Collaborative Business Process Evolution

The University of Amsterdam (UVA) and the VU University of Amsterdam (VU) have decided to form an alliance between their faculties of science. This alliance includes inter- and intra- organizational changes in goals, policies, and specifically routines. In other word, the UVA and VU are unifying their academical affairs (e.g. teaching) and supporting activities (e.g. human resource activity). Therefore, they need to collaborate for evolving their Business Processes (BPs) e.g. employing a new PhD student. The BP modeling and changing efforts are part of organization’s job, while collaboration and the collaborative process of evolving make it challenging.

To elaborate a conceptual model for designing a particular information system, a visual representation by a set of specific artifacts from a distinguished context is needed (Wand and Weber, 2002). The BP model is a conceptual model, whereas it captures the external behavior of a process. Moreover, BP modeling is performed by languages, which consist of grammars and semantics (e.g. BPMN, UML) (Riemer et.al, 2011). Beside model and modeling languages, the modeler is another part of system design, and usually includes a group of stakeholders.

The modeling could be accomplished by domain experts, consultants (Xiao and Zheng, 2012), facilitators (Hengst, 2005), and editing tools (Rittgen, 2010). The joint modelling to make a shared understanding of models, so-called collaborative modelling has been live topic for two recent decades ( Renger et al., 2008). It was a source of many empirical experiments and case studies.

A number of researches focus on knowledge transmission during modelling (Xiao and Zheng, 2010). Renger et al. introduced a number of issues for collaborative modelling, i.e., group composition trade-offs between stakeholders and domain experts, or choose of starting point for modelling either from experts creation or from domain experts’ scratchs.

A series of extensive research for collaborative modelling is presented by Rittgen. He presents a negation model for recognizing different levels and domain of the collaborative modelling in social, pragmatic, and language aspects (Rittgen, 2007). Also, a model of collaborative factors is elaborated in (Rettgen, 2010b), which addresses the co-evolution of methods and tools towards increasing group productivity. Other collaborative modelling researches focus on supporting software infrastructure (Hahn et al., 2011) or collaboration facilitator tools ( Riemer et al. 2011).

However, there is not sufficient insight for collaboration in BP evolution (Niehaves and Henser, 2011) in the presented researches. Therefore, we aim at examining the collaborative business process evolution to introduce a supporting framework and evaluate it by case study.

Regarding to the motivating example, UVA and VU are evolving their relate processes A1 and A2, respectively to achieve the desired evolved process, we call it A3. This needs to be performed by a set of collaborative steps (i.e., the group roles, process aggregation, process formalization, collaboration closing). Thus, first step would be developing a model to lead the collaborative business process evolution. {A model has to be conceptualized and validated for this step}

As the next iteration, the A3 is analyzing for the purposes of disambiguation and soundness. This automated appraisal will check the occurrence of ambiguous pattern (Russel et al. 2006) and other inconsistent constructs (e.g. deadlock) (Diljkman et al. 2008). In case of discovering ambiguous constructs a suggestion is made on A3 and will produce “A3+” as a recommendation for the domain experts.{A Tool has to be developed for this purpose}

A final step is focusing on interaction of domain experts in responding to the “A3+”. Whether they agree upon revised BP or they ask for further changes to achieve their expected behaviour. {This step is done as the validation of the suggested process}.

Problem definition

Again, since this topic, though very interesting, is not my core expertise, I fully trust you in selecting the topic and defining the RQ. One humble comment on the text is that perhaps where we conclude that “However, there is not sufficient insight for collaboration in BP evolution (Niehaves and Henser, 2011) in the presented researches” (p.1), I felt that this gap needs to be a bit more specific. For example the lack of insight is on which aspect? For example, is it about how culture affects this evolution or is it about how processes are formalized through a modeling language or maybe is it about the overall IT policies of the company?

As a next step, I think we can start thinking a bit more specifically about the three steps of the project (A1, A2, and A3 that you have suggested) by examining 1) what are the specific RQs that each step is going to address?, 2) what are the specific expected outcomes of the research in each step?, 3) what methodological considerations do we need to take into account for each step? Since my role here is mainly as a methodologist, I would be very happy to help on the third line. And of course I will be more than happy to help on the other two aspects, as much as I can. Regarding the group of students for the experiment, I will definitely help to find a groups of students for the last step (if we thought that still this might be needed in the new setting), yet, I should say that I personally do not have a group of students that I can have some control on them for this experiment, especially if it involves some computer skills. Surely I will do my best with your help at UvA to find a proper solution.

Problem Definition {RQs}:

Dumas et al. mention three reasons for fall of BPR, (i) labeling all organizational projects as BPR project, (ii) taking radical redesign approaches instead of gradual improvement approach, (iii) immaturity of cultural or technical infrastructure.

Related works

{Novelty of problem, or approach}

Development of solution

Validation

Conclusions

1. motivation
2. measure
3. relatedwork\_measure
4. design\_method

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