

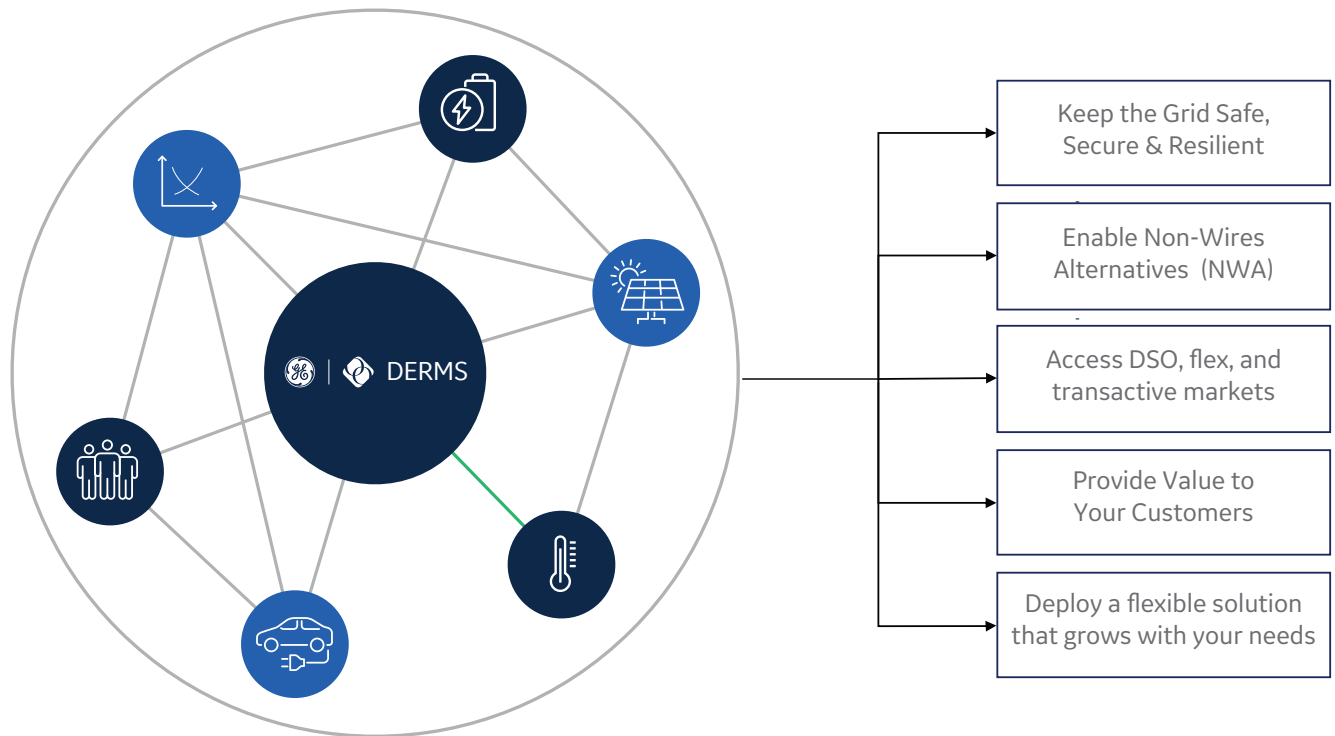


Opus One DERMS

Powering the Energy Transition
with the Grid as a Platform

<https://www.ge.com/digital/derms>

GE Digital and Opus One Solutions have come together to help utilities on their DER journey with a modular DERMS platform. Our DERMS software provides intelligence, operations, economics, and markets in one modular solution that enables grid operators to connect, see, control, and optimize DERs from a technical and an economic standpoint, while helping utilities provide clean, reliable, and affordable energy to their customers



Keep the Grid Safe, Secure & Resilient	Enable Non-Wires Alternatives (NWA)	Access DSO, flex, and transactive markets	Provide Value to Your Customers	Deploy a flexible solution that grows with your needs
Manage and mitigate DER impacts down to the meter level and across multiple timeframe.	Perform detailed technical and economic evaluation of non-wires alternative (NWA) solutions, instead of more CAPEX.	Facilitate open, fair, and neutral markets, while managing bids and offers, clearing market, and performing settlements.	Drive customer engagement, enabling their participation in grid modernization while driving energy affordability.	Drive customer engagement, enabling their participation in grid modernization while driving energy affordability.

DER Pain Points Addressed



- Clearing connection queue in time
- Customers dissatisfied with connection denial, time and costs
- Data sharing and privacy
- What DERs? Where are they? What are they doing?
- Does control room or planning know?
- There're a lot of them! Systems and processes scalable?
- Can I control them? Schedule them?
- Go through aggregators? AMI? DR programs and contracts?
- How do I know they actually operated?
- At risk of causing grid violations? Where/when, & how much headroom?
- Go through aggregators? AMI? DR programs and contracts?
- What if?
- How to efficiently facilitate flex markets?
- Stacked value of DER
- How to balance market transactions with grid safety?



Comprehensive Use Case Coverage with Analytics, Operations, and Economics/Markets in one DERMS solution

Connect

Determine the hosting capacity of your grid. Perform scenario analysis to determine the impact of DERs on your grid. Automate your connection acceptance workflow.

Visibility

Get an aggregated or a disaggregated view of connected DERs. Monitor DERs to increase your situation awareness. Anticipate violations for more DER control levers to allow more time to solve. Run grid-level DER analysis, based on a true digital twin of your grid (including as-operated topology).

Control

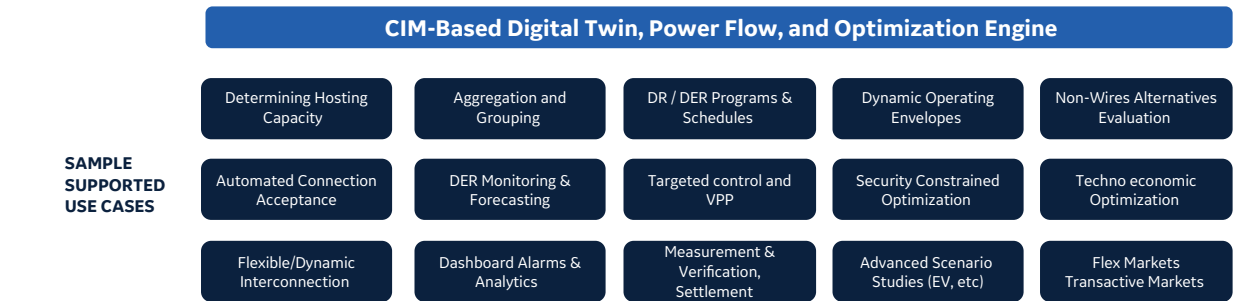
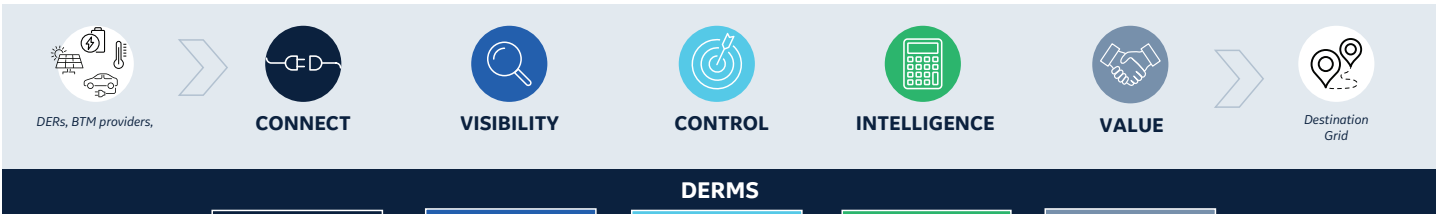
Manage within the limits of DER programs and schedules agreed to by customers. Ensure targeted control of DERs at a wide and a granular level. Track measurement, verification, and settlements for DER dispatches and control.

Intelligence

Calculate the amount that every DER should be dispatched to remain within dynamic operating envelopes, not just in real-time, but also in look-ahead. Avoid violations on the network. Simulate the impact of DER growth on your grid.

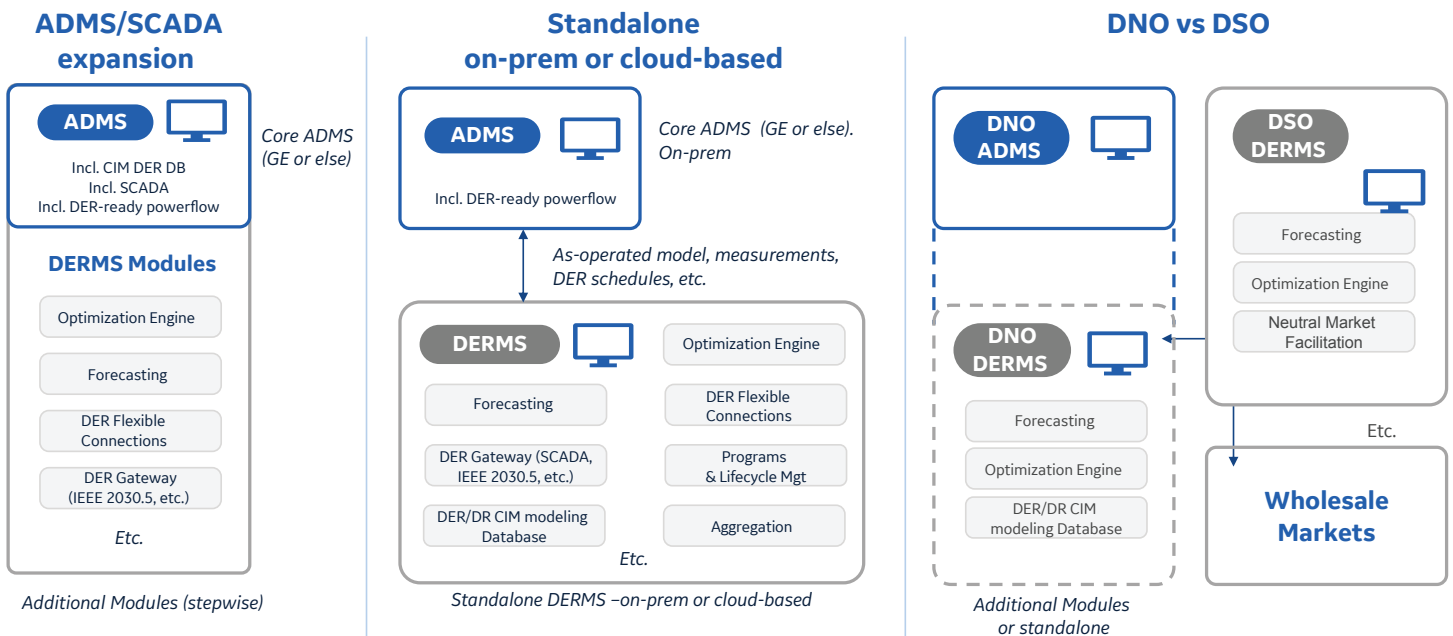
Value

Achieve techno-economic optimization. Enable Non-Wires Alternatives and access to DSO, flex, and transactive markets. Ensure that flexibility trades being agreed to at market level do not violate grid reliability or QoS.



Modular platform that can easily integrate with your current ADMS or be standalone

Select the modules you need depending on where you are in your DER journey, or how DER-aware your ADMS is. Integrate with your existing ADMS or keep it separate based upon your use case requirements, notably in regulatory regimes requiring separate DNO and DSO operations.



DELIVERY CONSIDERATIONS

Governance

Vend
Agnosticor

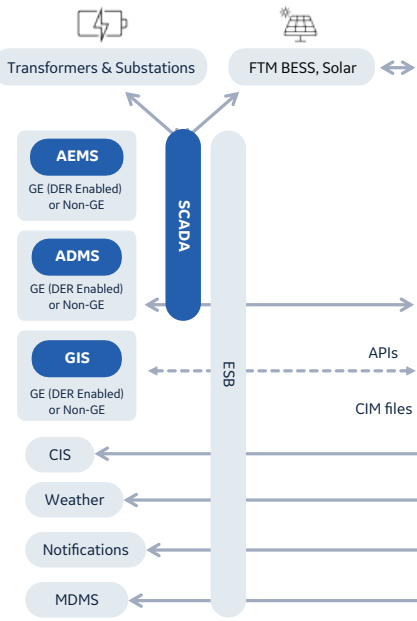
On-prem
vs Cloud

System-of-
systems

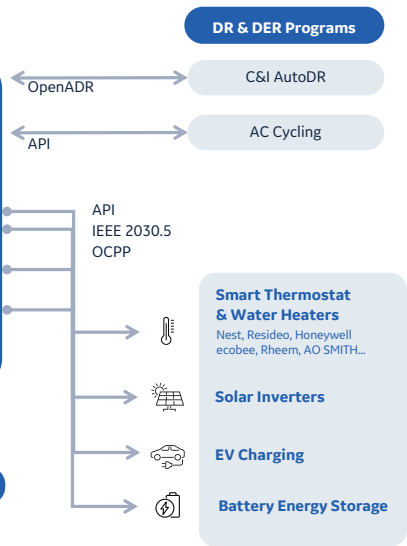
Standard based architecture with flexible deployment options

Ingest a CIM based network model easily from your ADMS. Use DERMS as the gatekeeper of your grid by forecasting loads and generation through the GRIB2 standard and controlling DER assets with IEEE 2030.5 or OpenADR. Get a choice of cloud vs on-prem deployment.

Utility Systems and Grid Front of the Meter (FTM) Assets



Aggregators and Behind the Meter (BTM) DERs



Wholesale Markets



Why DERMS from GE Digital and Opus One Solutions?



DER MANAGEMENT JOURNEY

Partnership with utilities on comprehensive use cases across connecting, seeing, controlling, and optimizing DERs while keeping the grid safe, secure, and resilient.



AGGREGATOR OF AGGREGATORS FOR UTILITIES

Gain visibility and control across fleets of DER aggregators, via a single pane of glass. Anticipate and solve violations with access to granular views (when solving a violation on a single distribution feeder) and aggregated views (when solving a violation on a large primary substation perimeter) of your data.



LOOK AHEAD HORIZONS

Forecast, anticipate and resolve system violations, while optimizing DERs and grid performance, across multiple time frames, from minutes to weeks ahead and beyond. Anticipate violations for more flexible DER control options to avoid last-minute DER dispatches which may be unavailable due to advance notice constraints or may be too expensive.



AS-OPERATED NETWORK TOPOLOGY

Run grid-level DER analysis, based on a true digital twin of your grid (including as-operated topology). Our DERMS uses open standards-based digital twin in sync with the ADMS on the as-operated network for constraint management and system optimization.



TECHNO-ECONOMIC OPTIMIZATION

As DER penetration increases, economic considerations arise. It's not enough for look-ahead optimization to only account for factors such as grid reliability/QoS or contractual constraints around DER operations. It also needs to factor in DER dispatch compensation costs. Our model-based, 3-phase AC unbalanced, security constrained optimization engine can:

- Optimize technical and economic outcomes for analytics, operations, and market use cases.
- Manage DER operations and contracts, grid devices, CapEx/OpEx, and even carbon emissions.



MODULAR, FLEXIBLE DEPLOYMENT

GE Digital and Opus One Solutions have come together to help utilities on their DER journey with a modular DERMS platform, that can grow with their needs use case by use case, feeder by feeder, and substation by substation

Contact Us

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