

# The Continuously Connected Utility

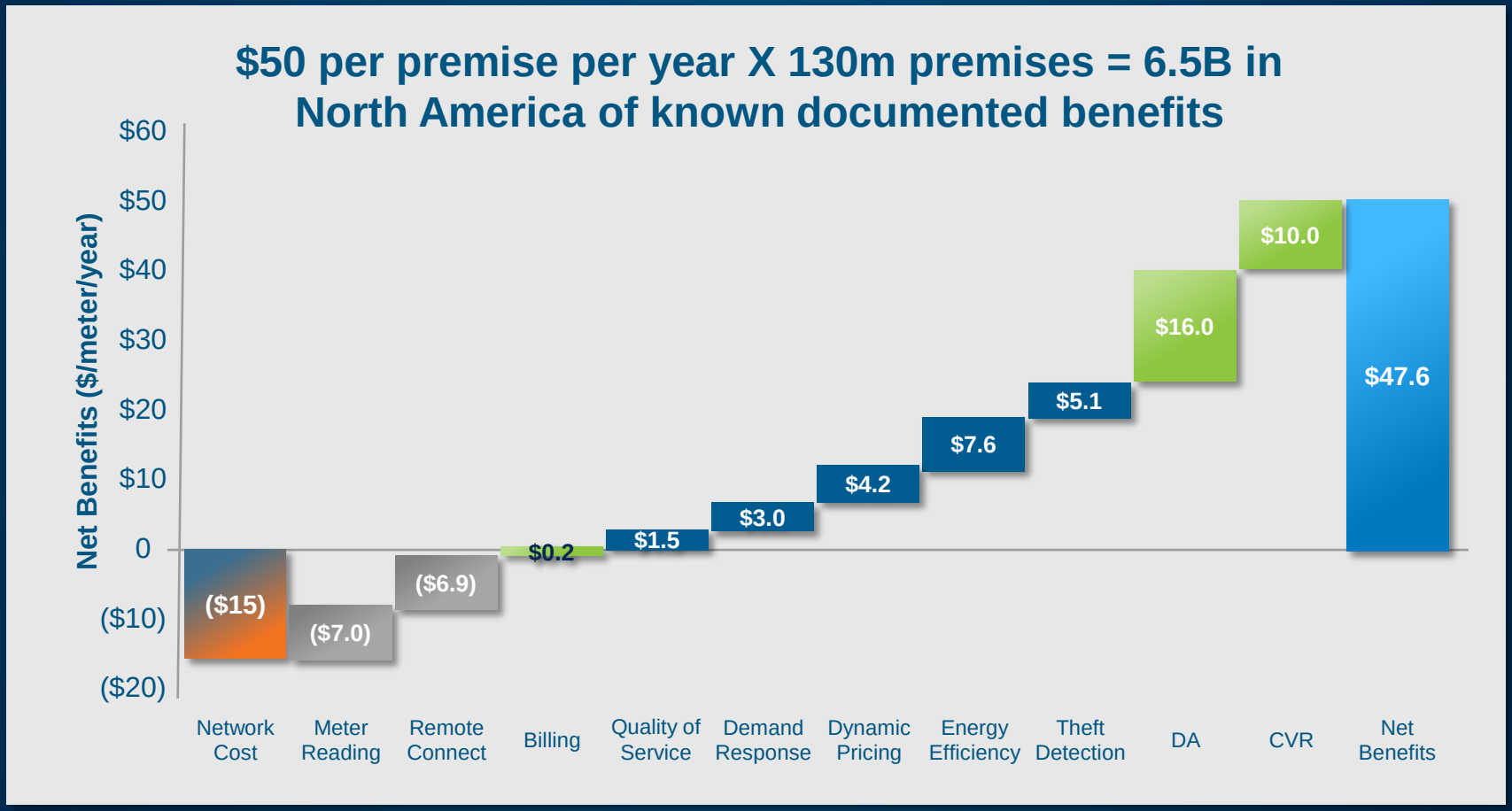
Matthew J. Smith

National Town Meeting for Demand Response

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# More Apps = More Smart Grid Value

## Deploy more apps to unlock more benefits




* Data based on cost / benefit analyses of existing SSN customer deployments.
** Benefits stated are net annualized benefits based on a 20 year amortization period.


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# The Right Platform Will Be Key

Dynamic and active management of ever greater swings in supply and load





Pressure to add more renewables, distributed generation, and maintain grid stability



Need for monitoring and connectivity to all deploy assets

The network will be a critical success factor for survivability



Growing customer choice and more disaggregated markets

Increasing need for sophistication of secure asset management and transactions





Increasing demands for sustainability and community engagement



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# Key Predictions & Implications

- Cross-silo, cross-domain applications will yield the next generation of value to the business → Multi-app network & high performance matters
- More devices will be attached to the network than ever thought possible → Scale matters
- Highly distributed, localized, peer-to-peer processing of real time information will be essential → Peer to peer distributed Intelligence matters
- Secure identity management of every asset will matter to create trusted critical infrastructure → Certificate based security matters
- Devices will be installed in locations never before imagined → Ubiquity matters
- Low cost sensors will demand low-cost ‘data plans’ and highly affordable connectivity → Affordability matters
- Customer choice will be a fundamental expectation → Standards matters


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# Key To Transformative Change: The Continuous Connection



**Continuously Connected Utility**

**Connected Customer**



Win the hearts and minds of customers and enable new business models

**Connected Grid Asset**



Use real-time complex events that integrate across all grid assets

**Connected Business Process**



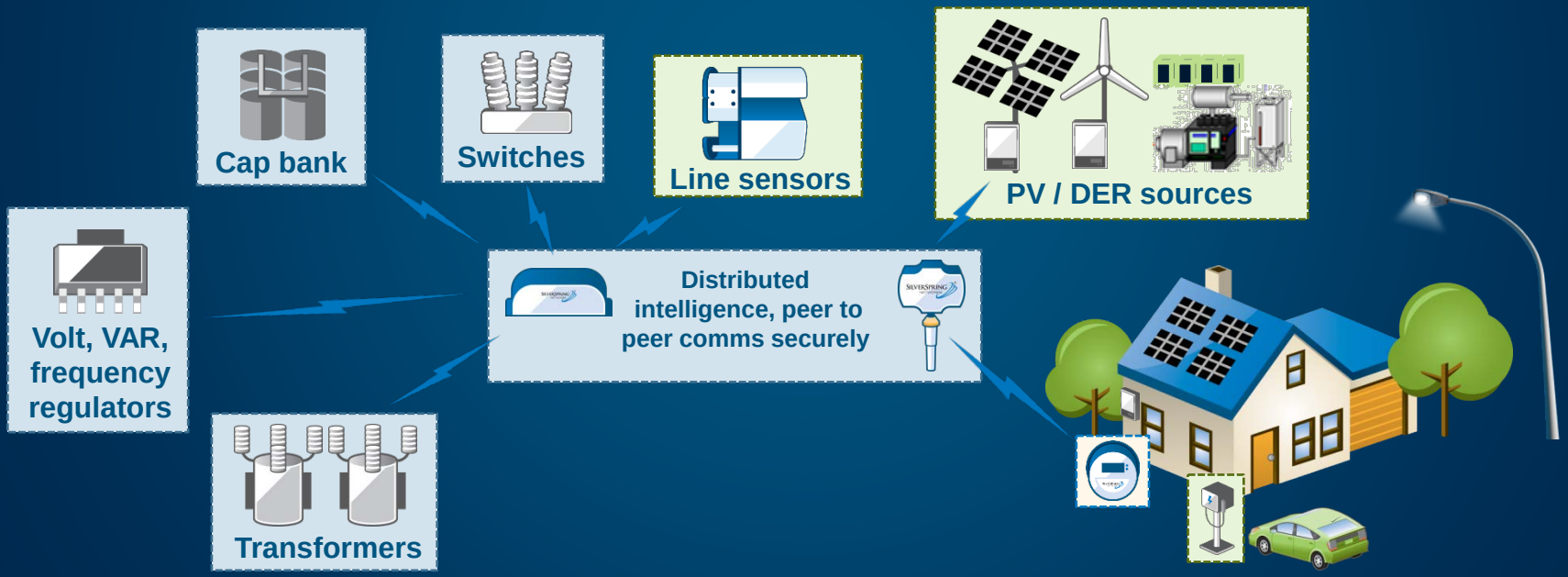
Make the business more agile through real-time data for decision making



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# Connectivity Drives Convergence

*Ubiquitous connectivity enables large scale AMI, DA, DR, streetlight converged applications under one network, enabling new revenue and improved efficiency across OT and IT*




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# Customers Are Key

- We live in a world of immediate gratification
  - Customers expect utilities to react in real-time
  - Expectation set by Google and Comcast
- Grid Modernization requires customer engagement
  - Online, email communications, benefit outreach
  - Personal and targeted based on region and segment
- Ignore the Customer at your own peril
  - See AMI deployments for examples
  - Other companies waiting in the wings


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# Thank You!


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