Nokia Managed Services
Converged Operations

Converged Delivery Model and how to transform your operations to achieve this
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Abstract

Fixed – Mobile Convergence Operations

Over the last years, Customer Service Providers (CSP’s) have embarked on fixed and mobile network convergence in order to meet the demands of their end users in terms of the ‘must have’ services and applications today across a blended fabric of technologies.

The scenario of a fixed network operator investing in a mobile network in order to gain access to a customer base hungry for video anywhere at any time (via wireless hand held device), or a mobile operator investing in a fixed network core / IMS solution in order to capture and provide ubiquitous fixed and wireless service to a single customer, presents various challenges to be solved for the CSP. First of all to have the right approach and methods to transform their operations today, to what is needed to a converged network solution tomorrow. And once this transformation is complete, having the capability and expertise ready to operate a converged network solution.

CSP’s need to be able to accelerate their network convergence solution in order to launch the new required end customer services quickly, to gain the market and to capture the revenue before their competitors. Various analyst reports show that locking in subscribers with a mobile/fixed offering is the key to reduce churn.

Having the target operations solution available, and the methods to transform to this in the most effective and efficient way becomes a critical success factor within the Fixed Mobile Converged (FMC) journey CSP’s will take on.

This paper highlights both the target operations model capabilities needed for successful FMC operation, but also the key methodologies that need to be adopted to get to the target FMC operations model.
Introduction

As CSP’s move to a multi domain, fixed and mobile converged network solution, from either domain moving into the other, presents them with a challenge with regards to evolving and adapting their current operations solution in order to cater for the new domain being introduced.

Operational capabilities and the operating model attributes are different for each domain, and thus have to be integrated in order to operate the new FMC network solution as if it is one ubiquitous domain in itself.

Each existing technology domain has its own unique operational characteristics:

Mobile network solutions introduces operational complexity by the nature of the real time changeable access volumes, meaning the art of near real time capacity management on access aggregation points becomes a key operational focus.

Also due to the nature of RF, access connectivity can be influenced easily by the surrounding environment (manmade or from nature) thus there are a unique set of skills and capabilities needed for optimizing continuously this RF environment, which does not feature in a fixed network operation.

Fixed network solutions introduce operational complexity by the nature of the multitude of end user voice and data flavored services it carries, coupled together with the multi market segments it serves, everyday consumer through to mission critical dedicated private connections for government and enterprise customers. This introduces an operational discipline of understanding exactly what type of service, and the expected quality of that service being carried, is known across the common fixed network connectivity layer at any one time. This demonstrates maturity of service and traffic management operational capability, something that has been developed from early voice quality management across fixed network solutions.

So from a CSP who operates singularly in either one of these domains today, the prospect of moving to a FMC solution means there is a complex transformation within the operations environment to occur.

Nokia Managed Services have been providing operations solutions for FMC network solutions for over 10 years, and can both provide the integrated operations solution which brings the operational maturity and capability needed for both technology domains, as well as providing the methodology to transform to this integrated FMC operating model in a robust, quick, and risk free approach.

The following sections describe the experience, maturity, and credibility of Nokia’s ability to support the needs of a CSP in making this transformational operations journey.
The Target Delivery Model for Fixed Mobile Converged Operations

Through the experience gathered in operating over 200 Managed Services projects serving over 650 million customers, Nokia has defined and refined the optimum operating model for managing FMC network solutions.

The operations framework Nokia implements and uses as its blueprint baseline for assessment, consolidation, and transformation to the target operating model for FMC network solutions, is based on the ETOM standard and adapted ITIL standards. The framework not only addresses people, process and tools, but couples each of the contributing factors for highly cohesive operations.

Fig. 1. Nokia FMC Operating Model

High quality and cost efficient service delivery relies on the application of best practice standards and processes, and a high degree of automation and sharing of resources. To achieve this, Nokia’s operational framework is structured into three areas:

1. Operations
2. Business Management
3. Nokia Support (i.e. the use of Nokia infrastructure and capabilities e.g. HR know-how and processes, to support Managed Operations projects).
Within each of these framework areas, delivery capability attributes are defined and developed based on a combination of industry best practice, and Nokia’s experience in operating fixed and mobile network solutions.

This includes capability attributes of organizational design, process framework, SLA / OLA framework, OSS / Tools framework, and any physical and logical infrastructure to support these.

The model also defines the interfaces for Governance and Operational Interaction towards the Customer and third parties supporting the FMC network solution, and the key internal interfaces with other Service Lines, Business Management and Nokia Support.

As a result, Nokia have built an operational delivery engine that leverages a centralized delivery platform. Nokia has established six Global Delivery Centers, four Delivery Hubs, 13 local Delivery Centers, and four Special Scope Delivery Centers. Transformation of an operations solution for FMC network solution to the Nokia delivery engine is fundamental to Nokia’s philosophy of Operational services. The key benefits of utilizing the Nokia operating model for FMC network solution managed service delivery are:

1. Cost efficiency;
2. End to End network visibility;
3. Management control and Transparency
4. Faster fault finding and fault resolution, and;
5. Operational efficiency.

Fig. 2. Nokia’s Worldwide Delivery Capability
How to get there, the transformation approach

CSP’s embarking on moving to a FMC network solution, and subsequently transforming their current operations model solution to be able to manage effectively the FMC network solution, is not a frequent or regular occurrence in their solution roadmap lifecycle, and thus is more of a ‘one off’ significant decision in the lifecycle development of the CSP’s service and network strategy.

The operations transformation is needed to ensure the strategic network integration decision made, (to move to FMC in order to deliver the end user services driven by the market), is fully honored and supported through ensuring a fit for purpose operations environment is in place and leveraging and maintaining the value and availability of the new FMC integrated end user service delivery solution.

As both the network and the operations change, decisions are of a significant nature, (large and complex with potentially high risk through the change), CSP’s will look for a partner who is proactively engaging with them to help them through the decision process and ultimately the network and operations change.
Nokia has developed an engagement process with CSP’s to ensure the decision process for them is well informed and that allows a CSP to understand all the aspects of the transformation journey they will embark on.

Nokia’s proactive engagement model consists of:

• Clarification sessions with the CSP’s CxO profiles, utilizing sets of questions to help target and prioritize the CSP’s key business objectives.

• Analysis of the resultant key business objectives and the mapping of these to the best transformation solution option (in terms of scope and accountability share between Nokia and CSP)

• Value demonstration through a specialized value calculator developed by Nokia, which can provide high level value statements as a result of Operations transformation in terms of:

  • Opex improvement (up to 33 percent improvement)
  • Quality improvement (up to 30 percent improvement in CSAT / NPS)
  • Speed improvement (up to 30 percent improvement in speed of operational transactions)
  • Revenue generation (increased billable minutes through improved network availability)

• Value demonstration through our credible capability and references.

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**Fig. 3. Nokia’s Value Model**
Transformation Solution Options

A key to helping CSP’s make the ‘leap of faith’ decision in transforming to a FMC network and operations solution, is to ensure there is flexibility in both the scope and accountability of the transformation approach.

Nokia offers three transformation solution building block approaches, which give flexibility in both scope and accountability.

Nokia can include the network change and the operations model transformation change in scope and take the full accountability of managing the change with both. (For when the network change is based on a Nokia FMC technology solution).

Or from a scope perspective, Nokia can solely address the required operations transformation, allowing the CSP to have an independent multi-vendor FMC network solution, though still getting the value from Nokia in adopting the Nokia defined operations solution, and the application of the Nokia transformation method to transition to it.

From an accountability perspective, Nokia can also provide transformation assistance support into the CSP’s team, for the situation where the CSP wishes to maintain the control and accountability of the operation and the transformation of it in house.

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**Fig. 4. Nokia’s Transformation Solution Options**

1. **End to End Network Operations Outsourcing**
   - Operations transformation
   - Operate and Manage (Continuous Improvement)
   - Reverse Transfer
   - +3 years
   - 3-6 M
   - • No Network Transformation
   - • Operations Transfer
   - • Operations Transformation

2. **TCO Based Network Outsourcing**
   - Operations transformation
   - Operate and Manage (Continuous Improvement)
   - Reverse Transfer
   - +3 years
   - 3-6 M
   - • Network Transformation
   - • Operations Transfer
   - • Operations Transformation
   - • Transformation Program Management
   - • Reverse Transfer

3. **Transformation Program Management**
   - Operations transformation Assistance
   - Operate and Manage by Customer
   - Network transformation
   - 1+ years
   - • Network Transformation
   - • No Operations Transfer
   - • Operations Transformation Assistance
   - • Transformation Program Management

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Conclusion

CSP’s that are moving towards a fixed – mobile converged network solution, will need to address their operate model in parallel.

Each technology domain has unique operational attributes in itself, and will need to be integrated in a robust manner to form the unified operations delivery model for a CSP’s FMC network solution.

Nokia can support CSP’s in this significant step with them, by providing both a solution for the target delivery model for a FMC operation, as well as the transformation methodology to implement it.

And with adopting the Nokia transformation engagement and value demonstration methods, allows a CSP to make confident and robust decisions on moving into the FMC environment.

Nokia have over 10 years’ experience in transforming operational environments, transitioning and transforming over 18,000 people, and have refined the target operating model and the transformation methodologies in order to make this change for CSP’s a well-informed, well planned and well managed journey.

For further information on Nokia’s capability to provide an operation solution for FMC network solution, and for the methods used to transform to this, please contact Russell.Laughton@nokia.com
References

**Fixed and Mobile Network Transformation (FTTx and LTE)**

Nokia provided build and operate solution.

- **Build Services:** Design and Integration Services, Deployment and Deployment Field Services
- **Operate and Manage Services:** Operations Support, Fulfillment Services, Assurance and Field Assurance Services

**Airtel Africa**

- Span across 11 African countries, (5 additional in 2015)
- 24/7 real-time remote delivery for FMC solution - Core, RAN, BSS, Transmission
- Airtel: Be #1 in KPI benchmark and best Smartphone experience
- Correlation of all network and service degradations

**Business results and benefits**

- Helped STC with rapid go-to-market for bundled offerings for fixed and mobile broadband services
- STC first and only one able to successfully launch combined BB services in 2012
- Single O&M partner for wireless & wireline networks improves efficiency and enables STC to refocus on end user experience
- Leveraging an existing common radio platform for LTE/3G/2G, (single-RAN) brings major cost efficiencies, OPEX savings and enhanced investment in network evolution
- With Software Base Services, STC enjoys timely and efficient software upgrade service for all new software releases and updates

Rapid deployment to help beat the competition.

“STC is committed to delivering innovative services to its subscribers and together with Nokia we are confident we will enrich our customers’ lives by offering a variety of services for consumers and businesses. Our customers will enjoy the benefits of 4G LTE through an enhanced mobile experience that is unmatched in the industry.”

**Dr. Zeyad Al-Etaibi, CTO of STC Group**