GENERATION OF AN INFORMATION SYSTEM FOR THE CERAMIC INDUSTRY VALUE SYSTEM: THE CERAMIC MARKET OBSERVATORY

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1. INTRODUCTION

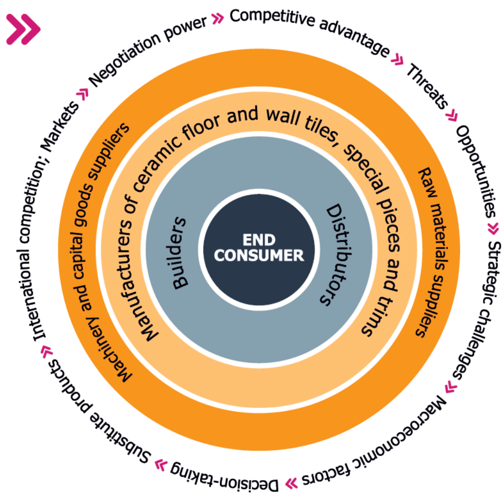
1.1. GROWING NEED FOR INFORMATION

In view of the changes that are occurring in the national and international competitive environment of the ceramic sector, it is increasingly critical for companies to have instruments that supply them with a certain type of information that enables establishing new action strategies to counteract the threats and allow taking advantage of the constantly arising opportunities. In order to be able to address this inescapable need for information, it is necessary to have a system or tool that enables compiling it, analysing it, and evaluating it, providing companies with an objective and reliable base for focusing their future strategies.

1.2. COMPETITIVE INTELLIGENCE SYSTEM

The **Ceramic Market Observatory (MO)** is a competitive intelligence system that seeks to provide objective information encompassing the entire value system of this industry. The information appears on an aggregate sectoral level as well as by means of individual, customised reports for each participating company. This is based on continuous analysis of the environment, which, through market research techniques and statistical methods, assures the objectivity and representativeness of the results.

1.3. CERAMIC SECTOR VALUE SYSTEM



Ceramic sector value system

1.4. THE MO IS BASED ON...

The OM seeks to provide objective information for the elaboration of strategies and business decision-taking, based on:

- Exhaustive analysis of the overall sector environment.
- Continuous monitoring of competitive forces: suppliers, manufacturers, substitute products, distribution, and end-consumer.
- Statistical treatment of data and indicators regarding competitive position and expectations from a representative sample or *Panel* of companies.

1.5. THE MO WILL ENABLE...

As a comprehensive intelligence system the OM will enable:

- Evaluating sectoral conjuncture, detecting new strategic challenges and anticipating changes in the environment.
- Designing strategic operating plans for the development of sustainable competitive advantages.
- Generating integral management groups or control groups.

1.6. ASSURANCE OF INFORMATION QUALITY

The Market Observatory elaborates and deals with a representative sample of companies, creating specialised sources of quality information in order to generate exhaustive analyses of the national and international context. The analysis procedure consists of:

- Periodic collection of information from a panel of companies making up the value system of the ceramic market.
- Refinement, treatment and advanced statistical analysis, by clusters or market segments.
- Validation of the quantitative information by means of meetings of experts from the sector.

1.7. OBJETIVE OF THE MO

This information system's top-priority is to help improve and develop the formulation and application of enterprise strategies by the companies, as well as to improve their cost and production structures, while simultaneously contributing more advanced knowledge on the evolution of the ceramic sector and its final demand. Therefore, the purpose of the Observatory is the creation of a competitive intelligence system that enables taking strategic operating decisions, on both an individual and sectoral level.

This system, directed towards the whole ceramic industry, in addition to the public and private organisations that support or serve the industry, will endeavour in the middle term to address the needs of industry through multidisciplinary approaches: economic, aesthetic, technical and social, which will provide the information obtained with amplitude and depth.

2. OBSERVATORY METHODOLOGY AND OUTPUTS

2.1. COMPETITIVE ANALISYS

The Ceramic Market Observatory serves as a supplier of valuable information for performing **competitive analysis**. Defined as a process that helps identify the strengths and weaknesses of the company in regard to its environment, as well as the opportunities and threats that affect them in their target market. The starting point is a situation analysis.

2.2. SITUATION ANALYSIS

- External analysis: this involves analysis of the environment, competition, clients, suppliers and substitute products, and even complementary products.
- Internal analysis: this involves analysing the organisational structure of the own company, and its available resources and capacities.

2.3. INFORMATION INFRASTUCTURE

It is obviously external analysis in which the Market observatory needs to cover the information needs of the industry, since the internal analysis is a private matter for each company. For this, the system of competitive market intelligence of the Observatory grounded on an information infrastructure whose aim is to provide the data based on which the sectoral evolution can be analysed, placing within reach of the companies the type of information needed for the afore-mentioned external analysis. This information infrastructure is the basis for a series of outputs or services that are structured through two analysis approaches.

2.3.1. Conjunctural analysis approach

The objective pursued with this approach is that of providing users with information on the conjunctural evolution of the main economic variables throughout the value system. In this sense, all the segments or links in the ceramic sector value system, potentially organized in homogeneous clusters, are envisaged, as well as, should this be case, homogeneous segments of the end demand. Therefore, owing to the importance that the following aspects or elements have in the ceramic sector, the competitive intelligence system created by the Observatory attempts to capture, generate and analyse information relative not only to the actors making up the sector value system, but it also endeavours to study the structure, operation and evolution of the Spanish ceramic industry and its international competition, substitute products (such as marble, stone, wood, carpeting…) and complementary products (such as furniture, lighting, home textiles, domotics…), among others.

2.3.2. Structural analysis approach

The objective pursued by this approach is to provide the users with information on the structural situation of those variables that directly impact to a greater extent the performance of the industry, offering an aggregate vision with an international focus. The methodology for the obtainment of this information is grounded on the definition of an information search and monitoring strategy of the competitive environment based on primary and secondary national and international sources of information specialised in the ceramic sector.

2.4. CORE STUDY OBJETIVE

Therefore, the Ceramic Market Observatory mainly centres its attention on this industry's **value system**, although it tries not to neglect any variable related to the environment that could affect this value system.

2.5. ANALYSIS SCOPE

The field of data capture and analysis is national and international. In a first consolidation phase, which will conclude in 2007, the main attention, although not solely, focuses on the national field.

2.6. INFORMATION SOURCES

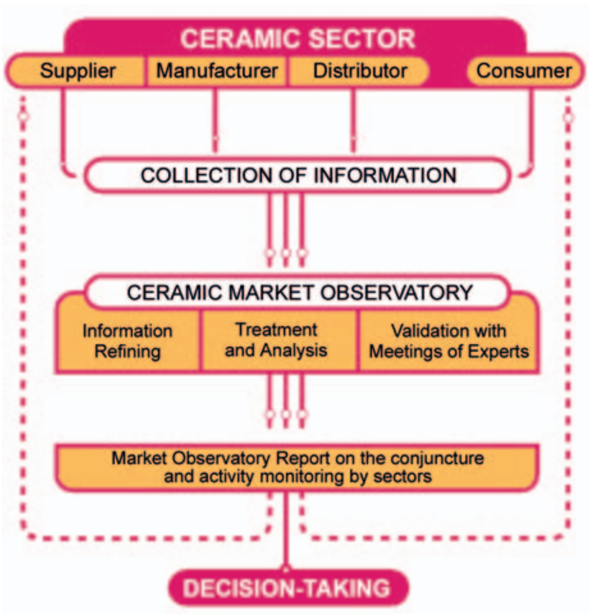
The information sources to be used are both primary and secondary. The secondary sources include all the documentation already generated by other organisations, which directly, or after some type of processing or selection, contributes knowledge to the system. The primary sources of information are those that the own Observatory generates in meeting its aims. Secondary sources will mainly be used for analysis of the environment, and in the consolidation phase also for analysis of the international markets, although these primary sources will progressively be incorporated to improve the knowledge of the key variables characterising these markets. The analysis of the ceramic value system in its national field will essentially be undertaken by using primary sources.

2.7. INFORMATION OBTAINMENT SOURCES

The instruments used for obtaining information are quantitative as well as qualitative, using different instruments or a combination of these, depending on the subject to be analysed.

2.8. MO WORK FLOW

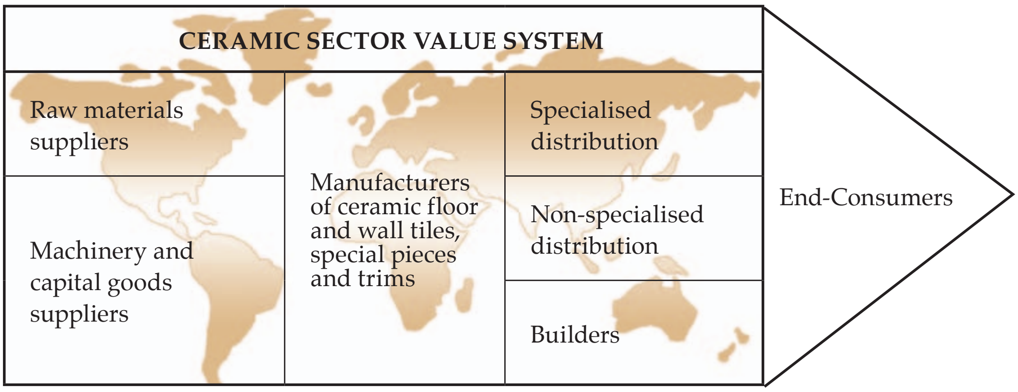
The following figure schematically illustrates the Work Flow of the Market Observatory.



2.9. CERAMIC SECTOR VALUE SYSTEM

The first section of this scheme shows the Ceramic Sector **value system**, which comprises:

- Raw materials (clays, frits and glazes…) suppliers.
- Machinery and capital goods suppliers.
- Manufacturers of ceramic trims.
- Manufacturers of ceramic floor and wall tiles, special pieces and trims. This will be the first link analysed by the Observatory, which comprises about 200 companies.
- Specifications writers (architects, designers, interior designer, media…).
- Distributors (purchasing centres, wholesalers, retailers, builders, promoters, tile fixers…). Here the Observatory also intends to analyse, not just the commercial distribution but the contract market.
- Demand (end-consumer). In the consumer study the purchasing process will be analysed, as will consumer behaviour, in order to determine the most appropriate strategies to be followed by companies in the ceramic sector in order to be able to reach the consumer better and confront competing products.



Since the Observatory seeks to be an instrument for information and analysis of value for the entire industry, it has been decided to conduct the analysis of the value system through two *ad hoc* technical tools:

1. *Segment technical committees.* The creation of technical committees for each segment in which there is at least one representative from each segment. These committees deal with the definition of the information needs of each segment in the system, the analysis method, treatment of the conclusions, and the method for dissemination of the generated information. In this way, specific and exclusive information systems are generated per segment, which respond in a way that matches their needs.
2. *General monitoring committee*. In order to avoid excessive fragmentation of the information and ensuing loss of overall vision of the value system resulting from the previous premise, the Observatory needs to assure the traceability of all the information of interest for the whole industry. This is achieved by accurate management of the key variables to be traced. The principal control mechanism is the creation of a general observatory monitoring committee comprising, among others, representatives from each of the segments, whose aim is:

- To select the variables to be analysed and the methodology to be used
- To agree by consensus those variables of general interest which are to be monitored across segments.
- To watch over the correct operation of the system
- To assure the value system segments of the confidentiality of their individual private data.
- Writing up general reports on the whole industry.

2.10. SUPPLY - DEMAND

Taking into account these premises and after a first analysis of the value system, we can differentiate a series of segments that form the supply of the industry, and other that form the demand. The supply is formed by a broad range of companies: suppliers and manufacturers. The demand, leaving aside for the moment the contract market because of its diversity, is made up of the distribution channels, i.e. companies and end-consumers.

2.11. COMPANY PANEL

There are several types of descriptive researches, which seek to explain situations, pursuing many objectives, and which are able to describe the characteristics of a given group of companies, finding the strengths and weaknesses of companies or their products, segmenting markets, measuring the positioning of goods… One of these types of descriptive researches is the panel study. This instrument for obtaining information has a quantitative character and is based on the use of a stable, representative sample. This sample provides information of a periodic character by responding to one or several questionnaires, whose composition should not vary excessively, but needs to enable analysing the evolution in time of the conjunctural and structural variables being studied.

This panel system needs to integrate both the large companies of the sector, which account for the largest percentage of production, as well as small-sized production units that detect the negative effects of the activity (they anticipate the turning points or change in conjuncture).

Therefore, we can say that the panel is a permanent and continuous study that enables recording the evolution of certain phenomena and behaviours. It therefore contributes a dynamic analysis of the market and of the characteristics of the companies that compose it.

The ability to use a company panel featuring all the companies belonging to the sector is synonymous with filming or obtaining succession of photographs of the sector over time, making it more feasible to follow the evolution.

For this reason it has been considered advisable to use this instrument for the analysis of the business elements in the Value Chain, which are: the suppliers, the manufacturers and the distributors.

2.12. PANEL SEGMENTATION

Each of these elements displays differentiated information needs, which makes it necessary to have different individualised panels, with questionnaires designed specifically for the element involved. But at the same time, each element in the value chain is formed in turn by a more or less wide variety of types of companies with a great diversity of strategic and operating approaches, characterisation, target markets, product ranges, etc.

This diversity means that, although it is correct to evaluate a given variable, for example such as the total turnover through a simple summation of the data obtained in the panel, remaining at that level of analysis would impoverish our image of reality. For this, it has been sought to enrich the panel analysis by using a segmentation techniques in the value system elements that allowed this. This is clearly the case of the ceramic tile manufacturing and ceramic distribution businesses.

The segmentation concept is based on: differentiating the market as a function of certain variables; grouping homogeneous elements that are different from the other elements, which are designated as segments and are obtained by means of different procedures, mainly statistical, with a view to enabling analysis of each segment in a totally differentiated way from the rest. In the case of the ceramic tile manufacturers it has been decided to apply, as segmentation criteria, the product specialisation of the companies together with their size measured on the basis of their turnover. These criteria have yielded the following 14 segments:

PRODUCTION SPECIALISATION	COMPANY SIZE (in million euros)	SEGMENT
EXTRUDED PRODUCTS	< 6	FE1
	6 > <12	FE2
	>12	FE3
RED BODY	< 6	FR1
	6 > <12	FR2
	>12	FR3
WHITE BODY / PORCELAIN TILE		FBP
RED BODY + WHITE BODY	< 6	FRB1
	>6	FRB2
RED BODY + WHITE BODY + PORCELAIN TILE	< 30	FRBP1
	30 > <60	FRBP2
	>60	FRBP3
RED BODY + PORCELAIN TILE	< 20	FRP1
	>20	FRP2

Segmentation of the ceramic tile manufacturers panel

2.13. ANNUAL COMPETITIVE POSITION REPORT

Applying panel techniques together with the use of segmentation criteria in each panel provides a more accurate vision of the structure of the industry, while concurrently making it possible for each panel company to receive in return information supplied by means of a report matching its nature, which means an important change in the present information offer for the companies, in which it is usual to supply a grouped sectoral study in exchange for individual information.

This report for the panellists is called the **Annual Competitive Position Report (ACPR)** or report on the structural situation, which yearly enables the associated companies, through analysis of management indicators, to know their competitive position in the market in regard to their main competitors. A specific ACPR will be developed for each segment of the ceramic industry value system, capturing the key variables in each of these.

Proceeding with the previous example, we find that the ACPR of the ceramic tile manufacturing segment allows the panel company to know: the situation of the cluster or segment to which it belongs, based on certain indicators, such as production figures as a function of the different types of ceramic tiles, the degree of stability of use or cost structure, among many other items, as well as having a much more explicit comparison of the figures of each panellist with regard to the weighted mean figure of its cluster.

With the information obtained through this report, independently of the segment to which the company belongs, the company will be able to make strategic decisions based, not only on its own business figures and results, but also on those of its closest competitors.

2.14. GROUP DYNAMICS: CLUB OF COMPANIES

All the foregoing analysis has a strictly quantitative character. The data obtained enable characterising in absolute values the industry, as well as the segments and subsegments that form it. However, this methodology of itself lacks an explanatory character. For example, it can be established that the extruded product manufacturers with a turnover exceeding 12 million euros have an average sales growth of 3% in the national market. However, what has been the reason or reasons for such growth to occur?

With a view to determining the reasons behind the quantitative data and at the same time to ascertaining other aspects like the future levels of confidence in the sector, a **Club of Companies** has been created, comprised of representatives from the different value system segments, including the ceramic distribution sector. This Club is presented with a report detailing the main conclusions drawn from the variables analysed in the panels, for subsequent debate. The final result is a profound analysis of the strategic challenges facing the sector, highlighting features such as the evolution of the interrelations within the value system, among others.

2.15. CONFIDENTIALITY

An important aspect to be noted is that the companies participating in the Market Observatory panel will receive their customised reports under **strict control of the confidentiality of the data** of these companies.

In order to be able to assure the anonymity of the panel companies once they are in the panel, they are assigned a security key, so that the name of the participating company does not appear in any document. The list of keys is only known to the members of the Observatory, who have signed a confidentiality contract which forbids disclosure of any information treated or analysed during the performance of this project.

Furthermore, a confidentiality contract has been drafted, which is at the disposal of any panel company that wishes to go a step further in the confidentiality of its data. This contract will be signed between the company that requests it and ALICER, and these are responsible for the non-disclosure of the information obtained.

2.16. THE CONSUMER

Until now we have seen the methodology used in the value system analysis in those segments that are made up of companies. The last segment of the value system remains the widest, most diverse and scattered of all: the consumers.

It would have been desirable to use the same panel methodology employed in the rest of the value system but an innate characteristic of ceramic tilings consumption has advised against its use. This characteristic is the frequency of replacement of these products, which may be estimated, a priori, at between 15 and 20 years. As the panel methodology is based on having a steady sample, it is evident that it would not be very helpful to have information provided by individuals that had bought or used ceramic tiles a long time ago.

Taking into account this point, the research technique selected for consumer analysis has been: **the interview.**

This research technique has a quantitative cross-sectional character, in contrast to the longitudinal character of the panel, obtaining the information only once from a given sample.

2.17. THE INTERVIEW

- Enables obtaining a snapshot of the market situation at a particular moment.
- Is a technique which, by using a structured questionnaire, allows obtaining particular and specialised information of the group of consumers at a given moment in time.

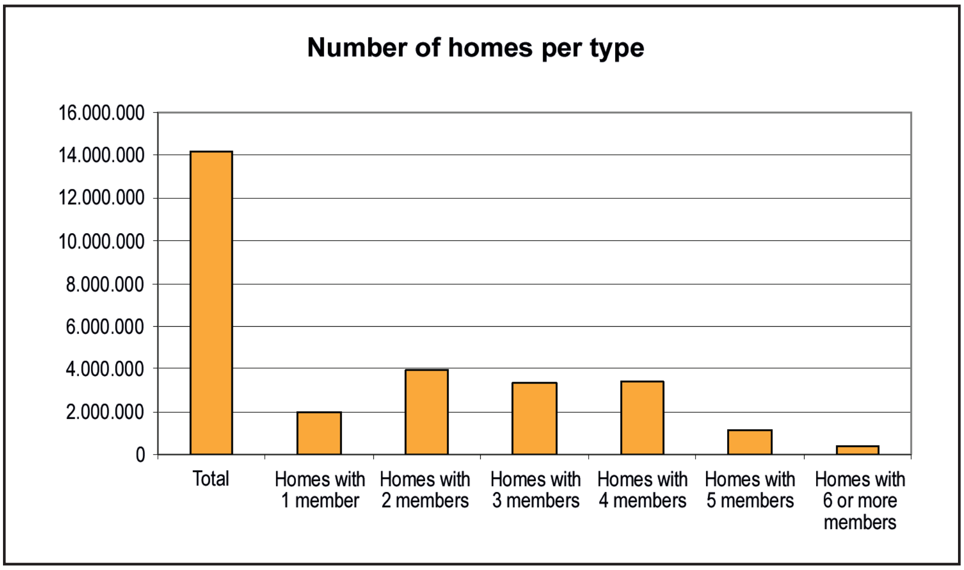
Prior to the performance of the fieldwork, two basic features have been defined:

- **Size of the sample** to be surveyed.

  A sample is the number of elements that need to be taken from a population so that the results can be extrapolated to it on a statistical level, provided they are representative of the population.

  Sample size is defined statistically by two parameters: the size of the population to be addressed and, on the other hand, the maximum statistical error that is considered acceptable. In this case we have considered a population size equal to the number of 'end-consumer units' of coverings existing in Spain.

We have considered this 'consumer unit' not to be the individual consumer but **homes**, whose number is around 14 million, according to the Spanish National Institute for Statistics (INE).



- **Geographic context** in which the sample to be surveyed will be located. In this case the interviews will be held in the entire national context according to the **Nielsen** geographic areas.

  The Nielsen method establishes 8 geographic areas or zones in which there is no difference in consumer behaviour of the different inhabitants in each of these areas. Thus, it is assumed that a consumer from Zaragoza behaves in the same way in regard to goods consumption as a consumer from Gerona, because both populations belong to the same geographic area delimited by Nielsen.

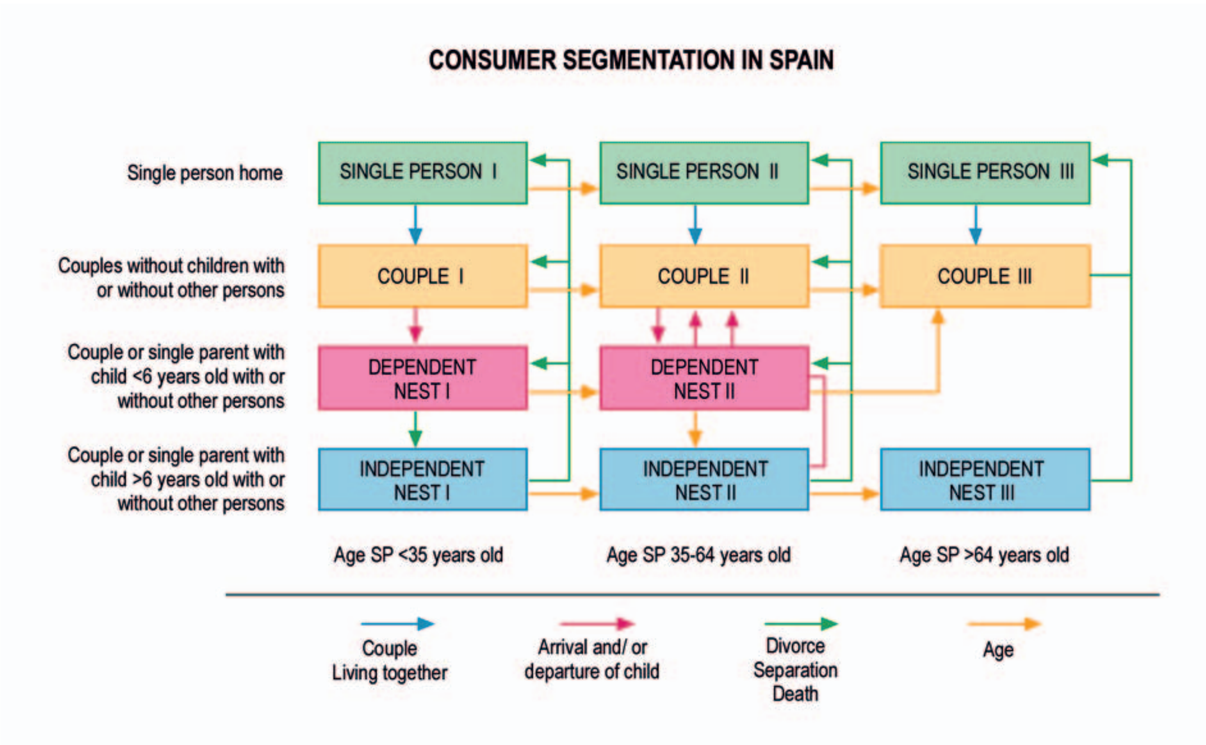
The following table sets out the different populations belonging to each Nielsen geographic area:

TABLE OF NIELSEN AREAS	
AREA 1	Barcelona (non metropolitan), Gerona, Tarragona, Lérida, Huesca, Zaragoza, Palma De Mallorca
AREA 2	Valencia, Alicante, Castellón, Murcia, Albacete
AREA 3	Almería, Badajoz, Cádiz, Córdoba, Granada, Huelva, Jaén, Málaga, Sevilla
AREA 4	Madrid (no metropolitana), Ávila, Cáceres, Ciudad Real, Cuenca, Guadalajara, Salamanca, Segovia, Soria, Teruel, Toledo, Valladolid, Zamora
AREA 5	La Coruña, León, Lugo, Orense, Oviedo, Pontevedra
AREA 6	Bilbao, Burgos, Logroño, Palencia, Pamplona , San Sebastián, Santander, Vitoria
AREA 7	Metropolitan Madrid
AREA 8	Metropolitan Barcelona

2.18. LIFE CYCLE OF THE HOME + SOCIOECONOMIC CONDITION

The selection of the consumer unit 'home' as study parameter, combined with the **socioeconomic condition** of its main provider, measured as a function of the consumer's profession and education, will enable our researches to provide segmented and quantified information on the consumers as a function of **home life cycle.**

The concept of home life cycle establishes several segments by virtue of the individual's age, life as a couple and the number of children under the individual's charge and their age.

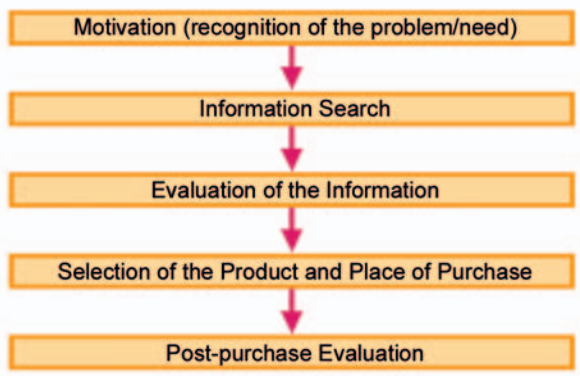


2.19. OBJECTIVE OF THE RESEARCH: THE PURCHASING-DECISION PROCESS

The specific objective of the research is the **purchasing-decision process** of coverings in the home, paying particular attention to ceramic tiles. The temporary and incidental character of the interview technique should provide a year-over-year vision of the evolution of this process, adapting its structure to different needs or possible complementary objectives that emerge in each new survey.

In general terms we may say that the most common purchasing-decision process corresponds to the following phases:

The objective of our study is to determine the purchasing-decision process of ceramic products as well as of their substitutes (wood, marble, terrazzo, carpeting...), to enable establishing the different positionings, perceptions, evaluations and, in general, the specific purchasing processes of each of these.



In order to know to the coverings consumer extensively, the motivations or needs are analysed that lead the consumer to purchase coverings (deterioration, decoration, hygiene…), as well as the process and the sources of information (magazines, stores, pamphlets, catalogues, Web…) which consumers access to obtain the information they consider necessary for the final selection, not only of the chosen product but also of the establishment where the coverings purchase will finally be made.

Lastly, the post-purchase evaluation of these products is analysed, because this enables establishing the satisfaction or dissatisfaction that these have produced in the consumers.

2.20. CONSUMER GROUP DYNAMICS

It is planned, in order to complete the information gathered by the questionnaires, to launch in parallel several annual group dynamics, to provide a certain type of information relating to the purchasing process and other aspects relating to the coverings consumer, which cannot be appropriately obtained by questionnaires.

2.21. CONSUMER REPORT

With all the information obtained on the coverings consumers the **consumer report** can be generated, which will provide companies annually with an orientation for their marketing strategies, especially for those directed towards the replacement market.

This report quantifies, among other features: homes according to their life cycle, indicating the type of home for each of 3 socioeconomic levels; the specific purchasing-decision process for coverings according to the assessment of the different coverings, the consulted sources of information (indicating which has been the first one used), in which rooms each type of acquired covering has been used …

This report enables bringing the industrial approach closer to a market and needs approach.

2.22. SECTOR REPORT

Finally, the Market Observatory makes a **sectoral report** which, with annual regularity, presents information that includes the evolution of the main economic indicators of the sectoral context and of the macro-environment related to the sector's activity, the sector's main threats and opportunities, the identification of tendencies and basic information from the markets on a global level.

With a view to defining the appropriate strategies and to improving the competitiveness of the companies and, in short, that of the sector.

This report, whose elaboration is supervised by the General Monitoring Committee of the Observatory, is the result of the analysis of all the information gathered from all the sources described above, together with specific studies, which include financial analysis and cost studies.

3. ACKNOWLEDGEMENTS

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