



The RESONANCE project is creating a software framework that enables rapid development and plug-and-play deployment of standard-compliant solutions for demand-side flexibility management

RESONANCE



Facilitating cost-efficient development of replicable & standard-compliant demand-side flexibility management solutions

The aim of the RESONANCE project is to make it more cost-efficient to harness flexibility from distributed and small-scale assets in homes, buildings, and places and thus help mobilise demand-side flexibility at a larger scale. To do so, the project is developing an innovative software framework that facilitates easy design and deployment of standard-compliant solutions for demand-side flexibility management, thereby reducing the workload and development costs.

The RESONANCE Framework provides three catalogues of software services for standard-compliant Resource Manager and Customer Energy Manager solutions as well as for Aggregation & Market Integration. Included are tools for configuring the services in a plug-and-play manner and for managing trust, security, and privacy aspects. A Data & Service Marketplace enables developers and integrators to advertise and explore the services, tools, and data assets in the different catalogues.

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Six pilot sites, several flexibility resources, various customer sectors

Pilot sites in six European countries develop and test the RESONANCE software catalogues and services. The populated services are then replicated at other pilot sites with different stakeholders and constraints.

The sites include and combine several flexibility resources and solutions, across various customer and energy sectors, engaging a multitude of stakeholders and market settings in a cross-sector energy ecosystem.

Place	Objectives	Sectors	Resources & Solutions
 Helsinki Apartment buildings	Demand-side flexibility for markets Cost-driven local optimisation	 Residential	HVAC systems Heat pumps District heating
 Marseille Industrial site	Demand-side flexibility for markets Cost-driven local optimisation	 Industrial  Transportation	EVs & ebikes PV systems Smart EV charging
 Bavaria Industrial & commercial buildings	Local optimisation, cost- & environment-driven	 Commercial  Industrial	HVAC systems Heat pumps
 Ptolemaida Municipality of Eordaia Public & private buildings and places	Demand-side flexibility for markets Cost-driven local optimisation	 Commercial  Industrial  Residential	HVAC systems Heat pumps District heating
 Celje and other Slovenian regions Households	Local optimisation, cost- & environment-driven	 Residential	PV systems Heat pumps
 Möndal & Gothenburg Single-family houses Commercial buildings	Local optimisation, cost- & environment-driven Demand-side flexibility for markets	 Transportation  Residential  Commercial	PV systems, Batteries Smart EV charging Heat pumps HVAC systems District heating

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Replicable and Efficient Solutions for Optimal Management of Cross-sector Energy

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