

Sivuvirtojen hyödyntäminen SHAPE kiertotalous hankkeessa

Jätehuoltopäivät 9.10 2024

DCEO Mats Sundell

Mirka



Mirka Magic

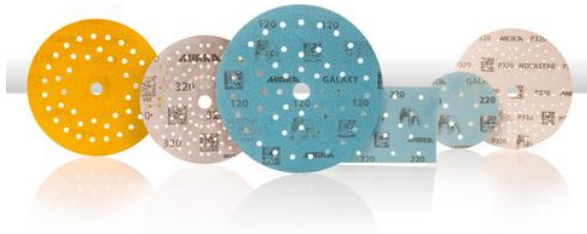
- Mirka is a family-owned Finnish company and a part of the KWH Group.
- We have been dedicated to the finish since 1943. With constant improvement and innovation, Mirka has become a world leader in abrasives technology.
- We are the only company that develops and produces abrasives, tools and polishing compounds under the same roof.

Our Product Portfolio



reddot award 2018
best of the best

Abrasives



Polishing compounds



Power Tools



Robotics



Superabrasives



Essentials



Our Business

409 M€ Turnover (2023)
10% Average growth/y
1750 Employees
20 Sales companies globally



Collision repair



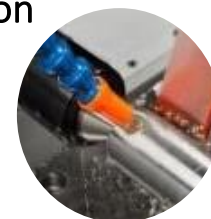
39%

Transport



12%

Precision



7%

5%

2%

19%

16%



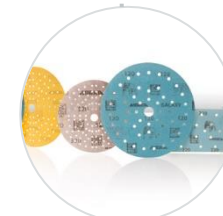
Construction & Decoration



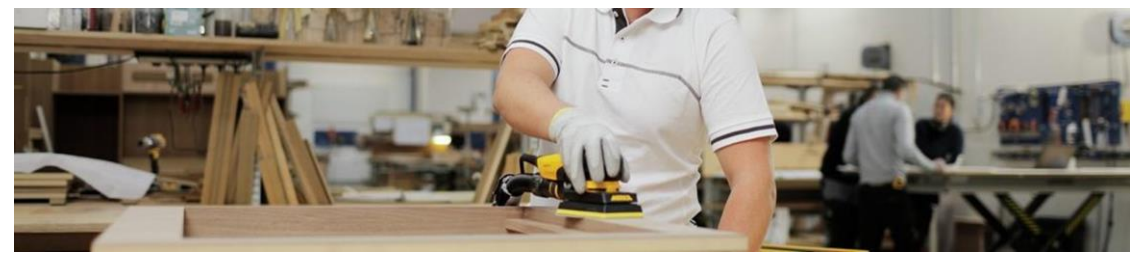
Wood



Industry



Internet sales



Mirka's production locations



Finland:

- **Jeppo:** Main plant. Head office, Technology, and R&D center
- **Jakobstad:** Manufacturing of power tools, micro products, and polishing compounds
- **Karis:** Manufacturing of raw materials
- **Oravais:** Converting
- **Nurmijärvi:** Automated grinding solutions and robotic tools



Belgium: Conversion of belts and rolls, warehouse and service center



Italy: Diamond and CBN wheels and tools



USA: Service center



At the forefront of innovation

- Mirka is a world leader in surface finishing technology and offers a broad range of groundbreaking sanding solutions for the surface finishing and precision industry.
- Mirka products are problem solvers brought to you by friendly people. Our know-how combines hands-on experience and fearless innovation to produce the best in abrasives, tools and sanding solutions. That's why Mirka has become the natural choice in a wide variety of industry sectors.




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Dedicated to the finish.





The solution
to the dust
problem

Research and development close to the market

- We are >180 experts working in a wide variety of technologies and know-how
- We are the pioneers in dust-free sanding, setting a new industry standard with our products and concepts that also reduce the stress on the environment.
- We are the industry leader in innovation in our core business sectors. **3.9% current R&D investment** of turn-over, with a strong commitment from owner family to **increase it to 6%**

Into the future

-The big shift for the manufacturing industry

-The circularity challenge



Rapid population growth and urbanization are driving the demand for products across the globe.....

.....but they are also contributing to a significant manufacturing footprint



**Material production causes
11 bn tons
of CO2 emissions globally**



**45% of CO2 footprint in Europe
comes from manufacturing and
construction of durable goods**



**364 000km2 of surfaces finished
in the EU each year cause 460 kt
of microplastics per year and 69
Mt of CO2 that could be avoided**

Vision statement

*"At Mirka we're experts in sustainability. We focus on three things, making the **environment** cleaner, having a positive impact on **society**, and using **resources** wisely.*

We're known for our dust-free innovations and we're working towards a future where no waste is produced."

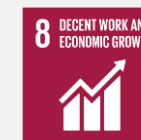
- Stefan Sjöberg, CEO



Clarity and Strategic Direction

ESG Pillar	Actions to 2035	Value it creates
<p>01 Cleaner environments</p>	<ul style="list-style-type: none"> ➤ 55% reduction of GHG emissions ➤ Scope 1 and 2 already 2025 ➤ Responsible raw materials usage ➤ SBTi to follow up 	<p>Shareholders Increased long-term value, reduced business risks, enhanced reputation.</p> <p>People Healthier work environment, engagement, talent attraction.</p>
<p>02 Positive Social Impacts</p>	<ul style="list-style-type: none"> ➤ Dust free innovation leader ➤ SHAPE:ing the green transition of manufacturing ➤ Responsible chemicals. ➤ Ecovadis to follow up. 	<p>Consumers Access to sustainable products, improved satisfaction and loyalty.</p> <p>End-users Environmentally friendly choices, safe products/services.</p>
<p>03 Circularity</p>	<ul style="list-style-type: none"> ➤ 70% of products recyclable ➤ Significant increase in the use of biobased or recycled materials. 	<p>Planet & Society Reduced emissions, resource conservation, responsible consumption.</p> <p>Suppliers & partners Collaboration, sustainable supply chain.</p>

Contributing to the UN SDG's



>200 M€ investment – SHAPE Veturi, Shaping the green transition

Business finland:

30m

EU:

20m

Mirka:

126m

Ecosystem:

30m

Total:

206m

SHAPE Targets

- ▶ Mirka/Ecosystem, new business
- ▶ GHG reduction from manufacturing
- ▶ New start-up:s
- ▶ New jobs, ecosystem
- ▶ New masters/doctoral thesis
- ▶ Products for rapid Green transition
- ▶ Microplastics from abrasive processes

Mirka Investments



Textile Competence center



Surface Value Lab infra



Carbon efficient production



Circular abrasives

Bioenergy fueled production



- 10 MW KPA
- 50-55 GWh / year
- Wood chips ~ 48 500 m³/a
(=> 2,5 truck/day)
- ~3200 t of abrasives waste from Mirka
- Oil free production in Jeppo
- Oravais>> 95% Oil free



Oravais Landfill 2010 and 2018



Question -How can we increase the circularity of our products?

The thousand-ton issue

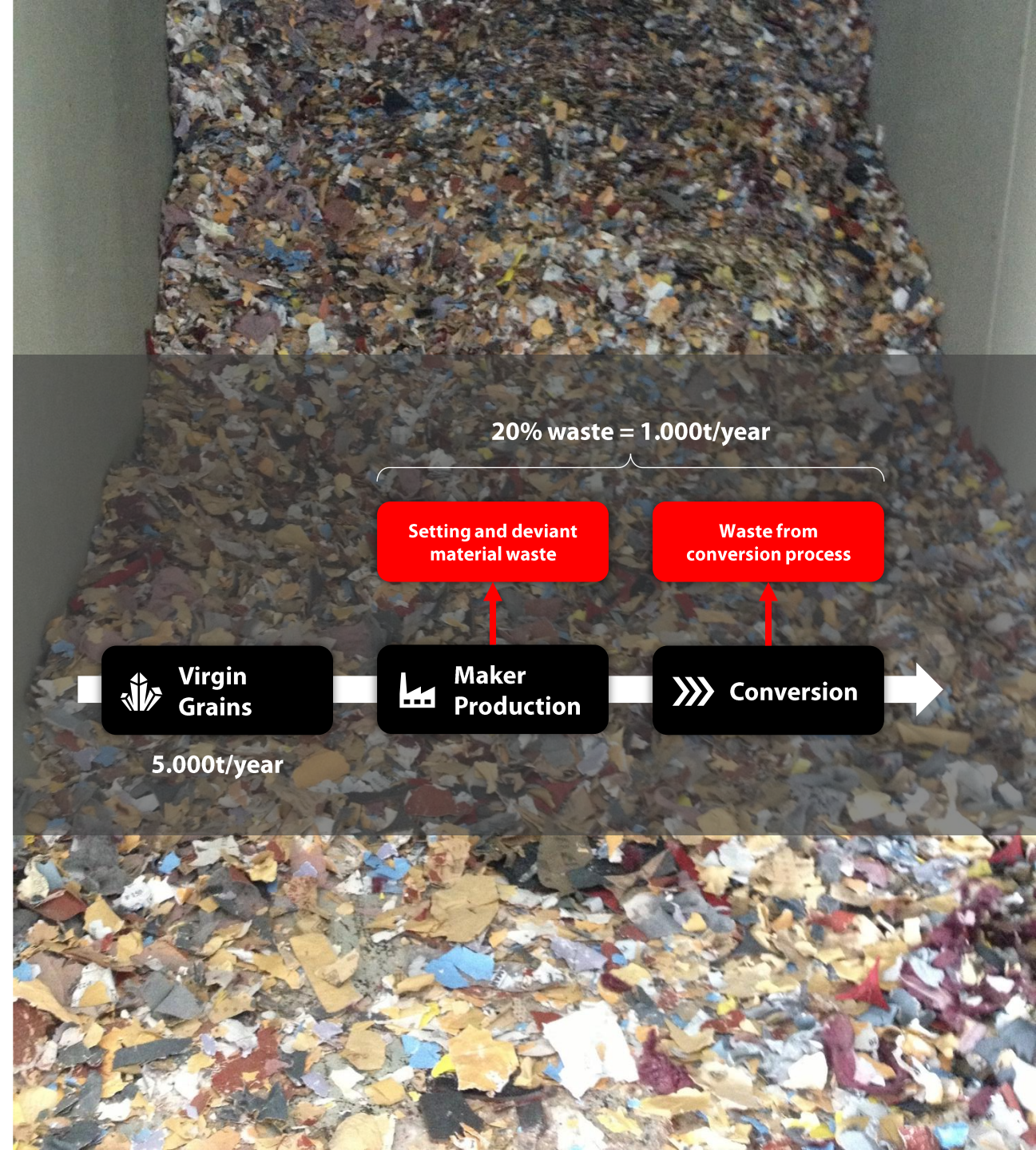
- 3500 t of sandpaper waste per year
- The waste and production spill contains close to 1000 tons of abrasive grains

Huge direct circular opportunity

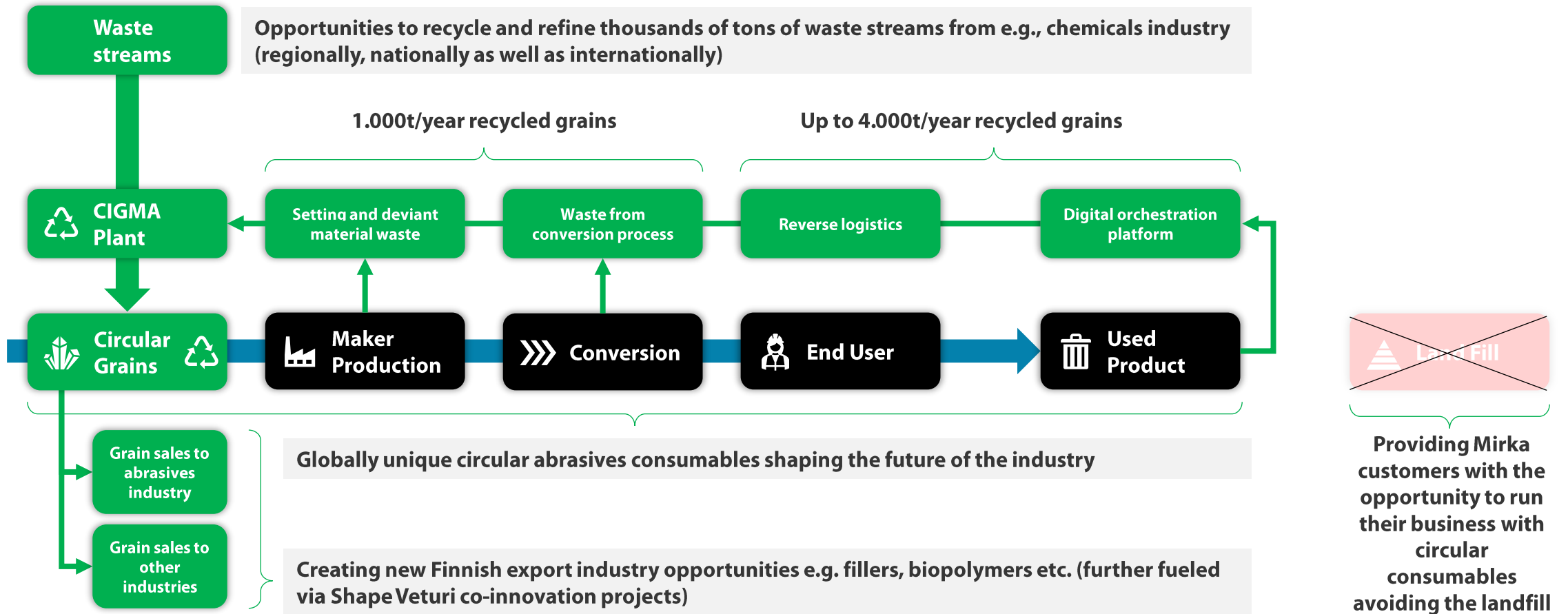
- 1000 tons of gains could be circulated from production
- Double the amount found at end of product life

New production methods and waste stream raw material opens up new levels of circularity

- In house manufacturing of ceramic grains based on domestic industrial aluminum containing waste streams could replace significant portion of our 3-4 thousand of imported grains



Solution – circular manufacturing (CIGMA)



CIGMA plant logic



Abrasive waste from end-users



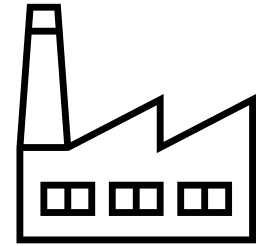
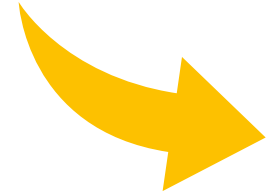
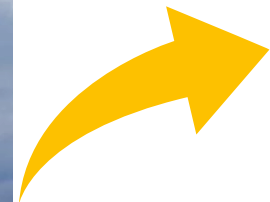
Abrasive waste from Mirka production



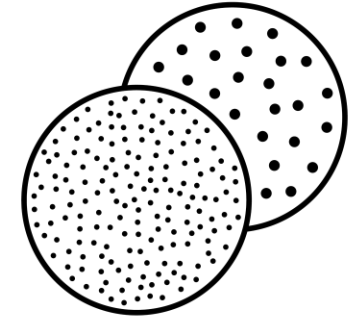
Waste streams from the industry



The 25M€ circular grain manufacturing plant of 8000 m² in Jeppo, Finland. Sorting, cleaning and preparing incoming recycled materials. Screening and classification of grains. Production of circular ceramic and abrasive grains.



Grain sales to other industries

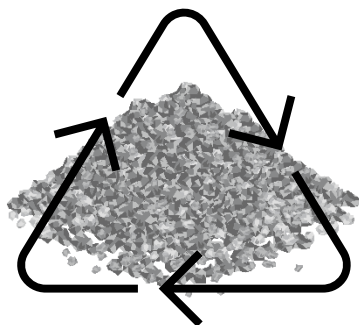


Globally unique circular abrasives



Grain sales to abrasive industry

April 2024, construction starts



December 2025, building completed



CIGMA Plant Vision and material balances

E.g. Mining & Metals



E.g. Construction & Decoration



E.g. Automotive & Aerospace

