

# Telenor pioneers a new way to bring the benefits of RFID to small and mid-sized companies.

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## Overview

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### ■ **Business Challenge**

*Intent on expanding its revenue base with high-value services, Norway-based Telenor set its sights on the fast-growing market for “machine-to-machine” (M2M) services, targeting small and mid-sized businesses for whom M2M have been out of reach due to cost and complexity, as well as larger enterprises looking for a low-cost, entry-level M2M solution.*

### ■ **Solution**

*Telenor teamed with IBM to create the first-ever hosted M2M offering. By creating a flexible, low-cost shared services platform, Telenor has drastically expanded the number of companies that can make a strong business case for offering M2M.*

### ■ **Key Benefits**

- *Increased wireless traffic over Telenor's network*
- *A new revenue stream for Telenor, leading to higher average revenue per user (ARPU)*
- *Enhanced ability to leverage the growth of M2M and move up the wireless value chain*
- *Improved ability to penetrate the small and mid-sized business market*



*Headquartered in Fornebu, Norway, Telenor is emerging as one of the world's fastest growing providers of mobile communications services, with approximately 130 million subscribers spread over 12 countries in Scandinavia, eastern Europe and Asia. Telenor also has a strong position in the growing Scandinavian market for broadband services and is the largest provider of television and broadcast services in the Nordic region.*

For providers of telecom services, intense competition has become a way of life. One of the biggest challenges they face is the need to establish a solid foundation for future revenue growth. While traditional voice service still represents the primary component of average revenue per user (ARPU) for the industry as a whole, voice is rapidly becoming a commodity service and the epicenter of aggressive price competition between providers. Thus, even as user volume rises, the “treadmill effect” of falling prices is making it increasingly difficult for providers to increase ARPU.

*“By enabling us to be the first Nordic telecom service provider to offer a hosted M2M service, IBM has helped us to open a new door for the rapid growth of the market.”*

– Rolv-Erik Spilling, manager,  
Telenor Business Norway

## ***A new business model opens a new market opportunity for RFID***

### **Business Benefits**

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- A new revenue stream for Telenor, leading to higher average revenue per user
- Enhanced ability to leverage the growth of M2M and move up the wireless value chain
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*“We looked at IBM’s thought leadership in RFID – as well as its clear ambitions in this field – and we concluded that it was a good opportunity to partner with the best in the industry.”*

– Rolv-Erik Spilling

That’s just one dimension of a deeper strategic imperative of telecom providers, namely that they carve out a sustainable role for themselves in an increasingly complex and diverse services environment.

### **Moving up the chain**

This is especially true in the realm of wireless communications, which has witnessed an explosion in the number and variety of services around messaging, music, video and gaming—to name a few. An important underpinning of this growth has been the efficient, reliable and affordable transport services that telecom service providers have been able to deliver over their networks. However, when it comes to future growth and profitability, most providers see the need to move beyond their role as a “pipe” in the services ecosystem and move up the value chain. This goal is perhaps the biggest reason providers are investing billions to build next-generation networks through which they can add value and thus extract a greater piece of the growing service pie. But they also realize that technology change is only half of the formula for success. The other half is a change in mindset, with service providers energized to find new opportunities and apply innovative approaches to capitalizing on them. Telenor ([www.telenor.com](http://www.telenor.com)), a diversified provider based in Norway, is showing how such an approach can fuel rapid growth and success in today’s global telecom market.

Telenor’s aggressive pursuit of opportunity has been most evident in the mobile communications arena, where it serves an estimated 130 million subscribers worldwide. It’s seen in the company’s expansion into a number of rapidly growing markets in eastern Europe and Asia. Another recently seen facet of the company’s vibrant growth strategy—and the focus of this story—is Telenor’s first-of-a-kind initiative aimed at developing the market for “machine to machine” (M2M) communications, which is expected to be among the fastest-growing wireless applications.

The main thrust of M2M communications is the use of RFID tags and sensors to track and monitor dispersed assets without human intervention. Some key uses of M2M include the tracking of shipments in transit, tracking vehicles within fleets and tracking inventory as it moves through a supply chain. The data captured by M2M systems range from basic geographic location (such as ensuring that a high-value shipping container is where it’s supposed to be) to more parametric data such as temperature (such as ensuring that a perishable shipment stays continuously within a prescribed temperature range).

Because of the cost and complexity of deploying M2M solutions, adoption has been mainly focused within larger companies, which are more likely to have the resources to build and manage the stand-alone solutions that typify M2M today.

### Fresh thinking on M2M

Telenor's insight was that many small and medium-size businesses in the same vertical segments driving large-company M2M adoption—transportation, utilities and retail, for instance—also have a compelling need for M2M capabilities, but lack the resources and in-house expertise required to make it happen. On paper, offering M2M as a managed service held the promise of overcoming these barriers, and, in so doing, unlocking a huge new source of revenue potential. This is amplified by the high probability that the European Union will issue new rules that require companies to improve their ability to track the conditions of perishable shipments while in transit.

To realize this potential, Telenor faced the technical challenge of taking what has traditionally been a custom, stand-alone solution and reincarnating it as a flexible, shared-services platform. In addition to the strong security that is critical to M2M, Telenor also needed to make the system easy enough to use for small and mid-sized companies with lean IT departments. More fundamental was the need to develop a viable go-to-market strategy and business model for what would be a truly first-of-a-kind offering.

IBM's key contribution was the design and development of a shared-service M2M platform that employs SOA features at its core. To accommodate a variety of customers and needs, the IBM La Gaude European Business Solution Center (EBSC) designed the M2M solution for maximum flexibility and versatility. This refers to the ability to gather remote sensing data from a variety of different sources (including—but not limited to—RFID), as well as to make that data accessible to other parts of the solution for purposes of business process automation, reporting and sharing. This role is played by IBM WebSphere® Enterprise Service Bus, which provides a simplified integration layer for sharing data between applications and services in the solution.

For example, in the case of a customer using RFID-based sensing, the solution uses IBM WebSphere RFID Premises Server to collect and filter RFID data from remote sites. From that point, the data can be used to trigger automated business process events through IBM WebSphere Process Server (also connected via WebSphere Enterprise Service Bus), or can be made available to IBM WebSphere Portal to generate customer reports on demand. The solution relies on Tivoli® Monitoring Server and Tivoli Enterprise Portal for end-to-end monitoring and runs on IBM System x™ servers, chosen for their inherent scalability.

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## Key Components

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### Software

- IBM WebSphere Enterprise Service Bus
- IBM WebSphere RFID Premises Server
- IBM WebSphere Process Server
- IBM WebSphere Application Server
- IBM WebSphere Portal
- IBM Tivoli Monitoring Server
- IBM Tivoli Enterprise Portal Server

### Servers

- IBM System x

### Services

- IBM Global Business Services
- IBM Global Technology Services—Integrated Communications Services
- IBM La Gaude EBSC

### Business Partner

- Intermec

### Timeframe

- Design and implementation: 4 months
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## Why it matters

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Determined to move up the telecom value chain, Nordic wireless giant Telenor teamed with IBM to create a new, hosted business model to deliver RFID-based asset management capabilities to the largely untapped small and medium-sized business segment. By simplifying and standardizing “machine-to-machine” applications, this new model promises to speed up the adoption of M2M by all segments.

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The customer engagement model developed by Telenor and IBM is a model of collaboration. Before a new customer is brought on board the hosted M2M solution, IBM Global Business Services conducts a thorough business process audit to ensure that the customer's processes are optimally configured to get the most out of the solution. The installation of wireless equipment at the customer premises is performed by IBM Global Technology Services, while Telenor personnel are responsible for integrating remote wireless devices back to the host platform. IBM Global Technology Services also performs integration as needed to generate custom reports (such as temperature readings for perishable products) or to automate processes (such as triggering alerts when temperatures go out of range).

### **M2M for the masses**

The notion that M2M services can improve a company's supply-chain transparency, decision-making and process optimization—to name just a few—is beyond doubt, and a big reason it's projected to grow faster than any other wireless service. But before Telenor and IBM broke ground with a hosted M2M offering, it was also beyond the reach of most companies due to cost and complexity. What changed this formula was fresh thinking all around. IBM technology, expertise and access to strong wireless partners enabled Telenor to create a new business model for offering M2M services. By the same token, Telenor's strategic vision ultimately promises to change the business case for companies seeking the benefits that M2M technologies have to offer.

Rolv-Erik Spilling, manager of Telenor Business Norway, sees the success of the M2M initiative as a testament to Telenor's strategic vision and to IBM's track record of helping to translate bold visions into solid businesses. "By enabling us to be the first Nordic provider to offer a hosted M2M service, IBM has helped us to open a new door for the rapid growth of the market."

### **For more information**

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