SR682 Opportunities for brown crab processed products in selected European markets - trade perspectives

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June 2015

978-1-906634-88-9

Opportunities for brown crab processed products in selected European markets - trade perspectives

Report produced by

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This report is an output of Acrunet project Activity 5.

Date: June 2015

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1. Introduction

- This research is an in-depth review of brown crab processed products as seen from a trade perspective.
- The research is produced as a specific output of the wider Acrunet Activity 5 which seeks to understand the wider system of brown crab practices from production to consumption.

2. Rationale and requirement[1]

- Initial research conducted within Activity 5 suggested a number of macro developments affecting the industry:
    - Three countries represent the main brown crab markets on the European continent and these are stable/declining, served by an ageing, affluent consumer group.
    - An emerging preference for convenience products.
    - Emerging markets in far-east growing rapidly opening direct and secondary market opportunities.
- Given these developments, specific opportunities and threats arise from the dynamic between major systems (live and processed):
    - Live system;
        - Opportunity - Growing demand for very high quality live crab (China).
        - Threat – Lower volume, lower quality crab left for domestic markets.
    - Processed system;
        - Opportunity – Potential market for processed crab product (younger consumers)
        - Threat – Alternative providers of processed crab (Norwegian processors, substitute species).
- In response, Activity 5 research was to focus on investigating opportunities relating to:
    - New niche markets in existing European markets (UK, France, Ireland, Spain).
    - Added value processed crab product.
    - Younger consumers.

3. Aims and objectives[2]

- Previous research, concerned with consumer perceptions of added value brown crab products, suggested very specific opportunities for processed product within 'under 35 year' and '35-50 year' age groups, in particular contexts. These contexts included selected Spanish regions; retail/food service in eastern France; and in UK food service.
- Added value processed brown crab is defined here <u>more specifically</u> as *brown crab that requires no additional preparation (e.g. pate's, ready meals, other meat based products) and excludes products containing shell and products requiring additional cooking*.

[1] Acrunet meeting Paris, 2013.
[2] Annex 1 Market Research Briefing – Brown Crab Trade Research, 27 March 2014

- The aim of this research is to *communicate consumer perceptions of added value crab products within the demographic group in all partner countries* and *establish attitudes and barriers towards brown crab and added value brown crab products in particular*.
- The research objectives are to:
    - Establish and scope out market opportunities in the prioritised target markets.
    - Establish the requirements of brown crab product to differentiate from competing products.
    - Allow specific product tasting and trade links to be created as supplementary opportunity to the generic research.
- The prioritised markets include Spain (retail market opportunity in selected regions), France (Foodservice market in Eastern regions), and the United Kingdom (Foodservice market).

4. Approach

- The approach to this research involved the following research tasks:
    - Communicate consumer perceptions of brown crab products.
    - Communicate available product range.
    - Establish market opportunities and brown crab product requirements, with structured questions on:
        - *Seasonality, product availability and pricing issues.*
        - *Interaction with other crab or shellfish products and relative pricing/margins.*
        - *Consumer demand (including promotions and seasonality).*
        - *Sustainability and traceability.*
    - Conduct product testing and establish trade links.
- The research was conducted between March 2014 and June 2015, and validated with industry between October 2014 and March 2015.
- The approach initially adopted in each priority market is described in Annex I Section 2 a, b, and c. The approach actually adopted in, and the findings from, each priority market are described in the following chapters.

5. Brown crab product opportunities in Spain

- The testing of processed products in the Spanish Market embraced four research activities, based on an iterative engagement with the Industry. Stage 1 involved compiling a catalogue of brown crab processed products (conducted within Acrunet Activity 6). Stages 2, 3 and 4 took a participatory approach with industry in Spain to explore opportunities for products from this catalogue in the Spanish market. This participatory approach combined Workshops, fair exhibitions, face to face interviews and product trials to provide a comprehensive analysis of opportunities relating in the Spanish market.
- This research included:

  STAGE 2: Research on commercialization of processed products from Brown Crab in the Spanish markets

  STAGE 3: Product trial with an Industry group

  STAGE 4: Consumers' research[3] developed jointly under Activity 5 and 6 of Acrunet.

These stages are described in turn in the remainder of this chapter.

5.1 STAGE 2: Spanish market acceptance of processed products from brown crab

5.1.1 Introduction

- There is a well-established market of highly processed products from brown crab as raw material –and in some cases with additional ingredients- especially in the United Kingdom and to a lesser extent in France.
- Building on the output of the "Sensory assessment of consumer packaging in brown crab products from Ireland, UK, Spain and Portugal" (Activity 6, Action 3), a catalogue of products with families and references was designed to carry out this task. The market is so specialized that the Products Catalogue, collecting all the products available in supermarkets for consumers, contains 57 references classified in eight ranges. It is worth noticing that products proceeded only from the UK market, (this was based on suppliers' interest in the Spanish market: the UK had considerable availability, the Rep. of Ireland had limited availability, and there was no response from France).

[3]. The report from Consumers research is included in the Activity 6 deliverables.

Caption: Brown crab processed products at the Conxemar Exhibition © CETMAR.

- The catalogue was sent to the companies present in the initial meeting to discuss, in rough lines, about the market possibilities of crab in Spain. We intended to obtain an assessment of each product to make an overall analysis afterwards. However, many factors may affect a product success; for example, a given product may be very attractive for the Spanish market but due to price or other reasons like packing with a short shelf life can hinder its introduction in our market. An evaluation on a basis of a 0-10 rating scale for instance, would really cover up the opinion about the product as well as its advantages and disadvantages.

- On the other hand, the wide range of products (57) in the above-mentioned catalogue complicate the collaboration with companies. In order to ensure an effective feedback it was decided to considerably reduce their number (for details on the methodology for objective assessment see below.

5.1.2 General remarks

- **UK & Spain - comparisons and contrasts**. Consumers in both Spain and the UK share a familiarity with processed crab products. However, UK processed products would be unfamiliar to Spanish consumers; they are convenience food, extremely processed and uncommon on the shelves of Spanish shops (which would generally stock basic processed products). In addition, they fulfil the tastes and social uses of UK consumers, which are remarkably different from the Spanish consumers' (who purchase crab to eat socially). Moreover, the offer of convenience food likely to be found in a UK supermarket is unlikely to be found in Spanish supermarkets. The product offer is tailored to the needs of the customer in specific markets. In countries like the UK there is a strong demand for convenience food – more expensive - while in Spain there is a preference for more simple and affordable products.

- **Current availability of products in Spain.** Almost none of the products in the catalogue are currently present in the Spanish market. Therefore, the processing and/or trading companies working with raw material from fishing are not familiar with them. Additionally neither the packaging, nor the net weights or the presentations are close to the range of products offered by Spanish firms.

- **Scope for product testing**. A number of factors hindered the scope for full product testing and assessment.
  - The wide product range and references available hinders a thorough analysis by our companies. In order to attract their interest and obtain specific answers we had to simplify the information from the catalogue and reduce the number of references.
  - In the particular case of products within the range of "legs" they are not at first under study; the reasons for this exclusion are related to a higher demand than offer and an alleged increase in sales would provoke the promotion of the reviled practice of "*clawing*". Being aware of the decline caused to populations of crab that practice is rejected by the European brown crab sector, which aims for a sustainable management of the species.
  - The product price information was limited, providing only the price to the consumer, rather than the price to the retailer. This meant that all product items were in a higher price bracket: all the items in the catalogue are expensive. Moreover, the price available for the assessment is not the price per kg but for sales unit, which usually refers to very low net weights –many of them under 200g. In general the prices per kg are very expensive for the Spanish market. The catalogue included retail prices. Those numbers are far from the price that producers offer to sales agents (supermarkets). The price for the processing company may be around 35-40% of the retail price and production costs are not in line with final sale prices. In order to know to what extent supermarkets or other selling entities can offer these products to consumers both sale prices and the prices from the supplier are required.The percentage margin that the sales agent assigns to the sale price does not have to be the same in Spain and consequently, the retail price would be lower. For assessment of the market feasibility information on final price is necessary; this price should be significantly lower and in line with the average purchasing power of the Spanish consumer.

5.1.3 Market Barriers

The general remarks frame the following issues:

- Short shelf life period: most of the products in the catalogue are chilled. It means that they have been packed using Modified Atmosphere Packaging (MAP) through different methods and the cooked ones may have been preserved by the sous-vide system. Consequently, the shelf life for each product is usually short and around four weeks at the most. The catalogue does not show this kind of information for any product.

- The logistics are complex because the stages of transport, storage and distribution already use a part of the life period. This causes a subsequent reduction in time for selling which is short, per se, and even shorter for products unknown to the Spanish consumers.

- Additionally, when a product exceeds the time allowed for sale in a shop shelf the commercializing company must withdraw it and destroy it. There are no possibilities of alternative strategies like special offers.

5.1.4 STAGE 2 Methods

The engagement of the Spanish industry has been a challenge due to the marginal relevance of brown crab in their basket of seafood product. Nevertheless, all the activities have been designed to attract their interest whereas gathering useful information and insights for the Brown Crab network. As an illustrative example, the "Market Research Briefing: Brown Crab Trade Research in Europe" was digested in a user-friendly format with the key information for the Spanish companies and afterwards used to guide the dialogue.

The launching of the Market research took place during an Acrunet workshop organized in February 2014. The attendees covered the final links of the seafood value chain, including importers, processors and retailers. After this meeting, the catalogue of products was sent by email to the participants, using a template with a scale to measure market acceptance.

LINEA	PRODUCTO	INTERÉS COMERCIAL. De 1 a 10 (1=bajo; 10=alto)
Cangrejo preparado	REF. 001 Seafood & Eat It Cornish: Dressed crab	
	REF.006 Seafood & Eat It Cornish: potted crab	
	REF.007 Seafood & Eat It: handpicked potted crab	
	REF.011 Asda: Extra Special potted crab	
	REF.015 M&S 2 Orkney crab gratins	
	REF.016 M&S: 4 mini dressed Orkney crab	

Caption: Template designed for assessment of the market acceptance, based on Seafish and Seafood Scotland Sensitivity Assessment for Acrunet Activity 6.

However, it became evident that the email strategy was giving limited results; many of the companies did not provide any answer, even after several phone calls. As a contingency plan, researchers from the Acrunet Consortium developed individual interviews with the companies at their working places, facilitating data gathering and exchange.

Even assuming this considerable effort, from the 15 companies contacted only 6 provided effective answers. In addition, all of them expressed their willingness to remain anonymous in this report. The respondents are professionals from different fields (marketing, commercial and quality), interviewed to address the following topics:

- The reasons to choose these products and reject the others, at range and references level:
  - Do you find them right?
  - Do you miss any other?
  - Which is the main barrier for commercialization?

- The selected products represent the ranges with more possibilities.
  - Do you think they are right and representative of each range?
  - Which are the most adequate commercial channels for each of them (Food Service, supermarkets, etc.)?
  - Specifically, which one is the most interesting for your company?

- Which would the main barrier for the commercialization of these products?
  - Price, preservation system (shelf life period) or a packaging different from ours?
  - Which range/product has more possibilities?
  - What should we do for success: changing net weight, looking for another preservation system (canning), designing products tailored to our market?

5.1.5 List of selected products

The discussion and assessment was grounded by the fundamental principle governing success in the Spanish market place; "the more cooked the worse the product". It should be noted that this principle is based on the Spanish practice of sending the quality brown crab material to the fresh/live market and material failing at this market being then channelled to the processed market. The overall assessment of the families of products could be summarized as follows:

- Dressed crab: this product would be difficult to commercialize initially. The potential commercialization channel would be Food Service. Only two or three products should be chosen among those containing just crab.
- Pates: Prepared Crab: these products would be difficult to commercialize. The potential commercialization channel would be Food Service. Only two or three products should be chosen among those containing just crab.
- Cakes: These products would prove unpalatable and were therefore rejected.
- Meat: These products have some commercial possibilities. This range of products follows the same reasoning as pates. They are scarce in our market and canned for sale.
- Claws: These products were rejected for the reasons described earlier (see general remarks). They are sold just in some Spanish regions (mostly Málaga, Jaén, Córdoba, Madrid and Toledo). The initial raw material in our country is the King Crab (*Calappa granulata*). The presentation is similar. It comes with the claws and the muscle base which is under the carapace when the animal is alive.
- Assorted shellfish: These products were absolutely rejected. They are intended for one person and do not adapt to our consumers habits. Our consumer usually buys these products in special occasions (Christmas, weddings and such like) to share with other people. However, in the country of origin the usual purpose is for only one consumer. There are previous unsuccessful experiences.
- In all cases the price would also be critical to choose a specific product

The number of products in the original list (57) was reduced by analysing adaptation to the habits and preferences of our consumers, price, appearance, organoleptic and visual data, and presentation. Therefore, four families of products were rejected (claws, claws, assorted shellfish and others), although to achieve a balanced selection we have kept at least one product of each of the three remaining families (dressed crab, pates an meat). At this stage of the research, the only sensorial information assessed was colour, texture (granular, liquid..) and general appearance. For other aspects see section 5.2 reporting on the products trial.

Following we list the most suitable products and the reasons justifying their selection:

Dressed crab	REF.001 Seafood & Eat It Cornish: Dressed crab
	REF.038 Sainsbury's TTD Dressed Scottish crab mouse
	REF.047 Tesco Finest Devon crab and cod bake
Pate	REF.051 Waitrose crab pate
Meat	REF.005 Seafood & Eat It Cornish: Fifty crab

DRESSED CRAB

REF.001 Seafood & Eat It Cornish: Dressed crab

- Price/kg: 46,83€
- The presentation is similar to the frozen whole crab in restaurants and homes. The texture is different because meat comes chopped but the distribution of the meat with the two different colours resembles the original.
- MAP packaging is also usual in the cooked whole crab in our markets.
- There is not any additional ingredient. It is only crab meat.
- Despite of the price (120g. cost 5, 6€) consumers may find it acceptable because the content has no wastes.

REF.038 Sainsbury's TTD Dressed Scottish crab mouse

- Price/kg: 34,13€
- Although 72% of the product, according to the ingredients list, is Crab Mousse and the rest is cheese, lemon, mustard and other we have included it because its appearance resembles the one in our retail markets.

REF.047 Tesco Finest Devon crab and cod bake

- Price/kg: 11,52€
- The affordable price as well as the 400 gr. packaging, which is very common in Spain for seafood, led us to choose this product. The ingredients list declares 4% crab and 18% cod, very appreciated species in Spain. Although the product is very processed with too many ingredients the appearance is very appealing and careful –although too big - and those features may attract the consumer.

PATES

REF.051 Waitrose crab pate

- Price/kg: 30,59€
- From the six types of pates in the catalogue this is the only reference with a similar appearance to the pates in our supermarkets.
- The rest, apart from being expensive, have cylindrical plastic packaging very different from those we use here. Additionally the texture is very far from the usual pates in our supermarkets.
- It might be necessary to eliminate certain ingredients far from our tastes like mustard and lemon.

CRAB MEAT

REF.005 Seafood & Eat It Cornish: Fifty crab

- Price/kg: 48,51€
- This product was chosen because it has a 50% proportion of white and dark meat and it does not contain any other ingredient.
- This characteristic makes it distinctive in this product range which suffers from apparent uniformity. The presentations are also similar so it is difficult to establish differences.
- Visually the texture is right. Apart from the high price the product may suffer from similarity to the Spanish Shellfish Salad (which looks the same but it includes different seafood ingredients).

5.1.6 STAGE 2: Results and analysis

All the companies considered the reasons to choose the aforementioned list of products as objective and justified. Focusing on the selected products, they pointed out some critical issues:

- Text in the packaging (not in the label) foster and remark some common issues from the country of origin (UK) but they may be less relevant for the Spanish market. Coherently, they illustrate and suggest preparations and dishes are widely known for the source market (UK) but not for the target market (Spain).
- Culturally speaking crab is a devaluated species in Spain if compared with other crustaceans.
- It seems that packaging in general is too big regarding the content and that the room required in the shop shelf is not a problem. UK supermarkets may have no difficulties but in Spain these products have limited room. Packaging would need to be adapted to fulfil the space requirements.
- The development of shop shelves in UK or France is different from Spain, as well as the logistics involved in chilled products:
    - In these countries end consumers, due to their higher living standard and food habits, are familiar with MAP packed products and minimally processed foods so their supermarkets shop shelves are much more noticeable than in Spain.
    - In Spain the refrigerated area (Positive Cold) is smaller and in case of increasing sales the companies in need of those areas have to pay bigger amounts.
    - Logistics is also more simple and affordable in UK than here; specific distribution infrastructures have been more developed. They have more cold stores, available distribution platforms and the room in supermarket cold stores is also bigger.
    - Distance is also an important issue linked to logistics. Distances in certain countries like Spain between factory and destination is greater than in UK. That gives the product an additional cost for distribution in Spain.
    - Finally although shelf life is an obstacle we should know the real margin we are discussing in every case. That is because the broker wants to know

first how and how often can the product be sold and which is the time period.

- In Spain, although seafood consumption habits mean shellfish is consumed throughout the year, the consumption of brown crab is seasonal, being concentrated during celebrations, especially Christmas.
- It is important to know the manufacture capacity and time of every reference. That is to know the amounts to be offered and the time taken for delivery to the customer.

In this framework, the main barriers for commercialization of brown crab processed products in the Spanish markets are:

- Price. However, as a high quality product targeted for "premium" market, price becomes a secondary issue. Areas inside supermarkets devoted to *delicatesen* products. *El Corte Inglés* has an area called *El Club del Gourmet* established now for several years. Other companies have copied it. Carrefour has *Espacio Gourmet* for the last three years. Gadisa Group has some shops called *Casa Claudio* where they sell these Premium products. These areas can adapt better to high prices and quantities
- Shelf-life period. The longer the period is, the bigger the sale opportunities are.
- Unnecessary packaging designed for end consumer (for food service), which raises the price. On the contrary, the restaurateur prefers a more practical format and a natural product without any additional treatment because the restaurateur then contributes with the added value[4].
- The rise in internet sales is another topic that could be analysed.

Regarding the products rejected, some of the companies stated that the cakes product range could be an alternative with a different formulation. For instance, it is possible to make a burger from crab but as any other burger, adding other ingredients, which follow our market's preferences. That contributes to reduce the price to make it affordable. The advantage is that Spanish consumer already knows fish Burger from hake and other species; the previous experiences would help to choose the product in the shop shelves, instead of being unnoticed or needing a special promotion to attract the consumer's interest.

Beyond market acceptance, the industry assessed which channels are the most suitable for every product. Generally, all of them may be introduced in any channel as long as they adapt the format and packaging to the needs. This said, there were divergent opinions including the following:

- Food service. References Ref.038 and Ref.047 would probably be the worst valued in Food Service because they are too processed –many ingredients-; there is no room for the restaurateur to leave his/her own mark. Only crab meat (Ref.005 and Ref.001, although the last one is not only meat) would be commercialized in Food Service. These allow the chef to add the value and the base is the product.

[4]. The catalogue only include consumers' products, since this was the target of Action 3 under Activity 6.

- Retail. We must remark that although all UK supermarkets have shop shelves for convenience food, it is also true that every supermarket chain is specialized in certain target consumers. So as we can see in the analysed products the cheapest ones are designed adapting to supermarkets which are used to more affordable products and vice versa with the most expensive ones.
- Their current presentation makes them suitable only for hyper and super markets remarking that: they would be sold in big supermarkets with high competition and availability in the shop shelves and they would not be sold in small supermarkets without enough room or tradition of selling them.
- Consumers going to the *delicatesen* products area will not be swayed by price.

Building on the previous results, we asked the companies which products would be of commercial interest for them. The different selections reflect their target markets:

Meats REF.001 *Seafood & Eat It Cornish: Dressed crab* (in another format) and REF.005 *Seafood & Eat It Cornish: Fifty crab*. As a processing company the most interesting are products to be used as raw material to produce other items in line with our market.

- The most interesting references are REF.001 *Seafood & Eat It Cornish: Dressed crab* and REF.005 *Seafood & Eat It Cornish: Fifty crab*; they are both suitable for Christmas an also other celebration periods. Particularly Ref.005 could also be interesting in summer to be used in a salad but we should study a more adequate format.
- The most interesting is REF.001 *Seafood & Eat It Cornish: Dressed crab*.
- For Food Service :
  Dressed crab. REF.001 Seafood & Eat It Cornish: Dressed crab
  Dressed crab. REF.038 Sainsbury's TTD Dressed Scottish crab mouse
  Meat. REF.005 Seafood & Eat It Cornish: Fifty crab
- For hypermarkets:
  Dressed crab. REF.001 Seafood & Eat It Cornish: Dressed crab
  Meat. REF.005 Seafood & Eat It Cornish: Fifty crab
- My company does not work with these products but we could be interested in dressed crab. It is a good raw material with a good presentation. It offers a wide range of possibilities to make different preparations.

For the aforementioned products, the market barriers analysed earlier were specified:

- In the Spanish market there is not such a great difference in quality –purchase level- of wholesalers. There should be more affordable products for general supermarkets and more expensive products for the Food Service market.
- A foreign presentation and an inadequate packaging may stop the consumer from buying to an extent that a short shelf life period may be insufficient.
- All these products are almost delicatessen and expensive, apart from being presented in small net weights that would make them unnoticed in our shop shelves. They would have to compete with bigger and well-known formats (400 grams).
- Consumers would not buy these products, not only for price reasons, but also because they will not risk trying something new. The product on the shop shelf does not work

on its own otherwise, it would be dead. In order to attract consumers' attention there should be marketing campaigns.

The full report [available on request in English and Spanish] details the individual replies to the questions detailed in 5.1.4.

5.1.7 STAGE 2: Conclusions

1. Reasons used to choose the products as well as the specific considerations and obstacles for commercialization are considered right for all the companies.

   Additionally, feedback suggested other factors that could reduce the market acceptance of these products:

   - The texts in the packaging –not the ones in the label- are not universal and promote consumption in their own countries but not in others like Spain.
   - In Spain, the brown crab is less valued than other species in our gastronomy.
   - Packaging in general terms is too big regarding the content; the room available in our supermarkets for these products is smaller than in UK.
   - The development of the shop shelves in countries like UK or France is different from those seen in Spain as well as logistics regarding chilled products.
   - Consumption habits in our country regarding crab are seasonal and linked to certain periods like Christmas.
   - Critical information: capacity and production time of every reference; to know which quantities can be offered and the delivery time are key factors to open sales channels.

2. The main barriers for market penetration are price and shelf life period although it is not clear which is the most important. The commercialization channel is linked to the following issue: for wholesalers the price would be the biggest problem while in premium areas where there are high quality products the price would be set aside to be replaced by the shelf life period.

   In Food Service the current formats are expensive and unnecessary. They do not add any value to the product. There should be more practical and affordable formats.

3. From the selection, the most attractive product for the companies consulted (noticing there is not unanimity) is *REF.001 Seafood & Eat It Cornish: Dressed crab*.

4. Marketing channels: in general they all may get into any channel, if they adapt to the formats and packaging required in each case. Even within the UK market, products adapt to the consumers profile.

   Being offered with the current presentation the only possible channels would be hyper and supermarkets depending on availability on shop shelves.

   They could be suitable in general for Food Service as long as formats and presentations are modified –cost reduction-. Meats (Ref.005 y Ref.001) would be especially interesting for Food Service. Ref.038 and Ref.047 would be certainly be the least feasible products for Food Service.

5. These products hardly have precedents at our sale points. Consequently the final consumer may not trust them particularly if prices are high. The product in the shop shelf does not work on its own so it requires support with promotional campaigns.
6. Regarding the opinions about the five products selected there is great agreement although every case has interesting details to bear in mind.
7. The changes and strategies to follow in order to introduce these products in the Spanish market are:
    - Searching for alternative preservation methods like canning and not just keeping MAP exclusively.
    - Adjusting prices, they are expensive for the Spanish market.
    - Designing tailored products for our markets is a critical factor.
    - Support to products at the shop shelf. Promotion campaigns.
    - Going to specialized shows like *Feria Gourmet* held annually in Madrid.

The iterative engagement with the industry has allowed us to set the landscape for the market penetration of processed brown crab products in Spain. Aiming for the optimization of resources and synergies in the European Brown Crab value chain, the Acrunet Consortium decided to give a step forward in the market research, developing a product trial. This task allowed a deeper analysis as well as the validation of the results of the research on market acceptance, providing the industry valuable and applicable outputs.

5.2 STAGE 3: Product trial with Spanish Industry Group

The market research - Spanish market acceptance for processed brown crab product- suggested that further tasks would improve the outputs. Building on the Acrunet network and the results described in 5.1 the Consortium decided to organize a product trial.

- The selection of products was made basing on the deliverable of Activity 6, Action 3 about sensorial evaluation of products processed from crab.

- The criteria and reasons for the selection are described in the Spanish market acceptance of processed products from brown crab (5.1).
- The list of selected products (5) was sent to the producers in UK and the trial was organized with the products from the companies interested in the study and sent the samples (3).

- Frozen products from the same range were included in the trial due to the actions taken within Activity 5 where we are developing a Consumer's Study and to the contribution of samples from The Blue Sea Company.

- CETMAR would like to thank the support from Seafish and Seafood Scotland, and especially the work of Clare Dean (Marketing, Seafood Scotland) to ease and assure this action focused on the introduction of new products from crab into the Spanish market.

5.2.1 General overview

The session was held on the 25th March 2015 and there were six firms represented. The companies' information will not be disclosed by their express requirement. Other companies were invited and despite their interest, they could not come due to busy schedules. Nevertheless, the participating firms are representative and significant for the Galician and Spanish fisheries sector.

The trial included six products: three were refrigerated and three were frozen. The products were the same but with different preservation and packaging systems. As they were processed from different manufacturers, there were differences also in their appearance.

The order of tasting was alternative starting with a refrigerated product and following with the equivalent in frozen. With the aim to include additional ingredients pate was the third product to be tasted.

Each participant had a template for each product to fill in a series of questions about the following aspects:

- ✓ Organoleptic factors
- ✓ Packaging
- ✓ Logistics and distribution
- ✓ Socioeconomics
- ✓ Other

Regarding sensorial traits, the participants were asked to take into consideration what consumers would think in general and leave apart their own opinions.

Caption: Product trial of brown crab processed products at CETMAR facilities, March 2015. Acrunet project.
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The list of products to be tasted was the following:

- Seafood & Eat it Cornish: dressed crab

- Seafood & Eat it Cornish: crab meat 50/50

- Young's seafood: pate

- The Blue Sea Company: dressed crab

- The Blue Sea Company: crab meat 50/50

- The Blue Sea Company: pate

5.2.2 STAGE 3 Methods

The design of the market research tasks was developed optimizing time and resources available. Therefore, some of the findings may be conditioned by the research design (for instance, the catalogue of product for the selection of the final products available for the trial due to logistical constraints). This said, the methodological approach for the product trial guarantees that the insights and results obtained are valid and useful for both ends of the European value chain.

The trial was guided by a template covering the following topics: organoleptic factors, packaging, logistics and distribution, marketing and others. The trial was conducted with six companies (see table) and for each product each topic was evaluated on a scale of 1 to 5 for suitability for the Spanish market. A table was produced showing the six responses for each topic, and the average response. Annex II provides further detail of the methodology.

Company/activity	Working area
1. On-line sales of products	Sales agent
2. Products processor	Sales agent
3. Trading	Sales agent
4. Trading	Sales agent
5. Wholesale distributor	Product manager
6. Products processor	Marketing

For each product and after filling its form we extract some partial conclusions. To have more detailed information for a specific question it is necessary to analyze the answers and the average punctuation for that question.

The last section will establish some Global Conclusions not only for each product but also for the whole ranges of products.

5.2.3 Results

A summary of the results are presented in table 5.1. Detailed results and analysis are provided in Annex II.

Table 5.1 Summary results for product testing trials (average scores for all six participants, where score 1 = inappropriate, score 5 = very suitable)							
No	**Question**	**Product**					
		Prepared crab		**Crab meat**		**Crab pate**	
		chilled	**frozen**	**chilled**	**frozen**	**chilled**	**frozen**
	Organoleptic						
1	General appearance (apart from format and packaging)	3.5	3.5	3.7	3.5	2.3	2.2
2	Texture	4	4	4.3	4	2.1	2.3
3	Odour	4.2	4	4.3	4	2.7	2.5
4	Colour	3.8	3.8	4.3	4	2.5	2.5
5	Taste	4.2	4.2	4.3	4.3	2.1	2.3
	Packaging						
6	Net weight	3.5	3.2	3.5	2.8	3.3	3
7	Shape	3.5	3.2	3.7	3.7	3.1	3
8	Material	3.8	3.5	3.7	3.7	3.3	3
9	Do you think the packaging should be modified in certain aspects to make it more commercial?	Yes	Yes	No	Yes	-	-
10	Packaging weight/size ratio	4	3.8	3.8	3.7	3	2.8
11	Do you think that the packaging net weight/size ratio needs too much room and that causes competitiveness in the shop shelves?	No	No	No	No	-	-
12	Appealing label for consumers	4.2	4	4	3.7	2.2	1.7
	Logistics & distribution						
13	Is it a suitable product for Food Service?	3	2.3	2.7	2.8	2.5	2.5
14	Is it a suitable product for medium size supermarkets?	3	3.6	3.3	3.2	2.5	2.3
15	Is it a suitable product for big wholesalers?	4.2	3.6	4	3.3	2.7	2.3
16	Is it a suitable product for *Premium* areas inside big wholesalers?	4.5	3.8	3.8	3.5	2.5	2.8
	Marketing						
17	Is the product suitable for sale at any time of the year?	3.8	3.5	3.2	3.2	2.7	2.5
18	Product adequate for sale in any geographical area?	3.2	2.8	2.3	2.7	2.3	2.3
19	Do you think it is necessary a promotion campaign to launch the product?	4.3	3.8	4.3	4.3	2.5	3.3
20	Is the product suitable for Spanish consumer?	3.8	3.3	3.3	3.2	1.5	1.5
21	Apart from the price and considering just its features would it be competitive in comparison with other convenience food products already set in our shop shelves?	3.8	3.5	3.7	3.3	2	2
22	Quality-price ratio	2.6	2.1	2.7	2.2	2.2	1.2
	Other (see Annex)						

5.2.4 STAGE 3: Analysis and conclusions

1. Tasting was developed with specific participants from specific companies. The same products made by other companies would certainly be evaluated in a different way concerning certain issues because packaging, formats and so on are a producer's choice. However, the specific assessment in every case can provide very useful conclusions, which are applicable to the whole product range from which the product is selected.

2. The most usual preservation system for this range of products in the UK is refrigeration. A very short shelf life period would hinder the commercialization largely. However in the UK market (albeit with a lower presence) we can also find the same products but frozen and with a longer shelf life period that enables the commercialization and introduction in other markets. Therefore, it is proved that the freezing system applied to the processing and distribution of these products is perfectly feasible and that the industries of the sector have the choice to use it but it is not a technical barrier.

3. The organoleptic quality of all the products both refrigerated and frozen except for pates is very high. They have a great quality. On the contrary, all the companies seem to dislike the pates, which they think have no potential to enter the Spanish market.

4. Regarding packaging:
    - 4.1. The net weights of all products are insufficient for the Spanish market. They should be properly reviewed if they are to seek entry to the Spanish market or to other possible target markets.
    - 4.2. All of cases are considered quality products and expensive for our market. In consequence, the presentation, the design of the format and the quality of the packaging material must have the same quality so as not to disappoint the consumer's expectations. All the refrigerated products (except for the pates whose samples came in bulk) had a great quality packaging very well evaluated. On the contrary, frozen products with a clear organoleptic quality, were packed in commercial formats which were very poorly evaluated because they were neither attractive at all nor in line with the quality of the product.
    - 4.3. Packaging would be among the main commercial barriers in the case of frozen seafood whereas for refrigerated it is among the last. Products that are expensive for the Spanish market (or others) cannot have a low quality packaging.

5. Concerning logistics and distribution:
    - 5.1. These products are neither adequate for Food Service nor for medium supermarkets. They would be suitable for big wholesalers and Premium areas inside big supermarkets.
    - 5.2. More specifically when asking about distribution channels all the answers focus on specialised gourmet (small shopkeeper), distribution firms and to a lesser extent, retailers.
    - 5.3. The Spanish network of coldstores for frozen products is much larger than for refrigerated products. To the same extent, the number of processing/trading companies of refrigerated products is much smaller than the frozen ones. Therefore logistics for refrigerated products is more difficult than for the frozen ones. As an

obstacle for commercialization, logistics problems recede when considering frozen seafood opportunities but they recover the importance for refrigerated seafood products. In one of the products, logistics was the most voted even above prize and shelf life period.

6. With regards to marketing:
   - 6.1 In every case, both refrigerated and frozen, the product would need a promotion campaign of support.
   - 6.2 Depending on the product, there are certain possibilities of commercialization throughout the year without seasonality. There seem to be more possibilities for the frozen products. In addition, due to the regionalist condition, a given product would be more successful in one region than in others.
   - 6.3 With the exception of pates, products are considered adequate/suitable products for Spanish consumers regarding organoleptic quality apart from other factors.
   - 6.4 In general, these products could compete in an acceptable way with other ready-to-eat products already present in our market.
   - 6.5 In all cases, the quality/price ratio is not suitable for the Spanish market and it means a major obstacle for commercialization. In fact, from all the suggested barriers for commerce price is usually the first one.

7. In summary regarding the main barriers for commercialization:
   - 7.1 Refrigerated. Price and shelf life are the main obstacles for refrigerated products although logistics is important due to the failures in the distribution network. Packaging recedes because the products under analysis had an attractive appearance.
   - 7.2 Frozen. The main obstacles for the introduction of these products in other markets are firstly the price and then the packaging due to the lack of quality of the packaging in the assessed samples. Shelf life and logistics barriers recede in the face of this.

Finally, two main remarks summarise the product trial:

- Quality is optimal. Apart from the specific case of pates, the organoleptic quality of all the products is optimal. In fact, it does not mean any obstacle for commercialization neither for frozen nor for refrigerated products. That is due mainly to the simple formulation in line with Spanish market without ingredients that have a low gastronomic evaluation among the products chosen for the tasting.
- Prices are considered inappropriate and expensive although they could be right for specialised gourmet (small shopkeeper) and *Premium* areas of big wholesalers, which are the only feasible environment as long as prices keep high. That fact determines that the tons to commercialize are limited and that the packaging must have a quality on pace with the product, the price and the place where it is sold.

6. Brown crab product opportunities in France

6.1 Introduction

- The research exercise in France focussed on the following steps the supply chain French brown crab:
    - Retail (distribution) and catering of brown crab products
    - Consumption of brown crab products
- The exercise sought to describe and characterise practices in relation to these steps, identify issues and recommend actions. This was undertaken at a national level, and to in more depth at the North East region level to explore this regional dimension more explicitly.
- The North-East of France is subject to special analysis as this is a less traditional region of consumption - a low-consuming region of brown crab, like the rest of France - and is geographically proximate to the centre of Europe.

6.2 Method

- For retail (distribution) and catering, the approach sought to engage retail (distribution) and catering professionals directly.
- The methodology was primarily qualitative and used face-to-face and telephone survey. At a national level:
    - Preparatory face-to-face or telephone interviews were conducted with managers of traditional fishmongers, seafood managers of supermarkets and cash and carries, and restaurateurs.
    - A telephone survey was then conducted of 50 fishmongers, 50 supermarket chains seafood managers and 50 restaurant chefs offering seafood menus.
- In order to provide a regional perspective, the 150 outlets were divided among the five French Advertisers Union regions in proportion to the population. Moreover, the large supermarkets were divided between the seven main chains in proportion to their sales areas in France.
- For consumption of brown crab products, the approach sought to engage consumers directly.
- The methodology was primarily qualitative and involved interviewing consumers via a consumer blog. However, with a large number of bloggers, the goal was to identify trends

in attitudes and behaviour. A total of 64 bloggers were selected on the basis of their profile and gave their opinion over the period of one week.

  - Two categories of consumers were analysed according to their consumption level (non- consumers or light consumers on the one hand and heavy consumers on the other).
  - The sample was compiled so as to ensure national coverage (5 French Advertisers Union regions), whilst overstaffing for the North East region (33% of the total sample) made it possible to analyse the features of this region in further depth. An adjustment was then made for take the whole of France into account with normal region distribution.
  - Two age brackets were studied, one for those under 35and the other 35-50 years.

- The research exercise undertaken by *Via Aqua* (external consultants) for FranceAgrimer and was conducted between October 2014 and May 2015.

6.3 Results and analysis

6.3.1 Retail (distribution) and catering of brown crab products

- Lower numbers of respondents at a regional level allow us to only consider data as trends. Especially since on some issues, notably for those involving meat-based products, an important proportion of respondents expressed no opinion. Differences in trends between the North-East region and France are highlighted.

<u>Product availability at selling points</u>

- The importance of each crab presentation format (live, cooked, claws, flesh) being widespread is *the same as it is at the national level*, and the same across hypermarkets, fishmongers and restaurants. That is:
  - Brown crab products are presented differently at selling points (live crab, cooked, claws, meat).
  - Brown crab is present in one or more retail situations. Brown crab meat is not very widespread.
  - In hypermarkets, regular presence of live crab, cooked and claws. However, there is almost no crab meat.
  - In fishmongers cooked crab and claws are available, with a little less live crab, a lot less crab meat, but more than in hypermarkets.
  - In restaurants duplication of presentations is lesser than the previous circuits. Supply is generally live crab, with less cooked, claws and meat.
- Permanent availability of products: as with the rest of France, brown crab is not always permanently available in the region (particularly live). There is weaker availability in the restaurant industry, but not at any significant level.
- Sales trend: trends are similar to those across France – shift towards cooked crab - with the exception of live crab (this is stable in the region compared to the decline in national sales).
- The availability of tanks for live crabs is somewhat less than the rest of France: the North East is the least equipped region.

- Cooking for the sales outlet: as with the rest of France, cooking is widely performed in fishmongers and a lot less in hypermarkets.
- Extraction of crab meat for restaurants: as with the rest of France half the surveyed restaurants extract the meat themselves (a practice that is considered costly in labour) and the trend is to replace this with imported fresh meat (extracted manually) which is very competitive in terms of quality.
- Crab meat as raw material for fishmongers: as with the rest of France, brown crab meat is used primarily to carry out prepared catered food and buy virtually no ready-made crab meat based products.

Origin and suppliers

- The origin and suppliers of brown crab to the North East region is not significantly different to the rest of France (see Table 6.1).

Table 6.1 The origin and suppliers of brown crab to the North East region

	France	UK	Rep of Ireland	Norway	Other	Don't know
Hypermarkets	46%	9%	32%	16%	14%	7%
Fishmongers	69%	13%	20%	2%	7%	7%
Restaurants	62%	6%	23%	4%	2%	13%

Quality

- Brown crab quality is, on average, judged better in the North East region. In hypermarkets and fishmongers, quality of live crab is considered the same as elsewhere in France i.e. quality is weaker due to crabs not always being complete and the mortality risk. Cooked crab, claws and meat are better rated. In the restaurant industry, the quality of whole crab and claws is satisfactory (same assessment for France overall); whilst meat is better - rated.

Price

- In the North East region, perspectives on price are similar to those across France. That is:
    - In retail distribution: Prices are much higher for cooked than for live crab. But on balance, the prices for live crab and cooked crab are deemed correct. In contrast, prices for claws and crab meat are considered high. Price developments in recent years are seen as relatively stable for hypermarkets and fishmongers, with a more marked stability for cooked meat.
    - In restaurants: The price of high-quality meat (30-40 Euros/kg) is considered high. Price developments in recent years are seen as being between stable and increasing (50%-50%) for all outlets.

Brown crab Tourteau vs Crabe designations

- In the North East region, as in the rest of France, the term ‘tourteau’ (brown crab) is considered superior to crabe – an important competitive asset for brown crab. See Table 6.2.

Table 6.2 Brown crab designations (France overall)			
Sales outlets judging ‘tourteau’	Better than crabe	Same as crabe	Worse than crabe
Hypermarkets	55%	34%	11%
Fishmongers	49%	47%	4%
Restaurants	66%	34%	0%

Products sold

- Seafood platter: In the North East region the presence of this product is much as it is nationally. Across France, alongside base products (live or cooked brown crab,whole or half, claws), the seafood platter is a highly-demanded classic in distribution, with which brown crab is often associated for its good value for money. 90% of fishmongers and hypermarkets offer it. 60% of restaurants from our sample also offer it, which makes it the leading brown crab product in the restaurant industry.
- Brown crab-based dishes in restaurants: in the share of different recipes offered the profile is similar to France overall (53% whole brown crab and platter, 30% ready-cooked dishes, 15% hot or cold starters)
- The most successful products according to the sales outlets: whilst the successful products are more or less the same, the scores differ from the national ones. Claws and ready-made dishes are better ranked; live brown crab and seafood platters are less well ranked than France overall. See Table 6.3.

<table>
<tr><th colspan="9">Table 6.3 Most successful products according to the sales outlets</th></tr>
<tr><th></th><th>Live crab</th><th>Crab cooked by outlet</th><th>Vacuum-packed cooked</th><th>Crab claws over stall</th><th>Self service crab claws</th><th>Brown crab in seafood platter</th><th colspan="2">Brown crab meat or crab meat-based product</th></tr>
<tr><td>North East</td><td></td><td></td><td></td><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td>Hypermarkets</td><td>20%</td><td>0%</td><td>7%</td><td>60%</td><td>7%</td><td>7%</td><td colspan="2">0%</td></tr>
<tr><td>Fishmongers</td><td>0%</td><td>25%</td><td>8%</td><td>67%</td><td></td><td></td><td colspan="2">0%</td></tr>
<tr><td>Restaurants</td><td colspan="3">18% whole crab</td><td colspan="2">0%</td><td>27%</td><td>0% starter</td><td>55% main course</td></tr>
<tr><td>France</td><td></td><td></td><td></td><td></td><td></td><td></td><td colspan="2"></td></tr>
<tr><td>Hypermarkets</td><td>48%</td><td>9%</td><td>13%</td><td>36%</td><td>2%</td><td>5%</td><td colspan="2">0%</td></tr>
<tr><td>Fishmongers</td><td>20%</td><td>29%</td><td>13%</td><td>36%</td><td></td><td>7%</td><td colspan="2">2%</td></tr>
<tr><td>Restaurants</td><td colspan="3">11% whole crab</td><td colspan="2">2%</td><td>55%</td><td>9% starter</td><td>30% main</td></tr>
</table>

- Substitute products: With the exception of some restaurants who cite preserved crab or crab sticks as substitutes there are no significant differences with substitutes used across France as a whole. That is:

- For retail (distribution), two products that are largely dominant as substitutes are shrimps and another kind of shellfish: Spider crab for hypermarkets (but is a false alternative because it is not widespread), and spider crab or langoustine (Norwegian lobster) for fishmongers.
- For restaurants, the solution is the same in reverse order, firstly another sort of shellfish (spider crab, lobster, langoustine) and then shrimps.

<u>Attractiveness of brown crab for sales outlets</u>

- Attractiveness of brown crab is generally ranked lower than across France as a whole.
    - In hypermarkets: attractiveness is lower for all supply.
    - In fishmongers: attractiveness is lower with the exception of claws (which are better appreciated).
    - In the restaurant industry: there is no significant difference national ranking except for meat being considered less attractive.
- Figure 6.1 illustrates the North East profile and the very enviable position of the North-West in terms of attractiveness.

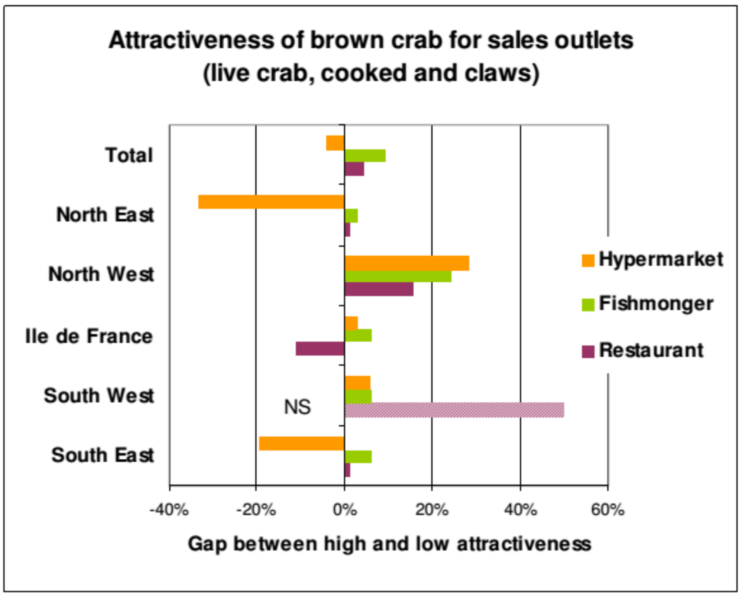

Figure 6.1 Attractiveness of brown crab for sales outlet by region

<u>Potential levers and handicaps</u>

- Potential levers and handicaps in the North East generally reflect those across France overall (see Figure 6.2), that is:
    - French origin and sustainable fishing are recognised as assets (noting, however, that 25% of respondents expressed no opinion on sustainable fishing).
    - The communication gap is significant (information on brown crab and Point Of Sale display which many consider insufficient).
    - There may be difficulties in obtaining delivery of the desired products.
    - Finally, there is no real expectation of new products, the majority of professionals are satisfied with existing supply.

- However, one region specific difference was the critical position of fishmongers on information and Point Of Sale display than at the national level.

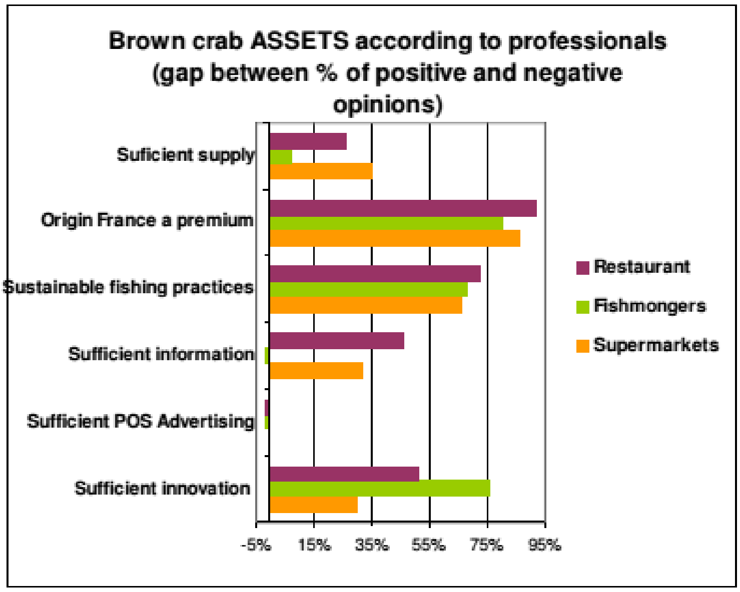

Figure 6.2 Brown crab assets (France overall)

<u>Attractiveness of crab meat-based products</u>

- The attractiveness of crab meat based products in the North East, when compared to France overall (see Figure 6.3), reveals that for:
  - hypermarkets, products are less attractiveness.
  - fishmongers, products show no significant difference.
  - the restaurant industry, products are more attractiveness than at a national level (especially for starters).
- For retail (distribution), unlike in the restaurant industry, the proportion of opinions is weak and the results are insignificant (75% of respondents express no opinion on the matter).

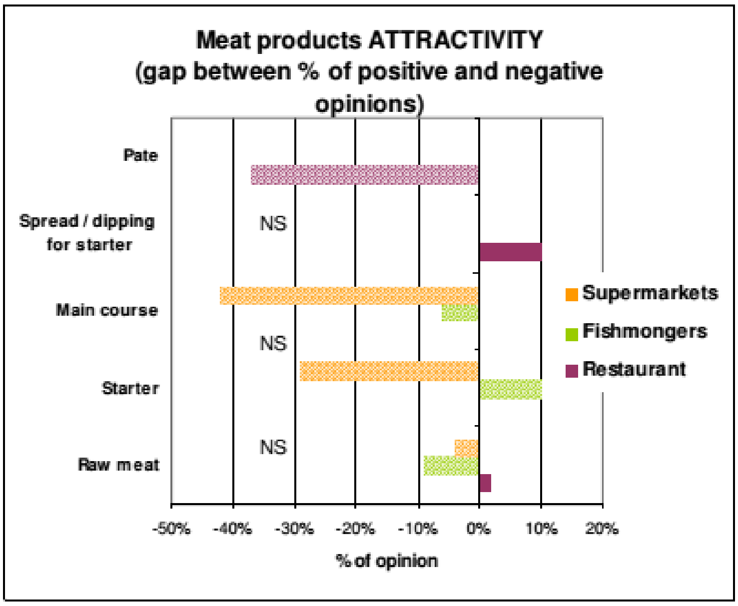

Figure 6.3:Attractiveness of crab meat-based products (France overall)

<u>Strengths and weaknesses of brown crab</u>

- The strengths and weaknesses of brown crab in the North East are comparable to strengths and weaknesses for France overall (Figure 6.4). That is:
    - The distinctive and fine taste of brown crab is recognised as being a major asset.
    - The low quality is mainly due to brown crabs not always being well filled in the shell. This almost exclusively concerns live crab.
    - Hypermarkets and restaurants are sensitive to the vulnerability of live crabs.
    - Cooked crab is more expensive but taking into account the mortality risk of live crab (and the filling hazards) makes cooked crab very competitive.
    - The price is perceived rather as a handicap even if it is generally acknowledged that value for money is good.
    - Preparation and shelling at home are a handicap for selling.
    - Filling problems, mortality and preparation risks favour the development of cooked crab and claws for distribution.
- **One should note, however, a more marked North East regional deficiency in advertising according to fishmongers than at national level.**

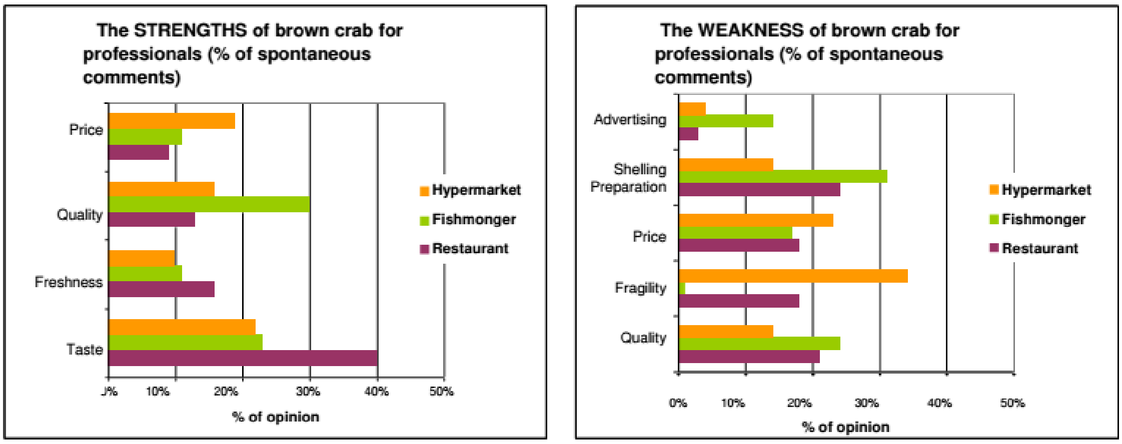

Figure 6.4 The strengths and weaknesses of brown crab (France overall)

6.3.2 Consumption of brown crab products

- This section analyses the differences in consumer behaviour and attitudes towards brown crab in the North-East and the rest of France. The comparison is made through raw data synthesised in the graphs and using the qualitative comments from respondents. In the graphs, the items are classified according to the decreasing importance of the gap between the North-East region and the rest of France.

<u>Visits to sales outlets</u>

- The visits to sales points to purchase seafood products in the North East did not differ significantly from the national average.

- Overall in France, brown crab is bought mainly in stores and primarily in supermarkets, more rarely at fishmongers or at markets (see Figure 6.5). Purchases take place primarily at fishmonger stalls andmore rarely at self-service counters (fish counters, catering, frozen or preserved). Buying directly from fishermen is rare even if it is considered as the very best, and holidays are often involved.

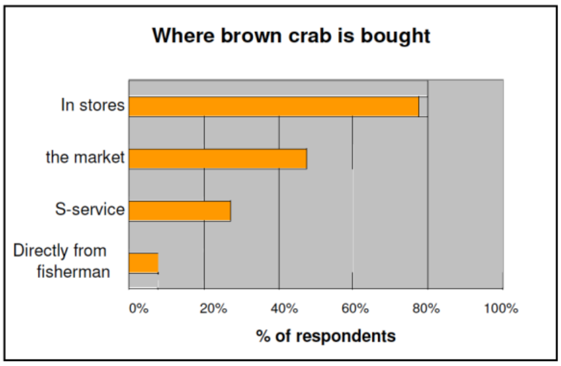

Figure 6.5. Where brown crab is bought.

Perception - Brown crab in comparison to other fish products

- The taste aspect is still predominant as a more pronounced feature of brown crab compared to other seafood products.
- Nutritional benefits and secondarily the value for money appear to be more important in the North-East as specific features of brown crab.

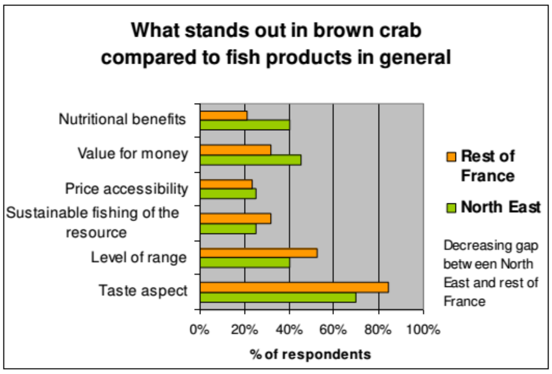

Figure 6.6. Pereptions of brown crab.

Purchasing

- Purchased brown crab products
  - Live and cooked brown crab are still dominant. Preserved and brown crab meat are more often purchased in the North-East.
  - There is more diversity in purchases to be found in the North-East.

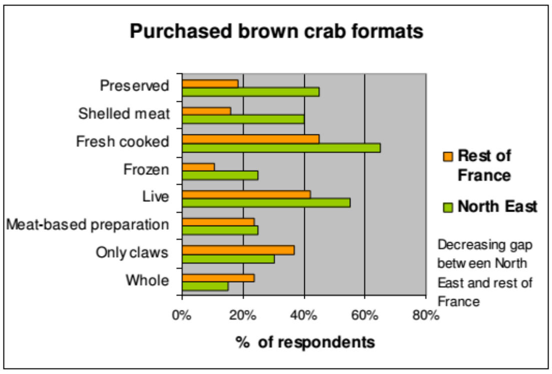

Figure 6.7. Purchased brown crab formats

- Where brown crab is purchased
  - There is a greater diversity of where brown crab is sold - markets and stores - for brown crab in the North-East. This concerns the fishstall in particular, there is no difference for self-service which is not often frequented for brown crab in all cases.
- Pre-planned purchasing or decided at the place of purchase
  - In the North-East purchases tend to be planned in advance while in the rest of France, purchasing on site dominates.
- Interest in supply at the sales outlet
  - Cooked meat, platters, fresh preparations (potted crab...) are those products considered the most attractive (in contrast to the rest of France)
  - Fresh meat is appealing (as in the rest of France)
  - Live crab has low and decreasing interest (in contrast to the rest of France)

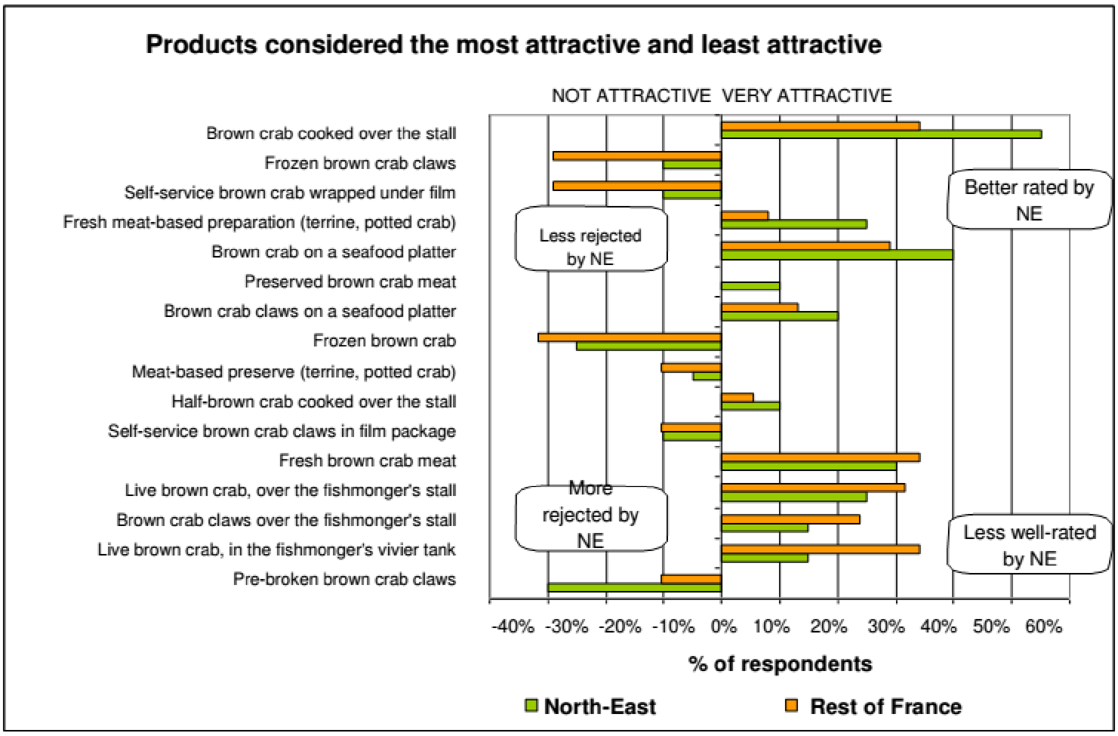

Figure 6.8. Attractiveness of brown crab product formats.

<u>Consumption</u>

- Where brown crab is consumed

  - The hierarchy of where brown crab is consumed in the North East is essentially the same as the rest of France (see Figure 6.9).

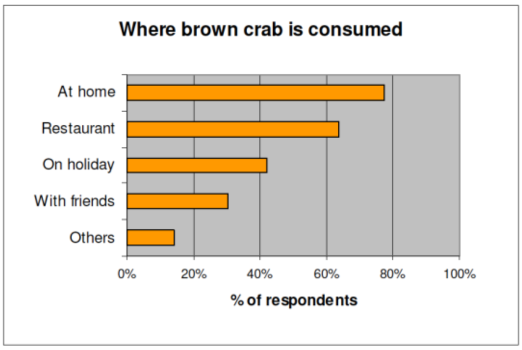

Figure 6.9. Perceptions of brown crab.

  - Across France as a whole consuming brown crab is not an everyday act. There is usually a big occasion that warrants it (holidays…) and/or that facilitates it (by the seaside). In the case of ordinary consumption at home, this would take place during the weekend or with special visitors, family or friends. A restaurant would have to be specially chosen (not every restaurant can offer brown crab) and it is known in advance that the bill will be higher).

- In contrast with the rest of the country, friends and holidays feature more heavily in the North East region.

- Whilst across France the vast majority (82%) of consumers believe that brown crab is a festive product, this is more so in the North East region.
- However consumption at the restaurant mirrors the experience across France. That is, that eating brown crab is an exceptional experience often associated with gourmet restaurants. Many dishes are available, including crab meat-based starters, in salads, in soups… But the most classic choice is the seafood platter. At a restaurant, expectations are high, in line with an often festive occasion being the reason for visiting an above average restaurant (brown crab is not found in ordinary restaurants), and in line with the price. This may explain disappointment with freshness, cooking, taste, quantity, or shelling problems.

Product evaluation

- The evaluation of brown crab meat-based products is shown in Figure 6.10.

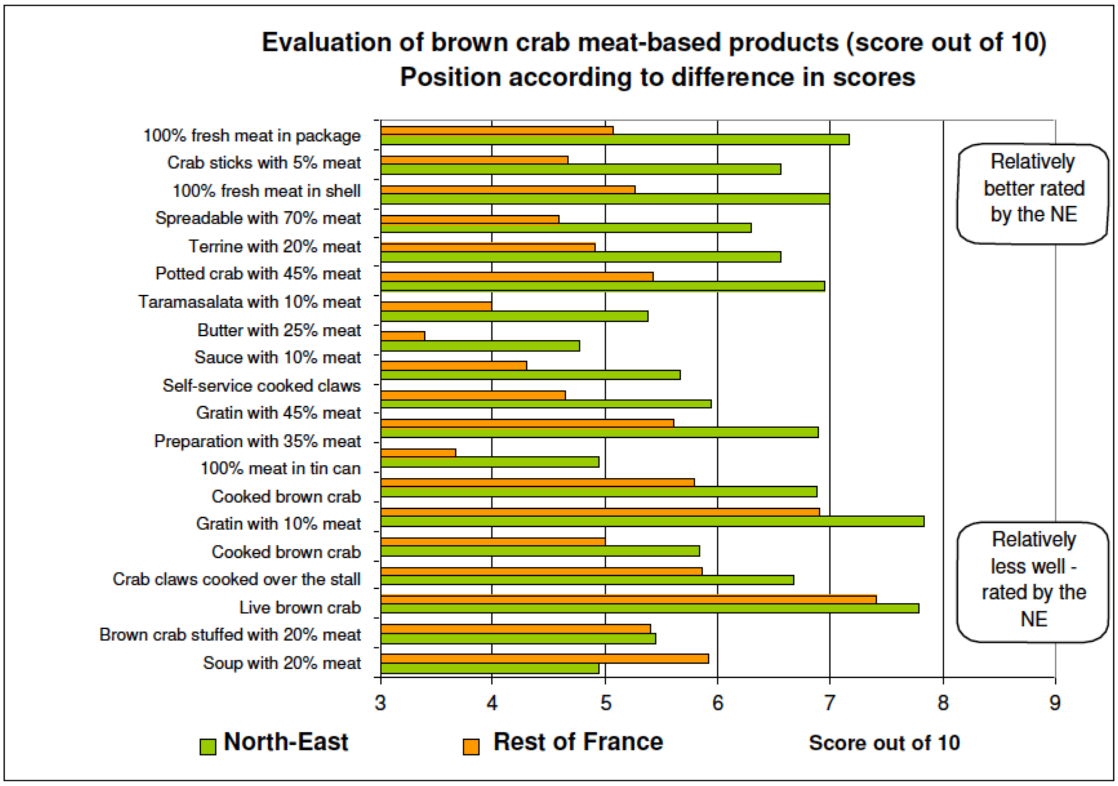

Figure 6.10. Evaluation of brown crab meat-based products.

- The scores are higher on average in the North-East.
- The two favourite products remain cooked meat and live brown crab.
- In the North-East, value-added products (100% fresh meat in packaged tray, 100% fresh meat in the shell, but also potted crab, gratin...) are relatively better-rated than in the rest of France where more traditional products are preferred (soup with 20% meat, cooked claws over the fish stall).
- Preserved meat obtains good scores across the board as a very convenient product.

- Crab sticks are preferred in the North-East and are also part of the products with a strong rankings gap between North-East and the rest of France.
- It is noted that restaurants offer crab sticks as an alternative to brown crab.

Preference for brown crab meat based products

- For France as a whole, there is a clear preference for 100% meat (see Figure 6.11)
- Compared to the rest of the country, this is even more so in the North East region.

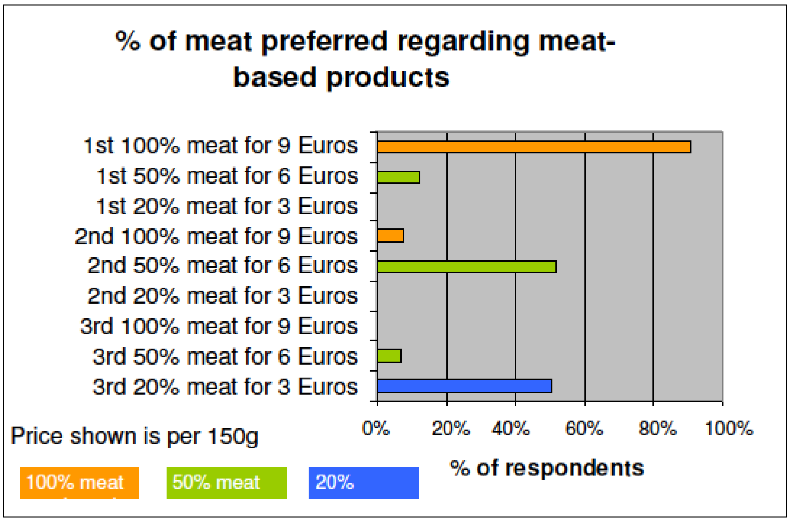

Figure 6.11. Percentage of meat in brown crab meat-based products.

Point of sale for brown crab meat

- In France generally self-service fish counters and deli seafood can sell brown crab products, particulalry the self-service fish counters. The reason for this is the logical preference for a fresh product that stands for superior quality.
- As with the rest of France, there is a preference for self-service at fish counters but this preference is more pronounced in the North East region.

Shelf life of brown crab meat

- As with the rest of France, almost all respondents favour a fresh rather than a preserved product. The perceived fragility of crab meat suggests that preservatives are necessary if you extend the shelf life. The fine tase of brown crab may be impaired. The questionable quality of preserved crab meat attests to this. In the North East region there is a very dominant interest for fresh meat (90%).

Expectations

- As everywhere in France, products that are more user friendly, but that do not affect the quality of brown crab nowadays.
- A trend in the North East region, more than elsewhere, is to imagine products that are different to traditional supply (value-added products such as crab sticks, sweet-salty, recipes with charcuterie, frozen, preserved). This may be indicative of less of an

attachment to classic brown crab and a more marked opening for a more innovative supply than in the rest of France.

6.4 Conclusion

<u>Brown crab retail (distribution) and catering in the North East region</u>

- There is not a very marked difference between the North-East and France, on the basis of the sales outlets in our sample. The difference is probably to be found more in demand than in supply, other than less available vivier crab tanks.
- The quality is rather better appreciated by professionals.
- Live brown crab is less at the forefront.
- There is a preference for more processed products (claws compared to whole crab, ready-cooked dishes compared to seafood platters).
- The attractiveness of brown crab for the sales outlets is particularly low.

<u>Brown crab consumption in the North-East region of France</u>

- The overall good scores and positive comments show an interest for brown crab in the North-East.
- While, like everywhere in France the traditional products (cooked and live brown crab) are at the top of the charts, live crab is however relatively less well-liked and conversely value-added brown crab products are better rated.
- More than anywhere else, in the North-East there would be an opening for more innovative products.
- In these conclusions, there is a lot of consistency with the accounts of distribution of the North-East.
- A risk to development objectives is a greater difficulty in turning this into demand in a competitive market, due to a lack of brown crab culture and despite interest being shown in new products.
- Overall:
    - There is no major difference between the North East region and the rest of France, although there appears to be much less knowledge of brown crab.
    - As everywhere in France traditional products (cooked and live) are preferred in the North East region; the live crab is however relatively less appreciated and in compensation, elaborated brown crab products are better rated (surimi in particular).
    - In the North East region more than elsewhere in France, there seems to be an opening to more innovative products.

7. Brown crab product opportunities in the United Kingdom

7.1 Introduction

- The testing of processed products in the UK food service market embraced three research activities, the second and third of which sought engagement with the industry. As with the exercise in Spain, stage 1 involved a review of the catalogue of brown crab processed products (conducted within Acrunet Activity 6) and a review of the consumer perceptions of brown crab products (conducted earlier in Activity 5). Stages 2 and 3 engaged UK industry to communicate consumer perceptions of brown crab products and explore opportunities for products from this catalogue in the UK food service market. This approach combined product trialling with face-to-face interviews to allow analysis of opportunities relating in the UK food service market.
- The aim of the UK exercise was to "allow specific product tasting and trade links to be created as supplementary opportunity to the generic research" and the scope of the exercise was defined as:
  - The whole of the UK with no further specific target geography.
  - The Food Service sector.
  - Value added products ONLY.
- Figure 7.1 illustrates the main steps in the supply of brown crab products from the brown crab producer (step 1) and the consumer (step 4). Step 2 (wholesale distribution) and step 3 (Food Service outlets) in this illustration show the target audience for this research exercise, with the latter group the primary target.

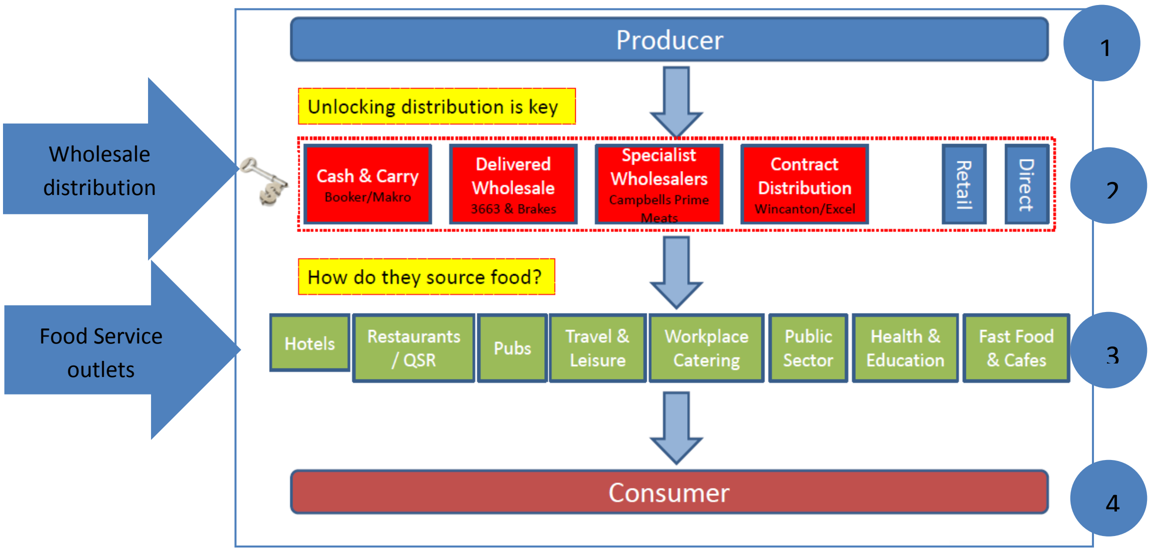

Figure 7.1. Schematic showing key steps in the Food Service route to market

7.2 Method

Stage 1

- A UK catalogue of all brown crab retail products had been brought together under Action 6 of Acrunet "Sensory assessment of consumer packaging in brown crab products from Ireland, UK, Spain and Portugal". The UK retail market had been one of the largest examples of new product development and proved the largest listings in fact across Europe. This provided a sound basis of existing product to compare to for this research.

Stage 2 (Research plan A)

- Stage 2 involved:
  a. Identifying 30 candidate food service companies (step 3 of the route to market) to form the target group for the research.
  b. Engaging the target group and recruit companies for the research exercise. This was undertaken by email and introductory note (one page brown crab briefing note).
  c. Conducting an initial quantitative survey to establish level of interest in brown crab products. This survey, based on 35 products chosen from the UK Catalogue, invited candidates in the target group to very simply indicate interest in each product "if the product were made available for the food service sector, would you choose to buy it to use on your menu and within your kitchens?" Responses were coded as either "yes, interested (=2 points)" or "no, not interested (=-2 points)". To evaluate the format and range of brown crab products preferred by food service outlets, a specific range of products were chosen. Products were categorised according to the differing levels of value added processing. Three main categories were defined (see figure 7.2) from one of the most basic products, whole cooked brown crab, to highly value added options such as brown crab linguine.

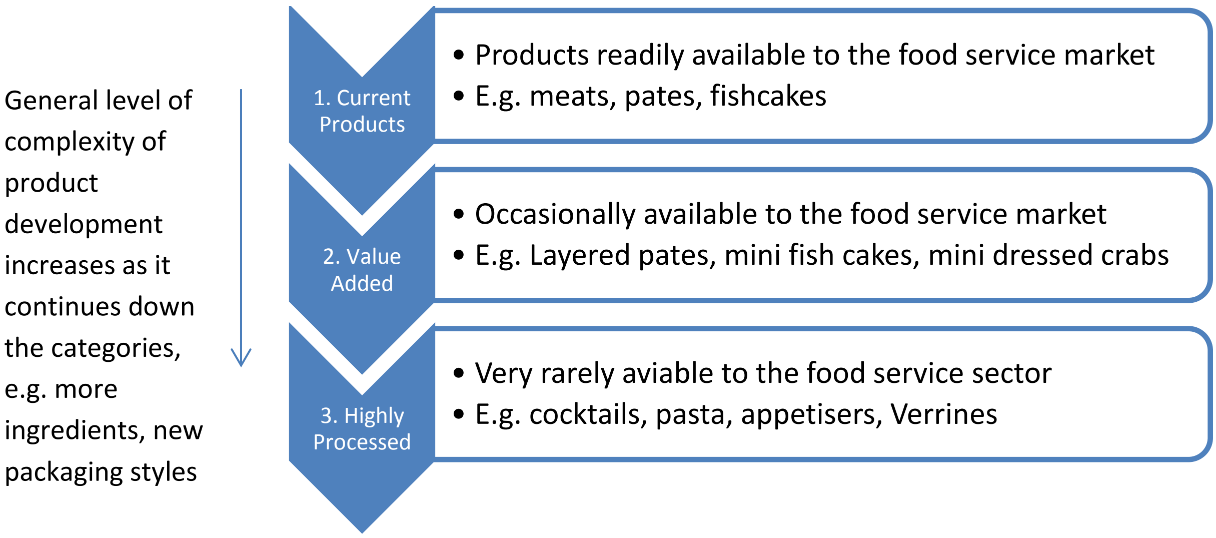

Figure 7.2 Schematic showing product categorisation

d. Conducting a subsequent qualitative survey, with more detailed questions, to explore attitudes to brown crab products. A target was set to engage 15-20 companies willing to carry out interviews about usage of brown crab.

- This survey used the following interview questions:
  1. Do you think there is more potential for brown crab on your menus? Is the market saturated?
  2. What are the biggest barriers to chefs using brown crab?
  3. Have you seen a significant change in demand for crab dishes?
  4. Based on research answers, provide samples for companies to use to allow product tasting and link opportunities identified with product suppliers.
- All the activities were designed to attract the interviewee's interest to gathering useful information and insights for the Brown Crab network. As an illustrative example, stage 2 of the Research Plan, the "brown crab one pager" was designed to highlight the positives and benefits a company might see from listing brown crab on their menu. Included in this, was the direct comparison to the success brown crab has seen in the UK retail sector.
- Stage 2 (Research plan A) gave limited results. Many in the target group did not respond to the email and cold call strategy, despite several follow-up phone calls. This led to the stage 3 of the research.

Stage 3 (Research plan B)

- Stage 3 of the research sought to approach direct buyers (step 2 of the route to market). As direct buyers to the brown crab industry, these contacts were seafood specialists, and had closer relationships with partners. It was hoped these factors would ensure more traction and full interviews to be carried out.
- A new target group was established, focussing on the leading Food Service distributors for the seafood sector. The research design (interview questionnaire) was slightly adjusted to reflect the new target group.

7.3 Results

- Stage 2 of the exercise led to the engagement of three food service outlets with the research. Two outlets fully engaged with the research and provided full responses (MacDonald Hotels and Resorts, and G1 Group). A further outlet (Fast Casual London chain, Wahaca) also engaged but provided only a partial response. Samples were requested by this outlet, and were provided to allow research to be carried out, but unfortunately the research questions but were never fully answered.
- Food service outlet interviewees (step 3 in the route to market):
  - **MacDonald Hotels and Resorts-** A group of 45 hotels across the UK, each with its own unique style from countryside to city. Food procurement is managed through a central purchasing policy with specified suppliers for some items. Menu

development is led by Regional Executive chefs, managing a group of 4 to 6 hotels each. Interview with Kevin McGillivray- Regional Executive Chef
    - **G1 Group -** The G1 Group is Scotland's largest independent and most diverse leisure operator, with a collection of over 45 venues, some large and some small. Outlets include restaurants, hotels, nightclubs, bars, cinemas and casinos. Although purchasing is undertaken by individual sites to ensure the right fit with the variety of outlets, central purchasing and support is available to help menu development. Interview with Joe Queen
- In stage 2, the engagement of the food service industry proved a challenge. This was due to the marginal relevance of brown crab in the entire basket of seafood purchased by food service establishments as well as against other competitor proteins.

- Stage 3 of the exercise was more successful. Two major operators with national coverage, M&J Seafood Ltd and Direct Seafoods Ltd, engaged fully with the research. This was perhaps unsurprising given their specialism as seafood distributors.
- The Direct buyer interviewees (step 2 in the route to market) were:
    - **M&J Seafood's-** The UK's largest independent seafood supplier, a member of the Fresh Direct Group. Through local branches and the UK's largest range of fresh, frozen and chilled seafood products, they service over 12,000 chefs nationwide. A varied customer base includes restaurants, hotels, pubs, contract caterers, education and quick service restaurants as well as supplying fishmongers and other wholesalers. Interview with Carl Fanthorpe Head of Fresh Fish Purchasing
    - **Direct Seafood's (Campbell's Brothers Fish**) - The Scottish branch of a nationwide fresh seafood supplier to the food service sector, with over 400 customers across Scotland. The national company consists of 9 regional outlets, run autonomously but with some central purchasing. They supply all types of catering establishments from Michelin starred restaurants, hotels, pubs, retail outlets, schools, colleges and universities to sports stadiums, and contract caterers across the country. Interview with Andy MacMillan, Business Director and Lyndsay Rae, Sales Manager

7.3.1. Quantitative results (responses to the UK Retail Crab products catalogue):

- The individual scores for each product by each interviewee are summarised in Figure 7.3.
- Individual scores for each product were aggregated across the sample to produce a total score for that product. The range of total scores for each category are shown in the Figures 7.4, 7.5, and 7.6.
- Finally the type of response profile provided by Food Service outlets and by Direct Buyers across the three product categories is shown in Figures 7.7 and 7.8.

	Food Service outlets			Direct buyers		
Product	**Interview 1**	**Interview 2**		**Interview 1**	**Interview 2**	**TOTAL**
Current						
Cornish Brown Crab	-2	-2		-2	2	-4
Claw Crab Meat	-2	-2		2	2	0
Whole Cooked Crab	-2	-2		2	2	0
Crab Pate	2	-2		2	-2	0
Crab Pate	2	2		2	-2	4
Crab & Prawn Fish Cakes	2	-2		2	2	4
Orkney Crab & King Prawn Fishcakes	2	-2		2	2	4
Cornish White Crab	2	2		2	2	8
Cornish Fifty Fifty Crab	2	2		2	2	8
Dressed Orkney Crab	2	2		2	2	8
White Crab Meat	2	2		2	2	8
						40
Valued Added						
Orkney Crab & King Prawn Layered Pate	2	-2		-2	2	0
Scottish Crab Claws	-2	-2		2	2	0
Crab, Chilli & Spring Onion Cakes	2	-2		-2	2	0
Thai Style Mini Crab Cake Bites	2	-2		-2	2	0
Potted Crab	2	2		2	-2	4
Cornish Dressed Crab	2	2		2	2	8
Cornish Crab Claws	2	2		2	2	8
Mini Dressed Orkney Crab	2	2		2	2	8
						28
Highly Processed						
Prawn & Orkney Crab Cocktail	-2	-2		-2	-2	-8
Spiced Crab Bakes	-2	-2		-2	-2	-8
Devon Crab & Cod Bake	-2	-2		-2	-2	-8
Crab, Rocket & Chilli Linguine	-2	-2		-2	-2	-8
Orkney Crab Cocktail	-2	-2		2	-2	-4
Chilli Crab Cocktail	-2	-2		-2	2	-4
Prawn, Salmon, Crab & Lobster Appetisers	2	2		-2	-2	0
Orkney Crab Crème Brulee	2	2		-2	-2	0
Devilled Crab Layered Appetisers	2	2		-2	-2	0
Crab & King Prawn Verrines	2	2		-2	-2	0
Crab & Crayfish Ravioli	2	2		-2	-2	0
Crab Gratins	2	-2		2	2	4
Dressed Layered Crab	2	-2		2	2	4
Crab & Prawn Terrines	2	2		2	2	8
						-24

Key :

Yes	
No	

Figure 7.3. Individual scores for each product by each interviewee.

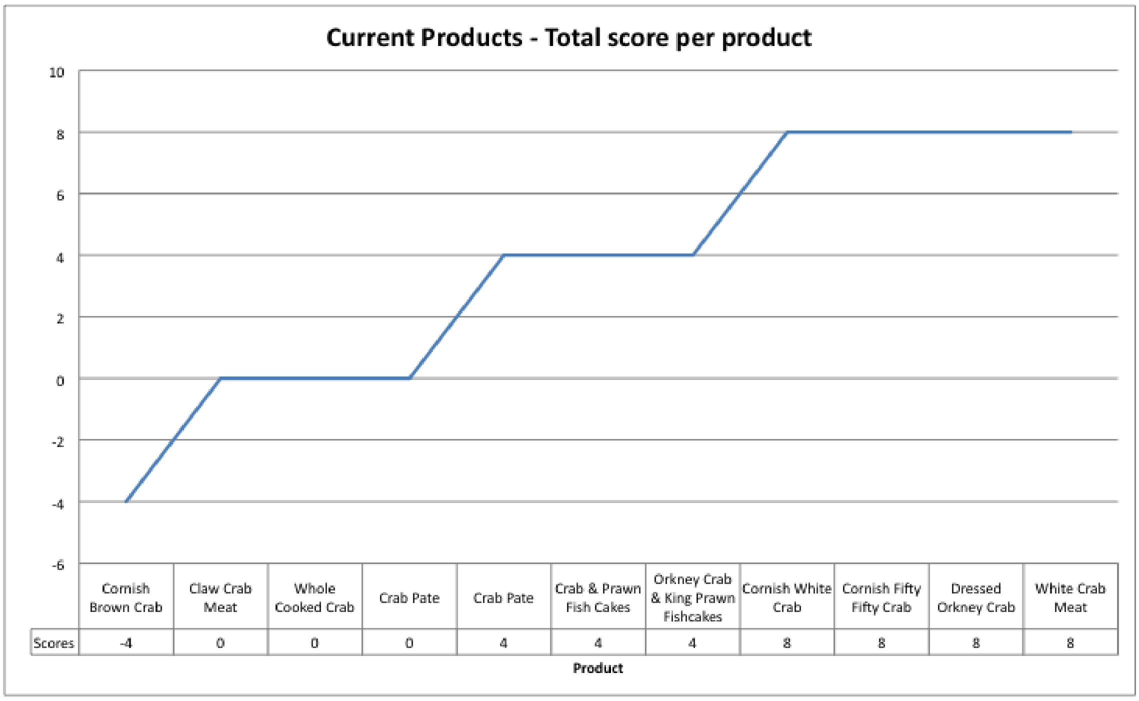

Figure 7.4 Range of total scores for current products

Figure 7.5 Range of total scores for value added products

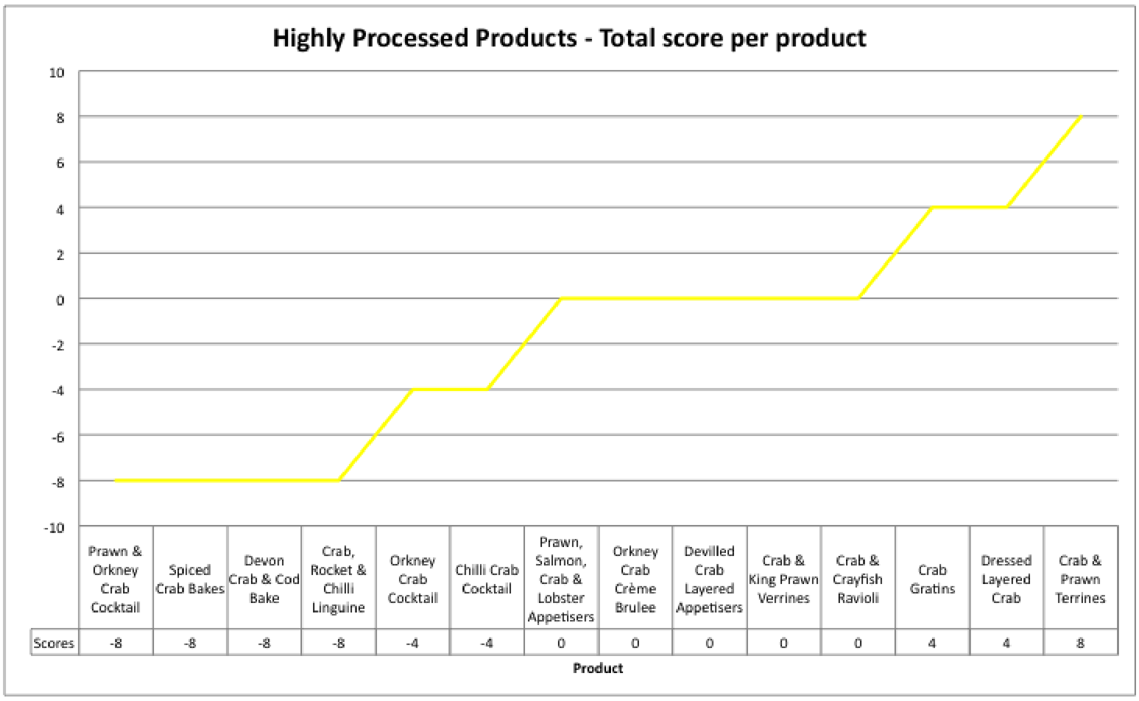

Figure 7.6 Range of total scores for highly processed products

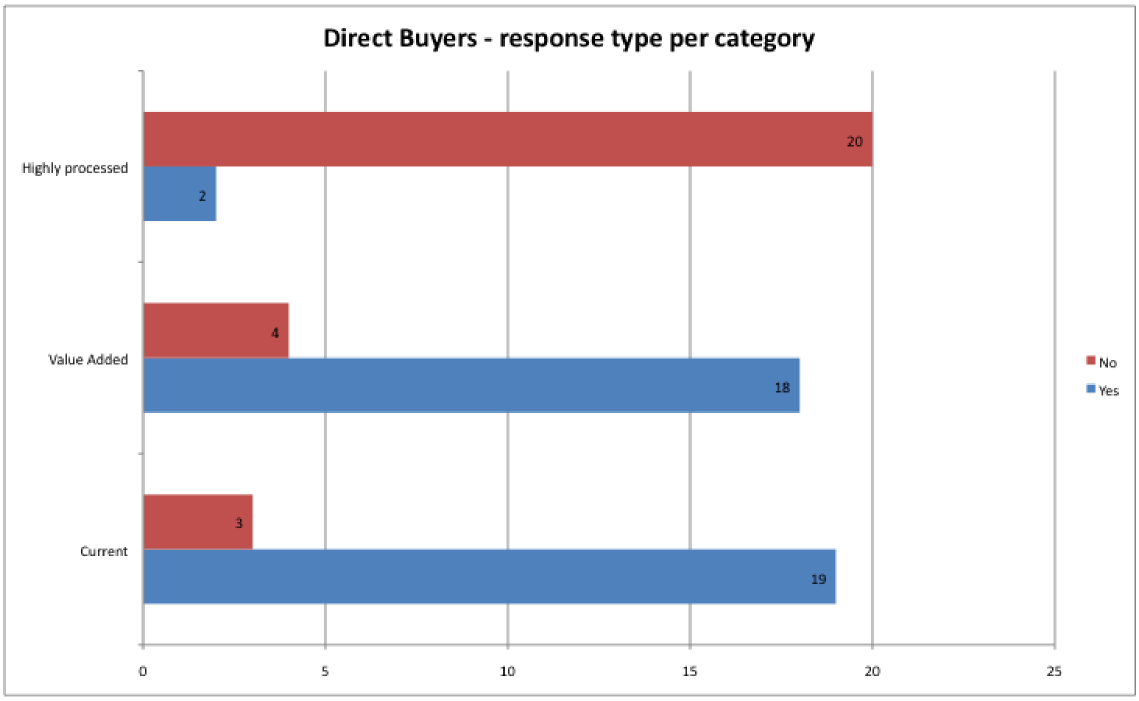

Figure 7.7 Type of response profile provided by Direct Buyers

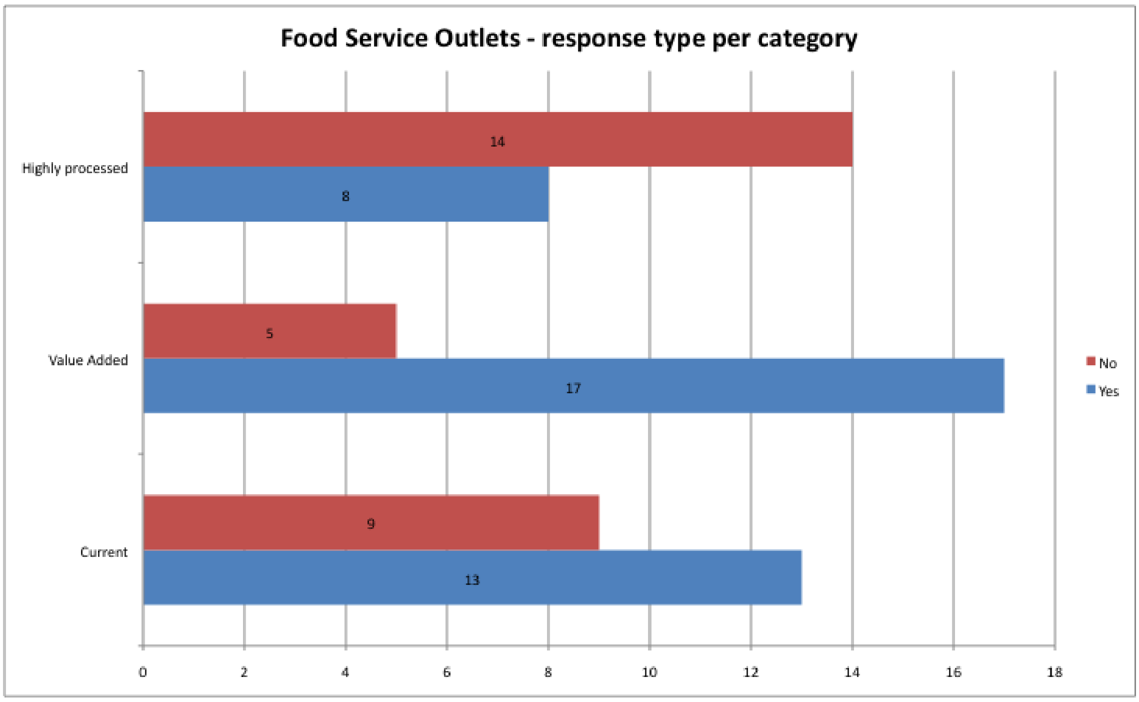

Figure 7.8 Type of response profile provided by Food Service outlet

7.3.2. Qualitative Results

Table 7.1				
	Direct buyer		Food service outlet	
Question	Interview one	Interview two	Interview one	Interview two
1. Do you think there is more potential for brown crab on your menus, is the market saturated?	• Yes. It's a great product, but needs to be better produced to match the skills in kitchens. In terms of other seafood, it is a significant player. • We currently buy 2,000 dressed crabs a week, mainly going into white linen cloth restaurants I imagine or for the most part. As a company ourselves, we sell only a few value added product lines. Added value is a way to interest chefs, to get them looking at products again and to help work with the skill set in the kitchen these days.	• We have around 20 products listed available to buy from handpicked to dressed crab, claws, cakes, meats etc. There is more potential for crab as a product through more variety, different products would go down well. • Fish orientated restaurants do tend to serve more crab, as they have the skills in house to handle product. So the opportunity for us lies in servicing the more generic outlets who currently don't buy the product for whatever reason.	• Yes more potential with products like the Verrines, which are quite trendy as a pre starter or to build into a tasting menu for example. I don't think it's saturated at all.	• Yes, lots more potential but chefs struggle with ideas of what to cook with crab. More value added products like we've just seen would really help chefs to put it on the menu.
2. What are the biggest barriers to chefs using brown crab?	• We struggle to get white frozen meat which might help the kitchens • Unpasteurised products shelf life is an issue for stock rotation due to levels of demand	• It's a supply issue rather than a demand barrier, if we have more variety we could sell more product • Supplies on a regular basis • Skills in the kitchens are not invested in and therefore don't always match the product format available • Still a huge amount of consumers not sure on the product	• Doesn't have a great shelf life • Crab is a premium product so needs to be put on the menu at a premium price. If this is not done carefully at the right level it can lead to low uptake from the menu and onwards to waste issues …it's harder to make brown crab dishes profitable.	• Crab is not a popular product amongst seafood as a whole and could do with a strong marketing campaign to support it. • Time for preparation and the skills required by chefs is the main barrier from a kitchen perspective. • Pasteurised white meat is ok, but fresh leads to issues. Pasteurised creates less waste, less storage and improves the safety of serving the product which in turn ensures less skilled required to cook it.
3. Have you seen a significant change in demand for crab dishes?	• Nothing significant although I think if anything, there is a slow growth trend of crab on menus, with room to move.	• Recently there has been a greater deal of enquiries for products to see if we stock more crab products. Retailers seem to be getting more adventurous and perhaps this is pulling through into the food service sector. Normally this is the other way round, the retailers taking a steer from food service, whereas for Crab, it seems to be the opposite.	• Crab is a popular offering within the seafood category for sure, but whilst it is already on menu, amongst all other dishes, it's still only the minority that go for it.	• Nothing significant to really mention no

7.4 Analysis

- The results highlighted inaccuracies in respondents' choices during the same interviews on similar products (e.g. Current Products graph, crab pate scores differ). This highlights the limitations in working with such a small sample, and how heavily the result can be relied upon.
- Overall the results of the scoring show a positive story for brown crab, over half, 59% of the retail products shown from the UK catalogue scored as having "opportunity for the food service sector".
- When looking at the Food Service outlets (chefs) alone, these responses highlighted a larger degree of opportunity for the vast majority of products shown, right from the existing products already available to the market, through to some of the most elaborate highly processed lines. These responses elicited a generally more positive view of the products than the responses from Direct buyers.
- In general however, the results do highlight a pattern that the more developed the product category, the less certain the responses become about the acceptability of a product as a food service listing. However there was only a minimal difference in scoring between the "current lines" and "value added products". See Table 7.2.

Table 7.2 Acceptability of brown crab products in food service		
Category of product	**Yes**	**No**
Current Lines	73%	27%
Value Added products	72%	28%
Highly processed products	39%	61%

- Interestingly, when looking at the most basic, unprocessed product -Whole Cooked Brown Crab, both Food Service outlets (chefs) said there was no opportunity for this product in their current businesses.
- Some of the results could be said to highlight an imbalance between what the direct buyers believe the food service sector want, and what the Food Service outlets (chefs) etc. do in fact want to use in kitchens.
- There were eight product lines where the thoughts of the Food service outlets (chefs) and those of the Direct buyers were polar opposite. This was more prevalent in the highly processed category where items such as Appetisers, Crème Brulee and Verrines were seen by Food Service Outlet (chefs) as exciting options, yet the Direct buyer interviewees believed they had no place on the market for food service.
- The products below scored the most extreme at both ends of the spectrum. For those products with the most advanced value adding, such as the Linguine, Bake and Cocktails, all interviewees considered these too far developed for a food service environment. The Food Service outlets (chefs) would prefer the ingredients and individual elements to make up the final dish for themselves. See Table 7.3.

Table 7.3 Brown crab products considered highly unfavourable and highly favourable	
Highly unfavourable products (scoring between -8 and -4)	**Highly favourable products (scoring +8)**
• Prawn & Orkney Crab Cocktail • Spiced Crab Bakes • Devon Crab & Cod Bake • Crab, Rocket & Chilli Linguine	• Cornish White Crab • Cornish Fifty Fifty Crab • Dressed Orkney Crab • White Crab Meat • Cornish Dressed Crab • Cornish Crab Claws • Mini Dressed Orkney Crab • Crab & Prawn Terrines

- The qualitative research highlighted four key barriers. Overall, all respondents agreed that brown crab has more potential and the market is certainly not saturated.

- Key barriers are as follows:
  1. The most significant barrier is the demand for crab from a consumer perspective. This was expected and is continue to remain. The barrier arises both from other seafood products and also more widely against all other protein offerings (e.g. red meat or poultry).
  2. Shelf life leading to waste issues. This is driven by either poor demand or premium pricing on menus.
  3. Skills in the kitchen do not match the products currently available to chefs.
  4. Little inspiration for menu development of the current products available to chefs.

7.5 Conclusions

- There does appear to be a desire for a greater number and wider variety of value added brown crab products within the UK Food service sector.
- More specifically, from this limited exercise it appears that high end outlets are satisfied with the current types of products available and that they use and that the opportunity exists for mid-market food categories where currently products don't match skills sets in the kitchen. For example, whilst white linen outlets may purchase live or cooked crab, mid restaurants are faced with meat options without the required kitchen skills opening up potential for pre-prepared products (not overly prepared).
- The opportunity lies with those consumers already buying into the seafood category and eating brown crab less often. For this project and subsequent work, it is important to recognise that a large number of consumers are switched off from brown crab, in fact seafood as a category and it is not these consumers that the opportunity lies with.
- If a serious effort was made to make inroads into UK food service, a larger scale initiative would be required. To ensure future new product development is accurate, further research should be commissioned on a much larger scale, with a statistically representative number of outlets.

- It's important that the development of products is done in an holistic fashion engaging operators at each stage of the chain (i.e. industry operators at steps 3 and 4 of the route to market). There is some evidence from this short study that a disconnect may exist between what Direct buyers believe Food service outlets might want to purchase and what chefs are directly saying.
- Any future research in this area should be carried out with a more appropriate methodology for engaging step 3 of the route to market (Food service outlets: hotels, restaurants, pubs etc.) to ensure results can be gleaned.
- It is not possible to comment on the scale of opportunity for brown crab products in UK food service. Considering the fragmented nature of the food service sector and the difficulty to measure this as an actual commercial opportunity, it is difficult to assess the opportunity against the possible investment required to develop greater numbers of value added products (especially as they are likely to be on a smaller volume scale). It will therefore be a difficult choice for industry as to whether this really poses a great deal of future business opportunity to invest in.
- There is a fine balance between new product development to generate this opportunity, and the risks involved which needs to be accounted for. This balance should be carefully considered before action is taken.
- Due to factors listed in this report, unfortunately the project has ultimately failed to deliver the original aim of the work; "allow specific product tasting and trade links to be created as supplementary opportunity to the generic research" and stakeholders should reflect on the need for this should an Acrunet II initiative be developed.

8. Conclusions and recommendations

Conclusions

- Although all three research exercises adopt different approaches, target different markets, and employ different methods, there are a number of broad themes that can be identified.
- All three reviews highlight market opportunities and further potential for brown crab products. These opportunities are very much niche (and this supports the conclusions drawn from the consumer attitudes research). Specifically:
    - **In Spain**, opportunities relate particularly to the premium retail sector and products from the UK, if price points can be achieved (UK products are of a comparable quality to fresh products). There are opportunities to challenge the consumer mindset over the quality of processed products, to provide raw material for processing companies in Spain, and to explore other conservation formats (canned).
    - **In France**, there are opportunities to expand secondary processed product; fresh brown crab meat with 100% or a high meat content in order to address impracticalities of brown crab and the difficulties faced by preserved crab meat. There is potential to offer brown crab that is easier to consume under the form of prepared meals (however not to the extent that the product is spoiled through too much processing or through becoming an everyday product).

    - **In the UK**, the food service opportunity lies in more mainstream restaurants, as current formats do not fit their needs. Outlets currently supplying brown crab are reasonably well served.
- However there are risks, some of which are quite formidable. In keeping with niche opportunities, pursuing these may yield very small volumes. In all cases demand for brown crab is constrained in that it represents a small part of the overall seafood offer, which in itself competes with other proteins (particularly as processed products move brown crab into the fast moving consumer goods bracket). More specifically:
    - **In Spain**, a range of initial market entry barriers exist for advanced processed products available in the UK. Important barriers relate to the perception of low quality crab and an expectation of low prices for processed products in Spain. Beyond this, barriers for UK products into Spain also include: high prices, limited shelf space and short shelf life; complex logistics, and appropriate packaging (including text suited to the Spanish market). Critically, the Spanish consumer associates processed products with low quality/low cost items.
    - **In France**, processed products are undermined by a dependence on imported material (non-French origin), and uncertain quality. The attractiveness of crab meat based products is mixed. A level of disinterest and price expectations (considered to be at the right level, or quite high in the case of claws) would suggest a risk of small volumes.
    - **In the UK**, shelf life difficulties (driven by either poor demand or premium pricing on menus) generates waste problems in food service. Furthermore the changing skills in the kitchen do not match the products currently available to chefs. In addition, there is little inspiration for menu development of the current products available to chefs.
- The above findings are constrained by a number of limitations that ultimately undermine any conclusion on the significance of the market opportunities These include:
    - Tentative engagement and collaborative working. The engagement with industry was tentative but without which the research would not have been completed. Nevertheless, there is also a sense that deeper engagement could have generated further benefit. The level of collaboration between partners was mixed. In some cases there was almost no collaboration, in other cases collaboration was intense, demanding and ultimately fruitful.
    - Limited scope and scale. All three exercises are exploratory and of limited boundaries (coverage, resources, timescale) and the findings are necessarily tentative.

Recommendations

- Industry feedback suggests future orientation should be on developing secondary (meat based) products in selected European markets.
- If further work in this area is conducted in the future, there is a requirement for:
    - Much greater engagement and collaborative working. This includes engagement with and from the industry to secure buy-in. It also includes engagement with partners conducting the exercise; not only in terms of the demands on co-ordination but also to ensure synergies.

- Appropriate scope and scale. If these opportunities are to be pursued, then a more thorough exercise should be conducted to ensure findings and actions arising are more robust.

ANNEX I

(MARKET RESEARCH BRIEFING – BROWN CRAB TRADE RESEARCH)

DRAFT

Market Research Briefing

Brown Crab Trade Research

27 March 2014

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1. Background

Brown crab sector and situation analysis:

- The live brown crab trade is showing growth in emerging SE Asian markets but stagnation in existing European markets

- The added value processed brown crab trade appears to be showing growth in European markets. This is particularly so in the UK, but also in some continental markets.

- Added value processed brown crab is defined here as *brown crab that requires no additional preparation (e.g. pate's, ready meals, other meat based products) and excludes products containing shell and products requiring additional cooking.*

- The existing markets for brown crab in Europe are generally held by an older demographic group.

- There appears to be potential growth in added value processing amongst a younger demographic group (defined as *individuals under 35 years, earning a wage, living independently in their own home, and purchasing their own food*).

- Task A tested this with consumer research via online study. This was conducted in 7 countries with the under 35 yr age group and with 5 countries with the 35-50 yr age group. This suggested very specific opportunities for processed product, in both age groups, in particular contexts: selected Spanish regions; retail/food service in eastern France; and in UK food service.

2. TASK B: Trade engagement in Spain, France, and UK

Objective:

i. Communicate findings from Task A and establish attitudes and barriers towards brown crab and added value brown crab products in particular;
ii. Establish and scope out market opportunities in the prioritised target markets via qualitative research with trade buyers
iii. Establish the requirements of brown crab product to differentiate from competing products (e.g. blue swimming crab, crab substitutes etc.)
iv. Allow specific product tasting and trade links to be created as supplementary opportunity to the generic research.

Market prioritisation and potential timing:

a. Spain - Retail market opportunity in selected regions – complete prior to Acrunet meeting in Lisbon (June);
b. France - Foodservice market in Eastern regions - complete by end July;
c. UK - Foodservice market - complete by August.

Methodology

In each target market, engage with trade to:

i. Communicate consumer perceptions of brown crab products (Task A)
ii. Communicate available crab product range - utilise UK catalogue of brown crab products (brown crab added value products)
iii. Establish market opportunities and brown crab product requirements, with structured questions on:
    - Seasonality, product availability and pricing issues
    - Interaction with other crab or shellfish products and relative pricing/margins.
    - Consumer demand (including promotions and seasonality)
    - Sustainability and traceability
iv. Conduct product testing and establish trade links

a. Spain

Engage with a 'foodies' group of national retailers in Spain and develop product testing based on their knowledge and expertise of both the Spanish market and the consumer preferences for seafood.

i. Communicate consumer perceptions of brown crab product	Workshop with 'foodies' group to review consumer research, including regional findings (Task A)
ii. Communicate crab product range	Analysis of UK catalogue of brown crab products, and other listings (brown crab added value products). Selection of approx. 10 products suitable for the Spanish market
iii. Establish market opportunities and brown crab product requirements	Workshop/interviews with 'foodies' group
iv. Product tasting and trade links	Product testing (physical test, package testing and survey research (thoughts, opinions, and/or feelings)) and sensory analysis (effective testing (objective facts), affective testing (subjective facts) and perception (biochemical and psychological aspects of sensation)). To conduct this versus competitive products which may include crab flavoured products.

b. France

Engage with **Food Service trade buyers** in North Eastern regions of France.

i. Communicate consumer perceptions of brown crab product	*Review consumer attitudes research and engage with trade and consumers through a blog or other means (Tender page5/6) [Pilot committee to re-adjust specification once contract awarded as follows]* *Focus on food service trade buyers, communicate attitudes research to target group prior to consultation to secure their opinion.*
ii. Communicate crab product range	*Not specified in tender [Communicate list of relevant processed products to target group (product list available from other Acrunet partners completed with product range available in French market)]*
iii. Establish market opportunities and brown crab product requirements	*Not specified in tender [Obtain feedback on preferred processed products which may hold potential for market entry]*
iv. Product tasting and trade links	*Not specified in tender [Review this requirement following above steps i-iii]*

c. UK

Engage with a range of seafood buyers and seafood category marketing managers in selected foodservice suppliers. Food service suppliers could include Brake Brothers, Direct Seafood whilst Food service operators (used by younger consumers could include a Hotel chain (e.g. Hilton), a Pub chain (e.g. Whitbread), a Contract caterer (e.g. Compass)

i. Communicate consumer perceptions of brown crab product	UK partners (Seafood Scotland, Seafish) to engage with and present a review of existing consumer research, including regional findings (Task A). Objective is to establish level of interest with target group.
ii. Communicate crab product range	Utilise the UK product catalogue from Activity 6 to demonstrate the range of possible products using Brown Crab as an ingredient with a view to stimulating interest in non-traditional products. Identify no more than 10 products of potential interest and suitable for the target market.
iii. Establish market opportunities and brown crab product requirements	Based on the outcomes of tasks above, to conduct more in-depth discussions with interested parties to establish the requirements of new product entry,
iv. Product tasting and trade links -	Product testing (physical test, package testing and survey research (thoughts, opinions, and/or feelings)) and sensory analysis (effective testing (objective facts), affective testing (subjective facts) and perception (biochemical and psychological aspects of sensation)). To conduct this versus competitive products which may include non-brown crab products (snow, blue swimming etc).

3. Timetable

Work stage	Tasks		Schedule (week/beginning)		
			1st iteration	2nd iteration	3rd iteration
Preparation	1.	Distribution of briefing document	31 March 2014		
	2.	Partner discussion	11 April 2014		
Research design	3.	Research design	End April 2014		
Fieldwork	4.	A. Spain fieldwork	i-iii (Sept/Oct 2014)/iv (Mar 2015)		
	5.	B. France fieldwork	Dec 2014		
	6.	C. UK fieldwork	i-iii (Sept 2014)/iv (Dec/Mar 2015)		
Reporting	7.	A. Spain fieldwork	i-iii (Sept/Oct 2014)/iv (Mar 2015)		
	8.	B. France fieldwork	Mar 2015		
	9.	C. UK fieldwork	i-iii (Sept 2014)/iv (Dec/Mar 2015)		
	10.	Move to Task C	September 2014		

4. Costs (Euros)

COST PROFILE	ONE COUNTRY		TOTAL	
TASK	Costs (excl VAT)	Costs (incl VAT)	Costs (excl VAT)	Costs (incl VAT)
B. Trade engagement (Qualitative research)				
Trade depth interviews in 3 countries**				
i-iii. Trade engagement	8,120	9,744	24,360	29,232
i.Communicate consumer perceptions	0	0	0	0
ii.Communicate crab product range	0	0	0	0
iii.Market opportunities and product requirements	0	0	0	0
iv. Product tasting and trade links	3,596	4,315	10,788	12,946
TOTAL	**11,716**	**14,059**	**35,148**	**42,178**

BUDGET		TOTAL	TASK A	TOTAL REMAINING
UK		51,000	20,567	30,433
Ireland		20,000	20,567	- 567
France		10,000		10,000
Spain		15,000		15,000
Portugal		-		
TOTAL		**96,000**	**41,134**	**54,866**

**3 Countries would be partner countries with target markets: Spain, France, and UK. Assumptions: within each target market, engage 5 organisations:

Tasks i - iii: 2.5 days prep, 5 days for interviews, 2.5 days write-up = 10 days @£700/day.

Task iv: 10 products, prep of products, product testing, write-up over 3 days @£700/day expertise, £1000 transport costs.

ANNEX II (Spain: research methodology and detailed results)

Spain research STAGE 3: Methods

The design of the market research tasks was developed optimizing time and resources available. Therefore, some of the findings may be conditioned by the research design (for instance, the catalogue of product for the selection of the final products available for the trial due to logistical constraints). This said, the methodological approach for the product trial guarantees that the insights and results obtained are valid and useful for both ends of the European value chain.

The trial was guided by a template covering the following topics: organoleptic factors, packaging, logistics and distribution, marketing and others. The answers from the six companies for a given product are collected in a table. Therefore, following we have as many tables as tasted products. Each table has all the questions asked to the tasters observing the structure of the questionnaires they have been using.

Each question has been assessed using a Likert scale from 1 to 5 with the following equivalences:

Evaluation	Points
Very suitable	5
Suitable	4
Acceptable	3
Not suitable	2
Inappropriate	1

For each question -except for those that are not quantifiable- we calculate an average value to include in the right column.

For questions within "Other" we interpret as follows:

For question 23 about Which channels could this product be focused on? The possible options, having the possibility to choose one or more according to the number assigned from 1 to 5, are the following:

1. Gourmet (Specialized shopkeeper)
2. Food Service
3. Retailer
4. Wholesaler
5. Distribution companies

For question 24 about main barriers for commercialization there are 5 options that must be arranged from the most important to the least: Price, Shelf life, Logistics, Packaging and Taste.

In both cases, it is necessary to interpret the results as we are dealing with concepts and not with values.

As we have said, there were represented six companies whose name we cannot reveal. In enough cases, the scoring for the same question is very different depending on the company. That is because the people from the companies work in different fields or in companies with different activity. Apart from the average when looking thoroughly the partial scores, we must take into account the specialization from the marker because it can give us additional information.

In the following board, each company has a number from 1 to 6:

Company/activity	Working area
8. On-line sales of products	Sales agent
9. Products processor	Sales agent
10. Trading	Sales agent
11. Trading	Sales agent
12. Wholesale distributor	Product manager
13. Products processor	Marketing

For each product and after filling its form we extract some partial conclusions. To have more detailed information for a specific question it is necessary to analyze the answers and the average punctuation for that question.

The last section will establish some Global Conclusions not only for each product but also for the whole ranges of products.

Seafood & Eat It Cornish: Prepared crab (chilled)

Questions about organoleptic factors

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
1	General appearance (apart from format and packaging)	4	4	3	3	3	4	**3,5**
2	Texture	4	4	4	4	4	4	**4**
3	Odour	4	5	4	4	4	4	**4,2**
4	Colour	4	4	4	4	4	3	**3,8**
5	Taste	4	4	4	4	5	4	**4,2**

Questions about packaging

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
6	Net weight	4	4	3	3	4	3	**3,5**
7	Shape	4	4	3	3	4	3	**3,5**
8	Material	4	4	4	4	3	4	**3,8**
9	Do you think the packaging should be modified in certain aspects to make it more commercial?	YES	YES	YES	YES	YES	YES	**YES**
10	Packaging weight/size ratio	4	4	4	4	4	4	**4**
11	Dou you think that the packaging net weight/size ratio needs too much room and that causes competitiveness in the shop shelves?	NO	NO	NO	NO	NO	NO	**NO**
12	Appealing label for consumers	4	4	4	4	4	5	**4,2**

Questions about logistics and distribution

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
13	Is it a suitable product for Food Service?		4	2	2	3	4	**3**
14	Is it a suitable product for medium size supermarkets?		4	3	3	4	2	**3**
15	Is it a suitable product for big wholesalers?		5	4	4	4	4	**4,2**
16	Is it a suitable product for *Premium* areas inside big wholesalers?	3	5	5	5	4	5	**4,5**

Questions about marketing

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
17	Is the product suitable for sale at any time of the year?	3	4	4	4	4	4	**3,8**
18	Product adequate for sale in any geographical area?	2	4	4	4	3	2	**3,2**
19	Do you think it is necessary a promotion campaign to launch the product?	4	4	5	5	4	4	**4,3**
20	Is the product suitable for Spanish consumer?			4	4	3	4	**3,8**
21	Apart from the price and considering just its features, would it be competitive in comparison with other convenience food products already set in our shop shelves?		5	4	4	3	3	**3,8**
22	Quality-price ratio		3	2	2	4	2	**2,6**

Others

Nº	Question						COMPANY					
							1	2	3	4	5	6
23	Which distribution channels should this product be addressed to? 1.Gourmet (Detallista especializado), 2.HORECA, 3.Minorista, 4.Mayorista, 5.Marcas de distribución							1,4,5	5	5	3	5
24	**Main Obstacles** Set position from 1 to 5	Price (1)	Shelf life (2)	Logistics (3)	Packaging (4)	Taste (5)		2,1,3,4,5	1,3,2,4,5	1,3,2,4,5	3,4,5,2,1	1,2,4,5,3
25	**Consumer prices rank**	Highly adequate	Adequate	Acceptable	Inappropriate	Unacceptable		3	2	2	2	2

Conclusions for the dressed crab (chilled).

Caption: Product trial. Acrunet project. © CETMAR

- → All the organoleptic aspects have been very well evaluated with a score over four, which is between suitable and very suitable.
- → Concerning packaging, they have also been evaluated successfully: The ratio net weight/packaging size and the attractive labelling for consumers have been considered suitable. On the contrary, net weight, shape and material, are classified between acceptable and suitable.
- → Remarks about the need to change the packaging to ease commercialization.
- → It is an acceptable product for Food Service and medium supermarkets but more than suitable for wholesale distributor and Premium áreas inside big supermarkets.
- → Regarding marketing:
    - o Suitable for sale at any time of year.
    - o Acceptable for sale in any geographical area.
    - o A promotion campaign to launch the product is very necessary.
    - o Suitable for Spanish consumer.
    - o Suitable to compete with other ready-to-eat products already in our shop shelves.
    - o The quality/price ratio is not much suitable.
- → The most voted distribution channel for this product has been the distribution brands and the least, gourmet and retailer.
- → The main obstacles for commercialization: price, shelf life, logistics and packaging.
- → The price range for consumers is not much suitable.

The Blue Sea Company: Prepared crab premium (frozen)

Questions about organoleptic factors

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
1	General appearance (apart from format and packaging)	4	4	3	3	4	3	**3,5**
2	Texture	4	5	4	4	4	3	**4**
3	Odour	4	4	4	4	4	4	**4**
4	Colour	4	4	4	4	4	3	**3,8**
5	Taste	4	5	4	4	4	4	**4,2**

Questions about packaging

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
6	Net weight	3	4	3	3	3	3	**3,2**
7	Shape	3	4	3	3	4	2	**3,2**
8	Material	3	4	4	4	4	2	**3,5**
9	Do you think the packaging should be modified in certain aspects to make it more commercial?	YES	YES	YES	YES	YES	YES	**YES**
10	Packaging weight/size ratio	3	4	4	4	4	4	**3,8**
11	Dou you think that the packaging net weight/size ratio needs too much room and that causes competitiveness in the shop shelves?	NO	NO	NO	NO	NO	NO	**NO**
12	Appealing label for consumers	4	4	4	4	4	4	**4**

Questions about logistics and distribution

Nº	Question	COMPANY 1	COMPANY 2	COMPANY 3	COMPANY 4	COMPANY 5	COMPANY 6	Average
13	Is it a suitable product for Food Service?	2	3	2	2	3	2	**2,3**
14	Is it a suitable product for medium size supermarkets?	3	4	3	3	4	2	**3,6**
15	Is it a suitable product for big wholesalers?	3	4	4	4	4	3	**3,6**
16	Is it a suitable product for *Premium* areas inside big wholesalers?	3	4	4	4	4	4	**3,8**

Questions about marketing

Nº	Question	COMPANY 1	COMPANY 2	COMPANY 3	COMPANY 4	COMPANY 5	COMPANY 6	Average
17	Is the product suitable for sale at any time of the year?	3	3	4	4	3	4	**3,5**
18	Product adequate for sale in any geographical area?	2	3	3	3	2	4	**2,8**
19	Do you think it is necessary a promotion campaign to launch the product?	3	4	4	4	4	4	**3,8**
20	Is the product suitable for Spanish consumer?	3	3	3	3	4	4	**3,3**
21	Apart from the price and considering just its features would it be competitive in comparison with other convenience food products already set in our shop shelves?	3	4	4	4	3	3	**3,5**
22	Quality-price ratio	3	3	2	2	2	1	**2,1**

Others

Nº	Question						COMPANY 1	COMPANY 2	COMPANY 3	COMPANY 4	COMPANY 5	COMPANY 6
23	Which distribution channels should this product be addressed to? 1.Gourmet (Detallista especializado), 2.HORECA, 3.Minorista, 4.Mayorista, 5.Marcas de distribución						1,3	1,4	5	5	3	5
24	**Main Obstacles** Set position from 1 to 5	Price (1)	Shelf life (2)	Logistics (3)	Packaging (4)	Taste (5)	1,4,3,2,5	1,4,2,3,5	1,2,4,3,5	1,2,4,3,5	3,5,4,1,1	1,2,4,3,5
25	**Consumer prices rank**	Highly adequate	Adequate	Acceptable	Inappropriate	Unacceptable	1	2	2	2	2	2

Conclusions for the dressed crab (frozen):

Caption: Product trial. Acrunet project. © CETMAR

- → All the organoleptic aspects have been very well evaluated with a score over four, which is between suitable and very suitable.
- → Concerning packaging it has been evaluated between acceptable and suitable. Net weight, shape and material are just acceptable while the rest of issues reach the category of suitable.
- → It is not much suitable for Food Service and between acceptable and suitable for the other markets. It gets to mostly suitable for Premium areas.
- → Regarding marketing:
    - Between acceptable and suitable for sale at any time of year.
    - Not much suitable for sale in any geographical area
    - A promotion campaign to launch the product is necessary.
    - Acceptable to compete with other ready-to-eat products already in our shop shelves.
    - The quality/price ratio is not much suitable.
- → The most voted distribution channel for this product has been gourmet and retailer.
- → The main obstacles for commercialization: price, shelf life, logistics, packaging and taste.
- → The price range for consumers is not much suitable.

Seafood & Eat It Cornish: Crab meat 50/50 (chilled)

Questions about organoleptic factors

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
1	General appearance (apart from format and packaging)	4	4	4	4	3	3	**3,7**
2	Texture	4	4	5	5	4	4	**4,3**
3	Odour	4	4	5	5	4	4	**4,3**
4	Colour	4	4	5	5	4	4	**4,3**
5	Taste	4	4	5	5	4	4	**4,3**

Questions about packaging

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
6	Net weight	4	4	4	4	3	2	**3,5**
7	Shape	3	4	4	4	4	3	**3,7**
8	Material	3	4	4	4	4	3	**3,7**
9	Do you think the packaging should be modified in certain aspects to make it more commercial?	NO	NO	NO	NO	NO	NO	**NO**
10	Packaging weight/size ratio	4	4	4	4	4	3	**3,8**
11	Dou you think that the packaging net weight/size ratio needs too much room and that causes competitiveness in the shop shelves?	NO	NO	NO	NO	NO	NO	**NO**
12	Appealing label for consumers	4	4	4	4	4	4	**4**

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
13	Is it a suitable product for Food Service?	3	4	2	2	3	2	**2,7**
14	Is it a suitable product for medium size supermarkets?	4	4	3	3	4	2	**3,3**
15	Is it a suitable product for big wholesalers?	4	5	4	4	4	3	**4**
16	Is it a suitable product for *Premium* areas inside big wholesalers?	4	5	4	4	3	3	**3,8**

Questions about marketing

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
17	Is the product suitable for sale at any time of the year?	3	4	3	3	3	3	**3,2**
18	Product adequate for sale in any geographical area?	2	4	2	2	2	2	**2,3**
19	Do you think it is necessary a promotion campaign to launch the product?	4	4	5	5	4	4	**4,3**
20	Is the product suitable for Spanish consumer?	4	4	3	3	3	3	**3,3**
21	Apart from the price and considering just its features would it be competitive in comparison with other convenience food products already set in our shop shelves?	4	4	4	4	3	3	**3,7**
22	Quality-price ratio	3	3	2	2	3	3	**2,7**

Others

<table>
<tr><th rowspan="2">Nº</th><th rowspan="2" colspan="6">Question</th><th colspan="6">COMPANY</th></tr>
<tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th></tr>
<tr><td>23</td><td colspan="6">Which distribution channels should this product be addressed to? 1.Gourmet (Detallista especializado), 2.HORECA, 3.Minorista, 4.Mayorista, 5.Marcas de distribución</td><td>5</td><td>1,4,5</td><td>5</td><td>5</td><td></td><td>5</td></tr>
<tr><td>24</td><td>Main Obstacles
Set position from 1 to 5</td><td>Price
(1)</td><td>Shelf life
(2)</td><td>Logistics
(3)</td><td>Packaging
(4)</td><td>Taste
(5)</td><td>1,2,3,4,5</td><td>2,1,3,4,5</td><td>3,2,4,1,5</td><td>3,2,4,1,5</td><td>3,5,4,2,1</td><td>4,2,3,1,5</td></tr>
<tr><td>25</td><td>Consumer prices rank</td><td>Highly adequate</td><td>Adequate</td><td>Acceptable</td><td>Inappropriate</td><td>Unacceptable</td><td>3</td><td>3</td><td>3</td><td>2</td><td>2</td><td>2</td></tr>
</table>

Conclusions for the crab meat 50/50 (chilled)

Caption: Product trial. Acrunet project. © CETMAR

- → All the organoleptic aspects have been very well evaluated with a score over four, which is between suitable and very suitable).
- → Concerning packaging they have also been evaluated successfully: between acceptable and suitable. The net weight and the shape of the packaging could been modified but the presentation, design, weight/size ratio, etc., are adapted to our market.
- → It is not much suitable for Food Service and only acceptable for medium supermarkets but it is suitable for wholesale distributor and Premium areas inside big supermarkets.
- → Regarding marketing:
    - Acceptable for sale at any time of year.
    - Not much suitable for sale in any geographical area
    - A promotion campaign to launch the product is very necessary
    - More than acceptable for Spanish consumer.
    - Rather competitive against other ready-to-eat products already in our shop shelves.
    - The quality/price ratio is not much suitable although mostly acceptable.
- → The most voted distribution channel for this product has been the distribution brands and the least, gourmet.
- → The main obstacles for commercialization: logistics is the most important followed by shelf life period and packaging. Curiously, price would be in the fourth place.
- → The price range for consumers is not much suitable although mostly acceptable.

The Blue Sea Company: Crab meat 50/50 (frozen)

Questions about organoleptic factors

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
1	General appearance (apart from format and packaging)	4	4	3	3	4	3	**3,5**
2	Texture	4	4	4	4	4	4	**4**
3	Odour	4	4	4	4	4	4	**4**
4	Colour	4	4	4	4	4	4	**4**
	Taste	4	5	4	4	5	4	**4,3**

Questions about packaging

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
6	Net weight	3	4	4	4	4	2	**2,8**
7	Shape	3	4	4	4	4	3	**3,7**
8	Material	3	4	4	4	4	3	**3,7**
9	Do you think the packaging should be modified in certain aspects to make it more commercial?	YES	YES	YES	YES	YES	YES	**YES**
10	Packaging weight/size ratio	3	4	4	4	4	3	**3,7**
11	Dou you think that the packaging net weight/size ratio needs too much room and that causes competitiveness in the shop shelves?	NO	NO	NO	NO	NO	NO	**NO**
12	Appealing label for consumers	4	4	4	4	4	2	**3,7**

Questions about logistics and distribution

Nº	Question	COMPANY						Average
		1	**2**	**3**	**4**	**5**	**6**	
13	Is it a suitable product for Food Service?	4	4	2	2	3	2	**2,8**
14	Is it a suitable product for medium size supermarkets?	3	4	3	3	4	2	**3,2**
15	Is it a suitable product for big wholesalers?	3	4	3	3	4	3	**3,3**
16	Is it a suitable product for *Premium* areas inside big wholesalers?	3	4	3	3	4	4	**3,5**

Questions about marketing

Nº	Question	COMPANY						Average
		1	**2**	**3**	**4**	**5**	**6**	
17	Is the product suitable for sale at any time of the year?	3	4	3	3	4	2	**3,2**
18	Product adequate for sale in any geographical area?	3	4	2	2	3	2	**2,7**
19	Do you think it is necessary a promotion campaign to launch the product?	4	4	5	5	4	4	**4,3**
20	Is the product suitable for Spanish consumer?	3	4	3	3	3	3	**3,2**
21	Apart from the price and considering just its features would it be competitive in comparison with other convenience food products already set in our shop shelves?	4	4	3	3	3	3	**3,3**
22	Quality-price ratio	2	3	2	2	2	2	**2,2**

Others

Nº	Question						COMPANY					
							1	**2**	**3**	**4**	**5**	**6**
23	Which distribution channels should this product be addressed to? 1.Gourmet (Detallista especializado), 2.HORECA, 3.Minorista, 4.Mayorista, 5.Marcas de distribución						1,3,4	1,3,4	5	5	3	5
24	**Main Obstacles** Set position from 1 to 5	Price (1)	Shelf life (2)	Logistics (3)	Packaging (4)	Taste (5)	1,4,3,2,5	1,4,3,2,5	1,4,3,2,5	1,4,3,2,5	3,4,5,2,1	1,4,3,2,5
25	**Consumer prices rank**	Highly adequate	Adequate	Acceptable	Inappropriate	Unacceptable	2	2	2	2	2	1

Conclusions for the brown crab meat: frozen

- → All the organoleptic aspects have been badly evaluated with a score slightly over two, which is not much suitable.
- → Concerning packaging they have also been evaluated unsuccessfully: only aceptable for net weight, shape and material. Weight /size ratio only acceptable while labelling is not at all attractive for consumers.
- → It is not much suitable or slightly acceptable for any market. However, we must remark that as in the previous case, the format analysed is not the usual format for this product.
- → Regarding marketing:
  - Slightly acceptable for sale at any time of year.
  - Not much suitable for sale in any geographical area).
  - A promotion campaign to launch the product is absolutely unnecessary.
  - Not suitable for Spanish consumers.
  - Not much suitable to compete with other ready-to-eat products already in our shop shelves.
  - The quality/price ratio is not much suitable.
- → The most voted distribution channel for this product has been gourmet and retailer.
- → Concerning the main obstacles for commercialization there is much unanimity: price, packaging, logistics, shelf life, taste.
- → The price range for consumers is not much suitable although mostly acceptable.

Caption: Product trial. Acrunet project. © CETMAR

Young’s seafood: Crab pate (chilled)

Questions about organoleptic factors

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
1	General appearance (apart from format and packaging)	2	4	2	2	2	2	**2,3**
2	Texture	2	3	2	2	2	2	**2,1**
3	Odour	2	4	2	2	3	3	**2,7**
4	Colour	2	4	2	2	3	2	**2,5**
5	Taste	2	4	2	2	2	1	**2,1**

Questions about packaging

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
6	Net weight	2	4	4	4	3	3	**3,3**
7	Shape	2	4	4	4	3	2	**3,1**
8	Material	2	4	4	4	3	3	**3,3**
9	Do you think the packaging should be modified in certain aspects to make it more commercial?	SI/NO	SI/NO	SI/NO	SI/NO	SI/NO	SI/NO	**-**
10	Packaging weight/size ratio	2	4	3	3	3	3	**3**
11	Dou you think that the packaging net weight/size ratio needs too much room and that causes competitiveness in the shop shelves?	SI/NO	SI/NO	SI/NO	SI/NO	SI/NO	SI/NO	**-**
12	Appealing label for consumers		3	2	2	2	4	**2,2**

Questions about logistics and distribution

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
13	Is it a suitable product for Food Service?	2	4	3	3	2	1	**2,5**
14	Is it a suitable product for medium size supermarkets?	2	4	3	3	2	1	**2,5**
15	Is it a suitable product for big wholesalers?	2	5	3	3	2	1	**2,7**
16	Is it a suitable product for *Premium* areas inside big wholesalers?	1	5	3	3	2	1	**2,5**

Questions about marketing

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
17	Is the product suitable for sale at any time of the year?	2	4	3	3	3	1	**2,7**
18	Product adequate for sale in any geographical area?	2	4	2	2	3	1	**2,3**
19	Do you think it is necessary a promotion campaign to launch the product?	2	4	3	3	2	1	**2,5**
20	Is the product suitable for Spanish consumer?	1	4	1	1	1	1	**1,5**
21	Apart from the price and considering just its features would it be competitive in comparison with other convenience food products already set in our shop shelves?	1	4	2	2	2	1	**2**
22	Quality-price ratio	2	4	2	2	2	1	**2,2**

Others

Nº	Question						COMPANY					
							1	2	3	4	5	6
23	Which distribution channels should this product be addressed to? 1.Gourmet (Detallista especializado), 2.HORECA, 3.Minorista, 4.Mayorista, 5.Marcas de distribución							1,4,5	3	3	1	0
24	**Main Obstacles** Set position from 1 to 5	Price (1)	Shelf life (2)	Logistics (3)	Packaging (4)	Taste (5)	3,4,5,2,1	2,1,3,4,5	2,4,1,3,5	2,5,1,4,3	4,5,2,1,3	2,3,5,4,1
25	**Consumer prices rank**	Highly adequate	Adequate	Acceptable	Inappropriate	Unacceptable	2	4	1	2	2	1

Conclusions for the pate (chilled).

Caption: Product trial. Acrunet project. © CETMAR

- → All the organoleptic aspects have been badly evaluated with a score slightly over two, which is not much suitable.
- → Concerning packaging they have also been evaluated not very successfully: net weight, shape and material only acceptable. The weight/size ratio is only acceptable while labelling is not at all attractive for consumers. We must clarify that this product was not analysed in its usual packaging therefore, in this case, the comments on packaging have no value.
- → The packaging should be modified to become more attractive.
- → It is not much suitable for the four sales channels under consideration.
- → Regarding marketing:
    - Not much suitable for sale at any time of year.
    - Not much suitable for sale in any geographical area.
    - A promotion campaign to launch the product is unnecessary.
        - Not suitable for Spanish consumers.
    - Not much suitable to compete with other ready-to-eat products already in our shop shelves.
    - The quality/price ratio is not much suitable.
- → The most voted distribution channel for this product has been gourmet and retailer.
- → The main obstacles for commercialization: shelf life is the most important followed by packaging and logistics.
- → The price range for consumers is not much suitable or not suitable at all.

The Blue Sea Company: Crab pate (frozen)

Questions about organoleptic factors

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
1	General appearance (apart from format and packaging)	2	3	2	2	2	2	**2,2**
2	Texture	2	3	2	2	2	3	**2,3**
3	Odour	2	3	2	2	3	3	**2,5**
4	Colour	2	3	2	2	3	3	**2,5**
5	Taste	2	3	2	2	2	3	**2,3**

Questions about packaging

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
6	Net weight	2	4	4	4	3	1	**3**
7	Shape	2	3	4	4	3	2	**3**
8	Material	2	3	4	4	3	2	**3**
9	Do you think the packaging should be modified in certain aspects to make it more commercial?	SI/NO	SI/NO	SI/NO	SI/NO	SI/NO	SI/NO	**-**
10	Packaging weight/size ratio	2	3	3	3	3	3	**2,8**
11	Dou you think that the packaging net weight/size ratio needs too much room and that causes competitiveness in the shop shelves?	SI/NO	SI/NO	SI/NO	SI/NO	SI/NO	SI/NO	**-**
12	Appealing label for consumers	2	3	2	2	2	1	**1,7**

Questions about logistics and distribution

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
13	Is it a suitable product for Food Service?	2	3	3	3	2	2	**2,5**
14	Is it a suitable product for medium size supermarkets?	2	3	3	3	2	1	**2,3**
15	Is it a suitable product for big wholesalers?	2	3	3	3	2	1	**2,3**
16	Is it a suitable product for *Premium* areas inside big wholesalers?	2	3	3	3	2	3	**2,8**

Questions about marketing

Nº	Question	COMPANY						Average
		1	2	3	4	5	6	
17	Is the product suitable for sale at any time of the year?	2	3	2	2	3	3	**2,5**
18	Product adequate for sale in any geographical area?	2	3	2	2	3	2	**2,3**
19	Do you think it is necessary a promotion campaign to launch the product?	2	4	2	2	4	4	**3,3**
20	Is the product suitable for Spanish consumer?	2		1	1	2	3	**1,5**
21	Apart from the price and considering just its features would it be competitive in comparison with other convenience food products already set in our shop shelves?	2	3			2	1	**2**
22	Quality-price ratio	2		1	1	2	1	**1,2**

Others

<table>
<tr><th rowspan="2">Nº</th><th colspan="6" rowspan="2">Question</th><th colspan="6">COMPANY</th></tr>
<tr><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th></tr>
<tr><td>23</td><td colspan="6">Which distribution channels should this product be addressed to? 1.Gourmet (Specialized shopkeeper), 2.Food Service, 3.Retailer, 4.Wholesaler, 5.Distribution brands</td><td></td><td>3</td><td>3</td><td>3</td><td>1</td><td>0</td></tr>
<tr><td>24</td><td>Main Obstacles
Set position from 1 to 5</td><td>Price
(1)</td><td>Shelf life
(2)</td><td>Logistics
(3)</td><td>Packaging
(4)</td><td>Taste
(5)</td><td>1,5,4,3,2</td><td>1,5,4,2,3</td><td>1,4,5,2,3</td><td>1,4,5,2,3</td><td>4,5,2,1,3</td><td>4,5,1,2,3</td></tr>
<tr><td>25</td><td>Consumer prices rank</td><td>Highly adequate</td><td>Adequate</td><td>Acceptable</td><td>Inappropriate</td><td>Unacceptable</td><td>2</td><td>2</td><td>2</td><td>1</td><td>2</td><td>1</td></tr>
</table>

Conclusions for pate (frozen).

- → All the organoleptic aspects have been badly evaluated with a score slightly over two, which is not much suitable.
- → Concerning packaging, they have also been evaluated not very successfully: net weight, shape and material only acceptable. The weight/size ratio is only acceptable while labelling is not at all attractive for consumers. It is not much suitable or slightly acceptable for any market. However, we must clarify that, as the previous case, this product was not analysed in its usual packaging.
- → Regarding marketing:
    - Slightly acceptable for sale at any time of year.
    - Not much suitable for sale in any geographical area.
    - A promotion campaign to launch the product is absolutely unnecessary.
    - Not suitable for Spanish consumers.
    - Not much suitable to compete with other ready-to-eat products already in our shop shelves.
    - The quality/price ratio is not much suitable.

Caption: Product trial. Acrunet project. © CETMAR

- → The most voted distribution channel for this product has been gourmet and retailer.
- → The main obstacles for commercialization: price, packaging and taste. On the contrary, shelf life and logistics are the least important issues.
- → The price range for consumers is not much suitable or not suitable at all.

ANNEX III (UK: Research methodology)

UK Research method - detail

Stage 1

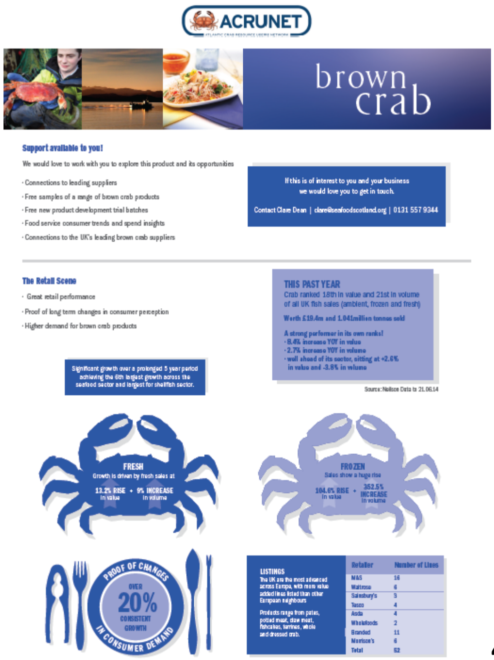
A UK catalogue of all brown crab retail products had been brought together under Action 6 of Acrunet "Sensory assessment of consumer packaging in brown crab products from Ireland, UK, Spain and Portugal". The UK retail market had been one of the largest examples of new product development and proved the largest listings in fact across Europe. This provided a sound basis of existing product to compare to for this research.

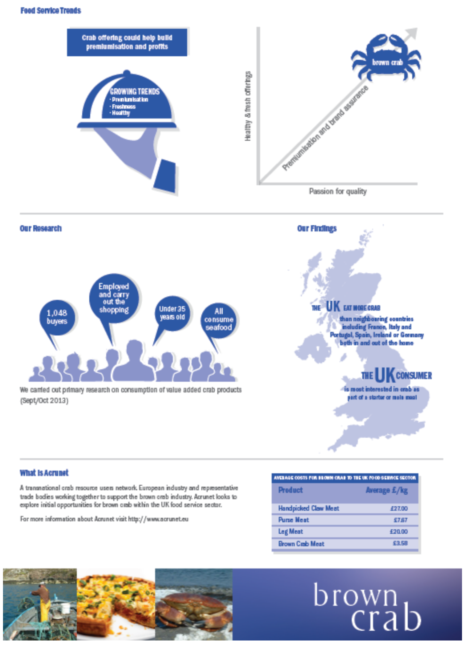
Stage 2 (Research plan A)

e. Identify 30 candidate food service companies (step 3 of the route to market) to form the target group for the research.

	B	D	E
1			
2	**Name**	**Response**	**Company**
3	Silla Bjerrum	Emailed again 06.10.14	Feng Sushi
4	Emma Yeynolds	No "Thanks for the info. We don't use a significant volume of crab, so I don't think we're a suitable partner"	Tsuru Sushi
5	Rob Mitchell	Emailed again, no direct dial	Drake & Morgan
6	James Lyon-Shaw	Emailed again and tried mobile number	ETM Group
7	Mike Ball	Sent on to local purchasing to see if interested	Aramark UK
8	Sandy Anderson	No- Unfortunately we do not buy much brown crab so it would not be worth your while	Elior UK
9	Nick Vadis	Emailed again 06.10.14	Compass
10	Iain Mulier	Emailed again 06.10.14	Makro
11	Martin Jordon	Emailed again 06.10.14	Sodexo Prestige
12	Graeme Warwick	Emailed again 06.10.14	Stonegate Pub Company
13	Carla Charalambous	Bounceback on email	Tragus Group
14	Carolyn Lum	Carolyn-"Thanks for the e-mail. It sounds really interesting, we are a bit swamped at the moment, we do have some development sessions booked in. " Clare- "No problem , I suspect you might be with the Christmas rush well on its way. We didn't anticipate starting much this autumn, so perhaps in the new year you might be better placed to take up the offer. " Carolyn- "Perfect, sounds good to me, crab for summer menu sounds good." Emailed again on 21.01.15	
15	Patricia Peinke	Sent on to Emma.warrington@beaconpurchasing.co.uk, Patricia not the right person. "Thanks for sending this through – we have a procurement manager in Scotland – Kelley Walker so I have forwarded this onto her." kelly.walker@beaconpurchasing.co.uk Emailed again 21.01.15	Best Western Hotels
16	David Small	Bounceback on email	Rail Gourmet

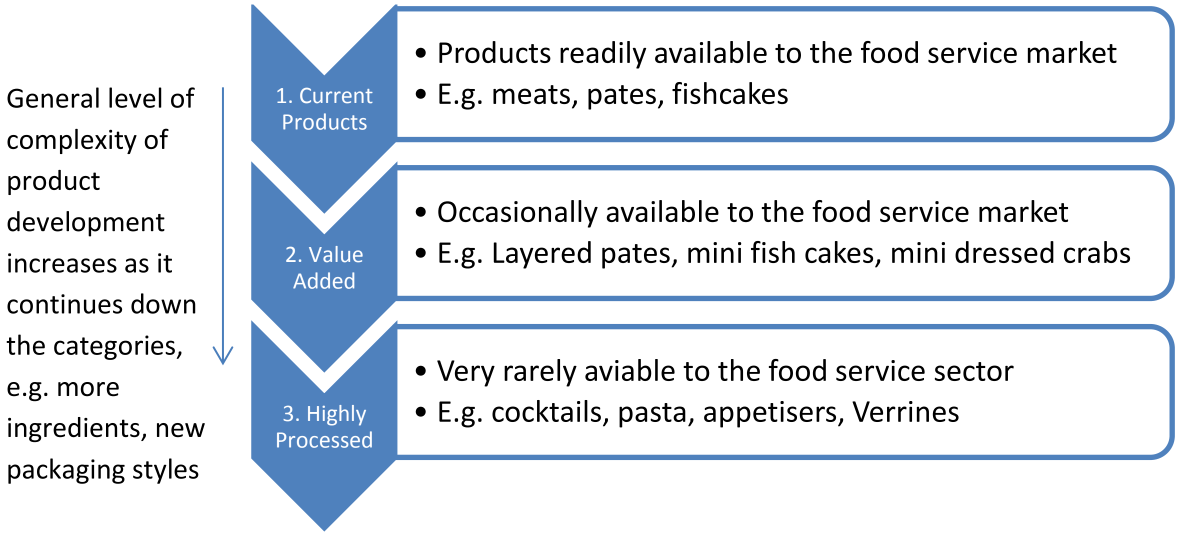
f. Engage target group and recruit companies for the research exercise. This was undertaken by email and introductory note (one page brown crab briefing note).





g. Conduct initial quantitative survey to establish level of interest in brown crab products. This survey, based on 35 products chosen from the UK Catalogue, invited candidates in the target group to very simply indicate interest in each product "if the product were made available for the food service sector, would you choose to buy it to use on your menu and within your kitchens?" Responses were coded as either "yes, interested (=2 points)" or "no, not interested (=-2 points)".

To evaluate the format and range of brown crab products preferred by food service outlets, a specific range of products were chosen. Products were categorised according to the differing levels of value added processing. Three main categories were defined (see figure X) from one of the most basic products, whole cooked brown crab, to highly value added options such as brown crab linguine.



h. Conduct a subsequent qualitative survey, with more detailed questions, to explore attitudes to brown crab products. A target was set to engage 15-20 companies willing to carry out interviews about usage of brown crab.

This survey used the following interview questions:

1. Do you think there is more potential for brown crab on your menus? Is the market saturated?
2. What are the biggest barriers to chefs using brown crab?
3. Have you seen a significant change in demand for crab dishes?
4. Based on research answers, provide samples for companies to use to allow product tasting and link opportunities identified with product suppliers.

Stage 3 (Research plan B)

Stage 3 of the research sought to approach direct buyers (step 2 of the route to market). As direct buyers to the brown crab industry, these contacts were seafood specialists, and had closer relationships with partners. It was hoped these factors would ensure more traction and full interviews to be carried out.

A new target group was established, focussing on the leading Food Service distributors for the seafood sector. The research design (interview questionnaire) was slightly adjusted to reflect the new target group.