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Specification for the cooperative dimension of the Bid Process Information System

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Abstract

Bid process is a key business process which influences the enterprise's survival and strategic orientations. Therefore, the Bid Process Information System (BPIS) that supports this process must be characterized by integrity, flexibility and interoperability. Nevertheless, the specification of this system, has to deal with "three fit" problems. Four dimensions have been identified to cope with such failures: operational, organizational, decision-making, and cooperative dimensions. In this paper we are particularly interested to organize the cooperative dimension of the BPIS once the bid is won. Thus, we propose the integration of a communication interface between softwares that characterize the operational dimension.

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Keywords: Bid process, Information System, ERP, Tuleap, Interoperability.

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1. Main text

In a market characterized by stiff competition, the organization ensures its survival through business that it achieves and bids that it wins. Business process is a sequence of related and structured activities that produce a service or a product for a specific owner [9].

The bid process is a particular environment for the exploitation of business process [22]. Indeed, this process corresponds to the conceptual phase of the lifecycle of a project or a product. A bid process interacts upstream and involves other processes being design process. It aims to examine feasibility of the bid before negotiating any contract with any owner following a pre-study carried out before a project launch [21].

However, the exploitation of business process, especially the bid process gathers strategic, managerial, organizational and technical skills. These skills contribute to systematic interactions between different organizational units, which they are coming from the same company or coming from different companies. Indeed, many companies work together in inter-organizational bid processes. To enable ad-hoc bid interaction it is necessary to align business processes of the business partners, especially in communication processes in the context of product conception activity [16].

The IS (Information System) [6] that allows to exploit the bid process (Bid Process Information System or BPIS) must be [21]: (i) integrated (able to restore and exploit the patrimony of knowledge and expertise acquired during past experiments bids); (ii) flexible (able to resist to changes in the market and to cope with the agility of business); and (iii) interoperable (able to exploit communications between companies in order to contribute to the construction of the techno-economic proposal that materializes the bid proposition). Nevertheless, the enterprise architecture approach [5], on which we rely to implement this system, has to deal with “three fit” problems: “vertical fit”, “horizontal fit” and “transversal fit” (Fig. 1). Such problems handicap the exploitation of these three criteria [21].

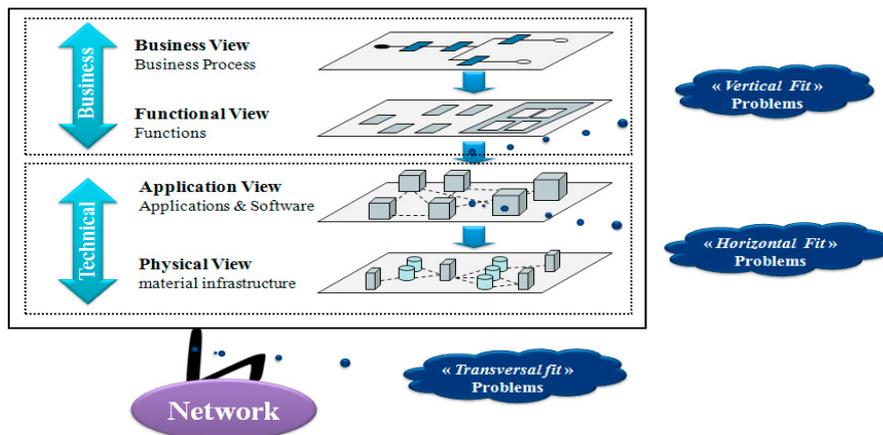


Fig. 1. Enterprise Architecture I.S reference model [6]: “three fit” problems [21].

The “vertical fit” represents the problems of integrity and transposition from a business infrastructure, which is abstract, to a technical infrastructure, which represents implementations. The “horizontal fit” translates not only the software’s problems of identification (induced by the “vertical fit” problems) that can cover the entire infrastructure of the company’s business, but also the intra-applicative communications problems (internal interoperability) to ensure the interactions between softwares of the same technical infrastructure in the company. The “transversal fit” translates the inter-applicative communications problems (external interoperability carried out dynamically through a network). In this context, we have identified an IS that must support four dimensions to deal with such failures: operational, organizational, decision-making, and cooperative dimensions [21].

Afterwards we are particularly interested to organize the cooperative dimension of the BPIS once the bid is won. Thus, we propose the integration of a communication interface between the software’s that characterize the operational dimension of the BPIS. We have demonstrated that the ERP (Enterprise Resource Planning) [8] permits to implement the techno-economic bid propositions that materialized the operational dimension of the BPIS [21].

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