

Meeting the Demand Response  
Integration Challenge  
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## Who We Are and What We Do

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- **A leading technology enabler and service provider for usage intensive industry sectors**
  - Integrate measurement technologies with web-based application software (electricity, water, gas, steam etc.)
  - Web platform for access to real-time consumption data, market information, data management capabilities, reporting tools and other support services
- **ISO-NE certified IBCS provider**
  - Nearly 600 MW of demand response assets under management for our customers in ISO-NE
  - Customers include major utilities, non-regulated marketers/aggregators and consultants/brokers
- **CRS provides the high tech picks and shovels for the gold miners - demand response providers**





## Grid Vision



### A More Sophisticated and Strategic DR Capability Network

More ISO DR product offerings based on distinct asset profiles

Greater need to match DR asset profiles to ISO product offerings

More targeted and frequent DR dispatch at sub-zonal levels

Year round active DR asset management in resource bundles

Rigorous daily and monthly hourly demand reduction forecasting

Enhanced settlement capabilities for assets within a resource bundle

Growth in automated DR for certain asset profiles

DR as price makers - not price takers in Forward Capacity Auctions

Enhanced communication technology and cyber-security

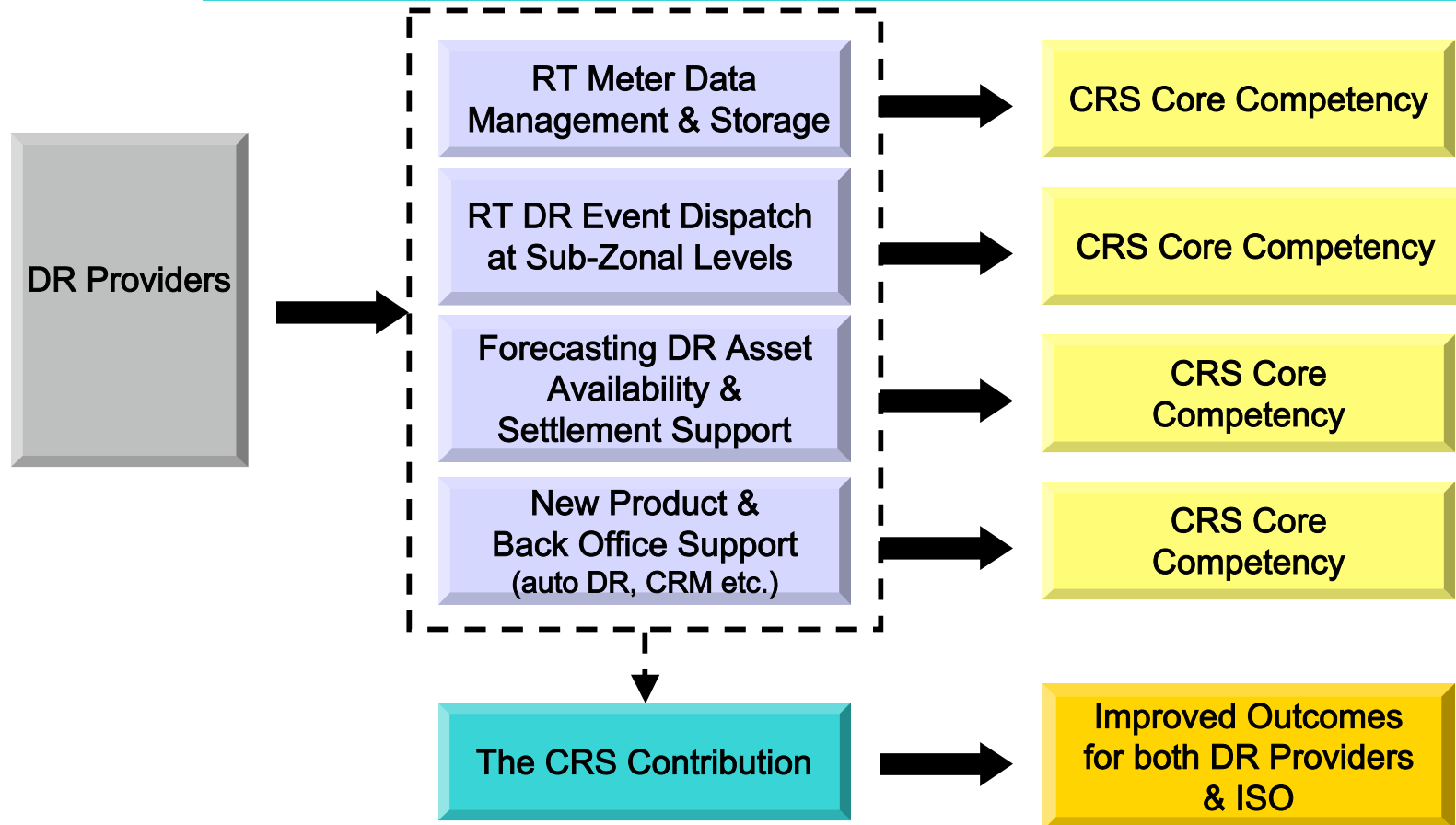




## Where We Fit In



CRS will enhance the capabilities, reliability and performance of demand response providers and their resources





## ISO-NE Operational and Planning Challenges How We Can Help



- **Automated Demand Response**
  - A product option for certain resources in response to future more frequent DR activations in FCM
- **CRS is operating Auto DR in ISO-NE with a Fortune 500 big box retailer whose EMS is hosted in Europe**
  - Via “light integration” with customer’s EMS
  - CRS guided EMS in implementing procedures to automate it’s DR functionality.
  - EMS can thus auto-engage other scripts and systems to implement auto-demand response at multiple facilities
- **Benefits of Light EMS Integration**
  - Complete control of DR resides with customer’s EMS – no need to manually implement DR procedures
  - No purchase, installation and maintenance of special hardware
  - Control path from ISO-NE-to-IBCS provider to customer’s EMS is EMS independent





## ISO-NE Operational and Planning Challenges How We Can Help



- Over time, CRS can work with our DR providers (and ISO-NE) to identify distinct categories/profiles of resources relative to their tolerance to increased dispatch frequency
- This may assist ISO-NE in:
  - Further DR product differentiation based on varying resource response capability categories
  - Development of future demand response offerings
  - Varying compensation for product/resource categories based on their availability/event frequency tolerances and their strategic value to the Grid

