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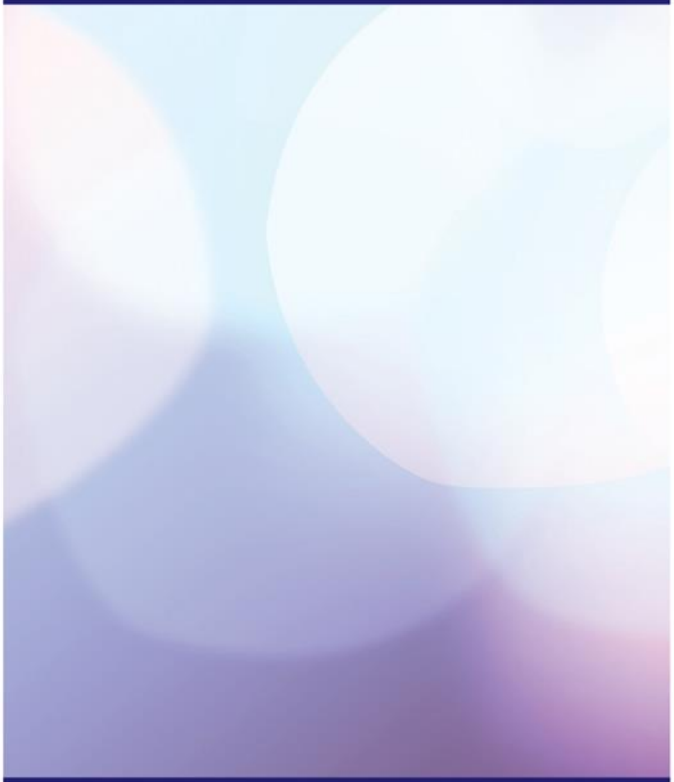

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Case Study

eircom’s novel BSS transformation: from separate service silos to integrated bundles and digital economy services

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Introduction

This case study describes the BSS transformation programme implemented by eircom. This process was designed to support a number of critical business changes, with the objectives of improving short-term revenue and operations, while preparing its operational environment to support expected new, non-traditional services in the future. It examines the business insights gained from the deployment and the benefits that the transformation brought to both eircom and its customers. To prepare this case study, Analysys Mason had multiple interviews with eircom personnel including Geoff Shakespeare (Managing Director of Technology) and Helene Graham (Chief Technology Officer).

About eircom

eircom is the largest telecoms operator in Ireland with over 2 million fixed and mobile subscribers across its retail and wholesale businesses.

It is the incumbent fixed-line operator, and is also the owner of Meteor (the third-largest mobile operator) and eMobile (which targets post-paid residential and business customers). eircom also recently launched a TV service called ‘evision’. eircom’s position as the largest PSTN provider means that it is exposed to the main trends in the Irish market: fixed–mobile substitution, declining fixed voice subscriptions and call volumes, and the rapid growth of cable broadband as alternatives to DSL. After years of incremental developments, eircom found itself with a large number of legacy systems, some of which had no vendor support, were expensive to maintain and could not support next-generation services. eircom decided that it needed to transform its current BSS landscape and prepare for future services that would be a mix of traditional and non-traditional services.

Near-term system requirements were driven by wholesale/retail separation and multi-play service bundle support

eircom has a growing portfolio of services including voice and broadband services delivered over fixed and mobile infrastructure. It has historically divided these services into three business units: consumer, business and wholesale. Some of the BSS systems in use to support these business units were several decades old and could not support multi-play bundles or next-generation services. Not only were the three business units unable to meet their own individual needs with the existing systems, they were also unable to create a single consolidated bill for customers subscribing to multiple services. eircom considered a BSS transformation programme around ten years ago. Several Tier-1 vendors and system integrator were assessed and eircom selected a Tier-1 system integrator for detailed systems analysis and requirements definition. However, after two years, with specification costs rising considerably and no actual deliveries having been made, the project was terminated. From that experience, eircom considered it a risk to go for a standard transformation project spread over the typical three or four years: there was a risk that the programme would have lost its relevance by the time it was completed and would have not added any capabilities during that time. Additionally, significant effort would be spent analysing eircom’s complex legacy systems without any actual deliverables – exacerbated by the prospect of several structural changes in eircom, and the launch of a new set of products on the horizon. eircom therefore decided to adopt a greenfield approach: eircom recast itself as a greenfield operator about to deploy an end-to-end BSS system. Its new plan called for setting up an entirely new system in parallel with the existing legacy systems, migrating subscribers at a later stage, and launching the new products on the new platform.

Around this time there was a change in ownership at eircom and the new owners stressed the need to offer bundled services. As noted by Geoff Shakespeare, “The future will be built around bundles.” Therefore a high priority was placed on deploying a platform that could produce a single bill for customers who had subscribed to more than one service. The new platform was expected to support multi-tenancy services to meet the needs of each separate business unit and offer cost reduction for the three business units through reduced headcount and opex. But this needed to be done in such a way as to meet regulatory requirements around security and segregation of data.

Beyond the need to consolidate bills, there was another transformation. Following the deregulation of the Irish telecommunications market, eircom has operated separate wholesale and retail entities. The proposed BSS systems had to be capable of supporting this separation of the business. Supporting multiple retail business units in an integrated fashion for retail and wholesale was a key capability in the selection process.

Selection criteria stressed quick, inexpensive implementation with multi-tenancy flexibility and excellent user interface

eircom made a decision not to employ a large software vendor for the new system, concluding that it would have significantly higher costs and complexity. Instead, the management team decided to go with a vendor that better matched its size and offered a ‘best-of-breed’ solution – one who would be heavily invested in the project’s success and who could offer a modern ‘concept-to-cash’ platform that could be deployed within a year.

Following a request for proposals, eircom shortlisted a number of vendors, then conducted detailed technical workshops with each one. Two of the most important considerations for eircom during the vendor selection process were the cost of implementation and time to market for new products during and after the implementation. Analysis showed that having a single multi-tenanted platform could significantly cut down on the time and cost for integration with fulfilment and inventory systems. This became a key factor in vendor selection, as the different business units could configure their software and work independently of each other. eircom wanted to have a wholesale platform that would integrate all services into one and then serve them out to different tenants with different cost and eligibility rules. The solution was also required to support the quick launch of new products and product bundles.

The user interface of the customer support systems was another key factor for eircom as many of its customer care agents had worked on the legacy systems for several years: a flexible, easy-to-understand interface would help in the training and migration process. eircom also looked at the ease of integration of digital services into the customer interaction lifecycle and simple reconciliation against third party services.

Out of the five vendors that were considered, eircom felt Infonova's R6 platform had the right architecture that offered an agile approach and was backed up by strong company expertise to successfully deploy the solution in the required timeframe.

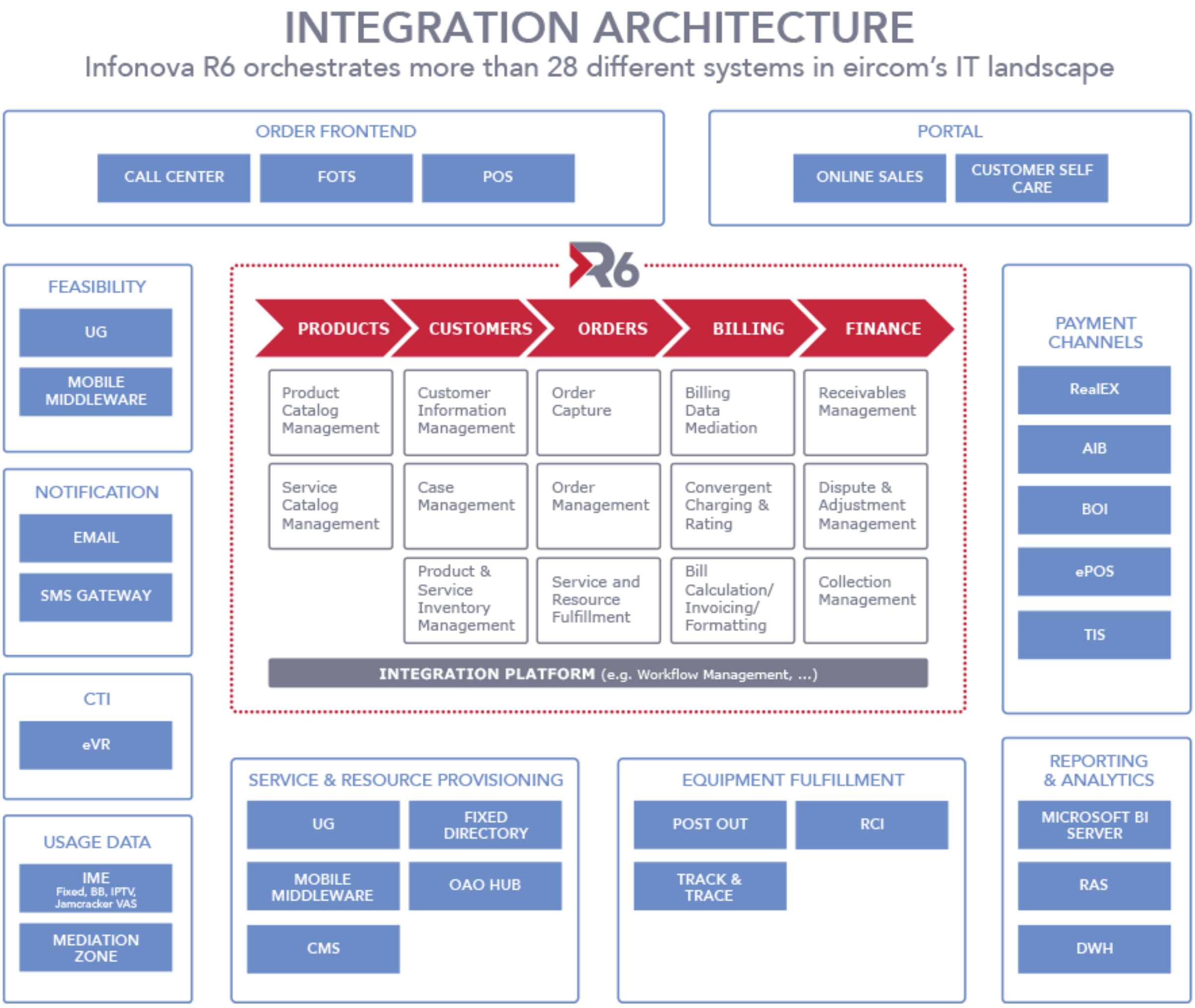
The deployment used a fast-track agile methodology, but aimed for minimal customisation

BearingPoint (Infonova's parent company) served as systems integrator for the deployment, supported by Infonova and eircom IT team.

To ensure quick deployment of the platform, eircom, BearingPoint and Infonova agreed an 'agile' methodology, and to adopt a greenfield approach that could deliver positive results quickly and without the need to spend time analysing legacy system platforms. The agile approach (characterised by an iterative and incremental development model) was new to eircom, whose staff (like those of most its suppliers) were used to the traditional waterfall approach (typified by sequential development process). After an initial period of adjustment, eircom found the agile approach to offer greater advantages.

One of the most challenging and complex part of the deployment was the integration of the wholesale gateway interface through the universal gateway system. The deployment process involved interconnecting multiple systems and automating relevant processes in a short timeframe. The overall integration architecture is shown in Figure 1.

Figure 1: Complex integration architecture for R6 in eircom [Reference: BearingPoint, Infonova, and eircom, 2014]


INTEGRATION ARCHITECTURE
Infonova R6 orchestrates more than 28 different systems in eircom's IT landscape
ORDER FRONTEND
CALL CENTER
FOTS
POS
PORTAL
ONLINE SALES
CUSTOMER SELF CARE
FEASIBILITY
UG
MOBILE MIDDLEWARE
NOTIFICATION
EMAIL
SMS GATEWAY
CTI
eVR
USAGE DATA
IME Fixed, BB, IPTV, Jamcracker VAS
MEDIATION ZONE
R6
PRODUCTS
CUSTOMERS
ORDERS
BILLING
FINANCE
Product Catalog Management
Customer Information Management
Order Capture
Billing Data Mediation
Receivables Management
Service Catalog Management
Case Management
Order Management
Convergent Charging & Rating
Dispute & Adjustment Management
Product & Service Inventory Management
Service and Resource Fulfillment
Bill Calculation/ Invoicing/ Formatting
Collection Management
INTEGRATION PLATFORM (e.g. Workflow Management, ...)
PAYMENT CHANNELS
RealEX
AIB
BOI
ePOS
TIS
SERVICE & RESOURCE PROVISIONING
UG
FIXED DIRECTORY
MOBILE MIDDLEWARE
OAO HUB
CMS
EQUIPMENT FULFILLMENT
POST OUT
RCI
TRACK & TRACE
REPORTING & ANALYTICS
MICROSOFT BI SERVER
RAS
DWH

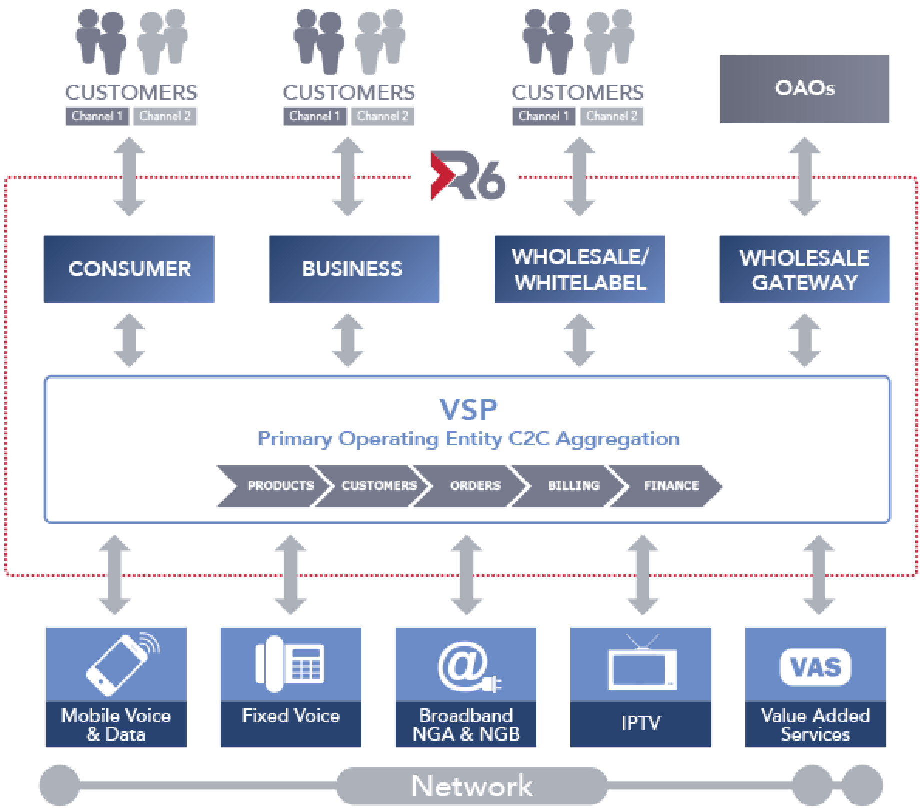
The first phase of the project supported bundles of PSTN, ADSL and broadband services for the retail provider. To ensure the timelines were met, product level customisations were kept to a minimum. This required that eircom ensured that the legacy processes were not carried over onto the new platform – the operations were adapted to the software, for the most part. The first phase of the deployment took 12 months – a remarkable achievement, considering the scope of the transformation project. eircom notes that a good working relationship with Infonova and BearingPoint, coupled with their technical expertise, ensured that the project was completed without significant delays, despite the challenges.

This greenfield deployment approach adopted by eircom, BearingPoint and Infonova is worthy of study in that it utilised an unusual agile transformational process to deliver a multi-tenant BSS system with advanced service bundling capabilities. Operators in developed markets facing challenging market conditions for revenue growth have identified service bundling as an important means of offering value and reducing customer churn. However we have not seen any other major operator begin such a transformation process around offering bundles to subscribers.

Now, later in its evolution, Infonova R6 is being used for all postpaid subscribers for multiple services (mobile, fixed, broadband/NGB, IPTV). The customer migrations onto the new platform were based on the ‘campaign churn’ approach – starting with new customers, and then targeting existing customers with new bundles on R6.

Prepaid mobile services are currently on a separate system, though there are plans to bring them onto the same platform (see Figure 2). The legacy systems have not yet been decommissioned and the plan is to move the wholesale unit also onto the new platform. Helene Graham noted that this was “an incredibly quick deployment, much faster than I have ever seen. Normal development methodology would have taken at least twice as long.”

Figure 2: Overview of target deployment of the Infonova R6 solution at eircom [Source: Infonova, 2014]


CUSTOMERS
Channel 1
Channel 2
CUSTOMERS
Channel 1
Channel 2
CUSTOMERS
Channel 1
Channel 2
OAOs
R6
CONSUMER
BUSINESS
WHOLESALE/ WHITELABEL
WHOLESALE GATEWAY
VSP
Primary Operating Entity C2C Aggregation
PRODUCTS
CUSTOMERS
ORDERS
BILLING
FINANCE
Mobile Voice & Data
Fixed Voice
Broadband NGA & NGB
IPTV
VAS
Value Added Services
Network

Future plans for the new platform include supporting a wholesale xVNO and integrating Amazon Web Services to add cloud services to eircom’s portfolio on the R6 platform (eircom is the exclusive provider for Amazon Web Services in Ireland). The platform will also form the basis of eircom’s move into many digital economy services in the coming years, each existing as a tenant in the multi-tenant environment.

Business benefits

- The new platform went live in 12 months and supported quad-play bundles in less than two years. The quick deployment brought significant business benefits in time and cost savings.
- The new integrated interface with ‘click-through’ action items has reduced average call handling times and improved the experience of customers dealing with customer service representatives. For example, one process which previously had 256 steps is now completed in two steps. eircom also notes that the new interface is simple and aids quick learning.
- The customer care agents were formerly trained on either fixed or mobile products as each required a different interface and had separate processes. Now, with support for quad-play bundles and a single interface for all products, agents can support other products according to the inbound traffic. This has improved flexibility and reduced support costs.
- With the new platform, eircom is able to move quickly on new revenue opportunities, such as supporting xVNOs, or offering bundling across the available services.
- With the legacy systems, eircom had no easy way to map which mobile customers also had a fixed connection and therefore were restricted in offering loyalty benefits to customers. With the new platform, it is easier to track of customers from an account level. This is expected to reduce churn in the long term.
- eircom is now able to apply credit scoring to fixed subscribers (which was previously only available for mobile subscribers). While this has caused a marginal increase in call times due to increased functionality, it is expected to generate longer-term benefits by reducing bad debt.

Learnings

- **Speed of implementation can be greatly increased by restricting customisation** to those features that have the greatest business benefits.
- **Transformation projects generally disrupt parts of existing culture** and this was evident in the operational changes for the customer care agents. Customer service representatives had to adapt from supporting a single type of product to supporting multiple products, albeit via a single system. In the long term, this is expected to lead to reduced support costs.
- **An array of disparate legacy systems and regulatory requirements may require significant customisation** of standard products. The initial assumption for eircom was that it would be an ‘80:20’ approach (80% standard product and 20% customisations), but the final percentage of customisations involved was somewhat higher. Looking back on the project, eircom would recommend to others to implement a strong governance system and work very closely with its systems integrator to reduce these customisations much as possible.

- The combination of a vendor invested in the company's success, the platform's flexibility and system integrator domain expertise are significant factors in the overall success of a transformation programme.
- The use of **'agile' methodology allows a greater degree of flexibility** by enabling operators to modify their business requirements intermittently during the project in line with market trends.

Summary

eircom deployed the new platform successfully, beginning service within a year of programme launch. The value from the transformation project has exceeded eircom's expectations. It now has a platform for the future that supports current and future needs, including wholesale/retail, complex multi-play offers, quick launches of new products, multi tenanted offerings and digital economy services.

About the authors

John Abraham (Analyst) is part of Analysys Mason's Telecoms Software research team and contributes to the *Revenue Management*, *Service Fulfilment* and *Customer Care* programmes. He has over five years' experience in the telecoms industry working for a worldwide OSS vendor and has implemented revenue management solutions for Tier-1 telcos in India, the Middle East and Europe. John has been with Analysys Mason since early 2012. He holds a bachelor's degree in computer science from Anna University (India) and a MBA from Bradford University School of Management (UK).

Mark H. Mortensen (Principal Analyst) is the leader of the BSS Practice and lead analyst for Analysys Mason's *Customer Care*, *Service Fulfilment, and Digital Economy Software Strategies* research programmes, all part of the Telecoms Software research stream. His primary areas of specialisation include customer self-care, automation of fulfilment processes, and data operations. The first 20 years of Mark's career were spent at Bell Laboratories, where he specialised in creating software products for new markets and network technologies and in the interaction of software with the underlying network hardware. Mark was Chief Scientist of Management Systems at Bell Labs, and president of his own OSS strategy consulting company, CMO at inventory specialist Granite Systems, VP of Product Strategy at Telcordia Technologies, and SVP of Marketing at a network planning software vendor. Mark holds MPhil and PhD degrees in physics from Yale University and has received two AT&T Architecture awards for innovative software solutions. He is also an adjunct faculty member at UMass Lowell in the Manning School of Business in Strategic Management.

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