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Using the Business Ontology and Enterprise Standards to Transform Three Leading Organizations

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ABSTRACT

This case story covers the exciting journey of three growth organizations and how they applied the Global University Alliance developed Business Ontology and various enterprise standards to innovate and transform their organization. The paper does so by firstly elaborating on the theory, then it introduces the three organizations, discussed the challenges and issues at hand. Followed by a discussion of their journey and the solution description. Various details about the journey and how enterprise standards where used will be shared, including how these standards assisted these organizations in rethinking their business model, the operating model which effected both the value, revenue and service model as well as the performance and cost model. The case concludes with detailed lessons learned and how the business ontology and standards helped the organizations changed.

KEYWORDS

Apply Enterprise Standards, Back Office Consolidation, Business Governance, Business Model, Business Ontology, Business Process Management, Enterprise Optimization, Enterprise Semantics, Innovation & Transformation, Knowledge Sharing, Mergers & Acquisition, Meta Model, Operating Model, Organizational Capabilities, Professional Services Administration, Shared Service Operations, Strategic Choices, Strategic Position, Value Lifecycle

1. A DISCUSSION ON THE THEORY APPLIED

We understand that case studies are a good way to learn from the knowledge gained and the experiences had by others. This is not a new phenomenon or concept; it is the basic reason of why so many organizations want their employees to work together, collaborate, and create the right circumstances for them to share knowledge. We have found that people not only learned more, but also gained the ability to apply some of these practices within their own organizations. It is also out of that reason we take the time to document the journey discussed in this paper. Although the time needed to document and compare these experiences and concepts can be daunting task in itself, we publish this case story to share our experiences using the business ontology in combination with various enterprise standards. We will therefore first describe the theory and concepts used from the Business Ontology, and then list the standards that we used.

From the Business Ontology developed by the Global University Alliance (GUA), we both used:

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- The business ontology meta objects. (von Rosing & Laurier, 2015; von Rosing & von Scheel, 2016)
- The clearly defined definitions in terms of the existing taxonomy (von Rosing & Laurier, 2015; von Rosing & von Scheel, 2016)
- The semantic relationships of the meta objects and thereby the meta models (von Rosing & Laurier, 2015)
- Working in layers (von Rosing & von Scheel, 2015)
- Association between meta objects and layers (von Rosing & von Scheel, 2016)
- Relationships between meta objects and artefacts i.e. models (von Rosing & Laurier, 2015; von Rosing, Urquhart, & Zachman, 2015)

To ensure that we have a common understanding and the right way of thinking across the three organizations discussed in this paper, we used the following publications:

1. An Introduction to the Business Ontology (von Rosing & Laurier, 2015)
2. Using the Business Ontology to develop Enterprise Standards (von Rosing & von Scheel, 2016).
3. The Value of Ontology (von Rosing, Laurier & Polovina, 2015)
4. Using a Business Ontology for Structuring Artefacts: Example - Northern Health" (von Rosing, Urquhart & Zachman, 2015).
5. Using the Business Ontology to develop a Role Ontology (von Rosing and Zachman, 2016).
6. The relationship between Ontology and Modelling concepts: Example Role Oriented Modelling (Hove, von Scheel, Arzumanyan, Zachman, 2016).
7. Applying Ontology and Standards for Strategy focused execution: Example SAL Heavylift (Okpurughre, von Rosing, & Grube, 2016).
8. Applying Ontology and Standards to develop Smart Applications: Example Dutch Railway (Bach, von Rosing, & von Scheel, 2016).

In order to not reinvent the wheel, we decided very early in the process that we wanted to apply existing market standards. In doing so, we wanted to make sure that the standards we used were built on best practices, industry practices and leading practices from other organizations. Not just something that only a few organizations or people had previously agreed on within the standards organizations. We decided to use the enterprise standards body LEADing Practice that built their enterprise standards based on the business ontology and studied patterns i.e. practices. In addition to that we applied standards from the software standards body Object Management Group (OMG), the engineering standards body Institute of Electrical and Electronics Engineers (IEEE) as well as ISO (International Organization for Standardization).

For your reference we will list the specific standards with their official specifications that we have used during the execution of this project.

From the enterprise standard body LEADing Practice, we used the following:

- Stakeholder Reference Content (ID number: LEAD-ES20002EX)
- Requirement Modelling Reference Content (ID number: LEAD-ES20003PG)
- Value Chain Reference Content (ID number: LEAD-ES20022PGBC)
- Business Model Reference Content (ID number: LEAD-ES20004BC)
- Competency Modelling Reference Content (ID number: LEAD-ES20013BC)
- Capability Modelling Reference Content (ID number: LEAD-ES20017ALL)
- Revenue Model Reference Content (ID number: LEAD-ES20006BC)
- Value Model Reference Content (ID number: LEAD-ES20007BCPG)
- Service Model Reference Content (ID number: LEAD-ES20008BCBS)
- Performance Model Reference Content (ID number: LEAD-ES20009BCPG)

- Operating Model Reference Content (ID number: LEAD-ES20010BC)
- Cost Model Reference Content (ID number: LEAD-ES20011BCPG)
- Governance Reference Content (ID number: LEAD-ES10018GO)
- Role Modelling Reference Content (ID number: LEAD-ES20012BC)
- Business Process Reference Content (ID number: LEAD-ES20005BP)

From the software standard body Object Management Group (OMG), we used the following software standard:

- Business Process Model and Notation (reference: BPMN)
- Ideas and concepts based on Value Delivery Modelling Language (reference: VDML)

From the International Organization for Standardization (ISO):

- ISO 42010 - Systems and software engineering Architecture description

From the Institute of Electrical and Electronics Engineers (IEEE):

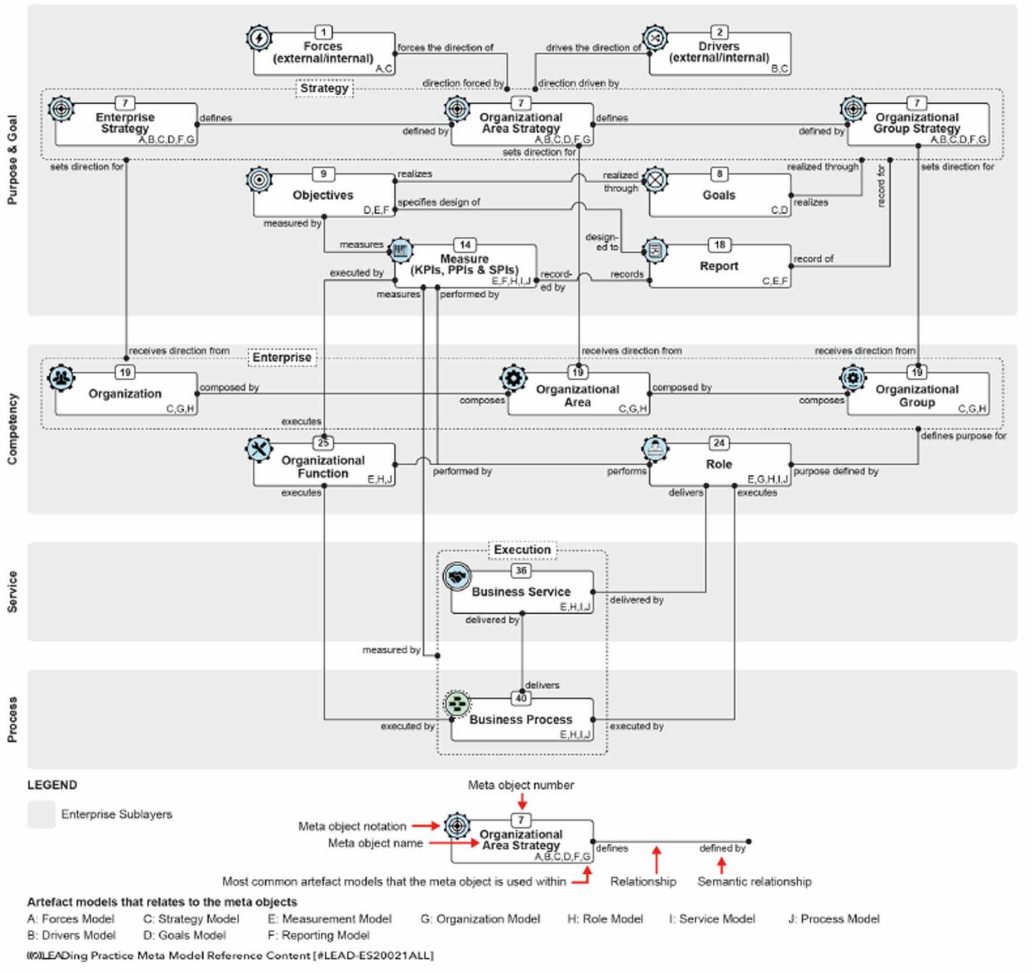
- IEEE 1471-2000- Architecture Description

The organizations discussed in this paper applied the standards by joining their back office capabilities, services, processes, roles, and technology to create a shared service operating model. The practical examples demonstrated in this paper are based on the consolidation of the market leaders in the technology sector; ConnectWise Inc., Quosal LLC and LabTech Software LLC.

Various details about this journey will be shared, including how the Business Ontology concepts were applied to understand and classify strategic considerations while enabling the business model decisions, redesign functions, and all the underlying activities, such as changing the revenue model, the value model as well as working on the service and performance model to the market. And always with the cost model in mind, to make sure that the non-core components created the wanted output with the least possible cost. All of this was possible because we used an integrated approach that ensured that the meta objects we modelled had the right semantic relationships, and that the models (i.e. artefacts) we applied had clearly defined integration points, ensuring full interoperability and assimilation with each other's outputs. In order to ensure that we considered the relevant components, artefacts and integration points, we asked the enterprise standards body LEADing Practice as well as Global University Alliance members to develop a meta model (figure 1) that was relevant for our situation and the goals of the organizations.

Figure 1 is a developed meta model that is tailored to the specific situation, challenges and goals which the three discussed organizations had. It includes the layered view, where the multiple relevant meta objects within and across the layers relate semantically together in the correct way. The layered view furthermore illustrates how all the components interlink at various points, thereby showing the critical touch points where we need to ensure interoperability and integration. What is notable is that this is a publication sample, and therefore for readability purpose, not all relevant object types and subtypes can be portrayed. While we understand that the example in figure 1 is limited, we wanted to portray how we ensured that the meta objects with their specific numbers, notations, the specification of the relations and the description of the semantic relationships as well as which artefact we should use, was well documented. All of this ensuring a common way of thinking, working, modelling and architecting.

Figure 1. The Meta Model developed and applied to our specific organizational situation and goals



2. INTRODUCTION TO THE ORGANIZATIONS: CONNECTWISE, LABTECH AND QUOSAL

ConnectWise

The ConnectWise journey began more than 30 years ago—when founders Arnie and David Bellini made a conscious choice to do things differently. Today, ConnectWise is ranked 344th (Desmond, 2014) among the world's largest software and service providers and has been named 2015 Best Channel Vendor by Business Solutions Magazine (Ulrich, 2015). Today, more than half of the world's top managed service providers (MSPs) run their businesses with ConnectWise (ConnectWise, 2014). More than 90,000 users rely on ConnectWise to achieve greater accountability, operational efficiency, and profitability. Leveraging the Cloud, the ConnectWise platform fully integrates information systems, help desk, customer service, sales, marketing, project management, and business analytics to dramatically streamline a company's operations. ConnectWise also gives users access to a powerful network of ideas, experts, and solutions. A veteran in the technology services industry, ConnectWise

has been the premier business management platform for technology companies for more than 15 years, offering the various solutions illustrated below (Figure 2).

The solutions ConnectWise offers to the market are as follows:

- **CRM**: Organizing client relationships around one system, helping you quote, win, and manage all accounts with efficiency, accountability, and visibility. Won opportunities are easily converted to sales orders, projects, or service tickets.
- **Help Desk and Customer Service**: The ticketing module enables the user to easily and efficiently track all service requests, ensuring nothing falls through the cracks. Service tickets can be created in a variety of ways, manually as well as automatically, or use the email connector to have clients send in service requests via email.
- **Project Management**: Whether your project involves one person in one place, or a team spread across multiple locations, the solutions gives the executive-level, real-time project reporting.
- **Finance and Billing:** Putting important financial information at the business manager's fingertips. From managing service contracts through agreement automation to automating the collection of time, expenses, and products for invoicing, and synchronize all data directly into an accounting system. Automated billing through ConnectWise has shown to significantly increases efficiency for improved cash flow.

Figure 2. Overview of solutions and relations enabled by ConnectWise

- **Workflow Automation**: Built in automated workflows within ConnectWise help you manage business processes. From sales to service to project management to invoice, workflow rules will fill in the gaps wherever a business lacks automation. You can easily establish role-defined workflow rules that escalate issues to the appropriate party, and leverage new workflow rules to automate every task that comes to mind.

2.1. LabTech Software

Founded in 2004, LabTech Software is ranked No. 354 on the 2014 Annual List of America's Fastest-Growing Private Companies (Inc., 2014). LabTech is the developer of the world's leading remote monitoring and management (RMM) solution designed to help global IT solutions providers transform their IT services business into successful managed services operations. The robust LabTech solution makes remote monitoring and management simple, scalable and affordable for many organizations. LabTech was designed to perform almost all IT support and maintenance tasks remotely, efficiently and non-intrusively. LabTech Software is the brainchild of a managed service provider (MSP) that struggled with the usual challenges and inefficiencies of a reactive IT maintenance and support model. LabTech—its flagship solution—was therefore born of the urgent need to eliminate technician inefficiencies and the desire to provide preventive, proactive and efficient service. Developed with cutting-edge agent technology, LabTech is the only solution created by system administrators for system administrators, leveraging their experience with the day-to-day realities in the business of IT services. With more than 4,200 partners and over 4 million agents sold, the LabTech RMM platform has quickly become the preferred tool of MSPs and IT service providers worldwide. LabTech Software and its partners in the United States, Canada, United Kingdom, Ireland and Australia—among others—are active in developing a worldwide community of talented IT professionals that collaborate and share in their knowledge and expertise to provide superior managed services. With numerous integration partners, LabTech Software develops more-than-powerful and smart applications through an agent-based RMM solution that is both scalable and wide-ranging (Figure 3).

The solutions LabTech offers to the market are as follows:

- **IT Asset Management**: Identify, audit and manage workstations, servers, printers and routers. Group assets by operating system, application or location for ease of management.
- **Mobile Device Management**: Manage Apple iOS and Google Android platform IT mobile devices with smooth enrolment, configuring, monitoring and reporting functions.
- **Multivendor Storage and Backup Dashboard**: Manage data protection environments from single or multiple vendors and multiple locations from a central console. Easily perform on-demand actions including disabling, enabling, creating, editing, deleting, starting or cancelling backup jobs.
- **Remote Control**: Simplify support by letting technicians control remote computers, servers, and network devices over the internet or on the network.
- **Storage and Backup Management**: Accurately monitor backup job status in real time, from a centralized dashboard. Perform on-demand actions such as disable, enable, create, edit, delete, start or cancel backup jobs.

2.2. Quosal

Quote more. Sell more.

In 2006, Kent McNall and Stephen Yu had a mission to create and implement the finest Quote and Proposal Automation (QPA) software on the market. They accomplished this mission by using development tools and technologies from partners like Microsoft®, as well as development best practices from the teams' decades of software development.

Figure 3. Various solutions and relations enabled by LabTech Software

Quosal has created a family of products, which were developed to answer the needs of a wide variety customers. With full-featured desktop, mobile, and browser interfaces, Quosal links seamlessly with Customer Relationship Management (CRM) systems, operational systems such as Professional Service Automation (PSA) applications, and accounting systems. Quosal's innovations in online quote delivery and execution, Order Porter, SuccessList and Quosal Achieve, empowers customer sales teams with truly game-changing tools for selling success.

Quosal makes it simple to create professional quotes and proposals to help clients grow their business. Quosal has helped ConnectWise and LabTech shorten their sales cycle and increase their close rate, just as they have helped thousands of other technology companies. As an affiliate of ConnectWise, Quosal has a seamless integration to ConnectWise. Users can access Quosal and prepare quotes, from directly within ConnectWise. Quosal also has live pricing feeds from top technology distributors like Dell, Ingram Micro, Tech Data and Synnex making it easy for Quosal's customers to provide their clients with accurate and up-to-date product pricing and availability. Quosal delivers a powerful punch when sending quotes or proposals to a client via Order Porter, an online, interactive quote portal where such clients are empowered to update quantities, products and instantly execute the order with built-in e-signature functionality.

Quosal offers:

- **Sales Workflow Automation**: Automate the delivery and visibility of successfully moving an opportunity to a positive result.
- **Channel Management** – Ease the process of selling your product through a reseller channel by utilizing online product catalogs, product configurations and branded proposal generation.

- **Quote and Proposal –** Create and deliver quotes with the ability to accept them through e-signature.
- **Catalog Services –** Work with as many catalogs as you need access to, whether it be from a company catalog or through a distributor.

3. THE JOURNEY OF OPERATIONS COLLABORATION AND CONSOLIDATION

The journey began in 2009 when Arnie Bellini and his brother David formed ConnectWise Capital with the intended purpose of supporting promising technology companies to increase their viability and accelerate growth. ConnectWise Capital has invested in LabTech Software, Quosal, Biz Docs and CharTec, a hardware-as-a-service provider. Business wise, there were multiple opportunities to collaborate, especially since LabTech and Quosal align with ConnectWise's PSA platform and form the foundation of a converged management suite designed to automate and simplify the IT solution provider business model. This is a very unique business model, and it is being compared to the suite strategy of Microsoft which integrated Word Excel, Access, and PowerPoint into the Microsoft Office Suite (Panettieri, 2014). The difference between the ConnectWise and Microsoft platform strategy is that ConnectWise isn't aiming to lock out competitors. ConnectWise APIs and the development roadmap remain open, meaning companies can just as easily replace their respective counterparts in the platform. The ease of interoperability between the products and adaptability within the ConnectWise platform is so great that the strategic choice to collaborate by all three companies enabled the creation of a unique platform that strengthened the individual products. As already identified by Channel Economics (Walsh, 2011), from a technology perspective, ConnectWise, LabTech and Quosal are putting together the next-generation management platform to satisfy market demands. However, technology alone does not guarantee success. ConnectWise has executed multiple joint ventures with promising technology companies and realize that simply acquiring technology companies is not a strategy in and of itself, but a vehicle for executing a strategy to jointly operate to deliver growth and success.

It is no secret that business consolidations are very challenging. It is well documented that mergers have often failed (Straub, 2007) to add significantly to the value of the acquiring firm's shares. As a matter of fact, an analysis of 30 years of Mergers and Acquisitions research (Cartwright & Schoenberg, 2006) concluded that contrary to their popularity, only 56% (Cartwright & Schoenberg, 2006) of acquisitions can be considered successful against the original objectives set for them. So while corporate consolidations and mergers may be aimed at merging product portfolio, being more competitive in the marketplace, cutting costs (for example, consolidating procurements, operating at a more technologically efficient scale, etc.), reducing taxes, removing management, streamlining the management chain, or other benefits, almost 70% (Cartwright & Schoenberg, 2006) depart in the five years following. The reason for this is the inability to merge the business model and the operating model while enabling joint core differentiating and competitive competencies that deliver exclusive services to the market. Understanding the challenges other companies have faced, ConnectWise, LabTech, and Quosal decided that they would collaborate and consolidate in certain areas of their business, while each keeping their core differentiating and core competitive competencies separate. This enabled separation and individual development, but collaboration within the revenue model, service model, and the value model. Furthermore, this consolidation of business areas, where they do not compete or differentiate, enabled the companies to reduce operational costs while creating a new performance model which only strengthened their individual and joint strategic position. In order to make this happen, the "As Is" situation needed to be fully mapped, and the transformation roadmap with all the existing challenges needed to be outlined. Among the challenges identified in the ConnectWise, LabTech, and Quosal operational consolidation were the following:

- Undefined business competencies within the specific departments creating the potential for duplication of business functions and inefficiencies of process execution and value delivered. This extends the timeline for a successful consolidation and the ability to deliver joint organizational capabilities that drive value within the value model of both organizations.
- Linking specific organizational strategies to the different departments functions and processes within the company. Without clearly defined competencies and strategy related to them, ConnectWise, LabTech, and Quosal might potentially miss opportunities to successfully consolidate operations. Moreover, there is the potential to misidentify acquisition opportunities as beneficial when they may not provide any benefits to the revenue model nor to the service model of all three organizations.
- A defined of the level of integration and standardization which is needed to create the right performance and operating model was not in place.

The primary reasons these challenges exist in most organizations are that most organizations have not (von Rosing, Zachman, & von Scheel, 2015):

1. Mapped the business competencies and categorized the business competencies according to core differentiating, core competitive and non-core competencies. Consequently, such organizations will not know where they are unique and where they are similar.
2. Linked their existing strategy to the business competencies, business functions or their specific process and, therefore, will not have a link between strategy and execution.
3. Defined a clear operating model in which the level of integration and standardization is defined.

The above challenge reasons also apply to ConnectWise, LabTech, and Quosal. While ConnectWise is an established company, they have always been focused on rapid and extensive growth. Recent rapid growth has dramatically changed ConnectWise and introduced several new departments, thereby introducing new competencies, business functions, and processes. Due to this rapid growth, ConnectWise realized the need to devote time and resources to mapping the new competencies and processes. LabTech, like ConnectWise, is also now devoting time and resources to map their processes and competencies because their focus has been rapid expansion and growth. Moreover, LabTech's strategy is continuously being evaluated to help ensure they meet market demands which, in turn, leads to the development of new competencies and services and consequently the constant creation and retirement of business processes. Quosal is also considered a start-up and, as a result, has the same challenges and obstacles to overcome that LabTech faces. In some cases, the challenges are more evident because they are younger than LabTech.

These companies were selected for the case study, because, while the technological advantages of the joint ventures are clear, it is the strategic positioning, choices and actions that matter when consolidating the back office to shared service operations. This case story, therefore, focuses on uniting the organizational capabilities into a common way of working and the joint service capabilities into a common way of execution by integrating competencies, business functions, and the process while linking them to strategy and operational governance.

4. DESCRIPTION OF THE SOLUTION

LabTech, Quosal, and ConnectWise are developed side-by-side and run off of a collaborative roadmap. While these advanced platforms are strong enough to stand alone, their seamless integration allows them to be deployed together. With LabTech, Quosal, and ConnectWise, users experience seamless continuity between mission critical Business Management and RMM applications to help ensure productivity and worry-free automation. We have, furthermore, discussed the need for a joint

business model and operating model as a part of the back office consolidation between the three different organizations. In order to create a shared model, it is vital to identify the joint organizational competencies and the influencing forces/drivers of the market. Moreover, the customer needs must be linked to the organizational competencies to define the Strategic Position and guide the exploring and recognizing of the possible Strategic Choices. Finally, the Strategic Actions, which position the new business model, need to be chosen. The business ontology meta objects (von Rosing & von Scheel, 2016) and models i.e. business model where used to create the figure 4 illustrated Shared Service Operations Model (LEAD-ES20010BC, n. d.a).

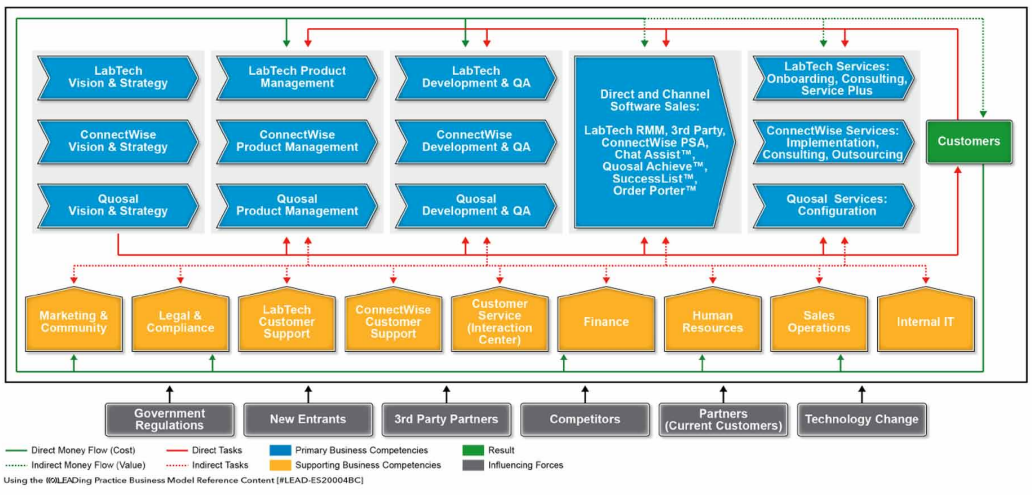
The necessity to move towards such a joint business model is born out of the need to:

1. Support the growth needed in the core differentiating and core competitive competencies while streamlining and consolidating the support of duplicate non-core competencies within the organizations.
2. Reduce costs associated with back office competencies, functions, processes and services.
3. Improve operational service excellence by increasing standardization and integration.

These needs emerge from decisions made in the operating model that reside in the existing business model. This is illustrated in Figure 3. For example, focusing on the core differentiating and core competitive competencies in each organization involved all three organizations defining what provides market value and what can be consolidated into a joint service. This meant creating the revenue, value, and service models that are common in the operating model. The second necessity, reducing cost in the back office competencies, functions, processes and services, is focused on changing the cost model in conjunction with redesigning the operating model. Each model is chosen for very different strategic reasons, and when merging back office services, it is very important to know why the consolidation is done, how it is done and what it can/will bring. In order to answer the why, how, and what, when developing a joint business model, the following questions should be considered:

1. Strategic Position with situational identification (LEAD-ES10001PG):
    - Are there any external or internal drivers that can be seen as potential business opportunities for the three organizations?

Figure 4. Overview of the Consolidated Back office to a Shared Service Operations Model



- What are the different customer value and performance expectations?
- What is the new strategy to position the separate and joint value propositions?
- What is the new joint strategy and how does it relate to the individual strategies?
- In which ways does the joint strategy attempt to fulfill the separate vision (the desired future state) of the three organizations?
- Are there any external or internal forces that can be seen as potential threats to the new strategy?
- Are there any potential risks that might negatively impact the execution of the joint shared service operating model?
- Are there any value drivers that can be seen as potential business opportunities in the new joint shared service operating model?
- Are there any performance drivers that are new business opportunities between the organizations?
- What are the organization's core competitive business competencies?
- What are the organization's core differentiating business competencies?
- What goals are critical to fulfill across the three organizations to meet market demands?

2. Strategic Choices with potential definition (LEAD-ES10001PG):
   - Which business areas and groups within the organization do the drivers affect?
   - Which business areas and groups, within the organizations, do the forces affect?
   - Where in terms of markets and industries, should the company differentiate themselves from their rivals and competitors and with which of the core differentiating competencies should ConnectWise do this?
   - How should the company's strategy and the specific critical success factors by business areas and groups be aligned and unified with the company's overall vision to execute?
   - Which services should be the focus for value creation?
   - Which of the core competitive competencies should the organization choose compete head to head with its main competitors (segmentation by markets and industries)?
   - Where the risks should be reduced and/or minimized?
   - Which processes and services should be the focus for performance optimization?
   - Who is responsible, i.e. business owners, service owners and process owners, for carrying out the transition of the back office operations of all three companies to shared service operations while supporting the strategic objectives for all three organizations?
   - Which business functions are responsible for meeting the value and performance expectations?
3. Strategic Actions (LEAD-ES10001PG)
   - How do the organizations respond to these drivers?
   - How do the organizations respond to these forces?
   - How can the organizations reduce and minimize these risks?
   - How do the organizations aspire to create individual and joint value?
   - How do the organizations aspire to optimize individual and joint performance?
   - How should the business units across the organizations compete?
   - How do the organizations achieve individual and joint differentiation?
   - Who should do what in the service flow?
   - Which kind of tools and capabilities do the organizations require to carry out the strategy?
   - Which goals have to be met in order to accomplish the mission?
   - Who should do what in the value realization?
   - Who should do what in the performance optimization?

In order to effectively manage this transition, ConnectWise, Quosal, and LabTech created a team focused on alleviating the challenges associated with the consolidating separate back office operations into a shared service operation. The team was comprised of colleagues from the different

organizations, with expertise in Business Architecture, BPM, Product Management, Project Management, Change Control, Product Support and Customer Service. Such a diverse team was selected to ensure various organizational competencies, functions, services, and processes were represented across all organizations. The immediate challenge the team faced was which direction or choices to make when creating a common back office that delivered shared services. While the team wanted partial integration or sharing of business functions and services between the organizations, there are lots of ways this can happen:

1. An Organization with excess capacity can provide these functions, services, and processes for the other organizations on a fee-for-service basis.
2. Organizations can band together to create a cooperative to provide back office services to all its members,
3. An intermediary serving a group can provide or organize the services on behalf of their members.

Such shared services can include:

- Finance services
- HR services
- Insurance services
- Group purchasing of supplies/procurement
- Quality controls
- Operational measurements
- Operational reporting
- Internal Controls
- Food services
- Facilities management services
- Teaching/Education services
- Application Services
- Data Services (keeping data security separate)
- Platform Services
- Infrastructure Services

Looking at the joint competencies, functions, and services turned out to be a good first step as it not only allowed for a better comparison of services across all three organizations, but also enabled the team to easily communicate with executives due to the common definition of services at this level. The team opted to not start with the individual processes because the detailed process view across the 3 organizations would not providing the necessary insight. Moreover, based on the nature of our different process naming conventions and low maturity of process alignment, it would be very difficult to compare the processes. Lastly, mapping the process connections to a specific function or service in order to identify duplication of tasks and/or the duplication of the service output would have taken several months which the team did not have. Due to the complexity associated with the view of all three organizations core competencies, a single business area, the Interaction Center (call center), was selected to illustrate how mapping the competencies and the different flows would be performed. The Interaction Center was selected to illustrate how the team's work was done because all three organizations equally support the Interaction Center which meant it was an easy target for consolidation into a shared service. Also, any pain points and opportunities discovered would impact all three companies. Moreover, the team had great visibility and a deep understanding of the day-to-day operations of the Interaction Center, making it the perfect candidate to start building a "common joint back office" with a fully integrated shared service operating model.

After selecting the Interaction Center, the team focused on finding the best approach for discovering pain points and identifying opportunities within the business area. With limited competency, process, and service flow mapping, the team decided to centre (nest) its approach around the joint competencies to define the Interaction Center business model and work back to the operating model while defining the level of integration and standardization.

5. THE INTERACTION CENTER BUSINESS MODEL (LEAD-ES20006BC)

The business model approach enabled the team to map specific business competencies within the three accountability layers (strategic, tactical, and operational) to the Interaction Center business area without having to create detailed process maps. This approach illustrated in figure 5, was chosen because all the organizations have varying levels of complexity and discussing the atomic level of a process, and whether the task creates value or not, did not make any sense for all involved.

Once the business competencies were mapped, associating those competencies with the various domains and processes allowed the team to create a comprehensive view of the opportunities and inefficiencies within the Interaction Center so that leadership could easily consume the team's recommendations. The team mapped the Interaction Center business model to six unique imperatives relevant for the organization Revenue Model, Service Model, Value Model, Performance Model, Cost Model and Operating Model (see figure 1 as well as figure 5). In addition to that it was possible to specific the service flow (figure 7) and governance flow (figure 8) as well as how they interact together within the business model (figure 9). Below are the descriptions of what pieces of the domain were mapped, why they were mapped, and the insights gained from analyzing the completed business model, as well as images of the fully populated business model, service flow, and governance flow.

5.1. Revenue Model

The Revenue Model concepts are based on the business ontology meta objects and the semantic relations possible in the meta model as well as existing standards around revenue modelling (LEAD-ES20006BC). Changes in the Revenue Model, directly impact the business model upon which the entire organization is build. The business models involve the conception of how the business operates, its underlying foundations, and the exchange activities and financial flows upon which it depends. Such models are the architecture within which the various business competencies and activities take place (von Rosing, von Scheel, & Scheer, (2015). As specified in the lessons learned from the leaders, of the complete business process handbook volume II (von Rosing, von Scheel, & Scheer, (2015), Cost Model changes with Revenue Model are the most prominent, especially during challenging economic times. Considered easiest, but tends not to yield the same financial benefits, as the innovations are less defendable or lasting. Often used during downturns to rethink and improve enterprises' revenue model and value proposition to respond to a different set of customer behaviours and market requirements. In fact, the outperformers offered a value-based service in an otherwise shrinking market. Service Model and Revenue Model are often combined to offer new services based on a new Revenue Model. The implications of Revenue Model and pricing decisions are complex and have a fundamental impact on how your business operates. Those companies that have standardized services, offered on a periodic basis supported by a signed service agreement, seem to be far better off than those who don't use a recurring Revenue Model.

Just like in many other organizations, rethink and improve enterprises' revenue model and value proposition to respond to a different set of customer behaviours and market requirements in downturns, was also a main agenda. The domains mapped from the value model were core competitive competencies as well as the core differentiating competencies, the value opportunity and value creation components such as the value drivers, value expectations.

The revenue opportunity, core differentiating and core competitive competencies from the Joint Interaction Center revenue model were mapped. Mapping the core competitive and core differentiating

Figure 5. Overview of the Joint Interaction Center Business Model

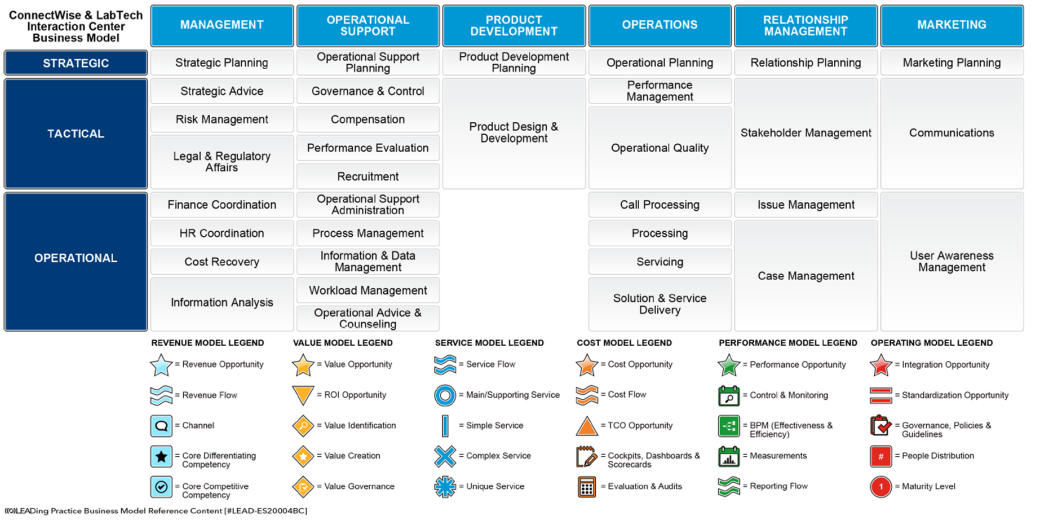


Figure 6. Example of Applying Innovation and Transformation to the Joint Interaction Center

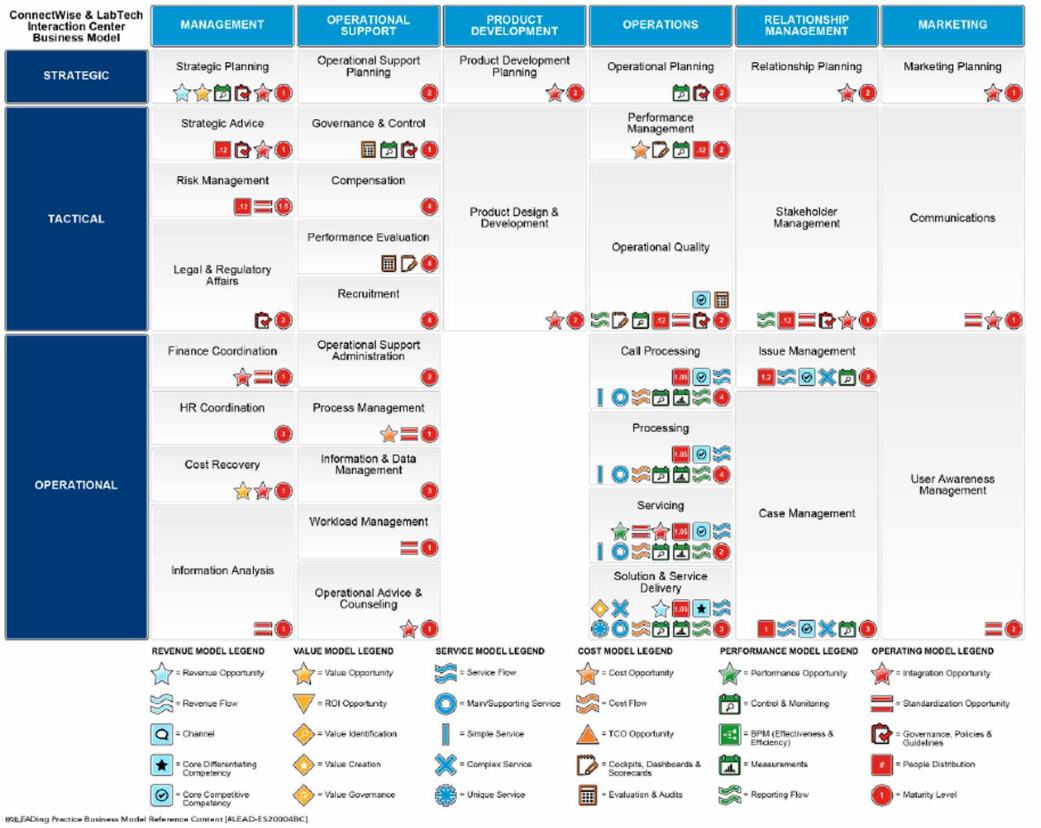


Figure 7. Service flow that was mapped within the Interaction Center

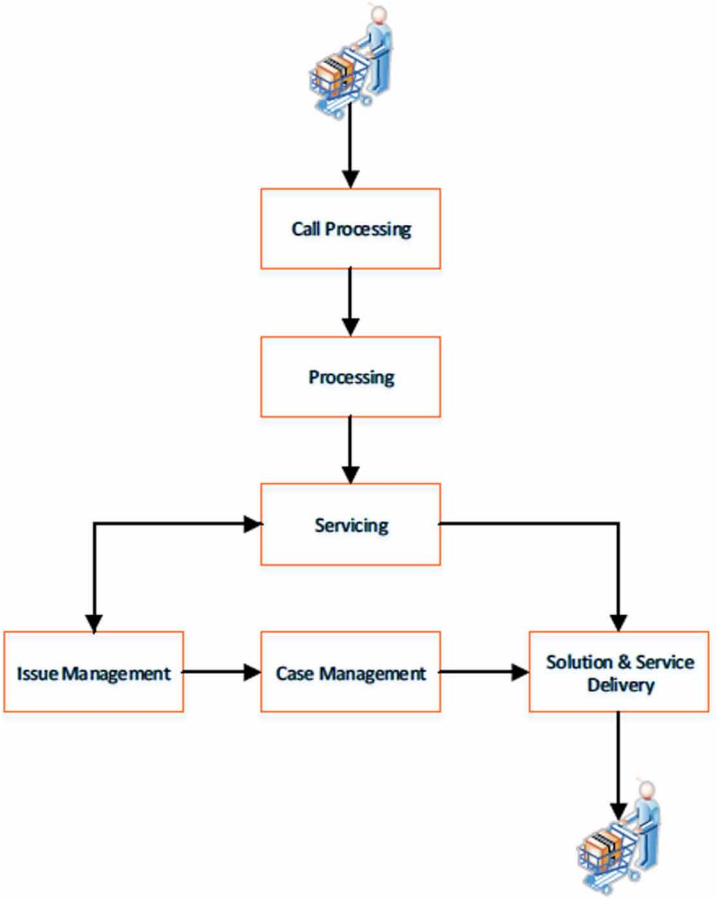


Figure 8. Governance flow through business competencies

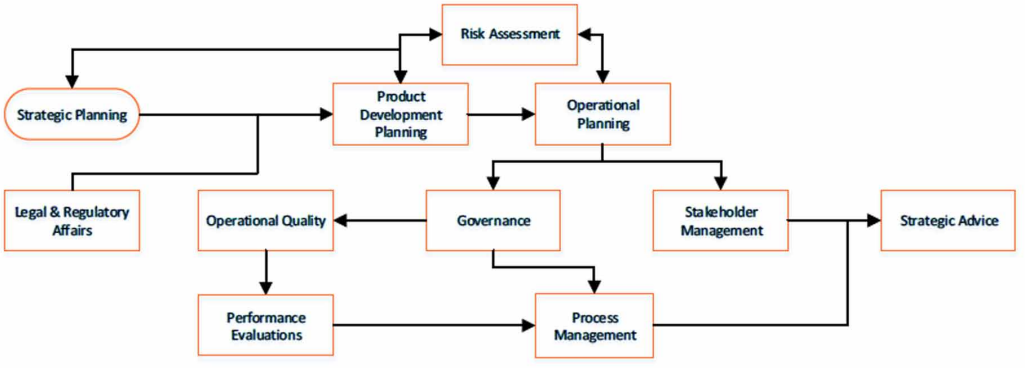
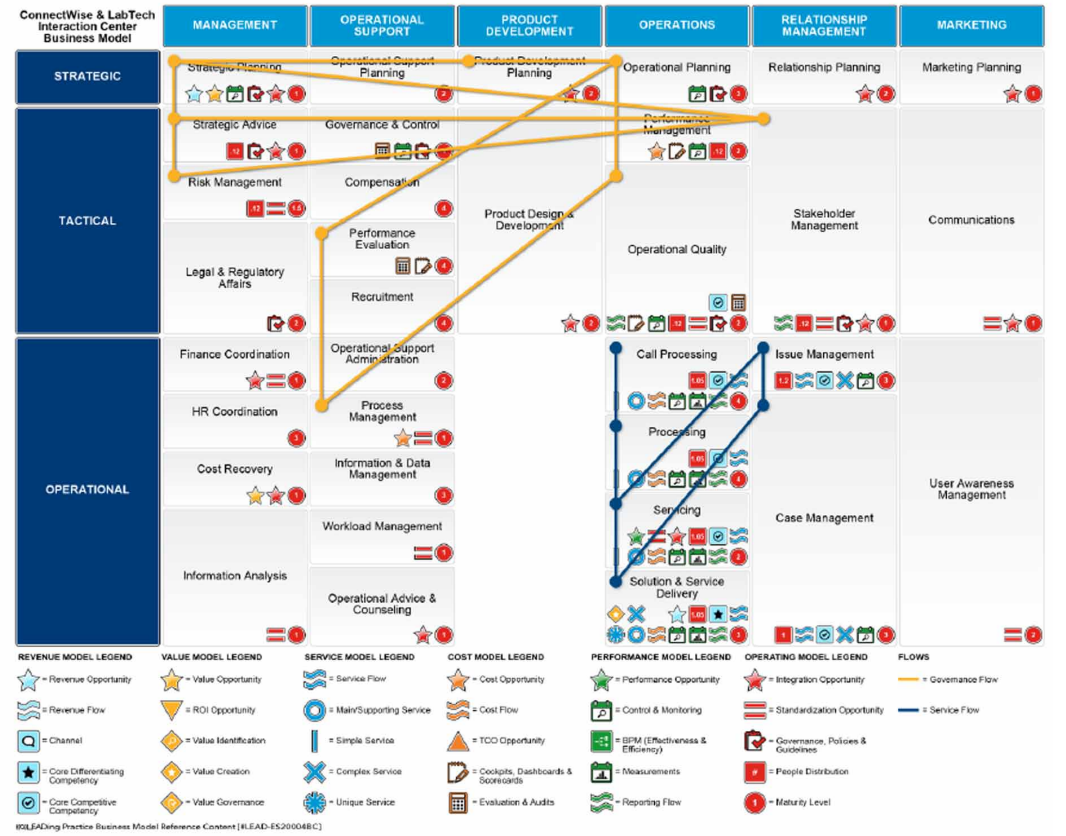


Figure 9. Governance and Service Flow Overlay with Business Model



competencies enabled us to look at which parts of the business model make us unique and which are common within the market. Through further analysis, along with the use of other mapped models (e.g., maturity), we are able to see if our core competitive competencies are mature enough to ensure we are competing at a high level. If they are not mature enough, we would need to decide, across all organizations, if we wanted to spend resources to mature the competency or potentially outsource it to a firm that specializes in that area. This practice also showed that we needed to invest more into our core differentiating competencies. Although the Interaction Center is currently not seen as having any revenue opportunity, we were able to map potential revenue opportunities using the business model. Mapping potential revenue opportunities gave us talking points to leadership on how to transform the Interaction Center from a cost center to a "revenue generation" center. This mapping provides a basis for leadership buy-in to invest resources in the areas the team has identified for improvement.

5.2. Service Model

The Service Model concepts are based on the business ontology meta objects and the semantic relations possible in the meta model as well as existing standards around service modelling(LEAD-ES20008BCBS). A Service Model helps redefine an organization's services. As specified in the lessons learned from the leaders, of the complete business process handbook volume II (von Rosing, von Scheel, & Scheer, (2015), Service Model domain is less frequent, but is more likely to be pursued by industry leaders with strong financial means and an industry position that allow them to take decisive

action. Using the Business Ontology service concepts allowed us to both embarked on a Service Model innovation and transformation endeavour, some of the steps included:

- Service Construct (main, supporting and management services)
- Development of core competitive and core differentiating services
- Services Strategy
- Service Nature i.e. complex service or unique service
- Service Objects e.g. service product
- Service Owners responsibilities for service developments
- Roles involved in the service concept and developments
- Business Flow that needs to be changed or optimized to support new service model e.g. service provider and service consumer
- Media that will be involved in the service development and delivery
- Service Channels that are needed in the wished service model.
- Service technology adoption, the level of service automation though applications, data, platform and infrastructure
- Service Level Agreements with partners
- Service Measurements, in terms of critical success factors and key performance indicators

We chose all these domains because the Interaction Center provides a service to customers. Therefore, a comprehensive map of all the domains within the service business model were relatively easy to map. Moreover, identifying pieces like the service flow or simple and complex services helped the team understand how customers interact with the Interaction Center and how each service, depending on the complexity, can be improved.

5.3. Value Model

The Value Model concepts are based on the business ontology meta objects and the semantic relations possible in the meta model as well as existing standards around value modelling (LEAD-ES20008BCPG). The value Model describes the different value perspectives supporting the entire business model. As the Value Model is built on the business ontology meta objects of external & internal value drivers, strategy (strategic business objective), business objectives (critical success factor, plan, forecast, budget, value expectation, value proposition and competencies. The value model is a strategic tool to redefine what is the core competitive competencies and what is non-core competencies and thereby what can and can't create value within the organization and to the customers. Contrary to the limited value modelling concepts in the market, the business ontology value concept allowed us to both do internal value flows as well as the external facing customer value flows. As specified in the complete business process handbook volume II (von Rosing, von Scheel, & Scheer, (2015), lessons learned from the leaders, value modelling is the most common business modelling strategy chosen by the outperformers. Meanwhile it is the least common business modelling strategy chosen by the underperformers.

The domains mapped for the Joint Interaction Center value model were core competitive competencies as well as the core differentiating competencies, the value opportunity and value creation components such as the value drivers, value expectations. While mapping these areas and others, the team identified a lack of strategic integration within the Interaction Center. Specifically, there is little value planning done at the strategic layer for the Interaction Center because it is not incorporated into either company's overall strategy. Therefore, value creation is limited. However, there were two areas identified where value opportunity could occur: (1) strategic planning, and; (2) cost recovery. By transforming the Interaction Center from a cost center to a revenue generating center, the potential to not only recover costs but add additional revenue streams to the company would constitute creating value and therefore a value opportunity. The Solution & Service Delivery Competency was found to create value for both companies and was mapped as such.

5.4. Performance Model

The Performance Model concepts are based on the business ontology meta objects and the semantic relations possible in the meta model as well as existing standards around performance modelling (LEAD-ES20009BCPG). Performance Model is what defines and tracks performance, usually on an ongoing basis, to determine success or alignment with value objectives and goals, as a part of any Performance Model we used the business ontology meta objects of performance goal, performance indicators and measures e.g. Business Process Improvement (BPI), Key Performance Indicators (KPI) and Process Performance Indicators (PPIs). This includes personalized key performance metrics (KPIs) and benchmarks that drive the financial and operational success of the company as well. While there are multiple performance modelling concepts in the market, there is none that interlink very well with strategy, value drivers, service concepts, innovation as well as transformation etc. As a part of the Joint Interaction Center transformation, we however had the need for advanced performance modelling, that involved both:

- Link to business strategy
- Development of a performance strategy
- Identification of business competencies that need to perform in order to create the right results
- Specification of Process and activity optimization or innovation to create the needed performance
- Appoint performance owner's responsibilities for performance developments
- Select roles involved in the performance concept and developments
- Business flow that needs to be changed or optimized to support new performance model
- Media that will be involved in the performance development and delivery
- Channels that are needed in the wished performance model
- Performance increased by technology adoption and thereby the level of performance automation though applications, data, platform and infrastructure
- Performance measurements, in terms of business performance indicator, key performance indicators and process performance indicator

For the Joint Interaction Center performance model, all items were mapped in this was done with the purpose of improving the Effectiveness and Efficiency. This includes performance opportunity, control & monitoring, measurements, and reporting flow. Since the Interaction Center is heavily measured and monitored to ensure appropriate levels of performance and services are met, mapping the rest of the domain was with the LEADing Practice templates/artefacts fairly straightforward. Through the mapping process, the team was able to understand what measurements are being monitored and where further metrics may be needed. The mapping process also identified areas in which measurements could be used to improve performance.

5.5. Cost Model

The Cost Model concepts are based on the business ontology meta objects and the semantic relations possible in the meta model as well as existing standards around cost model (LEAD-ES20011BCPG). The Cost Model describes all costs incurred to operate in an organization. Managing the cost model is the process used by organizations to administrate, evaluate, and in the end, reduce their costs and therefore increase their profits. As every decision in the product development process affects cost, depending on the services or product, the specific application of the strategy can vary. As specified in the lessons learned from the leaders, of the complete business process handbook volume II (von Rosing, von Scheel, & Scheer, (2015), modelling the cost model is often chosen as the first choice, when organizations are hit by an economic crisis. While cost is always important to manage, the cost model becomes very important when competition increases and price becomes a differentiator in the market. The design and implementation of a comprehensive cost reduction strategy should focus for the most on three key deliverables:

1. **Cost Reduction:** reducing overall operating costs
2. **Cost Efficiency:** Improving the management of utility contracts and relationships
3. **Reducing waste:** across all departments within a business

It does not matter which strategy is chosen, each can only be executed through process optimization, process standardization, or process reengineering. The challenge faced however is in two parts, first - not all processes have the same cost cutting potential and second, when applying the same cost cutting principle to an area with high value potential, the organization actually starves the area where they are unique. The result is that they spent lots of money creating a situation where they destroy their ability to compete by eliminating the ability to differentiate. The Cost Model deals with important topics like: Which functions, roles, resources, products, services, and processes can or should save money? What customer relationships are profitable and what is the impact of cost cutting incentives and programs? Which operations run efficiently and what areas need cost focus and attention? Identifying duplicate services and processes across functions and geographies.

For the Joint Interaction Center, all items were mapped for the cost model except for TCO opportunity. Mapped items include cost opportunity, cost flow, cockpits, dashboards, and scorecards, and evaluation and audits. A majority of the cost model was mapped in order to illustrate what business competencies drive cost and where the monitoring of these costs may reside. This will help leadership have a better understanding of the costs associated with the Interaction Center, as well as identify any gaps and potential strategies that may influence those costs.

5.6. Operating Model

The Operating Model concepts are based on the business ontology meta objects and the semantic relations possible in the meta model as well as existing standards around operating model (LEAD-ES20010BC). An organization's operating model describes how an organization operates across business competencies, functions, actors, process, services, with its resources and technology domains in order to deliver the performance and value defined by the organization. The purpose of an operating model is to make better-informed business decisions and to improve organization performance and profitability. While the operating model is specific on where and how the organization operates, what kinds of products will it sell, which customers and segments will it serve through its competencies, services, which processes will be outsourced or handled in-house, which relationships will be most critical, what results are expected and how will decisions be made, and measured?

Our motivation around the operating modelling was on Joint Interaction Center standardization, optimization and automation as much of the organizational effectiveness and efficiency possible. As a part of this journey, we focused on the following areas:

- Link to existing strategic direction and plans
- Define the operating model strategy
- Development and transformation of operating model to ensure continuous consistency of core competitive and core-differentiating competencies.
- Process integration and standardization for a focused, responsive, flexible and robust operating model.
- Appoint owner responsibilities for standardizing & integrating the operating model of one's organization
- Select roles involved in the operating model concept and developments
- Specify business flow that needs to be standardized, changed or optimized to support new operating model concept
- Define media that will be involved in Operating Model development and delivery
- Optimize channels that are needed in the wished Operating Model

- Specify technology adoption e.g. applications, data, platform and infrastructure, for the level of Enterprise Operating Model l integration, standardization, optimization and renewal
- Develop operating model measurements, in terms of critical success factors and key performance indicators that are linked to the business strategy
- Indicate compliance aspects to business regulations, procedures and laws
- Outline services delivered internal as well as external to partners, suppliers and customers around the new or transformed Operating Model initiative.
- Describe objects involved in terms of products, application or data that need to be standardized and or integrated
- Stipulate all rules in terms of standards, guidelines and policies to ensure the right monitoring, control and optimization initiatives.

For the Joint Interaction Center, all items were mapped from the operating model. This includes integration opportunity, standardization opportunity, people distribution, governance, policies, and guidelines, and maturity level. Identification of each item enabled the team to pinpoint several opportunities for immediate process change and improvement within the Interaction Center. Specifically, mapping the maturity levels identified many standardization opportunities within the various departments that interact or influence the operations of the Interaction Center. Moreover, the people distribution illustrated the lack of resource commitment within the business area to successfully run the day-to-day operations of the Interaction Center. Lastly, due to silos existent throughout each organization, the team identified areas that needed improved integration within all three organizations.

5.7. Complete Interaction Center Business Model

Figure 5 shows the completely mapped business model that the team created. Across the top of the model is each department or business unit that directly or indirectly supports the day-to-day operations of the Interaction Center. Together they make up the Interaction Center business area. Running vertically on the left side of the diagram, in blue, are the 3 accountability layers. The business competencies tied to Interaction Center business area are in the white boxes and are distributed across each different business unit depending on their function. All the icons located within the box relate to the 6 different models described above. A key for what each symbol means is on the page following Figure 6.

5.8. Service Flow (Not sure for this one either as it is similar to service one above)

Figure 7 illustrates the service flow that was mapped within the Interaction Center beginning with the customer/partner call into the Interaction Center to when a solution or service is delivered back to the customer/partner. There were several reasons why it was important for the team to properly map and then optimize the service flow. First, understanding the service flow allowed the team to clearly identify the dependencies of each process. Once these dependencies were identified, prioritizing enhancements to improve efficiencies within the specific process could not only increase the speed to a successful outcome, but also provide a better overall customer experience throughout the process. Second, by understanding the service flow, the team could identify opportunities to create and potentially drive additional value. Since part of the service flow is a core differentiating competency, strengthening the value creation would enable ConnectWise, Quosal, and LabTech to further distance themselves from the competition. Moreover, documenting the flow shows leadership potential redundancy—in terms of competencies—between both organizations and the Interaction Center, and which redundant parts can be removed or enhanced to improve the value creation mentioned earlier.

1. **Call Processing:** A customer contacts the Interaction Center via the telephone and is placed into the appropriate queue.

2. **Processing:** An Interaction Center liaison answers the phone call and creates a ticket to categorize the issue for downstream workflow.
3. **Servicing:** The liaison reviews the ticket and attempts to provide an immediate solution.
4. **Issue Management:** If liaison is unable to provide the customer an immediate solution, the liaison will tag the ticket for escalation.
5. **Case Management:** If the issue is not resolved upon escalation, a case will be created to involve additional departments needed for resolution.
6. **Solution and Service Delivery:** Upon completion of the service flow, the Interaction Center will deliver a solution to the customer issue or provide the service requested.

5.9. Governance Flow (LEAD-ES10018GO)

Figure 8 illustrates the governance flow created and applied during the business model development process. Since both companies lack a complete governance structure, it was important for the team to create and apply a proper governance flow during the modelling process. By mapping the flow, the team could inform leadership of any missing pieces within the current governance structure. The team also identified the pieces that would need to be created to potentially allow for a successful operational consolidation between all three organizations. Lastly, the mapped governance flow ensured that the proper controls and monitors would be put into place which would create a continuous feedback loop to gauge the success of the consolidation at a specific point in time. The diagram shows the actual flow through the various business competencies while the text gives a brief explanation of the flow.

1. **Strategic Planning / Legal and Regulatory Affairs:** The governance flow begins with Strategic Planning and Legal & Regulatory Affairs which take into account outside forces.
2. **Product Development Planning:** Strategic Planning/Legal & Regulatory Affairs drive product planning and strategy.
3. **Operational Planning:** A defined product strategy defines the necessary operation competencies needed to support the product, corporate strategies, and legal & regulatory affairs.
4. **Governance Planning:** Once an operational plan is developed, governance can be created to measure and monitor adherence to the plan.
5. **Risk Management:** During each planning phase, a risk assessment is done to identify and either mitigate or account for associated with risks related to plan execution.
6. **Stakeholder Management:** With an operational plan defined, a standard and process-based communication plan can be created to ensure both stakeholder participation and visibility.
7. **Operational Quality:** Once governance is in place, a quality baseline is established.
8. **Performance Evaluation:** Using governance metrics and the quality baseline, the performance of the individuals can be measured and monitored to ensure the requirements of the operational plan are being met.
9. **Process Management:** Performance evaluations and the defined governance dictate the various processes and their management within the operational layer to ensure the operational plan is being met
10. **Strategic Advice:** Information gathered from the Stakeholder Management Plan and Process Management are filtered up to and through the transactional level where it's consolidated at strategic advice. A feedback loop is then created from strategic advice back to strategic planning.

5.10. Governance and Service Flow Overlay with Business Model

With both flows properly identified, the team decided to overlay each flow with the completed business model. This overlay, shown below, shows that the governance flow does not actually directly overlap with the service flow. With this separation, it is important for the team to not only map each flow at a high level but also map the processes within each flow. Since each flow could be classified as its

own system, knowing the detailed processes of each will enable the team to identify how the systems interact and what "levers" are more influential than others.

6. LESSONS LEARNED

In the next sections, we would like to share the lessons we learned around using the business ontology with the mentioned standards and the modelling and architecture principles:

1. Revenue Model & Value Model:
    - In the many years the organizations have existed, have we engineered, modelled and architected many things, however the successful capturing and modelling of the core differentiating components was critical to develop for all three organizations a stronger revenue model and value model. Identification of investment opportunities within the organizations coupled with the application of innovation principles not only led to the aforementioned strengthening but also created greater differentiation within the market as well as greater diversification between the companies. We knew what was unique and differentiating where. We stopped treating everything unique and where able to identify those components that mattered for competitive advantage. The steps done and the meta objects and artefacts specified in figure 1, were the following:
    - Map all competencies involved in the revenue and value model using a competency map (LEAD-ES10002BC)
        - Specify which of the competencies are core differentiating and add those to the revenue and value model (LEAD-ES20006BC & LEAD-ES20007BCPG)
        - Specify the innovation journey/roadmap (LEAD-ES60005AL) of the specific core differentiating competencies and thereby the functions, services and processes involved
        - Relate the competencies of the three organizations to the growth strategy. (LEAD-ES10001PG) Table 1 is an example of this relation based on the LEADing Practice Strategy Canvas. Table 1 also specifies the critical success factors and the different organizational competencies that jointly support those factors to enable the execution of the specific strategy.
2. Service Model and Performance Model:
    - Using the Service Model & Performance Model, Core Competency collaboration between all three organizations also improved the service and performance models. The steps done and the meta objects and artefacts specified in figure 1, were the following:
    - Map the relevant competencies involved in the service and performance models using a competency map (LEAD-ES10002BC)
        - Specify which of the competencies are core competitive and thereby compete head to head with industry peers. These competencies impact both the performance model of the organization as well as the service model (LEAD-ES20008BCBS & LEAD-ES20009BCPG)
        - Specify the innovation and transformation journey/roadmap (LEAD-ES60005AL) of the core competitive competencies and all the functions, services and processes involved
        - Relate the competencies of the three organizations to an improved competitive strategy. Table 2 is an example, based on the LEADing Practice Strategy Canvas (LEAD-ES10001PG), of relating the competencies of the three organizations (CW, LT, Q) with the improved competitive strategy while specifying the critical success factors and the different organizational competencies that jointly support these factors in the execution of this strategy.

Table 1. Extract from the Strategy Canvas: Strengthen Growth (LEAD-ES10001PG)

Common Strategy	Common Critical Success Factors	The Business Competencies from CW, LT, Q
Strengthen Growth	Increase growth through penetrating new markets and segments	Sales, General Administration (strategy)
	Increase growth through partnering	Sales (Vendor Management)
	Increase revenue through Service & Price optimization	Sales Operations
	Increase revenue through developing new Sales & Service channels	Sales (Vendor Management/TAPP Program)
	Growth development through service portfolio expansion	Service Plus (Operations), General Administration, Product Management, Back Office (shared Services)
	Increase joint growth through merging certain Product portfolio aspects and expanding others	Product Management, General Administration
	Expand revenue with existing customers	Sales (Account Management)
	Increase growth through mergers and acquisitions	General Administration (strategy, partnering, mergers and acquisitions)

Table 2. Extract from the Strategy Canvas: Improve Competitiveness(LEAD-ES10001PG)

Common Strategy	Common Critical Success Factors	CW, LT, Q Business Competencies
Improve Competitiveness	Strengthen Innovation	Product Management, General Administration
	Faster Time-to-Market	Development/Product Management
	Improve Customer Interaction	Support (Operations), Sales, Back Office (call center shared services)
	Improve Customer Satisfaction & Loyalty	Support (Operations), Customer Service (Operations), Sales, Back Office (call center shared services)
	Improve Brand Awareness	Marketing/Branding/Community
	Improve Partner & Relationship Collaboration	Sales, Product Management, General Administration (strategy, partnering, mergers and acquisitions)
	Improve Responsiveness	Support (Operations), Customer Service (Operations), Business Excellence (Operations), Back Office support

3. Cost Model:
    - We would like to point out here that studies and research into back office consolidation and cost cutting is not a new subject. Studies have pointed out that there is only so much that back office sharing can save. Even if you take the best possible practice you can only save about 2% of overall budgets. This is also confirmed by a UK study on 'the next generation of shared services', which concludes that even in a best case scenario, "sharing back office services will limit savings to 3.6% of expenditure; with a more realistic expectation of 1.8%." (Wilding, 2011) We followed the LEADing Practice studied patterns and advice that in our situation concentrating on the cost model alone is not a good practice. Instead, improving cost structures and operational excellence by increasing standardization and integration not only focuses on the cost model but also the operating model. This message is also illustrated

by the UK study when it talks about how sharing services and incorporating the concept of operating model redesigns based on services and all transformations enable organizations to emerge as leaner and sharper while being better able to deliver the services people need. Thus, it is both about cost savings as well as improving the operating model. As shared before, we will again elaborate on what benefits it brought us, using the Cost Model specified in figure 1. Through the identification of non-core competencies where able to much better than 2%. Identifying the non-core components within the organizations we drove standardization across the different organizations, areas, groups, functions and processes which reduces cost while enabling harmonization and consolidation in all three organizations. The steps done and the meta objects and artefacts specified in figure 1, were the following:

- Map the relevant competencies using a competency map (LEAD-ES10002BC)
- Specify which competencies are non-core competencies, where differentiation or being unique only adds cost, not value. The non-core competencies are those that should have the highest level of standardization to enable improvement of output while reducing the cost. (LEAD-ES20011BCPG)
- Specify the innovation and transformation journey/roadmap (LEAD-ES60005AL) of the specific non-core competencies, functions, services and processes involved
- Relate the competencies of the three organizations to the cost cutting strategy. Table 3 is an example of this relation, based on the LEADing Practice Strategy Canvas (LEAD-ES10001PG). Table 3 also specifies the critical success factors and different organizational competencies that jointly support the execution of this strategy.

4. Operating Model:
   - With the completion of all the above steps, the back office competencies, functions, services and processes that do not create differentiation or are not competitive to any of the organizations, were joined in a shared operating model. This enabled a better level of standardization and integration across the organizations. There are a lot of potential pitfalls in creating a shared service center. One of these pitfalls is not categorizing and classifying the services that the 3 organizations will consume in the right way. Below is an example based on the operating model of The MIT Center for Information Systems Research (CISR). In this context the operating model's two main areas are about business process integration and business process standardization. Ross et al. specified: "Every company should position itself in one of these quadrants to clarify how it intends to deliver goods and services to customers." The way an organization positions themselves is by doing the following:
     - Process Integration – The extent to which each occurrence of a process in the enterprise uses the same data no matter where the process is executed. A process with low integration might be the activity involved in booking a conference room at a remote site; nobody in other offices needs to know about the availability of a room so information

Table 3. Extract from the Strategy Canvas: Reduce Cost & Improve Cost Efficiency(LEAD-ES10001PG)

Common Strategy	Common Critical Success Factors	CW, LT, Q Business Competencies
Reduce Cost & Improve Cost Efficiency	Optimize Cost, Cash Flow and Capital	Finance, General Administration
	Reduce Administration Costs	Business Excellence (Operations), Finance, Back Office (shared services)
	Reduce Sales Costs	Sales Operations, Finance, Back Office (shared services sales support)
	Reduce Cost of Goods Sold	Finance, Procurement
	Reduce Income Tax across the organizations (through joint deduction and write-off)	Finance, General Administration (Resource & Asset Management)

about the room, its status, what is in it, would not be shared across the organization. On the other hand, the list of employees might be common and shared throughout a world-wide organization, necessitating high process integration
        - Process Standardization – The degree to which the activity process must (or can) be made uniform. A process with low standardization will be done in different ways, whereas one with high standardization will be done in exactly the same way, even though it may be done in many different places within the enterprise.
    - According to Ross et al, companies adopt different models at different levels. For example, they might adopt one operating model at the enterprise level, but then a different model at the division, business unit, region, or other level. This method was also applied within ConnectWise, Quosal and LabTech, to solve for which of the four quadrants the organization belonged to. In order to answer this, two basic questions were asked:
        - To what extend is the successful completion of one business unit's transactions dependent on the availability, accuracy, and timeliness of other business units' way of working, structure and data?
        - To what extent does the company benefit by having business units run their operations in the same way?
    - The steps done and the business ontology models/artefacts involved were the following:
        - Map the relevant competencies using a competency map (LEAD-ES10002BC)
        - Specify which competencies are core and non-core competencies. This is used to develop the operating model and differentiate the services delivered by each competency. Figure 10 is an illustration of how the organization could architect and thereby structure the differentiation of their shared service operations, using the MIT operating model concept and the LEADing Practice Service Modelling principles. This is done by identifying if a processes, and the services it creates, should be diversified or coordinated or if they should be replicated and/or unified across the business units while accounting for the different nature of services, drivers and needs.
        - Relate the competencies of the three organizations with the operating model strategy. Table 4 is an example, based on the LEADing Practice Strategy Canvas (LEAD-ES10001PG), of this relation while linking it to the cost reduction strategy. Table 4 also shows the critical success factors that the different organizational competencies should jointly support to enable the execution of the associated strategy.

7. CONCLUSION

This case story covered the various angles of the exciting journey of three growing organizations, ConnectWise, LabTech, and Quosal, in the technology market, and how their collaboration has led to innovations around how they differentiate, compete, and drive cost reduction. The case story shared examples of how these organizations used the Global University Alliance Business Ontology and applied relevant enterprise standards. The meta model that details the meta objects, the touch points as well as the artefacts used was illustrated and various details about how the standards and artefacts where used was shared. The case also discusses the potential issues faced by such a consolidation and how value and performance expectations from all three organizations are incorporated while simultaneously tackling the challenges of uniting multiple organizational capabilities into one common operating model. The benefits that we encountered of using a well-defined business ontology that has meta object, with comprehensive descriptions (taxonomy), models/artefacts and sound meta models, cannot all be mentioned here, however; the business model mapping process enabled the team to identify opportunities to generate value, cost reduction, etc., within the Interaction Center. Moreover, the benefit of going through this process goes well beyond these opportunities. In fact, the business ontology with all its underlying concepts, allowed the team to identify gaps within the

Figure 10. The MIT Operating Model with the LEADing Practice Service concepts

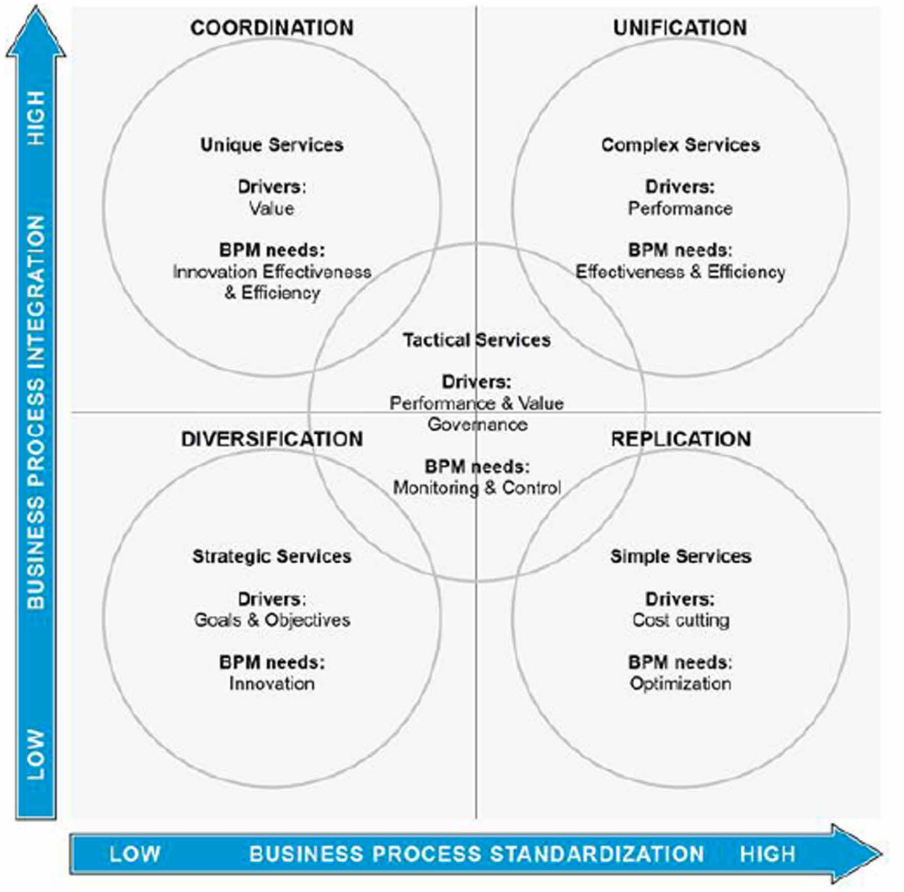


Table 4. Extract from the Strategy Canvas: Improve Operational Excellence(LEAD-ES10001PG)

Common Strategy	Common Critical Success Factors	CW, LT, Q Business Competencies
Improve Operational Excellence	Improve Resource Management	Back Office-HR shared services, General Administration (operational management)
	Increase Service Development	General Administration (service strategy), Product Management
	Strengthen Product Development	Product Management, Development
	Expand Service Level	Development, Product Management, Back Office (internal service level)
	Improve Product Delivery	Development, Product Management
	Improve Corporate Services	Operations
	Expand Information Management & Insight	Internal IT Support, Business Intelligence, Business Analytics

strategic layer that would not normally be included in an analysis. Some of these gaps were root causes to many of the challenges faced by all three organizations. By identifying and solving these gaps, all three companies have successfully consolidated their back office to shared service operations. This work marks a new way of merging back office services as it illustrates a success story versus what has been historically shown within the mergers and acquisitions space. Moreover, the artefacts developed and the enterprise modelling, engineering and architecture principles learned, can now be replicated and incorporated into future strategic joint ventures or acquisitions. Moving forward, ConnectWise, LabTech, and Quosal can evaluate target companies and identify duplicate functions, services, processes, core differentiating aspects, maturity levels, etc. Clearly, with this information, any future acquisition process can be expedited in determining whether the target company is a good fit and where and how collaboration should be initiated.

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