

# SOA in Action: Service-Oriented Composite Applications

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## Level Set – What is SOA?

- SOA is *architecture* – a set of best practices for the organization and use of IT
- Abstracts software functionality as loosely-coupled, business-oriented *Services*
- Services can be composed into *business processes* (which are also *Services*) in a declarative manner



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## The Benefits of SOA...

- ✓ Reduced cost of integration
- ✓ Improved value from legacy applications
- ✓ Reuse leading to reduced redundancy
- ✓ Greater visibility for governance & compliance
- ✓ Increased reuse of software assets
- ✓ Business agility...
  - Respond quickly & efficiently to business change
  - Leverage change for competitive advantage

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## What is a Business Process?

- What a business *does*
- Range from fully manual (no IT involvement) to fully automated (no human involvement)
- Most processes are partially automated

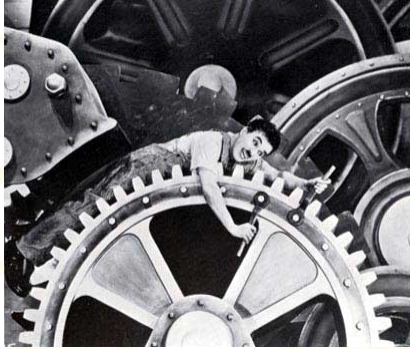


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## Business Process the Old Way...



- People plugged into rigid processes
- Inflexible & brittle

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## Business Process the Service-Oriented Way...



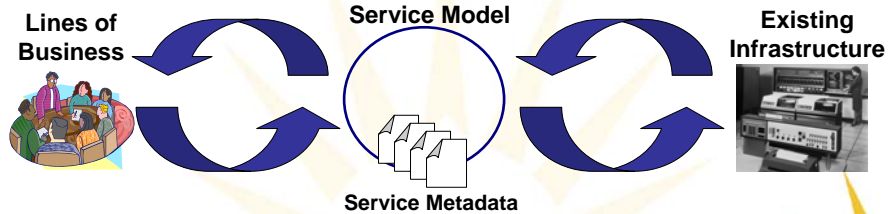
- IT resources (among other resources) available to the business as needed
- Business users compose applications on the fly

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## The Key: The Services Abstraction



- Services abstract underlying functionality & data to the business
- Also abstract business requirements to IT
- Lines of business should work with metadata — without direct IT involvement

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## Implementing SOA: Bottom-Up

*Put Service wrappers around existing applications*



- Pros:
  - Reduces cost of integration
- Cons:
  - May not be reusable
  - May be redundant
  - Management challenges

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## Implementing SOA: Top-Down

*Create architectural plan & detailed design*

- Pros:
  - Agility, reuse, flexibility
- Cons:
  - May not be implementable
  - Difficult to budget



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## SOA *Must* be Both

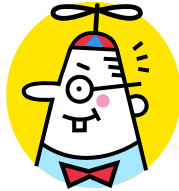
- Develop the vision (but not the details) ahead of time
- Decompose some processes to identify target Services
- Build modest set of Services
- Compose applications to enable flexible processes
- Refine architectural plan
- Repeat

*SOA should be iterative*

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## Bring Together Different Mindsets



- Developer Mindset: "Bottom-Up"
  - Everything is a Service or an Interface
  - Goal: connect Services
  - Method: Use objects and App Servers
  - Problem: Too many things to connect!



- Business Mindset: "Top-Down"
  - Everything is a Process
  - Goal: Run business efficiently by managing processes
  - Method: Use diagrams and flowcharts
  - Problem: How can you turn "shelf-ware" into software?

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## Role of Composite Applications

- *Architecture* underlies composition of Services
- Legacy assets key part of Service-oriented composite apps
- Benefit: combine old legacy processes with new composite business logic



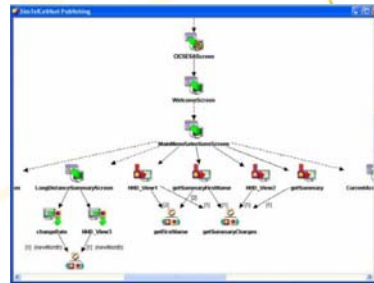
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## The Secret Sauce: Metadata

- Service contracts enable Services abstraction
- *Business* logic in composite applications represented in metadata
- Composite applications built *declaratively* (through configuration), not programmatically (with code)
- Puts business logic in the hands of business users!



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## In Summary

- ✓ IT resources are available on demand to businesses as Services
- ✓ The Service-oriented abstraction layer enables companies to run their operations and conduct business with each other in a dynamic and automated fashion
- ✓ Composite applications enable business users to create, manage, and evolve business processes

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ZapThink is an industry analysis firm focused exclusively on XML, Web Services, and Service-Oriented Architecture.



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