

# Validating acquisition IS integration readiness with drills

*Full Paper*

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## **Abstract**

To companies, mergers and acquisitions are important strategic tools, yet they often fail to deliver their expected value. Studies have shown the integration of information systems is a significant roadblock to the realisation of acquisition benefits, and for an IT department to be ready to integrate they must begin preparations many months or years in advance. While the need for preparation is well understood, there is limited understanding as to how an IT department can become ready to acquire. This paper begins to address this gap by drawing on drills (usually associated with emergencies), to understand how an IT department can use them to validate their integration plans. The paper presents a case study of two drills used to validate an IT department's readiness to carry out acquisition IS integration, and suggests seven acquisition IS integration drill characteristics others could utilise when designing their own drills.

## **Keywords (Required)**

Acquisition IS integration, Drills, Mergers and Acquisitions, Information Technology.

## **Introduction**

Mergers and acquisitions (shortened to 'acquisitions') are strategic tools used by companies for many reasons including gaining new customers, attaining new technologies, or corporate evolution (Carayannis 2008; Pradhan and Abraham 2004; Toppenberg et al. 2015). Acquisitions represent a significant investment for companies with over \$4.5 trillion spent on deals in 2015 (Rehm and West 2015). Despite the large investments, acquisitions generally fail to deliver their anticipated value, with reports putting the failure rate around 70% (Cartwright 2002; Christensen et al. 2011; Marks and Mirvis 2011).

Contributing significantly to both the expected benefits of an acquisition and the high failure rate are the company's Information Systems (IS). IS benefits acquisitions through 1) cost savings resulting from organisational synergies, and 2) the enablement of business practices. These contributions in sum can account for up to 60% of a deal's value (Sarrazin and West 2011). However, despite its high contribution to the overall value of the deal, integration of the two companies' IS is cited as one of the most common causes of acquisition failure (Curtis and Chanmugam 2005; Posnick and Schenborn 2007). Considering the value dependent on IS, and the low acquisition success rate caused by IS integration failure, it is vital that research finds ways to prevent these problems in the future.

To successfully carry out an acquisition IS integration project, an Information Technology (IT) department, must dedicate a significant amount of time (measured in many months or years) to getting their systems, people, and processes 'ready to acquire' (Yetton et al. 2013). It is too late to begin this preparation work after an acquisition is announced; it must be started well in advance. While this is known, there is a lack of research into how to establish the necessary readiness. The problem of readiness is especially relevant for novice acquirers, to whom acquisitions are a one off strategic event that cannot be fully experienced until the acquisition is finished. Unlike serial acquirers, who hone their acquisition IS integration capabilities over many acquisitions, novice acquirers cannot continually learn from their past.

Considering the upfront investment and (for novice acquirers) inexperience in executing an acquisition IS integration project, it is important that an IT department validate their IS integration plans and capabilities before an acquisition arrives. This paper seeks to address this by answering the research question: *How can an IT department validate their readiness to carry out an acquisition IS integration?*

This paper addresses this question through an embedded case study of a company who used drills as a means to validate their readiness. Similar to a fire drill, the company used two different approaches to simulate different acquisition conditions to gauge their IT department's ability for handling such events.

Believing an acquisition was likely in the near future, in early 2015 ShippingCo's<sup>1</sup> CIO instructed a senior IT manager to oversee the creation of a dedicated IT mergers and acquisition team (IT M&A team), who would prepare ShippingCo's IT department for carrying out an acquisition IS integration. After months of preparation, the IT M&A team had developed plans to follow, tools to use, and identified key stakeholders to work with to carry out such a project. Furthermore, they had assessed ShippingCo's IS's scalability levels, and staffing skills and capacities in the broader IT department.

After so much preparation, the IT M&A team needed to validate their readiness. This would entail testing their plans to ensure key IT people could perform their duties, and the IS could handle any changes an acquisition would introduce. Some of their preparation work had been theoretically validated through audits, reports, and formal agreements from IS owners. However, the IT M&A team needed a more rigorous validation method that would assess their acquisition IS integration plans and discover any gaps.

To achieve this, ShippingCo carried out two different drills. The drills were executed by different members of the team, involved different organisational stakeholders, and tested different dimensions of the IS integration. Although different, both drills validated the readiness of the plans, people, and IT resources through simulating the events of an acquisition.

By analysing this case, this paper contributes to the research into acquisition IS integration by introducing drills as a lens through which to assess readiness. Furthermore, it provides practical learnings that IT departments and project managers can follow to better prepare themselves for an integration.

## Literature Review

### *Acquisition IS integration*

Research has studied the challenge of acquisition IS integration since the late 1980's. Early work explored the concept, and sought to understand how the relationship between the business and the IT department influenced acquisition IS integration (Johnston and Yetton 1996). A key contribution was the identification of four IS integration methods and the business rational behind each other them (Buck-Lew et al. 1992; Henningsson and Øhrgaard 2016; Yetton et al. 2013). At one extreme is *absorption* whereby one company's IS are maintained and the others' are decommissioned. At the other end of the spectrum is *co-existence*, where both companies' IS are left as they were before the acquisition. In between is a *best of breed* approach, where both companies adopt one overall IS landscape, but a selection process determines which system will be retained in cases where two systems support the same process. Finally, companies following the *renewal* method deploy a new IS landscape to the combined company, discarding both companies' legacy systems. These four methods are distinctly different approaches to IS integration, used in different acquisition contexts; readiness to perform one, does not indicate readiness to perform others.

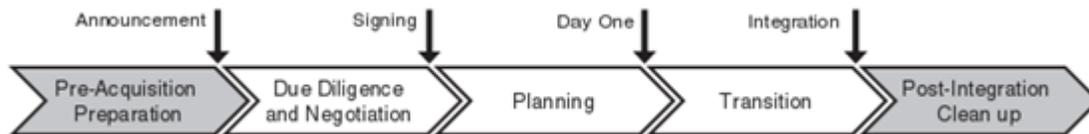
Irrespective of the method for IS integration, the literature agrees on a high level approach, shown in Figure 1 (Henningsson 2015; Henningsson and Kettinger 2016; Toppenberg et al. 2015). Research shows there is insufficient time for an IT department to prepare for an acquisition after one has been announced; the preparation work must be done during the *pre-acquisition preparation* phase (Yetton et al. 2013). However, the information that informs the decision of which IS integration approach to follow is usually not attained before due diligence. Furthermore, research has shown that IT departments can use different resource configurations to manage the IS integration (Henningsson and Øhrgaard 2016).

Considering these conditions: preparation takes a long time, there are different acquisition IS integration methods to prepare for, and there are different ways to handle integrations, how can a company know if their preparations have led them to be ready to acquire? This question is especially important for novice acquirers. Research shows that serial acquirers, those who acquire more than two companies every three years, compound their learning over many acquisitions, improving their readiness (Henningsson 2015;

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<sup>1</sup> ShippingCo is a pseudonym for a global container shipping company

Kengelbach et al. 2011). However, novice acquirers, those who do not acquire regularly, cannot learn from their recent past to improve their acquisition IS integration plans.



**Figure 1 – Generic acquisition integration approach. Adapted from: (Henningsson 2015)**

An acquisition, and the subsequent IS integration project, are significant and unique events that can be prepared for, but not truly experienced until a real one happens. In this way, they are similar to events requiring formalised drills to test readiness for, such as a building fire evacuation. In these cases, it is likely, although not known when, an event will occur. However, when it does those affected must respond by carrying out a predefined plan, not improvise a response. This matches the case of acquisition IS integration. When an acquisition will occur is unknown, but when it does the group responsible for responding must be ready with the plans and resources for action. Due to this similarity, this paper investigates the contribution drills can make, as a tool to evaluate an IT department's readiness to carry out acquisition IS integration.

### ***Validating readiness with drills***

Many events are rare, unique, and cannot be experienced until the real thing occurs. While some of these may be considered positive (e.g. winning the lottery), many are not and result in negative consequences, such as natural or man-made disasters, or (within the field of IS) catastrophic IT failure (Kendall et al. 2005; Martincic and Obrentz 2008; Simpson 2002). In anticipation of such events, stakeholders such as governments, emergency services, communities, and IT departments prepare by devising response plans. However, they do so without knowing when such an event will occur, nor its magnitude when it strikes.

Despite these challenges, not preparing for such events is not an option; therefore, these groups create response plans, and validate them using drills. A drill is a scenario-based test of a plan, and the people and resources involved in its execution (Anderson et al. 2005; Perry and Lindell 2003; Simpson 2002). Drills potentially contribute three key benefits. One, a drill evaluates the effectiveness of a group's preparation in a controlled situation, with the expectation that they learn from their experiences to be more ready when faced with the real situation (Simpson 2002; Zigmont et al. 2011). Two, drills test theoretical knowledge gained during preparations in a bid to identify weaknesses prior to an actual event (Alexander 2000; Martincic and Obrentz 2008). Three, through participant selection, the group can ensure all involved have experienced the simulation and know their duties (Anderson et al. 2005).

However, the effectiveness of drills is subject to a number of limitations. They can be costly and time consuming to hold, and if people are aware it is a drill, they may not participate as they would in a real event (Smith and Trenholme 2009; Zigmont et al. 2011).

Despite the challenges, drills are a widely accepted mechanism for validating preparedness. Applications include training doctors in operating theatres, preparing businesses for severe interruptions, and ensuring critical infrastructure sites (such as nuclear power plants) can quickly respond to disasters (Anderson et al. 2005; Epich and Persson 1994; Martincic and Obrentz 2008). In these examples, drills validate a group's readiness to respond to a foreseeable event that will not be truly experienced until the actual event occurs.

The literature on drills discusses two types, tabletop and functional, which are differentiated based on the degree of participant involvement (Simpson 2002). During a tabletop drill, participants talk through a scenario, evaluating their responses in a relatively safe place, such as a classroom (Simpson 2002). Tabletop drills remove the pressure of real-time decision making, and are instead often used to train leaders in what to expect, and how to respond (Hsu et al. 2004). By contrast, functional drills involve playing out designed, real-time scenarios, usually with actors to augment the unfolding of the events (Simpson 2002). These two drill types demonstrate how different a drill can be. It could be as informal as managers discussing a disaster recovery plan, through to an inter-governmental response to a man-made catastrophe. Despite their differences, both drills are scenario-based tests of a plan, and the people and resources involved in its execution (Anderson et al. 2005; Perry and Lindell 2003; Simpson 2002).

Based on the literature, Figure 2 shows a high level timeline for a drill (Alexander 2000; Epich and Persson 1994; Perry and Lindell 2003). Prior to a drill beginning, a plan is developed for a specific group to follow in the event of a foreseeable event. The drill begins with the occurrence of a simulated event, triggering a reaction from specific people. Next, they carry out their response to the foreseeable event by executing their predefined plan. Finally, the drill ends and participants review what occurred to validate their plan and actions, and learn from the events that unfolded.



**Figure 2 – Timeline for a drill.**

Similar to the events described in the drill literature, an acquisition is an event that cannot be truly experienced until a real one occurs. Although not as physically dangerous as a natural disaster, it is still unique, unpredictable, and requires advance preparation. Considering these similarities, it seems pertinent to investigate the contribution that drills could make to validating an IT department's readiness for acquisition IS integration. This paper begins this investigation through the analysis of a case study whereby an IT department undertakes preparation activities to ready themselves for an acquisition, and then executes two drills to validate their plans. It uses the framings of acquisition IS integration and drills presented in this section to describe the case and analyse the findings.

## Methodology

### *Case context*

The research followed the case study method, as it sought to understand how a real world phenomena, that the researcher had little control over, worked (Yin 2009). It observed ShippingCo's IT department over 18-months as they installed a dedicated IT M&A team to prepare IT for an acquisition. There were two key reasons for the selection of ShippingCo. First, their IT department was actively preparing for an acquisition without an identified acquisition target. This means that the study could observe their preparation in real time. Second, although they had made acquisitions previously, their last acquisition was 10 years earlier, and few processes and little knowledge remained from that event. This made ShippingCo an ideal case study; they were a large company, actively preparing for an acquisition that may not happen, and they were developing their acquisition IS integration plan more or less from scratch.

### *Data collection and analysis*

Qualitative data was obtained through 25 semi-structured interviews conducted over 12-months. Selected interviewees were either part of the IT M&A team, or directly involved in the drills. Interviewees were representative of the roles involved in the drills and preparations including the CIO, IT M&A team members, and drill participants. An interview guide was developed to ensure interviews followed a similar approach. Based on that, semi-structured interviews were used as they allow for an in depth investigation of an under researched topic, and are one of the recommended data collection methods for strong case studies (Saunders 2011; Yin 2009). The interviews were between the author and the interviewee, and the audio of the conversation was recorded. Additionally, the author maintained a continued presence as a member of the IT M&A team during this time, which gave access to supporting documentation.

Each recording was transcribed, and then the transcription was verified against its original recording to ensure its accuracy. Transcriptions were added to the analysis software, NVivo, to be coded against others. They were analysed using the incident-to-incident variation of the constant comparison method, utilising memos to support coding decisions (Charmaz 2006; Corbin and Strauss 2008; Glaser and Strauss 1967). The process for coding was to read the transcripts to identify incidents describing the characteristics of the drills. Incidents were compared to previously coded incidents and their supporting memos. If an incident matched an existing code, the new incident was coded the same, if not a new code was created. This process of incident-to-incident constant comparison continued throughout the analysis for all interview transcripts. After coding all transcripts once, the author repeated the process to code all transcripts a second time, ensuring all codes had been compared thoroughly and were correctly assigned. The extrapolated codes revealed characteristics of acquisition IS integration drills.

## Case description

Using the timeline for a drill (Figure 2) as a guide, this section details the two drills ShippingCo executed to validate their IT department's readiness to carry out an acquisition IS integration project.

### **Drill 1**

In Drill 1, the IT M&A team used a functional drill to validate their ability to absorb a similar company onto their IT landscape. They did this by simulating an acquisition of their sister company (SisterCo).

#### **Developing a plan for a foreseeable event**

ShippingCo's IT M&A team had prepared to carry out an absorption IS integration, as they believed any acquisition would be of a smaller shipping company who would adopt their IT systems.

During their pre-acquisition preparation, the IT department mapped ShippingCo's core business processes to the IS supporting them, creating a IS/business capability landscape map. One of the first planned steps to carrying out an absorption would be to go to the target company and replicate this model. Doing so would allow the two IS landscapes to be compared, enabling the absorption IS integration approach as it would reveal which of ShippingCo's IS would replace each of SisterCo's IS.

*"If you buy a containership company the goal would be to integrate it fully... We said in the principles that we will move to our systems."* (Former) Head of IT M&A

#### **Starting the simulation**

Drill 1 was initiated by the former Head of IT M&A who instructed the IT M&A team to validate their absorption approach by integrating SisterCo through a mock acquisition. SisterCo were already on ShippingCo's IS infrastructure, however were using a different suite of software. The overall objective of the project was to migrate SisterCo onto ShippingCo's IS and decommission their legacy systems, just as they would when following the IS integration absorption method. However, the first step was to create an IS/business capability landscape map of SisterCo that could be used to direct the absorption.

#### **Executing the drill**

Over two weeks the IT M&A team carried out the first step to absorbing SisterCo, mapping their IS/business capability landscape. Involved were the IT M&A team, ShippingCo's IT organisation, external consultants, and SisterCo staff. The IT M&A team coordinated the drill, and owned the tools and plans being validated. ShippingCo IT analysed SisterCo's IS and business processes, generating the knowledge for the model. The external consultants were brought in to offer acquisition IS integration guidance. Finally, the staff from SisterCo provided insights to their business processes and IT landscape, retrieving documentation, and answering questions. After two weeks they had successfully created a IS/business capability landscape map for SisterCo, which they compared to ShippingCo's.

*"We got through the whole process of looking at their business capabilities, comparing that to our mapping on top of our applications and their applications, identifying the gaps."* IT M&A Programme Leader

#### **Reviewing the drill**

Although the overall project of integrating SisterCo was put on hold due to budget constraints, Drill 1 successfully proved that ShippingCo's initial plan to compare the two landscapes worked. It validated the first stage of their planned absorption integration. Through Drill 1 the IT M&A team identified where the two company's business processes overlapped, and thereby where they could directly apply the absorption IS integration method. However, they also found some businesses processes that were not executed by ShippingCo that could not be supported by their existing IS; these processes could not be 'absorbed'.

Furthermore, Drill 1 validated staffing requirements. The IT M&A team, the IT staff, and SisterCo employees, performed as expected during Drill 1; the external consultants however, failed to deliver the

anticipated value. They were lacking sufficient knowledge of the industry and acquisitions to assist. To compensate, the IT M&A team deferred to their theoretical knowledge on acquisitions to fill this void.

In a relatively short time, the IT M&A team had analysed a foreign company's IS and developed a comparable IS/ business capability landscape map. Drill 1 validated the usefulness of the analysis tool, refined the execution process, and revealed limitations to the effectiveness of the chosen consultants.

*“So we didn't get to bring them on the systems, but for us it was as good an exercise as if we'd bought somebody.”* IT M&A Programme Leader

## **Drill 2**

Using an enhanced tabletop drill, ShippingCo's IT M&A team used Drill 2 to validate whether the IT department was ready to provide the IS infrastructure to enable selected connectivity for Day One.

### **Developing a plan for a foreseeable event**

Day One (as shown in Figure 1) is the day the acquisition transaction is complete, and the two companies legally become one. On this day, there is an expectation that some IS infrastructure is in place, connecting the companies. With a well-rounded understanding of the technical possibilities, the business operations, and newly hired employees with acquisition experience, the IT M&A team developed a plan for what IS infrastructure would be required on Day One. These included access to certain applications, video conferencing facilities, and ShippingCo laptops for some employees. These were identified as necessary Day One IS infrastructure services irrespective of the target or the acquisition IS integration method.

To install these infrastructure services, ShippingCo's IT needed sufficient lead-time and resources. As such, the purpose of Drill 2 was to validate the readiness of the IT department to deliver them.

*“There is an order to this... you get the base, the foundation which is the infrastructure and the connectivity.*

*So what we did first was, within the team, a few of us went and we developed what we thought we could and should do, and what we thought the business would want for Day One.”* IT M&A Project Manager

### **Starting the simulation**

To validate the IT department's readiness, the IT M&A team believed they needed more than a simple tabletop drill. They were concerned that a request for a full day meeting with key stakeholders would be rejected, as IT staff were too busy to commit so much time in the absence of a real acquisition. To overcome this, the IT M&A team created a realistic simulation upon which to carry out the drill.

Drawing inspiration from fire drills, and the story of the First Army Group<sup>2</sup>, the IT M&A team created a new company. They identified likely acquisition targets and based on publically available information on them (e.g. fleet sizes, staff numbers, and IT systems and vendors) created NewShippingCo.

The IT M&A team launched the simulation by reaching out to IT staff required for the drill. However, instead of openly inviting them to a meeting, they approached participants individually and discretely, asking them to keep the day free for a 'special workshop'. The discretion gave the participants the impression they were being brought into something secret.

*“So we literally built this company NewShippingCo from the ground up.*

*Another big part of this was the way that we engaged the stakeholders... initially we carved them all away from the desk so that they can speak privately via their mobile phones. So just like we will bring somebody in under NDA...”* IT Business Analyst

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<sup>2</sup> The First United States Army Group was a fictitious Army Group of World War II, created to deceive the German army [https://en.wikipedia.org/wiki/First\\_United\\_States\\_Army\\_Group](https://en.wikipedia.org/wiki/First_United_States_Army_Group)

## Executing the drill

On the day of Drill 2, three IT M&A team members and six IT staff met in a quiet, discrete room. Without telling participants it was a drill, the IT M&A team introduced the IT staff to NewShippingCo, handing out individually numbered information packs that participants signed out for and returned at the end of the day. After introducing NewShippingCo, the IT M&A team presented the date for Day One and the IS infrastructure requirements. Based on these goals, the IT staff began evaluating their path to delivering the IS connectivity. Working backwards from the date, the participants evaluated whether the outcome was achievable, and then determined actions and dependencies.

*“We went into [Drill 2] with a defined list of outcomes wanted from our stakeholders.” IT Business Analyst*

## Reviewing the drill

By the end of the day, Drill 2 had achieved three things. First, it validated the IT department’s level of preparedness to provide Day One connectivity. They had the technical solutions to enable the desired connectivity; however, dependencies on suppliers and other departments prevented them from starting. Second, in having their IS connectivity plan validated, the IT M&A team could confirm with the business, what IS services were possible for Day One, as well as how changes to Day One timelines affected those options. Third, they had a validated template for Day One integration that could be reused once a real acquisition target had been identified and real data could replace the simulated NewShippingCo data.

*“I think what [Drill 2] did for us, that session, that workshop, confirmed that what we wanted to do we could do.” IT M&A Project Manager*

## Findings and Discussion

Both Drills evaluated a plan, and the people and resources used in its execution, resulting in a better understanding of how acquisition IS integration should be done at ShippingCo. Emphasised through a discussion of their similarities and differences, this section presents findings drawn from the analysis. The study identified seven characteristics of acquisition IS integration drills, which are summarised in Table 1.

<b>Characteristics of acquisition IS integration drills</b>
<b>Tailor drills to the different phases of the acquisition IS integration project</b>
<b>Business rationale is a requirement for post-Day One IS integration planning</b>
<b>Functional acquisition IS integration drills can be derived from like experiences</b>
<b>Augment tabletop drills with functional elements to make them more effective</b>
<b>Increase the realism of the acquisition IS integration drill to increase participation</b>
<b>Include the right mix of IT, business, and acquisition participants and skills</b>
<b>Ensure the desired outcome (new IS state) is clear and communicated</b>

**Table 1 - Characteristics of acquisition IS integration drills**

### ***Tailor Drills to the acquisition phases***

The two drills differed in goal definition, personnel involved, and tools used. This was because Drills 1 and 2 validated different phases of the acquisition (Figure 1). Drill 1 validated a plan for application consolidation during the transition phase, while Drill 2 validated IT’s readiness to deliver specific a IS infrastructure configuration for Day One. Thus, validating the different plans required two different simulations and drills. Drawing on this, the first characteristic of acquisition IS integration drills is that they should be tailored towards the different phases of the acquisition IS integration project. Applying the specific details or the approach developed for Drill 1, would not have yielded results if used in Drill 2.

### ***Business rationale is required for post-Day One planning***

Further analysis of the two drills revealed how the IS integration method affected each drill differently. In the case of a real acquisition, the decision as to which IS integration method to follow would be driven by the purpose of the deal. In Drill 1, the IT M&A team decided to follow the absorption approach; they needed that decision in order to know what to do with SisterCo's IS. Conversely, in Drill 2, the IT M&A team did not select an IS integration method to follow, as it was not required for them to achieve their goal; the planned IS connectivity would be required on Day One irrespective of the IS integration method.

Based on this, after enabling Day One connectivity, the acquisition IS integration project requires business input to guide the selection of the IS integration method. Prior to Day One, though the approach is mostly standard for all methods. From this, the characteristic of, acquisition business rationale is required to drive post-Day One acquisition IS integration method selection and planning, is derived.

### ***Use like experiences as functional drills***

One of the criticisms of functional drills was their high expense. In Drill 1, ShippingCo found a way to carry out a functional drill while at the same time delivering a practical, value driven outcome. The drill to integrate a similar company onto their IS suite not only validated their integration approach, it was also to give a subsidiary company better technologies to operate with. As it was not an acquisition, ShippingCo had to simulate their approach to make it like an acquisition; they even hired external consultants to help hone their acquisition mindset. In this way, Drill 1 aligns with the definition of a drill; however, this case shows how a drill can add more value than just validating plans. This shows that functional drills can be derived from organisational changes, and additional benefits can be gained. Unfortunately, as SisterCo was connected to ShippingCo's IS infrastructure, they could not carry out a similar simulation for Drill 2.

### ***Enhance the tabletop drills to make them more functional***

Although not a functional drill, Drill 2 was more detailed and realistic than the earlier description of a tabletop drill. The formalisation of the simulation and amount of detail that went into creating a realistic acquisition target, NewShippingCo, added a functional dimension. Drill 2 was an extended tabletop drill, as it simulated the realistic approach key IT stakeholders would follow to initiate their IS integration project; however did so in a safe environment without affecting ShippingCo's IS. Blending the drill resulted in a more rigorous validation of the IT department's readiness. Coming from this, is the characteristic that tabletop drills can be more effective when augmented with functional elements.

### ***Increase the realism of drills***

Building on the previous characteristic, the creators of Drill 2's scenario set out to make it as real as possible, as such the participants believed they were working on a real acquisition and acted accordingly. Similarly, when executing the integration of SisterCo, the IT M&A team treated the event as a real acquisition. This degree of realism is a departure from the literature on drills. The drill literature focuses on fabricated simulations where people knew they were drilling, such as for a surgical operation. In the drills performed by ShippingCo, those involved participated in 'real events', either integrating another company or believing they were working on a real Day One plan. Due to this, the participation level was high, and those involved in the drills took them seriously. This leads to another characteristic: to increase the level of participation, drill organisers should create a high level of realism in their simulations.

### ***Right mix of people and skills***

A key objective of a drill is to test the response of the people involved in the plan, therefore the right respondents must be involved. In Drill 1, the participant groups were the IT M&A team, IT staff, staff at SisterCo, and external consultants. At the end of the drill the people and their ability to execute the plan was validated for the first three participant groups, however unfortunately not for the consultants. There were two participant groups involved in Drill 2 whose roles and skillsets were validated. In both cases, specific skills were identified as being required for the drill, and people matching those roles were selected. As was seen from these drills, it is imperative that the right people and skills be selected.

Building on this, the case showed there are three key skillsets that contribute to the drills for IS integration: IT, business, and acquisition skills. Drawing on these two points comes another characteristic, that there must be the right mix of people adequately skilled in business, IT, and acquisitions to carry out the drill as though it is a real acquisition IS integration project.

### **Clear drill goals**

To execute the drill, organisers must have a clear vision of the drill's purpose, that is what the drill is validating and what should be the outcome. For Drill 1 the purpose was to absorb SisterCo onto their IS software suite. The first step of this was to analyse SisterCo and create a business/ IS landscape model. The plan was validated against the simulation, and most people involved were able to execute their jobs. Likewise, in Drill 2 the IT M&A team defined a clear purpose for executing the drill, to validate the IT department's readiness to enable Day One IS connectivity, which the simulation validated.

A difference between drills presented in the broader drills literature, and the drills in this study is the desired end state or goal. In literature, the goal is usually to validate a plan that overcomes adversity to return to a 'normal' state. However, in this study, the goal is to validate a plan that will enact significant organisational change, resulting in a new IS state. In both Drills 1 and 2, all involved were aware of the intended new IS state as part of the triggering of the drill. Derived from this is the characteristic of having and clearly communicating the goal of the acquisition IS integration drill, the desired IS state.

### **Conclusion**

Acquisitions are great opportunities for companies, however are notoriously difficult to do well, especially the integration of the two firm's IS. To carry out an acquisition IS integration project successfully; IT must prepare in advance of an acquisition announcement. This study analysed how ShippingCo's IT M&A team used drills to validate their IT department's readiness. The analysis revealed seven characteristics of acquisition IS integration drills that others can apply when developing their own validation drills.

The paper contributes to the literature on acquisition IS integration, as it demonstrates a novel approach to preparing for acquisition IS integration. Previous literature had shown the importance of IT departments preparing in advance, but had provided little guidance as to how. These findings contribute to solving this puzzle by providing insights in to how to validate the IT readiness. Additionally, the paper contributes to the practice of acquisition IS integration (particularly for novice acquirers) by describing two drills that test different phases of the acquisition IS integration process, and by presenting drill characteristics practitioners can include in their own IS integration validation drills.

As a limitation, this is a single case study, therefore generalising the findings should be done cautiously. Furthermore, ShippingCo was preparing for a particular integration method (absorption), and this mindset may have influenced their actions. Additionally, Drill 1 was executed on a subsidiary company, so cultural challenges (usually associated with acquisitions) may have been limited. Despite these, the case reveals useful and novel insights into how an IT department can use drills to validate their readiness to carry out acquisition IS integration.

### **REFERENCES**

- Alexander, D. 2000. "Scenario methodology for teaching principles of emergency management," *Disaster Prevention and Management* (9:2), pp. 89–97 (doi: 10.1108/09653560010326969).
- Anderson, E. R., Black, R., and Brocklehurst, P. 2005. "Acute obstetric emergency drill in England and Wales: A survey of practice," *BJOG: An International Journal of Obstetrics and Gynaecology* (112:3), pp. 372–375 (doi: 10.1111/j.1471-0528.2005.00432.x).
- Buck-Lew, M., Wardle, C. E., and Pliskin, N. 1992. "Accounting for information technology in corporate acquisitions," *Information & Management* (22:6), pp. 363–369.
- Carayannis, E. G. 2008. "Knowledge-driven creative destruction, or leveraging knowledge for competitive advantage Strategic knowledge arbitrage and serendipity as real options drivers triggered by co-opetition, co-evolution and co-specialization," *Industry and Higher Education* (22:6), pp. 343–353.
- Cartwright, S. 2002. "Why mergers fail and how to prevent it," *Business: The Ultimate Resource*.
- Charmaz, K. 2006. "Constructing grounded theory: A practical guide through qualitative research,"

SagePublications Ltd, London.

- Christensen, C. M., Alton, R., Rising, C., and Waldeck, A. 2011. "The big idea: The new M&A playbook," *Harvard Business Review* (89:3), pp. 48–57.
- Corbin, J., and Strauss, A. 2008. *Basics of qualitative research* (3rd ed.), Thousand Oaks: Los Angeles: Sage.
- Curtis, G. A., and Chanmugam, R. 2005. "Reconcilable differences: IT and post-merger integration," *Outlook* (2:June), pp. 81–85.
- Epich, R., and Persson, J. 1994. "A fire drill for business.," *Information Strategy: The Executive's Journal* (10:2), Taylor & Francis Ltd, p. 44.
- Glaser, B. G., and Strauss, A. L. 1967. "The Discovery of Grounded Strategies for Qualitative Research," *London: Wiedenfeld and Nicholson* (81).
- Henningsson, S. 2015. "Learning to acquire: how serial acquirers build organisational knowledge for information systems integration.," *European Journal of Information Systems* (24:2), pp. 121–144.
- Henningsson, S., and Kettinger, W. 2016. "Managing IT Integration Risk in Acquisitions," *MIS Quarterly Executive* (2016:March), MIS Quarterly Executive, pp. 2–3.
- Henningsson, S., and Øhrgaard, C. 2016. "IT Consultants in Acquisition IT Integration," *Business & Information Systems Engineering* (58:3), pp. 193–212 (doi: 10.1007/s12599-016-0433-5).
- Hsu, E. B., Jenckes, M. W., Catlett, C. L., Robinson, K. A., Feuerstein, C., Cosgrove, S. E., Green, G. B., and Bass, E. B. 2004. "Effectiveness of hospital staff mass-casualty incident training methods: a systematic literature review," *Prehospital and Disaster Medicine* (19:3), pp. 191–199.
- Johnston, K. D., and Yetton, P. W. 1996. "Integrating information technology divisions in a bank merger Fit, compatibility and models of change," *The Journal of Strategic Information Systems* (5:3), pp. 189–211.
- Kendall, K. E., Kendall, J. E., and Lee, K. C. 2005. "Understanding Disaster Recovery Planning through a Theatre Metaphor: Rehearsing for a Show that Might Never Open.," *Cais* (16), pp. 1001–1012.
- Kengelbach, J., Klemmer, D. C., Schwetzler, B., Sperling, M. O., and Roos, A. 2011. "How the Top Serial Acquirers Create Value," *Boston Consulting Group*.
- Marks, M. L., and Mirvis, P. H. 2011. "Merge Ahead: A Research Agenda to Increase Merger and Acquisition Success," *Journal of Business and Psychology* (26:2), pp. 161–168.
- Martincic, R., and Obrentz, L. 2008. "Lessons were learnt from a large-scale nuclear international readiness.," *IAEA Bulletin* (50:September), pp. 54–55.
- Perry, R. W., and Lindell, M. K. 2003. "Preparedness for Emergency Response : Guide- lines for the Emergency Planning Process," *Disasters* (27:4), pp. 336–350.
- Posnick, J., and Schenborn, J. 2007. "Executives Report that Mergers and Acquisitions Fail to Create Adequate Value," (available at <https://newsroom.accenture.com/subjects/research-surveys/executives-report-that-mergers-and-acquisitions-fail-to-create-adequate-value.htm>).
- Pradhan, J. P., and Abraham, V. 2004. "Overseas mergers and acquisitions by Indian enterprises: patterns and motivations.,"
- Rehm, W., and West, A. 2015. "M&A 2015: New highs, and a new tone," McKinsey & Company Corporate Finance Practice.
- Sarrazin, H., and West, A. 2011. "Understanding the strategic value of IT in M&A," *McKinsey Quarterly* (12:1), pp. 1–6.
- Saunders, M. N. K. 2011. *Research methods for business students, 5/e*, Pearson Education India.
- Simpson, D. M. 2002. "Earthquake Drills and Simulations in Community-based Training and Preparedness Programmes.," *Disasters* (26:1), pp. 55–69 (doi: 10.1111/1467-7717.00191).
- Smith, S. P., and Trenholme, D. 2009. "Rapid prototyping a virtual fire drill environment using computer game technology," *Fire Safety Journal* (44:4), pp. 559–569 (doi: 10.1016/j.firesaf.2008.11.004).
- Toppenberg, G., Shanks, G., and Henningsson, S. 2015. "How Cisco Systems Used Enterprise Architecture Capability to Sustain Acquisition-Based Growth," *MIS Quarterly Executive* (14:4), pp. 151–168.
- Yetton, P., Henningsson, S., and Bjørn-Andersen, N. 2013. "Ready to Acquire": *The IT Resources Required for a Growth-by-Acquisition Business Strategy*. *MIS Quarterly Executive* (Vol. 12), MIS Quarterly Executive, pp. 19–35.
- Yin, R. 2009. *Case study research: Design and methods* (4. ed.), Los Angeles.
- Zigmont, J. J., Kappus, L. J., and Sudikoff, S. N. 2011. "Theoretical Foundations of Learning Through Simulation," *Seminars in Perinatology* (35:2), Elsevier Inc., pp. 47–51.