

# Enterprise Architecture: A Case Study



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Ufone is a subsidiary of Pakistan Telecommunication Company Limited (PTCL). Etisalat – UAE has management control of PTCL and Ufone is now part of the global communication services provider that currently consists of 21 Telco Operators, 3 Fixed Line Operators and 4 ISPs.

### Challenge

Telco market trends are ever evolving. Acquisitions, Re-Branding, expansion of mobile usage and an increasingly bandwidth hungry generation of Telco users are but a few of those. For a leading communication services provider, this raises critical challenges such as ensuring leadership in time to market of new products and services, efficient and timely change management and linking enterprise-wide initiatives together with a complete alignment of inter and intra-department vision and budgetary spend.

Ufone wanted to use Enterprise Architecture to build strategic capabilities to allow it to meet these challenges. Through this practice, Ufone wished to introduce tools & methods to define and govern change, at the center of which is a comprehensive and connected repository of business, data, application and infrastructure information components. By using Enterprise Architecture, Ufone also wanted to leverage best practices for the Telco industry. Specifically, Ufone envisaged the use of the New Generation Operations Systems & Software (NGOSS) framework to benchmark against industry proven references and standardize its OSS/BSS development, integration and operations.

As a parallel initiative, Ufone had also acquired a comprehensive suite of IBM Rational products to manage IT projects within the Enterprise for the complete lifecycle. It was essential that the tools and technologies adopted in establishing the Enterprise Architecture would minimize rework, reduce information maintenance and allow full integration of information across Ufone IT landscape.

The first phase of the engagement was carried out in 10 weeks. Given the timeline of this project, the key challenge was to involve business in the initiative and not limit the scope of engagement to IT, which traditionally provides the easiest ROI. The involvement of the business was designed to ensure smooth progression of the EA initiative to the entire Enterprise in subsequent phases.

## The Solution:

The initial engagement was part of a phased approach to a comprehensive Enterprise Architecture rollout at Ufone. It provided Ufone with the capabilities required to model its AS-IS enterprise architecture, analyze its baseline and define a transition roadmap. The project involved IT and Business together to identify, document, link and populate the information across all relevant domains for Sales & Distribution as the primary business area and the IT function as a secondary stakeholder.

After evaluation of different tools for this project, Ufone selected IBM Rational System Architect for their EA initiative. System Architect is the leading software tool for Enterprise Architecture, supports various standard EA Methodologies including NGOSS and TOGAF and supports standard notations for various domains out of the box and provides a comprehensive list of definitions that are fully extensible.

In this initial phase the approach was to take a thin but deep slice across the entire set of functional domains for the identified business area: Sales & Distribution. The following set of points were identified to set the Architecture Vision at the onset of the project and were used to design the EA structure at Ufone:

- ◆ Design the Architecture to provide quick answers to a set of frequent analysis undertaken by the key stakeholders.
- ◆ Define a uniform view of Vision, Goals and Objectives to link strategic drivers for all assets and initiatives within the Enterprise.
- ◆ Identify, document and link key business processes for the selected business area to bring clarity on the AS-IS process, services, roles and responsibilities.
- ◆ Using NGOSS/eTOM standard process maps, identify the level of coverage and redundancy in AS-IS state at Ufone to help identify gaps and plan the TO-BE roadmap.
- ◆ Identify, document and link IT, non-IT and Information Infrastructure within the Enterprise
- ◆ Identify areas of IT hardware consolidation
- ◆ Identify areas of Software and Service consolidation
- ◆ Using NGOSS/TAM standard Application Map, identify the level of coverage and redundancy in AS-IS state at Ufone to help identify gaps and plan the TO-BE roadmap.

Architecture design discussions were conducted with the stakeholders to create a fully connected Metamodel view of Ufone with information and data linkages across the enterprise.

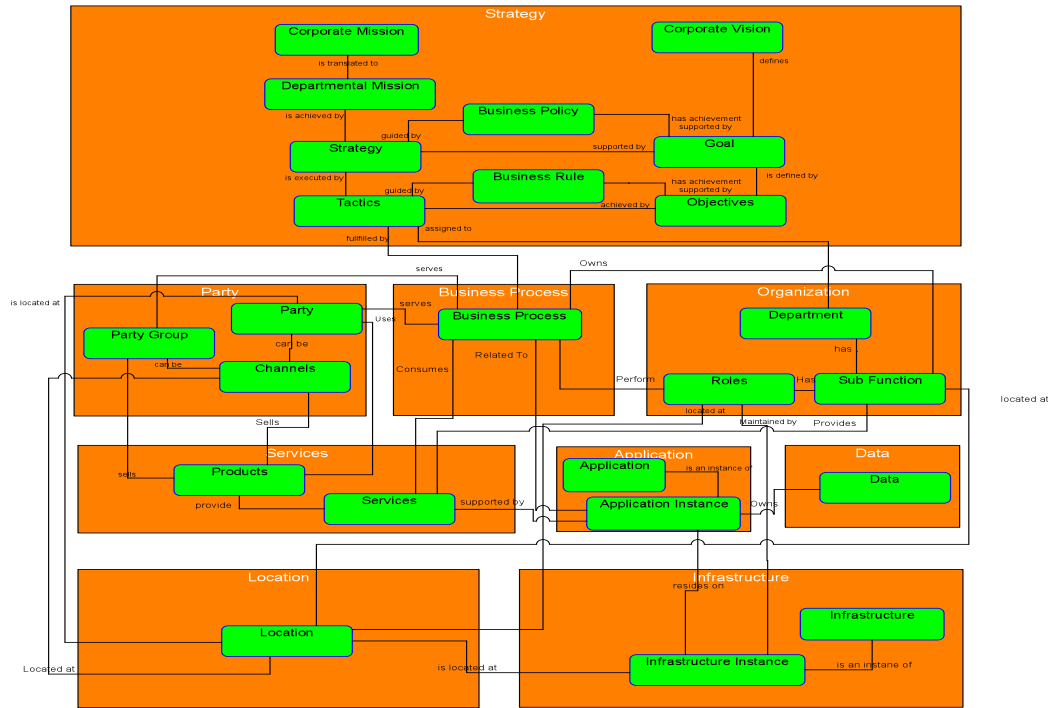
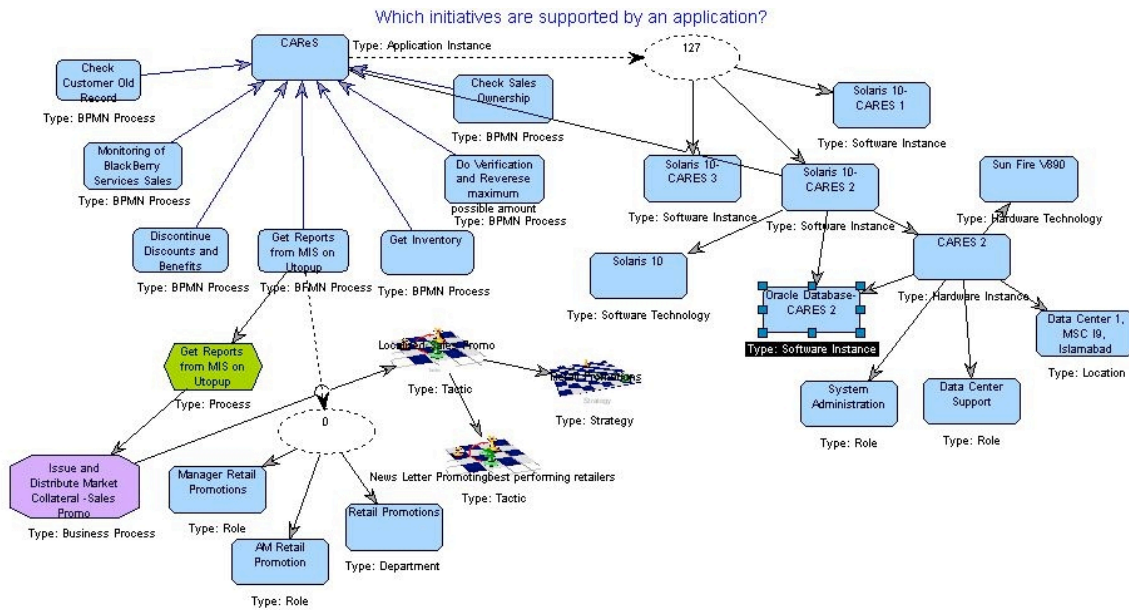


Figure 1 Ufone Metamodel for Enterprise Architecture



All information and data for the identified domains was captured, consolidated and imported for the Sales & Distribution department including comprehensive process documentation of business critical processes and a compliance heatmap for all eTOM defined processes. Similarly, all IT related domains and assets related to Sales & Distribution were captured in IBM Rational System Architect.

During this exercise, mapping and compliance with NGOSS was also carried out to determine level of standardization and plan future initiatives. Furthermore, a clear set of Architecture Principles were designed to define the process for induction of new initiatives within Ufone that will keep EA updated with minimal efforts.

In August 2009, Ufone presented its Enterprise Architecture to Etisalat for managing IT synergies across its subsidiaries along with other IT initiatives at Ufone. EA was selected for rollout across the entire group. Currently, IT initiatives are being routed through EA to complete the full map through Architecture Principles defined for Information and data updates as part of this project.

## **Technology**

The Enterprise Architecture project was implemented using the IBM Rational System Architect platform.

## **Benefits:**

Enterprise Architecture allows better change planning, reduces time to market for new products and accelerates capabilities development because of a central connected repository of information. With clear and agreed Architecture Principles, this information is maintained live and up-to-date providing stakeholders real-time access to information at the touch of a button.

In August 2009, Ufone performed an analysis to identify the usage of its database servers with a view to consolidate licensing as a cost saving initiative. EA was used as the primary analysis tool. The analysis provided easy access to key information such that the scope of exercise could be extended to consider migrating the database server technology to an alternative. EA helped Ufone identify all the stakeholders to reduce the risk and effort in change management of this initiative. This initiative also allowed Ufone to have architecture consolidation and enhanced cost savings.

In September 2009, the Ufone Sales & Distribution department used EA to simulate and plan introduction of a new external channel, the “Mini-Franchise” into its Distribution chain. The exercise provided a clear roadmap of the implication of the introduction of this new channel, associated on-boarding and operational processes, enhanced set of services and impact on affected applications within one week, whereas previous similar planning exercises would traditionally have taken over 3 months to complete.

The Ufone IT and Sales Department have also used EA to identify gaps and consolidate functionality of their applications to initiate a project to enhance its CRM application and sunset three standalone applications that had redundant functionality.

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