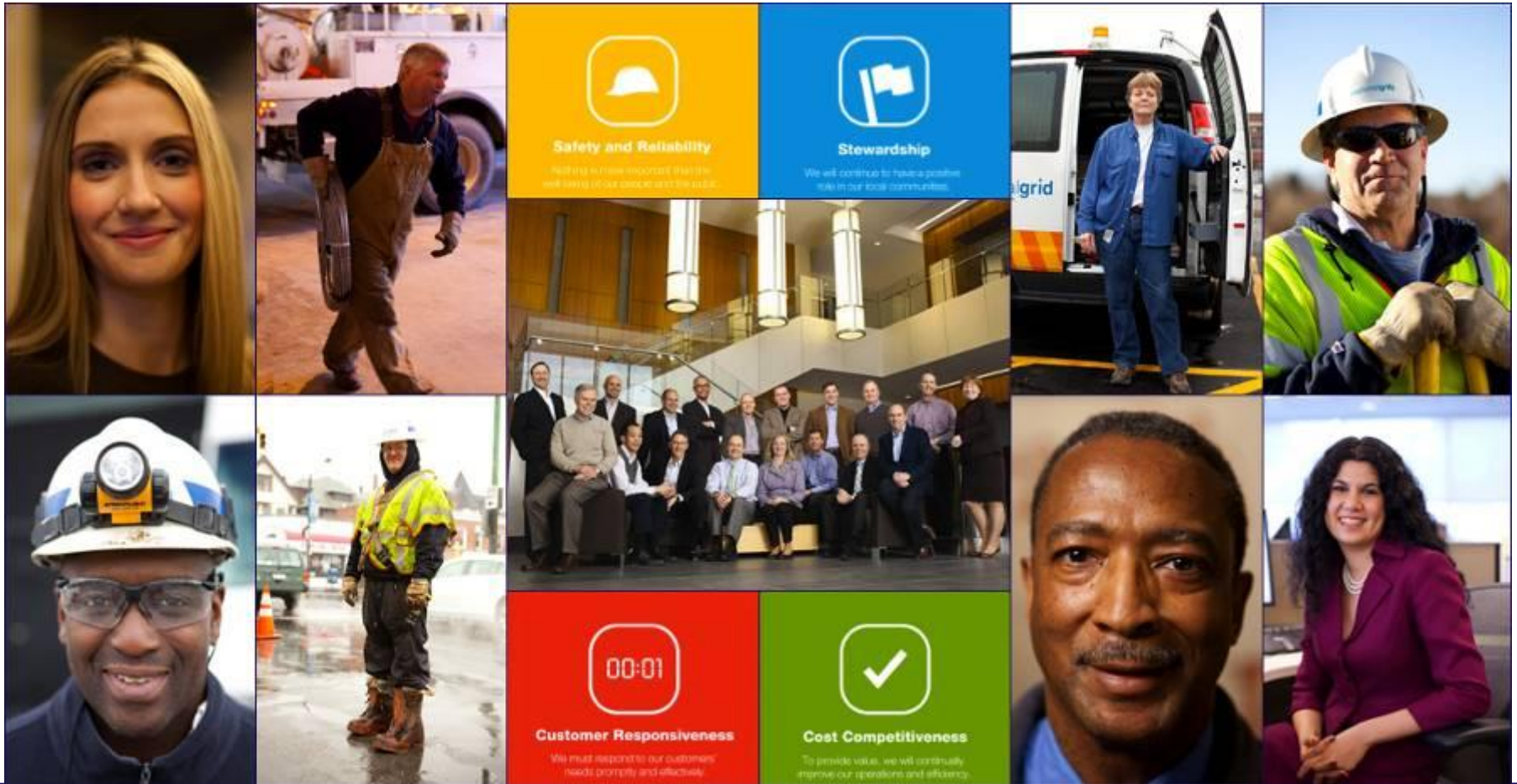


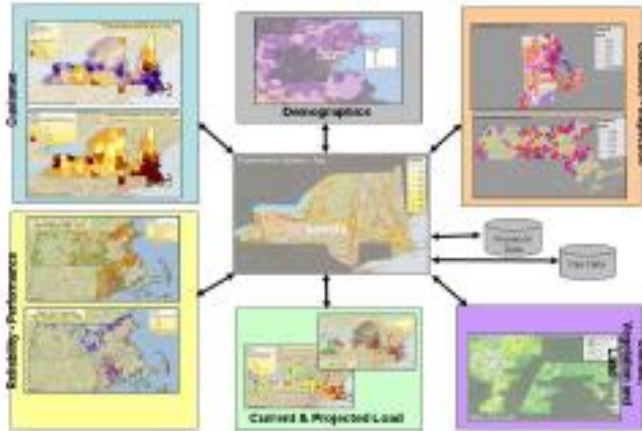
Managing Challenges in the Modern Grid

CIGRE Panel

Cheri Warren, VP Asset Management & Innovation Officer



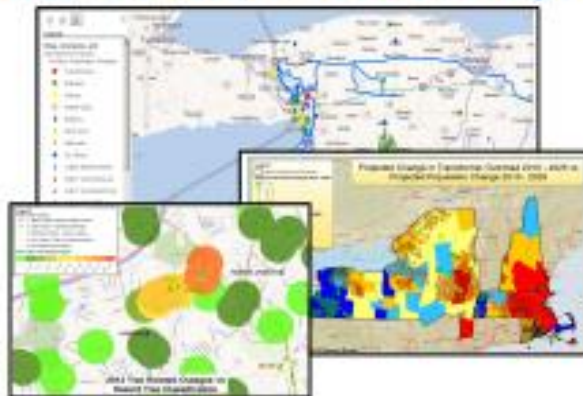
Data Fusion – Deeper Understanding



Consumable Information

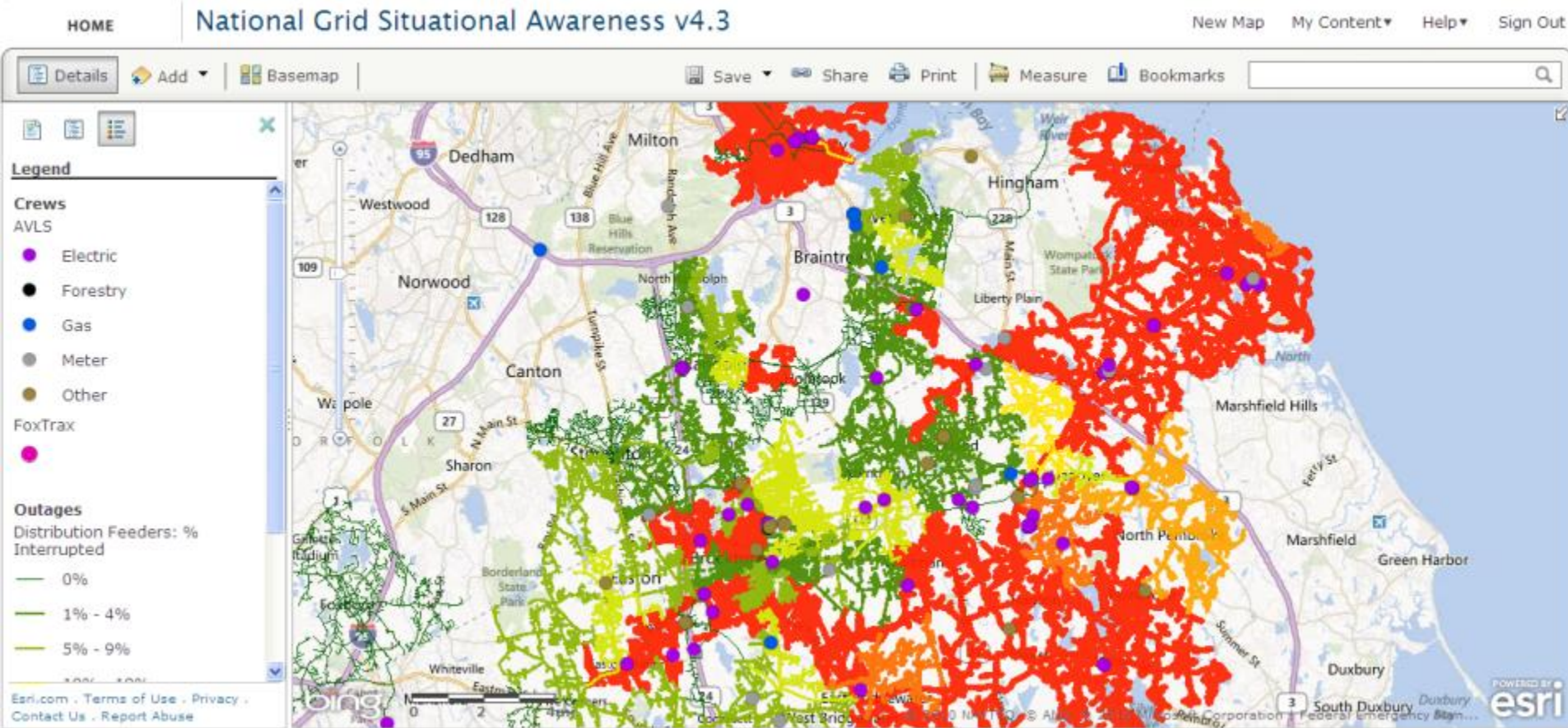


Inform Decisions in New Ways



Effectively Tell our Story





Great for Leadership MI, Municipal/Community/Customer Communications, portions good for MEMA, easy to add

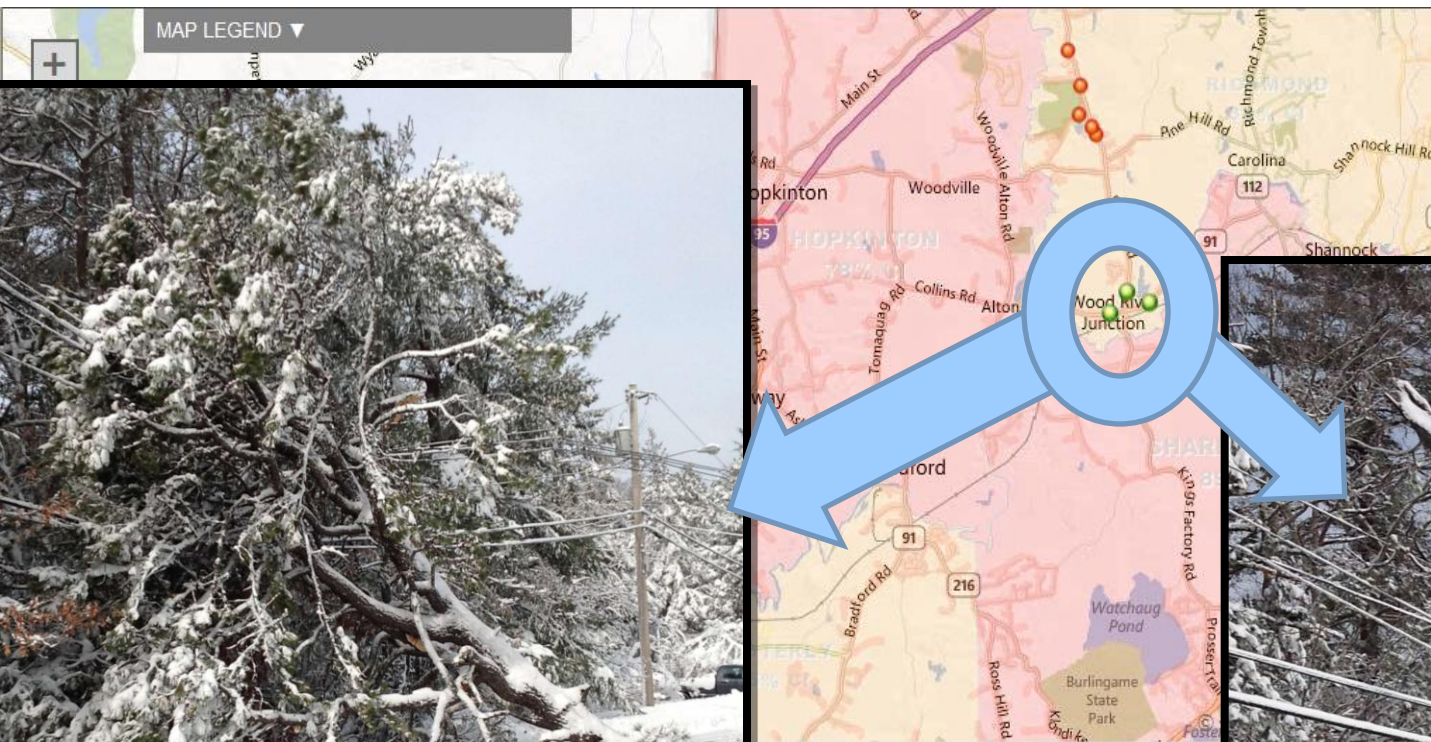
nationalgrid

Winter Storm Nemo

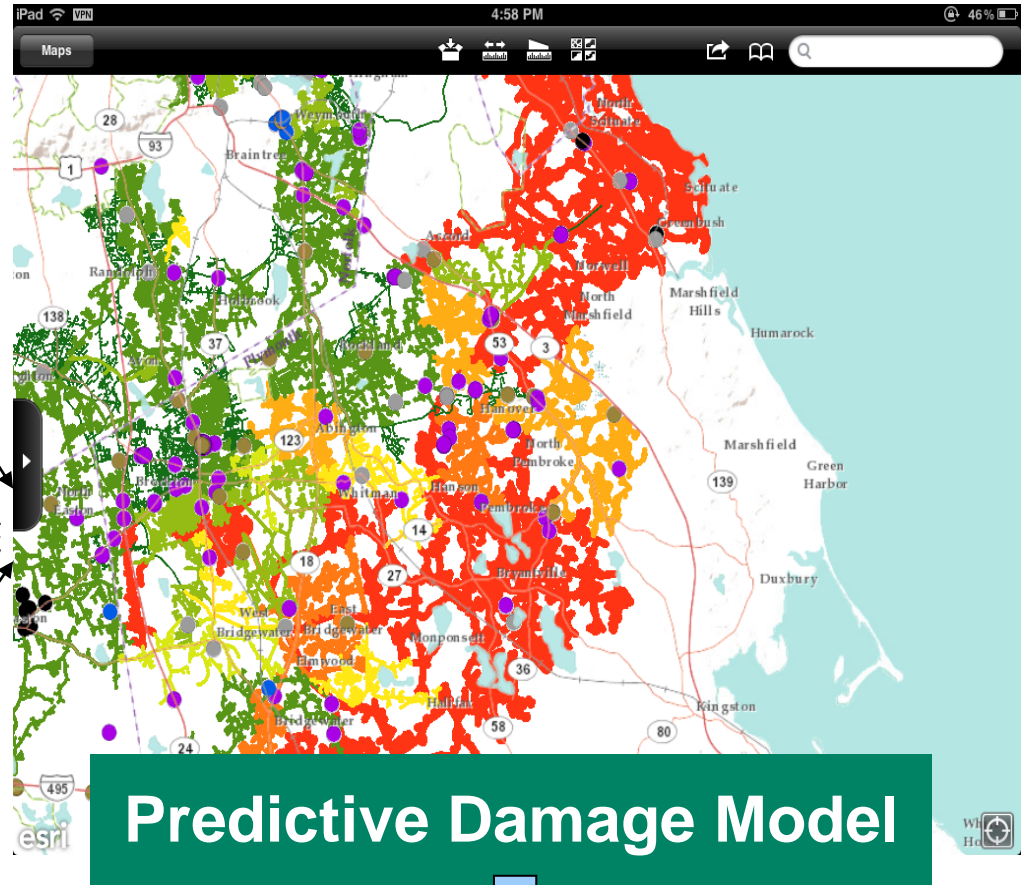
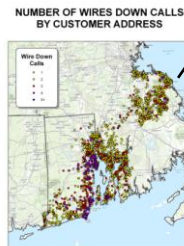
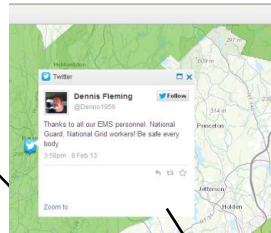


Damage Assessment Winter Storm Nemo

nationalgrid



Predictive Storm Damage Modeling Tool nationalgrid



3 Day ahead mutual aid estimate
1-2 Day ahead crew placement
In Storm Damage for better ETRs

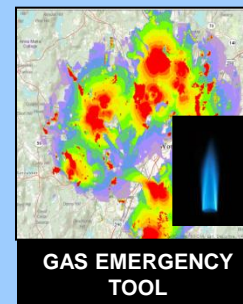
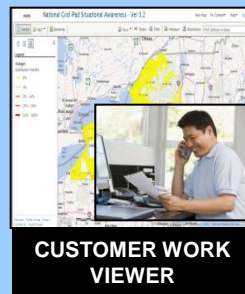
Mobile Apps



Asset Strategy



Awareness



Cheri.warren@nationalgrid.com

Utility 2.0 – Accountability for policy, resilient infrastructure, and enabling markets.

nationalgrid

Utility 2.0 - the heart of a clean energy future

Policy Drivers

- Resiliency and Reliability
- Cost Efficiency
- Efficient Consumption
- Greenhouse Gas Emissions
- CAFE standards – Alt Fuels
- Oil to Gas Conversions

- **Resilient Backbone** – prevents and reduces impact of outages while integrating clean, central and distributed resources
- **Market Enabler** - facilitates and sends the right price signals to customers and 3rd parties
- **Customized Solutions** – provides utility-customized solutions that can stimulate the market

Customer & Market Drivers

- Energy Efficiency
- Demand Response
- Distributed Generation
- Electric Vehicles
- Information
- Combined Heat & Power
- Energy Storage

- *Optimizes* value for all customers
- *Meets* policy objectives and Enables policy drivers to facilitate market solutions
- *Centralizes* information to prioritize & optimize solutions
- *Creates* accountability to deliver policy drivers
- *Accelerates* market expansion to meet policy objectives