

JOURNAL

PROJECT

EPIU - Energy Poverty  
Intelligence Unit

📍 Getafe, Spain

TOPIC

Urban poverty

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## Journal 2: Energy Poverty Intelligence Unit (EPIU)

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This is the second journal of the Energy Poverty Intelligence Unit (EPIU) project since its start in September 2019. EPIU led by Municipality of Getafe is an ambitious Urban Innovation Action aiming at identifying and combat energy poverty through an intelligent tool for advanced analysis.

Getafe's main challenge is to identify and fight hidden energy poverty (HEP) by developing the Energy Poverty Intelligence Unit with a pilot project in its two most vulnerable areas: Las Margaritas and La Alhóndiga. Innovation lies in the change in energy poverty attention beyond monetary poverty: from reaction to prevention using data. EPIU is based on a data analytics system that collects information on energy consumption, income and other factors determining energy poverty at three scales: home, building, and neighbourhood. EPIU improves the collaboration between working areas of the city council and enhance civil servants' skills. Finally, homes, buildings and neighbourhoods will become more energy efficient, contributing to a more responsible use of energy. The project benefits and feeds from existing local, regional, national, and European initiatives and policies which aim at identifying and tackle energy poverty too.

The project is put forward on a wide consortium with expertise from strategic areas such as academia, charities, energy companies, social organizations, public companies, consultancy services and the building sector. This strong partnership with wide experience on energy poverty gives the municipality of Getafe the reliance of a good delivery of the project.

This second period has been focused on stabilizing the project after the Covid crisis and its impacts that directly affected the project. Although not everything is at a pre-pandemic status, it can be said that EPIU has overcome this unexpected challenge and the implementation of the project follows its course with a formalized one-year delay.

## 2. How the project fits in the policy context at the EU, national and regional level

## EPIU's objectives are in line with EU, national and regional latest political priorities

### **EPIU focuses on one of the EU challenges: energy poverty**

Energy poverty is a situation in which households are unable to access essential energy services. With nearly 34 million Europeans unable to afford to keep their homes adequately warm in 2018<sup>[1]</sup>, energy poverty is a major challenge for the EU.

The European Pillar of Social Rights includes energy among the essential services which everyone is entitled to access. Support for access to such services must be available for those in need<sup>[2]</sup>.

On the 14th of July 2021, introduced the climate target plan to reduce net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels, under the new Fit for 55 package which consists of a set of inter-connected proposals to ensure a fair, competitive and green transition by 2030 and beyond. Fit for 55 package includes significant measures to strengthen energy efficiency laws to help tackle energy poverty such as the set up a new Social Climate Fund that will provide dedicated funding to Member States to support European citizens most affected or at risk of energy poverty.

### **EPIU, 100% aligned with the National Strategy against Energy poverty in Spain**

There is no standard definition of energy poverty, and it is therefore left to Member States to develop their own criteria according to their national context. In their NECP, Member States have to assess the number of households in energy poverty.

In Spain, the National Strategy against Energy Poverty 2019 – 2024 seeks to address a situation that affects between 3.5 and 8.1 million citizens, reducing at least 25% current indicators but seeking to reach 50%. Although the strategy entered into force after EPIU was approved, the project is 100% aligned with its four axes:

- Improving knowledge about energy poverty
- Redesign of subsidy mechanisms such as the social bond for electricity and the social thermal bond.
- Creating a structural change for the reduction of energy poverty- energy efficiency and rehabilitation
- Implementing measures to protect consumers and social awareness

### **COVID-19 reinforces the importance of projects as EPIU**

The Covid crisis, labelled as a “total social fact”, has highlighted the urgency of addressing energy poverty if we are to create a social Europe that guarantees the basic needs of all its inhabitants. Projects as EPIU will contribute to overcome the situation in an effective manner.

Different measures at all levels (national, regional and local) have been implemented to protect those suffering a situation of vulnerability which reinforces the need of specific services such as EPIU's one to provide advice.

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<sup>[1]</sup> 2018. Eurostat, SILC

<sup>[2]</sup> [https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles\\_en](https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles_en)

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## **3. Short Update**

EPIU started in 2019 with a logical structure of a project with several potential expected risks identified and evaluated. However, the effect of a global pandemic was not foreseen, and it has altered EPIU project too, not only in terms of milestones but also in terms of objectives. During this second year of the project, the main objective has been to get the project on track after the paralysis due to Covid.

### **Second year of EPIU status in a nutshell**

The project runs on a year of delay which is fully understandable considering the impact of the pandemics at all spheres of life. This delay has already formalized in terms of the operation of the project, so it won't carry any inconvenient.

From a project management perspective, the logic of the project switched from waterfall project methodology to an agile one in the previous year. However, it has not been enough as other complexities have arisen. Constant

consortium meetings and a feeling of a general blocking forced a new organizational model with new leaders and smaller and more approachable and doable tasks have been broken down. EPIU consortium has proved, once more, to be flexible and not a rigid structure that reacts to improve the implementation of the project.

EPIUs have three pillars: data management, the public energy poverty service, and the tailor-made solutions to improve the quality of those suffering a situation of energy poverty. Within this period, there have been great advancements as well as complexities at these three levels.

Data gathering for the predictive tool: To develop a predictive tool to identify hidden energy poverty is one of the core outputs of EPIU. To work on the machine learning tones of data are needed and during the first year of the project, data gathering from different sources was blocked. During this second year, some advancements have contributed to unblock the feeding system.

At municipal level, partners are working on a data lake to centralize all data available at local level and, although there is still work to do the potentiality of this repository will be essential once ready.

Furthermore, during this year, 700 surveys have been fulfilled by citizens which implies data available for the predictive tool. In addition to the surveys, Red Cross has provided specific data from neighborhoods that also will feed the tool. And finally, the startup of the PIOHS has made possible to get real data from users using the service. Despite the big effort, the tool needs more reliable data to predict and identify hidden energy poverty in Getafe. This is a critical aspect that needs to be address in the coming period.

OMHS (Healthy Households' Municipal Office Service): The initial planning was to design and prepare the structure of the OMHS and then launch it directly and open it to citizens in 2022 as this is the way local public services normally operate. However, this implementation methodology has risks as design under paper is not the same as reality. Furthermore, opening the OMHS from zero would represent having no real data of implementation at the beginning. At this point, EPIU consortium started to swing the initial strategy to improve and ensure an effective service design and evaluated the possibility to launch a pilot of OHS that would give the chance to test the service in the real conditions and users and will provide the intelligent data system with data. Instead of a minimum viable product (MVP) from the Lean methodology, it can be called a minimum viable service (MVS) as this piloting experience will allow EPIU team to evaluate the service before it is released in Getafe. The team has intensively worked in the operation of this pilot these months which has resulted in an improved design for the OMHS which will be ready by January 2022 and a collection of real data for the predictive tool. An interesting and replicable experience for other UIA projects.

Tailored solutions for people suffering a situation of vulnerability. The project is about to start the implementation phase as the first Grant Call for beneficiaries will be released at the beginning of 2022. This second year the focus has target all public procurement issues and the clusterization. Clusters are not yet complete as real data from the specific neighborhoods have not been integrated yet, but a first simplified version has been incorporated to the first Call requirements. For this reason, the grant's call will be launched in two months but only targeting 20 beneficiaries. Only after evaluating the impact of this call, a second and improved call will be launched in a year or so.

The project is just starting the critical implementation phase and, despite the complexities, EPIU is performing correct so it will soon start providing with interesting results that will bring an improved solution to fight energy poverty.

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## 4. Operational Challenges status

The seven implementation challenges outlined below are analysed periodically. For each challenge, a critical analysis has been made based on previous reporting. Following a reader friendly approach, the intensity of the challenge on the implementation period is presented supported by a traffic light system where red colour indicates the more relevance of the challenge during the period.

Challenge

Observation

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## Leadership

Challenge level



During this period, EPIU project has evolved in leadership, there has been a swing in the way the implementation is led.

-EPIU's consortium swings to keep leadership at internal level

-Local government bottom-up leadership has appeared to complement top-down existing leadership

-A legitimated leadership is a permanent challenge.

## Public procurement

Challenge level



One of the risks previously identified was on the demand side. Implementing works at households, dwelling and neighborhood levels engaging people suffering a situation of vulnerability is complex. What if potential beneficiaries are not interested in the tailored measures?

During this period, EPIU has tested Lean methodology and the team is ready to test it also for public procurement

Organizational arrangements within the urban authority (cross-department group)

Challenge level



EPIU has gained legitimacy after constituting PIOHS (Healthy households' Office point of advice)/OMHS

Participative approach for co-implementation

Challenge level



- Good practice of using existing city participatory channels

- The existence of PIOHS (Healthy households' Office point of advice)/OHS has promoted participation

- EPIU's delivery partners have shown they play a key role in the project's co-implementation

Monitoring and evaluation

Challenge level



In EPIU project, the Monitoring and Evaluation phase has not started yet because result indicators are primarily based on implementation. Therefore, there are no advancements on this stage.

Communication with target beneficiaries and users

Challenge level



Within this period, the challenge has been taken on from different sides:

- The experience of PIOHS (Healthy households' Office point of advice) in the integration of final user in the coming OHS

-EPIU's general communication focused on people suffering a situation of vulnerability

- Communication to hidden energy poverty affected groups

Upscaling

Challenge level



This is not a relevant challenge within this period. EPIU's adaptation to the unforeseen emergency situation may be of interest in the upscaling process. However, it is soon to evaluate to what extent it will contribute to the identification and management of energy poverty in urban areas.

## 5. Addressing 7 challenges

The seven implementation challenges outlined below are analysed periodically. For each challenge, a critical analysis has been made based on previous reporting. Following a reader friendly approach, the intensity of the challenge on the implementation period is presented supported by a traffic light system where red colour indicates the more relevance of the challenge during the period.

### 3.1 Leadership

A committed and constant leadership is essential for any municipal innovation.

During this period, EPIU project has evolved in leadership, there has been a swing in the way the implementation is led.

#### **A consortium that swings to keep leadership**

During this period, some organizational complexities have arisen. The project had been understood as a whole, and it was difficult to deal with the big challenge of energy poverty in Getafe. Constant consortium meetings and a feeling of a general blocking forced a new organizational model. The new controlling model is based on the "divide and prioritize" principle and tasks have been regrouped in three areas: data, energy poverty office and public procurement. New leaders have been designed and smaller and more approachable and doable tasks have been broken down with the aim of reducing procrastination and avoid deferring tasks.

Although this change responds to management issues, it shows a committed leadership from the consortium side as the team has been able to identify what was slowing down the implementation and has established new rules to continue with a good tone.

EPIU consortium has proved to be flexible and not a rigid structure that reacts to improve the implementation of the project.

#### **Local government bottom-up leadership**

During the first year of EPIU, there was an important top-down leadership coming from the local government. Even the Mayor of Getafe was directly involved in decisions affecting EPIU.

During this second year there is still a push coming from the highest levels of the government. However, new leadership is arising at local level.

From one side, there has been a more intense participation from different areas in the municipality such as social services or Human Resources. From the other side, a reinforcement in the capacity of EPIU unit with new employees and studies show potential incorporations in the data and IT sections, has let the project to start sowing a bottom-up leadership coming from the direct participants from the municipality.

#### **A legitimated leadership, a permanent challenge.**

This is a permanent challenge as the right and acceptance of a leadership needs to be constantly validated at all levels and all statements of the city. During this period new leaderships have emerged as stated above. However, it is a constant challenge that need special attention.

### 3.2 Public procurement

UIA projects will all tender contracts and procure services during the implementation phase. In the previous reporting period EPIU's project was not under the implementation stage yet so it was not identified as a major challenge. This has changed in the past months as the project is entering the operational phase and this is one of the most important claims within this period.

One of the risks previously identified was on the demand side. Implementing works at households, dwelling and neighborhood levels engaging people suffering a situation of vulnerability is complex. What if potential beneficiaries are not interested in the tailored measures? From discomfort caused by renovation works to tax complexities in case of receiving public grants are some of the reasons that may jeopardize the demand of the procured services and products.

### **Lean methodology as inspiration for public procurement**

EPIU team is addressing the challenge with the same approach and tools as other challenges in the project: implementing Lean methodology as the build-measure-learn feedback loop. In the case of public procurement this is translated into a minimum viable public procurement procedure to learn as quick as possible and adapt the final product to real conditions.

In real terms, this means that instead of two similar Grant's Call to implement measures at household level, there is going to be a first "minimum viable grant call" targeting only 20 beneficiaries in order to learn and adapt the final Call with more beneficiaries to reduce risks. This methodology is used in private companies and their products, but it is transferrable to public services. From Minimum Viable Policies to Minimum Viable Public Procurement, public sectors and in this case, local governments, can take advantage from the experience at private level.

This is an innovation in terms of public procurement that can be transferred at different levels if it works. Although it is soon to assess the impact of this methodology it is a coherent measure in line with the project.

### **3.3 Organizational arrangements within the urban authority (cross-department group)**

Energy poverty is a transversal social priority that affects different departments such as social services, housing, consumer protection, health, or emergency departments. Combining and coordinating these different areas are essential to effectively implement EIPU's integrated approach.

Getafe's units and departments work quite isolated and there is not a regular transversal culture so this is one of the most relevant challenges that EPIU will face. However, there are differences within periods.

EPIU has gained legitimacy after constituting PIOHS (Healthy households' Office point of advice)/OMHS

A lot of contacts have been made with departments since the beginning of the project. For example, the provision of data related to energy poverty, needed from specific departments of the municipality, was difficult at an initial stage. Within this reporting period EPIU set up the PIOHS (Healthy households' Office point of advice) that will become the Healthy households' Office in the coming weeks. This new service has changed the relation with the different departments as it is seen as an internal area of the municipal services. EPIU is not seen as an external project anymore but as an internal service thanks to the launch of the office and as an entity OMHS has started making links and establish relations with other departments.

### **3.4 Participative approach for co-implementation**

Covid crisis has transformed the level of importance of this challenge in EPIU project as during the design phase, the participative approach for co-implementation was not foreseen as a key challenge. However, the global crisis derived from Covid-19, affected all spheres of life. Getafe is a rich municipality in terms of community networks and active neighborhoods, but lockdowns and confinements did not help in the previous period.

#### **Use of existing city participatory channels**

All activities interrupted by COVID have been progressively reactivated. Furthermore, EPIU has started using existing city participatory channels such as the Neighborhoods Assemblies. In collaboration with the internal Getafe's Department on Action in Neighborhoods and Citizen Services EPIU is carrying out dissemination tasks, such as citizen participation actions at the neighborhood level (6.4 neighborhood actions to mitigate heat island).

This participation in the Neighborhoods Assemblies works bidirectional as not only EPIU is able to make citizens participate in the co-implementation of the project but also acts as a speaker to generate demand for PIOHS and later OHS.

#### **The existence of PIOHS (Healthy households' Office point of advice)/OHS has promoted participation**

The mere existence of a tangible public service helps the way participation is promoted. In the previous project EPIU was a potential project but with no tangible services to offer to citizens which made difficult the interaction with final beneficiaries. Today, the office is opened and offers real service to neighbors which makes easier the interaction.

#### **EPIU's delivery partners have shown they play a key role in the project's co-implementation**

It was mentioned on the previous reporting period, but the participation of real practitioners in the consortium has proved being an effective way to promote participation. On one side, ACA as an energy poverty practitioner has implemented the PIOHS and has direct contact with EPIU beneficiaries. On the other side, to have a local antenna of Red Cross in the project, as practitioners dealing with people suffering a situation of energy poverty, contribute to EPIU with their expertise on delivering support schemes for vulnerable people. Furthermore, both organizations are supporting the feed of data to university teams such as UPM and UC3M.

### **3.5 Monitoring and evaluation**

Monitoring and evaluation tools are important because only with the evidence of the results, urban authorities will be able to decide whether the tested solution has been effective. UIA projects need clear parameters that will tell urban authorities and local partners whether the experimental solution tested was successful.

In EPIU project, the Monitoring and Evaluation phase has not started yet because result indicators are primarily based on implementation. Therefore, there are no advancements on this stage.

However, the challenge of monitoring and evaluation is a permanent and intense challenge and will need to be approached without delay.

### **3.6 Communication with target beneficiaries and users**

The final aim of any UIA project is to improve the quality of life of citizens. This is of high importance in projects such as EPIU that tackles energy poverty.

Within this period, the challenge has been taken on from different sides:

#### **The experience of PIOHS (Healthy households' Office point of advice) in the integration of final user in the coming OHS**

Since the opening of PIOHS the contact with beneficiaries and users has become direct, constant, and real. Around 70 people have been assessed by the service and first household visits have been already delivered. Data and feelings of the service have been collected which represents valuable information for the design of the coming OHS which will be operative in the coming weeks. To have real information from the user of the service is key to design a more complex office.

#### **EPIU's general communication focused on people suffering a situation of vulnerability**

Until now, EPIU's communication strategy was designed to make EPIU known at general level so social networks, talks at conferences and press release centered the main communication actions. The challenge is enormous, and communication needs to launch at citizens' level. Therefore, some specific actions to deliver activities at neighborhood level have been planned from workshops to specific awareness campaigns in 2022.

#### **Communication to hidden energy poverty affected groups**

EPIU's ultimate objective is to identify, and tackle hidden energy poverty. The intelligent Unit will be the main tool to identify these groups. Until June 2022 the predictive model won't be ready so the challenge of targeting those affected from hidden energy poverty remains pending.

Other actions such as the activation of referrals with different municipal departments will make possible the identification of those suffering a situation of energy poverty

### **3.7 Up-scaling**

This is not a relevant challenge within this period. EPIU's adaptation to the unforeseen emergency situation may be of interest in the upscaling process. However, it is soon to evaluate to what extent it will contribute to the identification and management of energy poverty in urban areas.

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## **6. Conclusion**

EPIU is an ambitious project that is about to start the critical implementation phase. Above all the challenges, Covid appeared to add more complexity to the process but despite all, EPIU seems mature enough with start the operational phase with success. The project has already formalized a year of delay, but all deadlines and objectives have been revised so it does not represent an issue in terms of operativity of the project.

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Urban poverty

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