Abstract
This paper describes a collaborative inquiry between researchers and practitioners to evaluate portfolio management processes in a Fortune 30 company. At the time of the study, the company was undergoing significant change related to a shift in organizational strategic priority, resulting in a complex research environment that required a clear research question, data collection design, and expectations for research outcomes. First, researchers assisted practitioners in formulating a method of inquiry to describe existing portfolio management processes. Then, researchers framed the analysis of findings to recommend strategies for maturing the portfolio management processes in light of existing governance structures, established practices, and cultural values. The research design and theoretical framing used to arrive at the recommendations not only enhance the internal validity of findings, but are presented as an important strength in this instance of collaborative research and suggested as a model for future similar collaborations.

1. Introduction
In a period of ongoing disruptive organizational change, there are often repercussions at multiple levels that offer opportunities to learn about the current state of an organization’s management functions. However, these situations are particularly challenging to examine from a research perspective because of the rapidly changing and evolving internal and external environment. In this article, we describe a case study that demonstrates a practical approach to researching complex organizational change situations. Specifically, we examine the implementation of project portfolio management in the context of a major technology strategy change in the IT organization of a large retail corporation (hereafter “RetailCo IT organization” or “the IT organization”). By working in close collaboration with practitioners in the field, we describe the current state of the portfolio management function in the organization, and recommend culturally-appropriate tactics for positioning the portfolio management function more effectively. We demonstrate that the application of theoretical frameworks in the appropriate cultural context can aid in transforming practice and provide academic insight into the contextual constraints bounding the application of these frameworks.

2. Literature & theoretical foundations
Portfolio management is an enterprise-level viewpoint of all projects planned and ongoing in an organization [17]. Whereas project management ensures “projects done right,” portfolio management ensures “the right projects get done” (Reyck et al., 2005, p. 524). Portfolio management practices ensure that: a) projects are prioritized to best support organizational strategy; b) resources are allocated efficiently given those priorities; and, c) information gathered around projects contributes to an organizational knowledge base that can improve strategic decision making related to management of the project portfolio.

Although Reyck et al. [17] was used as the primary framing mechanism for identifying existing portfolio management processes underway in the IT organization, other academic models pertaining to portfolio management practices also informed our inquiry. Elements in existing literature that assisted us in designing interview questionnaires and creating tools to understand ongoing process evolution included those addressing meta-trends in portfolio management models and governance structures.
2.1. Meta-trends in portfolio management models

Elonen and Artto [6] produced one of the first surveys of internal development project portfolio management using workshops, interviews, and surveys within two organizations. Their inventory of problems and problem areas in project management grouped and prioritized observed gaps in portfolio management processes, such as inadequate project- and portfolio-level activities, unclear roles and responsibilities with regard to managing the portfolio, and insufficient information management within the process. Using the taxonomy of portfolio management problem areas, we were able to better articulate opportunities to our IT organization sponsors.

In the specific context of enterprise application implementation, as in this case study, Mitchell [11] examined the integration of internal and external knowledge on successful project completion. The author found that access to external knowledge, and the integration of relevant internal knowledge, positively affected the on-time completion of projects. Although Mitchell investigates knowledge integration at the project level, her findings underline the role of knowledge management systems in managing large projects that involve many different functional areas of an organization.

Project and portfolio management successes have also been measured in the context of absorptive, innovative, and adaptive capabilities [1]. Absorptive capabilities include acts of internalizing acquired knowledge and deploying such knowledge into portfolio management processes. Innovative capabilities encompass incremental, novel advances in tactical approaches. Adaptive capabilities entail responding to external market influences to evaluate the current course and correct if necessary. Absorptive and adaptive capabilities were found to positively affect portfolio management success, while innovation was not correlated with increased portfolio management effectiveness. We found that these aspects of the three capabilities were useful in inquiring about the responsiveness to administrative challenges in the existing portfolio management processes during our interviews.

In addition to academic models, industry white papers informed maturity opportunity recommendations formulated and shared with practitioners, including a portfolio management maturity model roadmap [8] and a model for enterprise architecture governance [9] that were particularly applicable to the RetailCo context. We found that incorporating industry white papers was helpful in ensuring that the recommendations we made to the sponsors, based on our findings, were presented in a way that was both meaningful and actionable from the practitioner perspective.

2.2. Governance structures affecting portfolio management models

We found a comprehensive understanding of historical and current governance structures to be a critical aspect of describing existing portfolio management functions in the IT organization. Since the RetailCo IT organization had recently undergone a complete re-structuring, we found new governance models developing alongside implementation of the portfolio management function. For this reason, we surveyed the literature to understand the range of governance models related to portfolio management functions.

Sambamurthy and Zmud [18] addressed project management as one of three “spheres” of IT management, and the authors investigated three modes of IT governance: centralized, de-centralized, and federal. Similarly, Kirsch [10] analyzed “control modes” in the context of project management with a slightly broader viewpoint: that of “formal” and “informal” controls, with control mechanisms ranging from project plans and documented user requirements to peer pressure. Although the RetailCo IT organization was not classified using these modes or mechanisms for the purpose of this case, the descriptions of such modes informed the modeling of information flows and management mechanisms among various levels of the organization’s project portfolio management.

Our research was also influenced by a comprehensive model of portfolio governance and success [13]. In this study, Müller and colleagues used a quantitative approach to evaluate the correlation of project selection, control, and decision structures with factors of portfolio success, such as achieving results and achieving purpose. Specifically, mature portfolio selection processes were found to correlate positively with achieving project results, and portfolio reporting was found to correlate positively with achieving project purpose. These processes were considered to be essential elements under portfolio optimization and centralization of project control, respectively, according to the Reyck et al. model [17] adopted for analyzing information flows.

In their surveys of organizations adapting to difficult economic times and rapid technological change, Daniel et al. [3] asserted that governance processes related to portfolio management were
essential for enforcing standard mechanisms ensuring transparency of decision making. Blichfeldt and Eskerod [2] called for all projects – from those proposed, to in-progress projects – to be considered part of the portfolio management model, reducing ambiguity around governance and establishing clear boundaries of portfolio governance. These perspectives on governance processes also informed our analysis.

Finally, Petit [16] and Mitchell and Zmud [12] investigated the role of uncertainty in project management. Petit used a multiple case study method to observe uncertainty feedback loops in two organizations in the software and financial industries, categorizing such feedback using a model of sensing-seizing-reconfiguring to organize findings. Mitchell and Zmud measured the success of projects involving process redesign in both loose and tight couplings with IT strategy, finding that loose coupling of process redesign with IT strategy was most effective in work process imitation projects, and tight coupling with IT strategy led to greater success in work process invention projects. Although these studies did not specifically address governance, the structures described in the studies added context related to organizational models supporting portfolio management functions with regard to managing uncertainty.

2.3. Identifying portfolio management elements with the Reyck et al. model

It is important to note that, in the original application of the implementation model for portfolio management, Reyck et al. [17] identified incremental benefits even with low-maturity portfolio management processes. Therefore, the implementation of portfolio management could itself be seen as an ongoing project, and one that requires time and effort to adjust reporting structures and existing processes in order to achieve the benefits. The following elements are included in the Reyck et al. model, and are explained in their optimal maturity stage below by adapting the characteristics outlined in the original paper.

Centralization of project control: Project information is centrally stored, analyzed, and distributed; this repository of information supports oversight and monitoring of projects.

Financial analysis: Financial tools such as Net Present Value (NPV) and Return on Investment (ROI) are used routinely to evaluate project performance.

Risk analysis: Project complexity, technology risks, and team experience are all quantified and weighed in taking on a project, and re-evaluated regularly.

Interdependencies: Overlaps and duplication of effort are assessed prior to project approval, and re-evaluated as organizational strategies change over time.

Constraints: Factors affecting project performance, such as skills training and competition for scarce resources, are frequently managed at a high level.

Overall portfolio analysis: The portfolio is evaluated regularly for risk balance and financial return.

Categorization, selection, accountability and guidance: Project leaders and business leaders work together to ensure alignment of the portfolio with strategic goals, and accountability occurs at the highest level to ensure appropriate oversight.

Optimization: Central tracking of project outcomes versus original objectives leads to a knowledge base that can be used to optimize project selection for the future.

Specialized software: The organization has adopted a specialized tool or tools (often used to implement elements above) as the central tool for portfolio-level management.

The Reyck et al. model elements, as described above, were used as an initial framing mechanism of the existing IT organization processes, to identify the presence or absence of portfolio management elements and to give a starting point for evaluating the current portfolio management maturity.

3. Methodology

This study of the implementation of the portfolio management function within the IT organization was guided by the following question from the practitioner sponsors:

How can RetailCo incorporate research-based best practices into their IT enterprise transformation and modernization effort, particularly in relation to the development and delivery of project portfolio management functions?

We first needed to understand what portfolio management processes were in place to address this question, and to describe where those processes were taking place, so that information flows in the current state could be tracked. From this analysis, we aimed to offer recommendations for maturing portfolio management processes that were appropriate to the organizational culture, governance structure, and work flows. Thus our initial investigation was driven by the following question:

Where do managers in the RetailCo IT organization currently carry out project portfolio management functions for the organization, and what opportunities can we identify for future maturation of these functions?
In order to investigate this question, we needed to develop a methodology that would allow us to track emerging and evolving processes and situations over time. Furthermore, we aimed to develop approaches for applying theoretical concepts and frameworks in a way that could reveal practical insights for the sponsors, while contributing to our academic understanding of these types of organizational initiatives. In the following sections, we present the methodology developed to examine the case, and describe the details of the case, including the organizational and strategic context of the project portfolio management implementation. We discuss the findings and the practical recommendations for the organization that emerged from the analysis. Finally we present implications for research and for researchers seeking to work in similar contexts.

3.1. Research design

We initiated the study with a preliminary two-month period of observation on site, observing meetings and conducting informal interviews with IT managers and employees involved in portfolio management. After gathering this initial information about the current state of the project portfolio management process, we presented the data collection, validation, and communication plan to RetailCo sponsors. The sponsors approved the plan, giving consent for an extended period of participant observation and further structured interviews with employees. During the course of the data collection, we found that IT organization employees were eager to speak about their roles and share information. More than 90% of the participants contacted for interviews consented to meet with researchers for periods ranging from 30 to 90 minutes.

The first author collected all data during approximately 100 hours of observation at RetailCo, as well as 14 informational interviews with 10 individuals in a number of positions throughout the IT organization. Subsequent to qualitative coding of observational notes, 10 follow-up interviews were conducted with employees working directly in project management and project support positions to verify themes identified during data analysis. Observations and interview sessions were not recorded, due to both the setting of the research (in a high-traffic, high-noise location), as well as a low tolerance in the RetailCo culture for such recordkeeping. In lieu of recordings, the researcher maintained a detailed field notebook throughout the six-month data collection period.

Qualitative coding was used to analyze observation and interview notes. The qualitative data were then accumulated and loaded into a secure, cloud-based software analysis package [4] to find patterns based on portfolio management elements, such as overall portfolio analysis and centralized project control. Field notes also included records of individuals involved in each meeting, as well as artifacts associated with the observed meetings, such as digital presentations or reference documents.

We built data validation into the research design in three ways [7]. First, we collected data from individuals who worked at various levels of project management, in the project, program, or portfolio management units (data triangulation). Participants were also given the opportunity to review their feedback to researchers (member checking). Finally, practitioner sponsors and researchers also met regularly to review themes identified during the observation period.

The aims of the study were three-fold: to benefit the RetailCo IT organization by offering specific recommendations for moving forward in maturing the portfolio management process; to derive fresh perspectives on methodological approaches for researching in these dynamic environments; and to contribute to our theoretical understanding of organizational change processes in the context of project portfolio management and portfolio governance. In this paper, we will focus on the first two aims: findings related to the third aim will be reported in a subsequent article.

4. Case description & analysis

The case study describes our collaboration with practitioners at a Fortune 30 retail company to study the implementation of a project portfolio management process, which was occurring in parallel with a number of structural changes in the organization. From October 2012 to June 2013 we conducted observations and interviews within the RetailCo IT organization. With over 600 locations globally, $97 billion in sales annually, and a demonstrably effective business model, RetailCo continues to operate efficiently and grow at a rapid pace; however, technology investment in the organization had lagged over the past 20 years. RetailCo is undertaking a modernization of its information technology architecture, applications, and service delivery, which began in 2011 and is still ongoing. The IT organization has reorganized to support modernization, transitioning from a siloed support structure, in which each business unit contained its own IT support group, to a matrix organization, in which the IT organization structure was consolidated into functional groups, e.g., software development, testing, and support. This change in
support structure has severed close working relationships between the IT organization and business lines.

The roadmap for IT modernization called for a coordinated, five-year effort, which involved moving the IT service and support model from a “build” to “buy” disposition and implementing an Enterprise Resource Planning (ERP) system. The implementation of an ERP system was intended to rectify two decades of what IT management referred to as “technology debt” – that is, years of low investment in technology infrastructure and modern application architecture leading to outdated and sometimes overburdened infrastructure and applications. This state of technology debt led IT managers to feel that RetailCo was not deriving maximum value out of its systems and data. As a result, the IT organization moved to prioritize ERP implementation projects, driven by business strategy and a goal of building capabilities in the future to support complex supply chain management functions, much as described in the manufacturing industry by Muscatello and Parente [14].

The radical shift in IT priorities required a new conceptualization of the IT organization, traditionally viewed as a cost center in the RetailCo organization. Projects were no longer proposed primarily from the business; instead, the IT organization had a long list of initial projects with which it would build out its infrastructure and capabilities, laying the groundwork for modernized IT service and support. As in many organizations, the need to evaluate projects at a portfolio level was spurred in RetailCo when the need to balance technology resources became increasingly urgent [15]. With two sources of IT projects – business and IT modernization – and conflicts arising between business needs and modernization efforts, managers in the IT organization’s Strategy and Planning group discovered a need to evaluate the entire project portfolio to carry out the five-year modernization roadmap, continue to support the business, and efficiently allocate resources.

Given this need for a top-down portfolio view, Strategy and Planning managers established a new functional group in the IT organization, the Portfolio Management Group (PMG). The PMG was initially staffed with a Portfolio Manager and two Portfolio Analysts; this group started reviewing the information generated, used, and disseminated in the IT organization from project proposal through project termination and debrief. The PMG also mapped dependencies among projects and configured a specialized portfolio management software package. The new PMG role was separate from the existing Project Management Office (PMO), an established group in the IT organization that managed the stable of project managers and monitored project statuses via a weekly meeting and a collection of software tools. It was at this point that we engaged with RetailCo sponsors for the study described in this paper.

During the observation and interview period, we were given access as researchers to a diverse set of meetings, as well as to information artifacts currently used at various levels in the IT organization to manage projects, programs, and the portfolio. The collaborative methodology we employed, which included framing observations from the field with the assistance of our participants and sponsors, allowed researchers to validate the organizational model developed, as well as gain access to new units in the organization for further observation rounds. Using these tactics, researchers observed managers and employees working in weekly meetings at the project and program levels (called “cadence meetings” by the IT organization and hereafter in this article), as well as in PMO meetings and PMG meetings. A graphical descriptive model of the management structure for various levels of project oversight is shown in Figure 1.

Figure 1. Organizational structure at project, program, and portfolio levels in the IT organization

We found that although the PMG and the PMO operated in parallel under the IT Executive Committee, the existing organizational unit structure excluded the PMG from routine information flows. Reporting in cadence meetings – typically taking place on weekly calls or in weekly, in-person meetings – occurred at all levels of management. Project managers reported to a program manager who oversaw a set of related projects or directly to the PMO. As a result, the Portfolio Manager found information routed through these channels had established procedures and artifacts associated with the preexisting processes that were
unfriendly to adaptation. The Portfolio Manager reported during an interview that the PMG was viewed as “an information consumer,” a difficult position in which the manager and her analysts were forced to track down existing information to incorporate into their fledgling processes.

Perhaps most significantly, during the period of observation, researchers noted that IT executives regularly attended weekly cadence meetings at all levels, including reporting meetings for large projects. This level of executive involvement was unexpected for a Fortune 30 company. When researchers probed the reason for this very detailed involvement among executives, a common answer among informants described expectations around the accountability within the broader organization. “Retail is detail,” an interviewee from the Strategy and Planning group asserted. Executives could be “called to the carpet” to answer for any problem or delay in a project at any time, and this contingency led to close involvement with all aspects of projects.

Table 1. Descriptive overview of portfolio management elements observed in the IT organization

<table>
<thead>
<tr>
<th>Portfolio Management Element</th>
<th>Project Management</th>
<th>Program Management</th>
<th>PMO</th>
<th>IT Execs</th>
<th>PMG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralization of project control</td>
<td>-</td>
<td>-</td>
<td>Change approval</td>
<td>Project and change approval</td>
<td>Information consumer</td>
</tr>
<tr>
<td>Financial analysis</td>
<td>Report variances to Program or PMO</td>
<td>Report variances to PMO</td>
<td>Report closeouts or changes to Execs</td>
<td>Ask questions, require clarifying information</td>
<td>Information consumer</td>
</tr>
<tr>
<td>Risk analysis</td>
<td>No standard process</td>
<td>No standard process</td>
<td>Report to Execs</td>
<td>Ask questions, require clarifying information</td>
<td>Information consumer</td>
</tr>
<tr>
<td>Interdependencies</td>
<td>No standard process</td>
<td>No standard process</td>
<td>No standard process</td>
<td>-</td>
<td>Established interdependency tracking system</td>
</tr>
<tr>
<td>Constraints</td>
<td>Report delays to Program or PMO</td>
<td>Report delays to PMO</td>
<td>Report delays to Execs</td>
<td>Ask questions, require clarifying information</td>
<td>Information consumer</td>
</tr>
<tr>
<td>Overall portfolio analysis</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Consolidates other information to give high-level overview</td>
</tr>
<tr>
<td>Categorization, selection, accountability and guidance</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Selection and approval authority</td>
<td>Capable of categorizing &amp; reporting</td>
</tr>
<tr>
<td>Optimization</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>No knowledge base established</td>
</tr>
<tr>
<td>Specialized software</td>
<td>Various software</td>
<td>Various software</td>
<td>Standard software (different from PMG)</td>
<td>-</td>
<td>Standard software (different from PMO)</td>
</tr>
</tbody>
</table>

1 Adapted from Reyck et al, 2005

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5. Discussion and recommendations

We determined through the preliminary two months of observation that it was essential to acknowledge the cultural context of the process implementation. This was due to the cultural background of the IT leadership, as well as the unique RetailCo culture. We identified the following four aspects of the culture that were particularly relevant to our case study:

a) Tacit knowledge management: Knowledge is managed largely through collaboration of individuals, rather than through explicit means such as information systems.

b) Valuing business knowledge: “Rising up through the ranks” of business lines is a highly valued career path, and organization-specific knowledge carries greater weight in the perception of expertise than specialized technological knowledge gained outside of the organization.

c) Consensus-based decision making: Collaborative work favors consensus-based decisions, with a large proportion of work and action items decided in meetings and concentrated in group settings.

d) Customization of solutions: Solutions derived from external frameworks or models required a process of customizing, meaning that the solution is tailored to RetailCo’s current values and processes.

Given these observations, we determined that it would not be productive to suggest or develop a novel process for project portfolio management in the organization. Instead, we suggested enhancements to the existing PMG processes that incorporated unique characteristics of the RetailCo culture (e.g., high level of executive involvement in detailed processes). In collaborating with the practitioners throughout the observation and analysis process, researchers were able to discuss possible avenues of process maturation, with an action strategy of focusing on existing processes that could be enhanced, rather than inventing new ones, as shown in Table 2.

### Table 2. Action strategy for maturing portfolio management processes in the IT organization

<table>
<thead>
<tr>
<th></th>
<th>What works</th>
<th>What doesn’t work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing in current state</td>
<td>Retain &amp; Enhance</td>
<td>Redesign</td>
</tr>
<tr>
<td>Desired for future state</td>
<td>Add sustainably</td>
<td>Avoid</td>
</tr>
</tbody>
</table>

During the period of observation, the major accomplishments of the PMG were introducing standardized portfolio management software, conducting meetings among portfolio stakeholders, and initializing interdependency mapping among projects at a high level. Our recommendations to the PMG, described next, build upon the observed progress in a manner that incorporates the four aspects of culture outlined above.

5.1. Short term recommendations

One of the most valuable early contributions from the PMG was its overview of project dependencies at the portfolio level. The interdependencies document was used in several instances to spur conversation among portfolio stakeholders, in settings such as the PMO meeting and one-on-one meetings with project and program managers. As such, the PMG’s ability to add value by presenting portfolio-level data had been proven in a preliminary manner. The short-term recommendation was to incorporate information from other sources, but also to use the existing meetings to introduce the interdependencies document and facilitate conversations about the portfolio, such as project balancing and hidden risks.

In addition, the standardized portfolio management software was perceived negatively by individuals outside of the PMG, most commonly as an additional onerous system to incorporate into work streams. This negativity is consistent with the organization’s preferred emphasis on tacit knowledge. The major recommendation here was to revisit the portfolio...
management software configuration with the vendor to make sure the software met the needs of information storage, analysis, and distribution for the planned maturation of the portfolio management function. A secondary recommendation was to map the information flows among project and portfolio managers to identify ideal information capture opportunities; i.e., if the information had been created, the PMG could become a central repository for project-level information, adding value by giving different “views” of the portfolio based on timely data.

5.2 Medium-term recommendations

The PMG had also piloted a weekly meeting among portfolio stakeholders, including Strategy and Planning managers, IT architects and analysts, business relationship managers, and program managers. These meetings, although suspended part way through the observation period, were found through data analysis to contain different conversations than those in other unit meetings. For example, conversations included stakeholder considerations, evaluation of project risk, and discussions regarding scope and resource constraints. These conversations were appropriate to conducting efficient portfolio management, but meeting attendees often felt ill-prepared for the meeting discussions. The major recommendation here involved re-introducing the meetings, but sharing an agenda ahead of time. In addition, researchers recommended standardizing the meeting presentations for proposed projects, to construct a weekly cycle of information flows similar to those used in other levels of project and program management.

An additional recommendation for the PMG meeting cycle is founded in the emphasis on business experience in the IT organization. Researchers suggested the PMG could frame its portfolio discussions from a business stakeholder viewpoint. First, this strategy would focus the diverse group of managers attending PMG meetings on risks and outcomes, an essential component of portfolio analysis and optimization. Second, discussing projects from the business stakeholder viewpoint would increase the relevance of the PMG conversation to IT executives, who are expected to maintain a high level of involvement. The value of incorporating IT executives was demonstrated throughout our observations not only in power/authority structures observed in meetings, but in supporting interviews. By involving executives in PMG meetings, the Portfolio Manager will benefit from greater organizational acceptance of consensus-based decisions involved in managing the portfolio.

5.3. Long-term recommendations

In the long term, the PMG has an opportunity to build up a knowledge base around projects, including types of projects undertaken, estimated and realized value of deliverables, and other factors that would aid in future decision-making. This strategy would add value by offering a new, historical view of the project portfolio versus the current state, in which most knowledge about past projects must be shared in real time among people who were involved in those projects. Although sharing of tacit knowledge among project managers is a practice that should be encouraged (and certainly not replaced entirely by a knowledge management tool), a centralized knowledge base would be a worthwhile investment in standardizing data around lessons learned and value added through project work.

In addition, if a knowledge base were deployed as part of a decision-making tool to aid future portfolio balancing and risk assessment endeavors, the PMG could enhance the ability of IT executives to confidently sponsor and monitor projects. According to the organizational culture, executives were under a great deal of pressure to be closely involved and informed on all sponsored projects, and accountable at a moment’s notice to the business stakeholders. If the PMG could deliver standardized information, particularly for serving business stakeholders, the group would be in a position to provide substantial value in support of IT executives and, in turn, the strategic objectives of the organization. Further, such a knowledge base would provide evidence of the value added by IT projects, supporting the shifting perception of the IT organization from a cost center to a facilitator and partner in essential business functions.

5.4. Developing portfolio management maturity

As shown in Table 3, the set of recommendations described above will help the IT organization to continue to develop project portfolio management functions. The PMG had already achieved a number of positive steps toward implementing basic portfolio management functions, and the recommendations are specifically aimed at assisting the transition to more mature portfolio management processes in a culturally appropriate way. By establishing portfolio-level information flows that complement existing practices at the project, program, and PMO unit levels, the PMG can utilize existing standards and cultural imperatives to increase the value and visibility of the portfolio management function.
### Table 3: Recommendations for transitioning from current-state to future-state portfolio management functions in the IT organization

<table>
<thead>
<tr>
<th>Portfolio Management Element</th>
<th>Current-state PMG</th>
<th>Recommendation</th>
<th>Future-state PMG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralization of project control</td>
<td>Information consumer</td>
<td>Design weekly cadence and standards for portfolio management meetings. Cultural values supported: Tacit knowledge management, consensus-based decision making.</td>
<td>Creates a new information flow that improves data quality and creates venue for sharing knowledge.</td>
</tr>
<tr>
<td>Financial analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interdependencies</td>
<td>Established interdependency tracking system</td>
<td>Share information gathered among other groups to introduce the concept of interdependency tracking. Cultural values supported: Tacit knowledge management.</td>
<td>Provides information about interdependency tracking to other groups, aiding in communication and risk management.</td>
</tr>
<tr>
<td>Constraints</td>
<td>Information consumer</td>
<td>No explicit recommendation</td>
<td>Information consumer</td>
</tr>
<tr>
<td>Overall portfolio analysis</td>
<td>Consolidates other information to give high-level overview</td>
<td>Incorporate new information sources and views to add value. Cultural values supported: Customization of solutions.</td>
<td>Offers a number of views of project data to enable new types of analysis.</td>
</tr>
<tr>
<td>Categorization, selection, accountability and guidance</td>
<td>Capable of categorizing &amp; reporting</td>
<td>Add additional value by incorporating business stakeholder reporting. Cultural values supported: Valuing business knowledge.</td>
<td>Contextualizes accountability in business value and service.</td>
</tr>
<tr>
<td>Optimization</td>
<td>No knowledge base established</td>
<td>Build a knowledge base to help executives make future decisions. Cultural values supported: Consensus-based decision making.</td>
<td>Knowledge base established and provided for executive decision making.</td>
</tr>
<tr>
<td>Specialized software</td>
<td>Standard software (different from PMO)</td>
<td>Map information flows and incorporate feeds to software. Cultural values supported: Customization of solutions.</td>
<td>Customized software solution implemented.</td>
</tr>
</tbody>
</table>

1 Adapted from Reck et al., 2005

### 5.5. Limitations & implications

In using the case study method to study a real-world phenomenon over which we had little control [19], our findings are susceptible to limitations of generalizability and the potential for “idiosyncratic” findings from the case [5]. The generalizability and applicability of the recommendations contained herein, in particular, are limited by the contextual details of similar cases. However, the major implication for this article is intended to assist future collaborative work between researchers and practitioners by demonstrating the application of an academic model to a complicated problem and practitioner space.

A key implication for the use of this methodological approach is the emphasis on multiple iterations between researchers and practitioners to formulate recommendations for improving the future state of management functions. The multiple-iteration model enhanced research design by building in validation practices throughout the data collection period. Incorporation of validation practices also benefited data collection by expanding informant access and including important aspects of organizational culture. As a result, the recommendations for maturing the portfolio management processes are better matched to the objectives and work styles within the IT organization.

### 6. Conclusion

Researchers and practitioners worked together closely during a time of rapid change at RetailCo to evaluate the current state of portfolio management implementation. Researchers were able to apply academic models to depict processes and describe maturity of the portfolio management elements, and practitioners supplied the essential cultural knowledge to inform recommendations for process maturation recommendations. Short-, medium-, and long-term recommendations to advance portfolio management processes give the PMG a roadmap to move forward in building a value proposition for the portfolio viewpoint, while accomplishing new functions using existing work processes.
7. References


