Dell Internet of Things:
Customer stories and resources

DELL | intel®

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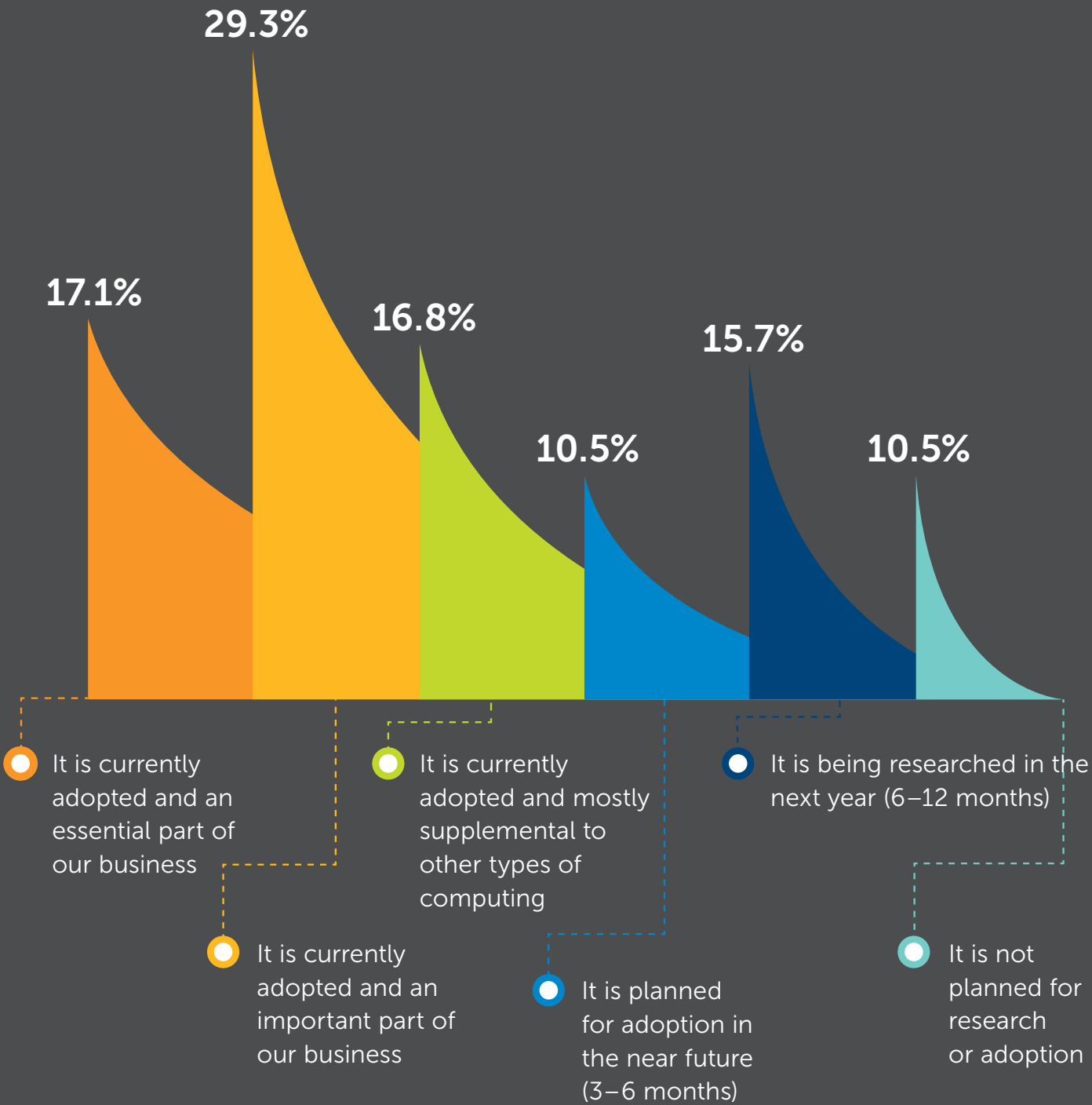
Think security first.
With award-winning security tools and expertise, as well as a holistic approach, Dell helps ensure your infrastructure and data remain safe, secure and private.

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

29.3%

17.1%

16.8%

15.7%

10.5%

10.5%

It is currently adopted and an essential part of our business

It is currently adopted and an important part of our business

It is currently adopted and mostly supplemental to other types of computing

It is planned for adoption in the near future (3–6 months)

It is being researched in the next year (6–12 months)

It is not planned for research or adoption

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

Solutions featured

Solutions
• Data center virtualization
• Networking

Services
• Support services

View the Full Chitale Dairy Case Study at dell.com/customerstories

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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 make 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.

Key facts

Delivers

competitive
edge

Improves

race day
performance

"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

Solutions featured

Solutions
• Mobile computing
• Rugged solutions

View the Full JTG Racing 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 24/7 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.

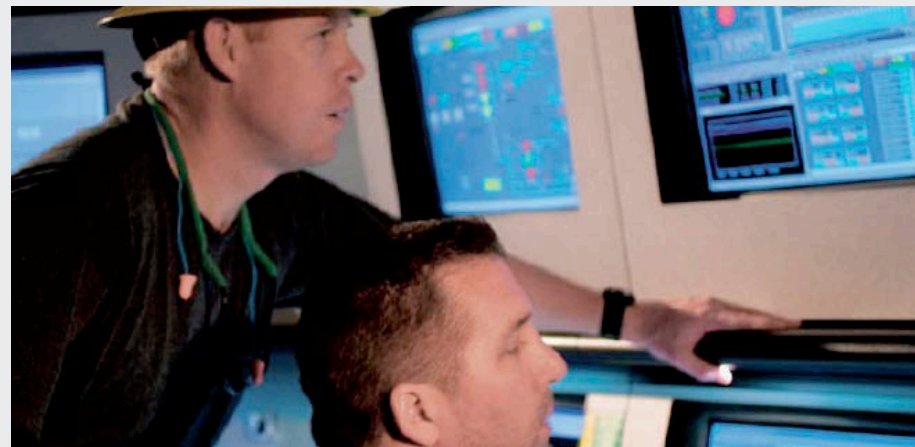• Companies can implement mission-critical solutions quickly and easily.

"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

Solutions featured

Solutions
• Servers
• Workstations

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

Solutions featured

Solutions
• Big data
• Cloud solutions
• Converged infrastructure

Services
• Enterprise deployment
• Enterprise support

KMC

KMC CONTROLS

Business need

KMC Controls sought to develop a cost-effective solution to connect buildings, make them more energy efficient and safe, and help 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

Solutions featured

Solutions

• Dell Edge Gateway 5000 Series

View the Full **KMC** Case Study at **dell.com/customerstories**

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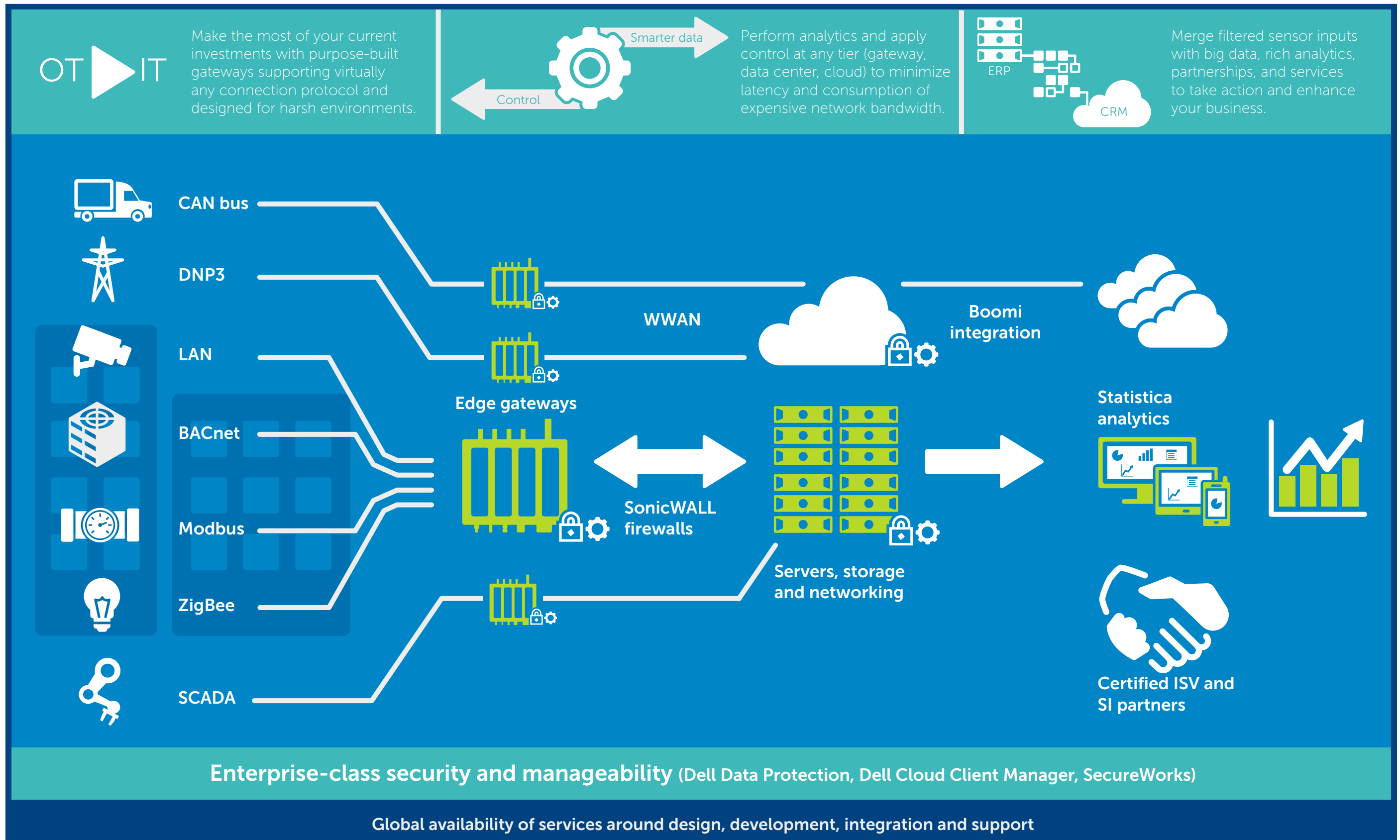
Connect, extract and analyze data from both your legacy and modern systems. With expanded input/output (I/O) and support for diverse communication protocols through certified independent software vendor (ISV) middleware, the Dell Edge Gateway 5000 Series easily integrates into almost any environment.

Learn More at **Dell.com/iotgateway**

Dell IoT framework

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

OT ▶ IT

Make the most of your current investments with purpose-built gateways supporting virtually any connection protocol and designed for harsh environments.

Smarter data

Control

Perform analytics and apply control at any tier (gateway, data center, cloud) to minimize latency and consumption of expensive network bandwidth.

ERP

CRM

Merge filtered sensor inputs with big data, rich analytics, partnerships, and services to take action and enhance your business.

CAN bus

DNP3

LAN

BACnet

Modbus

ZigBee

SCADA

WWAN

Edge gateways

SonicWALL firewalls

Boomi integration

Statistica analytics

Servers, storage and networking

Certified ISV and SI partners

Enterprise-class security and manageability (Dell Data Protection, Dell Cloud Client Manager, SecureWorks)

Global availability of services around design, development, integration and support

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.

Manufacturing Solution Blueprint

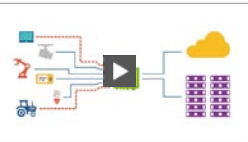Brochure: Dell Edge Gateway 5000 Series

Brochure: The Evolution of Industrial Automation

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