



---

**Bryndís Björnsdóttir**, NPA verkefnastefnumót 6.-7. október 2016

# BioValued

---



**Northern Periphery and  
Arctic Programme**  
2014–2020



**EUROPEAN UNION**

Investing in your future  
European Regional Development Fund



# OPTION → BioValued

Styrkur fékst frá NPA til forverkefnis 2016

Umsókn verður send inn í 4. kall í NPA sjóðinn í nóvember 2016

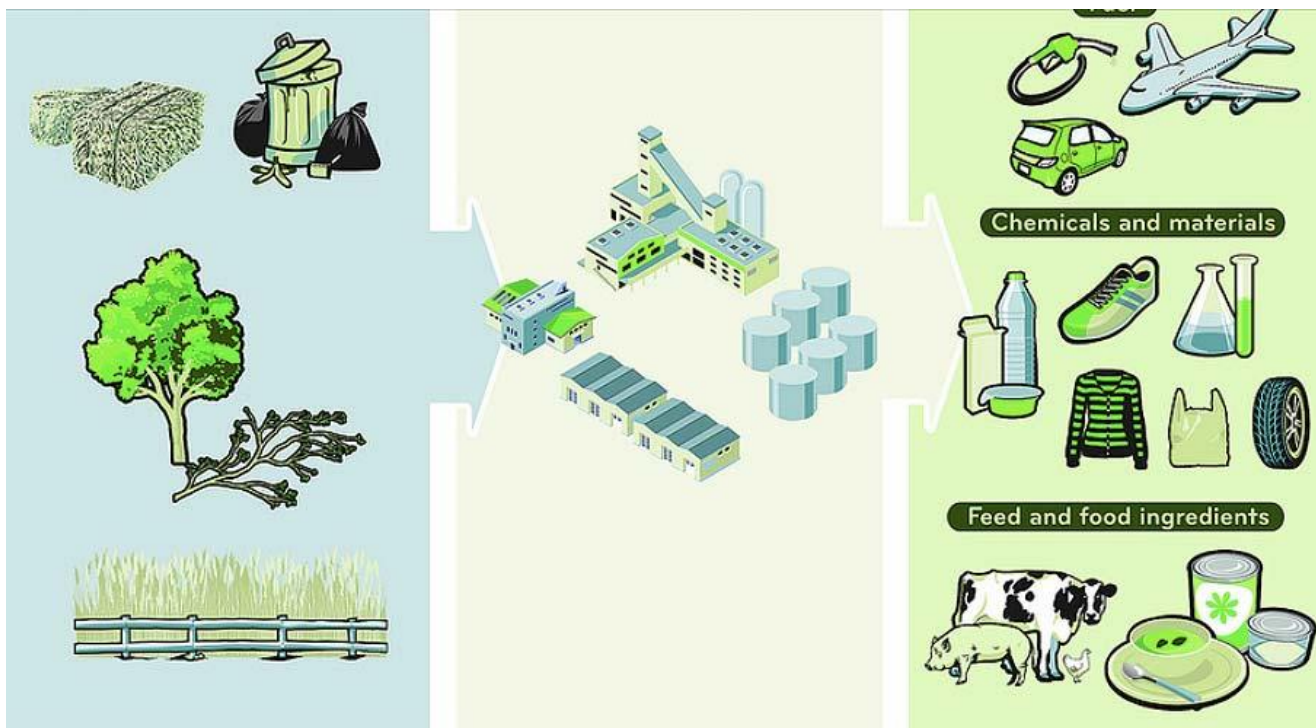
Priority 1: Using Innovation to Maintain And Develop Robust And Competitive Communities

Nú undir nafninu: **BioValued** - Biorefining for Value Added Product Innovation



# Hugmyndin á bakvið BioValued

Að sýna fram á kosti og tækifæri tengd **færanlegu lífmassaveri** (e. biorefinery).  
Lífmassaver nýtir **hliðarafurðir** (úrgang) og **vannýttar auðlindir** og umbreytir þeim í **verðmætar afurðir** með hjálp örvera



## Lífmassi í BioValued

### Finnland, Írland og N-Írland:

Hliðarafurðir úr skógrækt,  
kjúklingaframleiðslu og framleiðslu  
mjólkurafurða

### Ísland:

Úrgangur úr fiskvinnslu og þang/þari  
(vannýttur lífmassi á Íslandi)



# Byggir á eldra verkefni: ABOWE



## ABOWE project, novel Biorefinery Pilot



**Finnoflag**

Industry Like Nature®



EUROPEAN UNION

Investing in your future  
European Regional Development Fund



**THE IDEA:** Future biorefineries are industrial fields, where side streams from industries and municipalities are treated and refined into useful production in successive process solutions. All waste is then integrated as raw material into them.

– Elias Hakalehto, Finnoflag Oy



**SAVONIA**  
AMMATTIKORKEAKOULU

**Engineering Team starts to work in Kuopio 1/2013**



Many engineers and students involved from Savonia Technology and Savo Vocational College

**1/2014 Container is ready for testing in Finland, Poland and Sweden.**



LINKS:

[www.paneuropeannetworks.com](http://www.paneuropeannetworks.com)

[www.horizon2020projects.com](http://www.horizon2020projects.com)

[www.abowe.eu](http://www.abowe.eu)

**Concluding Seminar in Helsinki 10/2014**



**In the Future:**  
Continuation projects targeting full scale applications of the Biorefinery technology

**BioValued**





Heating, ventilation and air conditioning (HVAC) installations were a major part and here was needed a local installation company which also got very interested about the novel biorefinery concept.



Savon Sellu cartonboard factory's waste water treatment plant was the first testing site, for February-March 2014. The factory is using birch as the raw material for cartonboard.

## Dæmi um afurðir úr ABOWE tilraunum

- Ethanol
- Butanol
- 2,3-butanediol
- Lífrænar sýrur
- Vetni
- Áburður (fertilizer)
- Lífgas
- Aukin vatnsgæði
- Lækkaður kostnaður vegna úrgangslausunar (waste treatment)
- Minnkuð umhverfisáhrif



Pilot A was safely transferred to Gac, Poland. Photo: Mika Ruotsalainen



# Uppsetning BioValued Drög 3ja ára verkefni



Northern Periphery and Arctic Programme  
2014–2020



EUROPEAN UNION  
Investing in your future  
European Regional Development Fund

ABOWE Project  
12/2012-12/2014

Pilot A: Novel Biorefinery



## Main stakeholders:

Potential implementers & investors of the biorefinery operations model and technology:

- Biowaste producers & owners and other feedstock material providers for biorefinery sites: forest & food industry companies and other industrial waste producers, fish processing companies, farms, waste & waste water treatment companies.
- Local & regional technology companies who could be producers or developers of the full scale biorefinery plant and its equipment.

Informing policy makers in NPA of future waste management opportunities

Demonstration Period 1  
**Finnland**

## BioValued project idea:

- Demonstrate newly developed biorefinery technology for distributed production of bioenergy and biochemicals from biowastes and algal biomass
- Sites are diverse in terms of location, climate and waste materials.
- Build value chains around the technology in each region together with local stakeholders
- Perform techno-economic evaluation of each value chain
- Integrate and cluster SMEs around the biorefinery business delivery model and facilitate business networks to create new business ecosystem and new economic activity

Possibilities for further development & utilization in the region = scientific report + value chain&enterprise cluster + techno-economic evaluation + impact assessment

Demonstration Period 2  
**Írland og N-Írland**

Possibilities for further development & utilization in the region = scientific report + value chain&enterprise cluster + techno-economic evaluation + impact assessment

Demonstration Period N  
**Ísland**

Possibilities for further development & utilization in the region = scientific report + value chain&enterprise cluster + techno-economic evaluation + impact assessment



# Þátttakendur



Northern Periphery and  
Arctic Programme  
2014–2020



EUROPEAN UNION  
Investing in your future  
European Regional Development Fund

Leiðir verkefnið →

Project partner title	Abbreviation of organisation	Country
Savonia University of Applied Sciences Ltd.	Savonia	Finland
University of Eastern Finland	UEF	Finland
Matis	Matis	Iceland
Technology Centre for Biorefining and Biotechnology (RESOURCE)	TCBB/RESOURCE	Ireland
Agri-Food and Biosciences Institute	AFBI	UK (Northern Ireland)
Queen's University Belfast	QUB	UK (Northern Ireland)
Southwest College	SWC	UK (Northern Ireland)
Action Renewables	AR	UK (Northern Ireland)
North West Regional College	NWRC	UK (Northern Ireland)

Nokkur fjöldi  
„associated partners“,  
m.a.frá Grænlandi,  
Færeyjum og Svíþjóð





## Fyrsti undirbúningsfundur BioValued var haldinn í Kuopio, Finnlandi í mars



Nokkrir  
þátttakendur  
BioValued við  
færanlega  
lífmassaverið

