

Production industries grand challenges

Process industry

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SCA Munksund

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SCA Group

Leading global hygiene and forest products company



- Net sales of SEK 85.4bn
- 36,000 employees
- Sales in about 100 countries
- #1 or #2 positions in close to 80 countries
- Strong brands;
TENA and Tork are leading global billion-euro brands for Incontinence products and AFH tissue
- Europe's largest private forest owner
- Europe's second-largest sawmill company
- Several of the world's most prestigious sustainability awards

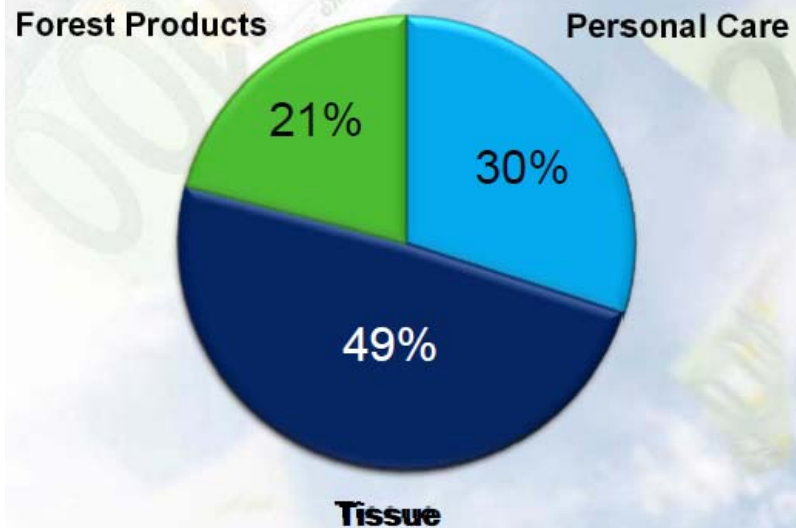


SCA Group

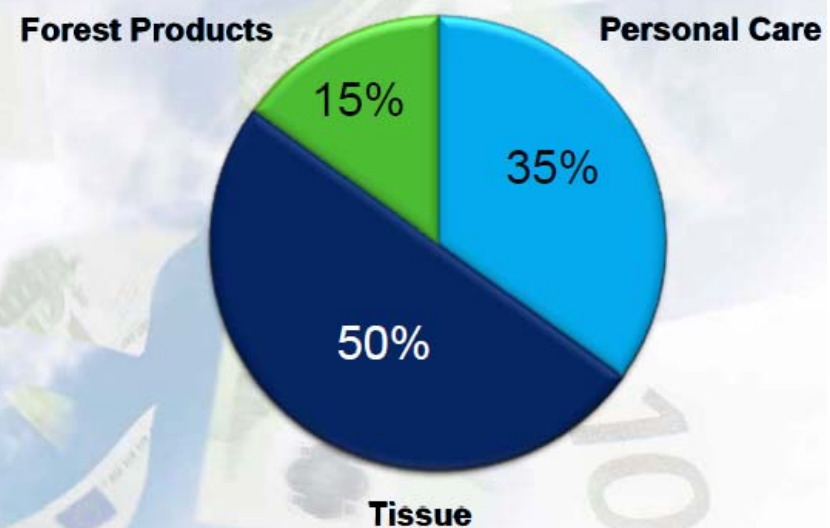
2012 sales and EBIT by Business Area



Sales by Business Area



EBIT by Business Area



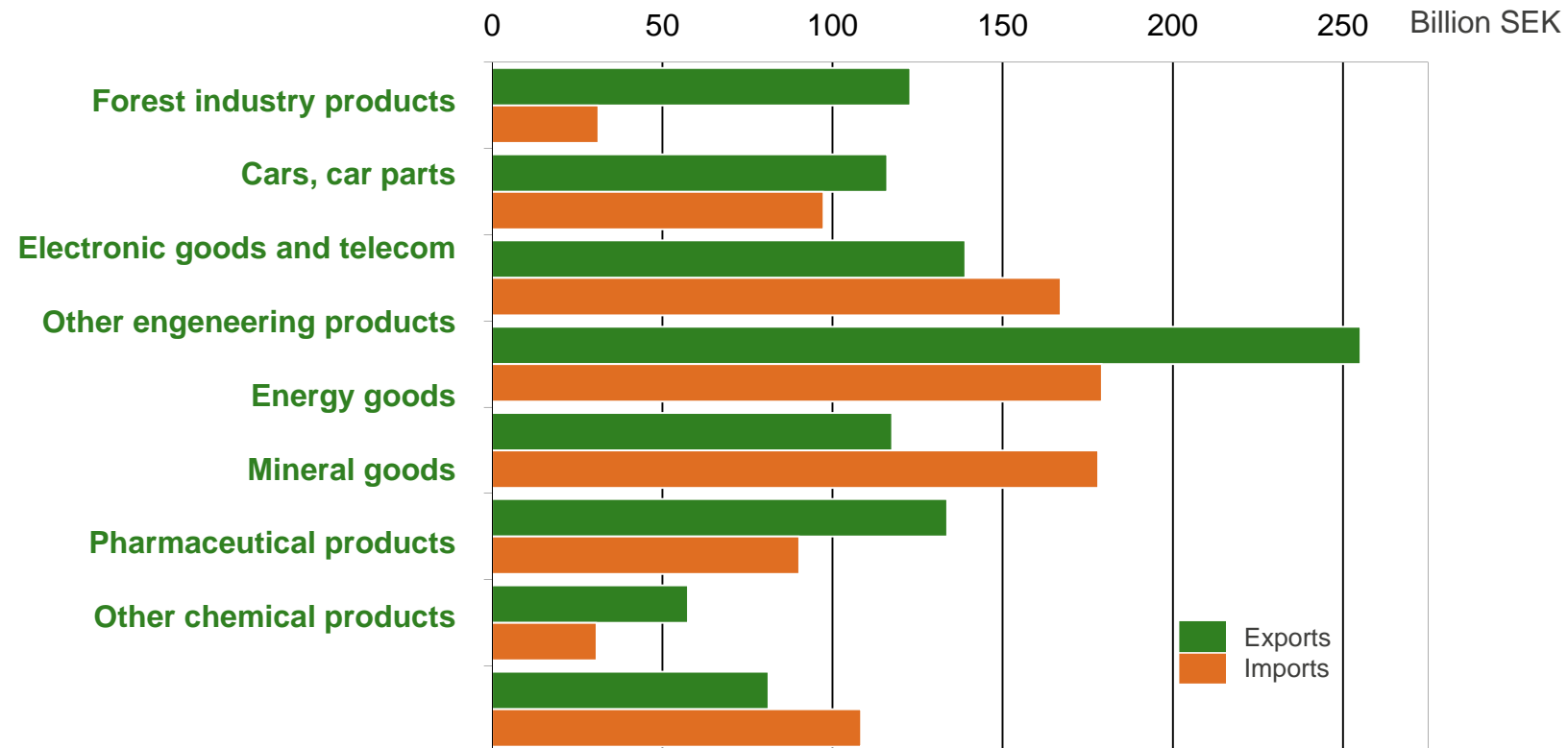
SCA Munksund



- Production: 360 000 t/y - Kraftliner
- Continuous operation, 6 shift teams
- 300 employees



Exports and imports of some product groups



Source: Statistics Sweden

Total exports: 1 169 billion SEK (2011: 1 212 billion SEK)

Total imports: 1 101 billion SEK (2011: 1 148 billion SEK)

Process industry – Grand challenges

Some typical characteristics for a process industry:

- ☐ The throughput of a plant is limited by operation equipment, bottlenecks
- ☐ Operations run 24 x 7
- ☐ More people in production will not increase throughput
- ☐ Time efficiency
- ☐ Importance of yield from raw materials
- ☐ Changeovers are complex and losses expensive
- ☐ Many processes cannot be stopped without severe consequences
- ☐ Equipment is very expensive and is expected to be efficient for a long time
- ☐ A high degree of automation, hierarchical structure, a lot of data

The Munksund example:



**Electric Power usage: 320
GWh/year**

Control system:

AI: 2400

AO: 1500

DI: 14000

DO: 3600

Control loops: 1150,

Electric drives: 2300

**On line measurement of the
paper:**

*About 1000 measurements/s of
Moisture*

Basis weight

Caliper

Britghtness/shade



Raw materials



Soft-/Hardwood



Recycled fibre



Saw mill chips

Process industry – Grand challenges

The demands continues to change, some examples:

Market:

New products

Next generation products

Improved quality, existing products

Higher performance vs price

Sustainability

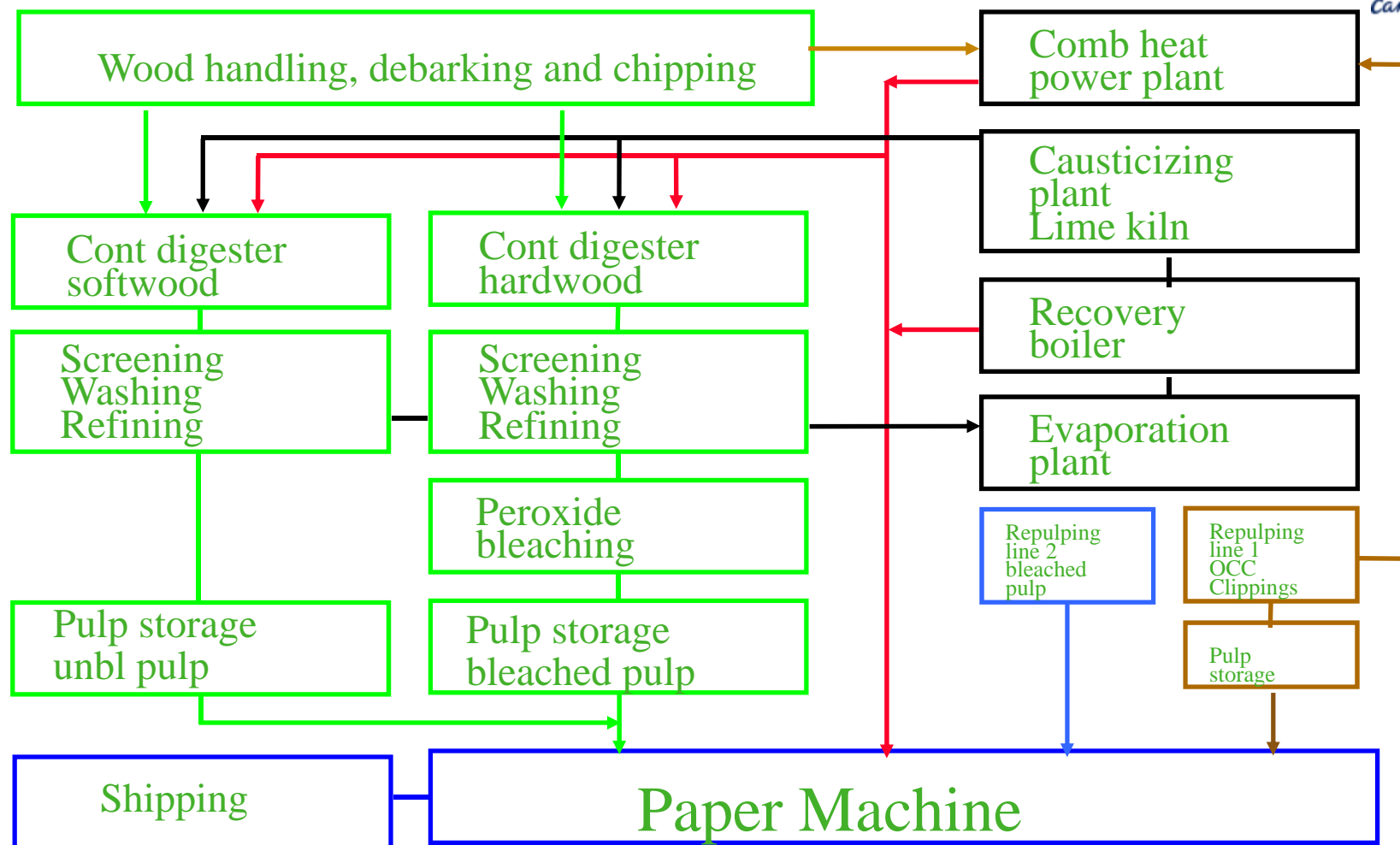
Other:

Environmental performance

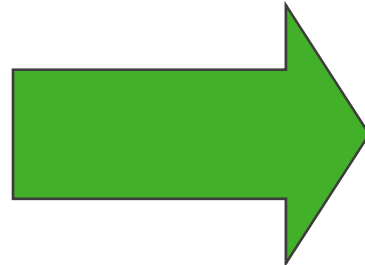
Working environment/safety

Product safety

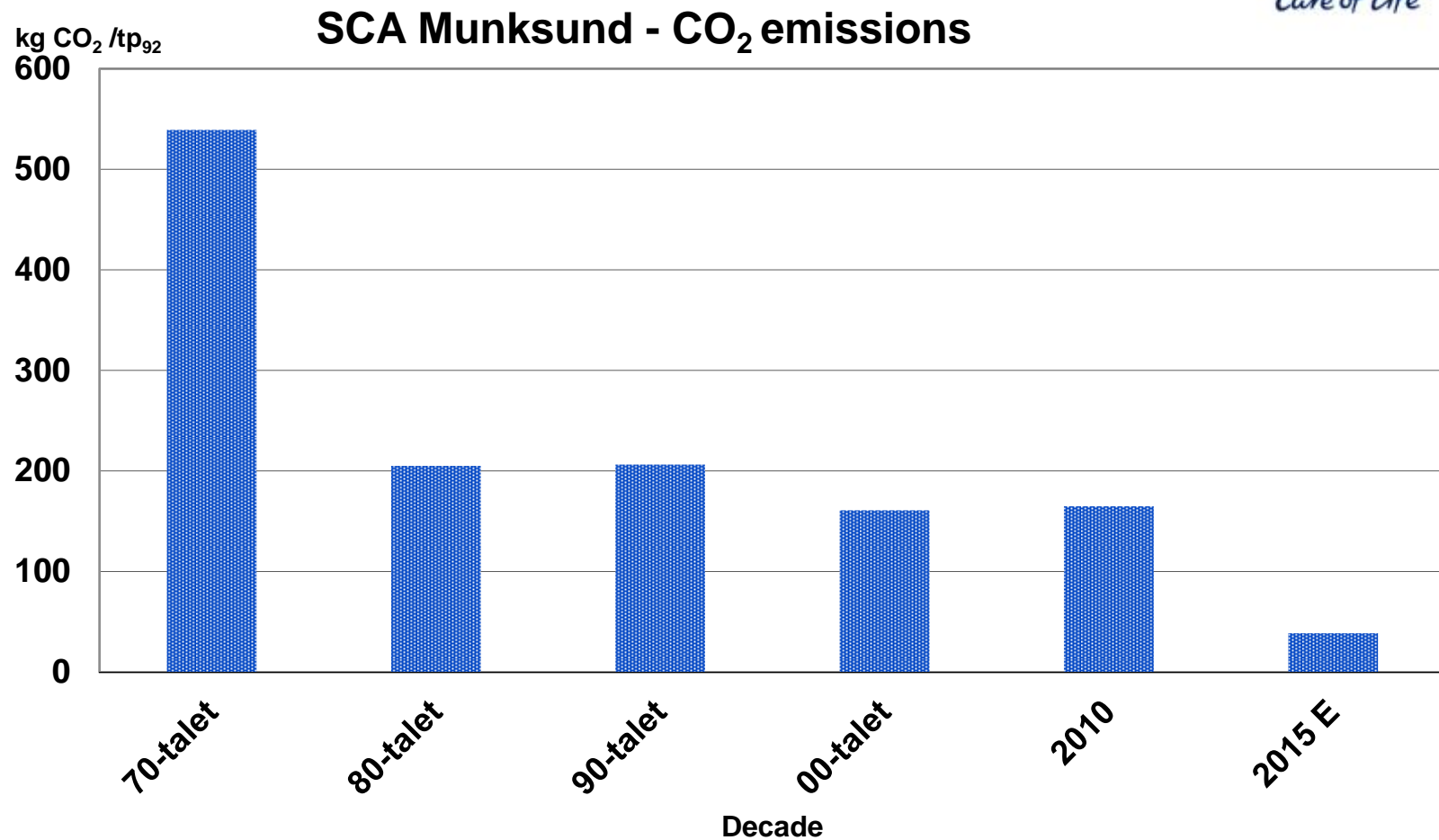
Energy efficiency



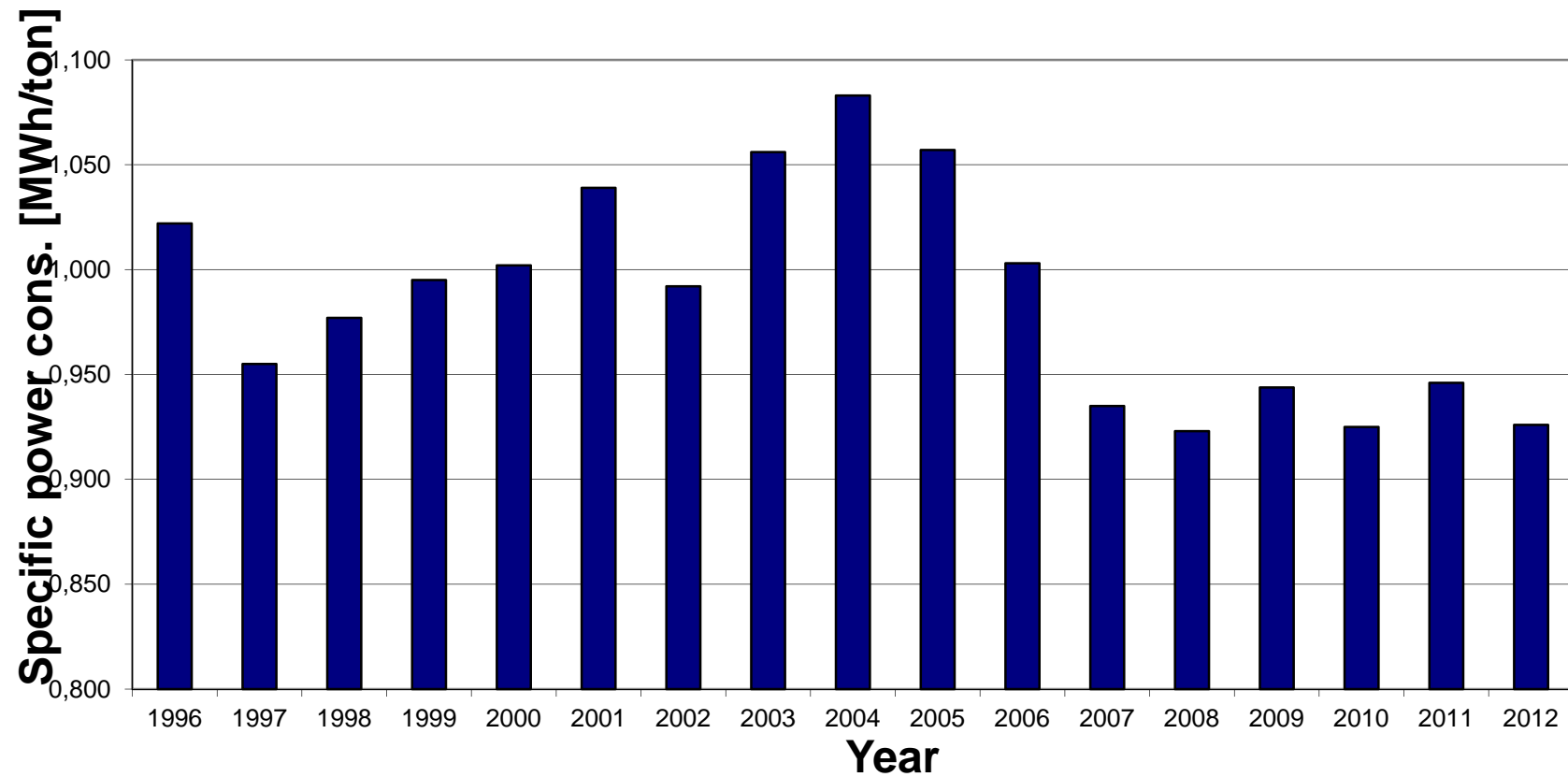
Changed demands



Environmental performance - Emissions of carbon dioxide from incineration of fossile fuels



Energy efficiency – Power consumption



Process industry – Grand challenges

How to meet future demands?

Knowledge and competence

- Highly skilled people

- Broad competence of existing, new and emerging technologies

Technology incl. Flexibility

- Production process

- Production equipment

- Automation & on-line measurement technique

- Process monitoring, data mining

- Maintenance tools

Process industry – Grand challenges



Thank You





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