New Business Models - BIR

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The Bergen region
The structure of the BIR group
Briefly about BIR Bedrift
Motivation for new solutions
Research and development
Long term goal
Market situation
Expectations for added value
Concluding remarks
Bergen region

- Over 365,000 inhabitants
- Ca. 138 km²
- Both urban and rural areas
- Surrounded by mountains
- Known for rainy weather
- Main economic activity:
  - Oil and gas
  - Ocean technology
  - Seafood
  - Shipping
The structure of the BIR group

Beneficiary/LTP in HOOP

- BIR AS
  - BIR Privat AS
  - BIR Transport AS
  - BIR Nett AS
  - BIR Avfallsenergi AS
  - WASTEIQ AS
  - BIR Bedrift AS

- Retura Vest AS
- Bossug AS
- Norsk Riving AS

Legend:
- Morselskap
- Lovpålagte renovasjonstjenester
- Konkurranseutsatt selskap med enerett
- Tjenester i fri konkurranse
Waste handling/pre treatment solutions for both household* and commercial waste

- Paper, cardboard, plastic, wood, park, food, metal, hazardous waste etc
- Handles approx. 70,000 tons/year (25% of local marked)
- 100 employees, 60 collection cars
- Sale/rental of collection equipment/infrastructure for waste handling

Pilot plant – Feed production insect/algae from food waste

*commercial contracts/ not delegated
Motivation for new solutions

- The Bergen region lacks local solutions for food waste
- Local demand for more environmentally sustainable solutions
- New EU/national sorting requirements for biowaste
Collaboration and innovation with start-up companies

Pilot plant for feed production

Processing vegetal pre-consumer food waste from the commercial market

Make feed for:
- Insect production
- Single cell proteins (SCP) and microalgae production

Create value chain «food to food»
- Insects, SCP and microalgae can be used as fish feed or for human consumption
Long term goal: large-scale industrial symbiosis
Market situation

- Large interest in new technology and circular value chains
  - Sustainable and local processing of food waste
- Less interest in facilitating new technology and value chains
  - Prices, collection equipment, sorting practices, product acceptance etc.
Who should profit from developing new technology and value chains?
Expectations for added value

- Waste possessors expect to get paid for «resource»
- Downstream processor expect to get paid to do a waste treatment service and for the final product(s)

- It is a common effort throughout the value chain to establish new technology with an associated market for products and services
- Added value of circulating the resources is to some extent distorted by additional processing steps and associated costs
Concluding remarks

Technology is largely ready for implementation

Barriers are market readiness (both upstream and downstream), holistic business models and laws and regulations

Establishing new treatment technologies and value chains takes *time*

Must involve and coordinate many different actors – *timing* is key

Early adoption is important to divide risks and motivate investment

Success is dependent on upscaling and access to large volumes
Thank you for your attention!