

Fillet-O

**Industrialized slaughter of Atlantic salmon:
Direct processing and superchilling (Fillet-O)**

Filet-O Background

- Startet approx 10 y ago
- Bleeding of fish 2003-2006
- 4 in 1 machine
- Collaboration with Atlantic cod farms in 2009
- Testing the concept on cod
- Superfillet- CrackDown
- New chance in 2013 Bionær
- Joint project in R&D KPN/KMB
- Strong consortium
- Filet-O (Only) or Direct processing of salmon (DPS)



What are the objectives

- To produce 100% salmon fillets changing the dynamics from selling Atlantic salmon carcasses «as is», to sell salmon meat with certain specifications (color, blood, melanin, size, fat).
- To produce safe and sustainable salmon meat with better quality, longer shelf life to a less cost than traditionally possible.

Today's solution

Approximately 120 min in total, End temp: 3 °C



- Blue are processing steps with chilling

Approximately 20 min in total, End temp: -1.5 °C

Fillet-O solution

KPN Project has focus on R&D. The goal is disseminate knowledge into commercial practice.

- Basically what we have to do is simulate a new production line, solving bottlenecks, predicting investment and production cost all in relation to a centralization of production with increasing volume towards a dynamic market.
- Further on, document the effect on quality, shelf-life and costs predicting market segmentation and new business opportunities all within 4 years.
- Unrealistic both from a single RTD or SME standpoint, but together everything is possible!!!!

Organisasjon-One important key

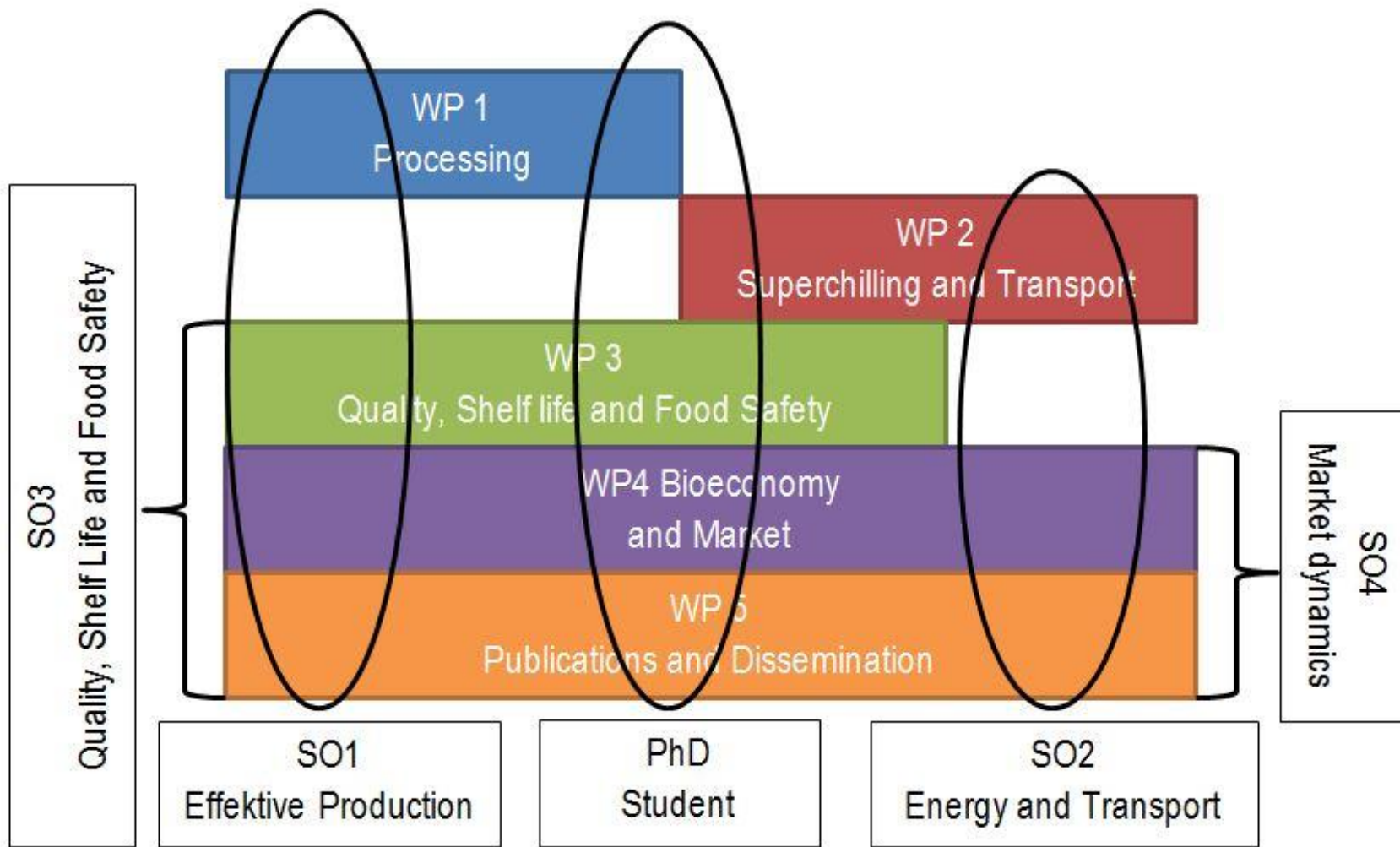
- The areas are Economy, Market, Processing technology, Welfare, Logistics, Biological science, Physics, Enviroment, Sustainebility, Waste products.
- RTD's: IMARES, Nofima, Sintef, IMR, UIS, and NTNU
- SME's: Marel, Seaside, Cermaq, Grieg, Jackon and AGA
- Organizations: Blue planet, FHF, NCE Aquaculture and Culinology
- Streamline structure of the project and activity is important

Organization-structure

- The Project Board is constituted to represent the diversity with mandate to control the project:
 - 2 from farming industry (Grieg and Cermaq)
 - 2 from technology industry (Marel and Seaside)
 - 1 from organizations (FHF)
 - 1 from RTD (Nofima)
- The project is organized into 5 Work Packages' (WP) all to report to the project leader responsible for the board- line in action.
- Within each WP there will be constituted a working group between the relevant partners. This to plan activity on research and development.

R&D Structure

- The five WP's are:
 - WP 1: Processing (Bjorn)
 - WP 2 : Superchilling and transport (Tom Ståle)
 - WP 3: Quality, Shelf life and Food safety (Bjørn Tore)
 - WP 4: Bioeconomy and marked (Frank Asche)
 - WP 5: Publication and Dissemination (Eivind)
- To avoid teams working in 5 separate clusters sub-objectives (SO) are set answering direct questions where WPs must be fused:
 - SO1: Effective production
 - SO2: Energy and Transport
 - SO3: Quality, Shelf life and food safety
 - SO4: Market dynamics



PhD and Post doc

- PhD will have a economic approach working across all WP's to estimate costs and energy consumption.
- A PhD candidate on economics started winter 2015.
- Post doc position 2 years.
- Master students on regular bases.

