The business case for resource efficiency – innovative examples for absolute resource use reduction

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Grundfos Group

• Founded in 1945 by Poul Due Jensen
• Annual production of more than 16 million pump units
• Turnover of DKK 23 billion in 2013
• More than 18,500 employees worldwide
• The world’s largest manufacturer of pumps and pump systems

Grundfos Manufacturing Hungary

• Founded in 2000
• 4 factories, R&D, TC
• 2100 employee – more than 10%
• Turnover: 400 million EUR
• 600 000 pump units produced yearly
• 500 000 motor units produced yearly
Grundfos and sustainability

Promise
be think innovate

Purpose

Values

Leadership principles

Code of Conduct

Sustainability strategy

Grundfos Manufacturing Hungary – strategy map

- CO2 emission (ton)
- Water (m³)

Sustainable resource consumption in GMH

“We are inspired by GMH”

Reduce environmental waste in the entire supply chain.

Achieve pride of employees through corporate responsibility activities.

We build organizational mindset and competencies within sustainability.
be for being responsible and taking care of the planet

think for thinking ahead and anticipating the demands of our target groups

innovate for innovating reliable solutions that fulfil the demands of our target groups
The Grundfos purpose

Grundfos is a global leader in advanced pump solutions and a trendsetter in water technology.

We contribute to global sustainability by pioneering technologies that improve quality of life for people and care for the planet.
Leadership principles

Grundfos Leadership Principles

- You are present
- You inspire passion, curiosity and joy
- You empower people
- You build high-performing teams
- You invent tomorrow

Grundfos vezetési irányelv

- Jelen vagy
- Szenvédélyt, érdeklődést és derűt ébresztesz
- Felhatalmazod az embereket
- Csúcstelesítményekre képes csapatokat építed
- Épited a jövőt
If in doubt, start by asking yourself
Sustainability strategy focus areas

LEAD & INNOVATE
IRÁNYMUTATÁS & INNOVÁCIÓ
SUSTAINABLE PRODUCT SOLUTIONS
FENNTARTHATÓ TERMÉKMEGOLDÁSOK
PEOPLE COMPETENCES
MUNKAVÁLLALÓI KOMPETENCIÁK

DEVELOP & IMPROVE
FEJLESZTÉS & FEJLŐDÉS
ENVIRONMENTAL FOOTPRINT
KÖRNYEZETI LÁBNYOM
WORKPLACE
MUNKAHELY
COMMUNITY
HELYI KÖZÖSSÉG

DELIVER & COMPLY
TELJESÍTMÉNY & MEGFELELÉS
RESPONSIBLE BUSINESS CONDUCT
FELELŐS ÜZLETVITEL
Every day we take steps to make the world better

= Sustainability
### GMH STRATEGY MAP 2013 – 2015

<table>
<thead>
<tr>
<th>Business Differentiation</th>
<th>Truly Global</th>
<th>Operational Excellence</th>
<th>Sustainability</th>
</tr>
</thead>
</table>
| - Sales increase of ETO 30%  
- VAV & MS sales incr 40%  
- Sales increase of OEM business with 50% | - Payback time on projects - NPI & transferer (NPV)  
- Sales growth on new products - NPI | - Stock Turns  
- Cost to produce  
- Productivity (Financial) | - CO2 emission (ton)  
- Water (m3) |

#### Financial
- Growth in customized products and project sales
- Preferred partner in growth strategy
- Optimize resource utilisation
- Sustainable resource consumption in GMH.

#### Customer
- „Give me fast reply on special requests“  
- „We want the new products in time“  
- „Keep your promises and be proactive to us“  
- „We are inspired by GMH“.

#### Processes
- Establish fast and flexible CSU OP
- Deploy visual management process for NPI
- Global technology and supply chain network process
- Minimise non-value added activities, in safe and agile environment
- Reduce environmental waste in the entire supply chain.

#### L&G
- Ensure competent and empowered unit
- Develop Visual management toolbox competence
- Find internal technical competences for the network and global role
- Enhance continuous improvement culture and competencies on all level
- Achieve proudness of employees through corporate responsibility activities

- We build organizational mindset and competences within sustainability.
Energy use and CO₂ - managing the initiative

• Aim: Decrease energy use and never to emit more CO₂ on group level than in 2008, despite the growth of the company

![GMH CO₂ emissions (t)](chart)
## Energy use and CO₂ - actions

<table>
<thead>
<tr>
<th>DEVELOPMENT</th>
<th>SAVED ENERGY</th>
<th>SAVED CO₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation of heat pumps in GMH3</td>
<td>Electricity: 9 050 kWh/year Gas: 16 270 m³/year</td>
<td>34 550 kg/year</td>
</tr>
<tr>
<td>Installation of solar collectors in GMH2</td>
<td>Electricity: 48 000 kWh/year Gas: 5 000 m³/year</td>
<td>37 160 kg/year</td>
</tr>
<tr>
<td>Modernization of cooling tower</td>
<td>Electricity: 12 500 kWh/year</td>
<td>3 500 kg/year</td>
</tr>
<tr>
<td>Reducing the ventilation speed of air handling unit machine by 20%</td>
<td>Electricity: 194 688 kWh/year</td>
<td>54 550 kg/year</td>
</tr>
<tr>
<td>Utilization of compressor waste heat</td>
<td>Gáz: 5 585 m³/year</td>
<td></td>
</tr>
<tr>
<td>Recirculation of waste heat, motorization of formwork</td>
<td>Electricity: 17 500 kWh/year</td>
<td>29 260 kg/year</td>
</tr>
<tr>
<td>Equipping the lighting system of production halls with ambient light sensors</td>
<td>Electricity: 16 900 kWh/year</td>
<td></td>
</tr>
<tr>
<td>Weather tracking programs for cooling system</td>
<td>Electricity: 17 500 kWh/year</td>
<td></td>
</tr>
</tbody>
</table>
Water use - management of the initiative

Baseline: Total water usage 652,000 m³ (Group)

Ambition 2025: 50% reduction 326,000 m³ in absolute numbers even though we expect to grow with more than 10% every year

Scope: The total amount of freshwater* used directly to run and support our business in all productions, sales and office locations.
Water use - What does it mean for GMH?

- Need to save 50% of water use by 2025 (2008), including tap water, well water, rainwater

- In order to achieve target

  - Align data
  - Map water consumption
  - Measure hotspots
  - Map saving opportunities
  - Targets and plan

- Own vs water strategy
- Include all sources

  - TOP5 consumption
    - Communal
    - CED
    - Testers
    - Irrigation
    - Cooling towers

  - Install metering

  - Map relevant saving opportunities

  - Create midterm target and plan (-2015)
Thank You!
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