



CARTESIAN

T-Mobile (UK)  
Customer Data Integrity  
Project

Case Study



## ***Executive summary***

T-Mobile International is one of the world's leading companies in mobile communications. As one of Deutsche Telekom's four strategic divisions, T-Mobile concentrates on the most dynamic markets in Europe and the United States. By the end of 2003, about 90 million people were using the mobile communications services provided by companies in which T-Mobile or Deutsche Telekom have a majority or minority stake. And all that over a common technology platform based on GSM, the world's most successful digital wireless standard. This also makes T-Mobile the only mobile communications provider with a seamless transatlantic service.

T-Mobile (UK) has built up an industry-leading revenue assurance team with strong process and control capability. In 2003 the team made a decision to implement a software solution targeting customer data integrity between their OSS/BSS platforms and network elements. The aim of the project was to tackle data integrity issues around provisioning which could cause revenue leakage where billing is out of step and stranded assets where the network is not correctly provisioned, whilst at the same time ensuring customer satisfaction, thereby reducing the number of calls to the call-centre and cutting churn.

Although T-Mobile (UK) had carried out similar audits in the past as a manual exercise, it was impossible to reconcile reference data for T-Mobile (UK)'s many millions of subscribers on a sufficiently frequent basis.

T-Mobile (UK) therefore decided to evaluate the available software tools on the market. This system selection process was characterised by T-Mobile (UK)'s knowledgeable and rigorous approach. Following a detailed RFI stage, selected vendors were asked to undertake a 'live' demonstration of their tools over a two-day 'Proof of Concept' session.

As a result of the selection process, T-Mobile (UK) chose Cartesian, a leading independent technical consultancy and software development business delivering products and services to the telecoms operators. Cartesian were selected both for the capability of their 'Ascertain' toolset and also for their flexibility and ability to work with T-Mobile (UK) as a team.

## ***The challenge***

The Ascertain system needed to be dimensioned to handle the very large data volumes extracted from the network, OSS and BSS systems. This currently involves reading well over 100 million records a day and building data sets of over 1.25 billion entries. In this way the system is able to provide, for the first



time, a consolidated view of all customers and their services, allowing T-Mobile (UK) to perform further detailed analysis and drill down to investigate any inconsistencies in the data.

In order to ensure complete comparability between the views of the various data sources that were being taken, the data synchronisation processes needed to be sophisticated. A key requirement on the Ascertain software therefore was to manage the scheduling, data collection and processing very carefully, as well as observing the allocated operational windows.

System testing involved close collaboration between all the various parties. Significantly, Cartesian provided full time on-site resource to support T-Mobile (UK) in their testing activities to ensure that any technical issues were quickly resolved. Naturally, user support as well as software support is to continue under an on-going support contract with Cartesian.

## ***Our approach***

The delivery project, termed the *Customer Data Integrity* (CDI) project, commenced with a detailed specification phase which involved Cartesian working closely with a number of stakeholders within the T-Mobile (UK) business to identify and capture the key requirements.

The aim of the project was to automate the reconciliation of customer reference data within and between the network elements, OSS and BSS platforms, comprising:

- 45 Ericsson Home Location Registers
- value-added service platform
- the Nexus Pre-pay platform
- Convergys RATER
- Amdocs Excalibur for customer billing

and to provide over 50 reports at both a detailed and a management level. These highlight and prioritise:

- customers present in billing but not activated
- customers activated but not in billing
- duplicates in the various source systems
- categorisation issues (for example post pay customers activated as pre pay and vice versa)
- feature level discrepancies (that is where a customer is active and being billed, but where there is a mismatch in the services provisioned and billed).



The implementation phase involved a focused team effort from a wide range of functions across T-Mobile (UK)'s business including Revenue Assurance, Operations, Networks, working closely not only with Cartesian but also with T-Systems who provide outsourced IT services. In addition, implementing the system also involved input from a wide range of other suppliers including Amdocs, Convergys and Ericsson.

### ***Benefits and achievements***

The Ascertain system has been accepted by T-Mobile (UK) and promoted into a live production environment. It is important to note that this system is regarded as an operational system and is therefore 'owned' by the operations team usually responsible for provisioning. It is therefore vital that the system has high reliability and operates under rigorous SLAs.

Cartesian's expertise in a combination of skill areas such as revenue assurance, OSS/BSS, network technology, business analysis and billing helped T-Mobile (UK) to forge a project team capable of delivering a stable and flexible platform for the future.

"For T-Mobile (UK), great service for our customers is paramount. Ensuring customer data integrity is a key part of assuring this great service. In addition, using Ascertain has benefits for us in terms of meeting OfCom approval requirements, increasing revenue and reducing operational cost. This solution improves the current in-house reconciliation tools and processes significantly. This was an excellent team effort involving key representatives across the business working in partnership with Cartesian and requiring the collaboration of suppliers including Ericsson, Amdocs, Convergys, and T-Systems" , said Julian Anthony, T-Mobile (UK)'s Rating Assurance Manager.

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If you would like more information about this case study, Cartesian's capabilities or how we might be able to help you, please contact Karen Hatty by email at [enquiries@cartesian.co.uk](mailto:enquiries@cartesian.co.uk).