

# Overview of Flexibility Platforms

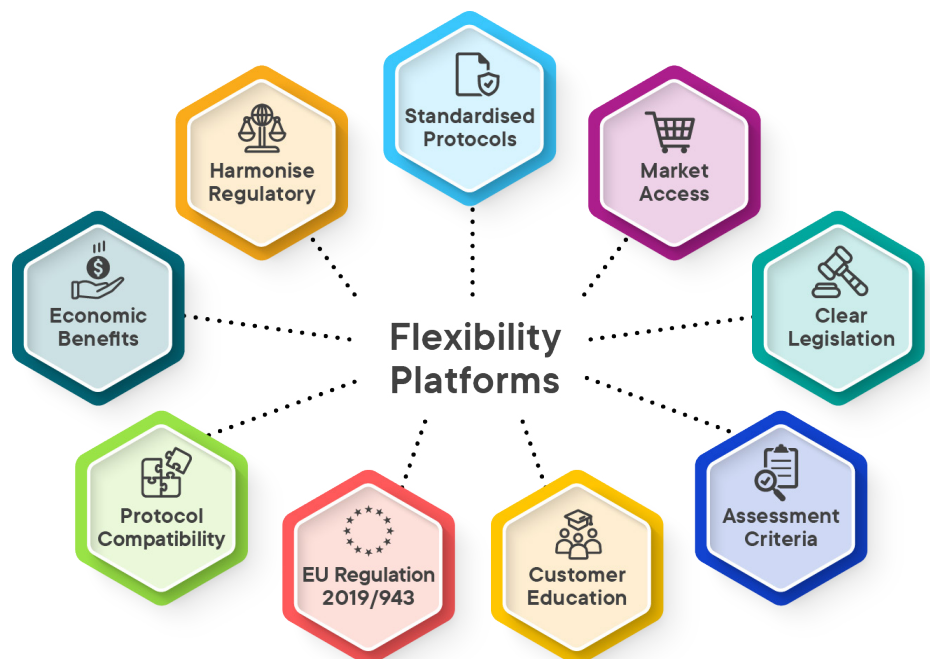
EDNA21

The Efficient, Demand Flexible Networked Appliances (EDNA) Platform of the 4E TCP provides analysis and policy guidance to members and other governments aimed at improving the energy efficiency and demand flexibility of connected devices and networks.

This briefing summarises the key findings of the EDNA report: *Overview of Flexibility Platforms* which assesses how flexibility platforms can facilitate the utilisation of flexibility from networked appliances, and identifies current barriers hindering their effective deployment. The report covers flexibility platforms, with a focus on residential and commercial demand-side flexibility. The study found that the handful of flexibility platforms currently operating on the market are concentrated in Europe. The analysis encompassed technical, regulatory, and market aspects of flexibility platforms.

## Recommendations for Policy Makers

- Harmonise regulatory frameworks across markets to enable easier integration of flexibility solutions between countries and encourage platform scaling
- Mandate standardised open communication protocols for smart appliances to ensure smooth integration with aggregator platforms
- Ensure non-discriminatory market access for independent aggregators to foster innovation and market development
- Develop clear legislation supporting aggregated flexibility trading on flexibility markets
- Create frameworks that reflect system-level economic benefits (reduced infrastructure investment, avoided curtailment) in compensation to flexibility providers
- Support customer education and awareness campaigns about flexibility services
- Establish standardised assessment criteria for security and reliability of aggregated flexibility services
- Consider requiring compatibility with a limited set of standardised protocols for heat pumps, batteries, electric vehicles and HVAC systems
- Accelerate the adoption of EU regulation 2019/943 and directive 2019/944 into national legislation



### MORE INFORMATION

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The EDNA report on **Overview of Flexibility Platforms** as well as further information can be found on the **EDNA website** and by contacting the EDNA Platform Manager at [edna@iea-4e.org](mailto:edna@iea-4e.org).

# Key Findings

## Market Development Status

Flexibility platforms have moved beyond the start-up phase and are now in a scaling phase, primarily concentrated in Europe. However, market growth is hindered by varying regulations between countries. Currently most flexibility volume comes from individual larger assets rather than aggregated smaller sources.

### Development Stage of Flexibility Platforms

**Past  
(Pre-2020)**

Trial/Pilot Phase

**Present  
(2025)**

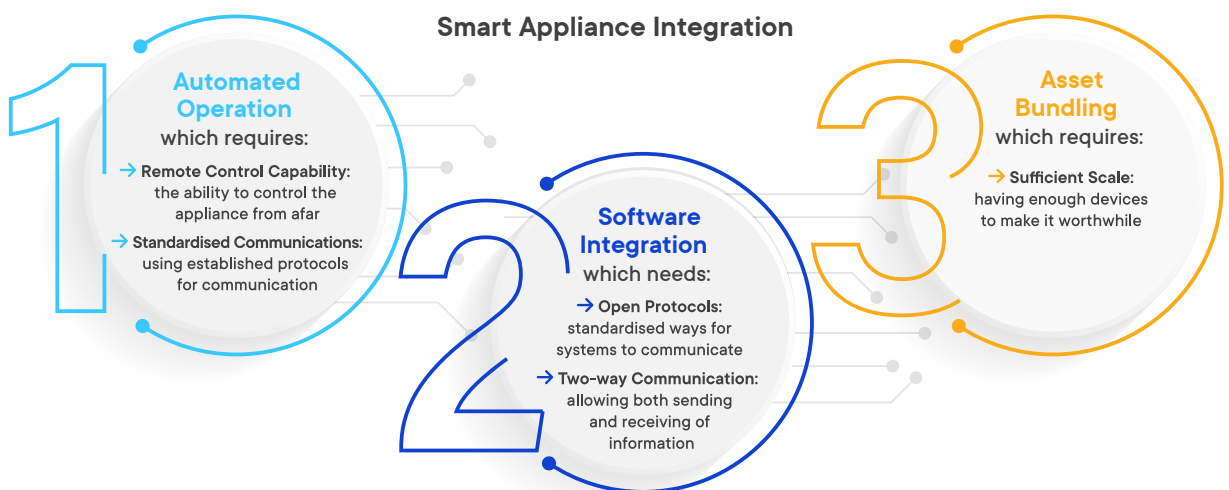
Scaling Phase

### Key Market Characteristics:

- Concentrated in European markets
- Moving from pilot projects to commercial operations
- Focus on system balancing and congestion management
- Growing integration of household/commercial flexibility but currently most flexibility volume comes from individual larger assets rather than aggregated smaller sources

## Integration Requirements

Smart appliances are essential for cost-effective household flexibility. Success depends on automated operation, smooth software integration, and the ability to bundle sufficient assets to achieve viable scale.



## Economic Incentives

While system-level benefits are substantial (estimated EUR 300 billion in indirect benefits from demand-side flexibility in EU by 2030), individual consumer incentives remain modest, necessitating seamless participation, clear value communication and no loss of comfort and utility to the consumer.