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ENGAGING NON-IT EXECUTIVES IN IT INFRASTRUCTURE DECISIONS

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Engaging Non-IT Executives in IT Infrastructure Decisions

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Title: Engaging Non-IT Executives in IT Infrastructure Decisions

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Abstract: This case study describes how information technology (IT) managers from Insurance Co. successfully engaged non-IT executives in IT infrastructure investment decisions. This enabled IT and non-IT stakeholder groups to take greater control of shared resources and achieve synergies that neither group could have achieved on its own. We describe three factors that enabled this type of engagement. First, the infrastructure group and the application development group developed strong internal IT capabilities to strengthen local alignment. Second, IT leaders also introduced short-term and long-term engagement opportunities for IT and non-IT stakeholder groups, representing local and enterprise-wide interests, to interact with each other. Finally, participants created several resources for managing interdependencies between applications, IT infrastructure services, and business objectives. Once engaged, and drawing on their capabilities and resources, IT and non-IT stakeholder groups developed a better understanding of how local applications related to each other and to shared resources, such as IT infrastructure.

Keywords: Business-IT alignment; IT infrastructure investments; IT engagement model, insurance, financial services

9 Pages



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Engaging Non-IT Executives in IT Infrastructure Decisions

At the start of 2006, Alice Benson became CIO of Large BU, the largest of three business units at Insurance Co., a global insurance and financial services company.¹ She found the application development group was good at quickly fulfilling requests from the rest of the business. However, in her view, Large BU had become a "product siloed organization," driven by considerations of "speed over efficiency" for individual products, sometimes "with multiple applications performing the same function." Non-IT colleagues wanted Benson's application development group to act in a more cohesive manner with Global Technology Services, Insurance Co.'s shared IT infrastructure services group. They also complained that IT infrastructure costs were a "black hole" eating into their application development budget. As one non-IT manager from Large BU recalled:

We had this amount of money from Global Technology Services. We really didn't know how it was spent or where it was allocated. It was a substantially large figure, and we had to manage the overall IT spend with that as a component of it. So if it went up-and it often did disproportionately to an increase that we might have for application development—we had to figure out how to make do with the money that we already had. The impression was that we have a large amount of money here in Global Technology Services, we can't control it, we don't know what it is, and that it takes away money from the projects that will ultimately drive business results for us.

Soon after assessing the state of IT at Large BU, CIO Benson met with Susan Travis, Chief Technology Officer of Insurance Co. and head of Global Technology Services (GTS). Travis reported two pieces of bad news to Benson:

 Large BU's annual bill from GTS was suddenly going to increase by \$12 million (about 10% of their total infrastructure costs) because GTS discovered that it had been undercharging Large BU by that amount.

¹ To ensure anonymity, names and other descriptive facts (e.g., gender of participants, size of company, budgets, number of business units, etc.) have been changed. However, the findings regarding the types of challenges and success factors have not been changed. The findings in this case study are based on our analysis of data we collected in 2007, including tape recorded and transcribed interviews with 13 senior IT and non-IT managers from Insurance Co. and internal documents that they and others at Insurance Co. developed and used as part of their integration efforts.

This case study was prepared by Nils O. Fonstad of the MIT Sloan Center for Information Systems Research and Mani Subramani of the University of Minnesota. This case was written for the purposes of class discussion, rather than to illustrate either effective or ineffective handling of a managerial situation. The authors would like to acknowledge the participants from Insurance Co. for generously taking the time to talk with us and provide us with helpful feedback on earlier drafts of this case study. In addition, we thank our CISR colleagues, in particular, Jeanne Ross, for all their constructive suggestions.

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 Insurance Co.'s three lines of business were demanding a total of \$20 million in new services from GTS, however there was only \$5 million in the budget. GTS had to figure out how to do \$20 million worth with \$5million.

Although GTS and Large BU's application development group had each been working for several years on improving their respective IT management capabilities, neither could resolve on its own the source of the two pieces of bad news: how applications contributed to and relied on common IT infrastructure services. Insurance Co.'s IT infrastructure was the result of years of acquisitions and hundreds of independent application development efforts focused on speed to market. Consequently, it had become too cumbersome a platform on which to build new applications and too expensive to operate and maintain.

The two pieces of bad news made Travis and Benson realize that, to further enhance Insurance Co.'s IT infrastructure and achieve greater benefits from IT, they needed to have IT and non-IT stakeholder groups work more closely together. Along with other senior managers from Large BU, Travis and Benson introduced a common initiative ("The \$12 Million Challenge") and several key mechanisms to help participants manage interdependencies between applications and IT infrastructure services (e.g., a database that linked infrastructure services to applications to non-IT application owners).

IT stakeholders succeeded in engaging non-IT executives in IT infrastructure investment decisions. As a result, within a year, they met \$20 million of new demand in infrastructure services with only \$3.8 million and reduced ongoing infrastructure costs by \$14 million. The following year, they anticipated saving an additional \$7 million in infrastructure costs, freeing up more resources for new applications. Most important, in building a greater understanding of IT infrastructure, participants set the foundation for a new way of working between IT and the rest of the business and sharing responsibilities for building and leveraging enterprise-wide resources. They went beyond local alignment and achieved platform alignment.

After providing some background on Insurance Co., this case study describes in greater detail key factors that enabled IT stakeholders at Insurance Co. to engage with non-IT executives.

Background

From 2000-2007, Insurance Co. expanded into a variety of services by acquiring a number of insurance and financial services companies. By 2007, Insurance Co. was one of the twenty largest insurance and financial services companies in the United States and considered one of the best-managed companies in the insurance industry. Insurance Co. provided insurance and other financial services to individual and institutional customers throughout the world. Like many of its competitors, Insurance Co. offered a range of products, such as life insurance, automobile insurance, annuities, retirement & savings products, and institutional investment, to a range of customers, such as individuals, corporations, and other institutions.

Over the years, IT became increasingly integral to how Insurance Co. operated, both in terms of new applications that supported individual products and services and in terms of the IT infrastructure that supported applications and ensured that applications that needed to interact with each other did. As IT became more integral, a new challenge emerged: how to achieve the benefits of providing a diverse set of products, each tailored to a specific type of customer, while also achieving economies across products.

Insurance Co. had a "federated model" of IT governance. At the corporate level, Global Technology Services (GTS) managed IT infrastructure services for all of Insurance Co. At the business unit level, each of the three lines of business had a CIO responsible for application development (AD).

GTS ran and provided the infrastructure services on which applications from business units were developed. When AD teams worked on a new application, they would tell GTS what they needed in terms of a development environment. GTS then provisioned that hardware or capability. GTS's infrastructure services included hardware (e.g., networks), software, storage, and output processing. GTS had around 800 full-time equivalents (FTEs) and an annual budget of around \$500 million—about 45% of Insurance Co.'s total IT spend.

Developing Strong Internal Capabilities

Susan Travis, who became CTO in 2002, spent her first four years centralizing and streamlining Insurance Co.'s infrastructure and transforming GTS into a services management organization. This included adopting the IT Infrastructure Library (ITIL) framework, training GTS employees in project management, and strengthening governance bodies. GTS also simplified its chargeback system, transforming its catalog of 125-plus products that, in the words of Travis, "no one understood," to one consisting of two dozen services "that clearly resonated with the business." In the process, GTS discovered several "dislocations"-where GTS had been either over- or under-charging a line of business. Large BU, for example, was being undercharged \$12 million.

Soon after Benson became CIO, Travis found herself in the uncomfortable position of explaining to Benson that her annual bill from GTS (around \$100 million) was going to increase by \$12 million. Travis also faced a second challenge involving Large BU: Insurance Co.'s three lines of business were demanding a total of \$20 million in infrastructure services, however there was only \$5 million in the budget.

The \$12 Million Dollar Challenge

To tackle these challenges, Travis and Benson believed that GTS, as well as IT and non-IT stakeholders from Large BU had to work more closely together. This included giving non-IT executives a greater sense of control over infrastructure investments by showing them how GTS services related to the applications they owned. There was only so much GTS could do on its own to enhance Insurance Co.'s IT infrastructure. Both Travis and Benson believed the problems with Insurance Co.'s IT infrastructure were not simply ET's problems, nor simply IT's. They belonged to IT and non-IT stakeholder groups throughout Insurance Co.

One of the first actions Benson took was invite Travis to a Large BU Planning Board meeting, to explain GTS to senior management. At the meeting, she proposed they all take on the challenge of eliminating \$12 million out of infrastructure costs, to keep their GTS costs flat. As she recalled:

Susan and I initiated a frank conversation with the board about ET charges. We allocated the entire application portfolio out among the board members so they could see exactly what portion of total ET charges they were responsible for. For the first time, the notion that ET charges are a shared responsibility really hit home. Board members recognized the direct impact on ET charges of their business and product decisions, and committed to achieving the \$12 million in reductions.

Benson and Travis made a similar presentation to Large BU's primary IT governance board, the IT Operating Council—a governance body responsible for ensuring the IT organization was effectively executing the technology components of Large BU's business plan. As Travis explained, "If the point was to share responsibilities and accountability, from the very beginning we involved IT and non-IT stakeholders."

After these two key presentations, Travis and Benson then formally launched the "\$12 Million Challenge"—a focused collaborative effort to lower \$12 million in infrastructure costs in one year. The initiative was backed up with an extensive communications campaign that included pins, buttons, coasters, and monthly recognition events. Every month, for example, recognition letters were sent to people who had successfully reduced infrastructure costs and a list of the recipients was posted on a wall. The wall became a "wall of honor." People wanted to be on the list because if they weren't, it suggested they had not saved any costs.

Creating Resources for Managing Interdependencies

IT managers created several resources for defining and managing interdependencies between local and enterprise-wide efforts.

Total Cost of Ownership Reports

The mechanism that all managers credited most with helping them surpass the \$12 million goal was a set of Total Cost of Ownership (TCO) reports. The result of several years of work, the TCO reports provided a common view of how applications related to and depended on each other and infrastructure services, along with the (non-IT) business owners of each application. Applications, for example, were now linked to maintenance and infrastructure costs. This enabled users to view the total cost of the applications they owned.

The TCO reports allowed business owners to view Large BU's application portfolio in a number of ways (please see Figure 1 for examples of views). On one axis, applications could be identified by the key business processes they supported (e.g., client acquisition, billing and remittances, etc.) and on another axis, by the key products they supported (e.g., life, automobile, annuities, etc.). For an organization that was very product-focused, users could now see how different products drew on similar processes and how often multiple applications were used for the same process (i.e., redundancies). Managers could also now view the data from multiple levels of detail—from all the products associated with a single business owner; to all the applications associated with a single product; to all the infrastructure services associated with an application. The reports enabled business owners to understand the total cost drivers of the applications and processes they were responsible for. In some cases, business owners realized they were responsible for applications they did not understand and engaged with an IT relationship manager to understand their portfolio. As Benson recounted:

As a large business unit with a diverse product portfolio, it is no surprise that Large BU's board members may not understand each and every application under their purview. By generating individualized reports for each board member, we were able to raise awareness about the costs associated with the applications in their portfolio. Upon learning that a particular application costs \$200,000 per year to run, a board member may seek out the business owner to learn more about it.

In other cases, users found applications with no business owners. These cases sparked discussion around whether or not the application was needed and if so, who the business owner should be.

The TCO reports gave business owners a greater sense of ownership and accountability. As one senior IT manager noted:

We needed to get the data together, because you can't be accountable if you don't know. If GTS holds onto all that data, then it's their problem. If [the application developers] hold onto all that data, then it's their problem, along with GTS's. If we pass it to the business and make them accountable for the expense, then it's everyone's shared problem.

A non-IT senior manager noted:

To break down the expenses by system, by owner, was huge... When you've got something that's an unknown it feels more put upon you. In contrast, when you've got the data, you know how much you're spending on an application, such as "DataMart," and you can then ask: Do we still need all that data? Do we still need to run all those reports? Is that still a business need? And maybe I can make some business decisions that will drive down that CPU. So, [the TCO database] did two things. First, it focused on sharing the data with the business. Then it enabled the business to say, you know what, this is my problem. This is something I've got to solve, but I couldn't solve it before when I didn't have the data. Now I do, so now I can make smart business decisions on where I want to spend my money.

Before the TCO reports were made available to the business, the IT group spent a couple of months in preparation, brainstorming potential questions and developing answers that would make sense from a business perspective. One IT manager involved in the roll out recalled:

We were very careful in how we rolled out the TCO reports and how we were going to communicate them. Before we shared them with the business, we spent a couple of months preparing the IT associates. We made sure that IT was educated about the application costs and how they were derived and knew how to explain these costs in terms that the business would understand. We also ensured that IT knew where to go for even more information on the application costs. Because as soon as you share that kind of information with the business, guess what? They start asking a whole bunch of questions, and they should. Reporting on the cost of our applications has heightened the awareness both on the IT and the business side as far as what the primary drivers of application costs are and what we can do to try to manage those costs more efficiently.

IT and non-IT managers commented that the database and report "brought two worlds together" and gave users a total picture of the systems for which they were responsible. Before, managers understood the set of applications supporting their business and they understood the total cost of their infrastructure, however they never related the two together. One IT manager recounted how he and his colleagues used to focus simply on their specific piece of an application without any understanding of how the pieces related to each other:

When I first came into the company, the conversations I would hear would be like, oh, what do you work on? I work on

2256 [a piece of an application]. Wow, that's really great. And somebody else would say, I am working on 3825 [a different application piece]. Oh boy, vou're working on that one. And as silly as that sounds, that's how some conversations would go, and what it amounted to was that folks had very little identity with the total application. They identified with their piece of an application that they happened to work on. So, a very interesting change over those 10 years has been that now we're quite well organized around applications of the type that the business organization recognizes. The steady migration has been to move away from recognizing component parts of applications the way an IT person sees them, to recognizing the whole application, to recognizing the application family or product group that it's part of and associating that with the right business groups on the business side of the house.

The TCO reports enabled IT and non-IT users to develop a common understanding of how applications related to broader business. Large BU's CIO, Benson, shared one experience she had with the president of Large BU, Jan Davis.

[Davis] called me one Sunday and asked why she's still paying \$200,000 a year for a product that had been demutualized. Then she posed an interesting question: 'Can't we just shut that thing off? Would anybody notice?' We're having more and more of those kinds of conversations these days, which I view as the sign of a healthy organization.

Providing Options

According to Benson, "We're viewed as better partners when we present the business with options." Another colleague noted, "Our mantra has been all about choice." Application developers and GTS worked together to provide business owners with choices that included organization-wide infrastructure both in terms of alternative project solutions and in terms of alternative service levels. They believed that when non-IT managers had choices, they could make decisions and be held accountable for them. According to Benson, presenting the business with options also had a favorable effect on IT's relationship with the rest of the business: "Our business partners view us as more strategic and more engaged when we present them with choices and clearly explain the ramifications of each."

An early example of how application developers and GTS worked together to provide choices to non-IT executives was during the development of two new products. They examined the total costs associated with the development and maintenance of two options: 1. have both products on a single system environment that Insurance Co. used for administrative processing; or 2. (as was tradition) have each product on a separate dedicated environment. In the end, business owners chose to give up some specific features and have a single environment because the costs of having two environments outweighed the benefits of additional features.

Creating New Vocabulary

Another area where GTS and Large BU's application developers worked together was to create a new vocabulary by identifying classes of services, based on criticality, as judged by the business. The result of this exercise was that applications were assigned a "service class," based on service requirements, of high, medium, or low. In addition, applications were also assigned a "disposition." Applications with a "Buy" disposition were applications that should be invested in for continued future value; those labeled "Hold" were applications that should only be minimally invested in for maintenance; and those labeled "Sell" were applications that should be divested to remove low cost value. These dispositions became an important first attempt at approximating business value alongside total IT costs.

A manager from GTS explained:

[Large BU] had about 160 applications. We worked with business sponsors to tell us, from a business perspective, what's most critical to the business as well as what's not as critical. We then asked them to line up their applications by the ones you pay for most, and see if we have anything that's disjointed. In some instances we found applications that cost a lot of money, used a lot of capacity and GTS resources, that we built like it was critical, yet the business sponsor would tell us that the application actually was not so critical.

Ensuring Ongoing Engagement

To ensure stakeholders from GTS and Large BU worked together beyond the \$12 Million Challenge, Travis and Benson relied on several governance boards. Travis, for example, introduced a Client Delivery Organization (CDO), which consisted of a service desk and relationship manager for each line of business. The CDO acted as a liaison between GTS and Large BU's application developers. GTS relationship managers helped execute projects, explained the ETS bill, and in general, worked on any special projects or problems that arose.

Another key governance mechanism that Travis relied on was the GTS Governance Board. Once a quarter, Travis and Insurance Co.'s chief accounting officer co-chaired a meeting with IT and non-IT executives to review major operating metrics (e.g., availability), financials (e.g., charge back figures), and approve and review enterprise-wide initiatives (e.g., a project on improving the overall risk and security profile of Insurance Co.'s IT). Participants included the CIOs from the lines of business, someone from audit, and finance managers.

As CIO of Large BU, Benson actively participated in key IT and non-IT governance boards where links between local and Large BU-wide efforts were examined. The Large BU Planning Board consisted of senior management from Large BU, including the heads of the business divisions. Participants focused on achieving synergies across Large BU's business divisions. Participants could see how the bottom line of their division related to the broader goals of Large BU (e.g., overall revenues and earnings). Benson's application development group had a Customer Relationship Executive (CRE) assigned to each of the three segments within Large BU. The CREs reported directly to Benson. Each CRE had an equivalent non-IT partner who represented the interests of a segment. The two regularly met to discuss all the projects that were underway within their segment.

Finally, Benson co-led the IT Operating Council with a non-IT senior vice-president. Once a month, IT and non-IT senior managers met to discuss project prioritization and the status of critical projects that were in red or yellow status from each segment in Large BU. During these meetings, participants used the TCO reports to ensure the correct party (e.g., IT or a business owner) was taking responsibility for issues. CREs participated in Council meetings and, in several cases, helped their non-IT equivalent prepare their reports. However, as one CRE explained to us, "The expectation is that the person who is reporting on their project is the business lead and that person should be raising issues that are not just IT-related."

Conclusion

In 2007, having engaged non-IT executives in IT infrastructure investment decisions, Benson

wanted to get IT and non-IT executives to work on better managing other shared resources, such as business processes that were common across product lines within Large BU. For example, she worked with non-IT peers to standardize how they calculated key data:

Large BU's operating model values speed over efficiency. Speed to market trumps all. Everything in the IT operating environment—the organizational structure, the policies, the rules, etc. needs to reflect and reinforce that basic value. We turned to our business partners for help clearing the obstacles that were slowing us down. Take something as basic as how to calculate age. Our X policy underwriters and our Y policy underwriters were using different formulas. Standardizing that calculation across all products helps us operate more efficiently, saving time and money. There are dozens of examples like that one, and we're vigilantly weeding them out as we speak.

Senior management at Insurance Co. was also keen to replicate the success of Large BU in other lines of business. A key issue, then, was: How?

Exhibit 1 Three Views of a Total Cost of Ownership (TCO) Report

View 1: An Excerpt of Summary by Sponsor, AD Maintenance & Infrastructure

Business Sponsor	Parent Application	Applications	Service Class	Disposition	Status	2006 Plan AD Maintenance	2006 Plan Infrastructure Total	Total IT SLA 2006 Plan
Jane Doe	ParentApp X	Application B	High	Hold	Production	\$1,742	\$11, 898	\$13,641
		Application E	Low	Buy	Production	\$790	\$6,352	\$7,141
	ParentApp Y	Application M	Medium	Hold	Development	\$157	\$449	\$606
		Application O	High	Sell	Target for Retirement	\$96	\$444	\$540
		Application P	Low	Buy	Production	\$21	\$677	\$698
Total Jane					\$2,806	\$19,820	\$22,626	
Pat Argent	ParentApp Z	Application A	High	Buy	Production	\$790	\$6,352	\$7,141
		Application F	Medium	Sell	Development	\$157	\$449	\$606

DISPOSITION

Invest in application for continued future value

Minimally invest to maintain the application

Divest in application to remove low value cost

Buy:

<u>Hold</u>: <u>Sell</u>: <u>Development</u>: <u>Production</u>: <u>Target for Retirement</u>: **STATUS** App is in Design or Build phase App has reached Deploy stage App is being replaced or phased out

View 2: An Excen	pt of Application	by Process wit	hin Product
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Process Group	Level 1 Process	Level 2 Process	Product 1	Product 2	Product 3	Product 4
Client Acquisition	Sales	Sales to Employer	Application A	Application B	Application B	Application C
		Sales to Individual	Application D	Application E	Application D	Application D
	Underwriting		Application F	Application F	Application F	Application F
	Case Implementation		Application G	Application H	Application I	Application J
	Eligibility		Application K	Application K	Application K	Application L
Disbursements	Claims Adjudication		Application M	Application M	Application P	Application M
	Funds Out		Application O	Application O		

View 3: An Excerpt of Application Details by IT Liaison and non-IT Sponsor

Application	Application Description	Parent Application	Application Status	Business Sponsor (non-IT)	Customer Relationship Executive (IT)	Platform	Product
Application B	Client server app that allows entry, tracking	ParentApp X	Production	Jane Doe	Alex Menz	Client Server	Product 2
Application C	Manages claims and payments	ParentApp W	Production	Kim Re	George Arndt	Client Server	Product 3
Application D	Batch app that provides	ParentApp W	Target for Retirement	Kim Re	George Arndt	Mainframe	Product 3
Application E	Portal providing access to participant	ParentApp Y	Production	Jane Doe	Alex Menz	Web	Product 2
Application F	Used to interface master products with	ParentApp Z	Development	Pat Argent	Alex Menz	Mainframe	Product 1

Exhibit 2 How Insurance Co. Achieved Enterprise Alignment

Strong Internal IT Capabilities

 How well does your firm understand its IT infrastructure costs? Meet SLAs? Manage capacity?

Are projects on time, within budget, and within scope?

Large Insurance Company Adoption of ITIL; services make sense to non-IT executives; applications developed quickly

Engagement Opportunities

 Do application developers, shared IT services and non-IT executives have a clear motivation for engaging?

Is there a simple set of governance mechanisms in place to sustain engagement?

Large Insurance Company Short-term: \$12 million challenge; long-term: joint participation in IT and non-IT governance bodies

Resources for Managing Interdependencies

Is there a mechanism that relates applications to shared infrastructure?

Does IT provide non-IT executives with choices that represent trade-offs?

Large Insurance Company TCO Reports; options linked to infrastructure for application solutions

Non-IT Executive Engagement in IT Infrastructure Investment Decisions

 Are non-IT executives taking responsibility for trade-offs between local and global objectives?

 Do non-IT executives share responsibility for IT infrastructure investments and other business platforms?

Large Insurance Company Non-IT executives have greater ownership and accountability over IT investments decisions that include IT infrastructure

Control of IT Infrastructure Investments

 Can the firm respond to new threats and opportunities and prevent infrastructure spaghetti?

• Are infrastructure investments linked to business value?

Large Insurance Company 1st year: \$14m reduction in ongoing infrastructure costs; met \$20m of new demand in IT infrastructure services with \$5m

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- The IT Engagement Models

In July of 2008, Jeanne W. Ross succeeded Peter Weill as the director of CISR. Peter Weill became chairman of CISR, with a focus on globalizing MIT CISR research and delivery. Drs. George Westerman, Stephanie L. Woerner, and Anne Quaadgras are full time CISR research scientists. MIT CISR is co-located with MIT Sloan's Center for Digital Business and Center for Collective Intelligence to facilitate collaboration between faculty and researchers.

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