

Schneider Electric IT (APC by Schneider Electric) Materials Evaluation

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Schneider Electric – global specialist in energy management

31.4

billion \$ sales
(FY2011)

39%

of sales in new economies
(FY2011)

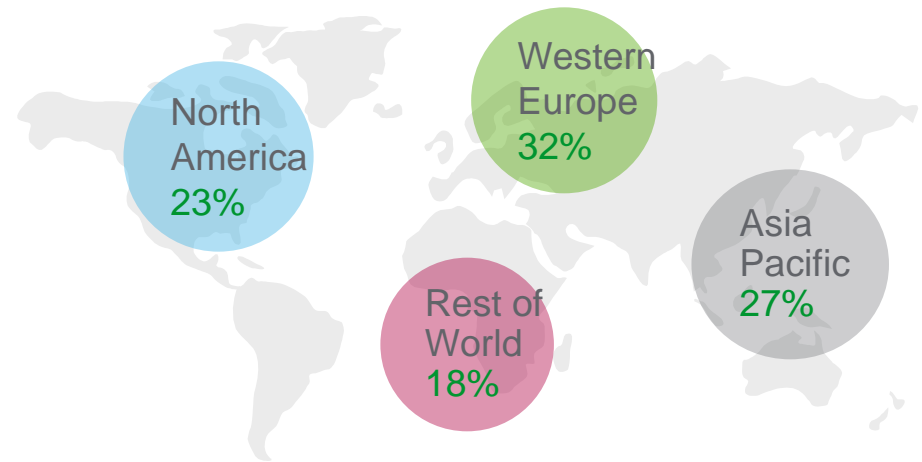
130 000+

people in 100+ countries

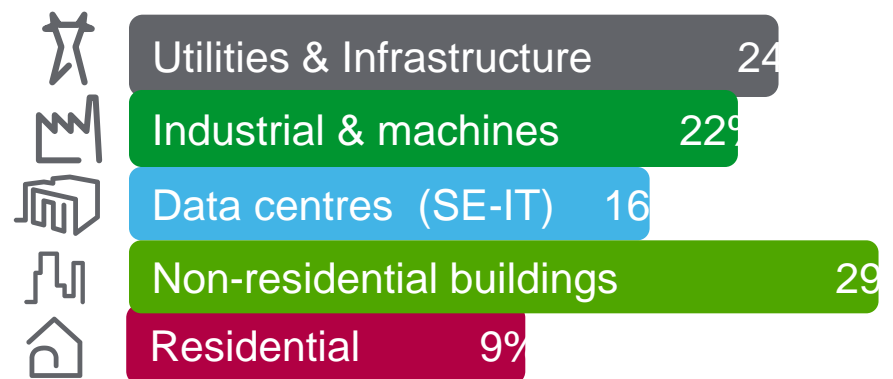
4-5%

of sales devoted to R&D

Balanced geographies – FY 2011 sales



Diversified end markets – FY 2011 sales



SE-IT Business Overview

Our Vision

We see a world where we can all achieve more while using less of our common planet

Our Mission

We help people make the most of their energy

Brand Promise

Schneider Electric's broad portfolio of activities in efficiency management makes our products, solutions, and services

- safe
- reliable
- efficient
- productive
- green

Green Premium

Generate baseline environmental data regarding product portfolio

EverGreen

Utilize New Product Design to improve sustainability metrics of the product portfolio

Materials Roadmapping

Engage "Edison" Expert Network to evaluate materials identified as important to the Schneider Electric product portfolio.

- Find sustainable alternatives,
- perform evaluations,
- establish standard replacements to communicate to supply chain.

SE-IT Business Overview

Business Size

\$4.64B

2011 annual sales

| | |
|------------|----------|
| UPS | #1 |
| Services | #1 or #2 |
| Cooling | #3 |
| Racks/PDUs | #1 or #2 |
| Software | #2 |

Go to Market Strategy

IT Distribution

End Users

Value Added Resellers

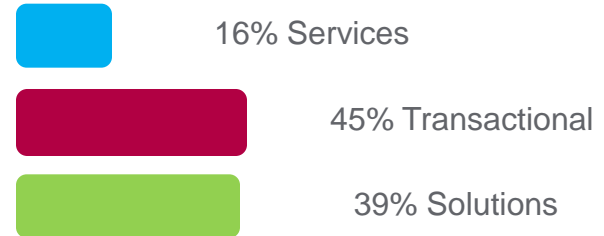
Electrical Distribution & Contractors

1st channel

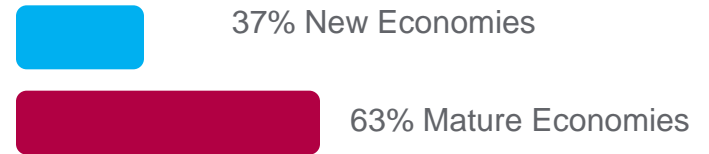
Other key channels



Sales by Offer



Sales by Geography



Segment Responsibility



What we need.

We have to decide on which Safer Chemical to use....

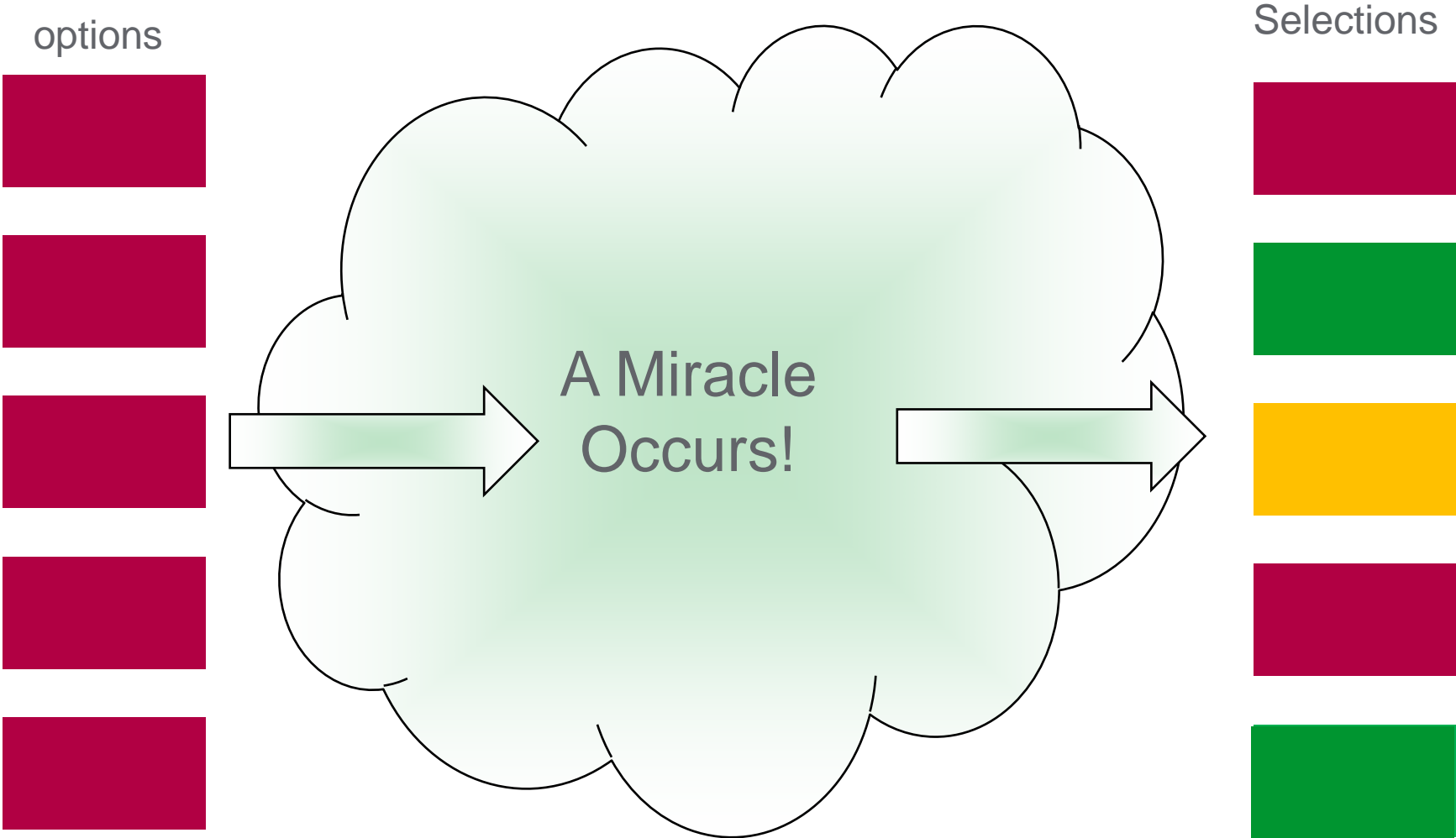
.....We make the best decision we can, but often end up with unintended consequences.

Avoid the Regrettable Substitution:

- Phase out of PBDE flame retardants without providing suppliers with guidance. A number switch to red phosphorus based chemicals.
- Product failures caused by the red phosphorus result in \$5M+ of product recalls

To select the right Safer Chemical requires the right data!

Model – Safer Chemical



SE- IT Critical Materials: Phthalates in Cords/Wire

- Phthalates in PVC Wire – Plasticizer in the insulator of PVC wire (Power Cords, wire assemblies)
 - For applications that rely on plasticizers to achieve performance
 - Power Cords – customers expect flexibility
 - Wire harnesses with tight radius bends
- Critical Concern
 - Most common phthalates listed as SVHCs in REACH legislation. REACH includes a regulatory process that might result in use prohibitions.
 - Select "best" substitute technology to guide engineering and supply chain to an endpoint that brings value to SE
 - Avoid making a selection that results in having to redo it all again.

SE- IT Critical Materials: Phthalates in Cords/Wire

- Phthalate Use – Facts and Figures

| | Purchases (M€) | Weight (kg) |
|---|----------------|-------------|
| 2012 Purchases of Wires with Phthalates | 25.0 | 3,250,000 |

| | \$billion of 2011 NR | % of Total |
|-------------------------------------|----------------------|------------|
| SE-IT NR with wires with phthalates | 0.85 billion | 29.0% |













SE- IT Critical Materials: Phthalates in Cords/Wire

- Find the **Right** Safer Chemical to replace Phthalates:
 - Utilize SE expert community to evaluate and select the **Right** substitute
 - Materials Roadmapping Team, Cross functional technical/financial evaluations, establish standard replacements to communicate to supply chain.
 - Involve experts beyond SE
 - Private – Public Partnership with multiple stakeholders (GC3)
 - Supply chain, start-ups, academia
 - Leverage existing SE sustainability initiatives to test/promote safer chemicals.
 - Leverage marketing advantages as an early adopter of safer chemical



Model – Safer Chemical (2)

| | Perf. | Cost | Env. | Sfty. | Mfg. | Mkt. | LCA | |
|---|-------|------|------|-------|------|------|-----|---|
|  | 4 | 3 | 5 | 2 | 4 | 4 | 5 |  |
|  | 3 | 3 | 4 | 5 | 5 | 4 | 4 |  |
|  | 5 | 2 | 3 | 4 | 2 | 2 | 3 |  |
|  | 3 | 3 | 3 | 5 | 2 | 2 | 4 |  |
|  | 2 | 1 | 3 | 5 | 2 | 2 | 3 |  |

Leveraging New Product Design (1)



- Product design with maximum environmental characteristics:
 - RoHS/REACH (v8) compliant
 - High energy efficiency, managed outlets
 - Green plastics – unit and packaging, no FR
 - EOL Management, Environmental datasheets
 - Higher Cost (\$79 vs. \$249)
- Evaluate successful characteristics and bring the valued ones to the standard product portfolio



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Leveraging New Product Design (2)



- Product design with maximum environmental characteristics:
 - Lithium vs. Lead Acid battery
 - High energy efficiency (EnergyStar®)
 - Green plastics – unit and packaging
 - Reduced weight
- Base Unit: \$100 vs. \$350
 - Marketing specifically to niche market that is willing to pay for maximum environmental characteristics.
- Evaluate successful characteristics and bring the valued ones to the standard product portfolio