

White Paper

Slicing up the M2M revenue pie

How to get your share and boost your business

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What will you learn?



- How can M2M communication help you acquire additional revenue sources?
- What types of companies are active on the M2M market?
- What constitute the typical features of an M2M platform and how can they support your enterprise?

■ Introduction

In our everyday lives we are using more and more automated and intelligent machines. These include vending machines, new energy meters in homes, monitoring equipment and many more. Such machines operating remotely can provide important information (e.g. various measures or alarms). They also need to be managed and monitored. Increasing numbers of machines are able to do this automatically and without the control of their owners. This sounds dangerous, especially if we imagine a scenario in which all our household appliances are capable of sending such information to the producer regarding our lifestyles and behavior. Fortunately the situation hasn't reached this stage, yet. Machines initiate communication in order to provide vital information, save time and money, and it is rather employed by such entities as energy meters, vending machines or monitoring equipment.

What is the main benefit of such automatic communication? The owner of the machines need not visit them personally to verify their operation or read certain measures manually. Such machines can automatically send the information to the owner or to another machine that processes the data further. Such Machine-to-Machine (M2M) communication is cheaper, faster and brings new possibilities.

■ Why should you be interested in M2M?

M2M communication is developing into an interesting business opportunity for telecom operators struggling to maintain or increase their revenues. As the revenue growth from voice services' is declining and the market is saturating, the M2M segment displays business potential for acquiring additional revenues. The number of connectable machines is five times

greater than the amount of humans (source: European Telecommunications Standards Institute [ETSI]), although the number of machines currently connected is extremely low.

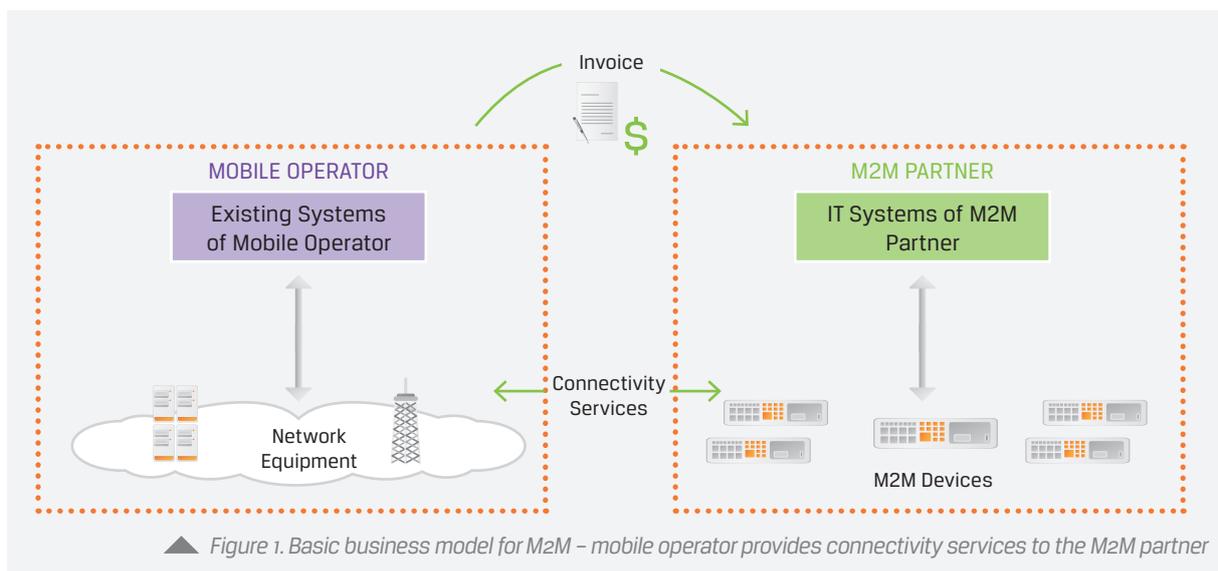
Figure 1 presents a very basic M2M communication business case from a mobile operator's perspective, where connectivity is provided to the M2M partner.

Machine-to-Machine communication is cheaper, faster and brings new possibilities.

As the level of M2M traffic increases and devices become more common, the price of individual hardware components falls, boosting M2M popularity even further. According to Gartner, the average price of an M2M module (one that is attached to a connectable machine and contains the necessary communication capabilities such as SMS/GPRS) will amount to approximately 20€ by the year 2011. Compare this to the average price of a similar module in 2007 – which was almost 40€, and we can see that the hardware cost has almost halved.

In addition to the reduced hardware costs, the declining price of data services renders more M2M business scenarios viable. Scenarios that a couple of years ago were deemed useless due to high costs, are now an attractive business opportunity. Instead of taking the market share away from mobile operators, the companies that use M2M services introduce new business opportunities for them.

Other aspects important for operators should also be considered. The churn rate for M2M subscriptions is extremely low, the machines can be controlled in groups, and the data from



M2M is a new and promising area which is developing very rapidly, with machines becoming an increasingly important customer segment for mobile operators.

machines does not usually overwhelm the network. Additionally, most of the M2M subscriptions do not require complex customer service. Of course, the ARPU of an individual M2M subscription is lower than that of one person, but the amount of connectable machines is higher.

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■ A multiplayer game

Telecom operators are not the only players in the Machine-to-Machine world. At this moment in time they offer connectivity services to M2M partners who own or operate these machines. The second group, M2M partners, represent various business sectors – for example, vending machine operators, electricity suppliers, monitoring companies and many more.

If the operator is only offering M2M connectivity services, the revenue stream in most cases originates solely from monthly fees for M2M subscriptions. However, there are numerous other possibilities and services which can be offered to M2M partners helping operators to maximize this revenue.

Figure 2 presents a scenario whereby a mobile operator gains additional revenues from the services it offers to the M2M partner. Compare this to Figure 1, in which the mobile operator only provides connectivity services – the difference between the levels of revenue can be quite significant.

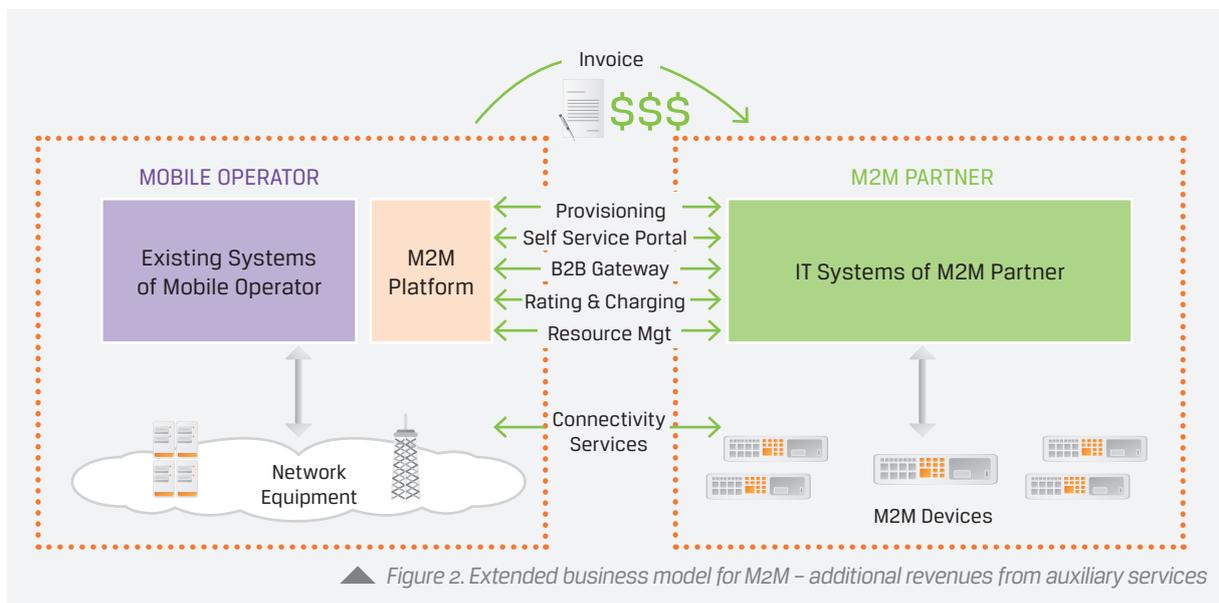
The most substantial difference is in offering services like provisioning, self service portals, B2B gateways, rating, charging services and resource management. This decreases the complexity of the IT systems required by M2M partners, enables faster and easier startup of M2M businesses and simplifies the management of M2M subscriptions. Such services can be delivered by the mobile operator through the platform, which operates like a gateway (or service enabler) placed between existing mobile operator systems and various M2M partners. Delivering such services to M2M partners facilitates mobile operators with increasing revenue.

■ New roles emerge – M2M enablers

In addition to the operators that are expanding into M2M, new types of players have arisen as a result of M2M business growth – M2M enablers offering services to M2M partners.

It is important that operators can add the M2M platform to their existing systems.

A typical M2M enabler can be described as the owner of the M2M platform (depicted in Figure 2) delivering services to various partners and in most cases with a connection to more than one mobile operator or ISP.



▲ Figure 2. Extended business model for M2M – additional revenues from auxiliary services

An M2M enabler's business model bears many similarities to the business model of a Mobile Virtual Network Enabler (MVNE), already known in the telecommunications world. Both types of business offer the necessary network connectivity (that can be obtained from the MNOs), back-office operations and IT platforms allowing end operators to concentrate on their core businesses.

Cooperation with M2M enablers or with mobile operators offering the appropriate services can boost the development of M2M business.

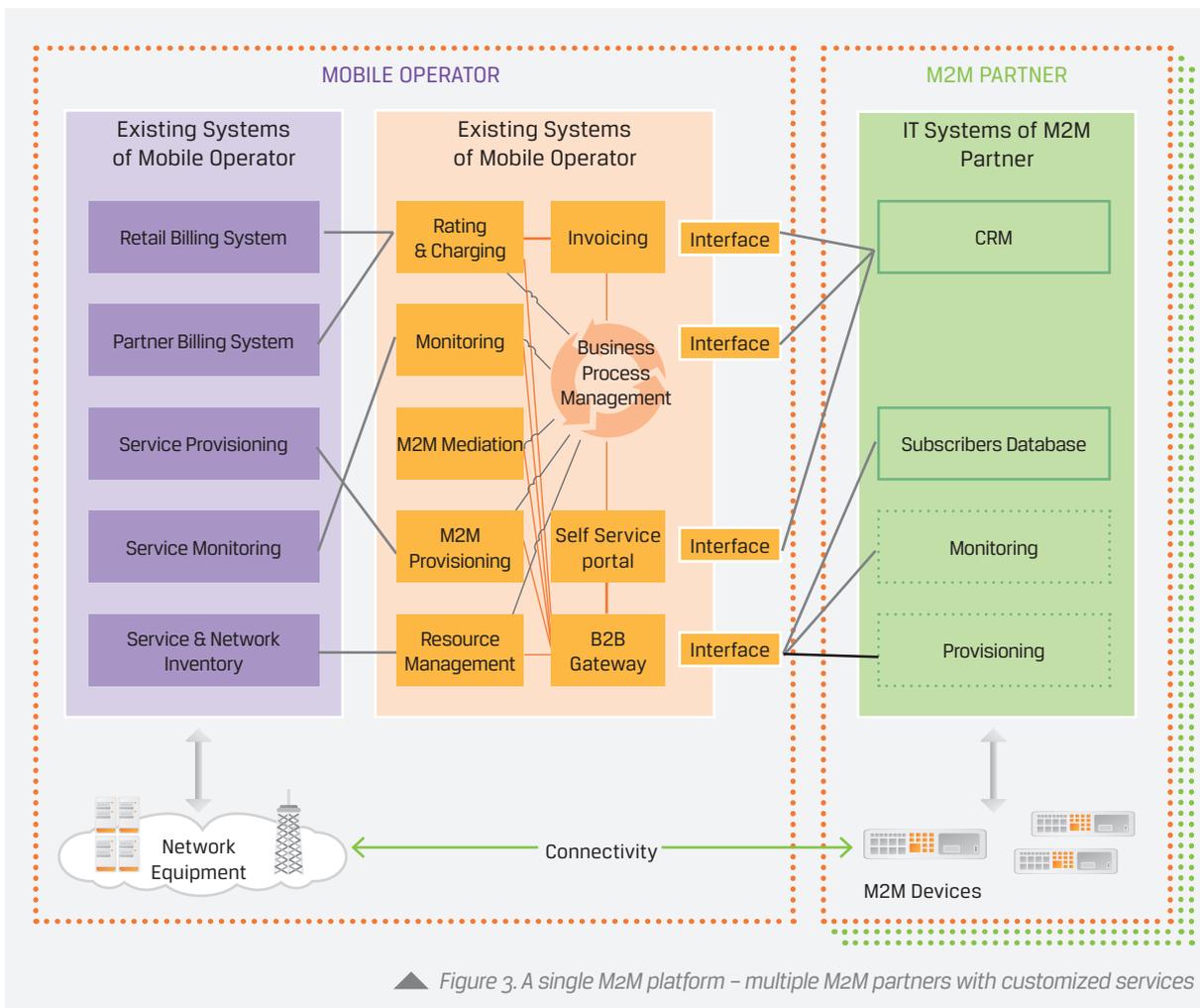
The enabler's role in the M2M business is very important, especially when considering how many of the new M2M partners and enterprises on the market derived from industries other than telecommunications (e.g. utilities, security and automotive markets) and that lack the sufficient expertise to cooperate closely with mobile operators.

What should you look for in an M2M platform?

What features are essential for an M2M platform used by a mobile operator or an M2M enabler providing services for M2M partners? Figure 3 presents an example of a business case, in which an M2M platform is integrated with the existing systems of a mobile operator and which exposes services to M2M partners.

Let's take a look at the typical features of an M2M platform and how they support the business of a mobile operator or an M2M enabler. With these features, they can both attain additional revenue by offering advanced services to their M2M partners. These features include:

- **Provisioning of services** such as activation and deactivation of SIM cards; the M2M partner does not need to perform complex integrations with mobile operator systems, yet the mobile operator can provide easy-to-use interfaces allowing the partner to perform mass provisioning operations on M2M SIM cards on an ad hoc basis



▲ Figure 3. A single M2M platform - multiple M2M partners with customized services

- **Data mediation** for the M2M partner to collect, unify and correlate data from the machines (e.g. meter readings) and then send it for further processing
- **Rating of events** allowing the mobile operator to charge the M2M partner for the service usage, as well as provide charging services for end users of the M2M partner as a value-added service; in this case the M2M partner does not need to have their own billing system
- **Integration with inventory** as a repository of M2M SIM cards and M2M equipment with customized structure, lifecycle management and logistics
- **A self-service portal** for M2M partners and end-customers enables the operator to lower costs by shifting the focus of customer service to the web
- **Mass SIM card management** enables M2M partners to control the SIM cards (such as mass activation or deactivation in a specific building or area) on their own, without involving the mobile operator
- **B2B gateway** making it possible to safely expose all features of the platform to multiple partners with easy-to-use interfaces (e.g. Web Services) and integration of the M2M partner systems

It is important that operators can add the M2M platform to their existing systems similarly to the way in which the MVNE platform can be added to the MVNOs infrastructure. With

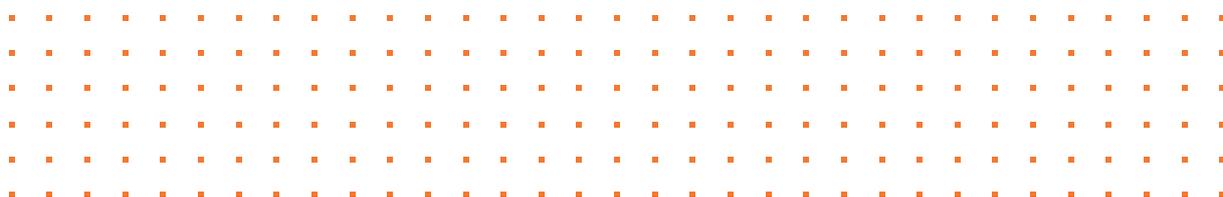
the M2M platform, mobile operators can enter the M2M market without performing complex changes to their existing systems, limiting the risk and increasing potential profitability.

Conclusions

The M2M revenue pie is likely to be substantial in size, but it is still an open issue as to who will get the biggest piece. Telecom operators and M2M enterprises are not the only players that will benefit from M2M business growth. M2M enablers may also play a key role in this market and can benefit directly from it.

Cooperation with M2M enablers or with mobile operators offering the appropriate services can boost the development of M2M business. With this approach partners and enterprises can focus on their business without the need for investment in complex IT systems which are not directly connected with their core business.

Mobile operators and M2M enablers should prepare their platforms for the offering of services to M2M enterprises and the managing of M2M services and traffic. The current systems designed for the managing of human-to-human traffic may not be capable of processing this increased amount of data and the different characteristics of these new "customers". To reap the rewards of the M2M business, appropriate adjustments to the underlying IT platforms are required, and it is important to make these adjustments early on in order to be a step ahead of the competition.



■ About Comarch

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