Telco Digitization Journey through Open API platform

The operating model for telco operators has become extremely complex and has undergone tremendous change in the past few years. To meet surging demand for better customer experience, telcos need to continue investing in network infrastructure. However, revenues are not expected to grow at the same rate of spending. With traditional businesses declining, the threat from over the top (OTT) business models from the Internet and device players are forcing telcos to rethink their revenue model. In order to achieve faster growth, telcos have to focus on building stronger partnering & integration ecosystems with digital service players. Such partnerships can enable them to become a marketplace to sell their own as well as non-telco products, thereby increasing revenue and enhancing customer experience.

For several years, companies have used APIs to exchange information between IT systems. However, what is novel now is the way they are being used. Today's billion-dollar valuation companies do not own huge assets but still have been able to achieve such high valuations by building an ecosystem primarily by exposing APIs. These ecosystems are used to connect end-users and sellers of different products or services thus assisting in attaining high customer experience and satisfaction. Using the same approach, telcos now want to become 'Open Telcos' through the adoption of open APIs to allow third-party developers to build services that hook into telco networks.

'Open Telcos' are part of digital initiatives that most telcos are undertaking as they enable them to deliver what customers want, when and where they want it. It helps partners to consume data from their internal systems to be able to create dynamic services. Telcos drive monetization through increased usage of services, and adoption of APIs can create an innovative ecosystem of independent software developers that, in turn, drives new business development.

Step 1: Define API business strategy
Once the API strategy is defined, the next step is to identify what capabilities or functions need to be published for consumption by the internal or external ecosystem. Service providers tend to make these decisions based on their digital The first step for any service provider is to define the business goal they want to achieve by the adoption of 'Open API'. Service providers can publish API either to be used for internal organization to increase efficiency, build mobile apps, etc. or for external partners to be able to cross-sell or upsell products, thereby monetizing the APIs.

Step 2: Define functions or capabilities to be exposed roadmap. Few options that service providers can use to identify capabilities to be exposed are:
- Better customer experiences by enabling customer interaction either through mobile apps or portals
- Integrate with partners to be able to cross-sell or upsell their products and share information like product catalogue information, product bundling recommendations, loyalty management, promotions etc. or as part of the customer order fulfilment journey, and share information like appointment, shipment tracking etc.
- Network-based functions like network availability, usage consumption etc.
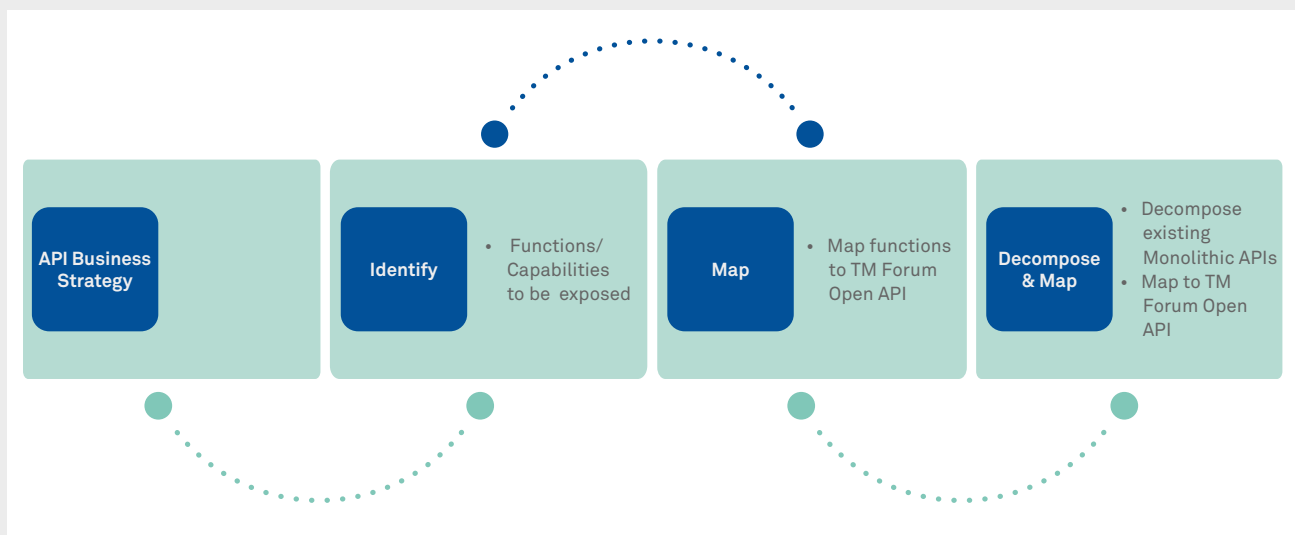

Fig. 1 - Open API adoption steps by Telcos

Step 3: Identify TM Forum API mapped to functions
The key to success of the functions or capabilities that are identified to be exposed is to help partners consume them easily. It will be difficult to on-board partners on to the 'Open API' journey if the APIs exposed are of non-standard specification. TM Forum provides industry-standard specification for APIs that can be used to expose the information to partners. As a next step, it is important to identify the APIs from the list of TM Forum set of APIs that can be used to provide similar information per the identified functions or capabilities. A single TM Forum API or a set of APIs might be required to be published on an 'Open API' layer. At this stage, it is also important to note that not all functions that are identified to be published might be mapped to the TM Forum API specification; hence, service providers should also consider other APIs to work in conjunction with the TM Forum API to achieve the business goal.

Step 4: Map TM Forum API to existing system APIs
Nearly all service providers have legacy systems with their own set of APIs. Legacy systems are built over several years and have monolithic ways of exchanging information, which is not easy to consume. Also, most of the legacy applications do have APIs which provide huge volumes of information – mostly repetitive during different points of the customer journey. It might be required to break them into multiple smaller APIs so that information can be consumed without a huge impact to the existing landscape. Transformation of monolithic application or huge APIs is not a mandatory step but might be required so that APIs from existing legacy systems can be easily mapped to TM Forum specifications.

Telco service providers have embarked on the journey of becoming digital service providers and have a huge potential to change the game through API platforms. Service providers should not try to rewrite all APIs but rather, see which existing APIs can be reused and mapped to TM Forum API specifications. It is a 3-step strategy that can be used - identify the functions to be exposed, identify the APIs in conjunction with TM Forum APIs and map the APIs from the existing system into the TM Forum specification. Over time, the number of APIs exposed for consumption by external partners will grow and thus, assist service providers to successfully monetize their functions and provide better customer experience.

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Ankit has over 18 years of experience in the telecom sector. He has played various roles like Business Analyst, Architect in OSS and BSS domains. In his current role, he works as a Chief Architect and Program Manager for digital programs and leads a team of technologists with the aim of harmonizing architecture principles across multiple programs and driving solutions from concept to reality.

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