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Furniture Foresight Centre – CEFFOR®

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Purpose

CEFFOR was created to promote the sustainable development (in terms of all three pillars: economic, social and environmental) of the furniture industry in countries with high costs of production. CEFFOR is to accomplish this task by means of contributing strategic information to the social agents and companies who participate in determining enterprise strategies and industry policies.

Furniture Foresight Information System: CEFFOR®

The CEFFOR® (Furniture Foresight Centre) strategic scenario analysis is a unique response to the future challenges that the furniture industry in high cost countries (HCC) will face. An important factor in this respect is the globalization of markets and its impact on industries located in high cost countries.

CEFFOR® is part of the *Business Intelligence System* of AIDIMA, which was commenced in 1998 and is based on the work of more than 150 international experts from all over the world. It covers seven knowledge areas: consumption, management, marketing, supply chain, materials, product and competitive environment. CEFFOR® is geared toward identifying future trends in each knowledge area and analysing their relation to the respective business models of the furniture industry.

CEFFOR® has a global scope and counts on the work of professionals, researchers and experts situated in different parts of the world.

The main objectives of CEFFOR® are

- to create a foresight information system using a European foresight approach by constructing the possible competitive scenarios of the furniture sector in the high cost countries between now and 2016 and utilising foresight methodology for a systematic analysis of the constructed scenarios to identify possible futures of the furniture sector (macroeconomic, sector-based and business models scenarios);
- to identify the key variables of the future that guarantee the economic, social and environmental sustainability of the furniture sector in high cost countries;
- to generate information on opportunities for high value added, supporting strategic decision making processes of the companies in the furniture sector;
- to promote the adoption of proactive attitudes in facing changes in the competitive environment;
- to formulate strategic recommendations to public administrations and business associations of the furniture industry in high cost countries;
- to follow the evolution of the furniture industry's competitiveness in low cost countries (LCC), assessing the existing competitive gaps to high cost countries.



There are three different phases of CEFFOR®:

- 2005–2007: strategic foresight – scenario definition, identification of key variables.
- 2008: foresight on future business models in the furniture industry – mapping out the territory for actions at company level.
- From 2009 on: strategic foresight oriented toward evaluating the sustainability of business models and scenarios from an industry and a policy makers point of view.

Phase 1:

Step 1	Defining CEFFOR global scenarios 2016: demography, territory, agents, macroeconomics, market, global relations and consumers
Step 2	Identifying key variables at a sectorial level
Step 3	CEFFOR morphological and FAR analysis: Round 1 expert panel
Step 4	CEFFOR cross impact analysis
Step 5	Defining BAU, Contrasted & Rupture Furniture Industry 2016 scenarios

Phase 2:

Step 6.1.1.	Round 1: Generalist Expert Panel: open questions in each knowledge area
Step 6.1.2	First Round: Sectorial Expert Panel: Evolution 2016 by knowledge areas
Step 6.1.3	Second Round: Sectorial Expert Panel: impact evaluation along the value chain
Step 7	Defining the future (2016) furniture business models

Phase 3:

Step 8.1	Defining the sustainability indicators for the furniture sector in HCCs
Step 8.2	Defining reference business models by scenario
Step 8.3	Weighting geographic differences of sustainability & measuring the indicators for all scenarios
Step 8.4	Sustainability – feasibility matrix
Step 9	Selecting the desirable scenario: involving the institutional committee
Step 10	Defining the pathway only considering the desirable future: industrial policy

The PREDICS® Model: Morphological/FAR and Cross-impact Analysis in CEFFOR®

For determining the (external) global and sectorial scenarios for the furniture industry, only variables related to the external context of a company were selected. Since the variables considered pertain only to the competitive environment and consumer market at the levels of the domestic and global furniture industry, not all of these variables are at the same level of controllability from the industrial players' points of view. In order to execute the morphological/FAR (Field Anomaly Relaxation) analysis, only the variables with a low level of control on the part of the industrial players were considered.

In FAR, one of the 'arts of usage' (Rhyne, 1995) is to make use of a constructed acronym as a sort of 'meta-language' for the problem under investigation in order to make it easy for the technical team involved in the scenario generating process to remember to consider all the dimensions of the problem (Coyle, 2003). The CEFFOR technical team has found an acronym very appropriate to its objective: 'PREDICS', which consists of the following dimensions:

1. **P**olitical situation internationally
2. **R**etailer strategy
3. **E**conomic policy on the furniture industry
4. **D**emographic evolution
5. **I**nternational competition in the furniture industry
6. **C**onsumer behaviour in the furniture market
7. **S**ocial evolution of home attitudes

The problem is examined at two different levels of detail in order to obtain a better definition. At the first level of dimensions are the seven key variables external to companies (i.e. PREDICS above) on which they have little (or no) influence. At the second level of components are the 32 values (in total) that the seven dimensions can have, which represent different possible evolutionary paths into the future and which together model the evolution of each dimension. Both levels of detail can be seen in Figure 1 (page 3).

The totality of every possible combination of these variables generates the so-called 'morphological space', which is obviously very complicated, having (as it does) many thousands of formal combinations. The next step therefore was to 'reduce' this morphological space to a more tractable form by removing illogical, implausible and improbable combinations. This crucial task was undertaken, in the first instance, by performing seven independent morphological analyses at the level of dimension. That is, within each of the seven major dimensions, a morphological analysis sought to eliminate inconsistent or illogical combinations within that particular dimension (deferring further consistency checking between the dimensions to a later time). The challenge in methodological terms is to generate output that is understandable for people outside the process and, at the same time, models the wicked problem without (as it were) leaving 'blank' areas. This is no easy task.

The internal team performed the analysis with Michel Godet's morphol software, making use of additional exclusion criteria generated by the experts based on assessments of greater or lesser probability for the various combinations. That is, only logical and plausible combinations that were not also considered to have a very low probability were included. In this way, the whole wicked problem was reduced to the FAR sector/factor matrix. Each of the seven PREDICS dimensions (called 'sectors' in FAR terminology) has been reduced to between three and five plausible and probable values (called 'factors' in FAR). These sector/factor values form the basis of

further morphological/FAR analysis to identify the mutually consistent combinations among these 2,187 (i.e. 3 x 3 x 3 x 3 x 3 x 3 x 3) formal combinations. This constitutes the starting point for building the sectorial scenarios. Ultimately, they are

used as a basis for discussion with companies and policy makers in order to begin the necessary process of initiating real change within the furniture industry.

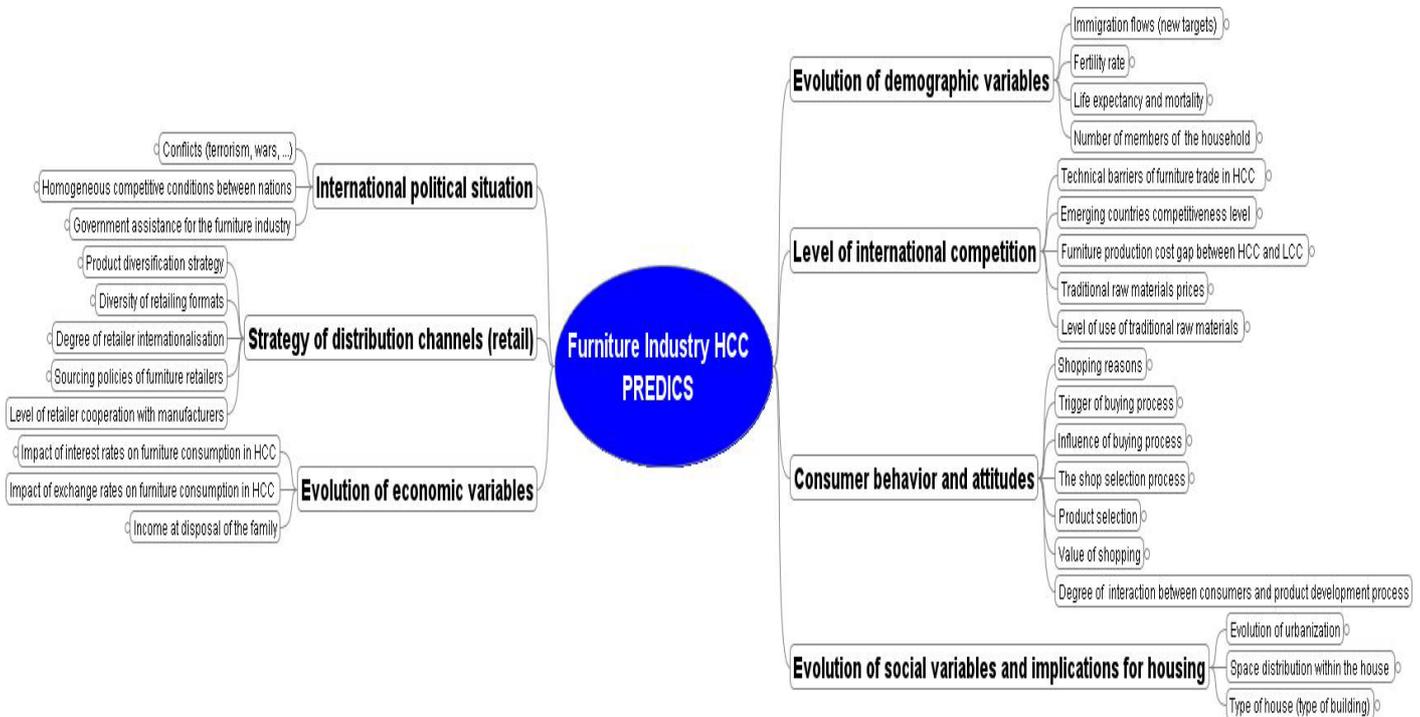


Figure 1: The PREDICS model – mindmap

Context of the Foresight System

The furniture industry operates in a turbulent, competitive environment, with companies lacking experience in strategic planning and/or the use of foresight information, focusing on the short term, and showing scepticism towards new ideas differing from current reality. In this business situation, price has become the most important strategic variable, and the irruption of low cost countries into the competitive environment has revolutionized the industry worldwide. Organized distribution, also pressured by an end-user who values low price in an oversupplied market, has taken advantage of economies of scale, beginning a seemingly unstoppable process of buying product in these low cost countries as trade and logistical barriers are being overcome. The effects of this situation have been catastrophic for the traditional furniture manufacturing industry in the developed countries, which has found itself incapable of competing on costs with these countries, which have gradually improved their quality and design. The progressive loss of market share, both domestically and internationally, and the growth of imports has caused a steep drop in the profitability of businesses – and the beginning of a worrying trend: the closing of companies and the subsequent rise of

unemployment. The key question in this context is: ‘Can the household furniture manufacturing industry survive in the developed countries or is it doomed to disappear?’

Three Sectorial Scenarios in the Furniture Industry

Smart Solutions – Sweet Home & Innovations

1. Revitalisation of the US economy and economic acceleration within the EU by 2010 in the wake of the Lisbon Treaty. Full employment and extended retirement age. Controlled immigration as a massive resource.
2. Growing urban-rural harmony. Urban polycentrism. Very fast development of communication and information technology. Demand for intelligent housing
3. More investment in housing. Home as a manifestation of values such as security, sociability, respect for the environment etc. Spread of avant-garde lifestyles. Life expectancy remains high while society experiences a moderate rejuvenation due to immigration. A growing furniture market.

Retail Brand – Global Suppliers & Value Chain

1. Economic slowdown 2008–2010 and a new expansive cycle after that. Reorganization of the economy.
2. Little global institutional progress in economic policy. Moderate antitrust progress (competition law). Off-shoring manufacturing of standard products.
3. High level of furniture retailing consolidation. Conventional purchase of furniture by end-user is focused on the product itself without any value added during the buying process. In the consumer mind, the furniture brand is equivalent to the brand of the retailer.

Low Consumption – Budget & Basic

1. Severe recession in both the USA and EU. Slow recovery after that.
2. Increasing economic instability. Employment stagnation. Immigration pressure. Wage moderation. Decrease of disposable income.
3. Households: Single-functional housing spaces and conventional lifestyles. Lengthening of the furniture usage cycle in households. Function and price as decisive factors of purchase. Consequence: a diminishing furniture market.
4. Retailers searching for the best combination of low cost furniture. Grave crisis of mature manufacturing sectors. Constant ‘antidumping’ conflicts.

Foresight Information System – a Useful Model for Policy Making

Foresight scenarios are not an objective in themselves. It is also necessary to implement a follow-up phase in order to facilitate furniture companies using this foresight information in their decision-making processes.

Scenario building methodologies should not be used in a rigid, mechanical way. When a foresight exercise starts, there is a risk of proceeding directly to methods and using more than we in fact need. Rationality and rigour do not imply a need to use a lot of methods. Sometimes the ad hoc nature of our problem indicates that it may be more convenient to use a combination of methods as presented here.

The presented foresight methodology used by CEFFOR® Furniture Foresight Centre can serve as a feasible model for foresight processes in other traditional industries upon suitable adaptation. Unfortunately, the current situation in other traditional industries is similar to the one that the furniture industry finds itself in. From the point of view of policy makers, it would be ideal if the main players in the rest of the traditional goods sectors decide to implement a similar foresight information system. In this instance, policy makers would have better access to information essential for anticipating and developing a sustainable industrial policy.

Partnerships within CEFFOR

AIDIMA is the Furniture, Wood and Packaging Technology Institute in Spain and leads the development of CEFFOR®. For this purpose, AIDIMA counts on the collaboration of international partners:

- FPINNOVATIONS-Forintek Division (Canada’s Wood Products Research Institute)
- Research Centre CRC-Wood Innovations of The University of Melbourne in Australia.

Sources and References

Project website: www.ceffor.com or www.aidima.es

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About the EFMN: Policy Professionals dealing with RTD, Innovation and Economic Development increasingly recognize a need to base decisions on broadly based participative processes of deliberation and consultation with stakeholders. One of the most important tools they apply is FORESIGHT. The EFMN or European Foresight Monitoring Network supports policy professionals by monitoring and analyzing Foresight activities in the European Union, its neighbours and the world. The EFMN helps those involved in policy development to stay up to date on current practice in Foresight. It helps them to tap into a network of know-how and experience on issues related to the day to day design, management and execution of Foresight and Foresight related processes.