I Hear You: Constructing Common Knowledge Practices in the Context of Organizational Meetings

Purpose: The purpose of this study is to provide a granular description of how organizational members construct common knowledge practices in the context of organizational meetings.

Design/methodology/approach: A longitudinal interpretative case study methodology was employed to collect data from a U.S. based organization involved in an information system implementation project.

Findings: Findings revealed that during meetings common knowledge was constructed through four practices of discernment, compliance, reconstruction, and expedition. Findings also revealed that these four practices were influenced by intervening conditions such as calibration challenges and scenario-sharing tools.

Research limitations/implications: The findings of this study have research implications related to common knowledge construction and co-participation practices in the context of organizational meetings. This study has limitations related to statistical generalizability that have been mitigated through a holistic approach to case study methodology that favors analytical generalizability of research findings.

Practical implications: This study provides managers with recommendations that suggest a more strategic use of meetings as useful organizational contexts that may help construct common knowledge practices and shared understanding.

Originality/value: This study contributes to current theorizations of common knowledge by providing an in-depth understanding of the construction of common knowledge practices in organizations. This study also sheds some light on the strategic role of organizational meetings to manage knowledge in project-based organizational contexts.

Article classification: Research paper.

"If we had to do it the way we had historically done it, it would have taken too long. What would happen is we would ask certain questions of them about business, they would then go to their managers, then go their VPs or executives and it would trickle back. That whole process would take a couple weeks, to get the information we wanted. That was challenging because it was a marathon of meetings that we scheduled. We scheduled them back to back to back. Having everyone in the same room, everyone was listening to the same issues, giving the same answers, and coming up with the same responses." (Paula, Senior Business Analyst)

Introduction

This paper extends current conversations on common knowledge (Dixon, 2000) and proposes four practices contributing to the construction of common knowledge in the context of organizational meetings. In this paper, common knowledge is defined as a form of organizational knowledge related to the internal know-how unique to specific organizational projects that is created through experience (Dixon, 2000) accumulated during organizational meetings (Allen *et al.*, 2015; Lehmann-Willenbrock *et al.*, 2018), and that becomes publicly known to the members of the organization (Desouza and Awazu, 2006).

Studies on common knowledge in organizational settings (e.g., Dixon, 2000; Desouza and Awazu, 2006; Nishinaka *et al.,* 2015) have shown how common knowledge contributes to the emergence of a common frame of reference (Desouza and Awazu, 2006) and collective sense making (Weick, 1995); and have pointed out the capacity of common knowledge to strength collaboration (Edwards, 2012; see also Shteynberg *et al.*, 2020), and support knowledge flows and innovation (Simonin, 1999; Cool *et al.*, 1997). Research work has also found that the lack of common knowledge in organizations can hamper project executions and ultimately can prevent a competitive edge (Prieto-Pastor *et al.,* 2018; Dixon, 2000). Indeed "without some form of common knowledge, the essence of the term 'organization' will be lost" (Desouza and Awazu, 2006, p. 36).

Previous studies related to common knowledge can be found in the literature on organizational knowledge (Blackler, 1995; Mariano, 2018), knowledge creation (Nonaka, 1994), knowledge transfer (Reagan and McEvily, 2003; Argote and Ingram, 2000; Inkpen and Tsang, 2005; Easterby-Smith *et al.,* 2008; Krylova *et al*., 2016; Senivongse et al., 2020), and knowledge conversion (Klein & Rendsvig, 2019). Research in the organizational knowledge literature has taken either a commodity or a process perspective. The first perspective has treated organizational knowledge as an objectifiable and transferable commodity (Hartmann and Dorée, 2015) that can be created and transferred in the form of a manual, a shared document, a wiki page, or an information technology repository existing in a textual format that privileges explicit over tacit knowledge (Franco and Mariano, 2007). However, scholars have soon realized that a greater attention should be paid to the equally important (and harder-to-transfer) context-specific knowledge, and to its related social practices allowing knowledge creation and transfer within organizational contexts. This alternative understanding has contributed to the emergence of a process prospective that conceptualizes knowledge as an inseparable entity from its related human activities (Gherardi, 2009; Nicolini, 2011). Common knowledge studies can be placed within this second perspective on organizational knowledge.

As a form of organizational knowledge, common knowledge is unique enough to be situated within a given organizational context, and not to be transferred or shared equally. Understanding how common knowledge is constructed through organizational practice, especially in distributed contexts such as those at the intersections of different practices like different departments, backgrounds, or expertise (Edwards, 2012) becomes critical. Nowadays, this critical aspect appears to become even more relevant in lights of the unexpected and unprecedented changes that many organizations worldwide had to face to reorganize their

workload in remote forms, relying more evenly on online meetings. Indeed meetings or online meetings, debriefings or after action reflections offer the relevant contexts for explorations of the construction of common knowledge practices. However, current studies on organizational meetings (e.g., Allen *et al.*, 2015; Lübstorf and Lehmann-Willenbrock, 2020) have not sufficiently discussed the role of common knowledge in such distributed settings nor have they yet provided an in-depth understanding of how common knowledge is constructed. Indeed, "meeting research is still a young science" (Lehmann-Willenbrock *et al.*, 2018, p. 32). Undeniably, empirical investigations exploring these contexts are relevant, and could potentially add to a refined understanding of the practices that contribute to the construction of common knowledge during organizational meetings. This line of inquiry thus seems to be worth exploring. This is the purpose of this paper.

This paper aims to fill in this research gap, and contribute to current conversations related to common knowledge (Dixon, 2000; Desouza and Awazu, 2006), providing a means to better understand the practices associated to the construction of common knowledge in the context of organizational meetings (Lehmann-Willenbrock *et al.*, 2018; Allen *et al.*, 2015). This paper answers the following research question: "How do organizational members construct common knowledge practices in the context of organizational meetings?".

This paper draws on data collected from a U.S. based organization that faced a number of challenges related to an information system project that required the use of several meetings as a way to construct common knowledge practices to solve specific tasks and/or emerged problems. Findings revealed that, during such meetings, organizational members constructed four distinct but related common knowledge practices of discernment, compliance, reconstruction, and expedition, and that these four practices were shaped by intervening conditions such as

calibration challenges, and tools such as scenario-sharing. These findings provide a means to better understand the construction of common knowledge practices in organizational contexts such as meetings, and have implications for theory, managerial practice, and future research directions.

This paper is organized as follows. First, it provides the literature used to understand data. Second, it introduces the case and provides methodological details. It presents findings, discusses related implications for theory and practices, and suggests future research directions. It closes with conclusions.

Literature Review

This section reviews contributions on organizational knowledge and common knowledge in distributed contexts, and studies on the role of organizational meetings, providing the theoretical background for this research study on how organizational members construct common knowledge in the context of organizational meetings, especially in distributed contexts.

Literature on Organizational Knowledge and Common Knowledge

Extant literature on common knowledge has been produced in the academic as well as practitioner literature (Paternotte, 2017; Angeletos and Chen, 2018). Much of this literature contributes to organizational knowledge (Blackler, 1995; Mariano, 2018), knowledge creation (Nonaka, 1994) or knowledge transfer conversations (Reagan and McEvily, 2003; Argote and Ingram, 2000; Inkpen and Tsang, 2005; Senivongse et al., 2020), and proposes ways to generate a form of organizational knowledge related to internal know-how specific to organizational projects that is accumulated through experience (Dixon, 2000) during organizational meetings

(Allen *et al.*, 2015), and that can become publicly known to the members of the organizations (Desouza and Awazu, 2006).

In the knowledge management literature, organizational knowledge is mainly defined in the following two ways: Commodity and process. As a commodity, organizational knowledge is conceptualized as objectifiable and transferable knowledge (Hartmann and Dorée, 2015). Examples of existing investigations include research on organizational memory retention structures (Walsh and Ungson, 1991; for recent reviews see Foroughi *et al.*, 2020; Coraiola and Murcia, 2020; Decker *et al.*, 2020); studies of the contribution of artifacts such as manuals and shared electronic repositories to knowledge transfer (Franco and Mariano, 2007); studies on knowledge integration challenges (Alavi and Tiwana, 2002; Postrel, 2002); and studies of knowledge retrieval and transfer processes (Senivongse et al., 2020; Mariano and Casey, 2006; Darr *et al.*, 1995; Argote, 2013). These studies consider knowledge as a commodity that can be moved, because it is abstracted to its context, and focus on those transfer impediments that prevent knowledge to reach the entire organizational community.

As a process, alternative studies on organizational knowledge has focused the attention on the organizational context, showing how it can represent a powerful predictor of how knowledge is created, travels, and becomes collectively known and understood by the members of an organization (Langley *et al.*, 2013; Whittington, 1996, 2003, 2006; Gherardi, 2009). According to this alternative view, if knowledge is highly concentrated in definite areas of specialization that confine possessed knowledge in definite domains, to move from this specialized and concentrated knowledge to a collective form of knowledge, individuals need to interact while accomplishing organizational tasks in a given context that create opportunities for passing their know-how to the rest of coworkers.

Much of this process literature has also contributed to common knowledge conversations, investigating, among others, the role of shared intentions as a condition of joint actions contributing to common knowledge (Blomberg, 2016; see also Lederman, 2018; on collective intentionality see Jankovic and Ludvig, 2018); or has highlighted the contribution of shared environments (Barwise, 2016), and culture and coordination mechanisms to common knowledge construction (Chwe, 2013). The present research study contributes to this process literature, providing insights related to how common knowledge is constructed through practices in distributed contexts where geographical, social, professional, cultural and political boundaries are constantly presented such as organizational meetings (for a description of distributedness dimensions see Evaristo *et al.*, 2004).

Common knowledge in distributed contexts

Early studies on common knowledge in distributed contexts have been conducted in a variety of research settings, including educational, medical, industrial, and organizational settings. For instance, the study by Edwards and Mercer (1987) has showed how common knowledge contributes to the success of classroom education (see also the study by Huang and Chin, 2018 on collective teaching). The study of medical teams by Middleton (1996) has shown that common knowledge offers the opportunity to reach rapid decision-making. The study by Carlile (2004) in the semi-conductor industry has proved that common knowledge helps link sub-units, allowing the intersections of different practices. Similarly, the study of Edward (2012) on inter-professional collaborations has shown how common knowledge contributes to take forward service integration practices. In organizational settings, the study by Reagan and McEvily (2003) has focused on social cohesion and network range, showing how ease of knowledge transfer has a positive influence on common knowledge formation. The study by

Shteynberg et al. (2020) has pointed out the role of collective attention in facilitating communication, remembering, and capacity to solve problems in group, contributing to common knowledge formation across group members. And the study by Wasko and Faraj (2005) has shown that enhanced reputation, possessed experience, and structural embeddedness in networks make individuals share their knowledge with the other members of the network of practice, contributing to the construction of a form commonly known knowledge.

These last mentioned studies have addressed the importance of common knowledge in organizational distributed contexts. However, these last mentioned studies have not yet provided a means to better understand the practices associated to common knowledge, especially those practices that emerge in the context of organizational meetings that, at today, still remain "a young science" (Lehmann-Willenbrock *et al.*, 2018, p. 32). Understanding how meetings contribute to the construction of common knowledge through emerged practices developed by organizational members becomes crucial. This appears to be especially critical nowadays that organizations need to overcome the challenges of distributed contexts (Halpern and Moses, 1990), interdisciplinary work, or remote work at the intersections of different practices such as different units, departments, backgrounds, or expertise (Edwards, 2012).

The next section reviews the current literature on organizational meetings, and adds to the theoretical background of the present research study.

Literature on Organizational Meetings

Organizational practices such as meetings, after action reflections, or debriefings offer unique opportunities to better understand commonly constructed knowledge in organizational contexts (e.g., Lehmann-Willenbrock *et al.*, 2018; Allen *et al.*, 2016). Meetings, in particular,

have been conceptualized as social system stabilizers (Peck *et al.*, 2004), forums for coordination (Boden, 2014), and have been proposed to contribute to the shaping of organizational strategy (Jarzabkowski and Seidl, 2008). Therefore, the study of meetings offers a rich opportunity to better understand how common knowledge practices are constructed by organizational members. During meetings individuals exercise unique efforts to imagine events or possible course of actions, and develop a common sense of understanding, creating, at the same time, opportunities for internal collective know-how production and dissemination.

Much of current literature on organizational meetings has focused on the pre-, within-, and post-meeting success factors, investigating aspects related to preparation, facilitation, conclusion, and documentation of meetings (Lehmann-Willenbrock *et al.*, 2018; Allen *et al.*, 2015). With regards to internal meetings dynamics, some key success factors that had been identified regarded the creation of a positive climate and mood (Lübstorf and Lehmann-Willenbrock, 2020; Lehmann-Willenbrock and Allen, 2014); the avoidance of complaining cycles (Lehmann-Willenbrock and Kauffeld, 2010) and negativity (Gerpott *et al.*, 2020); and the easing of knowledge sharing and team learning, since research has found that meeting relevance, voice in meetings, and meeting time management related to overall employee engagement, through the psychological conditions of engagement (Allen and Rogelberg, 2013). This organizational meetings literature has also highlighted the importance of inviting participants with relevant expertise to attend meetings (Rogelberg *et al.*, 2006), and has highlighted the relevance of matching participants and meeting content (Allen *et al.*, 2015).

To a lesser extent, this literature on organizational meetings has provided a richer understanding of how individuals construct common knowledge practices, or has it identified factors that may contribute to common knowledge construction. This line of inquiry thus seems

to be worth exploring to enrich current understanding of how common knowledge practices are developed by organizational members, contributing to knowledge dynamics (Mariano and Casey, 2016), and to the science of organizational meetings (Allen *et al.*, 2015).

Methodology

The following sections provide detailed information related to the research context and research design, and specify how the data collection and analysis processes were conducted throughout the research study.

Research Context

The research site of this study was a U.S. based product technology company (named PROD-CYCLE). PROD-CYCLE is a global medium-sized company that has around 6,000 employees and operates in the product life-cycle technologies industry, selling its products mainly to manufacturing firms. PROD-CYCLE wanted to improve its management of sales channels, and decided to introduce a new Partner Relationship Management (PRM) system, which allows the company to incorporate its resellers into its existing database system. The project of implementing this new PRM system was called the TECH project, which allowed the company to have an integrated partner relationship management process that centralized information across various departments including marketing, finance, and sales. The TECH project allows PROD-CYCLE to integrate front-end and back-end work processes; that is, from lead identification to deal registration. The processes include the following: marketing units set up campaigns in the system that result in new leads; sales representatives identify sales leads and then fill in information about the leads in the system; once a lead purchases PROD-CYCLE products, they become a customer; the TECH process is completed once a deal with customers is

closed. The TECH project vision is composed of the following three elements: (1) Develop a streamlined lead management, opportunity registration and order management process and programs; (2) Develop a self-service process to reduce PROD-CYCLE contact points and staff requirements; and (3) Create a seamless partner workflow with a combination of program creation/refinement (Program) with IT Business requirements (Process).

The Project Governance

The TECH project governance is composed of the following four groups: (1) the steering committee (it includes 15-20 senior executives and senior managers from sales and channels, finance operations, IT, and marketing who meet monthly); (2) the business and application working groups (it includes the IT managers, business analysts, offshore developers, and the sales, channel, marketing, legal, and operations administration business group who meet every Tuesday and only selected members attend the meetings); (3) the technical architects (it includes individuals who mostly belong to IT); and (4) the technology delivery teams (it includes individuals distributed in various offshore locations). The steering committee has the highest authority to articulate the strategic direction of the project, define associated processes and system requirements, and prioritize strategic and tactical initiatives. Next, there are business process and application working groups that define and maintain process and system scope, define and document functional requirements, and set priorities, and focus on continuous improvement. The third group is composed of technical architects who act as stewards of the system vision and architecture, translate functional requirements into technical orders and requests, and interact with the offshore delivery team. Lastly, the fourth group is technology delivery teams that develop technical solutions based on requirements and performs unit and system testing.

The TECH project operated based on a global model, established after the decision to offshore technical delivery service was made (see Figure 1).

Insert Figure 1 here

The TECH project case represented the ideal setting to study how common knowledge developed because offered unique opportunities to observe organizational meetings, and to understand how certain practices were constructed with the contribution of organizational members – often geographically located very far apart – who needed to be "on the same page" and thus develop a common form of organizational knowledge.

Research Design

The research design relied on a single longitudinal interpretative case study, which allowed the researchers to become 'insiders' in the organization (Walsham, 2006.) The case study helped the researchers to generate rich descriptive and exploratory insights into the critical issues of the study (Yin, 2002; Lincoln and Guba, 1985; Erlandson *et al.*, 1993), allowing them to collect various sources of qualitative evidence such as meeting records, archival records, direct observations, and interviews. In order to understand the complex nature of organizational practice, ethnographic fieldwork was employed. Ethnographic fieldwork helps immerse in the research setting, and allows researchers to observe subjects of interest and, at times, participate in the activities carried out by those subjects (Klein and Myers, 1999; Agar, 1980; Orr, 1996, Spradley, 1979, 1980; Van Maanen, 1988). Building credibility, the researchers conducted prolonged engagement, persistent observations, and triangulation of data (Erlandson *et al.*, 1993), since triangulation of data can overcome the limitations of certain types of data, such as

interview data, that may be subject to recallability issues and bias (Creswell, 2006). Prolonged engagement was maintained by spending enough time in the organization to understand events in the organization and the organization's culture. The prolonged engagement, for example, helped facilitate the capturing of chronological dialogs that helped provide contexts on how practice of common knowledge construction occurred in organizational meetings, as they happened since "the happening of an organization is, above all, the performance of its constituent actions" (Schatzki, 2006, p. 1866). Also, persistent observations were conducted by attending various types of project-related meetings, such as business-related meetings, steering committee meetings, and projects weekly meetings. The persistent observations of these meetings were important so that the researchers came to be seen as 'native' in the context of the research. The collection of interview data and on-site observations helped data triangulation to elicit the various and divergent constructions of reality (Erlandson *et al.*, 1993; Klein and Myers, 1999).

Data Collection of Longitudinal Data

To collect data, the TECH project was followed closely. Following Pozzebon and Pinsonneault (2005), the longitudinal data were collected by critical events and by regularity, over several data collection phases using different data collection methods, as specified in the following sub-sections.

Collection by critical events. In terms of critical events, three phases connected to two roll-out dates were followed to collect data. During the first roll-out date, a system with limited functionalities only for VARs (Value-Added Resellers) was implemented. The second roll-out date was for U.S. customers and included additional functionalities. The conversations had with project members allowed us to identify these roll-out dates as 'critical' events.

Collection by regularity. In terms of regularity, data were collected consistently from observations of project-related meetings that produced field notes that were incorporated in the data analysis. Attending these meetings was necessary and practical for the researcher to catch-up and observes the implementation efforts in real-time. It was also necessary to triangulate data, since interviews can suffer from recallability, and individuals may remember historical events incorrectly, or their descriptions of events may not be accurate enough when they 'explain' what happened after the event. Therefore, collecting data regularly worked somewhat as a fact-check.

Longitudinal data collection phases. The first phase related to the collection of multiple interviews (n=40) to better understand the organizational background and the project. The initial interviews focused on the historical aspects of the project as background information. Archival documents such as presentations and project-related documents that helped understand the historical context of the project (e.g. how the project began) were also collected.

The following phase of the data collection focused on the Go-Live phase. This second phase was very intense for project participants. Various project-related meetings were regularly attended (e.g. steering committee meetings and weekly meetings for the project team). During this period, multiple interviews with senior executives who had been involved with the related project in the past were conducted. The senior executives included the Chief Marketing Officer (CMO), the Chief Sales Officer (CSO), and the former project champion of the related project who had already left the company several years previously. The purpose of these multiple interviews was to continue to gather information on the historical background of the TECH implementation in the company as well as to get information on the current project implementation. The interviews were conducted immediately after the Go-Live phase.

Data collection methods. Data were collected primarily through interviews, field notes from observations, and archival documents. Interviews (n= 40) with individuals from distinct hierarchical and department levels including top managers (e.g., CIO, SVP), senior managers (e.g., Senior IT Manager), core project members (e.g., Chief Marketing Officer, Chief Sales Officer) and peripheral project participants (e.g., temporary hired consultants, newly hired assistants) were conducted by applying a historical narrative strategy. Historical narrative strategy lets interviewees speak for themselves and recount their memories (Pickering, 1993). Interviewees were identified through observations and interactions with project members. In this way, the researchers were able to identify not only core project members but also more peripheral project participants who played an important role in the project. The average length of each interview was 30-40 minutes. Interviews were recorded and transcribed verbatim. The open-ended interview focused on retrospective narratives and asked interviewees to talk about their experiences and involvement with the project. Interviews were conducted using the company facilities such as a conference room, a company cafeteria, and the desk assigned. These facilities were chosen based on the need to provide a relaxing environment for interviewees. Interviews with those who work and live overseas were conducted using the company's conference call capabilities. All transcript interviews were saved in MS word format and stored in a secured place. Recordings of the meetings that were allowed to be attended were saved, and served as supplemental material that was used to fill in the field notes.

Field notes related to the collection of observations of meetings, informal interactions, interviewees' daily work, workplace design and atmosphere, and any events that were associated with the implementation project. Each field note has the details of observations on the day's events. These field notes were prepared immediately after leaving the research site to be fresher

and ensure more detailed recollections (Emerson *et al.*, 1995). These field notes were helpful to understand complexities of the implementation project in terms of people who were involved, how they communicate with each other, and to gauge the real status of the project. These field notes capture what may be described as 'ordinary' aspects of the organization, project participants, and their work. Observing these ordinary practices was crucial to identify irregular patterns of activities, which helped to identify important events happening behind the scene. Observations also helped keep the list of core project members updated, since the core project members changed from the beginning of the project, due to the organization's layoff decisions. Interviewees were distributed geographically, hierarchically, experientially (in terms of tenure in the organization), and in terms of expertise.

Finally, archival documents were collected. These archival documents included internal organizational documents such as historical documents, project timelines, governance model, implementation strategy, and the initial core project member list of individuals.

Data Analysis of Longitudinal Data

Collected data were analyzed using analytic induction that is particularly useful when a systematic examination of social phenomena needs to be carried out to ascertain similarities and concepts through an iterative data analysis process (Eisenhardt, 1989; Klein and Myers, 1999; Miles and Huberman, 1994, 2014). The analytic induction included an in-depth reading of collected data, highlighting portions of the documents that could be associated to a specific emerged theme. In this first phase the overall goal was to identify similarities to facilitate the emergence of patterns and themes such as knowledge sharing issues between organizational units, and knowledge sharing practices applied in different organizational units. As analysis progressed,

emerged themes were revised and questioned multiple times to make sense of interconnections and potential explanations, applying a zooming-in and zooming-out approach (Nicolini, 2009) to include considerations of both micro-level details and broader contexts. The analysis required going back and forth with collected data, until a certain identified episode or vignette captured a specific practice, intervening condition, or tool. As part of a process of data reduction and display (Miles and Huberman, 1994), multiple versions of the emerged framework were also prepared and revised, until a final version that would capture the phenomenon observed was identified.

Summaries of the research methodology and the data analysis process are depicted in Figure 2 and Figure 3.

Insert Figure 2 and Figure 3 here

Findings

This section reports the findings emerged from data analysis, supported by verbatim transcripts from interviews, conversational dialogs captured from organizational meetings, or observations conducted at the company site. A conversational dialog was used as part of data presentation as it is helps the reader follow the flow of the events and understand a dynamic nature of 'practice' in a situated manner (Orr, 1996; Schatzki, 2006). Data reported were selected from a much larger dataset, and due to space constraints only the most illustrative examples are included in the following sections.

An Emerged Challenge: Calibration of Uncoordinated Actions and Rapid Design Sessions

One of the biggest challenges that PROD-CYCLE had to face during the development of the TECH project related to certain decision making processes, especially for design. These challenges regarded contrasting and often uncoordinated decisions that had a direct impact on several organizational levels and outcomes. First, when small changes were made in one of the processes, they often could totally impact another process, resulting in unwanted bugs. Second, if the changes impacted the business operations, design decision-making had to be approved by the appropriate senior executives. Third, each business organization had a tendency to ask the Information Technology department (IT) to fix bugs or to make changes, and which requests should be prioritized was not a straightforward question. Fourth, how long it was going to take the development team to fix or accommodate the needs of the business organization was necessary information for the business side but was difficult for IT to state. Moreover, this complexity was accelerated by the global nature of the TECH implementation, and the fact that PROD-CYCLE decided to "go for a global model"; that is, they decided to offshore their technical delivery service.

It resulted in a total of 70% of the technology delivery staff in the head office being replaced by local staff in the offshore locations (mainly due to cost issues) i.e., Pune, India for the IT organization; Shanghai, China for the Marketing and Sales organizations; and Munich, Germany for the Finance organization. The global model thus added an additional complication to the TECH project in terms of coordination and communication efforts. The development cycle circulated globally. For example, a business organization makes a request to the IT group; this has to go to business analysts in the working groups first to examine whether the request is actually worth processing. Then, once the request is processed, it has to go to technical architects.

Then, technical architects communicate with the delivery teams (e.g. developers) in Pune, India. Then, the technical teams deliver the product and communicate with technical architects. Then, technical architects communicate with business analysts and then they conduct testing of the delivered product. Then, the delivered product will be passed to the business organization that made the original request in the working groups. Then, analysts in the business organization communicate with their testers located in offshore locations to test the delivered product. If they find a problem with the delivered product, they will get back to business analysts in the working group and the cycle will repeat again. Various time gaps were needed to be accounted for. The time gap between Pune and the organization's headquarters is 9.5 hours. The time gap between Shanghai and the headquarters is 12 hours. The time gap between Munich and the headquarters is 6 hours. Each offshore location communicates with different business organizations located in different buildings in the same headquarters. Moreover, the TECH process is involved with the business processes in different organizational functions. Before a change request from a particular business unit is sent to the product development teams, there is a consideration of whether this change will affect the business processes of other organizational units. Also, the global model made decision-making processes difficult. For example, some requests made by one of the business organizations may need senior executives' decision approval before it can be processed.

As a result, PROD-CYCLE Rapid Design Session emerged as a practice to resolve frustrations of project participants, calibrating what appeared to be uncoordinated actions. This practice was a 1-2 days session to allow prioritization of customization and configuration decisions of the system. The session was very inclusive, comprising developers in India and

testers in Shanghai and consultants and senior executives. During the session, participants reviewed what the design needed and finalized the design priorities.

A Senior IT manager explained why the rapid design session practice was introduced:

"The reason the whole rapid design sessions came about, we originally mapped it out, we needed folks for five hours a day for four days a week over a span of six to eight weeks, and people freaked out and said… why we need it is because sometimes we spin on little details we find out later are not important strategically, making sure we have the appropriate resources committed. That was a challenge because I think some of the sponsors weren't clear why that was needed, as we went along." (Senior Business System Manager)

Another implication regarded the fact that the project sometimes tended to move quite fast and become too big to be comprehended with regards its real-time progress. This made decision-making horizontally (across units) and vertically (across status) difficult.

As the project manager in Shanghai stated:

"There is a challenge because we all have slightly different understanding as far as how we manage the business process. So the leader of the entire project, he or she has to be very aggressive and has to spend a lot of time to make sure everyone is brought onto the same understanding level. That is very difficult. I see that as a challenge. So sometimes it can be difficult to come to agreement for how we build a large piece. It will definitely need more time and consideration to come to a final solution and make sure everyone is confident about it, that it is the best solution we can have." (Project Manager (Shanghai) for Sales Operations)

The Rapid Design Session was organized around a set schedule. Before the session started, the IT team e-mailed meeting participants the excel file that included all unsolved issues that had been sent to IT during first roll out. This list included all the requests for fixes that had been independently sent to the IT team by each business organization. Some of these fix requests could be easily resolved but others were more difficult to fix. One of the problems for the IT team was how to handle all of these requests, given that they had limited time and available

resources. This had become more important for the next roll out since the IT team was trying to re-allocate resources for other projects that they had had to postpone or put on hold because of the TECH project. The session had two shared documents. One was a presentation, prepared by the senior IT manager that summarized the meeting agenda. The presentation was briefly discussed at the beginning of the session. The other was the excel file that was shared prior to the meeting that lists all pending issues. The session was supposed to be carried out by all participants discussing each ticket, which was a technical problem solution request from business organizations to IT. At the end of the session, the expected outcome was a clear agreement regarding which tickets needed to be handled by the IT department before they begin the next roll out.

The session was organized around one central document that was an excel sheet containing the list of IT tickets sent from business organizations to the IT team. These tickets were shown by an assigned number, by application type (e.g. Marketing application), by an urgency of requests, by color coordination (e.g. orange –meant IT needed further clarification from business, Green meant that they were ready to solve a problem; Yellow meant that some questions needed to be clarified together - they had identified them as bugs but they wanted to understand them better). Further, within each category, the tickets were divided into TECH- and non-TECH-related tickets. Then these tickets were categorized into several levels based on their complexity as defined by the IT staff.

Discernment of Meeting Purposes

The Rapid Design Session started with the conversation between the CIO and senior directors of business organizations (See Appendix I for the entire dialog).

CIO: "We cannot operate TECH Phase 2 in the same vacuum that we did TECH phase 1. It's important today that we go through and understand what it is, but then I also think we need to talk about different ways of accomplishing it…We cannot let TECH 2 be as consuming as it was for one. I'm sure it killed all of you guys, it killed us, and we can't let that happen."

Senior Director of Channels Operations: "Yeah, well that being said we've launched this program with certain goals, and you're saying we should back off of our goals."

CIO: "I'm not saying we should back off our goals. I'm just saying we should go through this thing and let's be conscious of the fact that there are a lot of other people screaming for resources."

Senior Director of Marketing Operations: (after following the above CIO's comments) "So Ray [CIO] just along those lines, have you and the team kind of thought about, do you do – I mean before TECH we basically did a smaller release, a point release once a quarter…"

In this first dialog, a clarification of a meeting purpose was being practiced. Although the meeting purpose was clear at a high level (e.g. deciding Release 2 design), how the meeting purpose was going to be accomplished during the meeting was not clear. This first dialog illustrated an example of the difference in how each part of the organization understood Release 2 design by linking its image to their previous experiences. For the IT organization, as the CIO indicates, next roll out was tied to their past experiences about their painful work in the first roll out. The metaphor of 'the same vacuum' represents the way the IT team worked to meet the demands of the business organizations. During the first roll out, the IT organization accepted too many requests from the business side, which ended up drying up their resources. Therefore, his second comment was about asking others to remember business organizations who were eager to utilize IT services. It was the IT team's resistance (or more precisely rejection) towards a repeat of the past practice. Furthermore, in response to the CIO's comment, the Senior Director of Channels Operations, engaged in a remembering act (Zerubavel, 2003), going back to before the first roll out in time, to the original goals of the project. This is a reminder for project participants

to remember that the project had not finished yet since the goals were not reached. This exchange was followed by the Senior Marketing Director's remembering what a typical release practice was, which, as stated, was based on a quarterly release cycle, different to the release schedule that was undertaken for the first release of the TECH project. Marketing was annoyed because their requests continued to be put on hold because of the TECH priorities.

Then, the CIO responded to the Senior Director of Marketing Operations by again reminding everyone that there were business organizations that might not fit the quarterly release cycle. The CIO responded:

> CIO: Okay here's my perspective you need to weigh in on this, I mean I don't know how much stuff you have facing too. I think we need to look at the whole pile. I mean you guys all roll up to the same bus and we need to look at that pile and say okay here's what we're going to have in the next release, here's what critical to the business. We have to look at it that way. Let's go through the list, let's figure out how big it is, let's time it out, and figure out what to do from there. But you know it's everybody's got to say this is critical. Piling on isn't going to help, I'm not suggesting anybody's doing it I'm just saying that stuff on the list has got to be stuff we need. That we can't live without…what are the items that we went through in the last few months, all sales and marketing we all looked at each other and said that we can't physically get this issue in June 1st. It was there and it broke and we made exceptions, we said we'll take it out, we've got to have it. What are the items we've found that we need to have. So that's the plan, it is an October launch. And we need our scalable items in there, OA's got them, marketing got them, Lauren's (Senior Director of Sales Operations) got them, and I've got them. Without those items we can't launch in October. Let's rock and roll."

In relation to the next roll out, each organization (in this case, there were three distinct organizations – Marketing operations, Channels operations, and IT) had a distinct mental connection with the past. For the Marketing organization, the image of Release 2 was closely related to their past practice – a quarterly release cycle. One of the main reasons for this inseparable relation between marketing and the practice of quarterly releases was because that was a typical upgrade practice before the TECH project was begun. On the other hand, the

Channels Organization was the business organization that initiated the TECH project and was thus tied to the project mission. The managerial success of the TECH project was closely linked to the Channels Organization. Lastly, the IT organization in the TECH project was tied to its painful experience in the first roll out as an IT service organization within the firm. Because of the TECH project, the IT organization had had to spend what those involved had seen as an unreasonable amount of resources and this hampered their service capability to other business organizations. The conversation concluded with the project champion, briefly summarizing the sales and marketing's arguments, asking for a clarification from the CIO. The CIO answered by employing several key words that might help others to imagine the near future, of how the session was going to run, and what Release 2.0 was going to include. He stressed the collective image of how they would agree with each other what was going to be in the next roll out by using metaphors such as "the whole pie" and "Roll up to the same bus". In this way, he was able to squash each organization's desire to reproduce their own previous practices, and create a new practice that was particular to the next roll out, and that provided a unique internal know-how to participants at the meeting session.

Compliance to Layered Approval and Scenario-sharing Tool

To the former conversation, it followed the actual performance of the session where the IT manager began to navigate the excel sheet and clicked each item in order, hence controlling the flow of the session (For the full dialog, see Appendix II). The first ticket was from a manager of the sales operations team in Shanghai, China, about a technologically-integrated process of contract approvals that required the inclusion of a secondary status in the contracts approval process. The development of the discussion around the issue reported in the ticket illustrated how the decision making of each request was practiced with scenario-sharing that complemented

information on the excel file sheet. The IT manager's account of the issue draws an image of the contract approval process. A person who requested this ticket was in Shanghai and the contract approval process was involved with cross-functional divisions from the contracts team, the contracts operational team, the sales operation team, and finally the finance team that was set to officially approve the whole process. The IT manager's description seemed very clear as evidenced by the senior IT manager's response to clarify the solution that they could provide. Here, the excel sheet seemed to convey all necessary information.

However, the senior director of sales operations, who was a manager of the Shanghai Sales Operations team, asked for a clarification:

> "Do we all understand that issue? So the purpose for it is, as we were going through the testing phases, is what was happening is that they were setting up all the contracts, they handed over to finance, finance goes to approve it, and something goes wrong. They have the same territory and they discount it or something like that. But its finance that's finding the disconnect or the potential errors in how a discount or something was set up and then it gets kicked back. What we're asking for is that the contract administration group have the opportunity mechanism by which to check their work to make sure that everything is consistent and aligned as possible prior to handing it off to finance to reduce the to-ing and fro-ing and make sure that they're able to do a cursory validation before it moves forward." (Senior Director of Sales Operations)

These clarifications referred to whether the issue was understood well or not. Then, she gave her own explanation that was slightly different from the IT manager's (technical) explanation in terms of its power to illustrate the case. She first explained that they (she and her team) were in the testing phase. What they found was that finance had the ultimate authority to approve or not to approve the contract. It was the final end authority and they can kick back the whole contract if it did not conform to their process. She added a brief but illustrative description of a hypothetical situation of the process that was inconvenient for them (and hence for the organization) without having the requested pending approval function. Her explanation inspired

the CIO as he also provided a hypothetical scenario that related back to her case - if her team worked very slowly, it would delay the pending approval process. Her action to share the context or the reasons behind the request was to follow-up the information that the Excel sheet cannot convey. Her comments and the CIO comments filled in valuable information that project participants needed to notice. This valuable information was unique to the meeting session, and provided internal know-how related to the tickets and process execution that was developed as a common effort by the participants at the organizational meeting. This example thus illustrated a practice that helped participants acquire a form of internal know-how that became commonly known by the participants at the meeting because of the related interactions and the nature of the distributed context.

Reconstruction of Internal Operations

As the session went on, there was a critical TECH-related ticket that was arrived and that was not considered to be feasible for IT to deal with. The discussion began with a seemingly very simple request to the IT team from the global operations team in Shanghai. The IT team and the business side were almost about to close the case and move on to the next ticket; however, a brief comment from the Senior Director of Sales Operations opened up a further discussion and eventually the discussion led to a much larger issue that might have been beyond the TECH project, and that forced the Senior Director of Channels Operations to state that "…I'm saying if it's more than a five minute conversation we've got to talk about this one offline".

The complete dialog (see Appendix III) illustrated a more complex picture of an organizational practice. There was an interpretation that the IT team made earlier in the session when they reviewed the list of the requests made by business organizations. The IT manager's interpretation that was actually the basis for a possible solution was for them to add a few more

fields. There was nothing wrong with this interpretation based on the information on the excel sheet. Although the CIO shared the same interpretation, it was actually further developed by the follow-up comment from the Senior Director of Sales Operations. The solution that was raised before – adding a few more fields – was actually not the right solution for the issue. Here, what the Senior Director of Sales Operations shared was the reasons behind the request - the English translated version of the local Chinese company was actually manually entered in the current process. The problem related to a local Chinese company's English translation. An interesting observation was that until the Senior Director of Sales Operations spoke up about a possible reason behind the request, information on the excel sheet appeared to be sufficient for the IT team to get started.

The CIO decided to explain to the IT team what the issue means in detail, using the specific example of a case company – Joe's Mold Shop. While explaining Chinese local business practice, he also created the image of how North American's sees Chinese local practice by adding "I know I still shake my head but it's the way of business over there". His experiences about the local culture in China helped others to imagine the situation of how it was managed. In response to the CIO's comment about legitimacy and credibility of local practices, the Senior Director of Channels Operations brought up how staff members in the North American HQ saw the cultural conflict. This example clearly illustrates how the practice of reconstructing the internal operations to address the issues faced by the participants at the meeting helped them acquire a form of internal know-how related to knowledge integration that became commonly known by the meeting participants because of the interactions that happened in the distributed context.

Expedition of Organizational Outcomes

A final aspect that emerged from the analysis of findings regarded the fact that many of

the practices were carried out to accelerate decision making, and guarantee quicker

organizational outcomes.

This is well expressed by the Senior Business Analyst:

"If we had to do it the way we had historically done it, it would have taken too long. What would happen is we would ask certain questions of them about business, they would then go to their managers, then go their VPs or executives and it would trickle back. That whole process would take a couple weeks, to get the information we wanted. That was challenging because it was a marathon of meetings that we scheduled. We scheduled them back to back to back. Having everyone in the same room, everyone was listening to the same issues, giving the same answers, and coming up with the same responses." (Senior Business Analyst)

This quote clearly highlights the importance of certain type of practices that helped

reduce decision-making time and power-structure constraints; improved coordination

mechanisms; customized the decision making process to the need of meeting participants; and

helped prioritize processes and desired outcomes. It also significantly contributed to a better

shared understanding, having everyone on the same page. Therefore, it helped the acquisition of

common internal know-how unique to the meeting context.

Summary of Findings on the Construction of Common Knowledge Practices in the Context of

Organizational Meetings

The findings described thus far suggest that common knowledge practices are constructed

in the context of organizational meetings to overcome calibration challenges related to

contrasting and uncoordinated decisions that are experienced by organizational members. These

calibration challenges are mitigated through rapid design sessions that, together with scenario

sharing tools, facilitate the emergence of four practices of discernment, compliance, reconstruction, and expedition. These practices contribute to the construction of common knowledge in the context of organizational meetings in several ways. They clarify issues and purposes. They complement inter-unit knowledge with single unit's knowledge. They integrate knowledge through dialogue. And finally, they accelerate decision making through a commonly developed knowledge that facilitates "being on the same page".

A summary of these findings that includes representative quotes is provided in Table 1. A discussion of the implications of these findings in the context of existing literature is reported in the following sections.

Insert Table 1 about here

Discussion and Implications for Theory, Practice, and Future Research

The following sections report the key observations made from the findings of this study. These key observations are discussed in the context of existing literature on organizational knowledge (Blackler, 1995; Mariano, 2018) and common knowledge (Desouza and Awazu, 2005; Dixon, 2000; Shteynberg *et al.*, 2020), organizational practices (Bourdieu, 1977; Nicolini, 2011), and organizational meetings (Allen *et al.*, 2015). Recommendations to managerial practices and potential future research directions are also provided.

Discussion and Implications for Theory

At least three observations and related implications for the academic literature can be derived from the findings emerged from this research study.

A first observation relates to the emergence of a calibration challenge in the construction of common knowledge during meetings, where the depth and breadth of decision-making processes have the potential to make or break organizational outcomes. The findings from this study suggested that when a decision regarding the TECH project had to be made, several individuals were involved but that coordination mechanisms were not always achieved. Collected data suggested that when configuration and customization priorities had to be decided, a centralized response such as the Rapid Design Session helped solve coordination issues, and reduce delays in execution. These findings add to existing literature on social structures (Tsai, 2002) and coordination mechanisms (Williams and Karahanna, 2013), and provide ground for further investigations of the contributing effects of practices such as the Rapid Design Session to the dynamics of knowledge shaping i.e., remembering and forgetting (Mariano and Casey, 2016). Such studies would add to explorations of routinization practices (Ohly *et al.*, 2006), and related issues of shared intentions as a condition of joint actions contributing to common knowledge (Blomberg, 2016; see also Lederman, 2018; on collective intentionality see Jankovic and Ludvig, 2018; on the distinction between collective and collected memories see Rowlinson *et al.*, 2010), showing how the orchestration of a centralized response could facilitate the emergence of coordination mechanisms that would otherwise be difficult to manage. Similarly, the findings of this study adds to existing investigations on time and temporality (Tukiainen and Granqvist, 2016; Orlikowski and Yates, 2002), showing an example of an effective temporal-based response to challenges experienced in distributed settings. Future studies could investigate the extent to which certain functions may have a greater effect on knowing in practice (Orlikowski, 2002) and collective practice especially in project-based contexts. In this study, the IT department had a key role in the development of common knowledge and its related coordination efforts A more

granular description related to if and how a shift in power in a single function could help improve decision making at a more distributed level is worth exploring. Furthermore, future studies could investigate the extent to which social networks (Shah *et al.,* 2018; Levin *et al.*, 2016; Cross *et al.*, 2013) could contribute to common knowledge construction, providing a means to investigate common knowledge from a methodological perspective that was out of the scope of this research study. Investigating common knowledge from a social network perspective could enrich current literature that has already provided insights related to social cohesion and network structure (Reagan and McEvily, 2003).

A second observation suggests the co-participation of distinct though related practices of discernment, compliance, reconstruction, and expedition during scenario-sharing practices that can be defined as *a sequence of imagined events or synopsis of possible course of actions or event*, when individual efforts are exercises to create a common understanding that has the potential to contribute to organizational ends. These practices helped organizational members co-construct a shared image of emerged problems that contributed to the development of common knowledge, and helped overcome limitations of previous approaches that were found to be less useful to organizational purposes and ends. These findings provide a means to better understand how common knowledge develops in distributed contexts through practices, since "practice refers to purposeful human activity. It is based on the assumption that activity incudes both physical and cognitive elements, and that these elements are inseparable. Knowledge use and development is therefore regarded as a fundamental aspect of activity" (Hislop *et al.*, 2018, p. 30). In particular, these findings extend existing research work on collective attention and learning that focused on cohesion and comprehension of group members (Shteynberg *et al.*, 2020); and to conversations of rituals – such as ceremonies – as a way to produce common

knowledge, transferring meaning from central to peripheral sources and among peripheral sources (Chwe, 2013). The findings from the present study add to these conversations, and shed a light on aspects related to production and reproduction of knowledge practices (Bourdieu, 1977), and related acts of historicity remembering (Zerubavel, 2003; see also Decker *et al.*, 2020). These findings provide empirical evidence on how previous decisions and actions may have a direct influence on current understanding. More specifically, these findings suggest that when collective work is produced in distributed contexts with the help of tools such as scenario-sharing, the commonly shared experience is co-created based on different grounds that require a certain level of negotiation efforts that are understood from distinct lenses related to previous experience and practices. Related issues of compliance, reconstruction, and expedition also contribute to the framing of such a commonly shared experience, providing a more granular description of the practices associated to common knowledge. Future research could investigate the extent to which "online proximity" may have a direct influence on the development of a common understanding since the findings of this study provide an initial account for this insight. This is a prominent direction for future studies, given the fact that an increased number of organizations have started introducing forms of remote and virtual work that increased exponentially during the COVID-19 crisis, and have contributed to a shift from face-to-face interactions to technology-mediated channels. Does technology foster or inhibit common knowledge? Is the knowledge that is commonly created through technology-mediated channels different from the one that develops from physical interactions, and if so to what extent do they differ? Does the space intended as office space, department space, and organizational space have an agentic role in construction of common knowledge? What is the role of artifacts in the construction and reconstruction of common knowledge and its related practices? This last

question could certainly add to existing research work (Awazu *et al.*, 2018; Glaser, 2017; Mariano and Awazu, 2016) that has identified the increased importance of artifacts in organizations. For examples, Awazu et al. (2018) has found a significant role that artifacts play in facilitating the mediating organizational practices. Additional explorations investigating the role of artifacts in the construction and reconstruction of common knowledge and related practices could certainly offer novel insights to this emergent line of inquiring (for a review see Mariano and Awazu, 2016).

A third observation regards the inclusion of discussions around past and future imagining developments in studies of common knowledge construction (Dixon, 2000) and scenario-sharing (Alspaugh and Antón, 2008). Previous research has already started investigating the crucial role of knowledge dynamics in organizations (Nonaka and Von Krogh, 2009), highlighting the role of artifacts (Awazu *et al.*, 2018), organizational mnemonics (Coraiola and Murcia, 2020) and organizational memory (Decker et al., 2020; Foroughi et al., 2020) and remembering (Rowlinson *et al.*, 2010) in the construction and reconstruction of distributed knowledge (Allen *et al.*, 2016; Lehmann-Willenbrock *et al.*, 2018), and has called for additional investigations of how common knowledge is constructed. The findings from this study started contributing to this specific call, and helped explain the related practices involved in collective forms of knowledge construction. These findings results especially relevant to multilevel and more complex systems that cannot be theorized as a simple collection of agentic components (Kozlowski and Klein, 2000; Morgeson and Hofmann, 1999), but have to be investigated from a more rounded view where individual parts contribute equally to the construction and development of a knowledge system as a whole. This seems to be particular relevant to studies of how collective – more than collected – knowledge and social memory are constructed by human subjective experiences that are

embedded in specific social contexts (Rowlinson *et al.*, 2010). Therefore, these findings provide an alternative view to (1) taxonomies of collective knowledge (Hecker, 2012); and (2) to already existing studies that focus on network structures (Reagans and McEvily, 2003; see also Levin et al., 2016), or knowledge contribution in shared environments (Wasko and Faraj, 2005). The findings from this study help enrich current conversations related to the role of agency and agentic components in shared and distributed organizational settings (Kozlowski and Klein, 2000; Morgeson and Hofmann, 1999), and highlight the role of practices in internal know-how construction in project-based settings through the use of organizational meetings (Allen and Rogelberg, 2013; Allen *et al.*, 2015; Allen *et al.*, 2016). Future research could further investigate this line of inquiry, including explorations of the link between common knowledge and organizational memory systems (Foroughi *et al.*, 2020) or common knowledge and organizational mnemonics (Coraiola and Murcia, 2020).

Discussion and Implications for Practice

From a managerial perspective, the findings from this study provide a means to help managers leverage the use of certain practices, such as meetings, and related artifacts, such as electronic documents, to resolve contradicting outcomes, especially in project-based distributed contexts. In the study, it was shown that meetings helped coordinate, customize, prioritize, and understand. Additionally, this study showed how artifacts helped inspire problem solving and foster collective sense-making that could become particularly useful in the presence of time or resources constraints. Lastly, the findings from this study highlighted the crucial role of scenario-sharing tools in decision-making processes that could be used by managerial practices as a new set of instruments for the development of common knowledge and collective expertise, especially in distributed settings (see Oliva and Kotabe, 2019).

Limitations and Conclusions

This study has limitations related to statistical generalizability, being the identified practices related to a single organization. Although not statistically generalizable, these practices can, however, be analytically generalizable (Yin, 2002), and can potentially relate to other organizational contexts that face similar situations. Another limitation regards the inclusion of a subset of individuals who belonged to the organization at the time of data collection. This limitation, however, is mitigated by the multilevel sampling strategy that included individuals from distinct hierarchical and departmental levels. Lastly, the examples included in this study were selected from a larger dataset, and only the most representative ones were reported in the paper and its appendices due to length constraints.

This study aimed to provide a more granular description of how organizational members construct common knowledge practices in organizational contexts such as meetings. In this study, a longitudinal interpretative case study methodology was employed to collect data from a U.S. based organization involved in an information system implementation project. Findings revealed that four practices relate to common knowledge were constructed. These four practices included discernment, compliance, reconstruction, and expedition. Intervening conditions such as calibration challenges and tools such as scenario-sharing contributed to and shaped these common knowledge practices. This study had implications for theory on organizational knowledge, common knowledge construction, and co-participation in distributed contexts. It also provided managers with recommendations on the strategic use of meetings to help construct shared understanding. Research directions in the context of common knowledge and organizational meetings research fields were also offered to future scholarly investigations.

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Figure 1 – The TECH Project Global Development Cycle

IT

BUSINESS

Senior Executives

Developer Teams (India)

Technical Architect

Business Analysts

Sales Ops

Channels Ops

Mktg Ops

Finance Ops

Tester Teams (China)

Tester Teams (Germany)

Figure 2 – Methodology

	METHODOLOGY Longitudinal interpretative case study (Lincoln and Guba, 1985; Erlandson et al., 1993; Yin, 2002)					
	DATA COLLECTION Ethnographic Fieldwork (Agar, 1980; Orr, 1996, Spradley, 1979, 1980; Van Maanen, 1988; Klein and Myers, 1999)			**DATA ANALYSIS**		
METHODS	Persistent Observations	Multiple Interviews	Archival Documents	Analytic Induction	Iterative Process	Data Reduction and Display
DESCRIPTION	Prolonged engagement with meetings context	Historical aspects of project and background information	Historical aspects of project and data triangulation	Systematic examination of phenomenon	Going back and forth with collected data	Identification of emerged framework
TYPES	Fields notes of workplace interactions, and business-, steering committee- and project-related meetings	40 semi-structured interviews; additional informal interactions/ conversations	Presentations and project-related documents	Looking for similarities and identification of preliminary patterns/themes e.g., knowledge sharing issues/ practices	Zooming-in on micro-aspects and zooming-out on larger contexts. Identification of representative episodes	Identification of building blocks forming emerged framework
THEORETICAL REFERENCES	Emerson et al., 1995; Walsham, 2006;	Pickering, 1993; Pozzebon and Pinsonneault, 2005	Erlandson et al., 1993; Klein and Myers, 1999; Creswell, 2006	Eisenhardt, 1989; Klein and Myers, 1999; Miles and Huberman, 1994	Nicolini, 2009	Miles and Huberman, 1994

Figure 3 – Data Analysis

Data Samples	Categories	Aggregated Categories

- Instances of how issues and purposes are clarified
- Identification of metaphors such as "the same vacuum" and "the whole pie"

Discernment

- Conversations about tickets and approvals
- Specifications of issues and solutions to process executions
- Observations of how excel sheets are complemented by units' knowledge

Compliance

Practices

- Instances of how dialogue helps integrate/reconstruct knowledge

Reconstruction

- Instances of how decision making is accelerated through commonly developed knowledge that facilitate "being on the same page"

Expedition

- Observations of contrasting and uncoordinated decisions. Instances related to unwanted bugs, approval requests, prioritization of unwanted bags, difficulties in decision making across units, customization and configuration prioritizations
- Observations of session inclusivity and review/finalization of designs

Calibration Challenges

Intervening Conditions

- Observations of use of excel sheet to navigate session and provide shared common content

Scenario-sharing

Table 1 – Findings

Emerged Issues and Practices	Description	Outcomes	Representative Quotes
Calibration challenges	Contrasting and uncoordinated decisions	-Unwanted bugs in interrelated processed due to specific changes -Approval required for business operation changes - Difficult prioritization of unwanted bugs interventions by IT -Length of process -Decision making across and within units difficult -Global model hard to implement, with locations in India, China, Germany, USA	-"There is a challenge because we all have slightly different understanding as far as how we manage the business process. So the leader of the entire project, he or she has to be very aggressive and has to spend a lot of time to make sure everyone is brought onto the same understanding level. That is very difficult. I see that as a challenge" (Project Manager)
	Rapid design session emerged	-Prioritization of customization and configuration decisions of the system -Inclusivity of session and set schedule -Review and finalization of design	"The reason the whole rapid design sessions came about, we originally mapped it out, we needed folks for five hours a day for four days a week over a span of six to eight weeks, and people freaked out and said…why we need it is because sometimes we spin on little details we find out later are not important strategically, making sure we have the appropriate resources committed" (Senior Business System Manager)

Scenario sharing	Using Excel sheet to navigate session and provide shared common content	-Sharing of current inter-units issues	-"If we had to do it the way we had historically done it, it would have taken too long…Having everyone in the same room, everyone was listening to the same issues, giving the same answers, and coming up with the same responses" (Senior Business Analyst)

Practices

Discernment	Clarifying issues and purposes	-Clarification of how each unit interpreted Release 2 -Clarification of IT work	-"The same vacuum" metaphor of IT work -Collective image stressed out by CIO using metaphors such as "the whole pie" and "roll up to the same bus" to make units feel they were on the same page
Compliance	Complementing excel sheet content about inter-units knowledge with single unit's knowledge to comply with process execution	-Discussion and approvals of tickets	Dialogue between CIO and Senior Director of Sales Operations on contract approval process "IT Manager: So this first ticket has been submitted…in Shanghai where he's looking for the ability to feed a secondary status in the contracts approval process…so right now we only have a single layer. Senior Director of Sales Operations: Do we all understand that issue?"
Reconstruction	Integrating knowledge through dialogue	-Discussion and approvals of tickets	"…I'm saying if it's more than a five minute conversation we've got to talk about this one offline" (Senior Director of Channels Operations)

Expedition	Accelerating decision making through commonly developed knowledge that facilitate "being on the same page"	-Discussion and approvals of tickets	"If we had to do it the way we had historically done it, it would have taken too long…Having everyone in the same room, everyone was listening to the same issues, giving the same answers, and coming up with the same responses" (Senior Business Analyst)

Appendix I

Dialog

CIO: "We cannot operate TECH Phase 2 in the same vacuum that we did TECH phase 1. It's important today that we go through and understand what it is, but then I also think we need to talk about different ways of accomplishing it…We cannot let TECH 2 be as consuming as it was for one. I'm sure it killed all of you guys, it killed us, and we can't let that happen."

Senior Director of Channels Operations: "Yeah, well that being said we've launched this program with certain goals, and you're saying we should back off of our goals."

CIO: "I'm not saying we should back off our goals. I'm just saying we should go through this thing and let's be conscious of the fact that there are a lot of other people screaming for resources."

Senior Director of Marketing Operations: (after following the above CIO's comments) "So Ray [CIO] just along those lines, have you and the team kind of thought about, do you do – I mean before TECH we basically did a smaller release, a point release once a quarter…"

CIO: "Okay here's my perspective you need to weigh in on this, I mean I don't know how much stuff you have facing too. I think we need to look at the whole pile. I mean you guys all roll up to the same bus and we need to look at that pile and say okay here's what we're going to have in the next release, here's what critical to the business. We have to look at it that way. Let's go through the list, let's figure out how big it is, let's time it out, and figure out what to do from there. But you know it's everybody's got to say this is critical. Piling on isn't going to help, I'm not suggesting anybody's doing it I'm just saying that stuff on the list has got to be stuff we need. That we can't live without…what are the items that we went through in the last few months, all sales and marketing we all looked at each other and said that we can't physically get this issue in June 1st. It was there and it broke and we made exceptions, we said we'll take it out, we've got to have it. What are the items we've found that we need to have. So that's the plan, it is an October launch. And we need our scalable items in there, OA's got them, marketing got them, Lauren's (Senior Director of Sales Operations) got them, and I've got them. Without those items we can't launch in October. Let's rock and roll."

Appendix II

Dialog

IT Manager: "So this first ticket has been submitted by I think Gale in Shanghai where he's looking for the ability to feed a secondary status in the contracts approval process such that in his team he can then have someone in his team approve it, have a holding pattern, and then have someone in finance approve it. So it's an additional step. So right now we only have a single layer. The contracts team, the contracts operational team can put it on pending approval, and then back in the approval triggers the finance team can go off and approve it. Gale is looking for a secondary level in there, where he can put it into pending operational approval then it can be pending finance approval, and then he can have finance approve of it."

Senior Director of Sales Operations: "Do we all understand that issue? So the purpose for it is, as we were going through the testing phases, is what was happening is that they were setting up all the contracts, they handed over to finance, finance goes to approve it, and something goes wrong. They have the same territory and they discount it or something like that. But its finance that's finding the disconnect or the potential errors in how a discount or something was set up and then it gets kicked back. What we're asking for is that the contract administration group have the opportunity mechanism by which to check their work to make sure that everything is consistent and aligned as possible prior to handing it off to finance to reduce the to-ing and fro-ing and make sure that they're able to do a cursory validation before it moves forward."

CIO: "What happens when your global is slow, it takes two days."

Senior Director of Sales Operations: "Yes."

CIO: "It's brutal."

Appendix III

IT Manager: "Please add local name to both the list applet and the form applet on the CXXX opportunity view and within the portal opportunity view. Okay. Basically this is clear to us, I just want to make sure that everyone realizes that four to five more fields will be added to all of the views that we're talking about."

Senior Director of Channels Operations: "Can we talk about that I was only asking for one. Not all these bonus fields." (laughs)

Senior Director of Sales Operations: "Is the need for the additional ones because the name is the local address. The address and local language as well as just the company name."

Senior Director of Channels Operations: "Ugh, well then we've got to talk about that."

CIO: "What's local name I'm sorry."

Senior Director of Sales Operations: "Double-bite."

CIO: "Oh. Local language would be Chinese."

Senior Director of Sales Operations: "Correct, yes."

CIO: "Thank you."

IT Manager: "Actually that's a good clarification. Were you requesting local addresses to be presented also."

Senior Director of Channels Operations: "This feels like it is more than a five minute conversation, so, but let me give you the pain point. So Ray this one is important for Asia. So in China, Taiwan, it's a big issue. Korea it's not. But in China and Taiwan, they have one manufacturer, it's called John's Mold Shop, in China, but the way that it works over there is they have four different company names and a local name. And its legitimately four different company names. So…"

CIO: "For Joe's Mold Shop."

Senior Director of Channels Operations: "For Joe's Mold Shop. So the system recognizes it as Joe's in English, and it's got a legitimate address. But then there's a local name that says Joes Mold Shop in four different ways because it's legitimately four different companies for that same site. So the deal registration program in Taiwan and China, I know I still shake my head but it's the way of business over there. The way deal registration works over there is it has to accommodate different partners being able to register different local names. So registering Joe's Mold Shop A, and a different partner will register Joe's Mold Shop B in the local name. It's legitimately different companies that do business differently. So we can't accommodate that right now because it's only one site in English. The way they really legitimately look at business over there is the local name."

CIO: "So but in Oracle, forget TECH (project) for a minute. What is it in Oracle? Joe's Mold Shop? Or do we have four different entities?"

Senior Director of Channels Ops: "Well when you say in Oracle I can go into Oracle and I can see the local name."

CIO: Customer reg. Senior IT Managers: "In Oracle there is a Joe's Mold Shop like a customer name, and then there's a place to capture one local name."

CIO: "One, okay. So this isn't just a TECH issue, or a channel issue, this is bigger."

Senior Director of Channels Operations: "I'm saying if it's more than a five minute conversation we've got to talk about this one offline."