



Dell Internet of Things:
Customer stories and resources



“Dell OEM Solutions has a track record of expertise in helping customers securely manage their solutions from the endpoint to the data center, so it’s natural for our team to lead for the Internet of Things at Dell. In fact, Dell OEM Solutions has been partnering with industrial automation and manufacturing companies to bring their IoT solutions to life long before the term became popular.”

Joyce Mullen, VP/GM Global OEM and IoT Solutions, Dell

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Make the Internet of Things real. Today.

Helping the world's most successful companies take their intellectual property to market.

Dell cuts through the hype with a pragmatic approach to the Internet of Things (IoT) and helps its customers leverage existing equipment and data to make the most of current technology investments. Dell customers can take advantage of analytics scenarios that span gateways, data center and cloud, leading to analytics-driven action. The Dell portfolio, combined with a rich partner ecosystem, deep vertical and domain expertise, and a collaborative approach, enables Dell to provide end-to-end IoT solutions.

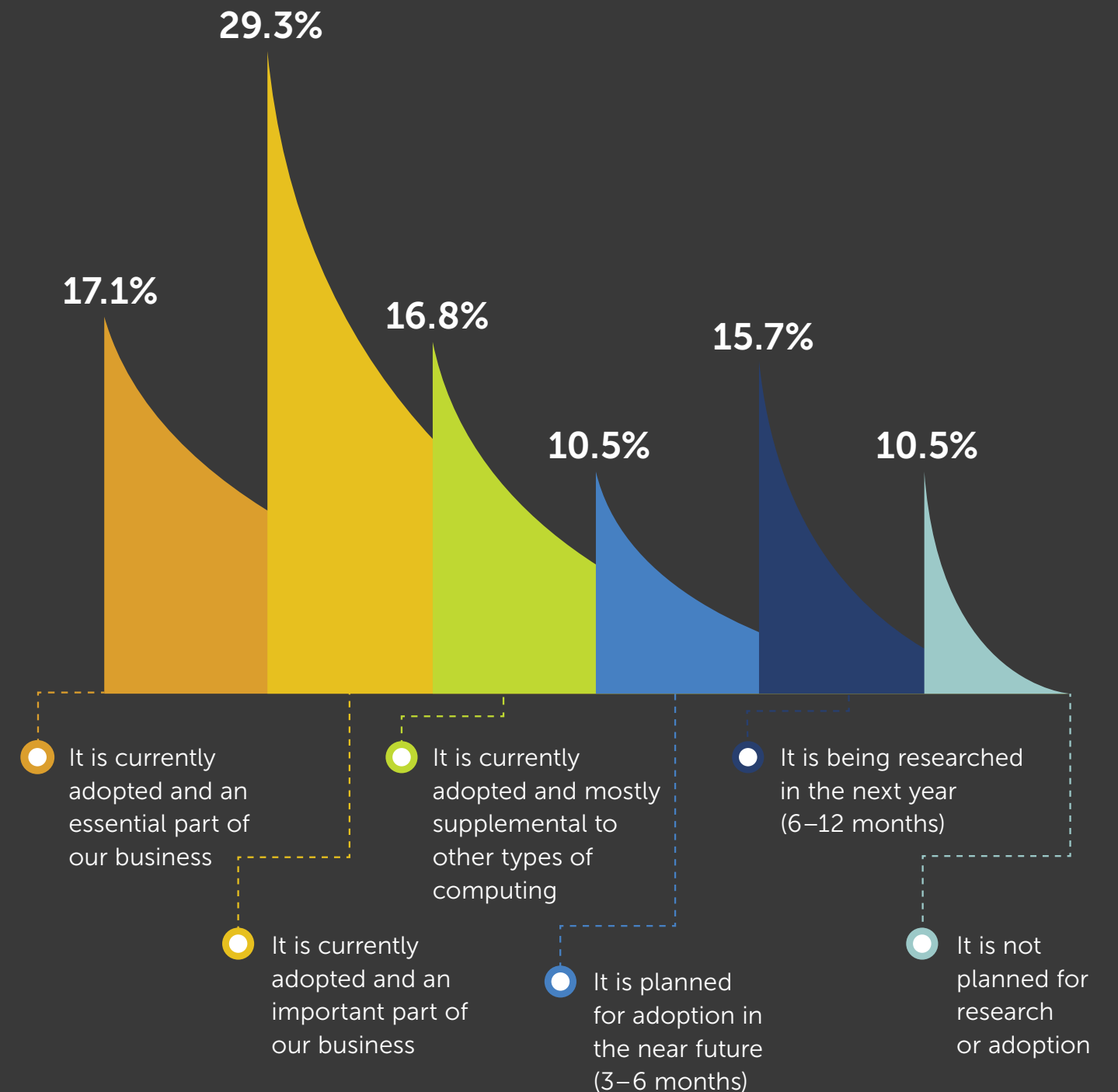
At Dell we:

Architect for analytics. Dell's analytics, data management and infrastructure solutions provide the power to ensure your IoT solution enables analytics where it makes sense — at the edge, in the data center or in the cloud.

Think security first. With award-winning security tools and expertise, as well as a holistic approach, Dell helps ensure your infrastructure and data remain safe, secure and private.

Provide choice and flexibility. Dell's broad portfolio of key IoT technologies, combined with a rich partner ecosystem, allows you to build the right IoT ecosystem for your unique needs. With a comprehensive solution portfolio and pragmatic approach, Dell reduces the complexity, lowers the risk and increases the speed of deploying IoT initiatives.

Organizations implementing IoT





Chitale Dairy



Business need

Chitale Dairy wanted a high-speed, highly available network that could support a massive growth in operations and the automation of its milk production process.

Solution

The company, running a Dell virtualized platform, upgraded its infrastructure with Dell Networking switches to deliver high performance and redundancy across its production plant.

Benefits

- Innovative research and development is driven by data captured at every level.
- Milk production achieves efficiencies through network virtualization.
- Animal management improves with increased access to information.
- Support simplifies technology management in remote areas.

Key facts

Simplifies

technology
management

Achieves

production
efficiencies

“We get 100 percent availability from Dell Networking, eliminating delays that impede our daily delivery schedule for fresh milk products. Network virtualization on Dell means complete protection on an open platform, while delivering 10-gigabit network speeds.”

Vishvas Chitale, Director, Chitale Dairy, India



Featured

Solutions

- Data center virtualization
- Networking

Services

- Support services

View the Full [Chitale Dairy](http://dell.com/customerstories) Case Study at dell.com/customerstories



ELM Energy



Business need

ELM Energy wanted to make independent energy sources — including solar panels and turbines powered by wind and water — an affordable and reliable option for more customers.

Solution

The company built an innovative, microgrid control solution based on an intelligent Dell Edge Gateway that's device-agnostic, affordable, reliable and fast enough to provide real-time insight and control.

Benefits

- Pollution and energy consumption are reduced.
- Renewable energy is viable for a diverse customer base.
- Local, centralized control boosts ROI and minimizes risk.
- Innovative offerings can get to market faster.
- Numerous protocols and devices are supported.

Key facts

Improves

resource
virtualization

Simplifies

microgrid
management

“We showed the company how it can cut harmful emissions by 90 percent and utilize its solar investment by deploying our FieldSight Controller that runs on the Dell Edge Gateway Model 5000.”

Aron Bowman, Vice President of Product Development, ELM Energy



Featured

Solutions

- Application and data integration
- Internet of Things
- OEM solutions

View the Full [ELM Energy](http://dell.com/customerstories) Case Study at dell.com/customerstories



Emerson



Business need

To help companies automate production, processing, and distribution, Emerson wanted to create a process control solution that simplified the complex operations its customers face.

Solution

Emerson built its DeltaV process control system utilizing Dell servers, workstations, storage arrays and thin clients. It also has Dell engineer, manufacture, test and configure the Dell machines to meet DeltaV systems performance and stability requirements — and provide 24x7 OEM services.

Benefits

- Emerson provides a leading-edge process-control solution.
- Customer companies can have a consistent solution for their global operations.
- Flexible solution options include virtualization.
- Customers reduce total cost of ownership and improve lifecycle management.
- Companies can implement mission-critical solutions quickly and easily.

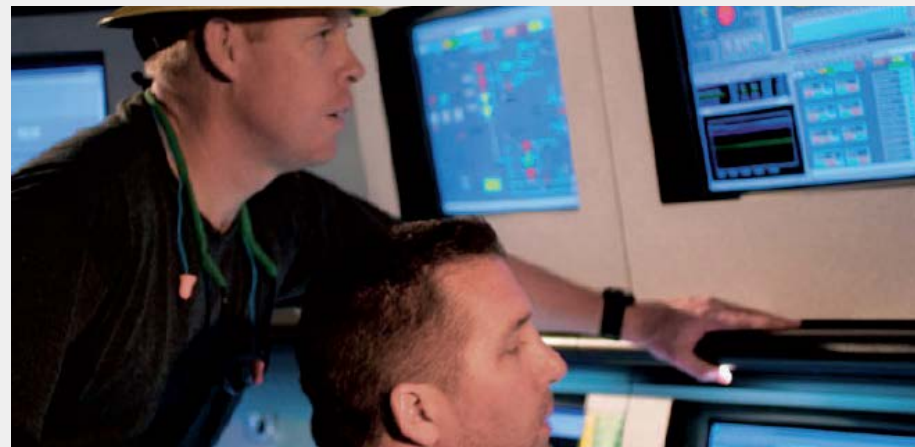
“We consider Dell a partner, rather than just a vendor that provides hardware. Dell understands the specialized needs of our marketplace and meets our requirements for extremely high availability.”

Dave Imming, VP of Systems Marketing, Emerson Process Management

Key facts

Improves
lifecycle
management

Reduces
total cost of
ownership



Featured

Solutions

- Servers
- Workstations

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Fujian



Business need

Fujian University of Technology wanted to create a high-performance cloud platform to mine and analyze real-time data on local road usage, and deliver it to residents and government offices.

Solution

The university built an end-to-end Dell cloud platform based on Dell PowerEdge blade and rack servers featuring Intel® Xeon® processors, Dell Storage with Intel Xeon processors, Dell Networking switches and VMware® vCloud®. Performance of the solution is optimized through the support of Dell Deployment Services and Dell ProSupport Plus.

Benefits

- Successfully drives a Smart City strategy to manage rising vehicle numbers.
- Helps residents travel more efficiently by reducing congestion.
- Delivers transportation updates in real time with in-memory database.
- Reduces running and management costs by using a converged IT platform.
- Maximizes performance with highly responsive support.

“We are helping Fujian province develop its Smart City Transportation strategy with Dell’s end-to-end cloud platform. The data shows how our roads are being used and will help shape transportation policy and services at a time when the number of vehicles is rapidly increasing.”

Professor Zou Fumin, Vice Dean, College of Information Science and Engineering, Fujian University of Technology

Key facts

Maximizes
performance

Reduces
running
costs



Featured

Solutions

- Big data
- Cloud solutions
- Converged infrastructure

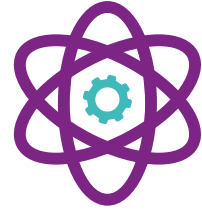
Services

- Enterprise deployment
- Enterprise support

View the Full [Fujian](https://dell.com/customerstories) Case Study at dell.com/customerstories



Internet of Bees



Business need

Responding to a request from an employee group focused on environmental initiatives, the team at Dell's Internet of Things lab in Limerick decided to build a technology-powered beehive. The aim was to showcase the role of IT in expanding our knowledge of and contribution to the planet.

Solution

Guided by experienced beekeepers, the team built a smart beehive on the roof of the building, powered by a mixture of Dell Internet of Things technologies and key partner solutions.

Benefits

- Smart beehive provides vital data about the health of its colony.
- Project is helping educate employees, young people and the broader community about big data, environment and Internet of Things.
- Hive makes a vital contribution to Dell's 2020 Legacy of Good Plan.
- Proof of concept should help inform future bee research projects.

"Adding the IoT and data streaming to our Dell hive delivers a modern twist and creates an opportunity to see the bees close up, yet from a distance."

Irene Power, Global Support and Deployment Director, Dell EMEA

Key facts

Enables

remote
monitoring

Provides

end-to-end
insight



Featured

Solutions

- Internet of Things
- Big data

View the Full [Internet of Bees](https://dell.com/customerstories) Case Study at dell.com/customerstories



JTG Racing



Business need

The JTG Daugherty race team used manual processes to analyze data from in-car systems and test rigs, making it difficult to complete necessary changes in time for races.

Solution

Using ruggedized Dell notebooks, team engineers were able to collect, analyze and share data in real time and make required changes quickly to ensure that the car delivers optimal performance.

Benefits

- Real-time data improves race day performance.
- Improved collaboration drives success.
- Rugged computers withstand tough racing conditions.
- Custom tooling delivers competitive edge.
- Mission-critical support guarantees uptime for critical systems.

"We can collect and process data from test runs immediately with our ruggedized Dell notebooks and quickly make changes that shave vital thousandths of a second off our lap times."

Bobby Labonte, Driver, JTG Daugherty Racing



Key facts

Delivers

competitive
edge

Improves

race day
performance

Featured

Solutions

- Mobile computing
- Rugged solutions

View the Full [JTG Racing](https://dell.com/customerstories) Case Study at dell.com/customerstories



KMC



Business need

KMC Controls sought to develop a cost-effective solution for connecting buildings, making them more energy efficient and safe, and helping managers and owners intelligently understand and manage their properties.

Solution

The company worked with Dell OEM Solutions to create KMC Commander, an integrated building-control product based on the Dell Edge Gateway. The solution secures and processes data at the edge of the network and sends it to the cloud or data center for further analysis and action.

Benefits

- Transforms building automation with an innovative IoT solution.
- Helps building owners and managers gain actionable insights about energy use, temperature trends and equipment run times.
- Reduces time-to-market by up to 50 percent.
- Drives business growth in an easier and more cost-effective way.

“We feel this product has the potential to transform the building automation industry. By partnering with Dell OEM, we have a plug-and-play IoT solution that helps facility managers easily integrate automated system data from different locations throughout their buildings.”

Nate Kehr, Marketing Manager, KMC Controls

Key facts

Transforms

building
automation

Reduces

time-to-market



SK Telecom



Business need

To help companies leverage IoT technologies and improve their processes, SK Telecom wanted to create an IoT big data appliance for advanced analytics.

Solution

The company created an IoT appliance with the support of Dell OEM Solutions, which provided Dell PowerEdge servers at the heart of the solution, as well as branding and support services.

Benefits

- Enables greater business focus with 50 percent time saving from OEM relationship.
- Customers have greater confidence with widespread support network.
- Strengthens brand identity by customizing OEM solution in corporate color.
- Allows planning for Asia-wide sales drive thanks to Tier One supply chain.
- Delivers further savings in the future with value-adding OEM services.

“Our customers tell us that they’re able to reduce production flaws by successfully processing data from machines and crunching information by using our Dell OEM Solutions-based IoT appliance.”

Kim Ki Nam, Manager, Enterprise Solution Business Division, SK Telecom

Key facts

Drives

business
growth

Strengthens

brand
identity



Featured

Solutions

- Dell Edge Gateway 5000 Series



Featured

Solutions

- OEM Solutions
- Servers
- Big data

View the Full [KMC](https://dell.com/customerstories) Case Study at dell.com/customerstories

View the Full [SK Telecom](https://dell.com/customerstories) Case Study at dell.com/customerstories



V5 Systems

Business need

To fuel growth and innovation, V5 Systems needed to increase market exposure and evolve its intelligent security platform to support more use cases, requirements and technologies.

Solution

The company expanded its platform by engaging Dell OEM Services to provide intelligent gateways for use at the edge of networks, global support services for clients and software from Nexenta.

Benefits

- A portable, self-powered platform for IoT innovation.
- Customers can monitor any area for threats in real time.
- Global customers have more choice with one point of contact.
- Dell's IoT ecosystem boosts credibility and growth.

"As a startup, part of our challenge is being recognized and understood in the marketplace. We've gained instant credibility and we've been able to bring our solutions to distribution much faster by working with Dell."

Mike Grosswald, Vice President of Global Sales and Strategic Partnership, V5 Systems



Key facts

Simplifies

data
storage

Delivers

real-time
insight



Dell Edge Gateway 5000 Series



Generate business-driving insights faster with secure, reliable IT/OT integration.

The Dell Edge Gateway 5000 Series for IoT connects legacy and modern equipment to the cloud.

Purpose-built for the building and industrial automation verticals, the Dell Edge Gateway 5000 Series for IoT can be mounted on a wall or DIN rail at the edge of the network, enabling you to collect, secure, analyze and act on data from multiple disparate devices and sensors — even those in extreme environments.

Powered by an Intel® Atom® processor, the Dell Edge Gateway 5000 Series also has the capacity to perform analytics locally, close to the devices and sensors generating data. Sending only meaningful data to the cloud, data center or a master gateway, this powerful solution reduces bandwidth and money that might be spent transmitting every unprocessed data set.

Connect, extract and analyze data from both your legacy and modern systems. With expanded input/output (I/O) and support for diverse communication protocols through certified independent software vendor (ISV) middleware, the Dell Edge Gateway 5000 Series easily integrates into almost any environment.



Featured

Solutions

- IoT Gateway 5000 Series
- Software

Services

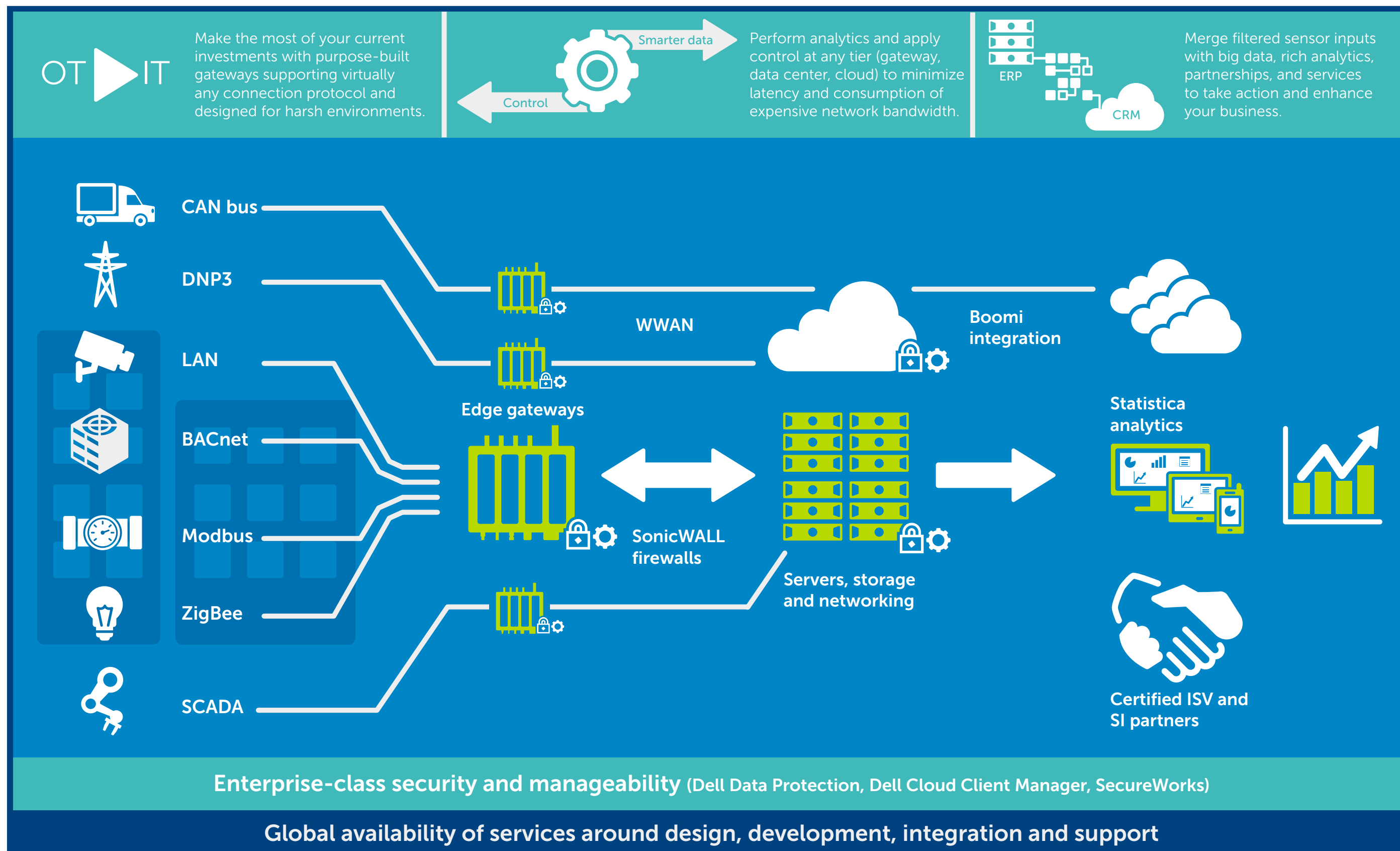
- Support services

View the Full [V5 Systems](https://dell.com/customerstories) Case Study at dell.com/customerstories

Learn More at Dell.com/iotgateway

Dell IoT framework

Enabling flexible, distributed IoT solutions that can be tailored to specific verticals and use cases.





Dell Embedded Box PCs 3000 and 5000



Innovate, deliver and
commission solutions faster.

**Dell's heritage brings enterprise-class support, reliability
and flexibility to the industrial PC market.**

Embedded computers must run reliably 24x7 for extended deployments, and withstand both higher and lower temperatures than ordinary PCs. Industrial, telecom, vehicular and other use cases can bring high amounts of shock, vibration, moisture and electromagnetic radiation.

Dell has almost 10 years' engineering experience in rugged devices. Dell Embedded Box PCs are fanless, highly reliable devices that can be used "headless" or with a keyboard, mouse and monitor.

Flexible and powerful, with many input/output options, they run on powerful multi-core Intel processors, which allow them to perform analysis, and control data aggregation and graphical display at the edge of the network. They communicate securely with back-end or closed-loop control systems.

Learn More at Dell.com/embedded



Resources

Take some time to review the documents below, or **contact a Dell IoT solutions expert** to find out how we can help you bring your solution to market.

Solution Blueprint:

[Increasing Manufacturing Performance with the Internet of Things \(IoT\)](#)

Brochure: [Dell Edge Gateway 5000 Series](#)

White Paper: [The Value of Bringing Analytics to the Edge](#)

White Paper: [Analytics at the Edge for Real-Time Production Processes](#)

Automated Response Blueprint:

[Five Steps to Improving Facility Operations Through Automated Demand Response](#)

Predictive Maintenance Blueprint:

[Six Steps to Using the IoT to Deliver Maintenance Efficiency](#)

White Paper: [Security for the Internet of Things](#)

Video: [Goal Control Wins With the Internet of Things](#)

Video: [KMC Controls Connects Buildings to the Internet of Things](#)

Video: [Drive Better Internet of Things Insights with Edge & Core Analytics](#)

Video: [Making the Internet of Things Real](#)

Video: [Childress Racing Harnesses the Power of IoT](#)

Video: [Optimize IoT Analytics with an Edge Gateway](#)

“The Internet of Things represents a \$3 trillion opportunity for growth. Delivering on that opportunity takes a tall stack of technology — both informational technology and operational technology. We are a global, Tier 1, end-to-end IT solutions organization that has vertical industry expertise and a deep bench of partners to enable the effective IoT solutions our customers require.”

Andy Rhodes, Executive Director of Commercial IoT, Dell



@DellOEM



Dell Internet of Things

Start small. Build fast. Connect what matters.
Learn more at **Dell.com/iot**

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