Chapter 3
Interdisciplinary Interaction for the Early Stages of Product and Service Development

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ABSTRACT

Saturated markets require user value through services and mass customised differentiation instead of mere products. This increases the significance of integrated innovation in the early stages of complex value offerings. Front end development combines the multidisciplinary professional perspectives and user insight in a cost effective way. Truly interdisciplinary interaction is reached through intrinsic motivation, shared goals and understanding. Experience for structuring the multidisciplinary front end innovation comes from the INNOstudio® concept created by the D’ART Design Resource Centre in the North Karelia University of Applied Sciences. This concept is about service and methods facilitating innovation sessions. Process support for communication, exploration, problem space definition and further development is provided by moving from abstract thinking into external observables – scenarios, sketches, or models. Innovative value concepts require both divergent, generative thinking and convergent, analytical thinking. Diverse methods support generative ideation, exploring future opportunities and user relevance or analysing the problem space.

INTRODUCTION

This article explains the significance of integrated, interdisciplinary innovation, especially in the early stages of complex value offerings. The experience for these development practices comes from the INNOstudio® activities, a service concept created by the D’ART Design Resource Centre in the North Karelia University of Applied Sciences. With the history of more than nine years of innovation camps in North Karelia, these were selected year 2005 as the best practice of the past period of EU projects in Eastern Finland. This led to the creation of the INNOstudio® service concept at the end of 2005. The INNOstudio® concept is about facilitating multidisciplinary innovative processes with...
structured sessions applying various innovation methods. The service has been created in practice of helping companies and organisations in their needs for new concepts. The approach of using people from diverse professional backgrounds, as well as user information and participation in innovation camps has proven successful.

The purpose of this article is not to explain in detail the executed development cases e.g. in the fields of wooden building industries, wellbeing services and products, new materials applications or in the real user participation. The experiences applying innovation sessions as a development tool have produced processes and methods that are mirrored here against the international professional practice and research. The INNOstudio® experience shows how these are applicable to regional development collaboration, especially with the local SMEs. The essential issue is not only to run an efficient development process but to turn the multidisciplinary approach into real interdisciplinary work by exploiting and synthesising the knowledge and skills of the diverse people. This development tool is currently being shared regionally through learning by doing approach via Multidisciplinary Innovative Environment for Product and Service Development 2008-2010 European Social Fund project.

**INTERDISCIPLINARY VALUE CREATION PROCESS**

The current understanding of innovation is holistic reaching from new business ideas to the market success and can be described as the commercially successful exploitation of ideas (Stamm 2004, 11). It can be associated with an ideation process that has a value-creating outcome for the markets. Future orientation is required in a rapidly changing world predicting how the market will change through complex competition springing from any corner of the globe. As the changes offer new technologies, new processes and new approaches to living and working innovation has become a key to remain competitive. (Walton 2005, 6). New products and services draw their value from the networks they bring together including not only the product, but the whole venture. Developers will have to become proficient at aligning and managing the needs of multiple stakeholders: investors, suppliers, content-providers, distributors and others. (Hargadon 2005, 34). Complex product and service concepts need to be defined for the collaboration of these networks.

Concepts describe holistic business solutions, where extra value and desirability are created for the customer or end user. Concepts also involve the part of the different stakeholders in producing the solution. It is management information that illustrates what users expect from an improvement of situations in which a product or service might be acquired and used. Concepts describe the unique selling points valuable to the customer and differentiation from the existing offerings. They explain not only physical attributes (dimensions,
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