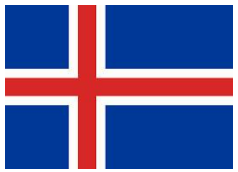
matís

Presentation at the fifth annual Humber Seafood Summit 2014
Session title: "Scanning the horizon: trade and technology"



Iceland

by
Jónas R. Viðarsson

Content of the presentation

1. Introduction on Matís and its Humberside connections
2. Iceland and Humber – past, present & future
3. Project introductions
   - The WhiteFish project
   - The WhiteFishMaLL project
   - The FoodIntegrity project
4. Q&A

© Matís 2014

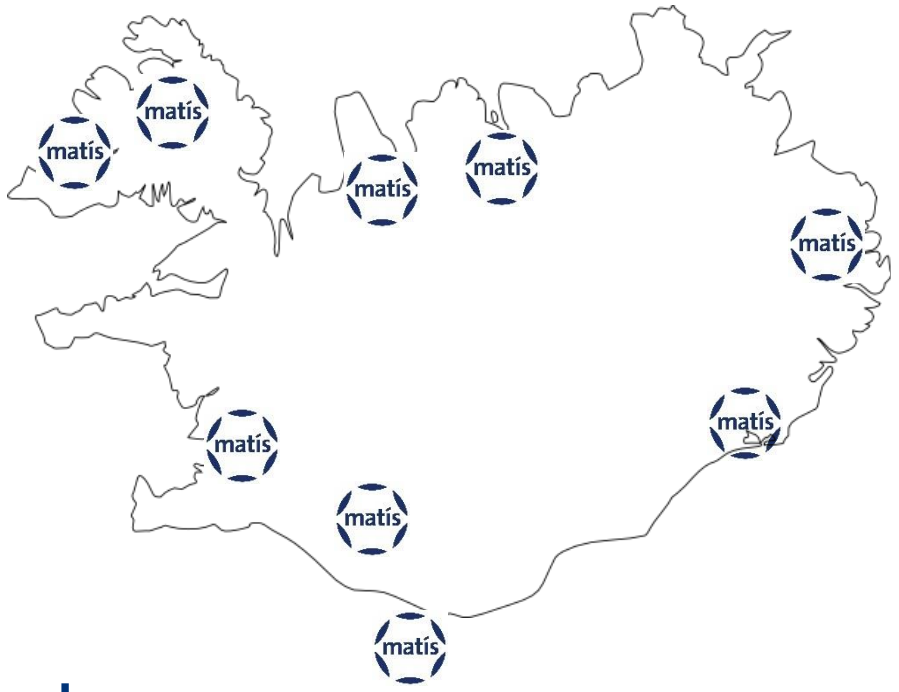
Matís

Matís is an independent research institute which strives toward value creation in the food and biotech industries, food safety and public health

Matís provides consultancy and services to companies in the seafood industry and agriculture as well as governmental agencies

As an example, Matís develops new products and processes for businesses and plays an important role regarding the quality and safety of the Icelandic food supply

Matís is in nine locations around Iceland



© Matís 2014

Matís

Matís and its predecessor (the Fisheries laboratories) have a long standing relationship with the Humber area:

- Quality improvements
- Traceability projects
- Statistics
- Link between Humber and Iceland in various matters (and vice versa)

My first assignment for Matís was to work on quality improvements, forward information and increased information sharing in supplies of Icelandic containerized fish sold at GFM and Fishgate. http://www.alltummat.is/english/containerised-fresh-fish/

During the winter of 2008/09 in the middle of the banking crisis I was involved in sending reports on the economic situation in Iceland to Seafish every week. During that time we found out who our friends are. Fish supplies to the Humber continued almost without a hitch, despite of MR. Brown's terrorist laws.

We have as well taken part in a number of projects with Seafish, FMA, Atlantic fresh and more.
http://www.seafish.org/media/Publications/OutlookforsuppliesofIcelandicCodandHaddocktotheUK.pdf

© Matís 2014

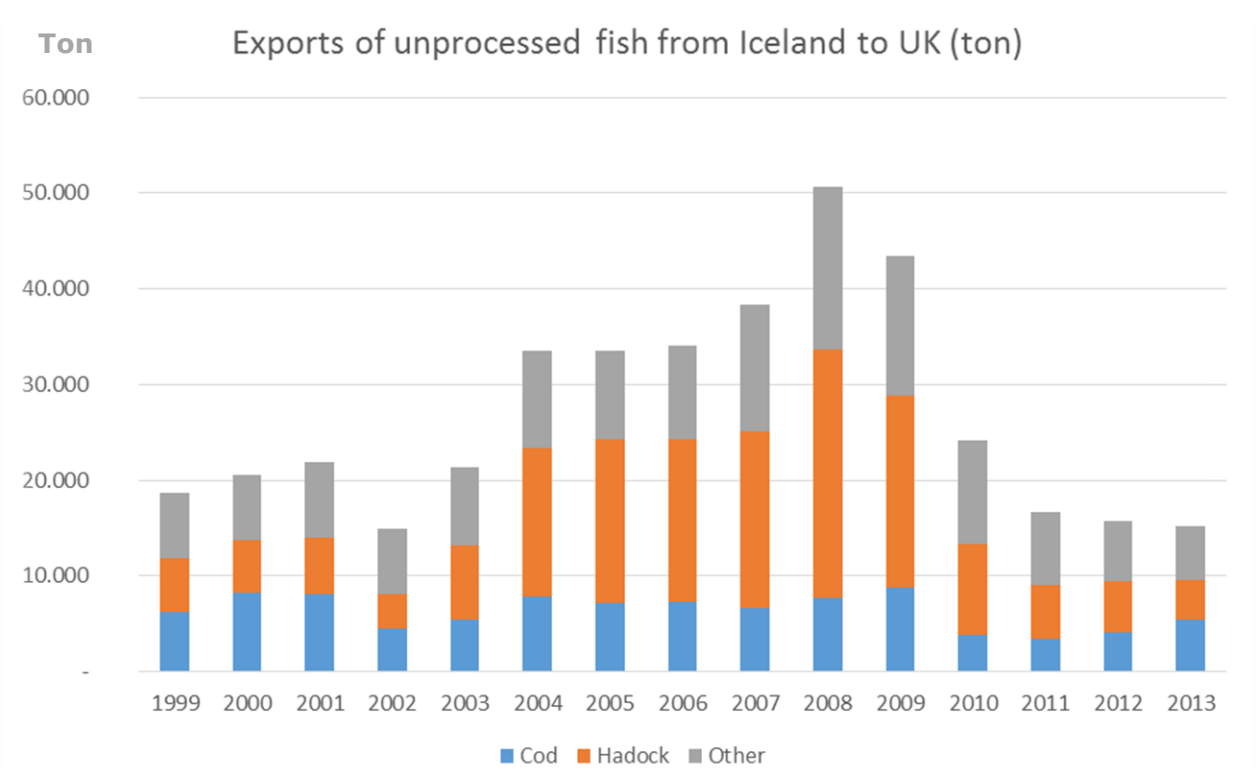
Iceland and Humber – past & present

18th century – 1975 Trawlers from Humber fishing

1910 – 1990 Icelandic vessels landing their catch in Humber

1980 – present Icelandic fresh fish supplies arriving by containers

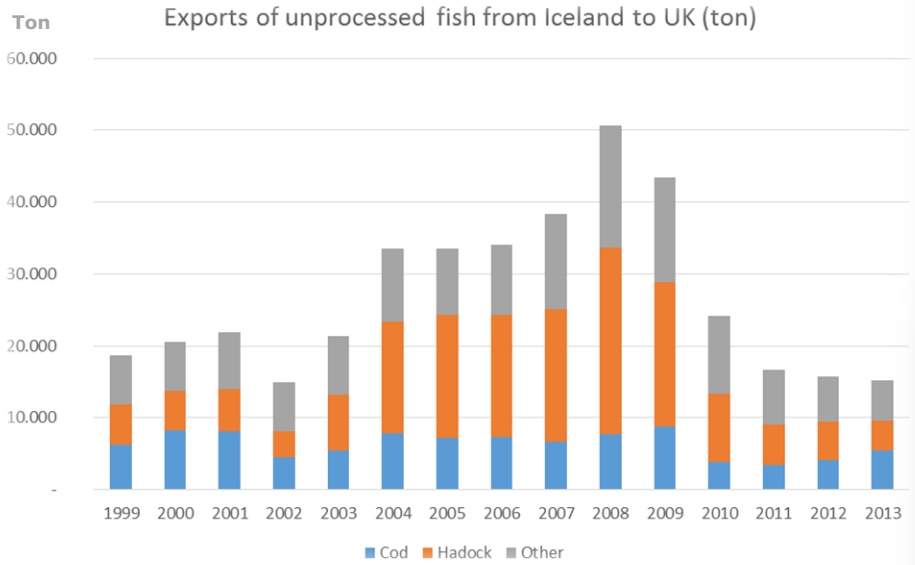
Humber companies connected to Iceland have been important for Iceland and the UK for long time

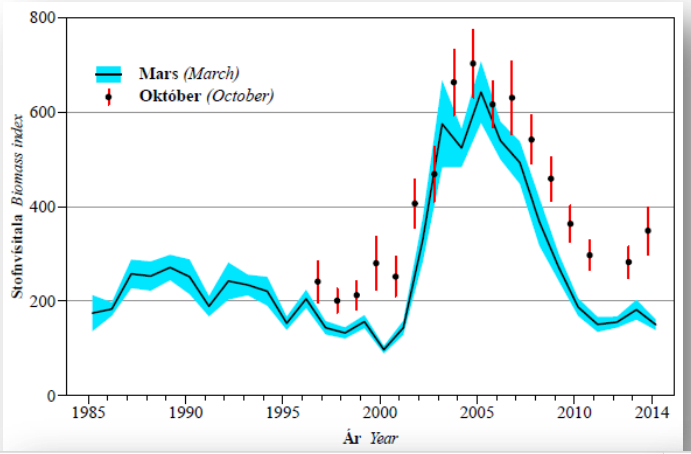


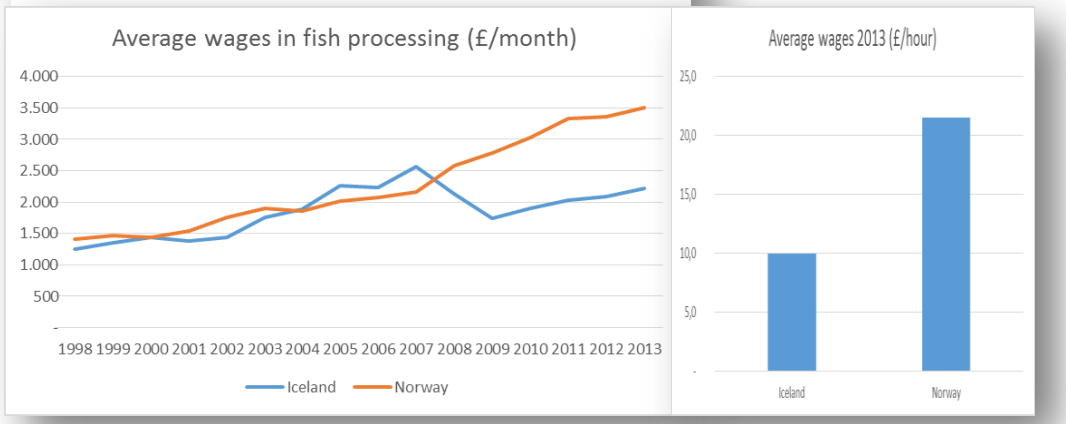
Iceland and Humber – past & present

Changing supplies from Iceland to UK

Reduction in fresh whole supplies due to dwindling haddock stock and increased emphasis on further processing in Iceland as wages have decreased (caused by depreciation of ISK)





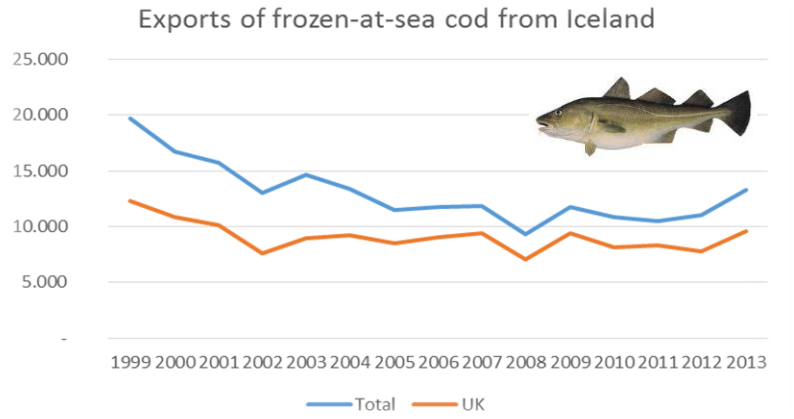


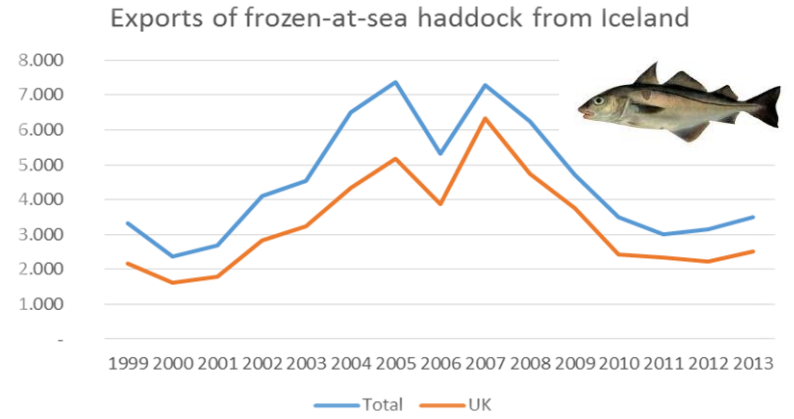
© Matís 2014

Iceland and Humber – past & present

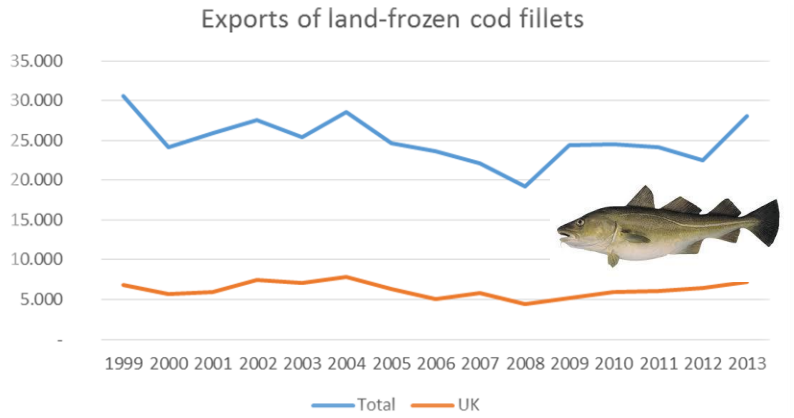
Changing supplies from Iceland to UK

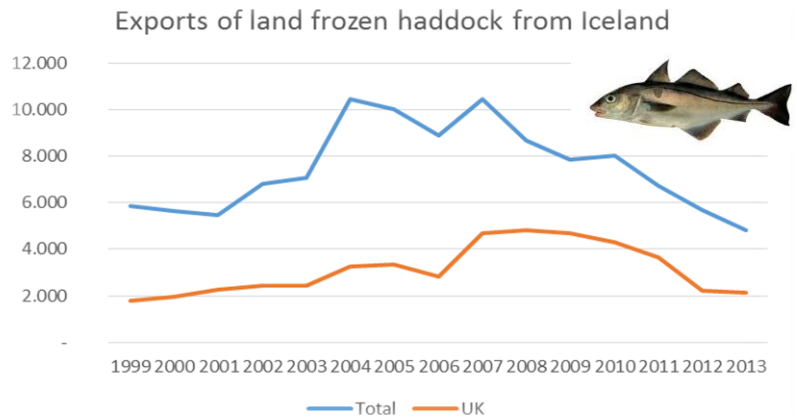
Decreasing number of factory trawlers as more and more emphasis is placed on land-based processing.





70-75% of frozen-at-sea cod and haddock exported to UK





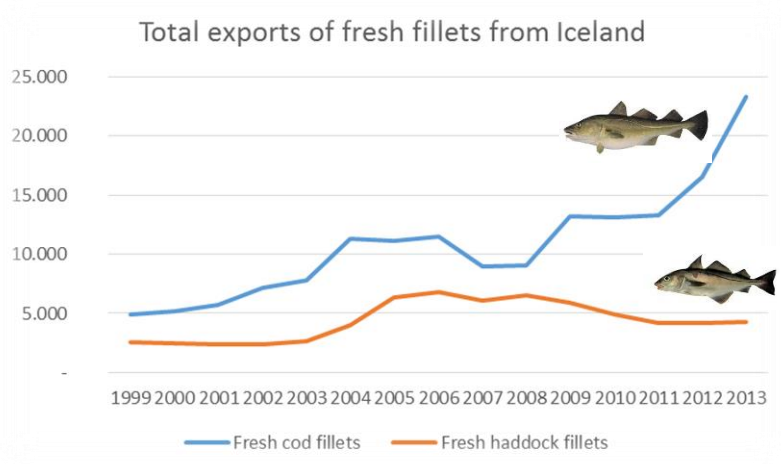
25% of land frozen cod and 45% of land frozen haddock exported to UK

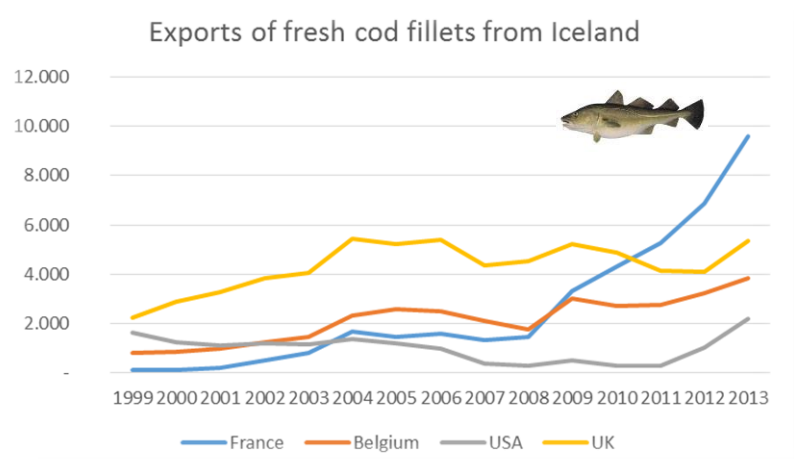
© Matís 2014

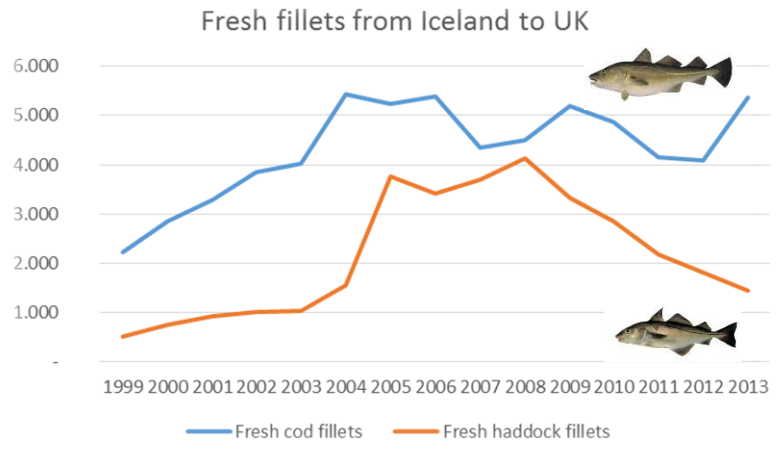
Iceland and Humber – past & present

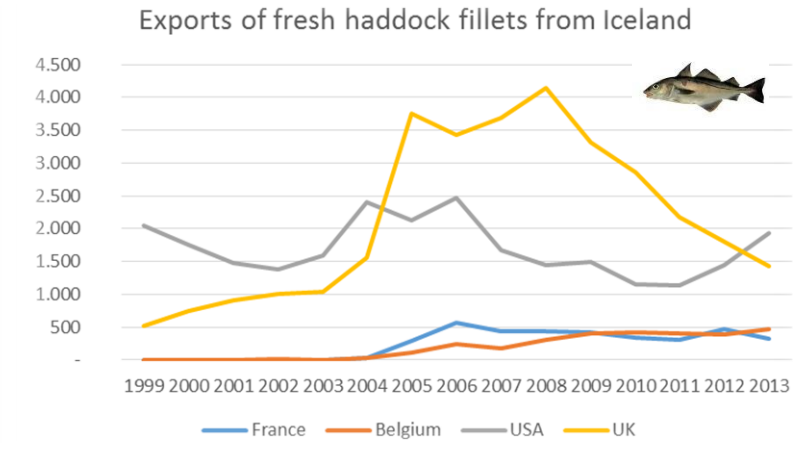
Changing supplies from Iceland to UK

Decreasing number of factory trawlers as more and more emphasis is placed on land-based processing.







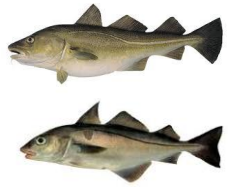


© Matís 2014

Iceland and Humber – past, present & future

What to expect in regards to Icelandic supplies to Humber

Stocks



- Cod stock in good condition and quotas gradually being increased
- Haddock stock in poor condition and little chance of better days in the near future

Focus of Icelandic suppliers

- Considerable investment being made in wetfish trawlers and land-based processing.
- Investment in automization and processing capabilities (automatic trimming and pin-bone removal, CBC and superchilling etc.)
- Factory trawlers being decommissioned.
- Biggest suppliers of fresh whole fish to GFM have been bought up by large processing companies, which are strengthening their access to raw material for their plants.

Opportunities

- There are 100.000 tons of groundfish being sold at Icelandic auction markets each year. Prices are competitive with GFM prices.
- Norway and Russia have a lot of cod to sell ☺

© Matís 2014

Project Introductions

International projects that are connected to Humber/UK

© Matís 2014

WhiteFish

WhiteFish: “Automated and differentiated calculation of sustainability for cod and haddock products"

FP7 project under a program titled “Research for the benefit of SME-AG”
Meaning that the project is owned by the Associations in the project and the purpose is to make something that benefits them.
The associations are:

The objective of the WhiteFish project is to **development of simple tool for self-assessment of sustainability – to enable small and medium-sized enterprises to make these calculations for themselves.**

www.whitefishproject.org

© Matís 2014

WhiteFish

Motivation for starting this work: Cod and haddock from the N-Atlantic is superior to most competing products in regards to sustainability impacts.

- ✓ Environmental/ecological Impacts, such as strong stocks and EAFM
- ✓ Social impacts, such as strong labor laws, healthy working environment, no child- or slave labor, community involvement of companies.
- ✓ Economic impacts, such as profitable industry, low subsidies

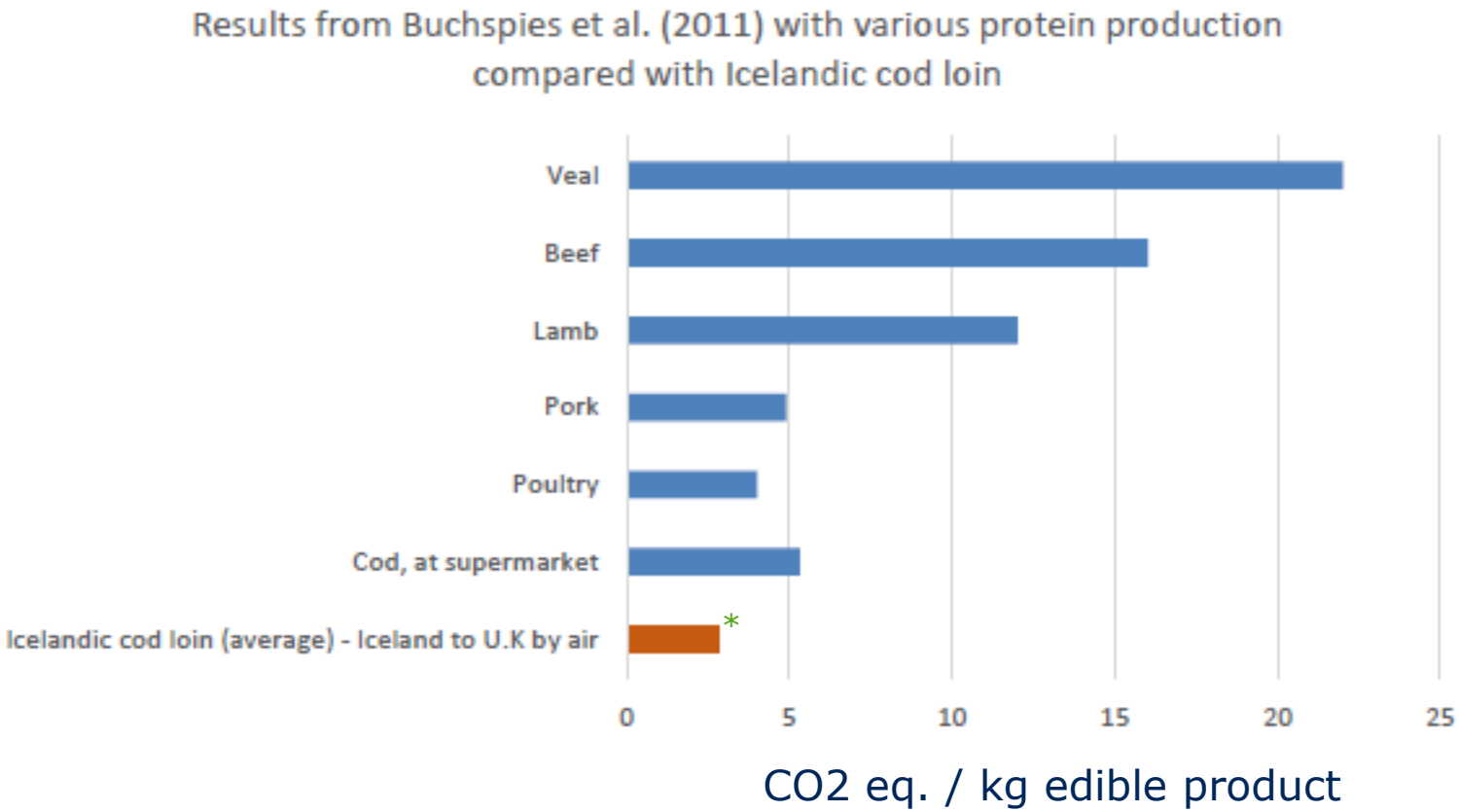
This is though not giving SMEs the competitive advantage or price premiums we would expect

Available methods for calculating/demonstrating sustainability are eco-labelling and LCA.

LCA expensive (20-50 thousand EUR) and only gives information on impacts on a fixed time in the past – usually converted into CO2 emissions.

© Matís 2014

Common misunderstanding that seafood has large carbon footprint



* Smárason et al. 2014 (in press)

www.whitefishproject.org

© Matís 2014

WhiteFish

The WhiteFish project aims at utilizing the extensive data availability in the traceability & documentation systems in N-Atlantic seafood value chains.

- **To produce a simple "batch-based" tool for self-assessment of sustainability impact**

- **Threefold criteria:**
  - ✓ Environmental sustainability where only the most significant contributors are included (batch based & static)*
  - ✓ Economic sustainability where key figures are included (Batch based & static)
  - ✓ Social sustainability were a check list is used to determine sustainability (static)

- **Processor/supplier can enter basic data and print out a "certificate" for each batch. Based on the standard that the WhiteFish project is developing.**

**Batch based: New data for each batch/shipment*
**Static: Updated every 6-12 months*

www.whitefishproject.org

© Matís 2014

WhiteFish

Within the project we have used case studies to do full LCA and sustainability impact evaluations to select what impact categories should be included in the standard.

1. Frozen at sea cod and haddock H&G (NO)
2. Fresh fillets (IS to UK)
3. Fresh whole (IS to UK)
4. Consumer products (NO to CH to SE)

Research partners

Nofima

WAGENINGEN UNIVERSITEIT
WAGENINGEN UR

Sik

matís

Industry partners

Hermes

SÆMARK

Atlantic Fresh Ltd.

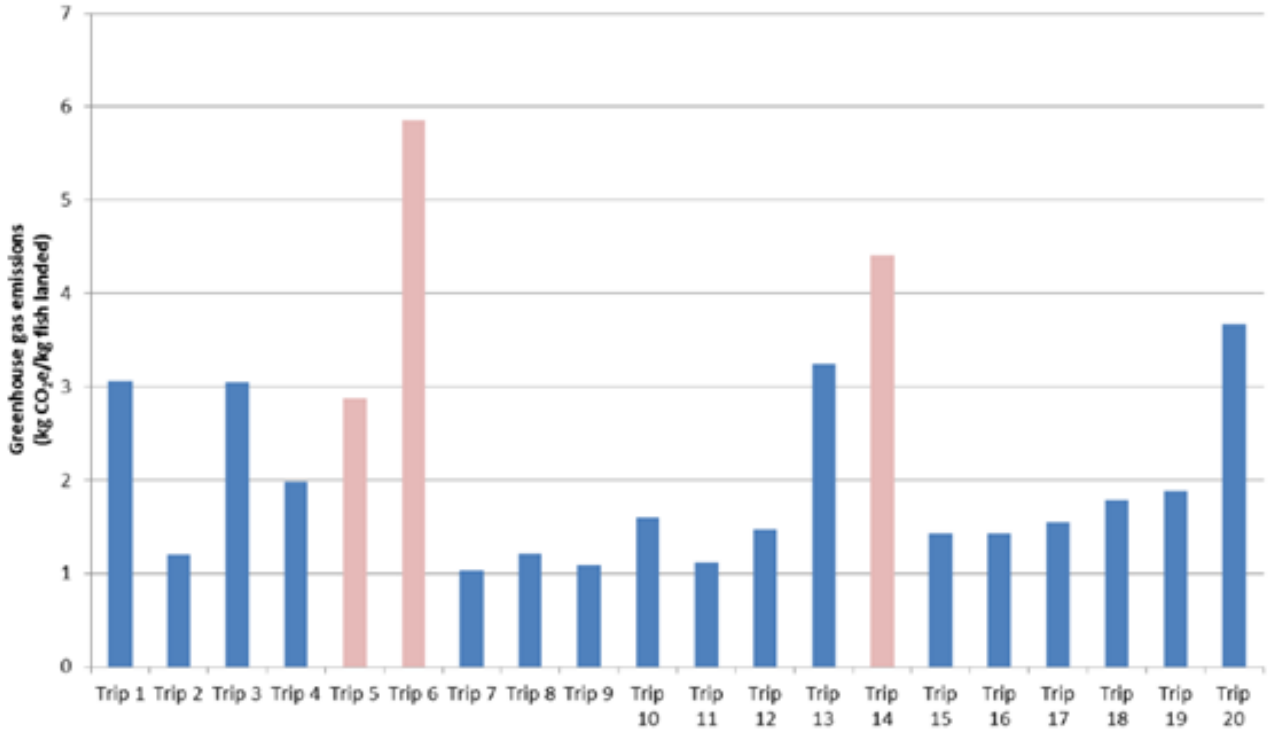
Feldt's
vid Smögen

www.whitefishproject.org

© Matís 2014

Example from the frozen-at-sea H&G

- Impacts vary between fishing trips

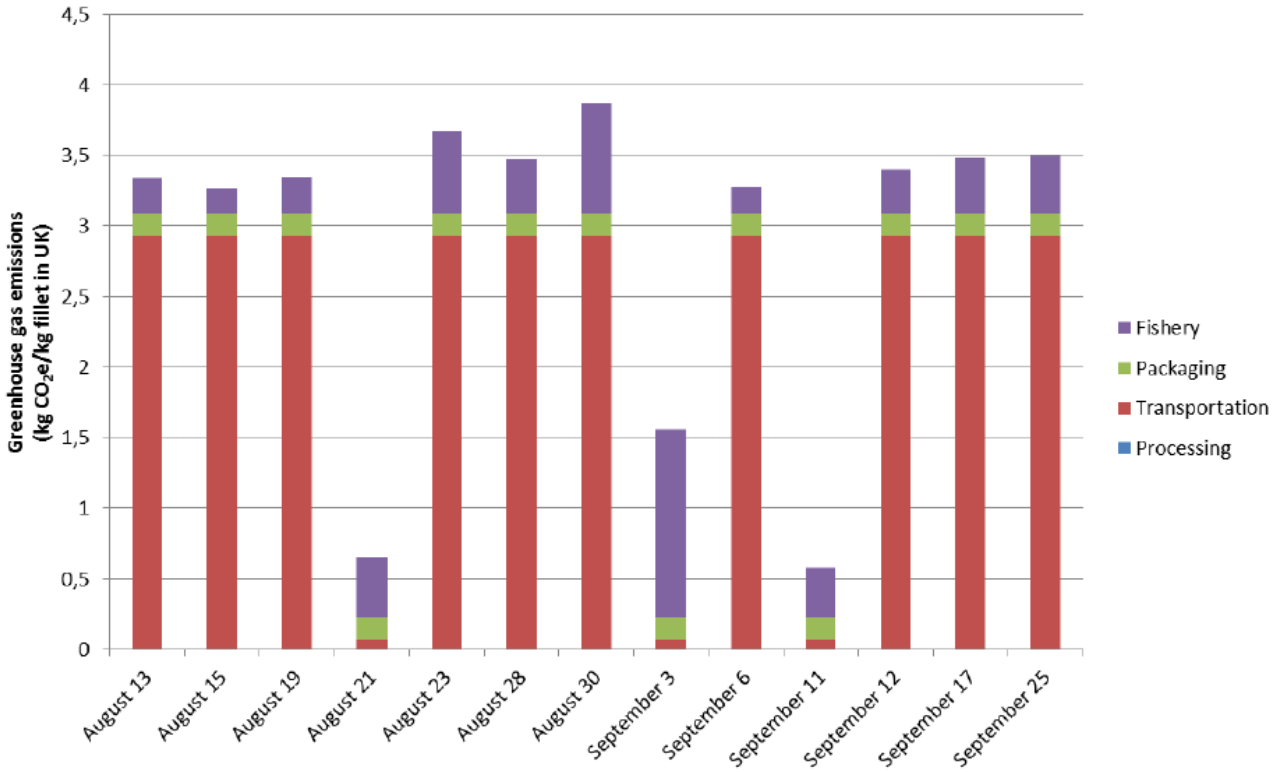


Greenhouse gas emissions pr. fishing trip (trips 5, 6 and 14 targeting shrimp)

© Matís 2014

Example from fresh fillet chain

➢ **Transport mode explains most of the EI**



The catching link for long-line fishing in Iceland is has extremely low carbon footprint

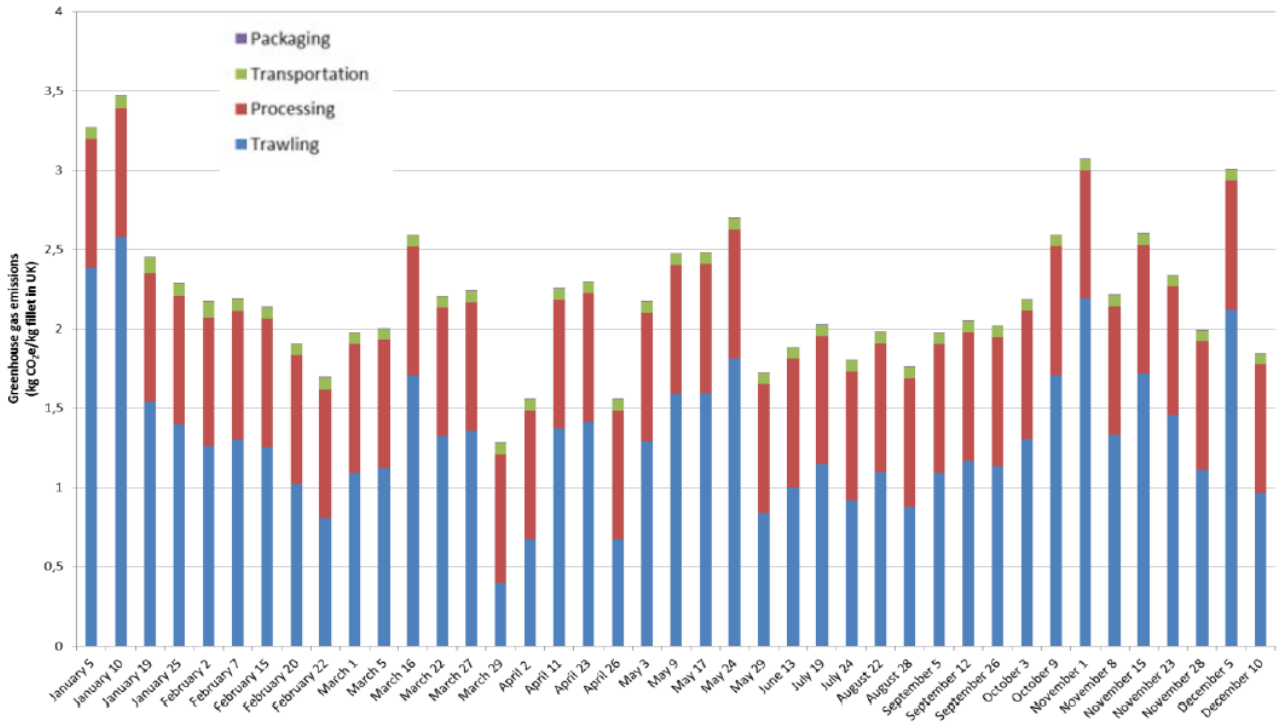
Packaging impacts mainly caused by EPS

Airfreight contributes to 85% of the carbon footprint in this chain

Carbon footprint CO2 equivalent for long-lined cod and haddock fillets processed in Iceland and transported to UK by air- or sea freight

Example from fresh whole chain

- **Fillets processed in Grimsby from Icelandic raw material sold at GFM**



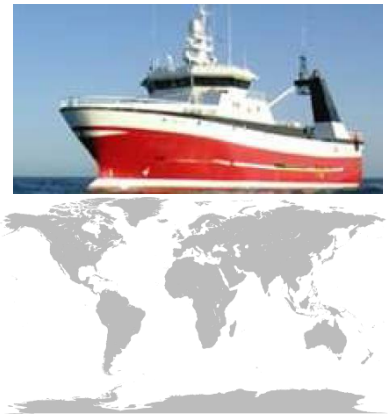
Carbon footprint for the Iceland-Grimsby chain shows that it is primarily the catching link that varies between batches.

The catching link for trawlers is variable depending on CPUE and distance to fishing grounds.

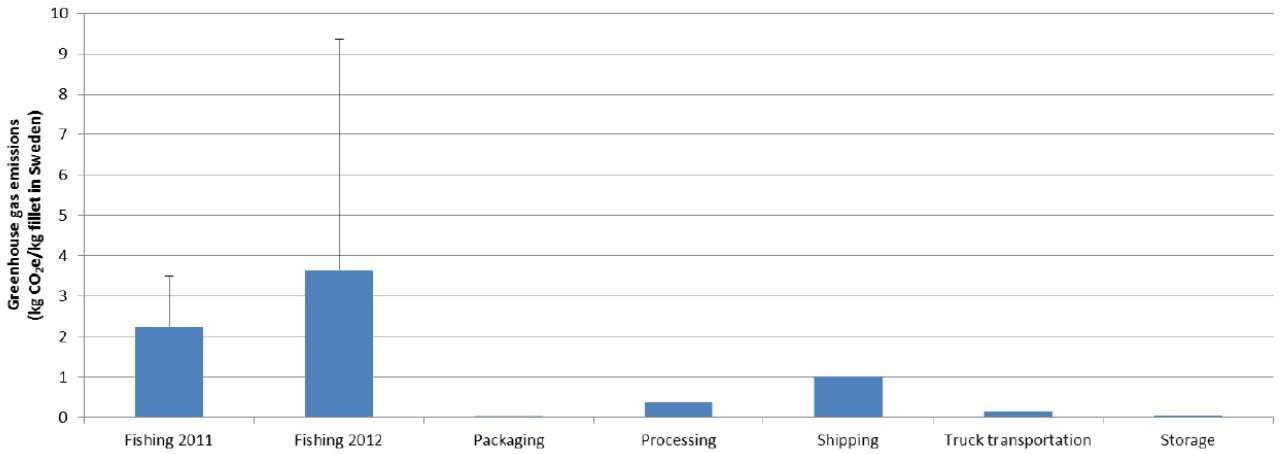
Main processing impact categories are coolants, water depletion and energy

© Matís 2014

Example from the frozen-at-sea H&G landed in Norway, processed in China and transported to Sweden as a fully packed and ready consumer product



Caught: *Barents Sea*
Landed: *Norway*
Transport: *Norway-Rotterdam-China-Rotterdam-Sweden*
Processing: Qingdao, China



Carbon footprint for the NO-CH-SE chain

We were unable to show meaningful batch based results and have therefore relied on yearly averages for this chain

www.whitefishproject.org

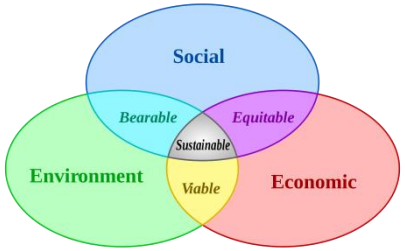
© Matís 2014

WhiteFish

Other ecological, environmental, economic and social SI categories have been identified, evaluated and assessed for each of the case studies.

For example:

- ✓ Stock status
- ✓ By-catches
- ✓ Sea floor Impacts
- ✓ Profits
- ✓ Subsidies
- ✓ Fixed & variable costs
- ✓ Employee working environment
- ✓ Health & safety
- ✓ Wages and freedom of associating (labor unions)
- ✓ Community involvement



WhiteFish

Workshop at the Royal Humber Hotel tomorrow morning 9:30-12:30.

Agenda:

1. **Methodology**
2. **Standard**
3. **Practical application (calculator)**
4. **How to use to gain competitive advantage**
5. **Discussions**

www.whitefishproject.org

© Matís 2014

WhiteFishMaLL – North Atlantic Whitefish Living Lab

The main goal is

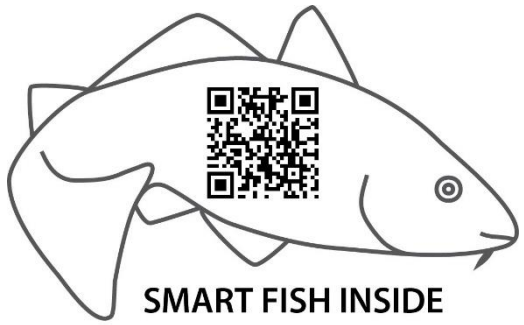
a. to build a branding platform for whitefish from the North Atlantic that differentiates in terms of sustainable production and superior consumer benefits.
b. to demonstrate how Living Lab methodology can be applied in the marine industry

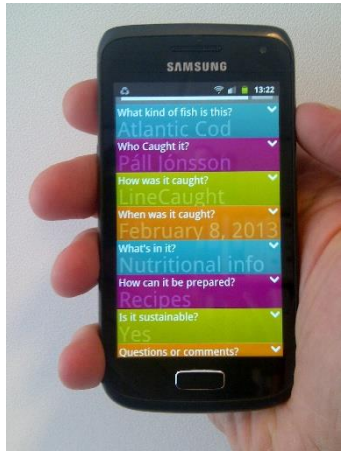
After a comprehensive work looking into consumer preferences and the applicability of meeting these consumer needs, we have developed and tested a web-based tool for disseminating to various links in the value chain information on favorable characteristics of N-Atlantic whitefish.

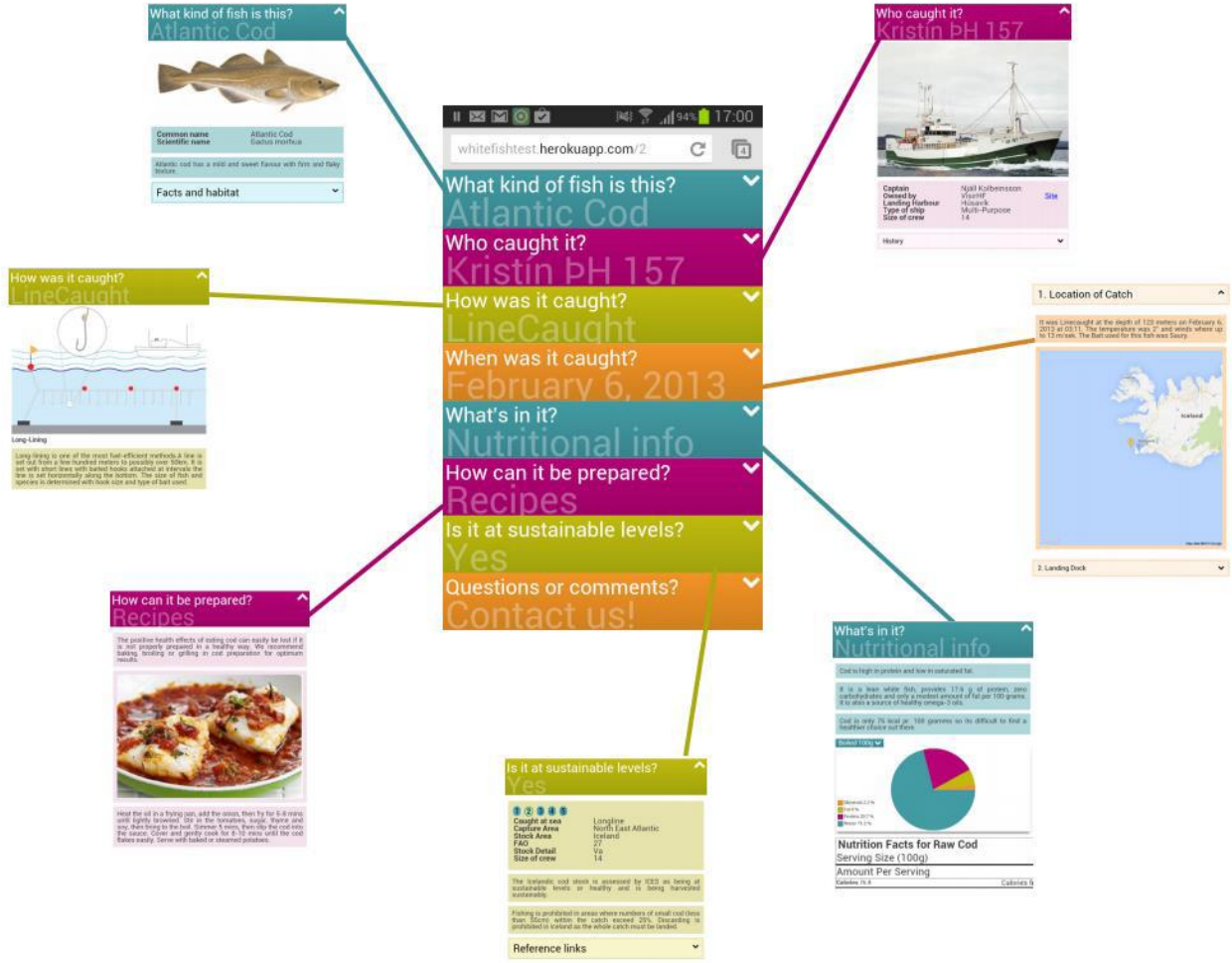
Some of the information can be batch based, some will be updated regularly and some are static.
The batch based information retrieved automatically from the documentation system of the supplier.

© Matís 2014

The tool is to be accessed through QR codes scanned with smart phones or tablets.



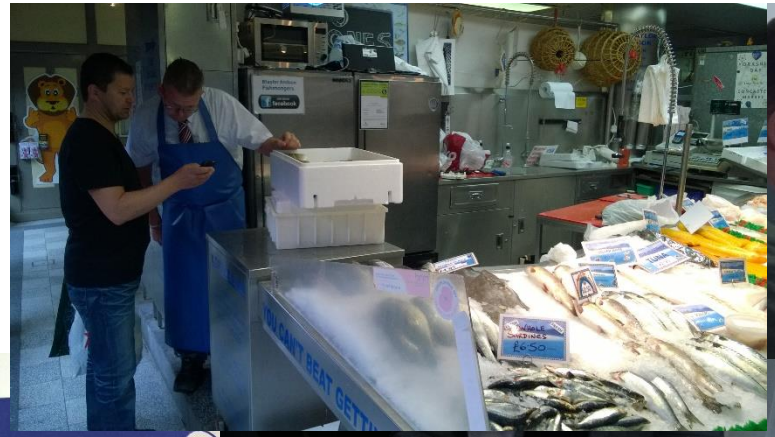




www.whitefishmall.com

We have been testing the solution out here in the UK.

- Fish&Chip sector has showed biggest interest.
- There is a gap between what consumer want to know and what suppliers are willing to give away.




FoodIntegrity

The five-year FoodIntegrity project, supported by 12 million euros of EU funding, has been launched by the UK's Food and Environment Research Agency (Fera)

- The project will bring together major stakeholders and scientific expertise from across the world to protect consumers and industry from food fraud.
- Food fraud is committed when food is deliberately placed on the market, for financial gain, with the intention of deceiving the consumer.
- There is a work package especially devoted to battling food fraud in the seafood industry. This WP is lead by Nofima in Norway, but Matís is a major contributor to that WP.
- Work in this field will be of interest to the Humber Seafood sector (more information on www.foodintegrity.eu or be directly in touch with us/me)

© Matís 2014

Q&A

For further information contact jonas@matis.is

© Matís 2014