

A business case for Machine-to-Machine (M2M) adoption ...

... Simplicity is the foundation of success.

"Comtech has already gained substantial experience in the rapidly developing M2M business across a broad range of applications, with an impressive list of users. This is reflected in the maturity of their communications solutions, which manage to combine quick wins for customers with flexibility to cater for future needs. M2M solutions work best when they can respond to user needs as they develop over time, thereby enhancing competitive advantage while maximising return on investment. Comtech has recognised this and built its comprehensive range of M2M products accordingly."

e-principles, January 2004

What is the status of your remote machines and how do you get real-time information from them?

Will you ever maximise efficiency, cost savings and revenues, if you cannot get a rapid return on your investment to make it happen?

Comtech will deliver early M2M success to your business through simple, robust and proven solutions.

Solving problems across product lifecycles – a business case

Do you have problems outside of your control, where remote devices are installed, maintained and operated by other partners within your value-chain? Manufacturers, Systems Integrators, Value Added Resellers (VARs), Service Operators and the end customer are all fundamental to the success of your business. However a combination of issues contribute to poor customer service and lost business as a result of the design, manufacture, installation, maintenance and general operation of the equipment. Some of the common problems are:

- Downtime issues
- Slow response to field problems
- Multiple calls to fix the same problem
- Reliability problems
- Operational and supply chain in-efficiencies
- Poor logistics
- Abuse of use
- Security issues
- Slow manual collection of data, often out of date.
- Lengthy update/roll-out process for new information

Simple information can be derived from any remote device to help resolve the problems across the value-chain, for example: -

- How is the equipment used?
- Does it need maintenance?
- Is it about to fail?
- How long has the equipment been running?
- Has it been operated outside of permitted limits?
- Are the consumables running low and what needs replenishing?
- Who used it when and are they authorised?
- Is the information displayed at the remote machine up to date?

- When was it last calibrated and serviced?
- Has it been configured and set up correctly?

However, can you gain access to the equipment to collect the data? Not only are the machines in remote locations but in many cases manufacturers are one step removed, where;

- Machines are maintained by service operators
- Retailers and end customers own the equipment, and see no immediate value in collecting and supplying data.

The solution is to automate data collection from the machine through the use of M2M technology. Direct collection of real-time data holds value to all within the value chain for differing management reasons. Making the data available on an ongoing service basis provides the foundation for new revenue streams and business models. Are you looking for new ways of enhancing your business?

Type of Company	Typical benefits	Example markets
Manufacturers	<ul style="list-style-type: none"> Increased product reliability Migrate from asset to leased to sell Wrap maintenance into a leased sell Increase machine performance Pay per usage Validate warranties (installation, service, use) Reduced support overhead Asset tracking and management Increased energy efficiency Ease of upgradability in the field Improved diagnostic and fault analysis 	<ul style="list-style-type: none"> HVAC Vending machines Gaming machines Domestic Appliances Ticket machines Industrial machines Elevators & escalators Office business machines Security & access control Power & energy Utilities ...
Consumable Suppliers	<ul style="list-style-type: none"> Improved inventory management Improved logistics and transport Improved supply chain management Detect unauthorised consumables Health & safety audit trails Brand Management Automatic purchasing and re-plenishment Tracking consumables Reduced energy consumption Reduced losses and waste 	<ul style="list-style-type: none"> Vended products (drinks, food, tickets ...) Business systems (toner, paper, fluids ...) Beverage & food (syrups, fast food ...) Petro-Chemicals (oil, petrol, ...) Utilities (Electricity, water, gas ...)
Service Operators (Lease, install, maintain, service, deliver & restock consumables)	<ul style="list-style-type: none"> Minimise downtime Prioritise maintenance visits Reduced cash shrinkages Fast response to field problems. Pay per usage Reduced cost of service and maintenance Preventative maintenance Reduce customer support overhead Eliminate paper trails Increased customer satisfaction & retention Ease regulatory reporting 	<ul style="list-style-type: none"> Vending machines Gaming machines Security systems Office business machines Photo-Kiosks Power systems Utilities Water & waste water Transport Beverage & food HVAC systems ...
Retailers	<ul style="list-style-type: none"> Monitor response to promotions Brand management Deliver advertisement content Health & safety audit trails Improved security Lower energy consumption & costs Increased customer satisfaction & retention 	<ul style="list-style-type: none"> Restaurants Pubs Shops Fast food Service stations Hotels Supermarkets ...
End Customer	Increased service	Leisure

	Increased loyalty Increased quality Increased security Increased health & safety Increased satisfaction	Office Industrial Retail Domestic Transport ...
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The benefits gained from M2M technology may differ from market to market and from customer to customer. Comtech's solutions allow the harnessing of the benefits of M2M technology in any market and with any remote machine. Examples of the benefits derived are:

Access to true real time information

Increased efficiency

Reduced operational costs

Fast response to field problems

Ability to send information to the remote machine

Increased revenues

Increased service

Increased customer retention

Ongoing revenues through service

Audit trails

Asset tracking

Increased reliability & quality

Preventative maintenance

Reduce paper trails

Can you deliver a fast Return on Investment (ROI)?

Clearly there are many benefits that M2M technology brings to a business. Value can be gained from simple solutions such as fast response to field problems, through to more complex enterprise integration and a change in business model to deliver service.

For all of the tangible visions that M2M technology paints, current reality shows that customer's projects often fail to succeed if a Return on Investment (ROI) cannot be demonstrated in the short-term.

- Does your management team share your vision on the benefits of M2M technology?
- Do you know how you will use the technology to change the way you do business?
- Do you know what you really want?
- Will your customers see value in your new product-set and business proposition?
- Do you have a budget to deliver a roll-out product?

- Have you identified a solution to meet your needs that enables you to demonstrate a return on the investment and thus deploy it in a production environment?
- Have you identified the partner that has products and solutions tailored to meet the differing demands that arise throughout the lifetime of a product?

Can you answer YES to each of these questions? If not, it opens the possibility of extended costly developments, which often fail to succeed as management divert budgets to more profitable projects. This is the nature of business.

Quite simply, it is not enough to be seen to be using the latest technology - success will only truly happen if:

- You are solving a problem that couldn't be solved before, or
- You are improving the current product offering, and
- The return on the investment to add the latest technology can be justified

This is further complicated by the fact that M2M communication is likely to be a technology outside of your expertise! How can you scale the time to market, let alone the return on investment when the technology is outside your core competency?

Comtech, early pioneers of M2M solutions across many markets, has the answer ...

Keep it simple

The more complicated that a solution is, the more difficult it is for businesses to understand the benefits and the returns. New technology often brings about fundamental change, which in itself can build barriers of resistance within organisations: -

- Understand the core problems that need solving which could give greatest returns.
- Identify simple solutions that achieve fast time to market with minimal investment
- Through small-scale trials demonstrate and prove your business model
- Put in place solutions that bring better use of and seamless integration with existing technology. Enhancement rather than replacement is the key.

This early feasibility process enables others to share your vision and understand the benefits and returns. With solid foundations of early success this enables

- Ease of sign-off for budgets to be assigned for roll-out products
- A roadmap of products to be specified based on early trial feedback
- Roll-out products to be deployed

There is no single M2M solution that meets the needs of all. This is particularly true when addressing M2M adoption and volume deployment needs, where the fundamental drivers are different: -

- **Adoption**, where customers are seeking to **prove** a business model that can yield a healthy Return on Investment. The emphasis lies with fast time to trial/market at minimal investment and risk. As a potential new or changed business model this is largely a management and/or marketing driven solution.
- **Volume Deployment**, where customers have **proven** their business model, delivered growth returns and need optimised costs. The emphasis lies with delivering roll-out needs through higher integration, volume cost reduction and optimum functionality.



Some applications bypass the Adoption phase and go directly into Volume deployment. However, this is usually as a least risk extension of existing technology where the business model is clearly understood and volumes demand high integration to meet existing market costs. Where new markets and business opportunities are being created there is a fundamental need for structured adoption.

About Comtech

Comtech target products and services to achieve controlled steps forward where customers gain early M2M successes. This serves as a solid foundation for migrating to more integrated solutions. Solutions can be scaled through to complex enterprise integration when the customers' business and markets are ready. The secret lies with enhancement to the existing business and systems rather than wholesale changes.

Comtech bring a wealth of solutions from simple M2M enablement of the remote machine using modern products through to "off the shelf" end-to-end products at system level. We have adopted a box-module-chip philosophy that offers fast time to market for ease of M2M adoption with an integration roadmap suited to volume M2M deployment.

Our competitors need to build broad and complex alliances to deliver the scalable end-to-end solutions that we offer, where risk and simplicity are compromised. Comtech offer a single partnership encompassing;

- **M2M hardware** for adapting remote machines to a communication environment
- **M2M software** for gathering data and managing remote machines
- **M2M services** for delivering information and services to users and machines

Leverage Comtech's patented and proven technology and its years of M2M expertise to dominate your chosen market together.

A selection of the target markets where Comtech have delivered robust and proven solutions include: -

Gaming machines

Vending machines

HVAC

Utility metering

Condition monitoring

Elevators & escalators

Ticket machines

EPOS terminal

Automated electronic signs

Security systems

Access Control

Photocopiers

Traffic control

Domestic appliances

Many applications ...

ANY MACHINE - ANY MARKET - ANYWHERE