

NASPI

Proposed Maturity Model for Synchrophasor Deployment

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These are semi-new ideas

This proposed framework needs your review and thoughtful feedback, please!

Why a maturity model for synchrophasor technology?

1. It's a useful roadmap for effective synchrophasor deployment
2. It highlights the important role of business practices and institutional support in successful technology adoption and deployment
3. It's useful as an organizational self-assessment tool
4. It can foster consensus around the path to full technology integration and effectiveness

Key pillars in synchrophasor technology maturity

Infrastructure	Hardware -- PMU and PDC deployment Security and cyber-security Institutional infrastructure – technical interoperability standards, regulatory acceptance
Communications	Data delivery networks – quality and scope Interoperable architecture and systems
Data quality	End-to-end collection and delivery of accurate data Detection of bad data Metrics and measurement
Analytics and utilization	Applications that perform useful functions effectively Applications that users value, want and use
Business practices	Commitment and ownership Training Maintenance and support Data-sharing

Maturity level definitions

- Level 5: Integrated, highly mature
 - Highly operationalized usage
 - Full business processes and institutional support for system and uses
- Level 4: Operationalized
 - High levels of reliability and robustness
 - Focus on operational or business uses & value
- Level 3: Implementation
 - Growing deployment, improvement, debugging process
- Level 2: Development
 - Developing tools, techniques, processes, infrastructure
 - Prototyping and proving effectiveness
- Level 1: Conceptualization

Proposed Synchronphasor Maturity Matrix

	Infrastructure	Communications Networks	Data Quality	Applications
Level 5 Integrated, highly mature				
Level 4 Operationalized				
Level 3 Implementation				
Level 2 Development				
Level 1 conceptual				

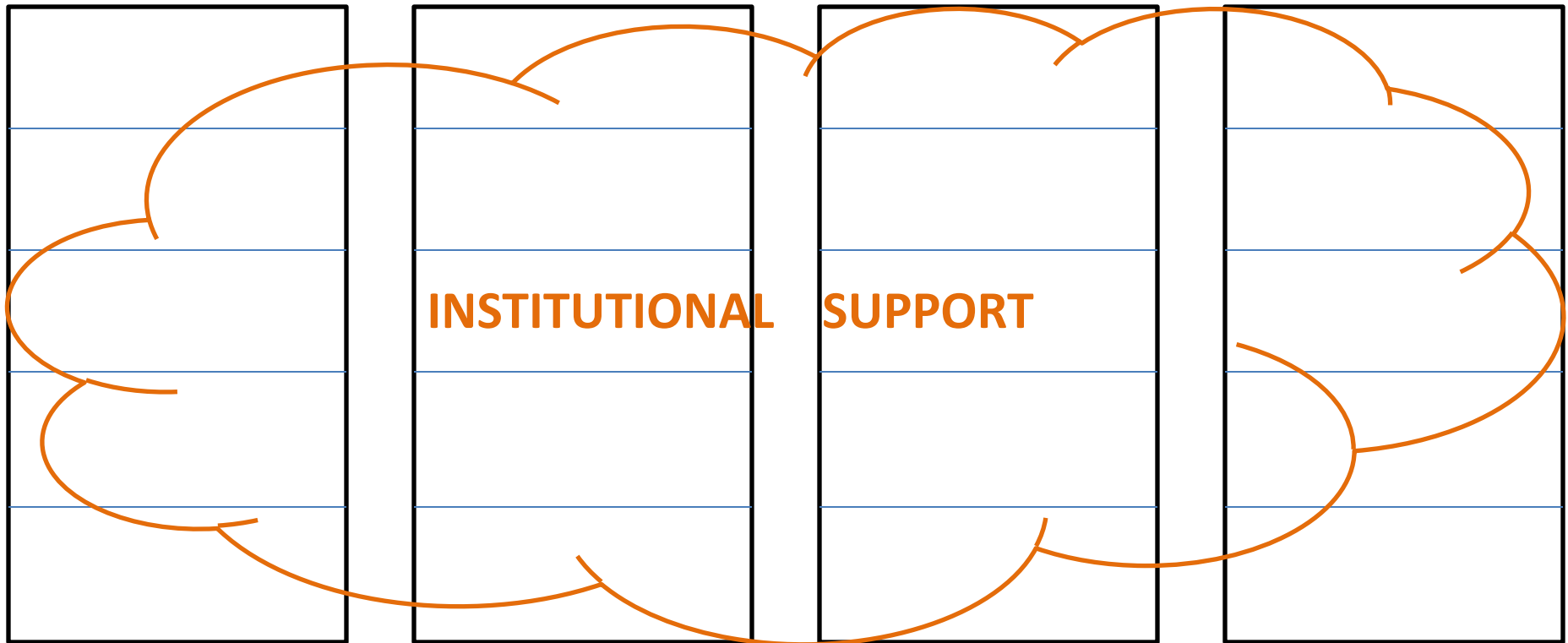
Business processes

Infrastructure

Communications
Network

Data Quality

Applications &
Utilization



- * Each pillar needs to be assessed uniquely, and in conjunction with others
- * Institutional support is an integral part of each of these pillars
- * It is the ultimate level of maturity

Some considerations:

- Different pillars are maturing at different paces; some are harder, slower (standards), or require more money or technology, or have regional differences.
- A company may advance in one pillar more quickly than in others.
- Company maturity differs from technology maturity.

	Infrastructure	Commns Networks	Data Quality	Applications
Level 5 Integrated, highly mature				
Level 4				
Level 3				
Level 2				
Level 1 conceptual				

Feedback & discussion

- We think this could be a useful tool to help understand synchrophasor technology adoption pace and differences.
- We are looking for your feedback to help develop this framework.
- Please provide and comments/feedback to:
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