Mitigating Development Risks by using MDA

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SOSY

SOA is creating opportunities

- *SOA Defined:*
  - *Service-oriented architecture (SOA) is a DESIGN methodology aimed at leveraging application-neutral services.*
  - *It's an approach to building composite applications from reusable services.*

As more companies create or migrate existing systems to an SOA, greater need exists for risk mitigation strategies.

Risk 1: Early Stages of Adoption

While SOA offers the opportunity to develop a highly flexible infrastructure, we are still working to figure out all the processes for definition, creation, management and maintenance of these new kinds of infrastructure requests.

This raises the questions:

- *What do organizations need to do to make SOA a practical reality?*
- *How do we validate these requirements?*

Risk 2: Not Just Architecture, It's People

- *Too many of our software projects struggle when the initial designers/architects move on (to another project or company).*

- *Every new project participant struggles to understand what exists, why it's been designed the way it has (historical context), and what problems it really solves.*

Impact analysis becomes close to impossible when changes or new requests are proposed.

Risk 3: Ever-Changing Requirements

- *The longer it takes to validate a request, the longer our stakeholder has to redefine their request.*

- *The longer it takes to validate a request, the more likely we are to engage in technology conversations about how we would solve it, rather than in defining the business service to expose.*

When we know that requirements will change, and when we put in place a process and leverage a set of tools that predict this particular challenge – then we can mitigate as much risk as possible.

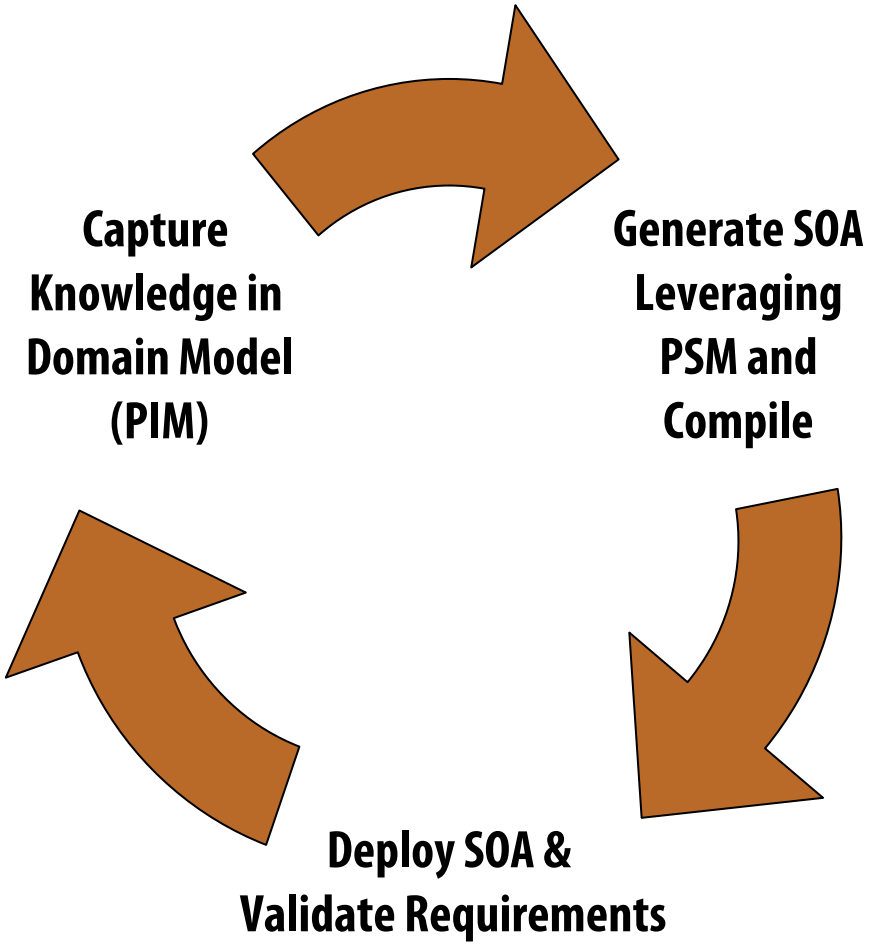
Solution: Model Driven Architecture

- *In the MDA world, transformation engines automate the process of translating information stored in a model into working code.*

- *Specifically, transformation engines take a semantically rich language (like UML) and transform them into a syntactically precise language (like Java). Most importantly, these transformation engines aren't limited to one set of transformation rules or to one target platform.*

The benefits to using models and transformations engines to mitigate project risks are many.

How MDA & Transformation Engines Work



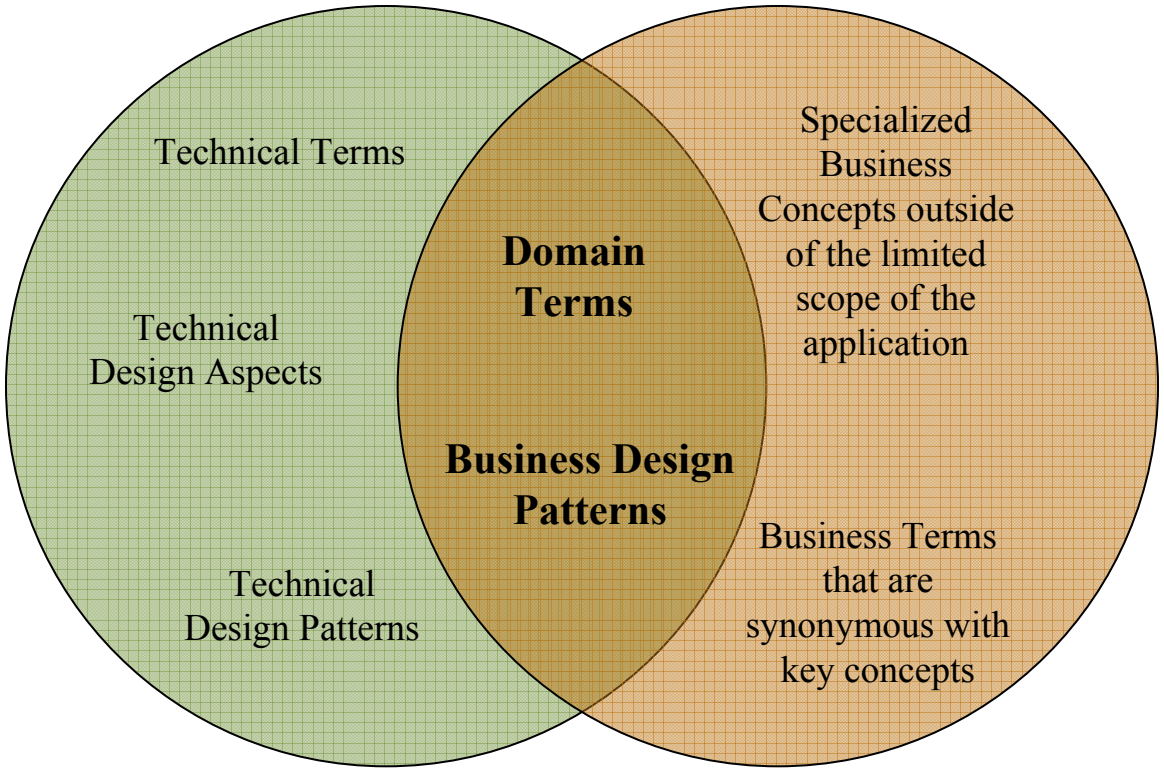
The 1st Result: Risk Mitigation

- *Companies using transformation engines to rapidly generate SOAs are shortening the length of time between gathering system requirements and the validation of those requirements – mitigating project risks*

- *Companies capturing business realities within models have less challenges with new staff coming onto projects and understanding context.*

- ***In one recent SOSY project, the quick turn around of a proposed SOA helped the customer determine they weren't ready to move forward.***

The 2nd Result: Refined Understanding



The 3rd Result: Greater Productivity

- *Gartner's studies in 2001 and 2003 stated that projects using tools like The OlivaNova Model Execution System have performance ranges from 12 to 47 times higher than similar projects using other development methods – regardless of whether the project is an enterprise application or a set of consumable services.*

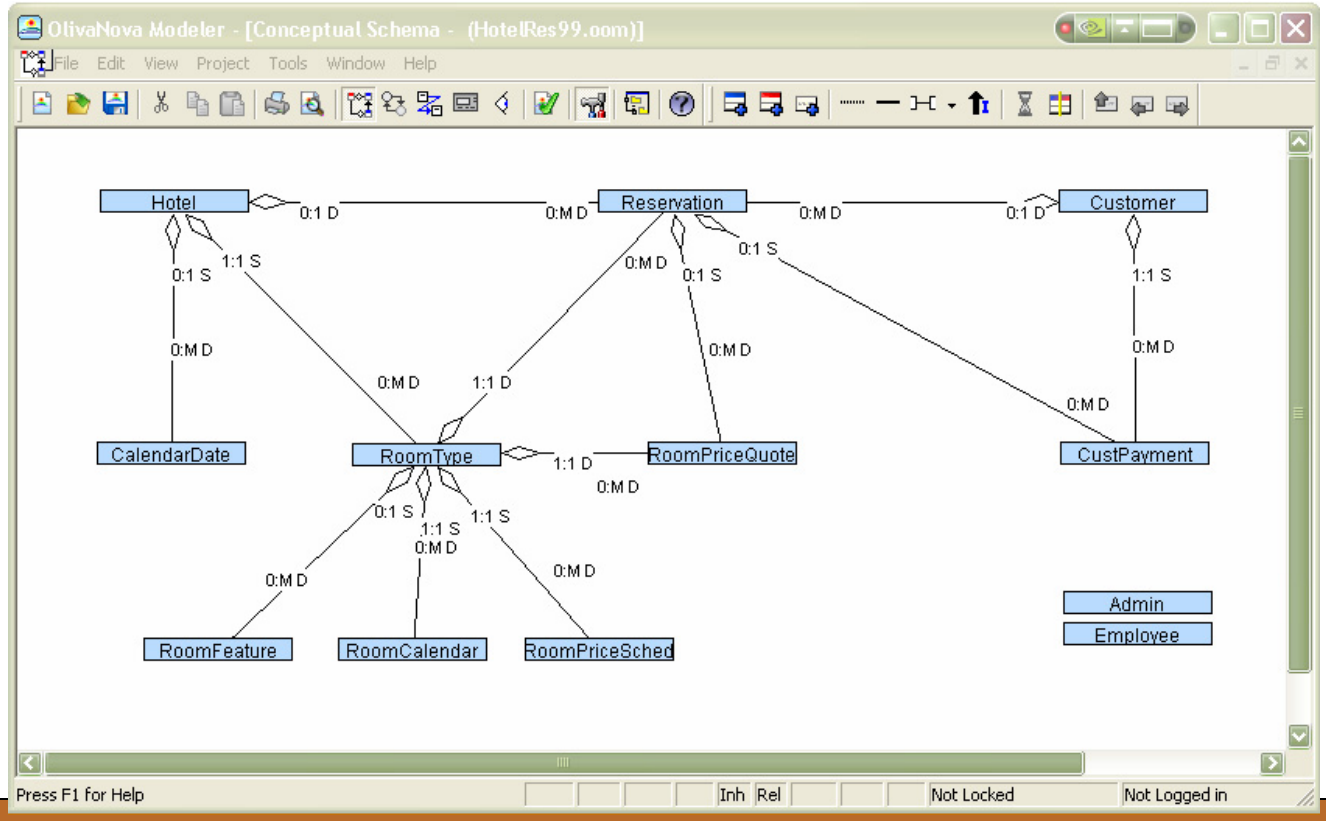
- ***In one recent SOSY project, we were able to generate a system in under three hundred fifty hours (350) that had been delivered by custom development in over 25,000 hours.***

Approach: Iterative Modeling/Generating

- *Given the benefits, the approach of iterative modeling and code generation (key techniques when using MDA) ensures that:*
  - *Requirement Validation is quick and often painless*
  - *Greater feedback mechanisms exist for the customer*
  - *The model is self-documenting and captures the service requirements*
  - *Architect/Developer focus stays on the logic of the consumable service*

Tool Support

Demonstration of one tool, The OlivaNova Model Execution System, and how it provides support for the automatic generation of consumable web services



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Questions?

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