

Implementing Product Configuration Systems - Organising for Success

By Kasper Edwards*

Department of Manufacturing Engineering and Management, Technical University of Denmark
Building 423, office 028, 2800 Lyngby, Denmark. (email: ke@ipl.dtu.dk)

ABSTRACT

Product Configuration Systems (PCS) is a technology where an information system is used to support product configuration. Product configuration is the process in which a salesperson translates a customers' need into a product. It happens that a salesperson sells a product, which is not readily producible thereby lowering the profit margin occasionally to the point of generating a loss.

PCS will allow only valid configurations to become production orders. Needless to say PCS offer the potential of significant increases in productivity. In order to obtain these productivity gains firms must go through the process of implementing a PCS. While this seems straight forward it is not and experience from several projects shows this to be difficult.

This paper argues product configuration systems are a technology which integrates multiple process in the firm. This has consequences for the project organisation when implementing product configuration systems. The paper draws from existing literature on implementing PCS which is coupled with project management and communities of practice in order to suggest a suitable organisation for the task.

The paper begins by explaining the cross functional nature of PCS and how knowledge from diverse areas of the firm is needed for their implementation. The paper then explains uses project management principles to deduce the organisation of a PCS project through its stages. This is then compared with empirical insight from a number of implementation projects in Danish firms. Lastly it is discussed whether the proposed organisational model is usable outside a Danish cultural context.

PLEASE NOTE THIS IS A WORKING PAPER IN ITS EARLY STAGES.

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1 Introduction

A product configuration system (PCS) is a technology, which support the product configuration process. The purpose of the product configuration process is to translate customers' wishes into a product that the firm is actually able to produce. Since the dawn of time has sales staff been the key to this process where customer and sales staff meet and try to agree on price and functional characteristics etc. However, customers have begun to demand products which cover all of their specific needs and less general purpose products. This places firms in a new type of competition: Customer specific products at the least possible cost. Customers desire the product, which meet their demand to the lowest possible price. This is a change in competition from mass production with its focus on general products at the lowest possible cost and naturally this requires a change in the organisation of the firms. Now customers will have to be involved in the process of configuring or specifying the product and so the product becomes tailor made and can only be produced after the customer has specified the product and placed the order. Gone are the days where mass producer could just stock up on products and sell the same product over and over again.

Historically the market has responded to demand for specific product by allowing one-of-a-kind producers to sell their products. The trend, however, are that one-of-a-kind is too expensive in a world where customers are accustomed to mass production prices. To this end mass customization has emerged as the way to achieve both a high degree of customization and a the low costs associated with mass production.

In this process it is necessary to

A product configuration system

Explain the problem

State the purpose of the paper

Present the order of arguments.

2 Product Configuration Systems

What is PCS

How are they developed and what is the special properties of PCS projects.

How do currently advice on the implementation of PCS

3 Empirical Observations

Briefly tell about the PETO project.

Try to characterise the successful first time implementations of product configuration systems.

4 Possible Solution: A Community of Practice

What is a CoP

What properties of CoP are interesting and fits with a PCS project?

“At the simplest level, they are a small group of people (in this case, about 20) who've worked together over a period of time. Not a team, not a task force, not necessarily an authorized or identified group. People in CoPs can perform the same job (tech reps) or collaborate on a shared task (software developers) or work together on a product (engineers, marketers, and manufacturing specialists). They are peers in the execution of "real work." What holds them together is a common sense of purpose and a real need to know what each other knows. There are many communities of practice within a single company, and most people belong to more than one of them”, Brown and Gray, 1995.

5 Implementing PCS using CoP

Realise this to be a learning experience

Information wants to be free

Establish a project team

Can this be linked to PRINCE2

Allow stakeholders to be part of the team.

Keeping a chain on the political side of matters

6 Conclusion

This paper has show product configuration systems (PCS) to be a very complex technology requiring a serious effort to implement. Firms who decide to implement product configuration systems are seldom aware of work ahead. PCS require a great deal of effort to implement because knowledge of the possible product configurations reside within many an employee. In order to create a successful implementation firms must gather this knowledge, which is not formalised. In fact much of this knowledge is implicit and to complicate matters it is often not known who possesses the required knowledge.

From the PETO project we have observed successful projects to be characterised by informal teams allowing both stakeholders and other interested parties to participate in the project. To some extent these teams share resemblance to communities of practice, which are defined as a group of individuals working together in the execution of real work (Brown, 1995). In this case the creation of a product configuration system.

It would appear that PCS, in order to succeed, would need to draw upon the knowledge of many employees whom at the outset was not thought to be related to the team creating the PCS. As the project unfolds the core members of the PCS team becomes aware of the needed information and begin to approach possible carriers of knowledge. Naturally this is a search process, which depending on the size of the firms will be more or less structured and manageable. Employees with the relevant knowledge

7 Notes

Packard 1995 offers some very interesting interesting insight into project management. Basically the paper argues that projects should be treated as temporary organisations. This has implications for surrendering the knowledge gathered in the project as a substantial part hereof is organisational learning which will vanish with the organisation.

In particular this perspective is interesting for PCS projects as many of these is a first time effort where learning is particularly intensive. If the project staff does not continue to maintain the PCS the knowledge will vanish.

Further the paper argues that projects tend to play down the importance of interpersonal relations management as the project leader is so deeply rooted in the technical matters. Perceiving a project as a temporary organisation it becomes apparent that a project is not just plan, execute and control but relations management is an important part of that leaders job.

For PCS this has special implications as the project participants are very different in their relation to the finished product. Some will deliver their knowledge to the project and this will be formalised to an extent where they are left without a job.

8 References

Brown, John Seely, and Estee Solomon Gray, 1995, "The People Are the Company, How to build your company around your people", *Fast Company* magazine (Issue 01, November 1995).

Packendorff, J., 1995, "Inquiring into the temporary organization: New directions for project management research", *Scandinavian Journal of Management* Vol. 11, No. 4, pp. 319-333.

9 Change log

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