

The background of the slide is a close-up photograph of a natural setting. It features a large, dark grey rock surface on the right side, which is partially covered by a dense carpet of bright green moss. The moss has a star-like or tufted appearance. The lighting is natural, highlighting the textures of the rock and the vibrant color of the moss.

# Is zero waste mining “Mission Impossible” or necessity in the future?

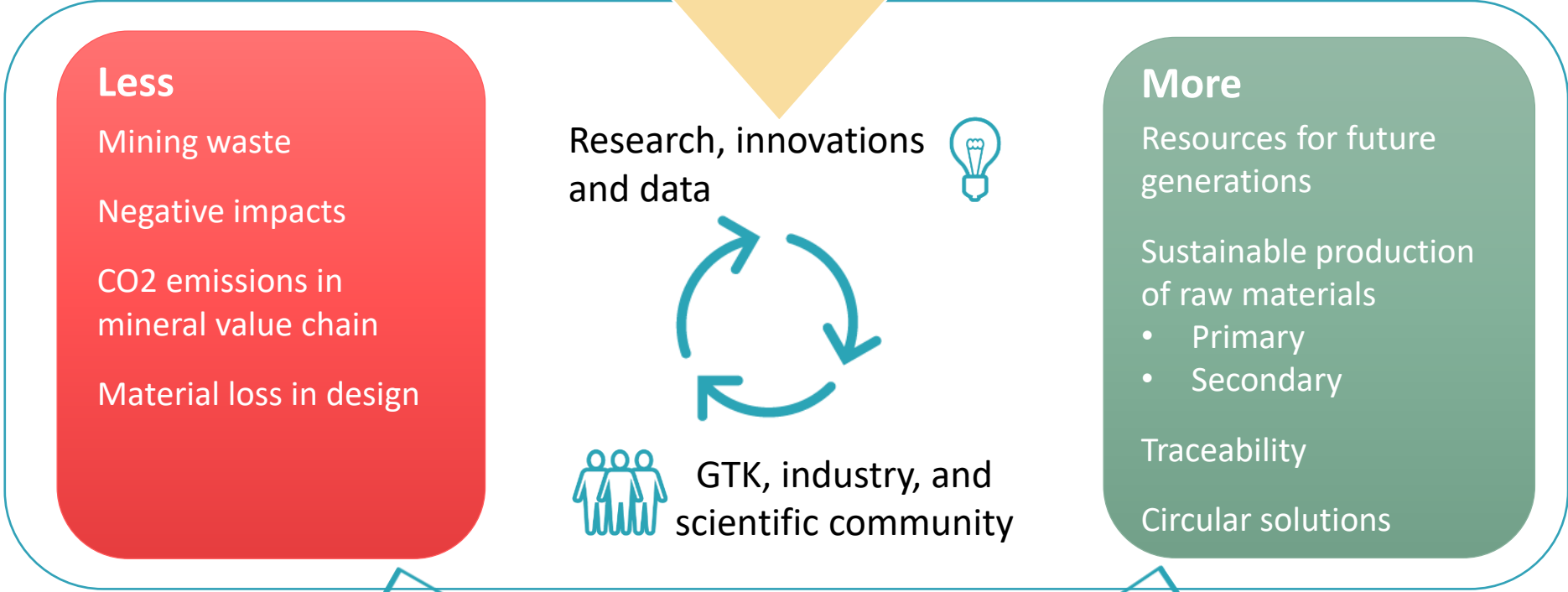
May 11th 2023, Kimmo Tiilikainen




# Supporting Sustainable Raw Materials Value Chains

2023  
Pressure for system changes 

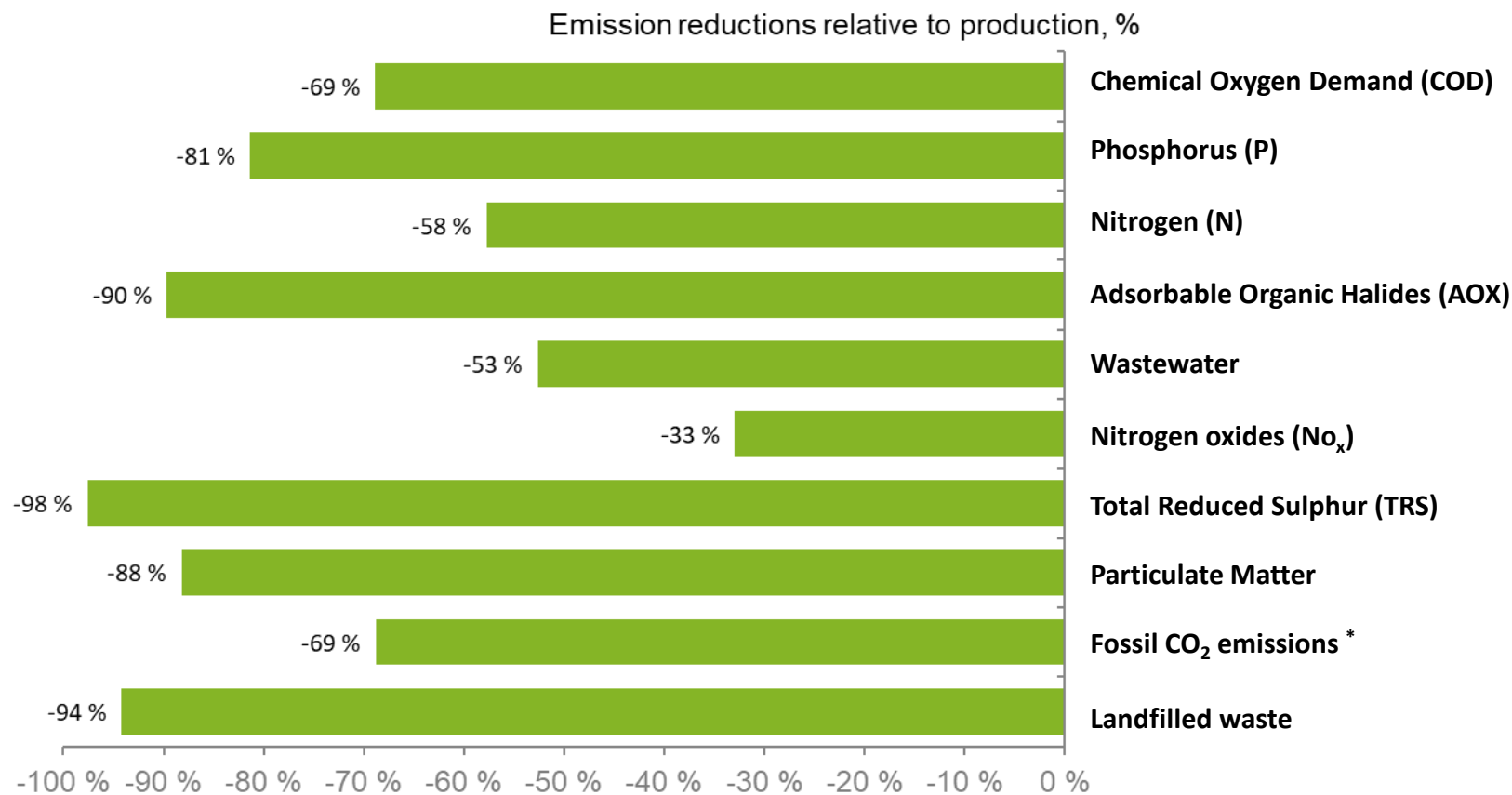
Actions are needed – GTK strategy



  
Sustainable, carbon neutral future

# Finnish forest industry's long-term environmental work has led to significant emission reductions

The goal of environmental protection is continuous, cost-effective improvement



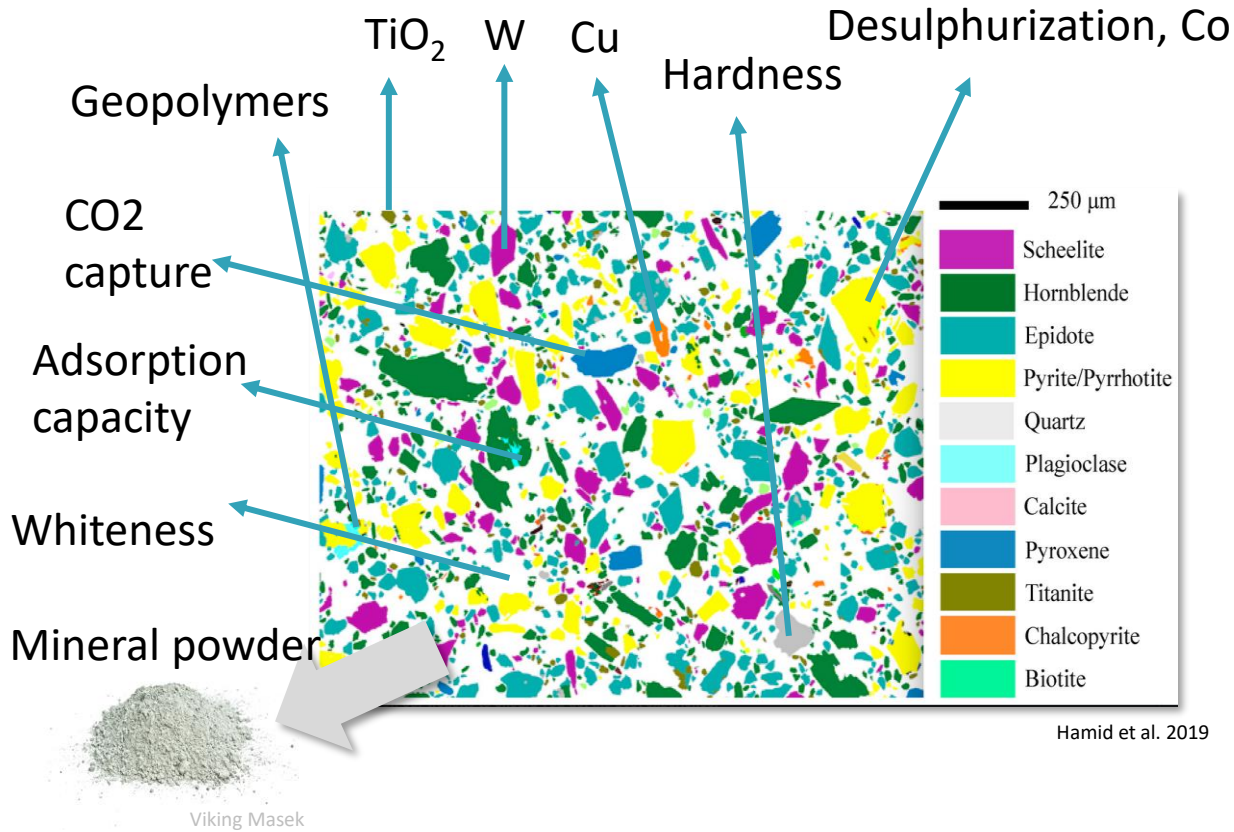
Emission reductions relative to the production of the Finnish pulp and paper industry 2021 compared to 1992

# Mining Industry NEEDS TO ADOPT CIRCULAR PRACTICES

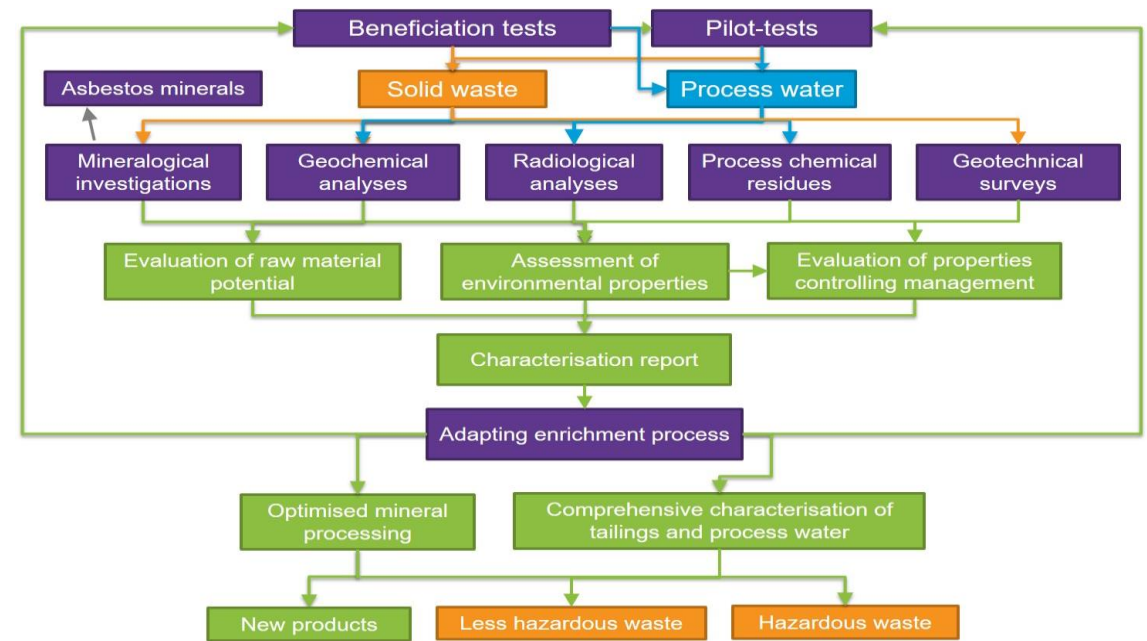


# Design out the amount and optimize the content of waste

Find uses for all grains in the waste



Design optimized final waste





# GTK Mintec

Global Research and Innovation  
Platform for Mineral Processing and  
Circular Economy





# From Ore Deposit to Mine Closure

- Mineralogy – Bench Scale – Pilot Plant
- Centre for co-creation
- Geometallurgy and low-impact process design
- Design out mining waste
- Long term waste testing facility
- Process water recycling and treatment
- Re-mining, secondary raw materials, innovation metals





# Summary



GTK runs projects in all key areas of sustainable mining and minerals production.



These approaches are built in our strategy and stem from our role in the society.



Sustainable mining can only be carried out with a combination of private and public efforts.



Green transition is an issue that calls for global solutions and responsibility.



Thank you!



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