

# Using Process and Service Models to Help Transform Business Processes in Financial Services Organizations

Marcia Kaufman, Partner

Dr. Fern Halper, Partner

Judith Hurwitz, President and CEO





A GreenPaper™ Customer Benefit Study

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□ 233 Needham Street □ Newton, MA 02464 □ Tel: 617-454-1030 □  
www.hurwitz.com



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## Introduction

Financial services organizations faced with increasing competitive pressures are looking for innovative approaches to leverage their strategic assets. Many companies are looking to implement industry best practices to enable the business to increase revenue, attract new customers, and offer new products – without increasing expenses dramatically. The most successful companies in this very process-intensive sector have recognized that consistent, efficient, and repeatable business processes are a required foundation for meeting their goals for growth and innovation. Hurwitz & Associates recommends that organizations select routes to business innovation by improving efficiencies based on identifying common processes. Because this is by no means an easy task for a large financial services organization, it must be approached in an incremental way. To understand the impact of process on financial services companies, it is helpful to look at some examples.

A global insurance provider needed to have a consistent way to administer policies to support a corporate mandate to gain more revenue from existing customers. The company's problem was that each product area had its own unique process for policy administration. As the company began to move towards providing a consistent way to deal with customers across product lines, these inconsistencies started to cause too many delays and actually held the company back from its attempts to cross sell products. To make matters worse, this company had a plan to acquire at least three new companies a year.

One of the largest bank holding companies was so distributed that IT was not designed to support its strategic direction. The company realized that its IT operations had been designed to support the requirements of individual departments. In order to provide a consistent customer experience across customers and various channels, the company realized it needed to rethink how to design its systems to reduce complexity and duplication.

The transition from disconnected processes within business units to consistent enterprise-wide processes that support business objectives is complicated. In essence, both banks and insurance companies have been structured as vertical silos within a specific product area. Therefore, each product area has its own set of processes, its own IT and business systems, and often its own specialized sales channels for product sales. Inevitably, this has led to massive duplication that causes huge inefficiencies in a time when organizations are trying to contain costs and streamline processes across business units. In reality, many of the unique processes implemented at a particular financial organization can be grouped into the major categories illustrated in Figure 1 on the following page.

***The most successful companies in this very process-intensive sector have recognized that consistent, efficient, and repeatable business processes are a required foundation for meeting their goals for growth and innovation.***

Organizations are able to become more efficient by finding ways to standardize and reuse business processes across different divisions. Once these efficiencies are in place, management can focus on innovation and differentiation across the organization.

This report will provide insights into the movement towards modeling business processes in conjunction with a service oriented architecture (SOA). The conclusions in this report are based on interviews with IBM customers in both banking and insurance companies using IBM's Process and Service Models as an enabler on the path to SOA.

**Organizations are able to become more efficient by finding ways to standardize and reuse business processes across different divisions.**

Banking	Insurance
<ul style="list-style-type: none"> <li>• Account Opening</li> <li>• Lending, Syndicated Lending</li> <li>• Mortgages</li> <li>• Savings, Investments, &amp; Deposits</li> <li>• Wealth Management</li> <li>• Sales &amp; Relationship Management</li> <li>• Product &amp; Marketing Management</li> <li>• Payments</li> <li>• Regulatory and Compliance</li> <li>• Human Resource Administration</li> <li>• Transfer Service</li> </ul>	<ul style="list-style-type: none"> <li>• Enterprise Resource Management</li> <li>• Channel Management and CRM</li> <li>• Communications Management</li> <li>• Marketing &amp; Customer Acquisition</li> <li>• Product Portfolio Management</li> <li>• Claims Management</li> <li>• Policy Management</li> <li>• Underwriting</li> <li>• Financial Transaction</li> <li>• Reinsurance Management</li> <li>• Investment Management</li> <li>• Provider Management</li> </ul>

Figure 1. Examples of Process Models

## Business Process Models: The Linchpin of a SOA

Organizations typically look at SOA as an architecture based on technologies ranging from an enterprise service bus to web services interfaces. However, in reality, SOA is only useful when it is designed to support the way business processes are codified and used to support business aiming to operate in an efficient manner. Managing business process successfully requires conformance to a set of principles:

- **Consistency of business terminology and definitions.** Each business unit often adopts its own unique definitions of terminology. Therefore, one department may define a customer as the business unit that has purchased a product, while another business unit can define the customer as the corporate entity. Five departments may have five different ways of defining the process of opening an account. This inconsistency makes it almost impossible for companies to look at processes across the company.

- **Predictability to ensure success.** Increasingly companies need to create models across business units. If there are differences across the organization, management cannot accurately predict outcomes. A lack of predictability can cause slowdowns in the companies' move to innovative business models.
- **Quality as a foundation for trust.** The business needs to be able to trust in the reliability of the data in combination with associated business processes. Therefore, reusable processes require that the related data be consistent and as accurate as possible.
- **Auditability and governance as a foundation for business control.** The goal of the new generation of process management is to ensure consistent results. Therefore, being able to show the origins of a process accurately and tying that process back to the data can mean the difference between success and failure.
- **Modularity is required for flexibility.** While it is possible for companies to create a consistent approach to modeling business processes as a one-time project, companies that have tried this discover that they are unable to adapt to business changes. The only approach that protects the company from change is to use a modular approach to model processes and services. This service-oriented approach means that components can be recombined to support new business initiatives.

*Turning business requirements into technical architecture that is consistent across the business is complicated - from cultural, IT, and business management perspectives.*

## Tying Business Requirements into Technical Architecture

Turning business requirements into technical architecture that is consistent across the business is complicated – from cultural, IT, and business management perspectives.

- **Fostering collaboration.** It is difficult to identify reusable services and service definitions across departments. Typically each department wants to hold on to their view of a service. This issue tends to be more political than technical. Companies need to create an organizational structure that fosters collaboration.
- **Going beyond silos.** Each product area has a different way of defining everything from “customer” to “accounts.” For decades, departments have looked at their products as though they reside in independent worlds. The future of financial services organizations demands a holistic view of processes across organizational silos.

- **Seeing the big picture.** It is hard for management to understand processes outside of their own departments. Departmental management finds it difficult to see the big picture. It takes time to reorient management to look at processes outside of their own view of the world.
- **Moving forward incrementally.** Taking a holistic view of the organization does not mean that business requirements for the entire enterprise must be modeled all at once. In fact, organizations that undertake very large-scale corporate-wide initiatives typically fail. Incremental approaches are the only practical way to move forward.
- **Using modeling to understand business processes.** It is difficult to find the right level of granularity for business services. If business services are too narrowly focused, then it is hard to find opportunities for reuse. Modeling helps to identify the similarities in business processes and thus enables the development of business services that are more broadly focused and still abstracted enough to meet many different needs.

*... modeling as the foundation of a business process strategy can have the effect of forcing developers to think in business rather than technical terms.*

## Models Provide a Solution

Clearly, it is hard for financial services companies to transform the way they manage processes across departments. However, modeling as the foundation of a business process strategy can have the effect of forcing developers to think in business rather than technical terms. Hurwitz & Associates believes that leveraging best practices-based models is an approach that can help organizations create a knowledge base that is standardized and maintained even when there is staff turnover.

In fact, training was one of the most important issues mentioned by customers. For example, one customer interviewed by Hurwitz & Associates has found that training a business modeler to understand the business had a failure rate of more than 70%. This meant that modeling became a huge bottleneck in the project. Given this type of customer experience, it makes sense to begin with a pre-configured industry-specific model as a starting point. Another company Hurwitz & Associates interviewed was able to add its unique company terminology into a pre-defined model. Through this procedure the company was able to save as much as 50% of the time that it would have taken to model from scratch. Using this process, the company was able to more quickly identify the business processes that could be standardized and reused.

## The IBM Approach to Process and Service Models

Over the past fifteen years, IBM has developed a set of Industry Process and Service Models for the banking, financial markets, and insurance industries. These models were designed based on the best practices of hundreds of companies in IBM's business strategy and information management engagements. The Models for each industry group are designed to represent the specific requirements and processes of these industries.

Within each of the three industry groups, the Process and Service Models are part of model portfolios designed to be used across a broad range of multi-channel transformation, compliance and governance, process and SOA scenarios. IBM has leveraged industry standards to ensure that customers are dealing with common industry best practices.

An overview of IBM's Process and Service Models for the banking and insurance industries is detailed in the following discussion.

### ***Insurance (IAA Process Models and Service Models)***

IBM's set of Models designed to define and represent common business processes for the insurance industry is called the Insurance Application Architecture (IAA). The business processes in these Models represent the various insurance lines of business such as personal property, auto, commercial property and casualty. These Models may be used in tandem to support the development of business services in a SOA environment. For example, a company could use Websphere Business Modeler in conjunction with the Process Models to codify business processes. Once this stage is complete, the company can then decide which processes will become actual business services through the use of the Service Models. The Service Models capture business requirements for SOA component development and service enablement. The resulting business services must be created using a standard set of definitions to ensure consistency and reusability. In addition, the Models define common data structures that would be needed to ensure that business services are consistent.

For companies building their SOA environment, the Models can be used to identify the appropriate level of granularity for business services. In effect, companies utilizing the Models have the opportunity to learn from the experiences of their peers in the insurance industry. Business services can be built once and used across multiple lines of business and with various business partners such as independent insurance agents.

***The Models for each industry group are designed to represent the specific requirements and processes of these industries.***

**IAA Business Process Model (BPM).** The IAA BPM is a graphical representation of a business process and describes the human and machine tasks required to complete insurance company business processes. These models standardize the terminology and processes in use at multiple insurance companies to provide a best practices approach. They have been built for hundreds of specific insurance processes. IAA helps insurers identify, describe and structure all of the business functions, data and processes in an objective manner that can be understood by both IT and business users.

The IBM Process Models describe how a discrete process such as “pay a claim” should be accomplished in a way that is independent of specific software, hardware, or organization. In addition, the Process Models represent the various system and channel interactions that are required to complete these business processes. While the process models are in the form of electronic documents, these documents can be turned into reusable software using an enterprise modeling tool.

The BPM for the insurance industry includes a catalogue of approximately 200 pre-defined business processes. The catalogue defines key characteristics of these pre-defined processes such as use of common language and the various business roles that may be involved with a particular process. Due to the commonality and universality of the business process definitions, the pre-defined processes tend to represent about 80% of the actual procedures followed at the organization. The business processes are designed to be reconfigurable so that the business can make changes to bring modeled business processes more in line with the actual workflows and policies at the organization. The Models can be used to help an insurance organization determine which processes should be made into business services. Some of the major focus areas for the business processes included in the BPM catalogue are detailed in Figure 2:

<ul style="list-style-type: none"> <li>• Channel Management</li> <li>• Claims Management</li> <li>• CRM</li> <li>• Enterprise Resource Management</li> <li>• Human Resources Management</li> <li>• Financial Transactions</li> <li>• Market Research and Analysis</li> <li>• Product Portfolio Management</li> <li>• Reinsurance Management</li> </ul>	<ul style="list-style-type: none"> <li>• Intermediary Management</li> <li>• Communication Management</li> <li>• Customer Acquisition</li> <li>• Financial Reporting and Regulatory Compliance</li> <li>• Information Technology Management</li> <li>• Investment Transactions</li> <li>• Marketing and Promotion Management</li> <li>• Provider Management</li> <li>• Underwriting</li> </ul>
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**Figure 2. Business Process Focus Areas within the IAA Business Process Models (Insurance Industry)**

***The business processes are designed to be reconfigurable so that the business can make changes to bring modeled business processes more in line with the actual workflows and policies at the organization.***

**IAA Service Models.** As described in the preceding discussion, the Process Models describe the individual activities or tasks that must be followed to complete a process such as “process a claim”. In order to move to a service oriented architecture, the insurance company will need to create business services to represent these business processes. The Service Models identify business services and provide insight to determine the appropriate level of granularity for these services. The Service Models also identify the data structures required for the business services and data that the business service will need to complete the process and deliver the expected output.

*The Service Models identify business services and provide insight to determine the appropriate level of granularity for these services.*

**Banking (IFW Process and Service Models)**

IBM’s set of Models designed to define and represent common business processes for the banking industry are called The Information Framework (IFW). These Models are identified as Process and Service Models just like the IAA set of Models for insurance.

**IFW Business Process Model (BPM).** The IFW BPM is a set of logical models representing approximately 300 different banking industry processes. The BPM uses flow diagrams used to describe the activities and workflows required for each business process to be completed, enabling the banking organization to identify commonly used processes and where they occur. A bank will typically identify its key business processes and then select pre-defined processes from the BPM catalogue as one step in identifying which processes should be made into business services. The processes in the catalogue are defined so that they are independent of specific products, channels, and organizational structure and may be changed by the bank to more accurately reflect the specific business environment. The main focus areas for the pre-defined processes included in the BPM catalogue are shown in Figure 3:

<ul style="list-style-type: none"> <li>• Arrangement Account Administration</li> <li>• Arrangement Management</li> <li>• Asset Management</li> <li>• Capital Management</li> <li>• Channel Management</li> <li>• Collateral Management</li> <li>• Communication Management</li> <li>• Financial Market Offering Management</li> <li>• Financial Transaction Card Access</li> <li>• Financial Transaction Processing</li> <li>• Infrastructure Management</li> <li>• Involved Party Evaluation</li> <li>• Involved Party Management</li> </ul>	<ul style="list-style-type: none"> <li>• Liability Management</li> <li>• Liquidity Management</li> <li>• Market Management</li> <li>• Product Development</li> <li>• Product Distribution</li> <li>• Profit and Loss Management</li> <li>• Relationship Monitoring</li> <li>• Risk Management</li> <li>• Special Customer Assistance</li> <li>• Human Resource Management</li> <li>• Arrangement Negotiation</li> <li>• Arrangement Reporting</li> </ul>
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**Figure 3. Business Process Focus Areas within the IFW Business Process Models (Banking Industry)**

**IFW Service Models.** As described in the preceding discussion, the Process Models represent the individual activities or tasks that must be followed to complete a process such as “open an account.” The Service Models identify the business services the bank will need to create within a SOA environment. The Models provide the business with insight into a best practice approach to determine the appropriate level of granularity for these services. As in the insurance models, the Service Models for banking identify the data structures and requirements to ensure the business services will deliver the desired output.

## Results of Customer Benefit Study

In order to verify the importance of using Process and Service Models, Hurwitz & Associates engaged in a detailed interview process with 10 IBM Process and Service Models customers – five banks and five insurance companies. The purpose of the interviews was to understand the customers’ experience with the Models, including the business and technical benefits they derived from using the Models.

Hurwitz & Associates asked the respondents about the top drivers for implementing the Models. These questions were asked based on the four phases of their SOA implementation: Modeling and Analysis, Design, Implementation, and Management. IT managers and directors at these ten companies were asked to rate various benefits they may have received from implementing the Models on a four-point scale ranging from significant to not important. Where applicable, these customers were also asked to quantify benefits they received from the Models using metrics such as percentage time and cost savings. The companies in the study were at various stages in the development of their SOA strategy. While some companies were just beginning their SOA journey, several companies were early adopters. Likewise, the range of experience with use of the Models ranged from less than six months to many years.

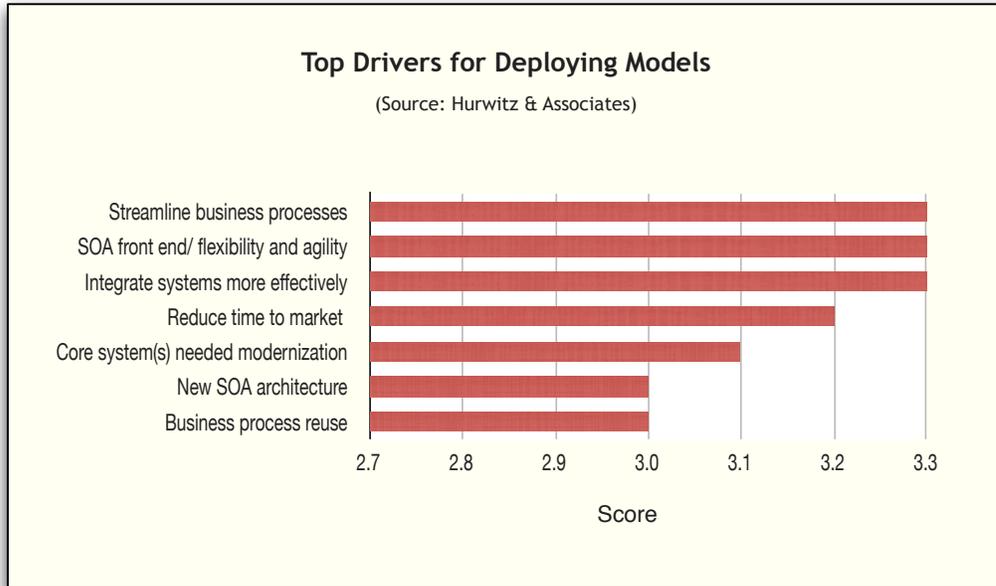
### ***Drivers for Deploying the Models***

As illustrated in Figure 4 on the following page, the companies in the study indicated that the top reasons they chose to implement the Models centered on:

- Streamlining their business processes
- Creating a SOA infrastructure to increase business flexibility
- Integrating their systems more effectively

These drivers are consistent with the goals of many financial service organizations as they respond to industry challenges such as mergers and acquisitions, increasing requirements for risk and compliance, and a constantly changing competitive landscape

***IT managers and directors at these ten companies were asked to rate various benefits they may have received from implementing the Models on a four-point scale ranging from significant to not important.***

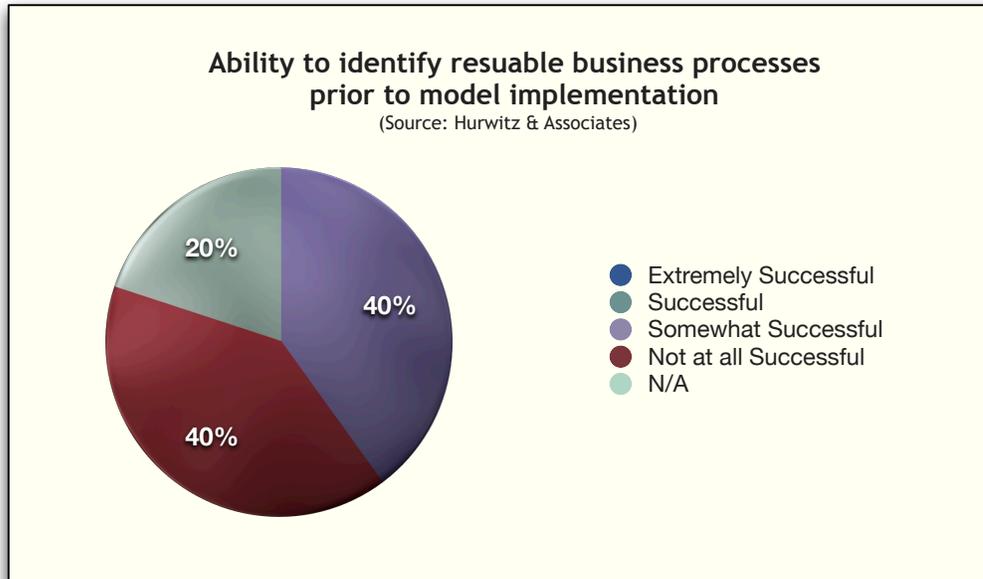


*IT and the business must have a common understanding of the strategic plans in order to successfully collaborate on the best way to innovate and implement change.*

**Figure 4. Companies interviewed ranked their top drivers for deploying the IBM Business Process Models (4=very important, 3= important, 2=somewhat important, 1=not important)**

Overall, the top drivers are focused on reducing costs while driving up revenue. Many of these companies have to find more cost-effective ways to quickly bring new products and services to market. In order for this to happen, business and IT need to improve alignment with the organization’s business strategy. IT and the business must have a common understanding of the strategic plans in order to successfully collaborate on the best way to innovate and implement change.

One important driver for companies implementing the Models, was to help improve business process reuse. An insurance company manager reflected the sentiments of the majority of companies in the study when he stated that his company was “absolutely weak in reusing business processes” prior to implementing the Models. As illustrated in Figure 5 on the following page, prior to implementing the Models, eight out of ten companies ranked their experience in reusing business processes as either somewhat successful or not at all successful.



*“The initial idea for the Models was to improve business and IT communication by establishing a common language and to improve the context for business requirements.”*

**Figure 5. None of the companies interviewed rated themselves as successful in reusing business processes prior to using the IBM Business Process Models**

The Models helped the organizations in this study to know their customers better. IT and business executives developed a better understanding of what it means to open an account or how to define the process for activating a customer loan. An IT director at one large insurance company stated, “The initial idea for the Models was to improve business and IT communication by establishing a common language and to improve the context for business requirements.” An IT manager at a large bank had a similar story. Management wanted to establish a common business language so that various IT groups and business groups could standardize on terminology and definitions. The Models were used as a starting point when defining or changing processes or services.

**Benefits from the Models**

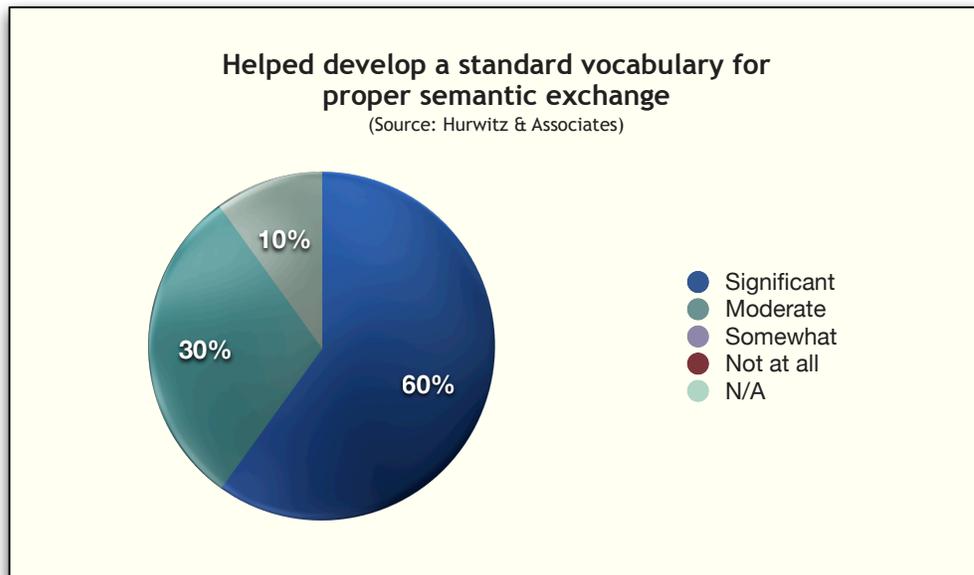
Companies we interviewed experienced significant benefits using the IBM Process and Service Models across the four phases of SOA deployments. These benefits include developing a standard vocabulary and common communication language, understanding interdependencies in business processes, and ultimately creating reusable business services as part of a SOA deployment. All of the companies in the study found that the Models had an impact on improving communication between business and IT. The key benefits experienced by customers are described in the following discussion.

**Process and Service Models helped to develop a standard vocabulary for proper semantic exchange.**

Financial services companies interviewed for this study have found that a consistent and standardized business vocabulary is a top priority if the business expects to make informed decisions based on an enterprise-wide view. This goal is not easy to achieve. Typically, financial services companies have a siloed approach when building and implementing business processes across different business units. Each division of the typical financial services organization has standardized on its own definitions for certain attributes and has modeled and implemented business processes to fit the unique needs of a particular division.

The participants of this study indicated that the IBM Process and Service Models provided them with a framework to help understand the common processes that exist across the disconnected silos of their business. According to an IT executive from one large bank, “The Industry Models save enormous amounts of work in defining a semantic model for services. If we didn’t have the Models there would be lots of analysis, requirements, discussion and argument and a lot of rework. We might solve a problem at one particular time and then have to revisit it, which might result in even more arguments. The Models let you avoid this because they provide a company view.”

As Figure 6 shows, 60% of the companies we interviewed stated that the Models helped significantly in developing a standard vocabulary for proper semantic exchange.



**Figure 6. Most of the companies interviewed (9 out of 10) found the IBM Process and Service Models were moderately or significantly helpful in developing a standard vocabulary for use across business units.**

***“The Industry Models save enormous amounts of work in defining a semantic model for services. If we didn’t have the Models there would be lots of analysis, requirements, discussion and argument and a lot of rework...”***

**Process and Service Models helped to identify interdependencies among business processes.**

In addition to providing a common semantic vocabulary, the IBM Process and Service Models also help to identify interdependencies among business processes – a key factor in creating a standardized view across business units. For example, different business units in an insurance company might have implemented different payment processing systems, when in reality much of the process is the same. All of the companies we interviewed felt that the Models improved their ability to understand these interdependencies as a first step towards streamlining business processes across product lines. As shown in Figure 7, half of the companies in the study felt this benefit was significant.

One company executive provided the following example to illustrate how the Models helped them to identify business process interdependencies. The company’s overall goal was to create a single image representing all of the company’s processes and all the related interactions between them. It began by tackling one critical area – claims processing. It first focused on what the business processes were, how they were structured, and from this identified what processes should be modeled. IBM’s IAA model was leveraged as a starting point. After reviewing existing code from legacy applications, the company was able to build an automated approach to claims processing. The Process and Service Models created for claims processing were then replicated across different departments throughout the company.

*All of the companies we interviewed felt that the Models improved their ability to understand these interdependencies as a first step towards streamlining business processes across product lines.*

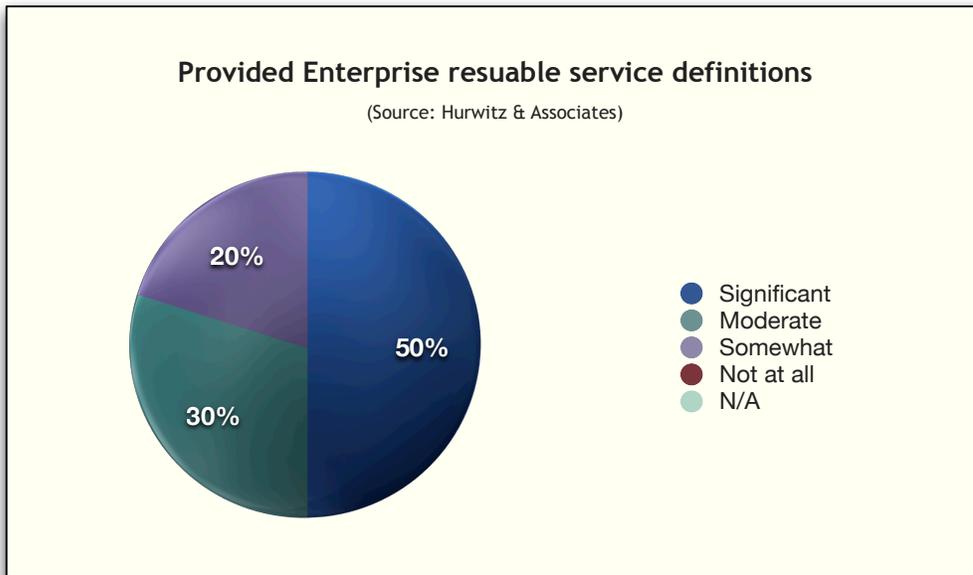


**Figure 7. Half of the IBM customers interviewed for this study felt the IBM Process and Service Models were significantly helpful in identifying interdependencies among business processes.**

**Process and Service Models helped to identify reusable business processes and reusable service definitions.**

A Service Oriented Architecture provides a mechanism to decompose processes and utilize legacy code efficiently to create reusable business services. It provides a smarter, modular software development process. For example, account opening is a reusable process that can be translated into a reusable service definition, at an enterprise level. The Models help companies to identify these reusable business processes and to define appropriate business services (Figure 8 below). Other IBM products help deploy these logical services models. One company IT Director described deploying new systems and services to their customers this way, “It now becomes an exercise in choreography rather than development.” And, the actual implementation is more accurate because it is driven from the Models. Additionally, new systems are more business-focused and in line with business needs.

**The actual implementation is more accurate because it is driven from the Models. Additionally, new systems are more business-focused and in line with business needs.**



**Figure 8. Most of the companies interviewed (8 out of 10) found the IBM Process and Service Models were moderately or significantly helpful in identifying business services that can be reused across business units.**

What does this mean in terms of the overall reduction of time needed to model, design, implement, and manage business processes and services? While not all of the companies had completed this exercise, a few were able to quantify the impact. These companies said that they decreased the time required for the modeling effort by 15% to 20%. A similar response was achieved in the design phase. Others cited about a

10% to 15% decrease in development costs. A few companies felt that development cost reduction exceeded 25%. Eight of the ten companies we spoke with said that the Models enabled them to build systems faster.

Several of the IBM customers in this study were far enough along in their experience with the Models to observe broader business benefits, such as speeding up the time to market for new systems, products and services. For example, one insurance company IT director saw a 50% reduction in the process of deploying a new system. Each time the company implemented a new “system” using the set of services provided in the Models, the development time decreased even more. This company built an entire claims module in four months. Company management believes that before using the Models, this same effort would have taken between one and two years. Likewise, the company also deployed a policy administration system that might have taken three to five years. Leveraging the Models, the process took only eight months.

## Conclusion

Leveraging industry-focused process and service models can have positive business benefits for customers, as demonstrated by the results of the study conducted by Hurwitz & Associates. Virtually all of the companies interviewed as part of the study concluded that the Models resulted in more business-focused systems and business-focused requirements. These Models helped customers reach time to value more quickly, which enabled companies to become more competitive. In fact, more than 50% of the companies interviewed stated that the Models made their companies more competitive. In addition, 80% of the respondents determined that their companies were able to achieve time to value more quickly than without the Models.

It is complicated for companies to truly bring business and IT together to transform business processes. It requires rethinking everything from how business units work internally to finding the interdependencies among current processes and looking at IT from a modeling perspective. Many companies that have followed traditional business strategies based on optimizing growth in individual lines of business find they need to make radical and sometimes uncomfortable changes to move to an enterprise approach. As we have discussed in this paper, modeling business processes across business sectors can help companies to create a common vocabulary and identify common processes. Companies are recognizing that this first step in developing a standardized and modular services approach provides a practical foundation for a more flexible and responsive business.

For example, a company looking to provide a consistent way to model claims processing across ten business units will need an underlying architecture designed to

***Virtually all of the companies interviewed as part of the study concluded that the Models resulted in more business-focused systems and business-focused requirements.***

support this approach. By implementing a service oriented architecture, the company will be able to create a standard and repeatable way to support business rules across the different lines of business. In addition, the business will need to create, manage, and secure business services in a way that reflects industry best practices. However, because of the complexity of this requirement, many organizations recognize this is a long term strategy rather than a simple project to be executed over a number of months. This long term thinking was echoed by the results in the study of customers implementing the Process and Service Models. Customers are using these Models to help them get started on this journey.

### **About Hurwitz & Associates**

Hurwitz & Associates is a strategy, analyst, and customer benefit research company focused on understanding the value of emerging software technologies including service oriented architectures, data integration, web services, and the overall manageability of a highly distributed computing environment. A GreenPaper is the culmination of customer benefit research and analysis that focuses on the tangible technical, financial, and business benefits of adopting pragmatic solutions. Additional information on Hurwitz & Associates can be found at [www.hurwitz.com](http://www.hurwitz.com).

Marcia Kaufman and Dr. Fern Halper are Partners at Hurwitz & Associates. Judith Hurwitz is CEO and President of Hurwitz & Associates.

***By implementing a service oriented architecture, the company will be able to create a standard and repeatable way to support business rules across the different lines of business.***