Teleonics as a framework for Business Modelling and IT System Design

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Teleonics is a goal-oriented process modelling methodology belonging to the multifarious family of System Sciences. It is often considered as a general purpose framework for meta-modelling of goal-oriented biotic and abiotic process systems to study their dynamics in a value conscious, hierarchically arranged environment in order to improve our way-of-doing-things, i.e. our technology. The teleonic vocabulary has developed a few neologisms such as: teleoses, teleons, mei, ethos, doubles, biomatrix, telentropy. A more formalised summary of these terms and several of their relations can be found in: "The mathematico-symbolic formulation of Teleonic principles" Horváth and Járos (accepted for publication in System Research and Behavioural Sciences in 2003).

Summarizing the major Critical Success Factors of Business Modelling and IT System Design in teleonic terms on different levels of complexity is the articles main objective.

It is often the how a system works that people tend to focus on, describing it with interaction models. The study of objectives - the what a business or system does - is often left implicit and sometimes even unclear in the analysis although goals are much less variable than the activities, roles and players in a system. This more stable nature of purposes makes them a perfect starter for requirement analysis and system design. Use cases have been also enhanced with objectives into so called goal cases, and General Goal Patterns have been developed to explicitly capture and describe goals and their relations to each other.

The increasing awareness of professionals has proved the essential nature of bridging between Business Modelling and Object Orientation. The communication between people from the board (managerial) level and the technician/developer level has been improved with the Unified Modelling Language as well. Different extensions of UML help not only the design of IT systems, but also the redesign of organizations and its processes, guaranteeing a homogeneous modelling environment in the whole organization. The same UML extensions are also very useful when we discuss teleonic concepts.