to create Rule set for each channel
   2. rule engine should be Configurable
   3. Rule set management to create and define using domain-specific language and decision logging and reviewing.
   4. DCCM to create rule table for giving personalized experience to customers based on information received from analytics
   5. Rule to share offer to a particular segment of customers, by location, by product, by service, by LoB and such parameters
6. Customer specific and context sensitive interactions -- integration with analytic & knowledge base system
7. Logging of decisions and interactions enabling analysis and rule tuning
8. Support for additional offers once SIM Is inserted and latches onto the network
9. Recommend plans based on consumption pattern

**I****ntegration with analytics**

1. Able to forecast customer future traffic and spending, based on historical data of the involved services. Using forthright calculation rules, e.g. (but not limited to) via average growth/drop rate of past X months, to project the forecast of future Y months.
2. Content suggestion based on browsing behaviour (video, podcast, song), consumption, commute /activities, user location, user's mood (TKL 82 and others)
3. Customer can enter topics of interest, see content /events based on interest
4. Customer can see other users' activities of interest
5. Analytics based machine learning = Leverage NBO, contextual offers not just for mobile SIM but for IOT devices & services as well (ST-013)
6. Analytics run when customer logs into portal
7. Integration with analytics is to understand which offer to be suggest /recommend to customer
8. DCCM to send below detail to Analytic system , for further analysis
9. sends performance data of web portal & mobile App to enable administrator to know the performance
10. sends all web and app usage data to enable administrator to have analytics on usage of the application such as page views etc (TKL 170)
11. sends data to enable administrator to view advanced analytics of individual and aggregated buying behaviour by data usage, voice usage, etc. (TKL 172)
12. sends data to Analytics system to enable administrator to log and view all possible content interactions (eg. search terms, filter actions) that each user made on the app to understand user preferences for future(TKL 173)
13. sends data to enable administrator to view analytics of sign up channels used by users(TKL 174)
14. As an app administrator I want to know basic data on past buying behaviour for each user – not in scope (TKL 171)
15. Able to integrate with business intelligence tools and use all 3rd party data for our analysis purposes, for example Telco could gather data on which content/services that a particular subscriber often bought. This will be used by Telco to recommend a similar content/services to ensure higher successful rate for upselling (TKL 218)
16. Subscriber usage and experience information should be available to telcos’ platform admin team if they desire to analyze such information – not in scope ( analytic system) (TKL 251)
17. As an app administrator I want to know the performance of my app and web portal – feed to analytics not in personalization (TKL 169)
18. Suggest path of least network disturbance to consumer taking calls regularly while in transit – Advance version AI ( to be done later)
19. products and services tailored to the current location of the customer (location wise personalization) (ST-176)
20. Insight or suggestion based on my consumption behaviour
21. Next plan suggestion based on current usage & history. Show best plan combination. (TKL 149)
22. Increase insight into customers’ behaviour and respond in real-time with actions i.e. recommending a new offer
23. Analyse customer behaviour and purchasing habits to identify major patterns and drivers (DCCM to get feed from analytic system & apply rules)
24. As an app administrator I want to have connection to Telco big data platform and use those data as a trigger to system (TKL 205)
25. Spend analysis, forecast, predict usage / balance expiry, insights to save money & optimize usage.(ST-019)
26. Frontend system should provide tags/ activity related to user behavior (commute, activities) to DCCM which in turn will provide to analytic system.
27. Ability t to set the ranking of recommendation types
28. Ability to enable or disable this function or type of recommendation
29. Ability to set and control the triggers & display positions in Portal. For example, there is hot promotion this week, set and prompt a banner whenever customer login within a week.
30. Corss sell/Up Sell: The proposed solution shall support Offer/Product Up sell or Cross sell suggestions. Based on UPC settings, system shall be also able to recommend appropriate add-on, or co-related (e.g. VAS), or upgradable product offerings based on current selections and existing service and product subscription profile of the customer.
31. Showcase Add on or relevant product(s) for higher chances of being purchased along with primary product or later in self-care portal or mobile app
32. Next plan suggestion based on current usage & history show best plan combination (TKL 149)
33. Support Guided selling, allow configuring questions and answers per product type or line, customer segment and sales channel as such to recommend product offerings based on questions and answers flow. Allow the configuration of different guiding scenarios as required, e.g. base on different product line or types, etc., in order to facilitate inexperience users to correctly determine the appropriate products & offers as needed.
34. The proposed solution shall have Recommendation and Campaign driven Offer/Product for selection.
35. Real time product offering recommendation shall also be shown based on prospect/customer list(s) associated to active marketing campaigns.
36. The proposed solution shall allow integration between Campaign Management, Customer Information Management (CRM) and Product Management (UPC) , and/or other product offering recommendation data feeds from other external sources.
37. Notification
38. System should push these offers on the basis of User Preferences such as Messaging, SMS notifications, Email etc. (TKL 121)
39. System should capable to send notification on below events, including but not limited to: (TKL 283)
    * 1. every successful & unsuccessful transaction/purchases that subscribers made
      2. promotional offer
      3. plan recommendation, for example recommendation based on usage behaviour, most used plan based on social circles, etc
      4. events recommendation, for example events recommendation based on interest, location, etc
      5. content or services recommendation, for example recommendation to buy content due to subscriber's interest
      6. community recommendation
      7. manual input notification through batch

## Feature: Personalized view

1. Customizable Personalized dashboard & widgets,
2. My favourite products
3. colour themes
4. Personalization of attributes e.g. notification limits, lists for Family and Friends, product prices
5. Adapt the portal to the user and his or her needs, and also allow the end user to have control over some aspects of the portals. This includes My Favourites as well as My Look-and-Feel
6. Page should be Telco branded and personalized based on the information available in customer profile
7. Ability to set and control the triggers & display positions in Portal.

For example, there is hot promotion this week, set and prompt a banner whenever customer login within a week.

1. Campaign Management integration adaptor
   1. Campaign mgmt. system defines campaign
   2. DCCM gets campaign details from Campaign system and executes it per channel and other criteria.
   3. Rule types can be defined on multiple attributes / parameters like (but not limited to): channel, customer type, location, product /service /subscription, existing products /subscriptions, time, duration, consumption patterns, usage levels, combination of these and more
   4. DCCM should Record campaign source & id
   5. Display campaign on storefront
   6. Have Recommendation and Campaign driven Offer/Product for selection. Real time product offering recommendation shall also be shown based on prospect/customer list(s) associated to active marketing campaigns.
   7. The proposed solution shall allow integration between Campaign Management, Customer Information Management and Product Management, and/or other product offering recommendation data feeds from other external sources.

* Ability to set the ranking of recommendation types
* As an app administrator I should be able to provide zero-rating into xx apps (TKL 122)
* As a user, I should be able to access certain application free (TKL 123)

Back office administrator

Telco centers connect stores or agents closest to the customer and contact details of the same for effective and quick resolution of queries that would not otherwise be resolved through a call.

Usage behaviour - Insight or suggestion based on my consumption behaviour Show colleagues plan to user (TKL 148)

-As a user, I should be able to add friends from social media (TKL 78)

-As a user, I should be able to input my mood (TKL 81)

-As a user, I should be able to see other users' plan and historical usage (TKL 84)

-As a user, I should be able to see other users' activities of interest

-As a user, I should be able to read news/article from the partner within the apps

-As a user, I should be able to watch video from the partner within the apps

-As a user, I should be able to listen music from the partner within the apps

-As a user, I should be able to have 3rd party partner's capability (ordering, reservation, payment) within the apps

-As a user, I should be able to create own streaming (voice) channel

-As a user, I should be able to click link that redirect to specific page from partner's platform.

-As a partner, I should receive specific code from Telco that will apply discount in my platform

-As a partner, I can input my content to Telco through dashboard

## Feature - Referrals & Rewards

As a customer, I want to get reward points on purchase or referrals

As a customer, I want to redeem my reward points.

As a Telco, I want to provide reward points and encourage user to get new customers and reduce churn.

**Acceptance criteria:**

Referrals

1. System should generate referral code & provide to user , so that referrals( friends) to subscribe to Telco (TKL 125)
2. Customer can share referral code in social media (TKL 126)
3. Non user is able to receive referral link from Telco user
4. As a user, I should be able to customize template for sharing referral code (TKL 127)
5. system should have capability to generate and track referral code users (TKL 128)

Rewards

1. Reward points can be accumulated, tracked and used as payment or exchange for coupons or items from loyalty program.
2. Customer Is able to get Reward points in below scenarios:

- for every successful referrals that s/he make (TKL 129)

- for every purchase in the app (TKL 130)

- for purchases (TKL 86)

- for his/her activities (recharge, activities in my universe, community engagement) (TKL 85)

- for engage with partners (attend an event, subscribe)

- get rewards from my contribution (TKL 119)

-for stay in Telco (LoS count)

-for contribute in community care

- On special dates such birthday, anniversary, date of joins, etc. (TKL 132)

- for being top xx within certain location (TKL 204)

-for Usage

1. Display reward points in self-care, mobile app, query over sms
2. Reward points redeemed

-Customer can be rewarded of X GB free for every X month of my stay with telco (TKL 131)

-Customer is able to change reward points to extra data, voice, or sms (TKL 133)

-Customer is able to exchange the rewards with discount voucher at partner merchant

(TKL 135)

1. Redeem points for purchase of subscriptions, services, product(s), partner service(s), exchange against another voucher, recharge etc
2. System can integrate with Voucher / coupon management & manage life cycle of Voucher
3. Display these vouchers/Coupons along with products while purchasing
4. Customer can also enter voucher code while doing payment
5. Integrate all the above with community & chatbots
6. An existing Telco subscriber referring to Telco a competition number will be able to benefit from x amount of discount on the next invoice (fixed and mobile)
7. Validation checks on redemption & discount application
   1. Eligibility controls to be applied:
      1. Check that the customer referring someone is a Telco existing customer, has not exceeded the allowed referrals (Example max 8 referral)
      2. Check that the referred number is not an existing Telco subscriber
   2. Discount provision controls:
      1. The referred number activated within the period of 2 months from the date of referral
      2. The referred number is a port in subscriber from the competition
      3. Has ported in the specific service or plan and for a specific contract period
   3. Discount allocation
      1. if all discount provision controls are satisfied then the discount to be applied on the customer that referred the new number in the next invoice
      2. Discount might be provided in the form of a % or an amount based on the referee plan/invoice or based on the referred customer plan selection
   4. Invoicing: to be shown at a separated line on the invoice with specific description
   5. Reporting: to include all the requested, submitted, successful, unsuccessful referral with all the available information (the number of the customer referring , referred number, date, time, status, referred subscriber activation date/plan, Discount provided

Others

1. As a user, I should be able to enjoy gamification inside the apps(TKL 203)

Epic - Common features and Backoffice

## Backoffice – Inventory Management

As a Telco Back office Admin, I want to

* Add/edit/import/delete inventory (Numbers in this case) using back office GUI
* List view of all the inventories with Inventory number, inventory status, creation date
* Inventory life cycle
* Stock management
* Synchronize B2C & B2B product and inventory details
* Unified portal where customers can purchase hosted digital products & services (ST-221)

## Backoffice – Drop links Management & Assisted Sales (Q1 FY20)

Specific drop link mgmt per segment and service

Drop link mgmt.

Abandon cart support

Launch ASM through back office for drop links

## Omnichannel (Q1 FY20)

As a customer, I want the flexibility to start my journey in one channel while finish in another channels

As a Telco, I want to offer omni-channel experience to customers to deliver a better experience.

Acceptance criteria

1. As a returning user, I should be able to get back to where I left (TKL 7)
2. Enables product/service availability through any channel (ST-064)
3. Consistent experience across all channels for customers and partners (ST-084)
4. Provide seamless customer experience regardless of the channel
5. All channels can access the same (complete) product portfolio information (TKL 222)
6. All channels can have capability to submit the same order and all channels can view the order status regardless in which channel it was captured (TKL 223)
7. Actions of a customer are gathered in one place, allowing execution of the proper logic (e.g. response to certain actions). Channels are aware of customer actions in other channel (TKL 224)
8. Omnichannel customer experience via API and custom built micro service. Consistent logic based on customer journeys in central place within the stack with minimum logic on the channels (TKL 219)
9. All APIs must be omnichannel
10. System must be accessible across devices (PC, Tablet, Mobile)
11. System to have dynamic Mobile version
12. System must be compatible across OS (Windows, iOS, Android, Blackberry)
13. OCC API for customer and partner mgmt.
14. The system supports integration capabilities with conversationsal interfaces like Chatbots, Live Chat etc through the Omni Commerce Connect layer
15. Integrate with all channels e.g. chatbot, virtual and mixed reality, chatbox channels, AI based channels
16. Common configurable omni-channel user experience that provides access to market, sales and service capabilities across all user roles and touchpoints.
17. Improved customer relationship effectiveness, across all touch points and throughout lifecycle.
18. Bill exposure into different channels (with user customization ability)
19. Exposure of an API Interface to the OMNI channels and self care for customer to view all complaints and status of the same ever logged by the customer.
20. System must have high level of configurability, which allows for easy adaption to e.g. new service contexts and APIs. Composable: Applications need enable that each of their services is designed and built as an API to enable reusability and allow it to be part of other applications
21. Multi-channel customer management (voice, whatsapp, twitter, facebook etc)

## Social Media (Q1 FY20)

As a customer, I want to use my social media details to signup a Telco account so that I don’t need to remember other details

As a customer, I want to link my social media account to my Telco account

As a customer I want to raise problems or ask questions to Telco using social media and get responses on it (TKL 232)

As a Telco, I want to enable my customers to signup and interact via social media channels

Acceptance Criteria

1. Sign-up & login using social media channels like FB, Google, Yahoo, Whatsapp, Twitter (TKL 262)
2. As a user, I should be able to use my email, facebook, google as username (TKL 20)
3. Allow subscribers to signup with Telco using social media account details
4. As a user, I should be able to add friends from social media (TKL 78)
5. Support ticket creation, raise problems or ask questions) from any of these channels and provide notifications and response /status on these mediums (TKL 232)
6. Integration with social channels for all operations (voice, whatsapp, twitter, facebook etc)
7. Auto insertion to complaints & case mgmt DB from social channels
8. For personalization via social feeds - DCCM to integrate with social listener. Pass on feed to analytics.
9. Social CRM – enriched customer personalization via social feeds – Provide APIs for omnichannel that can be consumed by social channels (ST-014)
10. Support for various modes of communication (SMS, facebook, Twitter, Google, email and whatsapp) with the customer not limited to the below scenarios:
    * Notifying customers on case resolution status
    * General communication to the entire base on planned downtime, changes in regulation etc
11. Manage authentication of social media that subscribers use to signup with
12. Telco can select the social media channels to be exposed for signup, case mgmt and other purposes on per purpose basis, per customer segment, per service /product, per location
13. The adaptor need not be modified and should work seamlessly with the social media platforms
14. As a user, I should be able to share my plan details using social media and chatting apps (TKL 159)

## Backoffice – 360 degree View

Customer service - Share basic info of users, ability to call customer, Remove customer care from app, 360 degree view

* 360 customer view - Generate holistic picture of the customer in a near real-time bases
* Converged customer management/ unified management and view of the customer across different service lines
* Augmented customer experience by providing a 360° and real-time view of customer related information
* System must interact with customer in a homogenous way and no matter which channel is chosen it provides same 360-degree view of the customer and experience in terms of offerings
* Holistic real-time view of a customer that is rich and consistent throughout the Telco Portals for Customer, Partner, User (Staff) and other system modules or external systems
* 360 view on customer data regardless of the type of interactions (TKL 225)
* View customer location in real-time along with:
  + Telco centers connect stores or agents closest to the customer and contact details of the same for effective and quick resolution of queries that would not otherwise be resolved through a call.
  + products and services tailored to the current location of the customer (ST-176)
  + complaints logged by customers in the same location with current customer along with current status and what Is currently being done against those complaints to ensure that one version of truth is communicated to all customers on similar complaints.
* Subscriber usage and experience information should be available to Telco platform admin team if they desire to analyse such information (TKL 251)
* Capability for telcos admin to view complete view of subscribers’ Usage, billing, subscription, contact history available (TKL 255)
* As an app admin, I should be able to make sure customer service know the basic information of users (TKL 96)
* As an app admin, I should be able to call customer to solve their problem (TKL 97)

Agent (or any other backoffice administrator)

* Per Customer
* Total view including customer information and demographics, bill account profiles, customer interactions across the various contact channels, service and subscription profiles, customer relationships
* Customer Overview - Current products, products in cart, Last order, last ticket, x interactions. Hyperlinked to more details. Loyalty points, Redemption points, points redeemed, behavior trend & insights, usage broswers & devices, favourites, interests, social media activity & links, location, answers /resolutions & status of cases similar to what customer has asked in area where customer is located & generally – both separate
* Customer Profile - Billing, address & contact details, payment method
* Activity, Order tracking, ability to call customer, ability to notify customer
* Feedback - Support ticket, Product reviews, Social media interactions
* Case mgmt
* Ability to update customer ticket
* Agent can view tickets assigned
* Can initiate conversation with customer based on ticket
* Update status of ticket
* Assign the ticket to another team
* Send email to customer
* Promotions - Next best offer
* Maps
* Churn propensity
* Next best action
* It must be possible for the agent to create a request to follow up an action that is required to answer a question or solve a problem for the customer
* Capable to easy retrieval of customer interactions and transactions for a defined range of date/time for a specific account. Sales can know all the transaction, case, enquiry, compliment/complaint for this customer before they meet up

Agent Manager

* Per agent 360 degree view
* Average feedback rating
* Calls handled, Calls transferred, Right first time, AHT, Repeat calls
* Tickets in queue
* Option to filter by phone calls & tickets

## Alerts & Notifications (Q1 FY20)

As a customer, I want to be notified for various purposes during my engagement with Telco e.g. set account password, OTP, order successfully placed, bill notifications & reminders, profile changes

As a Telco, I want to notify customers, partners and employees for various purposes e.g.

e.g. Notify customers - set account password, OTP, order successfully placed, bill notifications & reminders, profile changes, ticket responses

e.g. Notify employees – Account managers on new leads, leads not progressing for sometime, customer tickets

e.g. Partners – During on-boarding and self care – stock status, order status, case management

Acceptance criteria:

1. Ability to add, modify, or delete any configuration or rules in notification engine (TKL 277)
2. Ability to configure message format based on Telco's needs (TKL 278)
3. Messaging / notification via different channels such as : Email , SMS , Push notification , Whatsapp, Google, Twitter, Facebook, Voice (TKL 276) (ST-134)
4. Fully configurable by Telco – Message per channel per type per customer segment
5. Trigger Notification engine at subscription, renewal and un subscription stages
6. Support for embedded link in alerts & notifications across all mediums for all purposes. Deep link support.
7. Support multiple channels of communicating to the customer not limited to Google, facebook, whatsapp, Twitter, voice, SMS, Email, push notification depending on the preferred channel of communication chosen by customer on: (ST181,ST182,ST183)
   * New products and services tailored to customer needs
   * New pricings/discounts on the most frequently bought products and services by the customer
   * Support interactions
   * General contact
8. The communication subject, type, segment, scenario, message, image /attachment support, embedded & deep link support should be configurable by Telco from UI
9. web-based fully configurable user interface for Telco users to configure and monitor notification engine activities (TKL 288)
10. Capability to recall the notification sent. (TKL 286)
11. Support for reminder notification
12. Telco should be able to configure against each Alert and notification type whether it must follow the communication preference of customer. Configurable per customer, segment, location, product, service and by multiple parameters.
13. centralised point to provide API to other modules or external systems to call when needs to notify customer, such as Payment Reminder
14. notification log for all notification activities for certain time that will be determined by Telco (TKL 287)
15. Enable Operator to notify Customer, Staff, and Administrator Alert

• Direct Debit Reminder

• Instalments Reminder

1. Event Notifications for activities related to:

• Account • Bill • Inventory • Package • Payment • Staff • Ticket • Usage

1. Triggers subscription life-cycle notifications
2. Trigger Notification engine at subscription, renewal and un subscription stages
3. Notifying customers on case resolution status
4. Broadcast: General communication to the entire base on planned downtime, changes in regulation etc.
5. Front end view for broadcast message , integration with case management system
6. Email & SMS notification for OTP validation, drop link, order conf, reminder of events, different interaction points etc
7. Configurable notification to customer about device payment made with the loyalty points or redemption codes or other payment mediums using the customer preferred channel of communication
8. As a user, I should be able to receive OTP to validate my email and mobile number (TKL 23)
9. As a user, I should be able to get referral code for my friends to subscribe to Telco (TKL 125)
10. As a user, I should be able to customize template for sharing referral code (TKL 127)
11. Support to send out account activation email notification to registered new users with unique system generated password or one time password
12. SMS/email notification shall be sent to customer upon profile information is being updated
13. For Service Termination, the system shall collect and re-confirm all the required service details. Acknowledge customers the termination will be properly followed up, and pass also to designate users, e.g. sales, per pre-defined workflow.
14. If the picked address does not have any requested service coverage, Telco user should be notified to follow up with customer
15. Notify customer and Telco if customer did not complete the journey
16. Notification support to gather customer feedback
17. Payment reminder, after X days (configurable) of bill date or Y days (configurable) before due date, will be sent to customer via Inbox/alert and dashboard page on Customer Portal web version, Push notification for App version
18. Allow to configure the target recipient of performance alert notification
19. When defining the approval process, system can set an expiry threshold for alerts to corresponding parties for their response to the request. The proposed solution shall send the alerts as defined to both requesters and approvers to take proper action.
20. For requester, the response of each approver will be sent to User Portal and can be notified at the Follow up Dashboard , or by email
21. Ability to send notification to (configurable) e.g. by MSISDN, certain location, within certain time period and other parameters (TKL 279, 281)
22. capable to send notification, including but not limited to: (TKL 283)
    * a. every successful & unsuccessful transaction/purchases that subscribers made
    * b. promotional offer
    * c. plan recommendation, for example recommendation based on usage behavior, most used plan based on social circles, etc
    * d. events recommendation, for example events recommendation based on interest, location, etc
    * e. content or services recommendation, for example recommendation to buy content due to subscriber's interest
    * f. community recommendation
    * g. manual input notification through batch
23. Show and manage approval process for confirming the notification configuration (TKL 289)
24. Notification on downtime or issues e.g. Timely subscriber updates - planned outage, issue in locality, notifications / Sms to inform service interruptions
25. Configurable by Telco in terms of which notifications, reminders, alerts to enable and disable, via which medium (sms, email, push notification on app etc), customize text, URL of notification, define sending notifications on crossing a threshold of usage /consumption, time based. Ability to fully customize notification /reminder /alert message of type.
    * a) account creation & activation to Customer & Telco
    * b) Lead creation to Telco
    * c) Opportunity creation to Telco
    * d) Movement in CPQ or contract stage or order with all details
    * e) Configurable by Telco per stage - text, email ids (one or more)
    * f) If process does not move forward for x days then inform Telco user
    * g) notify customer about new offer / promo based on cross sell / upsell opportunity. Inform Telco if customer expresses interest. Rules configurable by Telco.
26. Require to integrate with Email gateway for outbound Notifications Hence require to build Email gateway integration adaptor (Q1 FY20)
27. Require to integrate with SMS gateway to send /receive Notification messages such as OTP, notifications, promotion messages, reminders, account creation, service termination, profile changes, successful recharge, balance updates, remaining capacity etc. Must be fully configurable from UI and backend.

Hence require to build SMS gateway integration adaptor (Q1 FY20)

1. Provide real-time APIs to all required modules or external systems to

* Send customer notification
* Set customer alert

## Backoffice – User Management (Q1 FY20)

As a Telco, I want to have ACL capability to assign roles to users and groups.

Acceptance criteria:

* Ability to define n number of users, groups. Define groups to nth nested level from UI
* Ability to define role profiles from UI
* Ability to assign role profiles to users and groups from UI and manage, update it as needed
* Define profiles for access to each functionality, segments, services
* Define Departments
* Define Users and Groups
* Map Users -> Department -> Profile
* Out of the box profiles like but not limited to Support Agent, Admin, Support Manager, Commercial Manager, Marketing Manager, Product Manager, Account Manager
* Omni Commerce Connect layer that provides role based access feature which can run across all the user roles and touchpoints
* What agent can acesss what - sales, payment collection, support etc
* ACL for CS agents
* For each agent designated location to be attached to their profiles and API Interface enabled for 3rd party systems to query and validate during the course of transaction.
* Flexibility to display different UI layout for different customer type. User can see accessible menu and functions eligible under his/her access role only.
* Have user account privilege control. Every user account should be assigned with specified role for access control. Role can be changed based on different situations. Normally, it can be general role or administrator role. The proposed solution shall have flexibility to configure and create new role for functions access. Support user account privilege control. Every user account shall be assigned with specific role(s), which will govern the associated data and functional access privilege control in Portal, as it is defined in role privilege settings.
* Portal Users under same group(node) within an organisation structure hierarchy can access the profiles under their corresponding group. Company administrator is capable to administer and assign portal users in groups.
* allow to maintain the organisation hierarchy, which can add/modify the hierarchy and grouping.
* User with appropriate administrator role shall allow to add, modify, remove users from/to the organisation hierarchy. Different roles can be assigned to users.
* Different partnership models should have different privilege controls
* Case shall be capable to update, add supplementary information, cancel, close by designated user.
* provide user administration function for general user and administrator role user
* Privilege control should be in function level and also data access level as well.
* flexibility to configure and create new role.
* Keep all approval records, and allow users, with required access rights, to enquire or retrieve whenever necessary.
* control the data access right based on user role permission control
* Data retrieval should be controlled by user access right definition.
* Attribute level role based access control in product catalogue
* Field-level / attribute level role based access
* Profile modification permission right should be controlled by user role definition.
* Change of Bill cycle is allowable by authorised user. Generate the coming bill with original bill day and generate following next bill with next bill day.
* Capability to extract predefined fields/information and not limited to, which allows the authorised user, to select and export data.

## Backoffice – Workflow & Approval (Q1 FY20)

As a Telco backoffice administrator, I want to define one or more workflows and request approvals

As an authorized Telco backoffice administrator, I want to view workflows and requests pending approval and approve, reject, hold or return it with comments

Acceptance criteria

* Backoffice should allow configuring workflow & approvals from UI and backend. From the UI the workflow & approvals should be configurable via drag n drop in a visual manner and presented in a easy visual /graphical manner. The backend APIs automatically align accordingly
* One should be able to view the configured workflows and approvals visually in UI and update (if they have the necessary rights) and be able to export as image or pdf
* One should be able to enter the lead id or order id or other relevant parameters to view the workflow and approvals it went through
* One should be able to simulate & test the workflows and approvals before going live
* OOTB pre-defined workflows and approvals e.g. new product approval, product change workflow & approval, approving partner account creation, partner order approval workflow, approving partner order exceeding their credit limit, credit limit related approval workflows, enterprise account creation and order generation workflow, feasibility check workflow, refund workflow & approvals, returns workflow & approvals, fixed line and mobility order creation and modification workflow & approvals.
* Workflows and approvals for assignment of leads to agent and /or account managers, customer queries, cases, handoff chat to live agent.
* flexibility to display different UI layout for different customer type. User can see accessible menu and functions eligible under his/her access role only.
* For Service Termination, the system shall collect and re-confirm all the required service details. The proposed solution shall acknowledge customers the termination will be properly followed up, and pass also to designate users, e.g. sales, per pre-defined workflow.
* Advanced UI operations, e.g. graphic interfaces, map/diagram illustration, drag and drop, etc., shall be in place where appropriate to simplify the selection / configuration steps and operation.
* For different pricing and term adjustment ranges, there shall have approval ranking/guidance indications, required approval levels and associated rules defined for the quote approval flow under the proposed solution.
* For all adjustments made in the quote, proper guidance indications shall be shown for reference, and shall summarise also the required approval level to assist the sales before they finalise the price configuration for the quote.
* The proposed solution shall able to monitor the approval progress by and not limited to :
  + a. Quote enquiry – can show overall approval status, and each approver respond
  + b. For requester, the response of each approver will be sent to User Portal and can be notified at the Follow up Dashboard , or by email
* For split billing, pool sharing and/or group setup across different Customer account, the system shall automatically pass the request to designated users, following pre-defined workflow, to validate the collected LOA, of the target customers & billing accounts before the request is approved and made effective.
* support management of the PLM workflow steps for product creation (development), validation, approval, launch, in-life management and retirement in an automated workflow.
* The status of a product within the workflow and its lifecycle should be traceable and viewable
* Approval workflow to set any process, hierarchy, lead & partner assignment, customer assignment, partner rating /commissions / contracts / quote / proposal, support workflow, case assignment, everything related to case mgmt, any self service portal or on-boarding changes
  + ex. Refund approval, approval before launching a plan, approving a partner
  + a) Approval workflow for CPQ (Threshold based), Automated or Manual - configurable by Telco
  + b) configure approval workflow per service /product per service /product per location /country /region
  + c) approval workflow support to publish product changes, journey flow changes etc

## Backoffice – Business Process Management (Q1 FY20)

* Supports flexible business process management supports both automated and manual order management through business processes
* Ability to define business process from UI for each step in journey per service type per customer segment
* Ability to enter order id and view the business process it went through
* The Business Process should be configurable through UI like a drag and drop.
* E2E workflow automation - Introduce standardization elements in the proper place and to be used in real time basis

## Customer Classification, segmentation, information mgmt (Q1 FY20 ?)

* Support at multiple type of users: new registered user, prospect customer, existing customer and virtual partners' customer, new Partner, prospect Partner, existing Partner. User access on different functions are determined by access role assigned.
* Configurable by Telco from UI and backend
* Customer should be indicated by different customer segmentation, customer type or other groupings.
* Support for customer classification attributes – configurable from UI and backend
* The proposed solution shall have Recommendation and Campaign driven Offer/Product for selection. Real time product offering recommendation shall also be shown based on prospect/customer list(s) associated to active marketing campaigns. The proposed solution shall allow integration between Campaign Management, Customer Information Management and Product Management, and/or other product offering recommendation data feeds from other external sources.
* Maintain a unique customer identifier across modules.
* Maintain a unique prospect customer identifier across platforms.
* Prospect customer required information can be dynamic, extendable and configurable. Validation should be provided when capturing information
* Provide the bulk update function, such as updating blacklist customer etc
* have approval endorsement on updating specific fields of customer profile, such as credit term etc
* maintain a unique account number as identifier across modules
* provide a function to store and centralise all Contact information for customers
* able to quickly segment the subscribers based on defined criteria, such as demographic, tenure, app usage profile, spend/purchase history etc (TKL 272)
* ability to search another co-related customers from one customer profile based on association.

## Google map integration adaptor (Q1 FY20), GIS integration adaptor (Q1 FY20)

1. Integrate with google map for customer location.
2. Based on customer location enable customers to locate stores or agents near them
3. Feed the location to analytics for personalized services e.g. suggest content based on location, suggest to turn on roaming if at airport (and roaming not enabled already), suggestion based on weather at given location
4. Show location of customer in real time to agents
5. Display location of sites on & availability of services and connection between sites on google map
6. E.g. for Enterprise services - End to end diagram is to be display on the Singapore map for local connectivity & services as well as global mapped if it's a global services (inclusive of SD-WAN)
7. Address management shall integrate with map solution for better customer experience and ease of use, as such user can search the address by keyword search, postal code and/or pin on the map using Lat/Long co-ordinates.

## Search (Q1 FY20)

As a customer /partner /Telco user, I want real time search & filtering capability on Telco website, portals and app to search products, services, tickets, order etc to find info I am looking for with ease.

As a Telco, I want to provide customers, partners and Telco users with a real time search & filtering capability on Telco website, portals and app to provide expected experience.

Acceptance criteria

1. Ability to search in all portals and app across all pages and tables
2. Omni-search capability
3. Full Text Search – language-aware searching of pages and services on the portal
4. Solr and Facet search
5. Support Global search box
6. Provide flexible Offer/Product Searching and Filtering features. User shall be able to search required product offering by simple & easy navigation flow, keywords searching and filtering.
7. Search and Filtering tag shall be supported in Product Catalog setup, as such to assign proper attributes and values pair to provide efficient & satisfactory search and selection experience.
8. Provide real time searching function on different areas
   * support exact name, partial searches and case insensitive searches
   * support wildcard search
   * support combination of search parameters for one search
   * support input validation rules at field level
9. Provide real time searching prospect customer function
10. Provide searching customer function
11. Searching results should include customers regardless if it is active/inactive but easily trackable and understandable by user
12. Inquire and display (current and historical) customer profile information in real time.
13. Ability to search another co-related customers from one customer profile based on association.
14. Provide real time searching contact function and not limited to any specific contacts
15. Searching results should show all associated Prospects, Customers, Accounts and contacts
16. Search by orders, ticket, quote, bills, payments, contract, profile, customer, dept etc.
17. Provide real-time APIs to all required modules or external systems to
    * search follow-ups task, interaction logs, case tickets, products, customer info, customer profile, bill, service profile etc
    * All modules

## Auditing

As a Telco, I want to maintain record of all activities within DCCM, affecting DCCM or interacting with DCCM for audit, investigation and compliance purposes.

* All customer activities, partner activities, employee activities, system activities shall be captured, logged and auditable
* One should be able to view all activities – All, by time, by activity, by user /group, any attribute, by type & sub-types, by severity, by success or failure and other parameters
* One should be able to view all activities on UI in easy human readable format and have option to download it
* One should be able to view all activities from backend
* Solution maintains historical records of all mentioned entities
* Audit trail
* All user activities shall be auditable.
* Actions performed by users with timestamp are necessary to keep track for audit purpose.
* Changes to be recorded but not limited to:
  + User account related activities
  + Bill related activities
  + System activities
  + API auditing
  + Quotation and Contract related activities
  + Approvals
  + Access control changes & role assignments
* Different access roles can have different functions. Audit trail will log down creation and update of user account and roles.
* Keep all approval records, and allow users, with required access rights, to enquire or retrieve whenever necessary.
* Complete historical records e.g. for order, contract, services, purchases, personalization, changes & approvals, and payments

## Security & Compliance

* Ensure security of subscribers' registration details, personal data, key billing information, and transaction history (TKL 269)

## Authentication Server

System must have Active Directory interface capabilities but also allow non-AD users (D-004)

## Multi-lingual support

* System must support multiple languages
* Multi-lingual support for Portals /backoffice in all text of menu, buttons, message box, etc. is required.
* Default – English
* As a user, I should be able to choose language (Indonesian or English) (Default - English) (TKL 54)

## Multi-currency support

1. Support multiple currencies & prices while defining products and display on frontend portal & app
2. Ability to view price in different currency by selecting options from UI
3. Default based on location or preference
4. Also, ability to integrate with SAP or another system to import latest rates
5. Ability to define customized workflow based on the currency selected
6. System should be having SAP integration adaptor (Q1 FY20) to
7. Support real-time interface to enquire Currency Conversion Rate from SAP
8. Real time interface for prices
9. keep in sync with Master Rate table housed there

## Consent Management & E-signature capabilities, integration adaptor (Q1 FY20)

* Consent acceptance via consent checkbox (with text /agreement link /T&C) or e-signature
* Consent management of an agreement or T&C
* Used for consent mgmt., order confirmation, agreement acceptance and other scenarios
* System must have E-Signature capabilities (with Document Management interface capabilities) (D-006)
* Terms and Conditions (if any) will be displayed for customer confirmation during account registration
* Consent text must be fully configurable with embedded link capability and ability to easily integrate with
* Esignature integration adaptor to integrate with document management and esignature systems
* Maintain in audit logs & records
* Solution must allow customer to give his agreement or not for his personal data usage by Telco (GDPR regulation)
* Solution must allow to get customer consent for his sale order whatever channel used
* Solution must propose customer consent and appropriate documents depending on customer journey action
* Solution must allow to manage an automatic validation process for customer supporting documents through a workflow for contracts whatever offer and channel (automatical checks of document content, concordance, consistency) Example : QuickSign tool
* Solution must propose digital signature whatever channel for documents requiring a customer signature (customer contract, SEPA document…). digital signature = validation following button click done by customer

## Data anonymization & GDPR

As a Telco, I want the capability to demonstrate GDPR compliance

As a customer, I want to be assured that my data is secure and Telco follows GDPR compliance allowing me the rights as per the compliance.

Acceptance criteria

* Adheres to GDPR compliance
* Ability to demonstrate compliance to GDPR requirements
* support masking /aliasing of sensitive information based on user roles e.g. user sensitive info that can allow tracking user, payment info, MSISDN number, subs prof data etc
* Ability to delete customer sensitive data when required e.g. asked by customer after a period as demanded by other compliances or defined by Telco
* Ability to tag / annotate attributes or parameters which can be masked /alias’ed and is visible only to certain users and other’s on approval.
* Ability for customer to view data stored about them by Telco and download it
* Fully configurable from UI

## Disclaimer page

* Before granting an authenticated user access to the application’s resources, the application must present a warning notification message to that user containing the following information: (1) System should only be access by authorized users only; (2) extent to which the application will protect the user’s privacy rights, (3) highest sensitivity level/classification of data that may be handled by the application, (4) user’s actions are subject to audit, (5) user’s responsibilities for handling sensitive or classified information when using the application.
* Fully configurable by Telco in terms of
  + Whether to display disclaimer page or not
  + Who will view (e.g. user, group, customer, partner, employee etc)
  + Which medium / channel one will view
  + View and accept on first time login or each login
  + Text for disclaimer page is configurable per role & channel
  + Ability to add link to the text in disclaimer page
  + Ability to define what happens on acceptance or rejection of disclaimer

## General / Web Content Management (Q1 FY20, Q2 FY20)

* Telco store - Providing a unified portal where customers can purchase hosted digital products and services. (ST-221)
* System must perform all functionalities from a single UI
* Requested resources reach the device, either using HTTP download or OMA download (ST-398)

Epic - Mobile App (MVP 1)

As a customer I want a user friendly Telco mobile app for purchase and self care

As a Telco, I want to offer a user friendly Telco mobile app to customers for onboarding journeys, self care, and to be constantly in touch

## Download & install Mobile app / SDK (Q1 FY20)

As a prospect or customer, I want to download mobile app from Android and /or iOS marketplace and /or Telco website

As a Telco, I want to offer a user-friendly mobile app to customer

Acceptance criteria

* Mobile app
* Android & iOS SDK
* Ability to upgrade app version
* Fast performance (page load + process < 2 seconds)
* Customizable flash screen, theme, colours, logo, look n feel
* All on-boarding journeys and self-care functionalities present in web portal for Retail, Enterprise, Partners should be presented in mobile – configurable
* UX / UI suitable for mobile devices. Intuitive UX.
* Responsive
* Lead to Activation, Full Self-care, eCare
* Support to execute survey

## Sign-up & login (Q1 FY20)

As a prospect or customer I want to sign up a Telco account on Telco mobile app and login

As a Telco, I want to offer a user-friendly Telco mobile app to customer

Acceptance criteria

* All sign-up and login available for web portal should be available for mobile app / SDK
* Biometric sign-in - Finger print, Voice
* UX / UI suitable for mobile devices. Intuitive UX.
* Responsive
* Mobile app
* Android & iOS SDK
* Fast performance (page load + process < 2 seconds)
* Sign-up analytics
* Push notification support
* Chat support

## Retail on-boarding journeys & self care, support via mobile app (Q1 FY20)

As a customer I want to buy SIM card or device or bundles or fixed line services using mobile app

As a Telco, I want to enable customer to do purchases using mobile app for ease of use

Acceptance criteria

* All on-boarding journeys and self care functionalities present in web portal for Retail should be presented in mobile – configurable
* UX / UI suitable for mobile devices. Intuitive UX.
* Responsive
* Mobile app
* Android & iOS SDK
* Lead to Activation, Full Self care, eCare
* Fast performance (page load + process < 2 seconds)
* Multi-lingual + Multi-currency support (TKL 237)
* Troubleshooting
* Consumption analytics
* Start from where one left
* Push notification support
* Chat support
* App personalization
* Ability to upgrade app version
* USSD information
* Customizable flash screen, theme, colors, logo, look n feel
* Support to execute survey

Epic: B2B Lead to Activation (Q1 FY20)

As a telco, I want to deliver a complete paperless and delightful lead to activation process for Enterprise customers so that I can

* Automation of telco buying process and CPQ to potentially increase sales by 5-10%
* Reduce on-boarding time by atleast 30%
* Reduce customer acquisition cost by atleast 15%
* Improve operational efficiency through streamlined operations by 15%

**Epic level Acceptance Criteria**

* Fully paperless and seamless experience for lead to activation
* Deliver experience that parallels experience of Amazon & Uber
* Fully configurable by Telco to sequence the lead to activation flow e.g. online service feasibility check vs. offline
* Guided experience for Enterprise customer : Notify and guide customer & telco team at each step
* All Enterprise services should be supported- Mobility, Broadband, IoT,Cloud,Network service etc.
* Various Enterprise products should be supported – Mobile connection, Fixed line, VAS like BoD and Anti-DDOS, IoT
* Integration with Sterlite and 3rd party products via standard open TM forum compliant Open APIs that can be reused without any changes in product e.g. adapter-based
* Fully automated End to end process - service feasibility check, capacity reservation, CPQ acceptance & negotiation, contract acceptance & negotiation, product –region-skill mapping of resources of appointment, order placement till activation
* Features and functionalities that are fully reusable across all DCCM versions, B2B and B2C products e.g. extensions, add-ons
* Recommend suitable products and add-ons to prospects and customers
* Experience that is suitable & responsive for Web and Mobile app and runs on all commonly used browsers & its versions
* Registration and activation with OTP / Password / Email (with department support)
* Suggest relevant products based on interest & preferences
* Lead management capabilities to convert leads efficiency by having a lead workspace to view, track, update leads
* Opportunity management capabilities by having an opportunity workspace to view, track, update Opportunities
* Assignment of Leads and Opportunities to different Account Managers according to certain parameters like potential revenue, budget of business customer and business cases
* Product selection and bundling and capture necessary inputs
* Service feasibility check & capacity Reservation
* Ability to create product configuration and validation rules for accurate quote and product offering including capturing of non-standard quote requirements
* Generate Quotes, proposal and Order Management for an opportunity along with Pricing Management, discounts and approvals and send on mail and guest account
* Depending on solution tentative upfront costs to be made available with option of request for quotation. Fully online paperless CPQ negotiation and acceptance with approval mgmt.
* Fully online paperless Contract negotiation and acceptance with approval mgmt.
* Conversion of final Quote to Order
* Order preview & confirmation
* Installation appointment booking
* Online payment
* Order tracking
* Service fulfilment
* Recommend products to be cross sold and upsold to customer
* Notify customers and Telco user(s) about the lead creation, opportunity and order status
* Capture information in all necessary systems
* Log activity and status at all times
* Support complex customer account hierarchy to enable large corporate customers, business customers with branch offices and head office type of setups.
* Every integration can be changeable project to project , Hence expectation is to develop a reusable framework with one of the current module, but should be designed in such as way which will be resulted in minimal changes

**Below are key functionalities as part of this Epic**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lead to Activation** | **Self Service** | **Partner mgmt.** | **Admin View:** | **Account View ( Back office)** |
| Enterprise customer On boarding | Bills & Payments | Reseller, Whitelabel, OTT Partner | User Management | Account summary view ( Quote , Contract view) |
| Product Selection & Bundling | Case mgmt. | On-boarding | Hierarchy / Org creation | Credit management |
| Feasibility Check and reservation | Interaction history | Product, commissions, contracts, approvals | Dashboard & Report | Workflow & Approvals |
| Customer Offer & Quote | Order tracking | User Mgmt. | Workflow & Approvals |  |
| Contract Management & negotiations | Dashboards & reports | Partner portal |  |  |
| Order Management | Usage tracking | Hierarchy / Org creation |  |  |
| Payment | My Services | Dashboard & Report |  |  |
| Service Activation | Add-ons | Self care |  |  |
|  | My profile |  |  |  |
|  | Order history |  |  |  |
|  | Disconnection |  |  |  |
|  | Quote & contract history |  |  |  |
|  | User Mgmt. |  |  |  |
|  | Hierarchy / Org creation |  |  |  |
|  |  |  |  |  |

**Below integrations are required as part of this Epic**

* CRM
* Contract Management
* Customer Order Management
* Product Catalogue Management
* Service assurance & performance Management
* Revenue Management
* Stock Management
* Chat bot
* Analytics
* Trouble ticketing / Case Management
* Service Portals ( e.g. IOT)
* Workforce Management
* SOM
* Payment gateway
* Inventory mgmt.
* NPS ( Net promoter score System)
* Knowledge mgmt.
* ERP
* Notification & Alerts

**Integration requirement:**

1. Workforce mgmt.

Support real-time interface to enquire from Workforce Management to

1. get available timeslot for appointment
2. reserve timeslot for making appointment
3. enquire appointment details & status
4. cancel appointment
5. Real-time interface to enquire Currency Conversion Rate from ERP System
6. Service orchestration

Support real-time interface with Service Orchestration for

Check resource availability

reserve available resource

release reserved resource

modify the issued order details

cancel the issued order details

1. Billing & Revenue mgmt...

Support real-time interface from Billing & Revenue Management to

a) enquire bill account credit information  
b) enquire bill summary and details  
c) reprint and resend bill  
d) incur one time charge for reprinting paper bill  
e) enquire billed / unbilled usage summary and details  
f) enquire pool sharing information  
g) enquire payment history  
h) enquire adjustment history  
i) enquire deposit history  
j) perform online prepayment (upfront payment) and deposit payment  
k) enquire rebate fund balances  
l) enquire outstanding balances of all accounts under a customer  
m) consume rebate fund   
n) return rebate fund

1. Service assurance & performance mgmt..

Support real-time interface from Service Assurance and

Performance Management to   
a) get Network healthiness figures/diagram   
b) get Network historical performance trend and figures

1. IoT

Support the redirection to IoT service portals for IoT related details

1. Customer satisfaction

Support real-time interface from Customer Satisfaction to  
a) check any pending survey or feedback   
b) redirect to URL of the survey or feedback

1. IVRS

Integrate with IVRS platform to support customer interactions, e.g. balance inquiry, payment due date and log problem cases.

## Feature: Inquiry Management (Q1 FY20) (ST-112)

As a customer, I want to express my interest in Telco product(s) or service(s) and have Telco representative call me for next steps.

As a telco, I want to give ability to customers to fill an online sales lead form to express their interest and have responsible customer agent or account manager reach out for further steps.

Acceptance criteria

1. Provide online Sales Lead form for customer to fill in their request & associated information for service/product offering of their interests for capturing customer interest and acquire sales leads. The captured Sales Lead will be passed to designated users per configured flow e.g. responsible sale team of designated industry segment, for further sales assignment & follow ups.
2. Online sales lead form with necessary fields (up to 15 fields)
3. Contact & address details. Company details as applicable
4. Allow customer to choose the LOBs, products, services, plans, subscriptions, bundles, contracts they are interested in

## Feature: Registration & activation

1. As an Enterprise customer, I want to register my access account
2. As a registered Enterprise customer, I want to setup my password to login to system

**Acceptance Criteria:**

1. Customer should be registered themselves with basic details such as But not limited to

Company Name

Address

Contact Name

Contact Number

Email ID

Type of Industry

ID Proof (Company ID proof depending upon geography)

Bank Details: Bank Account Number, IFSC Code

User ID

Password

1. Sign-up process should be secured via OTP approach
2. Along with all contact details and Enterprise information also capture what Enterprise customer is interested in, and department of the person
3. Create Lead in the system
4. Notify vendor Account manager for lead creation & customer interests
5. **Validation** : Require to verify ID proof ( third party integration)

**Customer Id Validation**: Integration required with the eligible authority present in the relevant country to validate the B2B customers credential

**Address Validation**: Integration required with country’s address validation and verification system

1. **Credit check Validation** : Require to verify Enterprise credibility ( third party integration)

**Credit check** - Integration required with the local credit assessment agency to check credit ratings

1. Above 2 points related to validation can be online or Offline.
2. Notify customer of account creation
3. Login with Email / password / OTP
4. Integrate with necessary systems to capture lead
5. Mandatory and optional input fields should be supported for configuration by vendor.
6. Terms and Conditions (if any) will be displayed for customer confirmation during account registration
7. Send out account activation email notification to registered new users with unique system generated password or one time password
8. Customer should perform first time login as account activation and force to reset password. Password should comply with Telco Password policy.
9. Provide customer identification function to build the association between the Portal User Account and Prospect/Customer.
10. The Enterprise contact who is registered first , can be get an administrator role , or S/he can assign that role to some other customer as well
11. Admin will further create organization with different roles
12. All necessary records available with telco personnel to view lead information and support customer
13. Every Customer account should be assigned with specified role for access control. Role can be changed based on different situations. Normally, it can be general role or administrator role. The proposed solution shall have flexibility to configure and create new role for functions access
14. As an Telco Account manager , I want to configure automated follow-up process for newly created Lead

**Acceptance Criteria:**

1. Can define rules on the basis of input parameter entered by customer during registration
2. Can define single workflow for all new Leads , who yet to be placed a single order
3. As and when new user will be registered , send indication to indicate telco Account manager this Customer is newly registered and trigger BPM workflow to follow-up with new Registration
4. As an approval manager, I want to approve /reject new registration request.

**Acceptance Criteria:**

1. As and when new user will be registered , send indication to indicate telco approver manager this Customer is newly registered
2. System should have flexibility to configure automated approval workflow for new registered users
3. Manager can accept / reject the registration request on the basis of predefined criteria which can be differ for each deployment

## Feature: Personalization

As an Enterprise customer, I want to have view of personalized plans

**Acceptance criteria**

1. System should have capability to configure rules to categorize the plan to be shown
2. Optimized view on the basis of customer type - Customer can view all relevant products according to past customer insight & buying behaviour.
3. Below are some sample rules, to be configured :
   1. Customer type

-If new customer then showcase bundled + standalone offers only

-If returning customer then bundled + standalone + VAS + add-on

* 1. If threshold alert ticket exists for bandwidth usage then showcase upselling VAS
  2. Location wise

-Product will be shown on the basis of customer address (pin code) , So Based on pin code of customer's location, only relevant products are displayed

1. By default All plans should be shown to customer , If no rule will be applicable
2. Showcase cross sell / Up sell product recommendation with customizable different look & feel
3. Support Offer/Product selection by entering of Configuration and Specification required, based on location, required technology, configuration specification and parameters, etc.
4. System should identify and show possible and suitable product offerings base on rules & settings defined in Product Catalog, and then guide users onwards for entering the subsequent correlated quote details to complete the Quote.
5. Compatibility/Eligibility: Support Offer/Product eligibility by sales channel, partner, customer segment, quotation nature (new install, change, add-on or renewal, etc.), as set up in Product Catalog.

## Feature: Cross Sell / Up Sell, Promotion & Offer recommendation

As a Telco Manager, I want to recommend products to new & returning customers

(Persona: Product manager, Sales representative, Marketing Manager)

**Acceptance criteria**

1. Personalized VAS & Add-on options should be visible to customer once customer subscribed base (Bundle) product.
2. System should have capability to configure dynamic rules which can provide resulted products on the basis of condition such as customer segment, current product , location etc.
3. Integration with Analytic system & basis of analytic parameters , Rule creation can be done
4. Recommended offering for promotion, upsell, cross sell shall come from
   1. configurable recommendation rules
   2. API external feed from external analytic system or Campaign Management System
5. Provide diverse recommendation types. For example, but not limited to Campaign, regular promotion, new services, upsell, cross sell
6. Ability to set the ranking of recommendation types
7. Ability to set and control the triggers & display positions in Portal. For example, there is hot promotion this week, set and prompt a banner whenever customer login within a week.
8. Ability to enable or disable this function or type of recommendation
9. Ability to recommend offering based on customer industry, market segment, location and reported cases.
10. Have Recommendation and Campaign driven Offer/Product for selection. Real time product offering recommendation shall also be shown based on prospect/customer list(s) associated to active marketing campaigns. Allow integration between Campaign Management, Customer Information Management and Product Management, and/or other product offering recommendation data feeds from other external sources.

## Feature: configure Product/Service

1. Allow Customer to configure the selected Product/Service.
2. The required configurations are driven by Product setup in UPC
3. Capability to have dynamic configuration page based on selected Product/Service.
4. Different products can have different parameters and should be configurable.
5. Support graphic view to display the inter-related services and products, as configured in Product Catalog Management and linked up upon order was issued & processed.
6. Support Search and Filtering tags in Product Catalog setup, as such to assign proper attributes and values pair to provide efficient & satisfactory search and selection experience.
7. Support Offer/Product Up sell or Cross sell suggestions. Based on Product Catalog settings, system shall be also able to recommend appropriate add-on, or co-related (e.g. VAS), or upgradable product offerings based on current selections and existing service and product subscription profile of the customer.
8. Ability to display all related Product Offerings with price, discount (if any), for selected Product/Service and configured parameters.
9. Integration with master system such as CPQ & UPC will be required

## Feature: Product Search & Selection

As an Enterprise customer, I want to search products based on my requirement.

**Acceptance criteria**

1. Customer can search products using facet search
2. Criteria for search can be product type ( Bundled offer, Standalone offer, VAS: Anti-DDOS, VAS: BoD ) , product name (Use all products from the attached list) , services (Fixed line, Mobility, VAS, IoT)
3. Also, customer can enter any text /value in the search box -> then show all product names + VAS Product offer having it in its description.
4. Use Solr search for high performance
5. Provide flexible Offer/Product Searching and Filtering features. User shall be able to search required product offering by simple & easy navigation flow, keywords searching and filtering.

As an Enterprise customer, I want to select product based on my requirement.

**Acceptance criteria**

1. Allow different ways of offer/product selection to facilitate sales (or partners) on the ease their quote preparation works, besides the traditional catalog browsing.
   1. Support Guided selling, allow configuring questions and answers per product type or line, customer segment and sales channel as such to recommend product offerings based on questions and answers flow.
   2. Allow the configuration of different guiding scenarios as required, e.g. base on different product line or types, etc., in order to facilitate inexperience users to correctly determine the appropriate products & offers as needed
2. Customer chooses product(s) in < 1 minute
3. Customer and Telco always aware of chosen product(s) and can view them at any time
4. Display all related Product Offerings with price, discount (if any), contract (if any), rebate fund(if any) for selected Product/Service and configured parameters. Product Offerings should well defined in Product Catalogue Management.
5. Display all related Product Offerings with price, discount (if any ) for selected Product based on the master contract
6. Some specific OTC products can set to be offset by rebate fund. Capabilities to cross check the customer's balance of rebate fund (from Revenue Management).
7. Customer is able search the desired products in the U/I and choose a product
8. Show available products & Services on google map and on link show Speed and Service type on Mouse Browse over.
9. Only active products should be displayed to customer , retired products should not be displayed
10. All the recommended/selected product offerings details shall be clearly illustrated or drill in for details during the offer/product selection steps.
11. On each product offering, provide detail descriptions of the offering, with product offering details, product specification, pricing details, terms and remarks, etc., as retrieved from Product Catalog.
12. Users shall be able to manage the products & offers selection easily with different associated user operations allowed, e.g. view, add, delete and update quantity, etc.
13. Validate the product offer relationships (e.g. prerequisite, exclusive & co-existence, etc.) and mandatory configurations, as defined in Product Catalogue, before proceed.

As an Enterprise customer, I want to select configurable parameters (timeslot) to get best price for services( e.g. BoD)

**Acceptance criteria**

1. Allow customer to select and configure applicable 'bandwidth on demand' product offering of the subscribed service for specific the Time of Day, Day of week, Location.
2. if customer choose BoD as service , then Graphical calendar should be visible from which customer can select timeslot and price of VAS will be changed as per configured dynamic pricing matrix in UPC

**Feature: Bespoke product configuration**

As a Product Manager, I want to configure product rules

**Acceptance criteria**

1product manager can set product business rules

2) To be able to set business rules to define mandatory & optional attributes for the products

3) To be able to set product recommendation rules, compatibility and eligibility rules

4) To be able to manually update the product data.

As an Account manager, I want to add bespoke products, which are not available in Product catalog

**So That**

I can build quotes with custom requirements if required for a customer

**Acceptance criteria**

1. Ad hoc/ Bespoke products can be requested to add in product catalog
2. Catalog version should be go for approval
3. Values are included in total quote value and other P&L calculation
4. Quotes can be submitted with cost as blank. Commercial manager or supervisor to add this cost value during Approval.
5. Adding Adhoc products always triggers commercial approval
6. To be able to add the following mandatory product attributes to this product:

- Product name

- Product description

- Quantity

- Total price

- Cost

## Feature: Service Feasibility Check and capacity reservation

As an Enterprise customer, I want automatic service feasibility check for required locations

**Acceptance criteria**

1. If customer selected a service / product that needs both start and end location e.g. Metro Ethernet then ask to enter specific installation locations. Customer can input multiple locations ( addresses)
2. UI should display End to end diagram is to be display on the country/state/city map for local connectivity & services as well as global mapped if it's a global services (inclusive of SD-WAN)
3. On entering a service /product that requires just one installation location then ask accordingly.
4. For starting point and ending point user must fill address and pincode fields
5. Validation : Check service availability and coverage
6. Resource management integration adaptor (Q1 FY20)
   1. Validation : Check resource availability

Based on product setting, assigned installation address and entered configuration, system shall perform network resource availability check, on both tangible and intangible resources.

* 1. Interface can be Synch or Asynch
  2. If resources are available, system shall assign and reserve resource(s) by calling Resource Management APIs with a grace period.

1. Auto reserve resource capacity in the system if the feasibility checks are positive.
2. UI to showcase existing services of the customer and allow to connect him new Branches by Punching address
3. Integrate with network inventory system for checking resource availability
4. Automatically reserve resource capacity in the system if the feasibility checks are positive.
5. If order is cancelled or not completed within <x> time frame then release the reserved capacity
6. Integration with network inventory system to reserve resources in their system
7. If the picked address does not have any requested service coverage, sales should be notified to follow up with customer
8. Customer shall be able to enquire available timeslots and make appointments for field services via Customer Portal for desired dates.

As an Enterprise customer, I want to select installation timeslots based on availability

**Acceptance criteria**

1. If response of coverage check & capacity reservation will be positive then DCCM should fetch available timeslots from workforce management
2. And Customer should then select installation timeslot from available time slots
3. Validation: Display date > = current date + 1 AND <= current date + <x=5>. x is configurable by Vendor.
4. Basic validations of date & time should be applicable

As an Enterprise customer, I want to select site survey timeslots

**Acceptance criteria**

1. Schedule appointment for Installation site survey if coverage check or capacity availability is negative (only show available time slots for field engineers with required skill and product matrix)
2. Validation: Display date > = current date + 1 AND <= current date + <x=5>. X is configurable by Vendor.
3. Basic validations of date & time should be applicable

Epic: Quote to contract

As telco, we want a full paperless automated CPQ system that supports Quote creation and product configuration with guided selling, pricing & discounting, approval workflow, quote acceptance and negotiation with customer.

## Feature: Quote negotiation & Acceptance

1. As an Enterprise customer, I want to View the quote request for my selected product Offerings
2. As an Enterprise customer , I want to accept & checkout the Quote
3. As an Enterprise customer , I want to reject & negotiate the given Quote
4. As an Enterprise customer , I want to cancel the Quote
5. As a Telco Account manager, I want to negotiate on requested quote
6. As a Telco Account manager , I want to view discount % , which is already preapproved
7. As a Telco Account manager, I want to view approval workflow for non-preapproved discount for Quote negotiation

**Acceptance criteria**

1. Display quote on customer portal against the requested product /service.

This is done by integrating with Master CPQ system.

1. Telco user has an option to upload quote manually.

e.g. In case of site survey, BOM is prepared manually and uploaded to CPQ or another relevant system & visible to customer

1. Quote can be generated against product / service or else can be generated for combination of Product & services by CPQ System , Hence viewing of multiple quotes for single order can be feasible in DCCM
2. Customer can upload and download documents related to the quote during the Quote negotiation process & which in turn push to the CPQ system
3. Customer shall be able to upload a related document (format and max. file size TBC) with input of document nature, document name and version.
4. Authorised parties (owners or those with access right of the Quote) shall be able download the uploaded document(s) whenever they enquire on the details of the Quote record.
5. Customer Reviews & Accepts Quote and T&C (This may involve finance approvals in case the customer requires additional discounts)
   1. Customer can view quote and T&C and accept it via digital signature, or download the proposal to sign the hardcopy and upload the signed copy or reject with comments and pass it back to telco.
   2. If the % discount seeked by customer is higher than what the Vendor’s Account Manager/Telco representative can approve, then it goes through approval workflow at telco end.
   3. The vendor’s Account Manager/Telco representative will be able to view the RAG status which will highlight whether the discount requested by the customer requires financial approval and :

Green – No approval required

Amber – Requires one to two levels of approval

Red – Low probability and will go through multi stage approval process

1. Notify customer & Telco user(s) over email and sms during key milestones of negotiation phase
2. Customer & Telco user can view all comments and previous quotes including final one online
3. The System should allow Telco to configure if the Quote negotiation process should be online or offline (default is online)

### Approvals

1. Ability to automatically approve discounts that do not violate pre-authorised approval thresholds.
2. Ability to apply auto- approval of discounts by role.
3. Ability to notify user where changes in data may result in additional approvals

### Configure and Manage Quote

1. Ability to Clone a Quote based on user privileges
2. The ability for an Opportunity to support multiple quotes
3. Ability to use existing customer historical usage data to determine pricing
4. Ability to add Products to the quote with all associated parts
5. Ability to only view and select products/ product combinations valid for my organization/department
6. Ability to reconfigure product on the quote prior to issuing for approval
7. Ability to select and price Services during product configuration
8. Ability to see pricing information during product configuration
9. Ability to delete Products from the quote and all associated parts.
10. Ability to store multiple attachments with a Quote. An attachment can be an image or any standard document type e.g. Word, excel, pdf, Visio
11. Allow customer to input their own company PO number/Tender number in quote process for customer self reference propose. It shall be kept in the quote records and associated quotation & agreement documents where appropriate.
12. Capability to save customer selections & entered configuration during the quote process, e.g. which services are selected but still not configure completely. And the system shall allow customer or sales to retrieve unfinished quote and continue later on.
13. Upon quotation with Terms and Conditions generated, the system shall allow customer

a) reviewing and modifying the quotation

b) saving quotation for further consideration

c) saving quotation with quote feedback and sales follow up

d) rejecting quotation

e) accepting quotation immediately

1. Upon quote acceptance, related resource(s) in accepted quotation will be reserved.
2. Notify & alert Telco Account manager who is responsible for sales to follow up as necessary, on the Quote or Order which customers did not complete the creation process on their own.

### P&L (Generated by CPQ)

1. The P&L should be visible at all stages of the quote lifecycle based on user role
2. Ability to provide a yearly split of the P&L for a quote based on contract term
3. The ability to prevent non authorised users from viewing the P&L and KPI's
4. Ability to export the P&L to Excel for reporting
5. The ability to automatically update the P&L and KPI's as products, prices, discounts and costs are added or changed.
6. Ability to calculate P&L
7. Users should not be able to manually edit the P&L calculations as it is automatically calculated

### Configure Quotes – Quote Amendment & tracking

As an admin of an Enterprise, I want Amendment in existing Quote

As an Account manager of Telco, I want to do amendment in existing Quote

1. All changes to a quote must be tracked
2. Ability to Edit a Quote whilst not in the approval process
3. Ability to amend Quote details after Approval rejection
4. Ability to add Comments when a Quote is approved or rejected
5. The ability to see and modify quotes within a team so each member of the team can administer and amend the quote accordingly (with relevant audit trail)
6. Ability to display the current workflow stage. , Workflows should be configurable based on specific requirment
7. Ability to View quote change history based on user role.
8. To be able to create a quote by cloning the previous quote and setting contract type as "Amendment "
9. if I select Amendment, I should be prompted to enter existing Corporate/Business ID (which was mapped to the earlier contract)
10. That products from the previous quote are viewable but not editable
11. System should have flexibility to add additional products/ services required
12. To be able to request for changes in any T&Cs and submit quote for approval, once the product has been added
13. Account manager cannot self-approve quote for amendment
14. Account manager cannot generate contract after approval(Contract team will be responsible)

### Configure Quote – Contract Renewal

As an Account manager of vendor, I want to renew the contract.

1. To be able to create a quote by cloning the previous quote and setting contract type as "Renewal”
2. When I submit the quote for approval, I should be prompted to enter existing Corporate/Business ID (which was mapped to the earlier contract).
3. Account manager can edit existing products and configure new products.
4. Those products from the previous quote be viewable and editable. However, Account Manager should be able to edit Pricing/ Discount, contract term etc.
5. To be prompted if any existing products have retired and I cannot submit the quote if it contains retired products
6. To be able to request for changes in any T&Cs and submit quote for approval, once the product has been added

## Feature: Quote search

As an Enterprise customer, I want to search quote based on specific rules or search criteria

**Acceptance criteria**

1. Provide quotation search function for customer.

2. DCCM should Allow Quote search by pre-defined searching rules:

a) Owner of Quote(s)

- Search quote directly owned by the user or co-related to the user/based on user privileges

- Integrate with organisation hierarchy and access right control of user role.

- e.g. sales can access their own quote records, but sales managers can access all quote records in their corresponding team(s)

b) Quote(s) created by other user, but within the user’s own access authority

- Search quote owned or related to the user, subject to organisation hierarchy and access right control

- e.g. sales A and sales B is located at the same sales team. Sales A can view Sales B quote, or vice-versa

3. DCCM should support search of Quote with the criteria such as

a) by keywords, e.g. Customer name, Quote Id, country, products etc.

b) Via associated information entities, e.g. related opportunity Id etc.

c) By range(s) of applicable dates

d) By customised filters on information available

4. Quote Result:

DCCM shall show the quote search result with required basic information but not limited to, such as

* Quote name,
* Quote id
* customer name,
* opportunity id,
* Quote status (Approved, Rejected, Parked etc.)
* Proposal status etc.
* DCCM shall support sorting, filtering & paging features to easily manipulate with the multiple records shown in search result.

## Feature: Proposal/Contract negotiation & acceptance

As an Enterprise customer, I want to reduce the cycle time for proposal negotiation process and have better visibility

**Acceptance criteria**

1. Display proposal on customer portal against the requested order/Quote. This is done by integrating with contract management system. Also, Telco user has an option to upload proposal manually.
2. Telco can define agreement approval workflows based on the contract value/customer type, product line etc. Wherein approvers and required approval parties should be configurable in the approval flow setup.
3. The approval request should allow to be approved/rejected by a particular approver, or anyone in a node of approvers (e.g. any one of sales managers).
4. After the proposal agreement document is generated, sales can submit the same for approval.
5. Customer can upload and download documents related to the proposal during the proposal agreement process.
6. DCCM should notify the approvers on the submitted approval requests as per the defined workflow, and reach to relevant parties for approve, reject and comment feedback actions, such as:
   1. an email with the proposal agreement information and a URL shortcut for approve/reject the quotation
   2. an app push message to related parties for approval notification via User Portal mobile app (if available), then take action in the Approval dashboard
   3. a pending approval request as shown in Approval dashboard in the proposed solution.
   4. Identification of pre-defined keywords in reply e-mail, such as but not limit to "Approved", "Proceed", "OK", etc.
7. Customer can track the whole approval process and all associated status.
8. DCCM will generate alert to the concerned sales/account lead , if proposal agreement is being rejected or got any comment feedback
9. Customer with proper access rights shall be allowed to review, accept, reject and/or put in feedback and telco sales team will be notified via email
10. Notify or send alert to sales once the proposal agreement is ready for customer submission
11. Real-time checking on customer's credit limit, outstanding amount & blacklist will be required during proposal process.
12. Proposal Agreement with pre-defined Terms & Conditions shall be generated based on accepted quotation.
13. The proposed solution shall allow customer to accept the proposal agreement by

e-Signature

To use e-Signature, customer's device will need to be compatible for signing digital signature.

or download the proposal to sign the hardcopy and upload the signed copy via Customer Portal. "

1. Real-time checking on customer's credit limit, outstanding amount & blacklist are required during proposal process.

## Feature: Proposal/Contract search

As an Enterprise customer, I want to search proposal based on specific requirement

**Acceptance criteria**

1. Proposal selection by keywords, e.g. Customer name, Contract Id etc.,
2. via associated information entities, e.g. related Opportunity Id etc.
3. by range(s) of applicable dates
4. by customized filters on information available.

## Feature: Approval Governance

As an Telco Account manager, I want to be informed on the approval status

**Acceptance criteria**

1. Account manager to be informed that requesting a non-standard terms and conditions would require commercial approval

As a commercial manager of Vendor, I want to approve/Reject the Quote/contract request

**Acceptance criteria**

1. The Commercial Manager is informed that he needs to approve the quote when account manager submits a quote, which has any of the following conditions true:
   1. Non-standard terms and conditions are requested Account Manager
   2. Overall quote RAG is Red or Amber
2. When quote in 'Submitted for Approval' status, the quote is assigned to commercial manager for approval
3. once the quote is assigned to commercial manager, S/he can edit the quote and then Approve or Reject the quote and provide additional comments
4. Once the quote is assigned to a commercial manager, quote cannot be edited unless withdrawn
5. Once the quote is approved or rejected, the quote status is appropriately changed and email notification is sent to account manager
6. Commercial manager should be able to edit the quote including cost base
7. if the quote is rejected, Account manager can make changes to this quote by revising the quote

As an Account manager of Vendor, I want to Edit Quote

**Acceptance criteria**

1. When a quote is submitted for approval, quote is validated for missing mandatory data fields, incorrect data type, special characters or spaces

2. Quote should contain at least one product before submitting for approval

3. Account manager can Edit quote to prepare correct Quote

As a telco account manager , I want to review the approval related actions performed on quote ( Approval History)

**Acceptance criteria**

1. Approval history is initiated when the quote is first submitted for approval and assigned to a commercial manager

2. All approval or rejection actions taken on a quote are recorded

3. Approval actions are tracked with details date, timestamp, Rejection reason, Quote status, Approver name, Comments

4. Approval history is maintained even when a quote revision is made

5. That approval history is maintained throughout quote lifecycle

6. Approval history once captured is never deleted or removed from a quote

7. Approval history is system generated and cannot be modified by any user

As an telco admin/account manager, I want to configure system to send reminders for unattended Quote approval Request

**Acceptance criteria**

1. Admin can set the schedule for notification

2. Automatic reminder is triggered when no action is performed on a quote in 'Submitted for Approval' status for a defined time

As an admin, I want to define approval managers & approval groups in system

**Acceptance criteria**

1. To be able to define the group of approvers for a particular segment/department

2. To be able to add/ delete users from the above group

3. To be able to define the permissions valid for the group and delegation rules .

i.e Approvers defined by the Approvers group can only approve/ reject a quote

4. Approvals are triggered as per the action defined

5. Actions to be performed after approval/ rejection are triggered

As an admin, I want to configure Quote approval validity (This should be configurable based on business rules)

**Acceptance criteria**

1. When a primary quote is approved, approval timestamp is captured

2. Quote remains in Approval status only till 30days from timestamp/ timeline approved by commercial manager

3. Once this time elapses, quote status should automatically change to ‘Expired’ status

4. An automatic notification is sent to Account manager stating that quote has expired

As a commercial manager, I want to delegate Quote approval

**Acceptance criteria**

1. Quote approvals can be delegated to users

2. Delegate can modify, approve or reject the quote based on his/her permissions and group allocation

3. Approval history records the details of the delegate when actions are performed

## Feature: Approvals – proposals / Quote / Contract

As an approver Manager of vendor, I want to approve the proposal/quote/contract request

**Acceptance criteria**

1. Approver manager of Vendor can have access of Approval Dashboard on the User Portal ( Web & APP)
2. Approval request(s) should be sent to related approver(s) by email or app push message
3. Approver(s) can go to the dashboard to view the high level info of the approval requests like approval type (e.g. Quotation or Proposal Agreement), related Quote/Customer and a link to view the document.
4. Approver(s) can approve, reject or leave comments on each request.
5. The response will be sent to the approval requesters for further follow up.

Progress tracking:

1. Customer can view approval progress on follow up dashboard
2. Customer will be notified as and when any response comes from approver
3. Customer can raise quote enquiry to show overall approval status & approver response
4. Vendor can configure approval workflow based on thresholds per service /product per location /country /region

## Feature: Order preview & confirmation

As an Enterprise Customer, I want to preview my order before confirmation

**Acceptance criteria**

1. Customer interacts with U/I to complete the order capture with all required details (Products, Bundles, Optional child Products, and Endpoints etc.)
2. Preview order with all installation points/sites prior to acceptance through geographical display
3. Allow the Customer to select FE appointment for Installation (only show available dates for field engineers with valid skillset, zone)
4. Actions required : Back , save , confirm & proceed
5. The captured order can be viewed in Customer Portal U/I after saved
6. The captured order can be found in the database
7. The captured appointment for installation can be found in the database

As an Enterprise customer, I want to place an order

**Acceptance criteria**

1. After preview of order customer can place the order by confirming that.
2. Order confirmation page should be having whole order detail.
3. Show order acceptance T&C with link embedded with contract. By default unchecked. User must select it to confirm order without which order cannot be confirmed.
4. FE appointment selection for installation with date and time. Integrate with WFM to fetch timeslot detail for this order. Customer Portal proposes the FE appointment and Customer is able to change the date and timeslot
5. Actions required - Back, place Order
6. Clicking back takes to order summary page
7. On successful placement of order, lead will convert to order.
8. Notification should be sent to customer for successfully placed order ( as per customer preference)
9. Notification should be sent to Account manager of vendor for successfully placed order by Enterprise customer
10. Customer order will be created from agreement to order. All selected product offerings, inputted product configuration, selected service request date, selected appointment timeslot, etc. should carry forward to Customer Order automatically.
11. Resources required for the order will be verified again on availability and alert sales to follow-up if any problem. When order is completed, subscribed service(s) are provisioned to customer and start the charge of service.
12. Integration : with COM

## Feature: Online Payment

As an Enterprise customer, I want to make online payment

**Acceptance criteria**

1. Customer can
   * See overview plan and, what are the total cost and its breakdown
   * Choose to make payment via one of the below mediums
     + Seamlessly make payments with Credit Card, Debit Card, Online banking, and E-Wallet, ATM, mobile banking, mobile money, EVD, loyalty points
     + Seamlessly make payments with e-commerce payment
   * See receipt confirmation ID (QR code) and tracking details on my order
   * Notification is sent to customer with the order details including receipt confirmation ID (QR code)
2. Vendor Admin/Account manager
   1. Configure which payment modes must be exposed
3. Integration with payment gateway, ecommerce payment mediums, systems that deals with store
4. Payment terms to be administrative and configurable
5. Allow customer to make online payment with credit card when upfront payment is required. e.g. but not limit to:
   1. subscribing product offering requires a deposit/prepayment/advance payment as defined in Product Catalogue, or,
   2. a special customer deposit is required, e.g. customer in bad credit rating. "
6. Alert the sales to follow up on the quote as necessary, if customer eventually did not perform the online payment.
7. Integration with payment management systems for supporting multiple payment modes , Hence require to build PMS integration adaptor
8. Capability to consume or return Rebate fund when necessary.

Epic: B2B digital self-care (MVP 1)

* Self-service request shall include, but not limited to,
  + New line subscription
  + Add additional Services and/or Products
  + Change Configuration
  + Change of Services and/or Products
  + Contract Renewal
  + VAS Add-on & Removal
  + Bandwidth on Demand
  + Service Termination
  + Profile information

## Feature: Subscription / Services

As an Enterprise customer, I want to view subscription (product offerings/Services) detail.

**Acceptance criteria:**

1. Display subscribed service/products for e.g.network services details with map view.

As an Enterprise customer, I want to create new billing Account

**Acceptance criteria:**

1. Allow creating new billing account, which is assigned for new customer with new subscription
2. Existing customer can choose to have separated bill under new account or use existing billing account.

## Feature: Order Handling (Update)

As an Enterprise customer, I want to update the already raised order

**Acceptance criteria:**

1. Order should not be in No return status to cater any update request
2. Ability to change the appointment date (subject to available resources) via the portal.
3. Allow customer to select and reference signed Master Service Agreement for issuing customer order

As an Enterprise customer, I want to cancel the already raised order

**Acceptance criteria:**

1. Allow customer to cancel the issued Order or Order item if defined validation rule(s) are passed (have pre-requisite check on item relationship, sequence and other PONR conditions).
2. Upon cancellation triggered, the system shall perform revert actions on reserved resource(s), workforce assignment, deducted rebate fund, etc.

## Feature: Order tracking

As an Enterprise customer, I want to track my order

**Acceptance criteria**

1. Order tracking shows visual tracking information with all information about order, status (done, current, and upcoming) with tentative time to fulfil the current step, and Est time to complete the remaining steps.
2. Graphical progress bar should be there for order tracking which will enable customers to track status online at any point of time
3. Customer should be notified with tinyURL through

As a CS Agent, I want to track customer order

**Acceptance criteria**

1. Same progress bar view should be displayed in backoffice
2. Agent should have visibility of detailed status of order , so that they can guide the customer

## Feature: My Services

As an Enterprise customer, I want to view my subscription details.

**Acceptance Criteria:**

1. View all active (and historical) subscriptions, products, plans through a self service experience using web and app channel (TKL 254)
2. Customer to view Subscription details with basic information such as :  
   - Product name, Service name, Service status
3. System should have flexibility to configure no. of subscription view.
4. According to configuration, Show latest details i.e. last <3> subscriptions. If more, show 'View all' link which will expand the view
5. Tree view is recommended for each subscription.
6. Integration with CRM to fetch all subscription details and display relevant status accordingly.

## Feature: User Management

As an admin, I want to manage users of my company

**Acceptance Criteria**

1. Support at least 4 types of users: new registered user, prospect customer, existing customer and virtual partners' customer. User access on different functions is determined by access role assigned.
2. Have user account privilege control. Every user account should be assigned with specified role for access control.
3. Role can be changed based on different situations. Normally, it can be general role or administrator role.
4. System should have flexibility to configure and create new role for functions access.
5. Support user account privilege control. Every user account shall be assigned with specific role(s), which will govern the associated data and functional access privilege control in Portal, as it is defined in role privilege settings.
6. Privilege control should be in function level and also data access level as well.
7. Flexibility to configure and create new role.
8. Different access roles can have different functions. Audit trail will log down creation and update of user account and roles.
9. Create users with different privileges basis on departments , segments , geo location
10. Create User (Super Admin will create user)
11. First Name, Last Name
12. Personal Details :Email, Mobile Number
13. Department
14. Role
15. Reporting Head
16. User Status (Active,Inactive)
17. Access Permission : Check boxes with Admin : create,view,edit,delete , Password : create,view,edit,delete, Configurations: Email, SMS,audit settings, Module Registration etc.

* Edit User (Super Admin will edit users)
  + Module Template
  + Password Policy
  + Audit Settings
  + Configurations

1. User in administrator role shall allow maintaining the organisation hierarchy, which can add/modify the hierarchy and grouping.
2. User in administrator role shall allow adding, modifying, and removing users from/to the organisation hierarchy. Different roles can be assigned to users.
3. User in administrator role shall allow to configure the target recipient of performance alert notification
4. Show the corresponding partner company logo, as configured, when white labelling partners' customers log on to Customer Portal.
5. Flexibility to display different UI layout for different customer type. User can see accessible menu and functions eligible under his/her access role only.

## Feature: Hierarchy / Org creation

As a vendor Admin, I want to build organization hierarchy

As a Customer Admin, I want to build my organization hierarchy

**Acceptance Criteria:**

1. Company administrator is capable to administer and assign portal users in groups.
2. User in administrator role shall allow maintaining the organisation hierarchy, which can add/modify the hierarchy and grouping.
3. User in administrator role shall allow adding, modifying, and removing users from/to the organisation hierarchy. Different roles can be assigned to users.
4. User in administrator role shall allow to configure the target recipient of performance alert notification
5. Allow to setup the organisation structure hierarchy to create different hierarchy type. And configure who can view what information with empowerment.
6. Support hierarchical or tree structure to define any subsidiary or mother company
7. Support up to level N hierarchy (i.e. Parent company -> subsidiary -> subsidiary -> ...)
8. Ability to capture and display the relation between one customer and other customers.
9. Customer-side organizations are composed of B2B units which are in a tree structure with one root node. A B2B unit may represent a department, sub-company or division within an organization.
10. Can create B2BUnit for department/ division within an organization
11. System should support managing the Sales Organisation Information of all Sales Channels in Telco, such as :
    1. Hierarchical structure of different Sales teams
    2. Individual Sales Unit under the Sales Organisation
    3. Assigned Sales Staff
    4. Assigned Sales Account of Prospect and Customers
12. System should maintain the information of Sales Unit and the hierarchical relationships between all Units in different Channels and Teams under the Sales Organisation.
13. System should allow the creation, enquiry and update the information of individual Sales unit, include but not limit to Sales Unit ID and Name, Sales Unit Description, Sales Category and Type, Channels and Market Segments, Associated Parent Sales Unit and Effective Date, etc.
14. System should show the current and historical hierarchical structure of all Sales Teams and fellow Units within the Organisation of Telco in graphical view. In the hierarchical views, the current or previously assigned Sales Staff and Customers of each Sales Units shall be able to be seen along also at ease.
15. System should provide search and filter features to find any Sales Unit(s) within the Organisation by a series of criteria, such as Sales Staff ID, Staff Name, Team Names, Customer Names, Channels and Segments, etc.
16. System should provide the necessary facility for the flexibly maintenance of the Organisation Hierarchy,
    1. e.g. addition of fellow sub-ordinates, re-assign to another parent unit in the hierarchy, etc., without any limitation and at any time necessary.
    2. And All addition and changes shall allow also the input of corresponding effective dates, which can be immediate, future or date-back.
17. System should provide the functions to maintain the Sales Team and corresponding assignment of Team head.
18. System should allow the creation, enquiry and update the information of a Sales Team, include but not limit to Sales Team Name/Description, Sales Team Category and Type, Channels and Market Segments, Assigned Sales Unit and Effective Date, etc.
19. System should allow assigning a Sales Unit as the head of that corresponding Sales Team. The associated relationship of fellow team members, as well as further associated sub-teams, shall follow the parent/child structure of the Organisation Hierarchy as it is maintained in the system.
20. All new assignment and changes shall allow also the input of corresponding effective dates, which can be immediate, future or date-back.
21. Vendor can define different Hierarchy such as sales hierarchy, support hierarchy, partner hierarchy
22. Vendor can define distributor – reseller level 1 – reseller level 2 – reseller level n hierarchy

**Integrations Required:**

* CRM
* Chatbot
* Analytics
* Service assurance & perf mgmt.
* Trouble ticketing
* Contract mgmt.
* WFM
* SOM
* Payment gateway
* Inventory mgmt.
* NPS
* Knowledge mgmt.
* ERP
* Notification & Alerts

Epic - Dashboards & Journey Analytics

As Telco user, I want to view dashboard for quick snapshot to take decisions and actions based on my role. E.g. Business ops team to monitor KPIs & journey performance, Agent to view case details & drop links etc

As a customer, I want a snapshot of my account in terms of services /subscriptions I use, open cases & responses, pending orders & any news that will help me.

Acceptance criteria:

1. Summary & detail view in all dashboards
2. Customizable for widgets, adhoc reports, pick n choose fields for reporting
3. Understand health of system and flag areas that need attention with recommended actions (wherever possible)
4. Real time & full understanding of how customers interact during purchase life cycle - by journey, by device + OS, time per step, time per click, delays, dropouts
5. Real time view of users online in journey, time between steps - aggregated view, per service, per customer type, per journey, per city /circle and comparative analysis
6. Real time insights on drop outs
7. Business KPI prediction & notifications
8. Auto-adjusting journey to optimize conversion rates

## Dashboard for Agent

* + Leads, Orders, Tickets, Summary & detail view, Drop links with option to call back and more, AHT, Open cases, Closed cases, Similar cases (open, resolved etc), Case priority-wise summary & details, assigned cases, case history

## Dashboard for Account Manager

* + Leads & Opportunities at each stage - aggregated and detailed, drill down ability to nth level, Summary of closure, P&L - closed, in pipeline, Time from last stage for open leads /opportunities, option ot assign to another Account Manager or above in hierarchy, Partner summary - Sales, Type of Partner, Orders, Stock, Settlements
  + The proposed solution shall provide report of Quotes which is having resource shortage or pending replenishment, for designated users to follow up accordingly.
  + New requests by Enterprises or Partners for account creation or quote or contract
  + Approval summary like approval type, related info, link to open the details

## Dashboard for Backoffice Admin

* + System Performance, Frequently used workflows & processes & unused, Summary view of each section of backoffice with ability to drill down
  + notification performance report – aggregated and per type of notification, including: (TKL 290)
    - a. success rate
    - b. latency - time for notification to arrive to subscribers
    - c. Total rejected message

## Dashboard for Product Manager

* + Summary of products in creation stage, approval stage, published & their performance, interlinking. Ability to drill down

## Dashboard for Manager of Managers

* + Summary of Account Manager view, Contact centre manager - Summary view of cases by priority / open / close / location / handled / AHT / priority-wise / Right first time etc

## Customer Dashboard

* + Provide Customer Dashboard View as landing page after user login with at a glance view for quick vision of customer activities, such as (but not limited to) all products, services, reminders, quotation/proposal, order and status, query cases , network status and fault alert if any.
  + The data shown in dashboard should be illustrated with choices of common presentation format, such as summary table views and graphical charts, which would be allowed also to be drilled into next level of details as needed.
  + The proposed solution shall provide a dashboard view with quick vision for customer to enquire the pending/outstanding orders status and progress, which would be drilled into order details to view and monitoring the progress as needed.
  + The proposed solution shall have payment reminder, after X days (configurable) of bill date or Y days (configurable) before due date, will be sent to customer via Inbox/alert and dashboard page on Customer Portal web version, Push notification for App version.
  + Customer should be able to enquire the case information, status and progress for x months (configurable). Summary view can display in Dashboard and allow to drill down in details.
  + The proposed solution shall integrate with Customer Satisfaction Management for showing any pending feedback or survey in dashboard page as reminder. The proposed solution should allow to click the dashboard and then redirect to the form in Customer Satisfaction Management to fill in instantly.
  + The proposed solution shall provide functions to monitor service and network performance. Functions should integrate with Network Performance Management to view the current network performance and history trend. Dashboard view (tables/graphs/charts) shall be provided.
  + The proposed solution shall provide User Dashboards in landing page with the available information provided by different modules. The Dashboard shall also be configurable.
  + a) Summary of services & usage
  + b) Offers & recommended plans /services
  + c) Current bill vs. unbilled amount with pay now option
  + d) Ticket summary info
  + e) Inquiry widget
  + f) Notifications section

## Partner view dashboards

* + The proposed solution shall provide Partner View Dashboards in landing page with the available information provided by different modules. The Dashboard shall also be configurable.

## Business dashboard

As a Telco, I want to monitor business KPIs, journey performance KPIs, drop out reasons and order to activation KPIs in real time with ability to slice & dice data to derive inference and take decisions and actions

Acceptance criteria

* Business KPIs
  + Count, trend, conversion ratios of business KPIs like Traffic, Leads, Orders, Activations
  + Ability to filter by time, duration, Circle, Source Channel, Delivery Partner, Web / App, Logistic Partner, Pin code, Campaign / Source
  + Monitor business and journey KPIs, performance, successes, failures, conversions, drop outs, average time and trends
* Business score cards
  + View into business run rate and sales by circle, time, source
  + Score cards
    - Stage-wise conversions – aggregated & per channel, circle wise summary
    - Circle summary
    - Campaign score card
    - Logistics score card: Order -> Delivery -> Activation conversions, Time to serve
    - Product / Plan score cards
    - Call center score cards
  + Aggregated view and per channel view (e.g. web, mobile app), per type (STP / ASM / Self Recovery / Journey type), per source view, per campaign view
* Journey Performance KPIs
  + Understand user’s journey behaviour and what can be done to optimize experience to increase conversions & reduce dropouts
  + Count, rates, trend of visits on each page, conversions and drop outs at each stage

## Logistics dashboard

* + Logistics performance e.g. order to activations /fulfilment
  + Successful, failed /expired, pending
  + Analysis & trends to be able to plan the logistics better – on a whole, on a per location, per product/ service and per partner basis

## Operations dashboard

* + Understand the health of system and flags that need attention
  + Monitor DCCM / system health in terms of successes & failures, response time, page load time, which processes /APIs did not perform as desired

## Drop out insights

* + Insights into drop outs at each stage of journey by location, type of customer, journey or other parameters and combination of these

## Other

* + OOB standard reports in DCCM
  + Capture all user and system activity in form of logs
  + Usage of the application such as page views etc
  + View analytics of sign up channels used by users
  + Option to integrate with any 3rd party reporting tool
  + As an app administrator I want to have analytics on the application performance, crashes etc. (TKL 168)
  + As an app administrator I want to know the performance of my app and web portal (TKL 169)
  + As an app administrator I want to have analytics on usage of the application such as page views etc (TKL 170)
  + As an app administrator I want to know basic data on past buying behavior for each user (TKL 171)
  + As an app administrator, I should be able to view advanced analytics of individual and aggregated buying behavior by data usage, voice usage, etc (TKL 172)
  + As an app administrator I should be able to log and view all possible content interactions (eg. search terms, filter actions) that each user made on the app to understand user preferences for future (TKL 173)
  + As an app administrator, I should be able to view analytics of sign up channels used by users (TKL 174)
  + Suggest path of least network disturbance to consumer taking calls regularly while in transit

## Journey recommendations

As a Telco, I want the DCCM system to give recommendations on what must be changed in the journey to increase conversion rates along with possible impact.

Acceptance criteria

* Recommendations on change in journey sequence at page level or within a page
* Recommendations on removing or changing a widget
* Probable impact of change
* Telco administrator should be able view recommendations + impact in backoffice and sent over email daily

## Auto adjusting journey

As a Telco, I want the DCCM system to do continuous auto adjustment of journey sequence at page level and within a page to increase conversion rates.

Acceptance criteria

* Manual vs. Auto mode configurable for Telco – Global, Per journey /segment /location /customer type
* Journey learns and adjusts automatically to change journey sequence at page and widget level to monitor conversion rate and continuously optimizes
* Actions and results available to Telco administrator for monitoring and action / roll back

# 

# BRM integration adaptor (Q1 FY20)

As Sterlite, we want to have seamless integration between Sterlite BSS / BRM and DCCM and maintain that on continuous basis to offer DCCM + BSS solution as a stack to our customers.

Acceptance criteria

* Seamless integration between BRM and DCCM
* Easy ability to maintain and upgrade integration across versions when a new version is released and maintain cross version integration
* Easy to upgrade DCCM and BRM versions without breaking the integration with back support for APIs
* All functionalities mentioned in Payments, Bills section should be integrated with BRM as necessary
* Display all related Product Offerings with price, discount (if any), contract (if any), rebate fund (if any) for selected Product/Service and configured parameters. Product Offerings should well defined in Product Catalogue Management.
* Some specific OTC products can set to be offset by rebate fund. The proposed solution should be capable to cross check the customer's balance of rebate fund (from Revenue Management).
* Allow creating new billing account, which is assigned for new customer with new subscription. Existing customer can choose to have separated bill under new account or use existing billing account.
* Allow customer to make online payment with credit card when upfront payment is required. e.g. but not limit to:
  + subscribing product offering requires a deposit/prepayment/advance payment as defined in Product Catalogue, or,
  + a special customer deposit is required, e.g. customer in bad credit rating.
* Capable to consume or return Rebate fund when necessary.
* Upon cancellation triggered, the system shall perform revert actions on reserved resource(s), workforce assignment, deducted rebate fund, etc.
* The proposed solution shall provide billing account related enquiry and maintenance functions.
* Billing Account Profile enquiry function shall be provided. Information should include but not limited to enquiry account status, bill date, bill language, bill media, payment method and bill address.
* The proposed solution shall be capable to update the payment method of their account, such as autopay by credit card/bank, etc.
* The proposed solution shall be capable to enquire the rebate fund balance with expiry date
* Bill and invoice enquiry function shall be provided, such as (but not limited to)
  + a) current outstanding balance
  + b) invoice summary
  + c) bills for past months - number of months will be configurable "
* Capable to reprint / resend bill by specific account and bill date, etc. bill or resend request by Customer via the portal. Resent paper bill in hardcopy needs to have extra charge.
* Capable to download eBill image or selected fields can allow to download in predefined format.
* Billed and unbilled usage enquiry (e.g. IoT related service) are required in summary view or detail view.
* Payment history for x months (configurable for number of months) are required for customer enquiry.
* Payment reminder, after X days (configurable) of bill date or Y days (configurable) before due date, will be sent to customer via Inbox/alert and dashboard page on Customer Portal web version, Push notification for App version.
* Support real-time interface from Billing & Revenue Management to
  + enquire bill account credit information
  + enquire bill summary and details
  + reprint and resend bill
  + incur one time charge for reprinting paper bill
  + enquire billed / unbilled usage summary and details
  + enquire pool sharing information
  + enquire payment history
  + enquire adjustment history
  + enquire deposit history
  + perform online prepayment (upfront payment) and deposit payment
  + enquire rebate fund balances
  + enquire outstanding balances of all accounts under a customer
  + consume rebate fund
  + return rebate fund
* The conversion rate, local and converted amount in specified currency of the quote will be captured and passed to Billing for the involved Billing processes.
* It can only be updated by authorised user. Some fields, such as account status or credit status but not limited to, can only modified by Revenue Management.
* Change of Bill cycle is allowable by authorised user. The proposed solution shall generate the coming bill with original bill day and generate following next bill with next bill day. Detail is in Billing and Revenue Management Area
* Provide sufficient bill related enquiry function to support customer’s query. Billing account profile with bill and payment method, invoice history, bill image shall also be provided.
* Provide reprint / resend bill by specific account and bill date, etc.
* Allow to maintain the split ratio or cap amounts for OTC/MRC/group of services charges, and to different billing accounts, but not limited to same customer account.
* Allow to maintain the pool sharing and/or group set up of involved services & billing accounts (but not limited to same customer account), for the relevant product offering subscribed.
* Split billing shall be disconnected upon a transfer of ownership request happen. The proposed solution shall alert user / customer when such request was raised.
* For split billing, pool sharing and/or group setup across different Customer account, the system shall automatically pass the request to designated users, following pre-defined workflow, to validate the collected LOA, of the target customers & billing accounts before the request is approved and made effective.
* Provide Rebate Fund Enquiry function to inquiry the outstanding balance and expiry date.
* Provide inquiry function of Billed, Unbilled Charges, Usage pooled sharing summary
* Provide deposit history, payment history and adjustment history enquiry function
* Provide dunning history enquiry function of selected account during specific period. The transaction shall include, but not limited to, dunning action, description, action date and time, release date, submit status, collector name and assigned period.
* Support real-time interface from Billing & Revenue Management to
  + maintain bill account profile
  + enquire bill account credit information
  + enquire bill summary and details
  + reprint and resend bill
  + incur associated charges of specific requests (e.g. paper bill reprint)
  + enquire billed / unbilled usage summary and details
  + enquire pool sharing related billing information
  + enquire payment history
  + enquire adjustment history
  + enquire deposit history
  + maintain split bill details
  + change bill cycle
  + maintain subscription grouping & pool sharing details under subscribed product offering (not involve switch of product offering)

# A/B Testing

As a Telco, I want the ability to test any changes in journey sequence on random sample set of users and verify if it results in desired outcome before publishing changes for everyone using that journey.

Challenge:

Today Telcos have no way to verify benefit from any changes in journey sequence before a wider roll out

Acceptance criteria:

* Telco should be able to make changes in journey and configure the change as Beta and enable A/B testing
* Allow A/B Testing support before wider roll out
* Support to define primary, secondary experience
* Ability to define the target segment (select fixed, demograpnics, product type, location, demographics, consumption behavior, NPS score) to whom secondary experience should be visible and count on targeted or random basis
* Ability to discard beta or reject it or convert to “A” and forward for necessary approvals.
* Even “Beta” journey experience can go through workflow and approval steps

# Workflows

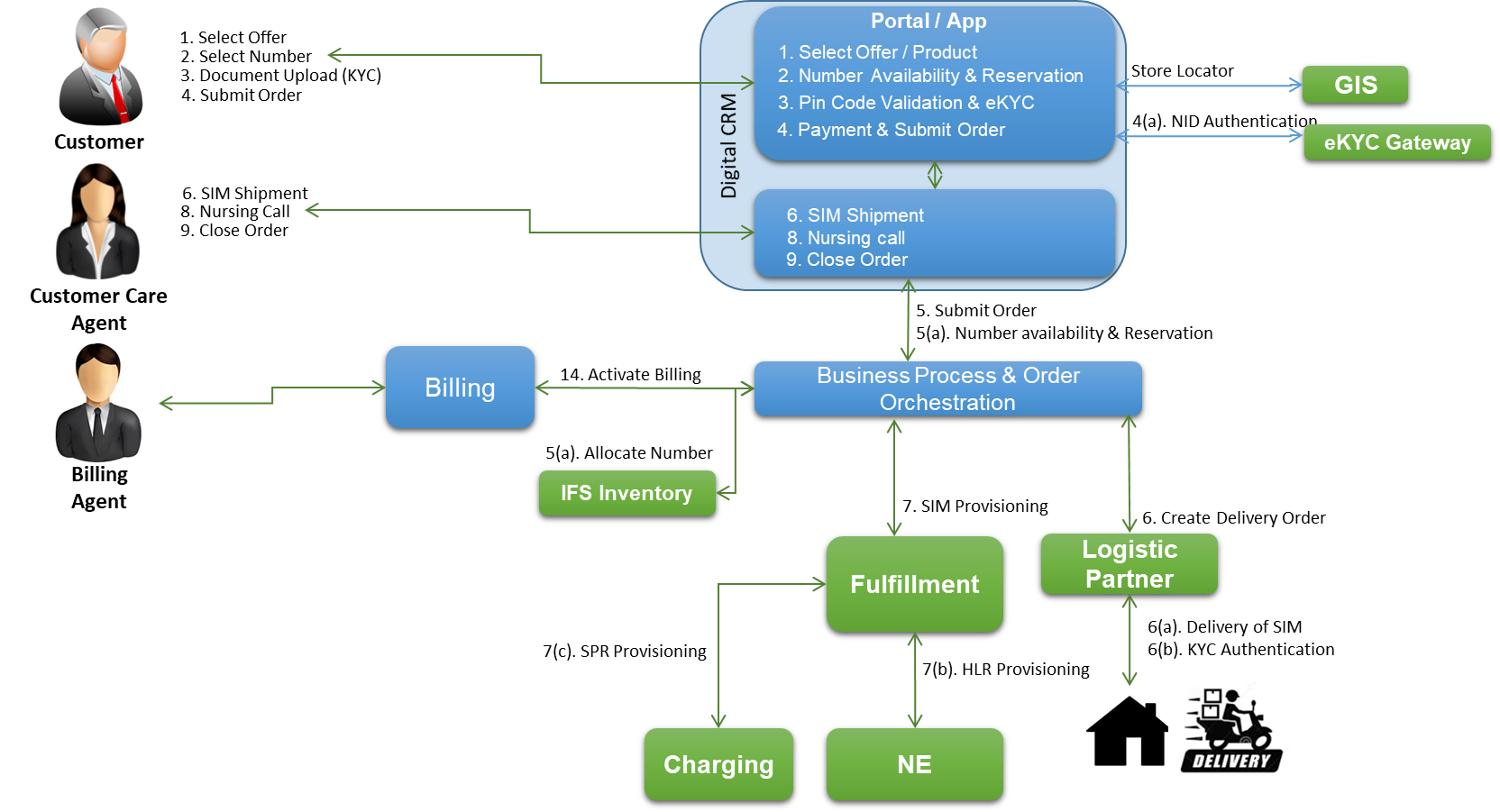
Out of the box workflows should be available for prepaid connection, postpaid connection, Device + Prepaid, Device + Postpaid, Device + Prepaid + Postpaid, Prepaid + Postpaid, Multiple prepaid, Multiple postpaid connections, Fixed line, Triple play, Quad play.

The journey sequence should be configurable by Telco and provided guided selling experience

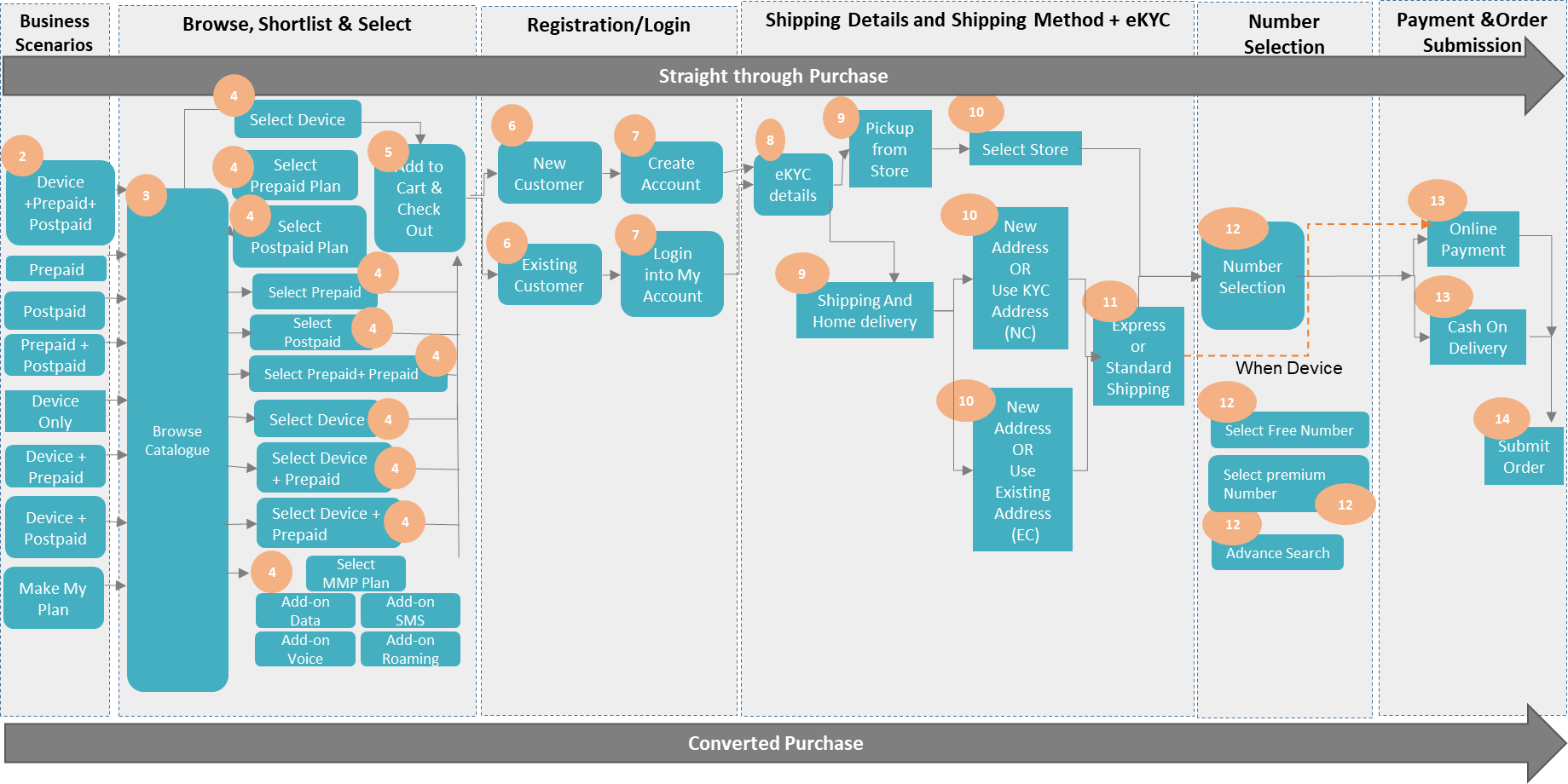
Standard on-boarding journeys as follows

* Mobility
  + Product selection
  + Enter personal details
  + Number selection
  + Plan selection & bundling (also option to customize plan)
  + Add-on selection (optional)
  + Delivery mode selection
  + Upload documents & Verification
  + Online Payment
  + Online ordering
  + Track order
  + Fulfilment & activation
  + Add on
* Prepaid to Postpaid
  + Choose number
  + Plan selection & bundling (also option to customize plan)
  + Add-on selection (optional)
  + Upload documents & Verification
  + Online Payment
  + Online ordering
  + Track order
* Mobile portability
  + Enter mobile number
  + Plan selection & bundling (also option to customize plan)
  + Add-on selection (optional)
  + Delivery mode selection
  + Upload documents & Verification
  + Online Payment
  + Online ordering
  + Track order
* Fixed line
  + Plan /product selection & bundling (optional add-ons)
  + Enter personal details
  + Feasibility check & field appointment (if needed)
  + Online ordering
  + Upload documents & Verification
  + Online payment
  + Installation date
  + Fulfilment & activation

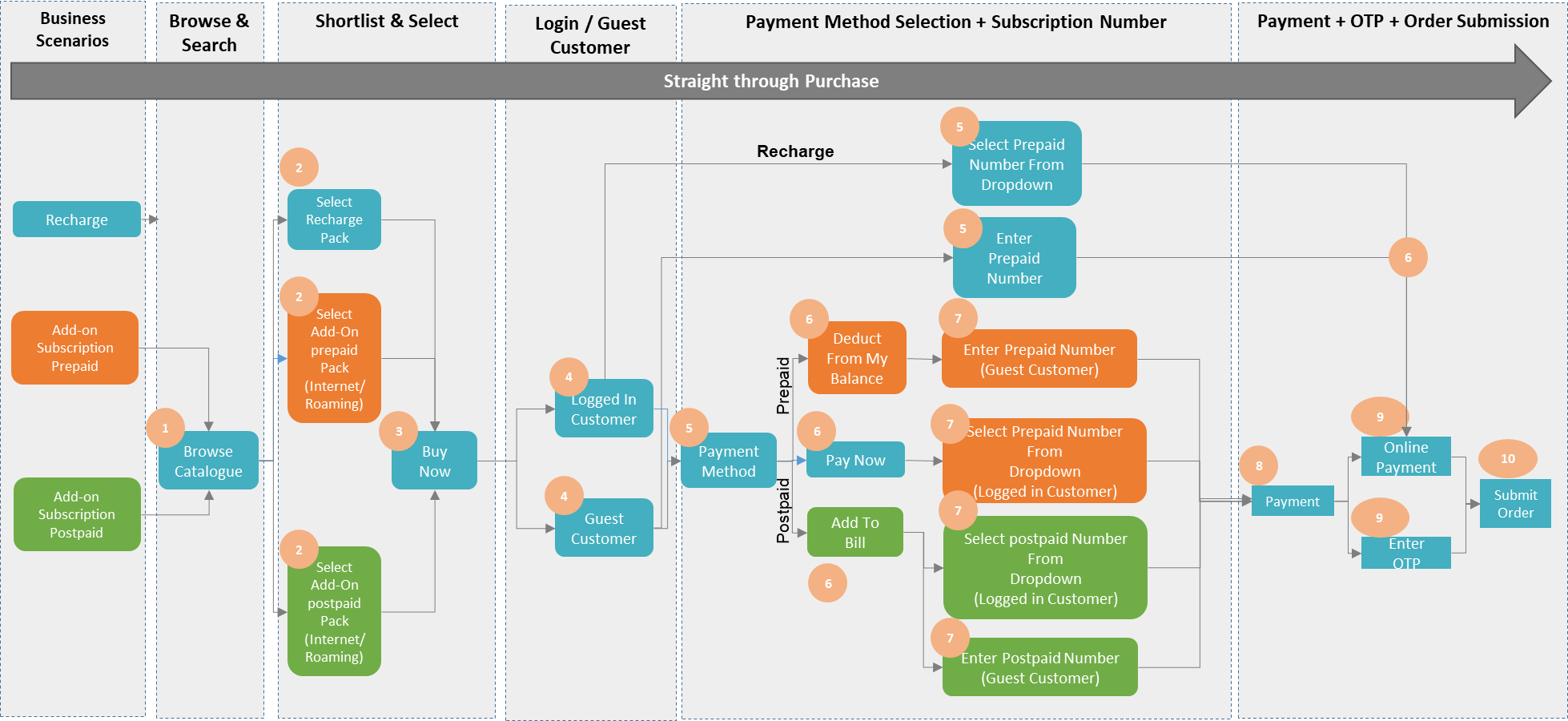
Sample Mobility workflow

****

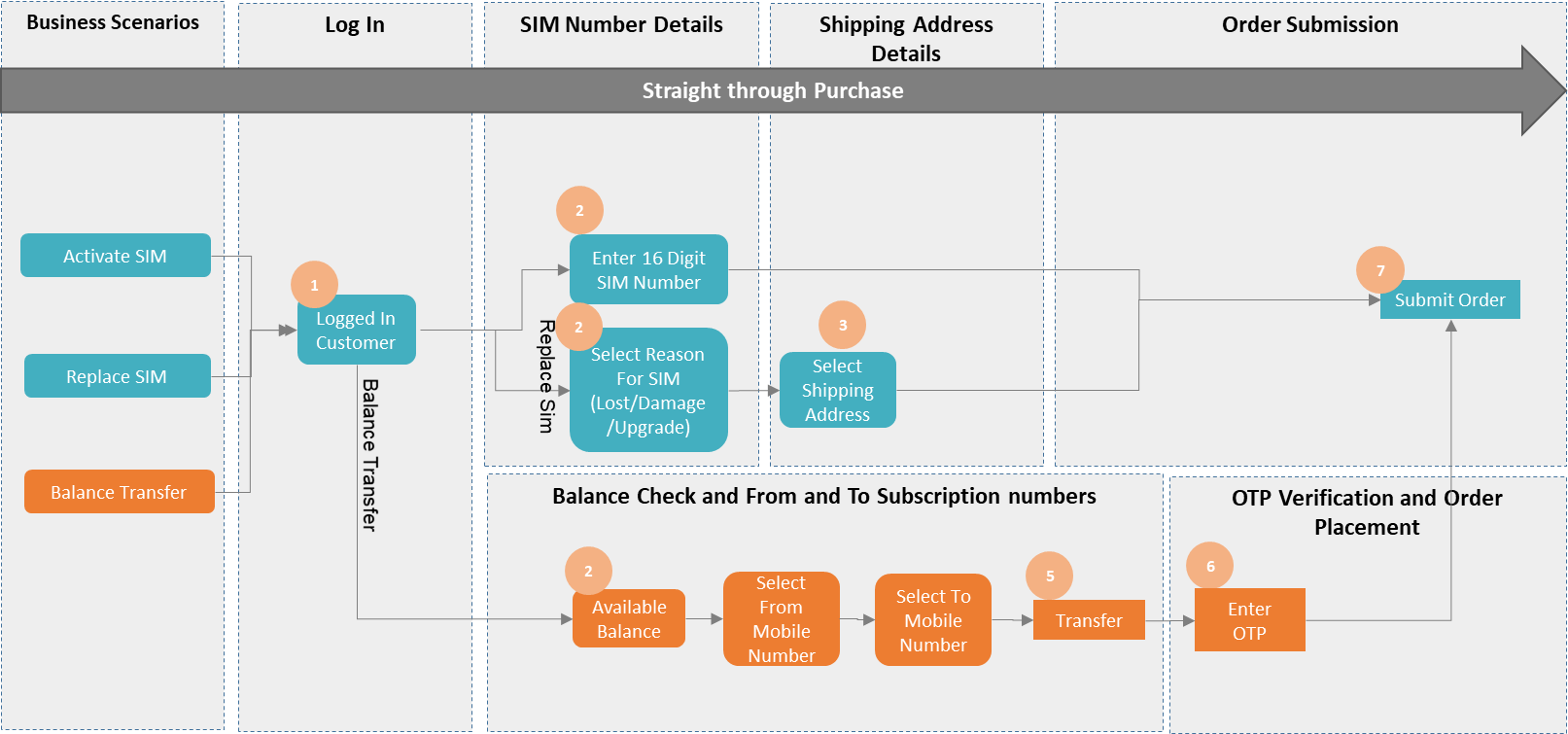
Retail – Device + Prepaid + Postpaid



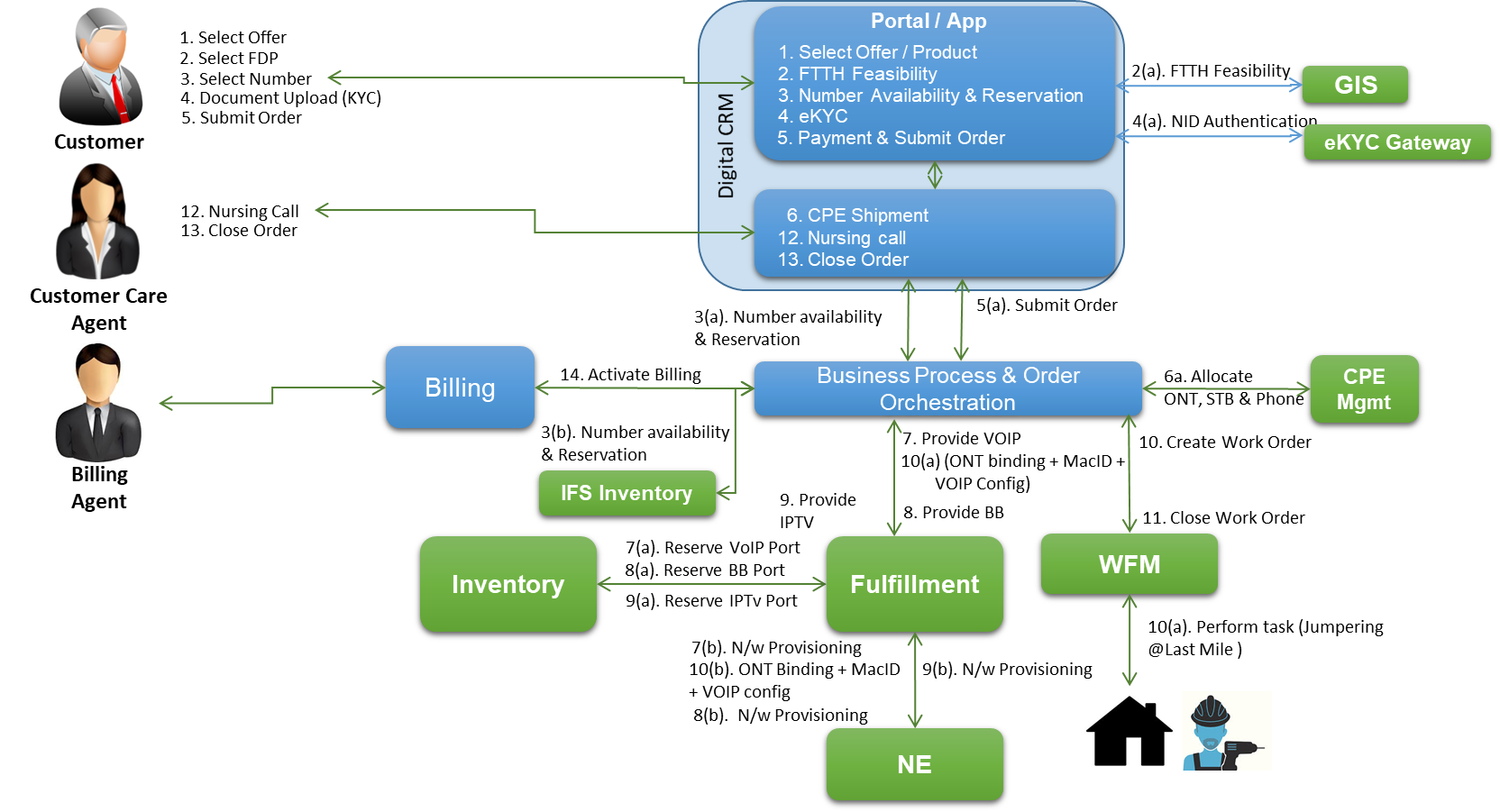
Retail – Add on + Recharge



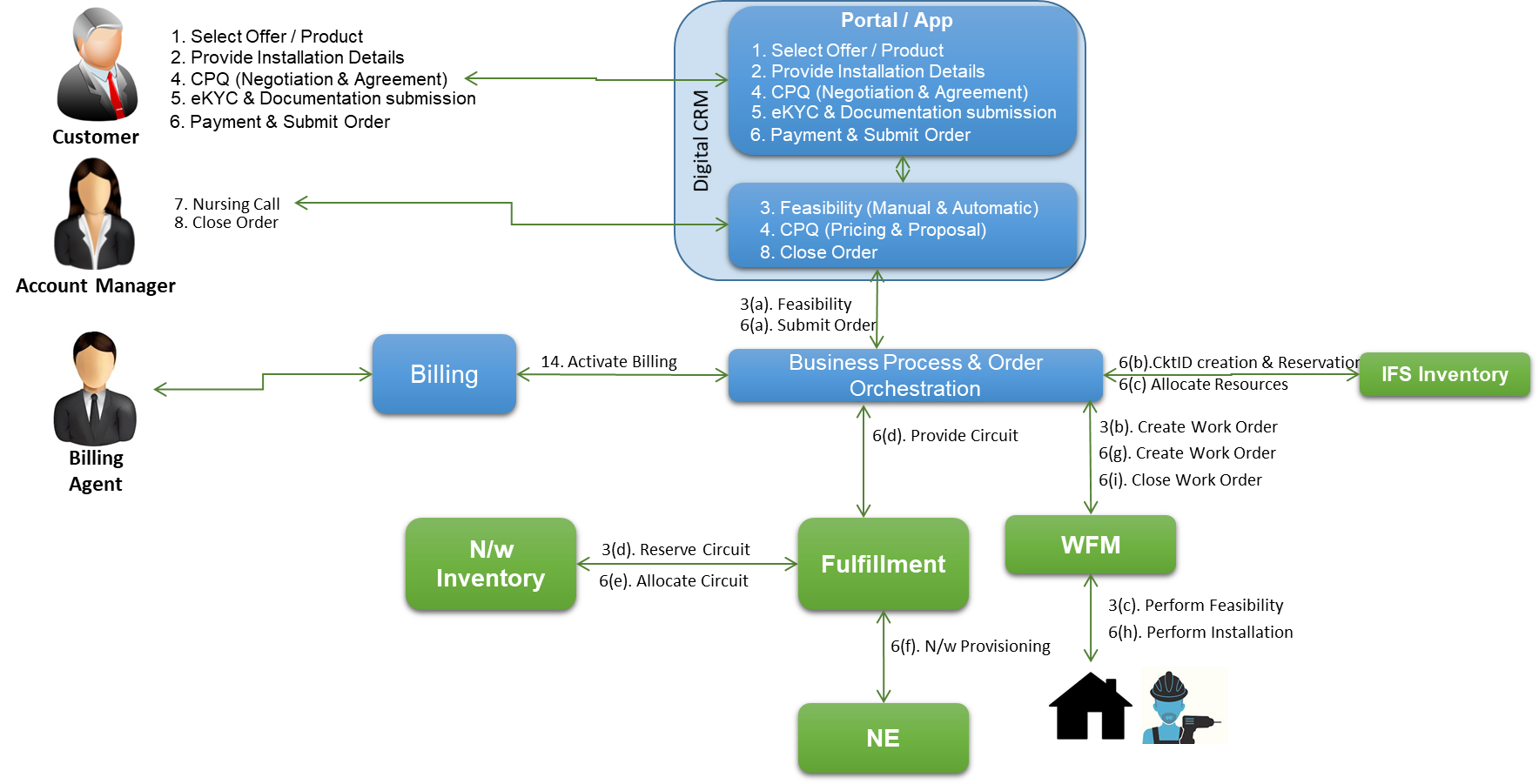
Mobility – Replace / Activate SIM / Balance Transfer



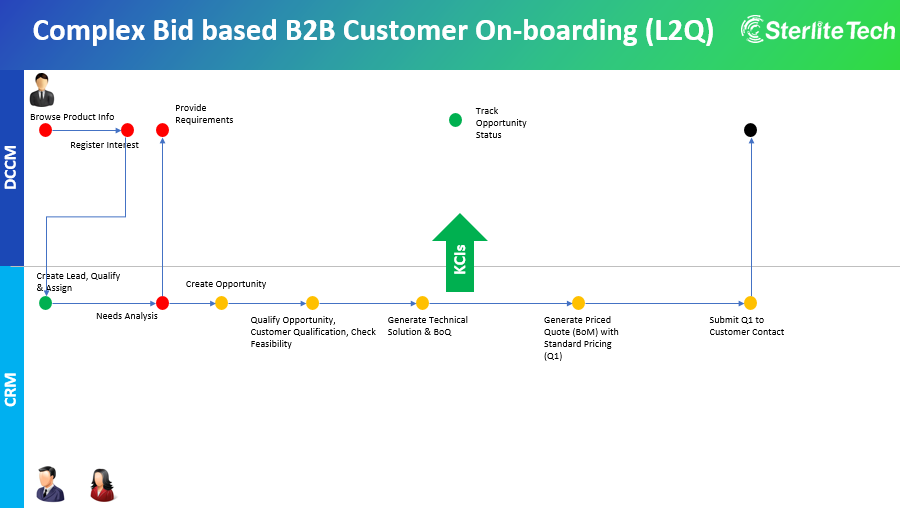
Sample Triple Play workflow

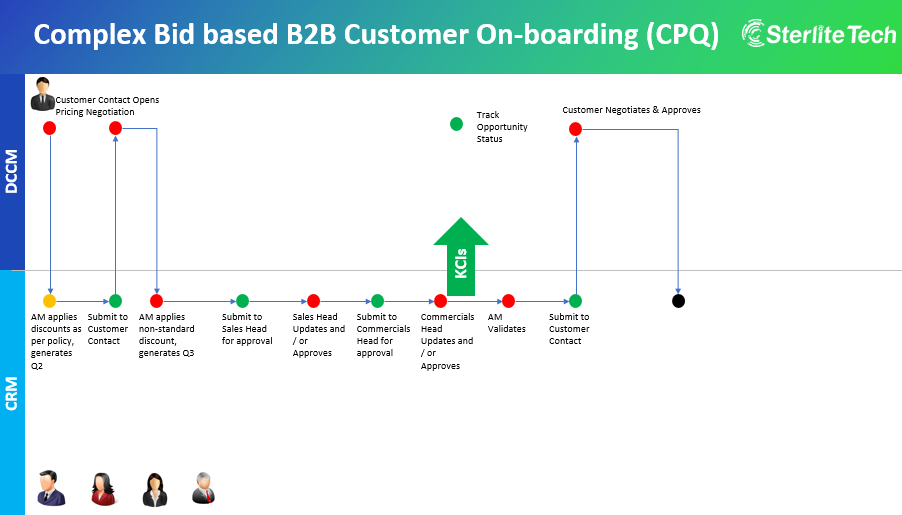


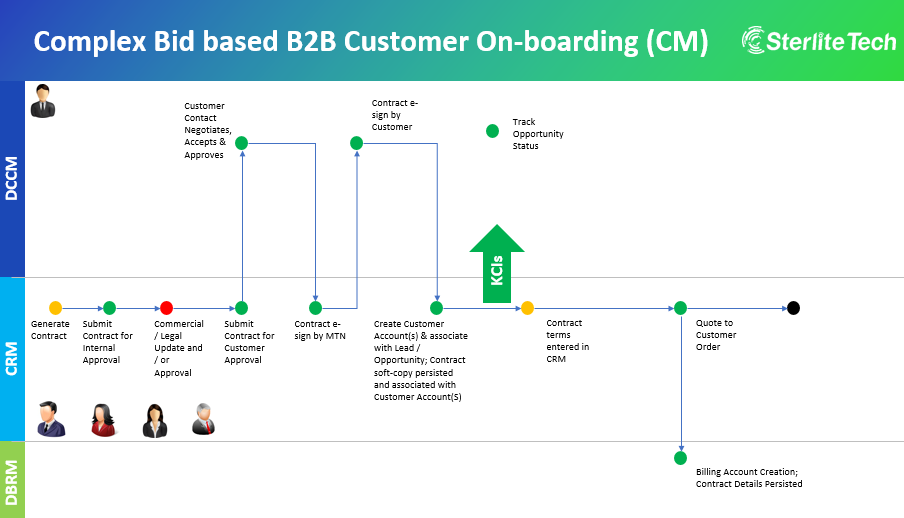
Sample Enterprise Leased line workflow

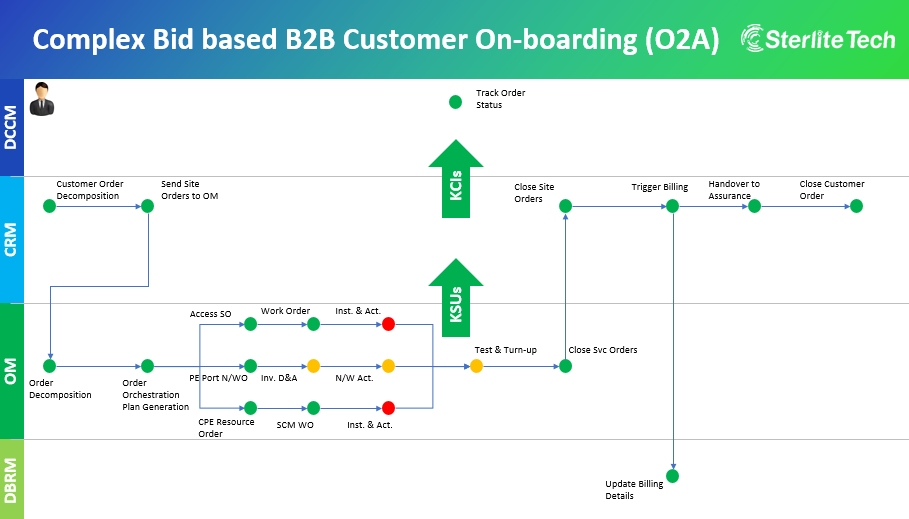


**Sample Enterprise journey – Complex**

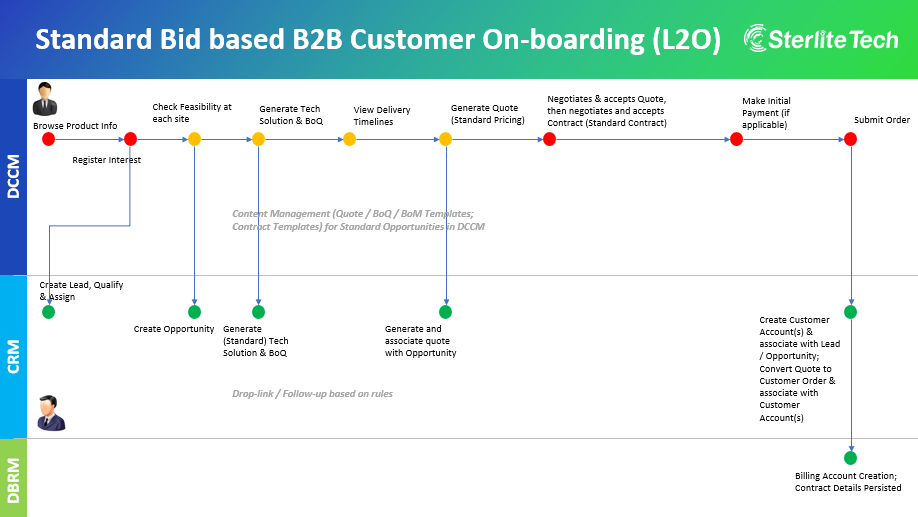








**Sample Enterprise journey – Standard**



# Integration points

Integration adaptors for below third party integration points

OM

WFM

BSS

PBSS

PCC

PLM

Payment

CRM

Analytics

KYC

Middleware

NMS

Provisioning

Reporting

Inventory

Loyalty

PoS

SocialMedia

IVR

Google Map

Fulfillment

Logistic Partner

CPE Mgmt

Google Analytics

Chatbot

KnowledgeMgmt

GIS

ATM integration adaptor

eCommerce integration adaptor

Facebook integration adaptor

Google account integration adaptor

Twitter integration adaptor

Whatsapp integration adaptor

Google assistant integration adaptor

SIRI integration adaptor

Amazon Echo integration adaptor

Ewallet integration adaptor

Email gateway integration adaptor

Inbound email integration adaptor

Resource Management

Stock Management

IVRS integration adaptor

Digital signature integration adaptor

Document Management system integration adaptor

SAP pricing integration adaptor

CPQ integration adaptor

PMS integration adaptor

QR code integration adaptor

Product catalogue integration adaptor

SMS gateway integration adaptor

1. Epic : Partnership model

## OTT Partnership

* + 1. Registration & activation

As a Partner, I want to register myself so that I can sell my products on the existing Online Platform

Acceptance Criteria:

1. Enable digital on boarding of OTT partners which will have functionality such as but not limited to

Validate partner address, business entity, credit check, doc verification

(Refer Feature: B2B Registration & activation for Acceptance criteria

2. Ability to create Partner profile (- Account Creation in all downstream systems)

3. Ability to have configurable approval workflow by Telco Admin

(Refer Feature: B2B Registration & activation for Acceptance criteria

4. Sales contract & commercial model (Refer Epic : Quote to contract)

* + 1. configure Product/Service

As a Partner, I want to add my product/Services to be sold on Telco platform

Acceptance Criteria:

1. OTT partner can add categories as well as OTT products /services to be sold on Telco platform
2. Bundling of Telco products with OTT services/ offerings or merge as offer (time limited, perpetual)
3. with one or more plans /product / services
4. Product rules for display of OTT bundle & offers to be administrative and configurable
5. OTT Products compatibility check for Product Bundling
6. Bulk upload feature should be there to upload products/services
7. Integration with Stock management system for monitoring stock & availability of SIM card
8. in pick up points
   * 1. Order preview, confirmation , Tracking & fulfillment

Acceptance Criteria:

1. Integration with OTT Systems for subscription on Order Fulfilment in DCCM and
2. Seamless activation of the OTT Service accordingly
3. Trigger notifications to Telco, customer, OTT partner related to OTT services
4. Order Orchestration for Order Fulfilment and subscription creation in different downstream CRM systems
5. Integration with Order Management system for below requirements
   1. Triggering external delivery services when someone chooses an option for SIM card delivery
   2. Tracking delivery progress for SIM card distribution
      1. Case Management

As a customer, I want to raise ticket for issues related to OTT services

Acceptance Criteria:

1. Case Management functionality for issues with Partner products and services
2. Queries related to OTT Services linkage with Telco Ticketing system and Integration of the same OTT System to resolve the issue
3. Tracking customer and regulatory complaints against each hosted digital service ( daily, weekly, and monthly)
   * 1. Unified portal

Unified portal where customers can purchase hosted digital products & services (ST-221)

## Partner White label Telco store / Marketplace

### Registration & activation

As a Partner, I want to register myself so that I can sell my products on the existing Online Platform

Acceptance Criteria:

1. Enable digital on boarding of OTT partners which will have functionality such as but not limited to validate partner address, business entity, credit check, doc verification

(Refer Feature: B2B Registration & activation for Acceptance criteria

1. Ability to create Partner profile(Account Creation in all downstream systems ) & Partner Account Activation
2. Ability to have configurable approval workflow by Telco Admin

(Refer Feature: B2B Registration & activation for Acceptance criteria

1. Ability to negotiate and create sales contract ( Refer Epic : Quote to contract)
2. Ability to showcase & finalise the Wholesale Pricelist, Payment & Order Terms via quote

(Refer Epic : Quote to contract)

### Configure Product/Service

As a Partner, I want to add my product/Services to be sold on Telco platform

Acceptance Criteria:

1. Ability to add categories & products for Telco to sell
2. Product bundling by Telco. Sold as individual product and /or as bundle. And it should be Configurable
3. Partner can request products /services to white label. Configurable approval workflow by Telco.
4. Products compatibility check for Product Bundling
5. Bulk upload feature should be there to upload products/services
6. Product rules for display of bundle & offers to be administrative and configurable
7. Integration with Stock management system for monitoring stock

### Order preview, confirmation , Tracking & fulfilment

Acceptance Criteria:

1. Integration with Partner Systems for subscription on Order Fulfilment in DCCM and activation of the Service accordingly
2. Order Orchestration for Order Fulfilment and subscription creation in different downstream CRM systems
3. Ability to track delivery progress
4. Trigger notifications related to partner services

### Self care

1. Define Commercial model with the reseller , T&C, returns & refund, commission, payment terms , case mgmt relation, SLA – Integration with PRM , View part will be on DCCM

### Case Management

As a customer, I want to raise ticket for issues related to OTT services

Acceptance Criteria:

1. Case Management functionality for issues with Partner products and services

### Partner portal

1. Ordering stock, stock management and sync, integration with stock movement - by location, partner, product /service, credit limits, Settlements, commissions, dispute mgmt., Returns & Refund mgmt.

### Unified portal

### Ability to White Label Products and configurable user screens based on UX process

Epic - Flexi journey & OOTB journeys (MVP 2)

As Telco Business Team, I want to have flexibility to change Journey sequence without any dependency on IT or vendor to roll out changes in real time.

**Differentiator**

Ability for business user to customize journey sequence, change look n feel, hide /display information or controls in real time

## OOTB journeys for Retail segment (Q2 FY20)

As Telco Team, I want to have OOTB journeys for all possible offerings for retail segments to adapt them my needs without having to create a journey from start to save time.

Acceptance criteria

1. OOTB journeys for retail segment - Device, Device + Prepaid, Device + Postpaid, Device(s) + Plan(s), Fixed line, Triple play, Quad play, IoT, bundled offerings, Add ons.
2. Ability to configure new journey from UI or customize /clone / update an OOTB journey
3. All capabilities of Flexi L2A framework should be available

Note – Refer sample workflows

## OOTB journeys for Enterprise segment (Q2 FY20)

As Telco Team, I want to have OOTB journeys for all possible offerings for Enterprise segment to adapt them my needs without having to create a journey from start to save time.

Acceptance criteria

1. OOTB journeys for Enterprise segment –Metro-E + DIA, SD WAN, SD WAN + DIA, IoT, Anti DDOS, IP VPN, BoD, Triple play, Quad play, IoT, bundled offerings, Add ons.
2. Ability to configure new journey from UI or customize /clone / update an OOTB journey
3. All capabilities of Flexi L2A framework should be available

Note – Refer sample workflows

Epic - Lead to Activation process for B2C customer (MVP 2)

## Feasibility check

As a customer, I would like to get a fixed line connection as early as possible at my home by doing most of the Telco process online

As a Telco, I want to digitize the process of feasibility check to deliver fixed line service to a site instead of doing it manually to improve the on-boarding experience and reduce lead to activation time.

Acceptance criteria

1. Ask customer to enter site address and run feasibility check. The check can be automated (by integrating with service /resource assurance system) or offline from backoffice and /or via site survey and is configurable by Telco. Or initiate site survey (with appointment booking) if feasibility check fails or not location is unserviceable or in case of offline process.
2. If the picked address does not have any requested service coverage, sales should be notified to follow up with customer
3. Allow automatic and manual resource reservation upon booking or order confirmation as desired by Telco. If the order is cancelled later or changed then appropriately release the reserved resource and appropriately cancel /modify the issued order details.
4. Resource management integration adaptor (Q1 FY20)
   1. Validation : Check resource availability

Based on product setting, assigned installation address and entered configuration, system shall perform network resource availability check, on both tangible and intangible resources.

* 1. Interface can be Synch or Asynch
  2. If resources are available, system shall assign and reserve resource(s) by calling Resource Management APIs with a grace period.

## Credit check & integration adaptor

As a Telco, I want to check credit limit of a customer based on their location, history, product / service / plan / contract selected to determine risk and take decisions like not go ahead, ask for advance deposit etc

Acceptance criteria

* Credit check validation by integration with credit check system.
* Real-time checking on customer's credit limit, outstanding amount & blacklist are required during proposal process.
* Ability to do this step offline in the process by backoffice administrator
* Define different workflows depending on the results returned during credit check e.g. risky or blacklisted customer must pay advance deposit for fixed line services

## Installation

As a customer, I want to have fixed line installed at a site without any hassles and start enjoying services

As a Telco, I want to fufill customer order of delivering product /service or bundle in timely, guided and best possible manner

Acceptance criteria

1. Installation of fixed line as per fixed schedule
2. Installation appointment booking (dates /slots proposed from WFM integration or manual. Proposed slot given. Flexibility to change slot). Ability to choose different time slots for locations and /or different service(s)
3. Installation confirmation and tracking. Integration with downstream systems.
4. Once installed and tested and confirmed by customer, the system has option to start fixed line services and initiate billing

## SIM or Service Activation (Q1 FY20) (MVP 2)

As a customer, I want to activate my SIM or services on my own

As a Telco, I want to activate the services for customer following fulfilment of the order so I can start billing the customer

Acceptance criteria

* As a user, I should be able to get app screen pop up once SIM card is inserted to phone (TKL 47)
* Integration
  + Integrate with downstream systems for SIM activation status

Epic – Chatbot and Community (MVP 2)

## Community forum Integration adaptor

As a Customer, I want to ask or read information about the problems, queries related to my telco services on a community forum

As a Telco, I want to leverage community platform to deflect support calls and auto-enrich knowledge base

Acceptance Criteria

1. Automatically enrich knowledge base across chatbot, community forum & contact center
2. System must have the capability to integrate to knowledge management platform to assist Customer Care, power self Service with Faqs etc
3. Sentiment analysis for churn prediction, pro-active retention & recommendations (feed data to Intellza / analytics)
4. Upsell - Cross sell using NBO. Next best action for pro-active and reactive resolution
5. 24\*7 first line of support with real time & live assistance
6. Multi-language support (OOTB)
7. Integrate with survey & feed into satisfaction survey
8. Integrate community forum with self care, knowledge management, mobile app, chatbot
9. Integrate with community platform to support below capabilities for customer & telco
   * Allow building community of Telco subscribers
   * As a user, I should be able to ask and answer online post on a problem that other user experienced (TKL 100)
   * As a user, I should be able to search topic related to my problem (TKL 101)
   * As an admin, I should be able to give recommendation from omnisearch (TKL 102)
   * As an admin, I should be able to give related topic from knowledge base and community (TKL 103)
   * As a user, I should be able to ask the community if I could not find any related topics on my problem (TKL 104)
   * As a user, I should be able to write the description of my problem (TKL 105)
   * As a user, I should be able to get recommendation of problems or questions that I could reply (TKL 106)
   * As a user, I should be able to reply the question from community (TKL 107)
   * As a user, I should be able to get notification if my question get a reply (TKL 108)
   * As a user, I shoul be able to read other's replies (TKL 109)
   * As a user, I should be able to give rating to the replies (TKL 110)
   * As a user, I should be able to view my data profile (TKL 111)
   * As a user, I should be able to view my badges (TKL 112)
   * As a user, I should be able to view my statistic (TKL 113)
   * As a user, I should be able to view other's profile (TKL 114)
   * As a user, I should be able to post my idea related to Telco (TKL 115)
   * As a user, I should be able to vote others' idea related to Telco (TKL 116)
   * As a user, I should be able to comment others' idea related to Telco (TKL 117)
   * As an admin, I should be able to respond the idea (TKL 118)
   * As a user, I should be able to get rewards from my contribution (TKL 119)
   * As a user, I should be able to join forum related to my interest (TKL 120)
   * As a user, I should be able to create my shareable profile consist of: Name, interest, activities, telco package summary, loyalty status (TKL 185)
   * As an admin, I should be able to block user if their behavior is not appropriate (TKL 197)
   * Allow community to be used to answer subscribers problem and give rewards for community members that are helping to solve other subscribers' problems (TKL 292)
   * Ability to manage the "best answer" for each question (TKL 293)
   * Allow subscribers to report spam messages (TKL 294)
   * Ability to manage the confidentiality of subscriber's private information (TKL 295)
   * Send notification to subscribers if there question is answered, upvoted, liked etc (TKL 300)
   * Ability to manage crowdsource information (TKL 307)
   * Ability to handle the platform when there are increasing and seasonal traffic (TKL 308)
   * Ability to manage crisis time when big incident happened to the main Digital Solution Platform. Such as in case service is down, users can still access Community solution to get service updates/information. (TKL 309)
10. Support gamification to raise subscribers engagement in the community (TKL 296)
11. Ability to integrate with analytics tools and segment subscribers based on something in common, for example interest, hobby, telco plan and products used etc (TKL 297)
12. Allow Telco to use subscribers segmentation data to create different subscribers communities (TKL 298)
13. Allow Telco to give community recommendations to subscribers based on the information that subscribers provided (TKL 299)
14. Allow Telco to push notifications on related 3rd party content or services to subscribers in the related community (TKL 301)
15. As a user, I should be able to see summary of my activities both for beyond telco and telco in MyActivity (TKL 187)
16. Allow subscribers to raise problems or ask questions through community forums and get response (TKL 232)
17. Provide solution to build a knowledge database using existing subscriber issues problems and incidents with appropriate resolution, which can be used in future for rectifying issues if similar issue arises with other subscribers (TKL 256)
18. Deliver personalized interests of subscriber using Community solution system
19. Ability to differentiate subscribers level, for example normal subscriber, VIP subscriber, Top Influencer subscriber, etc (TKL 303)
20. Community solution shall be able to connect to social media and manage it (TKL 304)
21. Interact with other sub components such as problem management, user management etc (TKL 305)
22. Support mobile interface and shall have capability to integrate with telco's main app. (TKL 306)

## Stitching Chatbot, Knowledge Management, Self Care Portal and Community Platform

As a Telco, I want to reduce dependency on my human-based call center with vision to have no human-based call center at a point of time will full online self service mechanism

As a Telco, I want to have an automatic capability to continuously enrich knowledge base across chatbot, community forum & contact center so that I can save the manual effort

Acceptance criteria

1. Integrate Chatbot, case management, community platform and knowledge management
2. Shortlisted faqs, resolutions not available in knowledge mgmt but identified through chatbot, case mgmt and community interactions
3. Applying necessary language filter / NLP to craft it as knowledge base article or FAQ or resolution with appropriate keyword suggestions
4. Review and approval of such KB article or faq, resolutions by designated Telco users with ability to accept, customize or reject it and approval cycle before publishing it to knowledge base under a certain (one or multiple) category / sub-category or type with appropriate keywords
5. Ability for customer to search on self care and view answers pulled from KM or other sources, without user having to visit knowledge mgmt or another URL
6. Queries or interactions not having already in KB are tagged and viewable /recorded for separate reference and review and select Telco users can be notified about the same at defined intervals.
7. Stitching chatbot, community forum, knowledge base for sharing & exchanging information
8. Filter out unwanted / unnecessary keywords using various techniques
9. Automatically enriching knowledge base with information from chatbot, community
10. Giving Telco a snapshot of what enrichment has been done automatically on periodic basis
11. Whether enrichment should be done automatically or after manual review (available to Telco) should be configurable by Telco along with the frequency of review or automatic updates

## Chatbot assistance for Fixed line

As a customer, I want an immediate human-like assistance for mobility on-boarding journeys, inquires and actions.

As a Telco, I want to reduce the calls landing on customer care for on-boarding journeys and related queries by providing automated virtual assistance that acts 24\*7 as first line of support.

Acceptance criteria

* DCCM is integrated with Chatbot for assistance
* Support on-boarding journeys & self service for fixed line, bundles, add ons
* All steps on web portal should be available for Telco to define the journey on Chatbot
* Telco should be able to define the flow for on-boarding journey per service /offering / customer type on their own
  + Configure chatbot for on-boarding journeys, self service, self care, Knowledgebase, FAQs
  + View conversation analysis & insights
  + Redirect customer to live agent or another function for complex operations
* Trigger survey in case of drop out to know drop out reason
* Trigger survey on completion of successful order and completion of a transaction
* Chatbot support is available on web portal, customer portal, partner portal, website and mobile app
* Chatbot integration adaptor that enables to easily integrate with any Chatbot solution. Seamless integration with AmplifyReach.
* Chatbot should support 7x24 automated customer service as first line customer support with predefined response, problem solving, and guidance for customer queries. It shall be capable to distribute to IVRS or Chatter if applicable.

## Chatbot assistance for Enterprises

As a customer, I want an immediate human-like assistance for Enterprise on-boarding and self care, inquires and actions.

As a Telco, I want to reduce the calls landing on customer care for Enterprise on-boarding journeys, self care and related queries by providing automated virtual assistance that acts 24\*7 as first line of support.

Acceptance criteria

* Ability to onboard customers across channels
* All types of enterprise on-boarding journeys should be supported
* All Enterprise self-care capabilities must be supported
* Ability to guide customer to select & order product/services
* Ability to generate quote for standard product selection
* Ability to guide Account sales team to create best offers
* Ability to provide cross sell/upsell recommendations based on analysis of past purchases and similar customers
* Ability to predict optimal price or discount levels for each deal based on analysis of deal characteristics and sales history
* Quote scoring - Predict the probability of winning the deal and give account manager recommendation to improve the win quote and increase the win probability
* Ability to copy contents from previous quotes/ contracts to create new ones
* Ability to generate proposals for standard products and services

## Chatbot assistance for Partners

## Gather customer feedback and /or trigger survey

* Gather feedback by asking relevant questions
* Trigger survey on customer satisfaction
* Configurable when to trigger the feedback questions or survey
* Trigger survey in case of drop out to know drop out reason
* Trigger survey on completion of successful order
* Trigger survey on successful completion of a transaction or left incomplete
* Gather customer feedback and /or trigger survey on customer satisfaction using chatbot

## Conversation analysis and insights

* Conversation analysis and insights
* Analysis of the conversation to provide users the insight of how well the bot is behaving
* Admins get real-time, actionable insights into bot usage from a dashboard or examine detailed reports for more information. You can track insights such as number of bot tasks executed, most popular channels, most active users, and more, which gives admins unparalleled visibility into worker and customer behavior.
* Option to integrate with 3rd party analytics solution
* Log all interactions, conversations and business process or actions triggered via chatbot. Notify user (if necessary) about conversation being recorded.
* Record every activity regarding the problem management (TKL 241)

## Voice assisted Chatbot integration adaptor(s)

* Voice assisted chatbot support
* Integration adaptors for Voice assisted Chatbot, Google assistant, Amazon Echo, Siri
* Applies to on-boarding, self care
* Sample use-cases below

|  |  |  |
| --- | --- | --- |
| **Use Case Name** | **Use Case Description** | **Flow** |
| Current Bill Amount | Customer can ask their current bill amount | Request -> Bill amount is fetched, read and shown to the user -> Prompt if bill details required or not -> If yes, read and show bill details / If no, promote MVA/MIA |
| Current Bill Details | Customer can ask details / summary about the current month’s bill | Request -> Fetch and read bill amount details -> Prompt if previous bill amount details are required -> If yes, read and show previous bill details / If no, promote MVA/MIA |
| Previous Bill Amount | Customer can ask previous bill amount and get a comparison with current bill amount | Request -> Fetch and read previous bill amount and compare it with current bill amount -> If further details are required, take user to MVA/MIA |
| Previous Bill Details | Customer can ask details / summary about previous month’s bill | Request -> Fetch and read previous bill details -> If further details required, take user to MVA/MIA |
| Bill Payment | Customers can initiate a payment for their current bill | Request -> If mobile devices, read and show bill amount and then take user to app/web with auto populated MSISDN and Bill Amount / If Google Home devices, trigger SMS with auto populated details |
| Bill Due Date | Customers can know when is their next bill due date | Request -> Fetch and read bill due date for the current cycle -> If due date <10 days and bill not paid, prompt for bill payment -> If yes, initiate bill payment journey / If no, promote MVA/MIA |
| Current Plan Details | Customers can get details about existing plan details | Request -> Fetch and read description about current plan and details around it -> Prompt if interested to know about other plans -> If yes, recommended plans journey / If no, promote MVA/MIA |
| Recommended Plans | Based on current usage, we can recommend an upgrade for existing postpaid customer | Request -> Fetch and recommended 2 higher plans than the current plan for the postpaid customer -> Prompt if interested to upgrade -> If yes, take to NEO upgrade journey |
| Current Data Balance | Customers can get current and available data balance in their account | Request -> Fetch, read and show used data balance and available data balance for the customer |
| Current Account Balance | Customers can get current account balance available | Request -> Fetch, read and show current account balance for the customer. If amount < 10, prompt for a recharge -> If yes, initiate recharge journey / If no, promote MVA/MIA |
| Make a Recharge | Customers can get a recharge by speaking their preferred recharge amount | Request an amount -> If mobile devices, take users to app/web with auto-populated MSISDN and Amount / If Google Home devices, trigger SMS with auto populated details |
| Last Recharge Details | Customers can get details of the last recharge amount done | Request -> Read and show last amount recharged by the user -> Prompt, if the user wants to do the same recharge -> If yes, continue recharge journey / If no, promote MVA/MIA |
| Recommended Offer | Customers can get details about the recommended offer for their number | Request -> Fetch, read and show the recommended offer from offer recommendation engine for the given MSISDN -> Prompt if the user wants to do a recharge -> If yes, continue recharge journey / If no, promote MVA/MIA |
| Roaming Pack | Customers can get best roaming packs based on their requirements | Request country of travel -> Request days of travel -> Recommend the most relevant roaming pack for the customer -> Prompt for purchase -> If No, promote MVA/MIA / If Yes, confirm whether to activate now or late -> If now -> activate and take to web/app / If later, confirm date and take to web/app thank you page. |
| Roaming General FAQ | Customers can ask general queries around roaming and its packs | Need to confirm with Google but we can make Google Assistant read textual info and take user to web in case of details |
| New Connection FAQ | Customers can ask queries around a new connection, plans etc. | Need to confirm with Google but we can make Google Assistant read textual info and take user to web in case of details |

## Chatter integration adaptor

Epic : Mobile App (MVP 2)

## Enterprise on-boarding journeys & self care, support via mobile app

## Reseller mobile app

## Marketplace Partner mobile app

## Customizable mobile app (Q1 FY20 ??)

As a customer, I want to select what items I view on dashboard and color / theme of app

As a Telco, I want to be able to customize the mobile app as per my needs

Acceptance criteria

* Customer can customize
  + What widgets they can view on dashboard after login
  + Color / Theme of app
* Telco can customize flash screen, theme, colors, logo, look n feel
* Telco has ability to make changes in run time without impacting customer experience
  + Change customer care number
  + Send notifications and pull back
  + Change colors, logo, look n feel
  + Make feasible changes in run time

**-------------------------------------------------------------------------------------------**

Acceptance criteria

* All on-boarding journeys and self care functionalities present in web portal for Retail, Enterprise, Partners should be presented in mobile – configurable
* UX / UI suitable for mobile devices. Intuitive UX.
* Responsive
* Mobile app
* Android & iOS SDK
* Lead to Activation, Full Self care, eCare
* Fast performance (page load + process < 2 seconds)
* Multi-lingual + Multi-currency support
* Troubleshooting
* Consumption analytics
* Start from where one left
* Push notification support
* Biometric sign-in - Finger print, Voice
* Chat support
* App personalization
* Ability to upgrade app version
* USSD information
* Customizable flash screen, theme, colors, logo, look n feel
* Support to execute survey

Epic: B2B digital self-care (MVP 2)

* + Self-service request shall include, but not limited to,
    - New line subscription
    - Add additional Services and/or Products
    - Change Configuration
    - Change of Services and/or Products
    - Contract Renewal
    - VAS Add-on & Removal
    - Bandwidth on Demand
    - Service Termination
    - Profile information

## Feature: Service Termination

As an enterprise customer, I want to terminate my service

**Acceptance criteria**

For Service Termination, the system shall collect and re-confirm all the required service details.

System shall acknowledge customers the termination will be properly followed up, and pass also to designate users, e.g. sales, per pre-defined workflow.

## Feature: Bills & Payments

As an Enterprise customer, I want to view my Bills

**Acceptance criteria:**

1. Self-service Menu should be having one of the option of Bills & payments
2. Total bills with split of unpaid, upcoming, paid should be displayed in tabular & graphical format
3. Display the billing account according to Customer Account Hierarchy, All specific Customers associated billing accounts should also be listed out.
4. Reprint bill
   1. Capability to reprint / resend bill by specific account and bill date, etc. bill or resend request by Customer via the portal. Resent paper bill in hardcopy needs to have extra charge.
5. Ebill
   1. Ebill support (with inputs as email address) should be there.
   2. Capable to download eBill image or selected fields can allow to download in predefined format.
6. Bills (Tabular Format – By Default last 10 bills)
   1. Invoice Number
   2. Account Number
   3. Invoice Start – End Date
   4. Contract ID
   5. Department/Cost centre Name
   6. Due Date
   7. Actions (Make Payment, Download Bill, Raise a Ticket)
   8. Product
   9. Charge Type (Subcription, Standard)
7. Bills (Graph – By Default last 12 months)
   1. Total Amount vs. months
   2. Search by year
   3. Search By Cost Centre/Department
   4. Search By Products
8. Billing Preferences
   1. Standing Instruction – Milestone based payments linked to the account (Contract check)

As an Enterprise customer, I want to make payments against my Bills.

**Acceptance criteria:**

1. Provide online payment function that is PCI-Compliance for Customer to pay instantly for a specific bill
2. Different payment modes should be supported such as

Card – Master , Visa , credit , debit

Ewallets

Netbanking

1. Mask payment card information – configurable
2. Make Payment (Partial/Full)
   1. List of Products with outstanding amount with checkbox
   2. Total Bill
   3. Payment Method (Net banking, Credit Card, Debit Card)
   4. Download Payment Receipt from Success Page

As an Enterprise customer, I want to get reminders for my payments

**Acceptance criteria:**

1. Payment reminder
   1. The proposed solution shall have payment reminder, after X days (configurable) of bill date or Y days (configurable) before due date, will be sent to customer via Inbox/alert and dashboard page on Customer Portal web version, Push notification for App version.

As an Enterprise customer, I want to raise Enquiry ticket for Billing & payment related queries

**Acceptance criteria:**

1. Provide sufficient bill related enquiry function to support customer’s query. Billing account profile with bill and payment method, invoice history, bill image shall also be provided.
2. User can access own billing account profiles or if user with designated role can enquire or update corresponding account(s) profile under the customer company organisation hierarchy.
3. Bill enquiry information should include but not limited to enquiry account status, bill date, bill language, bill media, payment method and bill address.
4. Only limited billing account profile information is allowed to be updated by customer and validation checking is necessary
5. Allow to display the split ratio or cap amounts for OTC/MRC/group of services charges, and to different billing accounts, but not limited to same customer account
6. Display the pool sharing and/or group set up of involved services & billing accounts (but not limited to same customer account), for the relevant product offering subscribed.
7. Alert user /customer when request for transfer of ownership is raised & fulfilled and split billing is disconnected
8. provide Rebate Fund Enquiry function to inquiry the outstanding balance and expiry date
9. provide deposit history, payment history and adjustment history enquiry function
10. Provide dunning history enquiry function of selected account during specific period. The transaction shall include, but not limited to, dunning action, description, action date and time, release date, submit status, collector name and assigned period.
11. Support real-time interface from Billing & Revenue Management to
    1. Display bill account profile
    2. Enquire bill account credit information
    3. Enquire bill summary and details
    4. Reprint and resend bill
    5. Display associated charges of specific requests (e.g. paper bill reprint)
    6. Enquire billed / unbilled usage summary and details
    7. Enquire pool sharing related billing information
    8. Enquire payment history
    9. Enquire adjustment history
    10. Enquire deposit history
    11. Display split bill details
    12. Change bill cycle
    13. Display subscription grouping & pool sharing details under subscribed product offering (not involve switch of product offering)
12. Ability to update the payment method of their account, such as autopay by credit card/bank, etc.
13. Support to enquire the rebate fund balance with expiry date
14. Bill and invoice enquiry function shall be provided, such as (but not limited to)
    1. current outstanding balance
    2. invoice summary
    3. bills for past months
       1. number of months will be configurable
15. Payment history
    1. Payment history for x months (configurable for number of months) are required for customer enquiry.
16. Usage enquiry
    1. Billed and unbilled usage enquiry (e.g. IoT related service) are required in summary view or detail view.

## Feature: Case Management.

As an Enterprise customer, I want to create case for different customer service functions.

Provide the following functions for customer service and improvement.  
 Case creation, enquiry, update   
 Chatter and Chatbot  
 Fill in Survey or Feedback   
 Sales Lead input

**Acceptance Criteria**

1. Ability to create a case via Customer Portal.
2. Customer in designated role can fill in necessary information and upload supplement attachment (if any) to create a case.
3. Customer should be able to enquire the case information, status and progress for x months (configurable). Summary view can display in Dashboard and allow to drill down in details.
4. Display tickets & details generated by user or auto-generated resulting from issue in system or SLA
5. Case shall be capable to update, add supplementary information, cancel, and close by designated user.
6. Super admin can define different case categories: Bills, payment, plan information etc.
7. Category should be configurable entity, it can be add / remove at any point of time and come in to effect.
8. integrate with CRM to create ticket in CRM as well if required
9. Ticket creation should be having below fields ( but not limited to)
10. Issue type (dropdown)
11. Priority (dropdown)
12. Site address (type address)
13. Department (dropdown)
14. Product (dropdown)
15. Issue (text box to describe issue)
16. Upload supplementary information
17. Action – Submit, Reset, Cancel

As an Enterprise customer, I want to track my tickets.

**Acceptance Criteria**

1. Customer can view all the tickets
2. Should be adhering the hierarchy. i.e. customer can view all the tickets raised by self as well as it’s own department
3. No of tickets to be shown on frontend should be configurable
4. Pagination support should be there
5. Click or hover will deep dive in ticket details
6. Ticket status should be clearly mentioned
7. System should have parsing logic if required to have customer understandable ticket status.
8. Some of the sample fields which require to be displayed are :

Ticket No. , Raised by (click to view contact details), creation date, Severity,

Issue type, Description, Status, Resolution remarks (if closed)

1. As and when ticket status update will come, System should notify the customer basis of customer preference ( Email/SMS)
2. Architecture should configurable to define on which all status updates notification should be sent
3. Case summary would be having below details ( but not limited to)
   1. Ticket id
   2. Product
   3. Raised by (click to view contact details)
   4. Site
   5. Department
   6. Date when raised
   7. Priority / Severity
   8. Issue type
   9. Issue details
   10. Status
   11. Resolution remarks (if closed)
   12. Other remarks

As an Enterprise customer, I want chatter support to raise a ticket

**Acceptance Criteria**

1. System should provide Chatter function for customer to seek for assistance from vendor
2. System should integrate with Chatbot for supporting 7x24 automated customer services as first line customer support with predefined response, problem solving, and guidance for customer queries.
3. It shall be capable to distribute to IVRS or Chatter if applicable.

As a sales representative of vendor, I want to capture Survey/feedback from customer

**Acceptance Criteria**

1. System should integrate with Customer Satisfaction Management for showing any pending feedback or survey in dashboard page as reminder.
2. System should allow clicking the dashboard and then redirecting to the form in Customer Satisfaction Management to fill in instantly.

**Integration:**

1. Above covers tickets from DCCM as well all third party systems such as CRM, WOM, Billing / BRM, SA(Service Assurance & Performance Management) for which integration is needed with these systems to get ticket information
2. DCCM to expose below API

- Create ticket

- Update status /ticket

1. Also differentiate with Service Ticket view & Resource Ticket view

As an Enterprise customer, I want to raise Enquiry tickets

**Acceptance Criteria**

1. System shall be able to tell the service and subscription status.
2. Product & service Enquiry: For that system can extract all information (but not limited to) about subscribed Product Offerings, Service line, Product Profiles, Equipment, regardless if they are pending active/active/inactive.
3. Customer can enquire available services based on certain automated filtering, such as Inputted service keywords, customer segment, industry and location, recommendation, etc.
4. For Order related Enquiries , system should have ability to display related Order summary information, such as order status, order summary, appointment date and time, etc.
5. System should provide order history enquiry function.

All order information like order id, raised by, department, date issued, and status. This along with date /time filter

1. Bill Enquiry: System should provide sufficient bill related enquiry function to support customer’s query. Billing account profile with bill and payment method, invoice history, bill image shall also be provided.
2. Provide reprint / resend bill by specific account and bill date, etc.
3. Usage Enquiry: Provide inquiry function of Billed, Unbilled Charges, Usage pooled sharing summary
4. Provide Rebate Fund Enquiry function to inquiry the outstanding balance and expiry date.
5. Provide deposit history, payment history and adjustment history enquiry function
6. Provide dunning history enquiry function of selected account during specific period. The transaction shall include, but not limited to, dunning action, description, action date and time, release date, submit status, collector name and assigned period.
7. Information fetched for enquiry shall include status, effective date, termination date, SLA plan, offer details, contracts, agreement, related orders, etc.
8. Capable to extract predefined fields/information and not limited to, which allows the authorised user, to select and export data.
9. Authorised user enquiry functions shall include but not limited to the following items:

a) Customer profile - Customer number, customer Identification (UEN), supporting documents (for particular role), etc.

b) Contact profile - contact person, department, primary contact, fax, email, etc.

c) Service/subscription profile - subscribed services, products and equipment under the customer organisation, depends on assigned group.

1. Contract Enquiry: view the contracts list and its details e.g. pricing, discount and SLA.
2. download contract function should be provided

## Feature: Interaction history

As an Enterprise customer, I want to view my communication history

As an Customer support agent, I want to view customer interaction history

**Acceptance Criteria**

1. Customer can choose to view communication history against an order
2. All email and sms notifications will be visible
3. Sent date, sent time, subject. (of email), text (email / sms) would be visible
4. System should have configuration to view no. of entry on frontend
5. Pagination should be there in case of larger no. of entries
6. System should keep track of all interaction communications including, but not limited to, email, IVR, chatter, chat bot, phone call, complaint, case creation, etc.,
7. System should also capture all business interaction such as quotation, agreement, order creation, customer inquiry, etc.
8. System should prepare APIs which will integrate with other modules or external system to capture Interaction log.
9. The information such as interaction date, time, participants, description, interaction type, status, etc. should be captured
10. Provide searching function to search interaction log by (but not limited to) customer, type, date period, etc.
11. Ability to display interaction log within specific date range.
12. Last 10 (configurable in product by Telco) interactions with Call centre, web, and mobile app across all systems are visible upfront with option to view more.

Name

Interaction Type (Product Inquiry, Service, Ticket, Orders, Quote, Search etc.)

Current Status

DateTime Raised

DateTime Resolved

Interaction Description

1. System should have option to view all interactions.
2. System should have Filter by created /resolved date & range, type, status, raised by
3. System should have capability of Text search from interaction description
4. Capable to easy retrieval of customer interactions and transactions for a defined range of date/time for a specific account. Sales can know all the transaction, case, enquiry, compliment/complaint for this customer before they meet up
5. Provide real-time APIs to all required modules or external systems to

o create/search & enquire/update follow-ups task

o create interaction log

o search & enquire/update interaction log (not to Customer Portal)

## Feature: Dashboards & reports

**Common Acceptance Criteria**

1. Dashboard should be consist of different widgets
2. Dashboard should be customizable by privileged customer .i.e Widgets can be added / removed from the available list
3. Widget should in tabular format / Graphical format
4. Show links - View customer details, View account details. Click through will take to respective sections in MyAccount
5. Provide Partner View Dashboards in landing page with the available information provided by different modules. The Dashboard shall also be configurable.
6. Provide Customer Dashboard View as landing page after user login with at a glance view for quick vision of customer activities, such as (but not limited to) all reminders, quotation/proposal, order and status, query cases , network status and fault alert if any.
7. The data shown in dashboard should be illustrated with choices of common presentation format, such as summary table views and graphical charts, which would be allowed also to be drilled into next level of details as needed.
8. Users can slice and dice the reports according to their requirements

* Transaction reports based on subscriber and cost center based usage
* Drill-down analysis of the bill from top of the hierarchy to the last person, and also a view of itemized details
* Comparative analysis based on cost centers, subscribers, services
* Trend analysis based on multiple users, cost centers, usage and subscribers
* Spend vs. budget: When the corporate admin allocates budgets, analytics and reports based on spend vs. budget and ad hoc analysis
* Audit reports based on users, roles, permissions, cost centers etc.
* Outstanding payments – bucket wise ( 0-30 days,31 to 60 days)

As an Enterprise Customer, I want to view latest subscription detail on my Dashboard

**Acceptance Criteria**

1. Below Subscription details should be displayed
   1. Product name, Service name, Service status
   2. Show latest subscription details i.e. last <3> subscriptions. <3> is configurable by Telco.
   3. If more, show 'View all' link which will take to order history page.
2. display subscribed network services details with map view.
3. Services & orders by department & LoB
4. Spent by services, products, cost centers, department, LoB
5. Outstanding payments
   1. Total
   2. By cost centre

As an Enterprise Customer, I want to view latest Order detail on my Dashboard

**Acceptance Criteria**

1. Below Orders details should be displayed

Total order count

Orders in progress

Orders in last 6 months

1. Provide a dashboard view with quick vision for customer to enquire the pending/outstanding orders status and progress, which would be drilled into order details to view and monitoring the progress as needed.

As an Enterprise Customer, I want to view latest Ticket detail on my Dashboard

**Acceptance Criteria**

1. Ticket status summary (open, closed, in progress)
2. Display latest <5> tickets on dashboard with all details

As an Enterprise Customer, I want to view latest interaction detail on my Dashboard

**Acceptance Criteria**

1. All reminders, quotation/proposal, order and status, query cases , network status and fault alert if any

## Feature: Usage tracking

## Feature: My Services

As an Enterprise customer, I want to view my subscription details.

**Acceptance Criteria:**

1. Customer to view Subscription details with basic information such as :  
   - Product name, Service name, Service status
2. System should have flexibility to configure no. of subscription view.
3. According to configuration, Show latest details i.e. last <3> subscriptions. If more, show 'View all' link which will expand the view
4. Tree view is recommended for each subscription.
5. Integration with CRM to fetch all subscription details and display relevant status accordingly.

## Feature: My Profile

As an Enterprise customer, I want to view my profile & account details

**Acceptance Criteria:**

1. Can view basic profile details
2. Department account details - Department name, contact person, contact details (email, phone)
3. All orders in department <x> with above details
4. All subscriptions in department <x> with above details
5. Portal Users under same group(node) within an organisation structure hierarchy can access the profiles under their corresponding group. Company administrator is capable to administer and assign portal users in groups.
6. Provide Password change/reset function. Password should comply with Telco Password policy.

As an Enterprise customer, I want to update my profile details

**Acceptance Criteria:**

1. Allow to maintain Contact Profile by authorised user. i.e. add, update and remove of contact information, for different contact purposes, such as (but not limiting to) authorise Contact, billing contact, fault contact, maintenance contact, etc. of associated customer, billing accounts & services.
2. SMS/email notification shall be sent to customer upon profile information is being updated

## Feature: Quote history

As a Vendor, I want to view Quote History

**Acceptance Criteria**

1. The product should allow Telco to configure
   1. if the quote handling should be online or offline (default online) and what fields /info to display and information to be gathered from customer
   2. Approval workflow based on thresholds per service /product per location /country /region
   3. Telco can set approval hierarchy for quote negotiation
2. DCCM can fetch quote from another system and also give ability for telco user to upload quote manually
3. Customer Self service
   1. View latest quote against a request
   2. View all previous quotes against a request
   3. Map these to request info like request id, product id, service, product name
   4. Display status of quote
   5. Ability to accept or reject quote (with reason for rejection) (This may involve finance approvals in case the customer requires additional discounts)
   6. Customer can view quote and T&C and accept it or reject with comments and pass it back to telco.
   7. If the % discount seeked by customer is higher than what the Account Manager/Telco representative can approve, then it goes through approval workflow at telco end.
   8. Acceptance involves accepting with T&C and with e-signature
4. Notify customer & Telco user(s) over email and sms
5. Customer & Telco user can view all comments and previous quotes including final one online

## Feature: Contract history

As a Vendor, I want to view History of Contract

**Acceptance Criteria**

1. The product should allow Telco to configure
   * if the contract handling should be online or offline (default online) and what fields /info to display and information to be gathered from customer
   * Approval workflow based on thresholds per service /product per location /country /region
   * Telco can set approval hierarchy & workflow for quote negotiation
2. DCCM can fetch contract from another system and also give ability for telco user to upload /override proposal manually
3. Customer Self service
   * Display list of contracts on customer portal against order with product /service / site / LoB / department details and also master service agreement
   * View latest contract
   * View all previous contracts
4. Map these to request info like Contract id, Customer spoc (name, email, phone), Service provider spoc (name, email, phone), Contract (latest) (view previous contracts), Status / Take action
5. Actions – Approve (upload signed contract), Reject (Reason for rejection, upload edited contract or comments file in pdf, word, txt, csv, xls, image)
6. Customer can view contract and T&C and accept it or reject with comments and pass it back to telco.
7. Contract approval can go through multiple stages at customer & telco end.
8. Notify customer & Telco user(s) over email and sms
9. Customer & Telco user can view all comments and previous contracts including final one online

## Feature: Add-ons

## Feature: Order history

## Feature: Disconnection

## Feature: User Management.

As an admin, I want to manage users of my company

**Acceptance Criteria**

1. Support at least 4 types of users: new registered user, prospect customer, existing customer and virtual partners' customer. User access on different functions is determined by access role assigned.
2. Have user account privilege control. Every user account should be assigned with specified role for access control.
3. Role can be changed based on different situations. Normally, it can be general role or administrator role.
4. System should have flexibility to configure and create new role for functions access.
5. Support user account privilege control. Every user account shall be assigned with specific role(s), which will govern the associated data and functional access privilege control in Portal, as it is defined in role privilege settings.
6. Privilege control should be in function level and also data access level as well.
7. Flexibility to configure and create new role.
8. Different access roles can have different functions. Audit trail will log down creation and update of user account and roles.
9. Create users with different privileges basis on departments , segments , geo location
10. Create User (Super Admin will create user)
11. First Name, Last Name
12. Personal Details :Email, Mobile Number
13. Department
14. Role
15. Reporting Head
16. User Status (Active,Inactive)
17. Access Permission : Check boxes with Admin : create,view,edit,delete , Password : create,view,edit,delete, Configurations: Email, SMS,audit settings, Module Registration etc.

* Edit User (Super Admin will edit users)
  + Module Template
  + Password Policy
  + Audit Settings
  + Configurations

1. User in administrator role shall allow maintaining the organisation hierarchy, which can add/modify the hierarchy and grouping.
2. User in administrator role shall allow adding, modifying, and removing users from/to the organisation hierarchy. Different roles can be assigned to users.
3. User in administrator role shall allow to configure the target recipient of performance alert notification
4. Show the corresponding partner company logo, as configured, when white labelling partners' customers log on to Customer Portal.
5. Flexibility to display different UI layout for different customer type. User can see accessible menu and functions eligible under his/her access role only.

## Feature: Hierarchy / Org creation

As a vendor Admin, I want to build organization hierarchy

As a Customer Admin, I want to build my organization hierarchy

**Acceptance Criteria:**

1. Company administrator is capable to administer and assign portal users in groups.
2. User in administrator role shall allow maintaining the organisation hierarchy, which can add/modify the hierarchy and grouping.
3. User in administrator role shall allow adding, modifying, and removing users from/to the organisation hierarchy. Different roles can be assigned to users.
4. User in administrator role shall allow to configure the target recipient of performance alert notification
5. Allow to setup the organisation structure hierarchy to create different hierarchy type. And configure who can view what information with empowerment.
6. Support hierarchical or tree structure to define any subsidiary or mother company
7. Support up to level N hierarchy (i.e. Parent company -> subsidiary -> subsidiary -> ...)
8. Ability to capture and display the relation between one customer and other customers.
9. Customer-side organizations are composed of B2B units which are in a tree structure with one root node. A B2B unit may represent a department, sub-company or division within an organization.
10. Can create B2BUnit for department/ division within an organization
11. System should support managing the Sales Organisation Information of all Sales Channels in Telco, such as :
    1. Hierarchical structure of different Sales teams
    2. Individual Sales Unit under the Sales Organisation
    3. Assigned Sales Staff
    4. Assigned Sales Account of Prospect and Customers
12. System should maintain the information of Sales Unit and the hierarchical relationships between all Units in different Channels and Teams under the Sales Organisation.
13. System should allow the creation, enquiry and update the information of individual Sales unit, include but not limit to Sales Unit ID and Name, Sales Unit Description, Sales Category and Type, Channels and Market Segments, Associated Parent Sales Unit and Effective Date, etc.
14. System should show the current and historical hierarchical structure of all Sales Teams and fellow Units within the Organisation of Telco in graphical view. In the hierarchical views, the current or previously assigned Sales Staff and Customers of each Sales Units shall be able to be seen along also at ease.
15. System should provide search and filter features to find any Sales Unit(s) within the Organisation by a series of criteria, such as Sales Staff ID, Staff Name, Team Names, Customer Names, Channels and Segments, etc.
16. System should provide the necessary facility for the flexibly maintenance of the Organisation Hierarchy,
    1. e.g. addition of fellow sub-ordinates, re-assign to another parent unit in the hierarchy, etc., without any limitation and at any time necessary.
    2. And All addition and changes shall allow also the input of corresponding effective dates, which can be immediate, future or date-back.
17. System should provide the functions to maintain the Sales Team and corresponding assignment of Team head.
18. System should allow the creation, enquiry and update the information of a Sales Team, include but not limit to Sales Team Name/Description, Sales Team Category and Type, Channels and Market Segments, Assigned Sales Unit and Effective Date, etc.
19. System should allow assigning a Sales Unit as the head of that corresponding Sales Team. The associated relationship of fellow team members, as well as further associated sub-teams, shall follow the parent/child structure of the Organisation Hierarchy as it is maintained in the system.
20. All new assignment and changes shall allow also the input of corresponding effective dates, which can be immediate, future or date-back.
21. Vendor can define different Hierarchy such as sales hierarchy, support hierarchy, partner hierarchy
22. Vendor can define distributor – reseller level 1 – reseller level 2 – reseller level n hierarchy

**Integrations Required:**

* CRM
* Chatbot
* Analytics
* Service assurance & perf mgmt.
* Trouble ticketing
* Contract mgmt.
* WFM
* SOM
* Payment gateway
* Inventory mgmt.
* NPS
* Knowledge mgmt.
* ERP
* Notification & Alerts

Epic - Customer satisfaction survey, feedback collection & Integration adaptor

As a Telco, I want to gather customer feedback about their experience with Telco services, interactions, journeys and be able to monitor net promoter score over time.

* Overview
  + Ability to gather customer feedback and satisfaction (rating-based, multi-optional, text)
  + Ability to show customer feedback collection survey on
    - Order confirmation
    - Order fulfilment
    - Drop out during the journey
    - Self care (at multiple points)
    - Post customer care interaction
  + Integration with customer satisfaction management to pass on the feedback
  + Ability to show survey to customer or partner on completion of a transaction, relation, by segment, by location & geography, time, channel, frequency, by product /service / lob, length of stay with telco etc or combination of these
  + Ability to show survey across multiple channels – web, email, sms, whatsapp, social media, IVR, app
  + Telco can view real time customer feedback & NPS score and actionable insights dashboard. View by transactional, relational, segment, geography, time, channel, plot comparison. Define KPI
  + DCCM acts as front end for customer survey & NPS
  + Define a new customer survey e.g. define NPS survey – survey definition, select audience, choose mediums, questions, when to run survey, criterias, language, preview, provide out of the box templates.
  + Global setting for defining NPS
  + Define & run survey
  + Present survey in multiple channels (email, sms, embed in customer portal, whatsapp, in-app surveys, online surveys on corporate website)
  + View reports
  + Customizable Out of the box NPS survey definition by Telco
  + Out of the box survey templates
  + Integrate with survey system, CRM, analytics
  + Multi-lingual
  + Enable and enhance campaign & loyalty management & pro-active CVM (ST-092)
  + NPS collection capabilities after every services order fulfilment (ST-386)
* Integrations
  + Integrate with customer survey tool to send surveys and manage responses.
  + Integrate with downstream system to retrieve customer information for selecting audience of survey
  + Integration with CRM to fetch details and store responses
  + Integration with analytics system
* Details:
* Integrate with Customer Satisfaction Management for showing any pending feedback or survey in dashboard page as reminder. The proposed solution should allow to click the dashboard and then redirect to the form in Customer Satisfaction Management to fill in instantly.
* Support real-time interface from Customer Satisfaction to
  + a) check any pending survey or feedback
  + b) redirect to URL of the survey or feedback
* Provide a Customer Satisfaction module that is responsible for presenting customer survey’s and capturing the results, including support for determining net promoter score
* key functionalities but not limited to: a) Customer Survey, b) Feedback Analysis
* The user portal dashboard shall show the Net Promoter Score (NPS) and survey result summary base on monthly and yearly.
* Ability to define KPI for Dashboard to display base on current result vs KPI and the gap that Telco needs to close by end of the year.
* ability to define Net Promoter Score (NPS) to measure customer experience.
* Ability to manage the NPS survey easily with built-in tool with template to ensure Telco user create and edit the survey such as but not limited to:
  + a) Add company logo
  + b) Theme/Colour
  + c) Sample questions
* Ability to presents Telco customers with a NPS survey, capture feedback and satisfaction.
* The Customer Survey function shall support tabulation and calculation of survey response and display survey result in various dimensions (e.g. channel, customer segment).
* Ability to publish real time Net Promoter Score (NPS) result via:
  + a) Internal Telco website
  + b) External Telco website
  + c) Customer portal dashboard.
* Ability to present survey in the following various channels:
  + a) Send surveys via email
  + b) Embed in customer portal
  + c) Send Surveys via SMS
  + d) In-App Surveys
  + e) Online Surveys on Corporate website
* Ability to able identify individual customer and their response to avoid duplicate or multiple response from same customer.
* Ability to prevent sending multiple survey to same customer once they have responded to the survey.
* Ability to send different survey based customer interaction through Customer Portal:
  + a) Customer Bill Dispute
  + b) Equipment Faulty Reported
  + c) Product subscribed
  + d) Termination
* Ability to define Time-based survey that will trigger survey to customer based on configurable number of days from certain criteria. Example below (but should not be limited to):
  + a) 30 days after service activation
  + b) Last login > X days
* Ability to define Event-based survey that will trigger survey to customer based on specific event. Example below (but should not be limited to):
  + a) Upon purchase of an offer
  + b) Closure of case
* Ability to support survey segmentation to target specific group of customers such as but not limited to:
  + a) products
  + b) geographical location
  + c) customer segment
  + d) payment method
  + e) tenure
* Ability to receive information from Customer Information Module (CIM) related to customer, such as but not limited to:
  + a) Customer data (e.g. Customer Name, email, etc.)
  + b) Interaction history (e.g. last login, etc.)
  + c) Service Profile (e.g. subscribed offer, VAS, etc.)
* Ability to send information to Marketing & Campaign module related to the customer to identify target marketing campaign, such as but not limited to:
  + a) Survey Result
  + b) NPS Score
* Ability to send information to Agent & Sales Management modules (e.g. Opportunity & Pipeline) related to the customer to identify sales lead, such as but not limited to:
  + a) Survey Result
  + b) NPS Score
* The Feedback Analysis function shall be able to analyse the survey data and derive to a result such as but not limited to:
  + a) Existing product improvement
  + b) New product development
  + c) New Service development
  + d) Service upgrade
  + e) Sales response improvement
* Ability to analyse responses in real time and provide a view of rolling average NPS and response counts over time.
* The Net Promoter Score (NPS) analysis shall support the following but not limited to:
  + a) Customer demographic data (e.g. Industry, geographical location/region, etc.)
  + b) automated verbatim analysis
* Ability to support automated analysis to find recurring pattern in customer responses and translate into result. Example: Customer provide negative response in network performance for multiple times, system should trigger escalation.