



INNOVATION

Our Circularity Story

Gaurav Sharma – Director, Circular Business Models
5th April 2018 – WEC Executive Roundtable, Augsburg, Germany

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Life Is On | **Schneider**
Electric

Schneider Electric, leading the digital transformation of Energy Management and Automation

€24.7 billion

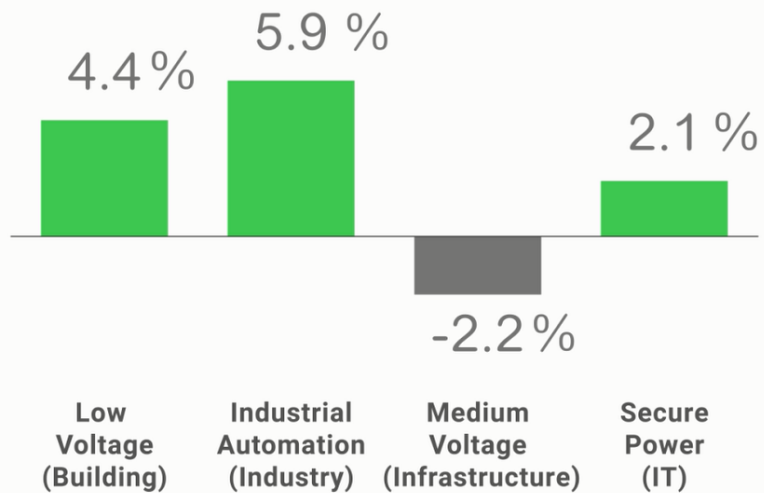
FY 2017 revenues

~5%

of FY revenues devoted to R&D

140,000+

people in 100+ countries

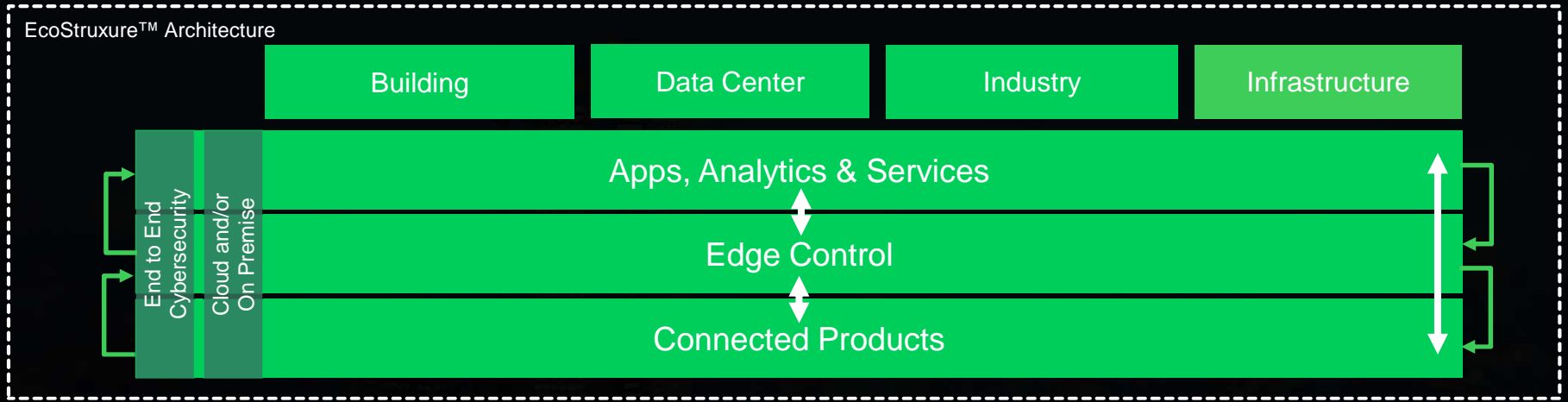


Efficiency gains will come from IT/OT convergence



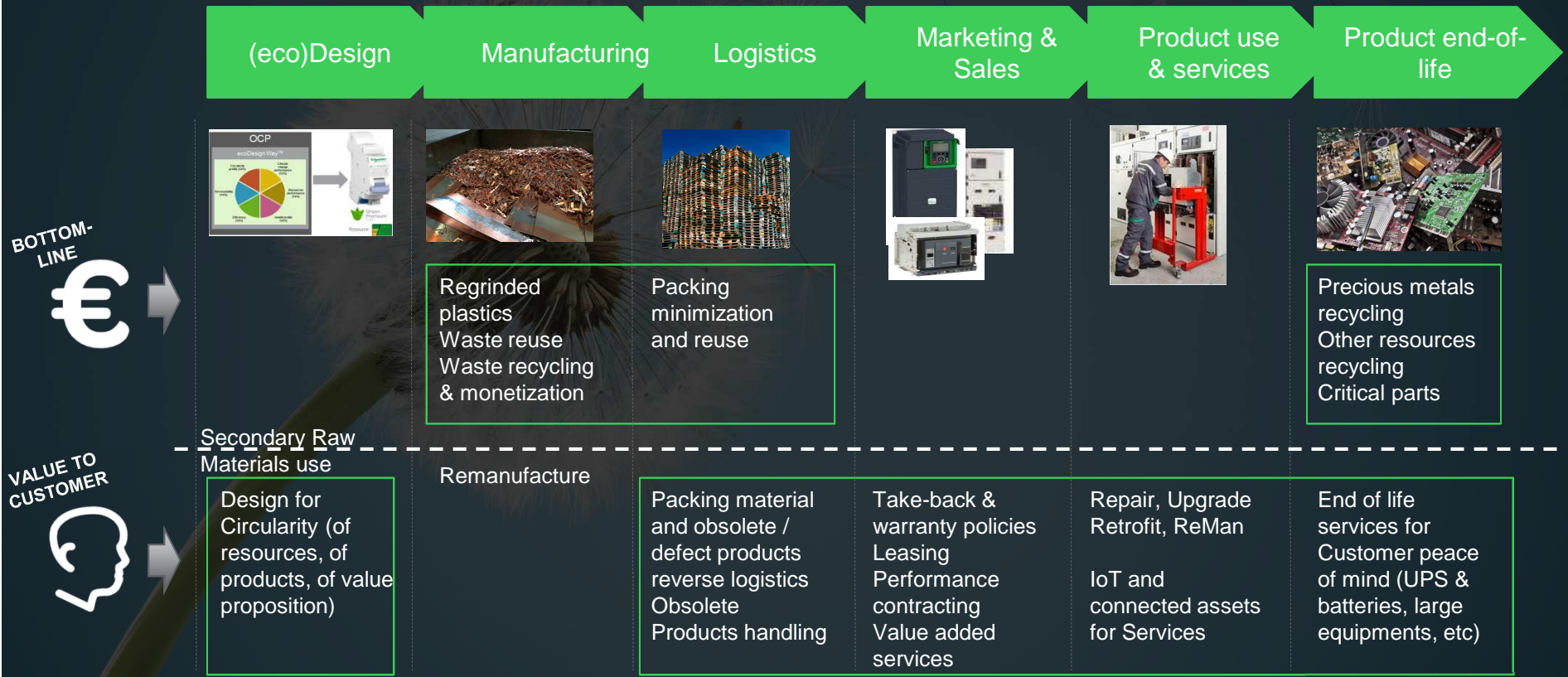
EcoStruxure™

Innovation At Every Level



<p>EcoStruxure Building</p>  <p>EcoStruxure Building Operation</p>	<p>EcoStruxure Power</p>  <p>Electrical Distribution</p>	<p>EcoStruxure IT</p>  <p>Data Centers</p>	<p>EcoStruxure Machine</p>  <p>Variable Speed Drives</p>	<p>EcoStruxure Plant</p>  <p>HMI</p>	<p>EcoStruxure Grid</p>  <p>Substations</p>
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Circular lens placed on Value Chain helps unearth future opportunities: both practical & strategic



We identified 4 domains of “Circular Innovations” – driving programs, partnerships, communities

I. Resources Circularity



Value proposition to Customer (eg)

- Toxic-free, recycled content
- End-of-life instructions
- « Circularity » Profile
- Recycled & Certified Packaging

II. Products Circularity



Value proposition to Customer (eg)

- Total Cost of Ownership
- Uptime maximization
- Longer lifespan
- ROCE

III. Value Proposition Circularity



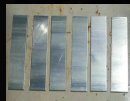
Value proposition to Customer (eg)

- Power Distribution: xx k€/month: EaaS
- Remote Monitoring & Analytics
- Performance Contracting
- Focus on what is ‘Core’

IV. End to end Supply Chain Circularity

Efficient & waste-free Manufacturing, Logistics & Procurement

Raw Material Selection & Optimisation



Scrap recycling



Packaging Minimisation & reuse



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Schneider Electric

Circular Economy as integral part of our sustainable growth dashboard

Climate

80% renewable electricity

10% CO₂ efficiency in transportation

100 million metric tons of CO₂ avoided through our offers

25% increase in turnover from our Sustainability Services

Circular Economy

75% of sales under our new Green Premium program

200 sites labeled towards zero waste to landfill

100% cardboard / pallets from recycled or certified sources

100,000 metric tons of primary resource consumption avoided through Ecofit, recycling, and take-back programs

Circular Economy

75% of sales under our new Green Premium program

200 sites labeled towards zero waste to landfill

100% cardboard / pallets from recycled or certified sources

100,000 metric tons of primary resource consumption avoided through Ecofit, recycling, and take-back programs

Health and Equity

75% score in Employee Engagement Index

1 medical incident per million hours worked

97% of employees in a recognized training program

100% of employees in countries w/ fully deployed Family Leave policy

100% of workers received 12h learning year (30% digital)

90% of white collars have an individual development plan

75% of employees in countries w/ commitment process for gender pay equity

Ethics

50% of suppliers received on-site Human Rights & Environment assessment

300 suppliers received on-site Human Rights & Environment assessment

100% of suppliers received on-site Human Rights & Environment assessment

Development

x4 turnover of our Access to Energy program

350,000 underprivileged people trained in energy management

12,000 volunteering days thanks to our VolunteerIn global platform

Product Environmental Profile

DT40 4500A 16A/C 1P+N



ENVPEP100612EN_V1 / PEP ecopassport 6CHN-2015-098

Product Environmental Profile – PEP

Product overview

The functional unit of the 1P+N MCB (ref. A9N21025) is to ensure protection of low voltage electrical installations against overloads and short-circuits for 20 years.

This range consists of circuit breakers rated 1 A to 40 A.

- Complying with EN/IEC 60898-1 and with EN/IEC 60947-2
- With instantaneous tripping curves type B, C or D
- With 1P+N
- Belonging DT40, C40, IDPN, DPN, Domo' clic, D'clac XP, or Domae

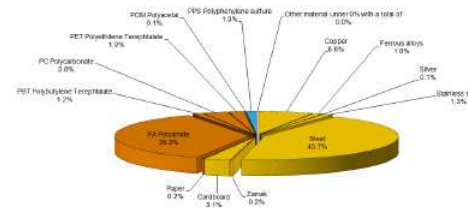
The representative product used for the analysis is DT40 4500A 16A/C 1P+N (ref. A9N21025).

The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.

The environmental analysis was performed in conformity with ISO 14040.

Constituent materials

The mass of the product range is from 115.9 g and 119.9 g including packaging. It is 119.9 g for the DT40 4500A 16A/C 1P+N (ref. A9N21025). The constituent materials are distributed as follows:



Substance assessment

Products of this range are designed in conformity with the requirements of the European RoHS Directive 2011/65/EU and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive.

Details of ROHS and REACH substances information are available on the Schneider-Electric [Green Premium website](http://www2.schneider-electric.com/it/esp/ecommerce/products-services/green-premium/green-premium.page) (<http://www2.schneider-electric.com/it/esp/ecommerce/products-services/green-premium/green-premium.page>).

Manufacturing

The 1P+N MCB (ref. A9N21025) product range is manufactured at a Schneider Electric production site on which an ISO14001 certified environmental management system has been established.

Distribution

The weight and volume of the packaging have been optimized, based on the European Union's packaging directive.

The 1P+N MCB (ref. A9N21025) packaging weight is 4 g. It consists of cardboard (3.75 g) and paper (0.25 g). The weight of recycled materials used is 98 % of total packaging mass.

ENVPEP100612EN_V1 / PEP ecopassport 6CHN-2015-098

Published by: Schneider Electric 08-2015

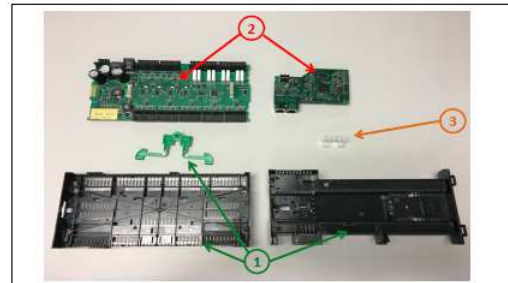
Product End of Life Instructions

MP-C 36 POINTS 8 UIOC 8 FORM 20 UIOB

All MP-C models



End of Life Instructions



Recommendation	Number on drawing	Component / Material	Weight (in g)	Comment
Potential hazards				
To be depolluted	2	Electronic Board (Communication) -> 10cm ³	263.5	
To be dismantled	3	Base and Cover Assy / polycarbonate	2.6	
To be dismantled	1	Light Pipe / PC+ABS	206.5	
Other				

Product description

Manufacturer identification	Schneider Electric Industries SAS
Brand name	Schneider Electric
Product function	SmartX Controller - MP-C is a multi-purpose, fully programmable, IP based field controller. The MP-C models offer a flexible mix of I/O point types that suits a wide range of HVAC applications.
Product reference	SXWMPC36A10001
Additional similar product references	SXWMPC36A10001 SXWMPC15A10001 SXWMPC16A10001 SXWMPC16B10001 SXWMPC24A10001
Total representative product mass	547 g
Representative product dimensions	122mm x 234mm x 64mm
Accessories	0
Date of information release	02/2018





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