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# **Building IT Resources for Post-Acquisition IS Integration in Novice Acquirers**

*Completed Research Paper*

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## **Abstract**

*Despite much attention and research, mergers and acquisitions generally fail to deliver their anticipated value. One of the main causes of failure is ineffective post-acquisition IS integration. Research into this problem, has largely overlooked the challenges novice acquirers face when developing their post-acquisition IS integration capability. This paper addresses this research gap by analyzing a novice acquirer's preparation through a two-and-a-half-year case study informed by 81 in-depth interviews. Applying the resource-based theory of acquisitions, the study identifies five components consisting of 28 resources the novice acquirer developed and applied during the successful IS integration of an acquired company.*

**Keywords:** IT Resources, Mergers and acquisitions, Novice acquirer

## **Introduction**

Mergers and acquisitions (sometimes referred to as M&A, in this paper shorted to acquisitions) are powerful strategic tools for organizational growth and change. According to Hershorn and Thomson Reuters (2017), 2017 was a record year for worldwide deals, recording 49,448 deals worth over \$3.6 trillion. Two high profile deals were Amazon's acquisition of Whole Foods for \$13 billion and CVS's merger with Aetna worth a staggering \$69 billion (Amazon 2017; CVS Health 2017). As this shows, acquisitions are a significant investment for companies which garner much public attention. Unfortunately, statistics for acquisition success are shockingly poor, with reports claiming up to 70% of deals fail to deliver on the anticipated deal value (Cartwright 2002; Christensen et al. 2011; Marks and Mirvis 2011). With so much at stake, and yet such a high failure rate, research has a unique opportunity and responsibility to help understand this challenge and contribute meaningful solutions.

The causes of failure in acquisitions has been the subject of many studies. Factors contributing to this unfortunate outcome include, CEO hubris, overpaying, and inadequate due diligence (Haleblian et al. 2009; Lovallo et al. 2007). A common attribute of these three factors is they all occur up to the point a company commits to an acquisition. While they are important, there is another significant challenge that is faced only once the deal is done – post-acquisition integration (also known as post-merger integration). Post-acquisition integration is the act of bringing the two companies together to form one, and it impacts most parts of the companies involved. One of the major challenges in post-acquisition integration is bringing together the two firms' Information Systems (IS) (Posnick and Schenborn 2007). Today, all organizations are massively dependent on their IS, and failure to integration effectively can be catastrophic. There would be disruption to 'business as usual', a waste of expenditure, and the lost potential of the acquisition. Up to 60% of a deal's value is dependent on IT effectively supporting the business processes of the combined organization and in IT related synergies, and yet failure to integrate IT is one of the most common causes of failed acquisitions (Curtis and Chanmugam 2005; Posnick and

Schenborn 2007; Sarrazin and West 2011). Avoiding this problem and the realization of acquisition value is dependent on successful post-acquisition IS integration.

Fortunately, research has been looking into this challenge, and is contributing to an understanding of the challenges faced. One of the key lessons known from the experiences of past acquirers, is that acquiring IT departments typically do not possess the capabilities needed for carrying out post-acquisition IS integration (Yetton et al. 2013). This process is unlike other projects, and it is therefore imperative that companies commit to building the post-acquisition IS integration capability. Ideally this build up initiated well in advance of an acquisition (many months or years), and led by an internal IT M&A team who will ultimately be responsible for executing the post-acquisition IS integration (Yetton et al. 2013).

Literature on the topic often reports stories of successful acquirers, who have honed their IS integration capability over many acquisitions, and focuses on serial acquirers such as Cisco, Danisco, or Trelleborg (Henningsson and Kettinger 2016; Toppenberg et al. 2015; Yetton et al. 2013). However, most acquirers are *not* serial acquirers (Kengelbach et al. 2011). Instead most acquirers make one or a few isolated deals, which are so infrequent that learning by experience accumulation is not an option. For such *novice acquirers*, acquisitions represents one-off strategic opportunities (Finkelstein and Halebian 2002; Laamanen and Keil 2008). The core principle when defining a novice acquirer is their lack of experience. Lees (1991) highlights the relative disadvantage of novice acquirers as ones who have no experience to draw on. On the other hand, Henningsson (2015) distinguishes serial acquirers as those who have developed and internalized routines to implement IS integration over many acquisitions. Novice acquirers are those without experience in acquisitions who have not built any internal processes or capabilities for handling one. They carry out only a single transaction or acquire so infrequently that the knowledge and processes of past acquisitions are not retained. The IS challenges faced by novice acquirers have not been explicitly studied.

This paper addresses this niche by studying the IT M&A team of a novice acquirer through the theoretical lens of the resource-based theory of acquisitions. Specifically, the paper is driven by the research question: *what resources does the IT organization of a novice acquirer need to develop to enable successful post-acquisition IS integration?*

The rest of the paper is as follows. First it discusses the state of the IS Integration literature positioning the paper within the field and justifying the choice of theoretical lens. Following that, it gives an overview of the case study, detailing the case company and the research methodology. Next the findings from the study are presented, and finally implications of the research are discussed, and the paper concluded.

## Theoretical Approach

### *Post-acquisition IS Integration*

Post-acquisition IS integration has been the subject of study for nearly 30 years. Early work focused on understanding how IT fit into the overall corporate acquisition process, using alignment theory to explain how it created (or in many instances, failed to create) value in acquisitions (McKiernan and Merali 1995; Wijnhoven et al. 2006). Over the years, the scope of investigation expanded, revealing a greater understanding of the challenge, and began providing insights of how IT organizations were dealing with them.

Based on their review of 30 years of literature on post-acquisition IS integration, Henningsson et al. (2018) identified 248 variables that have been shown to contribute to IS integration outcomes. From these, five overarching IS integration research themes were derived. These five themes identified were:

- Theme A: The M&A context
- Theme B: Relational fit
- Theme C: The human side
- Theme D: Pre-conditions for IS Integration
- Theme E: Time pressures

As can be seen from just the theme titles, the literature on the topic is broad, revealing a great insight into the challenge of post-acquisition IS integration.

Due to length limitations of this paper, I cannot discuss all five themes, rather I take my point of departure from the studies contributing to Theme D: Pre-Conditions for IS Integration (Henningsson et al. 2018). Within Theme D, studies have explored conditions for success in post-acquisition IS integration. It highlights ways an IT organization configures itself, so it may apply that configuration to overcoming the challenge of post-acquisition IS integration. The dominant theory used throughout this theme is the resource-based theory of acquisitions. Importantly, Theme D's findings call for more research into the pre-conditions needed for the delivery of IS Integration (Henningsson et al. 2018). Furthermore, it recognizes the need for more research into the resources and capabilities of both novice and serial acquirers.

### ***The resource-based theory of acquisitions***

Throughout Theme D, the dominant theory applied is the resource-based theory of acquisitions. This theory states that acquisition value is created through the arrangement of the two firms' resources, as they combine to generate new value (Henningsson and Øhrgaard 2016; Yetton et al. 2013; Zollo and Singh 2004). It states that this new value is a source of competitive advantage for companies, although is dependent on successful post-acquisition IS integration. A challenge to this is the understanding that the resources needed to execute post-acquisition IS integration do not exist naturally within firms, and that they must be built before an acquisition is announced (Yetton et al. 2013). Therefore, to realize the resource-based value of acquisitions, the resources and capabilities for post-acquisition IS integration must be known and built. A need to understand what should be built forms the basis of this paper's research question.

Within literature there are many definitions and categorizations of resources (Bharadwaj 2000; Grant 1991; Wernerfelt 1984). This paper adopts the definition put forward by Barney (1991), that resources are "*all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness*" (Barney 1991, p.101). To better understand the resources used by acquirer's in post-acquisition IS integration, this paper also adopts Barney's (1991) three classifications of resources, as listed in table 1.

**Table 1 - Barney's (1991, p.101) resource classifications**

Resource	Definition
Physical	<i>...include the physical technology used in a firm, a firm's plant and equipment, its geographic location and its access to raw materials.</i>
Human	<i>...include the training, experience, judgment, intelligence, relationships and insight of individual managers and workers in a firm.</i>
Organizational	<i>...include a firm's formal reporting structure, its formal and informal planning, controlling and coordinating systems, as well as informal relations among groups within a firm and between a firm and those in its environment.</i>

The resource-based theory of acquisitions, and its extension into capability and knowledge-based views have been applied extensively throughout the post-acquisition IS integration literature, and frame the pre-conditions for post-acquisition IS integration success (Henningsson et al. 2018). This includes research into Cisco examining how their internal resource 'Enterprise Architecture' was deployed to govern their acquisition and integration process (Toppenberg et al. 2015). Similarly, Yetton et al. (2013) discussed how Danisco, over a series of acquisitions, honed their IT resources to become "ready to acquire". The resources identified included scalable IT systems, and a dedicated IT M&A team.

Beyond these resources, other studies have explored the way alternative capabilities contribute to successful post-acquisition IS integration. For example, Tanriverdi and Uysal (2011) showed how strong existing IT resources and capabilities increased the likelihood of success in acquisitions. They

found those companies with an IT organization, experienced in general IT integrations were better prepared for the challenges of post-acquisition IS integration than those without.

Additionally, employing the knowledge-based theory of acquisitions, Henningsson (2015) shows that organizations learn to be successful at acquisitions over subsequent acquisitions. It was found that acquirers who repeat the same acquisition type, become better at IS integration after internalizing the experiences in their IT organization (Henningsson 2015; Zollo and Singh 2004).

From these studies, it can be seen that post-acquisition IS integration requires the unique deployment of a combination of specific resources, capabilities, and knowledge, that IT departments do not generally possess. Those successful at post-acquisition IS integration have taken the time to build, and iteratively improve them over many acquisitions. As this paper adopts Barney's (1991) definition, all three requirements, resources, capabilities, and knowledge are discussed as resources.

A key gap in this research field exists due to its focus on those who acquire regularly, known as serial acquirers. While these may be some of the more interesting cases, as the statistic shows, many deals exist outside of this threshold. Of specific interest are novice acquirers. From an IT perspective, these are companies who do not possess the IT knowledge or processes to carry out post-acquisition IS integration. This could be because this is their first acquisition, alternatively they may acquire so infrequently that the capabilities built for the previous acquisition were not retained. For many companies, acquisitions are significant, one off events, and for many participating in it, this may be the only time they are involved in a post-acquisition IS integration. Another important dimension for IT, is that there are a variety of integration methods: absorption, co-existence, renewal, and best of breed (Merali and McKiernan 1993; Wijnhoven et al. 2006; Yetton et al. 2013). Due to the variance of resources needed for each integration method, a novice acquirer could also be one without the resources to carry out an alternative integration method.

Drawing on the finding that for successful post-acquisition IS integration an internal IT team be setup (Yetton et al. 2013), this research focus' on the novice acquirer to identify the resources to be built for their first acquisition. It is known that companies should invest in this development process early, and that it takes many months, even years to build (Yetton et al. 2013). To guide this, it is important research investigate how successful novice acquirers prepare for their first acquisition. They do not have the many years and dozens of acquisitions to experience post-acquisition IS integration to get it right, it must be done right the first time. This paper looks at the IT M&A team as a resource needed for post-acquisition IS integration and asks what should be built prior to executing an acquisition that will enable its success.

To answer this question, a two-and-a-half-year case study was conducted of a novice acquirer's IT M&A team as they prepared for post-acquisition IS integration. Next, the paper describes the methodological approach of this research, then moves onto detailing the specific case.

## **Methodology**

### ***Research Context***

This case study examines Maersk, the world's largest container shipping company as they prepared for, and executed, their acquisition of Hamburg Süd (Wagner 2017). Although Maersk had acquired before, it had been over a decade since their previous acquisition and there were no existing processes or knowledge in place from which to build upon. This qualifies them as a novice acquirer. This was one of the key selection criteria for choosing Maersk, in that studying them would give new insights to understanding how novice acquirers prepare for acquisitions. Another reason was that they were preparing in advance of their acquisition, even prior to an acquisition target being identified. They were investing the time to build the resources needed for post-acquisition IS integration, which were not already held by the company. In doing so, the findings from this study contribute to the understanding of how to prepare for the first acquisition.

The research followed a single case study approach, a suitable choice as it allows for the close investigation into a real world phenomenon (Yin 2009). It was conducted over an extended period as

the author was embedded as an industrial researcher within the IT M&A team for over 2 years. The result was a thorough understanding of how a large novice acquirer's IT M&A team had prepared themselves, and the company's IT department, for their first post-acquisition IS integration.

### ***Data collection and analysis***

Qualitative data for this case was collected through a series of interviews conducted over a two-and-a-half-year period. Interviews were held with a range of participants within Maersk. This included interviewees from the IT M&A team, IT leadership, the broader IT organization, and key staff from outside IT. Table 2 provides a brief overview of the groups, and the types of positions interviewed in each. In total 81 interviews were conducted recording the progress from preparing for an acquisition, to the eventual outcomes of the post-acquisition IS integration of Hamburg Süd.

**Table 2. Summary of interviews**

Group	Interviews	Example positions
IT M&A team	37	Project Managers, Business Analysts, Technical Analysts
IT leadership	19	CIO, Head of M&A, Senior IT Managers
Broader IT organization	15	Heads of department, Program Managers, Delivery Managers
Non-IT staff	10	Head of integration, Integration workstream leads, Legal Counsel

Interviews followed a semi-structured approach, following prepared interview guides. Semi-structured interviews are favored by case study researchers as they offer the researcher the tools to investigate and some freedom explore an under researched topic (Saunders 2011; Yin 2009). In this study, they allowed for a consistent approach to investigating the IT M&A team of a novice acquirer, while also offering the flexibility to identify and discuss new insights as they arose during interviews. All interviews were recorded and transcribed into Microsoft Word format, by either the author or a third party, promptly after the interview. Upon completion of a transcription, the author reviewed each transcription against the original recording to ensure accuracy.

Each interview transcription was loaded into the digital analysis tool Nvivo so to be coded against other interviews. Within Nvivo, interviews were coded using the incident to incident variation of the constant comparison method (Charmaz 2006; Corbin and Strauss 2008; Glaser and Strauss 1967). Specifically, applying a deductive approach, within each incident the author was looking to identify what resources, aligning with Barney's (1991) three categorizations, were developed and used by the IT M&A team. Coding followed a systematic approach of reading a transcription and identifying incidents. Within incidents the author identified any resources that had been developed. As resources were identified, they were compared to those that had already been coded. If their description aligned with a pre-existing code, it was assigned the same code. If it did not, a new descriptive code was created. The author used memos to support their coding process as a means of recording thoughts and logic for assigning codes (Glaser and Strauss 1967). After the initial coding had been completed a second round was undertaken to ensure consistency by ensuring the incidents coded first were also coded against the full list of codes.

This round of coding identified 28 resources which were grouped into Barney's (1991) three categories. At this stage, each resource was treated independently of each other. However, as they were all being built to for a single overarching purpose, it seemed useful to look for relationships between them. As such as a second round of coding was done. Again, following the constant comparison method, however adopting an inductive approach. Looking at the full resource list, and comparing them to each other, this round of coding identified five resource groupings, that were termed components. Taking the five components together provides a holistic understanding of the resources needed by a novice acquirer. Doing this built a detailed understanding of, not just what was done, but also why the resources were being developed. This additional layer of analysis found overarching requirements for building the resources. This three-tiered topology, creates an IT resource-based view of the novice acquirer,

revealing the IT resources needed for successful post-acquisition IS integration. I present these findings in Table 3. After briefly describing the case, the rest of the paper will present the five components and the resources within them.

<b>Table 3 – The IT resources built by the novice acquirer</b>		
<b>Resource</b>	<b>Resource Category</b>	<b>Component</b>
Relationships throughout Maersk businesses	Organizational	Component A: Organizational Engagement
Relationship with the Maersk strategy team	Organizational	
Relationships throughout IT	Organizational	
Management presentations	Organizational/ Human	
IT M&A roadshow	Human	
Recorded IT landscape	Physical	Component B: IS Infrastructure Management
Critical path/ core applications	Physical	
Know application adaptability	Physical	
Knowledge from other experiences	Human	Component C: Learning
Hired acquisition experience	Human	
Fundamentals of acquisitions	Human	
Agreed terminology	Human	
Due Diligence Plan and Report	Physical	Component D: Planning
Data Migration Plan	Physical	
Guiding Principles	Physical/ Human	
IT M&A Playbook	Physical	
Communications Plan	Physical	
Stakeholder Matrix	Physical	
Digital Due Diligence Plan	Physical	
IT Deliverables	Physical	
IT M&A Team	Human/ Organizational	Component E: Team Development
Right sized permanent team	Organizational	
Staff with different specializations	Human	
Staff with variable skills	Human	
Formalized onboarding program for new recruits	Physical	
Expand team with temporary agents	Human	
Integrated with central integration function	Organizational	
Aligned to integration work streams	Organizational	

### **Case description**

In early 2015, foreseeing that acquisitions would become a key part of growth for the container shipping business, Maersk's CIO instructed one of his senior IT leaders to prepare the IT organization for acquisitions. One of his first initiatives, executed in mid-2015, was to build Maersk's IT M&A team. This team would be responsible for preparing and executing post-acquisition IS integration. Between then and 1<sup>st</sup> December 2016 the IT M&A team worked on this objective. Some actions taken during

that period were to build their knowledge of acquisitions, hiring (or recruiting internally) a variety of expertise, developing integration plans, creating a unique understanding of the IT landscape and people, educating and preparing the broader IT organization, and validating their readiness with drills. On the 1<sup>st</sup> December 2016 Maersk announced its intention to acquire its competitor Hamburg Süd and almost overnight the team went from preparing to executing (Maersk 2016).

## **Findings**

This section presents the five components, identified after the analysis of 81 interviews conducted at Maersk, and their corresponding resources. This combined view creates the resource-based view of the novice acquirer's IT M&A team, as shown in Table 3.

### ***Component A: Organizational Engagement***

Organizational engagement is the first component identified and within this component are five resources. The IT M&A team were formed within IT and responsible for preparing IT for an eventual acquisition. An important factor to post-acquisition IS integration is alignment between businesses objectives and IT integration deliverables. The Organizational Engagement component contributes to this realization by describing how the IT M&A team developed its organization relationships, as the point of responsibility for post-acquisition IS integration.

Relationships throughout Maersk businesses were built to create an understanding of how other functions anticipated the likely approach to integration. This gave insight to what the business expected, and therefore informed what IT would need to do to align with that. Additionally, and this runs true for the first three resources, it included building a professional relationship with people likely involved in an integration. In this way, this resource is an organizational one, in that it was used to develop formal and informal structures, that did not already exist, that would be used in an acquisition.

The Maersk strategy team were the group scouting for potential acquisition targets. The IT M&A team built a relationship with them early, informing them of IT's preparation activities and providing input and suggestions on how IT would carry out an integration. This regular communication and sharing of an IT plan, created a strong rapport between the two teams. It is known that IT managers should be part of due diligence and that they must earn the right to participate in it (Henningsson and Kettinger 2016; Yetton et al. 2013). By coming up with a plan, and actively engaging those who would drive due diligence, the IT M&A team ensured they were receiving timely information on potential deals and, by coming with their own proposals for integration earned the right to be part of due diligence.

Building relationships throughout the IT organization took a different approach to engaging with people outside of IT. IT needed to be prepared for post-acquisition IS integration, and the responsibility of preparing them fell to the IT M&A team. This was done by actively reaching out to key IT staff and explaining to them what an acquisition was, and how it would impact the IT organization. Building on that, the IT M&A team helped team leaders and managers identify what they should do before and during an acquisition. This approach of preparing together created a strong relationship between the team and IT.

Other resources in this component centered around presentations given to different groups at different times of the preparation process. The first presentation was by senior IT M&A management, presenting to other senior IT and business leaders. This management presentation introduced leaders to acquisitions, and explained how acquisitions would likely affect the company and IT. The purpose of the presentation was to educate the leadership and obtain their permission for the IT M&A team to engage their parts of the organization for preparation. In this sense, Management Presentations can be considered both a human resource, in that it developed the skills and awareness of individuals, and an organizational resource, in that enabled a new way for the organization to engage with itself. It is often stated that having senior management buy in is vital for successful post-acquisition IS integration (Robbins and Stylianou 1999), this is one resource that achieves this.



The last resource was the IT M&A roadshow. This is a human resource as it resulted in an increase in the understanding of acquisitions, and of people's specific roles within one. It is a tool for building and enhancing knowledge. This presentation was aimed at all of IT, however sessions purposefully targeted grouped audiences, such as bringing project managers or solution architects into a session together. The purpose of these was to educate the staff on what would happen in the acquisition, the process that would be followed, and the milestones that would occur. Additionally, it prompted participants to consider how an acquisition would affect them and how they would contribute. These were held late in the acquisition preparation, around the time of the announcement to acquire Hamburg Süd. As such participants felt a sense of urgency to take on the knowledge and start planning.

### ***Component B: IS Infrastructure Management***

Literature on post-acquisition IS integration has focused on IS Infrastructure Management, and the prerequisites for enabling its success. This section builds on this knowledge, by identifying the IS resources novice acquirers should focus their preparation on to be ready for executing post-acquisition IS integration. Three physical resources are included within this component.

The first is to have a complete and detailed record of the IT landscape, including the IT estate (hardware and software), its interconnectedness, and the business processes it supports. Enterprise Architecture has been identified as a contributor to successful M&A when applied by Cisco as a tool in their serial acquisition program (Toppenberg et al. 2015). This is a capability built over an extended period. In the case of Maersk, they were able to substitute a formalized Enterprise Architecture function with process maps and enterprise system landscapes as a first step. In addition to these, IT processes and application ownership were also recorded against the landscape.

The second resource is the identification of systems that are most critical to business operations and will likely be affected by post-acquisition IS integration. These are the ones the business relies on the most and includes the applications which support those applications. These critical systems are the ones the IT M&A team prioritized and focused their attention on. In the case of acquisition preparation where time is limited, it is vital to focus attention on ensuring the most critical applications can handle the changes brought about by an acquisition.

The final resource is the knowledge of the Information Systems' ability to adapt to the changes imposed by an acquisition. In this case, Maersk considered they would likely absorb an acquired company, therefore the requirement was for the applications to scale. However, this should not be considered the only requirement. If, for example, the goal was to maintain separate IS in a co-existence model, then systems may need to be integrated. This could be a software package integrated with another, or the two companies' networks being linked. Ensuring that existing IS resources are capable of adapting is a key physical resource of the IS estate. This resource was discussed by Yetton et al. (2013) as the need for IT capabilities to be capable of both extending and expanding. This paper's finding based on the experiences of the novice acquirer continues this understanding by acknowledging a need to spend time first understanding the limitations of the current Information Systems before embarking on programs to overcome limitations. This is especially relevant when there is limited time for preparation.

### ***Component C: Learning***

This component, Learning, identified four human resources Maersk used to learn how to do post-acquisition IS integration. As noted, the knowledge of executing post-acquisition IS integration is generally non-existent in a novice acquirer (that is what makes them a novice acquirer), this was the case with Maersk and a limitation they successfully overcame.

The first resource is to build knowledge of other experiences. In the case of Maersk, while not having the inhouse capabilities of post-acquisition IS integration, they had acquired several companies over a decade prior. So initially, they held interviews with those who had been involved in them to understand what had or had not gone well. Similarly, they drew on contacts from other companies and publications

on acquisitions for preparation insight. This began to give them an understanding of the challenges ahead as told by others.

In addition to listening to experiences from others, Maersk, as part of their proactive approach, recruited (from outside of Maersk) two members to the IT M&A team with acquisition experience. This knowledge being brought to the team on a full-time basis proved vital. They were able to direct the preparation in line with best M&A practice, prioritizing the preparation approach based on their past experiences. Importantly they were able to prepare the team for what would happen, while at the same time making them aware of the uncertainty around acquisitions.

Both resources contributed to the human resource of fundamentals of acquisitions. During the early period of preparation, the lack of fundamental understanding of acquisitions meant the team was largely guessing what they should or shouldn't do. While many would say every acquisition is different, there is a lot of similarity between them, and because of that, there are fundamentals that can be learned. Knowing and agreeing on these, provided the framework from which Maersk began preparing.

The final resource in this component was agreed terminology. The team agreed on what an acquisition was, the phases it would run through, key people roles and importantly, what they would call all of these. Once these were in place, they were speaking one language and moving in the same direction. This learning phase was vital to being able to engage with others about acquisition preparation.

### ***Component D: Planning***

The Planning component encapsulates those resources related to the creation of a plan for post-acquisition IS integration. Found in this component are mostly physical resources developed by the IT M&A team, often in conjunction with the wider IT organization. They are considered physical resources as they are developed as plans that are written down or saved as files to be retrieved and followed in an acquisition.

Planning is a key concept studied in post-acquisition IS integration literature (Alaranta and Henningsson 2008). This study contributes to this literature by providing specific examples of plans created as part of the preparation, as well as discussing how those were used by the IT M&A team in execution. It is worth recognizing the link between the physical resources that fit under the planning component and the human resources developed as part of the Learning component. Two critical resources built in the Learning component were agreeing on terminology and fundamentals of acquisitions. These resources were used extensively to guide the development of the physical planning resources found in this component.

The first resource built for planning was a due diligence plan, including a questionnaire, and report. This was built by the team as one of the first artifacts, driven by the fact it would be one of the first tools applied by IT after the identification of an acquisition target. This was successfully used early in the acquisition of Hamburg Süd along with the report template.

Another plan built early was the data migration plan, which detailed how the acquired company's data would be brought into Maersk's systems. It is important to note, that during much of the preparation, the IT M&A team worked with an assumption that they would absorb an acquired company. Therefore, they required a resource to facilitate that migration to Maersk's systems.

Other plans were developed in advance of the acquisition, as can be seen in Table 3. However, the main Planning resource built during preparation was the Maersk IT M&A Playbook. This resource was the "guide to acquisitions" describing both what an acquisition was, specifically in a Maersk IT context, and what Maersk IT would do in the case of an acquisition. It was authored by the IT M&A team, however extensively based on input from key IT stakeholders. Tens of IT staff contributed to its content, to build the plan of what IT would do in the event of an acquisition.

These resources are highly dependent on other resources that were developed. The agreed terminology and fundamentals of acquisitions were vital to have established before the playbook could be built. These were required so that when the IT M&A team engaged with the rest of IT, they could all talk about the same acquisition process, using the same language, and could advise what needed to be done.

A technique Maersk's IT M&A team used in ensuring their plans were sound, was to test them using drills. During preparation, they executed two distinctly different drills testing their plans in realistic scenarios. These drills showed the effectiveness of their plans, the overall IT readiness, and any limitations and assumptions.

When the acquisition's planning phase began, starting December 2016 with Due Diligence and moving quickly into pre-integration planning, the preconceived plans were put into action, however were adapted to fit the specific case of the integration of Hamburg Süd.

The adaption of the plans was particularly noticeable with respect to the Playbook. While it had specific action plans, the IT organization had to adapt those to deliver on the specific business goals of the acquisition. As such, a new resource was created, IT deliverables, which aligned the post-acquisition IS integration actions with the business's needs. This is the alignment of goals regularly discussed in this domain's literature (Merali and McKiernan 1993; Wijnhoven et al. 2006). This resource aligns with other findings in the literature. For example, that it is important to have plans, but that plans need to dynamically respond to the situation (Alaranta and Henningsson 2008; Busquets 2015; Robbins and Stylianou 1999). This paper shows how a novice acquirer did so, by preparing for their assumed integration approach, then adapting to the specific acquisition.

### ***Component E: Team Development***

The final component contains resources which encapsulate the development of the IT M&A team. Contributing resources to this maturation process of the IT M&A team are important to recognize, as this is the preparation other novice acquirers should undertake to build their team.

This component builds on the existing recommendation that companies use an internally staffed IT M&A team to manage the post-acquisition IS integration program from Due Diligence to post-integration (Yetton et al. 2013). It builds on this understanding by identifying specific resources that make-up the novice acquirer's IT M&A team. It also furthers the understanding by highlighting the organizational relationships developed by the team to enable them to carry out their first integration.

Present in this component were all three categories of resource. Interestingly, there is a natural split in this component into two sub-components. The first has to do with the staffing of the IT M&A team, the second is to do with their relationships and roles within the company and post-acquisition IS integration process.

The IT M&A team as a resource was created in 2015 and was initially staffed with IT business analysts who had done work deemed similar to an integration, the carving out of a brand. Over time, the size of the permanent team increased, as more skills were needed. One of the earliest specializations recruited to the team was experience in post-acquisition IS integration, a skill the team was lacking. Later, more specializations were added, such as IT knowledge, project coordination, and shipping knowledge. This was done in reaction to both the amount of work and the type of preparation work.

During the development, the team were taught additional skills to apply during the integration. Most notably all members of the team needed to vary between IT business analyst roles and project manager roles at different times, as the integration unfolded. It was vital these, and other skills were held by the team members, and that they were able to apply them in different situations as needed.

As more members were recruited to the team, a key physical resource was an onboarding kit, which quickly brought new recruits up to speed with what the team had done and what was important to know in this role. Much of the ability of the team to carry out post-acquisition IS integration was held in tacit knowledge built while preparing. It was necessary to have a tool that conveyed to new joiners, as much knowledge as possible as quickly as possible. This resource achieved this.

Critical to the execution was the onboarding of temporary agents to expand the size of the IT M&A team as the post-acquisition IS integration ramped up. The increase in staff has been discussed in past literature, notably in the context of external consultants (Henningsson and Øhrgaard 2016). In the case of Maersk's IT M&A team, they did not recruit external consultants to fill the void, instead sourcing temporary talent inside the company. Individuals were recruited based on their deep knowledge of how

Maersk ran. At this time (while planning the integration of Hamburg Süd), the team had the knowledge of acquisitions and how this one would play out, what they needed were people who could work effectively within the company. Additionally, they had to have an adaptable mindset, whereby they could work outside of the usual corporate project management methodology to get the work done in the short timeframe allowed for an acquisition.

The second grouping of resources under Team Development is the IT M&A team's working relationships with the rest of the company. It reveals the evolution of the organizational resource (the IT M&A team) from preparation to execution. The first resource in this group (also in the first group) is the organizational resource of the IT M&A team. This organizational resource was created by the then CIO, but also supported by IT leadership and corporate leadership as well. It birthed a new department, new organizational reporting lines, and relationships within the company tasked with preparing IT for post-acquisition IS integration.

During the preparation stage, most of the direction and requirements for preparation came from within IT. Although the team worked and built relationships with other groups at Maersk, they reported into IT. This changed when the acquisition of Hamburg Süd was announced and a central corporate integration team was setup. This team was made up of individuals representing key areas of the business who were responsible for coordinating the overall integration. One function represented was IT, and a senior IT Manager, who had been heading up the IT M&A team, was recruited to be IT's representative. At this time, the organizational resource of the IT M&A team became integrated into the central coordinating team via their leader's position in it. They were now part of a larger team responsible for integrating the acquired company. This was a significant change for the team as now a new group were setting goals and objectives which effectively created a new organizational resource.

The final organizational resource of the IT M&A team was to create direct relationships to each of the leaders within the integration team. This was done by aligning individual team members to integration work streams. After this change, the resource of the IT M&A team adopted a functional alignment structure, whereby team members partnered with the different integration business leaders. This alignment occurred once the integration had been designed by the overall integration team. This functional structure had been expected, and some of the human resources described above were specifically developed to address this. As discussed earlier, IT M&A team members had to adopt both IT business analyst and project manager roles in working with their functional counterparts. This was perceived during preparation and as such the human resources in the team were trained with these skills.

## **Contribution and conclusion**

The findings make a significant contribution to the literature on post-acquisition IS integration. From the outset this paper sought to address a specific gap in the research: what are the resources that a novice acquirer should develop to prepare for an acquisition. First of all, that question is answered by the list of resources identified as part of this novice acquirer's preparation. Additionally, it shows that the overall requirement can be broken into five components consisting of the resources.

Of interest, is the extended understanding of the resources required for an IT M&A team. This study showed they must develop acquisition specific knowledge and skills to be able to manage this type of project. Previous studies talking about an IT M&A team had emphasized their importance, however not discussed the critical resources underpinning this team.

Additionally, the paper extends the resource-based theory of acquisitions. The literature on post-acquisition IS integration had not previously applied the resource-based view in the context of novice acquirers. This study shows that the novice acquirer must build specialist resources to apply in post-acquisition IS integration. Building these resources, enables them to successfully carry out the overall integration, leading to value creation and competitive advantage. This study shows that this is enabled by the newly created IT resources.

Furthermore, the study identified five components, which grouped the resources into areas of focus for an IT M&A team's preparation. By presenting the resource findings as five components, the elements contributing to the broad task of preparing for post-acquisition IS integration are identified. The

components give a holistic view of the preparation. They reveal there are overarching requirements for preparation which resources collectively contribute to. The use of components shows the dimensions to enabling post-acquisition IS integration in novice acquirers and the resources required to enable them.

These findings address other gaps in the literature. Additional research had been called for into the capabilities and assets relevant for post-acquisition IS integration (Henningsson et al. 2018). This paper specifically addresses this point, identifying those used by a novice acquirer as they carried out a hybrid co-existence - absorption integration. Furthermore, it does so by organizing them into Barney's (1991) resource categories of physical, human, and organizational, and five components, providing additional depth and structure.

Additionally, Henningsson et al. (2018) call for a better understanding of the differences between serial and novice acquirers. This paper lays the foundation for such a study, by providing a rich description of the resources built by a novice acquirer to prepare for an acquisition. Previously, little attention has been paid to this group of acquirers. Future studies can build on this, by comparing these findings to those of a serial acquirer's resources for post-acquisition IS integration.

From a practical standpoint, this paper contributes greatly to the practice of post-acquisition IS integration. It has identified key resources that do not exist prior to an acquisition, which were used as part of the preparation and execution of IS integration. For the IT departments of novice acquirers, these findings can be used as a guide on how to prepare for their first acquisition. By collating the resources as components, practitioners can easily identify areas most lacking in post-acquisition IS integration resources and focus on building them. They can also use the components to manage the building of the overall IS integration capability.

There are limitations to this study. First, it is a single case study, and therefore difficult to generalize findings. Also, as this study does not investigate all integration types, it does not address the full scope of potential challenges to successful post-acquisition IS integration. To overcome these limitations, it is recommended to conduct additional studies on a range of novice acquirers and their first acquisitions.

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