



Session	Start-ups/SMEs looking for Finance: Pre-seed/Angel/Seed
Title	From Paper Byproduct to Durable Wood: Upcycling Lignin for Toxic-Free Wood Protection
Company	LignoSolve ApS
Speaker	Tor Ivan Simonsen
TRL	TRL 4 - 7
Keywords feedstock (max 2)	Lignin
Keywords technology (max 2)	Lignin Impregnation
Keywords End-Product (max 2)	LignoWood
Abstract:	
Durable outdoor wood always comes with a compromise: biocide-treated timber relies on toxic chemistry, while tropical hardwood is costly and drives deforestation. At the same time, lignin, the polymer that gives wood its natural defence against fungi, moisture and UV, is one of the most underused bioresources on Earth, with over 70 million tonnes produced each year as a byproduct of paper production. LignoSolve turns this side-stream into non-toxic wood protection. Our patented technology solubilizes lignin into a stable, bio-based fluid that is impregnated into fast-growing, non-durable local wood. The result, LignoWood, gives local wood tropical-hardwood-like performance and stores extra biogenic carbon. In accelerated decay tests, LignoWood shows minimal degradation across ten wood species, absorbs about four times less water than untreated wood, and shows no sign of toxicity. The process builds on familiar pressure-treatment principles, so existing impregnation plants can adopt it with low switching costs. LignoSolve supplies lignin fluids and process know-how to wood impregnators, and tailored LignoWood to makers of outdoor furniture, architectural and construction sector. Founded by researchers in wood science, lignin chemistry and bioprocess engineering, LignoSolve is now moving from lab to pilot-scale production, with first commercial collaborations underway. We are looking for industrial partners and investors to scale.	