Chapter 4
Planning Cooperation in Inter–Organizational Systems

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ABSTRACT
The purpose of this chapter is to present a systematic reasoning framework (called e-Planning) to plan cooperation between organizations in a network. Thorough assessment of opportunities for and obstacles to cooperation is of paramount importance, as setting up electronic networks usually requires considerable up-front investments in information technology (IT) specific for this cooperation. E-Planning offers an action plan for decision makers to determine with whom to establish cooperation first, and on which topic to cooperate more closely. Following a method for critical problem solving, e-Planning provides guidance to analyze different potential partners and to reason about obstacles to and opportunities for cooperation. To illustrate and validate the framework, it is applied in the area of cooperation between customs organizations of member states of the European Union. Applying the reasoning framework in practice revealed several potential benefits, such as fast and successful assessment of cooperation needs that result in increased re-use of knowledge and software applications. In particular, this way of reasoning may prove to help decision makers cut down unnecessary expenses by, for instance, avoiding duplicated projects.

INTRODUCTION
More and more organizations cooperate in networks to perform increasingly complex tasks. Rather than managing their resources in isolation, organizations construct inter-organizational networks in which flows of information support joint value-creating processes. Organizations participating in such networks need to understand how closer cooperation with selected members of that network can be fostered. Decision makers such as business analysts and IT architects use
Planning Cooperation in Inter-Organizational Systems

This understanding to decide which investments to make, e.g., developing or acquiring inter-organizational systems.

Consider a (potentially large) network of organizations. The members of this network know each other and are probably already cooperating in some way, or have recently done so. However, the current way of cooperation is no longer sustainable, for example due to new laws or increased transaction volumes. Consequently, one member organization in this network is interested in intensifying cooperation with one or more other members of the network (potential partners). This organization starts a process in which it tries to identify opportunities for closer cooperation, as well as potential problems in such cooperation. In other words, it tries to identify those other member organizations with which closer cooperation is feasible, together with cooperation topics for which closer cooperation is mutually beneficial. Finding these candidates for closer cooperation within the (existing) network is a large part of the problem of planning an inter-organizational network. We name this the partner selection problem. In this chapter, we present a reasoning framework that helps decision makers to solve this problem from an IT resource management perspective.

The partner selection problem comprises the first step in developing and implementing closer cooperation with selected members of a network. In this endeavor, several challenges have to be taken into account (Ponisio et al., 2008a): issues related to distribution of power and opportunistic behavior (Williamson, 1993) have to be considered, IT development processes for the inter-organizational systems needed for cooperation have to be planned, and sustainable gains have to be measured. Moreover, a network may have very ambitious joint aims, but there is no way it can accomplish all those aims at once for all members. Thus, the issue is to identify the first steps towards these aims that have a reasonable chance of being successfully implemented. Decision makers are, therefore, in need of an approach that helps them to plan closer cooperation with selected partners in a systematic and integrated way. Unfortunately, current systems development and IT project management methods do not provide such an approach. Focusing solely on one challenge at a time, they fall short in integrating the challenges mentioned above in one comprehensive and systematic assessment method.

The objective of this chapter is to present a reasoning framework (called e-Planning) that enables an organization to plan selection of partners for closer cooperation. Decision makers can use it as a systematic technique to assess opportunities for closer cooperation with candidate organizations. Furthermore, e-Planning helps decision makers to identify the most suitable topic for cooperation.

The reasoning framework leads us through the steps needed to solve the partner selection problem (i.e., problem investigation, solution design, validation, implementation and implementation evaluation) in a systematic way. The reasoning framework is based on a critical problem solving method that was chosen for a number of reasons. First, it makes the problem solving task less daunting, by splitting a large problem into smaller ones that are easier to deal with. Second, it helps decision makers to focus their attention on the most relevant issues. Third, it adds a degree of flexibility, promoting asking questions pertinent to the specific characteristics of the network. Finally, it disentangles nested problems in a logical way.

To illustrate and evaluate our reasoning framework, we use e-Customs, a case study about customs in the European Union. This example is particularly interesting because it is not a commercial business network but a governmental network, demanding a more complex analysis of similarities and matches between organizations to identify obstacles to and possibilities for closer cooperation. Compared to commercial business,
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