Management interventions in pacing a planned financial accounting outsourcing transition

Arja Flinkman
UEF Business School, University of Eastern Finland – Kuopio Campus, Kuopio, Finland

Benita Gullkvist
Department of Accounting and Finance, University of Vaasa, Vaasa, Finland, and

Henri Teittinen
UEF Business School, University of Eastern Finland – Kuopio Campus, Kuopio, Finland

Received 10 June 2023
Revised 11 October 2023
18 February 2024
20 April 2024
Accepted 21 April 2024

Abstract

Purpose – This paper aims to explore how the time and temporal aspects are managed in a financial accounting outsourcing (FAO) transition process in an international interorganizational context. As a research outcome, the authors identify management interventions of both the service provider (SP) and the outsourcing company (OC) at both the corporate and operational levels.

Design/methodology/approach – The framework by Huy (2001a, 2001b) was used to analyze the qualitative data, which draw on observations, participation in 32 official meetings during the outsourcing process, informal discussions with key actors from the SP and the OC, and archival data of a single case company.

Findings – The authors illustrate how the time and temporal aspects of planned accelerated change are managed through management interventions during the FAO transition process. All four ideal intervention types (commanding, engineering, teaching and socializing) were used sequentially but also jointly to complement one another. The pacing was mostly rapid, owing to strong commanding interventions initiating almost every stage. When analyzing the FAO transition process, the authors identified four stages: contact, contract, convergence and control. Moreover, the authors focused on the role of the operational-level managers and accounting specialists of both organizations. The findings indicate that management interventions vary with the management level.

An earlier version of this paper was presented at the EAA 2021 Virtual Congress in 2021. The authors would like to thank the participants of the conference for their valuable feedback. Further, the authors would like to thank the editor and the anonymous reviewers for their very constructive and valuable suggestions on earlier versions of this paper.

Funding: This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

Qualitative Research in Accounting & Management
Emerald Publishing Limited
1176-6093
DOI 10.1108/QRAM-06-2023-0104

Originality/value – This study contributes to the interorganizational control literature by considering the time and temporal aspects in planned organizational change and the role of operational-level managers in managing large-scale changes.

Keywords Case study, Time, Financial accounting outsourcing, Interorganizational control, Management interventions, Temporal aspect

Paper type Research paper

1. Introduction

Interorganizational control (Lepistö *et al.*, 2020; Dekker *et al.*, 2018) and planned organizational changes (Lukka and Partanen, 2014; Chenhall and Euske, 2007; Huy, 2001a) as purposeful actions that involve an alteration of multiple organizational elements (Agndal and Nilsson, 2019; Huy, 2001a), have interested researchers for a long time. This study combines these two research areas by focusing on the time and temporal management of a financial accounting outsourcing (FAO) transition. Although outsourcing, that is, the contracting of business processes, here financial accounting (FA), to a third-party service provider (SP) represents a planned organizational change (Srikanth and Puranam, 2011), the interorganizational relationships emerging from outsourcing are complex (Stouthuysen *et al.*, 2019; Nicholson *et al.*, 2006), the risks are numerous (Dekker *et al.*, 2018; Nicholson and Aman, 2012) and, consequently, the failure rate is high (Dekker *et al.*, 2018; Langfield-Smith and Smith, 2003; Das and Teng, 2001). Mouritsen *et al.* (2001, p. 221) have argued that "interorganizational relations place not only the firm's own but also the partners' activities as objects for management and control."

Interorganizational control (IOC) includes policies and procedures that align the possibly conflicting interests of the cooperational partners with the interorganizational relationship (Mouritsen and Thrane, 2006). IOC includes formal mechanisms, such as contracts, organizational structures, target setting, feedback and performance management systems (Anderson *et al.*, 2015; Mahama, 2006; Dekker, 2004). Research on IOC has focused on issues such as transaction risk management through partner selection and formal contractual design (Dekker *et al.*, 2018; Dekker, 2008); IOC configurations, mechanisms and practices (e.g. Langfield-Smith and Smith, 2003); the use of cost management information and practices for relationship management (e.g. Agndal and Nilsson, 2019; Mouritsen *et al.*, 2001); and the differences in alliance partner countries' institutional environments that may influence IOC choices (Zeng *et al.*, 2022). IOC has also been used in conjunction with informal controls (including trust and relational norms) to address collaboration and coordination concerns and increase firm performance (Dekker *et al.*, 2019; Anderson *et al.*, 2015).

Previous studies, drawing mainly on transaction cost economics (TCE), have introduced FAO models to understand offshoring (Nicholson *et al.*, 2006) and outsourcing in general (Speklé, 2001; van der Meer-Kooistra and Vosselman, 2000; Nooteboom, 1993), identifying several stages during the implementation process, such as contact, contract and control/execution (Nicholson *et al.*, 2006; van der Meer-Kooistra and Vosselman, 2000). However, they have not considered the time and temporal dimension [1] to manage the inherent dynamics of the change process. The time and content of change are often interrelated in planned organizational change because some organizational elements (such as organizational structures) can be changed faster than others (such as beliefs and values) (Huy, 2001a). Furthermore, concerning the FAO transition process, both FAO SPs and their clients face challenges in terms of the rapid changes in the talents required and the adoption of automation and new technologies (Faituša *et al.*, 2020). Therefore, it is essential that operational-level managers are integrated to support the planned changes (Huy, 2001b).

The need to coordinate the management interventions between alliance partners calls for a gradual development of the interorganizational relationship (Agndal and Nilsson, 2019), whereas the objective of offshoring is usually the accelerated reaction to changes in the global market (García-Canal *et al.*, 2002). However, contemporary IOC literature is largely silent on how the time and temporal dimension should be managed in a planned organizational change (see, however, Agndal and Nilsson, 2019; García-Canal *et al.*, 2002). Indeed, in much of the IOC literature, IOR development is presented as an evolutionary process rather than a steered strategic process with a goal determined in advance (Agndal and Nilsson, 2019). Often, a rapid change is required from both the SP and its FAO client (Faituša *et al.*, 2020). Accelerating change may, however, bring about conflicts, as parties may differ in their perceptions of the appropriate pace and timing of change activities, especially on different levels of collaborating organizations. As people's perceptions of time can be either quantitative or qualitative, this leads to different rates of adaptation to change (Huy, 2001a). Thus, it is important to examine the ability to manage the time and temporal dimension of a strategic change. To shed more light on the whole FAO transition process and possible time and temporal-related issues, the research question of this study was formulated as follows:

RQ1. How can the time and temporal aspects of an FAO transition process be managed in an international context?

By examining how the time and temporal aspects of an FAO transition process are managed in an interorganizational international context, this study responds to the recent call to explore pacing in IOC research (Agndal and Nilsson, 2019). We rely on the theory of the four ideal management intervention types (Huy, 2001a). According to Huy (2001a), management intervention is an approach which can be commanding to change formal structures, engineering to change work processes, teaching to change beliefs and attitudes and socializing to change social relationships. Management interventions can be, for instance, decisions made by the board or in organized training sessions. This theory, based on the time and temporal aspects of planned change, proposes how each intervention type associated with altering a distinct organizational element could be managed in the most effective (successful) way. The theory also captures the temporal capability of change agents to effectively pace the planned change by timing, pacing, sequencing and combining the ideal management intervention types (Chenhall and Euske, 2007). As a research outcome, we identify the management interventions of both the SP and the outsourcing company (OC) at both corporate and operational levels during an FAO transition process.

The empirical research was conducted as a case study of the FAO transition process of an Eastern European subsidiary of an international system provider to an international FAO SP. We analyzed the whole FAO transition process over a period of eight months, using observations, archival data and informal discussions with 13 individuals.

This research aims to extend the existing IOC literature in three ways. First, drawing on Huy's (2001a) ideal intervention types, we are able to extend IOC-related research with the time and temporal aspects of a planned, accelerated change process (FAO). The ability to manage the temporal dimensions of change initiatives within networks of organizations may play an important role in transforming the interorganizational relationship (Agndal and Nilsson, 2019). This research adds to the existing IOC literature by focusing on how organizations move between the stages and how the time and temporal aspects of a planned change are managed. Second, this study adds to IOC research by applying Huy's (2001a) types of management interventions at both corporate and operational levels of the OC and

the SP. Previous IOC research emphasizes an organization-level analysis and organizational control mechanisms (Dekker *et al.*, 2019). The focus on both corporate and operational levels provides us with an in-depth approach to the management of the time and temporal aspects of FAO. Third, as a result of our analysis, we identified a fourth stage in the FAO transition process, namely, convergence, in addition to the three previously identified stages (Nicholson *et al.*, 2006; van der Meer-Kooistra and Vosselman, 2000; Nooteboom, 1993). The convergence stage connects operational-level managers to the FAO transition process. From a practical management point of view, this may be relevant in increasing the rate of success concerning FAO.

The remainder of this article is structured as follows: Section 2 provides a literature review, and the research method is addressed in Section 3. Case findings are described and analyzed in Sections 4 and 5. Section 6 ends with concluding remarks, discusses the contributions and limitations of the study and provides some suggestions for further research.

2. Control mechanisms in planned organizational change

The literature on organizational change addresses the complexity of the change process and the role of managers in various change implementation activities (for a review, see Van de Ven and Poole, 1995). There is also growing interest in IOC in planned organizational change and the acceleration of change beyond the pace at which the interorganizational relationship may naturally evolve (Agndal and Nilsson, 2019; Varoutsa and Scapens, 2015). In this section, we present the previous IOC literature, management interventions and how management interventions are related to IOC and FAO.

2.1 Interorganizational control literature

The term "inter-organizational control" refers to all formal mechanisms to deal with appropriation and coordination requirements (Dekker *et al.*, 2019; Dekker, 2004). However, Dekker (2004) has emphasized the importance of informal relations to complement formal control mechanisms in interorganizational relationships. Such relational controls are often approached from the perspective of social and relational exchange theory (Agndal and Nilsson, 2019). The controls not only mitigate the partners' opportunistic behavior but also minimize transaction costs and risks (Nicholson *et al.*, 2006; Dekker, 2004; Langfield-Smith and Smith, 2003; Speklé, 2001; Van der Meer-Kooistra and Vosselman, 2000). Conflicting interests exist not only between partners but also at several levels of an organization relating to the interorganizational relationships of complex networks (e.g. Håkansson and Lind, 2004; Huy, 2001b).

Studies with a narrower approach to IOC have typically examined the use of specific investments and formal contracts (Dekker *et al.*, 2013). Influenced by interorganizational studies in related fields, such as economics and strategic management, previous studies have mainly focused on the organizational level (Dekker *et al.*, 2019). Scholars have investigated questions related to the boundaries of firms, firms' collaborative strategies and the acquisition of strategic resources with the help of business partners using theories such as TCE, the resource-based view of the firm and resource dependence theory (Dekker, 2016). Scholars have also explored issues such as the selection of alliance partners and contract design (Dekker *et al.*, 2019; Dekker, 2008), IOC mechanisms and practices (Langfield-Smith and Smith, 2003) and the use of cost information and cost management practices in the collaboration between alliance parties (Mouritsen *et al.*, 2001).

In their study on interorganizational actors, Dekker *et al.* (2019) adopted a broader concept of IOC mechanisms, consisting of all devices used to ensure the alignment of behaviors and decisions with the organization's objectives. The broader concept is rooted in organizational control theory and includes trust and relational norms, which develop gradually in interorganizational relationships (Dekker *et al.*, 2019). Trust is related to the readiness of one party to engage with another with positive expectations concerning the other party's actions (Free, 2008). Trust can be based on competence or goodwill. The former refers to the ability and expertise of the alliance party, whereas the latter can be described as a way of perceiving the partner's commitment to fulfilling contracts (Langfield-Smith, 2008; Dekker, 2004; Van der Meer-Kooistra and Vosselman, 2000). Shared norms and values and a commitment to the alliance support the establishment of goodwill trust (Varoutsa and Scapens, 2015).

Relational norms and the development of trust in interorganizational relationships are viewed as preconditions for better performance and competitive success in complex business environments, which encompass rapid technological innovation and increased competition (Free, 2008). The level of trust changes as collaborating parties learn about each other at organizational and individual levels (Vélez *et al.*, 2008). It is necessary to achieve a balance between control and trust in an interorganizational relationship (Das and Teng, 2001). Control and trust can either substitute or complement each other (Dekker, 2004). Also, every employee of the SP who communicates client-specific information to the alliance party representatives may strengthen the perceptions of the appropriateness of the SP at the interorganizational or individual level (Lepistö *et al.*, 2020).

The development of an interorganizational relationship (or alliance) is a process that takes place in stages (Agndal and Nilsson, 2019; García-Canal *et al.*, 2002). Previous studies on IOC, based on TCE and management control theories, have maintained that decisions about the structuring of IOC include three stages of a transactional relation: a contact stage, a contract stage and a control or execution stage (Nicholson *et al.*, 2006; Van der Meer-Kooistra and Vosselman, 2000; Nooteboom, 1993). However, TCE-based models of IOC structuring have been criticized for not considering the social context within which the transactions are embedded (Langfield-Smith and Smith, 2003). Previous IOC research (Dekker *et al.*, 2019) has argued for the need to consider control practices used in interorganizational relationships to affect managerial or employee behavior in desirable ways. According to the more rational and technical approach to organizational change, altering the tangible organizational structure and work processes should come first, whereas a more social approach first focuses on the organizational culture, including beliefs and social relations (Huy, 2001a).

2.2 Control mechanisms through management interventions

Huy (2001a) has argued that a proper consideration of the time and content of change is often critical to implementing a planned change because time is an inherent part of the definition of change itself and content, along with context and processes, represents an essential dimension of change. Change theories (e.g. McGrath and Rotchford, 1983) define two conceptions of time: quantitative and qualitative. While quantitative time refers to clock time, which is precisely measured in ways common to everybody, qualitative time cannot be measured or managed easily because it depends on how individuals interpret events. It can, therefore, flow in different and indefinite ways. Quantitative time is usually applied to influence the content aspects of change, such as budgeting and formal planning, whereas qualitative time is essential to understanding the behavioral challenges related to

organizational change. Ideal intervention types differ in the time and content of change, and the continuity and tangibility of change (Huy, 2001a).

Huy (2001a) identified four idealized intervention types:

(1) commanding intervention (CI);

(2) engineering intervention (EI);

(3) teaching intervention (TI); and

(4) socializing intervention (SI).

Commanding intervention and EI are considered formal controls because they affect the organizational structures and work processes, which can be seen as the tangible content of change (Beer and Nohria, 2000). Teaching intervention and SI affect individual psychology and interpersonal relations, as well as shared norms and are considered informal controls (Huy, 2001a). The purpose is to change intangible contents, such as individuals' beliefs and social relationships between them (Beer and Nohria, 2000).

The CI, the dominant approach in the strategic management literature, is seen as a commander-like approach in which "change agents apply directive and coercive actions to their change targets to exact compliance with their purposed change goals" (Huy, 2001a, p. 604). Strategic management by top managers assumes that the rest of the organization will closely follow the rules and regulations that are set, and sanctions are used to ensure compliance (Lukka and Partanen, 2014; Huy, 2001a). Typical examples of CI can be found within formal strategic planning (Chenhall and Euske, 2007). The change agent is usually a top executive, assisted by external consultants (Lukka and Partanen, 2014; Huy, 2001a), who will play a leading role (Agndal and Nilsson, 2019). Using formal authority is an effective means of changing structures or achieving visible results (Agndal and Nilsson, 2019; Chenhall and Euske, 2007), especially when external factors determine the purpose and rate of change (Lukka and Partanen, 2014; Huy, 2001a). The progress toward near-term, highly visible outcomes is measured in quantitative time. The CI is not likely to introduce long-term changes to basic beliefs or values (Lukka and Partanen, 2014; Chenhall and Euske, 2007; Huy, 2001a).

The EI aims to improve the execution, efficiency and quality of work processes by analyzing, understanding and redesigning them using detailed work specifications, planning and control (Lukka and Partanen, 2014; Huy, 2001a). Skilled work process analysts, acting as change agents, guide the change by developing employees' technical skills. Total quality management, work process redesign and new instructions are typical approaches (Lukka and Partanen, 2014). The time concept is quantitative time but it is paced to the logic of the work processes (Huy, 2001a). As processes and skills take time to be understood and developed, pacing is usually moderately fast, in other words somewhat longer than the rapid pace in a CI (Chenhall and Euske, 2007). A successful change requires the employees' acceptance and the actual use of new work practices (Huy, 2001a).

The TI is related to formal analytical and guided learning, targeting change in individuals' beliefs (Lukka and Partanen, 2014; Chenhall and Euske, 2007). Various educational initiatives can be used to change the beliefs of an organization's members (Lukka and Partanen, 2014). Individuals seek to change their basic beliefs or behaviors with the help of change agents (Huy, 2001a), for example, external consultants, who guide them throughout the process. Change agents should be patient, as the change initiative recognizes an individual's inner time, which refers to qualitative time experienced at the subjective level of individual consciousness (Huy, 2001a). Thus, changes occur gradually, usually in the moderately long term.

The SI refers to change agents' actions to enhance the quality of the social relationships among the members of an organization and assumes that changes in behavioral interactions among individuals cause changes in beliefs and organizational culture (Lukka and Partanen, 2014; Chenhall and Euske, 2007; Huy, 2001a). Social relationships in the change context involve issues of individual emotions, power and politics. The time concept is qualitative social time (Huy, 2001a). Social time can be defined as the temporal ordering and arrangement of social processes (Huy, 2001a). Changes may take considerable time to occur.

In a planned change, managers sequence or combine the four ideal management intervention types and decide on the sequencing and combining of the interventions, as well as their timing and pacing (Chenhall and Euske, 2007; Huy, 2001a). The concept of the temporal aspect of controlling planned change means adequate pacing, which can be achieved through suitable timing, sequencing (enacting one intervention type at a time) and combining (enacting all intervention types simultaneously) of the types of management interventions (Huy, 2001a). Each intervention type has typical pacing characteristics: rapid for commanding, moderately fast for engineering and gradual for TI and SI. The appropriate timing of interventions plays a key role in creating a tolerable and effective change rhythm (Huy, 2001a). Sequencing is critical, especially in significant and large organizational changes that might include several intervention mechanisms (Agndal and Nilsson, 2019; Huy, 2001a). Huy (2001a) has argued that temporally capable change agents are attentive to changing conditions both inside and outside the company. They will choose between pure sequencing and pure combining as well as all other possibilities to sequence and combine the four intervention types only partially. Furthermore, interventions may be adjusted to the pace of another intervention, and each intervention type can be applied at a different pace. A forced pace may not succeed, while a more moderate pace may succeed (Huy, 2001a). The ideal timing of an intervention with its typical pacing is critical to its effectiveness (Huy, 2001a).

The ability to manage the time and temporal dimensions may play an important role in transforming interorganizational relationships (Agndal and Nilsson, 2019). Change agents have to be experts in the timing and sequencing or combining of intervention types to create a suitable rhythm for the change (Chenhall and Euske, 2007). In addition, a planned organizational change may imply change accelerated beyond the pace at which the transition may be constructed (Agndal and Nilsson, 2019). The effectiveness of change will also largely depend on the alignment of the intervention types with the context of the organization and the dispositions of individuals involved in the change (Huy, 2001a). Success in implementing radical change in an organization requires an understanding of personal predispositions to the initiative of change, and management interventions may be needed to weaken change-resistant organizational ideologies and implement new ideologies (Lukka and Partanen, 2014; Huy, 2001a).

2.3 Management interventions in relation to the financial accounting outsourcing and Interorganizational control literature

The FAO literature has focused on staff attrition in offshoring (Nicholson and Aman, 2012), contract monitoring of the FAO relationship (Anguelov, 2016), accounting outsourcing turnback (Maelah *et al.*, 2010), legitimacy building through outsourced management accounting (Lepistö *et al.*, 2020) and the development of FAO through shared service centers (Hyvönen *et al.*, 2012). To understand the FAO transition process, scholars have built models and identified stages (Nicholson *et al.*, 2006). While the management of FAO, and related time and temporal aspects, have been recognized as challenging and complex (Faituša *et al.*, 2020; Nicholson *et al.*, 2006), previous models do not consider the time and temporal dimensions

necessary to manage the inherent dynamics of the change process. Sometimes, there is a need to accelerate, decelerate, postpone or advance change activities to align them with the abilities of the organization and its individuals who undergo change (Agndal and Nilsson, 2019; Huy, 2001a). The time and temporal management of an FAO transition process can be approached through the timing, pacing, sequencing and combining of management interventions. Huy's (2001a) approach, connecting the time and content of change, highlights the role of operational-level managers in planned organizational change. For example, the appropriate timing of management interventions plays a key role in creating a tolerable and effective change rhythm as well as for the overall success of the change process (Huy, 2001a), here is the FAO transition process.

The previous IOC literature, implying formal control mechanisms but lately often extended to include informal controls such as trust and relational norms, addresses collaboration and coordination concerns in interorganizational relationships (Dekker *et al.*, 2019; Anderson *et al.*, 2015; Dekker, 2004) Previous IOC research recognizes formal and informal control (Dekker *et al.*, 2019; Dekker, 2004). However, it is relatively silent on managers' ability to manage the time and temporal dimensions of planned change through management interventions, although this ability may play an important role in interorganizational success (Agndal and Nilsson, 2019; Huy, 2001a). While the interorganizational relationship usually evolves gradually (Agndal and Nilsson, 2019), the FAO transition process may have to be accelerated due to internal or external factors (Agndal and Nilsson, 2019; García-Canal *et al.*, 2002). An acceleration of the change may cause tensions on different levels of the collaborating organizations, because different parties are likely to have different opinions on what is an appropriate pace and timing for the change activities (Huy, 2001a). Thus, by using Huy's (2001a) framework, we are able to add to previous literature on how the time and temporal aspects of the FAO transition process are managed in the international interorganizational context. Furthermore, we can examine the controlling of planned change from both the formal (CI and EI) and informal (TI and SI) perspectives, considering also the combinations, sequencing and pacing of the interventions.

3. Case study design and site

In this section, we introduce our focal company and the interpretive case study method used. To facilitate the readers' understanding, we have identified the actors with labels after their titles, such as "OC" for outsourcing company, "sub" for subsidiary and "SP" for service provider. For example, the CFO of the OC is labeled "CFO/OC" and the CEO of the subsidiary is labeled "CEO/OC-sub."

3.1 Methods

We chose a qualitative research approach because the case study is suitable for describing and explaining a complex phenomenon in its real-life context (Scapens, 2004; Yin, 1994). According to qualitative field researchers, social reality is emergent and subjectively created, and it can be objectified through human interaction (Ahrens and Chapman, 2006). The control mechanisms used during the outsourcing transition process were observed over eight months (2008–2009 [2]) at both the operational and corporate management levels of two companies, the FAO SP and its client, the OC. One of the researchers spent all eight months in the field observing the behavior of the managers of the collaborating organizations during the transition process. Informal discussions with 13 individuals took place several times during the FAO transition process at both the corporate and operational levels of both alliance parties. In addition, access to all meetings throughout the project, as

well as to minutes, service contracts, a GoLive roadmap and other relevant archival material, was provided to the researcher at the research site. Archival material was collected, and detailed notes were made during discussions with the key actors. The data sources are presented in Table 1 (data sources).

The focus was on the FAO transition process. Through observation of the practical phenomenon on site, we received detailed and in-depth insights into how the management intervention mechanisms were used in the FAO transition. Training sessions were also observed.

The observations, meetings and discussions with the key actors provided our main primary data. Informal discussions were not based on any predefined structure. They were mainly conducted before and after official meetings to clarify the themes handled and decisions made during the meeting. The discussions often indicated how individuals felt about the decisions made earlier. Also, observations between the meetings provided information on how the managers at operational and corporate levels reacted to the interventions.

For data analysis and writing, we used an iterative process (Rockmann and Vough, 2023) and interpreted the data using Huy's (2001a) framework. To facilitate data analysis and interpretation, all documents and notes were organized in chronological order and coded based on an initial list of codes from the perspective of management interventions. All management interventions to accelerate or decelerate the intended change were identified. We also identified areas of agreement and disagreement among the actors. The notes of the informal discussions with the key actors provided a rich source of additional and somewhat confidential information, as well as a sense of the managers' dispositions to the changes and interventions taking place during the FAO transition process. Furthermore, the minutes of the official meetings, as well as the contracts and their attachments, provided a source for clarifying the initial findings.

The analysis of the FAO transition process was closely tied to the conceptualization of the impacts of timing, pacing, sequencing and combining of the management interventions used to accelerate the FAO transition process. During the analysis, two researchers performed the initial analysis separately, comparing their findings afterward. Regarding the external validity or transferability, referring to the generalizability of our findings, we lean on the description of the observations made on the spot and rich archival material collected during our stay at the research site. Furthermore, the real-time data collection also ensured the accuracy and reliability of the data.

3.2 Research site and background

We chose the research site for three reasons. First, we aimed for an international company, large enough to have all accounting processes in use. Furthermore, companies operating in the international context represent a good case for a large-scale change. Second, the research on IOC design at both corporate and operational management levels in an interorganizational and international context was limited. A third reason for our choice was that we required good access to the SP's and the OC's corporate- and operational-level managers in both countries.

Our case company (the OC) is an international group with 1,200 employees operating as an engineering industry system supplier. In late 2006, the group acquired a foreign (Eastern European) 500-employee company to be consolidated as a subsidiary within the group. The group had outsourced FA six years ago to a focal SP and used a Web-based financial reporting software integrated into its enterprise resource planning (ERP) system. The acquired company used another ERP system and a nonintegrated accounting system, which meant that all accounting processes involved manual, paper-based document processing. Immediately after the acquisition, the former CEO/OC-sub and three financial managers/OC-

Meetings observed during the stay at the research site between Jun 2, 2008, and Jan 19, 2009		
Theme of the meeting	No. of meetings	Hours
Corporate management level, transition clarification meetings	3	4
Corporate management level, steering group meetings	4	16
Operational management level, the analysis of accounting processes General ledger (GL), accounts payable (AP), accounts receivable (AR), assets accounting (AA)	8	44.5
Operational management level, process management meetings	2	5
Testing the processes	7	37
Training sessions	3	17.5
Special issues (VAT, local accounting policy)	5	20
Number of meetings/total hours spent in the meetings	32	144

List of individuals discussed with during the FAO implementation	
Outsourcing company	*Service provider*
Corporate level	Corporate level
Chief financial officer (CFO)	Chief executive officer (CEO)
Business support manager (BSM)	Marketing manager
	Chief operational officer (COO)
	Chief information officer (CIO)
Operational level	Operational level
Chief executive officer (CEO/OC-Sub)	Service manager, general ledger and assets accounting
Controller	Service manager, accounts payable and cash management
Accounting manager	Service manager, accounts receivable and sales invoicing
	Implementation manager

Two semistructured interviews to validate the findings (postimplementation)		
Interview informants		Hours
CFO, outsourcing company	May 10, 2010	1.0
Business support manager, outsourcing company	May 10, 2010	1.5
Total hours, interviews		2.5
Total hours, official meetings and interviews		146.5

Documents analyzed
Service contract, corporate level
Service contract, operational level
GoLive roadmap
Minutes of four steering group meetings
Minutes of 10 operational meetings
Service specifications of outsourced accounting processes
Process flow charts of outsourced accounting processes
Accounting regulation and policy

Table 1.
Data sources of the case

Source: Created by authors

sub of the acquired company were fired. The controller/OC-sub and the accounting manager/OC-sub remained. The group appointed a new CEO for the subsidiary (CEO/OC-sub) and a business service manager (BSM/OC) from within the group. The BSM/OC was familiar with the focal SP, and became familiar with the current accounting processes of the subsidiary before the FAO transition process began.

The new CEO/OC-sub and BSM/OC did not speak the local language, and the locals did not understand English. Because of the language barriers, it was impossible to continue with in-house FA after the acquisition. Thus, in 2007, the FA of the subsidiary was first outsourced to a local accounting SP (D) because the manager of the local accountancy office spoke English. No changes were made to the staff or software. It soon became evident, however, that the FA processes were not efficient, and the CFO/OC and BSM/OC began to look for alternatives.

4. The financial accounting outsourcing transition process

In this section, we explore, identify and describe how the four intervention types were adapted to suit the outsourcing transition process and the dispositions of the individuals involved to promote the change.

4.1 Management interventions identified during the financial accounting outsourcing transition process

During the analysis of the management interventions, we identified four stages based on the target and timing of various management interventions, as follows: the contact stage – the first contacts and the mutual definition of the scope of the transition process; the contract stage – the design and signing of the contracts at both corporate and operational levels and the design of the GoLive roadmap for the transition; the convergence stage – a detailed analysis of the FA processes, including the data flows into the new information and communication technology (ICT) systems, mainly carried out at the operational management level to achieve convergence between systems and practices; and the control stage – the management of the FAO transition process after commitment by signing the contracts and approving the GoLive roadmap, including steering group meetings and follow-ups of the transition process to monitor the ongoing process.

An overview of the interventions detected during the FAO transition process is presented in Table 2 (interventions detected during the FAO transition process). The following sections describe the interventions in more detail.

4.2 Initial discussions and planning of the transition: contact stage

The first meeting to discuss the FA inefficiency of the subsidiary and plan for a possible FAO transition was held in early June 2008. The alternatives discussed were either to upgrade the existing ERP system and the current FA accounting software of the acquired company and continue with the local SP (D), or to select the accounting information system (AIS) used by the group, implying a change of the ERP system and accounting software of the acquired company (called "subsidiary" hereafter). Furthermore, the subsidiary would also have to change the SP to SP (used by the group) who was totally unknown to the existing subsidiary personnel. The BSM/OC seemed to be in favor of continuing with D, whereas the CFO/OC desired the more flexible and scaling FA that he was used to:

> We can either continue with the local service provider or transfer the FA of the subsidiary to the same SP as we use at corporate level. The former solution would be easier, as people are already used to working with the local service provider. People do not like changes in their work. (BSM/OC)

Period	Management action	Intervention type CI, EI, TI, SI	Management level C O
Jun 2008	Initial idea to have the same SP as at the corporate level for the offshore subsidiary	CI	C
	Budgeting of the possible FAO process		
	Agreement of the scope of the FAO process		
Jun to Aug 2008	Designing the service contract at the corporate level	CI	C
	Designing the service contract at the operational level	CI	C, O
	GoLive roadmap, planning of all activities to be done during the transition process	TI	C, O
Aug to Nov 2008	Setting up a cross-functional	CI	C (OC)
	Interorganizational team	EI, SI	O
	Detailed analysis of current accounting processes	EI, SI	O
	Analysis of data concerning the volumes and quality of transactions of each accounting process	CI	C (OC) O (SP)
Nov 2008 to Jan 2009	Steering group meetings, 4	CI	C (OC)
		CI, EI, TI	C (SP)
		EI	O (SP)
	Operational meetings, 10	CI, EI, TI	C, O (OC)
		EI	O (SP)
	Planning of the information tehcnology	EI	O
		TI	C (OC)
	Analyzing and testing of the work processes		
	Reeducation session of the cross-functional and interorganizational team	TI, SI	O
	Pricing negotiations	EI	O
	Definition of the processes connected to transaction-based pricing	CI	C
	Payroll process analysis	EI	O
		EI	C (OC)
		CI	C

Table 2.
Detailed timeline of interventions detected during the FAO transition process

Notes: C = corporate management level; O = operational management level; OC = outsourcing company; SP = service provider; CI = commanding intervention; EI = engineering intervention; TI = teaching intervention; SI = socializing intervention
Source: Created by authors

The SP had earned a reputation for reliability and trustworthiness. Furthermore, at the corporate level, there were jointly developed digitalized FA processes, which represented accumulated knowledge to build on. It was thought that a transition to the known SP, with which there had been previous experience at the corporate level, would bring benefits at the corporate level in the form of common accounting practices. The foreign subsidiary could be

better controlled and quickly integrated into the group's operations. The importance of real-time digital reporting, allowing for drilling down to the voucher level, was also considered important. Outsourcing everything to the SP would also enable easier adaption to the expected rapid future changes in technology, especially system development in FA. However, although experienced, the SP did not have previous cross-border experience of FAO transition processes:

> A familiar SP and extant technology are important service provider selection criteria for us. [. . .] The international aspect also brings some challenges: different payroll systems, digitalization, and language barriers. (CFO/OC)

After discussions, the meeting decided to select the SP and begin a new FAO transition process. At the corporate management level, the project involved the BSM/OC, CFO/OC, CEO/SP, marketing manager/SP, CIO/SP and COO/SP. At the operational management level, the project involved the controller/OC-sub, accounting manager/OC-sub and the CEO/OC-sub, as well as the service managers/SP of the accounting processes. The CFO/OC and BSM/OC wanted rapid changes in the work processes:

> All accounting processes should be digital by the end of this year. (CFO/OC)

The size of the required change in the accounting processes was also initiated by the chief information officer (CIO/SP) at the beginning of the process. He was somewhat concerned about the timetable:

> Concerning the timetable [. . .] we have rather many things to do regarding the applications we currently use [. . .] and the tasks include several coding changes between our systems and the new ERP that the OC selected for the subsidiary. (CIO/SP)

The FAO transition was planned to be completed within eight months and for continuous service to begin from 2009. This may be considered a challenging pace in the international context. The reason for the strict timetable was also because the FAO transition process had to be closely scheduled to the subsidiary's projected schedule for the AIS integration with the ERP system. The ERP was simultaneously implemented but provided by another SP.

The goals and objectives, including the budget for the FAO transition process, were set. To ensure success in the digitalization of the FA processes, technological and human resources at the subsidiary would have to be managed and likely improved, by the OC. Furthermore, translations of the accounting applications into the local language were required from the SP:

> The accounting and invoicing applications must be translated into the local language to speed up the implementation. (CFO/OC)

The extant AIS used by the group could not be implemented in the subsidiary without changes. Regarding human resources, the controller/OC-sub would have to manage both financial and management accounting, as the BSM/OC would also have to focus on the ERP implementation. The BSM/OC was responsible for both implementations and coordinated both processes at the corporate level. This case focused on the AIS implementation and its integration with the new ERP. The BSM/OC was the only one at the beginning of the FAO transition process who had previous outsourcing experience. Thus, the two managers (the controller/OC-sub and the accounting manager/OC-sub) had to learn new procedures:

> They [the controller/OC-sub and the accounting manager/OC-sub] have to learn to do all duties, obviously rather quickly. (COO/SP)

Training on the new AIS was agreed upon jointly by the OC and the SP. The SP emphasized quick adaptation to the new ways of working after the employment of the new digitalized

accounting processes. In particular, the BSM/OC seemed to find this change challenging, being familiar with the local culture:

> The answer of the personnel to comprehensive changes like this is always, "never in my lifetime." I assume there may be some resistance. (BSM/OC)

> We need good personnel training to increase the knowledge level. Up to now they [the accounting manager/OC-sub and the controller/OC-sub] have just recorded everything manually on paper. (CFO/OC)

Furthermore, the CFO/OC and the BSM/OC noted that close cooperation and the individuals' ability to adapt to the rapid changes had to be considered during the transition process:

> This project will need close cooperation with all individuals involved in the accounting processes [from the OC and the SP]. (CFO/OC)

> The changes we talk about may take some time to adapt to, especially when I consider the accounting manager/OC-sub. (BSM/OC)

The CFO/OC was made responsible for the FAO transition process. Thus, he was appointed the formal change agent, initiating the change process. He requested strict compliance from everybody. He had support from the COO/SP and the service manager/SP, who worked as external consultants during this contact stage:

> I promise to do everything with respect to the strict timetable set. We can do this together. (COO/SP)

At the end of the contact stage, a tight timetable was agreed upon. However, the BSM/OC had not yet adapted to the pace required by the CFO/OC. The marketing manager/SP had some doubts about the challenging timetable at the beginning of the process:

> All in all, we have to be realistic about the timeframe during the process. (Marketing manager/SP)

The purpose of initiating the CI was to generate an understanding of the aims of the transition process, to set the accelerated pacing of the process, to establish a collaborative relationship between the alliance parties, to agree on the resources to be used and to establish data-sharing principles between the organizations. The CFO/OC and the BSM/OC acted as change agents. While interventions usually did not extend across different transition stages, the CIs at this stage extended as a sequence into the contract stage at both the corporate and operational management levels.

4.3 Contract negotiations and specifications as well as further development: contract stage

At the end of June 2008, contract negotiations began at both corporate and operational levels, aimed at foreseeing possible problems during the implementation and execution as well as to modify the existing corporate-level contracts for the international context.

To enhance the negotiations, the BSM/OC, together with the COO/SP and the service manager/SP, paid several visits to the subsidiary. Detailed service contracts and service specifications of the FA processes were expected to help the OC to mitigate the FAO transition risks, especially those related to incorrect or incomplete information in the monthly consolidations. Furthermore, the detailed contracts were expected to increase the trust between the alliance parties:

> You [SP] have to include everything in the contract at the corporate level, but especially between the subsidiary and the SP's service center to ensure that we have covered all possible risks. (CFO/OC)

Contrary to previous research (e.g. Dekker *et al.*, 2018; Dekker, 2008, 2004), the previous experience of the SP at the corporate level did not reduce the need for costly and complex contracts. The reason may be that the SP had no previous experience of operating abroad. Also, the CFO/OC was not familiar with the legal, cultural and institutional differences between the two countries and wanted to have everything in writing. After numerous discussions and negotiations at both the corporate and operational levels of both organizations, two detailed service contracts were drawn up. The COO/SP and the BSM/OC agreed that all software should be translated into the local language:

> We [OC] expect that you [SP] do all you can to provide the translations. (BSM/OC)

A GoLive "roadmap" was designed to manage the timing of activities during the FAO transition process. The roadmap was drawn up by the operational-level managers/OC-sub together with the COO/SP, the service manager/SP and the implementation manager/SP. This document defined all the steps of the FAO transition process.

The personnel training was conducted by outside consultants from the SP's international service center, acting as change agents. Instruction was to be delivered in English, partly online and partly in face-to-face sessions. However, when the SP had to teach the new digital accounting processes to the controller/OC-sub and the accounting manager/OC-sub, it became evident that only one person on the SP's accounting team could provide training in fluent English. Thus, the SP had to hire another English-speaking trainer for the first training session. By then, the accounting software had been translated into the local language. The operational-level managers of the focal subsidiary made it clear that they resisted education in English, and the SP personnel did not speak the local language. In particular, the accounting manager/OC-sub seemed unhappy:

> Why do we have to change the training language? The accounting software is now in X [the local language], so couldn't we have the training in the same language? (Accounting manager/OC-sub)

It may be that, even though using TI, the trainers did not adapt to the slower pace of change that the accounting manager/OC-sub could have accepted:

> Perhaps it was a mistake to have these external trainers, as they did not seem to be able to slow down even a little bit. (BSM/OC)

The COO/SP and operational-level managers/SP were involved to bridge any gaps between different countries and organizational cultures. Furthermore, both alliance parties agreed that the COO/SP, the service manager/SP and the BSM/OC would check the generally accepted accounting principles (GAAP) in the foreign country with the controller/OC-sub.

The CI that continued from the contact stage forced the pace of change and was effective at both the operational and corporate management levels in the negotiation and signing of the contracts. The purpose of the CI was also to establish a new resource commitment and a long-term commitment with the SP's operational managers. The CIs did not create a positive atmosphere but caused resistance from the operational-level managers. Based on our analysis, we conclude that besides formal control mechanisms, informal control such as TIs are needed to create a positive atmosphere in a complex change. We regard the GoLive roadmap and its actual use as a TI, which helped employees to learn the new work processes together and to create a slower pace than what the CI used. The TI partly overlapped with the CI. The controller/OC-sub, the accounting manager/OC-sub, the corporate management-level managers/OC and the implementation manager/SP applied the TI (the roadmap). The combined CI–TIs at both levels failed, owing to the incompatibility of the TI with the CI. While the corporate management level of the SP was able to combine the CIs and TIs, for the

operational managers/OC, using the combined interventions was clearly a challenge at the beginning of the contract stage. We noted that the operational-level managers did not have the same temporal capability as the corporate-level managers.

4.4 Convergence of financial accounting processes: convergence stage

In August 2008, a cross-functional international accounting team went through all accounting processes and designed the necessary developments. This EI included an FA process analysis and redesign to achieve highly productive and efficient work processes and to guarantee the high quality of all FA processes. Regarding timing, at the beginning of the convergence stage, the EI captured the window of opportunity for operational-level managers. The operational-level managers appeared to be the most important change agents, as they were responsible for all FA processes. The tight project timetable proposed by the corporate-level managers set the pace for the development of new digitalized FA processes.

The aim was to encourage team members to think about FA processes and costs. By combining the team members from the two different organizations and countries into a cross-functional team, the corporate-level managers also aimed at increasing trust in the alliance, which can be seen as an SI:

> The (goodwill) trust between the parties should increase if we make them work more together. The resistance of our accounting manager/OC-sub might also decrease when she meets the others [accounting specialists]. (BSM/OC)

The accounting manager/OC-sub was responsible for the in-depth analysis and redesign of the extant FA processes, as well as for the verification of the service specifications and clarification of responsibilities and she also participated in the implementation of the roadmap. This responsibility and cooperation with the service manager/SP increased her confidence in the FAO transition process and helped her find her position as a change agent. The operational managers of both organizations seemed to share the same social time as a group. Also, it seemed to reduce the change-hindering influence of different organizational cultures.

During the convergence stage, complexities arose due to legal, cultural and institutional aspects. It was necessary to adapt the digitalized processes to international accounting regulations and integrate them into the ERP, which had been acquired by a subsidiary. The controller/OC-sub and the service manager/SP at the operational management level checked the regulations several times. Once the details of the local legislation had been worked out, it became clear that the HR processes could only be partly digitalized. A closer look at the processes showed that, at times, the organizational cultures clashed. However, the cross-functional team collaborated and communicated on a weekly basis to overcome these challenges. Through this collaboration, the team members also became acquainted with one another and the team members became more positive about the new software and new ways of doing things.

The controller/OC-sub, together with the service manager/SP, analyzed the process flow charts attached to the service contract to ensure compliance with accounting legislation at the takeover. These issues, relating to the adoption of the outsourced FA processes and their integration into the new ERP system, were discussed in detail between the operational-level managers of the SP and the OC. The joint development of future processes created new, functional social relationships at the operational level. It was observed that managers at the operational level called or e-mailed each other almost daily, forming a trusting, collaborative environment. Even though the analysis of the working processes was the duty of the

organizational-level managers, the development was closely monitored by the steering group:

> We still have to check all the processes in detail and all possible data risks [disappearance] to ensure the data transfer within the systems and between the two countries. (COO/OC)

While there were many FA processes and subprocesses to be analyzed, we briefly describe some of the thorniest issues, many of which arose because of the digitalization and convergence initiatives. An intensive collaboration with the bank of the group was undertaken:

> We need to configure automatic payment batches in a format specific to the country of the OC and ensure bank statements in digital format. (Service manager/SP)

Various challenges and risks were discussed. The responsibilities of the SP and the subsidiary were defined for the purchase invoice process:

> How do we make payments from the ledger, like salaries, taxes, repayment of the loans? They must go through an approval procedure. (BSM/OC)

COO/SP and BSM/OC identified problems in the payroll process and time-tracking software, which had been planned to operate in digital format. The legislation on payroll differed considerably between the two countries. The payroll process was discussed in operational and strategic-level meetings during the outsourcing process, and it was also the primary focus during both training periods:

> It will be a challenge. We shall have to operate with two totally different payroll software applications, as labor legislation and collective agreements are very different between the countries. (COO/SP)

Toward the end of the convergence stage, CIs were used to analyze the data and transaction volumes in each FA process. Although the service contracts at the level of general agreement had been signed previously, more detailed price lists were negotiated and agreed upon toward the end of this stage. The CI and corporate management involvement settled some specific regulatory concerns, such as cross-border data transfer and data security issues. The integration of several ICT applications was challenging, and the ICT team had to ascertain that the data flow remained correct during the data transfers to different institutions and countries.

We identified a combination of CIs, EIs and SIs used at this stage, generating beneficial outcomes. The CIs were used by the CFO/OC and the BSM/OC, and the EIs by the operational-level managers of both parties. The detailed analysis of all digitalized FA processes made it easier for the corporate-level managers to follow the process. The time concept was quantitative time, but it was paced to the logic of the work processes and individuals' social (qualitative) time. Socializing interventions created a trusting environment for working together:

> It is easy to discuss everything in the [international, cross-functional] team. Quite often we together manage to find an acceptable solution to challenging issues. (Controller/OC-sub)

4.5 Controlling the outsourcing transition process: control stage

The official steering group meetings began in November 2008 and ended in January 2009. The aim was to safeguard the quality of and govern the FAO transition process. It was

decided that the BSM/OC, together with the service manager/SP, should coordinate the FAO implementation and the process was followed up by the steering group:

> The BSM will coordinate the implementation of the new AIS with the service manager and your [SP] accounting team. All digitalized work processes have to be tested together with your ICT specialists and the cross-functional international team of accounting specialists [SP and OC]. The progress will be followed up by the steering group every month. (CFO/OC)

> We should have these steering group meetings more often to ensure we have a clear picture of the stage of the whole transition process in both countries and at both levels. (CFO/OC)

In one of its meetings, the steering group interfered in the payroll process by redesigning it:

> The payroll process needs to be clarified again at the operational management level, so that each party knows exactly what actions to take. (Minutes of the steering group)

Through the steering group, the CFO/OC had access to quite detailed process specifications. The steering group also planned a retraining session for the operational-level managers of the collaborating organizations:

> The steering group has to focus on the retraining of the FAO implementation and some special entries, too. (CFO/OC)

This retraining (TI) was more successful than the first one, as it achieved a balance in terms of pacing the change. The corporate management/OC saw the need to plan and manage the ICT changes. A rough ICT project plan for the implementation was drawn up to create a common understanding of the whole FAO transition process. The CFO/OC seemed to be dubious about the use of the same software in both countries:

> There is a possible risk of the remote use of the latest accounting software versions. The technical implementation works, but can they use it abroad? (CFO/OC)

The ICT project plan had the characteristics of an EI, being an analysis of FA-related ICT processes, but also of a TI, as it included the planning of the retraining session. The purpose of the TI was to teach the new work processes, thereby influencing the basic beliefs and values of the OC's operational-level managers to accept the new ways of working. It included guided learning about key processes through hands-on use and analysis of each FA process. As the time concept included the individuals' inner time, the patience of the SP's change agents at the operational level and avoiding causing distress by rushing through the training sessions were essential:

> We need to wait so that the accounting manager/OC-sub and controller/OC-sub have time to internalize all this. (Service manager/SP)

The ability of internal trainers to use TIs appeared to be better than that of the external consultants. We found that CIs were used by the steering group and supplemented by EIs and TIs. In particular, at the corporate management level, the steering group meetings also included a TI. The TI, in the form of retraining, is regarded as an important intervention to pace the change. The TI related to retraining was well-timed and strengthened by the more demanding EIs of both organizations. The meetings at the operational level had the characteristics of an EI, as they focused on the design of the new digitalized FA processes. Moreover, the analysis and approval of the payroll by the CFO/OC were interpreted as an EI. Finally, the issues with the accounting manager/OC-sub being too "unimaginative to dream up anything better" (Huy, 2001b, p. 73) were tackled at the corporate level of the OC by informing the SP.

During the control stage, the steering group meetings and CIs used quantitative time with tight scheduling and checklists on the status of the transition process. However, EIs and especially TIs and SIs during the retraining session slowed down the accelerated change process and indicated qualitative inner and social time. The way the interventions were (or were not) combined seems to have depended on both the characteristics of the intervention type and the disposition of the change agent, whose preferences sometimes evolved over time. Furthermore, although the timing of these interventions differed, in combination, they reinforced one another.

4.6 After the transition

Timewise, the employment was executed as planned. Thus, the transition time met the preset project time limit. The corporate-level monthly reporting was, however, not ready at the end of January 2009:

> All accounting information does not yet flow in a digital format into the financial statements as in my dream. (CFO/OC)

When evaluating the completed FAO transition process, most of the preset plans appeared to have been realized, the outcomes achieved and the total costs kept within the approved budget. However, there were some issues that could have been designed and managed better, as verified by the final project report:

> Altogether, this project has been successful, even if some issues of the FAO transition process could have been dealt with otherwise, as follows:

- The scope of the offer should have been defined in more detail at the beginning.
- The integration between software applications should have been checked more carefully.
- Better integration of the ERP and FA software implementations could have facilitated the transition.
- The second training with both the SP (operational level) and the client (operational level) staff should have been held earlier.

From a longer-term perspective, the FAO transition seems to have been successful, according to the interview conducted one year after the transition:

> The FAO worked well. Now, the subsidiary is an efficient and productive unit from which I have received good feedback. It has advanced a lot. (BSM/OC)

From the above quotation, we conclude that the FAO service worked well, and the OC was satisfied with its quality.

5. Discussion

The FA transition process includes the integration of activity structures and the development of a collaborative atmosphere. Such changes are controlled through the implementation of CI, EI, TI and SI mechanisms (Huy, 2001a). This study shows, from a process acceleration perspective, the challenges and the success of balancing the rhythm of change through timing, pacing, sequencing and combining the management interventions. This case study also illustrates how different interventions work at different organizational levels, thus extending the existing IOC literature with the time and temporal aspects of the planned change (FAO).

At the beginning (contact stage) of a large-scale and complex change such as FAO, CI is important to quickly establish an organizations-wide structure for the outsourcing transition, both at corporate and operational management levels (Huy, 2001a). Consistent with previous research (Agndal and Nilsson, 2019; Chenhall and Euske, 2007; Huy, 2001a), we find that CIs initiated the beginning of the planned extensive change. The CIs, comparable with formal IOC controls, were directly chosen and implemented (Dekker *et al.*, 2019) to accelerate the FAO transition process and quickly establish structures for cooperation, but had a limited and rather negative impact on the relationship atmosphere. We noted, consistent with Huy (2001a), that pure CIs created resistance during the subsequent stages of the FAO transition process. Trust between collaborating parties develops in a gradual way (Dyer and Singh, 1998) and calls for informal control (Dekker, 2004). Thus, relying on Huy (2001a), we suggest that also TIs and SIs would be appropriate during the contact stage to better adapt to the different pacing of the change. Furthermore, EIs are necessary at the operational management level for the business process reengineering and rethinking the organization of work (Huy, 2001a).

At the contract stage, management interventions at both management levels and related to the CI included negotiations and the signing of contracts, as well as other contract-related issues, such as pricing and budgeting. Management interventions that could be categorized as TIs and SIs included joint learning and partnership development. The timing of the CI and the pacing of the FAO seemed effective, thanks to the SP's experience but also the involvement of the operational-level managers of both organizations in the interventions. The sequencing of the TI (GoLive roadmap) after the CI is interpreted as an attempt to help managers develop appropriate mental decision models for the upcoming new working environment, but it failed. Accelerating changes in beliefs beyond the pace at which a TI can catch up with a faster CI was counterproductive to the FAO transition process, which supports the findings of Agndal and Nilsson (2019). We maintain that TIs and SIs are related to qualitative inner and social time, and the management of time aspects is necessary to pace the change. To be successful, the operational-level managers probably should have been integrated better into the process from the start, as Huy (2001b) and Dekker *et al.* (2019) argue. Further, EIs would have better integrated the operational-level managers into the FAO transition process through formal control in the form of digitalized FA process development and quality management issues (Chenhall and Euske, 2007; Huy, 2001a). Besides formal control (CIs and EIs), we suggest also using SIs to strengthen trust between the parties and TIs to enhance joint learning of the FA processes. Regarding informal control, the previous literature emphasizes its relevance from the beginning of the change process, as relational controls are built step by step during repeated exchange (e.g. Dekker, 2004; Dekker *et al.*, 2019; Langfield-Smith and Smith, 2003).

At the convergence stage, the management interventions related to the CI included the formulation of the processes and development teams, data analysis and clarification of expected outcomes. At the operational level, the EI related to the detailed development of the future FA processes and the SI to the building of trust between the collaborating parties are emphasized. To manage the pace of the change effectively, interventions were combined and used in sequence. For example, the EI was able to match and align with the tight time constraints set by the CI. This is consistent with Huy (2001a), who has argued that a combination of CI and EI would require that the EI can keep up with the rapid pacing of the CI. Huy (2001a) maintains that some intervention mechanisms would be better used in a specific order or so that one intervention type is dependent on another preceding intervention type. We find, for example, that the SI facilitated the building of trusting relations between the individuals, which supported the technological change as well as performance as people got to know each other. This confirms the results of Vélez *et al.* (2008) and Free (2008). Without the CFO's strong CI, the SI of the operational-level

managers might have been used earlier in the transition process, promoting commitment to the change among the accountants and trust in the change agents earlier. Since interorganizational relationships evolve gradually (e.g. García-Canal *et al.*, 2002), an earlier involvement of operational-level managers in the change process would likely have supported the building of trusting relationships from the beginning of the IOR. As in previous studies (Mahama, 2006), one of the key purposes of socialization processes in IOC is to increase or maintain mutual trust. Further, there are risks of entering new activity models before the atmosphere is ready (Agndal and Nilsson, 2019; Dyer and Singh, 1998). In the face of rapid technological innovation, such as the one in our case, the shift in the relationships toward closer, trust-based relations is essential for success (Free, 2008). Furthermore, the significant role of the operational-level managers in an accelerated planned change as "the collaborators at the intersections between organizations" (Dekker *et al.*, 2019) is highlighted also in this case study. Operational-level managers are required to "spread the word and get people on board because they usually have the best social networks in the company" (Huy, 2001b). The effective integration of operational-level managers through informal control (EI and SI) may help in keeping up with new and rapid regulations and standards as well as technology developments in the FAO context (Faituša *et al.*, 2020). Highlighting the role of the operational-level managers may also help other kinds of organizational changes in both the interorganizational and intraorganizational contexts. Moreover, the conception of time seemed to be better shared among the operational-level managers in this case study. Although some combinations failed due to misfit or timing challenges, we recommend using multiple interventions to promote change at this stage, which is an important development step toward well-functioning FAO processes. Furthermore, it is important to involve both operational- and corporate-management levels in the change. Thus, we maintain that the employment of only CIs and EIs during the transition process cannot change the beliefs and attitudes of individuals involved in the change or the organizational culture or social relationships (e.g. Chenhall and Euske, 2007). Furthermore, at the operational management level, it is essential to decelerate the pace of CI with EI, TI and SI to guarantee the quality of the outsourced processes.

At the control stage, the management interventions related to the CI included steering group meetings, the monitoring of the FAO transition process, the establishment of long-term commitment, responsibility clarifications and the creation of the formal structure for the future ongoing service. In addition to CIs, the steering group meetings used EIs and TIs at the corporate level of both organizations. Different intervention types were successfully sequenced and combined during this stage, likely in part because of the existing trust formed in the previous stage. Further, the managers' individual pace set the pace for their adaption to and acceptance of the change. This was evident when the CIs, EIs and TIs required slower pacing for operational managers to adapt to changes in accordance with their own dispositions. Consistent with Huy (2001a), we observed that, toward the end of the transition process, operational-level managers, especially the accounting manager/OC-sub, had adopted new conceptual models and had accepted the accounting changes. However, this gradual pacing seemed to be a challenge at the corporate management level. The importance of operational-level managers was again evident. For example, a combination of an EI and a CI succeeded only when the CFO/OC and the BSM/OC were involved in the ICT project planning and the controller/OC-sub focused on the EI. This implies that the effectiveness of the combined interventions may depend on the management level. As at the previous stage, also here we recommend using interventions in combination or at least in sequence. Furthermore, slower pacing may help individuals to adapt to the rhythm of change. If multiple intervention types are used simultaneously (meaning they begin at the same time) at the operational management level, this may align possible differences in the

predispositions of individuals toward the change. While the TI was considered a success, we propose a timelier employment (i.e. earlier) to create a trusting environment between the individuals involved. Another option would be using continuous moderate pacing of the TI to create a positive atmosphere.

In summary, the successful and timely FAO transition in our case company was considered an indication of the successful pacing of the change. Based on our findings, we provide a holistic and contextualized description of how to manage an effective FAO transition project. We have considered the challenges and temporal misfits of our case. As an outcome of our analysis of each stage, we make proposals for managing the FAO transition process in an international context. The proposed management interventions differ from those described in the case company and are presented in Table 3 (proposed management interventions for time and temporal control of a FAO transition process).

Moreover, to manage planned organizational change over time, temporally capable change agents should have the ability to coordinate various intervention types, such as pure sequencing, pure combining or various combinations in sequence (Huy (2001a). We find that to be successful, the FAO transition management calls for temporally capable change agents who are "on the alert to shifting conditions" both within and between the organizations, use a variety of management interventions when and if needed and steer the organization to the final objective of planned organizational change (Huy, 2001a, p. 613). They should move at a patient pace and not try to rush the change (Huy, 2001a). At the beginning of the transition process, the CFO and the BSM acted as change agents from the OC's side and the COO and the service manager acted as external consultants. Operational-level managers of the OC began as change agents during the convergence stage and succeeded in balancing the quick pace desired by the corporate-level managers by using EI.

6. Conclusions

In this study, we explored how the time and temporal aspects of an FAO transition can be controlled in an international context by drawing on Huy's (2001a) ideal intervention types. The FAO transition to an international SP involves significant changes in organizational elements, such as formal structures, work processes, beliefs and social relationships. We identified four stages in the FAO transition process (contact, contract, convergence and control) and specified the appropriate pacing, timing, sequencing and combining of key management intervention types. Furthermore, we argued that the effectiveness of the used interventions depends on the manager's ability to combine and sequence the interventions. Moreover, we indicated that the successful implementation of an FAO depends on the operational-level managers' involvement in the change process. We concur with Agndal and Nilsson (2019) that a planned FAO transition process implies that change may accelerate beyond the pace at which interorganizational relationships may naturally evolve because this kind of transition process "normally" takes at least one year.

The contribution of our study to the IOC literature is threefold. First, drawing on Huy's (2001a) ideal intervention types, we are able to extend IOC-related research with the time and temporal aspects of a planned, accelerated organizational change (FAO). The ability to manage the temporal dimensions of change plays an important role in transforming interorganizational relationships. The results of this research indicate that the time and temporal aspects of a planned organizational change are essential in the FAO context and should be considered at the beginning of the process because the individuals involved in the change have their own inner time concepts and managers differ in their capacity to adjust their interventions to the content of change. This research adds to the existing IOC literature

Table 3. Proposed management interventions for time and temporal control of the FAO transition process

Intervention mode	CI	EI	TI	SI
Time perspective	Near-term	Medium-term	Moderately long-term	Long-term
Pacing	Rapid	Moderately fast	Gradual	Gradual
Contact stage	Selection of supplier (outsourcing company)	Careful analysis of the current and future FA processes (operational level, both organizations)	Joint learning of FA processes (both levels, both organizations)	Trust and partnership development (both levels, both organizations)
	Strategic development team (corporate level, both organizations)			
Contract stage	Service contracts (both levels, both organizations) Ex ante clarification of outcomes (corporate level, outsourcing company)	Ex ante clarification of the desired processes and technology (operational level, both organizations)	Joint learning of the FA processes (both levels, both organizations)	Trust and partnership development (both levels, both organizations)
Convergence stage	Cross-functional team Data analysis Outcome clarification (corporate level, both organizations)	Detailed development of future FA processes (operational level, both organizations)		Development of trust between collaborating parties (operational level, both organizations)
Control stage	Steering group meetings Long-term commitment Monitoring process Formal structure for the ongoing service (corporate level, both organizations)			
	Operational meetings (operational level, both organizations)	Analysis of working processes (operational level, both organizations)	Reeducation (both levels, both organizations)	Empowering trust between collaborating parties (operational level, both organizations)
	Responsibility clarifications (both levels, both organizations)	Clarification of the work processes concerning the ongoing service (operational level, both organizations)		

Source: Created by authors

by focusing on how organizations' transfer between development stages is accelerated as well as managed by considering the time and temporal aspects of a planned change.

Second, this study adds to IOC research by applying Huy's (2001a) types of management interventions at both the corporate and operational levels of the OC and the SP. Previous IOC research has emphasized an organizational-level analysis and organizational control mechanisms (Dekker *et al.*, 2019). The focus on both the corporate and operational levels facilitates the recognition of the role of operational-level managers in a planned change (FAO). Also, analyzing the change through the operational-level managers allows us to understand better the building of a trusting environment between the two collaborating organizations. Our analysis shows that the operational-level managers' integration into the planned change is essential for the successful transition process, especially at the convergence stage. If the operational level of management is not committed to the change or does not have the required temporal capabilities, the change might be unsuccessful. While management intervention types vary depending on the management level, we did not identify any major conflicts of interest between the corporate and operational management levels besides the resistance of the accounting manager/OC-sub. Corporate-level managers seem to have a better ability to understand the role of interventions in pacing the change. However, the operational-level managers play a key role in coping with all workers with differing inner time and possibly distrust and negative attitudes to the change, usually planned by the corporate-level managers. This finding could be useful for controlling of almost all kinds of large-scale interorganizational changes. We conclude that considering interventions at different management levels is the key to a successful outsourcing change process.

Third, as a result of our analysis, we identified a fourth stage in the outsourcing transition process, convergence, in addition to the three previously identified stages (Nicholson *et al.*, 2006; van der Meer-Kooistra and Vosselman, 2000; Nooteboom, 1993). This new stage highlights the role of operational-level managers in a planned organizational change. From a practical management point of view, the operational-level managers' involvement (at the convergence stage) may be relevant in increasing the rate of success concerning FAO and also other managerial implementation processes. The integration of different level managers into the planned change at the beginning seems to help large-scale changes. This offers an interesting future research avenue.

There are some limitations to this study. First, the framework of Huy (2001a) can be viewed as limited, as it focuses on planned change and deals with the domain of decision rationality (Lukka and Partanen, 2014). Thus, future studies could align other theories with Huy, as did Lukka and Partanen (2014). Second, although we aimed to understand how the time and temporal aspects of an FAO transition process are managed, we acknowledge that even more complex situations than those we identified might exist. It could be, for instance, that another combination of interventions or different sequencing of the interventions would better support the planned change. Such a case could occur in a different cultural environment, serving as a useful basis for further research. Third, the research material was collected over ten years ago. Due to technological developments and new accounting arrangements, the context studied may be somewhat different today. We encourage studies investigating the role of middle management in planned organizational change, as previous studies (e.g. Huy, 2001b) suggested tension between operational and corporate management levels. Such a tension could represent a further complication in an FAO transition process. Finally, the current study focused on interventions (Huy, 2001a) that support a planned change. Further case studies could focus on the time and temporal aspects of control during, for example, an ongoing FAO service or how managers' temporal capability affects the management or turn-around of an unsuccessful FAO.

Notes

1. Agndal and Nilsson (2019), using the concept of entrainment, explained it as a strategic choice to accelerate, decelerate, postpone or advance change activities to align with the abilities of an organization to undergo change. Management of the time and temporal dimension of change consists of the timing, pacing, sequencing and combining of management interventions.
2. The phenomenon studied (FAO) is relevant also today (Faituša *et al.*, 2020). The challenges in offshoring FAO, including the integration into enterprise resources planning system, digitalization of all accounting processes and different payroll legislations in different countries, are very similar (Nicholson *et al.*, 2006).

References

Agndal, H. and Nilsson, U. (2019), "The fast and the furious: the role of entrainment in controlled inter-organizational relationship transformation", *Management Accounting Research*, Vol. 43, pp. 15-28, doi: 10.1016/j.mar.2018.09.001.

Ahrens, T. and Chapman, C.S. (2006), "Doing qualitative field research in management accounting: positioning data to contribute to theory", *Accounting, Organization and Society*, Vol. 31 No. 8, pp. 819-841.

Anderson, S.W., Christ, M.H., Dekker, H.C. and Sedatole, K.L. (2015), "Do extant management control frameworks fit the alliance setting? A descriptive analysis", *Industrial Marketing Management*, Vol. 46, pp. 36-53, doi: 10.1016/j.indmarman.2015.01.004.

Anguelov, L.G. (2016), "Outsourcing oversight and ARRA 2009: what factors explain state agencies' decision to pursue collaborative monitoring?", *Review of Policy Research*, Vol. 33 No. 2, pp. 160-177, doi: https://doi.org/10.1111/ropr.12163.

Beer, M. and Nohria, N. (2000), "Cracking the code of change", *Harvard Business Review*, Vol. 78 No. 1, pp. 133-145.

Chenhall, R.H. and Euske, K.J. (2007), "The role of management control systems in planned organizational change: an analysis of two organizations", *Accounting, Organization and Society*, Vol. 32 Nos 7/8, pp. 601-637, doi: 10.1016/j.aos.2006.09.007.

Das, T.K. and Teng, B.-S. (2001), "Trust, control, and risk in strategic alliances: an integrated framework", *Organization Studies*, Vol. 22 No. 2, pp. 251-283, doi: 10.1177/0170840601222004.

Dekker, H.C. (2004), "Control of inter-organizational relationships: evidence on appropriation concerns and coordination requirements", *Accounting, Organization and Society*, Vol. 29 No. 1, pp. 27-49, doi: 10.1016/S0361-3682(02)00056-9.

Dekker, H.C. (2008), "Partner selection and governance design in interfirm relationships", *Accounting, Organization and Society*, Vol. 33 Nos 7/8, pp. 915-941, doi: 10.1016/j.aos.2007.02.002.

Dekker, H.C. (2016), "On the boundaries between intrafirm and interfirm management accounting research", *Management Accounting Research*, Vol. 31, pp. 86-99.

Dekker, H.C., Kawai, T. and Sakaguchi, J. (2018), "Contracting abroad: a comparative analysis of contract design in host and home country outsourcing relations", *Management Accounting Research*, Vol. 40, pp. 47-61, doi: 10.1016/j.mar.2017.09.003.

Dekker, H.C., Sakaguchi, J. and Kawai, T. (2013), "Beyond the contract: managing risk in supply chain relations", *Management Accounting Research*, Vol. 24 No. 2, pp. 122-139, doi: 10.1016/j.mar.2013.04.010.

Dekker, H., Donada, C., Mothe, C. and Nogatchewsky, G. (2019), "Boundary spanner relational behavior and inter-organizational control in supply chain relationships", *Industrial Marketing Management*, Vol. 77, pp. 143-154, doi: 10.1016/j.indmarman.2018.11.010.

Dyer, J.H. and Singh, H. (1998), "The relational view: cooperative strategy and sources of interorganizational competitive advantage", *Academy of Management Review*, Vol. 23 No. 4, pp. 660-679, doi: 10.5465/amr.1998.1255632.

Faituša, I., Subačienė, R. and Mačerinskienė, A. (2020), "Challenges of outsourcing accounting in Latvia and Lithuania", *Entrepreneurship and Sustainability Issues*, Vol. 7 No. 4, pp. 2883-2896.

Free, C. (2008), "Walking the talk? Supply chain accounting and trust among UK supermarkets and suppliers", *Accounting, Organizations and Society*, Vol. 33 No. 6, pp. 629-662, doi: 10.1016/j.aos.2007.09.001.

García-Canal, E., Duarte, C.L., Criado, J.R. and Llaneza, A.V. (2002), "Time compression diseconomies in accelerated global alliances", *Management Decision*, Vol. 40 No. 8, pp. 745-754, doi: 10.1108/00251740210437716.

Huy, Q.N. (2001a), "Time, temporal capability, and planned change", *Academy of Management Review*, Vol. 26, pp. 601-623, doi: 10.5465/amr.2001.5393897.

Huy, Q.N. (2001b), "In praise of middle managers", *Harvard Business Review*, Vol. 79, pp. 72-79.

Hyvönen, T., Järvinen, J., Oulasvirta, L. and Pellinen, J. (2012), "Contracting out municipal accounting: the role of institutional entrepreneurship", *Accounting, Auditing and Accountability Journal*, Vol. 25 No. 6, pp. 944-963, doi: 10.1108/09513571211250198.

Håkansson, H. and Lind, J. (2004), "Accounting and network coordination", accounting", *Organization and Society*, Vol. 29 No. 1, pp. 51-72.

Langfield-Smith, K. (2008), "The relations between transactional characteristics, trust and risk in the start-up phase of a collaborative alliance", *Management Accounting Research*, Vol. 19 No. 4, pp. 344-364.

Langfield-Smith, K. and Smith, D. (2003), "Management control systems and trust in outsourcing relationships", *Management Accounting Research*, Vol. 14 No. 3, pp. 281-307, doi: 10.1016/S1044-5005(03)00046-5.

Lepistö, S., Dobroszek, J., Lepistö, L. and Zarzycka, E. (2020), "Controlling outsourced management accounting to build legitimacy", *Qualitative Research in Accounting and Management*, Vol. 17 No. 3, pp. 435-463, doi: 10.1108/QRAM-05-2019-0062.

Lukka, K. and Partanen, V. (2014), "The role of managerial interventions and organizational ideologies in advancing radical change", *Journal of Change Management*, Vol. 14 No. 1, pp. 66-98, doi: 10.1080/14697017.2013.790837.

McGrath, J.E. and Rotchford, N.L. (1983), "Time and behavior in organizations", *Research in Organizational Behavior*, Vol. 5, pp. 57-101.

Maelah, R., Aman, A., Hamzah, N., Amiruddin, R. and Auzair, S.M. (2010), "Accounting outsourcing turnback: process and issues", *Strategic Outsourcing: An International Journal*, Vol. 3 No. 3, pp. 226-245.

Mahama, H. (2006), "Management control systems, cooperation and performance in strategic supply relationships: a survey in the mines", *Management Accounting Research*, Vol. 17 No. 3, pp. 315-339.

Mouritsen, J. and Thrane, S. (2006), "Accounting, network complementarities and the development of inter-organisational relations", accounting", *Organization and Society*, Vol. 31 No. 3, pp. 241-275.

Mouritsen, J., Hansen, A. and Hansen, C.Ø. (2001), "Inter-organizational controls and organizational competencies: episodes around target cost management/functional analysis and open book accounting", *Management Accounting Research*, Vol. 12 No. 2, pp. 221-244, doi: 10.1006/mare.2001.0160.

Nicholson, B. and Aman, A. (2012), "Managing attrition in offshore finance and accounting outsourcing", *Strategic Outsourcing: An International Journal*, Vol. 5 No. 3, pp. 232-247, doi: 10.1108/17538291211291765.

Nicholson, B., Jones, J. and Espenlaub, S. (2006), "Transaction costs and control of outsourced accounting: case evidence from India", *Management Accounting Research*, Vol. 17 No. 3, pp. 238-258, doi: 10.1016/j.mar.2006.05.002.

Nooteboom, B. (1993), "Firm size effects on transaction costs", *Small Business Economics*, Vol. 5 No. 4, pp. 283-295, doi: 10.1007/BF01516249.

Rockmann, K.W. and Vough, H.C. (2023), "Using quotes to present claims: practices for the writing stages of qualitative research", *Organizational Research Methods*, doi: 10.1177/10944281231210558.

Scapens, R.W. (2004), "Doing case study research", in Humphrey, C. and Lee, B. (Eds), *The Real Life Guide to Accounting Research*, Elsevier Science and Technology, Oxford, pp. 257-279.

Speklé, R.F. (2001), "Explaining management control structure variety: a transaction cost economics perspective", *Accounting, Organization and Society*, Vol. 26 Nos 4/5, pp. 419-441, doi: 10.1016/S0361-3682(00)00041-6.

Srikanth, K. and Puranam, P. (2011), "Integrating distributed work: comparing task design, communication, and tacit coordination mechanisms", *Strategic Management Journal*, Vol. 32 No. 8, pp. 849-875, doi: 10.1002/smj.908.

Stouthuysen, K., Van den Abbeele, A., van der Meer-Kooistra, J. and Roodhooft, F. (2019), "Management control design in long-term buyer-supplier relationships: unpacking the learning process", *Management Accounting Research*, Vol. 45, pp. 1-11, doi: 10.1016/j.mar.2019.06.001.

Van de Ven, A. and Poole, M.S. (1995), "Explaining development and change in organizations", *Academy of Management Review*, Vol. 20 No. 3, pp. 510-540, doi: 10.5465/amr.1995.9508080329.

Van der Meer-Kooistra, J. and Vosselman, E.G.J. (2000), "Management control of interfirm transactional relationships: the case of industrial renovation and maintenance", *Accounting, Organization and Society*, Vol. 25 No. 1, pp. 51-77, doi: 10.1016/S0361-3682(99)00021-5.

Varoutsa, E. and Scapens, R.W. (2015), "The governance of inter-organisational relationships during different supply chain maturity phases", *Industrial Marketing Management*, Vol. 46, pp. 68-82, doi: 10.1016/j.indmarman.2015.01.006.

Vélez, M.L., Sánchez, J.M. and Álvarez-Dardet, C. (2008), "Management control systems as inter-organizational trust builders in evolving relationships: evidence from a longitudinal case study", *Accounting, Organizations and Society*, Vol. 33 Nos 7/8, pp. 968-994, doi: 10.1016/j.aos.2008.02.006.

Yin, R.K. (1994), *Case Study Research: Design and Methods*, Sage Publications, Thousand Oaks, CA.

Zeng, W., Lillis, A.M., Grafton, J. and Dekker, H.C. (2022), "The influence of institutional differences on control mechanisms in alliances", *The Accounting Review*, Vol. 97 No. 3, pp. 415-441, doi: 10.2308/TAR-2018-0216.

Further reading

Ezzamel, M., Willmott, H. and Worthington, F. (2004), "Accounting and management–labour relations: the politics of production in the 'factory with a problem", *Accounting, Organization and Society*, Vol. 29 Nos 3/4, pp. 269-302, doi: 10.1016/S0361-3682(03)00014-X.

Krell, E. (2007), *Outsourcing the Finance and Accounting Functions. CIMA, AICPA and CMA*, Management Accounting Guideline, Canada.

Okhuysen, G.A. and Eisenhardt, K.M. (2002), "Integrating knowledge in groups: how formal interventions enable flexibility", *Organization Science*, Vol. 13 No. 4, pp. 370-386, doi: 10.1287/orsc.13.4.370.2947.

Corresponding author

Arja Flinkman can be contacted at: arja.flinkman@esedu.fi