

Machines and Power Electronics

7th and 8th July 2022 in Milan, Italy

CEMEP sustainable products, systems & services



"Circular economy in practice

- How to get started on circularity in the power electronics industry

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Topics for today:

- Danfoss' ambitions on sustaianability and circularity
- The case for circular economy
- How we got started on the circularity journey
- Key initiatives
- Help! Where to find it



Danfoss' ESG ambitions



We pioneer solutions for customers to **enable decarbonization**

We innovate best-in-class circular products (RA)

We offer a leading employee experience that values and respects diversity and inclusion





We are already in the sustainability

Using drives saves up to 40% of energy in the application thus saving millions of tons CO₂ for our customers during the products' lifetime

business





Circularity

We innovate best-in-class circular products as the default when developing, producing, sourcing, & selling to deliver new value propositions The Circular framework will secure designs to reduce waste, as waste is a design flaw. Reuse & reduce materials, and secure increased circular & end-oflife product performance.

By 2030

- >80% of products sold covered by circularity approach.
- Circularity collaborations with >80% of top-25 customers.



Key priorities in Drives:

- 1. Ensure all new products be covered by a circularity approach:
 - All new NPD and PMI projects to follow new sustainability/circularity approach
- Develop and deploy methodology for takeback and resell/reuse/recycling of products and develop related service business
- 3. Phasing out plastic-based packaging before 2025







The principles of Circular Economy





The potential

 Average concentration in gold ore: 5 g / tonne Average concentration in PCBs: 575 g / tonne









Closing the **loops**

Think from the inner loop and out:

- Extend lifetime as far as possible
 - Durability, repairability, upgradeability
- Allow for a possible second life
 - Ability to refurbish/remanufacture
- Allow reuse of parts
 - Easy disassembly
- Recycle all other materials
 - Easy separability, easy to identify materials





Circular models









Initial **assessment** of products





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Setting up the roadmap



- > Where is the room for improvement?
- > Where can we best retain value?
- > Where do we see low-hanging fruits?
- > Where do we see business potential?
- > Where can we collaborate with customers?
- > Where do we need to learn more?



Ongoing circularity initiatives













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Key takeaways



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Sustainability and circularity Cho

are preconditions for longterm success – and it is not a quick fix, so better start out now Choose the circular business models that best fit your business and where you have the biggest potential 3

Circular business models need cooperation in the value chain, so engage, collaborate and learn





Thanks for the attention!

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