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## JOURNAL

### PROJECT

EPIU - Energy Poverty  
Intelligence Unit

📍 Getafe, Spain

### TOPIC

Urban poverty

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# Journal 4: One year after the end of EPIU implementation period

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UIA projects have a transformative impact on urban environments by driving sustainable innovation, improving the quality of life for citizens, and promoting inclusive economic growth. EPIU project started in September 2019 as an ambitious initiative to identify and combat energy poverty through an intelligent tool for advanced analysis. One year after closing the implementation period, EPIU still influences the municipality of Getafe and beyond. One of the primary goals of UIA projects is to develop scalable and replicable solutions. After the project ends, many cities work to institutionalize these innovations within their regular policies and operations. The sustainability and continuation of EPIU is partially ensured through the OHS (OSS on healthy households established in Getafe during the project implementation period), as it has been consolidated as a local public service. Regarding institutional learning and policy change, EPIU has acted as a spark to promote the development of an urban agenda. Projects such as EPIU need a robust and grounded coordinated strategy at the municipal level to maximize the experience gained and lead to broader changes at the local level. In the case of Getafe, if the urban agenda had been set before, it would have ensured a lasting framework for urban development to continue addressing challenges. The economic impact of UIA projects can persist after they end, and this is, at least partially, the case of EPIU as the OHS has been consolidated as a public service. Successful UIA projects are often used as models for other cities facing similar challenges. Currently, the EPIU experience is not being replicated in other locations in the EU although it has inspired cities such as Barcelona in data-driven projects to tackle energy poverty. Besides, EMSV has submitted the URBACT IV call for innovation transfer networks. The main failure of the project was the delay in developing the energy poverty intelligence tool. EPIU failed to put the IT tool in operation on time to detect hidden energy poverty in the target neighbourhoods and to use machine learning techniques to perform the clusterisation process that should render EP cluster categories and design subsequent tailor-made solutions for each cluster in the call for beneficiaries at home and building scales, as envisaged in the Application Form. The initial ambition of the proposal underestimated some key challenges associated to the development of the IT tool, especially the hurdles posed by data protection legislation and the necessary requirements that this relatively new legislation imposed on the developments required to deploy the EPIU tool successfully. These systems, once in place, often become foundational tools for future urban development. Still, in Getafe, more time is needed to see how the municipality integrates the technology to improve urban management and policy-making. Last but not least, as with many other UIA projects, EPIU faces a challenge in sustaining impact. While the potential for long-term benefits is high, proper follow-up mechanisms and planning for long-term resource needs are crucial for maintaining the project's success post-UIA. This journal summarizes what has happened since the end of the EPIU project in late 2023.

## Project's progress

This section provides an update on EPIU's status after the implementation phase ended in 2023, highlighting progress made, challenges encountered, and the next steps.

### What has happened with the project since its end date

The Healthy Homes Office (OHS) has emerged as a pivotal service, offering crucial support to energy-vulnerable

families in Getafe. To ensure the continuity of this service beyond the EPIU project, the City Council has facilitated a successful referral network with other municipal departments and local civil society organizations. It has provided the infrastructure and resources to consolidate the service. The continuation of services provided by the OHS, the new agreements with external partners (Red Cross, Fundación Naturgy) to carry out soft measures, and new expected investments for refurbishment works, ensures one of the EPIU's objectives, which was to reduce energy poverty in Getafe, not only in the specific EPIU's neighbourhoods but also in the rest of the municipality. The implementation of the data lake and the single municipal forms is expected not only to increase the referral of users from other municipal areas but also to make the management of users more efficient.

Significant progress has been made to ensure the post-EPIU governance structure between EMSV and other city council departments, laying the foundations for a long-term and interdepartmental structure to address energy poverty locally.

Some other EPIU results indicators, such as the “% of beneficiaries satisfied with the programme”, remained the same by the end of year 4 as they referred more to the implementation phase.

In the policy arena, four areas of the City Council have been impacted the most after the project's completion: Welfare and Social Inclusion, Housing, Urban planning and Public Space, and Human Resources and Modernisation of the Administration. The added value corresponding to each area has been: Improvement of document management, Improvement of public procurement procedures and beneficiary selection, Data-driven urban intervention strategy and Data Lake generation and improvement of IT tools. Regarding impacts on local policy, mainly the development of new data-driven initiatives while in regional policies, the agreements for the exchange of social services data and housing consumption data.

Besides, the project has added value to the following policy areas:

- Housing: The City Council's annual call for applications for grants and subsidies for energy rehabilitation, which has been published over the last few years, includes, nowadays and after the end of EPIU, indicators on energy poverty.
- Social Services Department: The isolated consultation of the national database of social services users has been replaced by an integrated application that allows interoperability with other internal and external information systems. A single repository of users of social services has been created.
- IT, e-administration, and Transparency Unit: It has developed the City Council's new Action Plan on Data Protection, an IT tool for processing, pruning, and anonymising personal data, and the creation of a lake and data communication node.

The UIA project has resulted in the expansion of policy areas directly impacted by EPIU. First, the city council is developing a dashboard to visualise city-level data and foster new data-based decision-making processes in the municipality. This is the first step in broadening the path opened by the data analytics component of EPIU to streamline data-informed policy-making while accelerating the digital transition locally. Second, GISA, as municipal and public-owned company entrusted with the management of EPIU, has also taken advantage of the knowledge and experience acquired through EPIU to explore new solutions to the local industry in the energy field and more specifically to promote the development of business energy communities among SMEs. GISA has secured funding through EU funding (LIFE programme) to develop a project to empower businesses to develop energy community models for a successful energy transition.

### **What is the project's plan for long-term sustainability**

One year after the project ended, the urban authority has been focused on ensuring the sustainability of two of the primary outcomes from EPIU: the continuity and strengthening of the EPIU intelligence unit and the consolidation of OHS at city level (One-stop-shop to tackle energy poverty).

Getafe City Council IT department secured 159.000€ of funding from the last call for beneficiaries of the 2030 Agenda subsidy programme of the Spanish Ministry of Social Rights and 2030 Agenda. The funding allows the creation of a dashboard that will offer a series of numerical and graphic indicators to provide a real-time data visualisation to assist in municipal decision-making. Building on the structure created by EPIU, the dashboard will initially focus on a series of actions related to energy, poverty and social exclusion, which are essential for improving local public policies in these areas. Hence, the funding will ensure the continuity and strengthening of the intelligence unit by allowing further improvements over the coming two years, and it is foreseen to scale up the methodology to encompass other departments, ultimately allowing the creation of a Data Analytics Office for the City Council to support decision-making processes and improve public policies locally.

At policy level, EPIU's experience has helped develop the Municipal Renovation Strategy within the municipal initiative GETAFE REHABILITA, making it possible to develop a "Guide for Rehabilitation and Sustainable Development in Getafe." Currently, the Getafe Urban Agenda is starting to be developed based on action plans in different fields, among which, in addition to the renovation strategy and the Strategy for mitigation and adaptation to climate change, both closely linked to EPIU, there are others such as the Strategy for mobility and integrated management of the city through data, the Municipal Participation Strategy, the Local Action Plan on Communication, Training and Citizen Participation, the Climate and Sustainable Energy Action Plan and the Getafe

Coexistence Plan, all of them with cross-cutting aspects that have been dealt with in EPIU in one way or another.

The plans to upscale EPIU are linked to the continuation of the OHS in EMSV. This is being done through the preparation of application forms for national and EU funding for MUA and EMSV such as Urbact Innovative Transfer Network, Programme for Environment and Climate Action (LIFE) for funding actions related to refurbishment of buildings with vulnerable tenants through financial mechanisms complementing existing grants, a technical assistance provided by the Energy Poverty Advisory Hub (EPAH) for the creation of a Municipal Thermal Power Plant in the Alhóndiga neighbourhood or a Horizon Europe proposal on IA project for energy management of public buildings.

The Healthy Homes Office (OHS) now operates at city level, covering not only the two neighborhoods foreseen in EPIU but a total of eleven with a budget of 641,194.70 € annually. After the project's completion, the OHS registered about 1,000 new users, who were advised to achieve 88,200€ of estimated total energy savings per year.

Besides, during EPIU, some interventions to tackle the heat island effect were implemented. After the project ended, the public space analysis methodology used in the two neighbourhoods of the project was replicated in a third neighbourhood, with an intervention against the heat island with an estimated budget of 144.000€.

To sum up the MUA is expanding some of EPIU components in the following way:

The intelligence tool developed by EPIU is intended to lead to the development of a dashboard to inform policymakers in other relevant municipal areas. EPIU's developments in data acquisition, processing, and management can potentially be applied to any other municipal domain, with its ensuing impact on local policies, ultimately benefiting all the citizens of Getafe.

Similarly, the further work being developed regarding mitigating the heat island in the city is meant to lead to improved solutions for alleviating the heat island effect in key city locations. This is also intended to benefit all citizens of Getafe.

New refurbishment and energy poverty alleviation schemes are planned for citizens at risk of energy poverty in other deprived city areas. These are of particular interest to test the long-term viability of the solutions developed through EPIU.

Finally, the consolidation of the One-stop-shop on energy poverty designed by EPIU in two neighbourhoods is now available as a local public service in all neighbourhoods in Getafe.

## Generated Knowledge

During the implementation phase, EPIU was analyzed following seven implementation challenges. This journal, produced one year after the project was finished, approaches the lessons learned and recommends to other urban authorities, considering those challenges as perspectives. Leadership, public procurement, organizational arrangements within the urban authority, a participative approach for co-implementation, monitoring and evaluation, and upscaling highlighted key difficulties Getafe faced when implementing EPIU and are also helpful now to emphasize lessons learned and recommendations.

### Lessons learned

Strong leadership is crucial for navigating the complexities of urban innovation projects. Although leadership is traditionally seen as a top-down mechanism which, in the case of local authorities, is derived from the city mayor to the local councilors and then to the middle managers and civil servants in charge of delivering the public services, the complexity of innovative projects like EPIU makes it necessary to exercise leadership from different angles. In this light, promoting positive leadership in EPIU has implied not only focusing on the top-down traditional role of policy-makers but also on empowering all the people involved at all levels of the project and with a stake in it, from the social workers at the OHS to the chief directors of the departmental areas involved in the project. Fostering leadership among all employees participating in EPIU has been an act of empowerment that has provided highly positive results, both for the project and the employees working on it.

Public procurement refers to the process by which public authorities purchase goods, services, or works from the private sector. Public procurement processes must not be isolated and only related to the specific project on which they depend, but rather as part of a broader and encompassing set of procurement processes being deployed simultaneously by the city council. The limited available resources (mainly human resources) to which city councils are subject makes it very important to prioritise the most urgent services to be contracted. In light of this, it has been crucial to understand the planning and timing under which EPIU procurement processes have been performed and how these fit into the whole set of procurements being simultaneously processed and in the pipeline. In this sense, negotiating the priority of EPIU procurement processes about the other priorities of the local authority and coordinating them within each department has been critical to ensure a timely

implementation.

UIA projects typically address complex, multifaceted urban challenges across various policy areas. To promote a participatory approach, engaging interest groups and civil society organisations representing citizens is more effective than attempting to engage individual citizens directly. The main lesson learned from this challenge on EPIU was the need to identify the leading civil society actors with a stake in the project at a preliminary stage, approach them, and establish a cooperative framework they feel comfortable with. This undoubtedly facilitates the implementation of a real co-implementation process within the project.

Engaging citizens and stakeholders in the design and implementation of urban projects is a core principle of UIA. However, ensuring meaningful participation takes time and effort. Organisational arrangements that imply breaking silos at the municipal level are always challenging to put into practice. Through EPIU, the implementation team learnt the importance of looking for "allies" within the municipality, namely civil servants and personnel with a high level of responsibility in key areas of the project, to make the necessary changes possible. Engaging key personnel is essential, specially making them feel part of the project and the changes it aims to achieve, as this is necessary for them to step forward to collaborate and think outside the box to find solutions to the challenges posed by innovation. This is nonetheless a long process that requires perseverance, empathy, continuous support from the city council mayor and elected councillors, and a very clear political commitment throughout the project's lifetime.

UIA projects often test new and experimental solutions, making it difficult to define clear metrics or benchmarks for success. The challenge lies in creating adaptive M&E systems that capture qualitative and quantitative data and can provide valuable insights even as the project evolves. Through the M&E of EPIU, MUA has understood the need for an external expert to provide an objective and non-biased evaluation of the project. Given the project's complexity, this is an admittedly cumbersome, time-consuming and costly process that requires great effort from the project management and some project partners. Making all the necessary resources (material, data, time, knowledge) available for an external expert to evaluate the project properly is, therefore, highly demanding and, if not properly designed, may be a costly process. In this regard, it is crucial to pay special attention to the resources needed to produce monitoring and evaluation that is fit for purpose and weigh up the costs associated with it against its expected return. Not doing a realistic dimensioning of the budget, resources and expected results may result in a M&E that doesn't provide value for money or meet expectations.

Related to the communication with beneficiaries, the EPIU consortium tried to align some of its key communication actions with other events being done at the local level, such as local fairs, public events (eg: energy week, local festivities of neighbourhoods), recurrent events that take place in the city during the year (neighbourhood assemblies, energy retrofit roundtables with local stakeholders). By trying to piggyback on those events, the project secured an audience. It communicated more efficiently and optimised resources, obtaining a highly positive response from the target group.

One of the key ambitions of UIA projects is to develop solutions that can be scaled up, either across the city or to other regions and contexts. The reality in EPIU is that the most significant impact has been seen after the implementation period. The 4-year period of EPIU served as a tester of the energy poverty intelligence unit, and it is only now that it has to demonstrate its effectiveness in mitigating energy poverty at the local level. Hence, the main learning from the EPIU experience is that an innovative project like EPIU must be embedded in a broader and long-term strategy, in this case, related to energy retrofitting, social services and IT, that makes its upscaling process aligned with the municipal priorities. In this way, its continuation and expansion can be more easily secured, and its full potential can be realised.

Addressing operational challenges reflected the complexity and ambition inherent in urban innovation projects such as EPIU during their implementation, but it also brought a list of lessons learned that will be kept as treasures in Getafe.

### **Recommendations to other urban authorities who wish to implement similar innovative projects**

For urban authorities looking to implement innovative projects similar to EPIU, it is advisable to adopt specific strategies and best practices to navigate the complexities of such projects. Here are some recommendations based on lessons learned from the experience with EPIU.

- Ensure a clear and committed leadership with the support of key stakeholders and high-level political figures. In the case of Getafe, the mayor was involved from the beginning, which positively affected the project. Besides, projects like EPIU that run for 4 years may suffer political shifts, so securing political backing at other levels is crucial too. One option could be to design a Steering Committee with representatives from different levels of governance and relevant stakeholders.
- Traditional procurement rules can be a barrier to innovation. An option that may be more limited to Spain is to train and engage Local Government Secretaries, Controllers, and Treasurers in the project from the beginning to make the innovations easier to understand.
- Break down silos and promote cross-departmental collaboration from the design phase. If the project starts without all departments involved, it will be complex to commit them for collaboration later. Everyone needs to feel they are part of the project, and the design phase is the starting point. The same happens with the local communities: engaging citizens

and other stakeholders improves the project's design, relevance and sustainability and increases public buy-in and trust from the beginning.

- From EPIU's experience, considering an external expert who develops a robust M&E framework from the start would have helped define clear success metrics and indicators.
- To dedicate a team from an early stage of the project to plan the sustainability of the project. Operational teams are busy implementing the project, and they relegate sustainability as a priority. The same strategy can be proposed to ensure that the innovative practices developed during the project are embedded into local policies and governance structures. Setting up a separate team to ensure that the project's innovations can continue beyond the project's lifecycle could be a good strategy to give it a priority.
- To promote strong partnerships with other municipalities and networks during the implementation phase of projects so the project results can permeate better and be proposed as scalability in different territories. Besides, participating in EU networks, conferences, and urban innovation events or publishing reports, case studies, and other documentation can be used by other urban authorities to replicate and adapt successful approaches.
- Innovative projects are complex, and the projects need to invest in training at internal level in procurement, digital tools, sustainability, etc.
- Develop a clear communication strategy that considers the different targets of the projects. EPIU, for example, needed to reach citizens suffering from vulnerability, politicians, and private companies... so different communication strategies may be considered.
- Risk management plan built only at the beginning of a project may result ineffective as continuous new and unforeseen challenges will appear. An option would be to allocate resources for risk management at all levels of the implementation phase.
- The collaboration with the private sector in EPIU could have been stronger. Establishing solid partnerships can increase the project's impact and financial sustainability.

This list of recommendations is not exhaustive and definitive as it only responds to EPIU's experience during the years of implementation. However, it is a good starting point for those municipalities willing to implement similar innovative projects.

## Conclusion

### **The expert's final reflection and "evaluation" of the project**

The expert in an UIA project play a role in ensuring that the project meets its objectives, remains accountable, and is supposed to generate valuable insights for future urban development. After four years of accompaniment, I feel like a part of EPIU, too, and I am proud of the results and the process.

I was indeed free from internal pressures, and I could guide and recommend objectively and impartially, assessing successes and shortcomings. However, by the end of the project, I was also part of EPIU in some way and felt the team's effort needed to be visible as a success too.

EPIU was about tackling energy poverty, my field of expertise. I read it as an added value in this project, as my specialized knowledge has contributed to more realistically assessing EPIU's innovative solutions. However, I may not have been as critical as I was supposed to be because I could understand the magnitude of the challenges.

Related to validating outcomes, I hope I have offered credibility and validation of the project's results, providing confidence in the project's effectiveness.

As an expert, I have supported the replication and transferability potential too, offering recommendations for adapting the project's solutions to different environments or scaling them across other areas.

Transparency in evaluation also strengthens public trust in the project, and, as with other UIA experts, the evaluations were shared publicly through journals.

It has been an honour to accompany the EPIU project. I have also learned from both successes and challenges and contributed to a broader understanding of how to implement innovative solutions to tackle energy poverty.

### **What, in your opinion, has been the main legacy of the project, both in terms of knowledge generated and the solution implemented**

The legacy of the EPIU project goes beyond its outputs. It has added value to Getafe at different levels. On one side, energy poverty has been recognized as a social priority in the municipality. On the other hand, a service for citizens to identify situations of energy poverty has been consolidated. Besides, the effort to build an intelligent unit has provided the local ecosystem with new ways to interact and simplify procedures and data use.

One of the legacies of a UIA project is the adoption of its innovations into local policies and governance frameworks. In the case of EPIU, one of the lessons learned was the need to have a strategic plan that covers potential future innovations. Now, Getafe is working on an urban agenda that will guide the steps towards a more

sustainable city from a social, environmental, and economic perspective in 2030. The legacy impact in terms of scalability is not tangible as a whole, but some elements of EPIU have inspired other cities, such as Barcelona, which is working on the project Climate Ready Barcelona, which supports citizens and public bodies in anticipating and adapting to climate change effects and its related energy crisis. Another legacy impact is the generated valuable data and insights that can inform future projects in this area.

Finally, initiatives such as EPIU and its consolidated services, such as OHS, which improve energy efficiency in Getafe’s households or the interventions to alleviate the heat island effect are linked to environmental benefits after the project completion, which is a significant legacy that increases urban resilience to climate change.

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