

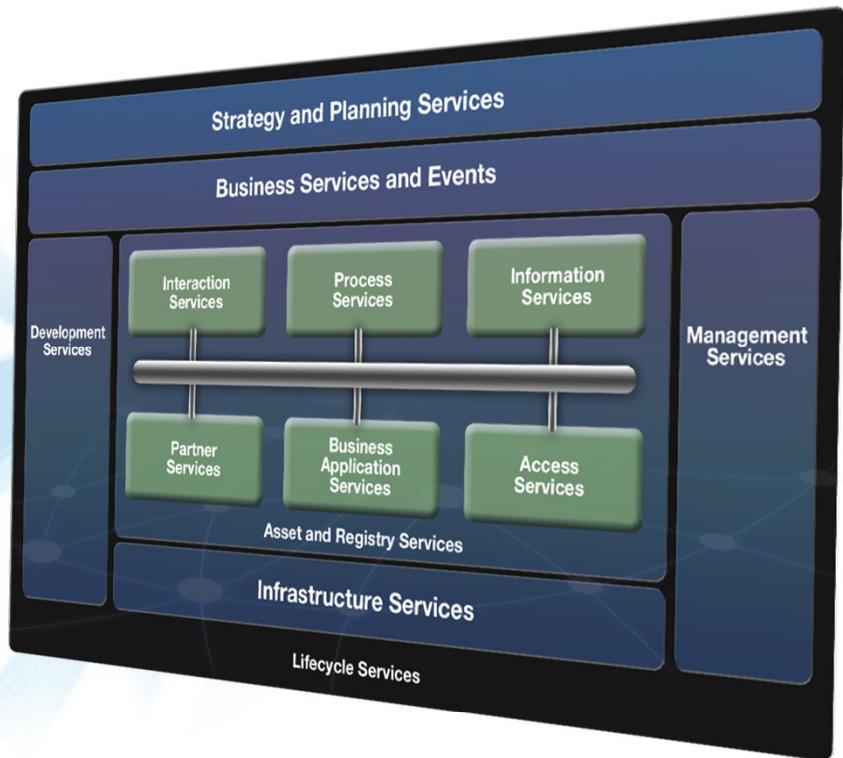


# Simply Good Design: 2012 IBM SOA Architect Summit

*SOA on Your Terms  
And Our Expertise*



# Business Integration



# Business Optimization and Integrity

- How can we improve the value of SOA investments by shifting focus to business process optimization?
- How do we advance process optimization by holistically leveraging the enablers of business agility within processes?
- How can we leverage process optimization principles to ensure that our businesses operate with consistent integrity?



## Consider This ---

- In 1917, Forbes compiled first 100 largest American companies list
- In 1987, Forbes published its 100 list & compared it to its 1917 list
- Of the original group, **61 had ceased to exist** →



Of the remaining 39, only 18 had managed to stay in the top 100.

**“It’s not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change.”**  
—Charles Darwin—

# Agenda

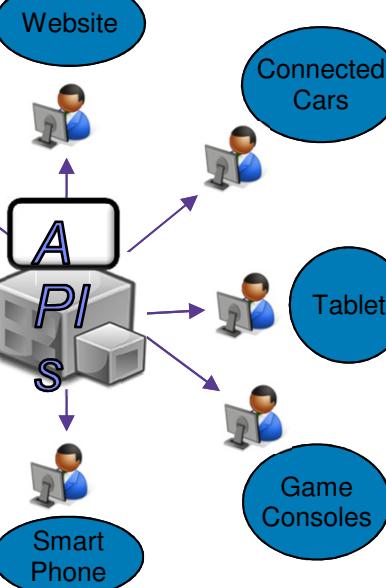
- Extending the Business with API's
- Delivering Greater Process Outcomes with Key Enablers of Agility
- Driving Business Execution with Consistent Integrity
- What is on the Horizon?



# Businesses are evolving



*Not having an API today is like not having a website in the 1990s...*



*Consumers expect to access data any time across multiple devices*

*Companies can re-invent interactions with customers, suppliers & partners*

*Explosion of potential clients increases opportunity, risk and innovation*

# The Basics of an web API



## What is an Web API?

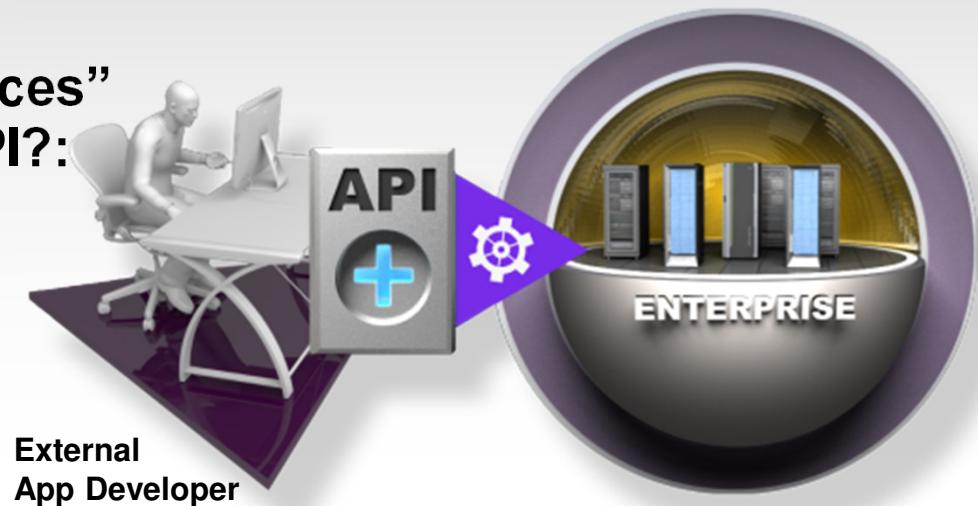
- An web API is a **public persona** for an enterprise; exposing defined assets, data or services for public consumption
- An web API is **simple** for app developers to use, access and understand
- An web API can be easily invoked via a browser, mobile device, etc.

## What Value Does an Web API Provide?

- Extends an enterprise and opens new markets by allowing external app developers to easily leverage, publicize and/or aggregate a company's assets for broad-based consumption

## What “assets, data or services” are exposed via an Web API?:

- Product catalogs
- Phone listings
- Insurance cases
- Order status
- Bank loan rates



# The Business of APIs



Grow revenues...



“The adoption of Amazon’s Web services is currently driving more network activity than everything Amazon does through their traditional web sites.”

Jeff Bar (Amazon evangelist) / Dion Hinchcliffe (Journalist)



“\$7bn worth of items on eBay through APIs”  
Mark Carges (Ebay CTO)

The API which has easily **10 times more traffic** than the website, has been really very important to us.”  
Biz Stone (Co-founder, Twitter)



... While reducing overhead



# Apps, APIs and API Mgmt...



## Benefits

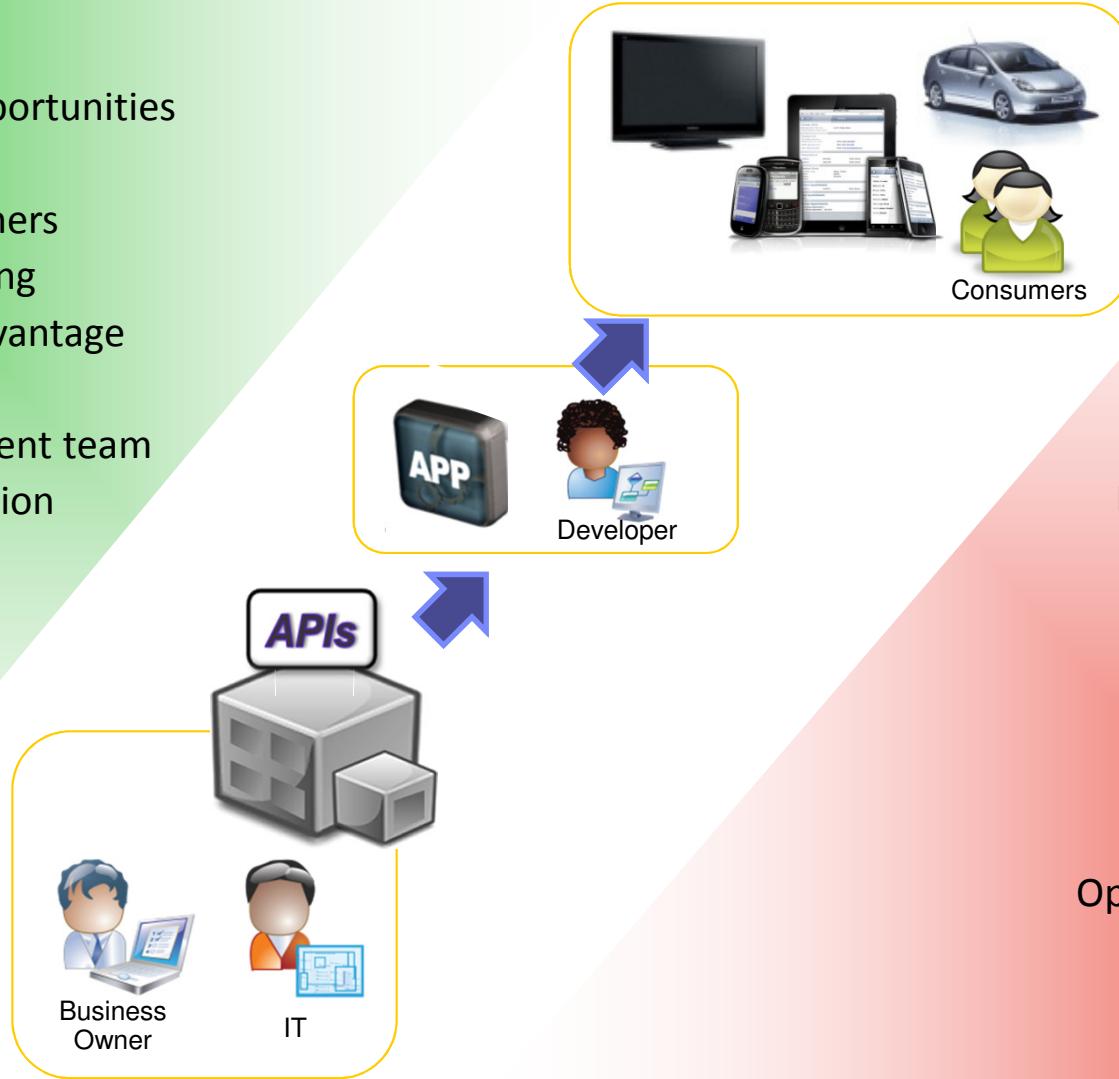
New business opportunities

- New markets
- Increase customers
- Enhance branding
- Competitive advantage

Extend development team

- Increase innovation
- Increase scale

Partner/supplier alignment



## Challenges

Business strategy

Infrastructure

- Security
- Creation
- Scalability

Operational control

- Publish
- Analyze
- Monitor

Myth: API management is completely different from SOA and SOA will bog you down

**API Management**



**SOA**

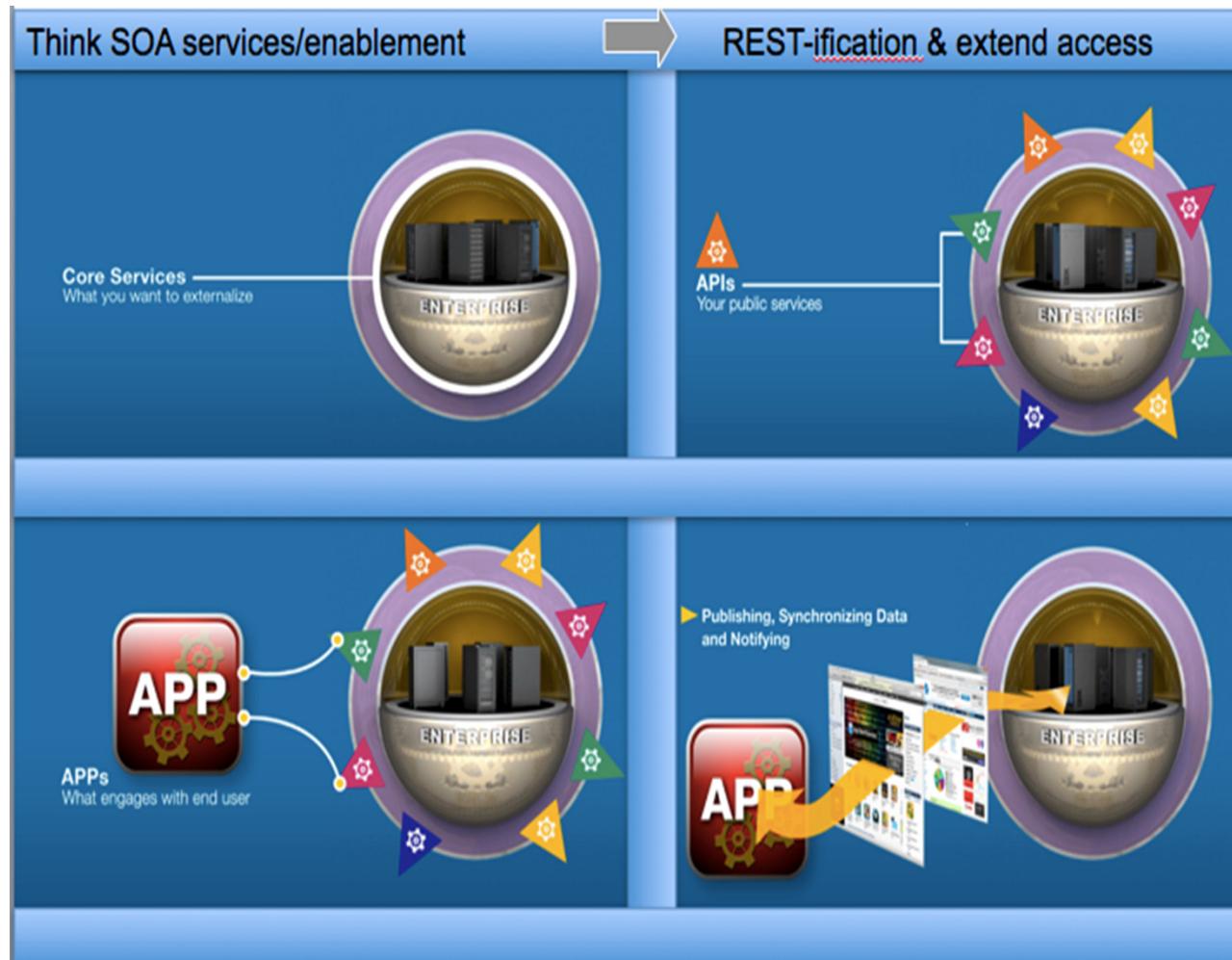


- At the Approach Level: Both need a direct link to business outcomes
  - API Management traditionally outward facing in opening new mobile channels more directly bringing revenue in
  - SOA historically tending to be more focused on organizational transformation and architectural approach for creating an agile business, often with a more indirect effect on the business bottom line
- At the Consumer Level: Both foster reuse and agility
  - API Management consumers tend to be greater in number and not well known
  - SOA consumers tend to be more well defined and smaller in number
- At the Technical Level:
  - API Management offers easy more open use with REST/JSON approach
  - API Management offers easier consumption and governance models
  - SOA initiatives relied mostly on SOAP based services which are more structured and well defined
  - SOA had a more well defined approach to governance with service management

# The Myth and the Hype

Impact2013

Myth: API management is completely different from SOA and SOA will bog you down

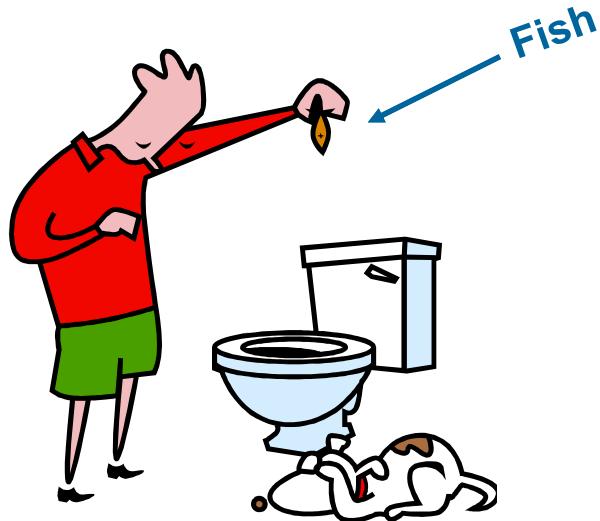


- All APIs are Services
- Not all APIs are good Services
- Not all Services make good APIs

**API Management is a Natural Extension of SOA**

**API Management and Service Management are converging for a more agile approach both inside and outside the enterprise**

## Myth 2: SOAP is Dead



- Does Anything in Technology Ever Die?
  - Look at COBOL
- Quote from Customer: “Nothing ever dies in the banks”
- Does it still have its purposes? Yes, Perhaps, Maybe, Depends.. SOAF is not just legacy

## Myth 3: “APIs are always REST”



- Didn't your mom teach you to never use always and never?
- However, if you are going external and trying to drive adoption REST is the love of most developers today because it's easy
- Better suited for mobile development
- For inside the enterprise it's beginning to be the flavor of choice as well

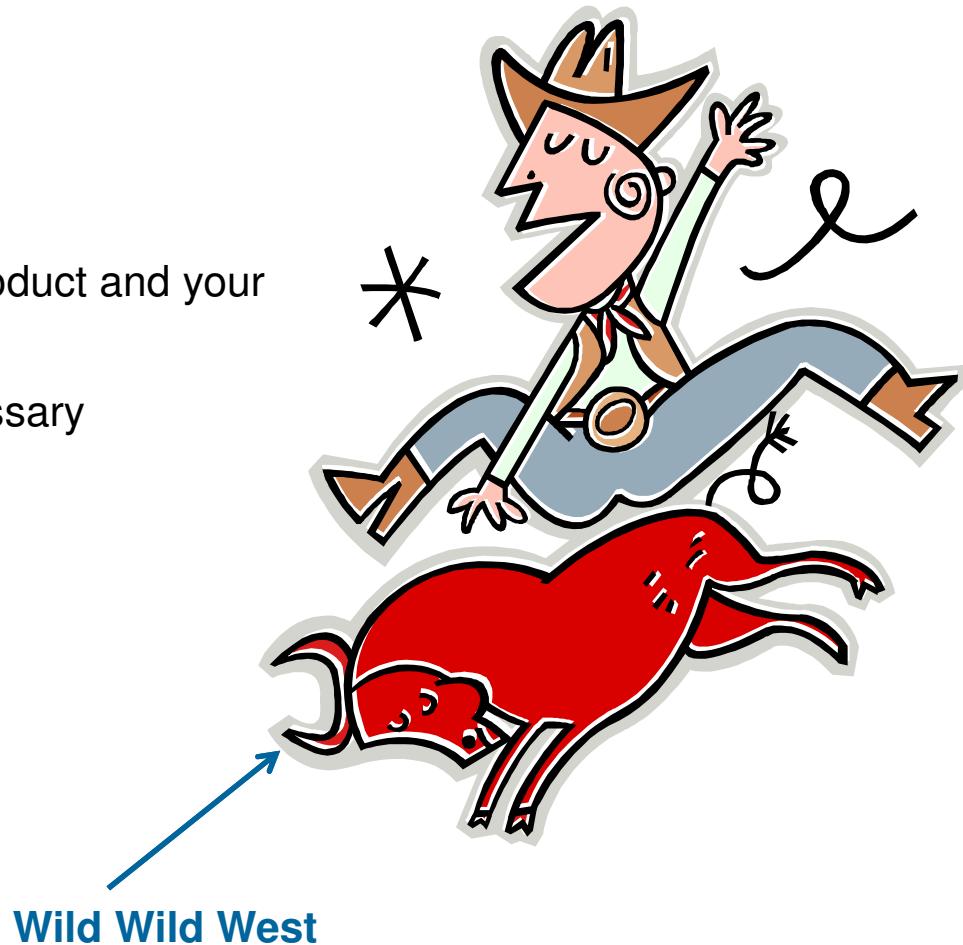
## Myth 4: “API management is SOA governance rebranded”

- **API Management** - APIs Are a Product Therefore Need to Be Managed Like One
  - Need Business Model for Each API (Free, Developer Pays, Developer Gets Paid, etc)
  - Need a Marketing Plan
  - Need Legal Reviews
  - Need Analytic Reports Reporting back to the Business
  - Need to define developer management strategy
  - Need to be very rapid in response to market
- **SOA Governance** – Presides over entire enterprise
  - Establishing Organizational Transformation
  - Enterprise Business Vision and IT alignment
  - Service Development Lifecycle
  - Service Portfolio Management
  - Change management
  - Procurement of resources
  - Longer process
- **API management is a natural extension of SOA governance**



Myth 5: “No governance is needed with API management, this allows companies to innovate faster”

- **Good Luck with That!**
- Remember External APIs are a product and your company's external persona
- Some form of governance is necessary



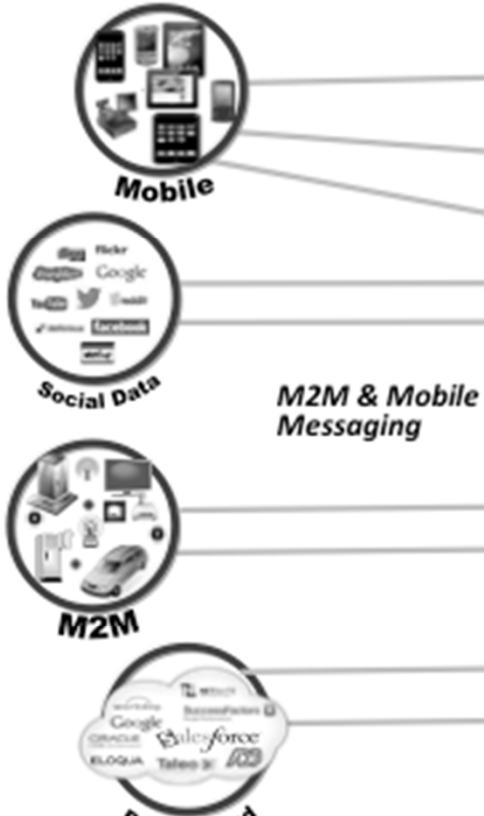
## Myth 6: “APIs are not versioned”

- That's like saying you don't need to change a baby's diaper
- They are versioned and you need to manage the change and protect your consumers
  - Don't expose minor version changes to the consumers. You don't want it to appear that you are changing your APIs on them all the time. They won't build a business on your APIs if you do.
- Remember APIs are a product and your company's external persona. Version wisely!



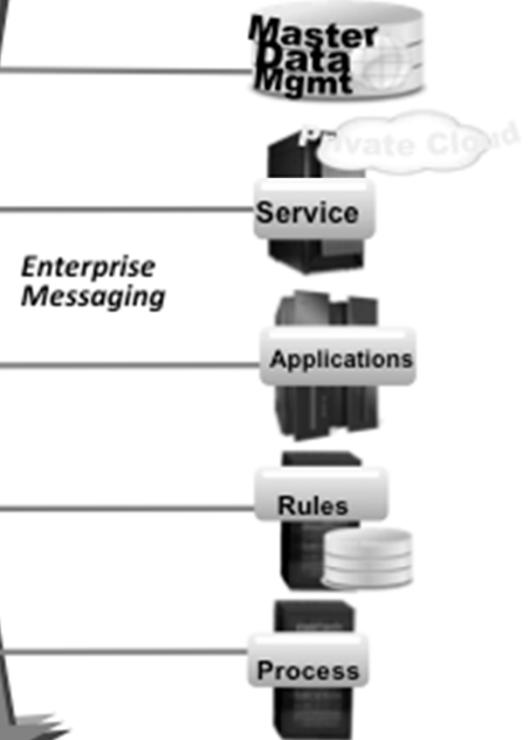
Systems of interaction provide lifecycle management across

## Systems of Engagement



*M2M & Mobile  
Messaging*

## Systems of Record



*Integration  
Gateway*

*Integration  
Bus*

API mgmt

SOA Gov

- Myth: “You only need one ‘bus’ ”
  - We have a different opinion, gateways and integration buses fulfill importantly different topological roles. With that said, some use cases require only a gateway, other use cases only an integration bus and yet others require both
- Myth: “You don’t need to integrate your API management solution with any other middleware”
  - If not, then how are you going to share metadata about available data, services, endpoints etc.? And how are you going to manage and enforce policies all the way from the point of engagement to the point of record?

- APIs are an extension of existing service integration and creation
  - APIs can be aggregated from multiple existing services
- APIs are being created out of non-SOA assets
  - The API itself is nicely defined, but its realization is “ad hoc”
- APIs are a technical veneer on existing resources
  - There is no particular architecture or design behind the APIs, they are created ad hoc for point use, essentially pushing EAI approaches into the API space
- New Engaging Enterprise APIs are created from scratch
  - Particularly relevant where the APIs represent an expansion of previous business scope (Amazon’s merchant API is one such example, it was built for API purposes from the start); APIs are created as a business approach to reach new markets

- Internal use for driving agility
  - Focus: Agile end-to-end processes
- External business partner use
  - Focus: Integration existing ecosystem
- External use for capturing new markets and driving adoption
  - Focus: Extending ecosystem outreach
- Both internal and external use
  - Focus: Holistic API management strategy enterprise wide

# Agenda

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# Business processes are everywhere

Account  
Opening



Campaign  
Management



Vendor On-  
boarding



Claims  
Processing



Order  
Fulfillment



Customer  
Problem Handling



To be clear, by *business process* we don't just mean procedural flow automation...

Structured  
Processes

Semi-Structured  
Processes

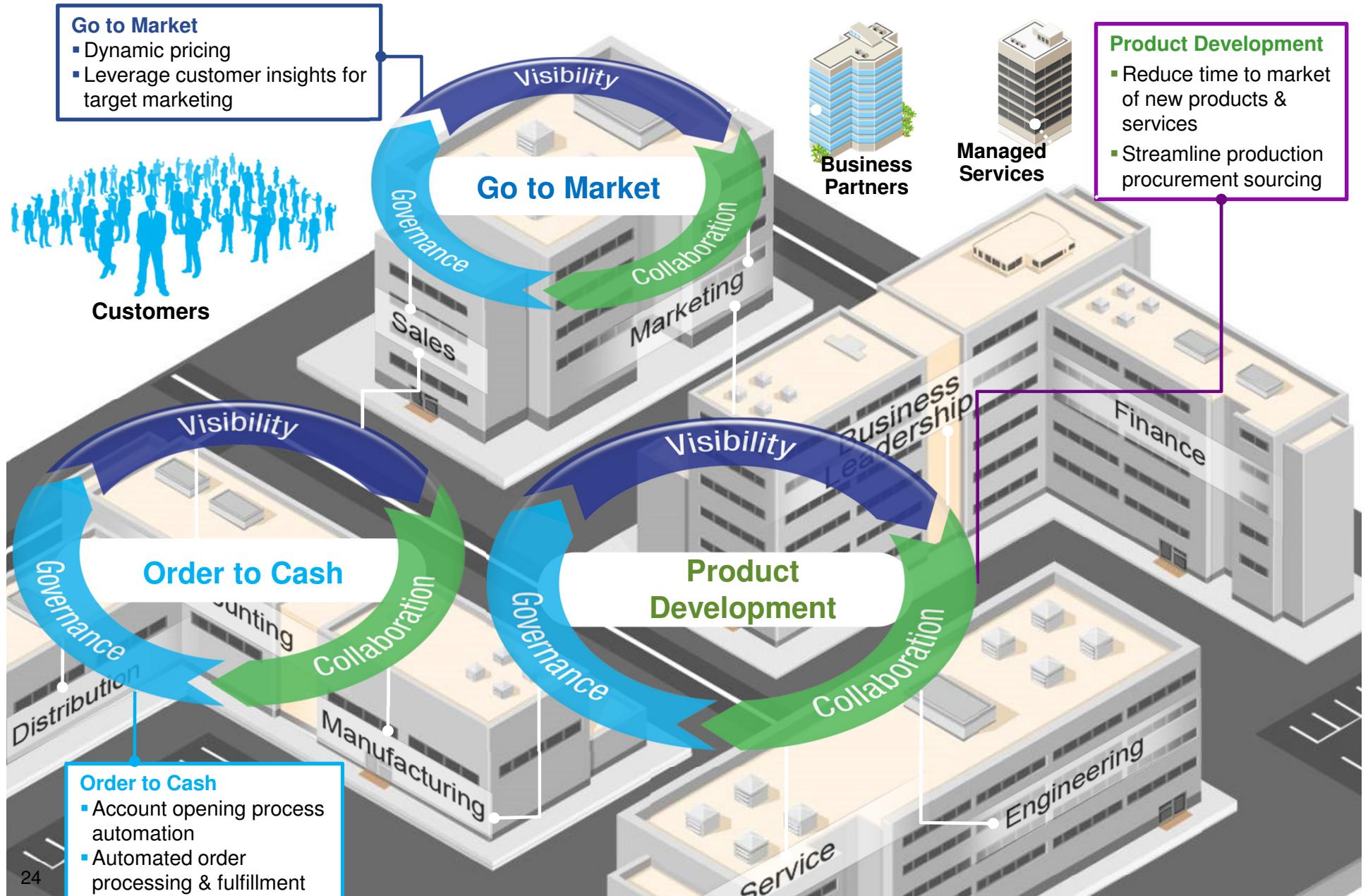
Adhoc  
Processes



... At the end of the day the process is not defined by the technology used, rather it is defined by how business people get things done.

# Process Innovation in Action

*Interconnecting the design and execution of business operations*

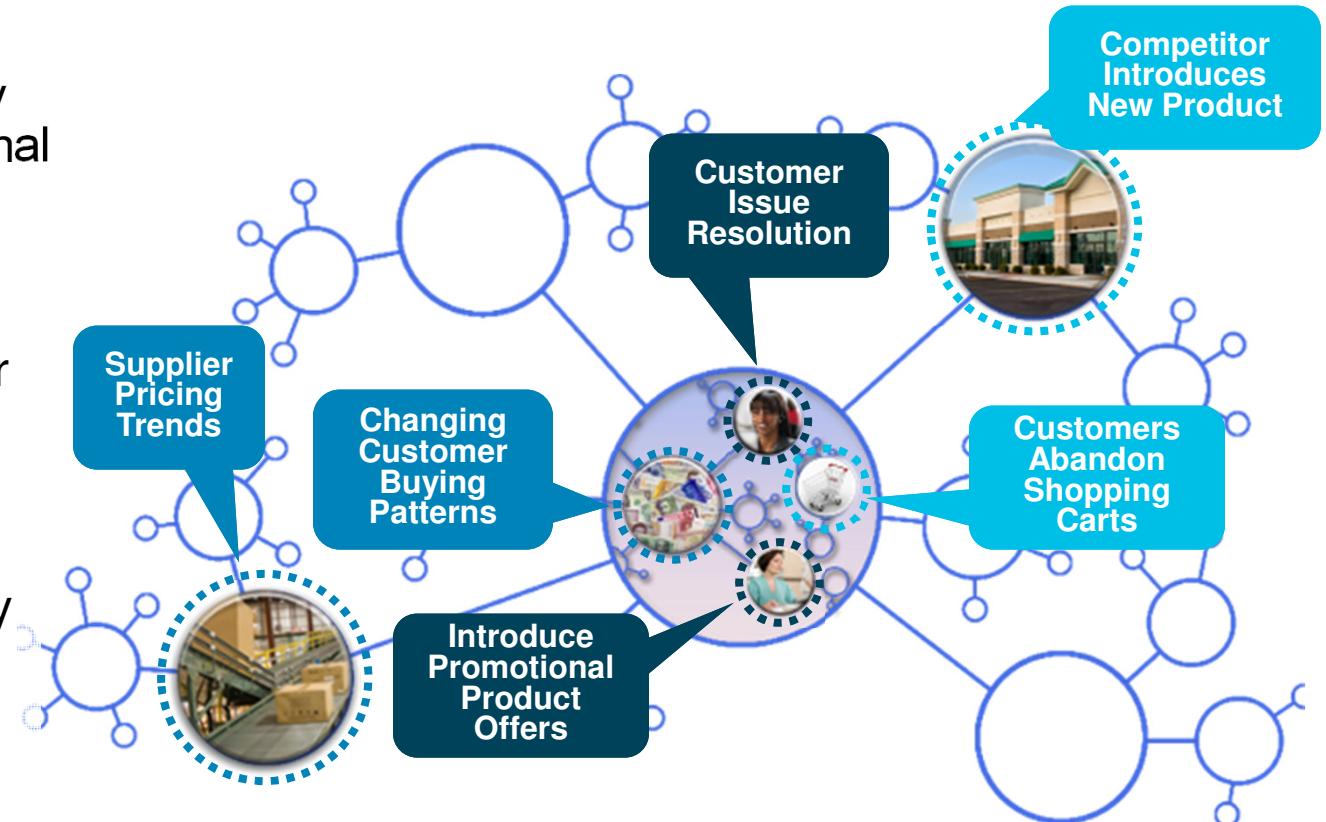


To optimize processes we need to think beyond just operational automation by combining operating model changes with enhanced flexibility and intelligence.

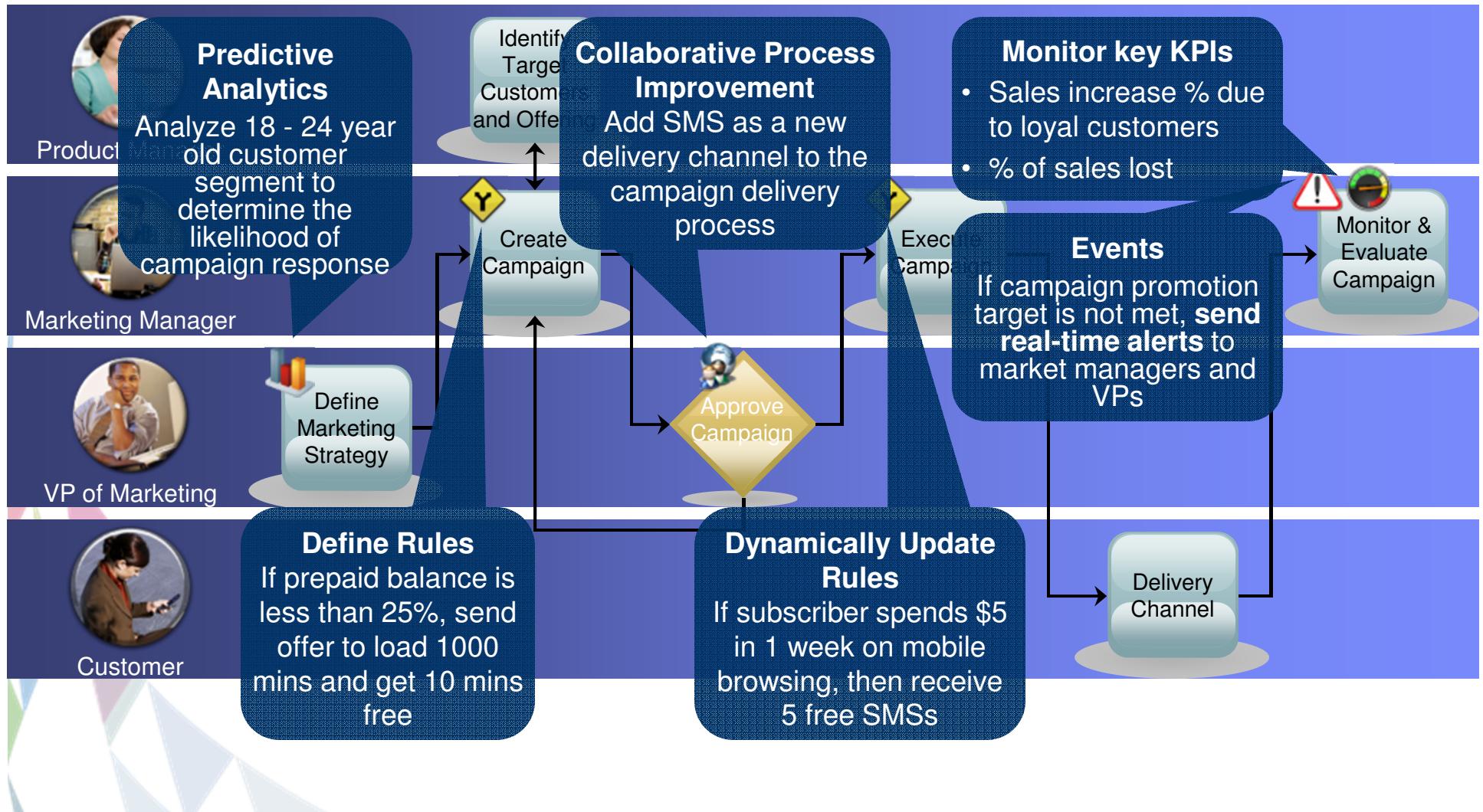
Increase **awareness** by capturing relevant internal and external events

Improve decision making through a better **understanding** of business conditions

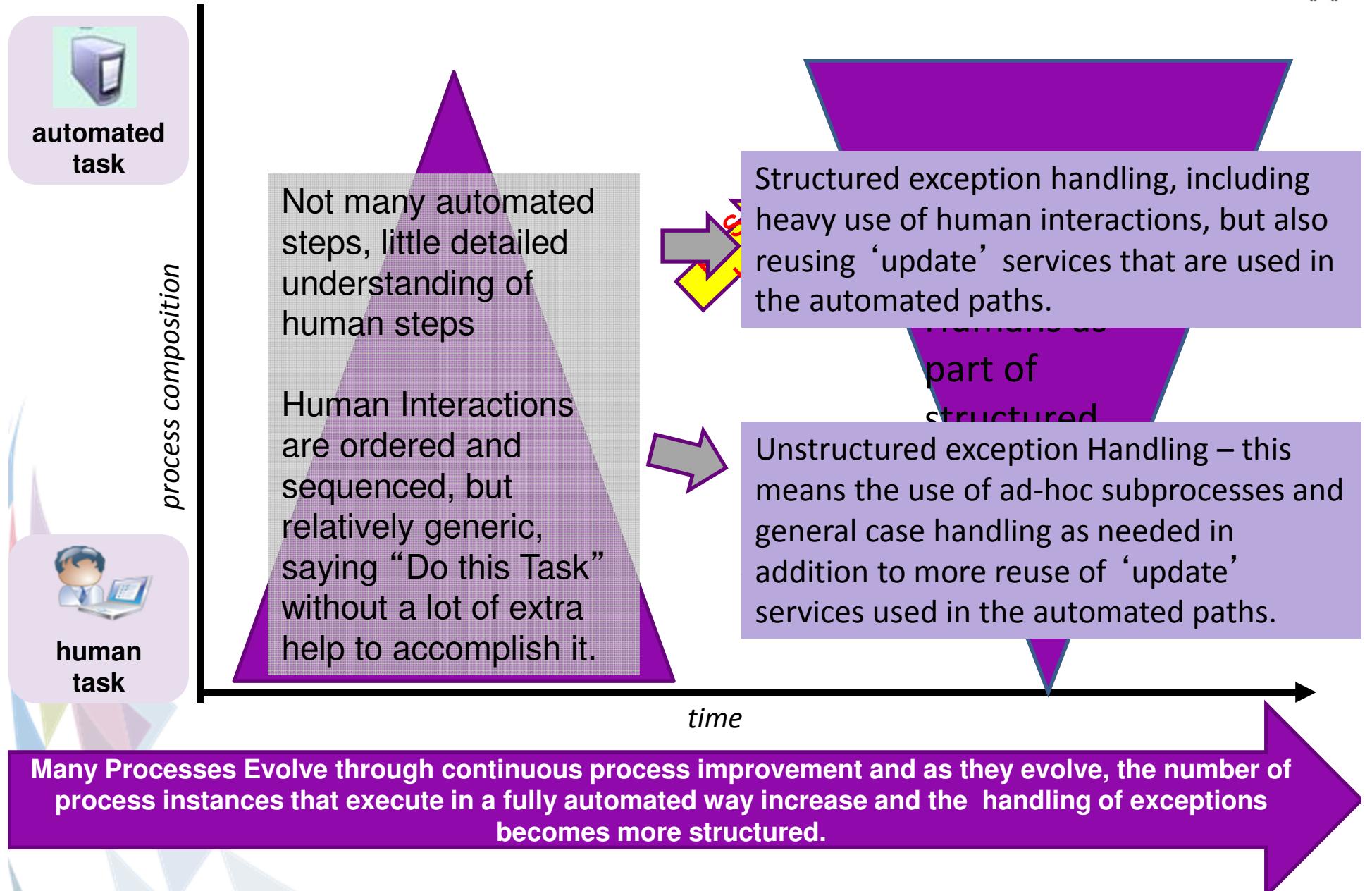
Deliver greater flexibility and **control** over and measurement of business activities



...combining advanced business capabilities to deliver new levels of agility



# Process shape evolution



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# Agility doesn't mean giving up on other key attributes

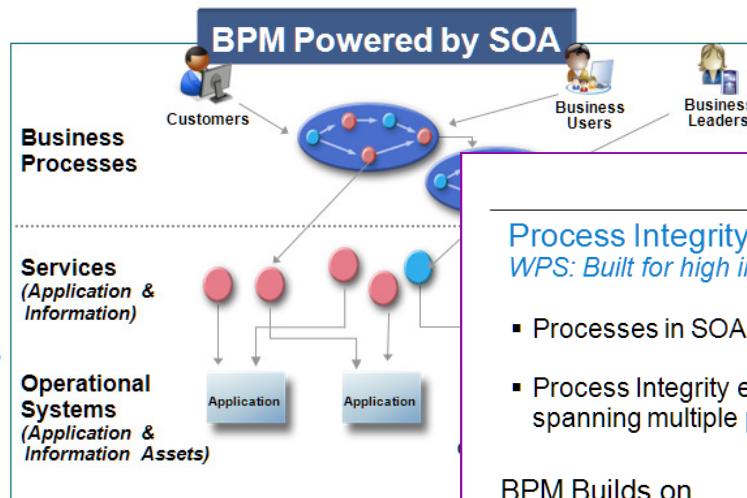
IBM

## BPM Powered by SOA

Service oriented BPM allows organizations to efficiently choreograph system, information and human services into flexible business processes

Improve how you design, automate, and optimize your business processes by providing...

- ✓ Efficiency in building solutions
- ✓ Reuse of existing assets
- ✓ Flexibility to change



**Improve Productivity ~ Lower Costs while Increasing**

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## Process Integrity is Critical for Service Oriented BPM Projects

WPS: Built for high integrity, service oriented process choreography

- Processes in SOA consist of multiple interactions, transactions and data flows
  - Process Integrity enables frictionless execution of distributed business activity spanning multiple platforms, applications, data sources, domains and users
  - Long-running business processes are built from a set of fully ACID short running transactions
  - We have advanced programming models to enable control over what happens in the event of business failures
  - We have advanced features that prevent the business from seeing tactical IT system failures unless absolutely necessary
  - Our programming model enables 'process level' integrity to occur with ease via powerful metaphors and authoring tools
- BPM Builds on Transactional Integrity
- Compensation (short-running, long running)
- Retry at multiple layers
- Built in 'failed events management' and recovery for long running processes
- Event Sequencing



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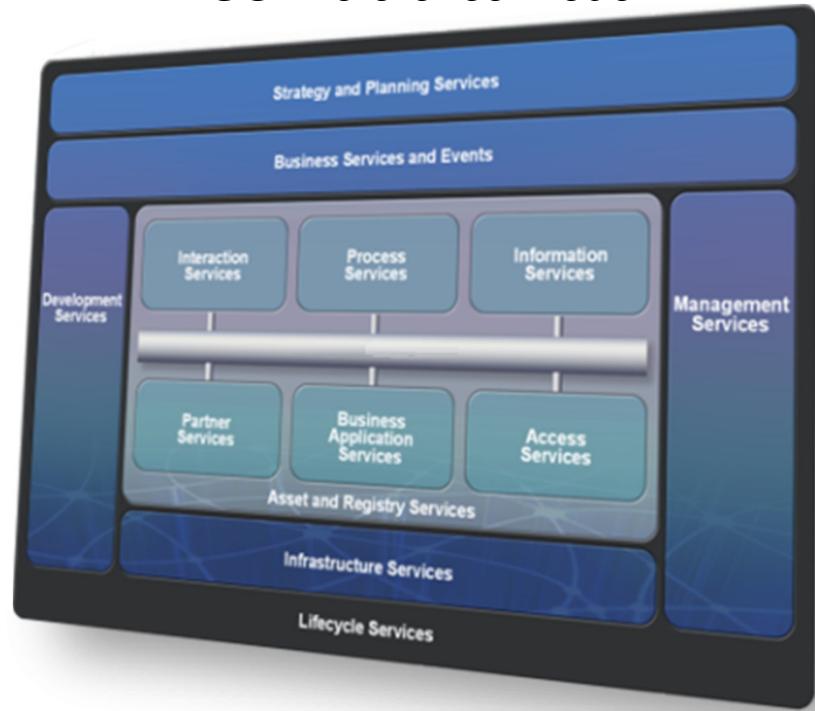


# Agility without performance & integrity is a fragile value proposition

*Enabled by a flexible, modular SOA reference model*



*Flawless execution of mission-critical processes*



Business agility is critical for excellence in managing change, business performance and business integrity are critical for excellence in business execution.

# Your business relies on consistent process execution

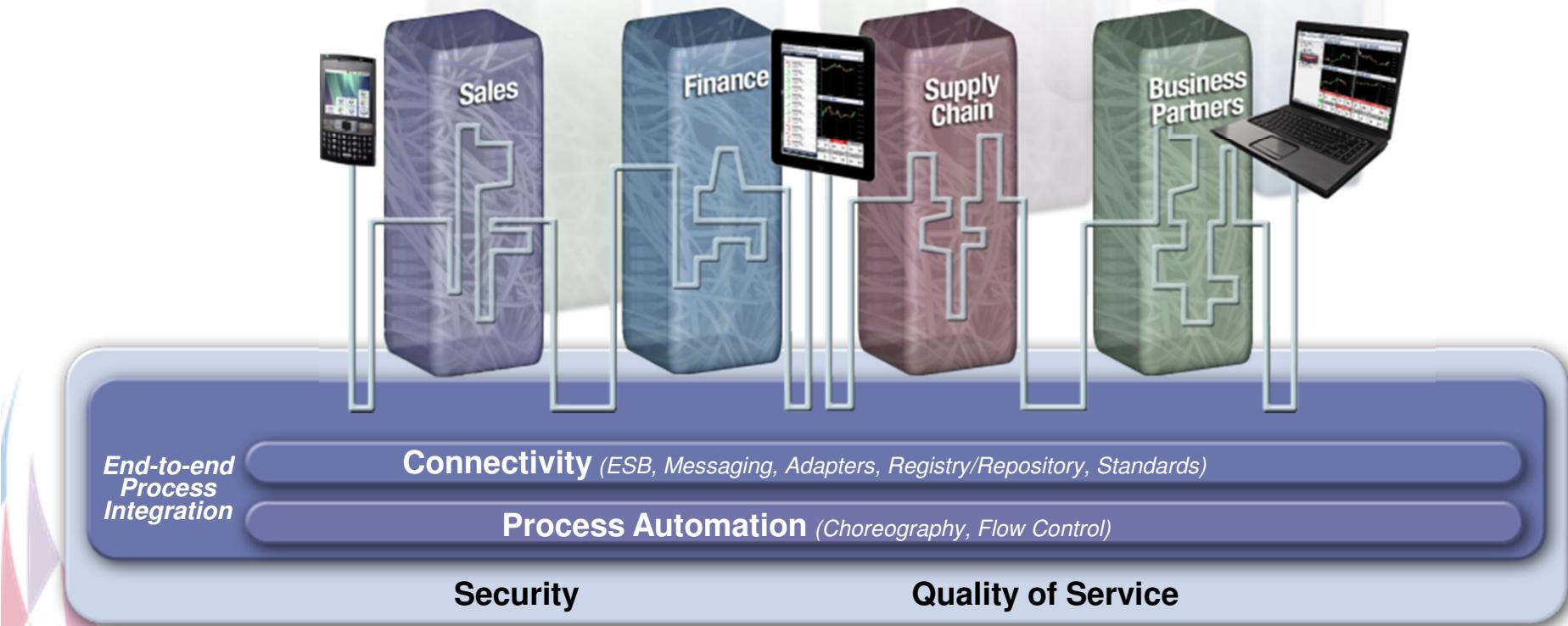
*What happens if critical business processes fail?*



- Failure of critical business processes results in lost revenue, decreased customer loyalty, and increased risk
- Critical end-to-end processes require an SOA environment that can provide:
  - *Full transactional support across distributed systems*
  - *Automated compensation and resynchronization*
  - *Recovery at all levels (process engine, service bus, database, ...)*
  - *Enterprise-class scalability to handle 1000's service calls per minute*

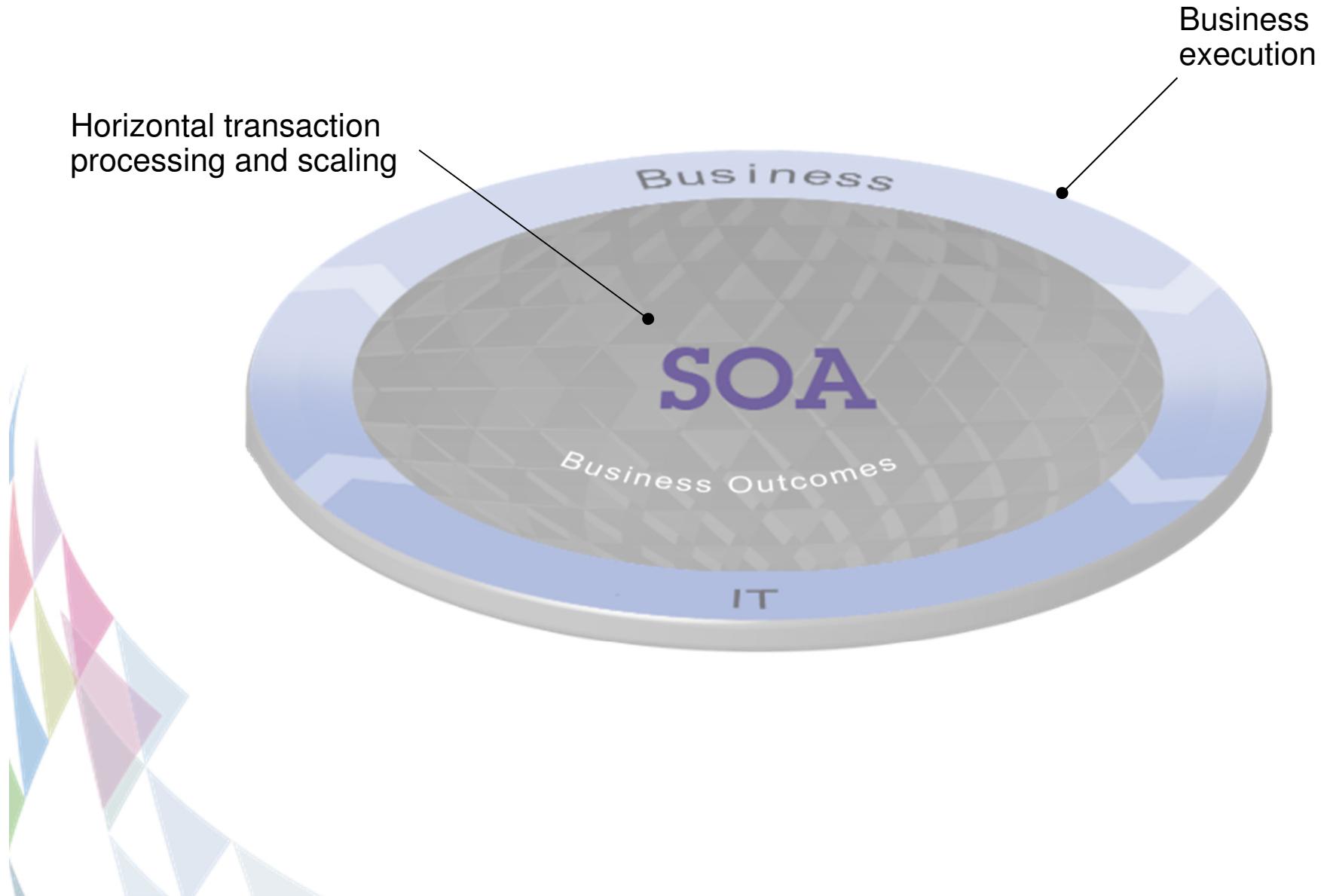
# Advanced SOA requires a more comprehensive approach

*To handle more process, services, information, people...*



- As you become more advanced, the ability to maintain robust end-to-end integration and consistency becomes more challenging
- Capabilities for process integrity must be built in to the middleware

# The New Imperative: Horizontal Transaction Processing



# Process integrity takes SOA to the next level

*Supporting integrity of transactions, interactions and information*

**Process Integrity** is the ability to conduct reliable business activity in a secure, scalable SOA environment with seamless synchronization between:

*Services ■ Human Tasks ■ Information ■ Domains ■ Users*



# Agenda

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Why?	<p><b>Achieving business agility with BPM and SOA together - Smart work in the smart enterprise</b></p> <p>Targets the business-facing part of the organization with a heavy emphasis on business process related rational for BPM and SOA. Deals with integrity primarily in terms of Business Integrity. This paper explains why you want to do BPM and SOA together in business terms.</p> <p>LINK: <a href="https://www14.software.ibm.com/webapp/iwm/web/signup.do?lang=en_US&amp;source=sw-app&amp;S_PKG=achagilbpmpm&amp;S_TACT=108AY1MW">https://www14.software.ibm.com/webapp/iwm/web/signup.do?lang=en_US&amp;source=sw-app&amp;S_PKG=achagilbpmpm&amp;S_TACT=108AY1MW</a></p>	Business view
What?	<p><b>BPM and SOA require robust and scalable information systems – Smart work in the smart enterprise</b></p> <p>Targets the Enterprise and Systems Analysts with an architectural focus on BPM and SOA. This paper focuses heavily on scalability, resilience and integrity at an Information Systems level. This talks about what BPM and SOA are, and creates a strong expectation about the need for integrity in BPM solutions.</p> <p>LINK: <a href="https://www14.software.ibm.com/webapp/iwm/web/signup.do?source=sw-app&amp;S_PKG=natsyn&amp;S_TACT=108AY2NW&amp;soc=all">https://www14.software.ibm.com/webapp/iwm/web/signup.do?source=sw-app&amp;S_PKG=natsyn&amp;S_TACT=108AY2NW&amp;soc=all</a></p>	Information Systems view
How?	<p><b>Creating a scalable and efficient infrastructure for SOA and BPM – Smart work in the smart enterprise</b></p> <p>Targets the Solution Architects and Developers and speaks directly to the capabilities of the IBM software product capabilities in support of scalability, resilience and integrity. This paper explains how our IBM middleware achieves transactional strength, but also infers what that does for BPM based solutions, and why these characteristics are important.</p> <p>LINK: <a href="https://www14.software.ibm.com/webapp/iwm/web/signup.do?soapp&amp;S_PKG=scabpmsoa&amp;S_TACT=109HE7YW">https://www14.software.ibm.com/webapp/iwm/web/signup.do?soapp&amp;S_PKG=scabpmsoa&amp;S_TACT=109HE7YW</a></p>	Technology view



ધ્યાદ

Hindi

Спасибо

Russian

شكراً

Arabic

Grazie

Italian

Multumesc

Romanian

ありがとうございました

Japanese

多謝

Traditional Chinese

Teşekkür ederim

Turkish

Gracias

Spanish

Obrigado

Portuguese

Danke

German

Merci

French

감사합니다

Korean

多謝

Simplified Chinese