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Flexibility Exploitation for residential, tertiary and industrial buildings

Deliverable Fact Sheet

Current regulatory frameworks for interoperability (D1.2)

Objective

- Explain which rules shape interoperability for Energy Communities in Europe and in five FlexBIT countries.
- Identify what blocks data sharing and flexibility services (legal, technical, organizational).
- Translate regulation into clear requirements for secure, compliant platform design.
- Provide actionable guidance for scaling Energy Communities across jurisdictions.

Methodology

- **EU-level review**: We reviewed the main EU policy and legal framework relevant to interoperability in energy communities, including energy community legislation and the digital, data-protection and cybersecurity rules that affect energy data exchange (for example GDPR, the Data Act and NIS2).
- **Country case studies (5 jurisdictions)** Partners collected and compared information for Italy, Germany, Malta, Poland and Greece using the same set of topics:
  - how energy communities are defined and which roles they can take
  - how they access markets and participate in flexibility services
  - permitting steps and administrative processes
  - the status of digital infrastructure (such as smart meters, data hubs and data access practices)
  - alignment with data protection and cybersecurity requirements
  - available financial incentives and support mechanisms
- **Synthesis and implications:** We brought these findings together to highlight common barriers and differences between countries, and to translate regulatory requirements into practical needs for interoperability, such as clear responsibilities, secure data exchange and access control.
- **Recommendations:** Based on the cross-country comparison, the deliverable concludes with recommendations and an implementation-oriented view on how FlexBIT can support compliant and interoperable solutions.

This research was funded by CETPartnership, the Clean Energy Transition Partnership under the 2023 joint call for research proposals, co-funded by the European Commission (GA N°101069750) and with the funding organizations detailed on https://cetpartnership.eu/funding-agencies-and-call-modules.

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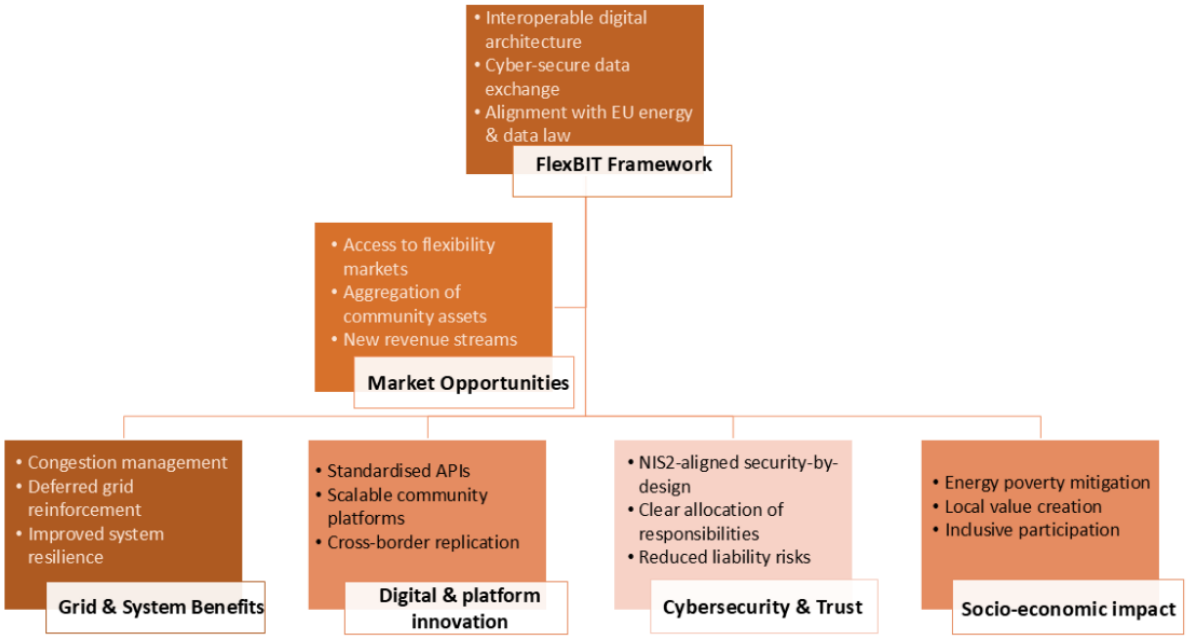
Key Findings

- **EU policy** points in the same direction, but national implementation differs widely and creates **fragmentation**.
- **Interoperability is not only a technical issue**; roles, responsibilities, and operational procedures are often unclear across actors.
- **Digital readiness varies strongly** between countries, including smart meter roll-out, data platforms, and data access rules, which leads to uneven service capability.
- **Cybersecurity requirements are increasing**, including under NIS2, while preparedness and implementation approaches remain uneven.
- **Support schemes and administrative processes differ significantly**, making replication across jurisdictions harder than it should be.



FlexBIT Interoperability Benefits

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Recommendations

✓ **Policymakers and regulators:**
should standardise rules for data access and interfaces, simplify permitting and registration for Energy Communities, and enable regulatory sandboxes to test new services safely before scaling them. They should also accelerate smart meter deployment and the supporting digital data infrastructure so that advanced services can operate reliably across regions.

✓ **DSOs, aggregators, and digital platform providers**:
should implement secure and standardised APIs, apply role-based access control, and maintain audit trails so that data sharing is trustworthy and traceable. They should embed cybersecurity by design in their systems and establish clear incident response processes to meet rising security expectations, including those linked to NIS2.

✓ **Energy Communities:**
should set clear governance rules for fair benefit sharing and responsible data handling, including compliance with data protection obligations. They should build early partnerships with DSOs and aggregators to gain access to flexibility markets and to integrate community services smoothly into local grid operations.

FlexBIT Recommendations ranked by level of control and responsibility

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FlexBIT Partners

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