

Summary of Agile Pilot

Company name	ENERGIQUBE
Company location	Bratislava, Slovakia
Domain	Digital services, Energy efficiency, Shared and green mobility
Municipality	Žilina and Pušovce (town and municipality), Slovakia
Project period	July - November 2025, 5 months
Solution	The project evaluated an online web application ENESIM designed for individuals interested in electricity sharing, forming sharing groups, or energy communities. Its goal was to develop a straightforward, user-friendly, self-service platform accessible to the public via the Internet. During pilot testing, the focus was on (A) assessing how effectively local government officials could use the online tool, (B) understanding their knowledge of electricity sharing, and (C) analysing a simulation of electricity production, consumption, and sharing within operations managed by local governments.
Stakeholders	Town and municipality, end users - Energy Company of the City of Žilina, and responsible employees of Pušovce. Academic sector: University of Žilina - Department of Electrical Power Engineering and Electric Drives, Slovak University of Technology - Faculty of Architecture and Design. External experts: Slovak Battery Alliance (association of legal entities), Stredoslovenská distribučná, a.s., Capitol Legal Group, MAKERS. Civic sector individual citizens - owners of photovoltaic power plants, Greenpeace Slovakia. Media https://zive.sk , https://energoklub.sk , https://www.energie-portal.sk . “This set of stakeholder engagements enabled a shared understanding of the objectives, constraints, and opportunities in the pilot’s initial phase; while testing and iterations took place in close cooperation between energiQube and the pilot municipalities. This approach supported effective learning and focused the pilot on practical value for end users.”
Lessons learned	The concrete benefits of agile piloting included: <ul style="list-style-type: none"> • Refinement and validation of testing scenarios • Better usability and clearer interpretation of outputs • Improvements that directly increase the solution's value • Lowered risks when deploying into a production setting • Engagement with additional stakeholders and customer segments
KPI 1 Number of simulations	Ten. A total of 26 simulations were performed, involving various objects and scenarios in both pilot municipalities.
KPI 2 User feedback surveys	Two. Two short surveys were completed by representatives of both pilot municipalities, confirming their usefulness for understanding data and supporting decision-making, while also highlighting specific areas for improvement. “The solution was perceived as beneficial, especially in terms of decision support in the design and assessment of energy scenarios (electricity sharing simulations and assessment of surplus utilization options across multiple consumption points). Respondents also identified specific requirements for further functionality improvements, in particular the need to generate/export a clear output (e.g., 1 A4 report) and add the possibility of battery storage simulation.”
Evaluation of the business model focusing on its viability and potential for growth	The solution helps municipalities and stakeholders quickly build a foundation for decision-making about source design and electricity sharing. Currently, limited data and energy expertise hinder informed decisions. The primary factor in establishing the business model is the differentiation of access to the portal (licenses), taking into account the size of municipalities (number of collection and delivery points) and their purchasing power (budget, external financing, etc.). During pilot testing, four parameters were identified to guide the development of the licensing model:

	<p>1. number of users, 2. number of collection points, 3. number of production sources, and 4. number of simulations.</p> <p>The licensing model will be divided into several packages: 1. Basic (1-2 users, x simulations/month), 2. Extended (more consumption points, more sources, unlimited number of simulations, report export), 3. Partner/Premium (multi-user, unlimited number of simulations, integration support).</p> <p>The solution benefits local governments, energy communities, electricity sharing groups, and organizers—a new entity introduced under Slovak law from 1.1.2026—as well as private companies such as electricity providers, consultants, and auditors, and individuals and civic associations.</p> <p>Those interested in sharing electricity and developing energy communities can assess their production and consumption capabilities using a publicly accessible, self-service portal. This platform will assist electricity suppliers and sharing organizers in identifying complementary electricity production and consumption patterns, facilitating optimal placement and use of surpluses.</p>
<p>Impacts</p>	<p>Agile piloting served as a framework for rapid, controlled testing of the ENESIM technical solution in the real-world environment of local governments. Its advantage was that the pilot was not a single "handover" of the tool but an iterative process involving co-creation, learning, and ongoing validation of value for different stakeholders. This method enabled energIQube to repeatedly improve the assignment, test various scenarios, and refine the interpretation of outputs to ensure they met the actual decision-making needs and local government knowledge.</p> <p>Pušovce.</p> <p>A new planned energy source at the primary school was simulated, showing that a 3 kWp system can meet the school's energy needs. This setup will also provide the greatest savings on electricity bills (supply and distribution), since the primary school has the highest consumption in the municipality. We recommend sharing electricity to use surpluses generated during weekends, holidays, and school vacations.</p> <p>The municipality's planned electricity-sharing group includes a primary school as the production source, with consumption points at the primary school, kindergarten, municipal office, cultural centre, and heat pumps. This sharing group can utilize nearly 100% of the generated electricity. If the system's installed power is increased—assuming financing through subsidies—it could produce additional electricity, which can be shared within the energy community with residents or neighbouring properties.</p> <p>Žilina</p> <p>Validation of the city's current electricity-sharing group confirms that production sources, such as the facility for seniors and the ice rink, can nearly meet 100% of the consumption points, including the city swimming pool, the ice rink, and the city office. The chosen group composition can utilize almost all the generated electricity even if the ice rink's cooling system is offline. We suggest adding extra consumption points to the sharing group to handle surpluses in case of simultaneous shutdowns of both the ice rink and swimming pool, addressing potential marginal scenarios.</p> <p>The new planned source city police, for their own use and surplus. This source will generate a certain amount of electricity, with about 40% considered surplus—offering potential for sharing or storage. We suggest storing surplus electricity in battery storage and using it for electricity sharing at public lighting points, discharging it in the evening and during the night.</p>
<p>Suggestions for future actions, especially focusing on sustainability and replication</p>	<p>The ENESIM online tool is designed so that other municipalities can access the same application, eliminating the need for replication, which is a key advantage of the solution. Scalability is managed at the cloud server level, allowing performance adjustments based on the number of simulations running. If demand becomes very high, additional servers can be added. The tool supports the simulation and development of energy communities globally, provided it can import measurements tailored to each country's specific conditions. Currently, it is already localized in English.</p>

<p>Next steps</p>	<p>In the near future, eneriQube aims to create product documentation comprising a public educational section and a private user manual. By January 2026 at the latest, eneriQube intends to start commercial sales and target the audience based on the business model. The company will also continue developing ENESIM. Further analysis will explore potential modifications and extensions.</p> <ul style="list-style-type: none"> • Support for creating summary reports related to the Pušovce questionnaire. • Support for detailed recording of the price of a commodity for calculating savings. • Support for standard consumption diagrams of distribution companies for points lacking continuous metering. • Support for importing continuous metering of surplus from production, such as the distributor's metered supply to the system. • Support for simulating electricity storage devices, such as batteries, as addressed in the Žilina questionnaire. <p>eneriQube will fund its operations and development using its own resources and proceeds from the sale of the Solution.</p>
<p>Provider's Reflection</p>	<p>eneriQube considers the course and outcomes of the agile piloting successful. The specific benefits of the agile piloting became clear in the following areas:</p> <ul style="list-style-type: none"> • Refinement and validation of test scenarios: Through collaboration with local governments, the testing concentrated on practically important situations, enhancing the relevance of the results. • Enhancement of usability and output interpretation: Ongoing user feedback helped clarify the specific needs for outputs and how results should be presented. • During the pilot, we identified key development priorities that directly enhance the Solution's value. Working with real cases helped clarify these high-value areas, which might not have been as obvious otherwise. • Reducing risks during production deployment was achieved through iterative validation using real data and local government processes, helping to identify limitations such as data issues, interpretation challenges, and reporting needs prior to broader rollout. • Access to other actors and customer segments: The pilot offered references, language for understanding the Solution's value, and specific use cases. This knowledge is helpful when engaging with other local governments and relevant partners. <p>Implementing the agile pilot demanded extra capacity from eneriQube, mainly for coordination, meeting preparation, data access from external sources, feedback processing, and iteration. Approximately 35 man-days were needed from the supplier team: 10 for preparing and conducting meetings, 8 for data collection, cleaning, and scenario setup tailored for local governments, 12 for iterations based on feedback, and 5 for pilot evaluation and documentation.</p>
<p>Municipality's Reflection</p>	<p>Pušovce joined the project as a beginner in electricity production and sharing, highlighting several benefits: implementing innovation in practice, collaborating with experts in smart cities and energy, addressing data access issues on electricity consumption, acquiring knowledge about electricity sharing, providing free online simulation tools for production and sharing, and laying the groundwork for an energy community involving citizens and neighbouring municipalities.</p> <p>Žilina contributed extensive expertise in electricity generation and distribution to the project. The main advantages include applying innovative solutions in practice, collaborating with experts in smart cities and energy, providing free access to an online electricity management simulation, evaluating the city's electricity-sharing group (including the closure of the winter stadium and swimming pool), and delivering transparent results to the council and decision-makers.</p>
<p>Expert's Reflection</p>	<p>Involving a broader range of experts during the initial pilot phase helped establish more realistic expectations. The testing was deliberately limited to key users to ensure the pilot remained effective. This focus was due to the pilot's scope and timeframe, mainly aimed at practically verifying the solution at pilot sites and gathering user feedback. The internal project team provided expert advice on the data collected and the simulation approach. For later stages, such as expanding or scaling the solution, we recommend including an</p>



	independent expert review of the methodology, result interpretation, and the potential for application in other locations or countries.
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