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Using SPI Manifesto to Recover from CRM Deployment Project Failures and to Proactively Eliminate Similar Failures in Future: An Action Research Study in a Russian organization

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ABSTRACT

The deployment of software products such as Customer Relationship Management systems may seem straightforward when reading the success stories of software providers. Yet, deployment projects are risky and often fail. Ineffective deployment processes of software providers and systems integrators are a major cause of failures. SPI Manifesto is a recent attempt to help the providers improve their processes, so most failures in software development may be eliminated proactively. Yet, the effectiveness and validity of SPI Manifesto relative to deployment projects are unclear. This paper presents an action research study in a customer organization to assess the extent to which SPI Manifesto could be used to help the providers to recover from situations in which CRM deployment projects are about to fail and to eliminate similar problems proactively in future. Based on the assessment, this paper contributes to improving the generic CRM deployment project process and SPI Manifesto.

Keywords

CRM deployment, CRM implementation, CRM project, CRM coordinator role, customer relationship management, service provider, software process improvement, SPI Manifesto.

INTRODUCTION

Organizations need to become increasingly customer-oriented (Bull, 2003). The heightening demands for product and service quality and delivery require new approaches to enhance relationships with customers and new solutions to automate parts of customer-facing business processes. Customer relationship management (CRM) systems are possible solutions. However, the deployment of CRM systems is fraught with risks (Rigby et al., 2002). Boardman (2005) found that 70 percent of CRM deployment projects were failures and more than half of all companies investing in CRM were disappointed after implementations. Gartner (2002) and Forrester (2005) found similar results. For example, integration between CRM systems and other sources of data was typically poor.

There are many definitions for CRM (McKie, 2000). For example, Levine (2000) considers CRM as the utilization of customer-related information to provide customers with relevant products or services. According to Parvatiyar and Sheth (2000), CRM is a philosophy, a comprehensive strategy, and the process of acquiring, retaining, and partnering with selected customers to create superior value for the company and its customers. For the purpose of this paper, CRM is defined as a customer-oriented business strategy, where the effective cooperation with the customers penetrates through all processes within the company to create the workflow and mindset for attracting new customers and developing existing customer relationships.

As a result of diverse, partially conflicting CRM definitions, there are no commonly agreed requirements for the class of CRM systems. This is a reason why CRM system deployments (hereafter ‘CRM deployments’) often fail to meet the expectations of organizations deploying CRM systems (hereafter ‘customers’) and CRM system providers (hereafter ‘providers’).

While there is ample research about CRM system deployment in the developed countries (Paulissen et al., 2005; Bull, 2003; Piskar and Faganel, 2009), practically no research has been conducted in countries such as Russia where customer relationships and their importance for business have not been properly understood. “Contemporary
Russian marketing practices cover only a narrow spectrum of the diversity of marketing practices observed in other nations, and the overall intensity of marketing activities is low in comparison with international benchmarks” (Wagner, 2005). Consequently, there is a need for CRM deployment process research in such contexts.

This paper studies CRM deployment in Russia. CRM is a relatively new concept there (Griffin, 2008). According to Pavlov (2005), the Russian CRM market accounted for only $5 million in 2001, $11 million in 2002, and $35 million in 2003. The CRM market has remained small and fragmented and the forecasts for the near future indicate a stagnated market (Bazarov, 2009). Several reasons for this have been reported (Griffin, 2008; Ramaseshan at al., 2006; Shumanov & Ewing, 2007; Wagner & Zubey, 2007). The main reason has been that most Russian customers have lacked a strategy for using the data they have collected. Often the managers and staff members responsible for using CRM systems have also been trained insufficiently. Moreover, Russian providers typically have not known who will be in control of their customers’ clients’ sensitive information after the CRM deployments: customers or their clients (hereafter ‘clients’).

Our industrial experiences from many CRM system deployments in middle-sized Russian customers indicate that failures often result from the following reasons. First, the CRM deployment and maintenance project plans often do not include comprehensive risk analyses, solutions to mitigate or eliminate the risks throughout the CRM system lifecycle, and possibilities to dynamically change the plans during the lifecycle. Second, the plans inadequately cover the technical and organizational knowledge (e.g., employee motivation issues, conflict resolution issues) providers need to help customers to embrace the full range of client relations at strategic, tactical, and operational levels. Third, the plans are often not executed and monitored by powerful steering groups representing CRM product providers, CRM system integrators (if different from the providers), and all critical stakeholders within customers. Fourth, providers are often unable or unwilling to recognize the importance of the CRM coordinator role (responsible for facilitating the interactions of customers and providers) not only to the CRM system evolutions but also to the implementation and improvement of the CRM strategies of customers. Fifth, the leaders of both providers and customers typically fail to introduce and enforce systematic change management processes for CRM systems.

The EuroSPI group has proposed SPI Manifesto (Pries-Heje and Johansen, 2010), including three values and ten principles, to guide practical software process improvement (SPI) based on best practices and experiences from organizations worldwide. The values and principles have been presented with examples and explanations of common SPI challenges to help readers place their SPI-related problems in proper contexts, making it easier to learn and apply the values and principles. SPI Manifesto will be revised in the future to address the concerns resulting from the applications of the manifesto in real life settings.

This research investigates longitudinally an unsuccessful CRM deployment project to explore how providers and customers could leverage SPI Manifesto to effectively recover from similar problems in their deployment projects and to avoid such situations in future. This study also provides EuroSPI with feedback to improve SPI Manifesto. It deals with two research questions. (1) What was the practical usefulness of the principles and values of SPI Manifesto in helping the customer and the provider to recover from the brink of failure? (2) What are the issues to address in successful deployment project plans to prevent similar problems in future? The second question is motivated by our empirical findings, indicating that poor CRM deployment project planning is the main cause of problems.

This paper proceeds as follows. The next section describes the studied organizations and the action research methodology followed in this research. Section “Problems encountered and an inter-organizational solution devised in the deployment project” describes the evolution of the deployment project to the point in which the action research study started. Section “CRM deployment action research study” presents the values and principles of SPI Manifesto, how they were applied during the study, and what the results were. The final section concludes the study and provides recommendations for further research.

DESCRIPTION OF THE RESEARCH METHODOLOGY AND THE STUDIED ORGANIZATIONS
This study was conducted in the contexts of a provider and a customer. The customer specializes in business and human resource solutions. It is a leading services provider in these markets with a staff of about 25 people. Its director (hereafter ‘customer director’) is not a Russian native speaker while the staff is native, so the official language for communications is English. The provider has a staff of about 12 people. It offers business expertise, consulting, CRM implementation, and project audit and support services. It is a partner of a CRM product development company, selling CRM software products for several industrial segments. The products are always configured for customers, enabling customer-specific customizations ranging from slight changes in user interfaces to extensive code level changes. The product development company is not investigated in this study.

There are two widely adopted research methods in information systems research – action research and case studies (Chin and Ding, 2003; Yin, 2002). Action research requires simultaneous problem-solving and research activities (Baskerville & Wood-Harper, 1996). The first author and the directors of the customer and the provider were practitioners wanting to understand and solve a CRM deployment problem. Both authors were interested in developing new scientific knowledge to help other organizations to resolve similar problems (c.f., Checkland and Holwell, 2007; Dick, 2002; Marshall and McKay, 2010). Action research met these requirements best and was adopted for this study. It entails a flexible spiral process involving fact finding, planning, and taking action, followed by monitoring and evaluating that action (Marshall and McKay, 2010; O’Brien, 1998). This process is iterated until satisfactory outcomes will be achieved (Figure 1). Figure 2 presents how action research was deployed in this study.

![Figure 1. Problem solving through action research.](image)

The provider and the customer engaged in a CRM deployment project a few years ago. The project almost failed partly because of an ineffective deployment project process. This action research study started from the phase when the project was about to fail. Before this study, the first author, a worker of the provider, participated in several deployment projects as a CRM consultant responsible for conducting predeployment meetings, creating the concepts of automation for the projects, writing technical requirements, making user interface configurations, testing final configurations, creating manuals, and training users and administrators. In the beginning of the study, she obtained the position of the CRM coordinator responsible for managing the deployment project in the customer under the leadership of a senior consultant and the customer director. She had access to all project-related documents during the research period, including meeting documents and analytical reports. She also collected project data over the period of two years through interviews with the customer’s director and staff members in various work roles. A thorough review of the scientific CRM implementation literature, SPI Manifesto (Pries-Heje and Johansen, 2010), and the provider’s materials guided data collection and facilitated the reflection of actions manifested by the data. The second author supervised the scientific process as a whole. He based his analysis and evaluation of the events...
and decisions during the deployment project on the data and the literature, ensuring objectivity of the research to the maximum extent possible and reducing possible biases that the personal involvement of the first author with the stakeholders in the studied organizations may have caused. This combined approach helped the authors to gather enough detailed data and analyze it rigorously (c.f., Miles and Huberman, 1994).

This research is exploratory in nature because there is practically no scientific research about CRM deployment projects in Russia. Furthermore, the usefulness of SPI Manifesto for salvaging projects and for software deployment process improvement has not been studied before. This action research study describes and analyzes the experiences with using SPI Manifesto for these purposes.

**PROBLEMS ENCOUNTERED AND AN INTER-ORGANIZATIONAL SOLUTION DEVISED IN THE DEPLOYMENT PROJECT**

When the deployment project started, the provider used a ten-phase CRM deployment process model (Figure 3). It defined two work roles responsible for executing the ten phases in collaboration: the CRM coordinator of the customer and the CRM deployment consultant of the provider. The coordinator was expected to plan the changes in work practices enabled by the new software and business process models, support the execution of existing processes, identify the mismatches between the configuration and the envisioned business processes, and to collect information about the defects found during testing and pilot working sessions. The CRM deployment consultant was expected to provide system-related expertise, serve as a link between the provider and the customer, and plan and monitor the updates of the software and manuals.
1. Determining the customer service processes, the planned tasks, and the success criteria for the CRM project.
2. Creating the CRM strategy and designing the service and organizational structure of the customer to meet the objectives defined in the first phase.
3. Defining the business and technical requirements for the CRM system.
4. Customizing the CRM product into a customer-specific system meeting the requirements.
5. Testing the CRM system configuration created in the previous phase.
6. Creating manuals, describing the work activities and the roles responsible for them, for each business process model implemented by the configuration. Establishing data update rules to ensure high data quality.
7. Installing the CRM system configuration.
8. Training the intended users, CRM coordinator, and CRM administrator.
9. Executing pilot working sessions to perform the business processes using the configuration.
10. Analyzing software defects and mismatches between the processes and the system configuration. Updating the processes, manuals, and the configuration.

Figure 3. A ten-phase process model for the deployment projects of the provider.

Only during the pilot working sessions the CRM consultant realized the project had deviated from the original plan. He realized that the CRM coordinator neither followed the deployment process model of the provider nor understood his responsibilities fully. Then the consultant quit his job. After a month, another CRM consultant continued the project, but he was occupied with other projects and did not have excellent English skills.

After training had been completed, the CRM coordinator decided that the configured software did not meet the business needs. He started to change the business logic based on his extensive theoretical background in the management consultancy and leadership. He did not communicate with users and the consultant almost at all. He postponed the making of work role manuals describing the steps of the business processes. The software changes were not synchronized with business processes and the general CRM concept was missing. The new configuration also made the analytical and financial reports useless. The customer director did not facilitate communication between the coordinator and the consultant. He believed his own staff rather than the new consultant and the provider’s director, whose main desire was to finish the project.

This situation lasted almost one year. The functionalities enabled by the CRM coordinator could have been valuable, but the staff could not fully use the new configuration due to its limited experiences with business automation software and the significant configuration changes after the training had been completed.

A possibility to start correcting the situation arose when the CRM coordinator quit his job. Both parties decided to assign the first author as the new CRM coordinator. She worked three days a week in the customer’s site during the three-month deployment period and then two days a week for ongoing support. The provider did not have prior experiences and routines for such an inter-organizational solution, so the customer director requested the first author to (1) uncover weaknesses in the current situation of the customer across several categories: data, staff, business process management, document workflow, financial operations, and marketing; (2) plan improvements within each category; (3) monitor the implementation of improvements; and (4) evaluate deliverables such as the improvements in the maturity levels of the employees’ CRM-related capabilities. To meet this request, the action research study was initiated.

**CRM DEPLOYMENT ACTION RESEARCH STUDY**

SPI Manifesto has been designed to improve software creation and maintenance processes. However, software processes need to interact with the business processes enabled and constrained by the produced software artifacts. The manifesto should thus be useful for improving deployment processes, too. We decided to experiment with SPI Manifesto to understand not only how to steer the deployment project back to the right track but also how the customer could avoid similar problems in the future. For this purpose we used SPI Manifesto to uncover weaknesses in the current situation and to plan improvements.
In the following subsections, we will present and assess each of the values and principles of the manifesto with respect to the improvements carried out in the customer. For each principle and value, relevant explanations from SPI Manifesto are quoted in *italics* to help readers understand the manifesto. Only the improvements approved by the employees and the customer director are described. It should be noted that sometimes the devised improvements led to new problems elsewhere that again had to be analyzed and solved by using the manifesto.

**Values of SPI Manifesto**

*We truly believe that SPI must involve people actively and affect their daily activities*

“The competitiveness of every organization is based on the knowledge, engagement and commitment of the people working in it”

To avoid previous mistakes, much more collaboration with the staff was deemed necessary to improve the software, so users’ knowledge would grow with the system and vice versa (Piskar and Faganel, 2009). Users should participate in software deployment to optimize the system functionality, seeing from real situations what will not work and what exceptions could appear (Silverman, 1998).

The CRM coordinator and the director started organizing meetings, in which people from each work role drew models of their business processes (e.g., marketing, sales, logistics) applying the system. These stakeholders knew a lot about the processes but they could not explain or even draw them in detail. We spent ample time to model the processes graphically. Then responsibilities were assigned for each work role, including the tasks of the business process for each role and their intercommunications (c.f., Käkölä and Koota, 1999).

Visual models of business processes and associated responsibilities helped us to adapt the system to business needs. When employees understood their wishes were listened and implemented, they were willing to request meetings themselves to make their work more automated.

“SPI is a tool to improve the competitiveness of organizations.”

This was a target from the beginning of the project. Initially, the staff and the director did not see that CRM could improve competitiveness. Now, they started to see the advantages from using CRM. Marketing specialists could formulate strategic goals, conduct market positioning and customer segmentation by different criteria and values, and define lists of products and most effective marketing communications for reaching each goal. Sales managers could define sales channels and levels of services personalization to reach the goals.

“Successful SPI is based on actively involved people having sufficient information and training.”

Knowledge workers can move to other jobs anytime. New employees could cause problems without appropriate knowledge of their CRM system-related responsibilities. The first author thus created detailed enough manuals for each work role to help employees learn their responsibilities without external CRM coordinators or trainers.

*We truly believe that SPI is what you do to make business successful*

Most problems encountered by the customer after the first unsuccessful attempt of deployment were in line with the problems SPI Manifesto considers relevant for this value.

“Many people believe that they don’t need processes in order to build and ship software products...But the fact is that you cannot create software without process.”

The provider offered a detailed deployment process model, but the previous CRM coordinator did not follow it, resulting in chaos.

Problems also occur when “‘process’ is seen as ‘somebody else’s process description.’”

Employees were in trouble because the previous CRM consultant did not align user manuals with the respective business processes. They thus considered inapplicable user manuals ‘somebody else’s process descriptions’.
“Process descriptions are just words – we believe the process should bring value to the business.”

We created responsibility lists for each role in the system, customized manuals to match different levels of staff experiences, and provided bird’s eye views of business processes for the director. The documents were thus targeted to meet the business objectives and to share knowledge between the staff, the CRM coordinator, the director, and other stakeholders.

“We must also close the gap between ‘the process’ and ‘how the work is really being done’...”

Employees typically had well-established routines for dealing with information they considered valuable. Manuals, role’s responsibility lists, and the CRM system were inadequate to motivate the employees to add all relevant information in the system. The director decided to discourage the use of previously available systems by announcing that he will not accept financial and analytical reports and other CRM-related documents drafted outside the CRM system.

We truly believe that SPI is inherently linked with change

“Software Process Improvement means change! Realizing this means an organization must ensure that the process improvement infrastructure has a change management component in it.”

When the intensive three-month deployment period was over and the configuration seemed to meet stakeholder needs, it was realized that employees still requested meetings with the CRM coordinator to ask how to use the system for different tasks, which had not been within the scope of the deployment project before. Business changes posed new requirements for the system. A new change management process was thus designed for the deployment process improvement. We decided to perform CRM system change meetings monthly to discuss current market changes, novelties in the domains the customer was servicing, and changes in the CRM market in order to decide which opportunities help the customer to improve its business perspectives the most and deploy the CRM system most effectively. For now, one meeting has been organized. The benefits are clear as the meeting not only helped to ameliorate the system but also motivated the staff to actively contribute to the business change.

Principles for action

The manifesto elaborates the three values into ten principles, serving as a foundation for action.

Know the culture and focus on needs

Organizational culture had to be taken into the consideration (Xiaoyu, 2008). Especially the relationships of the CRM coordinator with the staff and the director greatly influenced the results of implementation.

“When implementing SPI it is crucial to take the organisational culture into consideration in order to gain commitment and avoid resistance.”

That’s why the provider decided to add organizational culture consideration into its deployment process model. To motivate the staff more effectively, communication with staff members was aligned to their needs: some preferred official and others more casual communication. Some were willing to use the system when the CRM coordinator immediately answered their questions, while others batched sets of questions and then requested meetings with the coordinator. Adaptation was relatively easy because the coordinator and the staff were Russians.

Communicating with the director was more challenging because he did not speak Russian. However, when the provider and the customer created the plan to steer the deployment project back on track, the director openly said what he wanted. Weekly meetings with him were conducted to discuss the status and problems, build trusting relationships, and plan the next steps.

Motivate all people involved

CRM responsibilities must be clear and people must be empowered to carry them out as autonomously as possible, while keeping their work and related documents traceable for later reporting and analysis in problem situations.
Work roles and interactions between them have to be clearly defined. For this purpose, we found the following SPI suggestion appropriate:

“...use the experience of the functional experts to define and improve those parts of the process that affect users in their daily work.”

The first author collaborated with key employees (i.e., the functional experts) from each work role (1) to ensure the employees had access to minimal but sufficient system resources they needed to work autonomously and (2) to create understandable system manuals for each work role.

“Motivation and support by the management is imperative.”

The director created comprehensive incentive schemes to reinforce system use. For example, periodical sales bonuses depended on the completeness of the traceability data documenting the sales activities during the period. It was especially crucial from both strategic and operational viewpoints to document in the system the reasons why some sales deals or entire relationships were lost (e.g., to competitors) and why some deals or new relationships could be established.

“Provide the necessary resources like training, equipment and coaching support to all people who have to use the processes. Give them the opportunity to understand and accept the purpose of the processes.”

In addition to documenting the rights and responsibilities of people in work roles through manuals and other documents, all employees were trained individually. Finally, a common training session was organized for employees in all work roles to create shared knowledge and awareness of the business processes as a whole and the interactions between work roles necessary to execute the processes smoothly and without coordination breakdowns.

**Base improvement on experience and measurement**

“As processes are what people do, any SPI effort must optimise their 'doing' (day-to-day business). The conditions for optimisation can be set, but only the individual can change actions. Thus you need individual competences, readiness and willingness to learn and optimise actions.”

The staff had become accustomed to sharing tacit knowledge informally through socialization. The CRM deployment project required making the processes, work roles, and everyday routines as a whole explicit and document-based. The staff was not ready for document-based working culture. Even after the manuals and roles’ responsibility lists had been created, only few employees turned to documents when they had questions about the system. They kept asking questions, which were fully answered in the manuals. In order to raise the individual readiness and optimize user support activities, the staff was informed that only questions out of the manuals would be answered. All new questions were added in the “frequently asked questions” (FAQ) part of the online versions of the manuals after which they were no longer answered.

Personalized training sessions, including theory and practice, were measured, too. The first author and the director created a CRM maturity measurement program to evaluate each employee’s (1) willingness to learn, (2) participation in process improvement, and (3) competency level. A diverse set of measures were used, including (1) how many questions the employee asked about tasks in work role models; (2) how much feedback the employee provided concerning manuals; (3) how many changes, errors, and additional features the employee suggested; (4) how often the employee participated in CRM meetings; and (5) how much feedback the employee provided for business process optimization.

**Create a learning organization**

The necessity to create a learning organization became clear when users after three months of deployment started to suggest well-justified changes to the logic and features of the system. The customer started moving toward a learning organization in ways described under the value “We truly believe that SPI is inherently linked with change”. The staff, based on experiences from the first CRM change meeting, was eager to learn from novelties available in the CRM market and propose changes.

**Support the organization’s vision and business objectives**
“Dr. W. Edward Deming stated in most of his books and lectures: ‘Process improvement should be done to help the business – not for its own sake.’”

Technical requirements for the system were written by the first CRM coordinator. Later on, he changed the system configuration without any changes to the technical requirements. The staff and the director had almost no role in this process. This time the business objectives drove configuration changes: visual models of business processes and associated responsibilities helped the CRM coordinator to clarify the tasks and their interdependencies for each work role.

*Use dynamic and adaptable models as needed*

“…experience has shown that in many cases you cannot just follow one model to get the best results.”

Dynamic models of business processes and work roles were vital for the customer. Fortunately, the CRM software was malleable to changing business objectives without significant program code changes.

“The best models with highest utility are dynamic models.”

The provider’s deployment process was not good enough to help the customer to achieve well-managed customer relationships throughout the customer lifecycle. A more dynamic deployment process was needed to steer the project toward meeting the business needs, to suggest alternative implementation paths from any current project phase, and to raise the staff’s motivation, competency, and readiness to learn. The possibility for steering groups to change the implementation project plans dynamically is key for process improvement in deployment projects.

*Apply risk management*

Risk management was a critical component of the deployment process but the CRM consultants did not enforce it. We should create comprehensive risk analysis and solutions to mitigate or eliminate the risks throughout the project lifecycle.

*Manage the organizational change in your improvement effort*

“…process improvement is about organizational change. The simplest depiction of organizational change is the three-step model: Unfreeze – Move – Freeze.”

Continuous alignment between the evolving business objectives and processes and the CRM system was critical for the customer. Changes within the control of a single work role could typically be enacted quickly. Changes involving interdependencies between multiple work roles required negotiations and agreements between stakeholders in the work roles. The director often had to be involved before implementing the changes. Software change management thus became crucial (c.f., Kääkölä and Taalas, 2008). Requests for changes were collected for a month. A CRM system change meeting was then conducted to prioritize the requests, review new features available in the CRM market, and select the requests and features for implementation. When the implemented changes were released, the employees were already anticipating them, making the unfreezing and moving steps easy and quick.

*Ensure all parties understand and agree on process*

The manuals described business processes and work roles and the expected benefits to the business. For example, high quality information in the customers’ orders will positively influence the feedback from the customers.

“Process improvements constantly challenge the models and process descriptions. They are to be continuously optimized to reflect the state-of-the-practice in the organization”

System improvement should be accompanied with improvement of manuals and work roles responsibility lists.

*Do not lose focus*

“Define targets, plan the measures to reach the targets, and stick to the improvement plan.”
Monthly system change meetings helped keep focus and make process improvement a daily operational activity. In future, amendments established by the provider and the customer need to be controlled through the CRM deployment project plans. Moreover, the process of improvement must be continuous and the guidance about continuity must be added in the plans. Improvement programs should be started by functions such as marketing and sales and controlled by people in respective work roles.

CONCLUSIONS AND FUTURE RESEARCH

This research has explored the challenges a Russian middle-sized organization faced during its CRM system deployment, the possibilities of deploying SPI Manifesto to salvage imperiled projects and to improve software deployment project processes, and the importance of the CRM coordinator role for CRM change management. The paper contributes because the utility and validity of SPI Manifesto for these purposes and in similar deployment contexts have not been studied before.

The first author served in a boundary spanning role merging the roles of a deployment consultant of the provider and the CRM coordinator of the customer. This role was critical to successfully synchronize the individual and organizational changes with the CRM system changes required to reach the planned and emerging benefits from the deployment project. This dual role provided the first author with an exceptionally broad and deep systemic understanding about the concerns of different stakeholders and the dynamic interactions between providers and customers during the deployment projects, reducing bias and increasing relevance of this study. We have not found earlier CRM deployment literature where the researchers would have taken similar dual roles.

The analysis of SPI Manifesto has shown its effectiveness in CRM deployment projects. Its values and principles emphasize the common problems to investigate in order to find the right solutions for most cases. It sheds light on complicated issues, balances well between abstractions and details, contributes to improving the generic CRM deployment project process, and helps define the challenges future research must address to improve the CRM deployment project process model. The action research study indicates that SPI Manifesto can facilitate the recovery of the customer and the provider from a situation in which the CRM deployment project is on the brink of failure. However, this research could not confirm the usefulness of the manifesto in helping organizations eliminate similar problems proactively in future. Several longitudinal action research studies are needed to validate the effectiveness of SPI Manifesto in this respect.

However, our analysis indicates that the principles and values of SPI Manifesto partly overlap. They are also interrelated in ways that have not been made fully explicit in the manifesto. The manifesto is thus not as lightweight as it could be: some principles could apparently be merged with others without losses in the validity and utility of the manifesto and the relations between concepts could be clarified. For example, principles “Create a learning organization” and “Manage the organizational change in your improvement effort” suggested the same organizational solution during the action research study. Indeed, the conceptual basis of both principles is almost identical and a strong relationship between organizational learning and organizational change is involved. Although organizational learning does not automatically imply organizational change, the range of potential behaviors increases, facilitating organizational change (Huber, 1991). It is thus understandable that the practical application of the principles indicated some redundancy in the manifesto. However, different principles deal with different concepts and involve complex causal relationships between the concepts, so future research is needed to analyze the conceptual dependencies between the concepts in order to ensure that the possible merging of principles does not eliminate important concepts and/or causal relationships.

On the other hand, the manifesto should be extended to ensure that, from the very beginning of all projects, (1) all stakeholders are identified and involved in SPI and (2) organizational change management is considered. For example, the steering group involving the right stakeholders is a logical solution for project risk management but SPI Manifesto does not emphasize this.

This study was limited in three ways. First, only one action research study was conducted. Second, only SPI Manifesto was covered while even better approaches might be available. Future research is thus needed to compare SPI Manifesto to other possible approaches and to investigate the generalizability of the findings in other organizations. Third, only the voice of the first author was heard in this paper from the studied customer and provider organizations. Scientific guidance for recovering from deployment project failures can be effective only when a holistic approach is taken. The limited space available in this paper was thus used to cover SPI Manifesto.
and the deployment problems experienced by the customer in the greatest possible breadth and depth. An extended journal version of this paper will have the space needed to uncover more fully the viewpoints of various stakeholders and to show through interview quotes and other means that the conducted interviews and the other data collected during this study fully support the claims made in this paper.

Future research is also needed to improve the CRM deployment project process model to better address the challenges raised in this action research study. The model must take into account the recommendations of SPI Manifesto and deal with the limitations, raised issues, and required extensions of the manifesto discussed above.

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