FINRENES

Replacing Fossil Fuels

- Biofuels and carbon capture

There is no waste

Petteri Salonen

17.02.2021

FINRENES

Needs and Challenges

Traffic fuels without food resources

Fertilizer need is growing & nutrients are flowing to waters

Carbon capture

Control power to wind and solar

FINRENES

Finrenes Solution

Pretreat waste biomass

Steam explosion pretreatment to break biodegradable agricultural waste such as logging waste, straw, hog wood, bark, coconut hulls

Biogas

Biomethane / RNG as Traffic Fuel

Brown Pellets

Carbon Capture and Utilization (CCU)
Fertilizers
Fuel for power and heat

Biogas from inedible biomass

Replace coal and gas in power generation

Carbon capture by brown pellets

Fertilizer recycling, slow nutrient release

Finrenes solution / process

Collect wood and other lignocellulose

- Wood, bark, woodchips, partly decayed woodchips, thatch and coconut hulls
- Biogas can be produced from all of them in a quick process.

The pretreatment

- Process breaks the lignocellulose structure with a steam explosion, forming digestible biomass

Anaerobic digestion

Produces:

- Biogas (biomethane and carbon dioxide)
- Digestate from the pretreated biomass that does not turn to biogas

End products:

1. **Biogas**
2. **Brown pellets**

- Biogas is refined to 97 % biomethane.
- Biomethane can be used as fuel for CNG/RNG cars or as a replacement for natural gas in energy production

- Digestate is dried and pelleted to brown pellets
- Brown Pellets can be used in carbon sequestration and nutrient circulation and to replace fossil fuel (coal) in energy production

Product and key component:
Pretreatment device in a sea container

FINRENES

Customers

Biogas plant

Woodchip company

Pellet manufacturers

Large scale agribusinesses

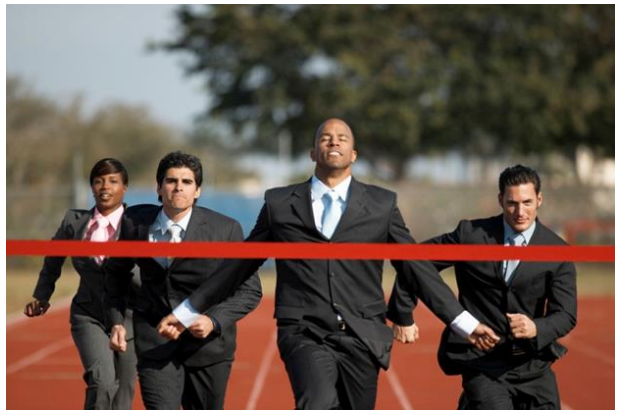
Fuel distributors

Forest companies and service providers

FINRENES

Benefit for the customers

Faster biogas process speed
Wider feedstock selection
High efficiency



Huge market
Huge inexpensive feedstock supply

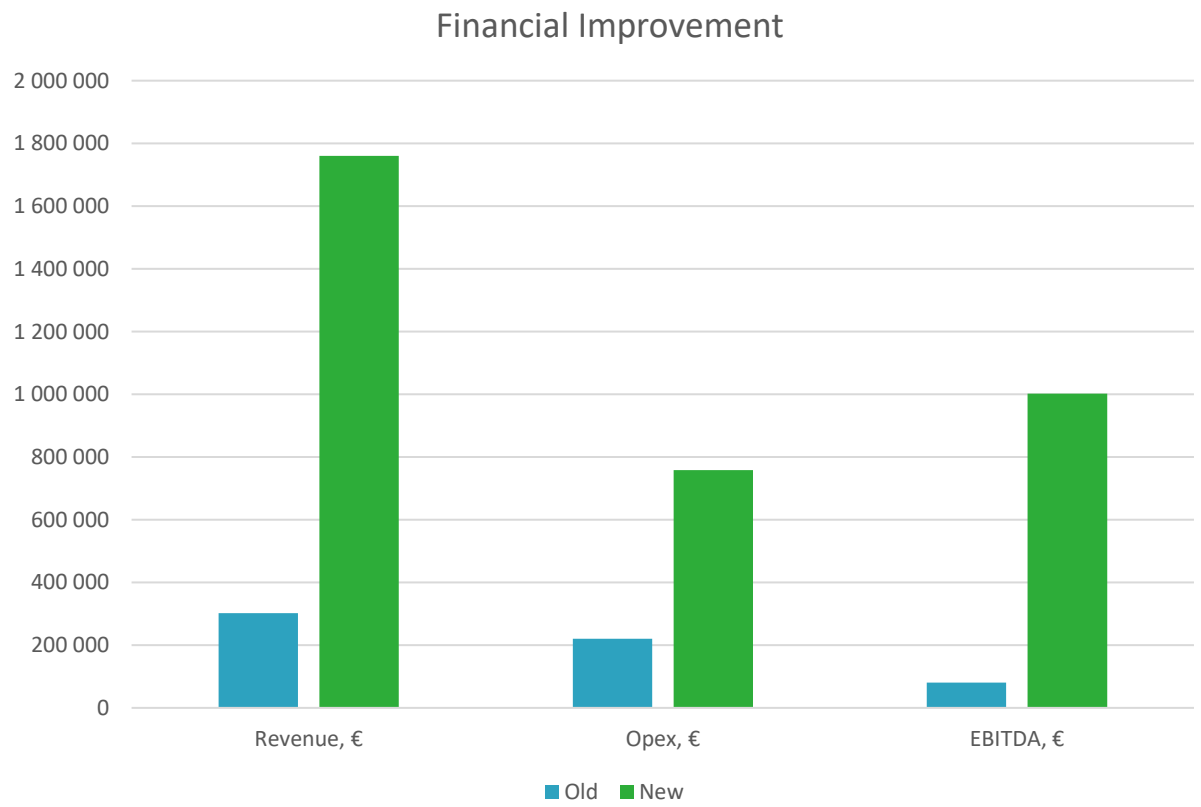
Revenue from biogas
and brown pellets
Energy self-sufficient process

Add-on pretreatment

Process speed 3 X
Volume: 3,1 => 10 k ton/a

By adding pretreatment to the process:

Faster process & higher capacity



FINRENES

Finrenes business logic

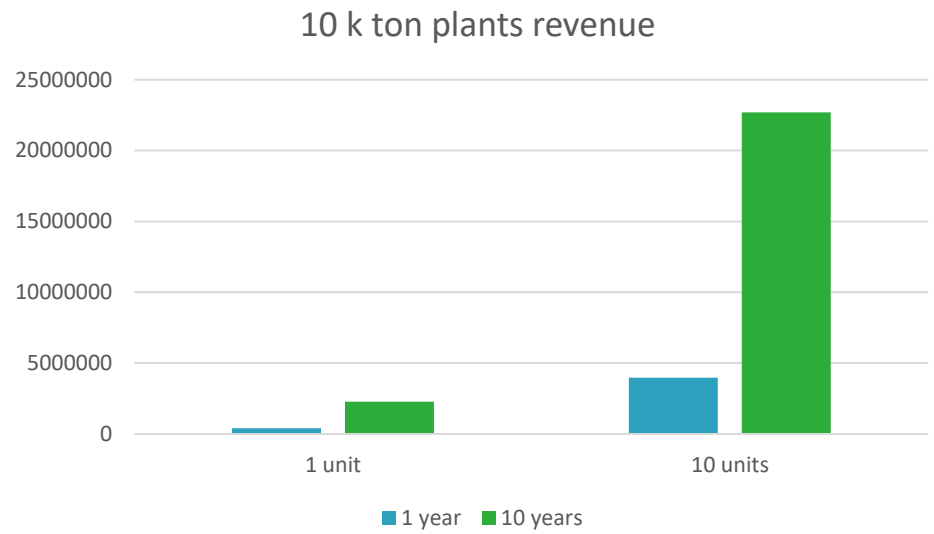
Finrenes revenue streams

One-time cash inflow:

1.	Feasibility study:	**10 000 €**
2.	Engineering:	**60 000 €**
3.	Sales commission:	**120 000 €**
Total		**190 000 €**

Yearly cash inflows:

4. Service:	**8 000 €/a**
5. Licence fee:	**200 000 €/a**
Total	**208 000 €/a**

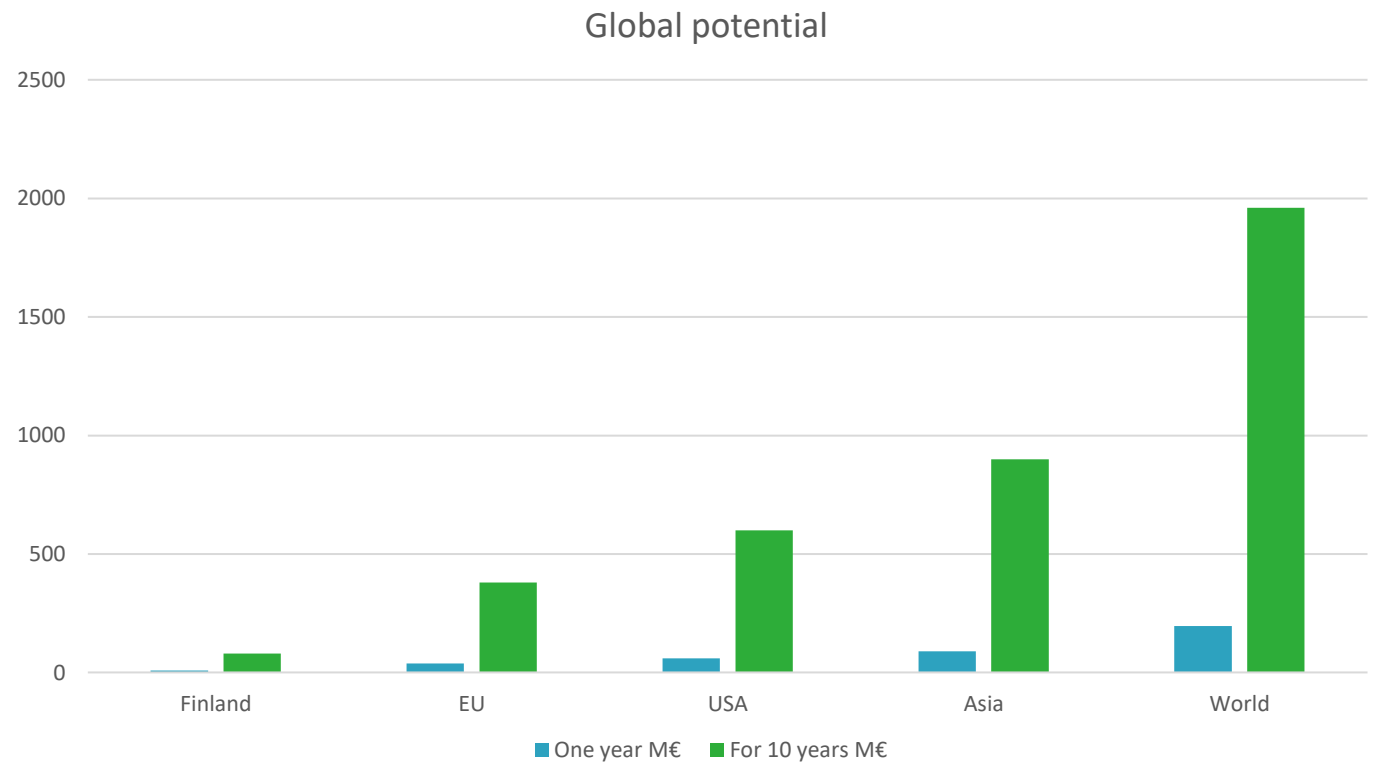


Global growth opportunity

Fast growing market, carbon neutrality and energy self-sufficiency driving business
Estimated SAM for 10 k ton/a installations, 4 - 5% of available side stream biomass

	Units
Finland	40
EU	190
USA	300
Asia	450
World	980

Revenue stream from one unit in 10 years	**2 220 000 €**
Revenue stream in Finland 40 units in 10 years	80 000 000 €
Revenue stream in EU 190 units in 10 years	380 000 000 €
Revenue stream in Americas 300 units in 10 years	600 000 000 €
Revenue stream in Asia 450 units in 10 years	900 000 000 €
Global revenue stream potential 980 units in 10 years	**1960 000 000 €**



Partner network

Partner network in Finland

1. Feasibility study

2. Design phase

3. Construction phase & service

Partner network in Asia

1. Feasibility study

2. Design phase

3. Construction phase & service

Uni-Orange CDS

Uni-Orange CDS

FINRENES

Team

Petteri Salonen,

CEO and Founder

Petteri has 20 years of experience in international technology development from Nokia and Samsung.

Rami Helminen,

Senior Advisor

Rami has over 20 years of experience in international business and operations from Nokia Tyres.

Reijo Järviö,

Chief Engineer

Reijo has over 40 years of experience in building power plants from Valmet and Metso in EU, China and Americas.

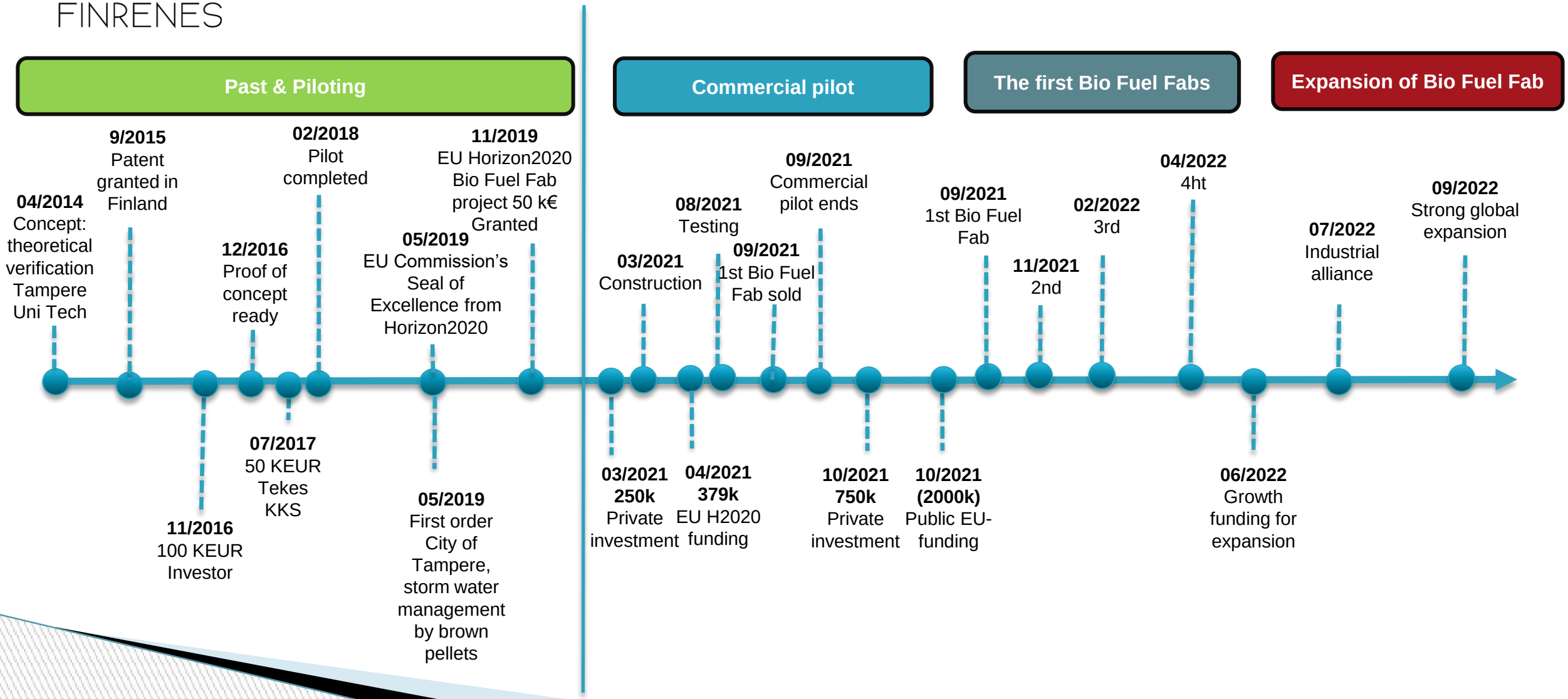
Juha Roppo,

Biomass Technologies

Juha has 20 years of experience in biomass combustion, from Metso and Tampere University of technology

FINRENES

Roadmap



Investment needs and use 2021-2022

Pre-seed round:

Private funding:

03/2021 250 000 €

Public funding:

03/2021 100 000€ ELY

03/2021 379 000€ EU H2020

Use:

Pilot project 250 000€

Materials, product development and testing

Sales & Marketing 100 000€

Seed round:

Private funding

10/2021 750 000 €

Public funding:

10/2021 2 000 000 € EU

Use:

1st & 2nd Bio Fuel Fab 1 500 000€

Feasibility studies and engineering

Product development 500 000€

Sales & Marketing 750 000€

Contacts and references

Contacts

General contact

- contact@finrenes.com

Petteri Salonen - CEO

- petteri.salonen@finrenes.com
- +358 50 482 1839

www.finrenes.com

Shell New Energy Challenge
Top 10 Finalist 10/2018

Horizon 2020
European Union Funding
for Research & Innovation

EU Horizon2020
11/2019 Phase 1 Grant

CLEANTECH FINLAND

Tekes

TOP 10 Finalist Verbund
Innovation Award for
Digital Energy
Munich Nov 2017

TiE 50 2018 FINALIST

TiE 50 finalist 4/2018 California

EnergyWeek 14th - 18th 2016 REGISTER NOW

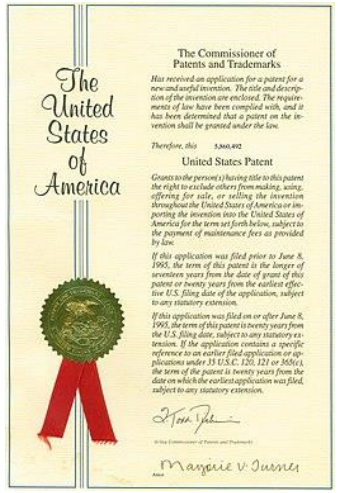
TOP30
Most Promising
Energy Startups
in Europe 2016

Runar Bäckströmin Säätiö
Runar Bäckström's
Foundation for Inventions

FINRENES

Finrenes as an investment

- **Low capital need for Finrenes, resulting SaaS-like EBITDA**
- **Proven technology**
- **Competent team**
- **The licensing business is easily scalable**
- **Growing global market**
- **IPR protected**
  - **Patent granted in FI, USA, RU & South Africa**
  - **Patent pending in EU, China & Canada**



Bio Fuel Fab investment and profitability

Financing is additionally seeked for new Bio Fuel Fabs

Bio Fuel Fab is a new installation to produce biogas and brown pellets

Bio Fuel Fab customers are also suppliers and operators, responsible for providing feedstock, operating the plant and use the fuels and energy

Attractive and secure investment opportunity

Public funding and grants are additionally available for environmentally friendly energy solutions

Operations are profitable without subsidies

Profitability in FI	
Revenue, €	2 364 350
OPEX, €	771 500
EBITDA, €	1 356 415
EBITDA %	57,53 %
Investment, €	5 000 000
Payback, years	4,95