Effectuation for organizing design processes?

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New ways should be found to organize the processes of requirements discovery and management in order to deal with increased design complexity. Trade-offs should be made between efficiency and flexibility, for designing in an uncertain and continuously changing environment.

Several approaches to design processes can be categorized into two main categories, namely top-down, expert driven, rational-problem solving like approaches, versus more bottom-up, participative, reflective-practice like approaches. The former are represented in well-known sequential and incremental models of the design process, like the waterfall model. The latter, more participative processes, are modeled as evolutionary or agile approaches (Benediktsson et al., 2006).

A recent theory that fits very well the agile approach is effectuation (Sarasvathy, 2001; Sarasvathy and Dew, 2005). Effectuation originates in entrepreneurship, namely the design of new markets and new businesses. Effectual thinking is contrasted with causal thinking. Effectuation puts low emphasis on prediction and high emphasis on control (Wiltbank et al., 2006). Causal thinking depends on accurate predictions and clear goals, whereas effectual thinking is extremely stakeholder-dependent and means-driven. Effectuation seems to be useful in situations of high unpredictability and high goal-ambiguity. These situations correspond very well with the new challenges faced when designing information systems and business software.

Given that effectuation is only recently studied, the literature is still limited. Not much empirical work is available yet. Although the link to design processes was already made by Sarasvathy and other authors, no clear guidelines are yet available for implementing effectuation in these processes.

Several questions follow from the above observations: What are suitable operationalizations of the theory of effectuation? How do effectual processes look like? Can effectual processes be recognized in the practice of designing new information systems? How to make effectuation work? Under what conditions is an effectual approach suitable, when is causation more appropriate? Further research should indicate whether effectuation can help in redesigning our design models to better fit the complexity of our systems to be designed and their environment.

References

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