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BUSINESS AND SOCIAL SCIENCES

25 NOVEMBER 2014

EU CONSUMERS' PERCEPTIONS OF VALUE OF NEW AQUACULTURE FISH PRODUCTS:

A CROSS-CULTURAL PROOF OF EVIDENCE

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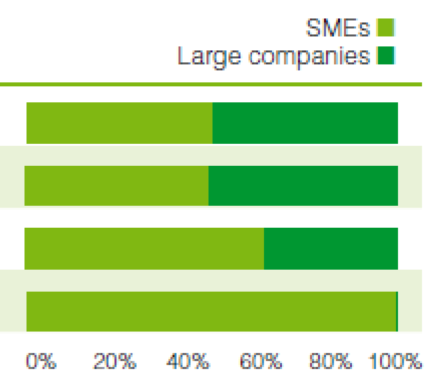
THE PARTICULARITY OF THE EU FOOD AND DRINK (F&D) INDUSTRY

› The F&D sector is the largest manufacturing sector in the EU-27 in terms of turnover (i.e. **€b 956.2, 16%**) and direct employment (**4.1 million** jobs)

Key role of SMEs in the EU F&D industry

	Micro-companies (% in total)	Small companies (10-19) (% in total)	Small companies (20-49) (% in total)	Medium-sized companies (% in total)
Turnover	7	5	9	28
Value added	9	6	9	24
Number of employees	16	10	12	26
Number of companies	79	10	6	4



Source: FoodDrinkEurope, 2012

INNOVATION IN THE EU FOOD INDUSTRY

- Within this fragmented environment, **product innovation** is the lifeblood of any food company
- Data on **R&D expenditures** indicates that EU F&D companies' level of investment in NPD has been **relatively stable**
  - Out of the top-1000 EU companies in terms of R&D investment in 2010, **37** F&D companies invested a total of **€2.3 billion**
  - This corresponded to a **2.2%** of their turnover, making the EU F&D sector one of **medium-to-low innovation intensity**

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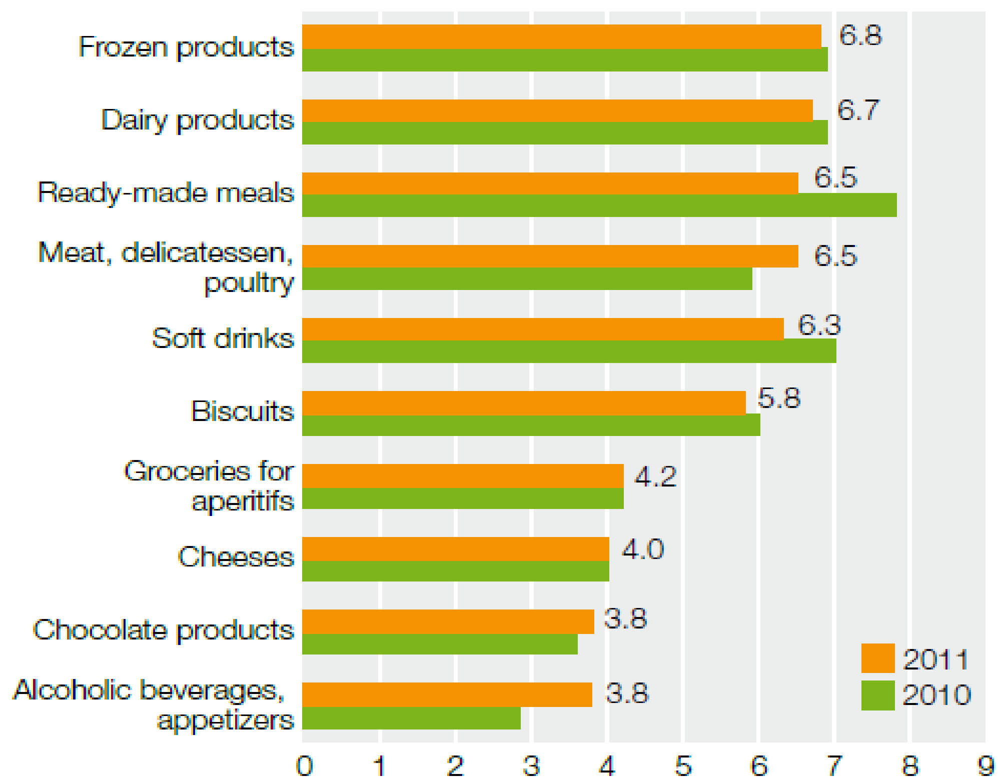
INNOVATION IN THE EU FISH INDUSTRY

Top ten most innovative food sectors in Europe, 2010-2011
(% of total European food innovation in 2011)



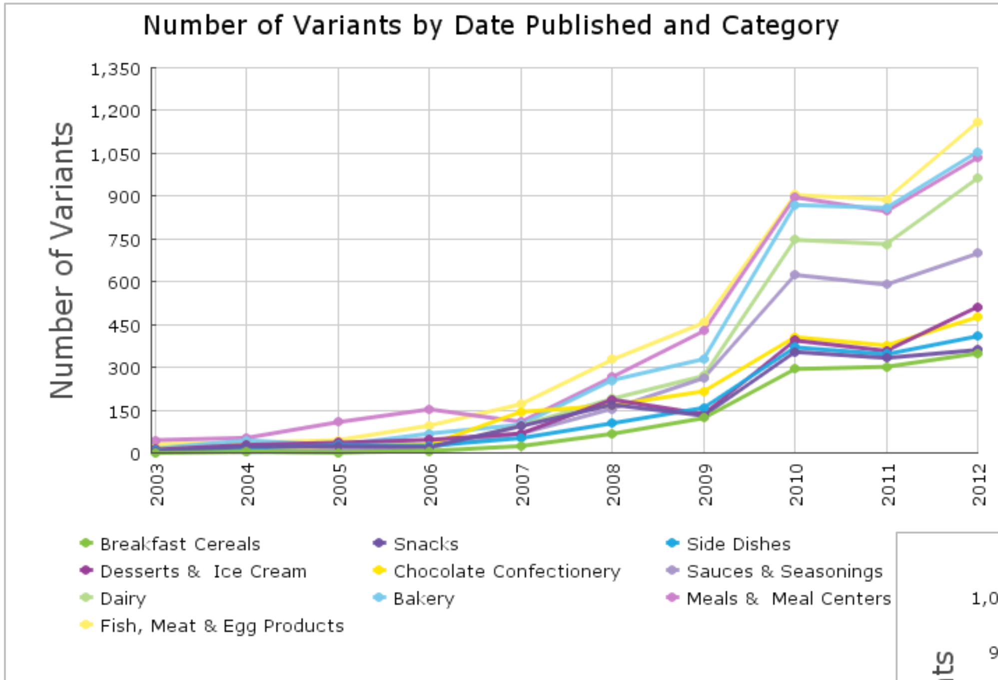
Source: XTC World Innovation Panorama 2011; Copyright XTC 2011 (www.worldinnovation.com)

MAPP CENTRE FOR RESEARCH ON CUSTOMER RELATIONS IN THE FOOD SECTOR

FROM INNOVATIONS TO NEW PRODUCTS

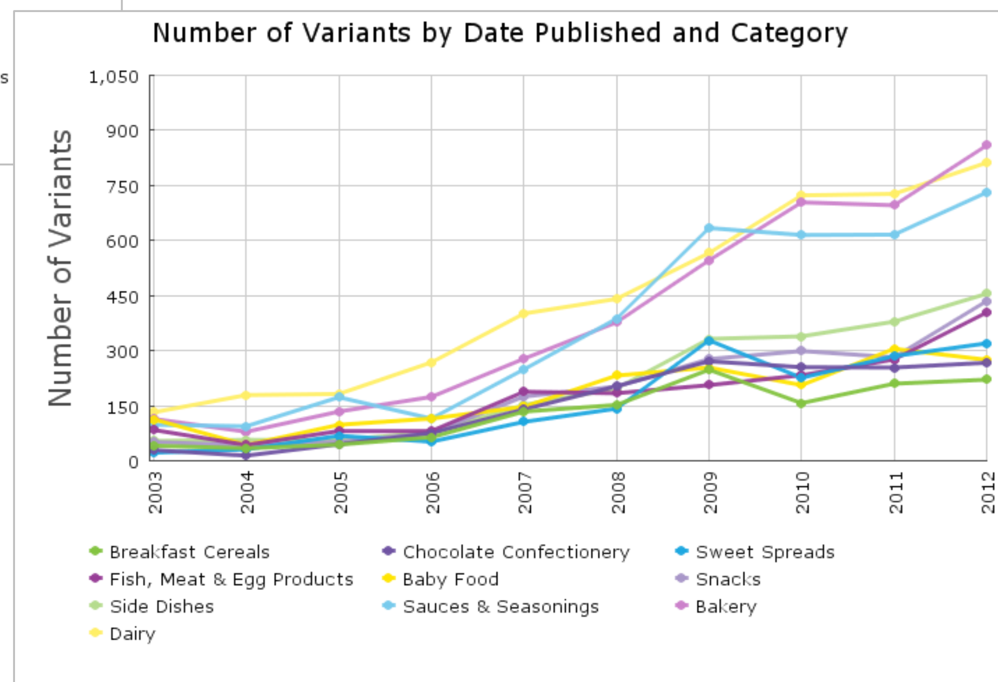
- **R&D plays an important role** in pushing industry **competitiveness** forward
  - …yet product innovation is costly and risky, often met with opposition on behalf of the market

- Although the number of patents turned into commercial products is small in the European F&D industry…
  - …the number of **new food products launched with various position claims** is spectacular!!

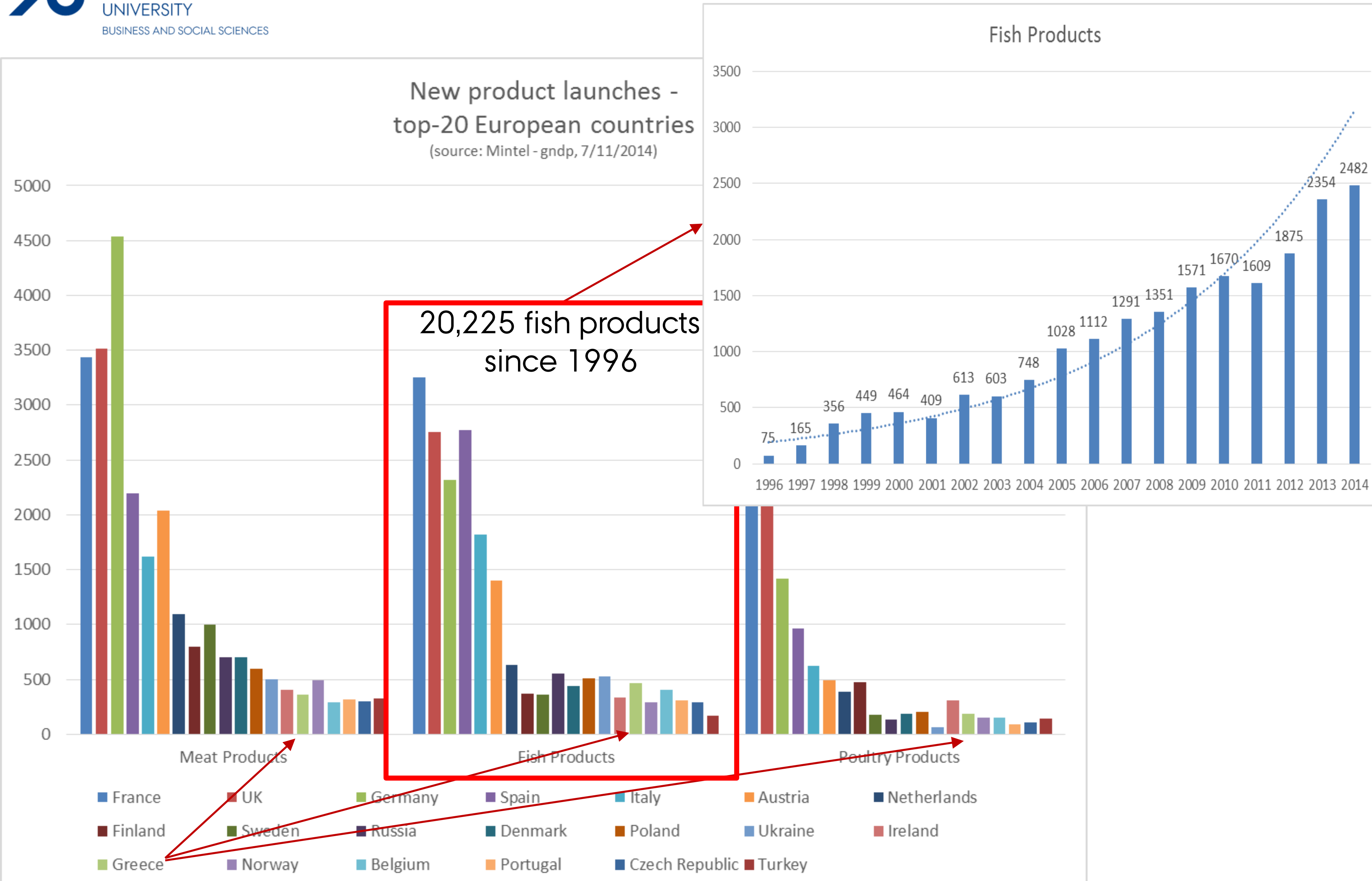


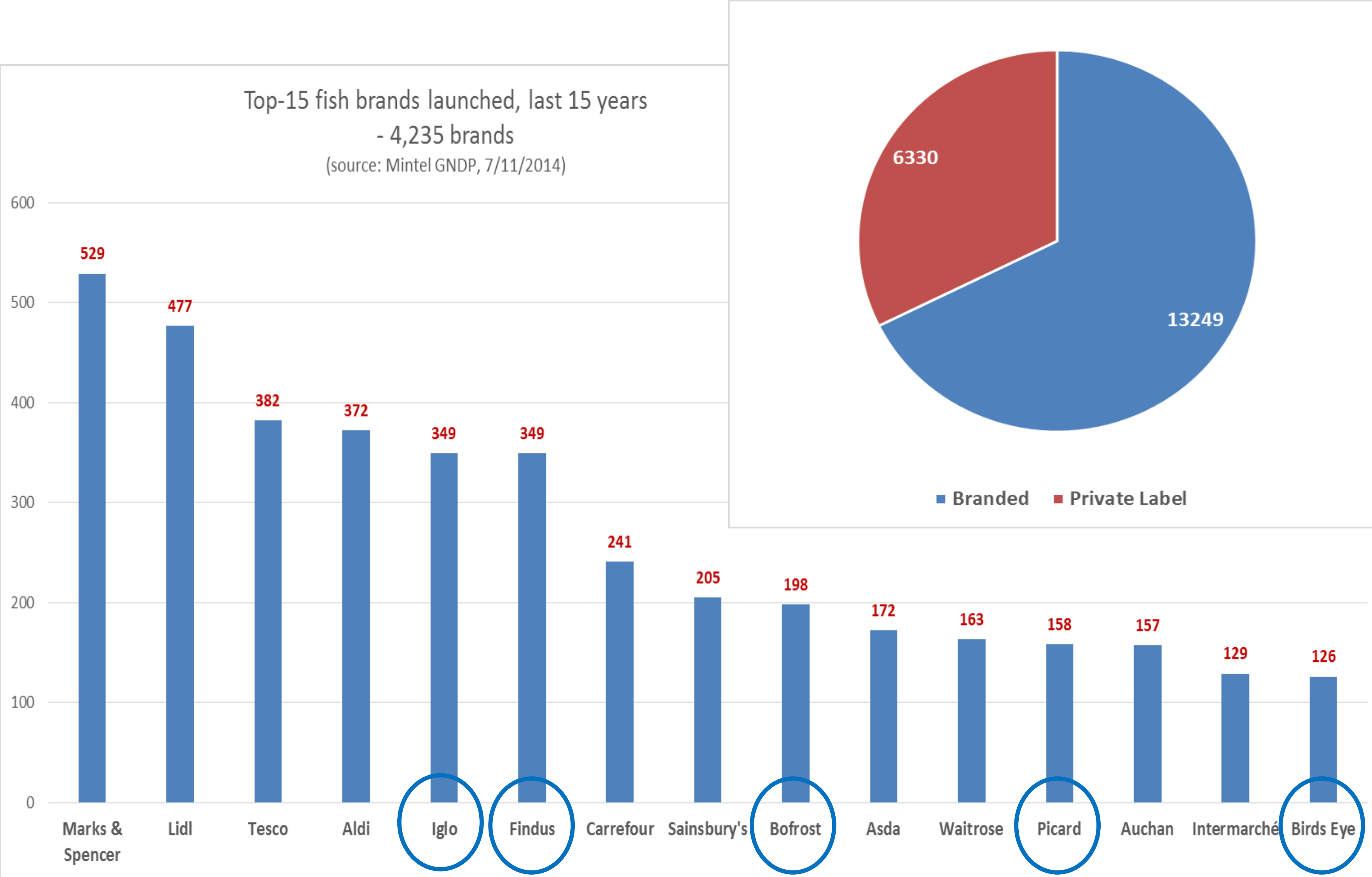
› **29,149** food products launched between 2003-2012 across Europe with the claim "ethical" on their description - Mintel GNPD, Febr. 2013

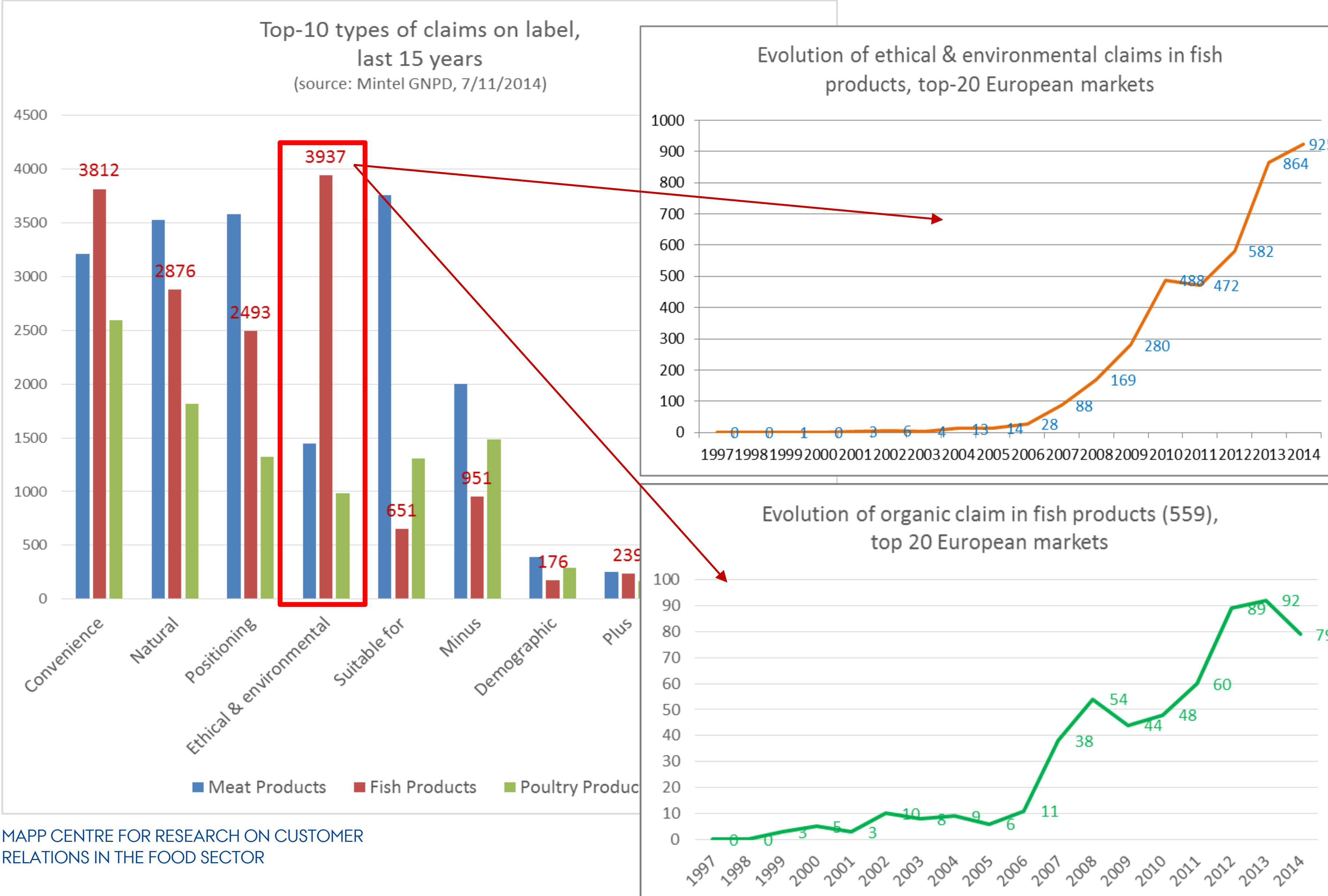
› **29,242** food products launched between 2003-2012 across Europe with the claim "organic" on their description - Mintel GNPD, Febr. 2013

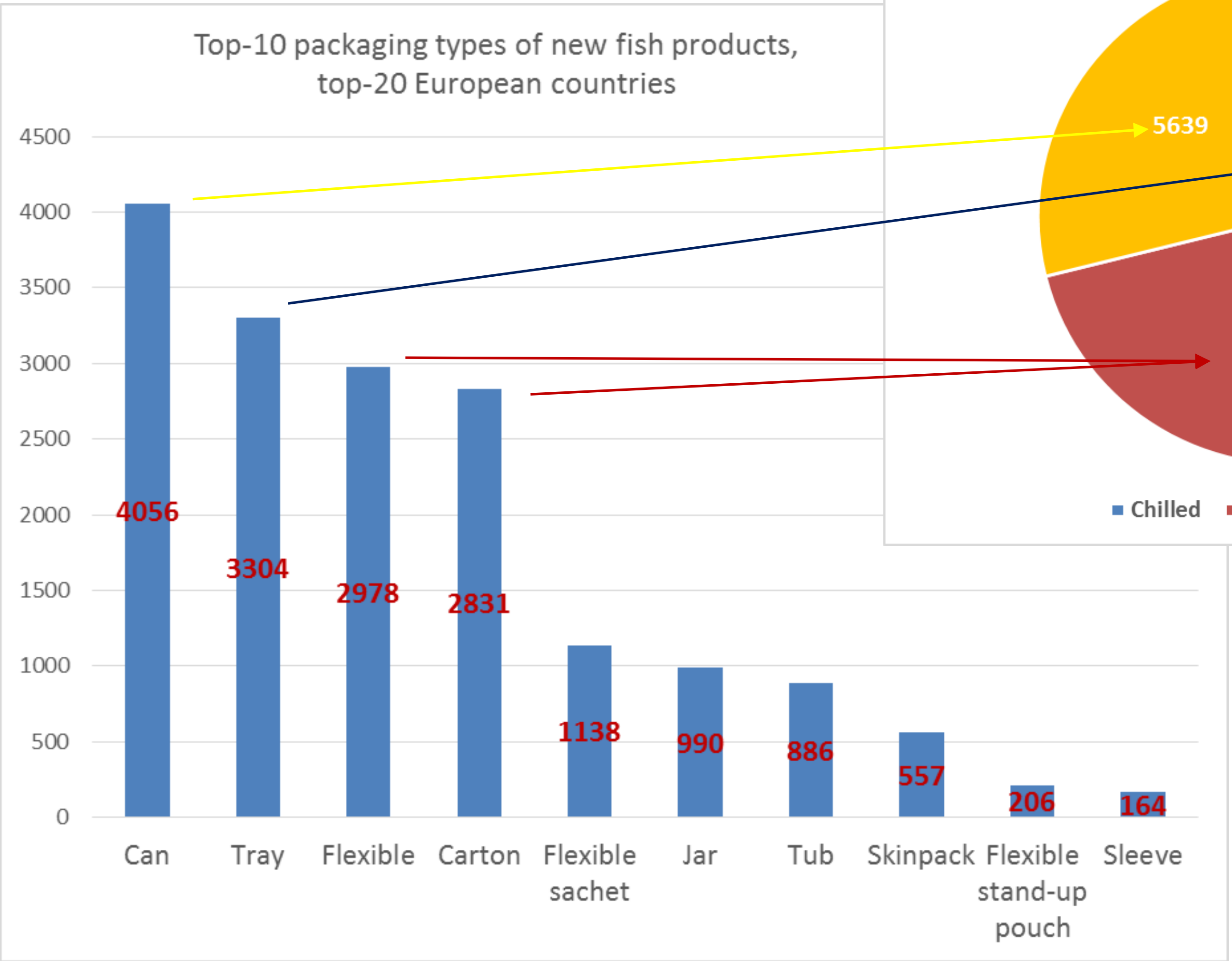


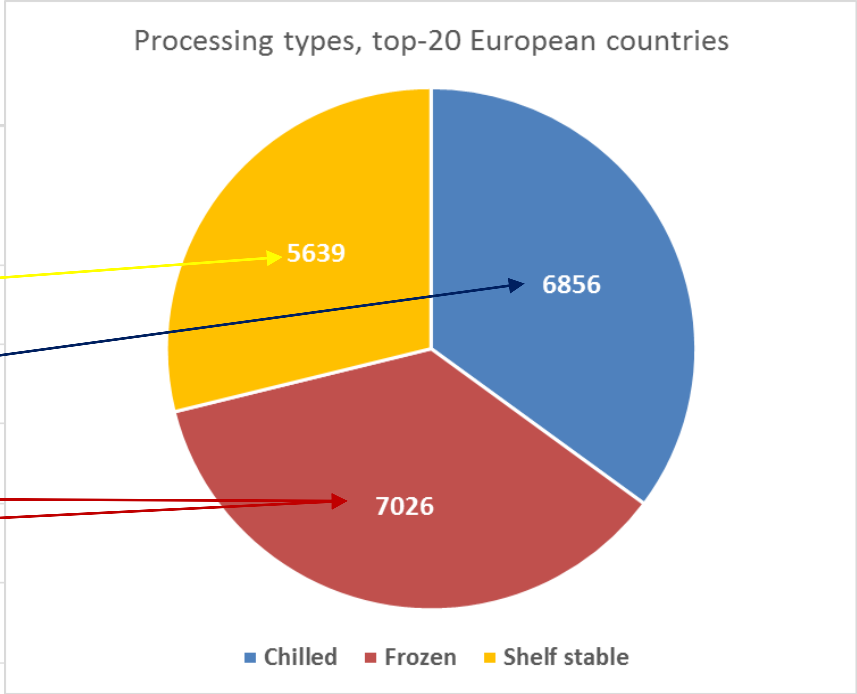
INNOVATION TRENDS IN THE EUROPEAN FISH & AQUACULTURE INDUSTRY


New product launches -
top-20 European countries
(source: Mintel - gndp, 7/11/2014)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Meat Products
Fish Products
Poultry Products
France
UK
Germany
Spain
Italy
Austria
Netherlands
Finland
Sweden
Russia
Denmark
Poland
Ukraine
Ireland
Greece
Norway
Belgium
Portugal
Czech Republic
Turkey
20,225 fish products
since 1996
Fish Products
3500
3000
2500
2000
1500
1000
500
0
75
165
356
449
464
409
613
603
748
1028
1112
1291
1351
1571
1670
1609
1875
2354
2482
1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

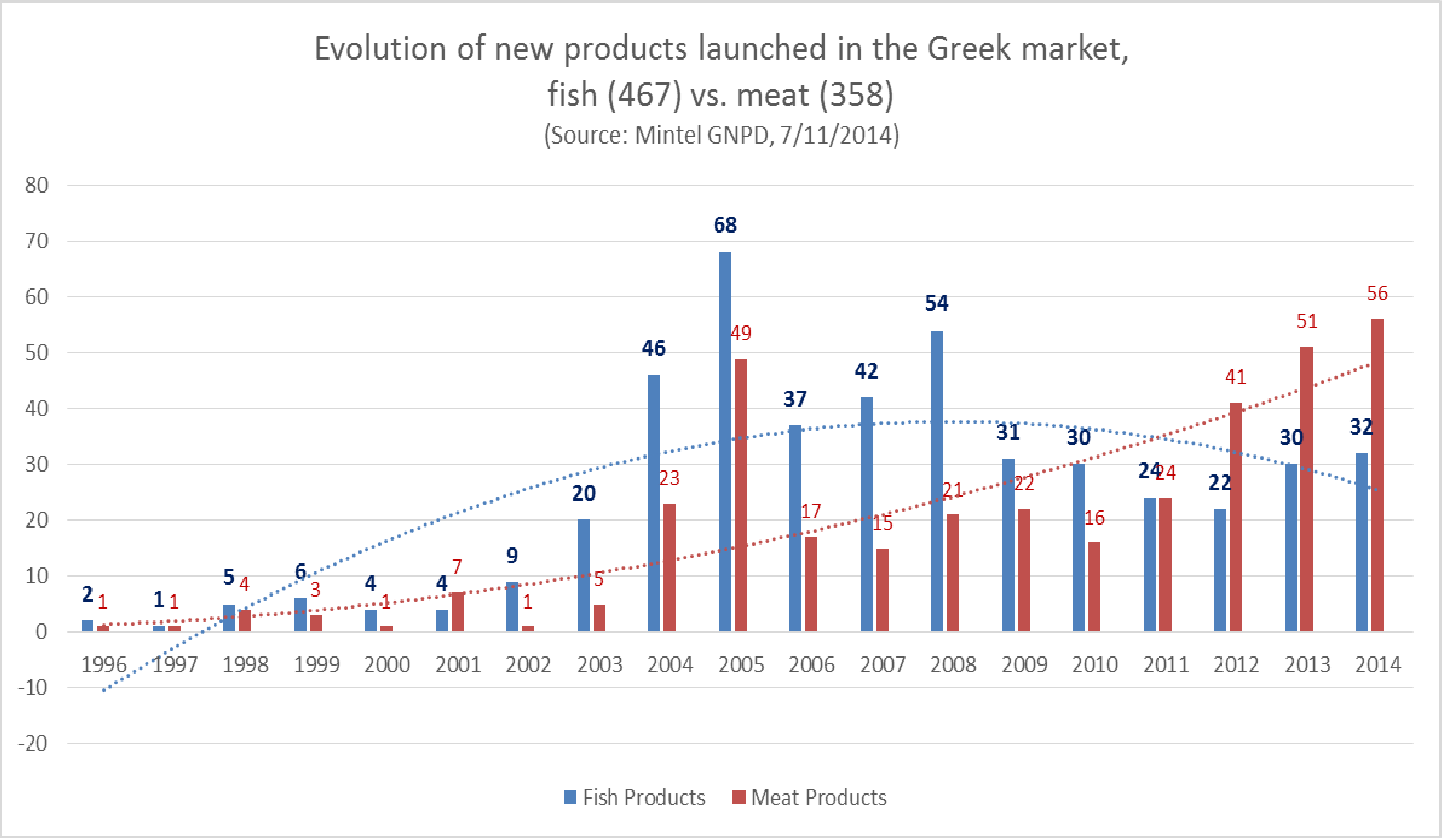

Top-15 fish brands launched, last 15 years
- 4,235 brands
(source: Mintel GNDP, 7/11/2014)
600
500
400
300
200
100
0
529
477
382
372
349
349
241
205
198
172
163
158
157
129
126
Marks & Spencer
Lidl
Tesco
Aldi
Iglo
Findus
Carrefour
Sainsbury's
Bofrost
Asda
Waitrose
Picard
Auchan
Intermarché
Birds Eye
6330
13249
Branded
Private Label

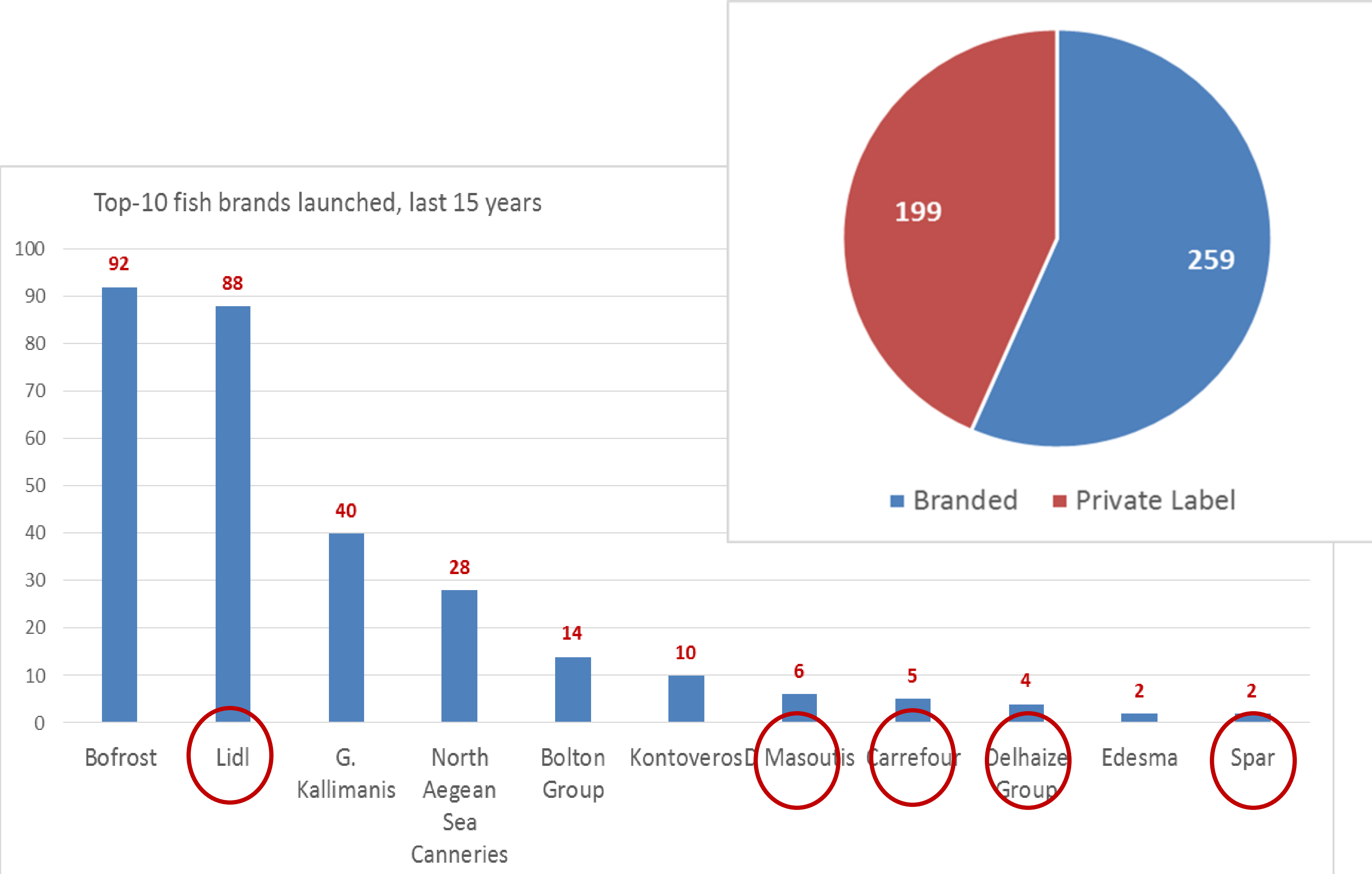

Top-10 types of claims on label, last 15 years
(source: Mintel GNPD, 7/11/2014)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
3812
2876
2493
3937
651
951
176
239
Convenience
Natural
Positioning
Ethical & environmental
Suitable for
Minus
Demographic
Plus
Meat Products
Fish Products
Poultry Produc
Evolution of ethical & environmental claims in fish products, top-20 European markets
1000
900
800
700
600
500
400
300
200
100
0
0
0
1
0
3
6
4
13
14
28
88
169
280
488
472
582
864
925
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Evolution of organic claim in fish products (559), top 20 European markets
100
90
80
70
60
50
40
30
20
10
0
0
0
3
5
3
10
8
9
6
11
38
54
44
48
60
89
92
79
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014

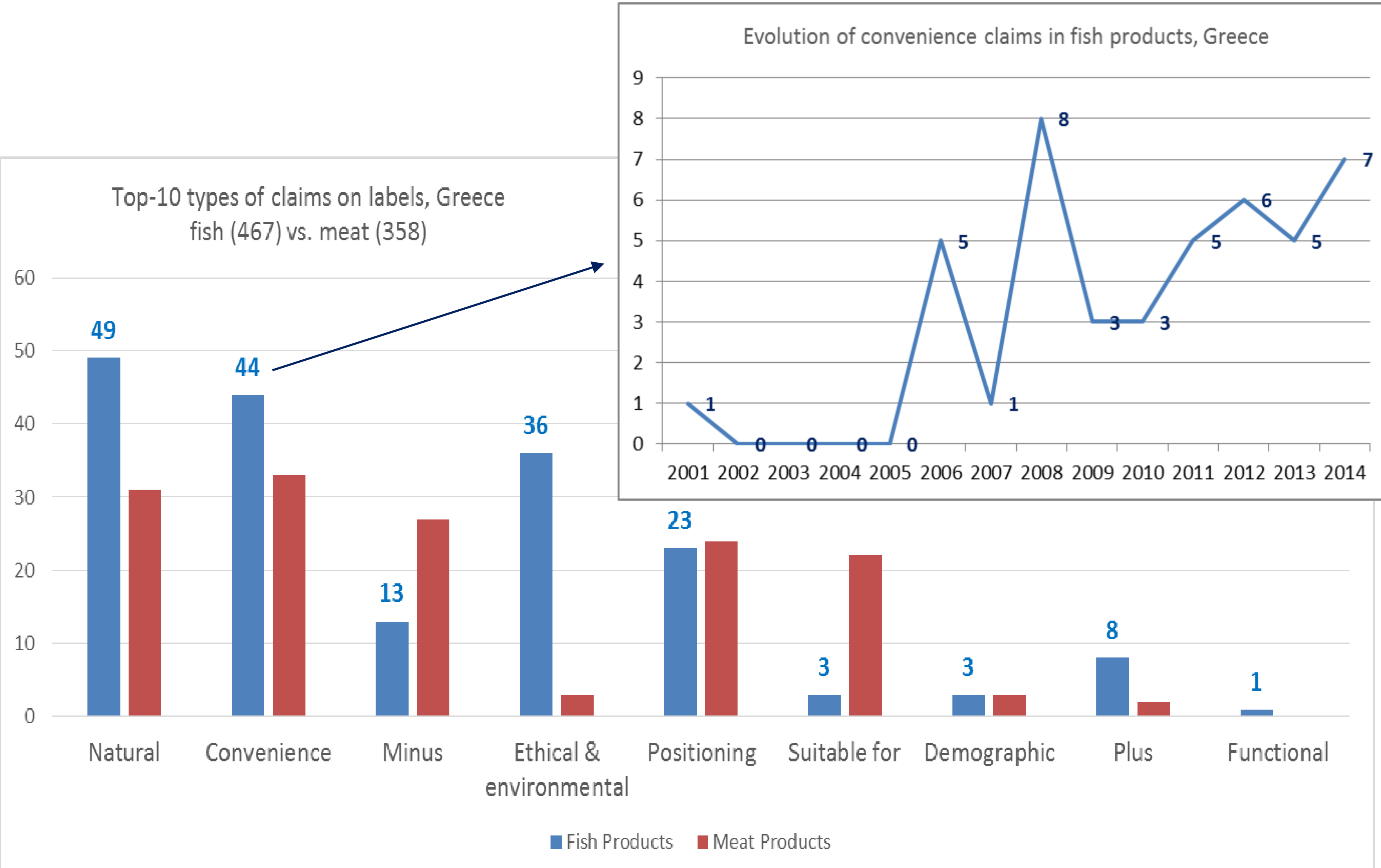

Top-10 packaging types of new fish products,
top-20 European countries
4500
4000
3500
3000
2500
2000
1500
1000
500
0
4056
3304
2978
2831
1138
990
886
557
206
164
Can
Tray
Flexible
Carton
Flexible sachet
Jar
Tub
Skinpack
Flexible stand-up pouch
Sleeve

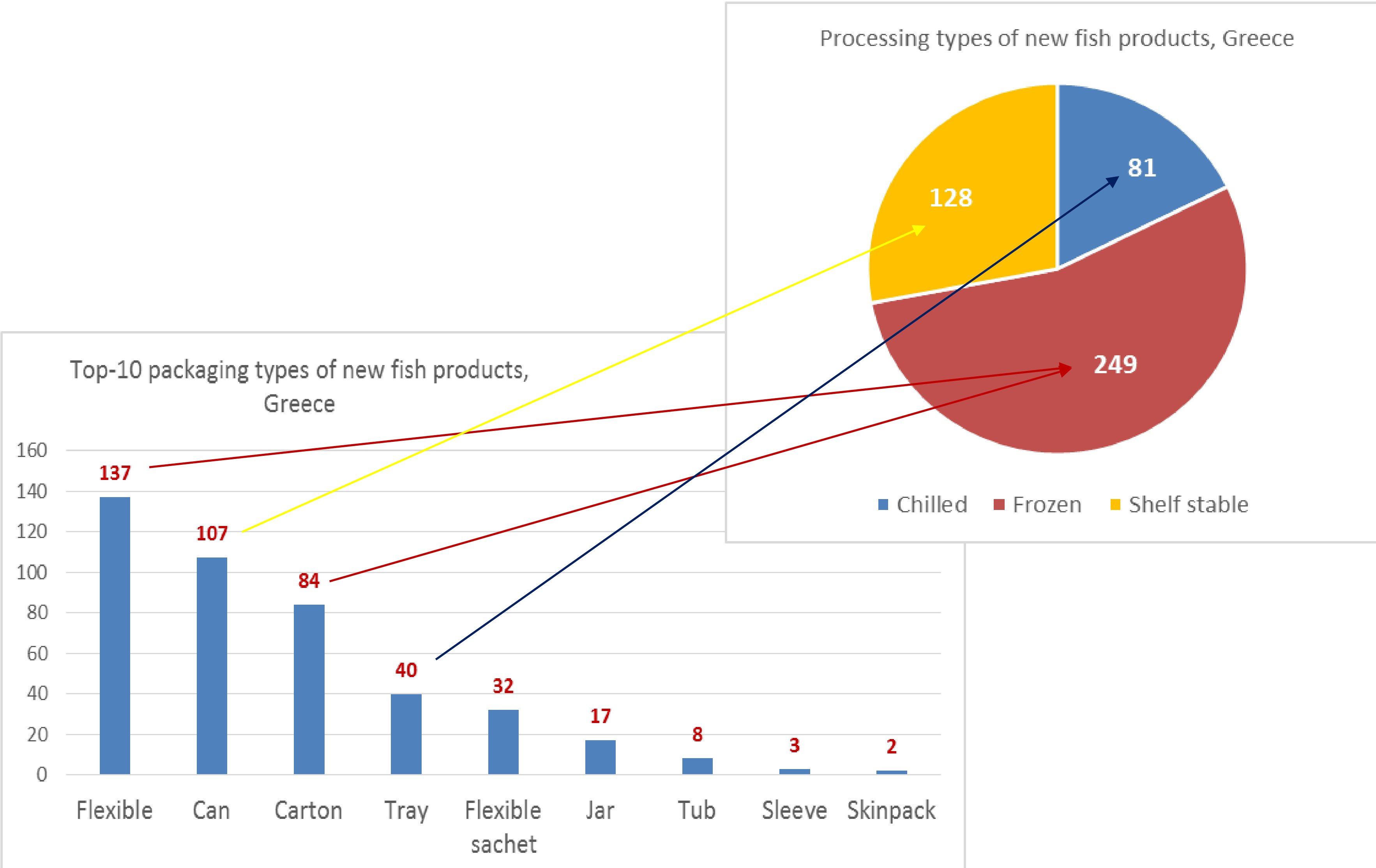

Processing types, top-20 European countries
5639
6856
7026
Chilled
Frozen
Shelf stable

INNOVATION TRENDS IN THE GREEK FISH & AQUACULTURE INDUSTRY


Evolution of new products launched in the Greek market,
fish (467) vs. meat (358)
(Source: Mintel GNPD, 7/11/2014)
80
70
60
50
40
30
20
10
0
-10
-20
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2 1
1 1
5 4
6 3
4 1
4 7
9 1
20 5
46 23
68 49
37 17
42 15
54 21
31 22
30 16
24 24
22 41
30 51
32 56
Fish Products
Meat Products


Top-10 fish brands launched, last 15 years
100
90
80
70
60
50
40
30
20
10
0
92
88
40
28
14
10
6
5
4
2
2
Bofrost
Lidl
G. Kallimanis
North Aegean Sea Canneries
Bolton Group
KontoverosD
Masoutis
Carrefour
Delhaize Group
Edesma
Spar
199
259
Branded
Private Label


Top-10 types of claims on labels, Greece
fish (467) vs. meat (358)
60
50
40
30
20
10
0
49
44
13
36
23
3
3
8
1
Natural
Convenience
Minus
Ethical & environmental
Positioning
Suitable for
Demographic
Plus
Functional
Fish Products
Meat Products
Evolution of convenience claims in fish products, Greece
9
8
7
6
5
4
3
2
1
0
1
0
0
0
0
5
1
8
3
3
5
6
5
7
2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014


Processing types of new fish products, Greece
81
128
249
Chilled
Frozen
Shelf stable
Top-10 packaging types of new fish products, Greece
160
140
120
100
80
60
40
20
0
137
107
84
40
32
17
8
3
2
Flexible
Can
Carton
Tray
Flexible sachet
Jar
Tub
Sleeve
Skinpack

EXAMPLES OF CANNED AND FROZEN NEW PRODUCTS IN THE GREEK MARKET

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http://www.gnpd.com/sinatra/recordpage/274059 | GNPD - Wild Pacific Salmo... | OFF Player | Offradio | Turn yo...

File Edit View Favorites Tools Help

1 2

Send feedback about this product

Product Details | Company & Source Details | Record ID 2740595

Company Lidl, Greece
Brand Nixe PRIVATE LABEL
Category Processed Fish, Meat & Egg Products > Fish Products
Country Greece IMPORTED PRODUCT

Launch Type New Variety/Range Extension
Storage Shelf stable
Price €2.99 / $4.00
Pack Size 190.00 g / 6.71 oz
Date Published Oct 2014

Country of Manufacture Germany
Production Code DE NI-EFB 016 EG
Bar Code 20350895

Product Description

Nixe Fileto Solomou Wild Pacific Me Saltsa Tomatas (Wild Pacific Salmon Fillet in a Tomato Sauce) is made with fish sourced from an MSC certified sustainable fishery. The product retails in a 190g pack.

Positioning Claims

Ethical - Environmentally Friendly Product http://www.gnpd.com/sinatra/recordpage/270974 | GNPD - Beer Battered Cod | OFF Player | Offradio | Turn yo...

File Edit View Favorites Tools Help

1 2

Send feedback about this product

Download

Product Details | Company & Source Details | Record ID 2709747

Company AB Vassilopoulos, Greece
Brand AB Gia To Spiti PRIVATE LABEL
Category Processed Fish, Meat & Egg Products > Fish Products
Country Greece

Launch Type New Product
Storage Chilled
Price €6.98 / $9.35
Pack Size 300.00 g / 10.59 oz
Date Published Oct 2014

Production Code GR 02.A.100 EC
Bar Code 5202336059850

Product Description

AB Gia To Spiti Vakaláos me Kourkoúti Byras (Beer Battered Cod) is now available. This microwaveable product is prepared fresh every day with the best ingredients and retails in a 300g tub.

Positioning Claims

Microwaveable

http://www.gnpd.com/sinatra/recordpage/233553 | GNPD - Plaice Fillets | OFF Player | Offradio | Turn yo...

File Edit View Favorites Tools Help

Send feedback about this product

Download

Product Details | Company & Source Details | Record ID 2335531

Company Bofrost, Italy
Brand Bofrost PRIVATE LABEL
Category Processed Fish, Meat & Egg Products > Fish Products
Country Greece IMPORTED PRODUCT

Launch Type New Packaging
Storage Frozen
Price €14.75 / $19.77
Pack Size 770.00 g / 27.18 oz
Date Published Mar 2014

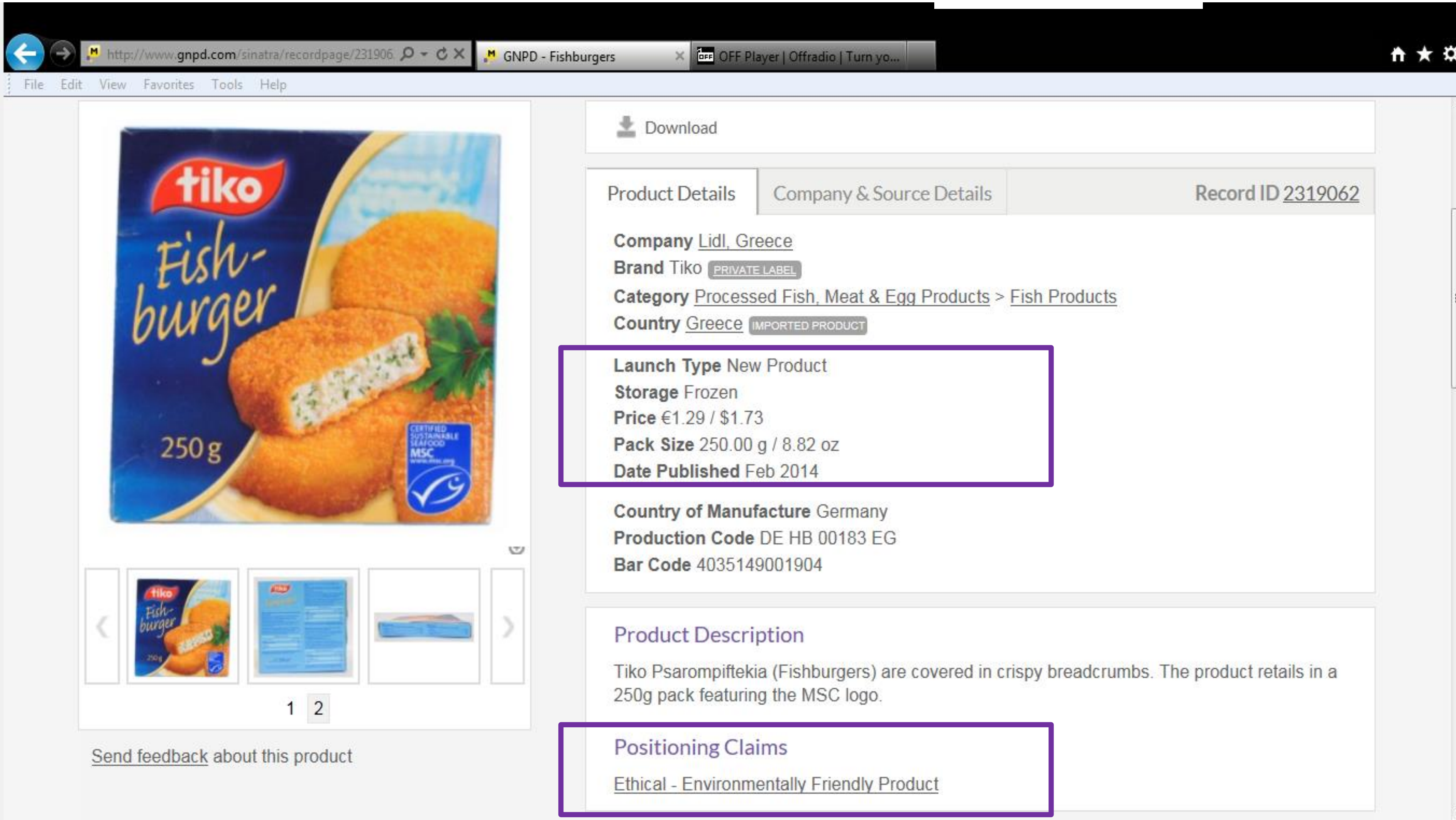
Country of Manufacture Italy
Production Code IT 608 CE
Bar Code 010039354883

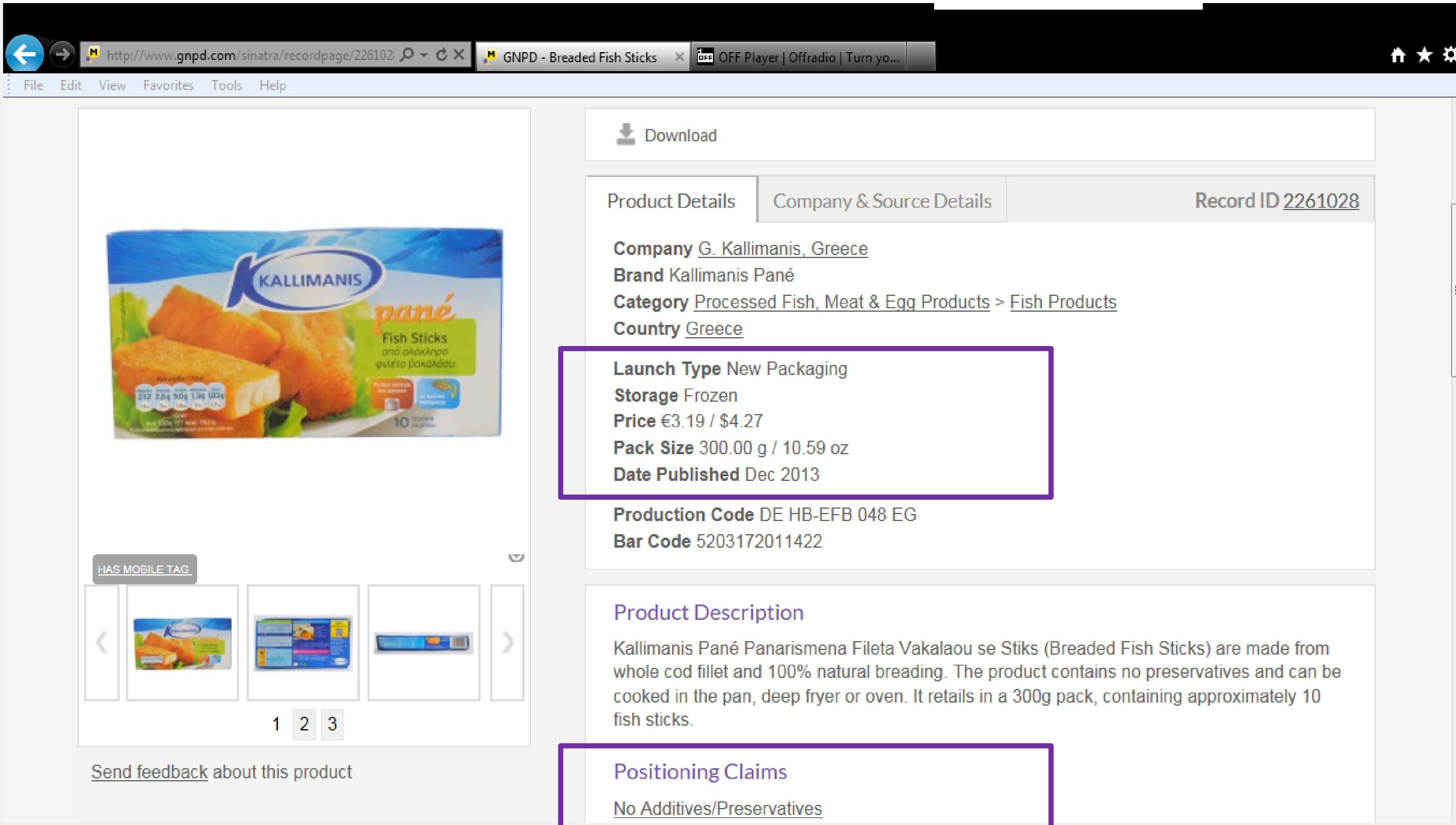
Product Description

Bofrost Plaice Fillets have been repackaged with a new design. This product comprises soft and fine whole natural fillets without skin from fish caught in the Atlantic Ocean. The fillets are ready to fry and retail in a 770g pack.

Positioning Claims

Ease of Use


http://www.gnpd.com/sinatra/recordpage/231906
GNPD - Fishburgers
OFF Player | Offradio | Turn yo...
File Edit View Favorites Tools Help
tiko
Fish-burger
250 g
Download
Product Details
Company & Source Details
Record ID 2319062
Company Lidl, Greece
Brand Tiko PRIVATE LABEL
Category Processed Fish, Meat & Egg Products > Fish Products
Country Greece IMPORTED PRODUCT
Launch Type New Product
Storage Frozen
Price €1.29 / $1.73
Pack Size 250.00 g / 8.82 oz
Date Published Feb 2014
Country of Manufacture Germany
Production Code DE HB 00183 EG
Bar Code 4035149001904
1 2
Send feedback about this product
Product Description
Tiko Psarompiftekia (Fishburgers) are covered in crispy breadcrumbs. The product retails in a 250g pack featuring the MSC logo.
Positioning Claims
Ethical - Environmentally Friendly Product


http://www.gnpd.com/sinatra/recordpage/226102
GNPD - Breaded Fish Sticks
OFF Player | Offradio | Turn yo...
File Edit View Favorites Tools Help
Download
Product Details
Company & Source Details
Record ID 2261028
Company G. Kallimanis, Greece
Brand Kallimanis Pané
Category Processed Fish, Meat & Egg Products > Fish Products
Country Greece
Launch Type New Packaging
Storage Frozen
Price €3.19 / $4.27
Pack Size 300.00 g / 10.59 oz
Date Published Dec 2013
Production Code DE HB-EFB 048 EG
Bar Code 5203172011422
KALLIMANIS
pané
Fish Sticks
HAS MOBILE TAG
1 2 3
Send feedback about this product
Product Description
Kallimanis Pané Panarismena Fileta Vakalaou se Stiks (Breaded Fish Sticks) are made from whole cod fillet and 100% natural breading. The product contains no preservatives and can be cooked in the pan, deep fryer or oven. It retails in a 300g pack, containing approximately 10 fish sticks.
Positioning Claims
No Additives/Preservatives

File Edit View Favorites Tools Help

http://www.gnpd.com/sinatra/recordpage/224511 | GNPD - Gluten Free Fish Fin... | OFF Player | Offradio | Turn yo...

Send feedback about this product

Product Details | Company & Source Details | Record ID 2245115

Company Bofrost, Greece
Brand Bofrost Free PRIVATE LABEL
Category Processed Fish, Meat & Egg Products > Fish Products
Country Greece IMPORTED PRODUCT

Launch Type New Product
Storage Frozen
Price €8.95 / $11.99
Pack Size 500.00 g / 17.65 oz
Date Published Dec 2013

Country of Manufacture Germany
Production Code BE VE 4003 EG
Bar Code Tell us the barcode

Product Description

Bofrost Free Kroketes Psariou choris Glouteni (Gluten Free Fish Fingers) are crispy, breaded fish fingers made from 100% pure Alaskan pollock boneless fillet. The MSC certified product is free from gluten, wheat, lactose, flavour enhancers and added flavours. It retails in a 500g pack.

Positioning Claims

Ethical - Environmentally Friendly Product, Gluten-Free, Low/No/Reduced Allergen, Low/No/Reduced Lactose, No Additives/Preservatives

EXAMPLES OF CHILLED NEW FISH PRODUCTS FROM THE DANISH & UK MARKETS


HAVFRISK
FRA THORFISK
225 g
Torskefilet
CERTIFICERET
BÆREDYGTIGT
FISKERI
MSC
www.msc.org/dk
Produktionsdato
Sidste anvendelsesdato
L13.10.14/005
19.10.14

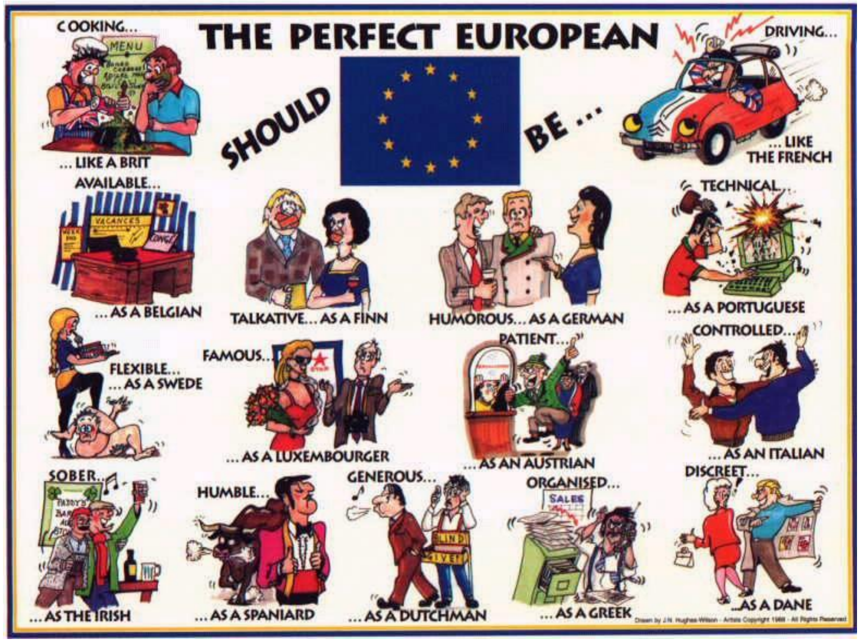

SLAGTEREN
TILBYDER
Slagter
LAKSEFILET
OPBEVARES VED HØJST +2°C
SIDSTE ANV-DATO
19.10.14
9:17
22.10.14
006532
0.670
149.17
99.95
FREDERIKSSUND


COOK WITH M&S
NEW
stir fry
meal deal
for £6
meat + veg
+ noodles + sauce
see price ticket for details
ALBACORE TUNA
GREAT FOR STIR FRIES
COOKS IN 5 MIN
2
SERVES 2
READY TO COOK
KEEP REFRIGERATED 0°C to +5°C
USE BY
20/10/2014
forever fish
suitable for freezing


LOVE life
rich in omega 3
Waitrose
Salmon with feta cheese, mint & lemon
...easy to cook
in 25 minutes
EASY
TO COOK
Serving suggestion
23 SEP


Waitrose
LOVE life
rich in omega 3
Boneless butterflied sea bass stuffed with slow roasted tomatoes and kalamata olives
Serving suggestion
Oven bake 18 minutes...
Partner with french green beans
31 Aug

IS CULTURE IMPORTANT IN INNOVATION ACCEPTANCE?



- One of most important perspectives in understanding the concept of **innovation** is consumer adoption and diffusion (Kumar, 2014)
- **Receptiveness** towards new products is not always consistent across countries, e.g. Asian cultures allow fastest diffusion than Americans and Europeans (Yalcinkaya, 2008)
- **Culture** may have strong impact on the speed of innovation diffusion (Steenkamp et al, 1999; Singh, 2006); e.g. several studies use Hofstede's cultural value typology to shed light on differences among countries in new product **acceptance** (Yeniyurt & Townsend, 2003), **adoption** (Van Everdingen & Waarts, 2003), & **diffusion** rates (Dwyer et al, 2005)

CULTURE & FOOD CHOICES

› Consumers in **China** have different attitudes towards food processing technologies than consumers in various EU markets, thus they differ in their acceptance of new food products that result from those technologies (Krystallis et al., 2012; Lee et al., 2014;)

› Moreover, consumers in **China** in general hold more positive attitude towards technology than consumers in the UK (Perrea at el., 2014; 2015).

› Consumers with positive attitude towards technology have more positive attitude towards **green food** in **China** than in the EU (Krystallis et al., 2009; Perrea et al., 2014)

ABOUT DIVERSIFY

The majority of the growing demand for aquatic products in Europe is currently supplied by foreign imports (aquaculture and capture fisheries) that are often of questionable quality, and by aquatic products from over-exploited European fisheries. European aquaculture constitutes a safe, healthy and sustainable source of aquatic products and though facing some barriers for further growth, could fulfil the demand for aquatic products, but is currently supplying only 10% of the total EU consumption.

DIVERSIFY is an €11.8 million EU-funded project (2013-2018), which aims to expand the European aquaculture industry. It will develop scientific methods required to optimise the rearing and production of some new/emerging finfish species and establish the marketing techniques required to attract consumers.

WHY HAVE THESE FISH SPECIES BEEN SELECTED?

The selected species include the meagre (*Argyrosomus regius*), greater amberjack (*Seriola dumerili*), wreckfish (*Polyprion americanus*), Atlantic halibut (*Hippoglossus hippoglossus*), grey mullet (*Mugil cephalus*) and pikeperch (*Sander lucioperca*). Originating from a wide range of climatic and geographic regions within Europe, the six species have been chosen based on their biological and economic potential. They have a large size/fast growth rate, enabling the production of a variety of value-added aquatic products, which are expected to attract consumers and be successfully commercialised.

MAIN OBJECTIVES

To develop the scientific techniques and methodology, which will ensure the successful rearing and production of the selected species and contribute to the expansion of the industry.

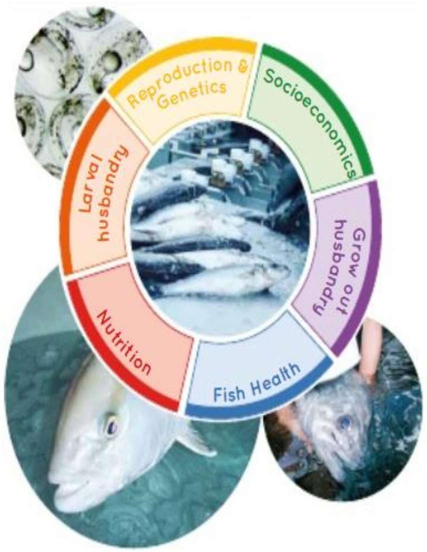
To determine the drivers for market acceptance of the new food prototypes in order to position the EU aquaculture sector as a leader in aquatic food production.

EXPECTED OUTCOMES

1. Scientific knowledge and techniques for culturing new/emerging finfish species that will be safe, sustainable, and attractive to consumers and markets.
2. Wide dissemination of this information to key stakeholders (aquaculture producers, retailers, processors and consumer groups).
3. Long-term business plans to ensure the successful market positioning of each species.
4. Increased value of European aquaculture products, which will result in increased economic prospects of the sector.
An efficient, sustainable and market-oriented expansion of the European aquaculture sector.

RESEARCH AREAS

Studies will be carried out in the six selected species across a number of different scientific disciplines:



FISH SPECIES AND BUDGET ALLOCATION

Atlantic halibut *Hippoglossus hippoglossus*	Greater amberjack *Seriola dumerili*	Grey mullet *Mugil cephalus*	Meagre *Argyrosomus regius*	Pikeperch *Sander lucioperca*	Wreckfish *Polyprion americanus*
13.2%	31.3%	11.3%	22.9%	14.2%	7.1%

leaflet_diversify.pdf
Download File

DIVERSIFY

CONSUMER-RELATED OBJECTIVES

1. **Analyze & understand** consumers' overall value perceptions with regard to cultured fish in general, and the DIVERSIFY fish species in particular;
2. **Evaluate** consumer sensory perceptions towards the DIVERSIFY species' products;
3. **Optimize** the DIVERSIFY species' products in terms of extrinsic product attribute combinations that can generate best value perceptions;
4. **Determine** effectiveness of market communication in consumer behaviour change in relation to the DIVERSIFY species' products developed.

› **Technological innovation**, i.e. introduction of a new technology that changes a product's functionality, is prevalent innovation type (Griffith & Rubera, 2014)

› **Consumers** may perceive changes in product functionality positively, thus see product technology as a warranty of high quality; or they may perceive it as a signal that the product is too artificial, complex, unknown or scary, creating negative impressions.

› **Perceptual trade-offs of gains & losses** in relation to technological innovations is called 'perceived customer value' (Zeithaml, 1998), which needs to reflect a technologically innovative product's success in creating a '**value proposition**'

THE STORY BEHIND THE FISH

Please read the story below carefully:

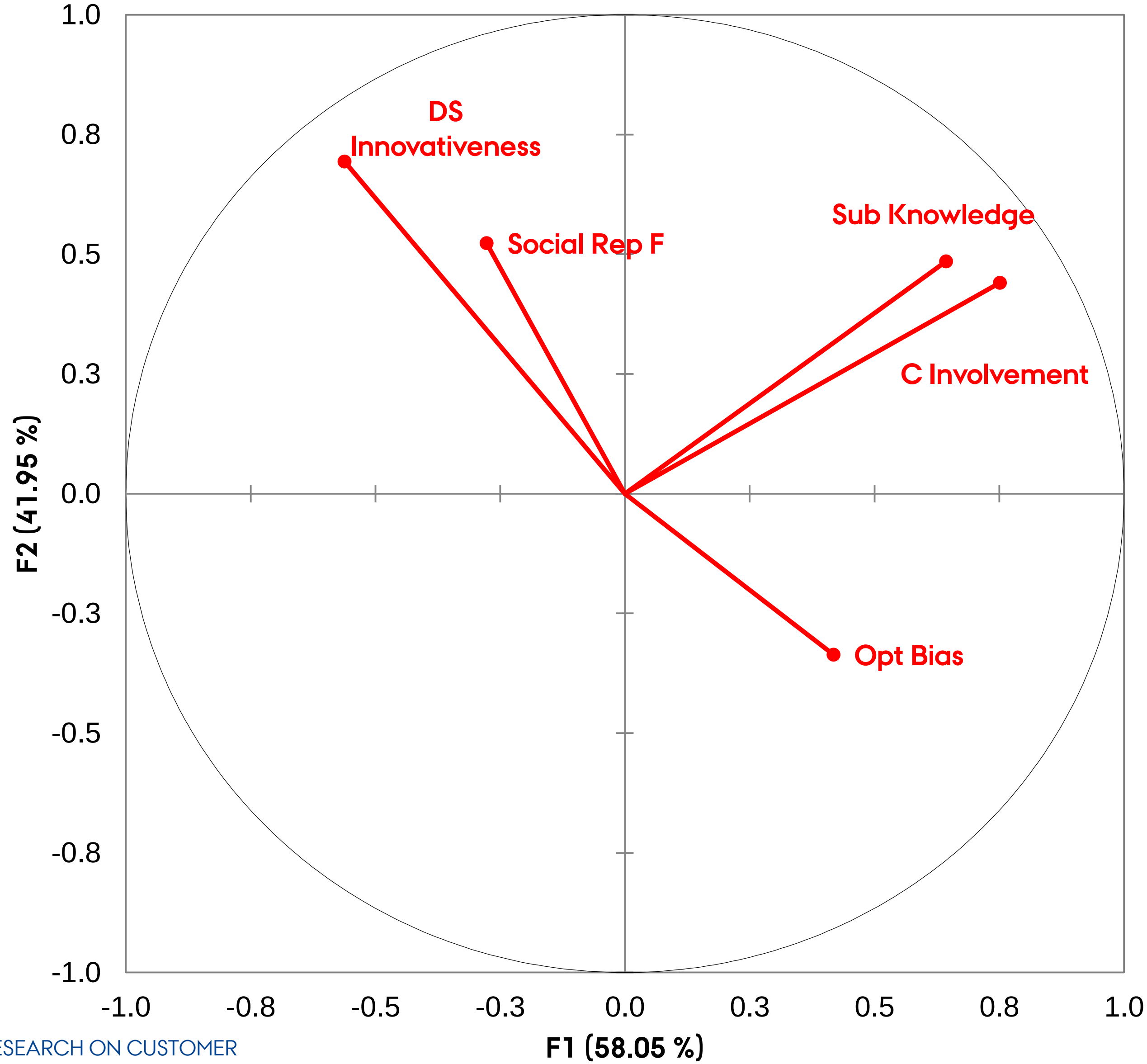
In this picture you see a new marine finfish species from the European aquaculture industry that has entered the market recently. The **size of this fish is similar to that of Atlantic Salmon**. This fish can be found in the Mediterranean and Black Sea, and along the eastern Atlantic coast.

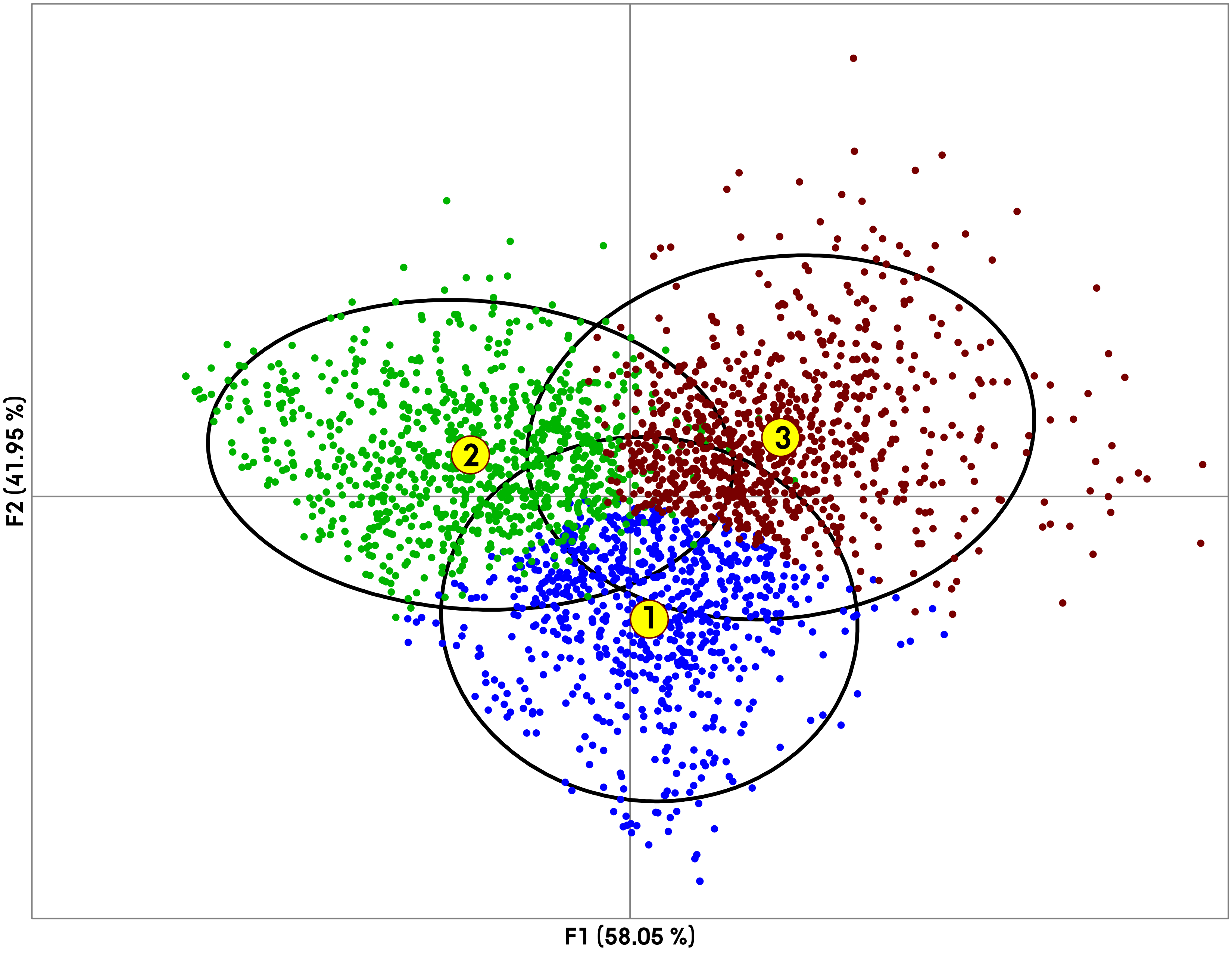
This fish is a **high quality meal** choice, has a **lower fat content** than the average farmed fish, **excellent taste** and **firm, yet juice flesh**. Due to these characteristics, this fish is very suitable to be **served at special occasions**. Moreover, this species is very suitable for the **development of value-added products**. As such, compared to other possible choices, this fish has the potential to **gain a popular image**. Finally, the development of this fish will **be more environmentally friendly**, compared to other species, and takes place in a **controlled production system**. This new finfish, therefore, suits the needs of consumers who demand **sustainability** and **low environmental impact**.

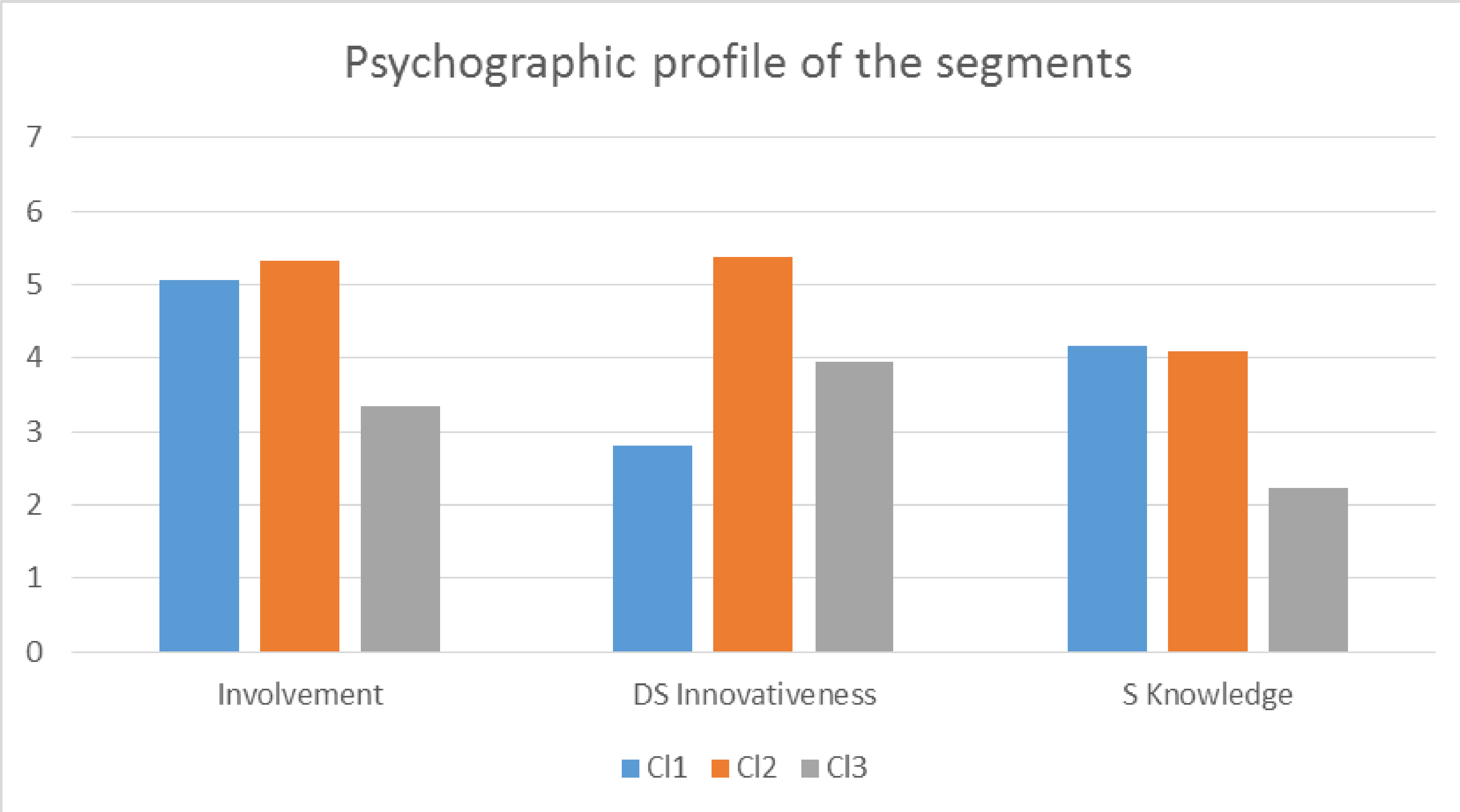
As a result of its high quality, this fish might be **more expensive** than the average farmed fish. In addition, since both its **production and market are still small**, it is likely that it will **not be widely available** in the ‘usual' retail outlets. Although this fish is praised for its taste, this **taste might seem different than usually expected** from farmed fish, a taste that not everyone would appreciate. Moreover, due to its different quality, this fish might **demand extra skills to cook** compared to other farmed or wild species. Overall, despite sufficient experience with its production system, the exact **rearing methods for this fish are still not perfected** as yet.

PSYCHOGRAPHIC SEGMENTATION
POOLED SAMPLE OF N=2511 CONSUMERS IN 5 EU COUNTRIES (SP, FR, IT, DE, UK)

Construct	Germany (n = 506)	France (n = 500)	UK (n = 505)	Spain (n = 500)	Italy (n = 500)	Mean difference-test (*F*-value)	Pooled sample (N = 2511)
Consumer involvement	***α = .88***	***α = .94***	***α = .94***	***α = .95***	***α = .96***		***α = .94***
59. I am very concerned about what fish products I purchase	2.65	2.49	2.97	2.63	2.29	14.68***	2.61
60. I care a lot about what fish products I consume	2.14	2.46	2.78	2.62	2.44	14.44***	2.49
61. Generally, choosing the right fish products is important to me	2.26	2.42	2.75	2.57	2.28	11.21***	2.46
Domain specific innovativeness	***α = .88***	***α = .86***	***α = .90***	***α = .86***	***α = .86***		***α = .87***
62. In general, I am among the last in my circle of friends to purchase new fish products.	4.22	4.17	4.20	4.18	3.95	2.10	4.14
63. Compared to my friends, I do little shopping for new fish products.	4.19	4.00	4.25	4.23	3.97	3.04*	4.13
64. I would consider buying new fish products, even if I hadn't heard of it yet.	n.a.[1]	n.a.[1]	n.a.[1]	n.a.[1]	n.a.[1]		n.a.[1]
65. In general, I am the last in my circle of friends to know the names of the latest new fish product trends.	4.17	4.09	4.17	4.14	3.99	1.02	4.11
66. I know more about new fish products than other people do.	n.a.[1]	n.a.[1]	n.a.[1]	n.a.[1]	n.a.[1]		n.a.[1]
Subjective knowledge	***α = .93***	***α = .95***	***α = .94***	***α = .93***	***α = .94***		***α = .94***
67. I consider that I know more about fish than the average person	3.49	3.97	3.60	3.69	3.53	7.50***	3.66
68. I think that I know more about fish than my friends	3.39	3.92	3.48	3.54	3.43	8.96***	3.55
69. I have a lot of knowledge about how to prepare fish	3.12	3.85	3.50	3.36	3.25	16.33***	3.41
70. I have a lot of knowledge about how to evaluate the quality of fish	3.29	3.95	3.63	3.59	3.37	14.00***	3.57
Optimistic bias	***α = .81***	***α = .90***	***α = .88***	***α = .86***	***α = .85***		***α = .86***
71. Compared to the average person of my age and sex, the likelihood of me getting health problems when eating new product from a new farmed fish is *[-3/+3: much less/more likely than the average person]*	-0.73	-0.15	-0.27	-0.46	-0.51	12.95***	-0.42
72. The health risks associated with eating a new product from a new farmed fish to me personally are *[1=very low to 7=very high]*	2.87	3.57	3.11	2.95	3.10	16.73***	3.12
73. The health risks associated with eating a new product from a new farmed fish to the average [Spanish / …… / …….. / ……… / ……] are *[1=very low to 7=very high]*	3.06	3.62	3.24	3.05	3.36	13.22***	3.27
Social representations of food	***α = .73***	***α = .74***	***α = .76***	***α = .74***	***α = .79***		***α = .75***
74. I value things being in accordance with nature.	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]		n.a.[2]
75. I feel good when I eat clean and natural food.	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]		n.a.[2]
76. I would like to eat only food with no additives.	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]		n.a.[2]
77. Eating is very important to me	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]		n.a.[2]
78. For me, delicious food is an essential part of weekends.	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]		n.a.[2]
79. I treat myself to something really delicious.	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]	n.a.[2]		n.a.[2]
80. New foods are just a silly trend.	4.43	4.47	4.38	4.58	4.44	1.01	4.46
81. Consequences of eating new foods are unknown.	3.31	3.18	3.53	3.53	3.50	5.41***	3.41
82. I have some doubts about food novelties.	3.67	3.49	3.59	3.51	3.68	1.64	3.59

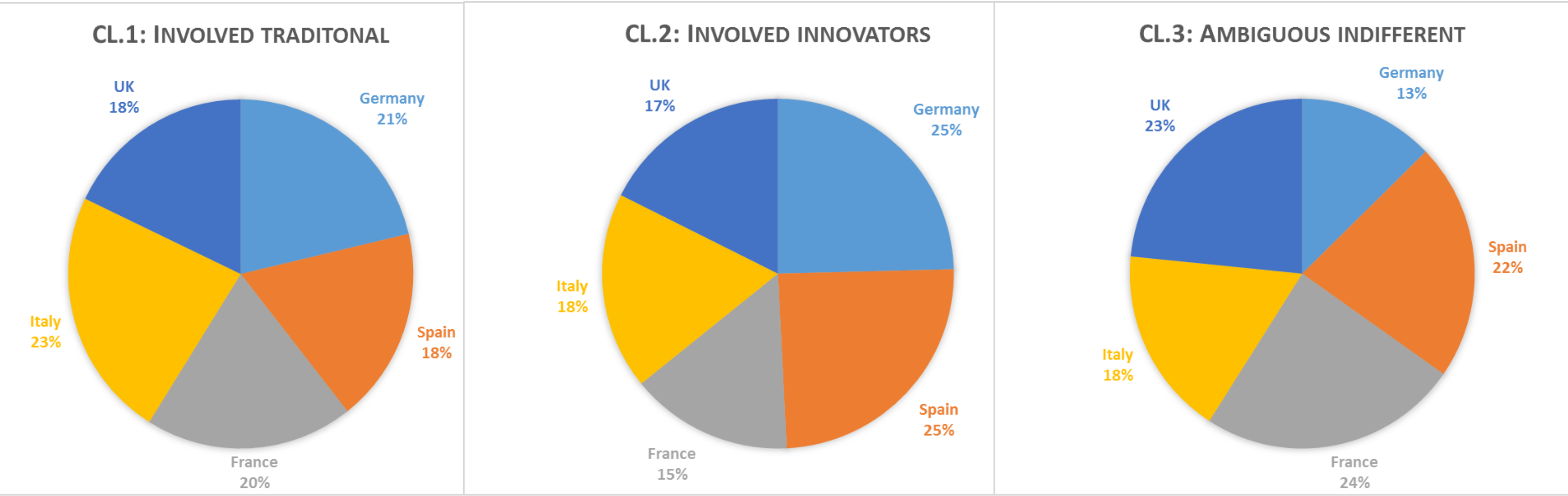

DS
Innovativeness
Social Rep F
Sub Knowledge
C Involvement
Opt Bias
1.0
0.8
0.5
0.3
0.0
-0.3
-0.5
-0.8
-1.0
-1.0
-0.8
-0.5
-0.3
0.0
0.3
0.5
0.8
1.0
F2 (41.95 %)
F1 (58.05 %)


F1 (58.05 %)
F2 (41.95 %)
1
2
3



Cl1	Cl2	Cl3
Involved traditional	Involved Innovators	Ambiguous indifferent
N=728, 30%	N=911, 36%	N=872, 34%

Country participation



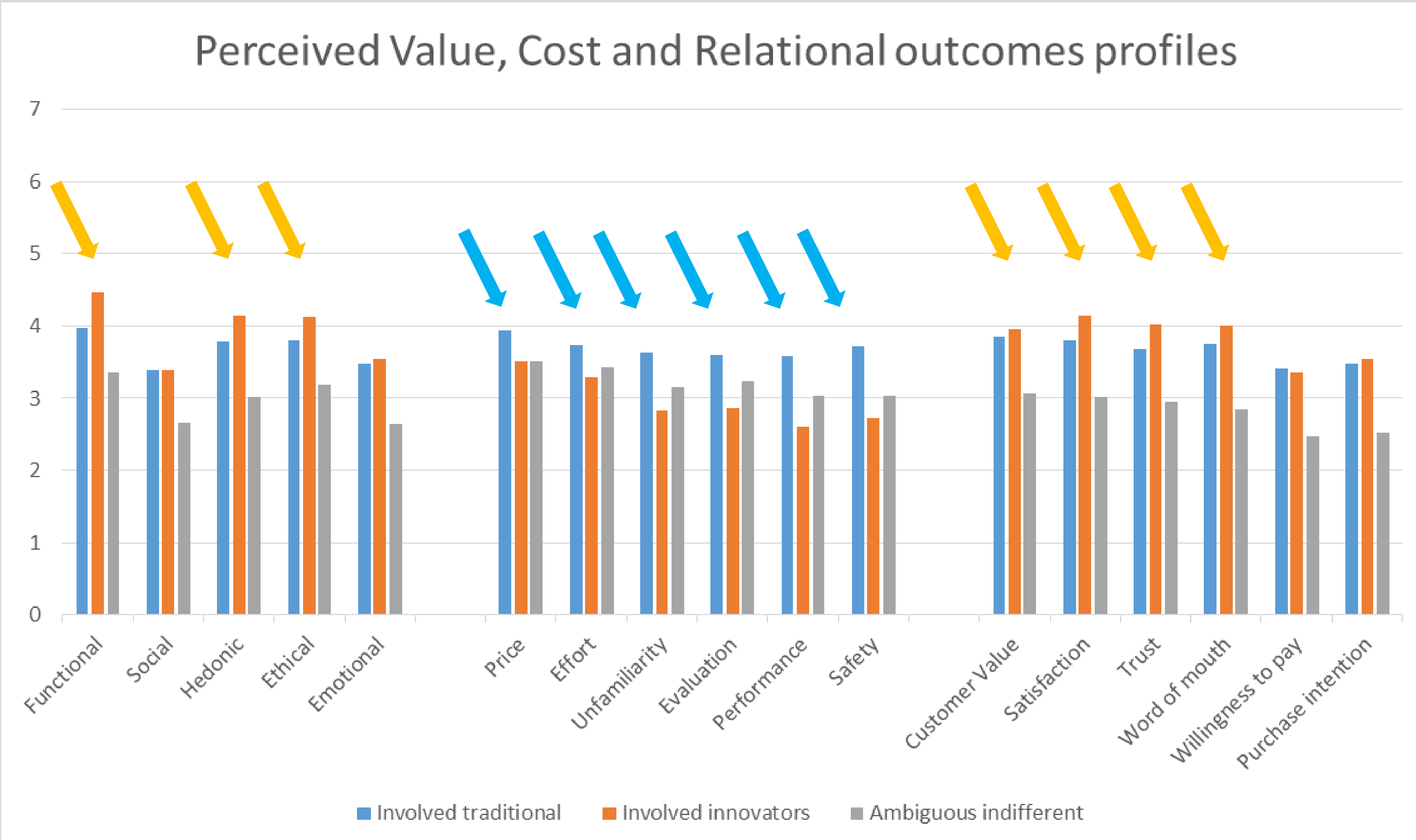
Cl1	Cl2	Cl3
Involved traditional N=728, 30%	Involved Innovators N=911, 36%	Ambiguous indifferent N=872, 34%

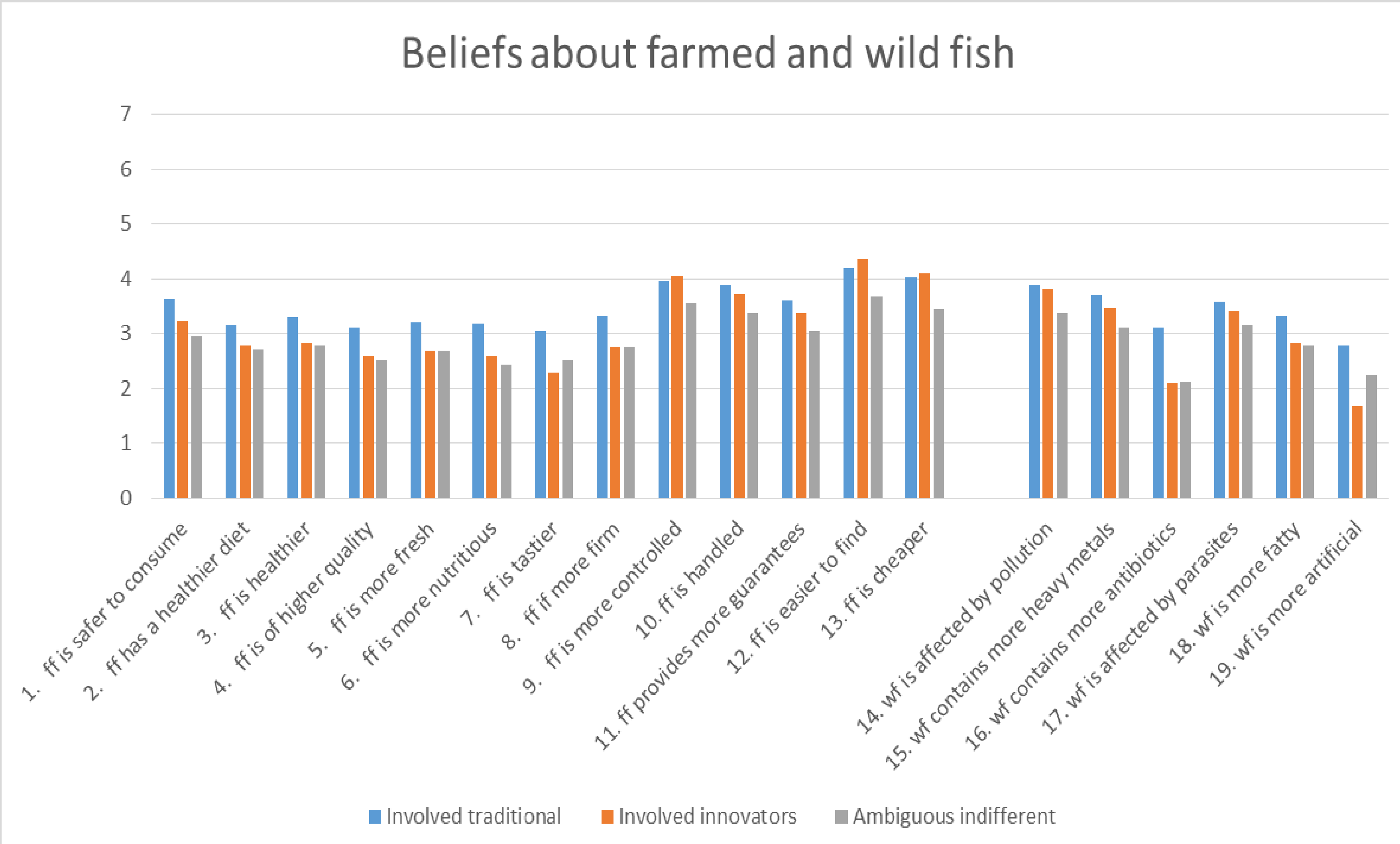
Socio-demographic profile, % (only statistically significant differences)

Characteristic		Involved traditional (N=728) 30%	Involved innovators (N=911) 36%	Ambiguous indifferent (N=872) 34%	Sig.
Age	(mean in years)	40.7	**43.7**	39.6	.002
Marital status	(married)	51.6	**53.9**	43.1	.000
Employment	(employee various)	**32.2**	30.5	30.6	.026
	(non-working)	11.7	14.3	**15.3**	
Income	(more than average)	13.5	**17.3**	9.9	.000
	(average)	**61.1**	59.5	57.7	
	(less than average)	25.4	23.2	**32.5**	

Behavioural profile, %

Characteristic	Involved traditional (N=728) 30%	Involved innovators (N=911) 36%	Ambiguous indifferent (N=872) 34%	Sig.
Consumption of farmed fish:				
Once a week or more	**23.1**	**22.9**	*16.5*	
Two-three times a month	**29.7**	**32.4**	*27.2*	.000
Once a month or less	32.6	32.6	**38.6**	
Never	**9.8**	*7.2*	8.0	
Consumption of wild fish:				
Once a week or more	**21.6**	17.9	*11.9*	
Two-three times a month	**27.9**	26.8	*22.6*	.000
Once a month or less	*33.1*	**35.7**	**33.9**	
Never	*11.1*	12.5	**22.1**	
Consumption of seafood:				
Once a week or more	**22.1**	20.6	*13.9*	.000
Consumption of frozen fish:				
Once a week or more	**31.7**	**31.8**	*25.1*	.003
Consumption of whole fish:				
Once a week or more	**28.7**	24.4	*17.1*	.000
Consumption of processed fish:				
Once a week or more	**29.3**	*21.7*	*21.3*	.001


Perceived Value, Cost and Relational outcomes profiles
7
6
5
4
3
2
1
0
Functional
Social
Hedonic
Ethical
Emotional
Price
Effort
Unfamiliarity
Evaluation
Performance
Safety
Customer Value
Satisfaction
Trust
Word of mouth
Willingness to pay
Purchase intention
Involved traditional
Involved innovators
Ambiguous indifferent


Beliefs about farmed and wild fish
7
6
5
4
3
2
1
0
1. ff is safer to consume
2. ff has a healthier diet
3. ff is healthier
4. ff is of higher quality
5. ff is more fresh
6. ff is more nutritious
7. ff is tastier
8. ff if more firm
9. ff is more controlled
10. ff is handled
11. ff provides more guarantees
12. ff is easier to find
13. ff is cheaper
14. wf is affected by pollution
15. wf contains more heavy metals
16. wf contains more antibiotics
17. wf is affected by parasites
18. wf is more fatty
19. wf is more artificial
Involved traditional
Involved innovators
Ambiguous indifferent

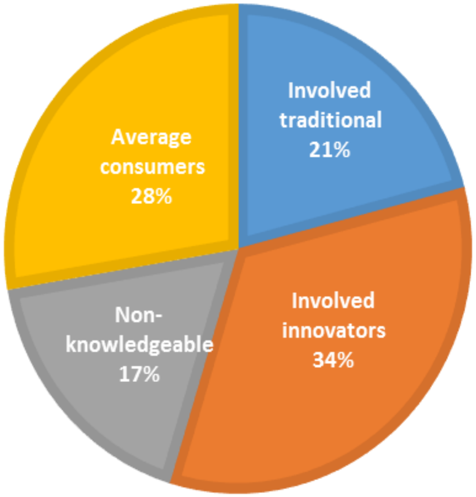
Logo recognition and attitude, mean scores

Statement	Involved traditional (N=728)	Involved innovators (N=911)	Ambiguous indifferent (N=872)	Sig.
I am aware of this logo	4.36	*4.22*	**4.64**	.000
The quality of products carrying this logo is very high	**4.04**	*3.80*	**4.09**	.000
Products carrying this logo would be my first choice	**4.09**	*3.95*	**4.28**	.000
I find this logo trustworthy	4.01	*3.81*	**4.11**	.000
I value this logo	**4.05**	*3.88*	**4.12**	.000
I am aware of this logo	*4.34*	*4.34*	**4.71**	.000
The quality of products carrying this logo is very high	3.87	*3.72*	**4.00**	.000
Products carrying this logo would be my first choice	4.02	*3.87*	**4.18**	.000
I find this logo trustworthy	**3.88**	*3.69*	**3.96**	.000
I value this logo	3.95	*3.80*	**4.13**	.000
I am aware of this logo	*4.27*	4.40	**4.59**	.000
The quality of products carrying this logo is very high	3.96	*3.86*	**4.11**	.000
Products carrying this logo would be my first choice	4.10	*4.01*	**4.23**	.000
I find this logo trustworthy	**4.00**	*3.85*	**4.08**	.000
I value this logo	4.07	*3.95*	**4.11**	.000

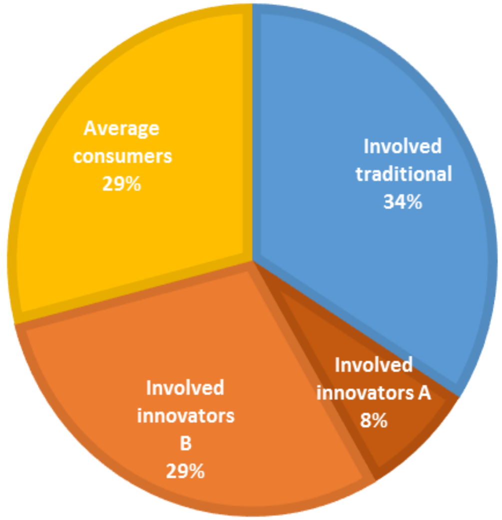
SUMMARY SEGMENT PROFILES - OVERALL

Involved traditional (30%)	Involved innovators (36%)	Ambiguous indifferent (34%)
PSYCHOGRAPHICS		
-Involved, knowledgeable	-Involved, knowledgeable, **innovative when in comes to new fish**	-Non-involved, non-knowledgeable
DEMOGRAPHICS		
-In their 40s, higher number of employees, less people out of work, **mostly of average income**	-**Slightly older, more people with above-average income**	-More non-working people, more with below-average income
BEHAVIOUR		
-**Highest number of regular fish consumers** across all fish types (farmed, wild, etc.)	-**Highest number of regular farmed fish consumers**, highest number of occasional wild fish consumers	-Highest number of occasional of non-consumers of all fish types
PERCEPTIONS OF VALUE & COST		
-Average perceived value of the new species, **highest perceived cost (i.e. price, safety, effort)**, high WTP and PI	-**Highest perceived value (i.e. functional, hedonic, ethical),** lowest perceived cost, **highest expected outcomes (i.e. satisfaction, trust, WOM)**, high WTP and PI	-Lowest value perceptions and outcomes, average cost perceptions
BELIEFS		
-**Overall strongest beliefs**: farmed fish is handled, guaranteed, safe, tasty; wild fish suffers pollution, heavy metals, parasites	-**Stronger beliefs about farmed fish**: easier to find, cheaper, more controlled	-Neutral, low-strength beliefs

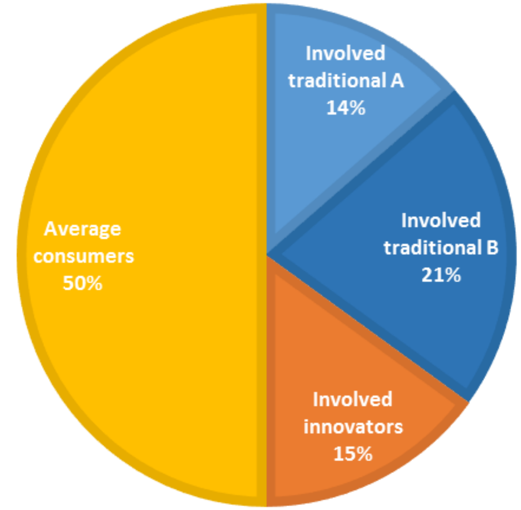
GERMANY



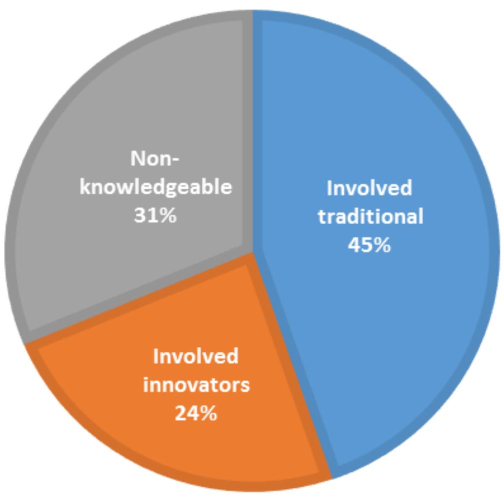
ITALY



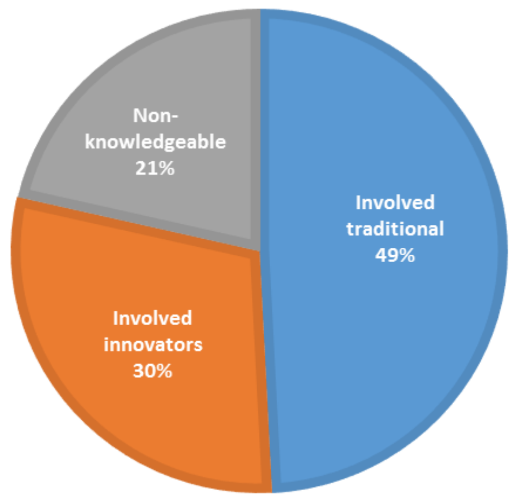
FRANCE



UK



SPAIN



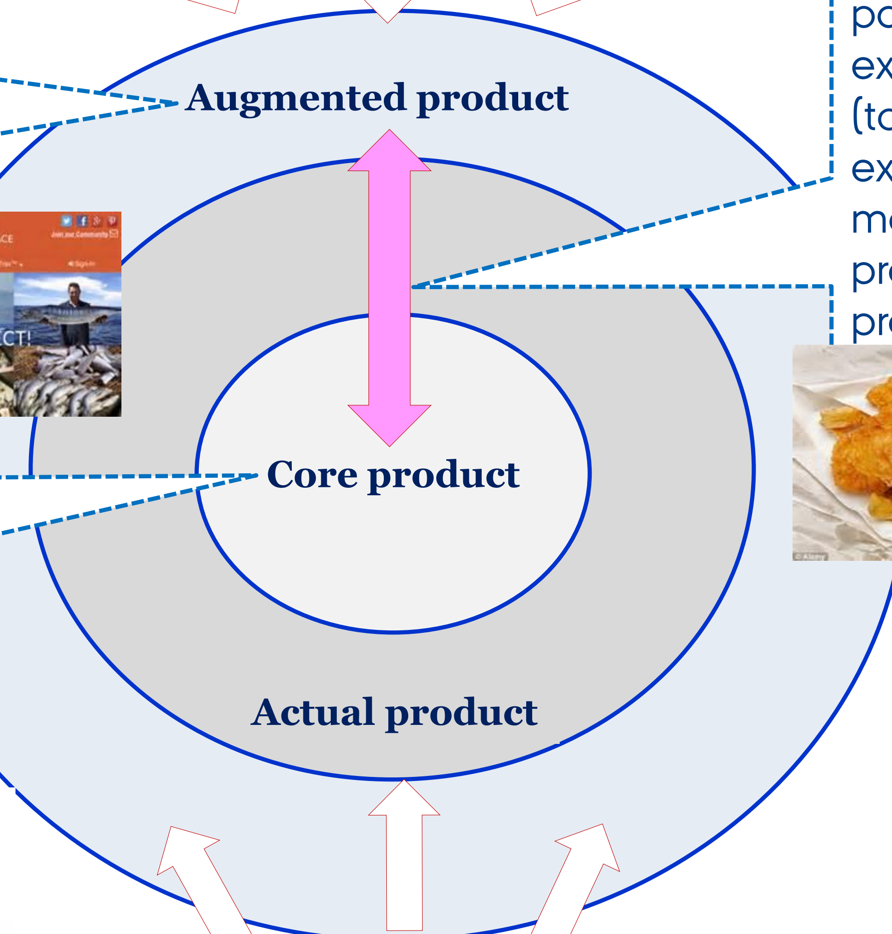
CONCLUSIONS

IMPORTANT QUESTIONS THAT NEED TO BE ADDRESSED

What are consumer trends relevant for fish innovations & Quo Vadis consumer demand?

How do consumers interpret messages about nutritional quality, healthfulness & eco-friendliness and how effective they are?

How can (product positioning-based) expectations and later (taste-based) experiences be matched in a way that promotes consumers' product acceptance?



To which extend can 'responsible' product positioning be combined with improved taste?

What kind of insight is needed to create a fish product and a market position that fully deliver the benefit and sells it in a believable way?

Consumer insight in support of the New (Fish) Product Development process

THANK YOU!