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Program integration in multi-project change programs: agency in integration practice

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Abstract

Multi-project change programs pursue challenging goals and may suffer from uncertainty and conflicting interests. To achieve their goals, programs need integration both with the parent organization and between projects. There is a need for knowledge on how program actors implement integration in different programs. This study pursues new knowledge on program actors' agency in program integration in the context of multi-project change programs. Two case programs in different contexts were explored, to map their integration mechanisms and actors' activities during the program lifecycle. The results reveal five integration tasks, the program-specific use of integration mechanisms, differences in the integration approach between the two programs, and the parent organization's input at the program front end in defining the program's requisite autonomy. The organization's maturity in project-based organizing, the program and project managers' competence, and the autonomy enabled at the program front end are shown to define the programs' integration practice.

Keywords: change program, integration, program management

1 Introduction

1.1 Background

Through the widespread usage of projects, organizations face a need to manage entities consisting of multiple projects — i.e., programs — efficiently. Programs are designed to pursue common higher order objectives (Turner and Müller, 2003), they may consist of multiple projects that are related to each other, and reaching the objectives of a program would not be possible by managing the projects independently (Lycett et al., 2004). Program management is needed to coordinate the management of the program's projects as well as other change-oriented activities together to deliver the strategic change for the organization (APM, 2012; Pellegrinelli, 2011).

A central characteristic of permanent organizations is the division of work between several units (subsystems) (Lawrence and Lorsch, 1967). In multi-project programs, a similar division of work occurs at three interfaces: 1) between a parent organization and a program, 2) between the several projects of a program, and 3) within the projects of a program. To ensure that these subsystems work as a coherent, aligned unit, program integration (or program coordination, Dietrich 2006) is needed. Program integration is here defined as *the process of achieving unity of effort between the projects of a program and ensuring alignment between the program and the needs of the parent organization*. This study focuses on program integration in multi-project change programs.

To core idea of organizational integration is the utilization of different integration mechanisms to create unity of effort in the organization. Integration mechanisms are the practical — formal or informal — ways, in which integration is carried out. Whilst the literature on integration in permanent organizations dates back to the 1960s and project integration management — i.e., integration within projects — is a basic component of project management (e.g., APM, 2012; PMI, 2013), only a few empirical studies cover integration in multi-project programs. The few empirical studies have focused on either inter-project integration (Dietrich, 2006), integration with the parent organization (Lehtonen and Martinsuo, 2009), or both (Turkulainen et al., 2015). The studies have followed different analytical perspectives to integration, such as boundary management (Lehtonen and Martinsuo, 2009) and information

processing (Turkulainen et al., 2015), and focused on different types of programs, such as change programs (Dietrich, 2006; Lehtonen and Martinsuo, 2009) and a global operations expansion program (Turkulainen et al., 2015). This study is designed to complement the scarce amount of empirical research by focusing on program to parent organization and the program's internal integration between projects (following Turkulainen et al., 2015) and by following a different analytical perspective — the perspective of agency — to integration.

Some research indicates that the pursuit of program goals requires not just the integration mechanisms but also ways for the program actors to influence and “negotiate” their context (Näsänen and Vanharanta, 2016; Pellegrinelli, 2002) or negotiate the scope of their activities (Crawford et al., 2008). This stream of research implicitly suggests that program actors exercise *agency* for the parent organization, when carrying out the strategic change (Crawford et al., 2008; Näsänen and Vanharanta, 2016). Agency refers here to the purposeful actions of individuals, who reflect on the conditions of their activities and are able to transform those conditions (Näsänen and Vanharanta, 2016). Where earlier program management research has covered, for example, program manager competences (Miterev et al., 2016; Pellegrinelli, 2002), there is more generally a need to understand program actors as agents whose interests, needs and actions shape the way in which the program integration takes place and how the program performs its change task for the parent organization.

1.2 Research objective and scope

The objective of this study is to develop new knowledge on program actors' agency in program integration in the context of multi-project change programs. Where change programs are intended to transform the organization in which they take place, we seek understanding on program actors' interests and actions as part of program integration at two levels: program-to-parent organization and project-to-project integration. As earlier research has largely focused on the program integration mechanisms — what they are and how they appear in use — in different programs, we argue that program actors can use them differently and for different purposes in the different integration interfaces. Agency in the use of integration mechanisms, thereby, ties the integration mechanisms with the pursuit of the change goals. Therefore, understanding the agency perspective in using

integration mechanisms will contribute by suggesting how a certain integration approach emerges and becomes (or sometimes fails to become) accepted as the way to guide the change toward its goals. The research focuses on two research questions:

1. What kind of different mechanisms do program actors use in program-to-parent organization integration and project-to-project integration in organizational change programs?
2. How do different program actors exercise their agency in program integration?

In this paper, we focus on change programs that intend to transform the parent organization and its processes and activities. We delimit the attention to organizational change programs which are also the dominating focus in previous program management research (Martinsuo and Hoverfält, 2018), even if program management can be applied in other contexts and program types as well. Change programs may feature subcontractors and partners, but the research is delimited to intra-organizational program integration, not broader networks. The focus is on the agent's view, where program actors include program managers, project managers, project team members and steering group members. Thereby, the principal view is covered merely from the perspective of the program actors, and their direct experiences are left for further study, including the parent organization's director-sponsors of the change, and the employees affected by the change program. The focus is on program-to-parent organization integration and project-to-project integration, and intra-project integration (i.e., project integration management) is purposely excluded.

The remainder of this paper is structured as follows. After this introduction, focal literature on programs and program management, integration in programs and agency in program integration is discussed. Then the design of the empirical study is described and the results of the empirical study are introduced. Finally, the results are discussed with respect to the existing literature on program management and program integration in particular.

2 Literature review

2.1 Multi-project change programs and program management

Projects are widely used to carry out organizations' change and development efforts. The widespread use of projects has generated a need to organize projects in a more coherent way (Pellegrinelli, 1997). Programs can be considered as temporary organizations that group projects together and manage those projects as an entity, to reach specific benefits (OGC, 2007). Compared to projects, programs are often considered more uncertain (Pellegrinelli, 1997), ambiguous (Thiry, 2002) and benefit-oriented (Maylor et al., 2006). Program management refers to *"the application of knowledge, skills, and principles to a program to achieve the program objectives and to obtain benefits and control not available by managing program components individually"* (PMI, 2017).

In this study, the focus is on change programs. While there are different types of programs, a change program is mainly goal-oriented (Pellegrinelli, 1997) and vision-led (OGC, 2007) and attempts to transform the parent organization and its business somehow. A program's projects may or may not exist prior to program launch and the degree of change may vary (Vereecke et al, 2003). In change programs all kinds of combinations of pre-existence and degree of change are possible. In this study, a change program is defined as *a collection of inter-connected projects and actions that are coordinated, managed and controlled in a strategic way to achieve a pre-defined change in the parent organization.*

A key aspect of a change program is the relationship between benefits, change vision, program goals and project objectives. The existing literature uses the terms "change vision", "goal" and "objective" partly interchangeably; in this study, the terms "change vision" and "goal" are used with respect to a program and the term "objective" with respect to the projects of a program. The starting point is an overall change vision, which describes the change to be pursued by the program (Lycett et al., 2004). Building from the change vision, the general goals of the programs and the objectives of the projects are defined and refined in the early phases of the program and more detailed planning is done while the program proceeds towards execution (Ferns, 1991; Pellegrinelli, 1997) (+ Lycett et al., 2004). In

order for the change programs to fulfill their purpose, their goals — and the objectives of the projects — need to be set in line with the parent organization’s strategic priorities (Thiry, 2004, 2002). Here an increasingly suggested approach is benefits management, which emphasizes the alignment between project objectives, program goals and benefits for the parent organization (Breese, 2012; Breese et al., 2015). However, the clarity of goal setting achieved in the initiation phase and the nature of program initiation differs between programs (Martinsuo and Lehtonen, 2007) and sets requirements on the effective management of programs (Crawford and Pollack, 2004).

When a program reaches its implementation phase, the clarity of its goals and expected benefits may vary. Also, programs are not stable but instead evolve during their lifecycle (Pellegrinelli, 1997). Due to the possibly ill-defined goals, benefit-orientation and evolving nature, uncertain and complex multi-project programs are expected to require different integration patterns than single projects, creating a need to study integration in the context of multi-project programs.

2.2 From organizational integration to program integration

The need for organizational integration stems from organizational fragmentation (Dietrich, 2006), i.e., the segmentation of organizations into various subsystems, each having its own responsibilities and tasks (Lawrence and Lorsch, 1967). Following this idea of organizational fragmentation, organizational integration can be defined as “*the process of achieving unity of effort among the various subsystems in the accomplishment of the organization’s tasks*” (Lawrence and Lorsch, 1967). Sometimes the terms integration and coordination are used interchangeably (Dietrich, 2006). For instance, Van de Ven et al. (1976) define coordination as “integrating or linking together different parts of an organization to accomplish a collective set of tasks”. The discussion about the difference between coordination and integration is beyond the scope of this study, and the term integration is used.

Since the seminal organizational integration studies (Galbraith, 1973; Lawrence and Lorsch, 1967; Thompson, 1967; Van De Ven et al., 1976) the main focus of organizational integration literature has been on identifying different integration mechanisms (sometimes integration techniques) and

contextual factors explaining the different configurations of integration mechanisms in different organizations (Dietrich, 2006). Integration mechanisms are the practical ways — formal or informal — in which integration is carried out. Similar integration mechanisms are typically classified into groups (often called integration modes); among the most used classifications is the division into impersonal, personal and group mechanisms (Van De Ven et al., 1976). Examples of integration mechanisms include rules and written policies (impersonal), liaison roles and integrator roles (personal), and different teams and committees (group) (Turkulainen et al., 2015).

The research on organizational integration has focused mostly on permanent organizations. Regarding temporary organizations, several studies have discussed inter-project and intra-project integration in single project environments. For example Dietrich (2007) reports an extensive summary of single-project related integration. The main results of these studies relate to the need for integration stemming from the division of work in projects into several tasks and between several teams (i.e., several subsystems). For instance, inter-team integration has been argued to have a positive effect on team performance (Hoegl et al., 2004) and a variety of integration mechanisms is used for inter-team (Van Fenema, 2002) and inter-task integration (O’Sullivan, 2003).

Integration in multi-project programs, however, is covered in just a few studies. Aligning with the definition of organizational integration, in program integration the various subsystems (cf. Lawrence and Lorsch, 1967) refer to the projects of the program. In addition to integrating the work (achieving unity of effort) between the projects of the program, integration is required also between the program and the parent organization. Thus, in this study we define program integration as *the process of achieving unity of effort between the projects of a program and ensuring alignment between the program and the needs of the parent organization*.

Although some research suggests that project management techniques can be useful also in program management settings (Buuren et al., 2010; Görög, 2011; Pellegrinelli et al., 2015), integration in the context of change programs cannot only be considered in terms of task and project team integration. Table 1 summarizes such earlier empirical research that has explicitly discussed program integration

either in terms of program-to-parent organization integration, project-to-project integration (program's internal integration), or both.

Table 1. Summary of previous empirical research on program-related integration.

| Study | Context | Integration interface | | Need for further research / research gap for this study |
|------------------------------|---|--------------------------------|----------|--|
| | | Program-to-parent organization | Internal | |
| Dietrich, 2006 | - A multiple case study - Four intra-organizational development programs | | X | - The results should be tested with a different set of change programs - No focus on program-to-parent organization integration |
| Lehtonen and Martinsuo, 2009 | - A multiple case study - Two change programs | X | | - The results should be tested with a different set of change programs - No focus on internal integration |
| Turkulainen et al., 2015 | - A single case study - A global expansion program | X | X | - Focus on an operations expansion program, not change programs. - Does not cover how integration in both interfaces is managed <i>in change programs</i> |

Dietrich (2006) studied program integration in four intra-organizational development programs. Dietrich identified different formal and informal integration mechanisms grouped into group, personal, and impersonal mechanisms. Additionally, Dietrich discussed the role of uncertainty and complexity in explaining the different configuration of integration mechanisms in different programs. Dietrich's focus was limited to project-to-project integration.

Lehtonen and Martinsuo (2009) focused on program-to-parent organization integration with a boundary management viewpoint. Their empirical setting included two intra-organizational change programs. Similarly with Dietrich, Lehtonen and Martinsuo also identified different integration mechanisms, although following a different (more inductive) classification. Among the main findings was that integration mechanisms were not the only way to manage integration; boundary management and isolation activities were used also. Regarding contextuality, Lehtonen and Martinsuo emphasized the importance of different organizational-level, program-level and individual-level factors in explaining the contextuality of integration in different programs.

In the most recent study, Turkulainen et al. (2015), in contrast to the other two studies, took into account both interfaces of program. Also, in contrast to both Dietrich and Lehtonen and Martinsuo,

the focus of Turkulainen et al. was not change or development programs, but on a global operations expansion program. Turkulainen et al. also identified different integration mechanisms in both integration interfaces, following the same group-personal-impersonal division of Dietrich. One of the main findings of Turkulainen et al. was the different nature of integration in the two integration interfaces; in project-to-project interface all three types of integration mechanisms were utilized, while integration in the program-to-parent organization interface relied mainly on impersonal integration.

The three existing studies on program integration have offered partial evidence on the use of different integration mechanisms in change programs. The results of Dietrich (2006) (internal integration) and Lehtonen and Martinsuo (2009) (program-to-parent organization integration) were focused on a certain integration interface only, and are yet to be complemented with studies in different change program contexts and covering both integration interfaces. The study by Turkulainen et al. (2015) indicates that the investigation of integration mechanisms in both types of integration interfaces is needed for understanding the pursuit of the change goals as a whole. However, it needs to be supplemented with studies in a change program context. Based on these research gaps, there is a need to focus on both integration interfaces in the change program contexts. In addition, all of the existing studies put their main focus on the different integration mechanisms. It is important to explore the different program actors who, through their agency in change programs, act both as integrators and targets of integration.

2.3 Agency in program integration and management

Agency theory draws attention to the interaction of agents and principals, and the interests and actions of the agent, to work on behalf of the principal (Eisenhardt, 1989). The idea is that the principal delegates work to be carried out by the agent, and attempts to control this work, to achieve expected benefits. Agency theory draws attention to differing interests of the parties, the uncertainties in their interaction, and the “contract” through which the agents’ behaviors are governed (Eisenhardt, 1989). In change programs, program actors can be considered as the agent, and the parent organization owners, directors, and sponsors of the program are the principal, representing the “recipients” of change more broadly. In this paper, the term “program actors” refers to the group of people taking

part in program work regularly, including program managers, project managers, steering groups and project team members.

In agency theory, a key assumption is the prevalence of an agency problem — conflicting interests between the principal and the agent and costs of controlling the work of the agent — and a risk sharing problem — different risk propensities and preferred actions to manage risk between the principal and the agent (Eisenhardt, 1989). As change programs are the parent organization's strategic organizational initiatives and typically feature significant uncertainty, agency and risk sharing problems both can be considered as relevant. Previous program management research has covered agency — i.e., program actors' interests and actions in working toward the change goals — only to a very limited extent.

The focus of Näsänen and Vanharanta (2016) was on the members of a temporary program management group. The study demonstrates how the members of the program management group utilized different discursive patterns in order to 1) isolate themselves from the parent organization, and 2) detach themselves from the responsibility for implementation. In another example, Crawford et al. (2008) studied the concept of sponsorship in projects and programs and conceptualized the role of a sponsor as a pivotal one, positioned between the parent organization (the principal) and the temporary organization (the agents). In a single project environment, Turner and Müller (2004) studied the relationship between a project owner and a project manager. In their study, the principal-agent relationship between the two actors caused difficulties such as conflict and tight control (instead of partnership and empowerment), but communication and co-operation were suggested as means to reduce these problems.

As the examples above demonstrate, the concept of agency is central in program management and can be used to study different aspects of it. As program integration can be considered a parent organization's central way to govern the program and its progress, and the agency issues have not been covered in connection with program integration, we will specifically focus on program actors' agency in program integration.

3 Research methodology

3.1 Research design

We adopted a qualitative multiple-case research strategy, to investigate the programs actors' use of integration mechanisms and agency in program integration in different change programs. Qualitative case studies are considered especially suitable when the boundaries between the studied phenomenon and its context are not clear (Yin, 2009). The importance of the interplay between the phenomenon and its context is highly relevant in change programs taking place in different organizational contexts, and regarding program integration and agency.

Following the research aim, the studied cases were multi-project change programs. We sought for change programs that were completed or almost complete, successful programs that should have achieved their expected benefits, and programs somewhat similar in their focus on an organizational change but different in their context, content, results, and integration approach. Studying more than one case increases the generalizability of the results and decreases the problems caused by a unique case (Yin, 2009). The differences between the cases enabled cross-case comparison and, thereby, investigating the possible contextuality of program integration.

Two case programs were selected, based on a tentative inquiry among various organizations having undergone significant changes in the recent past, and the organizations' own interest. Both programs were considered successful in terms of delivering their expected benefits, but had been implemented in a different context, had different goals and a different program structure. The success of the programs was assessed through the benefit perceptions of the program actors because the organizations did not use formal numerical assessment criteria for program success. General information on the programs is presented in Table 2.

Table 2. Background information on the case change programs and interview data.

| | DigitalProgram | ProcessProgram |
|---------------------|--|---|
| Parent organization | A public sector municipality organization | A medium-sized private sector company |
| Change vision | Digitalize internal work processes and improve digital communication between the municipality and its inhabitants. | Develop new, less person-dependent customer processes |

| | | |
|--|--|--|
| Success of the program (perceived by the interviewees) | Relatively successful | Relatively successful |
| Clarity of the change vision (perceived by the interviewees) | <u>Low:</u> Vague, fuzzy and with different interpretations | <u>High:</u> Clear and coherently understood |
| Program structure | Steering group, program manager and program office, multiple projects, some of which had their own steering group | Company management group as a steering group, program manager, multiple projects, no project-level steering groups |
| The status of the program | Case program had ended 2-3 years ago | Case program had just ended |
| Size of the program | 10 projects | 4 projects |
| Number of interviews conducted | 8 one-to-one interviews, 2 group workshops | 7 one-to-one interviews, 1 group workshop |
| Interviewees | 1 program manager, 4 project managers, 1 steering group member, 1 project team member, 1 employee representative | 1 program manager, 3 project managers, 1 sponsor, 2 project team members / employee representatives |
| Average interview length | 64 min | 52 min |

The first program, here labeled as DigitalProgram, is from a large municipal public sector organization and it aimed to digitalize internal work processes, introduce new IT-based tools for digitalization, and improve digital communication between the municipality and its inhabitants. The municipality was facing financial pressures, and therefore a group of change initiatives was initiated by the city council. One of the change initiatives was DigitalProgram, a multi-project change program pursuing efficiency through digitalization.

The program included ten projects, each of which had their own project manager. A program-level steering group was established to monitor the program's progress, and some of the projects had their own steering groups as well. In addition, program office meetings took place regularly. The program manager and the project managers participated in regular program office meetings.

In the interviews, it became evident that the projects of DigitalProgram were quite different. In particular, the perceived clarity of the projects' objectives varied and this created requirements toward integration. To clarify this aspect in the following discussion, two representative example projects that highlight the dominating difference in the program's project types are described in Table 3, and will

be referred to in the subsequent sections. This kind of a phenomenon was not identified in the second case program.

Table 3. Types of projects featured as part of DigitalProgram.

| | ClearProject | FuzzyProject |
|--|---|---|
| Project objectives | Build a new platform for digital communication and collaboration | Develop and introduce new processes and ways of working, especially utilizing digital tools and solutions |
| Clarity of the objectives (perceived by the interviewees) | <u>High:</u> the project team knew what they were doing and the objectives of the project were understood coherently throughout the project team | <u>Low:</u> the objectives of the project were considered unclear and fuzzy by the project team and different stakeholders had different ideas about the objectives of the project |
| Experience of the project team (perceived by the interviewees) | <u>High:</u> the project manager and most of the project team members had done similar tasks together multiple times | <u>Low:</u> the project team was small and neither the program manager, nor the project team members had adequate experience in the area |

The second program, here labeled as ProcessProgram, took place in a medium-sized private sector company operating in a business-to-business market and offering its customers expert services. The main challenge of the company was the person-dependency of its expert services: each specialist implemented customer projects individually and more or less differently. The management of the company considered the person-dependency both a risk (e.g., absences) and an obstacle for efficiency. Therefore, a change program was initiated with a goal to introduce team-based customer processes.

The program included four projects, each of which had their own project manager. The company did not implement either a program-level or any project-level steering groups as it was not considered necessary for the medium-sized firm with very limited resources. Instead, the progress of the program was discussed in the company's management group meetings. The project managers were also members of the management group.

3.2 Data collection

The empirical data were collected using semi-structured interviews. Altogether fifteen interviews were conducted (eight in DigitalProgram and seven in ProcessProgram). The interviewees were selected

by a key informant in the program, to cover the case programs' core personnel. The interviewees are listed in Table 2.

Interview questions followed the program structures and phases. The interview protocol focused on the integration practices and roles of the different program actors in the different parts and phases of the programs. The interviewees were asked to describe their actions and the actions of other key program actors throughout the lifecycle of the program. A semi-structured interview protocol enabled the interviewer to fine tune the interview structure based on the answers of the interviewee, but the same core interest areas were discussed with every interviewee. These core themes in the interview included:

- The role and background of the interviewee,
- The interviewee's general perceptions on the success of the program,
- The interviewee's descriptions about the actions of different program actors and significant events on his/her area of responsibility throughout the lifecycle of the program,
- The interviewee's descriptions about the interconnections, relationships, communication and collaboration throughout the lifecycle of the program between:
 - the several projects/project managers,
 - the program manager and the projects/project managers,
 - the parent organization and the program
- The interviewee's perceptions on the "pros and cons"/"lessons learnt" from the program

The interviews were recorded and fully transcribed. In addition to the interviews, results presentation sessions were organized in both organizations to present tentative results, discuss them and to validate the key findings. Secondary data such as program and project plans were studied to deepen understanding on the case programs and to triangulate the data.

3.3 Data analysis

The transcribed interviews were systematically content coded. We read through the interviews first, to identify recurring themes and develop the coding scheme for inductive analysis. In the first coding

phase, the focus was on *integration mechanisms*. All integration mechanisms were identified in the interview data inductively, but building on understanding from previous research regarding the impersonal, personal and group integration modes and the types of integration mechanisms within them. For example, various plans and rules (impersonal), project and program managers' liaison roles (personal), and meetings and committees (group) were coded. In this phase, all the integration mechanisms were marked regarding how they appeared in the two *integration interfaces*: program-to-parent organization integration and program's internal integration.

When analyzing the identified integration mechanisms further, it became evident that integration mechanisms were used for several purposes that deal with defining and implementing the change. These purposes (i.e., change-related goals of integration) were inductively grouped into five *integration tasks* (Figure 1), and the integration mechanisms used for each integration task were grouped similarly. This division into five integration tasks will be followed in the results section.

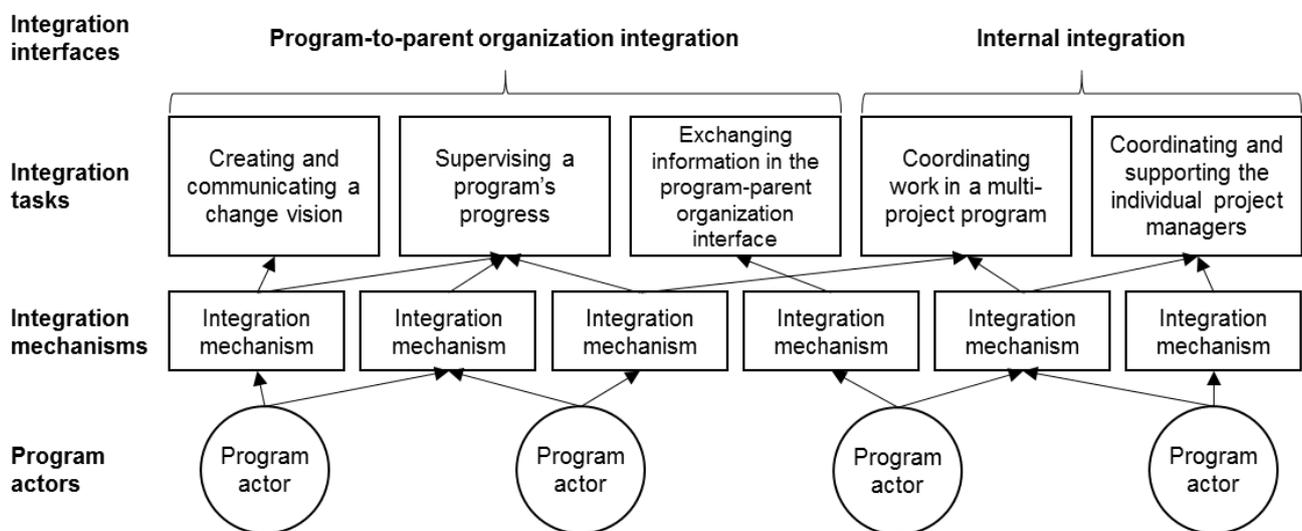


Figure 1. Analysis framework for integration tasks and mechanisms.

In the second coding phase, we tracked *the program actors' activities* as part of the implemented integration mechanisms. The goal in this phase was to identify how the different program actors (program manager, project managers, steering group members, other project personnel, parent organization, and recipients of change) utilized and perceived the utilization of different integration

mechanisms. This analysis revealed that program actors differ in their involvement and agency across integration tasks and in the use of integration mechanisms.

Finally, we cross-tabulated the key issues to highlight cross-case similarities and differences, both in program actors' activities and in their use of integration mechanisms. The results section is structured around the integration tasks (Figure 1) of program-to-parent organization integration and internal integration, so that the program actors' exercise of agency in using the integration mechanisms is emphasized throughout. We use illustrative quotes throughout the text to highlight the main findings. The written quotations were anonymized to preserve the anonymity of both the case programs and interviewees. Also the quotations were translated from the interviewee's native language to English. Some quotations were edited slightly to enhance their understandability and clarity, but their main content was retained.

The validity of the analysis was enhanced and verified in three main ways. Firstly, we sought for theoretical support and alignment for the constructs particularly concerning integration mechanisms from previous literature, to ensure the transferability of the results. Secondly, we utilized a consistent interview protocol and full interview transcripts to ensure the confirmability of the results and the stability of the research process across cases, as described in the data collection chapter. Third, we tested preliminary findings in case-specific workshops and through additional discussions with the program managers, and had a chance to triangulate some of the data through program-related documentation, to verify the relevance and accuracy and credibility of the results. We have also explicated the purposive selection of organizational change programs as the research focus, which deals with the applicability of the results in other contexts. Remaining validity limitations are discussed in the conclusions section.

4 Results

The results section is divided into two main sections: program-to-parent organization integration and program's internal integration. In both main sections, the practice of program integration is discussed following the division into the identified integration tasks in line with the developed framework (Figure

1). The following subsections and their tables report results concerning both the different integration mechanisms (research question 1) and the activities of program actors and agency in program integration (research question 2).

4.1 Program-to-parent organization integration

4.1.1 Creating and communicating a change vision

The two case programs being change programs, the parent organization had to define the change to be pursued by the program, i.e., a change vision. At the program level, this change vision had to be transformed into the goals of the program and the objectives of the projects. The integration mechanisms and program actors' activities in this integration task are summarized in Table 4.

Table 4. Program actors' activities and key integration mechanisms in the "creating and communicating a change vision" integration task.

| Program actor | DigitalProgram | ProcessProgram |
|---------------------|---|---|
| Parent organization | <ul style="list-style-type: none"> - The need for the change program originated from a municipality-level change vision. - The change vision was created and communicated by the decision making bodies of the city (e.g. city council) - The program actors did not participate in the creation of the municipality-level change vision. - The change vision was considered very vague by program actors. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - The municipality-level change vision was communicated with formal documents. | <ul style="list-style-type: none"> - The parent organization was represented by the management group. - The management group was responsible for transforming the ideas of the to-be program manager into a change vision. - Importantly, majority of the to-be project managers were also members of the management group. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Management group workshops were used in clarifying the to-be program manager's ideas and transforming it into the program-level goals. - The workshops assisted in creating the common understanding. |
| Program manager | <ul style="list-style-type: none"> - Due to the vague nature of the municipality-level change vision, program manager (and the project managers) focused strongly on the creation of the program-level goals. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - The main mechanism for this was the program office meetings. - These meetings (participated in by the program manager and the project managers) were used in clarifying the goals and objectives of the program and the projects. | <ul style="list-style-type: none"> - The to-be program manager was widely considered "the brains behind the whole idea." - In fact, many interviewees considered the program manager being visionary his main role. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - The program manager facilitated the workshops, in which the general idea of the program manager was transformed into program's goals. |

| | | |
|------------------|---|--|
| Project managers | <ul style="list-style-type: none"> - The project managers worked on defining the project objectives both independently and in the program office meetings. - The clarity and level of detail of project objectives varied significantly between projects. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Informal one-to-one discussions between the project managers and the program manager assisted in defining the project objectives. | <ul style="list-style-type: none"> - The project managers worked on defining the project objectives mostly independently. - The project managers were responsible for transforming the program-level goals into the more practical objectives of the respective projects. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - The majority of the project managers participated in the above-mentioned workshops. - Informal one-to-one discussions between the project managers and the program manager assisted in defining the project-level goals and in creating the common understanding. |
|------------------|---|--|

In DigitalProgram the change program was part of a broader change agenda of the municipality. From the perspective of integration, an important aspect was the broad and generic (not detailed) nature of the change vision communicated by the municipality council. Almost all of the interviewees described how the communicated change vision was just a broad idea about productivity through digitalization:

“The vague change vision was communicated by the city council. It was just that ‘we will digitalize everything’! No-one was defining what ‘digitalization’ would mean.”

The broad and generic nature of the program-level change vision was mirrored by the less-detailed project objectives as well (Table 3). The respective project managers described how some projects had very clear objectives, while the objectives of some other projects were defined quite poorly. As the project manager of FuzzyProject described:

“There were no clarified objectives for my project. The top management had different expectations than the program and project personnel did. -- There was just our project team and we could do whatever we wanted.”

In ProcessProgram the management of the company had perceived several challenges in the old ways of working. These challenges led to the initiation of the change program later. Particularly, many of the company’s processes were considered too person-related, which implied that the absence of key personnel caused major problems for the company. This problem was shared by the whole

management group, and even more widely in the organization, but the “solutions” for the problem were mostly linked to one top management key person. This person, the later-to-be program manager, was perceived as a visionary idea generator and the “brains behind” the change by most of the interviewees.

“He [the later-to-be program manager] is that kind of a visionary person. He had a vision how this new concept could change the ways of working in our company.”

In addition to the central role of the visionary key person in program-level goal setting, an important aspect was the creation and development of the change vision in the top management group. The visionary key person brought the general change vision into the top management group. This general change vision was then developed further in several workshop days.

When comparing the two programs, there were several differences in creating the change vision, against which the program-to-parent organization integration would take place. First, the change vision of DigitalProgram had its roots in formal decision making, while the change vision of ProcessProgram had a more informal origin. Second, the program key personnel participated a lot more in change vision creation and development in ProcessProgram than in DigitalProgram. That is, in ProcessProgram the change vision was the result of several workshops, while in DigitalProgram the change vision originated in the city council decision making, completely externally to the program. Third, the level of detail and the level of shared understanding of the change vision were higher in ProcessProgram than in DigitalProgram.

4.1.2 Supervising a program’s progress

In the “supervision of program progress” integration task, the focus was on monitoring and ensuring the progress of the program. As the creation of a change vision, this integration task also took place both at the levels of the program and the projects. The integration mechanisms and program actors’ activities in this integration task are summarized in Table 5.

Table 5. Program actors’ activities and key integration mechanisms in the “supervising the program’s progress” integration

task.

| Program actor | DigitalProgram | ProcessProgram |
|---------------------|--|--|
| Parent organization | <ul style="list-style-type: none"> - Different functions and decision making groups of the parent organization followed the progress of the program. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - The parent organization's key managers followed the progress of the program in a few municipality-level meetings <ul style="list-style-type: none"> o The <i>supervising</i> role of the municipality-level bodies was considered limited. | <ul style="list-style-type: none"> - The management group had several meetings where they followed the progress of the program. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - The management group discussed the progress of the program in a few meetings. <ul style="list-style-type: none"> o The <i>supervising</i> role of the management group meetings was considered limited. |
| Steering group | <ul style="list-style-type: none"> - A program-level steering group was set up to supervise and guide the program. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - The program manager presented the progress of the program in regular meetings of the steering group. <ul style="list-style-type: none"> o Despite the regularity, the <i>supervising</i> role of the steering group was considered limited. | <ul style="list-style-type: none"> - The company's management group acted as the steering group. |
| Program manager | <ul style="list-style-type: none"> - Program manager reported program's progress to the steering group and in parent organization's other meetings. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - The program manager presented the progress of the program in regular meetings of the program-level steering group and municipality level meetings. | <ul style="list-style-type: none"> - The program manager participated in the management group meetings. |
| Project managers | <ul style="list-style-type: none"> - Project managers assisted the program manager in evaluating the status of the program. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - A common understanding of the progress of the program was created in the program office meetings. | <ul style="list-style-type: none"> - Project managers presented the progress of their projects in the management group meetings. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Majority of the project managers participated in the management group meetings. |

In DigitalProgram, the most important integration mechanism for program-to-parent organization supervision was the program-level steering group. Steering group meetings were organized regularly and in the meetings the program manager reported the progress of the program. Based on the document data, such as program plans, this looked like a very textbook-like integration mechanism. In practice, however, both the program manager and the steering group members questioned the usefulness of this reporting. On one hand, the program manager felt that the feedback given by the steering group was quite limited. On the other hand, the steering group members questioned their

possibilities to evaluate the progress of the program with the reporting data provided by the program manager.

In addition to the steering group meetings, the program manager also participated in a few meetings of the municipality council and different management and planning groups. Even more than the steering group meetings, the program manager perceived these meetings quite superficial and even useless for DigitalProgram:

“I presented DigitalProgram in several meetings...but I did get very little feedback [for the program] from those meetings.”

In ProcessProgram there were no separate steering group meetings. All the project managers also being members of the management group of the company, the progress of the program was discussed in the regular management group meetings. As one project manager explained:

“We did not have a separate steering group or anything. We discussed the progress of the program as one topic in a few management group meetings”

There were both similarities and differences related to this integration task between the two programs. First, in DigitalProgram supervisory program-to-parent organization integration was pursued through formal meetings and with multiple integration mechanisms, while in ProcessProgram the nature of this integration task was more informal. Second, in both programs most of the interviewees considered the importance of the supervisory program-to-parent organization integration relatively low. Although a few supervisory program-to-parent organization integration mechanisms were identified, they were utilized quite seldom. Third, in DigitalProgram there were several formal integration mechanisms in place for supervisory program-to-parent organization integration. However, according to most of the interviewees, these integration mechanisms were not perceived fully functional.

4.1.3 Exchanging information in the program-parent interface

The last integration task in the program-to-parent organization interface is the exchange of information between the parent organization and the change program. This exchange of information took place in a bidirectional way, both from the parent organization to the change program and vice versa. The integration mechanisms and program actors' activities in this integration task are summarized in Table 6.

Table 6. Program actors' activities and key integration mechanisms in the "exchanging information in the program-parent interface" integration task.

| Program actor | DigitalProgram | ProcessProgram |
|---------------------|--|--|
| Parent organization | <ul style="list-style-type: none"> - The different functions of the parent organization nominated representatives to project meetings. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - The representatives participated in the project meetings, in order to ensure the consideration of the different functions' viewpoints. | <ul style="list-style-type: none"> - Middle managers and experienced employees were nominated to participate in project work. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Middle managers and experienced employees participated in project planning meetings. - In the meetings, the representative employees worked on the details of the new ways of working, together with the project managers. |
| Employees | <ul style="list-style-type: none"> - Employees were both a source of input (representativeness) and a target of actions (training). <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Representativeness (see above). - Training for the new digital tools and ways of working was provided by the program personnel. | <ul style="list-style-type: none"> - Employees were both a source of input (pilot project and representativeness) and a target of actions (pilot project and new work instructions). <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Representativeness (see above). - The new methods were tested in a pilot project. - Feedback from the pilot was collected when developing the new ways of working further. |
| Project managers | <ul style="list-style-type: none"> - In a few projects, project managers (together with project team members) were responsible for organizing training. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Training (see above). | <ul style="list-style-type: none"> - Project managers were in charge of creating the new work instructions. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Instructions and rules were created in the program, guiding and instructing the new ways of working. |

In both programs, the main way for collecting input from the parent organization was the representativeness of employees. For instance, when building a new communication platform in DigitalProgram, the different municipality functions were represented to bring their voice, needs and requirements to the planning work:

“My job was to bring the viewpoint of our function to the project work. -- And then I said: our function will not pay for that function, we do not have any need for that.”

In ProcessProgram experienced key personnel and middle managers participated in project work, and middle managers collected feedback from the employees regarding the new ways of working. Although the project managers were experienced and very autonomous, the aforementioned people made up a more unofficial project team, which planned the new ways of working to be designed by the projects.

Regarding transferring results from the program to the parent organization, the main mechanism in DigitalProgram was training. For instance, in FuzzyProject the focus was on developing internal processes by introducing specific digital tools and solutions to the organization. In addition to introducing the tools and solutions, it quickly turned out that a lot of training was required to introduce the new ways of working to the parent organization as well. However, here the problems in creation of the change vision became apparent again. As the project manager of FuzzyProject explained:

“The management was expecting those digital tools and solutions but all of the time [of the project personnel] was used in training the municipality personnel.”

In ProcessProgram, the main mechanism for transferring results was the creation of work instructions. Previously, one of the main issues had been that similar work tasks had been done very differently by different employees. In the new ways of working they aimed to manage this issue by introducing more detailed instructions and rules for different types of work tasks. From an integration perspective, the new work instructions acted as a way to transfer the results of the development work from the program back to the parent organization.

When comparing the two programs, this integration task appeared quite similarly in both programs. In both programs employee representativeness was the main way for collecting input from the parent organization to the change program, and there was a mechanism in place to transfer the results of the program back to the parent organization.

4.2 Program’s internal integration

4.2.1 Coordinating work in a multi-project program

In both programs, coordination took place centrally for all the projects of the program. The integration mechanisms and program actors’ activities for coordinating work are summarized in Table 7.

Table 7. Program actors’ activities and key integration mechanisms in the "coordinating work in the multi-project program" integration task.

| Program actor | DigitalProgram | ProcessProgram |
|------------------|--|---|
| Program manager | <ul style="list-style-type: none"> - Program manager led the program office meetings. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Program office meetings were the main mechanism for coordinating the project work. - In addition to the formal meeting itself, the importance of the informal nature of the meetings was emphasized even more. | <ul style="list-style-type: none"> - Program manager participated in the management group meetings. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - In addition to program-to-parent organization integration, management group meetings acted as venues for project coordination as well. <ul style="list-style-type: none"> o The <i>coordinative</i> role of these meetings was not emphasized too much, though. |
| Project managers | <ul style="list-style-type: none"> - Project managers reported the status of their projects in program office meetings. - Project managers were expected to work relatively independently. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Project manager nominations affected the relationship between the program manager and the project managers. - An experienced project manager (and a project team) was selected for several projects (e.g. ClearProject). <ul style="list-style-type: none"> o The experience enabled the projects to proceed in an autonomous way. - On the other hand, in some projects (e.g. FuzzyProjects) there was a lack of experience. | <ul style="list-style-type: none"> - Project managers reported the status of their projects in the management group meetings. - Project managers were expected to work relatively independently. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - The nominated project managers were both experienced and held responsible positions (managers or similar) in their business areas. <ul style="list-style-type: none"> o The experience and responsible positions enabled the projects to proceed in an autonomous way. - Management group meetings (see above). |

In DigitalProgram, the main mechanisms for this integration task were program office meetings. These meetings brought together the program manager and the project managers. In the program office meetings, the project managers reported the progress of their projects and the potential problems or issues in the projects. In addition, the meetings acted as forums for preparing the program-level reporting for the steering group.

Despite the formal ways of integration in the program office meetings, the importance of the informal ways of integration was emphasized more by all the project managers and the program manager. In particular, the interviewees perceived the meetings as important places for the timing and coordination of project-to-project activities and interfaces, and as important forums for project-to-project discussion and problem solving. As an interviewee explained:

“The program office meetings were more about that communication, collaboration and timing of activities.”

An important aspect related to the program office meetings was the projects’ different need for support. As a consequence of the challenges in project-level goal setting, the projects with less-well-defined goals (e.g. FuzzyProject) sought for support a lot more than the ones with a clear path forward (e.g. ClearProject). As the project manager of FuzzyProject explained:

“There was a small project team, there were no clear goals, we were just allowed to mess around freely -- So I started to ask for input more and more in those program office meetings.”

In ProcessProgram this integration task did not include any formal integration mechanism, except the management group meetings discussed already related to the program-to-parent organization integration. Instead, integration in this task relied mostly on the nomination of experienced project managers. The project managers’ experience together with their responsible organizational positions enabled the project managers to lead their projects relatively autonomously.

4.2.2 Coordinating and supporting individual projects and project managers

In coordinating and supporting projects, integration efforts were put to the individual projects and individual project managers. Integration took place both “above” the projects (especially by the program manager) and “between” the projects. The integration mechanisms and program actors’ activities in this integration task, including both subtasks, are summarized in Table 8.

Table 8. Program actors’ activities and key integration mechanisms in the "coordinating and supporting the individual

projects and project managers" integration task.

| Program actor | DigitalProgram | ProcessProgram |
|----------------------|--|---|
| Program manager | <ul style="list-style-type: none"> - The program manager had several different tasks, with respect to the individual projects and project managers: <ul style="list-style-type: none"> o problem solving o being an authority (esp. external to the program) o coordinating activities o supporting projects and project managers in their work <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Informal discussions took place both between the program manager and a project manager, and between project managers. <ul style="list-style-type: none"> o Discussions were initiated both by the program manager and by the project managers. | <ul style="list-style-type: none"> - The program manager had several different tasks, with respect to the individual projects and project managers: <ul style="list-style-type: none"> o coordinating activities (less emphasized) o being a discussion partner, in particular for "sparring" of ideas (more emphasized) <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - Informal discussions took place both between the program manager and a project manager, and between project managers. <ul style="list-style-type: none"> o Discussions were initiated both by the program manager and by the project managers. |
| Project manager | <ul style="list-style-type: none"> - Some project managers sought support from the program manager (and the program office meetings), while some others worked very autonomously. <ul style="list-style-type: none"> o The need for support was linked to the project manager's and project team's level of experience and the quality of project-level goal setting. <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - In addition to discussions with the program manager (see above), project managers discussed with each other, if there was a need for project-to-project coordination. <ul style="list-style-type: none"> o Project-to-project coordination was not really formally planned. | <ul style="list-style-type: none"> - Generally, the project managers worked independently. <ul style="list-style-type: none"> o Project managers sought for program manager's support, when they needed a discussant for idea "sparring". <p><u>Key integration mechanisms:</u></p> <ul style="list-style-type: none"> - In addition to discussions with the program manager (see above), project managers discussed with each other, if there was a need for project-to-project coordination. <ul style="list-style-type: none"> o Project-to-project coordination was not really formally planned. |

In DigitalProgram the interviewees emphasized particularly the program manager's tasks as a problem solver and as an authority; the program manager's authority was emphasized in particular if a project manager was struggling to collaborate with external partners and suppliers. In addition, the program manager had clear coordinative tasks, demonstrated particularly by the program office meetings.

In ProcessProgram the program manager's tasks as a discussion partner for the project manager was emphasized by multiple project managers. Although the program manager also focused a little on schedule management, the interviewees emphasized informal integration (in particular program manager as a discussant) a lot more. One of the project managers explained:

“We talked a lot about the program and the new ways of working [with the program manager]. It was especially that kind of “sparring” of ideas. How could we transform this change vision into the practical ways of working?”

When comparing the two program managers, the most important difference was related to the program manager’s tasks of coordinating the project work. Although the interviewees, especially project managers themselves, considered the projects relatively autonomous in both programs, in DigitalProgram the program manager also coordinated the project work a lot more.

In ProcessProgram there was no centralized coordination organized by the program manager. Regarding the individual communication between the program manager and the project managers, it took place irregularly but frequently, as exemplified by the previous quotation. However, the individual communication between the program manager and the project managers was less about the program manager coordinating or supervising the progress of the projects, but a lot more about the program managers and the project managers pondering the next steps of the projects.

Another important aspect was the project managers’ different need for integration. This was again particularly evident in DigitalProgram and linked to the different levels of detail and clarity in project-level goal setting and the different levels of project manager and project team experience. In addition to the need for support in program office meetings discussed earlier, FuzzyProject sought for individual extra support from the program manager as well. Simultaneously, the more experienced project manager did not really think that support from the program office meetings or the program manager was really required. As the project manager explained:

“I reported what we had done but was not expecting any feedback. We knew what we were doing; we had done similar things many times earlier.”

Lastly, integration took place between the projects in both programs also. The project-to-project integration was not planned or facilitated by the program manager in either program. The only main exception was the program office meetings in DigitalProgram, which included also elements of project-to-project integration. Instead of centrally planned or facilitated integration, it was up to the

project managers themselves to seek project-to-project integration. As one of the project managers in DigitalProgram exemplified:

“The collaboration between me and the other project manager was not planned. We were just discussing and it turned out that we were doing very similar things. And then we started to collaborate more closely.”

The autonomy of projects was again evident in ProcessProgram. There was some collaboration and communication between the project managers, but it was emphasized significantly less by the interviewees than in DigitalProgram.

5 Discussion

5.1 Integration in multi-project change programs

The first research question inquired the different kinds of mechanisms that program actors use in program-to-parent organization and project-to-project integration, particularly in organizational change programs.

Change programs are a way for organizations to coordinate various strategic change activities toward business benefits (Martinsuo and Hoverfält, 2018). Most of the existing literature on both organizational integration and program integration has focused on the integration mechanisms with which integration is pursued (Dietrich, 2006; Lehtonen and Martinsuo, 2009; Turkulainen et al., 2015). While integration mechanisms and integration modes — e.g., impersonal, personal and group integration mechanisms (Van De Ven et al., 1976) — explain the practical ways for pursuing integration, this study lends support to previous research on the use of different integration mechanisms on the two integration interfaces. The results complement this mechanism-centric view by discussing the *purposes* of integration and, thereby, the link of integration with the program’s change-oriented goals. The division into five integration tasks reveals how program actors utilize similar integration mechanisms with different goals in mind, in order to pursue program integration and, consequently, the fulfillment of the change vision. For example, program office meetings

(integration mechanism in DigitalProgram) were utilized in the “creating and communicating a change vision”, “supervising a program’s progress” and “coordinating work in a multi-project program” integration tasks.

The analysis of the integration mechanisms revealed the active use of several personal and group integration mechanisms in the change programs. The most emphasized examples include the program office meetings (DigitalProgram), management group meetings and workshops (ProcessProgram), and one-to-one discussions between project managers and between project managers and program managers (both programs). In line with these results, the previous studies (Dietrich, 2006; Lehtonen and Martinsuo, 2009; Turkulainen et al., 2015) have also identified different personal and group integration mechanisms in both integration interfaces.

Deviating from previous research, impersonal integration mechanisms were scarcely used in either of the case programs. In the only study having focused on both integration interfaces, the findings of Turkulainen et al. (2015) were the complete opposite: impersonal mechanisms were the only group of integration mechanisms used extensively in both integration interfaces. Two possible explanations can be provided for the scarce utilization of impersonal integration mechanisms: organizational experience in project-based organizing and high level of project autonomy.

Projects are not the main method of organizing activities for either of the case organizations in this study. In comparison, the case company of Turkulainen et al. (2015) seems to be a lot more experienced in project-based organizing, exemplified for instance by standard project reports, post-project evaluations and similar governance models for projects. It is possible that impersonal integration mechanisms are a feature of a more established project-based organization.

Another possible explanation for the low utilization of impersonal mechanisms relates to project autonomy. Project autonomy is a concept that has received increasing attention in single project research: it has been considered as a possible project success factor (Gemünden et al., 2005; Hoegl and Parboteeah, 2006) and studied in different contexts (Martinsuo et al., 2010; Martinsuo and Lehtonen, 2009). In both case programs, the level of autonomy was considered high by the program

personnel, both at the level of the multi-project programs and the individual projects. When both a program and the projects of a program are allowed to progress relatively independently, there might not be a need for a multitude of impersonal integration mechanisms in either integration interface.

The results of this study propose a difference between integration “in paper” and integration “in practice”. Especially regarding DigitalProgram, the results demonstrate evidence of integration which appeared different in the program documentation (i.e., “on paper”) than in the perceptions of the interviewed program personnel. A good example of this is the program-level steering group, which is a “textbook-like” integration mechanism in the program documentation, but was perceived as less useful by multiple interviewees. The division into integration “in paper” and integration “in practice” resembles the divisions into “established” vs. “unestablished” or “instructed” vs. “uninstructed” program management practice as reported by Martinsuo and Kantolahti (2009) in a single case program.

5.2 Agency in the integration practice of multi-project change programs

While the earlier studies (Dietrich, 2006; Lehtonen and Martinsuo, 2009; Turkulainen et al., 2015) have mainly focused on the different integration mechanisms in the two integration interfaces, this study complements the mechanism-centric view by emphasizing an actor-centric view to integration practice. The second research question asked how different program actors exercise their agency in program integration.

This study reveals different dynamics in the principal-agent relationship in the integration practice of the two different change programs and during their lifecycle (front end and implementation). The different agency phenomena are summarized in Figure 2 and discussed next.

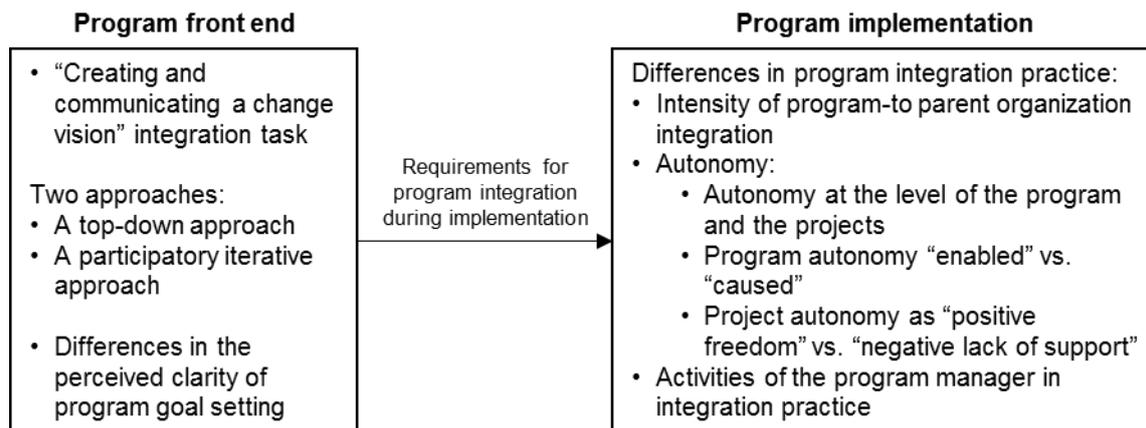


Figure 2. Different agency phenomena in the integration practice based on the two-case study.

5.2.1 Agency at the program front end

In the results, the integration task “creating and communicating a change vision” has a central role in the program front end, and program actors exercised their agency in quite different ways. Our results contribute by revealing two different approaches to integration practice in the “creating and communicating a change vision” integration task: a top-down approach and a participatory iterative approach.

In DigitalProgram, the municipality parent organization communicated a very vague change vision and let the program team take responsibility in transforming the change vision into the goals of the program. The change vision was created and the change program initiated by the municipality (principal) in a top-down manner (cf. Ferns, 1991) and the program actors (the agents) had very limited possibilities to participate in the creation of the change vision (cf. Martinsuo and Lehtonen, 2007). Multiple interviewees commented on the challenges of the vague and non-participatory goal setting; it turned out later that, for example, the parent organization and the program team had partly conflicting ideas about the goals of the program and, especially, the objectives of some projects. This example illustrates the challenge of uncertainty and ambiguity in the front end of change programs (Thiry, 2004), mitigated in DigitalProgram through the relatively high degree of autonomy taken and given by the “heavyweight” program manager and the creation of program-specific integration mechanisms.

Goal setting and program initiation in ProcessProgram was almost a complete opposite to DigitalProgram. In ProcessProgram, a lot more work was done by the parent organization in defining the change vision and program goals already before the initiation of the program. Both the program manager and almost all of the project managers participated in the ideation work, leading to the creation of the change vision and initiation of the change program. When the change program was initiated, all the key personnel shared a relatively similar understanding on the goals of the program. Consequently, ProcessProgram appeared to have an even lower need for program-to-parent organization integration later in the program than DigitalProgram, projects had a rather high degree of autonomy, and the program manager primarily supported the project managers.

The discussion above illustrates how different approaches to defining and communicating a change vision can lead to different requirements for and approaches to program integration. This way our results echo the importance (Lehtonen and Martinsuo, 2008) and the challenging nature (Martinsuo and Lehtonen, 2007) of the program front end. In particular, the beginning of the front end can be considered as “fuzzy” in both the case programs (cf. Thiry 2002). However, our case evidence showed that program actors’ agency was quite different: while in DigitalProgram the creation of a change vision was a relatively efficient, rational and non-participatory decision-making process governed by the parent organization, in ProcessProgram more effort was put in collaboratively creating clarity and decreasing the fuzziness already at the front end. This difference in the program front-end led to a change vision and program goals more coherently understood and shared by the program personnel in ProcessProgram than in DigitalProgram, requiring different integration approaches during program implementation from the program managers. While the participatory and sense making like program initiation (cf. Thiry 2004) was considered as beneficial in ProcessProgram, it can be perceived as vague, muddled and slow by program personnel as well (Martinsuo and Lehtonen, 2007), particularly if not supported with program managers’ autonomy. Thus, the results suggest that program integration will require sufficient time and effort for the creation of a shared understanding, and this effort can be taken already at the program front-end or later during program implementation by a selective exercise of the program managers’ agency.

5.2.2 Agency during program implementation

Despite the different approaches to integration practice at the programs' front end, the principal-agent relationship appeared as more similar across the two programs at the implementation phase. In particular, the parent organization's level of activity in the program implementation phase was generally low in both programs. In DigitalProgram the parent organization implemented a few integration mechanisms (regular steering group meetings and a few other meetings), but the effects of the mechanisms were perceived as quite limited by the interviewees. The parent organization of ProcessProgram interfered even less with the actions of the program team.

The parent organization's low activity in both case programs implies appropriate isolation and autonomy for the program, thereby supplementing previous research that has focused on how such isolation and autonomy is created in the front end (Lehtonen and Martinsuo, 2009, 2008) and how autonomy appears in single projects (Gemünden et al., 2005; Hoegl and Parboteeah, 2006; Lehtonen and Martinsuo, 2009). The results of this study illustrate two quite different viewpoints to program autonomy: program autonomy *caused* by a vague change vision and (partially ineffective) program-to-parent organization integration mechanisms (DigitalProgram), and program autonomy *enabled* by a participatory approach to the definition of the change vision and the nomination of experienced program personnel (ProcessProgram). In the ProcessProgram, almost all of the project managers were also the heads or top managers of the respective business areas representing the change recipient, thereby reducing the agency problem of conflicting interests.

Previous research has suggested that project autonomy does not take place automatically, but instead autonomy has to be "taken and used" and "given or withdrawn" (Martinsuo et al., 2010). This study (in particular in DigitalProgram) shows two opposite viewpoints to autonomy expressed by different projects: project autonomy was experienced both as "positive freedom" (in ClearProject) and "negative lack of support" (in FuzzyProject). Although project autonomy has been considered as a possible project success factor (Gemünden et al., 2005; Hoegl and Parboteeah, 2006), our results demonstrate a need for program managers to take into account the projects' different requirements or expectations for autonomy even within the same program.

5.2.3 Agency in program integration practice

This study was built on the premise that in change programs the parent organization as the principal and the program actors as the agent may have conflicting interests and actions to respond to uncertainty and that they use various mechanisms to align their interests. The results of this study reveal how the parent organization set up a few different structures to supervise the work of the program team (in particular in DigitalProgram) and used its existing structures for the same purpose (in particular in ProcessProgram). Despite these integrative, formal structures, the level of integrative activity at the program-to-parent organization interface was considered as low in both programs. The contrast compared to a more experienced project-based organization (Turkulainen et al., 2015) suggests that impersonal integration structures and systems may become more relevant over time, as the organization advances in project-based organizing.

Where previous research has emphasized the discursive strategies of program teams in isolating the program from the parent organization (Näsänen and Vanharanta, 2016), our findings emphasize the importance of how the parent organization selects and nominates program actors. The results namely indicated that both the selection of the program manager and the selection of project managers played a pivotal role in how they were able to deal with the autonomy given — with purpose or not — to the program and to the projects. The findings have also confirmed the centrality of the program front end in specifying the required degree and style of integration (Lehtonen and Martinsuo, 2009; Martinsuo and Lehtonen, 2007): in both programs, the parent organization was more active in the front end of the program, and let the program team act relatively autonomously in the implementation phase.

The program actors most discussed by the interviewees were the two program managers as the key representatives of the agent. The central role of the program managers in the case programs was increased by the relatively low activity of the parent organizations in guiding, controlling, and monitoring the implementation phase of both programs. Both the academic literature and the textbooks, guidelines, and standards of project management and program management have traditionally emphasized the importance of planning, control, and coordination by project managers and program managers. Complementing such emphases, our results demonstrate some activities

that have received less attention, such as the program manager acting as a support person and a discussant for the individual project managers, and having a championing or visionary role when creating the change vision for a change program and the respective projects. Earlier literature on program managers' competences (Partington et al., 2005; Pellegrinelli, 2008, 2002) has in particular emphasized the competence distinctions between project managers and program managers. Miterev et al. (2016) identified different program management competence profiles for different types of programs.

To conclude, the results of our study relate to the contextuality of program management. It is widely accepted that different projects (Shenhar, 2001) and programs (Martinsuo and Hoverfält, 2018) should be managed differently. This study contributes by emphasizing the need to tailor program management not only *between*, but also *within* programs, an important addition pointed out by Miterev et al. (2016) as well.

6 Conclusions

6.1 Theoretical contribution

Projects and programs are ways for organizations to deliver value (Thiry, 2002; Winter and Szczepanek, 2008), implement strategy (Lycett et al., 2004; Thiry, 2004) and implement organizational changes (Martinsuo and Hoverfält, 2018). Despite its benefits, program management has been argued to be inflexible in the context of an evolving strategy and to lack effective cooperation between projects (Lycett et al., 2004). By pursuing the unity of effort and strategic alignment, program integration is a means to achieve flexibility and inter-project cooperation, and for promoting project and program success. This study has contributed to program management literature by offering evidence on the program actors' different ways to exercise agency in the practice of program integration.

This study explored program integration on two levels: program-to-parent organization and project-to-project integration. The study has complemented the existing research (Dietrich, 2006; Lehtonen

and Martinsuo, 2009; Turkulainen et al., 2015) by replicating some findings of earlier studies — in particular the utilization of personal and group integration mechanisms — in a different change program context. This study has also contributed to the emerging discussion on agency in projects and programs (Turner & Müller, 2004; Crawford et al., 2008; Näsänen & Vanharanta, 2016) by connecting the integration mechanisms and tasks with the actors' specific activities and agency in implementing organizational change. The results included the identification of five integration tasks through which program actors implement integration and pursue change goals, and the varying use of integration mechanisms for these different integration tasks. Organizational maturity in project-based organizing, selection of program and project managers, and program and project autonomy were revealed as likely explanations for the chosen integration mechanisms, specifically for the scarce utilization of impersonal integration mechanisms.

The findings showed different dynamics in the practice of program integration at the different lifecycle phases of the change programs (see also Martinsuo and Hoverfält, 2018). We identified two very different approaches — a top-down approach and a participatory iterative approach — in the creation and communication of a program change vision at the program front end. While the results support previous research in generally emphasizing the centrality of the early phase of change programs (e.g. Martinsuo and Lehtonen, 2007; Lehtonen and Martinsuo, 2008), they contribute specifically by revealing the different consequences of the two different front end approaches, indicating that the integration approach used in the program front end guides the requirements for integration during program implementation.

The research offers new knowledge on program actors' agency (Näsänen and Vanharanta, 2016) in program integration in the context of multi-project change programs. When the parent organization specifies the change vision for the program, it also specifies the requisite autonomy for the program manager. We showed that the case programs differed very clearly in their requisite autonomy, through the clarity in the program goals and personnel involvement in their setting. In this study, autonomy was enabled on both the program and project levels by the nomination of experienced people, clarity of goals and objectives, and the usefulness of program-level integration mechanisms. The existence

or nonexistence of these factors led to autonomy being perceived either as positive and motivating freedom or as negative lack of support. While showing the enabling role of the parent organizations in the program front end, the study pointed out program managers in a central agency role during program implementation, both at the boundaries of programs and internal to programs. Program managers' typical activities of coordinating, controlling and planning were complemented by internal support, and visionary idea creation (cf. Miterrev et al., 2016), thereby promoting and also differentiating the autonomy divided to the program's projects.

6.2 Managerial implications

The results of the study deliver implications for program managers and other program professionals. The results emphasize the contingency view to program management (e.g., Miterrev et al., 2016; Martinsuo and Hoverfält, 2018; Shao, 2018): organizations and program managers should tailor their program management approaches not just *between*, but *also within programs*. That is, program managers should not treat all projects of a program equal, but acknowledge the different expectations and needs of different projects, project managers and project personnel. The results emphasize the importance of the front end phases of change programs (in line with Martinsuo and Lehtonen, 2007; Lehtonen and Martinsuo, 2008). In particular, organizations should focus heavily on the creation, clarification, and communication of the program's change vision and the respective goals of the program and the objectives of the projects. Also, the choices of key program personnel are crucial: when expecting high degrees of autonomy from the program and its projects, their managers should have sufficient previous experience to be able to work autonomously, whereas less experienced managers would need more support from the parent organization.

The results showed that the program manager is not just a coordinator between multiple projects. In addition, or even partly instead, the program manager can act as an internal support person or a visionary idea generator. Therefore, we encourage organizations to ensure that the official requirements for program manager duties would be defined in line with the varied expectations for creative and strategic thinking (front end), for project coordination and monitoring (implementation,

traditionally emphasized), and for supporting the individual project managers (implementation, traditionally less emphasized).

6.3 Limitations and ideas for future research

The main limitation of the study relates to its methodological setting. The number of case programs can limit the generalizability of results. Even if two cases reduce the contextual influence of a single case, two programs is still a limited setting, and the choices of the cases has influenced the results. We have described justifications for the choices and background information on the cases, to increase the validity. Semi-structured, retrospective interviews as the main method of data collection also creates validity limitations, in terms of the selection of informants and their potential biases. To reduce validity problems, we have covered different personnel groups within the program team, used a consistent interview protocol, and reported the data collection and analysis procedures thoroughly, to enable later replication. Furthermore, the research was not purposively designed with actors' agency in mind, as we discovered the idea inductively after the data collection. This may have an effect on the validity of the research, both in positive and negative ways.

Due to the scarce existing literature and the limited number of case programs in this study, further program integration studies should be conducted with different programs in different contexts. The findings of this study and the existing studies on program integration should be tested in a quantitative research setting. The viewpoint of agency and program actors should be studied further with a focus on different aspects of program management, including program integration. The competence requirements and knowledge areas of program managers should be studied further, particularly covering their boundary spanning activities. This should include both in-depth qualitative studies in different program contexts and quantitative studies testing the findings of the existing research.

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