White Paper

Industry Standards: Expanding the Framework to Enable Insurance Business Transformation

September 2005

Insurance Data Standards
Life & Annuity • P&C • Reinsurance

ACORD

nonprofit • industry developed • solution provider neutral

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Executive Summary

Whether transforming their business processes, connecting to their value-chain partners or attempting to drive efficiency in their implementation infrastructure, insurance companies are facing ever-increasing integration challenges. As members of the insurance value-chain address the problem of business process improvements, the appropriate level of inter and intra enterprise integration is a key issue and must be enabled through a broad framework of industry standards.

ACORD through its strategy work with members and research analysts realizes the need to extend ACORD standards as a framework that includes business process models, transactions/messages, and data which covers the entire the insurance value chain, and supports the following:

- Integrated systems that ultimately support good corporate governance and potentially regulatory requirements such as Sarbanes Oxley.
- Industry metrics and best practices for business processes and standards implementations
- Enable and drive more consistent standards implementations
- Development of business components, service oriented architectures (SOA) and web services
- Development of industry utilities
- Continued elimination of industry fragmentation through implementation or multiple proprietary "formats"

The linkage of process, transaction and data is more important than ever as our industry faces the need to have process controls, auditable data flows, and data transparency.

To enable ACORD to achieve this vision of a standards framework, IBM will be contributing intellectual property (IP) as a first step, to "jump start" this effort. The contribution of this IP will consist of the following which further defined in section 3.2:

- Business Process Models (IAA Business Activity Models)
- State Machines (workflow)
- Data Dictionary (IAA Business Terms)

This is a key contribution to enable ACORD to achieve its vision of a framework that will enable and support demands for, flexibility, innovation, transformation, and transparency within the insurance industry. In essence, existing industry work, knowledge and information will be used to expand existing ACORD standards to drive consistent adoption within the insurance industry.

This white paper launches this effort and proposes a blue-print for the creation of the ACORD business process model, transactions/messages, and data standards framework.

Background

The Association for Cooperative Operations Research and Development (ACORD) is a nonprofit, membership-based organization that offers its members significant value in a neutral forum where ACORD staff and the membership can work together freely and effectively on industry business processes, data definitions and message standards that support the end-to-end insurance value chain. It is imperative that ACORD's standards development process be representative of the industry demographics and marketplace and possess the speed and flexibility to support the pace at which the industry is changing.

ACORD offers a rich knowledge base on which companies can build their enterprise data architecture and management practices. This ensures data quality and consistency throughout the business process involving all trading partners, resulting in collaborative solutions. ACORD historically has focused on the front-end process for standards. Over the last 7-8 years with the acquisition of the Life & Annuity and RLC standards, as well as the emergence of XML, ACORD has addressed the backend reinsurance and various areas of insurance core processing. However, there are known gaps in available ACORD standards in core insurance processes.

Members are forced to take one of two paths:

1. They become paralyzed as there is no standard in a particular area;
2. They charge ahead with a "one off", proprietary implementation or limit or stop implementation resulting in industry fragmentation and limiting the opportunity for straight-through processing.

IBM believes in the importance of open standards in our technical solutions to provide customers a wide choice of components allowing customers and partners to achieve interoperability in their organizations. We have shown this by adopting and promulgating open technical standards in both our hardware and software products. Examples include IBM's participation and contribution to various technical standards bodies such as Eclipse, OASIS and WS-I.

The industry is pushing for easier and better methods of doing business internally and with their partners and suppliers. IBM believes that the use of industry standards is important to the insurance industry and we must provide solutions that are architecturally flexible and move away from proprietary, closed competitive solutions.

1: ACORD Industry Standard Insurance Value Chain

The fast changing global marketplace and regulatory demand have increased the importance of data quality and consistency, business process management and points to the growing importance and adoption of technology. This has fueled the need for ACORD to meet the needs of the industry by expanding the standards to include business process, data and XML standards more quickly, proactively, and deeply. Without this standards framework, the industry will quickly move down a path of fragmentation with proprietary standards that do not support the industry in addressing fundamental business needs, challenges and opportunities.

ACORD Perspective

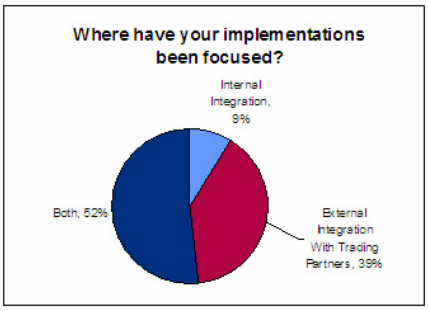
ACORD's Strategic Vision is that the global insurance industry has one common set of data definitions – a common vocabulary. This vocabulary supports messages and business processes across the insurance value chain. Each time any solution is implemented for any part of the insurance value chain it is built upon these standards. ACORD's mission is to facilitate the development and adoption of standards for the insurance, reinsurance and related financial services industries. ACORD accomplishes this by remaining an objective, independent advocate for sharing information among diverse technologies and constituencies across the insurance value chain. This is fundamental to ACORD being recognized as the SDO (Standards Development Organization) for the insurance industry.

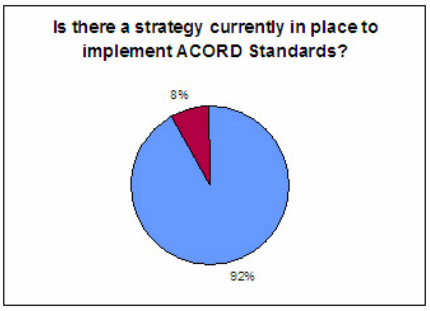
By using ACORD standards throughout the insurance value chain (1: ACORD Industry Standard Insurance Value Chain), the industry will achieve straight-through processing and will:

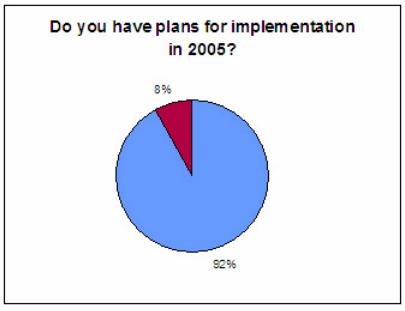
- Remove friction and cost from the process.
- Expand market reach, creation of new business models, speed to market and multiple distribution channels.
- Improve data quality, consistency and accuracy resulting in improved information for business decisions and regulatory compliance.
- Reduce duplication of work and ambiguous communication exchanges.
- Facilitate integration with other financial services.
- Facilitate e-commerce and e-business.

During 2003 -2004, the ACORD Strategy Report identified a number of areas where ACORD should strategically position to support and increase standards adoption within the industry, ACORD reviewed and modified its standards infrastructure and process to increase the speed and flexibility for standards development and maintenance. This was to primarily address the gaps in core insurance processes and standards. Key elements included:

- The inclusion and integration of existing industry work and regimentation for leveraging that work.
- Clearly define, articulate business processes in the development of the data and message standards to help







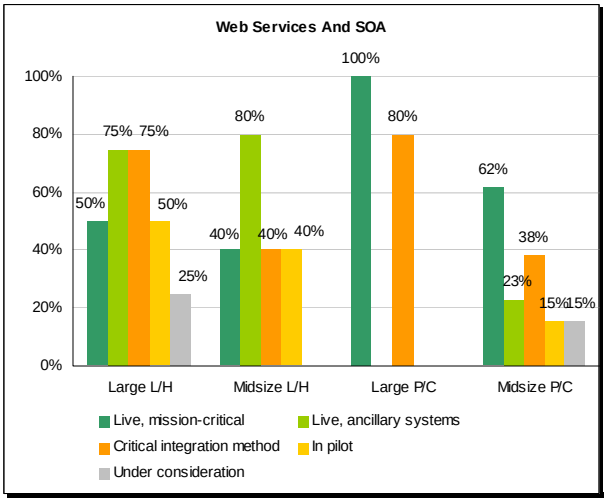
2: ACORD 2005 survey of top 25 insurance companies

guide and facilitate implementations in a consistent manner within the industry.

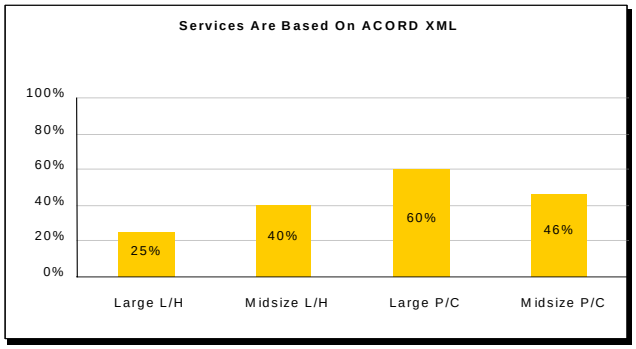
- Develop a method for incorporating feedback and implementation of best practices that can be shared with the industry.
- Support and enable the development of components, SOA and web services within the industry.
- Creating a standards reference roadmap for members that will identify existing standards, standards under development, and planned standards for planning purposes.

In addition, Celent identified in their CIO/CTO published in January 2005 that ACORD standards are being used as a foundation in the development of SOA and web services. This further indicates the strategy planning and use of ACORD standards and the need for ACORD to provide a broader framework to support this direction within the membership and industry.

Web Services and SOA: Best Practice for Innovation



Source: *Insurance CIO/CTO Pressures, Priorities, Projects, and Plans: 2004 Survey Results (Jan 2005)*



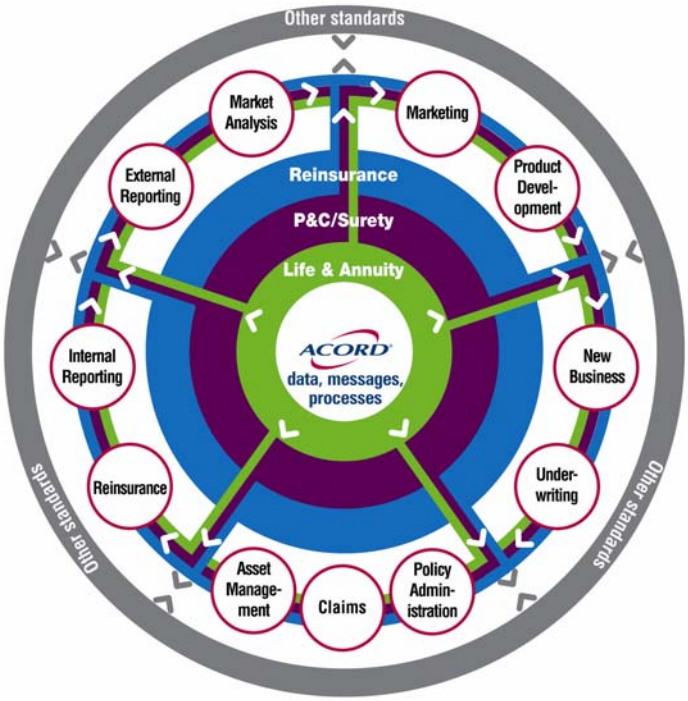
Source: *Insurance CIO/CTO Pressures, Priorities, Projects, and Plans: 2004 Survey Results (Jan 2005)*

3: Celent 2005 Web Services and SOA survey

This is consistent with directions of key ACORD members and their implementation of standards as a strategic enterprise wide effort. Key members with this strategy and well into implementation include:

- New York Life
- MetLife
- St Paul Travelers
- Prudential
- Allianz/Fireman's Fund
- Ohio Casualty
- Acuity
- Swiss Re
- SCOR
- XL Re

This has positioned ACORD to now more proactively work with industry participants to expand ACORD standards to meet business process, data and message standards. This is not new for ACORD given integration of the Life Model from Microsoft, life reinsurance standards from EDIFACT, and the RLC standards from WISE. Therefore, the proposed initiative is to define an industry standard framework that will include business process, transactions/messages, and data to support the evolution of the industry towards an eco-system of collaborative organizations. This framework will expand and enhance the existing standard to support existing B2B, B2C as well as internal integration and emerging industry outsourcing and utility opportunities. The integration of the Intellectual property (IP) from selected pieces of the IBM Insurance Application Architecture (IAA) in the form of business process models (referred to as the IAA Business Activity Models), business terms (commonly referred to as a data dictionary) and business entity state diagrams/state machines continues the integration of industry IP to the ACORD standard, further completing the business process, data and message standards for the industry. The goal is to eliminate industry initiatives that create fragmentation and find ways to integrate them with ACORD to enable and position the industry to more quickly adopt industry standards across the insurance value chain as illustrated in *4: Insurance industry value chain future expanded standards framework*.



4: Insurance industry value chain future expanded standards framework

IBM Perspective

IBM's position is not about dominance -- it is about embracing "open standards" for the betterment of the insurance industry. IBM believes that both technology and industry specific standards are essential for clients to solve collaboration and integration problems, as well as accelerate their business strategy whether it be to run, grow or transform the business. The use of open insurance standards provides game-changing opportunities for the insurance industry. This is reflected in *5: IBM view of standards*.

This position is embraced throughout the IBM Corporation. Recently Sam Parmesan, IBM CEO stated:

"Open standards must take hold in every industry. Without them, it's too difficult and costly to achieve the kind of transformation we've been talking about. I am not speaking just about technology standards, either. Standards exist in every industry, whether they are document formats, patient healthcare records, financial trading systems, security databases or inventory control systems."

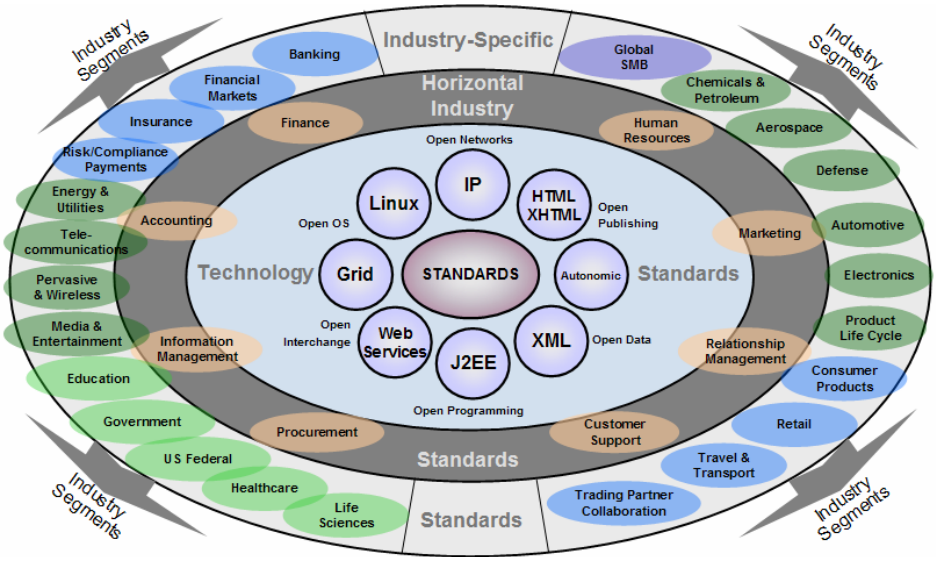
Sam Palmisano, IBM Business Leadership Forum, Paris
October 8, 2004

Additionally, this perspective is shared by others in the industry. This was expressed by Erikki Liikanen, European Union Commissioner:

"Open standards are important to help create interoperable and affordable solutions for everybody. They also promote competition by setting up a technical playing field that is level to all market players. This means lower costs for enterprises and, ultimately, the consumer. We need certain basic rules and regulations for the Information Society to yield all its benefits and we have to have a framework in place that protects enterprises and citizens, that fosters innovation and that avoids unnecessary technical barriers. Open standards are an ideal way to support such a framework."

EU Commissioner Erkki Liikanen,World Standards Day
October 14, 2003

Over the past 20+ years, IBM has invested and developed in partnership with licensed insurance companies a business and IT framework for the insurance industry: the Insurance Application Architecture (IAA). IAA is a comprehensive set of Information, Process and Integration models that represents systems development in the insurance industry. It is an information architecture blueprint with detailed insurance business



5: IBM view of standards

content that can be applied to initiatives on an enterprise-wide or specific project basis. It enables insurance companies to create detailed specifications and cross-enterprise architectures for information systems.

IAA has been continuously enhanced based on the input of the IAA Steering Committee and a community of insurance companies deploying IAA. Over time, IBM has identified that some of the elements constituting the IAA offering would be better positioned as industry standards. IBM is letting "go of control" – of certain IAA elements making them "open to the industry" through an industry standards body (ACORD).

The goal is to accelerate industry efforts to achieve speed of innovation and sustained value by seeding and enhancing the development of an appropriate set of enhanced industry standards. This whitepaper will address the nature of the enhance standards and the elements of the IAA models that will be contributed to ACORD in support of this collaborative effort.

Common Member Perspective

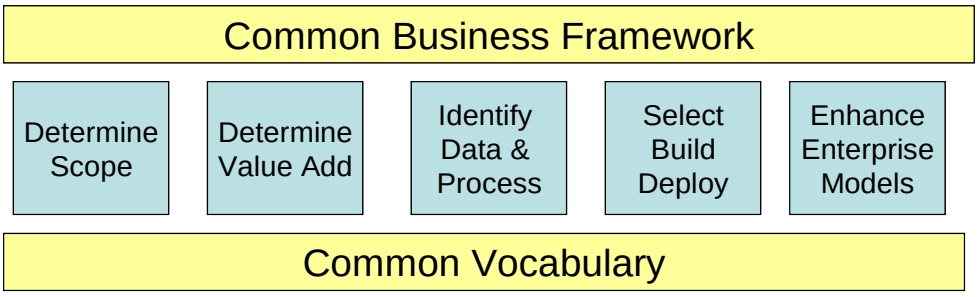
Several insurance and financial services organizations have expressed the importance of enhanced industry standards. NY Life (NYL) during the May 2004 IAA User Group Conference, the September 2004 Insurance & Technology and ACORD Standards Leadership Forum indicated several challenges:

- Flexible, Adaptable, Scalable
- Standards based
- Leverage "heritage" processes as reusable business components
- Support current while building new
- Value Add proposition

The suggested approach for companies is to use a Standards Based model driven approach that is a framework that consists of business processes, activities, transactions/messages, and data definitions. ACORD is the common language for transactions and data and IAA was used for business processes since ACORD did not have these within the ACORD standards.

NYL highlighted the value of business process models to define core components, but how the use of ACORD standards to build and integrate these components is critical to enable the integration and flow of data throughout the value chain.

In a recent interview in *Windows® in Financial Services,* spring 2005, Doug Johnston, Executive Vice President, Applied Systems, Inc. states, "Standards and tools for facilitating cross-industry connectivity have evolved and emerged, based mostly on ACORD XML standards and the more global Web Services standards. While 2004 saw a great deal of progress in the deployment of standards-based communications, we still see vendors and companies deploying quick-and-dirty, non-standards, and single-source solutions. These non-standard interfaces only delay the mass connectivity we need in order to deliver true efficiency throughout our



6: New York Life Common Business Framework

industry."

"As companies expand their scope of operations geographically, they are increasingly looking to standards-based technology to automate their end-to-end business process." Dennis Maroney, managing director, insurance for Microsoft. *Windows® in Financial Services,* Spring 2005.

Analyst Perspective

Several of the analyst firms including Gartner (formerly META) sight the importance of insurance industry standards. Recently Gartner published in their 2005/2006 Trends (February 2005) the importance of several areas including evolving standards and industry processes:

- **"Business Process Improvement:** Efforts to build enterprise Web services for mega processes like policy administration, claims, underwriting, and rating will accelerate in2005. Industry process maps for mega-processes will evolve and mature in 2006/07, facilitating the rapid build-out of enterprise Web services. By 2008/09, enterprise Web services will enable technology-savvy insurers to buy or outsource the standardized portions of their mega-processes and build and manage the advantageous parts.

- **Evolving Standards:** In 2005/06, the leading insurance vendors, in the absence of real progress by insurance companies and trade organizations like ACORD, will begin to build detailed Web services process models and standards that accelerate insurers' business process improvement initiatives. By 2007, leading insurance companies will recognize the dangers of vendor lock-in due to proprietary process standards and coordinate efforts to build these themselves. By 2008/09, standards bodies (e.g., ACORD, WS-I) will achieve significant progress in the extended parts of the Web services stack (e.g., security, quality of service, business process integration, transactions) and greatly simplify insurers' ability to integrate, communicate, and transact with agents, claims suppliers, and other external constituents.

- **Process Measurement:** Through 2005/06, the drive for operational excellence and improved financial performance will force insurance companies to develop time and unit-cost measures for business processes, as well as integrate and optimize business processes across multiple functional areas. Policy administration and claims will typically be the first to transform. Finding it too difficult to build the metrics themselves, insurers will consider operational metrics service providers to support their initial efforts. By 2008/09, the leading business process outsourcing providers will offer highly refined operational metrics that enable insurers to benchmark their competency in key process areas and make rational outsourcing decisions."

Recommendation

Strategic Opportunity

The insurance industry is evolving away from monolithic, silo-based organizations towards networked models where enterprises combine to deliver value. As individual insurers and the industry evolve, they will learn to leverage best-in-class capabilities both internally and externally from sources throughout the networked industry. More and more non-core capabilities will move outside the main enterprise and be provided in a services-oriented architecture (SOA) or web services environment. ACORD, IBM and other industry participants understand this necessary transformation and need a standards framework to ensure that this emerging environment is well supported for the industry.

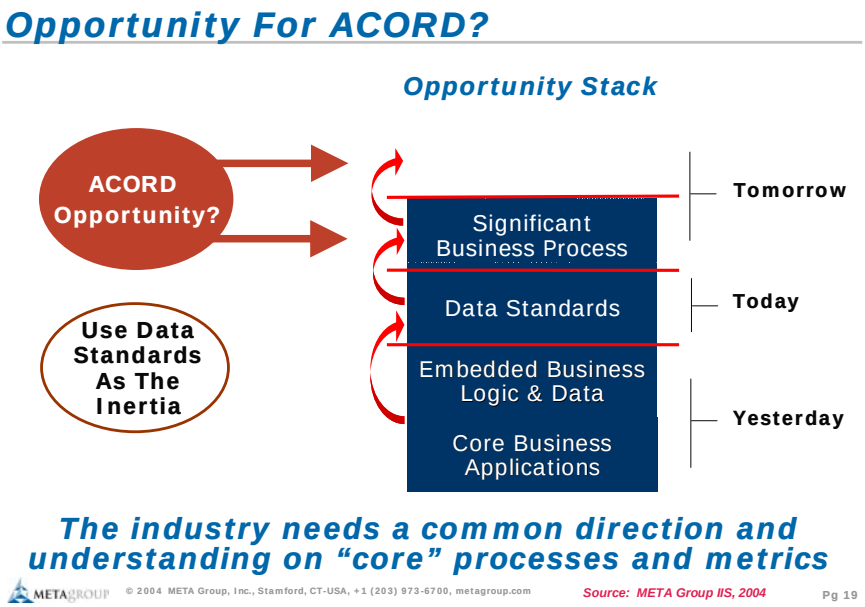
To enable this transformation, the current ACORD standards framework will be expanded and enhanced to provide the standards for business processes, messages/transactions, and data. With IBM contributing this IP to ACORD, this will jump start and further enrich the standards and help propel the use of ACORD standards framework for adoption within the industry as well as help propel the use of SOA and web services.

This strategic opportunity enables ACORD to more quickly achieve the vision and direction of providing the industry a robust, detailed, consolidated and complete standards framework that will support business innovation, transformation and efficiencies. It is a framework for business enablement through the use of industry standards: process, data and messages. The framework includes:

- Establishment of high level standard business processes that can be used to define:
  - Implementation guides for consistent adoption of the standards supporting business processes within the industry
  - Best practices for business process that can help guide and measure companies effectiveness (industry benchmarks)
  - Provide a roadmap of all of all standards available, under development and gaps to support and identify implementation opportunities.
- Expanded business dictionary of business definitions for the end-to-end insurance value chain across all product lines and geographies.

This IP will be contributed by IBM to enable and jump start ACORD's direction by providing IP that has been developed by the industry to ACORD. This will broaden and expand the industry opportunities for standards implementation and enable the innovation and development of solutions for the industry. It will integrate industry IP, expand ACORD standards for the industry and eliminate current fragmentation. In addition, this will bring into the ACORD framework 20+ years of industry knowledge and expertise, particularly from other geographies and for core insurance processing. It will also align a "proprietary standard" and integrate the IP into the industry standard, further eliminating fragmentation within the industry.

The expansion of ACORD standards for business processes will create a value proposition for the industry that will enable and support business solutions in a manner that is technology neutral, but more importantly will stand the test of time as the "transport" technology changes. It will ensure that the ACORD vocabulary and grammar remain platform neutral that can be mapped to various technological representations in order to provide longevity in the face of ever changing technologies and delivery systems.



7: META view of standards opportunity for ACORD

Contribution of Existing IBM Intellectual Property

IBM will contribute to ACORD a subset of the existing IAA models. This contribution includes the following (IAA definition of the content):

- Business Process Models (IAA Business Activity Models: a hierarchy of about 100 processes with business definition in English
- Data Dictionary (referred to as the IAA Business Terms) subset needed for defining the process services
- State Machines (workflow) for the main insurance concepts may become part of the ACORD process diagrams.

ACORD members have expressed an interest in the development and expansion of ACORD data models for the three standards domains.

Value to ACORD and the Industry Ecosystem

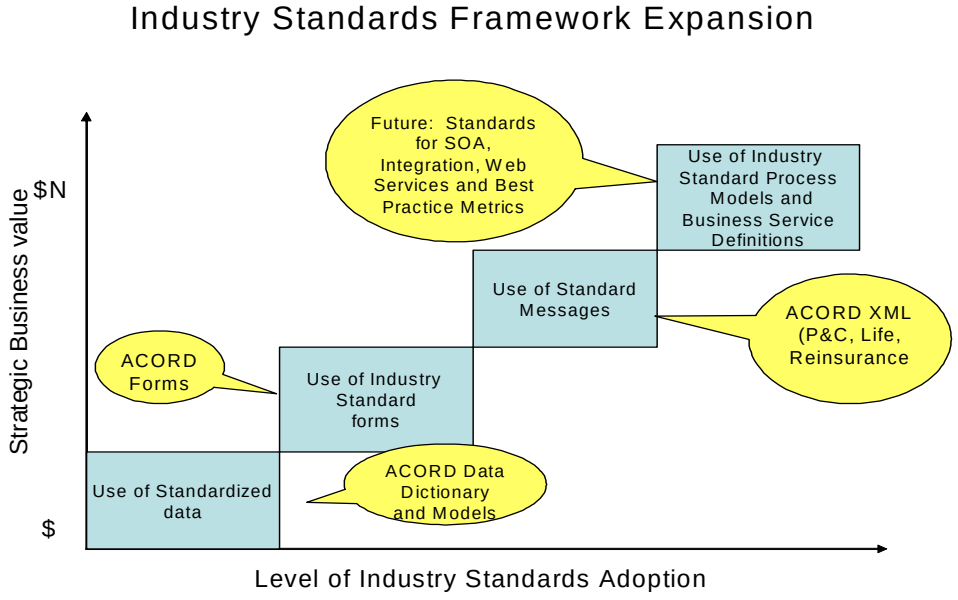
Traditionally, ACORD has focused on the front-end of the business processes while IAA has focused on the back-end core processing. The combination of these models provides the ability for end-to-end process service definitions for the insurance industry.

As part of this effort, we are positioning to "jump start" the standard framework expansion for the industry and help avoid the creation of "proprietary process services models". In doing so, the enhanced ACORD standards will enable the industry to better enable integration and interoperability.

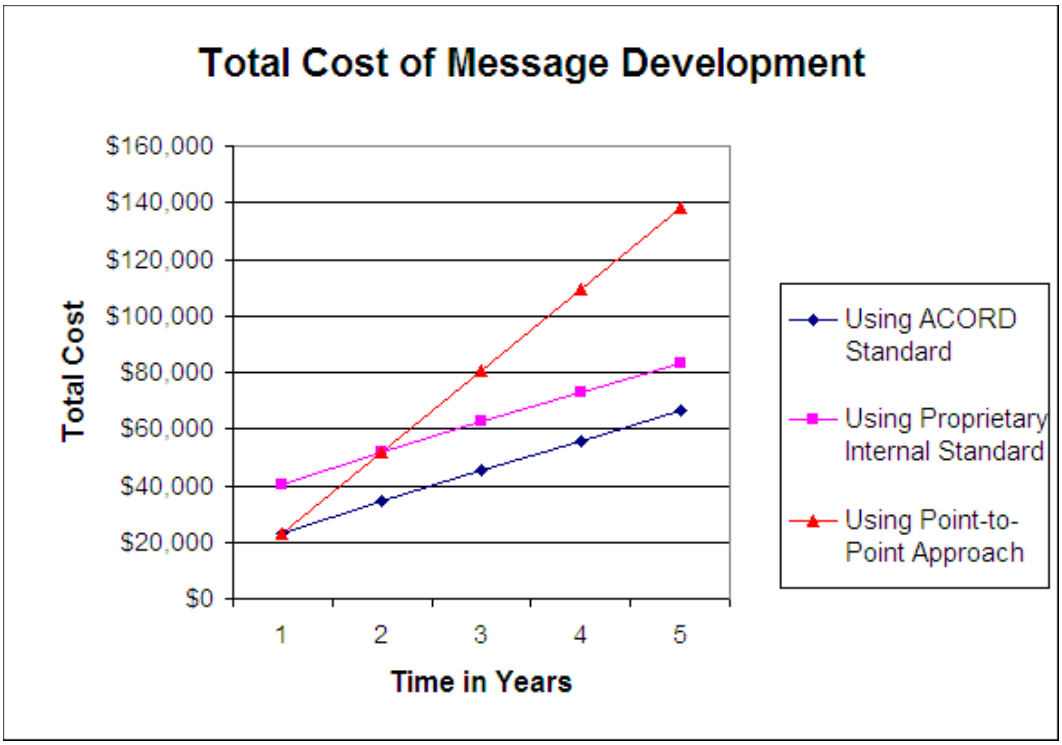
Additionally, these enhanced industry standards will provide the industry the ability to achieve progress in the Web services stack (e.g., security, quality of service, business process integration, transactions) and greatly simplify insurers' ability to integrate, communicate, and transact with agents, claims suppliers, and other external constituents.

The global insurance industry is an ecosystem that must interact and work together to survive. Data is the life blood of the ecosystem to grown and prosper. The ability to share and exchange data effectively and transform and innovate new processes requires the industry to work together to nurture and grow rather than split through fragmentation. It is the exchange and use of data via business processes that binds the insurance ecosystem (*4: Insurance industry value chain future expanded standards framework*) together, uniting disparate groups into a collective whole that makes the industry strong to meet the challenges of the changing environment.

In addition to the benefits available through the use of the existing ACORD standards, there are several benefits that the industry can achieve through development of enhanced standards. The value and increase of business strategic value (return on investment) increases exponentially or ever-decreasing incremental cost as the level of adoption increases, as shown in *8: Value of Industry Standard Adoption*, *9: ACORD Return on Investment Model*, and *10: Celent Report*.



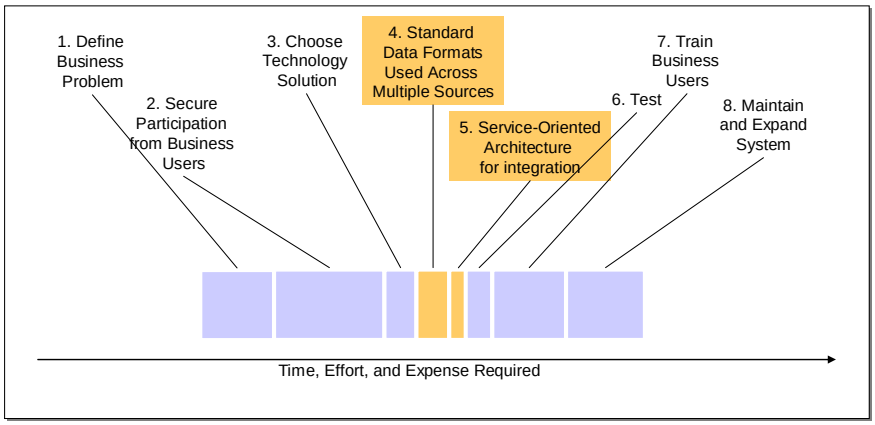
8: Value of Industry Standard Adoption



9: ACORD Return on Investment Model

CELENT www.celent.com

Potential Efficiencies with Standards



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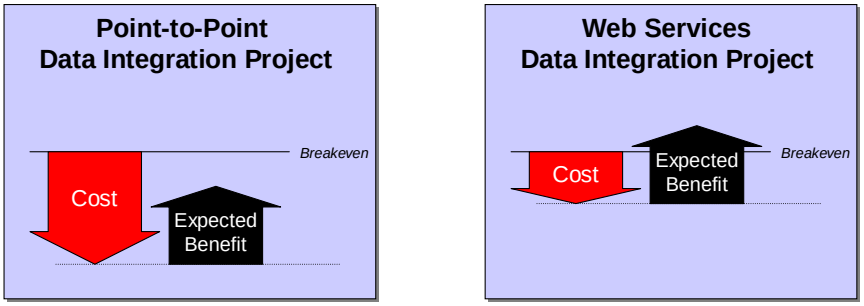
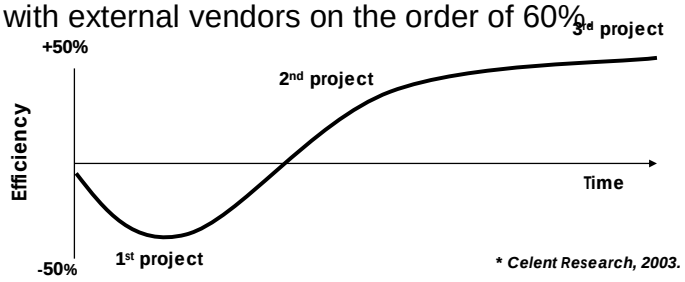
Reduce Cost of Data Integration Projects

- Cheaper and easier internal data integration makes it easier to justify providing needed data to service workers and others



ACORD Standards and Integration

- Business units have seen efficiencies of 25%-50% on subsequent integrations after adopting standards.
- Companies have also seen efficiencies on integrating with external vendors on the order of 60%.



10: Celent Report

Benefits from Industry Standards Framework Expansion:

- Standard business processes to identify:
  - Opportunities for business transformation and innovation
  - Opportunities for component based solutions
  - Opportunities for industry benchmarks and best practices
  - Opportunities to meet regulatory requirements for Sarbanes-Oxley with process, transaction and data standards. We believe that reduction of manual interfaces and education of regulatory authorities on the increased data quality brought about by electronic interfaces could be a tool for Sarbanes Oxley compliance.
- A standards catalog that would be available to use for internal planning.
- Standardized Business Terms or a standard business dictionary will help build/bridge the mapping exercise customers must complete when moving from one version of the ACORD standard or ACORD form.
- Solution providers can enhance their industry solutions by embedding their solutions with standards, easing implementation and integration and reducing overall costs.
- Enhances the existing data model and business dictionary can provide for a foundation for the enterprise.
- Enables a mechanism for internal planning, design and delivery.
- Provides a model that can be linked with other internal and external data models.
- Improves time to market of standards to meet industry needs.
- Improves participation of memberships at the appropriate time, thereby effectively using industry expertise.
- Members can leverage industry work and expertise.
- The ability to drive opportunistic growth in key industry target segments (health or major medical).

Approach

In this section we detail the approach of introducing the new IP into the ACORD standards to both vet and evaluate, while at the same time "fast tracking" to allow the industry to leverage and use to support and drive implementations.

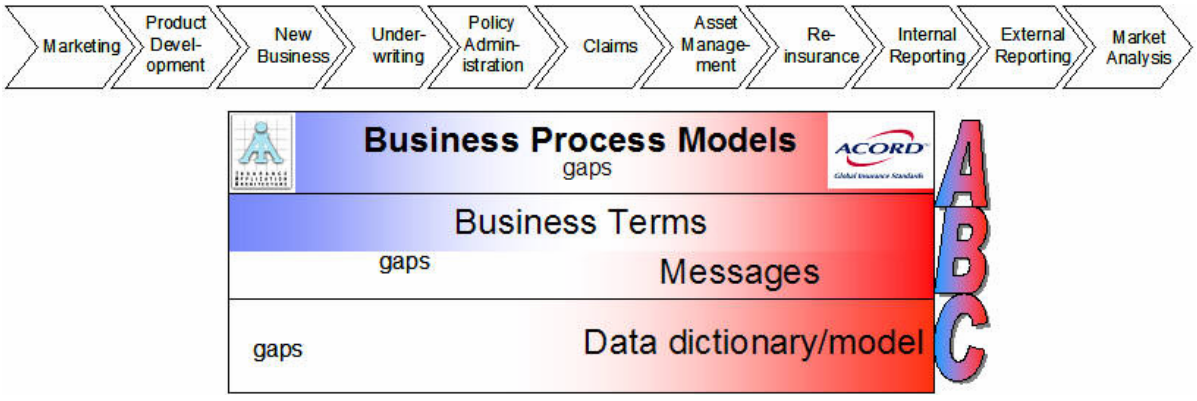
The introduction of the IP will be introduced into the ACORD standards process using a "fast track" approach as a candidate recommendation for the industry. The goal is to position the enhanced standards for immediate use with full acknowledgement that they will evolve over time. This is important because it eliminates the need for developing potentially competing one-off non-standard implementations, by providing the means for adopters to innovate standards based implementation using a process enablement standards framework.

ACORD will introduce this to the joint ACORD Steering Committee (ASC) as it supports the cross-domain efforts as well as ensuring that we leverage the IP across the domains consistently.

Evaluation of Content

ACORD, IBM and other interested parties are partnering to initially populate a process service standard using a framework that organizes the required content. By combining existing industry standards content from ACORD P&C, L&A and Reinsurance models with selected components of the geography and line of business independent IAA models, the expectation is that this framework will provide the basis and guidance for implementation and innovation of process service standards compliant solutions.

The proposed enhanced standards comprise the top layers labeled A and B in *11: Content sourcing the Process Enablement standards framework*. Label C illustrates the domain of current ACORD data across P&C, L&A and Reinsurance. The coloring of figure 11 indicates the initial source of the content, with red from ACORD, blue from, and white indicating areas of expected innovation by the standards community. The color scheme used for the labels defining the layers indicates this is initially a joint effort between ACORD and IBM for the purpose of merging IAA and ACORD content (see section



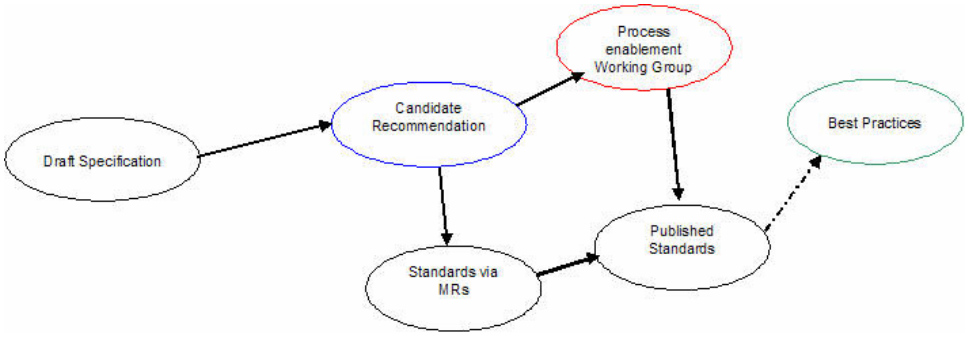
11: Content sourcing the Process Enablement standards framework

Integration Plan). The idea is that a set of common business terms will be adopted as a business view of the standards. The business terms will eventually support the entire range of the standards across the Insurance Value Chain. Additionally, this will provide the basis for building out the other layers by leveraging a mapping to the technical definitions that define the ACORD data that populate layer C. Layer B is composed of a set of reusable message definitions that will be built from the data definitions in layer C, a set of message services. This layer provides both a technical view and a business term view of the services required to accomplish specific business objectives, such as opening a claim. Layer B is very important to the standard because it provides the business/IT mapping of the message services that are required to move from design to implementation.

Layer B provides the framework with the means for guiding innovation of new message services based on appropriate business terms; as well as, the basis for innovating new business processes in layer A that use these message services. The business process standards that will occupy layer A provide the context for organizing an appropriate set of message services defined in layer B, as a means of achieving a useful business objective, such as underwriting a policy. The purpose of layer A is capture the aspects of the business processes that allows for standardized implementations of business processes, without compromising the aspects that support competitive differentiation. Again the blending of color indicates sourcing from both IAA and ACORD models, with the white area labeled as "gaps" indicating the expectation of future innovation of the process service standards by the standards community to address differentiating factors such as line of business or geographical specialties.

In general, the framework in *11: Content sourcing the Process Enablement standards framework* can be viewed as having the following 5 characteristics:

1. A business view of the technical standards across the insurance value chain,
2. An implementation method that ties together the business and technical views
3. A set of reusable standardized services built from existing standards.
4. Process enablement that allows organizations to leverage the services to conduct useful work, without compromising their competitive basis.
5. Support for immediate adoption and continued innovation of messages, services, business terms and business process enablement based on a guiding framework.



12: Process services draft release approach

Integration Plan

In order to meet the objective of having a process service standard available for immediate use with full acknowledgement that it will evolve over time, the approach is for ACORD, IBM and other interest parties to invest in an initial effort to create a draft specification. The intent is to cover the scope of existing IAA and ACORD content in the draft specification.

Once the draft specification is prepared, it would be posted a candidate recommendation where different components would be identified and worked through the enhanced standards process to integrate into the standards framework (see Integration *Approach – Process Service Example* for further details). It is also possible that pieces of the enhanced standard may be adopted via maintenance requests (MRs) to existing standards. *12: Process services draft release approach* illustrates the process.

The proposed rollout plan includes:

- Publication of Draft Specification (3 to 4 months)
- Candidate recommendation reviewed and refined within the ACORD Standard Process (3 – 36 months)
- Best Practices (18 – 24 months)

Integration Approach

In order to define the approach, this document uses process services to mean the reusable aspect of a business process. With this in mind, the primary objective of the process service standard is to provide a standardized means to build solutions that address insurance industry pain points. While there are many industry pain points to select from and thorough discussion of the merits if each is out of scope, the ones targeted by the proposed process service standard can be characterized as follows:

- Companies looking at standardization through form adoption
- Companies looking at process re-engineering
- Companies looking at business process outsourcing
- Companies looking at legacy modernization

The process service approach standardizes business processes, without compromising the ability to compete through business process differentiations (business rules) so a company can maintain its competitive identity, yet leverage standard solution components. The primary means for achieving this goal is to leverage a SOA approach, because it allows concentration on core competencies, while providing flexibility and agility in sourcing solution components for non-core operational areas. While describing SOA is out of scope of this paper, the process service standard targets enabling a best practice implementation of SOA by describing the key aspects that must be standardized.

Understanding which elements of a business process to standardized is best accomplished by focusing on fundamental insurance entities, such as a policy or a claim, and how business processes can be used to move them through their life cycle, instead of on the business process itself. From this perspective, business processes can be viewed as services and organized in terms of the state of these key elements.

For example services are used to do things like create a claim, evaluate a claim, grant a claim, settle a claim, close a claim, etc. Understanding when to use these different services is based on understanding the progress to date of the claim through its life cycle. This approach provides the business process service standard with a non-differentiating way to standardize the definition around the progress to date of completing some business relevant objective, such as closing a claim. As a result, a claim process could be queried to find out, for example, that it is paying benefits, using the process service standard gives a standardized way to express the progress to date. This approach provides a common understanding of a business process that has an additional benefit, in

that it provides an organizational context for rationalizing the usage of services. For instance, knowledge that invoking the service for paying on a claim that is closed is invalid.

Combining the common understanding of a business process with a set of business terms creates a business integration framework that describes how to accomplish business relevant work using appropriate standardized processes in a context agreed upon by the insurance industry. This is important because it provides industry agreement for mass adoption. Further tying the business vocabulary to standardized messages (like the ACORD messages) provides a bridge to existing standards based implementations.

In order to maintain their competitive edge, insurance companies must be able to incorporate company differentiating features when building solutions. The advantage of the process services approach is that it allows standardized solution components to be used with specific company business rules. (See section 6.4 for a representative example).

The process service standard defines how components interact, not their implementation. As a result efforts like form standardization, business process re-engineering, business process out-sourcing, and legacy modernization solutions, become building block efforts concerned with organizing standardized processes and services. The implementation details are then factored within the context of standardized solution components so that the solution is in compliance with company business objectives and ACORD standards.

Appendix

Terms

- Business process: a prescribed sequence of work steps that is intended to be completed in order to produce a specific result. A business process in initiated by a particular kind of event, has a well-defined beginning and end, and is usually completed in a relatively short period of time. It's a collection of activities that work together to produce a defined set of products and services. At its most generic, a business process is any set of activities performed by a business that is initiated by an event, transforms information, materials or business commitments, and produces an output. Value chains and large scale business processes produce outputs that are valued by customers. Other processes generate outputs that are valued by other processes.
- Business process models: from IAA Business Activity Models
- Business process service definition: the reusable aspect of a business process. These reusable aspects provide traceability that allows a customer to add their own differentiation, and still achieve a standards compliant implementation.
- Business Rule: a statement expressing a policy or condition that governs business actions and establishes data integrity guidelines. A business rule statement must always be true. It is intended to assert business structure or to control or influence the behavior of the business. A rule describing how a business operates that is treated as a requirement or a design constraint.
- Business Terms: From IAA requirements model
- Data: Alpha and numeric characters which are processed by a computer; unprocessed information. Data is converted into information, and information is converted into knowledge. Data is a collection of numbers, strings or facts that require some processing before they are meaningful.
- Form: – ACORD Form http://www.acord.org/forms/FormsOverview.aspx
- Message: – ACORD Messages L&A http://www.acord.org/Standards/lifexml.aspx , P&C http://www.acord.org/Standards/PropertyMain.aspx , Reinsurance http://www.acord.org/Standards/ReinsuranceMain.aspx
- State diagram: Applications sometimes work with artifacts that have a set of states. A state defines what the artifact can do at a point in time. A *state machine* is an implementation of this set of states. State machines are a common way of showing a set of interrelated states in a process. A familiar state machine is the pop dispenser. You put some coins into the machine and along with your pop, which hopefully is dispensed; you get your exact change as the state machine mechanically breaks down the nickels and dimes that need to be returned to you given the coins you inserted.

Integration Approach – Implementation Example

In general, the relationships between the primary components (forms, business processes, and services) provide the basis for defining the standardized interaction points between the reusable aspects in the process service standard. These reusable aspects provide traceability that allows a customer to add their own differentiation, and still achieve a standards compliant implementation. This means that starting with forms, or services, or process definition, the user will be able to trace implementation and modification implications through the relationships to other areas in terms of the requirements defined by the process service standard.

To illustrate the concepts behind the process service standard it is helpful to look at some examples built from the ACORD and IAA content being proposed to initially populate the process service standard. The first example is a line of business and geography independent view of policy administration from IAA. The policy administration business process is built to support a complex set of requirements, and sourced from many business services, some may be sourced internally, others externally. The primary goal is to exchange information in a business relevant way to transition a policy to a final state as defined by the product. By combining the policy administration states machine with a set of business terms we can define the range of services that are required for driving the policy through its life cycle. Mapping the business terms to ACORD standard messaging defines a framework for defining the scope of messages required by the policy administration process service standard. Service implementation is achieved by leveraging existing messages and defining new ones required to cover areas previously not considered in the ACORD standard. The value of any standard can be judged in its relevance to actual use and in the ease in which it can be implemented. Leveraging the process service standard in the form of a state machine and the service vocabulary provides the appropriate guidance. Implementation of the process service standard takes the form of sequencing a relevant set of services in the context of the states of the primary insurance elements, implementing the service invocations against standard components using existing ACORD messaging, or defining new messages based on the services business term definition and transactional mapping. (In this case the new services should be submitted as an MR to ACORD), weaving in business rules and exception handling to insure transitions between states meet business guidelines, and defining appropriate staffing criteria. While this may seem like a lot of work, it is work that has to be done anyway, but by leveraging the standard, the bar on insurance processing has been raised. The integration aspects are commoditized around ACORD messages with implementations based on best of breed solution components. The exciting part is that standard results in multiple differentiating business processes leveraging the same set of reusable components, where the components have a consistent set of requirements for solution implementation based on the process service standard.

The state transition models leveraged from IAA are line of business and geography independent. This has several implications. First, it means that the framework should support specializations of the business process enablement definitions to optimize for the differences between, for example, an auto policy and a VUL policy. This is handled via the business terms and mappings to the technical transactions to maintain consistency with generic policy administration state machine. Further specializations could be done by product line, geography, etc, based on consistent mappings.

Integration Approach – Process Service Example

Transitioning a policy to in force, by having accepted a payment using a payment services is interesting from a process service perspective because the payment processing achieved a state transition. The fact that the transition was achieved changes the list of appropriate services that can be applied to the policy. From a process service perspective visibility to the implementation of the service, for example, the business rule used in the payment services that control the dollar tolerance on the payment, even though that dollar tolerance maybe a unique differentiator to the organization, is unnecessary, because it does not affect the interaction or usage of process services components. Instead the service interface to the payment service is the key aspect, because that interface is what will be used to plug in a new component when the organization decides to change that rule.

The order of the services used by the component to process the payment, the exception process for payment conditions, etc all define differentiating aspects of an organizations flexibility, agility, quality of service, etc, and are all very interesting from the perspective of selecting the right set of process service components, but are not interesting in terms of how these process service component interact.

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