

Fibenol



ROHEPÖÖRE - tänane reaalsus?

Tulevikutööstus Eestis

Peep Pitk, Fibenoli arendusjuht

GLOBALNE INNOVATSIOON



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"Fiber Beyond Oil"


Rohepööre rohujuure tasandil ehk asendame nafta-põhised toorained puidu-põhistega.

LIGNOVA™



PUIDUSUHKRUD



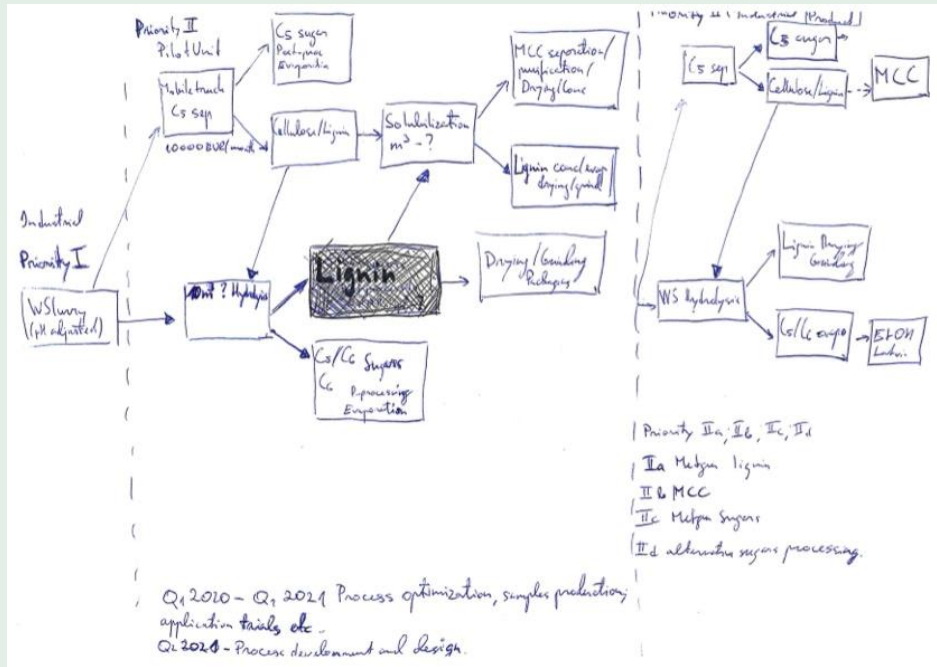
An aerial photograph showing a vast, rolling landscape. The foreground and middle ground are dominated by dense, vibrant green forests. Interspersed among the trees are several large, open, light-green fields, likely meadows or pastures. A few small, white buildings are visible in the distance, nestled within the forest. The horizon is flat, with a thin layer of clouds in the sky above. The overall scene conveys a sense of natural abundance and rural tranquility.

ROHEPÖÖRE = bioressursside
efektiivne väärimine

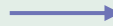
ALGUS



2016

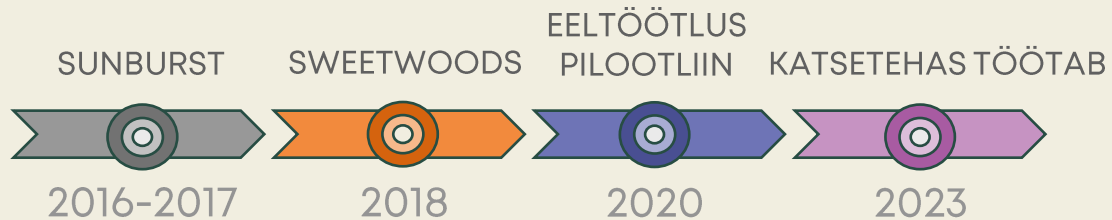


2022



ESIMESED MAAILMAS

- Tooraine biomaterjalide ja biokemikaalide tööstusele.
- Taltech ja TÜ kõrval enim EU teadusrahastust kaasanud organisatsioon.



EELTÖÖTLUS & PILOOTLIIN

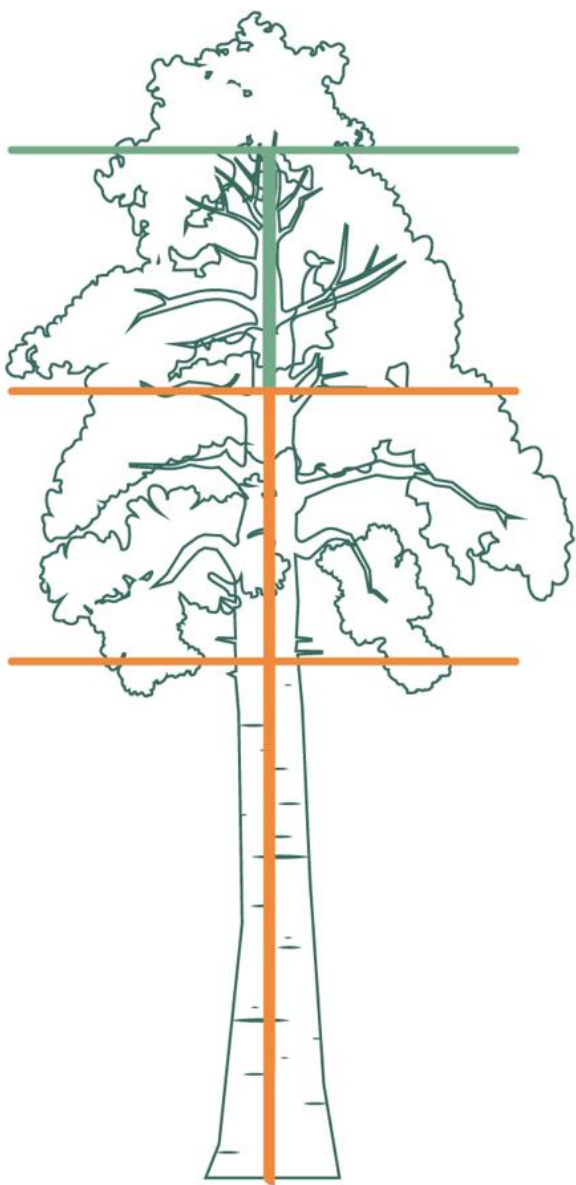


EESTI

kasutamata
võimalus
ROHEPÖÖRDE
vaates?

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20% muu

80% palk

100% koor ja oksad

25% energiapuit

45% paberipuit

30% palk

100%
bio-
energia

100%
bio-
energia

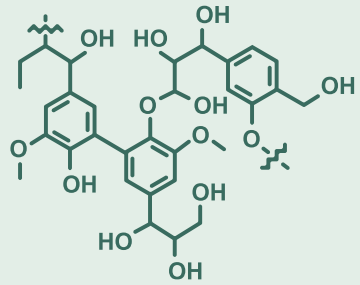
50%
bio-
energia

60%
bio-
energia

50%
paber &
papp

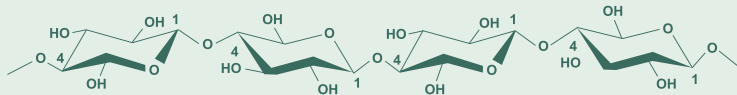
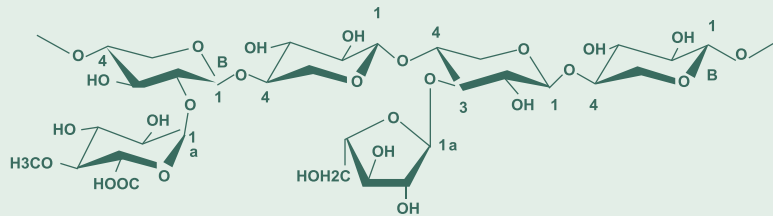
40%
vineer &
sae-
materjal

MEIE LÄHENEMINE

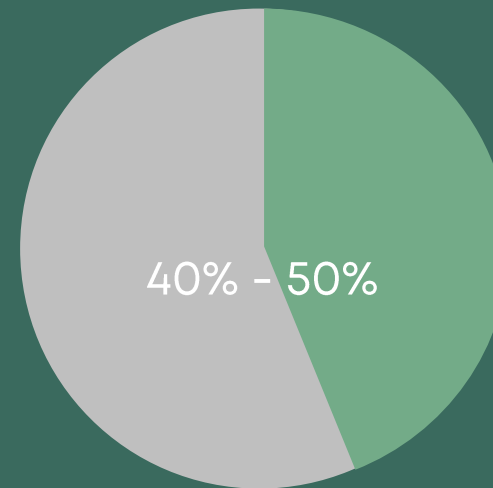
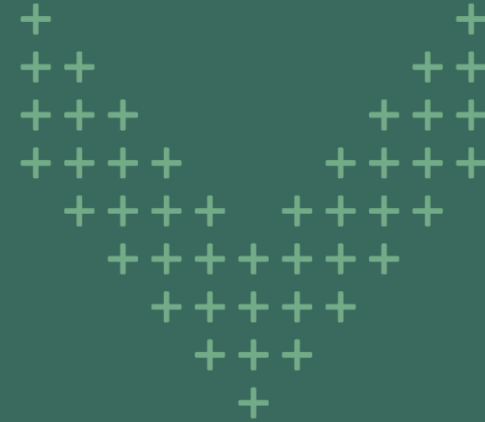


20%-30%
LIGNIIN

25%- 5%
HEMITSELLULOOS



35%-45%
TSELLULOOS

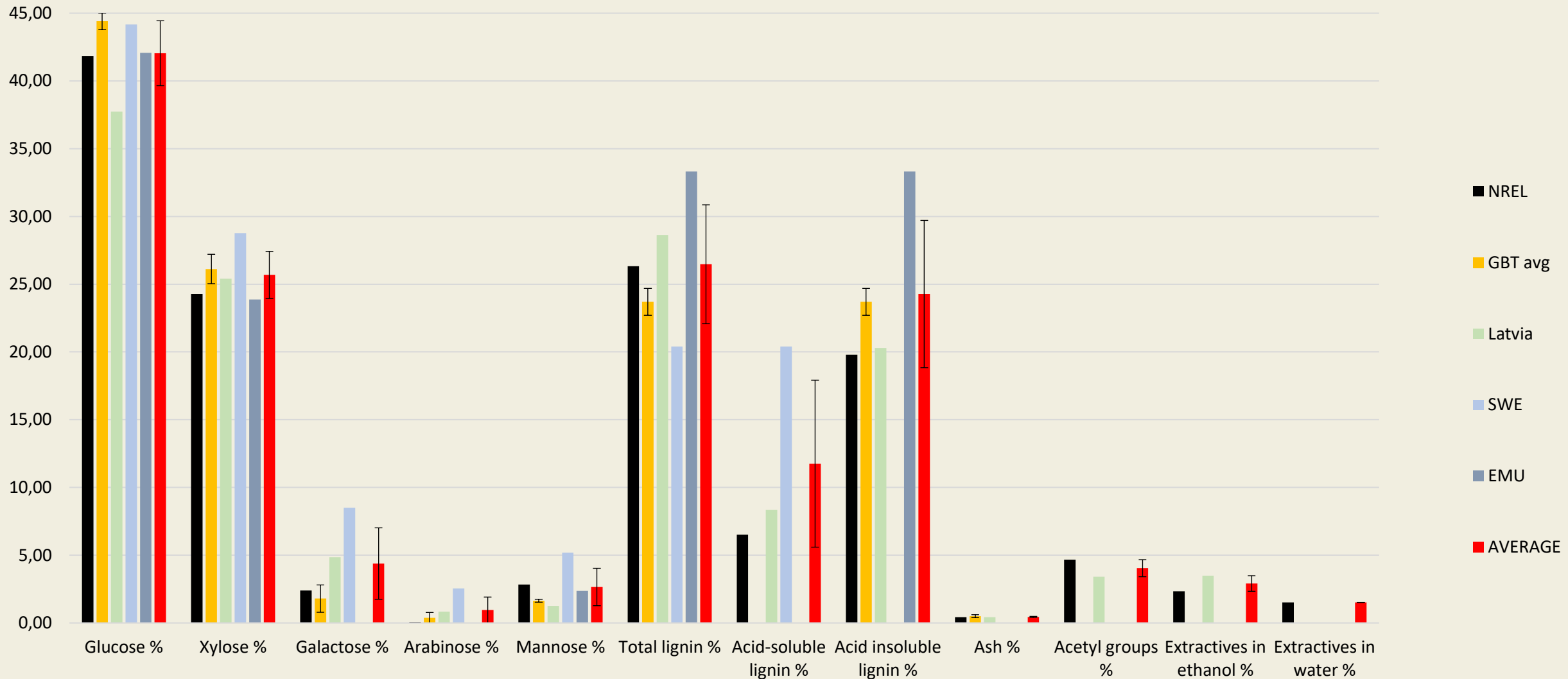


TRADITSIOONILINE

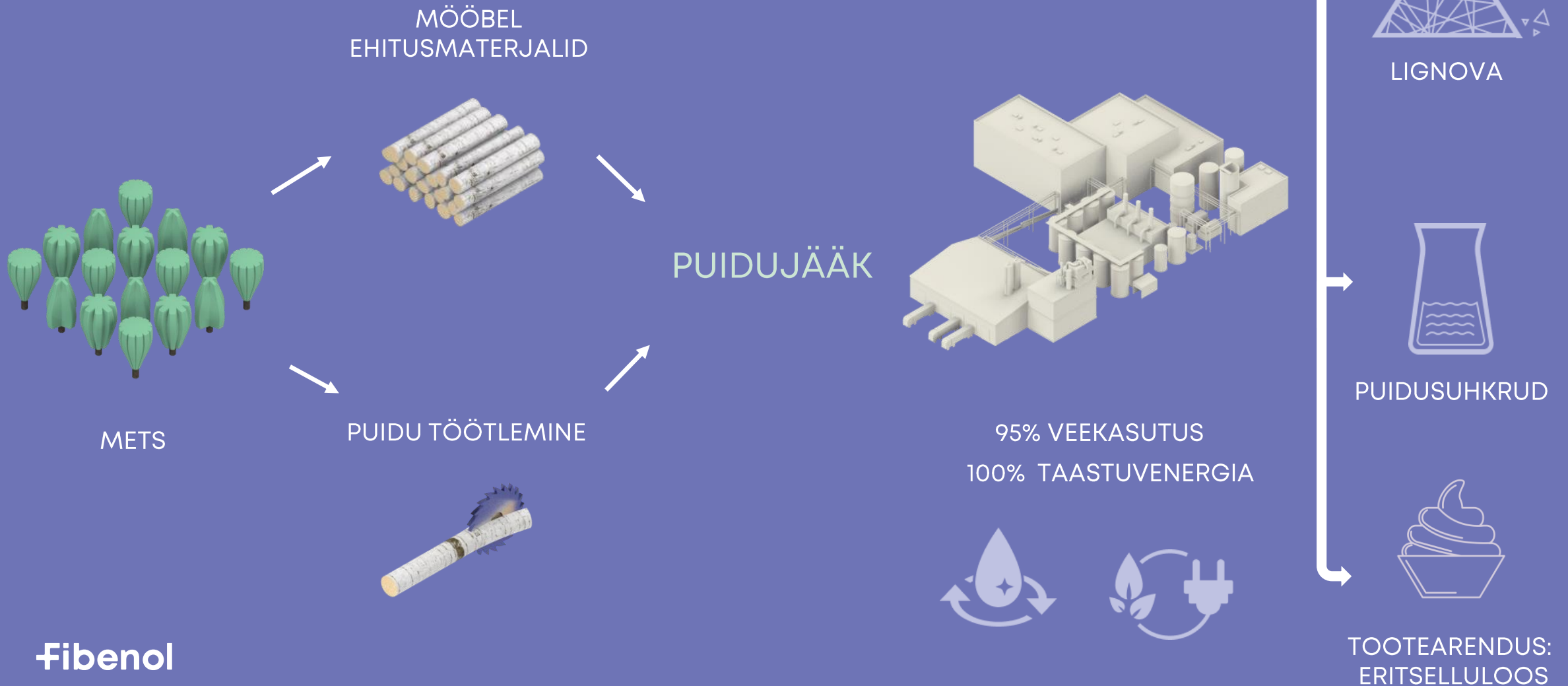


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PUIDU KOOSTIS



KATSETEHASE VÄÄRTUSAHEL





PROJEKTID JA RAKENDUSED

SWEETWOODS

Ligniini ja suhkrud → bioisobuteeniks ja glükosooniks

VEHICLE

Suhkrud → platvormkemikaalideks

VIOBOND

Ligniini → fenoolide asendajaks

2

VEHICLE PROJECT: SUGARS TO PLATFORM CHEMICALS

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WOOD SUGARS



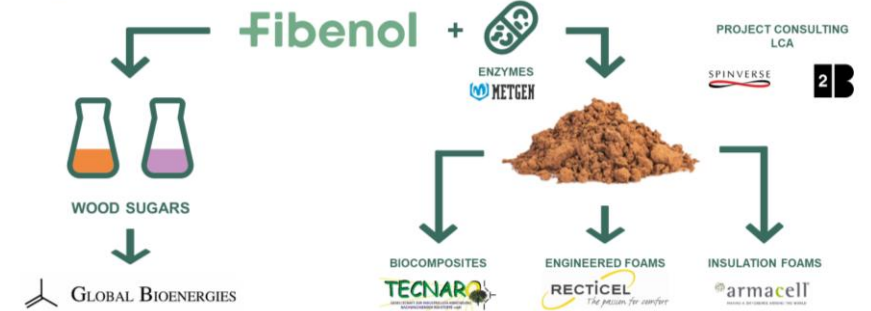
Kemira

Ecohelix

NOVAMONT

1

SWEETWOODS



3

VIOBOND: LIGNIN INSTEAD OF PHENOL

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TIIM & PARTNERID

Pikaajaline kogemus

300+ arenduspartnerit üle maailma

1000+ tootenäidise tellimust

Sunburst & Sweetwater Energy

DeSmet Engineers (Belgia)

Veolia Water Technologies (Holland)

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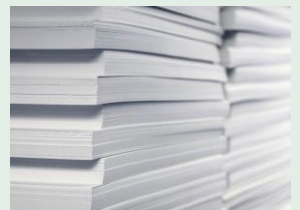
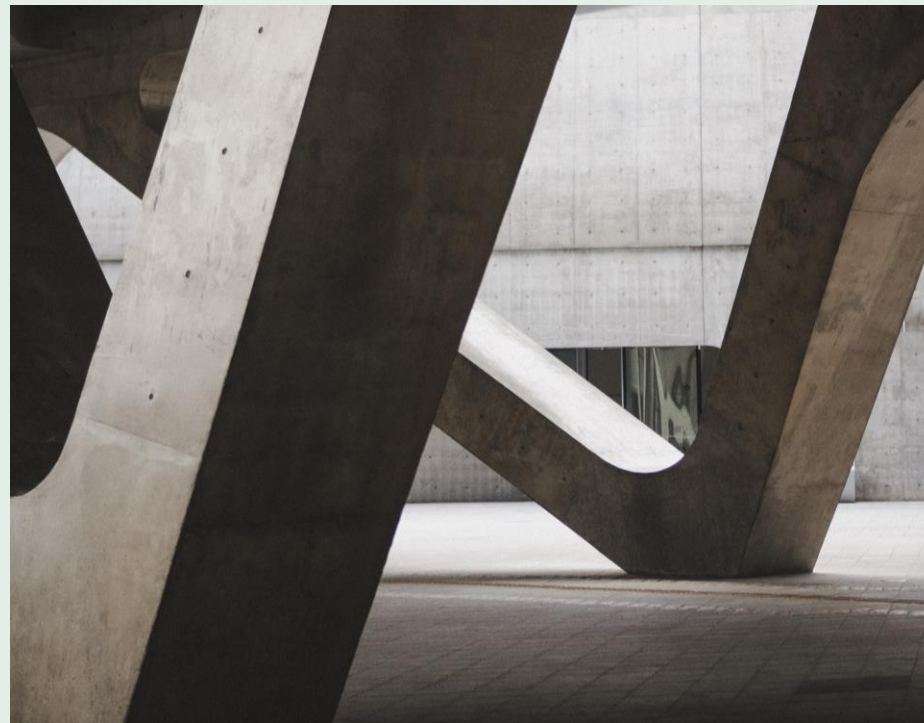




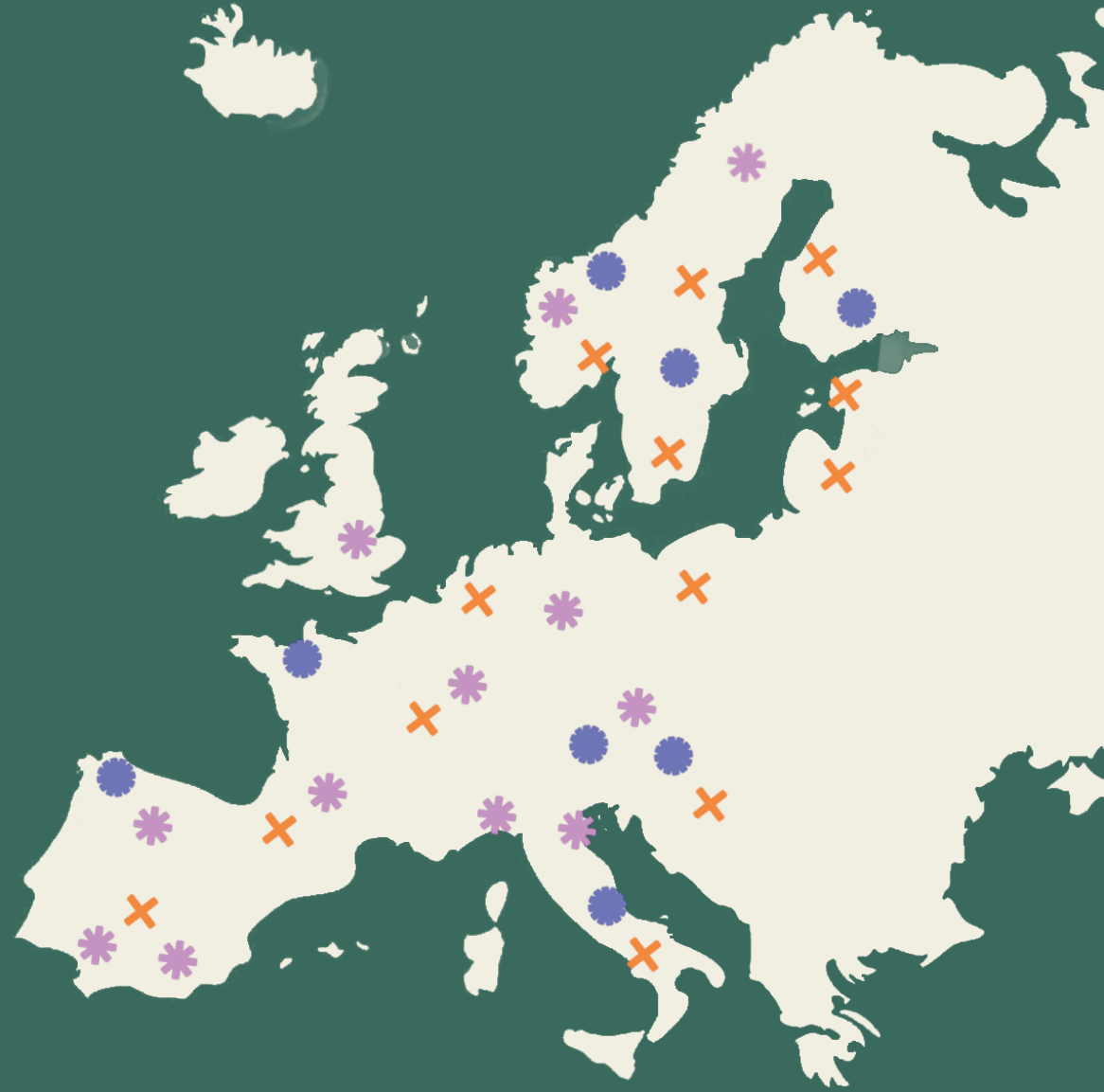
ERITSELLULOOS

TOOTED

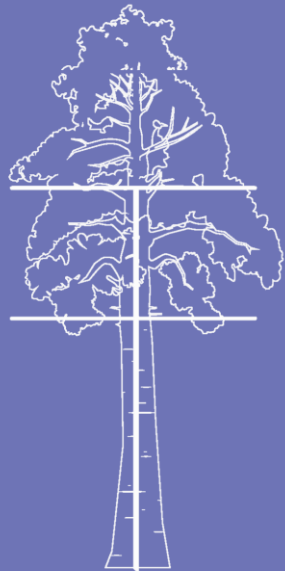
- Toidu pakendid
- Kosmeetika
- Farmaatsia
- Kiled
- Toidutööstus
- Paberitööstus
- Värvivid
- Tsement



SUUND



TÖÖSTUSLIK TEHAS



→ energiapuu

→ paberipuit

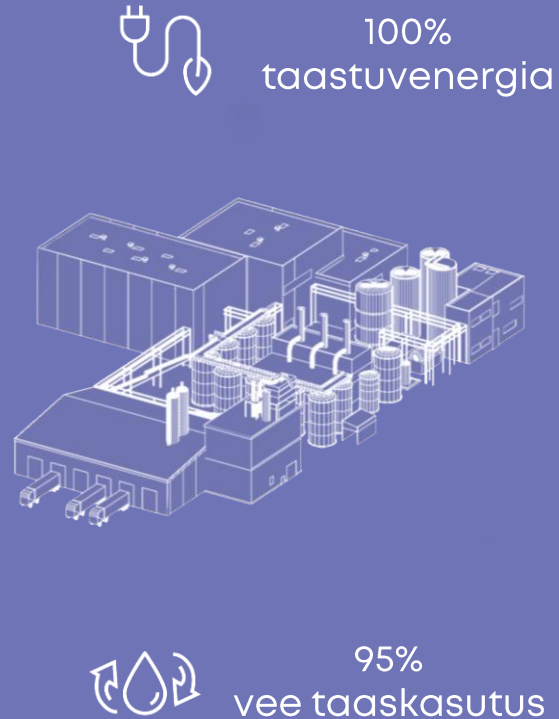
→ palk: saeveskid,
vineeritööstus



VÄÄRINDAMATA
KASEPABERIPUIT



VINEERITÖÖSTUSE
JÄÄGID

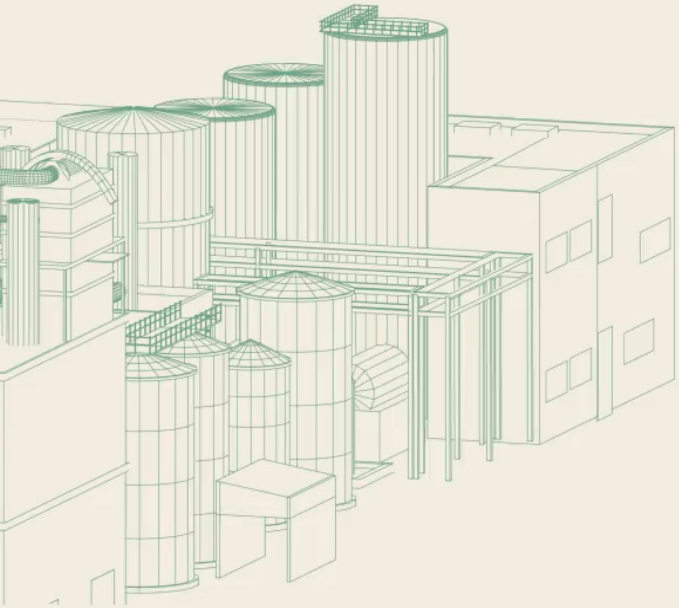


LIGNOVA



C5 ja C6
suhkrud

I TÖÖSTUSKOMPLEKSI RAJAMISKAVA



KATSETEHAS
KÄIKU VÕETUD

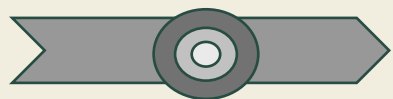
SUURE TEHASE
PLANEERIMINE

LUBADE
TAOTLEMINE

EHITUS

KÄIKU VÕTMINE

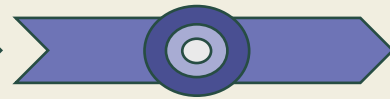
TOOTMINE



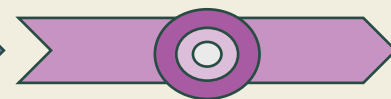
2023



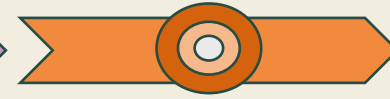
2023/2024



2024



2025/2026



2026/2027



2028

The image features a silhouette of an oil pumpjack (jack-o'-lantern) against a dramatic sunset sky. The sun is a large, bright yellow-orange circle positioned in the lower center, partially obscured by the dark silhouette of a forest line. The sky transitions from a deep orange near the horizon to a darker, more muted orange at the top. The pumpjack is a complex mechanical structure with a long, angled arm and a counterweight, all rendered in black silhouette. The overall mood is somber and evocative, suggesting the end of an era or the environmental impact of fossil fuels.

FOSSIILTOORMEL BASEERUV TÖÖSTUS EI OLE JÄTKUSUUTLIK

A wide-angle photograph of a wood processing facility. On the left, there are tall, neat stacks of cut logs. On the right, there are large, conical piles of wood chips, with a smaller pile of dark wood chips in the foreground. A yellow tractor is visible in the distance near a metal structure. The ground is wet and muddy. The sky is overcast with grey clouds.

PUIDURESSURSS ON ÜKS PARIMAIK ALTERNATIIV

ROHEPÖÖRE vajab eestvedajaid!

Võta ühendust:
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