

**ONZIEME RENCONTRE INTERNATIONALE DU GERPISA
ELEVENTH GERPISA INTERNATIONAL COLLOQUIUM**

Les acteurs de l'entreprise à la recherche de nouveaux compromis ?
Construire le schéma d'analyse du GERPISA

Company Actors on the Look Out for New Compromises
Developing GERPISA's New Analytical Schema

11-13 Juin 2003 (Ministère de la Recherche, Paris, France)

**HOW TO DERIVE SYNERGIES BETWEEN PROJECTS OR BETWEEN BRANDS?
PRODUCT ARCHITECTURE AND A NEW GRAMMAR
FOR THE DEVELOPMENT OF PROJECTS AND PLATFORMS**

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In recent years, there has been growing concerns in the automotive sector on product development performance, with the decrease of products' life-cycles and the shift to services development. Important mergers and acquisitions have also reshaped the sector: The global and multiple brands group dimension plays a more and more prominent role where each brand has to differentiate itself, to be a profitable independent company and at the same time needs to take advantage for strategic common orientations and cross-brands synergies. A key-issue is therefore to depict new leverages to organise these synergies.

With regards to these strategic evolutions, new technical and organisational solutions have been introduced, such as modularisation (Sako, 2002, Baldwin and Clark, 2000) and platform development (Cusumano and Nobeoka, 1998). They have considerably improved product development and cooperation between manufacturers. Yet, the implementation of these solutions encounters important difficulties. Platforms are for instance not as stable as expected and regarding the commonality ratio (number of components or costs shared by different vehicles) the results are sometimes disappointing. As a matter of fact, given the level of technical complexity, each car results from highly contextual compromises and platforms need to be tuned and readjusted for each car (Segrestin, Lefebvre and Weil, 2002).

Many manufacturers are therefore trying to find new ways to take advantage from multi-projects management and cooperation between brands. To approach this general issue and formulate new patterns, we propose to analyse a new strategic reflection that has been engaged, at a European car manufacturer. One of the authors of this paper is directly involved in this reflection and actively participates to the related managerial processes.

This approach is based on a new model for product architecture. It is closely related to what B. Weil has called "half-designed product" (Weil, 1999): it is neither a set of components nor a set of interfaces. It has much more to do with the structuring dimensions of the car. In other words, some dimensions are defined as common for a set of cars, but these dimensions are not physical solutions. The concrete solutions still have to be defined depending on each car's specificities. Hence, it is expected that a wide range of choices is possible to differentiate each car, but that these common dimensions enable the preservation of a good level of interoperability and of commonality.

The aim of this paper is to analyse this new approach and to examine its implications, both from a theoretical and a managerial point of view.

- ✓ Managerial doctrines usually refer to traditional models, such as the systematic approach (Pahl and Beitz, 1977). Although it is acknowledged to be crucial for design cooperation patterns and innovation management dynamics (Henderson and Clark, 1990; Midler, 2001), the notion of architecture is not clearly defined. Most of the times, it is seen as a packaging notion to allocate volumes and to enable job-sharing of development processes. In this respect, platforms appear as a set of developed components that could be transferred from one project to another. The new approach seeks to clarify the notion of architecture and it leads to a deep renewal of the underlying assumptions through taking into account product and learning dynamics.
- ✓ We then examine the practical significance of the new approach: to what extent does it lead to revise current representations of platforms and the notion of preliminary specifications? We assume that it also induces major changes in traditional marketing segmentation and platform's clustering. In this respect, it can renew innovation strategies and niches or opportunities building processes. This approach also helps to depict critical incompatibilities between new attributes and synergies rationale. Hence, further learning issues can be identified and could open new innovations fields. Thus, it can be a powerful leverage for managers, whose related competences, tools and practices have to be discussed.
- ✓ Finally, this approach raises crucial questions concerning strategic collaborations: we analyse to what extent the product architecture can reframe relationships between manufacturers, and with partners and suppliers.

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