



# Roadmap to Convergence

## **KEY TAKEAWAYS**

Drivers and constraints of FMC  
Types of offers enabled by FMC  
Roadmap to convergence

## **WHO SHOULD READ THIS DOCUMENT**

CIOs / CTOs  
CMOs  
CEOs

**CELFOCUS**

# Fixed-Mobile Convergence

## When 1+1=3

It is 7 AM on a cold winter Monday morning, the alarm rings and the CIO of TELCO4EVER wakes up to a different world. On Friday, he was leading a mobile operator but today marks the beginning of a new Era where, after the acquisition of a fixed operator, it is time to merge the two operations and offer customers a quad-play service.

Although fictional, the reality of many operators is not very different when having to move from a mobile or fixed operation to become a convergent CSP. The impact is transversal to the entire organization and includes processes, people and of course, technology.

Fixed-Mobile Convergence (FMC) enables CSPs to offer customers a unified communication experience by combining the convenience of the wireless world with the high quality and speed of fixed communications. However, it is a completely new business, requiring a different stance.

There are various types of convergence such as devices, network, service, billing and even sector. Within the context of the telecom industry, and from the CSPs' perspective, convergence delivers value and is centred on three main areas:

### Types of Convergence

- **Network IT**  
lowering data transport costs, providing higher data rates to customers and rationalizing the whole infrastructure.
- **Pricing and Proposition**  
providing customers a better value proposition where more services are bundled to deliver cheaper offers.
- **Product and Service**  
the key to accomplish this is the mobile voice and broadband, which includes the following services: voice over IP, call continuity and network convergence.

**This paper covers the main business drivers, constraints and roadmap for CSPs going or considering undergoing a FMC project.**

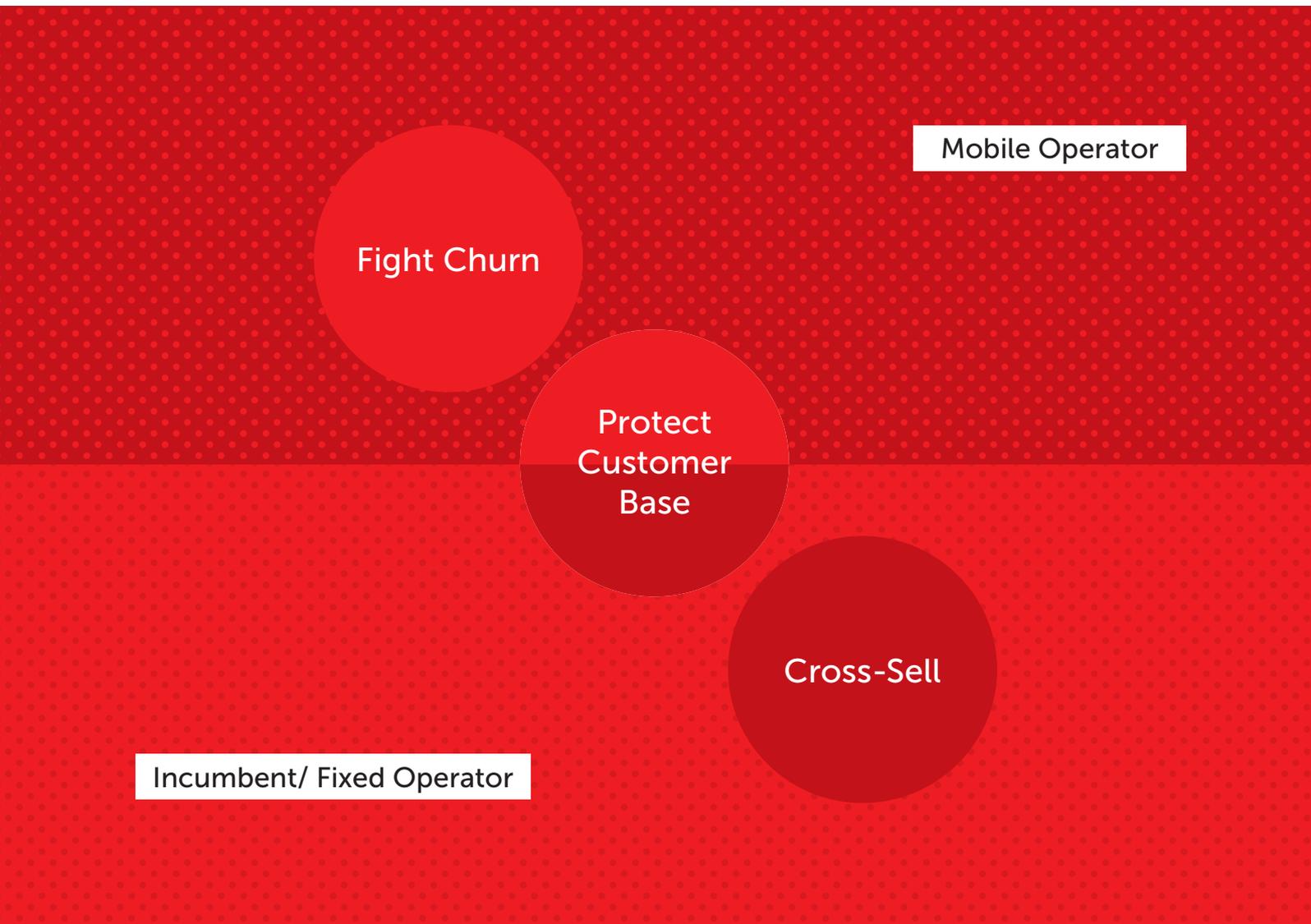
**Drivers for FMC:  
From Consumers  
to Enterprise  
Customers and CSPs**



The motivation to embark on an FMC project varies significantly based on the CSPs' core business. The decline of more traditional services such as voice, the need to fight commoditization and the emergence of OTT (Over-The-Top) players have led service providers to look into offering new enhanced voice, data, and fixed-mobile convergent services.

According to Oliver Wyman "...mobile users are three to five times more likely than fixed-line users to transfer to convergence services." meaning, **if your organization is either mobile or fixed, the endgame from convergence can be quite different. For some it can be about survival and mitigating churn, for others a tremendous growth opportunity, but for both is the road to success where in the future, customers will rely on a single provider to cater to their connectivity needs.**

**Business Drivers  
supporting FMC**



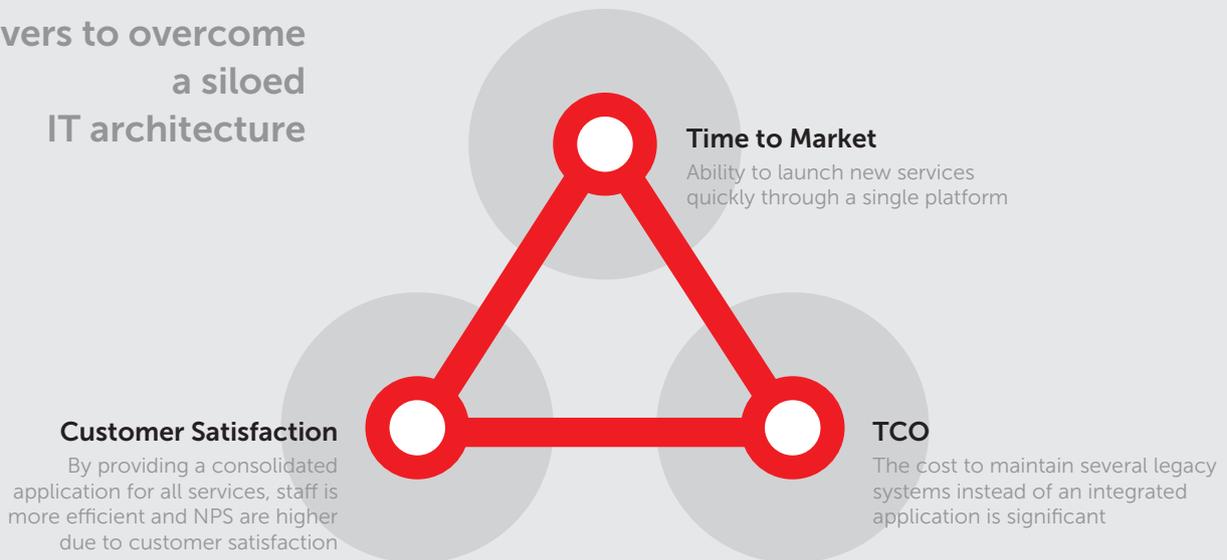
**Advantages**



The advantages of delivering convergent offers, clearly offsets the cost of maintaining a siloed legacy IT architecture. It has an impact on both the revenue stream and on cost reduction, by improving:

- Time to Market
- Customer Satisfaction
- TCO

**Drivers to overcome a siloed IT architecture**



**Embracing a transformation project and aiming at becoming a convergent player is about satisfying customers’ needs. Depending on the target group, consumer or enterprise, the use cases are quite different.**

For consumers, it can include, watching a TV show using a tablet, while in the car, or having a family account to control all services and be able to buy content and data using a single platform. For this group, it is about worry-free usage, transparency, a single point of contact and one bill.

For enterprises, the benefits are significant and can result in productivity gains, cost reduction and flexibility. Some of the most common use cases include the ability to transfer a call to any device, routing to the best available resource and transforming the phone into a personal secretary that won’t bring you coffee in the morning.

FMC represents an opportunity for CSPs to strengthen the relationship with both consumers and enterprises. To reprise its role as a value-added partner by purveying a new digital consumption, simplifying offer complexity, delivering more value, flexibility and answering to the new business dynamics on connectivity: **always on, using any device, from any location.**

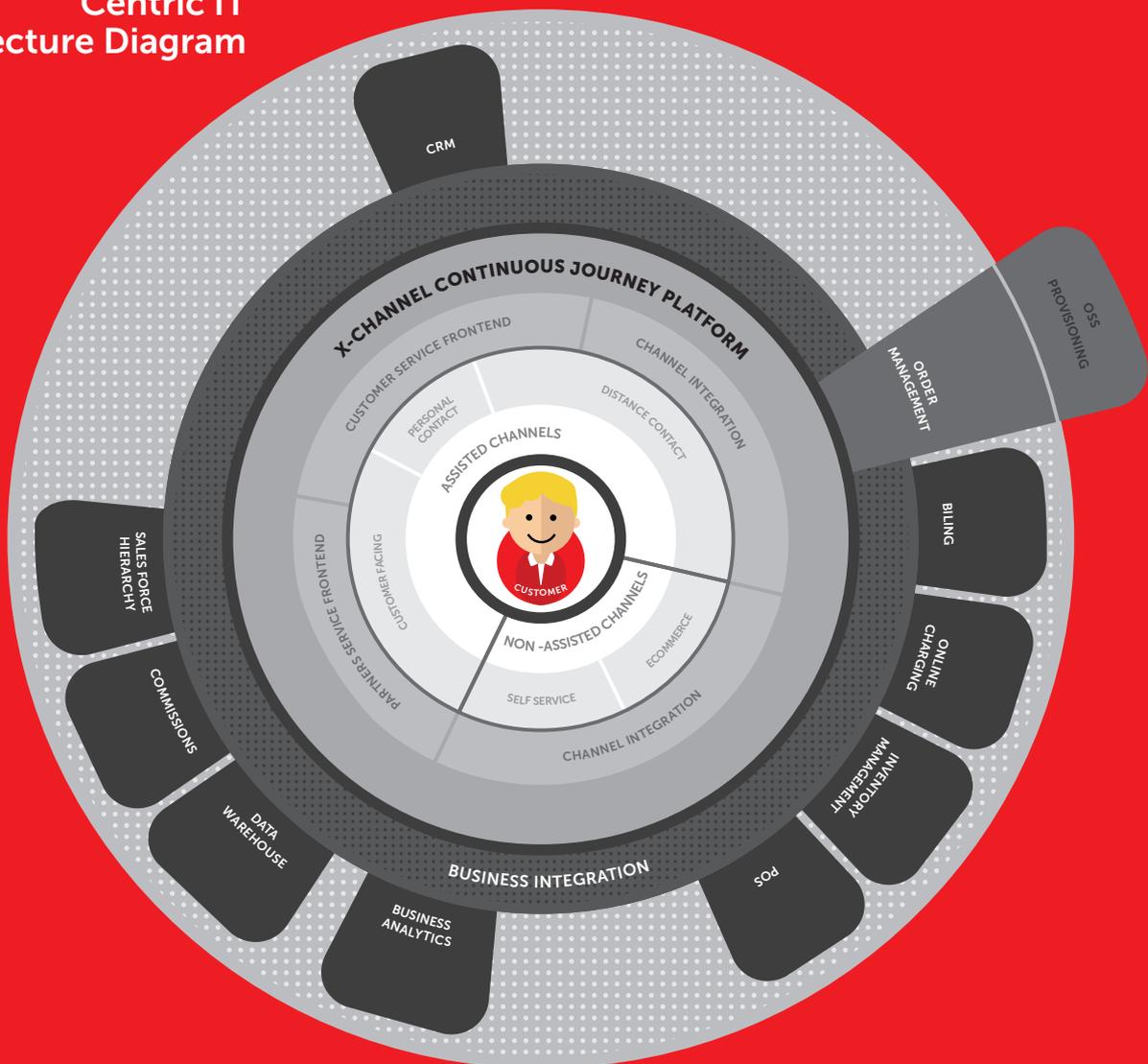
# Celfocus Customer Centric IT Architecture

CSPs in the process of considering or deploying an FMC transformation projects are required to look at their OSS/BSS architecture from a holistic perspective, considering the building blocks critical to both mobile and fixed application stacks, which to be shared and which applications to be introduced in the overall architecture.

Celfocus has worked with CSPs across the globe from Tier 1 to smaller operators, with different levels of maturity and has developed a deep understanding of the transformation roadmap and critical success factors.

The following figure illustrates Celfocus' Customer Centric IT Architecture. This architecture is built around the customer and starts with the omnichannel layer up to the OSS components, covering all the main FMC building blocks.

Celfocus Customer Centric IT Architecture Diagram



## Transformation Pitfalls



The approach to any transformation project is highly influenced by the CSP's context, objectives, budget and many other variables. When talking about an FMC project, the same principles apply.

Before embarking on any transformation journey and in particular in the context of an FMC project, it is important to understand some of the most common pitfalls, including:

- **The Migration Threat** – When planning to change the IT landscape, it is common to focus on the new technical solution and overlook the people and the business dependent on the systems. It is common to celebrate the rollout of the new solution even before it is supporting the business and real life customers.
- **The holy grail of the Telco-in-a-box** – The typical IT landscape of CSPs lists hundreds of systems from different vendors. Following the *cliché* that projects fail due to poor system integration, it became commonplace to trust one-stop-shop vendors that offer a single solution to cover all IT needs. What is missing is that these systems are the result of acquisitions and an integration that is not fully matured. This is going back to the monolithic approach of IT. Merges and Acquisitions between CSPs are now more prevalent than ever and principles like modularity in IT are crucial to ensure systems can evolve seamlessly.
- **Out-of-the-box** – Again, the typical complexity of legacy systems creates the perfect scenario for an arriving CIO/CTO to strive for simplicity and trust the vendor who assures that all capabilities are supported out-of-the-box. This is again overlooking the hundreds of hidden details that are required to support the actual business, the ongoing relations with the customers and the contracts in place.

## Roadmap for an FMC project



Invariably, CSPs have a complex IT landscape with hundreds of legacy systems supporting thousands of products and business rules. This scenario is the result of years of fast growth and fierce competition. However, it is now too inflexible to accommodate the capabilities required to support a truly convergent offer. A typical example is the order management of a mobile operator that processes orders in seconds and now has to cope with fixed-line orders that may take up to 2 weeks and undergo changes in the meanwhile.

New systems will need to be setup, existing systems will need to be changed or decommissioned. Changing the CSPs' IT landscape requires careful planning.

The extent to which CSPs embrace FMC varies and may include a full blown and complete transformation to a lighter approach and shifting key applications. CSPs have different options to become convergent players, each carrying its risks and opportunities.

We will present two different approaches to achieve a convergent-ready IT landscape:

- 1) start-off by consolidating the architecture components that support customer processes.
- 2) introduce an end-to-end stack replacing all legacy systems.

**Function and Component driven:**  
Time-to-market imperative



This approach is customer centric in the sense that CSPs are only focused on addressing areas with **customer visibility**. More than transforming the operation, the **target is surgical** with advantages in time and costs. The three critical building blocks involved are:

- **Omnichannel layer** – while engaging with CSPs, customers can use a myriad of channels and expect to have the same service level and information on all of them. To excel in delivering a unique customer experience, it is essential that all touchpoints provide the same offer.
- **Convergent Product Catalogue** – either at the contact centre, at the shop, or even on the website, CSPs depend on a convergent product catalogue to ensure that: the same offer is presented to all customers; all business lines are covered; bundles are available; the activation and provisioning process is correctly configured. The Convergent Product Catalogue is the primary source of the product information thus enabling synchronization and alignment within BSS systems.
- **Unified Bill** – one provider, one offer and one bill. The ability to deliver a single invoice including usage for mobile, broadband, fixed line and television is a critical success factor supporting convergent offers, especially for the consumer segment. Regardless of how the CSP is organized, a unified bill allows customers to understand the value proposition of a convergent offer and what services were subscribed.

**Advantages of this approach**

- Improve time to market of the quad play offer
- Less risk, focused project scope

**Disadvantages of this approach**

- Quick fix not solving IT architecture issues
- Increased OPEX for maintenance of legacy systems and operations convergence

**Offer and Segment Driven:** Preparing for the Future



Below is an illustrative example of the TELCO4EVER journey to offer a quad play service by tackling the paradox of going through a **complete transformation** project in a **very aggressive timeframe**.

In this context, TELCO4EVER has two full stacks, one covering mobile and the other supporting the fixed operation. To consolidate both stacks, a complex IT transformation project is mandatory, nonetheless, there is pressure to launch the new offer that is critical for business survival and to have the upper hand in the competition.

**Phase 1**  
Greenfield  
Quad Play

	Mobile			4P	Fixed	
	Enterprise	PrePaid	PostPaid		Consumer	Enterprise
ONLINE						
RETAIL UFE						
CRM						
PRODUCT CATALOGUE						
OM						
EAI						
BILL						
INVENTORY						

To speed up the launch of a quad play service, **a new stack was introduced**, covering only the **convergent offer**. This approach has a bigger impact on the operational side of the business. However, while the full transformation project advances, it enables the operator to start selling to both new customers as well as existing ones.

Because the inventory should be managed centrally, a single layer is deployed including phone numbers, IPs and SIM Cards inventory to accommodate both new and existent customers.

At this stage, the **customer big-bang migration is not required**.

**Phase 2**  
Full Consumer  
Consolidation

	Mobile			4P	Fixed	
	Enterprise	PrePaid	PostPaid		Consumer	Enterprise
ONLINE						
RETAIL UFE						
CRM						
PRODUCT CATALOGUE						
OM						
EAI						
BILL						
INVENTORY						

After launching the quad offer, all efforts turn to **consolidating the consumer mobile and fixed operations**. Although other options and possibilities are available, the next step of this journey is to extend the new stack to the legacy Mobile and Fixed offers for Consumer and SoHo segments. At this phase, the first big-bang migration and the systems decommissioning that supported this segment takes place.

**Phase 3**  
Full IT  
Transformation

	Mobile			4P	Fixed	
	Enterprise	PrePaid	PostPaid		Consumer	Enterprise
ONLINE						
RETAIL UFE						
CRM						
PRODUCT CATALOGUE						
OM						
EAI						
BILL						
INVENTORY						

TELCO4EVER is approaching the finish line **by moving from three stacks to two and consolidating the remaining segment - the enterprise.** This segment is characterized for its diversity since companies have specific requirements that are seldom met by standard offers, such as those you get in the consumer segment.

The timeframe for this type of transformation project varies immensely based on the operator’s characteristics and other variables. However, what this approach delivers is the ability to move quicker and introduce an offer, which was the main objective.

**Advantages of this approach**

- Ability to combine time-to-market with full IT systems transformation, and
- Preparing the IT infrastructure for new market demands and technological developments

**Disadvantages of this approach**

- Co-existence of separate IT stacks, and
- OPEX temporary increased.

The transformation has ended and now TELCO4EVER is a truly convergent operator, ready to tackle the challenges coming from a more demanding digital customer and fight the commoditization that CSPs are facing worldwide.

Do not let the happy conclusion of this story give you a false sense of security. Make no mistakes; this is a road full of uncertainties. Transformation projects are complex, the strategy of adding a new stack adds more risk but with a strong roadmap and vision, this approach delivers on the results.

## About Celfocus

Celfocus is a fast growing, global high-tech company with a reputation for developing and implementing successful projects and solutions that drive business value for the telecommunications industry.

By combining a deep business knowledge with the understanding of different technologies, while never losing sight of the customer experience, Celfocus built a reputation leveraged on an unexcelled track record.

Serving Clients in 25+ countries, Celfocus helps organizations transform their business in order to improve competitive positioning and ultimately their performance.

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