



Smart Grid Technologies—
Placing Long-Term Bets in an
Accelerating Market

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Noon - 1 pm Eastern U.S. Time



Jon Brock, Utilipoint
Michael Murphy, Pillsbury

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Presenting Today



Jon Brock

Jon Brock is the President and COO of Utilipoint. He manages UtiliPoint's day-to-day operations and utility-IT/strategic intelligence practice. Jon's expertise includes utility business design, business plan development and review, metering, outsourcing, benchmarking, business process optimization, and information technology infrastructure design and deployment. His previous work history includes experience at SCIENTECH, Central and South West, Public Service Company of Oklahoma, and Amerada Hess.



Michael Murphy

Michael Murphy is a partner in Pillsbury's Global Sourcing group. He concentrates on complex technology transactions and business process outsourcing projects for clients in the public and private sectors. Michael's transactional experience spans traditional outsourcing, joint ventures, strategic alliances and mission critical system licensing transactions. In recent years Michael has advised major utilities in several major smart grid procurement initiatives.

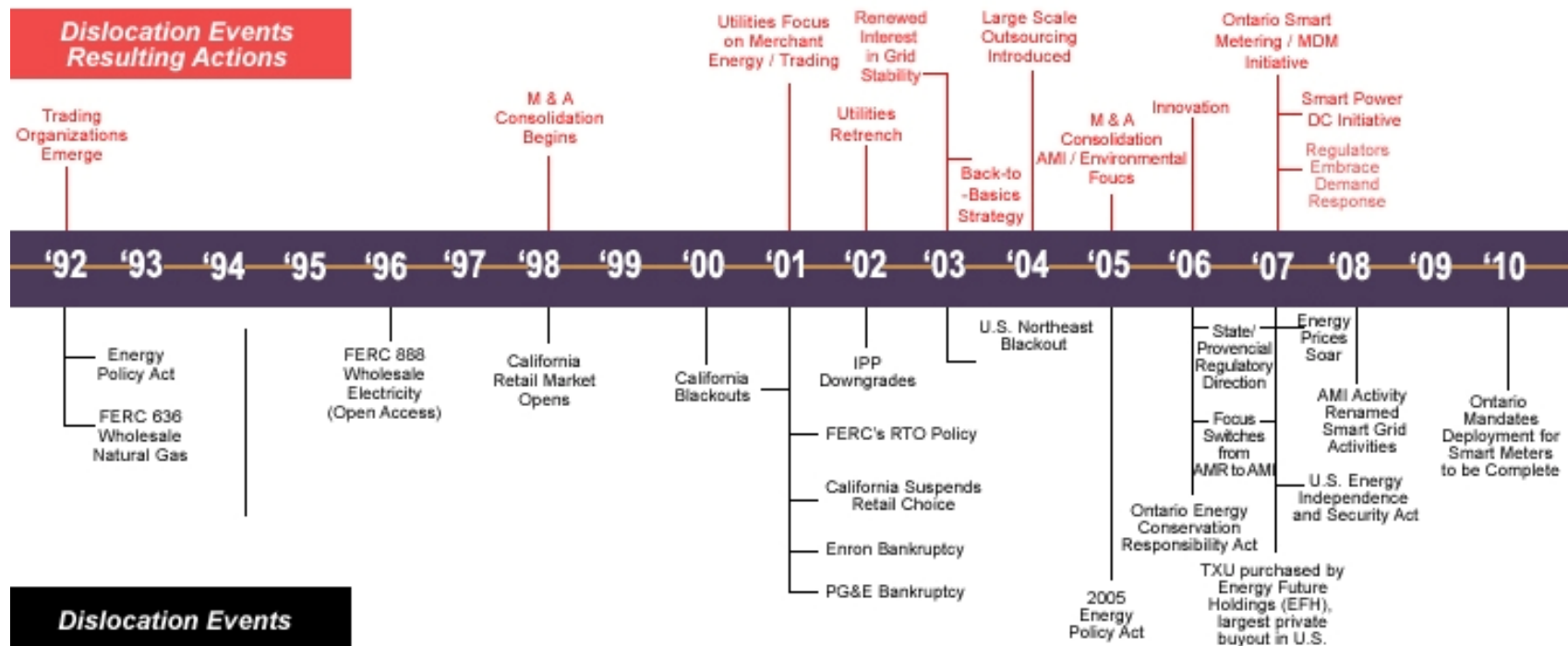
Agenda

- What is the current state of the smart grid industry and the available technologies?
- What are the strategic challenges in selecting technologies and planning for deployment?
- What special factors arise in the technology acquisition and contracting process?

Please use the “chat room” feature on your desktop to ask questions during the presentation. Please send your questions to the “Host and Presenter” – only they will be able to see them. We will address all questions at the end of the presentation.

How Did We Get Here?

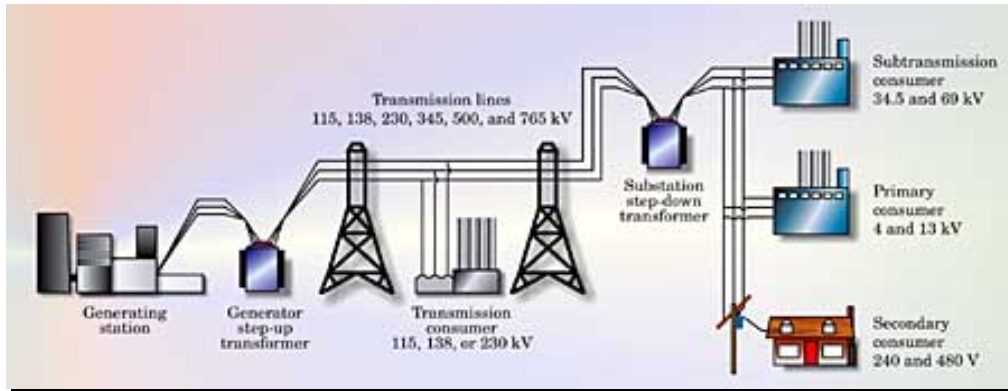
Recent Dislocation Events in the Energy Industry



Industry Trends

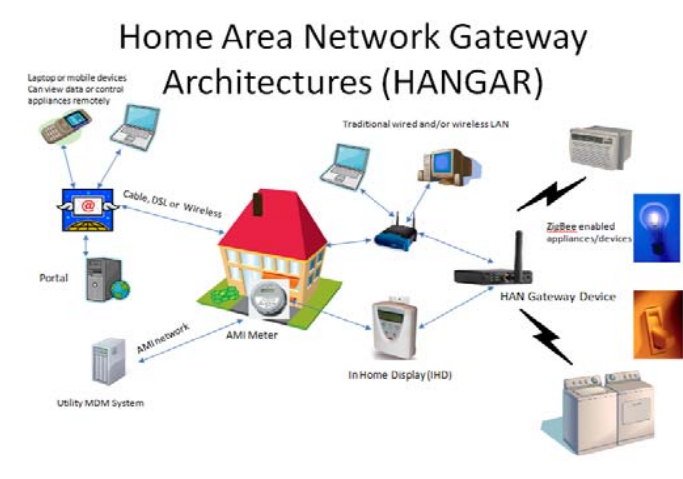
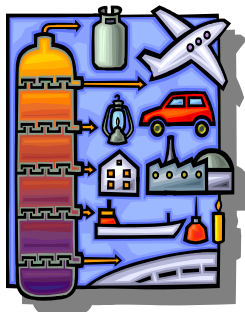
- Regulatory “Bliss”
 - 10-year planning
 - Regulatory Recovery was the Name of the Game
 - Biggest Concern was EMFs from transmission lines
- Retail “Craze”
 - Utilities search for the “killer app”
 - CRM a “must”
 - Shift from account or meter centric to customer-centric
 - Must serve 10 million customers or you will not survive
- “Back-to-the-Basics”
 - Utilities re-trench by selling off non-core assets
 - Realize that they are one of the most asset-intensive industries in the world
 - Focus on operational excellence as opposed to marketing excellence
- “Innovation”
 - Utilities beginning to focus on innovation and business transformation to optimize business, customer service, and operational processes in the industry
- Energy Prices Soar
 - Environmental concerns reduces the number of new power plants
 - Foreign oil dependencies get worse
 - North American legislative acts provide incentives for Smart Metering to reduce consumption

SmartGrid Encompasses Multiple Technologies and Use Cases

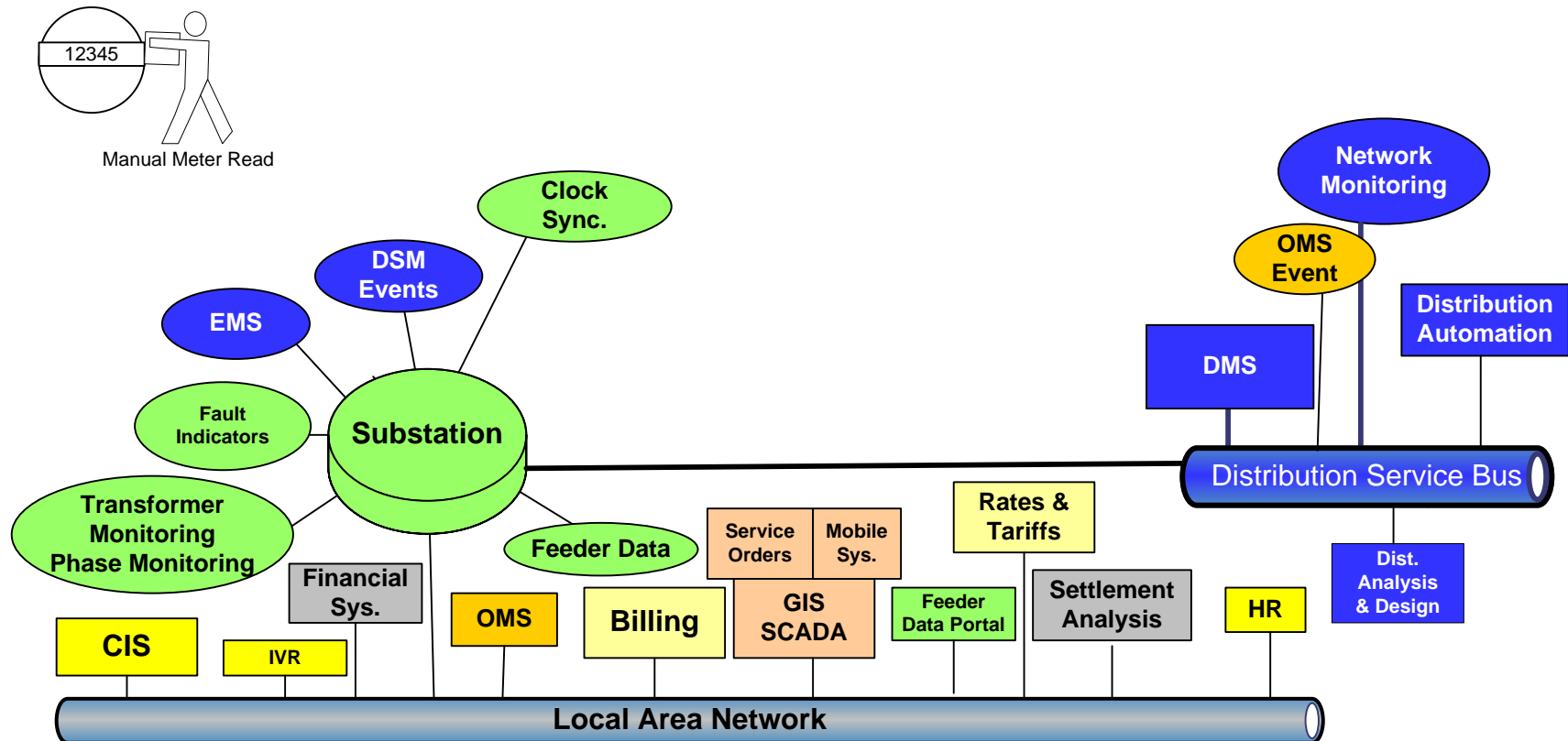


Potential Use Cases

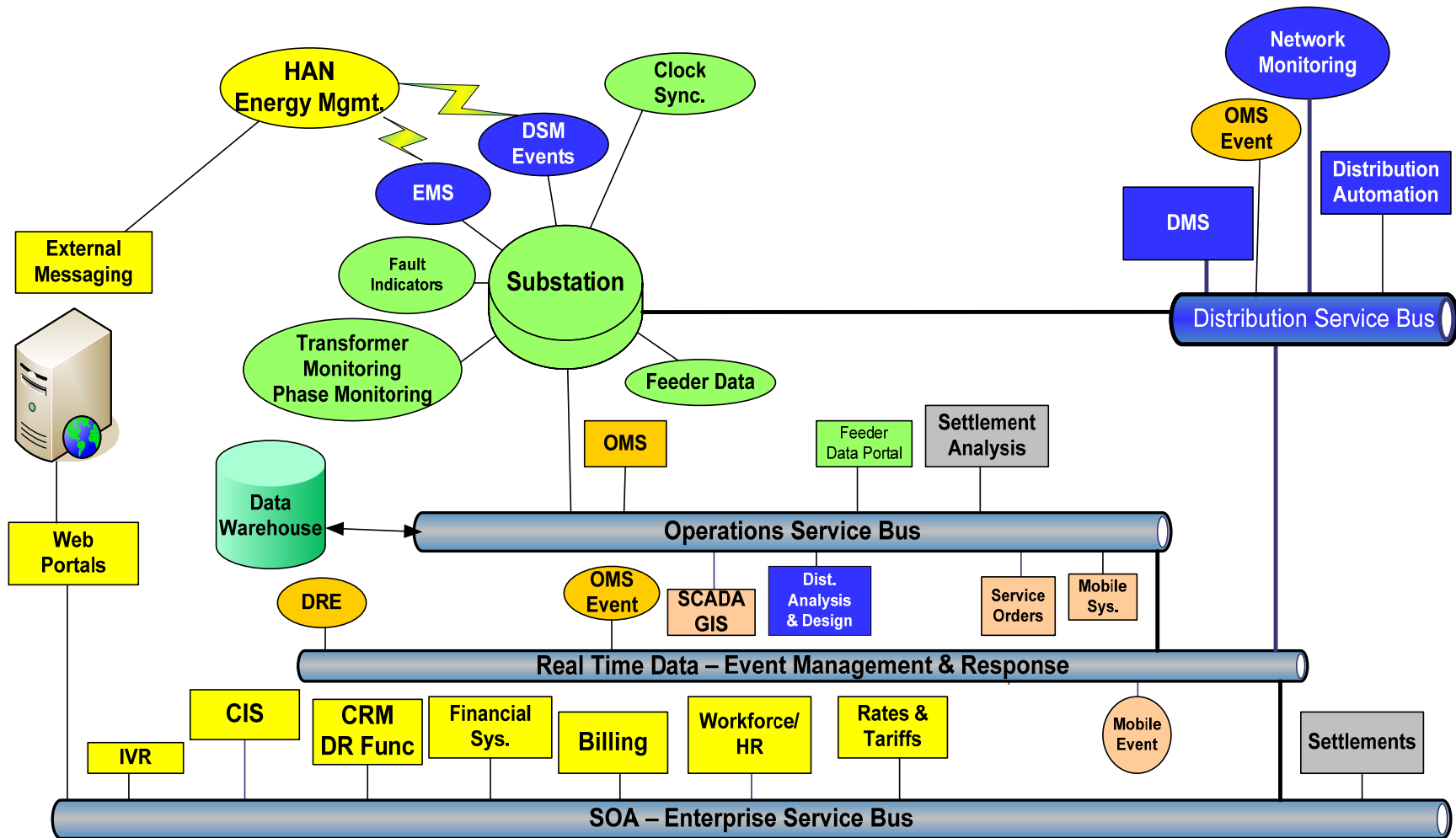
- Customer Service
- Field Service
- Operations
- Asset Management
- Generation
- T&D
- Finance & Accounting
- Rates & Pricing
- Marketing



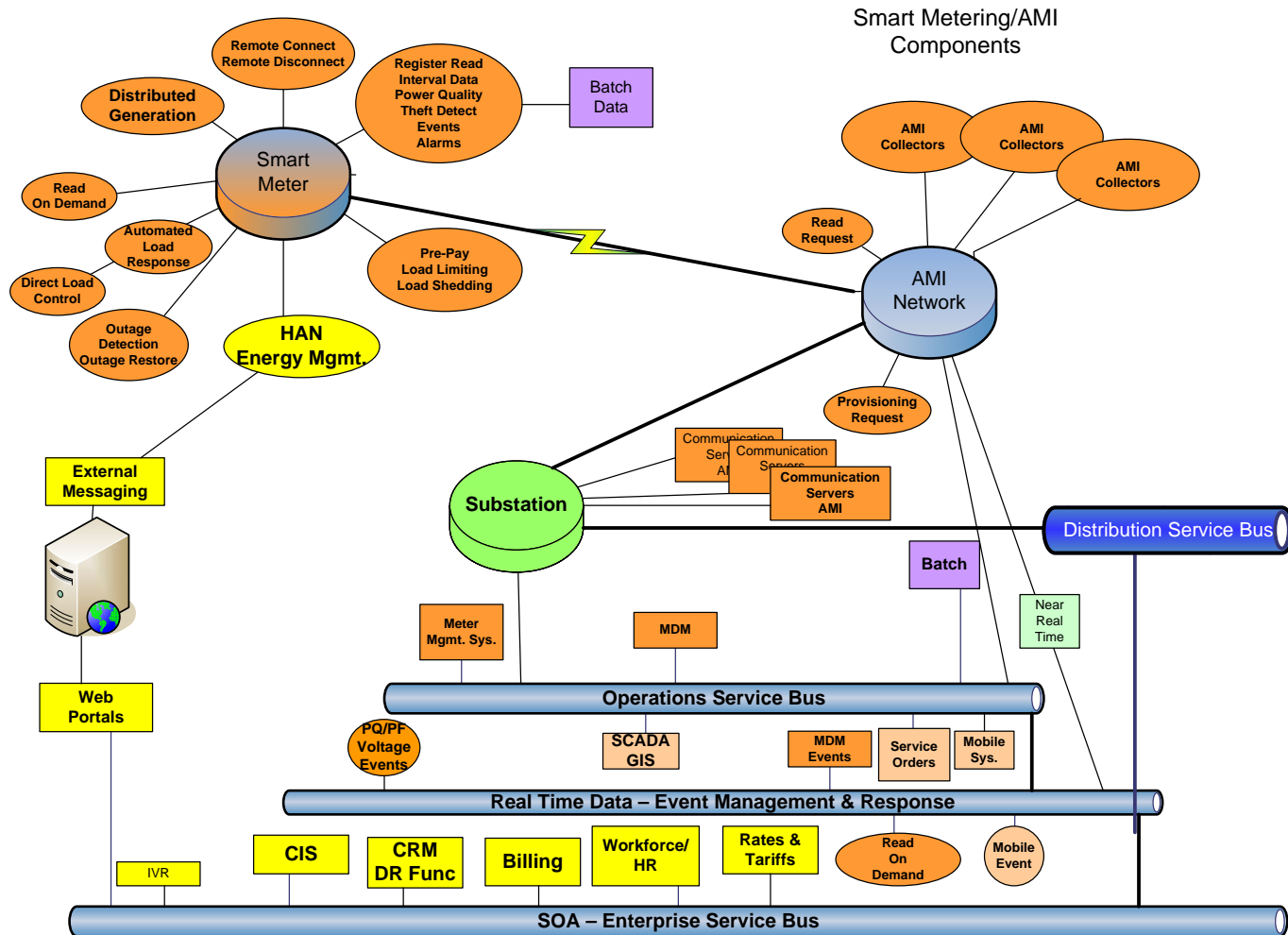
Minimum Smart Grid Requirements – Meter Reading



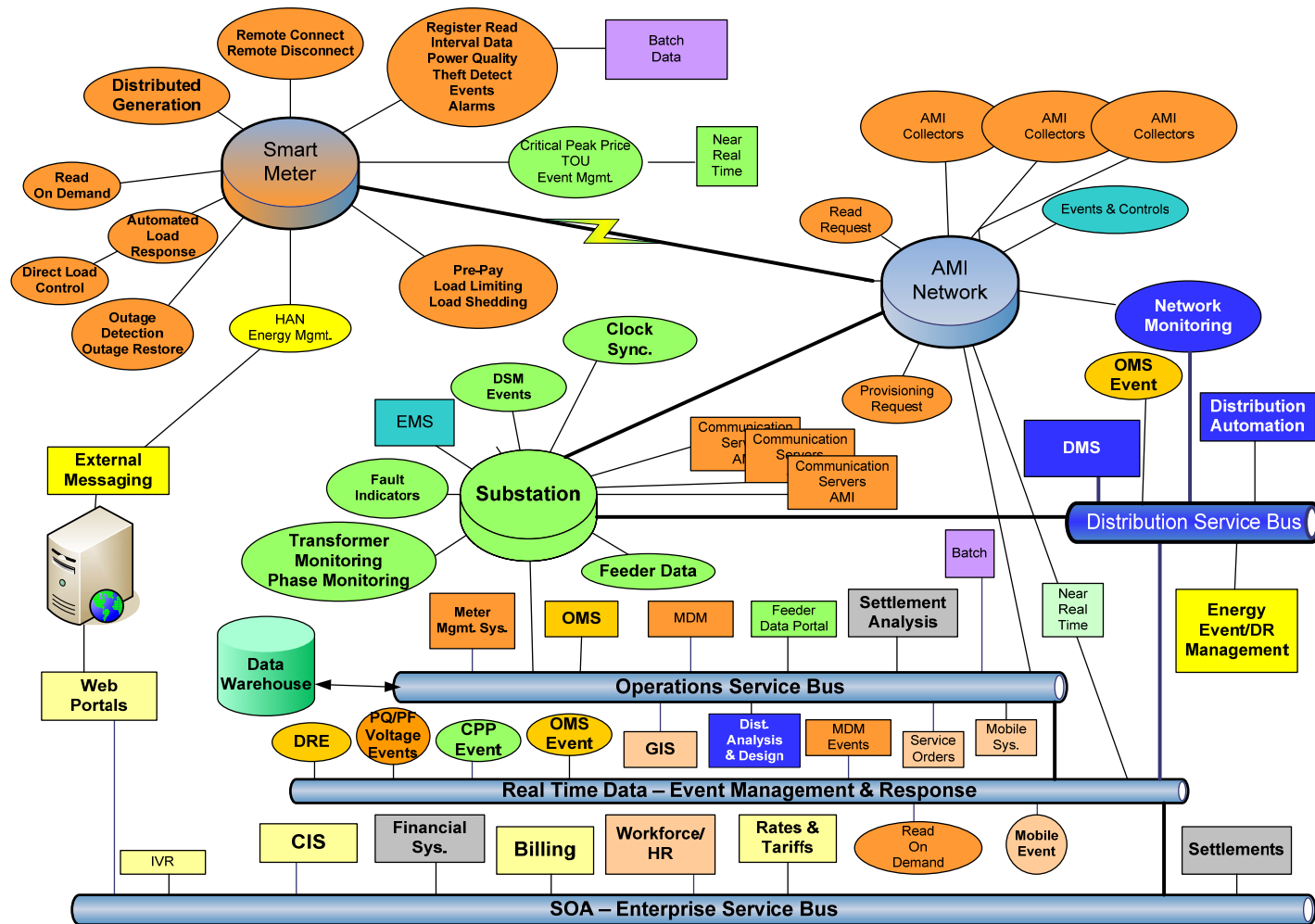
Smart Grid with HAN (no AMI)



AMI Components of Smart Grid



Fully Integrated Smart Grid with AMI, HAN, DR



Focus of Additional Functional Development

Ranking*	For areas of the Smart Grid that your utility would like to invest in, which of the following areas is your utility seeking additional product options? (Q3-08 Unreleased Survey of 41 Utilities in Americas & EMEA)	Total
Driver 1	Devices on the Customer Side of the Meter	11
Driver 2	Other	8
Driver 3	Advanced Metering Endpoint	5
Driver 4	Communications backbone for Smart Grid	4
Driver 4	Current State of the Grid distribution system	4

* Ordered by Rank Of “Very Important Component”

Other Rankings: All the Above – 4; Economic Sensors – 1; Already implement Smart Grid components on a large scale - 1.



Technology Acquisition - Challenges

Smart Grid technologies pose some special challenges for the acquisition process:

- **Evolving technologies** – evaluating products that are under development and often “built to suit”
 - Compliance with specifications – unproven products
 - Locking in specifications while industry standards, protocols and features are evolving
 - Performance characteristics that are “external to the product” – e.g. network performance; interoperability and functional interdependence
- **Evolving business cultures** – convergence of metering, electronics and software industries
 - Divergent habits and expectations

Acquisition Challenges, cont.

- **Integration** of technologies and management of business process changes
 - Project risk may be tied to integration more than the devices themselves
 - Supply chain management during rollout – a multi-party affair
- **Parallel negotiations** may be required with multiple parties
 - Technology providers (metering products, network products, DA products, HAN products)
 - Back office systems providers
 - Installers
- **Collaboration** between competing suppliers
 - During the bidding and contracting process
 - During the implementation process

SmartGrid Contract Features

- **What kind of contract?** May depend on the technology:
 - Product purchase agreement –vs-
 - Contracting for performance - options range from:
 - implementation/integration services
 - hosting
 - build-own-transfer
 - “software as a service”
 - business process services – e.g. meter to?
- } Alternatives available for each component of the solution
- Aligning **use rights** with expected usage
 - Physical products (goods)
 - Software and other intellectual property
 - Embedded features and functions
 - Ability to add future features and functionality
 - Limits on business uses?

Contract Features, cont.

■ Warranties

- “Traditional” warranties are device-centric
- Interoperability, scalability, network effects are also important and should be addressed
- Consider warranty duration vs. expected economic life of the asset

■ Supply Chain management

- Cost of delay in receipt of product may be significant if rollout is impacted
- Linkages to product development plan are key
- Dependencies and potential multiple causes should be addressed

IP Infringement

- There has been an explosion in patent activity in recent years
 - Hundreds of issued patents addressing AMI-related technologies and advanced metering
 - Many more applications in progress
 - No single patentee has a “lock” on the market
- Examples of recent active AMI-related litigation
 - IPCo v Cellnet & Tropos (Georgia)
 - IPco v Centerpoint Energy, Itron and Eaton (Texas)
 - Linex Technologies v Motorola, Inc. (Florida)
 - Linex Technologies v Belair Networks, Inc. (Texas)
- Complexity associated with system patents and the consequences of combining products for various uses
- Careful assessment of IP risks and indemnity coverage is required
 - Products, combinations and uses

Questions?



Please use the “chat room” feature on your desktop to enter questions

Questions are anonymous and can be seen only by the meeting organizer

About Utilipoint and Pillsbury

Utilipoint International

UtiliPoint is a leader in providing analysis and consulting services to the energy and utility industry. With a 75 year history and over 500 clients worldwide, Utilipoint operates as an energy and utility consulting and issues analysis firm. Utilipoint's staff are leading utility and energy experts with diverse backgrounds in utility generation, transmission & distribution, retail markets, mergers and acquisitions, new technologies, venture capital, information technology, outsourcing, benchmarking, renewable energy, regulatory affairs, and international issues.

www.utilipoint.com.

Pillsbury

Pillsbury Winthrop Shaw Pittman LLP is a full-service law firm with market-leading strengths in the energy, financial services, real estate and technology sectors. With a presence in the world's major financial and technology centers, we counsel clients on all aspects of global business and litigation.

Pillsbury Global Sourcing is a major practice group within Pillsbury specializing in the acquisition of complex technologies and systems, including advanced metering, smart grid and related technologies, back office systems, and related external services. Pillsbury's legal services span the whole sourcing cycle from RFP development through contract negotiations, technology licensing and the protection of intellectual property rights.

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