**Schneider Electric Global Supply Chain,** powered by EcoStruxure™
Investor visit, Wuhan (China)
March 26, 2018

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# Disclaimer

All forward-looking statements are Schneider Electric management's present expectations of future events and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. For a detailed description of these factors and uncertainties, please refer to the section "Risk Factors" in our Annual Registration Document (which is available on www.schneider-electric.com). Schneider Electric undertakes no obligation to publicly update or revise any of these forward-looking statements.

This presentation includes information pertaining to our markets and our competitive positions therein. Such information is based on market data and our actual revenues in those markets for the relevant periods. We obtained this market information from various third party sources (industry publications, surveys and forecasts) and our own internal estimates. We have not independently verified these third party sources and cannot guarantee their accuracy or completeness and our internal surveys and estimates have not been verified by independent experts or other independent sources.

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# **Agenda** for the day

| | |
|---|---|
| 09.30 | Global Supply Chain Strategy |
| | EcoStruxure for Industry |
| | GSC China and Wuhan introduction |
| 11.30 | Lunch |
| 12.15 | Showroom |
| 12.45 | Plant & Distribution center tour |
| 14.15 | Q&A |
| 15.00 | Departure |

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**SAFETY**

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# Tour Conditions

Thank you for following these safety rules during your visit:

**Safety shoes**

**Safety jacket**

**Follow the walkways**

**Priority to forklifts & trolleys**

**Don't touch**

**No photography**

**No cellphones**

**No smoking**

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# Evacuation Instructions



**1** **Vocal message**
**« Announcement for Second Intervention Team and first aiders "**

>> Be ready for evacuation while remaining vigilant

**2** **Vocal message**
**« End of alert »**

>> No evacuation, activity can restart

**3** **Vocal message and alarm, accompanied by a long siren interspersed with a message**
**« Evacuation »** (français / anglais)

>> Leave your place safely, through the first emergency exit and then regroup at the gathering point.

No return to the building

Gathering point          Emergency exit

Airport: 63 km (TianHe)

Railway: 14 km (Wuhan)
27 km (Wuchang)
39 km (Hankou)

(+86 27) 5941 7296

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INSIGHTS

Overview of Global Supply Chain

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# Global Supply Chain:
A key differentiator for the Group

| ONE GLOBAL supply chain | World class competencies and talents | Culture of continuous improvement |

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# Global Supply Chain

A vast worldwide set-up across value chain

**Orders**

- 150,000 order lines / day
- 260,000 references

**Logistics**

- 98 distribution centers

**Manufacturing**

- 207 factories
- 44 countries

**Procurement**

- 24,000 suppliers
- €11 B purchases

**86,000 employees** (Total industrial headcount incl. Procurement, Manufacturing and Logistics)

December 2017 (including Delixii)

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# GSC Manufacturing & Distribution Network

A large and balanced geographical coverage

x% in total industrial costs

x% in total employees

**North America**

24%  15%

**Europe**
(incl. Eastern Europe)

29%  25%

CIS

**Asia Pacific**

40%  45%

Middle East
& Africa

South America

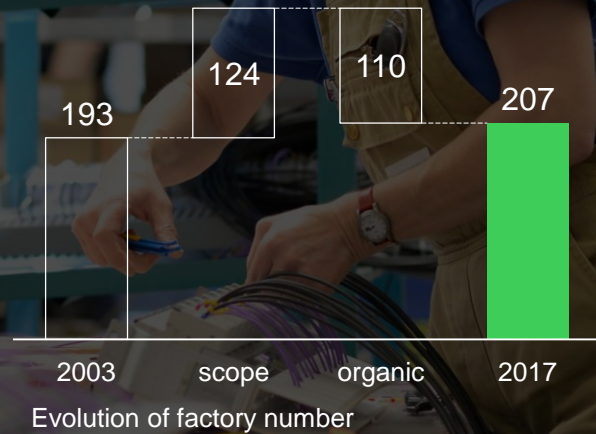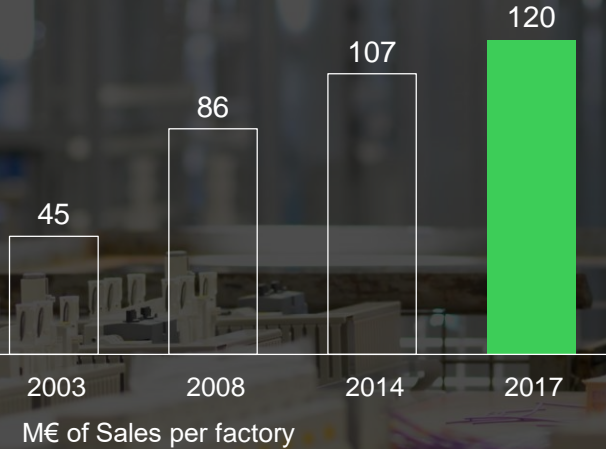**Rest of the World**

7%  15%

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# Continuous industrial footprint optimization

- Dedicated team tasked to manage footprint optimization based on market evolution, risk management, cost arbitrage, customer needs, competencies mapping…
- Continuous effort to add productivity through sites' consolidation and history of adopting automation technologies
- Continue to rebalance in new economies: Mexico, South East Asia, India and Eastern Europe…
- Solid integration process

## Increased footprint efficiency

| Year | M€ of Sales per factory |
|------|------|
| 2003 | 45 |
| 2008 | 86 |
| 2014 | 107 |
| 2017 | 120 |

Evolution of factory number

| | Value |
|------|------|
| 2003 | 193 |
| scope | 124 |
| organic | 110 |
| 2017 | 207 |

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# Global Schneider Performance System (SPS)
## with high standard applied across whole organization

Optimize the Supply Chain processes in order to achieve the best performance in **safety & environment, quality, service, lead time, productivity and capital employed**

- Integrate world-class Lean concepts and methods in our internal set of standards, the **"Schneider Performance System" (SPS)**

- Deploy regular **assessments** against the SPS standards, as the corner stone of our **continuous improvement** process

- Develop our **lean expertise** to the best worldwide level

- Identify opportunities and execute action plans that create **significant cost savings** for the Company

- **Implemented systematically** on every new acquisition

## 2017 achievements

- **94** sites at **high** SPS level

- **90** assessments realized

- More than **100** lean experts

- Strong contribution to the overall **€430m** delivered

- Due diligence and post-merger process launched on Asco

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# GSC organization is intricately linked across the Group

## Sales Operations

**GSC set up organized by region mirroring sales organization**

- 7 regions serving customers - Highest quality, cost and lead-time
- Constant dialogue with sales – forecasting and inventory optimization
- Strong focus on customer interaction for GSC teams

## Business Units

**Dedicated GSC teams for offer management**

- Translating the market requirements to supply chain strategy
- Linking with R&D on offer development
- Leading industrialization processes and Quality Value Engineering

## GSC

**GSC Global Functions integral to Group strategy**

- Dedicated functional teams for strategy, customer satisfaction & quality, planning, logistics & network design, procurement, Safety & Environment, Human Resources
- Driving GSC transformation at global level

## Group Global Functions

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**PERFORMANCE**

GSC journey over past years towards best-in-class levels

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# Our Tailored Supply Chain journey

has seen several breakthroughs towards Customer-centricity and cash efficiency, while delivering improved performance on productivity

| | | | | TSC 4.0 Tailored Sustainable Connected |
|---|---|---|---|---|
| | | | Tailored Supply Chain 2.0 | Tailored Supply Chain 2.0 |
| | | Tailored Supply Chain | Tailored Supply Chain | Tailored Supply Chain |
| | Simplification | Simplification | Simplification | Simplification |
| Footprint & Lean Manufacturing | Footprint & Lean Manufacturing | Footprint & Lean Manufacturing | Footprint & Lean Manufacturing | Footprint & Lean Manufacturing |
| 2005-2008 New 2 | 2009-2011 Connect | 2012-2014 One | 2015-2017 | 2018-2020 |

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**Best-in-class across industry**

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# TSC 2.0 journey on customer centricity

## 11
### Customer Segments with different buying behaviors

- Electrical Distributors
- IT Distributors
- Consumer Retailers
- Consumers
- Small and Med installers – EcoXperts
- Panel Builders
- Repetitive OEM
- System Integrators, Large Installers, Non Repetitive OEM, EPC
- Utilisers
- Other End Users
- Web Giants

## 5
### Supply Chain Models

**Customer order** - **Plan** - **Source** - **Make** - **Deliver**

| COLLABORATIVE | Standard Products | SIOP | Make To Stock | Track & Trace |
| LEAN | | | Make To Order | Precision Delivery |
| AGILE | Spare parts | SIOP | Configure To Order | Direct Shipment |
| PROJECTS -Equipment -Systems | Equipment | SIOP | Engineer To Order | Merge in Transit |
| | Systems | SIOP | | Order Grouping |
| | | | | On Site Delivery/ Storage ...... |

**FULLY FLEXIBLE**

## 9
### Key Transformations

- End to End Customer Lead Times
- Time to Market
- Special Care Units
- SIOP and Kinaxis
- Customer Process Capabilities
- Network Optimization & Transportation
- ETO Supply Chain Management
- Field Services Supply Chain
- Supply Base Management

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# TSC 2.0 key transformations have delivered

## 1 — Improve End to End Customer Lead Times

- 5 Supply Chain models tailored to customer segment
- Extended value stream mapping (eVSM) for flow design and competitive lead-time
- Analyzed by product line

→
- **80%** Made To Stock order Line < 5 days,
- **68%** Made To Order order line < 10 days;
- **Standardize** the methodology

## 2 — Shorter Time to Market

- Reinforce standardization and offer simplification
- Embed systematically procurement principles during offer creation
- Agile project management for new products to speed-up time to market

→
- Raised **maturity** of SPS industrialization
- Set up **lean & agility** for industrialization
- BU-GSC collaboration for offer simplification & standardization

## 3 — "Special Care Units" for Small Businesses

- Improve visibility for small volume offers for stronger performance tracking
- Develop an Agile supply chain model with the adapted planning

→
- Improved focus for **performance**
- One **Agile** flow successfully setup for targeted activities

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# TSC 2.0 key transformations have delivered

**4**   SIOP and KINAXIS

Develop tools & methodology for best-in-class planning and inventory management

- SIOP **maturity** raised
- **Kinaxis tool** covers most of regions
- **Co-planning** experiences with Distributors
- Reengineering of Sales **Forecast**

**5**   Network Optimization and Transport

Optimize distribution center footprint and transportation

- **Global Network model** completed, targeted flow changes implemented / under study
- **Control tower** phase 1 implemented, Phase 2 good progress

**6**   Engineered To Order Supply Chain Management

Adapt and increase equipment supply chain agility

- Engineering Design tool deployed
- **Claim management** process in place

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# TSC 2.0 key transformations have delivered

**7** Field Services Supply Cain

Develop and standardize supply chain offer for services

- Continuously increase **tracking from shipment**
- On Time Delivery improved to high level
- 48 hrs support solution enabled in Europe for OEM

**8** Supply Base Management

Supplier concentration and quality improvement

- Deployment of **Critical Supplies Quality process**
- **Supplier concentration** and **reduction** of -6,000+ active suppliers over 2017

**9** Customer Process Capabilities

Develop customer capabilities pyramid by customer segment
Develop CPC3.0 to differentiate us with innovation and digital versus competition

- Strong boost on CPC **adoption** while engaging **Monetization**
- Boosting deployment of Digital & Delivery Capabilities

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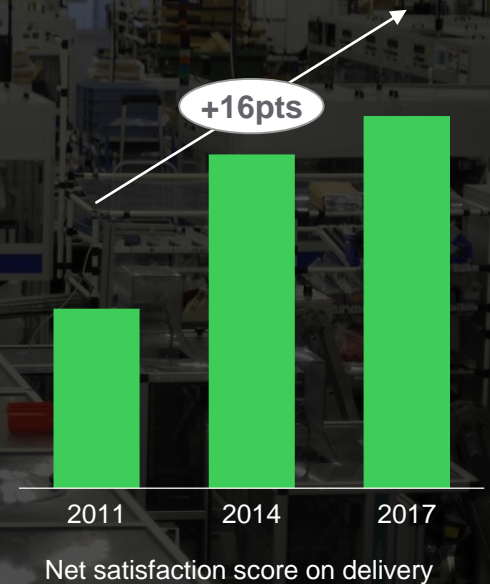
# Zoom on Customer Process Capabilities:

Increase customer satisfaction and contribute to growth

**86%** of customers would pay more for a better experience

**Logistic offer monetization of 30m€ in 2017**

C.P.C. 3.0 — **Premium package**

C.P.C. 2.0 — **Chargeable capabilities**

C.P.C 1.0 — **Offering freebies**
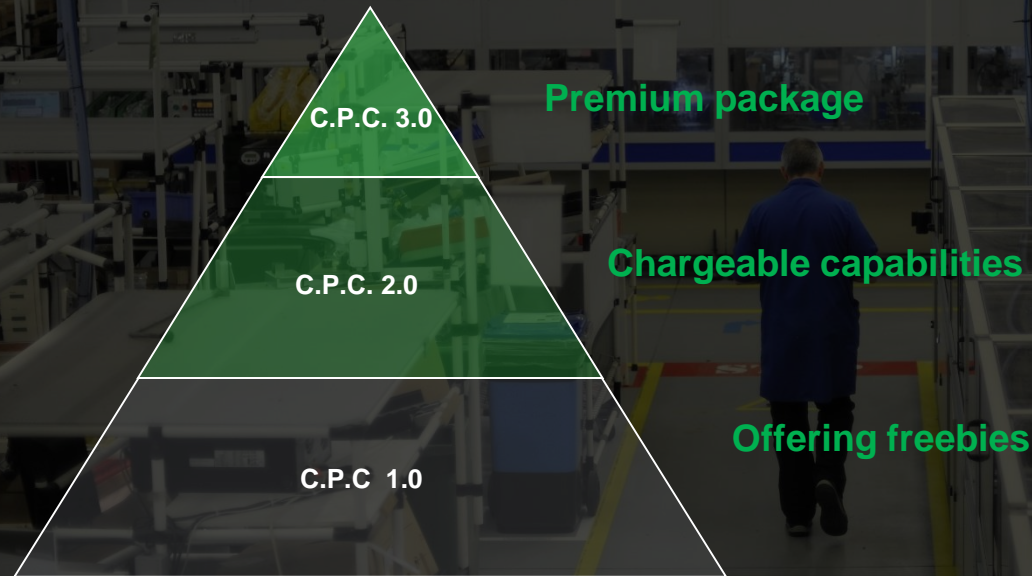
Increased customer satisfaction

+16pts

2011  2014  2017

Net satisfaction score on delivery

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# Our Supply Chain is recognized externally…



## Gartner recognition

**2017:** Schneider Electric ranked No. 17 in Gartner's Worldwide Supply Chain Leaders across industries

No.7 in Europe (in the top 10 since 2015), No.2 in Europe for Industrials

**2016:** 10/10 on Corporate Social Responsibility

Recognized for creating a centralized supply chain and Tailored Supply Chain transformation initiatives

## SCM Awards

**2018:** No.2 Power of the Profession Awards
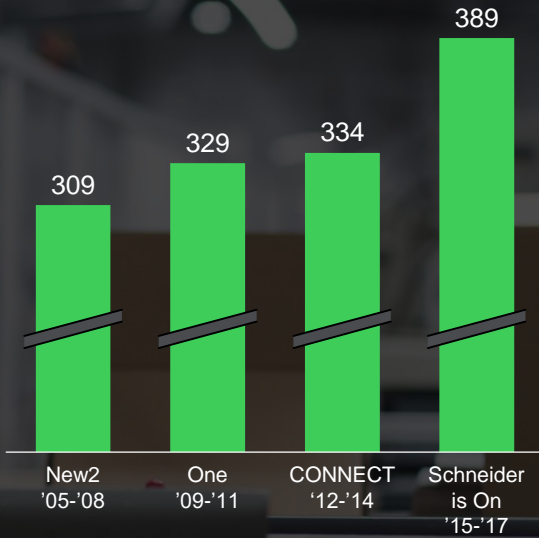
**2016:** Top 5 in Supply Chain Breakthrough

**2015:** Winner of Talent Breakthrough category



Supply Chain Breakthrough of the Year

Arrow's Lean Sigma Drones: A Higher Perspective on Supply Chain Innovation

Combatting Modern Slavery in the Supply Chain

Delivering a Competitive Advantage for MSD through Economic Inclusion & Supplier Diversity

Using Smartphones, Science and Partnerships to End a Neglected Tropical Disease

Doing Well by Doing Good – P&G's Approach to Citizenship

Outside in: Building a Customer Centric Logistics Platform Tailored to Customer's Buying Behavior
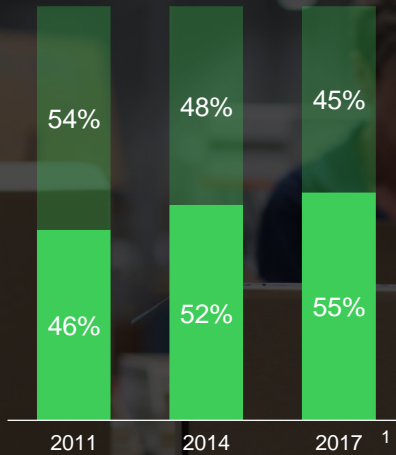
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# …and delivered consistently financial performance over past years

**Sustained improvement in industrial productivity**

**Constant work on cost rebalancing**

**Strong focus on cash through inventory management (c. 1bn€ cash)**



Yearly average productivity (m€):
- New2 '05-'08: 309
- One '09-'11: 329
- CONNECT '12-'14: 334
- Schneider is On '15-'17: 389

Constant work on cost rebalancing:
- 2011: Mature 54%, New eco 46%
- 2014: Mature 48%, New eco 52%
- 2017[1]: Mature 45%, New eco 55%
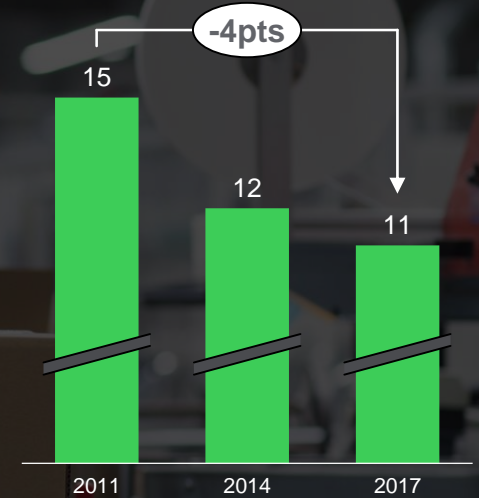
Inventory to sales ratio (%):
- 2011: 15
- 2014: 12
- 2017: 11

**-4pts**

**Mature** **New eco**

1. 2017 Estimated

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CONNECTED

TSC 4.0: Digitize Supply Chain
to further bring value

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# Main Supply Chain trends
driving our transformation

**Supply Chain as a Growth Enabler**

- Agility and flexibility to face variability, support growth and generate business
- Regionalization of supply chains for customer proximity driving margin growth
- E-Commerce driving higher customers expectations on deliveries

**Digitization & Innovation**

- Industry 4.0, IoT, Blockchain and robotics are accelerating
- Digitization leading to end-to-end visibility, customer transparency and collaboration
- Data analytics and Artificial Intelligence are coming on top of solid foundations

**Risk & Resilience**

- Growing tensions on worldwide trade, and return to national behavior (Russia, Brexit, USA…)
- Events are transmitted faster and further than before, increasing concerns about resilience of supply
- Increasing cybersecurity risks

**Sustainable Supply Networks**

- Population growth and middle class expansion scarce resources, and plead for more circular economy
- Sustainability is a factor of differentiation and it is now part of the Brand image

**Supply Chain Talents**

- Increasing **needs of supply chain talents** with significant anticipated shortages
- **Innovation, digital attitude & skills**, continuous learning and collaborative culture promotion
- **Real-time access to information** is changing teams attitude, agility, responsiveness: **empowerment**

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# Schneider Electric Supply Chain vision

to constantly increase value

# Our golden metrics

## Tailored

We provide our customers what they value while leveraging scale and efficiency.

## Sustainable

We optimize resources, by developing a circular supply chain, in clean and safe facilities, powered by renewable energy.

## Connected

We optimize end-to-end efficiency and asset reliability while providing visibility to customer.

## Customer satisfaction

Net Satisfaction Score on delivery

## Cost efficiency

Net productivity without raw material inflation

## Cash efficiency

Average gross inventory on sales

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# Tailored, Sustainable, Connected Supply Chain 4.0

**11**

customer segments with different buying behaviors

- Electrical distributors
- IT distributors
- Consumer retailers

- Consumers

- Small and medium installers
- Panel builders
- Repetitive OEMs
- System integrators, large installers, non-repetitive OEMs, EPC

- Utilities
- Other end users
- Web giants

**6**

digital accelerators

Source → Make → Deliver

**Plan**

**Care**

**Innovate**

**5**

supply chain models

COLLABORATIVE

LEAN

AGILE

PROJECT-DRIVEN

FULLY FLEXIBLE

**8**

key transformations

- End-to-end customer lead times
- Special care units
- SIOP: Sales inventory op planning
- Customer process capabilities

- Network optimization & transportation
- ETO supply chain management
- Field services supply chain
- Supply base management

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# Tailored, Sustainable, Connected Supply Chain 4.0

Digitization to empower our teams, improve customer experience and end-to-end operational efficiency

**Accelerators**

**Enablers**

**Cybersecurity**
Protect our EcoStruxure assets

Eco Struxure™
Innovation At Every Level
**Make** for Industry

Internal

**People & Leadership**
Empowering people
Digital Attitude

**Source**
Digital Procure to Pay

Inbound

Suppliers

Prime

Customers

Outbound

End-to-end

Eco Struxure™
Innovation At Every Level
**Deliver**
Smart Distribution Center
Digital delivery to service

**Data analytics**
Making better decisions, faster

**Plan** End-to-end digital planning & control

**Care:** For the customer and the planet

**Innovate:** Center of Digital Innovation

**Product life cycle and data management**
Accelerating data quality improvements

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# TSC 4.0 - Source

Digitization accelerates procurement and suppliers efficiency

## E-Procurement

One platform capability for non-production procurement bringing:

- Reduced consumption through better procurement controls and approvals

- Increased deployment of catalogues and associated price reductions

- Traceability in end-to-end approach (Tier 2 suppliers)

- Collaborative decision-making

⇒ Agile model being deployed

## Procurement Analytics

One centralized platform consolidating detailed production procurement information enabling:

- Fully automated, real time visibility and insights on spend coverage & supplier performance

- Support for procurement negotiation

- Visibility on order delay at supplier

⇒ Already 2,000+ users in PRISM tool - 100% spend coverage, 90% being automated

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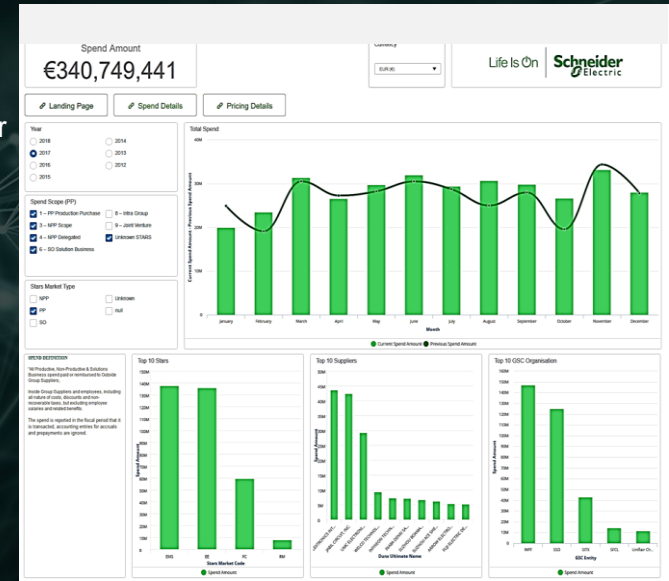
# TSC 4.0 - Make: EcoStruxure™ for Smart Factory

Catalyze optimization with high level of platforming data



EcoStruxure™
Innovation At Every Level

**Apps, Analytics & Services**

EcoStruxure Industrial Software

- On-Line Insight
- Manufacturing Execution System
- Enterprise Asset Performance Management
- EcoStruxure Augmented Operator Advisor
- EcoStruxure Asset Advisor
- EcoStruxure Resource Advisor
- EcoStruxure IT Advisor

**Edge Control**

- InTouch (Machine Edition) Development Studio
- EcoStruxure Machine SCADA Expert
- Modicon
- Magelis Edge Box and Industrial PC
- EcoStruxure Power Monitoring Expert

**Connected Products**

- Sensors & RFID
- Easergy TH110
- Harmony
- Transmitters
- Antenna (option)
- Receivers
- Altivar™: Variable Speed Drives
- Meters iON (PM8000)
- Masterpact MTZ
- Galaxy UPS

End-to-End Cybersecurity

Cloud and/or On Premise

EcoStruxure **Plant**  EcoStruxure **Machine**  EcoStruxure **Grid**  EcoStruxure **Power**  EcoStruxure **Building**  EcoStruxure **IT**

## Augmented Operator
- For Assistance, expertise, training or assemble

## Advanced Robotics
- Collaborative robot
- AGV

## Additive Manufacturing
- For non- production parts (Plastics)

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# TSC 4.0 - Deliver

## Digitization improves customer experiences with more efficient and sustainable logistics

| Transportation | Customer Delivery Experience |
|---|---|

**Control Towers for real-time monitoring in all regions**

- Drive remediation plans to protect customer from delays

- $CO_2$ measurement and reduction of wasted volume in transport

- Supported by our strategic partners

*Australia Control Tower for Pacific zone*



| |
|---|
| Reduction to less than 1/5th in end-to-end case cycle times |
| On Time Delivery transport above 98.5% |
| 50% improvement in % cases answered to customers within 24 hours |
| Total request time open reduced by 70% |

**Segment customer delivery experience:**

- Close collaboration with Businesses & marketing to deploy 30 capabilities- in progress

- Providing more visibility on shipment for critical deliveries

*GPS tracking for critical deliveries increasing satisfaction in Wuhan (China)*

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# TSC 4.0 - Deliver: Implementation of regional Control Towers

## 2018 examples of Risk Management and robust supply chain response to disruptions

### Major accidents
Major transportation accidents which could create severe implications to our supply chain across the regions

**March 7th, 2018**

Serious fire on **Maersk Line** container vessel in the Arabian Sea

**March 8th, 2018**

Full assessment on impact
3 shipments from China to France impacted
Contingency defined

**March 8th, 2018**

**Contingency activated:**
- Replacement orders raised
- Insurance company notified

- In **less than 24hs**, full assessment was done thanks to the **Control Tower real visibility** of all inventory in transit
- Supply chain impact was prevented by early detection; financial impact mitigated; no customer impact

### Port, Airport congestion
Continuous congestions verified across all regions might impact our supply chain

**January 17th , 2018**

Port congestion reported in Southern Vietnam, causing delays on ocean inbound shipments to our factory & DC

**January 18th , 2018**

Full assessment of all in-transit
Identification of critical orders
Notification to stakeholders

**January 18th , 2018**

**Contingency activated:**
- Containers discharged at nearby ports
- Truck directly to DC and factory
- Impact prevented / air cost avoided
- Real time tracking & daily report

- Within a few hours, full assessment was done & stakeholders notified;
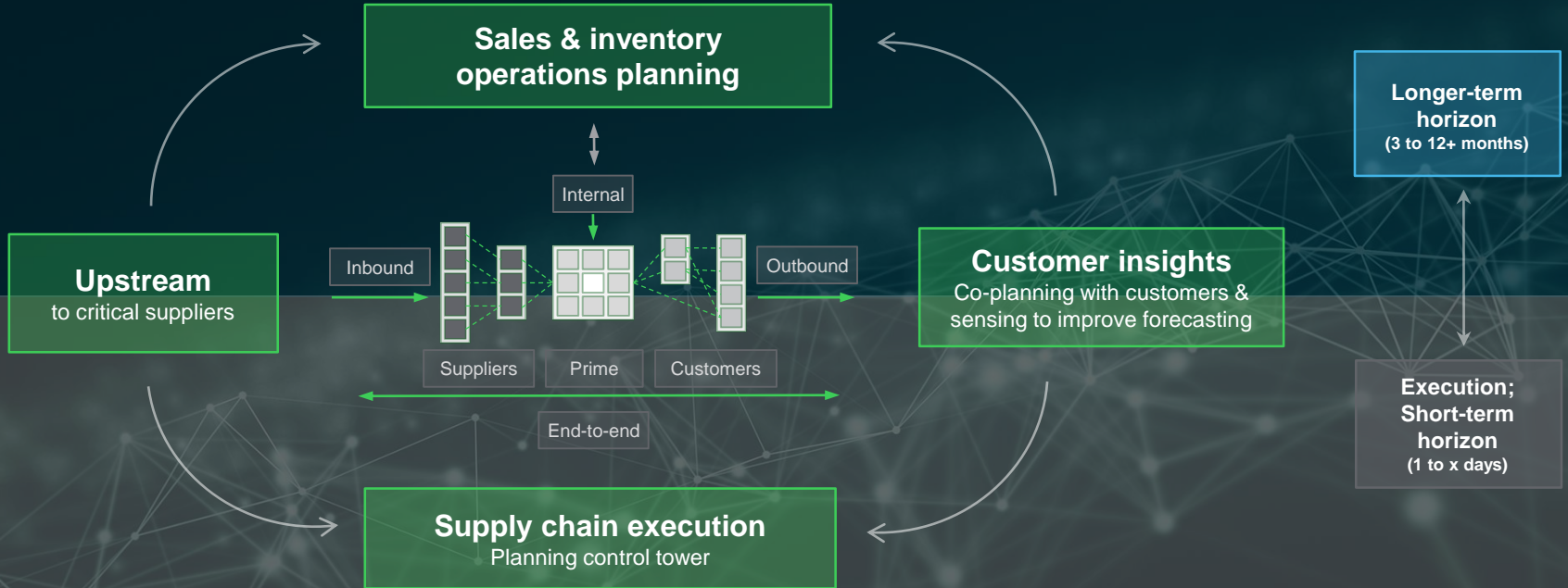- Contingency plan activated **prior to supply and customer impact**; no airfreight required

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# TSC 4.0 - Plan

End-to-End Planning will expand to improve synchronization of Demand & Supply



**Sales & inventory operations planning**

Internal

Inbound

Outbound

**Upstream**
to critical suppliers

**Customer insights**
Co-planning with customers & sensing to improve forecasting

Suppliers | Prime | Customers

End-to-end

**Supply chain execution**
Planning control tower

**Longer-term horizon**
(3 to 12+ months)

**Execution; Short-term horizon**
(1 to x days)

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# TSC 4.0 - Care for our Customers
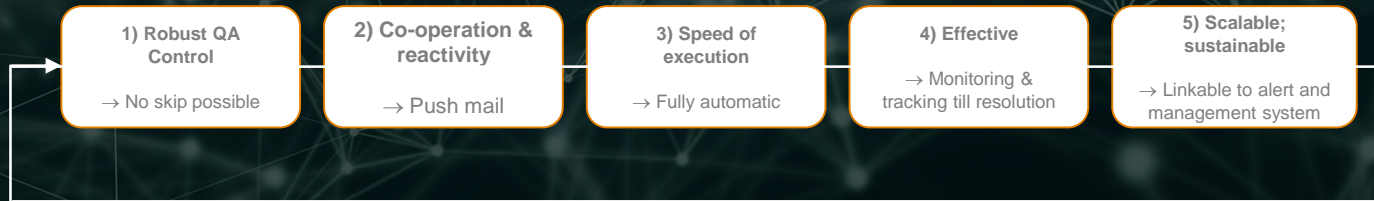
## Improve end-to-end quality

**Improvement of the execution of Process Control Plans with digital solutions**
**Example of Schneider Electric Batam (Indonesia)**

- Digitization of procedures for regular quality assessment
- Mobile device support to quality technician
- Audit results linked to continuous improvement actions across factory

Improvement through digital:

- ✓ Reliable & Robust
- ✓ Paperless
- ✓ Simplified
- ✓ Real-time
- ✓ Traceable & reliable
- ✓ Visual support
- ✓ Resource Management

| 1) Robust QA Control | 2) Co-operation & reactivity | 3) Speed of execution | 4) Effective | 5) Scalable; sustainable |
|---|---|---|---|---|
| → No skip possible | → Push mail | → Fully automatic | → Monitoring & tracking till resolution | → Linkable to alert and management system |

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# TSC 4.0 - Care for our Customers

## Improve end-to-end quality

Real time process & quality monitoring enabling preventive actions
Example of Schneider Electric Bangalore (India)

The **digital** solution integrated to **EcoStruxure** enables **connected** products, machines & tools to **collect** process & critical to quality data, in real-time.

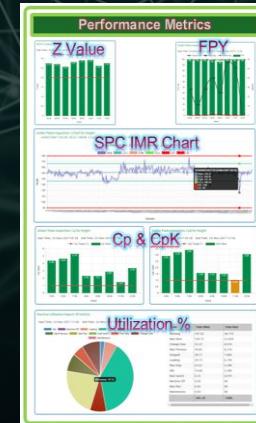**Analysis**(process capabilities) helps to **drive preventive actions**

Eco truxure™
Innovation At Every Level

- Apps, Analytics..
- Edge Control
- Connected Products

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| Parameter | Image | Highest Value | Lowest Value | SPC | TRIGGER | CAPA |
|---|---|---|---|---|---|---|
| Temperature | | 31 Deg C | 27 Deg C | Under Control | | |
| Humidity | | 60% RH | 50% RH | Under Control | | |
| Lux | | 600 Lux | 450 lux | Under Control | | |
| Noise | | 60 db | 50 db | Under Control | | |
| Leakage Voltage | | 5.7 Volts | 0.8 Volts | Under Control | | |
| Dust | | | | Under Control | | |
| CO2 | | 400 ppm | 200 ppm | Under Control | | |
| ESD Grounding | | | | Under Control | | |

**Performance Metrics**
- Z Value
- FPY
- SPC IMR Chart
- Cp & CpK
- Utilization %

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# TSC 4.0 - Care for the Planet

Our 2020 Sustainable Supply Chain ambitions

## Clean and safe facilities

**0**

serious or fatal accidents

**1**

medical incident per million hours worked

**100%**

of sites certified with ISO 14000, ISO 50000, and OHSAS 18000
Integrated new sites and secure certification renewal

## Carbon light and digital

**80%**

of electricity comes from renewable sources,

In line with RE100 commitment of 100% renewable sources by 2030

**100%**

of sites deliver energy savings, leveraging EcoStruxure Power & Resource Advisor

## Resource efficient – circular

**95%**

waste recovery rate and 200 sites on the way to zero waste to landfill

**100%**

of regions with circular supply chain innovations, through new and scalable innovations

**100%**

cardboard / pallets from recycled or certified sources

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# TSC 4.0 - Innovate

## Digitization that drive idea generation and experimentation

### Newly set-up Center Of Digital Innovation to monitor breakthrough technologies…

Dedicated team focused on 2 to 5+ years horizon

Industrial innovation

Empowering employees with cutting-edge technology

Collaborative robotics & advanced automation

Artificial intelligence

### …experimenting to deploy best-of-breed innovations in our facilities

Artificial intelligence (AI) used in quality improvement through faster machine learning:

- Teaching a pair of AI instances how to look at data from a camera

- Active, intelligent system that can check the quality of orders, products

Blockchain usage tested to improve critical to quality parameters and offer traceability:

- Proof Of Concept in North America with different suppliers and partners

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# TSC 4.0 - Cybersecurity

## An essential pillar of our smart Supply Chain

| **Holistic approach** | **Strong focus on architecture** | **Embed cybersecurity in operations** |
|---|---|---|

- Integrated in overall Schneider Electric CyberSecurity Strategy
- Leverage Schneider Electric EcoStruxure Offer
- Connect and integrate external inputs (e.g. suppliers, machine investment, …)

- Covering IT/OT convergence (hardware and software) through strategic partnerships at a global and regional level
- Support from Schneider Digital organization to implement best practices
- Internal conformance process and centralized governance

- Creation of a network of Supply Chain Cybersecurity referents
- Improved coordination for threats identification, detection and responses
- Regular assessment of the maturity level of every site, with action plans to reach the expected level of protection

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**Cybersecurity** and data privacy are integral to Schneider Electric's business strategy, following a multifaceted approach:

- Enterprise level (endpoint protection, access management & Operations Center)
- Assets & Systems in customer sites remotely managed by SE
- Products/Systems sold to customers through Product Security Office

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**Digital security approach**

**Risk Register**          **Capabilities + Digital Locks**

**Threats are mitigated by specific programs**

**High-Value Assets**          **Reality Check**

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# TSC 4.0 - People

Empowered people to drive the digital transformation with "competencies of the future"

| **Competencies of the future** | **Constant learning culture** | **Leadership in supply chain of the future** |
| --- | --- | --- |

- Evolving skillset (hard and soft)
- Digital technologies all pervasive
- Increased focus on analytics driven by new technologies

- Prepare future adaptations through constant learning experience for blue-collars
- Technology solutions offering easy access

- Higher empowerment of blue-collars through digital - direct link with suppliers to share and manage quality issues

- Management transformation: from technical to coaching skills

### Learning corner for Mexico Factory blue-collars

- Full Schneider academy content available, including safety, technical, quality, onboarding training, HR meetings…



**Transformation complementary with strong focus on current skills management**

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# Global Supply Chain:

A key contributor to the Group's performance

| | |
|---|---|
| Tailored to customer buying behavior | Consistent financial performance |

New TSC 4.0 program for future-ready supply chain with:

- Limited and progressive capex - progression in line with revenue growth and Group policy on ROI
- Contribution to productivity results, at good level

| | |
|---|---|
| Moving towards an end-to-end connected supply chain, benefitting from EcoStruxure 6 domains | Strong focus on sustainability |

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**RELIABLE**

Deployment of our Smart Supply Chain powered by EcoStruxure:
from local scale to global standardization

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# GSC leveraging EcoStruxure offers

## The aim:

- Optimize end-to-end efficiency and asset reliability using EcoStruxure for Industry

- Integrating innovative technologies, IT solutions and data analytics into our manufacturing operations

- Opening our smart factories to customer visits – EcoStruxure for Industry Showcase
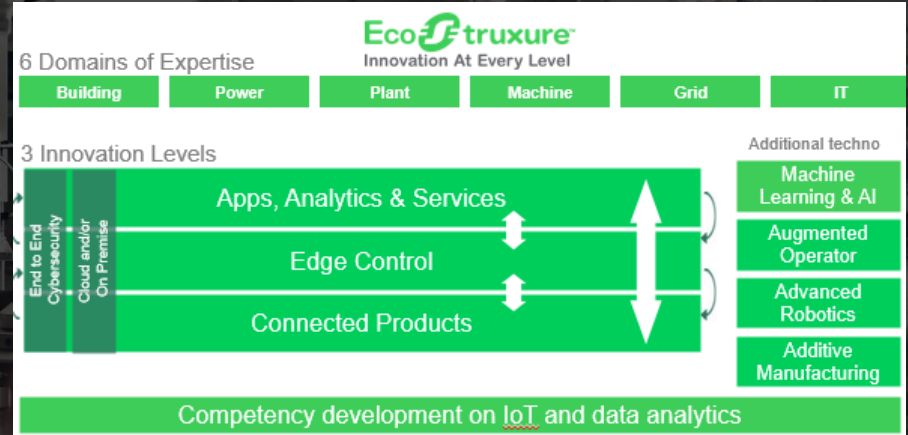


Being disruptive is required in today's Digital Age to be even more competitive and to deliver greater value to our employees and customers

# Deploying EcoStruxure in GSC sites

Think big. Act small. Scale fast.

## 2017 → 2020

**2017**

**11**
Advanced

**25**
Step-up

**70**
sites connected to **Resource Advisor**

**More sites covered**

**Wider solution deployed**

**Deeper expertise:**

- **Standard –** a connected factory for process control
- **Step-up –** a strong level of lean digitization
- **Advanced –** a high level of platforming data

**2020**

**Reach 100+**
Advanced + Step-up

**200+**
sites connected to **Resource Advisor**

Capitalizing a global roadmap with all regions and testing solutions from ideation to feasibility to pilot and scale
Deploy global governance and appropriated centers of excellence

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# INNOVATION

EcoStruxure for Industry

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# Digital Transformation in industry
What's Driving It?

## CONNECTIVITY

- Smart connected devices (products)
- Standards-driven connectivity
- Lower cost of measurement

## MOBILITY

- Pervasive and affordable communication
- Remote access
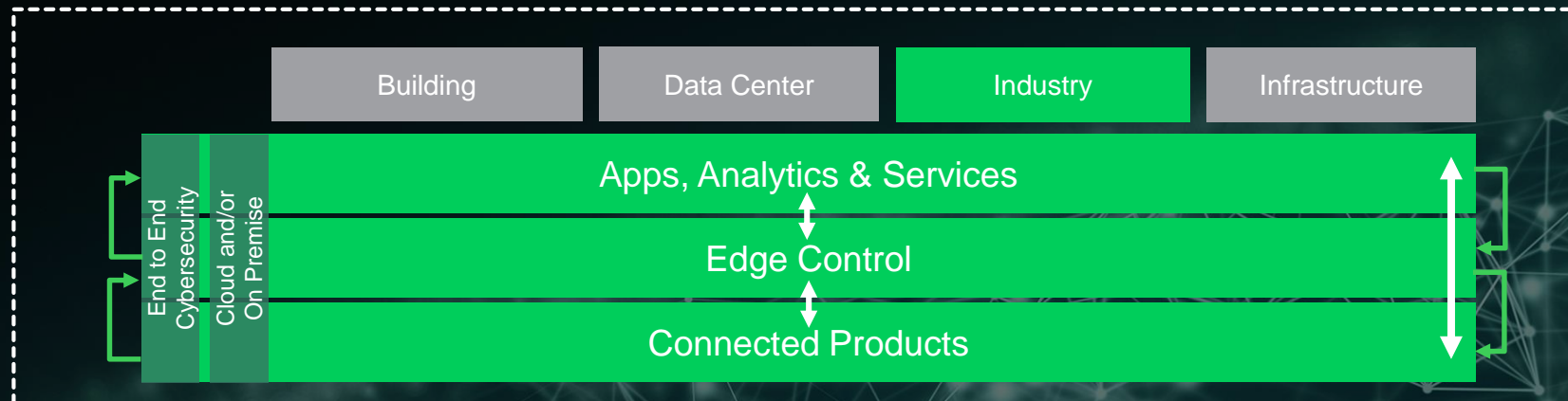- User-driven interfaces

## CLOUD

- Massive aggregation of data
- Data access by specialists
- Industrial application developer ecosystem

## ANALYTICS

- Cognitive applications
- Artificial intelligence optimizing performance at all levels

EcoStruxure's integrated architecture serves four end markets with its six domains of expertise

Building | Data Center | Industry | Infrastructure

End to End Cybersecurity
Cloud and/or On Premise

Apps, Analytics & Services

Edge Control

Connected Products

EcoStruxure Building | EcoStruxure Power | EcoStruxure IT | EcoStruxure Machine | EcoStruxure Plant | EcoStruxure Grid

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# Digitization powered by EcoStruxure

is driving end-to-end efficiency for industrial environment

## Agile Management

Shop floor agility: Bringing control to the enterprise level

## Process Efficiency

Better closed-loop measurement and control
for greater throughput and faster processing

## Asset Performance Management

Optimized asset use to improve profitability

## Empowered Operators

Empowering operators
for more effective decisions
on the factory floor

## Reliability

Ensuring plant, process, and asset uptime

## Energy Efficiency

Visibility, control,
and optimization of power
consumption and costs

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# Agile Management & Process Efficiency

Driving faster and better decisions, enterprise wide

EcoStruxure™
Innovation At Every Level

| | |
|---|---|
| Apps, Analytics & Services | Lean Digitization, EcoStruxure Machine Advisor, EcoStruxure Asset Advisor, system platform |
| Edge Control | HMI/PLC, IIoT Edge Box |
| Connected Products | PacDrive robot, Altivar drives, Zigbee/sensors, Harmony, RFID for Kanban |

IT/OT integration

Factory-floor insights and efficiency

Better decisions, faster processing

## Business value

Based on 15 years of Lean Manufacturing, we deliver Lean Digitization through:

- Transparency, visibility, reactivity
- Paperless operations in the factory for line management and support functions
- System Platform to reinforce control process and traceability

## Targets/Outcomes

- Simplification of shop-floor management across 100+ sites by 2020
- ROI in 2 years thanks to agility and efficiency

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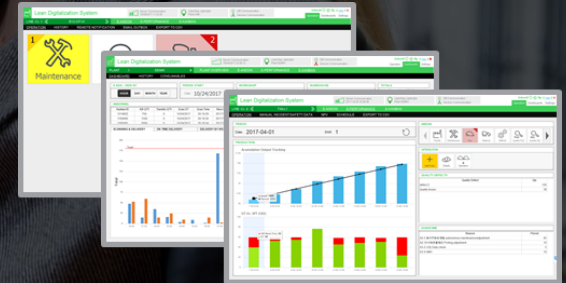
# Asset Performance Management

Predictive analytics for reduced downtime and longer operational times


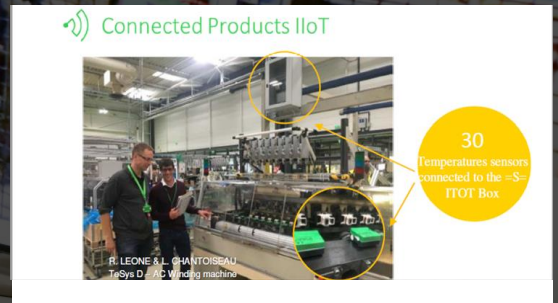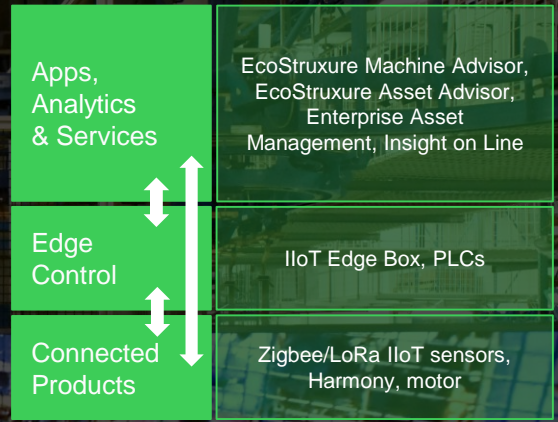Eco**struxure™**
Innovation At Every Level

## Business value

IIoT-powered predictive analytics reduce downtime and extend operational times through:

- Real-time insights
- Ease of integration
- Machine learning
- Improved overall assets availability and reliability, including reduced spare parts inventory costs
- Integration with Enterprise Asset Management

## Targets/Outcomes

- ROI in 6 months on IIoT-powered connected assets (IIoT Edge Box)
- ROI in less than 2 years on computerized maintenance management system (Enterprise Asset Management)

**Connected assets for predictive analytics**

**Increased asset control, availability, and reliability**

**Lower costs and higher productivity**

| | |
|---|---|
| Apps, Analytics & Services | EcoStruxure Machine Advisor, EcoStruxure Asset Advisor, Enterprise Asset Management, Insight on Line |
| Edge Control | IIoT Edge Box, PLCs |
| Connected Products | Zigbee/LoRa IIoT sensors, Harmony, motor |

Connected Products IIoT

30 Temperatures sensors connected to the =S= ITOT Box

R. LEONE & L. CHANTOISEAU
TeSys D – AC Winding machine

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# Empowered Operators

## For increased efficiency in maintenance and processes

EcoStruxure™
Innovation At Every Level

### Business value

Empowering operators by bringing all necessary information in hand to act:

- Simplified use of information at point of need or in case of repair
- Easy access across functions
- Driving effective decisions on shop floor

### Targets/Outcomes

- Reduced mean time to repair
- ROI in between 6 months and 1 year

Real-time asset and process information

Reduced time to repair

Process efficiency and reliability

| Apps, Analytics & Services | EcoStruxure Augmented Operator Advisor, EcoStruxure Mobile Operator Advisor, EcoStruxure Secure Connect Advisor |
|---|---|
| Edge Control | PLCs |
| Connected Products | PacDrive robot, Altivar drives, Zigbee/LoRa IIoT sensors, Harmony… |

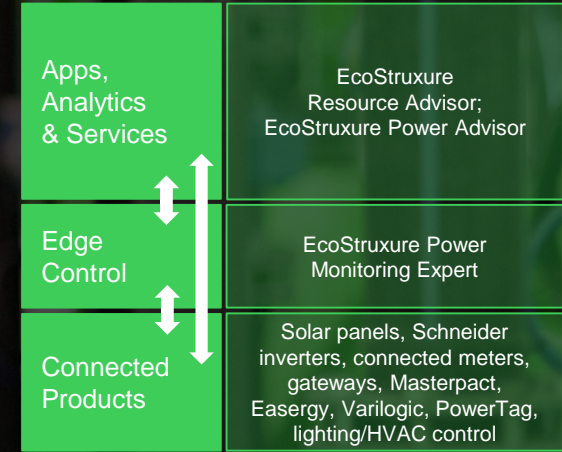Augmented Operator Advisor

Shanghai – China

Lexington , KY – US

Le Vaudreuil – France

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# Energy Efficiency & Reliability

## Driving reduced energy consumption through real-time insights

**EcoStruxure™**
Innovation At Every Level

Energy and sustainability insights

Real-time power monitoring

Greater energy efficiency and power reliability

### Business value

Energy efficiency program, built on real-time insights, delivers:

- Full visibility and control of energy consumption
- Continuous improvement and energy savings plan
- EcoStruxure supports ISO 50.001 certification (energy management)

### Targets/Outcomes

- First implementation delivers up to 30% energy savings and contributes to continuous improvement over the years
- 70% of our energy spend is already covered by Resource Advisor

| | |
|---|---|
| Apps, Analytics & Services | EcoStruxure Resource Advisor; EcoStruxure Power Advisor |
| Edge Control | EcoStruxure Power Monitoring Expert |
| Connected Products | Solar panels, Schneider inverters, connected meters, gateways, Masterpact, Easergy, Varilogic, PowerTag, lighting/HVAC control |

Example: GSC India / Bangalore / SEPFC

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# EFFICIENCY

GSC China and Wuhan (SEMW) Introduction

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# Schneider Electric

has grown significantly in China over the past 30+ years

**Infancy**

1979-1990

- HV technology transfer to Ping Ding Shan
- Tianjin Merlin Gerin Co. Ltd. In 1987

**Growth**

1991-2000

- Schneider Electric Co. Ltd.
- First wave of large-scale investments

**Development**

2001-2010

- Establish R&D centre
- Massive technology transfer

**A global role for China**

2011-present

- Contribute to China energy efficiency engineering innovation

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# Global Supply Chain
## China Footprint

- **26** Schneider Manufacturing plants
- **18,000** Employees
- **8** Distribution Centers
- R&D Centers

Wuhan

- **90%** sales manufactured in China
- **90%** parts from local suppliers

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Video:
GSC China development

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# Our Products

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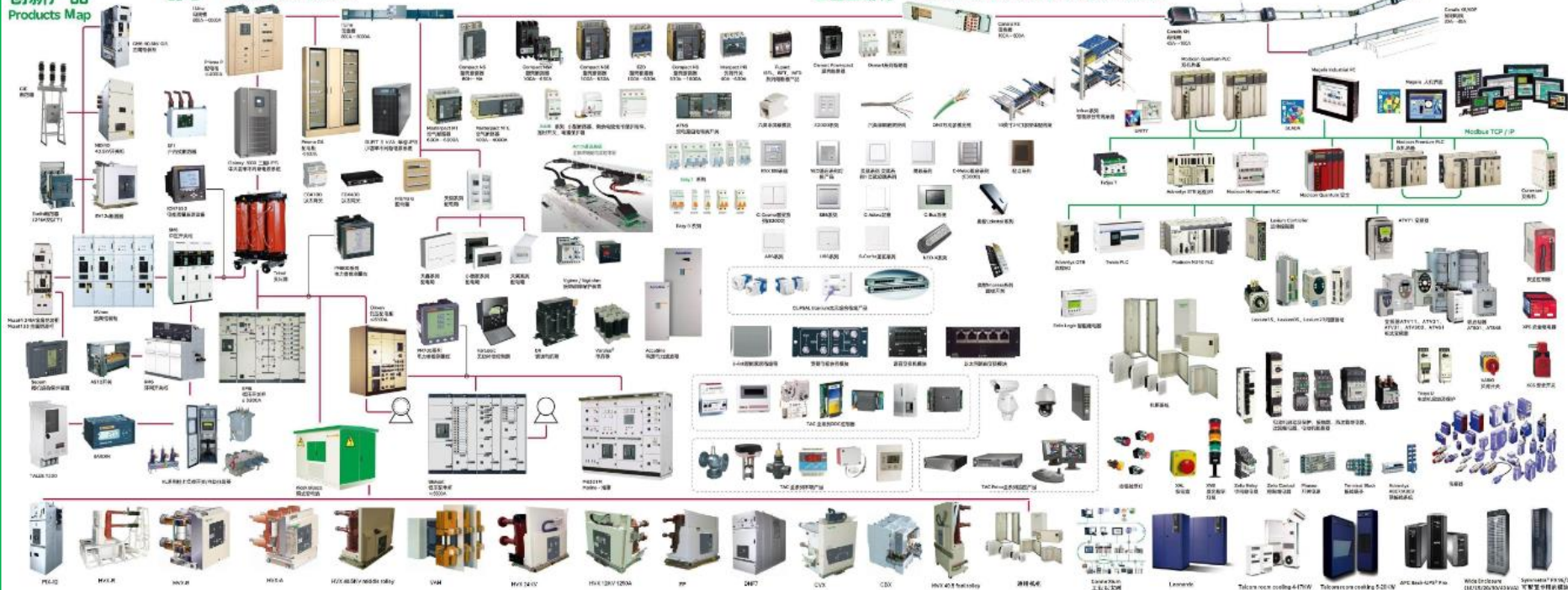
# Global Supply Chain
## Go West program

- **26** Schneider Manufacturing plants
- **18,000** Employees
- **8** Distribution Centers
- R&D Centers
- Go West program

**Reduction in hourly rate and rental costs**

Xi'An

Wanzhou

Wuhan

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**Video:**
**Technologies used in GSC China**

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# GSC China, SEMW Plant ID Card

Schneider Electric Manufacturing (Wuhan)

- **800+ staff as of Dec. 2017**
- **100%** Schneider Electric
- Manufacture **Mini Circuit Breakers**, **Contactors** and **Lights & Buttons**

- **25,000m²** building, include plant & distribution center, **100,000m²** land
- High level of SPS performance

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# SE Manufacturing Wuhan (SEMW) journey



New plant foundation

Relocation in new plant
COGS reach RMB 400 million

Lean Digital System
pilot 4 modules

**2011** · **2012** · **2013** · **2014** · **2015** · **2016** · **2017** · **2018**

Start mass production

Automation deployment

COGS reach up to RMB 850 million

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# EcoStruxure solution covered in SEMW

**6 Domains of Expertise**

| EcoStruxure GRID | EcoStruxure POWER | EcoStruxure BUILDING | EcoStruxure PLANT | EcoStruxure MACHINE | EcoStruxure IT |
|---|---|---|---|---|---|

**Additional technology**

**Apps, Analytics & Services**

- EcoStruxure Asset Advisor
- EcoStruxure Power Advisor
- EcoStruxure Building Advisor
- EcoStruxure Machine Advisor
- EcoStruxure Resource Advisor
- Lean Digitization
- EcoStruxure Augmented Operator Advisor

**Augmented Customer**
Virtual visit

**Augmented Operator**
AR & VR

**Advanced Logistic**
4G Geo Location RFID Traceability, Driverless Forklift. Smart AGV

**Edge Control**

- EcoStruxure Power Monitoring Expert
- Building Operations
- Modicon PLCs
- PacDrive
- IT/OT Edge Boxes
- IT/OT Edge Boxes

**Advanced Robotics**
COBOT

**Connected Products**

- Solar inverters
- Connected meters and gateways (Power Tag, SEPAM, Easergy P300 & T300)
- Masterpact MTZ, Masterpact 5.0, Varilogic, power meter, SmartLink, PowerTag
- Upgraded lighting control, Digital CCTV, HVAC control
- Magelis HMIs
- Altivar drives, servomotor, sensors, Harmony push buttons, RFID sensors
- UPS, cooling, sensor

**Additive Manufacturing**
Plastic 3D Printing
Metallic 3D Print

**3 Innovation Levels**

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# EcoStruxure delivers on its promises

Wuhan - limited investment for quick return

## Industrial Automation
### Plant & Machine

- **Agile management & Process Efficiency: < 1-year ROI through process efficiency**
  - Transparency / visibility: easier root cause analysis
  - Paperless operations: decrease "red time"
  - Enhanced reactivity: push information to workers

- **Asset performance & reliability through IIOT to Cloud solution: 6-month ROI**
  - Deployment on the coiling machines: temperature and vibration data collection to prevent unexpected breakdowns
  - Further deployment based on equipment criticality

- **Empowered operator**
  - Additional competencies via remote assistance
  - Reduction in maintenance time
  - Significant safety improvement during maintenance intervention

## Energy Management
### Grid, Power, Building & IT

- **Energy Efficiency**
  - EcoStruxure advisors deliver an additional ~10% saving over an already optimized consumption level
  - Continuous improvement expected yearly

- **kWh cost reduction**
  - 10% saving on solar-generated kWh
  - ~20% consumption generated through solar

- **Asset Performance & reliability**
  - Facility management maintenance optimization of 30%, on labor costs and spare parts
  - Increase of preventive vs corrective maintenance
  - Significant reduction of safety and fire risk

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# **Agenda** for the day

| | |
|---|---|
| 09.30 | Global Supply Chain Strategy |
| | EcoStruxure for Industry |
| | GSC China and Wuhan introduction |
| 11.30 | Lunch |
| 12.15 | Showroom |
| 12.45 | Plant & Distribution center tour |
| 14.15 | Q&A |
| 15.00 | Departure |

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# Q&A

# Investor Relations ready to engage – H1 2018 calendar

✓ **Upcoming events:**

✓ **Proposing quarterly interaction with investors showcasing specific businesses, geographies or functions**

| | |
|---|---|
| **5/6 April** | Innovation Summit, Paris |
| **19 April** | Q1 2018 Revenues |
| **24 April** | Shareholders' meeting, Paris La Défense |
| **25 April** | Hannover Automation Fair |
| **31 May** | Digital conference, Paris, BoAML |
| **07/08 June** | ESG/SRI conference, Paris, ODDO |
| **14/15 June** | CEO Conference London, JP Morgan |
| **26 July** | H1 2018 Results |

✓ Information on www.schneider-electric.com/finance
✓ Consensus available on http://www.schneider-electric.com/en/about-us/investor-relations/share-information/share-price.jsp
✓ 2018 Extel Survey is an important survey for us and we would appreciate your support - voting has opened and is available here:
https://app.extelsurveys.com/Voting/Voting.aspx?ID=1613

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