Game Day – May 20

Industrial Product-Service Systems 2015

The Game Day consists of half a day of experimentation of and discussions about educational tools relating to PSS design methodologies and industrial management at large. It is an opportunity to explore new game-based learning methods and most up-to-date innovations in this field.

14h15-15h45 – Educational Game Experimentations

First session of the game day is concerned with experiencing three educational games. Each participant selects the Game he would like to discover and experiment. The final assignation will depend on the limited number of participants for each game.

Game 1: Integrating product- and service dominated logics - A PSS Management Simulation

A session convened by Thomas Süße & Bernd-Friedrich Voigt (Ruhr-University Bochum.

The PSS (Product-Service Systems) business simulation is a challenging computer-based, but realistic learning and teaching environment for practitioners as well as for academics. Participants will be in charge of a virtual business division which provides integrated solutions along customer specific life-cycles. The key to delivering a profitable customer use value lies in an optimized coordination of decisions taken by a service-unit and a product-unit. A graphical PSS management cockpit integrates key performance indicators from both units and supports participants in analyzing results and effects of their PSS management decisions. This learning-by-doing simulation sets up a realistic PSS model to train business-related experience in an interactive, highly dynamic and risk-free manner.

Game 2: B to green

A session animated by Samuel Mayer, from the Pôle Ecoconception

B2 Green is an educational game focused on innovation and eco-innovation mechanisms. It allows understanding how the environment could open new innovation horizons. B2 Green consists of a board game, a debrief, and a training sequence. The game simulates a 5 year period where the players take the roles of innovation managers within different companies developing and marketing new products. Their aim is to gain the biggest market share through offering the best product. Each of the users may acquire new technologies, marketing strategies, and eco-design to take advantage over the competitors. The innovation strategies of the player depend on the economical context. The game is then structured into

three steps: innovation investments, product development, and market share assignment.

Game 3: WipSim - Work In Process SIMulation

A session animated by Patrick Burlat, from Ecole des Mines de Saint Etienne

WIP-SIM is an engineering tool for automating tedious and complex calculations needed to size and optimize pull production lines with constant work-in-progress. To this end, WIP-SIM uses different production management concepts, such as Queuing Theory and Theory of Constraints. This tool has been gradually enriched with new functions to suit user needs resulting in newly added tools such as, Value Stream Mapping and a view of the factory layout with calculating average distances traveled by components.

16h00-17h30 - Pannel and Discussion Session

Second session reports on most-up-to-date educational innovations based on the experience of experts in this field. These include but are not limited to effective design of educational tools: Methodology, Feedback from experience, and Best-practices on how to design efficient educational games, for different kind of public (Industrial managers, Engineering students, Management students...).

Round Table Animated by : Paul Wheal (Ecole des Mines) and Bernd-Friedrich Voigt (Bochum University)

Special panel contributions:

Prof. Yoshiki Shimomura, Tokyo Metropolitan University (JP)

How to design efficient educational games :
- overview of EDIPS, a serious game on PSS management
- the design process used to build such a game and to make it a success (return on experience, the reasons of the success, difficulties in adaptation to various publics, etc...).

Thomas Süße, Bochum University (DE)

Bridging the mindset-divide between product and service for PSS education - theoretical foundations and modeling of a learning environment for individual and team competencies