

## **PRESS RELEASE: GEODE Launches New Report on Digitalisation of Distribution Grid Operation**

Brussels, 25 September 2025 – **GEODE, the voice of local energy distributors across Europe, is proud to present its latest report “Digitalisation of Distribution Grid Operation”.** Prepared by experts from the **GEODE Working Group on Innovation & Development**, the report identifies the key challenges and opportunities DSOs face as they digitalise their networks. It serves as a practical guide to DSOs, offering strategic recommendations that provide a clear roadmap for digitalisation of distribution grid operation, while also showcasing best practices from GEODE’s members DSOs.

The transition to digitalisation brings both promising opportunities and significant challenges for DSOs. On the opportunity side, smart grids, advanced energy management systems (ADMS), artificial intelligence, and digital twins are enabling unprecedented access to real-time data use. These technologies have the potential to automate processes like congestion management, reduce network losses, and improve system flexibility and resilience.

However, as DSOs modernise their networks and integrate these technologies, they also face technical, operational, regulatory, and organisational hurdles. The growing integration of renewables, storage systems, and electric vehicles is transforming grid operations, but also creating complexity. DSOs are increasingly confronted with issues such as congestion, voltage fluctuations, ageing infrastructure, inconsistent smart technology deployment, cybersecurity threats, and growing customer demands for new connections.

To address these challenges, the report sets out **six strategic recommendations for DSOs when digitalising grid operation:**

1. **Roadmap for Digitalisation:** Adopt a tailored, flexible digitalisation plan reflecting DSO’s size and maturity, while ensuring reliability, efficiency, and resilience in evolving grid conditions.
2. **Assess the Current State:** Conduct a comprehensive assessment of digital maturity, including infrastructure and support for core DSO functions.
3. **Define Priorities:** Focus on high-impact areas that deliver the greatest benefits from digitalisation, including grid automation, data management, and the development of unified ADMS. These efforts should be aligned with the overarching goals of enhancing resilience, increasing flexibility, enabling DER integration, and advancing customer-centric services.
4. **Pilot Projects:** Test digital solutions through targeted pilot projects to gain insights on performance, interoperability, and readiness before full-scale deployment.
5. **Scalability and Grid-Wide Implementation:** Use successful pilots as blueprints for modular, standards-based solutions, supported by centralised ADMS and robust data architectures to meet growing grid demands.
6. **Collaboration and Knowledge Sharing:** Strengthen cooperation with TSOs, regulators, technology providers, and customers to enhance interoperability, share data, and drive whole-system optimisation, supported by EU-wide innovation initiatives.

Additionally, this publication showcases concrete **best practices from GEODE members** across Europe. Examples include Anëll (Spain), which is breaking down departmental silos with advanced data analytics, while Wiener Netze (Austria) is digitalising secondary substations to enhance observability. In Norway, Glitre Nett is developing centralised market platforms for distributed flexibility, and in Finland, Helen Electricity is improving the customer experience with real-time capacity tools. Finally, Cuerva (Spain) is advancing digitalisation by automating grid asset management and connection requests through digital twin technology.



To access the full report, click [here](#).

**About GEODE:**

GEODE is the premium European association representing local electricity and gas distribution networks across the continent committed to sustainable, efficient and reliable management of the backbone of the energy system - the grids. Thanks to the technical expertise of its members, GEODE's mission is to pilot the energy transition towards decentralised, decarbonised and digitalised energy systems.

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