

Nokia Siemens Networks Device Management Solution

Executive summary

1. Introduction

In today's markets, Communications Service Providers (CSPs) are being challenged on two fronts. While facing the need to provide traditional voice and messaging communications services, they also need to make Internet applications and content available to end users on as many different types of device as possible.

Ensuring customer experience and service take-up while reducing customer care and marketing costs

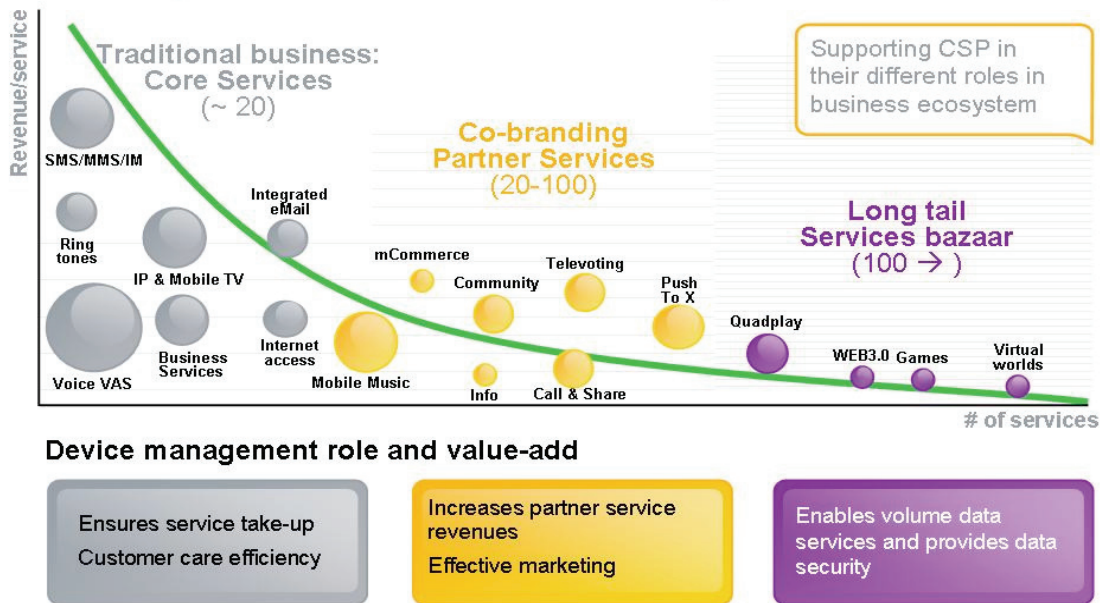


Figure 1: Device management role and value add in changing business environment

The number of devices, applications and configuration options is increasing, leading to a situation in which end users are changing devices more frequently, often through sales channels not owned by CSPs, such as the Internet.

To differentiate and stay competitive in this increasingly competitive and rapidly changing business environment, CSPs need to ensure an excellent customer experience and service take-up while controlling OPEX. The Nokia Siemens Networks Device Management solution can help CSPs to achieve these targets in the following areas:

- **Ensuring service take-up** through best customer experience and enabling **effective customer care** for traditional core services (including business/ enterprise services) and co-branding partner services.
- **Enabling business decisions and effective marketing** by providing insights into end-user behavior and needs, in both traditional core services (including business/enterprise services) and co-branding partner services areas.
- **Enabling data security** through advanced functions to support end-user generated content, ensuring volume in data services. These functions can be provided both in traditional core services and partner services areas.

2. Proposed solution

The Nokia Siemens Networks' Device Management solution helps CSPs to address these challenges and meet the needs of both consumers and business users.

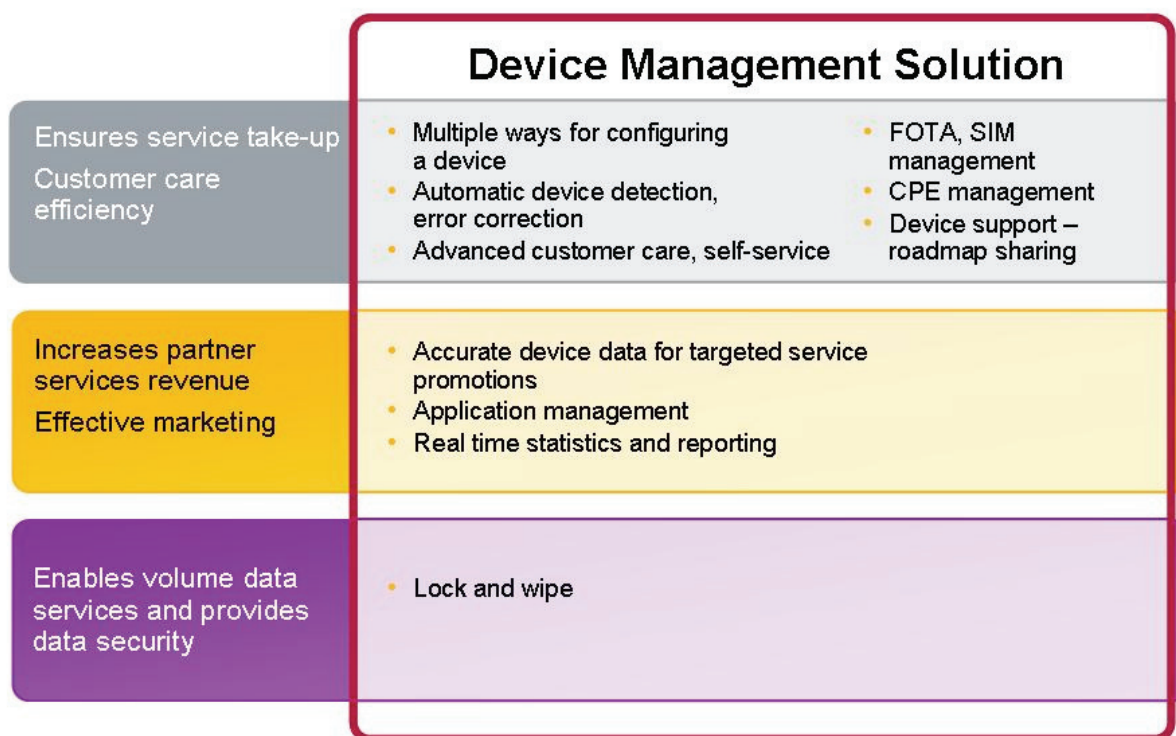


Figure 2: Nokia Siemens Networks Device Management solution key functionality

Our solution facilitates the remote management and configuration of settings, applications, security and firmware upgrades in devices connected to fixed line or wireless networks. The solution also provides information about device capabilities to other applications, allowing them to deliver a higher quality service. It also provides this information for statistical purposes. CSPs can use the solution to send correct settings to devices, allowing users to download applications and access other advanced, value-added services more easily.

The solution has a modular architecture, making it easy to adapt to different uses and requirements. The core component is the Nokia Terminal Management Server (NTMS), which can be extended with other management modules as needed.

Ensuring service take-up

Services should preferably work first time, an aim that is helped by the use of automatic provisioning and error correction. In turn, this helps improve the adoption of new services and increases the use of data services. Devices can be set up properly once

they appear on the network, without any specific operation needed by the end user or the CSP.

Customer care efficiency: proactive care, self care and improved personal assistance

Proactive care through automatic error correction offers a totally new perspective for customer care: a solution which solves problems automatically. No intervention is needed from CSP personnel, cutting costs dramatically. Since the correction is initiated by the error itself, subscribers don't have to do anything else.

In certain scenarios, it is often best to allow end users to use **self-care** options to manage their devices according to their needs. The Nokia Siemens Networks Device Management solution allows end users to retrieve configurations, download new firmware or applications and also to lock and wipe the device using web interfaces.

When users select the **personal assistance** option and call the CSP's call center, all the relevant information, such as device management functionalities and subscriber specific information, is presented to the customer care agents, leading to shorter calls and an improved service.

The solution reduces the time and competence needed by customer care personnel or mobile phone dealers to set up a particular brand of terminal correctly.

Increasing partner service revenue and effective marketing

User insights, including proper device information is a very important element in today's customer management and value ecosystem. Automated device detection and inventory are needed to give accurate and detailed information to both a CSP and its partners. This information includes device model and vendor distribution, number of users per device feature, supported features for each device, device change history and user behavior with the device.

Understanding this data helps CSPs make better business decisions and ensures efficient marketing by, for example, allowing proactive service promotions to targeted segments with capable devices. It can also help to estimate the right time to launch new products, for instance if there is a critical mass of capable devices in the addressed segment. It also helps the CSP to react quickly to changes in the device base.

It is also essential to be able provide an easy and effective solution to ensure that the new co-branded or partner services will reach the targeted subscribers. Our Device Management solution provides **application management** functions, with a wide range of possibilities.

Enabling volume data services and data security

Devices host more and more user generated information and there is a growing need for a solution which can protect users sensitive data and applications. With lock and wipe functionality, users can ensure that their data is safe and for their use only.

3. Ensuring customer experience while maximizing efficiency in customer care and marketing

The Nokia Siemens Networks Device Management solution ensures:

- Services work first time for consumers and business users
- Increased data service usage through automatic error detection and correction
- Maximum efficiency in customer care through automation (for example auto-correction for devices with incorrect settings), self-care options and an efficient personal assistance/call center solution
- Faster, automatic roll-out of new services
- Maximized efficiency in marketing and business decisions through user device insights
- Increased device and data security (device lock & wipe)
- Reduced device maintenance workload for enterprises, taking the pressure off the enterprise IT department

Proven carrier-class multi-vendor solution

- The solution is a proven carrier-class multi-vendor solution deployed to 49 customers worldwide
- Nokia Siemens Networks and Nokia have unique combined knowledge in building networks and devices
- This “all-in-one” solution addresses all device management related activities. It includes consumer and enterprise modules, real-time terminal capabilities and it is embedded and integrated with operator networks



Figure 3: The solution addresses the complete device management lifecycle

- Multi-vendor network and device support
- Reliable and professional integration and care services, available locally – with access to a unique worldwide competence pool: over 2,500 experts; wide experience of integrating carrier-grade solutions: over 500 system integration projects; field-proven project delivery methodologies.