



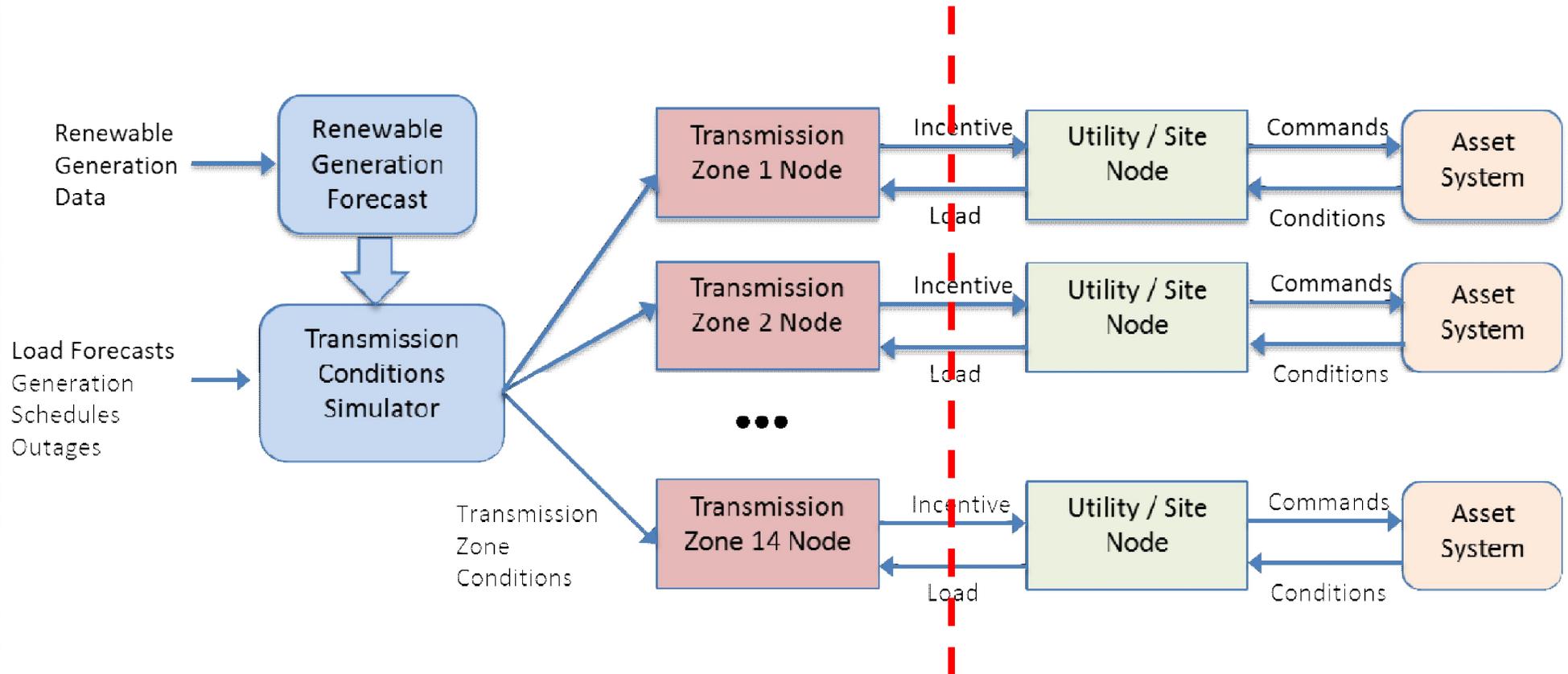
PNW Demonstration Project SGIMM Trial Application: Lessons Learned

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Agenda

- PNW Demo Project Trial Interface
- Executive Overview Document
- Assessment Methodology
- Scoring Methodology
- Sample observations
- Lessons Learned/Recommendations

PNW Demonstration Project Interface



Transactive Signal Interfaces between Participants

- The SG IMM: Information Exchange Interface
- The SG IMM Structure and Goal Areas
 - Configuration and Evolution
 - Operation and Performance
 - Security and Safety
- Maturity Model
 - Metrics to Measure Achievement of Goals
 - Combining Metrics and Goals
- Conducting SGIMM Assessments
- Appendix A: SG IMM Evaluation Spreadsheet

PNW Assessment Methodology

- The assessor was a member of the community with detailed knowledge of the community and interface under assessment.
- Key project members for the technology interface design and cyber-security were interviewed and comments captured.
- A preliminary draft assessment was developed and further detailed interviews are to be conducted.

Methodology Refinement

- Conduct of a more formal (deeper) assessment of the PNW Project using the current assessment tools.
 - Review with 3-5 key senior project managers to improve the actual data collected and maturity ratings.
 - Publish (revise) the assessment as a model assessment report
- Design and execute a supplemental process to assess each of the project members perspective on the transactive control interface
 - Recruit one member from each project partner
 - Conduct 1-2 hour interviews with each
 - Combine the different assessments into an overall project assessment with specific findings and recommendations for each project member
 - Develop a revised report on the trial process, results and recommended improvements for the SGIMM

Scoring Methodology

- For each Goal, determine the highest Maturity Level at which all of the applicable metrics are met for the interface under assessment.
- Note Goals that are Not Applicable (eliminated from the maturity scoring process).
- For each Goal/Category Area compute a simple average of the Maturity scores
 - Configuration and Evolution,
 - Operation and Performance and Safety and Security;
 - Organizational, Informational and Technical
- Compute a weighted average for each Goal Area.

Generic Scoring Example

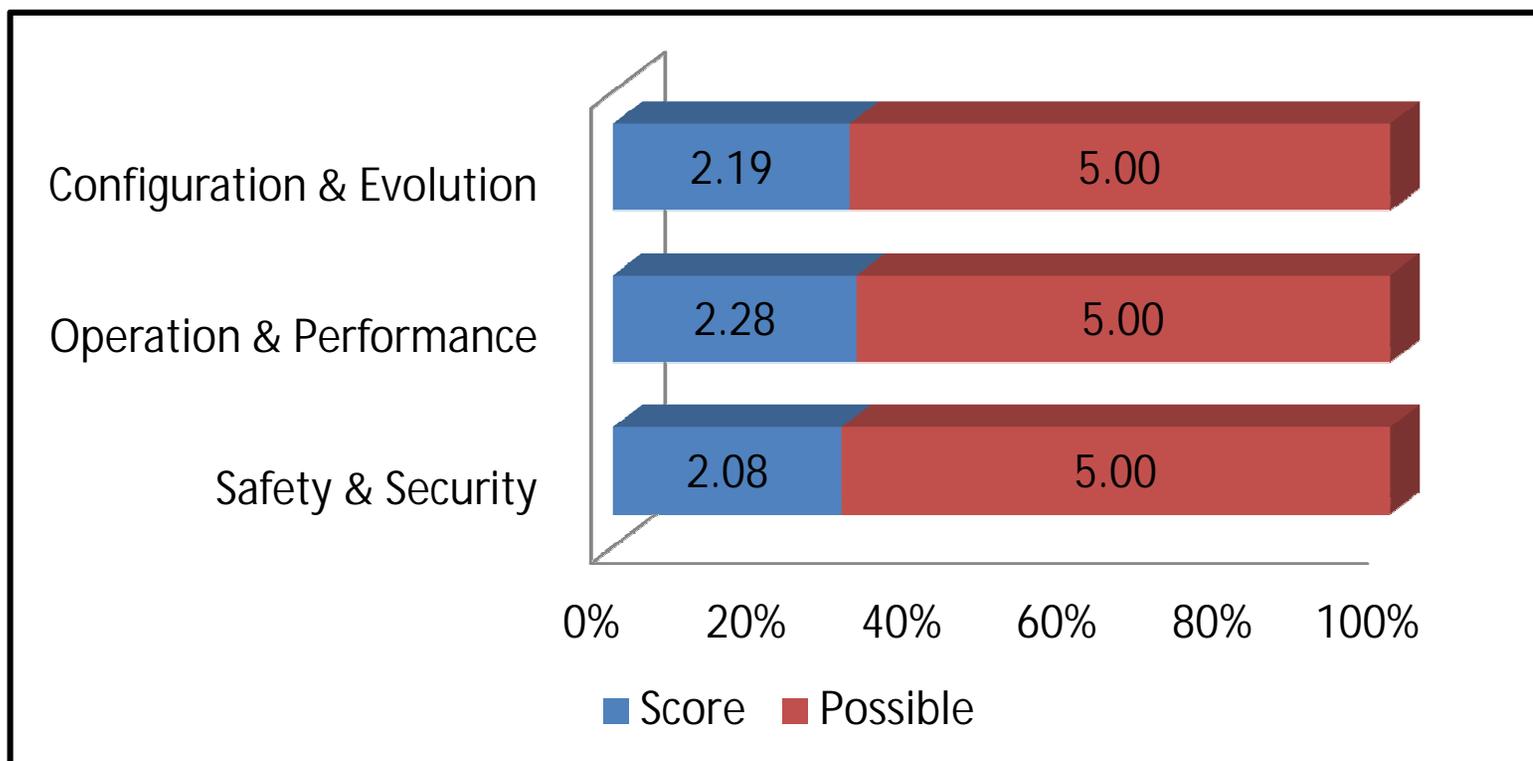
Configuration & Evolution - Informational	
CE1-I1: A business context information model supports the message definitions of the interface.	2
CE1-I2: The business context information model for the interface is derived from one or more general information models relevant to the functional domain.	3
CE2-I2: Where multiple information models are used to support an interface, the overlapping model elements are mapped between the models.	NA
CE3-I1, CE9-O3: The semantics used in the interface messages are independent of the technical interoperability categories.	4
CE3-I2: The general information models from which the business context is derived are independent of the technical interoperability categories.	2
CE4-I1: The business context information model describes the resource identifiers for unambiguous reference related to objects in the interface messages.	2
CE6-I1: The business context information model includes elements that support discovery methods as needed.	1
CE7-I1: The business context information model includes elements that support configuration options.	3
CE10-I1: The migration path for the business context information model from newer to older versions is specified.	NA
Average Score	2.43

Generic Scoring Summary

Summary Results	# of Goals	Maturity Rating
Configuration & Evolution	36	2.19
Configuration & Evolution - Organizational	17	2.09
Configuration & Evolution - Informational	9	2.43
Configuration & Evolution - Technical	10	2.14
Operation & Performance	16	2.28
Operation & Performance - Organizational	7	1.67
Operation & Performance - Informational	1	2
Operation & Performance - Technical	8	2.86
Safety & Security	24	2.08
Safety & Security - Organizational	16	2.00
Safety & Security - Informational	4	2.5
Safety & Security - Technical	4	2.00

Generic Scoring Summary

Summary Results	Score	Possible
Safety & Security	2.08	5.00
Operation & Performance	2.28	5.00
Configuration & Evolution	2.19	5.00



PNW Trial Sample Observations

- Scaling of the community using the technology has yet to be defined in terms of governance, business processes and technology.
- Automated discovery mechanisms for adding new or re-configuring existing participant nodes still need definition.
- The Project has developed much of its own, unique policy, business processes and technology due to lack of relevant existing or emerging internationally accepted standards. This is typical of any research project developing new technology.
- Security and safety policies may not be aligned across state boundaries and regulators. It is not clear that this is an issue but does not seem to have been addressed.

Lessons Learned/Recommendations

- Attempting to develop specific scores and comments on most of the Goal Statements and Metrics is very challenging without more specific guidance as to what data should be collected or questions asked to develop an assessment rating.
 - Recommend that specific questions or data to be collected for each of the Goal Statements and Metrics be developed and included as one of the assessment tools
- It is not clear who should be approached; who should be interviewed (or for that matter whether interview or self-assessment are preferable); how long should interviews be; what sort of senior management sponsorship is required/desired; how the Goal Statement Maturity scoring is computed, etc.
 - Recommend developing an Assessor's Guide to SGIMM Assessments to address these kinds of questions and standardize the assessment process.

Lessons Learned/Recommendations

- We need a tool that explains at a high level the goal, potential benefits and process of the SGIMM aimed at executive level decision-makers.
 - The draft PNW Demonstration Project publication “The Smart Grid Interoperability Maturity Model: Overview” is an attempt to create such a document. A slide presentation to accompany the Overview document would also be useful.
- This “PNW Alpha Trial Results” document is in response to a need to summarize and present the results to operating managers in an actionable format.
 - Need a model of reporting results to both standardize the reporting and provide a powerful communications vehicle to decision-makers in a community.