

How to Build, Implement, and Use an Architecture Metamodel

SATURN 2013
Software Architecture Conference

Minneapolis, MN

Armstrong Process Group, Inc.
www.aprocessgroup.com

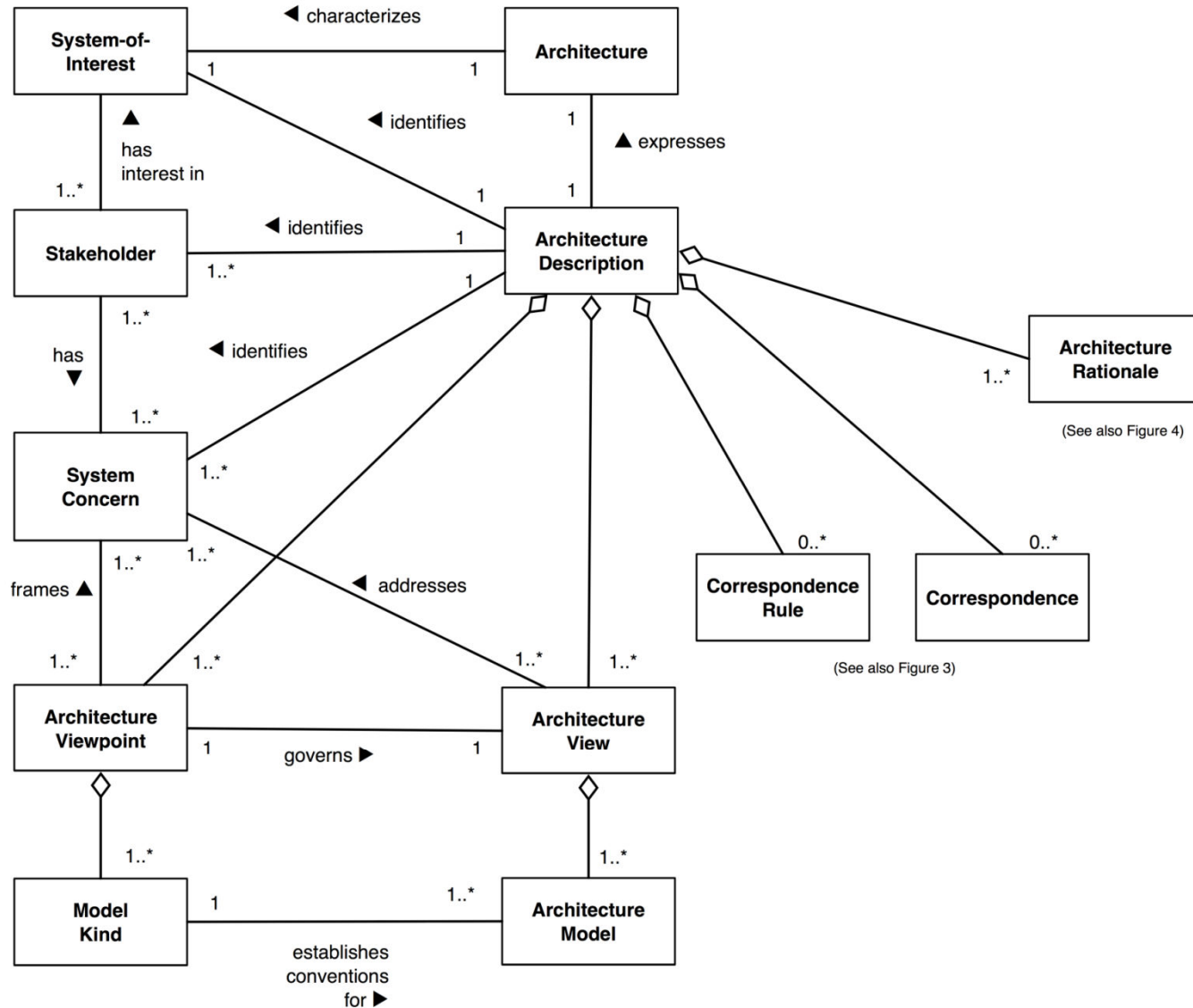
Objectives

- Review industry standard for architecture descriptions
 - Stakeholders, concerns, viewpoints, and views
- Introduce method for defining architecture viewpoints based on stakeholder scenarios and concerns
 - Based on Architecture Description UML Profile
- Describe techniques for designing custom metamodel for rendering required architecture views

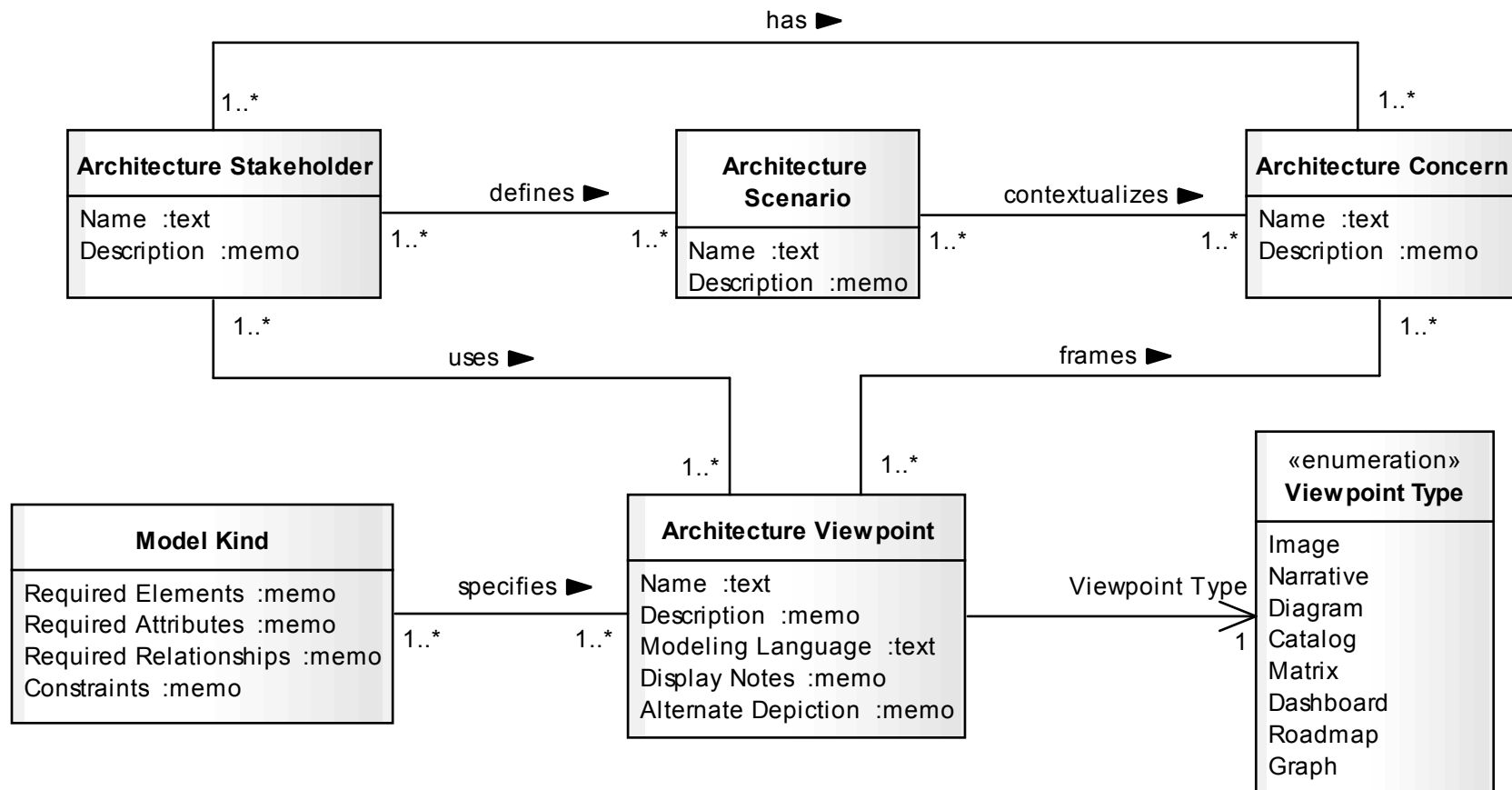
About APG

- APG's mission is to
 - “Align information technology and systems engineering capabilities with business strategy using proven, practical processes delivering world-class results.”
- Industry thought leader in enterprise architecture, business modeling, process improvement, systems and software engineering, requirements management, and agile methods
- Member and contributor to
 - UML, SysML, SPEM, UPDM at the Object Management Group (OMG)
 - TOGAF and ArchiMate at The Open Group
 - Eclipse Process Framework (EPF) at the Eclipse Foundation
- IBM Advanced Business Partner
- Sparx Systems Value-Added Reseller

Architecture Description Standard

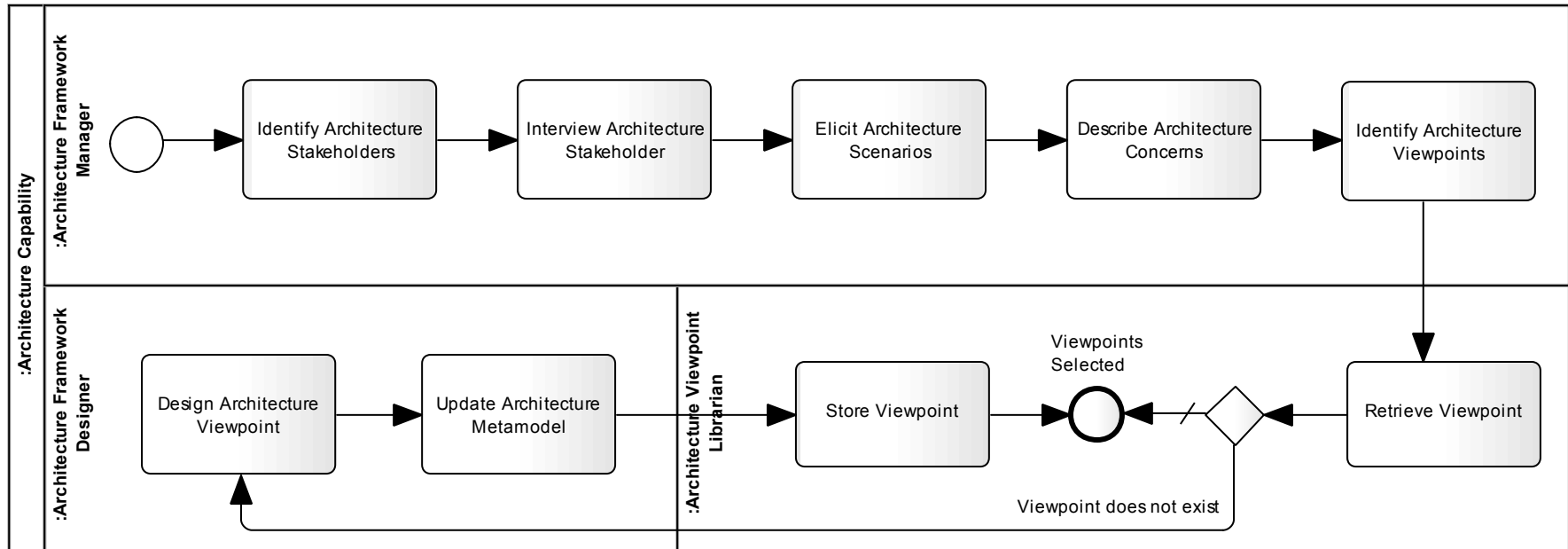


Refined Viewpoint Metamodel

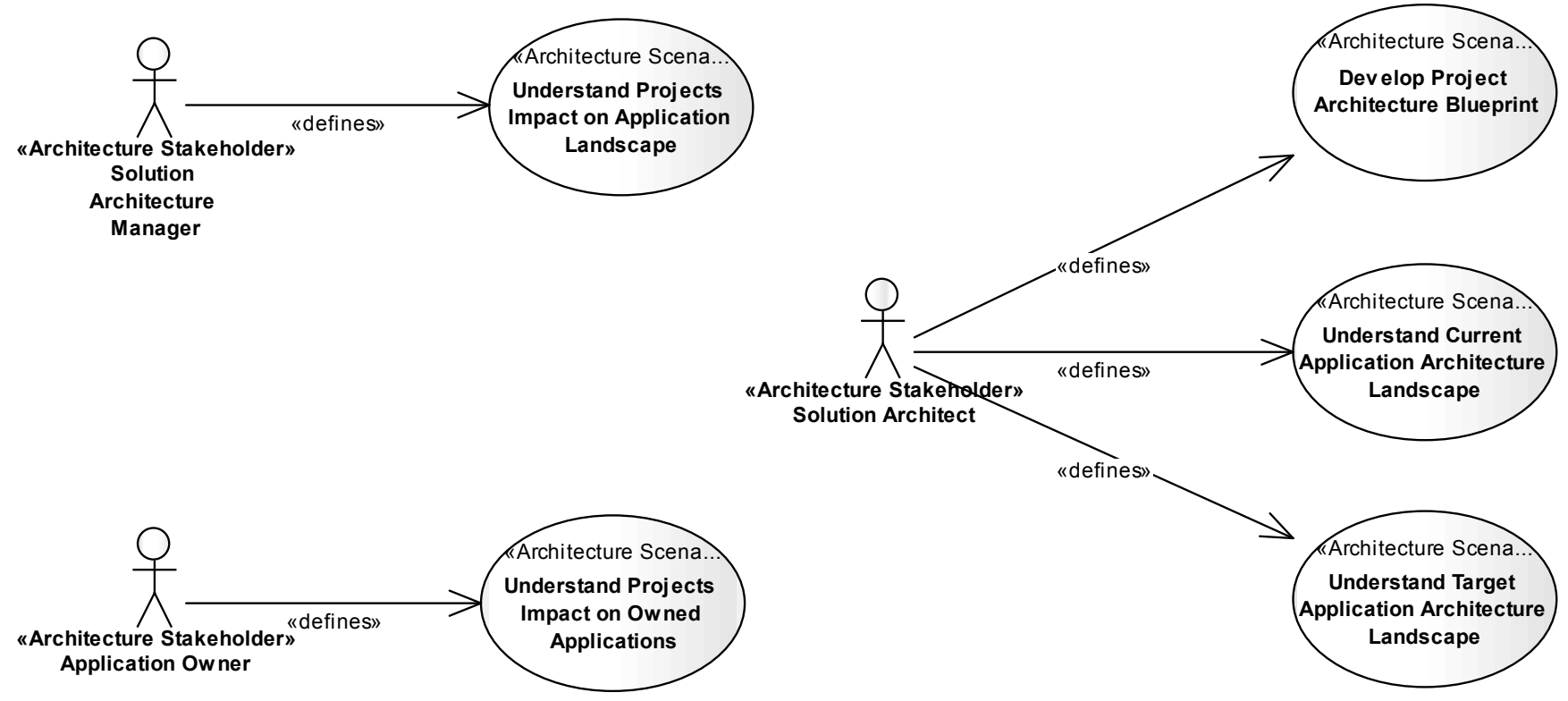


Describes the “Who”, “Why”, “What” and “How” for architecture modeling

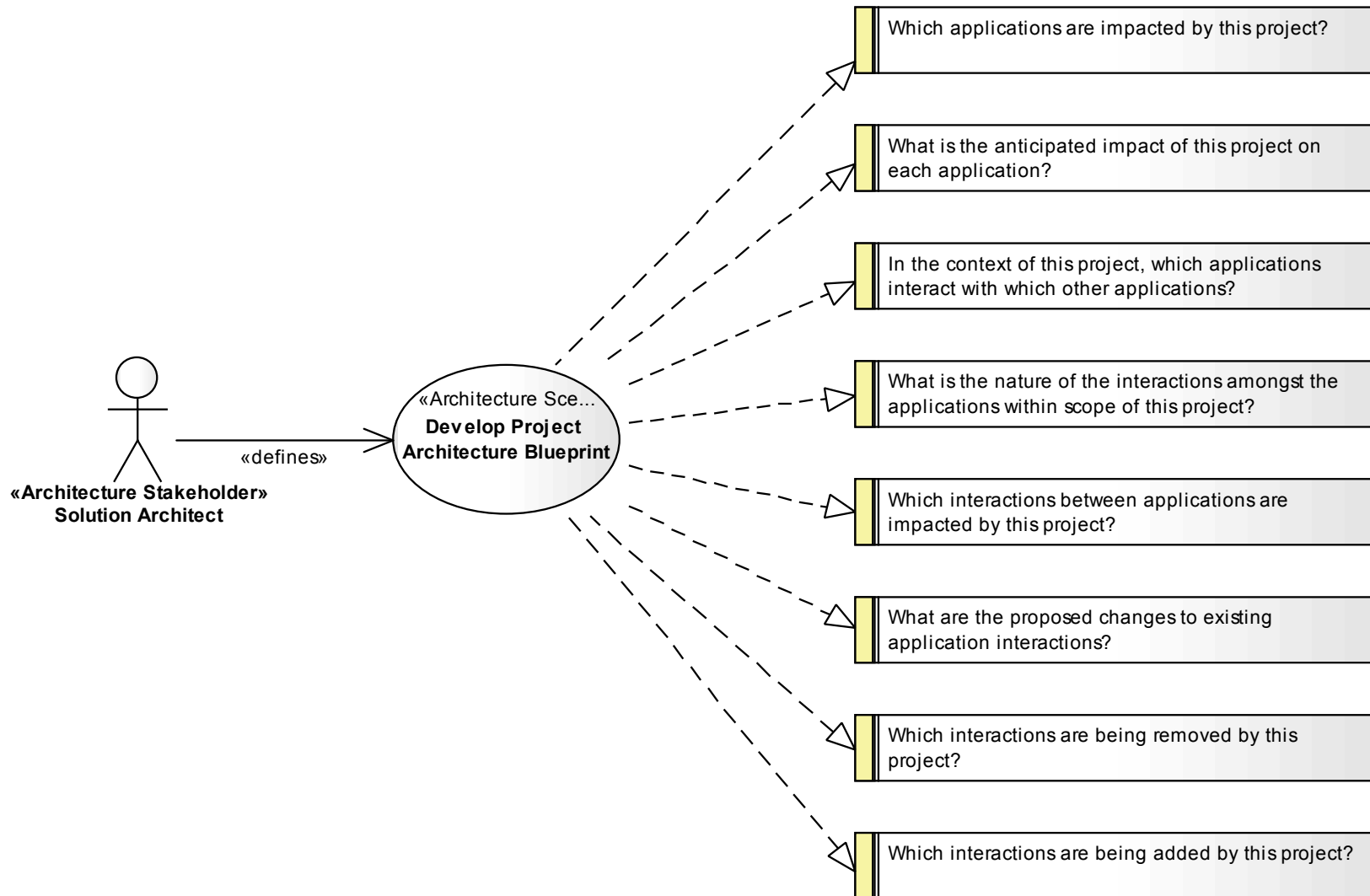
Gather Modeling Requirements – Workflow



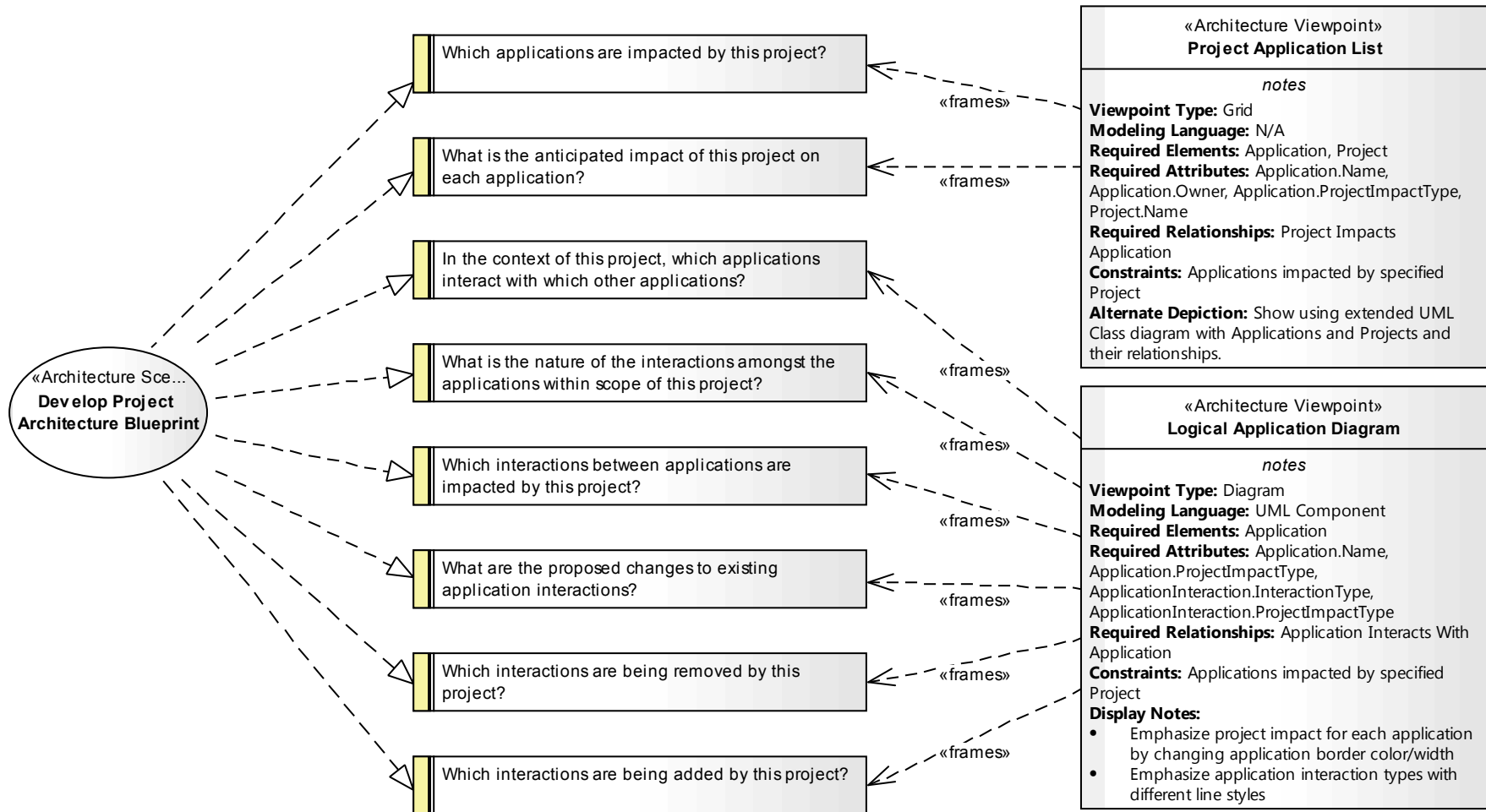
Describe Stakeholders and Scenarios



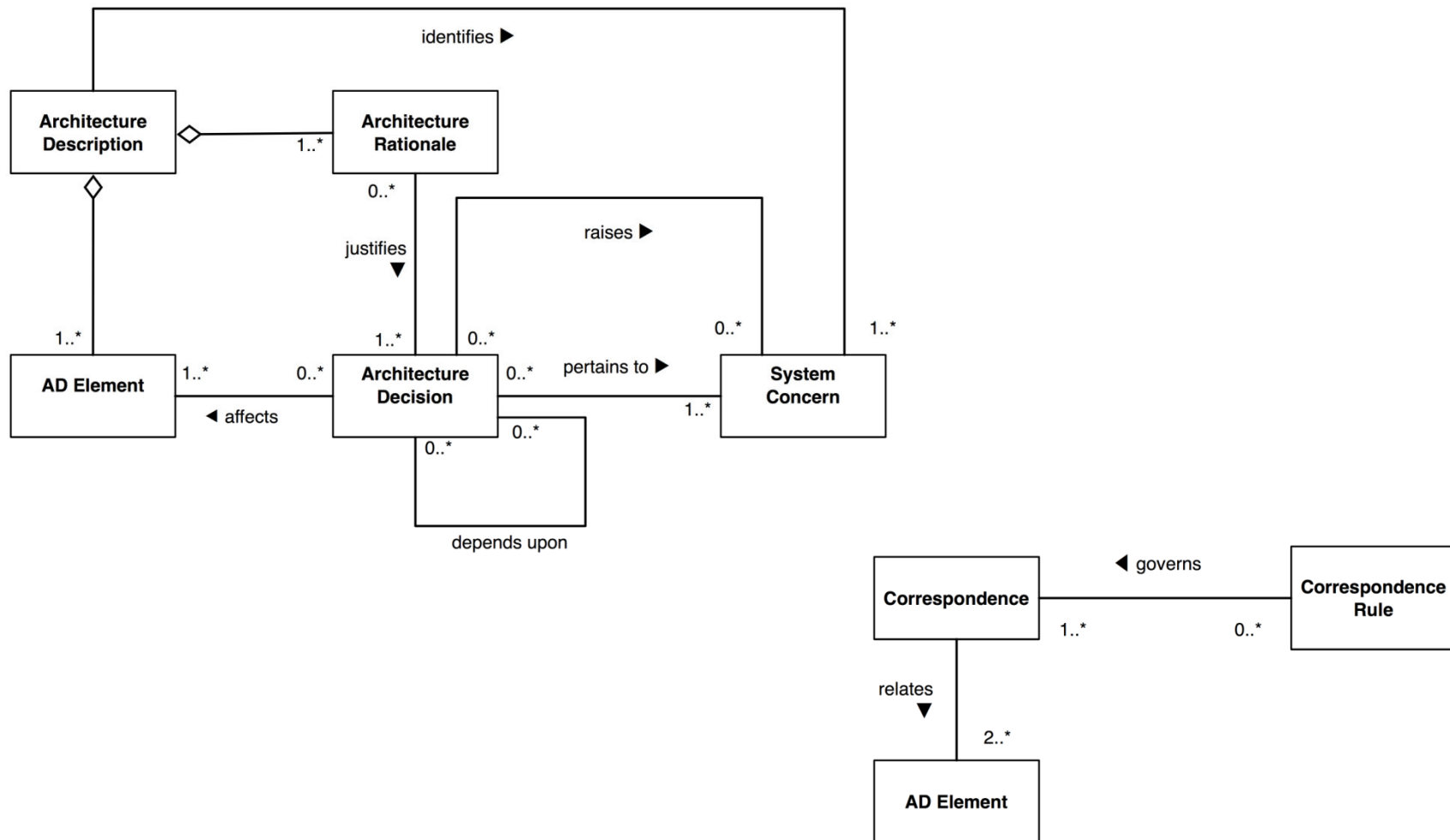
Describe Architecture Concerns



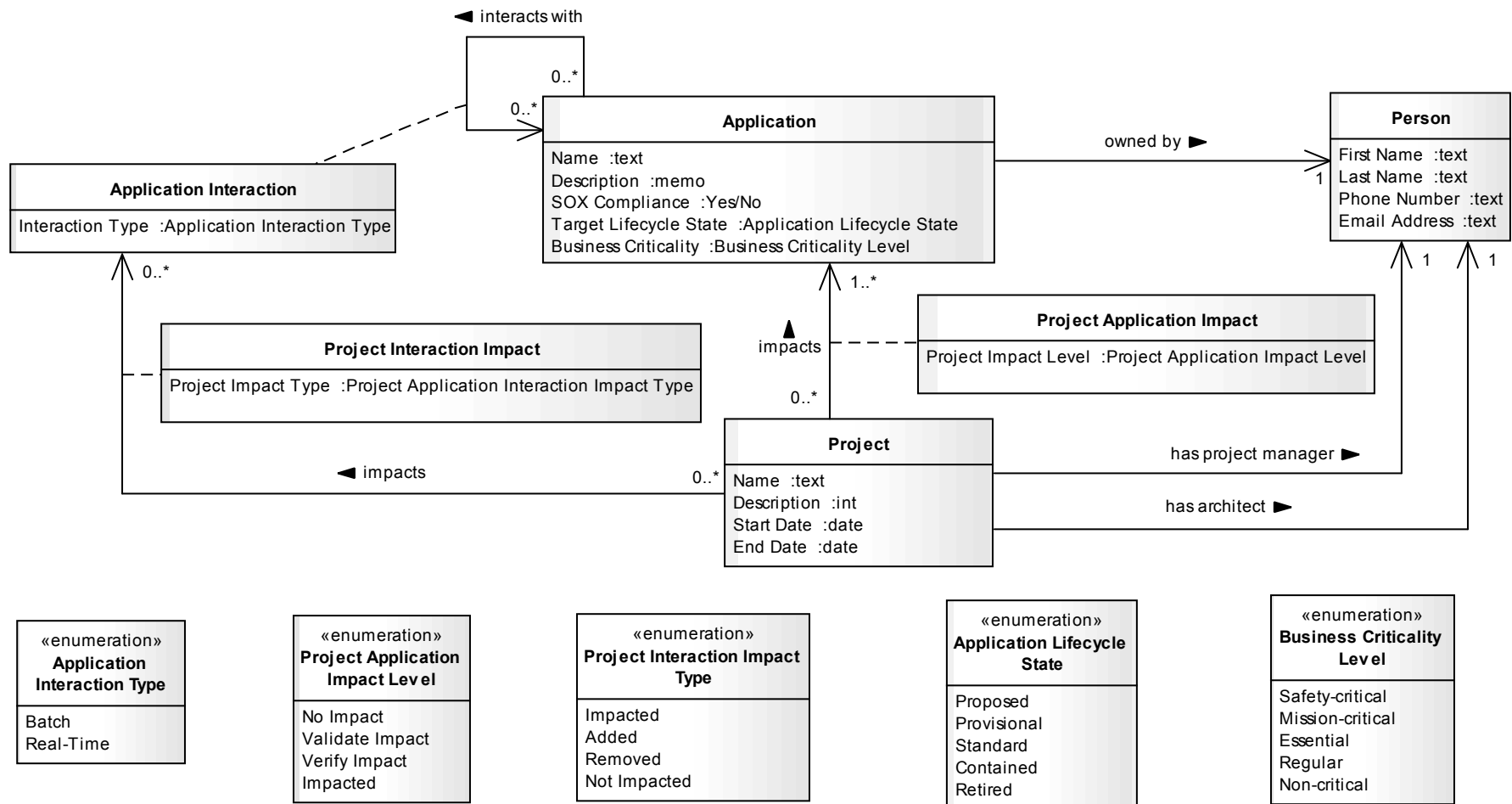
Identify Architecture Viewpoints



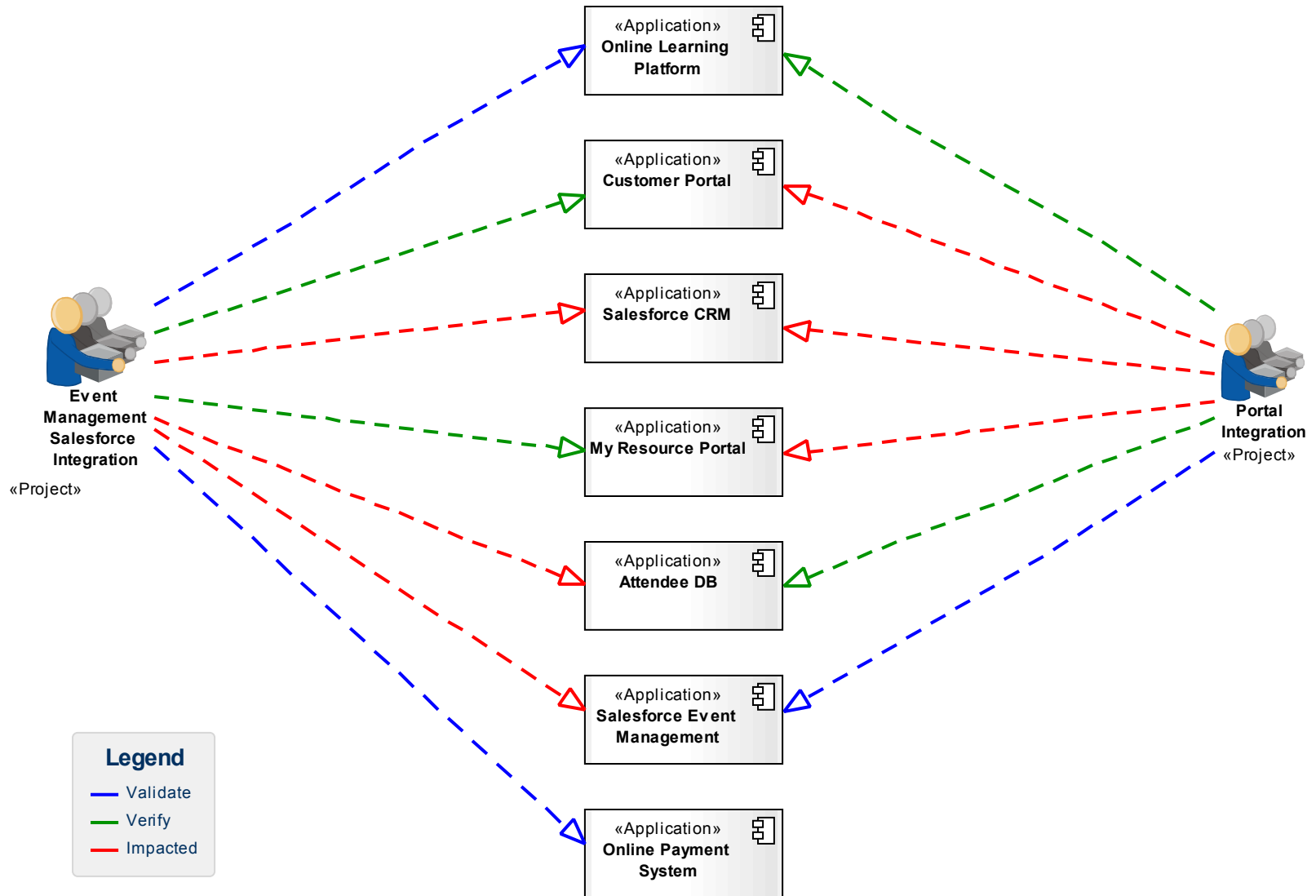
AD Elements and Correspondences



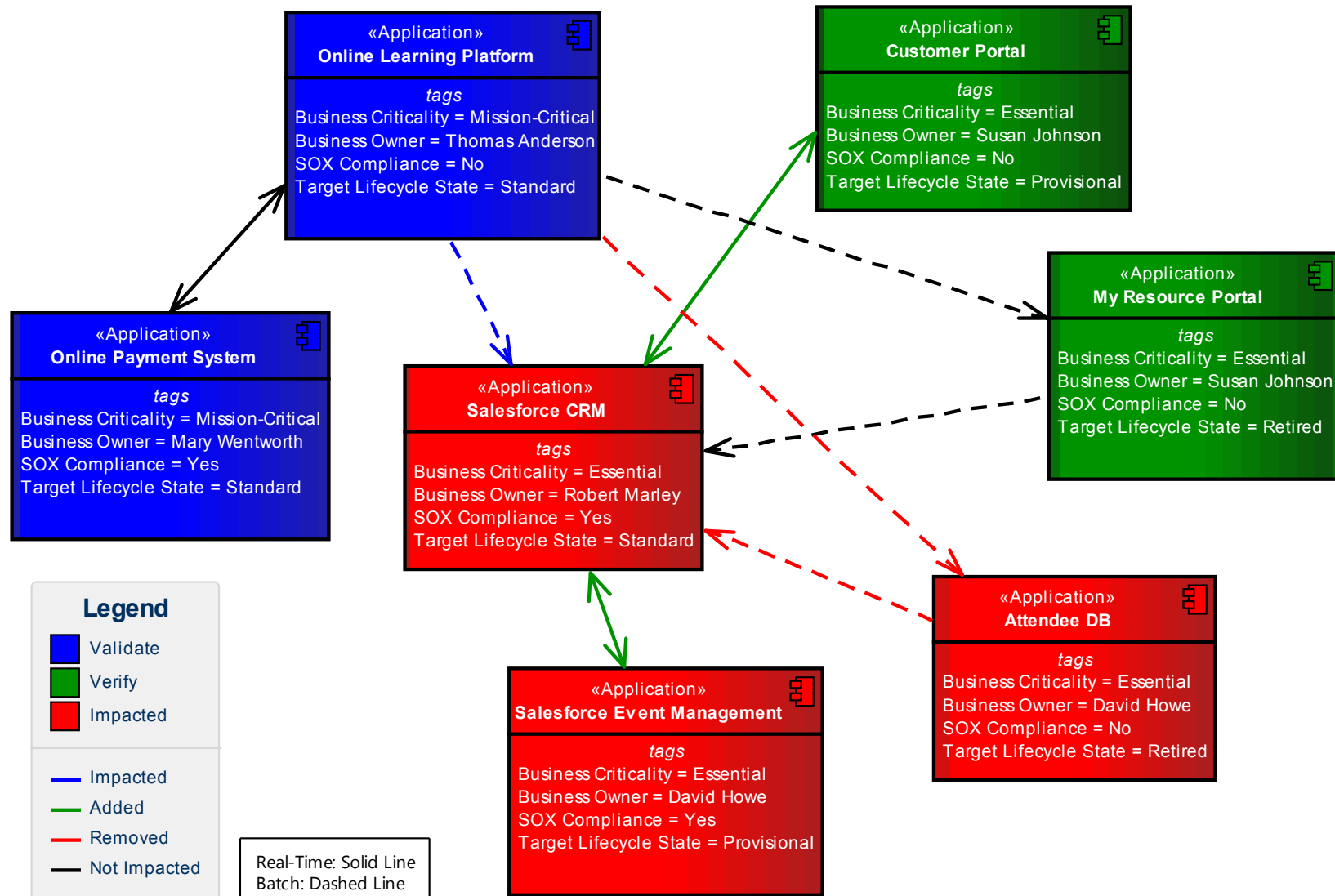
Update Architecture Metamodel



Project Application Impact Diagram



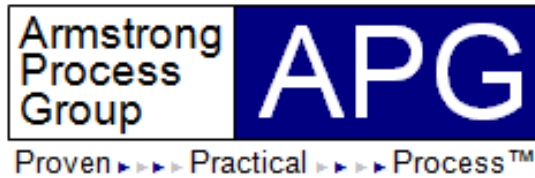
Logical Application Diagram



Conclusion

- Exploit existing architecture standards for determining how to model (and how much) for what purpose
- Use conventional modeling techniques for understanding stakeholder concerns and designing architecture viewpoints
 - And for designing custom metamodel
- Implement custom metamodel using UML profiles
 - Basis for consistent semantics and tool usage

Q&A



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***Thanks for your attention
and participation!***

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