SAND2012-1778P

Project Management Improvement Project

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Objective & Outline

- Objective
  - o Describe the internal effort of the Global Physical Security Program (GPSP) to improve project management of GTRI work.

- Outline
  - o SNL Project management approach
  - o Journey to Project Excellence
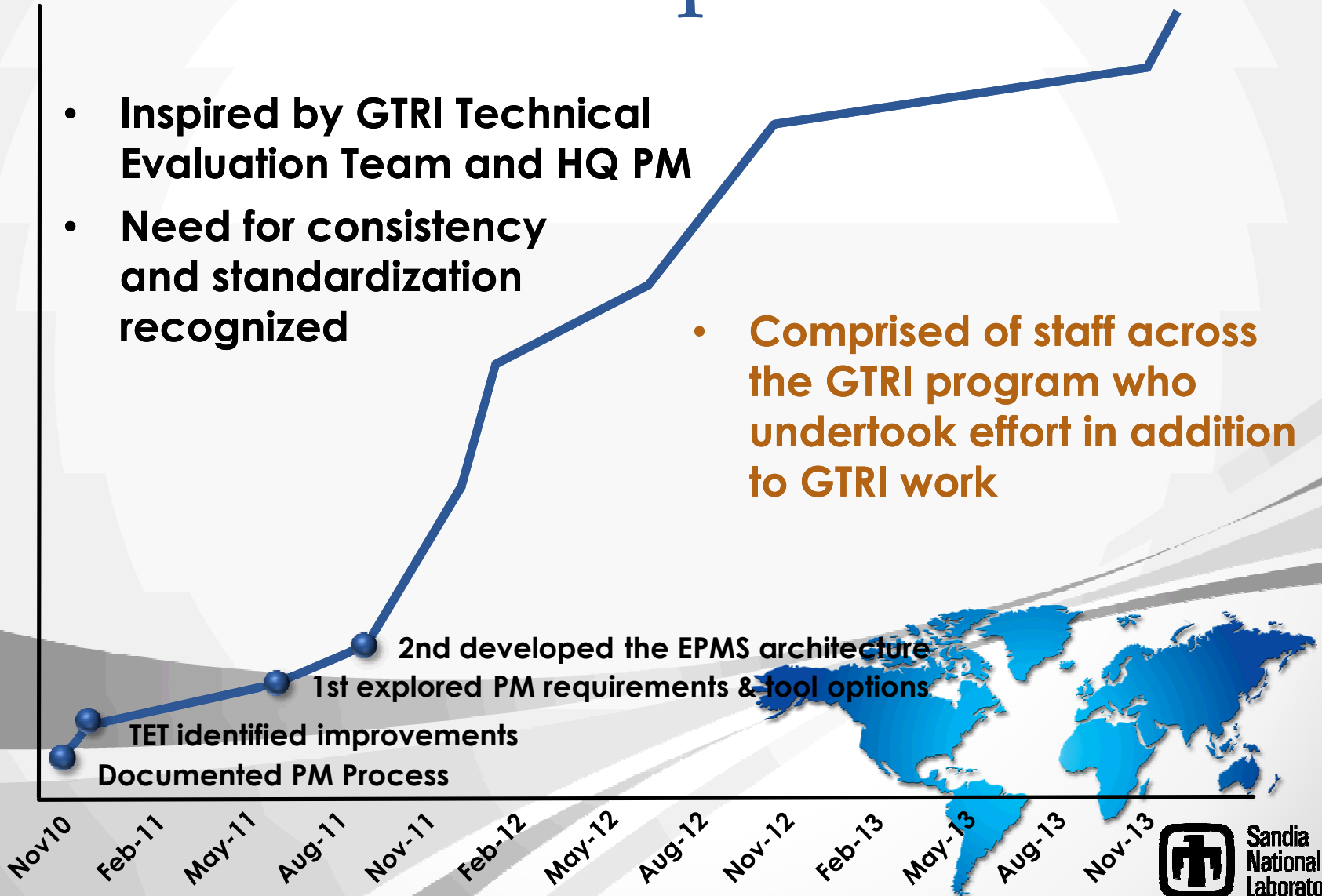 - o Status of Effort

SNL Project Management Approach

PM Rigor

FLEXIBILITY

Complexity, Funding, Customer PM Needs
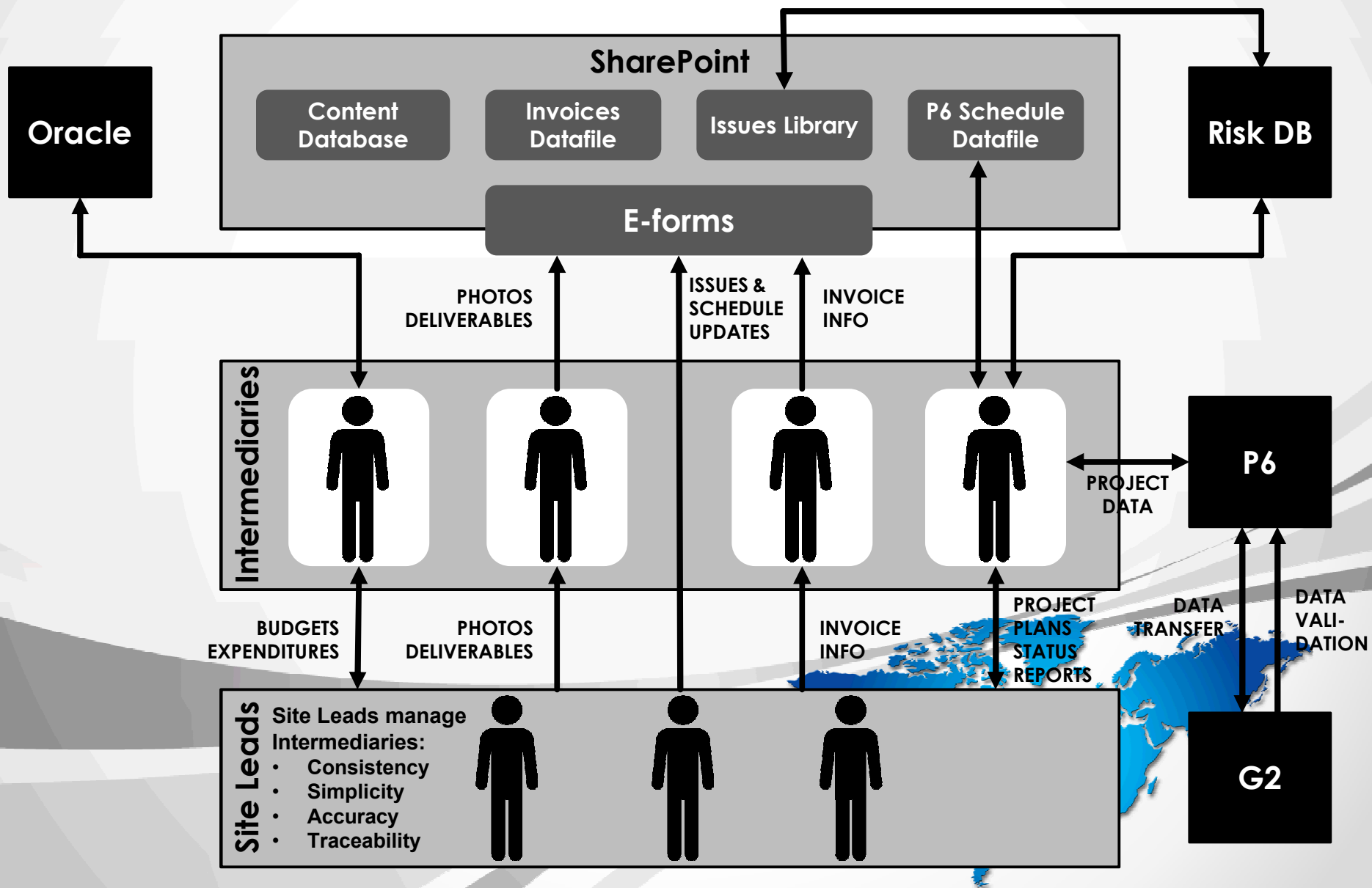
Staff PM Experience

Effort to Improve PM

- **Inspired by GTRI Technical Evaluation Team and HQ PM**

- **Need for consistency and standardization recognized**

- **Comprised of staff across the GTRI program who undertook effort in addition to GTRI work**
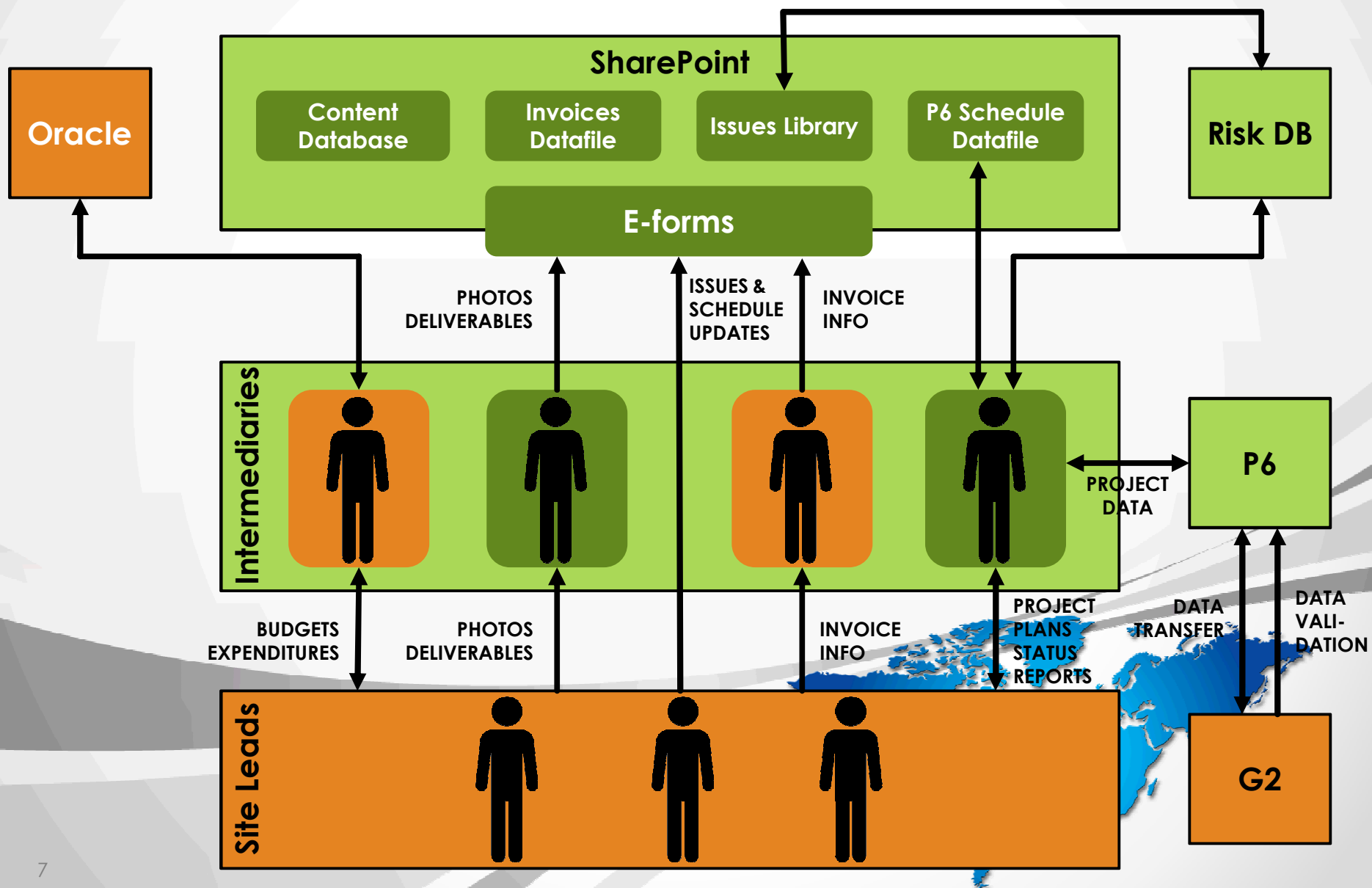
2nd developed the EPMS architecture

1st explored PM requirements & tool options

TET identified improvements

Documented PM Process

Nov10 Feb-11 May-11 Aug-11 Nov-11 Feb-12 May-12 Aug-12 Nov-12 Feb-13 May-13 Aug-13 Nov-13

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Project and Information Architecture

New and Existing Project and Information Architecture

Assessing Schedule Risk

- Schedule Risk Worksheet developed
- For each project
- Completed by Intermediary with Site Lead
- Risk Database drawn from SNL Corporate RM Guidance

- For each activity, can assign risk or opportunity
- Likelihood of occurrence
- Impact
- Handling strategy

Schedule Risk

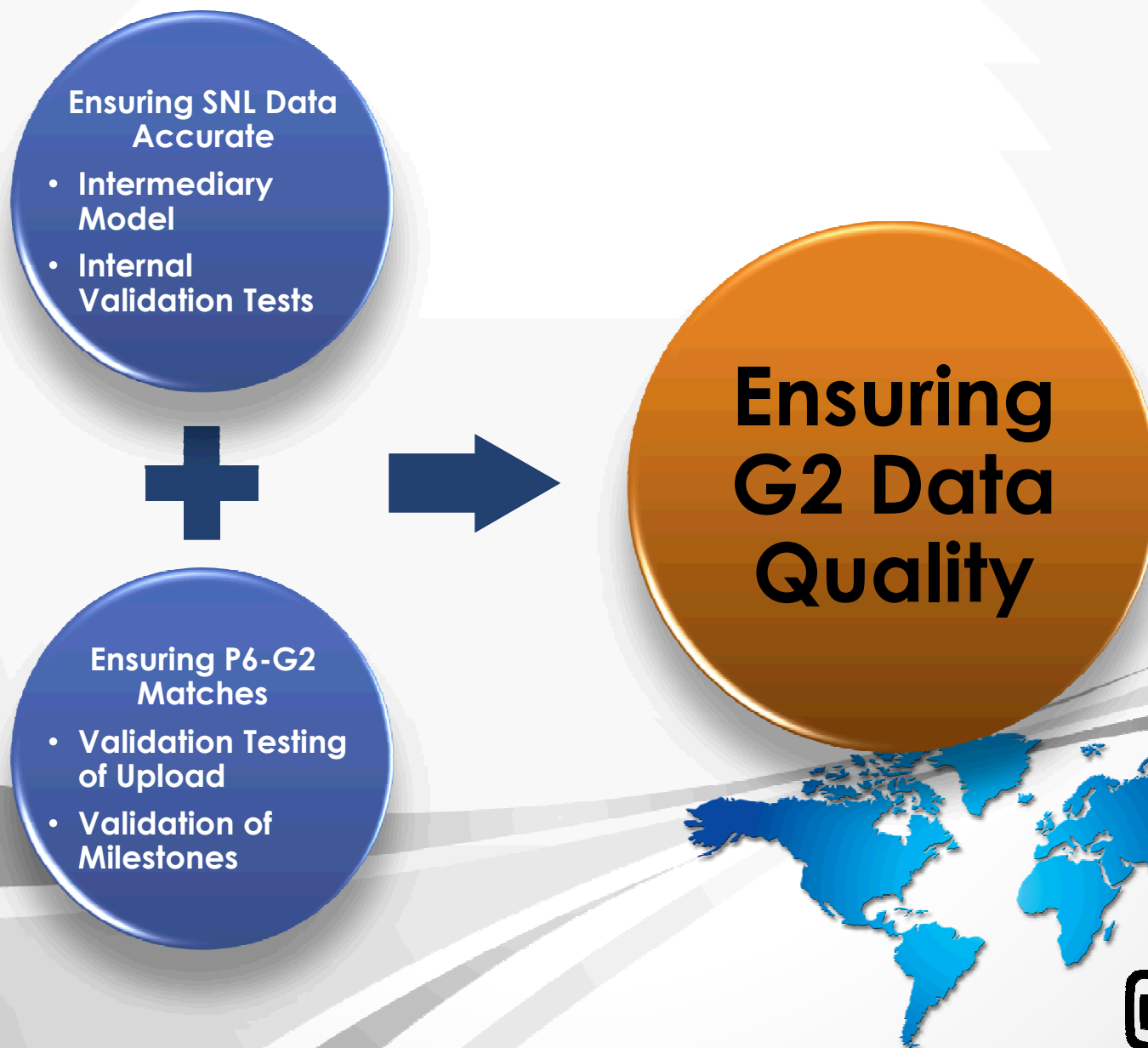## GPSP - Risk Identification & Assessment Work Sheet

Project: Uruguay ENOD Site (example)

Risk or Opportunity	Risk Description	Probability or Likelihood of Occurance	Impact Perce
2. Opportunity	Opportunity - Potential table-top exercise	2. Medium (11%-25%)	1. Low (
1. Risk	Resources or Site Conditions - Adequate and timely resources not available?	Low (<10%)	2. Medi
	Procurement - First-use subcontractor/vendor involved?		
	Procurement - Limited availability of qualified vendors or subcontractors?		
	Procurement - Long-lead procurement items?		
	Testing - Maintenance testing required?		
	Quality Control Issues - Precision work required? Slower than normal installation/build?		
	Procurement - Procurement strategy undefined or complex?		
	Quality Control Issues - Rework expected due to nature of tolerances?		
	Quality Control Issues - Significant quality work that is (or will be) inaccessible?		
1. Risk	Procurement - First-use subcontractor/vendor involved?	2. Medium (11%-25%)	3. High

PMIP Milestone Accomplishments

- Consistent WBS

- Formally defined processes:
  - o Domestic and international Upgrade Projects
  - o Systems Architecture (P6, SharePoint, and reporting)
  - o Financials

- Developed comprehensive risk management approach

- Incorporated data validation for PrimaVera to G2 uploads

- Developed aides (particularly for travel)
  - o Forms, templates, communication methods

- Revising program documentation to meet new PM approach

Ensuring SNL Data Accurate

- **Intermediary Model**
- **Internal Validation Tests**

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Ensuring P6-G2 Matches

- **Validation Testing of Upload**
- **Validation of Milestones**

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Ensuring G2 Data Quality

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Assuring SNL Data Accurate

- SharePoint to P6 Validation
- Helps find Scheduler Intermediary input errors in P6
- Checks identical fields as G2 Validation file

	A	B	C	D	E	F	G	H	I
1	Site Lookup Errors	Task Lookup Errors	Project Milestone Errors	Project Milestone Errors	Baselines Dates That Don't Match	Forecast Dates Don't Match	Completions Don't Match	Non Unique P6 Items	Errors in P6 Table
2	# of Errors	# of Errors	# of Errors	# of Errors	# of Errors	# of Errors	# of Errors	# of Errors	
3	3	3	3	0	0	0	3	3	
4									
5	Site Lookup Errors	Task Lookup Errors	Project Milestone Errors	Project Milestone Errors	Baselines Dates That Don't Match	Forecast Dates Don't Match	Completions Don't Match		Errors in SharePoint Table
6	# of Errors	# of Errors	# of Errors	# of Errors	# of Errors	# of Errors	# of Errors		
7	1	1	1	0	0	0	1		

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Assuring SNL Data Accurate

- G2 Validation File
  - Verifies that G2 data matches data in P6
    - Identifies Scheduler Intermediary data entry errors
  - Identifies new sites and buildings
  - Run weekly

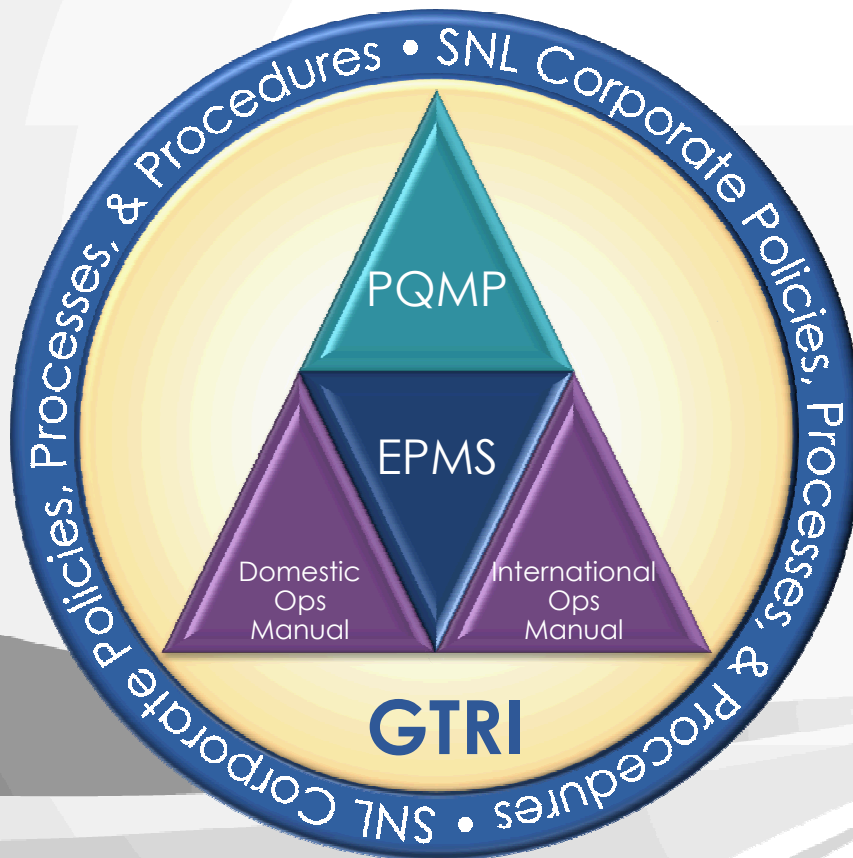|	A	B	C	D	E	F	G	H	I
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3	3	3	3	0	0	0	3	3	
4									
5	Site Lookup Errors	Task Lookup Errors	Project Milestone Errors	Project Milestone Errors	Baselines Dates That Don't Match	Forecast Dates Don't Match	Completions Don't Match		Errors in G2 Table
6	# of Errors	# of Errors	# of Errors	# of Errors	# of Errors	# of Errors	# of Errors		
7	1	1	1	0	0	0	1		

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Assuring P6-G2 Matches

- ## Milestone Reconciliation Report
  - Weekly report that reconciles the metric count and list in G2 versus current state in P6
    - Helps identify those in BCR process

GPSP Metric Reconciliation

Week of 10/1/2013

Site	P6 Metrics		G2 Metrics		Differences		Comments
	Scheduled	Completed	Scheduled	Completed	Scheduled	Completed	
SE	2	1	2	1	0	0	
AL	1		1		0	0	
2222 - Alabama General Hospital			1		-1	0	This site has been BCR'd into this FY to replace Site 2222
Site Not Found in G2	1				1	0	This site has been BCR'd into this FY to replace Site 2222
FL	1	1	1	1	0	0	
1111 - Florida State University	1	1	1	1	0	0	
SW	5	2	5	2	0	0	
CA	3	1	3		0	1	
5555 - UCLA Hospital	3	1	3		0	1	Site should have been marked complete in G2
TX	2	1	2	2	0	-1	
3333 - SW Medical Center	1	1	1	1	0	0	
4444 - Carter Blood Care	1	1	1	1	0	-1	Site should have been marked complete in P6
Grand Total	7	3	7	3	0	0	

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Content Management Process and Document Hierarchy

PQMP

EPMS

Domestic Ops Manual

International Ops Manual

GTRI

SNL Corporate Policies, Processes, & Procedures • SNL Corporate Policies, Processes, & Procedures • SNL Corporate Policies, Processes, & Procedures

- **Restructure** Org. 6811 Operations Guide document content following SNL Guidelines to breakout into:
  - Policy
  - Processes
  - Procedures

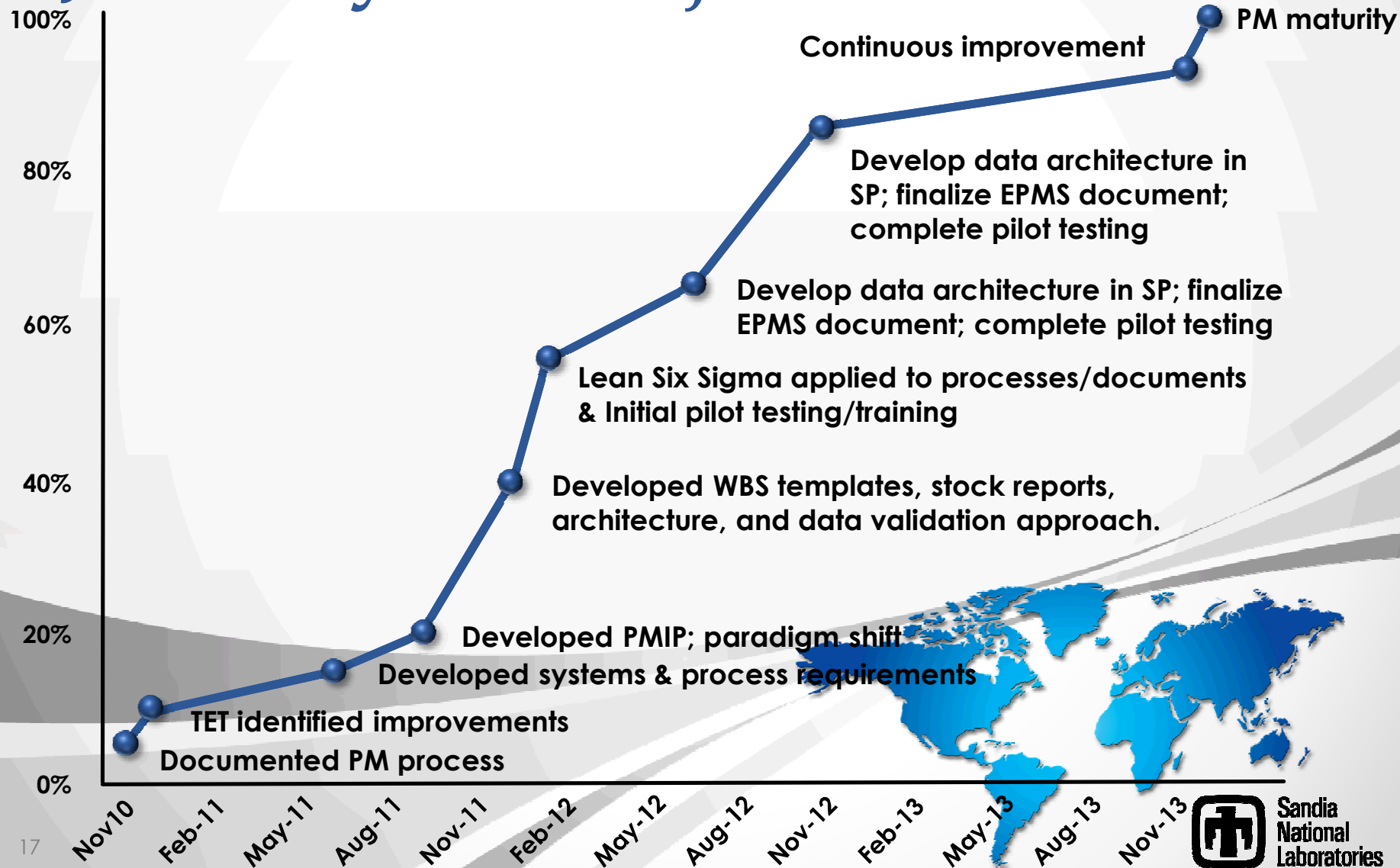Sandia National Laboratories

Remaining Work

- Content Management
  - o Developing Data Architecture in SharePoint

- Pilot Tests
  - o Limited system testing of PM tools in February
  - o Full system testing through FY12

- Staff Training Underway

Journey to Project Excellence

PM maturity

Continuous improvement

Develop data architecture in SP; finalize EPMS document; complete pilot testing

Develop data architecture in SP; finalize EPMS document; complete pilot testing

Lean Six Sigma applied to processes/documents & Initial pilot testing/training

Developed WBS templates, stock reports, architecture, and data validation approach.

Developed PMIP; paradigm shift

Developed systems & process requirements

TET identified improvements

Documented PM process

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Questions