



Creating value from secondary materials

Congreso Nacional de Energía y Ambiente

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The Apila Group Ltd was established in 2006 to create new, innovative and successful business without making compromises at the expense of future generations.

With this vision, we offer concrete solutions and services to meet the challenges and needs of our customers in the circular economy.



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Service

Environmental consulting

Projects

Over 200 circular economy collaboration projects and customer assignments

Customers

Leading forest-based, energy, environmental, construction, mining, chemical, and recycling industries as well as manufacturers' associations in Finland and abroad

Awards

- Technology to Products Foundation, 2020
- Circular Economy prize, Start Me Up business idea competition, 2020
- 1st prize, Start Me Up business idea competition, 2017

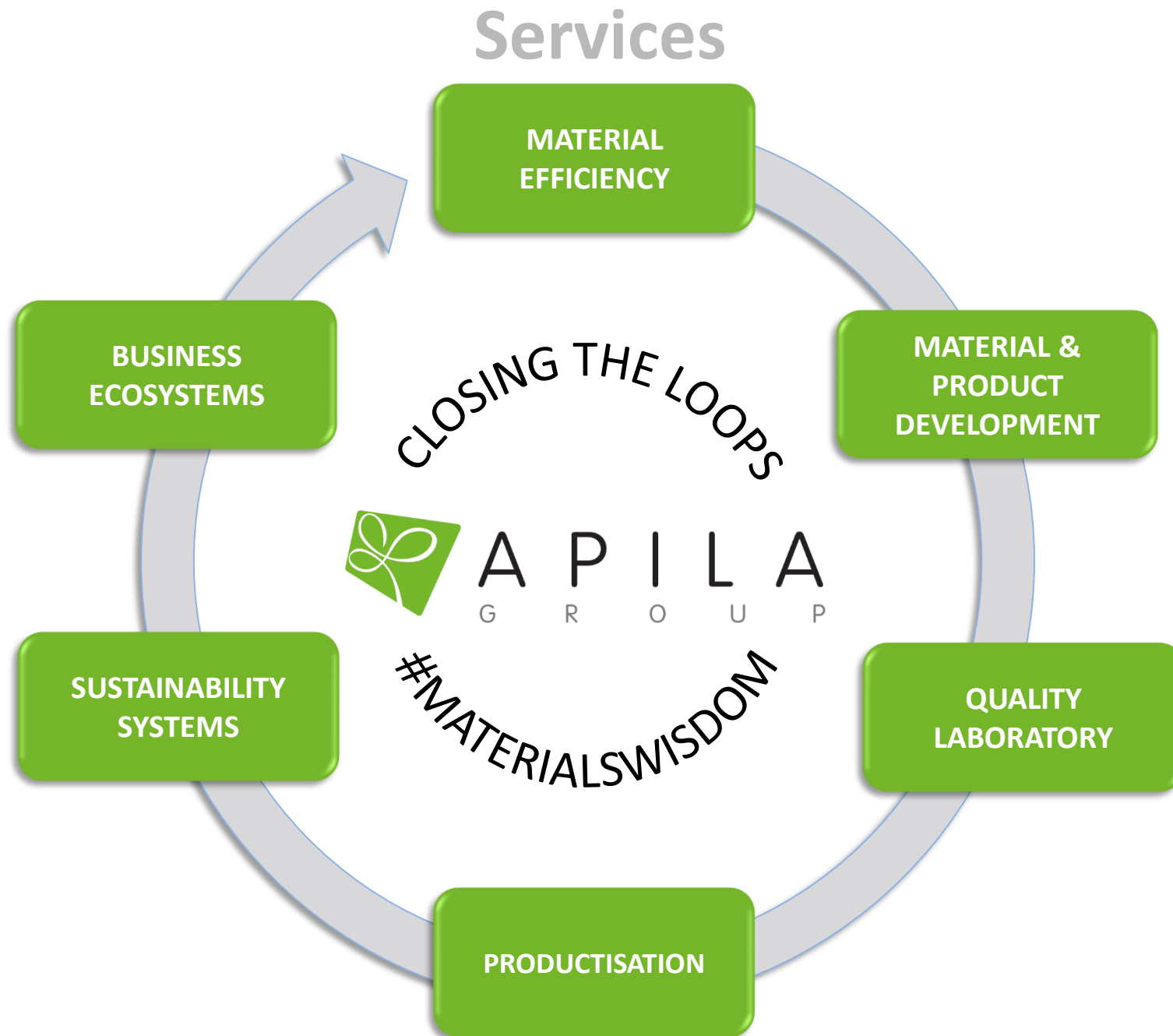
Location

- Kontiolahti Municipality: Head Office
- City of Lappeenranta: Office
- City of Helsinki: Place of company registration

Laboratory 250 m²

Materials and Product Development
Testing and Analysis Services







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Our team



Mervi Matilainen

Managing Director
PhD Chemistry



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Business Service Director
MSc Environmental Technology and
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Laboratory Technician



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Markus Hakkarainen

Environmental Specialist
MSc Environmental Technology and
Business



Maarit Leppänen

Bioeconomy Specialist
MSc Forest Sciences and Business



Ilpo Mustonen

Laboratory Service Expert
LicSc Chemistry



Facts about Finland

- ☐ Republic
- ☐ Population 5.5 million
- ☐ Area 338 440 km²
- ☐ 18,1 inhabitants per km²
- ☐ Currency € (1,00 € = 1,22 USD)
- ☐ GDP per capita 43 485 € (2019)
- ☐ Languages Finnish and Swedish
- ☐ Four seasons, winter is the longest season
- ☐ Most-used energy source is wood-based fuels
- ☐ Brands: Marimekko, Angry Birds, clean water, sauna, graphic paper





Circular Economy in Finland



Three strategic programmes to enhance circular economy

- ☐ Strategic programme to promote a circular economy
- ☐ The Plastics Roadmap for Finland
- ☐ Waste management



Strategic programme to promote a circular economy



- ☐ The vision: carbon-neutral circular economy society by 2035
- ☐ Sustainable products and services
- ☐ The sharing economy
- ☐ Materials remain in circulation longer and more safely
- ☐ The consumption of non-renewable natural resources will decrease and the sustainable use of renewable natural resources may increase to the extent that the total consumption of primary raw materials in Finland in 2035 will not exceed what it was in 2015.
- ☐ The productivity of resources will double by 2035 from what it was in 2015



The Plastics Roadmap for Finland



- ☐ Reduce littering and avoid unnecessary consumption
- ☐ Introduce a tax on plastics
- ☐ Significantly increase the recovery of plastic waste
- ☐ Identification and sorting of plastic waste at construction sites
- ☐ Recycling and replacement of plastics in agriculture and horticulture
- ☐ Diverse recycling solutions for recovered plastic
- ☐ Plastics network, Plastics challenge, Expertise, Research knowledge



Waste management



Waste management follows the order of priority:

- ☐ Primarily, the generation of waste should be avoided.
- ☐ If waste is generated, it must be prepared for reuse or reused.
- ☐ If reusing is not possible, waste must be primarily recovered as materials (recycled), and secondarily recovered as energy.
- ☐ Waste may be disposed of in landfills only if its recovery is not technically or financially feasible



Producer responsibility



- ☐ Cars, vans and comparable vehicles
- ☐ Tyres from motor vehicles, other vehicles and equipment as well as vehicles or equipment supplied with tyres (including tyre retreading companies)
- ☐ Electronic and electrical appliances
- ☐ Batteries and accumulators
- ☐ Printing paper and paper for manufacturing other paper products
- ☐ Packaging where the producer responsibility pertains to the packers of the products and importers or packaged products but excluding the packaging producers.



Case: Maximising the potential of wood ash



Maximizing the potential of wood ash





Maximizing the potential of wood ash



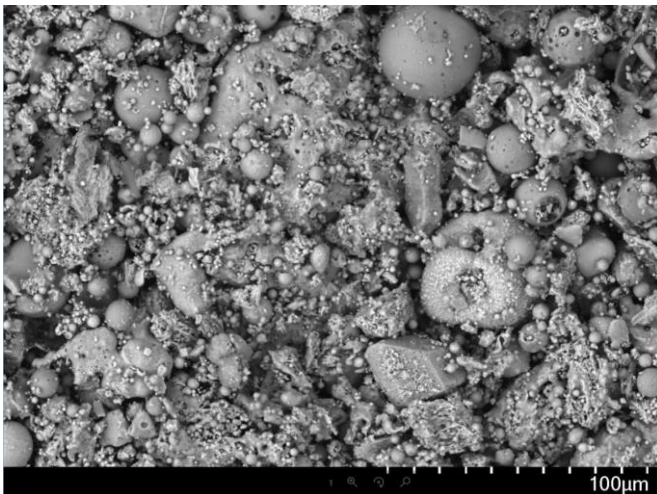
- ☐ The Finnish Fertilizer Act
- ☐ Limit values of heavy metals by law
- ☐ Controlled use in agricultural areas and forests



Case: Development of novel sustainable construction materials



Geopolymer composite Gepocit®



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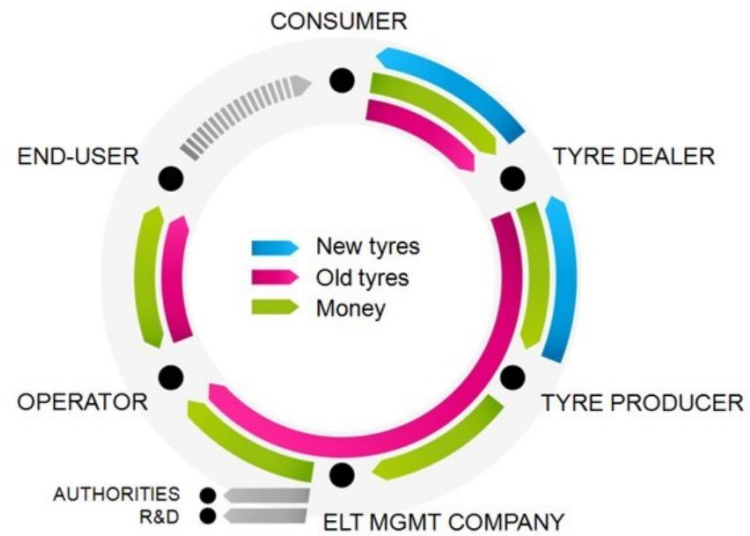


Case: Sustainable tyre recycling

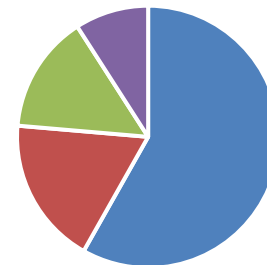


Sustainable tyre recycling

- ☐ Legislation since 1995
- ☐ The new Waste Act (646/2011)
 - ☐ Incl. Producer responsibility
- ☐ the connected Government Decree (527/2013) regarding the collection and recovery of end-of-life tyres



ELT Management Finland 2017, ELT arising 55000 tn



- Civil engineering, public works and backfilling 32000 tn
- Recycling (granulation, blasting mats) 10000 tn
- Energy recovery 8000 tn
- Unknown 5000 tn





Thank you for your attention!