



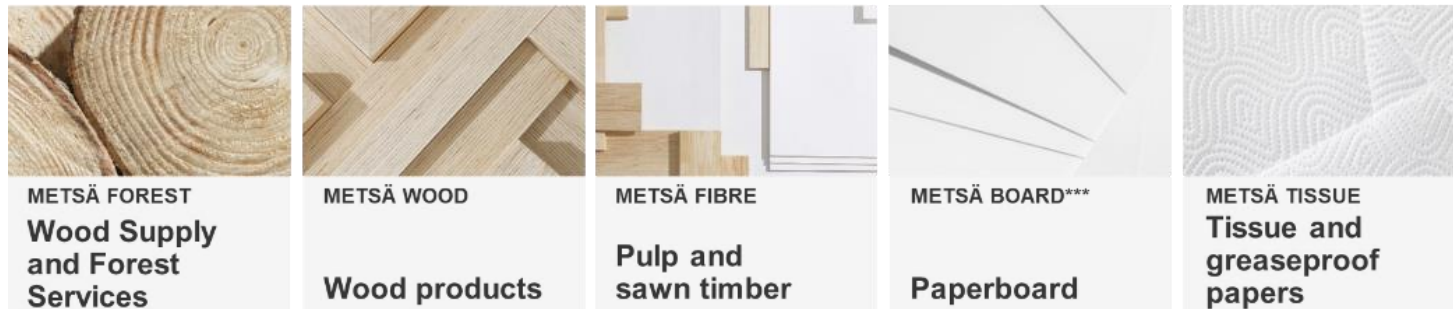
Metsä

Scaling up new bio-based products and the role of partnerships

Niklas von Weymarn, CEO, Metsä Spring

Metsä Group promotes collaborative bioeconomy

- Metsä Group's parent company Metsäliitto Cooperative is owned by over 90,000 **Finnish forest owners**
- Five business areas & innovation company Metsä Spring form a united group, in which wood raw material is used efficiently and responsibly



- Sales* EUR 6.1 billion
- Personnel approx. 9,500

* 2023, internal sales excluded

*** Shares listed on the Nasdaq Helsinki

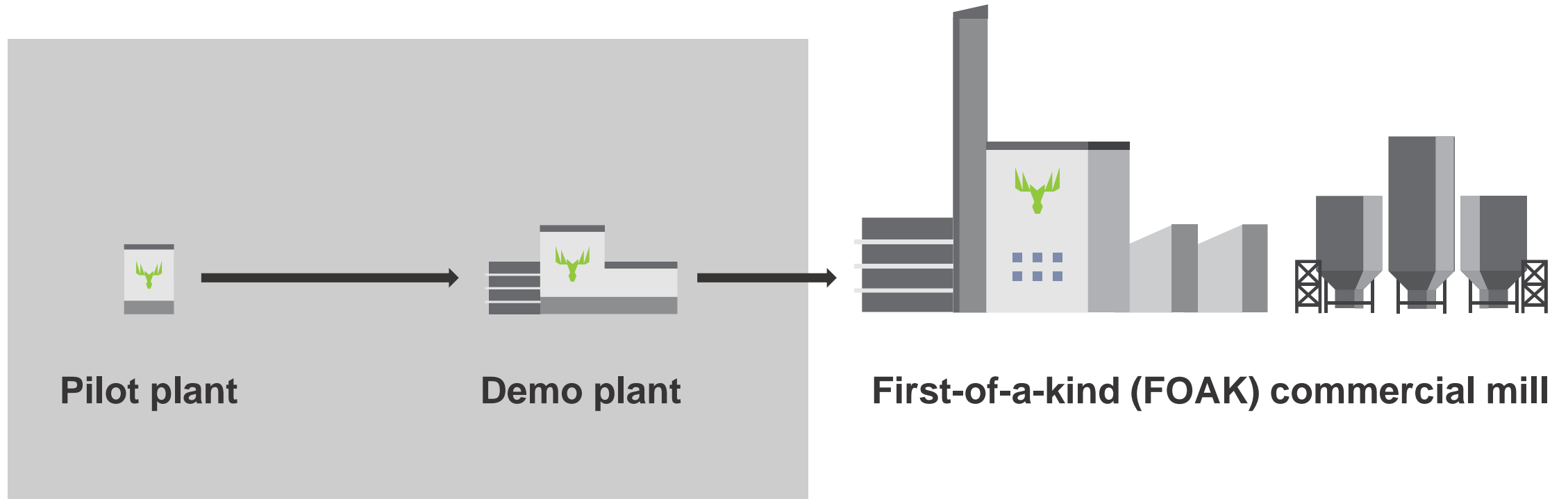


Metsä Spring in brief

- Metsä Spring is an innovation company within Metsä Group.
- All Metsä Spring projects must have the potential of strengthening the Metsä Group business ecosystem in the long run.
- Our main activities include:
 - Corporate Venturing – Investing in promising startup companies;
 - Carrying out own R&D&I projects, typically pilot or demo projects; and
 - Group R&D – Supporting and activating the R&D that is linked to Metsä Group's current businesses.

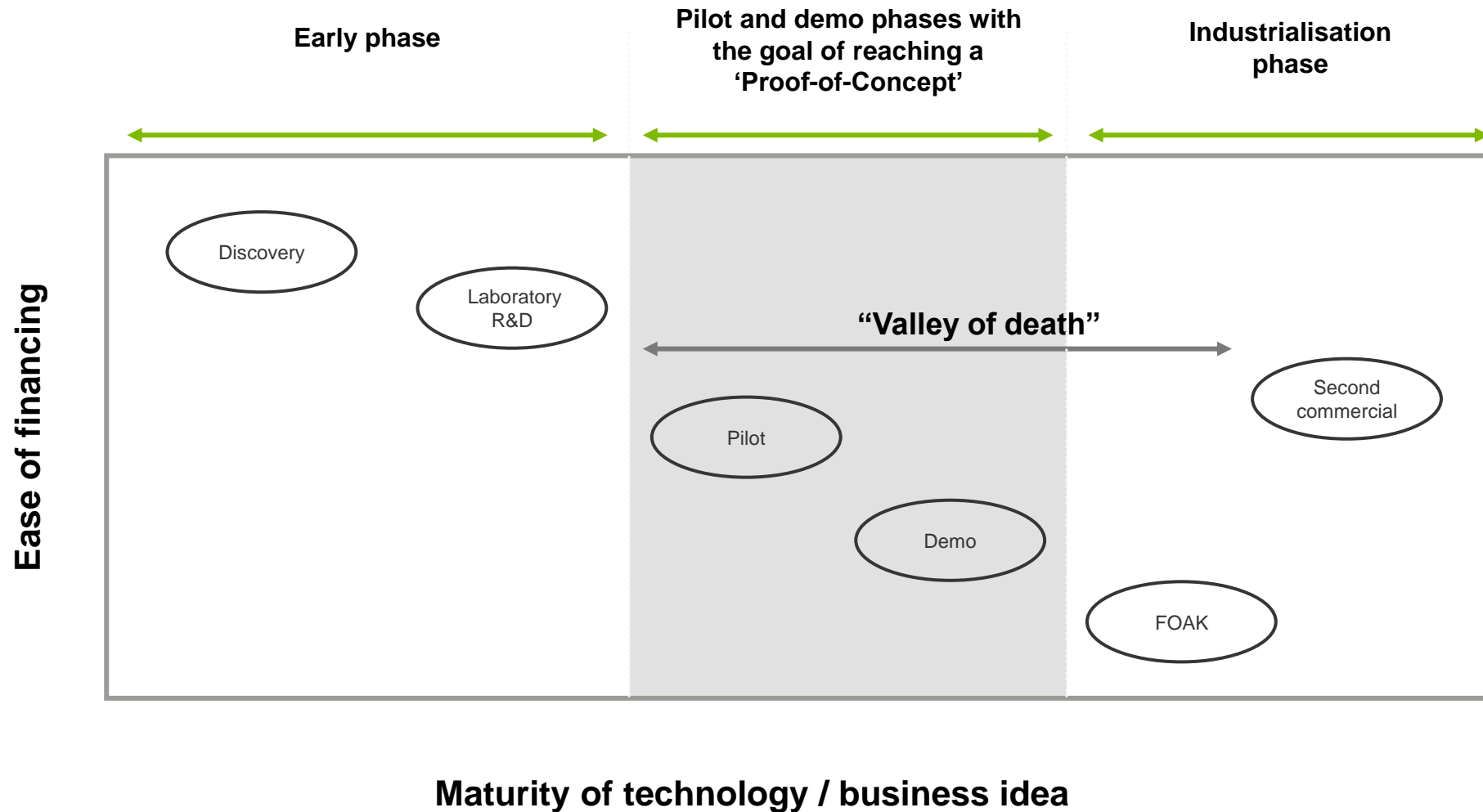


Scaling up

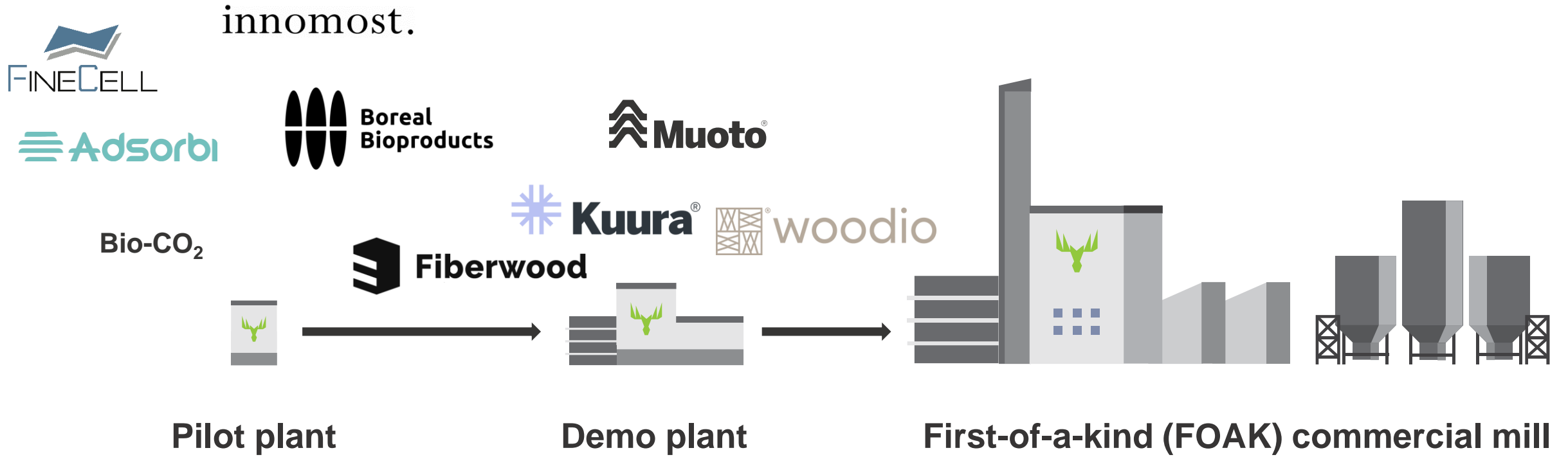


Metsä Spring's focus area

Focus of Metsä Spring is within the grey area



Scaling up Metsä Spring's portfolio



Case example: Kuura textile fibre

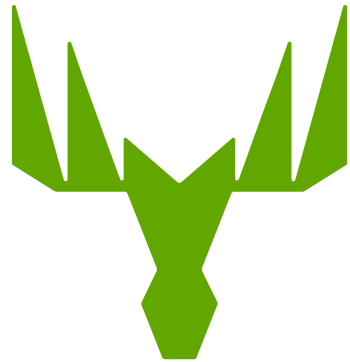
- 2011- Laboratory R&D (2013- Metsä Group's own programme)
 - Partial financing by Business Finland and BBI JU (grants to Universities and RTOs)
- 2016- Pilot scale
 - Using an existing pilot line in Germany (small modifications).
 - Partial financing by Business Finland and BBI JU (grants)
- 2020- Demo scale
 - Unique demo plant built in Äänekoski, Finland (see pic).
 - CAPEX ~45 M€ and OPEX ~10 M€
 - Partial financing by Business Finland (loan)
- Our main partner is ITOCHU Corp. based in Japan. Regarding FOAK factory planning, which is now in a pre-study phase, our key partner is ANDRITZ from Austria.



Some final thoughts..

- Scaling up needs many things, including time, patience, and deep pockets.
- Pilot and demo projects comprise mainly CAPEX → Not a perfect match with public funding instruments.
- Pilot and demo plant investments are very seldom bankable.
- When contemplating a FOAK plant investment, companies must have a clear understanding of the business environment 10-20 years into the future (including legislative framework).
- The investor/company risk, in the valley of death, is further elevated because the investment case usually lacks equipment suppliers, who can take legal responsibility of the process working as planned (i.e., they can usually only give the mechanical guarantees for the individual equipment).





Metsä

Innovations Grow on Trees!

www.metsagroup.com/metsaspring/

metsaspring@metsagroup.com