### Annual investor conference

### Uday Yadav, Chief Operating Officer - Industrial Sector March 2, 2018



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## Today's themes

- Unique enterprise-wide capabilities position us to grow from electrification
  - Today's focus is Eaton's vehicle electrification opportunity and strategy
- Our competitive, industry-leading portfolio is creating new growth opportunities
  - Investments and portfolio repositioning enabling share gain
  - Winning and growing content on future platforms
  - Discovering new applications with proven technology
- Asia Pacific growth strategy well underway
  - Gaining share with our footprint investments
  - Expanding with distribution channel and strategic partnerships



# The Industrial Sector serves a diverse set of end markets

#### **End-market mix**





#### **Hydraulics**

- Construction & mining
- Agriculture
- Oil & gas
- Commercial vehicles
- Industrial machining
- Material handling
- Industrial processing
- Recreation
- Filtration
- · Hydraulics aftermarket

#### Vehicle

- Commercial vehicles
- Passenger vehicles
- Medium-duty trucks
- Off-highway

#### Aerospace

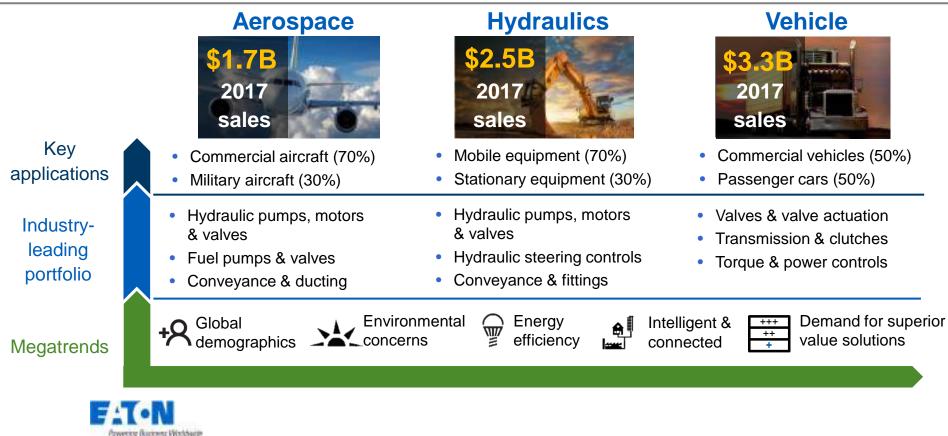
- Commercial transports
- · Regional jets
- · Business jets
- General aviation
- · Civil rotorcraft
- Commercial aftermarket
- Military transports
- Military fighters
- Military rotorcraft
- Military aftermarket
- Light-duty trucks
- Agriculture
- Construction & material handling
- · Vehicle aftermarket

#### **Geographic mix**

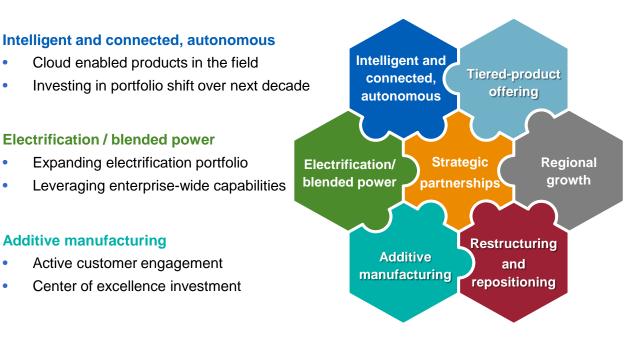
### Rest of World 42%

United States 58%

### **Industrial Sector overview**



# Dynamic industry shifts are creating opportunities for growth



#### **Tiered-product offering**

- Expanding addressable market
- Delivering superior customer value

#### **Regional growth**

- Localization of products
- Customer tailored solutions

#### **Restructuring and repositioning**

- World-class manufacturing footprint
- Improving customers' supply chain

#### **Strategic partnerships**

- Gaining scale & competitiveness
- Product & geographic adjacencies

#### Driving organic growth by continuing to invest in our core capabilities





Provening Barrows: Withheath



# Electrification is impacting all industrial markets at varying rates of adoption



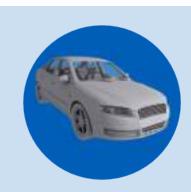
Hydraulics

Mobile markets transitioning



#### Aerospace

Migration to More Electric Aircraft



### Vehicle

Shift towards electric vehicles

Eaton has the unique capabilities and pedigree to provide blended power solutions



# By 2030, Eaton is targeting to be a leading global player in vehicle electrification

- xEV adoption is gaining momentum
- As voltages increase, power management becomes critical
- New addressable market of \$33B
- Invest ~\$500M over ~5 years
- Current revenues of ~\$275M
- Increased content per vehicle up to 10x
- Leveraging enterprise and purchasing scale

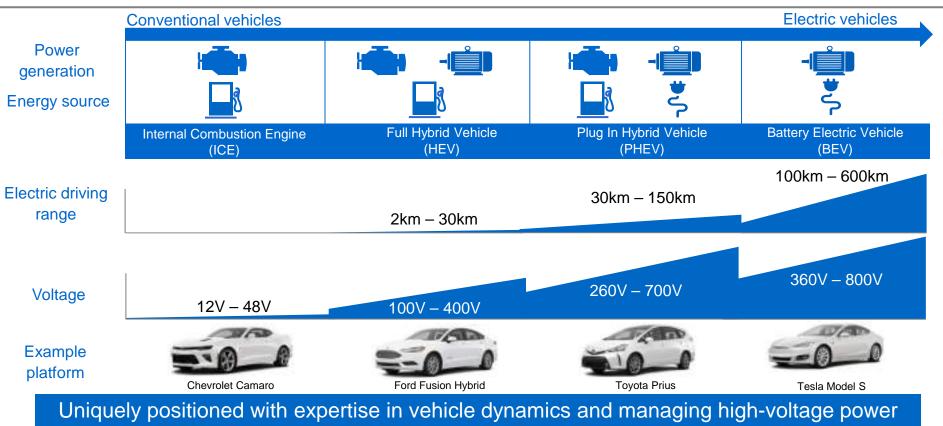
Eaton's deep expertise makes us a trusted partner to customers Vehicle domain knowledge Understand vehicle dynamics **Electric power capabilities** Managing electrical power Power electronics 8

Launching new eMobility segment and targeting additional revenue of **\$2 - \$4 Billion** by 2030

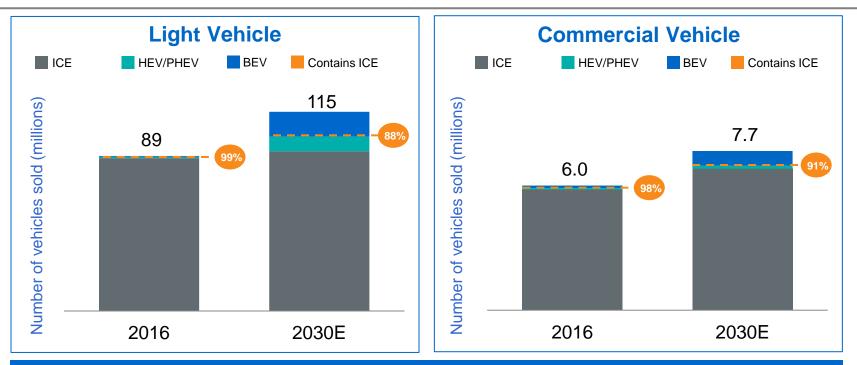


xEV - All Electric Vehicles

## Range of electric vehicle architectures



## We expect growth in all electric vehicle platform architectures by 2030



#### Projecting modest ICE growth with new 23M<sup>1</sup> xEV opportunity by 2030

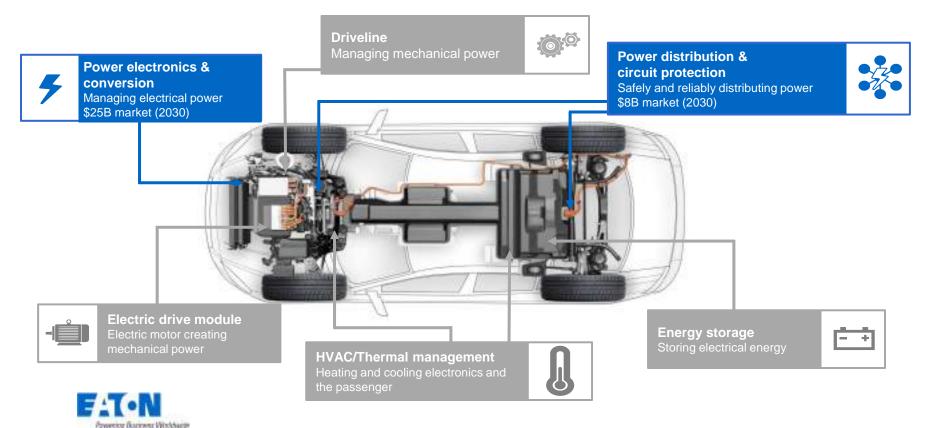


<sup>1</sup>Eaton base case projections ICE – Internal Combustion Engine HEV – Hybrid Electric Vehicle PHEV – Plug-in Hybrid Electric Vehicle

BEV - Battery Electric Vehicle

xEV – All Electric Vehicles (HEV, PHEV, BEV)

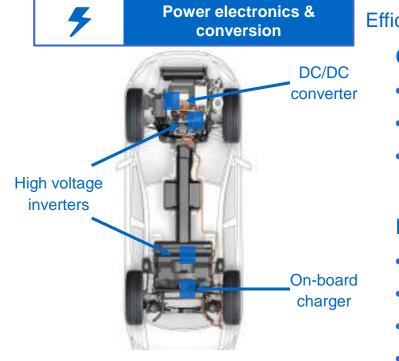
## Electric vehicle passenger car systems at a glance



## Eaton has the vehicle domain expertise, integration knowledge and infrastructure in place today



## We have a comprehensive power electronics portfolio...



Efficiently inverts and converts power and controls energy flow

#### **Customer needs:**

- Converting power from the grid, to battery, to vehicle
- Managing high-quality power to traction and auxiliary motors
- Packaging high-power density components

#### Eaton competencies:

- Recognized as a global leader in power conversion
- Deep expertise in industrial power electronics
- Transferable future technology from Electrical Sector
- Strong innovation pipeline in intelligent power management

...and the expertise to optimize vehicle performance, driving dynamics and range

# High-quality power distribution and circuit protection technologies...



### Power distribution & circuit protection

 Fuses

 Power Distribution Unit

 Contactor

 High voltage connectors

Intelligently distributes power to multiple sources and provides circuit protection

#### **Customer needs:**

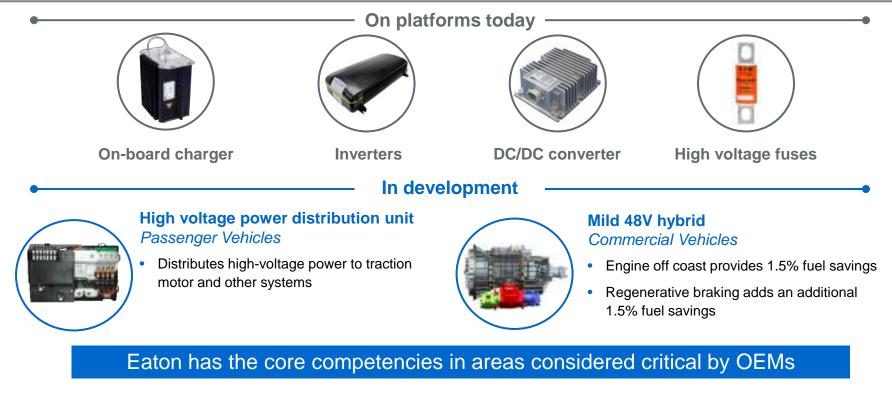
- Protection of expensive electronics and energy storage
- Efficient distribution of electric power
- Preventive health monitoring

### Eaton competencies:

- Deep expertise in compact circuit protection devices
- Wide range of power distribution and protection solutions
- Intelligent and predictive health monitoring technology

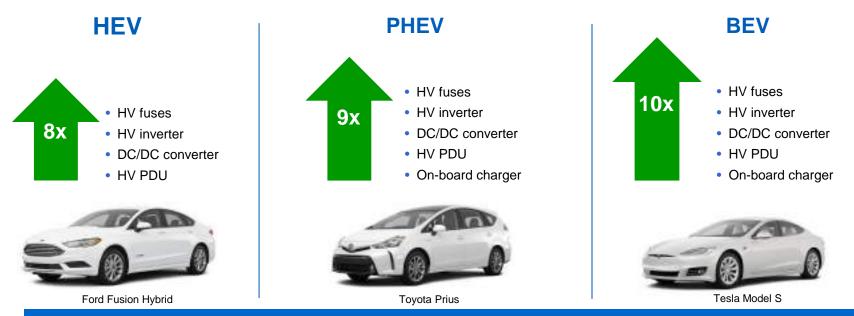
...that enhance safety and circuit protection and enable smart diagnostics

## Today, across Eaton, we sell ~\$275M of electrical products into mobile markets





## Eaton's addressable content per vehicle grows as vehicle electrification increases



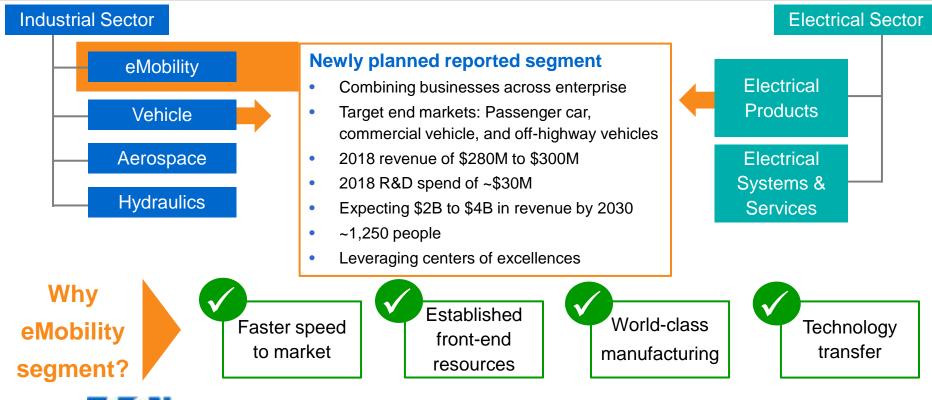
Eaton's existing vehicle portfolio serves as the foundation to build and capture additional growth as electrification intensifies



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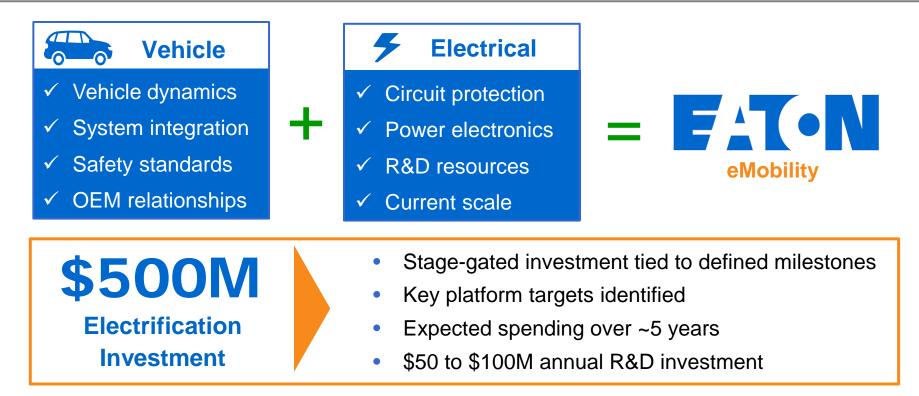
HEV – Hybrid Electric Vehicle PHEV – Plug-in Hybrid Electric Vehicle BEV – Battery Electric Vehicle

## Newly planned electrification segment will leverage enterprise-wide scale





## Providing **both vehicle domain** and **electrical expertise** makes Eaton a trusted partner to customers









Vehicle electrification opportunity & strategy



Competitive, industry-leading portfolio



Asia Pacific growth strategy



# Competitive, industry-leading portfolio creating new growth opportunities



### **Hydraulics**

Investments and portfolio repositioning enabling share gain



### Aerospace

Winning and growing content on future platforms



### Vehicle

New applications with proven technology

#### Strategic actions are enabling profitable growth with new wins



### Significant investments made across our Hydraulics portfolio



#### Manufacturing excellence

- ~2M sq. feet of world-class manufacturing
- Leveraging center of excellence locations
- Adoption of 3D printing technology for castings tools





#### **Reducing complexity**

- Executing portfolio rationalization
- >60% reduction in part numbers
- Moving customers to core products



- 49% reduction in constructions
- 38% reduction in part numbers

#### Markets have quickly strengthened and we are well positioned to gain share



# Repositioning with superior value products to expand our addressable market



#### **Emergence of two tiered markets**

- Standard tier product demand growing
- Advancing technology in premium tier products

#### **Repositioning portfolio**

- Investing in intelligent and connected products
- Introducing standard tier offerings across multiple product lines
- Multiple recent new business wins



- New Eaton Winner<sup>®</sup> brand has best-in-class performance in standard tier
- Investing in premium tier Aeroquip® and Weatherhead® brands
- Leveraging our world-class hose facility

### Increased addressable market by \$1.6B with new superior value products



## Platforms with strong technology offering Comm Highest pressure main fuel engine

pump in the industry

Winning on commercial and military

• Expanding China presence

- MA700 fuel distribution and inerting system wins
- Engaging with military customers on multiple classified programs

# Industry-leading Aerospace technology supports long-term growth

• Commercial • Military
agine
\$1.8B
\$1.0B

2015

Cumulative life of program wins

2016

### New wins in the past three years represent \$2.7B in life of program value



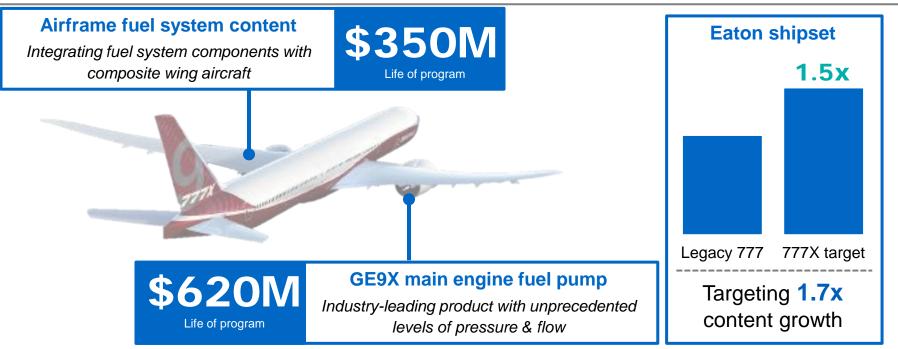


\$2.7B

2017

## Securing content on key next generation commercial platforms...777X



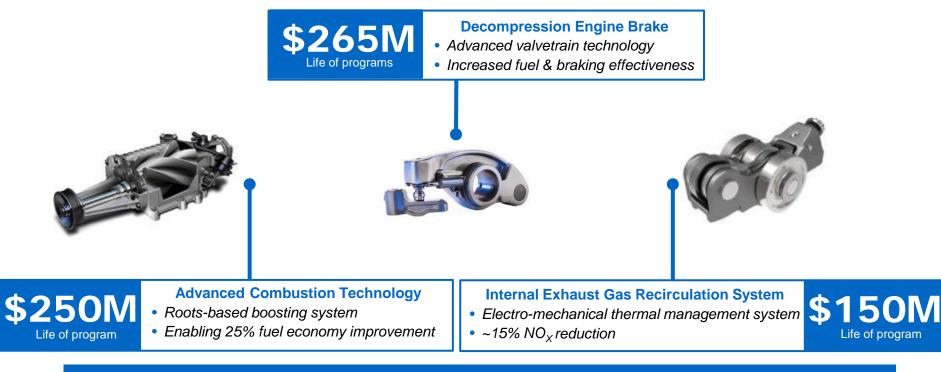


Awarded over \$1B in life of program wins to date...more content in play



## Discovering new applications with our proven vehicle technology...





Well positioned to capture internal combustion engine growth over the near term





Vehicle electrification opportunity & strategy



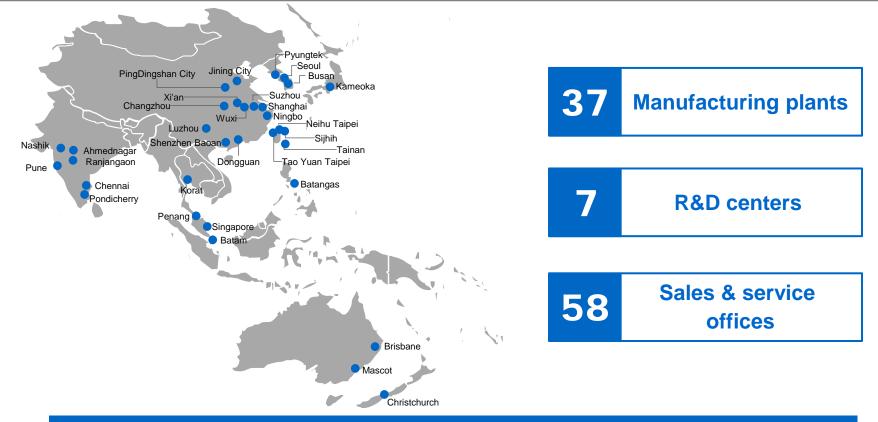
Competitive, industry-leading portfolio



Asia Pacific growth strategy



### Eaton has been investing in Asia Pacific footprint



Localized manufacturing – Channel strength – Strategic partnerships

# Our China localization strategy drives our competitiveness

#### Local manufacturing enables growth through:

- Competitive costs
- Faster lead times
- Local support and customization

#### Hydraulics – Last two years:

- Local manufacturing increased to 84%
- Local trade sales increased 47%

#### Vehicle – Last five years:

- Local manufacturing now over 90%
- Enabling passenger car valve share gain



#### **Jining City campus**

- Vehicle and hydraulics product lines
- World-class manufacturing facility
- Well-positioned footprint for China's growing xEV market

#### **Penetrating new applications**



- Marine oil and gas platform
- Complete system solution with cylinder, hydraulics power unit and electric controls
- Strategic wins in 2017

#### Growing share with large OEMs and penetrating new applications



xEV – Electric Vehicle

## Our distribution strategy is enabling us to expand into new end markets

#### **Excellent regional coverage across APAC, providing:**

- Right products
- Quick response
- Customer support

#### Over the last five years:

- Increased distribution partners by 50%
- Increased distribution sales mix by 400 basis points

#### Expanding our distribution partners by ~30% over the next 5 years

#### Key distribution channel wins

#### China Railway Construction Group

•



- Tunnel boring machine
  - Strong distributor service capability

#### Australia Department of Defense



- Refueling applications
- Leveraging distributors strong reputation

#### Delivering growth with diversified penetration wins



### Partnerships are key to our growth strategy

### Vehicle - Multiple Joint Ventures across the portfolio





- SFGW JV develops, manufactures, assembles, tests, sells and services clutches and clutch components
- Serves China's commercial vehicle end market
- SFGW JV increased our market share in China from 2% to ~17% in under 3 years

### **Aerospace - Joint Venture with SAMC**



- Design, development, manufacturing and support of fuel and hydraulic conveyance systems
- Serves the global civil aviation end market
- C919 conveyance systems Life of Program estimated at \$1.4B

Driving market penetration of our proven technology through strategic partnerships



## Today's themes

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### Annual investor conference





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## Key themes

- Eaton's electrical business serves key customer end markets around the world with its industry-leading electrical portfolio
- The world's electrical infrastructure is rapidly evolving, offering new ways to deliver value to our customers
- We are focused on a number of strategic initiatives to drive future growth, including:
  - Intelligent & connected solutions
  - Expanding core markets
  - Accelerating project productivity



# The Electrical Sector has two reporting segments serving customers in six key end markets

#### **Electrical Products**



- Industryleading portfolio
- Residential & non-residential products
- Industrial controls
- Power quality (1-phase)
- Lighting

- Bussmann series
- B-Line series
- Wiring devices
- Life safety

#### **Electrical Systems & Services**

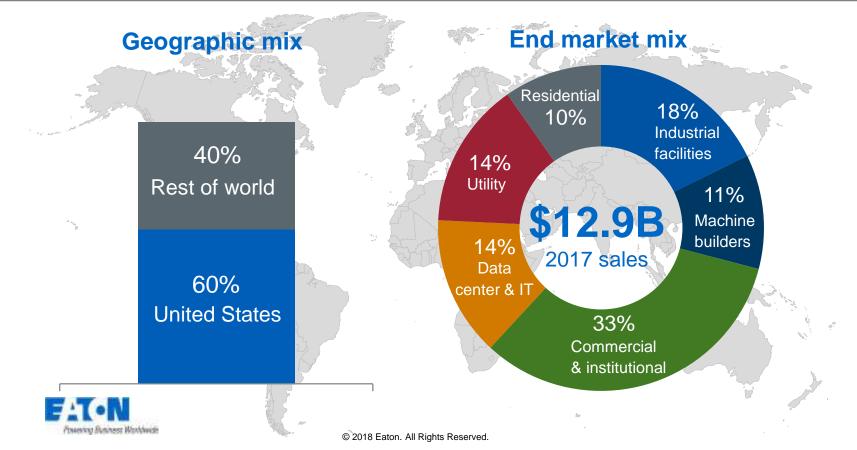


- Power distribution & assemblies
- Power quality (3-Phase)
- Power systems
- Crouse-Hinds series
- Software & services

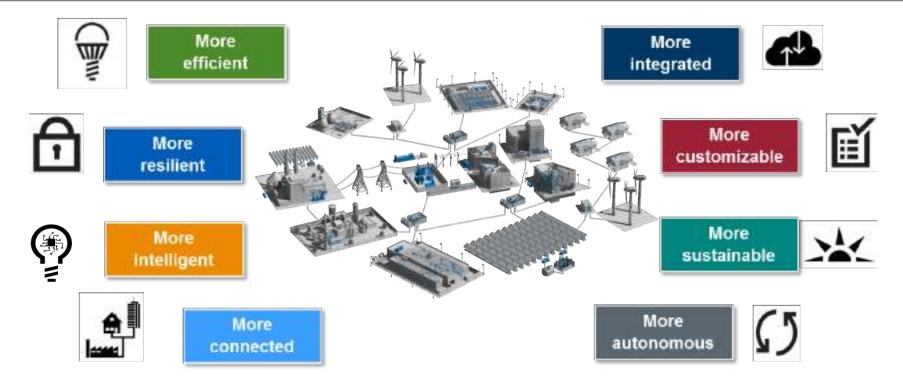




# Our business has breadth across both geographies and end markets



### Rapidly evolving electrical infrastructure offers new opportunities to deliver customer value





### **Electrical Sector strategic growth initiatives**

#### Accelerating project productivity

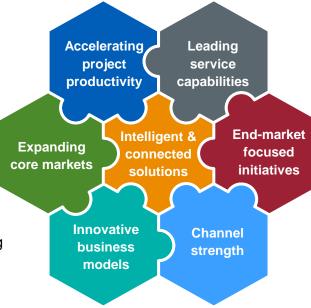
- Enhanced collaboration tools
- Prefabricated & modular products
- Automated designs

#### **Expanding core markets**

- Energy storage
- Microgrids
- Compact gas insulated switchgear

#### Innovative business models

- PredictPulse<sup>™</sup> data center monitoring
- Power management as a service



Leading service capabilities

- Turnkey project management
- Power systems engineering

#### **End-market focused initiatives**

- Broad utility solution offering
- Comprehensive portfolio for data centers

#### Intelligent & connected solutions

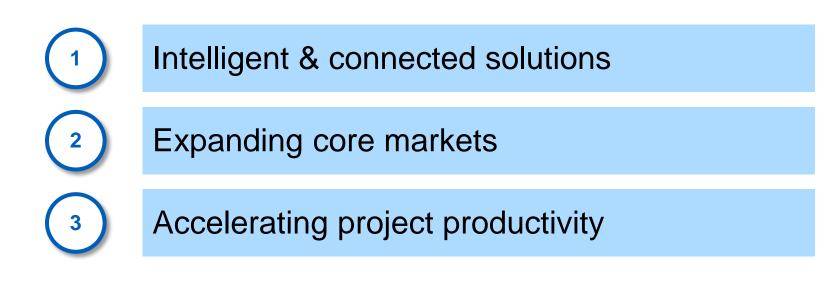
- Intelligent circuit protection
- Arc quenching switchgear
- Digital factory

#### **Channel strength**

- Eaton Distributor Advantage Program
- Contractor programs



### Topics for today's discussion





## Intelligent & connected solutions



### The world is becoming more digital



By the year 2020, the average home will have more than 35 connected devices



As of 2016, 77% of Americans own smartphones, up from 35% in 2011

An estimated 31 billion 'things' will be connected to the internet by 2020



Businesses spent an estimated \$964 billion on connected hardware in 2017





## The electrical industry IoT opportunity is large



Eaton IoT addressable opportunity



- Smart sensors
- Asset & people management,
  - security, employee engagement, labor productivity, space utilization



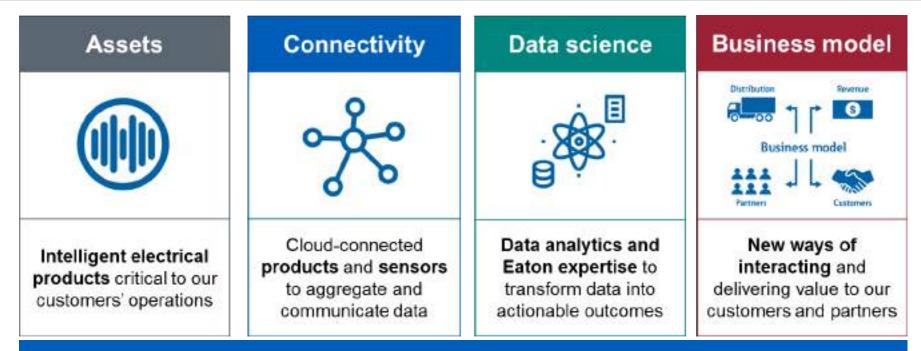
- Real predictive maintenance and diagnostics
- Data-based automation and configuration



- Distribution network / system level management
- Analysis, automation, and response based on operating parameters from connected Eaton and 3<sup>rd</sup> party devices



## Eaton combines deep application expertise with ownership of the electrical real estate



#### Intelligent Power: Driving digital innovation

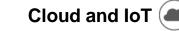


# Our CoE investments have resulted in significant accomplishments over the past year



- Deployed a common cloud platform across the Eaton enterprise
- Increased number of IoT product development engagements by 85% YoY
- Reduced IoT product development time by approximately 40%
- Established industry's first lab for UL program for cybersecurity testing of intelligent products

User experience (



Embedded systems (







### Intelligent & connected solutions Intelligent circuit protection



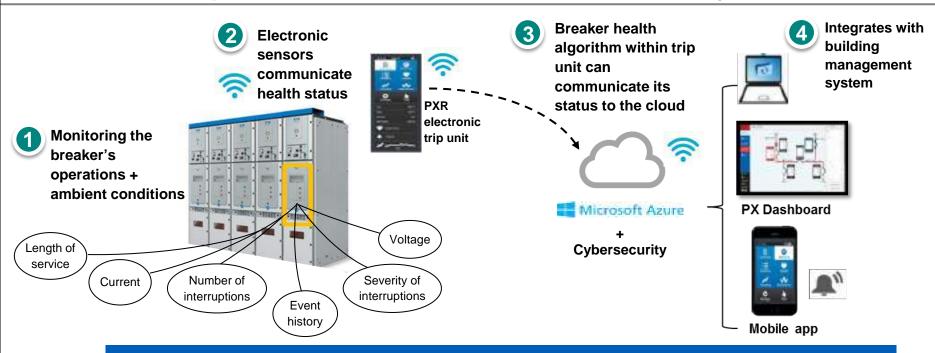
#### Traditional circuit protection protects personnel & equipment but does not provide higher-level system visibility or predictive diagnostics

Sources: American Hospital Association, Office of the Inspector General Department of Health & Human Services, American Society of Healthcare Engineering, Grumman/Butkus Associates

Intelligent & connected

solutions

# Embedded intelligence in our breakers provides an accurate picture of breaker health and system status



90% of our eligible air circuit breakers now include the PXR electronic trip unit



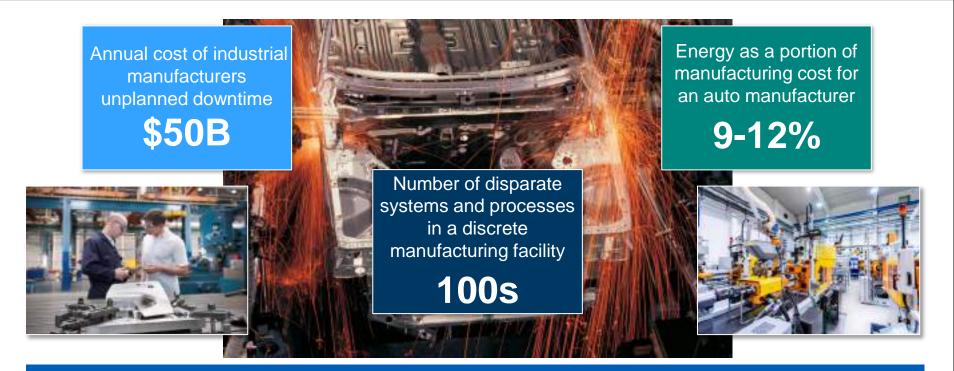
## Intelligent circuit protection allows hospital operators to work more safely and efficiently

	Past	Today	Future:
Maintenance	Maintenance work could impact	<ul> <li>Full system visibility makes it easier to shift critical loads</li> </ul>	100% fail-safe hospital
	critical hospital operations		Electrical systems fully integrated and automated
Electricity consumption	<ul> <li>Many inefficient loads throughout the system</li> </ul>	<ul> <li>Full system visibility makes it easier to target inefficiencies</li> </ul>	with all hospital systems
Regulatory compliance	<ul> <li>Meeting requirements is time consuming</li> </ul>	<ul> <li>Real-time data access simplifies compliance</li> </ul>	
Outage restoration	<ul> <li>Source of fault difficult to detect</li> </ul>	<ul> <li>System shows source, allowing rapid power restoration</li> </ul>	
New equipment installation	<ul> <li>Frequently requires full electrical system study</li> </ul>	<ul> <li>Capacity and capability of electrical system readily available</li> </ul>	

Eaton's incremental growth opportunity from intelligent circuit protection: \$150-\$200M by 2023

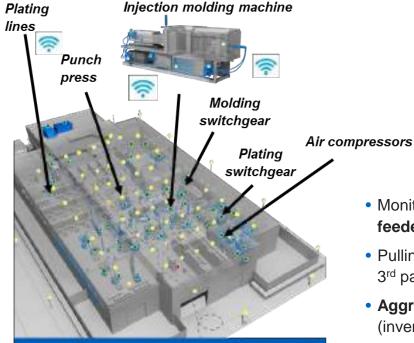
### Intelligent & connected solutions Digital factory





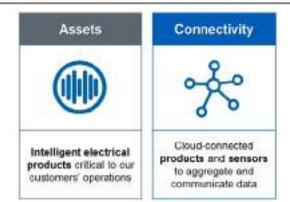
Intelligent power management mitigates unplanned downtime & manufacturing inefficiencies

# Digitizing factories to create a network of intelligent and connected devices



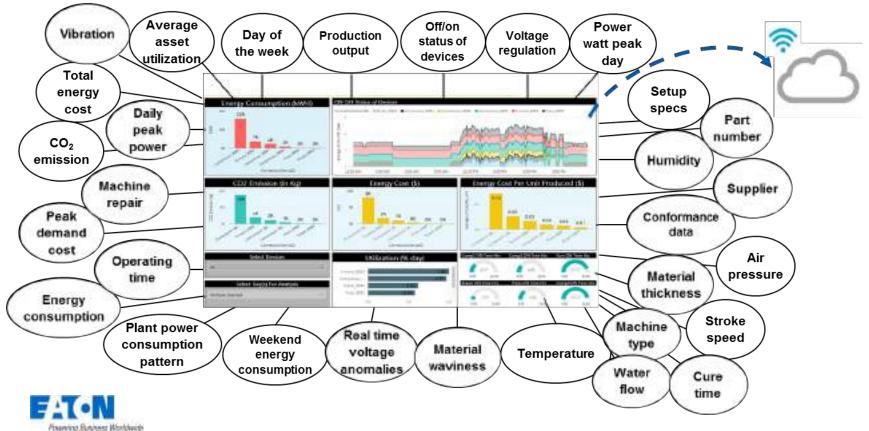
Eaton intelligent circuit breaker factory



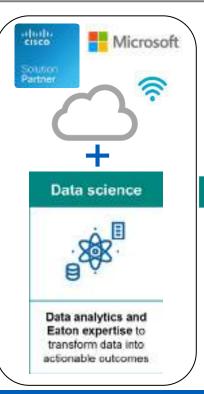


- Monitoring over 500 devices on 214 machines, switchgear and power feeders at our largest circuit breaker plant
- Pulling data from circuit breakers, variable frequency drives, meters, 3<sup>rd</sup> party controllers, PLCs, relays, and soft starters
- Aggregating device sensor data with 13 different facility systems (inventory, production schedule, purchasing, invoicing, maintenance, etc.)
- 250,000 streams of data at various measurement rates every 5 seconds to 5 minutes

## We are gathering thousands of streams of data from our machines, power sources and systems



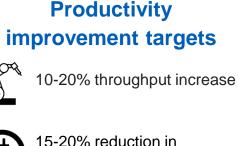
### Driving actionable outcomes to improve manufacturing efficiency and reduce costs





#### Actionable outcomes

- Preventative maintenance
- Operator training
- Ambient condition control
- Production planning
- Demand response
- Supplier quality





15-20% reduction in electricity consumption



10% reduction in unplanned production downtime



5-10% quality improvement

Our digital factory solutions will allow us to expand our U.S. addressable market by \$2-\$4B

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## **Expanding core markets**



### Expanding core markets Energy storage





From 2010 to 2016, Li-ion battery prices declined **73%**  From 2008 to 2016, EU-28 household electricity prices increased nearly **30%** 





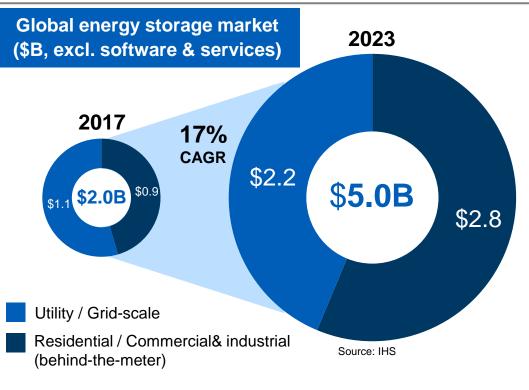
Renewables accounted for ~2/3 of global new power capacity in 2016 EU goal to reduce carbon emissions by **40% by 2030** compared with 1990 levels



Several important trends are fueling the growth in energy storage markets



## The energy storage market is large and is expected to expand rapidly



#### **Residential / C&I (behind-the-meter)**

- Significant follow-on software and services opportunities
- Lower ratio of low-margin battery content
- Greatest opportunity for balance of electrical systems pull-through

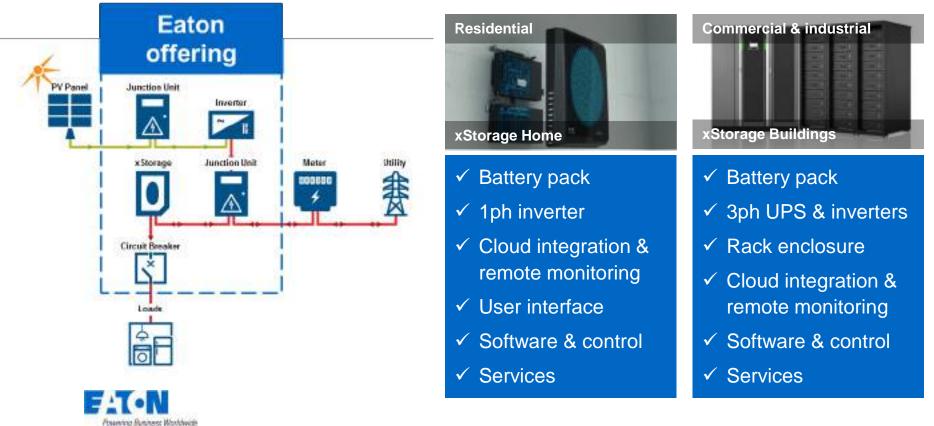
#### **Utility / Grid-scale**

- Fewer opportunities for follow-on software and services
- Higher ratio of low-margin battery content
- Utilities internally develop software
   and control platforms



Initial focus area

# Our energy storage offering includes our *xStorage* system and other parts of the electrical package



### We are initially focused on the European market

#### First focus: Europe

- Large solar PV installed base
- Reduced feed-in tariffs promotes electricity self-consumption
- Significant electric vehicle (EV) penetration in certain countries
- Strong culture of environmental stewardship
- High cost of electricity

#### Large existing market for energy storage systems

#### Key wins

#### Amsterdam Arena



#### Residential



- Significant Eaton content, including non-storage product pull-through
- Using new and 2<sup>nd</sup> life Nissan Leaf batteries
- Key wins in Germany, France and Italy
- Working with key distributors to train local installers

#### Energy storage is a \$200-300M incremental revenue opportunity by 2023



### Expanding core markets Microgrid update



#### Energy storage complements our microgrid strategy

#### **U.S. Government**

- **Tyndall Air Force Base** delivery of 2MW system for testing and validation of Air Force conservation technologies
- Fort Custer turnkey microgrid system to manage distributed generation and to power adjacent government facilities



#### Utility

Major investor owned utility
– turnkey microgrid

#### Commercial

 Large pharmaceutical company facility in Puerto Rico – microgrid controls, design, power studies



#### Department of Energy National Renewable Energy Lab Partnership (NREL)

- Eaton engineering team collocated at NREL in Colorado
- Enables both organizations to collaborate more closely on microgrid, grid intelligence and energy storage



### Expanding core markets Medium voltage gas insulated switchgear

## Gas insulated switchgear (GIS)

Uses gas-filled tanks to achieve safe electrical clearances in smaller spaces than with traditional switchgear



Eaton Power Xpert XGIS



Gas insulated switchgear represents a large and growing portion of the MV market



Expanding core markets

### Customers value GIS for its small footprint, low cost of maintenance and inherent safety



electrical hazards

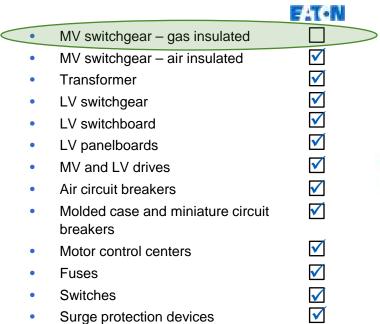
Many large data center customers are moving to GIS due to its smaller footprint

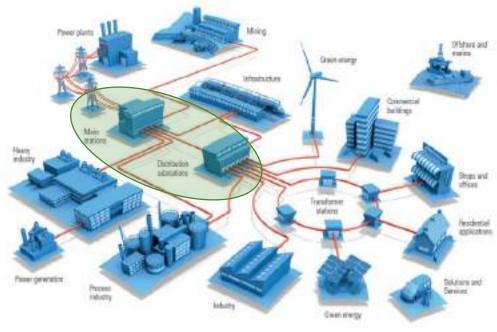
#### Gas insulated switchgear typically occupies 1/3 of the volume of air insulated switchgear



## Eaton sells to these projects today but cannot supply the MV solution if GIS is specified

#### Key parts of the electrical system





#### MV switchgear is often specified first in greenfield and expansion projects

# We are launching two solutions for different types of GIS customers

#### Value-focused solution

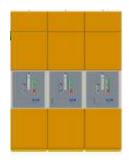
- Will meet IEC/ANSI/GB standards
- Provides superior value to customers who require a MV gas insulated switchgear solution

#### **Differentiated solution**

- Will meet IEC/ANSI standards
- Enhanced ratings
- Plug and play solution eliminates errors and cost associated with complicated installation
- Premium solution with market-leading features and performance



**Power Xpert XGIS** 



Next generation Power Xpert XGIS

#### Eaton's MV GIS solutions target a \$500M potential market with their voltage ratings



## Accelerating project productivity



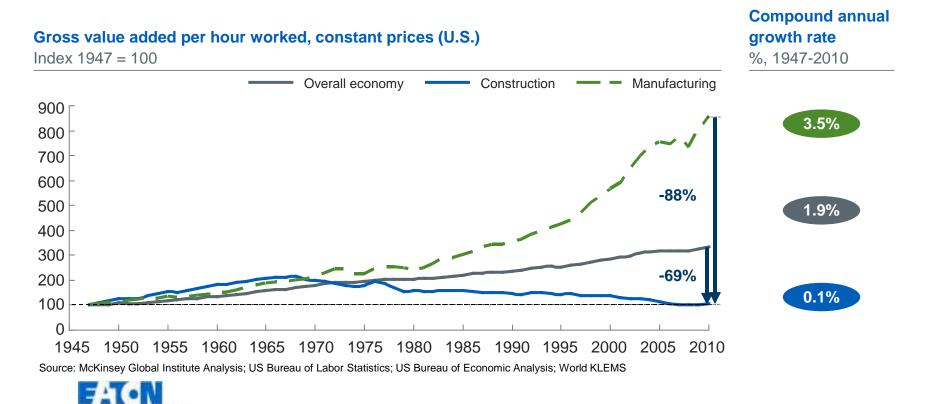
## Construction is a large, global market and a significant part of Eaton's electrical business

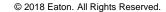


Source: McKinsey & Company Feb 2017 study "Reinventing Construction: A route to higher productivity"



## The U.S. construction industry has not benefited from the productivity gains seen in other industries

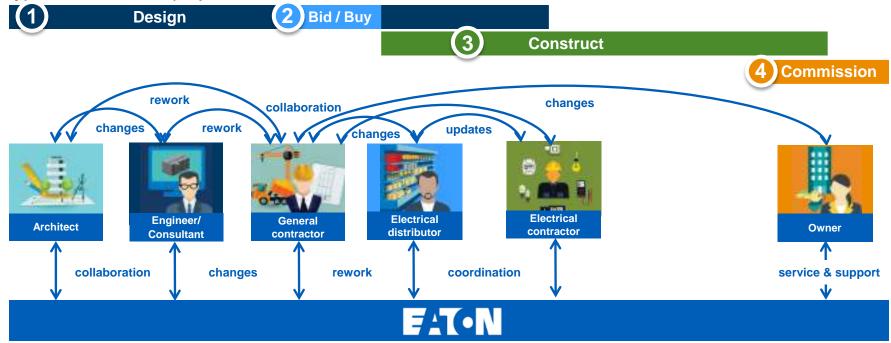




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## Construction projects are complex and include many stakeholders

*Typical construction project timeline:* 

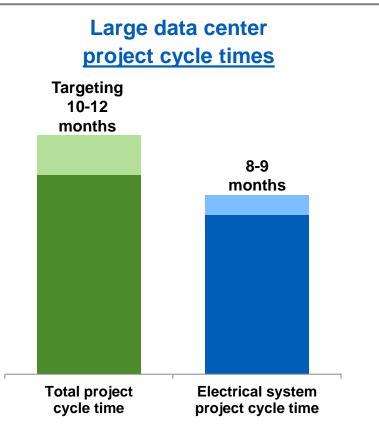


Note: project timeline representative only; cycle times vary by project

### Customer project cycle times are being compressed Large data center example



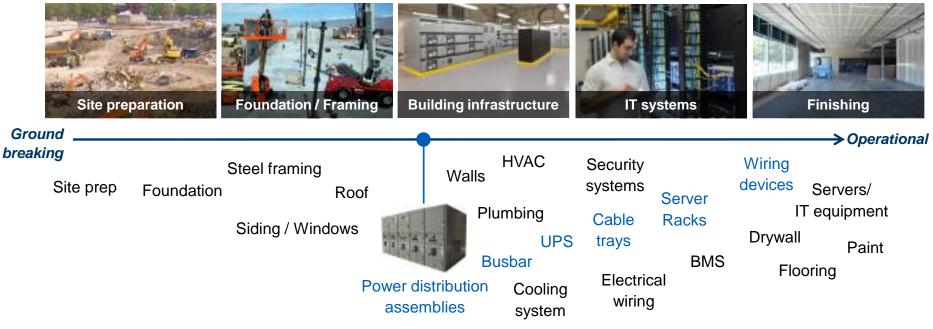
- Electrical infrastructure makes up 30-35% of the dollar value in a large data center
- Total project cycle times have compressed significantly since 2012
- Pressure on all suppliers to accelerate equipment delivery and commissioning





### Electrical systems are often the critical path in large construction projects

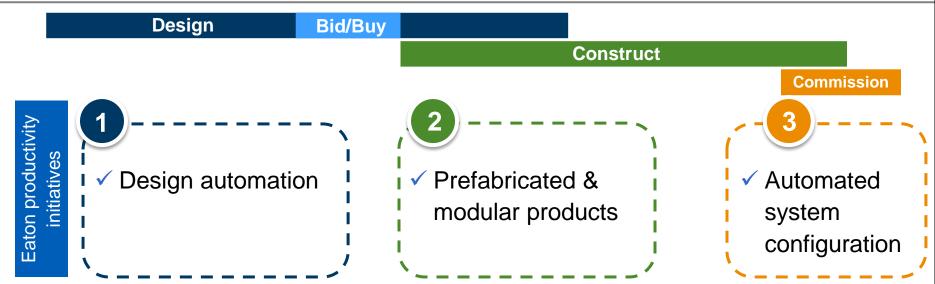
Data center example:



There is an opportunity to differentiate with speed-of-delivery, as other systems are often dependent on long lead time items like power distribution assemblies

Blue text = Eaton products

### As a key electrical supplier, Eaton is well positioned to help accelerate construction productivity



### \$200-\$400M by 2023

Eaton's incremental North American growth opportunity from construction productivity initiatives

## Reducing engineering and manufacturing cycle times by creating standard designs as a starting point for customization



#### Design

#### **Design automation**

(1)

We are advancing our design automation capabilities to significantly reduce design and manufacturing times for complex, engineer-to-order products like assemblies





#### Why it matters:

- Accelerating our internal cycle times on custom designs differentiates us from competitors with much faster speed-of-delivery
- Grow our business with customers demanding reduced lead times

Targeting a reduction in 50% design & manufacturing time on engineer-to-order products

# Reducing costs and contractor installation time with prefabricated products



#### Construct

#### **PRE-formance™ prefabricated assemblies**

Contractors use our pre-engineered and pre-assembled products to simplify branch wiring installation on commercial construction projects that have many rooms of the same type





## Electrical contractor

#### Why it matters:

- Pre-kitted material is available in the appropriate work areas which significantly reduces on-site material handling time
- With the current shortage of skilled labor, pre-built products simplify installation and help close the capability gap

Prefab products can increase worker productivity 25% by reducing material

handling on the job site

Source: National Electrical Contractors Association (NECA)

# Leveraging our intelligent & connected products to automate the configuration of large assemblies



#### Commission

#### Automated system configuration

Streamline the end-to-end device configuration process for engineer-to-order electrical assemblies using our intelligent products and cloud connectivity





#### Why it matters:

- Step function improvement in the time it takes to configure base and customer-specific settings
- Reduced risk of start up delays with early validation
- Improved order accuracy with connected data flow
- Meets cybersecurity data traceability requirements

Reducing commissioning time by **3-4 weeks** on a large data center

customer project

### Key themes

- Eaton's electrical business serves key customer end markets around the world with its industry-leading electrical portfolio
- The world's electrical infrastructure is rapidly evolving, offering new ways to deliver value to our customers
- We are focused on a number of strategic initiatives to drive future growth, including:
  - Intelligent & connected solutions
  - Expanding core markets
  - Accelerating project productivity





## Annual investor conference

Craig Arnold, Chairman and Chief Executive Officer March 2, 2018



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# Key takeaways for today...

- Our culture, willingness to change, and focus on customers have led to superior performance over our long history
- Today's Eaton is made of five leading franchises...which are stronger together
- We laid out our five-year financial goals in 2015, and we're on track to deliver
- 2017 was another year of solid progress, and we have good momentum heading into 2018
- We are generating significant cash flow and have increased cash optionality
- Our strategy is working; we're investing for organic growth, delivering solid margin improvements, and effectively redeploying capital
- We're making big investments in areas that have secular growth, where we have strategic advantages that will allow us to win
  - intelligent and connected devices, electrification in vehicle and mobile markets
  - customer productivity, new products/new partnerships, expanding in emerging markets



# Agenda

- Building on our heritage
- Eaton today
- Our strategy and future
- How we execute as One Eaton



# Remarkable 107-year heritage characterized by

- Values-based culture
- Anticipation, adaptation and change
- Customer focus and unique innovation

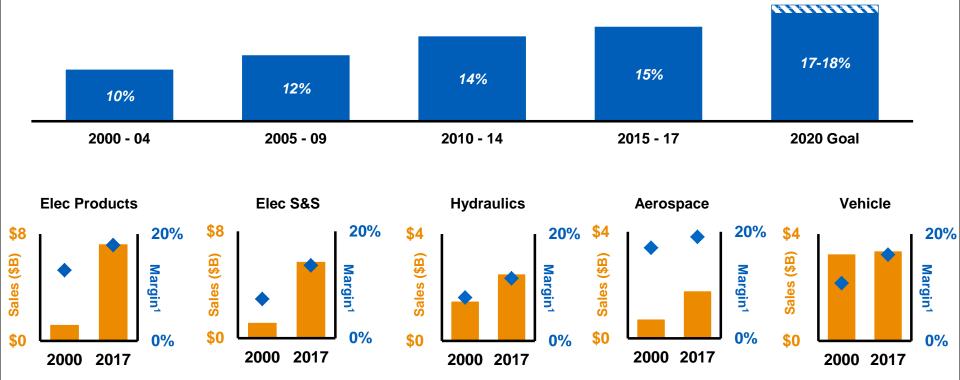
The served and the served of the protection of the served of the serve



er in the World of Rear Azles for Motor Trucks

# Which has allowed us to continuously improve...

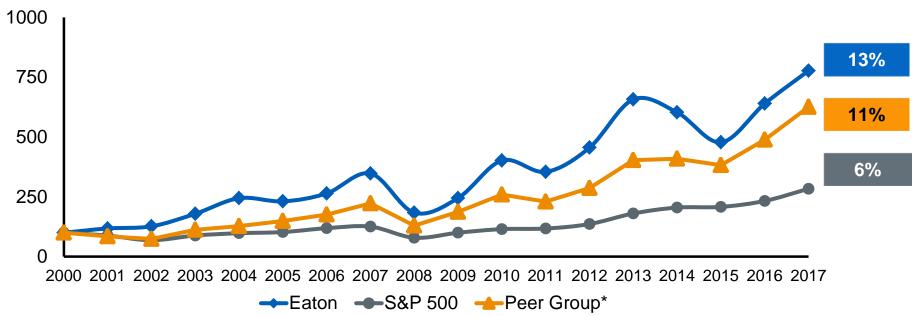
## Segment Operating Margin<sup>1</sup>



<sup>1</sup> Segment margins exclude acquisition integration charges

## ...and generate strong returns for shareholders...

## **Cumulative Shareholder Returns**

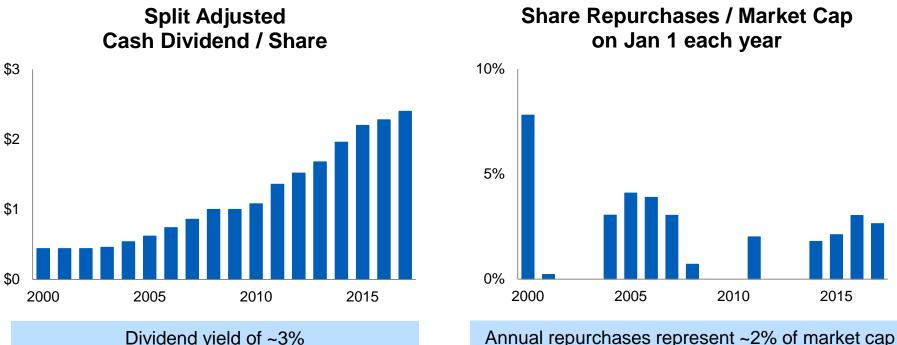


\* Peer group represents an equal weighted index of ABB, DOV, EMR, HON, IR, ITW, LR, PH, ROK, SIE, SU, UTX Source Data: Capital IQ, Eaton analysis

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2000 - 2017 CAGR

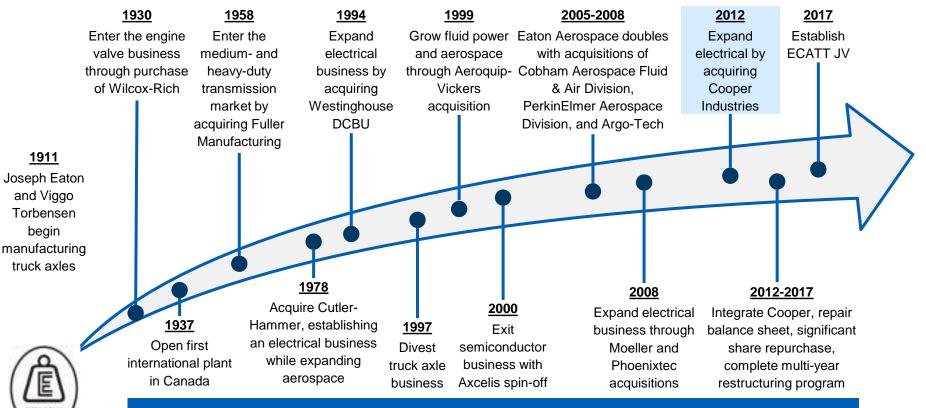
# ...including consistently returning capital to shareholders through dividends and repurchases



Dividend yield of ~3%



# All while building a better company through strategic acquisitions and divestitures



### We will continue to evaluate strategic options as opportunities arise

# Agenda

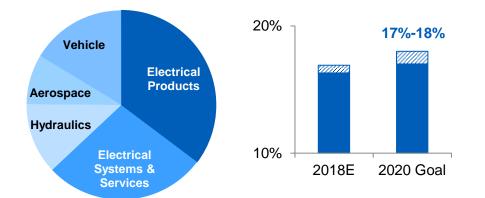
- Building on our heritage
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## Eaton is a leading power management company in difficult to disrupt industries

### 2017 Sales Mix

### **Operating Margin**













## What We Like

- Leading businesses in large, global markets selling well-recognized brands
- Doing mission critical work that protects people and assets, while improving productivity
- Highly engineered products in markets where application expertise matters
- Aligned with secular, long-term growth drivers
- Occupying valuable real estate that positions us to grow in a connected and intelligent IoT world
- Significant scale, providing an attractive cost position

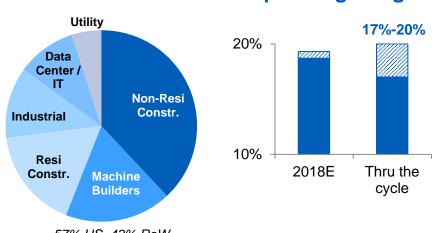
Electrical Products

Electrical Systems & Services

**Hydraulics** 

Aerospace Vehicle

## Electrical Products is a leading global player in low- / medium-voltage products



### 2017 End Market Mix Operating Margin

57% US, 43% RoW



Intelligent circuit protection



Arc fault / ground fault circuit interrupters

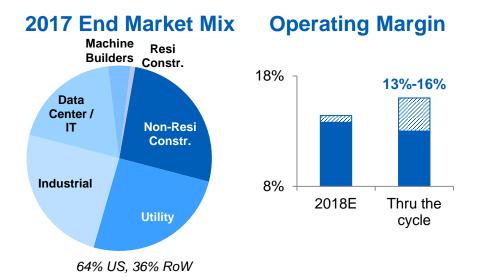


1-phase uninterruptible power supply

## What We Like

- Growth driven by focus on innovative products and ability to provide efficiency gains for our customers
- #1 or #2 position in numerous markets including NA circuit protection, single phase UPS, NA lighting, and NA structural support systems
- Strongest distribution network in NA
- Innovator in connected and intelligent solutions
- Strong margins driven by a portfolio of trusted brands, differentiated products, and a leading channel position

# Electrical Systems and Services is also a leading global player in low- / medium-voltage solutions





3-phase uninterruptible power supply



Power distribution and controls



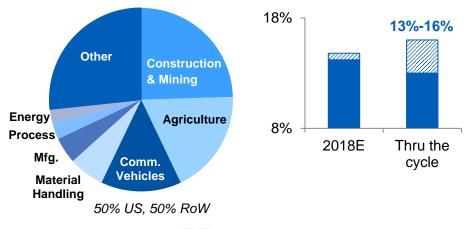
Harsh & hazardous

## What We Like

- Deep application expertise with proven ability to solve our customers' toughest challenges
- #1 or #2 position in numerous markets including harsh & hazardous, NA low- and medium-voltage power distribution, and NA three phase UPS
- Well-positioned to participate in connected and intelligent solutions
- Leading NA services organization able to deliver value-added services to our customers
- Strong margins driven by differentiated solutions and the ability to manage complex customer projects

# Hydraulics is among the 4 largest players serving a diverse set of end markets

## 2017 End Market Mix Operating Margin





Hydraulic hose

and fittings



Hydraulic pump

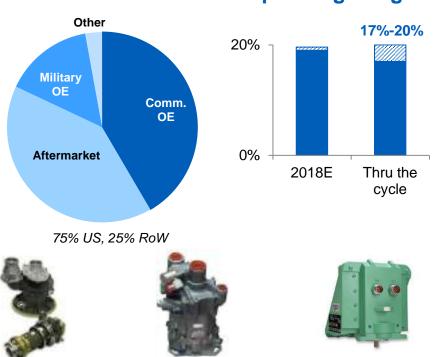


Hydraulic valves

## What We Like

- In the early stage of a cyclical expansion where we expect strong market growth through 2020
- Serving the world's most challenging applications where power density matters
- One of the broadest product offerings in the industry
- Among strongest distribution networks in North America, with 55% of our sales through distribution
- Large installed base driving aftermarket business, which accounts for ~1/3 of sales
- Significant restructuring program has improved our cost position and growth prospects

# Aerospace is a leader in motion control, air frame, fuel, and engine solutions



**2017 End Market Mix** 

**Operating Margin** 

### What We Like

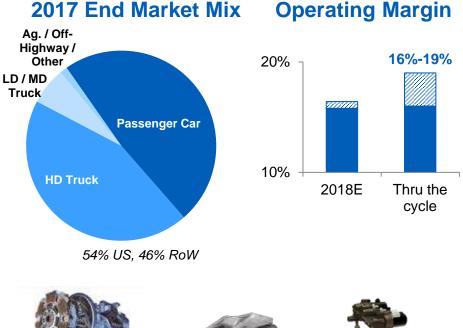
- Long-term growth underpinned by increasing passenger and freight air traffic
- Risk averse and highly regulated industry where pedigree matters – difficult to displace
- Strong intellectual property and patent protection
- Large installed base and strong aftermarket position create predictable, high-margin revenue streams
- Market leader in hydraulic, conveyance, and fuel systems

Air frame fuel pump

Hydraulic pump

Motion control Secondary flight controls

# Vehicle is a leading supplier of powertrain and engine air management products



## **Operating Margin**

### What We Like

- Need for better fuel economy and emission regulations driving long-term growth
- Industry leader in valves and advanced valve actuation – expect market growth over next 10 years
- Newly formed Eaton-Cummins JV provides increased access to global markets for automated transmissions
- Established relationships with all global OEMs with local manufacturing and customer support
- Long-term investments in manufacturing footprint drive best-in-class scale and cost competitiveness
- Uniquely positioned to be a global leader in growing electric vehicle market

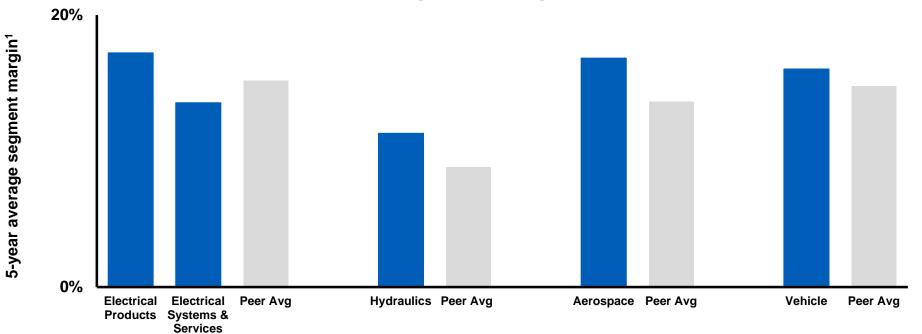
Clutches and transmissions

Valve actuation

**Torque controls** 

# Our businesses perform well compared to peers

Segment Margin<sup>1</sup>



Electrical Peers: ABB, EMR, HUBB, LR, ROK, SU, Siemens-Industrial; <u>Hydraulics Peers:</u> Bosch-Industrial Technologies, Danfoss-Power Solutions, Moog-Industrial Systems, Parker Hannifin-Diversified Industrial; <u>Aerospace Peers:</u> Moog-Aircraft Controls, Parker Hannifin-Aerospace Systems, Woodward-Aerospace; <u>Vehicle Peers:</u> ALSN, AXL, BWA, CMI

Source: Capital IQ, Eaton analysis, CY '13 thru CY '17

<sup>1</sup>Eaton segment margins exclude acquisition integration charges

# And we will continue to evaluate them against the criteria that we have established

Ability to lead in large global markets	> Addressable market >\$2B	
Above average growth potential	Long-term growth > real GDP	
High margin potential	Segment operating margin in mid- to high-teens	
High returns	Return on tangible assets mid-twenties or above	
Consistent profitability	Minimum of low-teens margin at the trough	

We like our mix of businesses and are driving significant improvement

# Agenda

- Building on our heritage
- Eaton today
- Our strategy and future
- How we execute as One Eaton



# At Eaton, we make what matters work\*



We make renewable energy work.\*



## \*Our vision

To improve the quality of life and the environment through the use of power management technologies and services.



# By making power safe, reliable, and more efficient

While doing so, we seek to make a positive impact on stakeholders...



Delight our customers

Develop and engage our employees

Support our communities

...while delivering superior returns to shareholders



# We're on track to achieving our 2020 financial goals



### 2018 – 2020 goals

- ~3-4% organic revenue growth
- ~1-3% acquisition revenue growth
- ~170 bps segment margin expansion
  - ~80 bps in 2018E at the mid-point
  - ~90 bps from 2019-20
- ~210 bps EBIT margin expansion
- 10%+ free cash flow as a percent of sales
- ~\$8B free cash flow

Note: EPS, margin, and cash flow metrics exclude acquisition integration charges, 2017 gain on Eaton-Cummins JV formation, and 2017 impact of U.S. Tax Reform

# But financial goals are not enough, we aspire to have a broader impact on society

- Be the preferred supplier to customers and channel partners
- Make work exciting, engaging and meaningful for our employees
  - Ensure the safety, health and wellness of our employees
    - Be a model of inclusion and diversity in our industry
    - Make our communities stronger
      - Be active stewards of the environment

## And we are making solid progress toward these goals

# Our corporate strategy is working



**Strategic Growth Initiatives** – Develop technology leadership (safe, reliable, efficient, connected, and intelligent), convert on our channel and service strength, deliver superior value



**Expand Margins** – Accelerate our operational excellence, implement multi-year productivity plans, focus on outliers *(fix the tail, grow the head)* 



**Disciplined Capital Allocation** – Invest to win, consistently return cash to shareholders (*dividends, share buybacks*), criteria-based product and business evaluation

# Our growth is supported by secular growth trends



**Global demographics** – Greater urbanization and growing middle classes require increased infrastructure and investment for housing, work space, food, electricity, and transport



**Environmental concerns and increased regulation** – Climate change, air and water quality, and waste disposal necessitate more innovation and less reliance on fossil fuels



Increased demand for superior value solutions – Increasingly, customers are turning to alternatives providing superior value

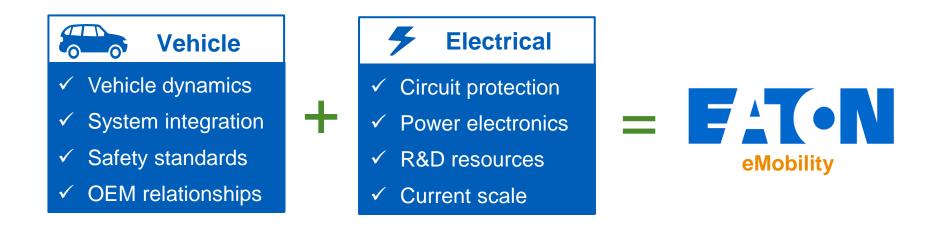


Intelligent products and connectivity – Value creation to be driven by the interconnectivity of products and systems and new business models



**Energy efficiency** – Highly influenced by environmental factors, energy efficiency and increased electrification will continue to be major drivers of growth

# Our planned eMobility segment is at the intersection of secular trends and our capabilities



### Positioned to win in a new \$33 billion market



# And we have increased focus on organic growth...



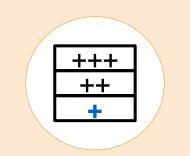
## **Technology leadership**

- Industry-leading high pressure fuel pump for aerospace
- Leveraging existing vehicle technologies for new applications
- IoT investments delivering results in data centers and factories



## **Channel conversion**

- Investments in Hydraulics APAC channel is delivering results
- Partnering in China to gain market access
- Software as a Service (SaaS) for data centers



## **Superior value**

- Two-tiered hydraulic hose offering expands addressable market
- Expanded localized electrical components in China from 30% to 70%
- Two-tiered suite of hydraulic motors provides different capabilities targeted at varied applications

# ...while running the business better

## **Operational excellence**



- 50% increase in world-class plants in 2017
- Over 400 employees achieved higher Six Sigma Belt certification
- As Operating Assessment results improved, a Mexican plant's manufacturing margins improved by >20 percentage points

## **Productivity plans**



- Digital factory solution driving savings in our factories
- Completed 3-year restructuring program with \$518M of mature year savings
- ~8% increase in employees in BCCs

## **Focus on outliers**



- Leveraging Engine Air Management expertise to penetrate new markets
- Improved a transformer's margin by 500 bps through pricing, product development, and manufacturing changes
- 7,000+ SKU reduction in Hydraulics



# And we remain disciplined in allocating capital





# Agenda

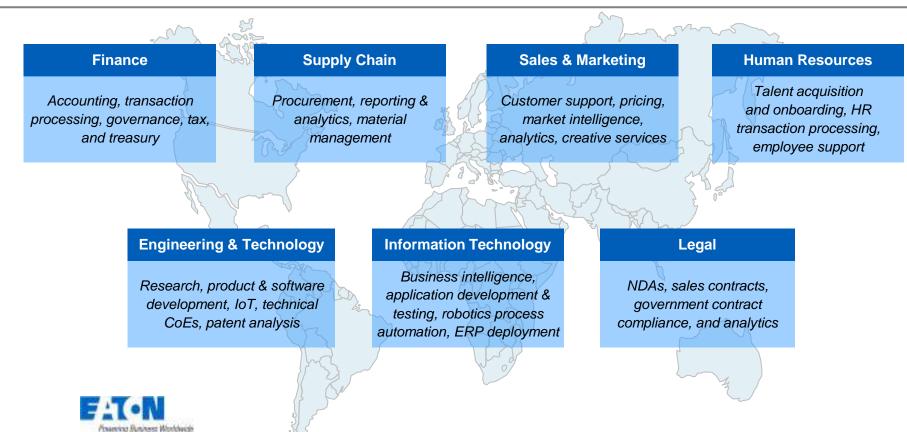
- Building on our heritage
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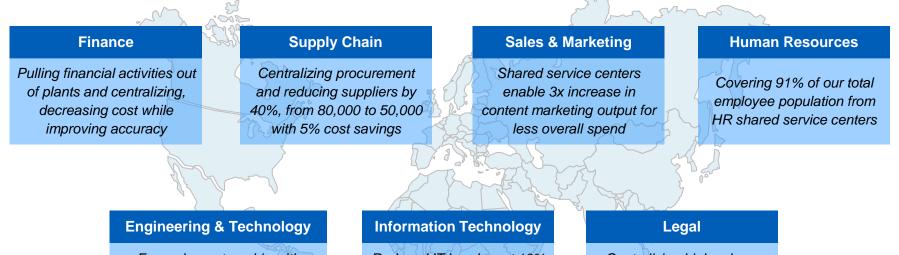
## EBS is the foundation of our execution strategy and how we achieve scale benefits



# Scale has enabled us to optimize our support functions across our global network of shared service centers...



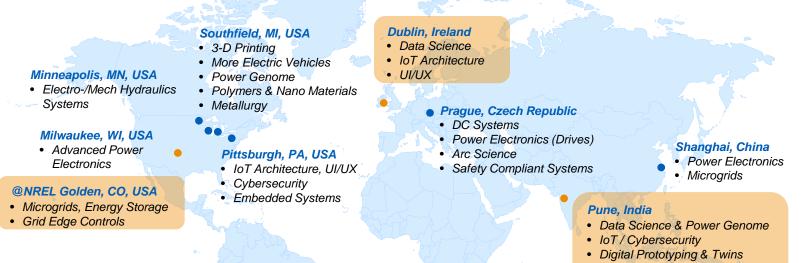
## ...and we continue to find opportunity to drive efficiency



Formed a partnership with NREL and established new Centers of Excellence in the US, Ireland, and India Reduced IT headcount 10% through consolidating workforce into a centralized organization Centralizing high volume contract management with goal of 100% increase in contract transactions in 2018



Our network of global innovation centers gives all businesses access to cutting-edge technology



- Reliability Engineering
- Embedded Systems

#### Creating a more efficient and effective team from innovation thru execution



Indicates a new capability added in 2017 / early 2018

# We have a consistent formula for how we create value and deliver superior returns to shareholders

#### **Aspirational Goals**

Our customers' and channel partners' preferred choice

An engaged workforce doing meaningful work

A diverse and inclusive organization

A safe and healthy work environment

Supporting our communities

Active stewards of the environment

#### Leadership Expectations

Leaders must be ethical, passionate, accountable, efficient, transparent, learners...make good decisions

#### **EBS Processes**

Standard set of processes thru which we run the company...teachable point of view and a continuous learning mindset

#### Leverage Scale

Leverage scale by centralizing common needs...driving efficiency across the organization

#### **Accelerate Growth**

Accelerating growth thru focused efforts on technology, channel and service, superior value...the right to win

#### **Margin Expansion**

Driving productivity improvements, optimizing manufacturing and support costs...managing the outliers in our businesses

#### **Capital Deployment**

Investing in organic growth, returning cash to shareholders, acquisitions that strengthen the portfolio...maintaining a disciplined approach



# Execution of our strategy will help grow EPS by 11% to 12% through 2020

## **EPS growth drivers (CAGR)**

Contribution to EPS growth:	2018 - 2020	Comments
Organic growth	4 points	Markets are accelerating
Restructuring and OpEx	4 points	Restructuring program proceeding as planned
Share repurchases	2 points	On track for \$3B of repurchases from 2015-2018
Acquisitions	1 - 2 points	Expect activity to pick up in 2018
Total	11% - 12%	On track



## Key takeaways for today...

- Our culture, willingness to change, and focus on customers have led to superior performance over our long history
- Today's Eaton is made of five leading franchises...which are stronger together
- We laid out our five-year financial goals in 2015, and we're on track to deliver
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- We're making big investments in areas that have secular growth, where we have strategic advantages that will allow us to win
  - intelligent and connected devices, electrification in vehicle and mobile markets
  - customer productivity, new products/new partnerships, expanding in emerging markets





## 2018 guidance and financial overview

Rick Fearon, Chief Financial and Planning Officer March 2, 2018



## Key takeaways for today

- Organic revenue growth is accelerating
  - 2017 was a transition year, as our markets broadly returned to growth
  - We expect organic revenues will grow 4% in 2018
- We are aggressively reducing our cost structure
  - Completed our 2015 2017 restructuring program
  - Segment margins in 2018 are forecasted to expand by 80 bps
  - We are offsetting commodity cost increases over time
  - Leveraging the power of One Eaton to gain efficiency in our global shared service centers
- We are closely managing our tax and pension expenses
  - \$62M gain in Q4 as a result of new U.S. tax law
  - 2018 effective tax rate estimated to be 13% 15%, and long-term rate stabilized at 14% 16%
  - U.S. qualified pension plan funded at ~95%
- We continue to generate record amounts of cash
  - Driven by strong margins and tight working capital management
  - Cash conversion solidly above 100%
  - Adjusted cash EPS of \$5.42 in 2017, \$0.77 greater than Adjusted EPS excluding one-time items
- Our consistently strong cash flow allows us to soften economic downturns through continued share repurchases
- We are using our cash flow to invest in growth, while expecting to return 5% 6% of our market cap to shareholders through dividends and repurchases in 2018

## 2017 was a solid year

#### **Beat initial expectations**

- Net income and adjusted earnings per share of \$6.68
- Adjusted EPS excluding \$2.03 of one-time items<sup>1</sup> was \$4.65
  - \$0.20 above original midpoint of guidance
  - Up 10% over 2016
- Driven by improving markets, execution of strategic initiatives, and restructuring benefits

#### **Record segment operating margins**

- Record total segment margins of 15.8%
- 100+ bps margin expansion in Electrical Systems & Services, Hydraulics, and Vehicle

### **Record cash flow**

- Record operating cash flow of \$2.7B, including \$350M pension contribution in the year
- Cash conversion<sup>2</sup> of 120%

### **Pension funding**

- Contributed \$350M to U.S. qualified pension plan
- U.S. qualified pension plan ~95% funded, driving lower pension expense

#### Strategic partnership

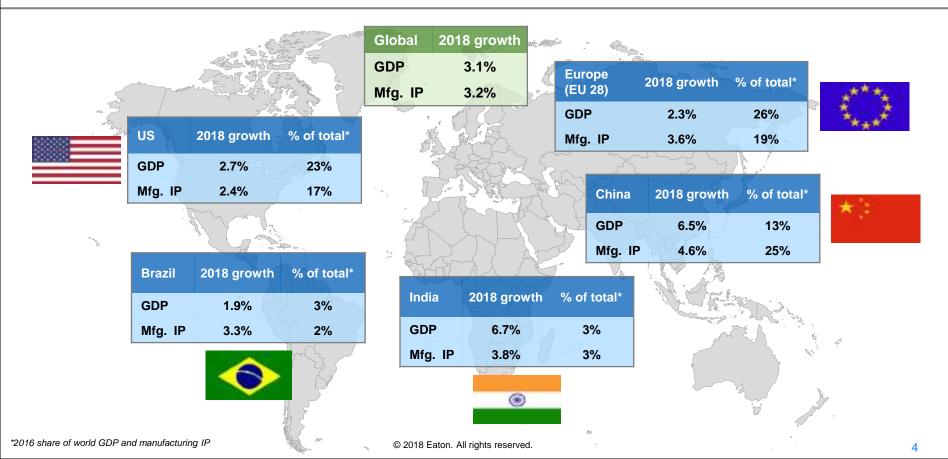
 Closed Eaton Cummins Automated Transmission Technologies JV, generating \$600M in cash



<sup>1</sup>One-time items include gain on Eaton-Cummins JV formation and impact of U.S. tax reform

<sup>2</sup>Cash conversion = Free cash flow adjusted for \$350M U.S. qualified pension contribution divided by net income adjusted for gain from Eaton-Cummins JV formation and impact of U.S. tax reform

## 2018 market outlook

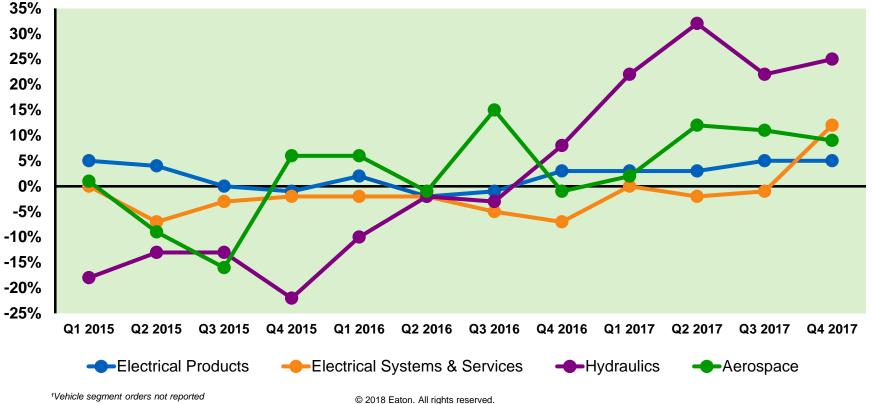


## 2018 organic growth is expected to be ~4%

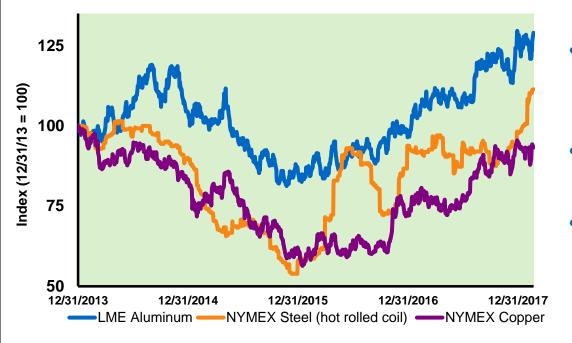
Segment	2018 organic revenue growth	Key market drivers	
Electrical Products	~3%	<ul> <li>Industrial markets and large commercial applications up mid-single digits</li> <li>Small commercial applications show modest growth</li> <li>Single-phase power quality to grow low-single digits</li> <li>Lighting flat to down slightly</li> </ul>	
Electrical Systems and Services	~4%	<ul> <li>+ Power distribution assemblies in the Americas show strong growth</li> <li>+ Harsh and hazardous markets grow mid-single digits</li> <li>+ 3-phase UPS to grow low- to mid-single digits</li> <li>+ Utilities markets up low-single digits</li> </ul>	
Hydraulics	~10%	+ + Mobile equipment markets showing continued strength globally	
Aerospace	~3%	<ul> <li>+ Commercial OEM markets showing continued growth</li> <li>+ Commercial aftermarket growth continues at solid pace</li> <li>Military OEM markets to grow modestly</li> </ul>	
Vehicle	~1%	<ul> <li>+ + NAFTA class 8 truck market up to 290k units in 2018</li> <li>+ + Growth in Brazil truck markets</li> <li>+ Global light vehicle market up modestly</li> </ul>	
Eaton	~4%		

## Orders are trending up in all segments

#### YoY Change in Orders by Segment<sup>1</sup>



## We expect to offset rising commodity prices...



- In 2018, we expect prices to rise less and be less volatile than in 2017
- We have programs in place to offset price increases
- New FASB hedge rules allowing for economic hedging should reduce volatility



### ...however Section 232 restrictions on imports of steel and aluminum would adversely impact Eaton

- It appears that the administration intends to put in place tariffs of 25% on steel and 10% on aluminum under Section 232
  - We anticipate such tariffs would create incremental costs for us from imports of ~\$50M
  - There could be additional costs if domestic producers increase prices
- We would expect to offset any incremental costs through commercial actions



# We have made structural changes that position us for long-term cost competitiveness

## Total restructuring program

- 3-year program
   2015 2017
- \$456M total costs

 \$518M total mature year benefit

#### Plant consolidation

- 21 manufacturing locations consolidated
- Consolidations distributed among all segments
  - Electrical Sector = 12
  - Industrial Sector = 9

#### Headcount reduction

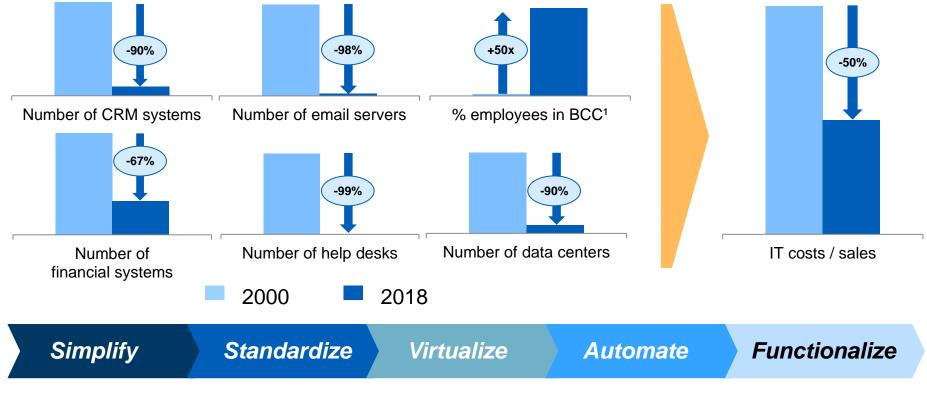
- Approximately 6,000 employees reduced
- Reductions primarily in high cost countries
- Structural changes eliminated 4% of corporate headcount

## Emerging market localization

- Expanded production in 8 best cost countries
- Added more than 800,000 square feet to emerging market footprint
- Opened 3 new facilities in Mexico and the Philippines



# Functionalizing IT has yielded significant scale benefits, which has notably reduced costs



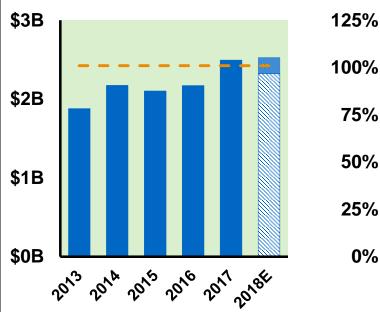
## Segment margins are expected to continue to expand

Segment	2016 segment margin <sup>1</sup>	2017 segment margin <sup>1</sup>	2018E segment margin	Margin improvement by 2020
Electrical Products	17.9%	17.9%	18.7% - 19.3%	+
Electrical Systems & Services	12.6%	13.6%	13.8% - 14.4%	++
Hydraulics	8.9%	11.7%	14.2% - 14.8%	+++
Aerospace	19.1%	19.0%	19.0% - 19.6%	+
Vehicle	15.0%	16.1%	15.8% - 16.4%	+
Total Eaton	15.0%	15.8%	16.3% - 16.9%	++



<sup>1</sup>Segment operating margin excludes acquisition integration charges

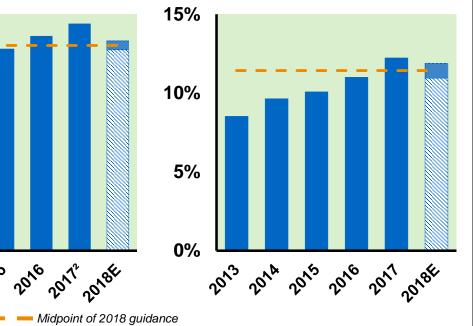
# For 2018, we expect strong free cash flow, cash conversion above 100%, and FCF margin above 11%



Adj. free cash flow<sup>1</sup>

## Adj. free cash flow<sup>1</sup> as a % of adj. net income

Adj. free cash flow<sup>1</sup> as a % of sales



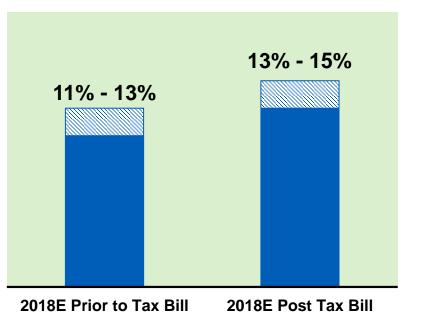
<sup>1</sup> Adj. free cash flow excludes U.S. qualified pension contributions and certain 2014 legal settlements

<sup>2</sup> Net income adjusted for 2017 gain on Cummins JV, 2017 impact of U.S. tax reform, certain 2014 legal settlements, and 2014 gain on Aerospace divestitures

2018 guidance range

# Our tax rate for 2018 is forecast to be between 13% and 15%

#### **Effective Tax Rate**



### Key tax considerations

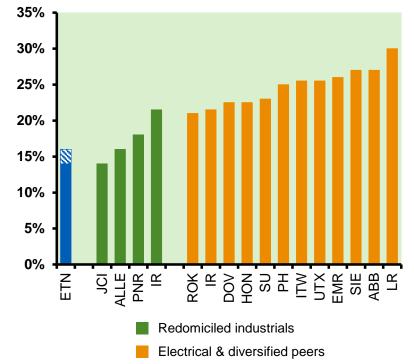
- U.S. tax reform resulted in \$62M of income in Q4
  - \$79M of income as a result of marking our deferred tax assets and liabilities to the lower tax rate
  - (\$17M) charge from mandatory repatriation tax
- We expect a 2018 effective tax rate between 13% - 15%, an increase of 2 percentage points over our prior estimate of 11% - 13% before the impact of U.S. tax reform



# We expect our long term tax rate to stabilize between 14% - 16%

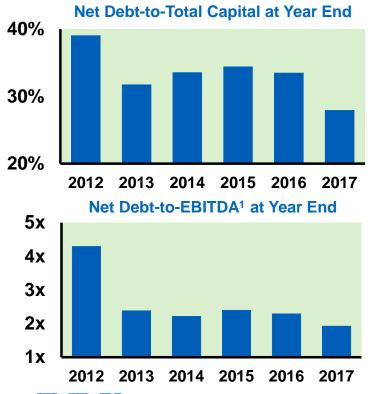
- The Tax Cuts and Jobs Act was a wholesale reset of the U.S. tax system
- With TCJA being adopted, almost all uncertainties about the direction of U.S. tax reform are now settled
- We expect our tax rate to stay in the range of 14% 16% post 2018

#### Peer Tax Rate Guidance for 2018 (midpoint where range provided)





## Our balance sheet is strong

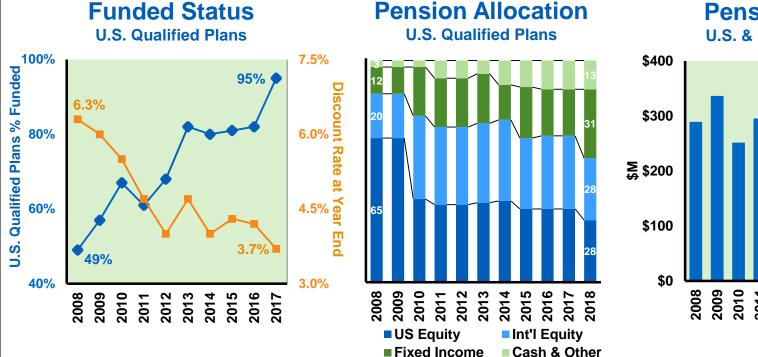


- Refinanced \$1B of debt which matured in November 2017
  - \$700M 10 year bond at 3.1%
  - \$300M 30 year bond at 3.9%
- Modest 2018 2020 maturities
  - Total 2018 maturities of \$578M, with \$450M in Q2, providing us refinancing flexibility
  - \$340M in 2019
  - \$241M in 2020

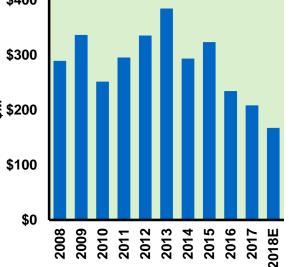


<sup>1</sup>Excludes acquisition integration charges, certain 2014 legal settlements, 2014 gain on Aerospace divestitures, and 2017 gain on Cummins JV

# Our U.S. qualified pension plan is almost fully funded, driving lower pension expense



Pension Expense U.S. & International Plans



Since 2008, we have contributed \$2.2B to U.S. qualified pension plans

# Our capital allocation strategy is focused on growth and returning capital to shareholders

*Reinvest in the business to drive organic growth* Capital expenditures plus R&D > 5.5% of sales since 2010



**Return cash to shareholders with a growing dividend** Over the last 10 years, dividend CAGR of 11%



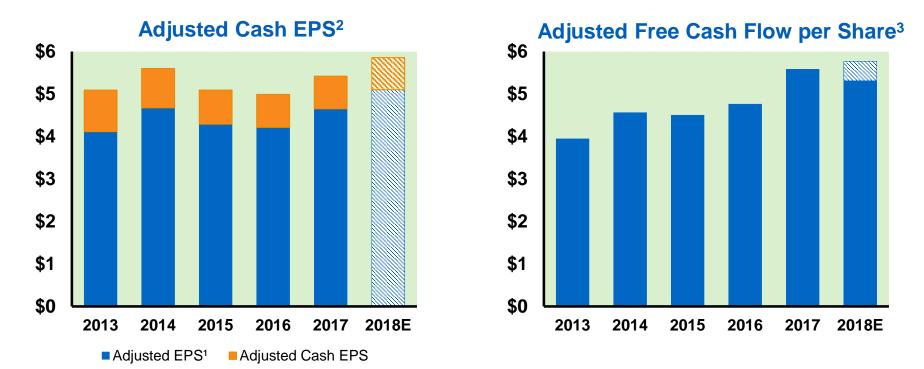
**Repurchase shares equal to 1% - 2% of our market capitalization** In 2018, completing last year of our 2015 – 2018 \$3B repurchase program

### **Pursue acquisitions**

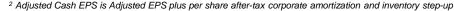
Increased focus on acquisitions, while retaining our discipline

We expect ~\$8B of FCF through 2020, average FCF conversion of >100%, and cash available post dividends of ~\$4.5B

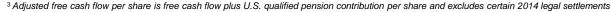
# On a per share basis, we generate strong and growing cash flow



<sup>1</sup>Adjusted EPS excludes 2017 gain on Cummins JV, 2017 impact of U.S. tax reform, certain 2014 legal settlements, and 2014 gain from Aerospace divestitures

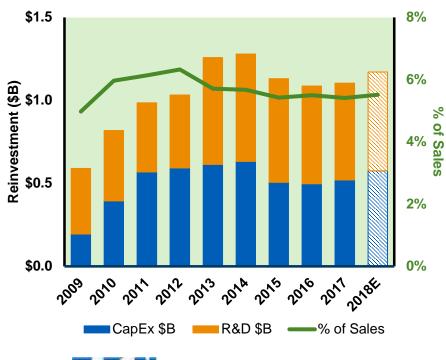


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# We will have invested over \$10B in capex and R&D in the ten years through 2018

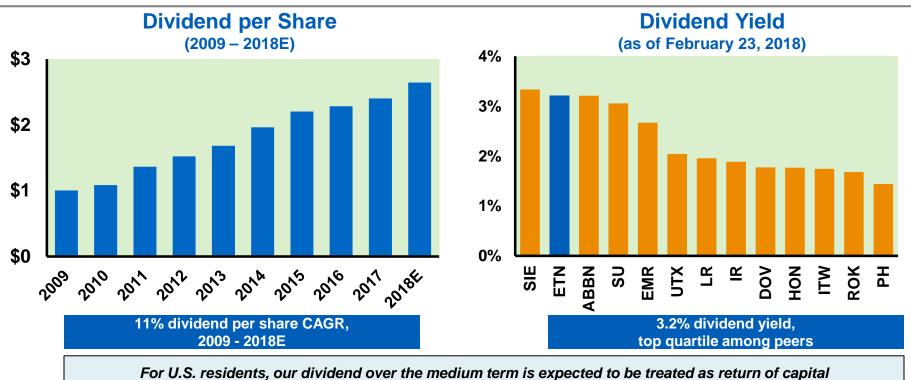
#### Annual Capex + R&D Reinvestment



- Reinvestment has been between \$1.1B and \$1.3B annually since the acquisition of Cooper
- Expect to reinvest 5.5% 6% of sales going forward
  - ~3% in R&D
  - ~2.5% 3% in CapEx

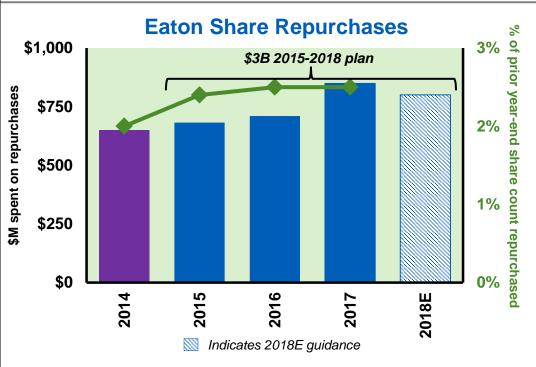


## Our dividend has grown rapidly



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# We are approaching the completion of our multi-year repurchase program

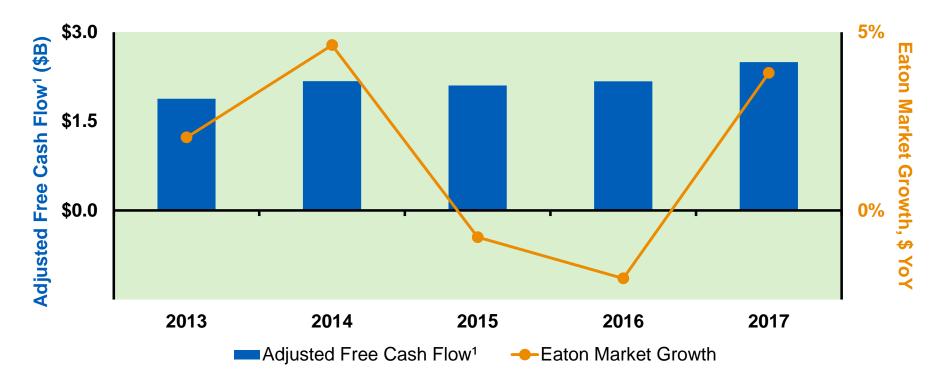


- \$2.3B of the \$3.0B 2015 2018 plan has been repurchased
- On track for successful 2018
   program completion
- Post 2018, anticipate continuing repurchases of 1% - 2% per year
  - \$350M \$700M per year

We have repurchased 9% of shares since 2014



# Our steady cash flow gives us the ability to maintain share repurchases during market declines





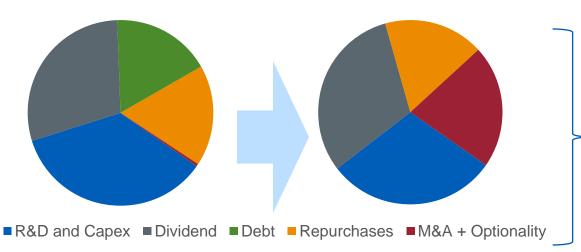
<sup>1</sup> Adjusted free cash flow is free cash flow plus US qualified pension contribution per share and excludes certain 2014 legal settlements

## We are targeting an increase in M&A spend

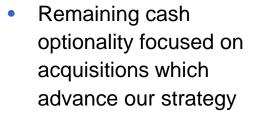
2018E - 2020E



2013 - 2017



We expect to have ~\$4.5B available for repurchases and M&A between 2018 - 2020



 Dividend policy remains unchanged



# We have a disciplined M&A process and a clear set of target criteria for evaluating future acquisitions

#### Areas of focus

- Electrical
- Aerospace
- eMobility
- Core technologies
- Geographic expansion
- Product gaps
- Channel coverage and service

#### **Qualitative criteria**

- Leadership in a key strategic market or region
- Attractive opportunities for growth and profitability
- Proprietary content in products and services
- Aligned with secular growth drivers

#### **Financial criteria**

- Target minimum returns of at least 300 bps above cost of capital
- Earnings accretive after 2 years
- Ability to drive sustainable top and bottom line synergies

We have completed 67 acquisitions since 2000 utilizing a disciplined evaluation and execution process



## 2018 financial guidance summary

2018 full year outlook				
\$5.00 - \$5.20 adjusted EPS / net income per share	10% growth at midpoint <sup>1</sup>			
Organic Revenue Growth	4%			
Revenue impact from JVs	\$(150)M			
Forex	\$150M			
Segment Operating Margins	16.3% - 16.9%			
Corporate Expenses (interest, pension, other corporate)	Flat with 2017 levels			
Tax Rate	13% - 15%			
Operating Cash Flow	\$2.9B - \$3.1B			
Free Cash Flow	\$2.3B - \$2.5B			
Capex	\$575M			
Share Repurchases	~\$800M			
Restructuring Costs	\$90M			

<sup>1</sup> Excluding \$1.89 gain from formation of Cummins JV and \$0.14 from U.S. tax reform, both in 2017

