Cities' feedback on the application of selected indicators and monitoring procedure

FINAL REPORT & COUNTRY SNAPSHOTS
THE BUILD UPON² PROJECT

We are in a state of climate emergency. We must act now to reach net zero carbon by 2050 - and cities can lead the way. To get there, cities must unlock the huge potential of their buildings - and building renovation in particular.

Deep building renovation has far-reaching benefits for society as increasing indoor comfort and air quality avoids illnesses and premature deaths associated with living in cold and damp homes. This in turn reduces pressure on healthcare and social services.

The EU Horizon 2020 funded BUILD UPON² project will empower cities across Europe to join forces with national governments and industry to decarbonise their existing building stock by 2050. BUILD UPON² will strengthen the local effectiveness and implementation of the national building renovation strategies required by the EU Energy Performance of Buildings Directive (EPBD).

The learnings can be summarised under the following aspects:

RESOURCES AND STAFF CAPACITIES

One aspect that came up repeatedly was the lack of resources and staff capacities for implementing a tool like the BUILD UPON Framework. Many cities did not have the agency to allot specific financial resources, as those are often already tied up through the overall budget. Technical staff also saw a lack of awareness for the benefits of monitoring for renovation in the senior leadership and other departments. That made it challenging to get staff hours dedicated to it in a way it did not get just added to the workload of an already spread thin climate action officer or similar.

Overall the cities found it helpful to dedicate one person to coordinate the BUILD UPON Framework implementation and align it with already established monitoring and reporting mechanisms to avoid double work. They also recognised that the use of the tool would become less labour intensive over time as it easily could be integrated with different established processes such as the acceptance of construction works or interactions with tenants in a social housing setting. Further, the staff would benefit from targeted training and capacity-building activities to ease concerns and enable efficient and effective BUILD UPON Framework use.

STREAMLINING DATA AVAILABILITY AND MANAGEMENT

Data collection and management are at the BUILD UPON Framework's core. One main challenge here is data availability in general. Some cities faced data tied up on different governance levels or with private stakeholders such as energy providers. There is no simple way for the cities to access those data sets, which is additionally burdened with GDPR concerns. Another challenge was the lack of definition of some terms used for the indicator, such as energy poverty.

These challenges can be addressed by progressively introducing indicators as they come available. Nevertheless, political and policy action must also unblock dispersed data and harmonise the most common reporting and monitoring schemes. The introduction of digital tools for monitoring and managing the collected data can make a considerable difference in both the data and the staff capacity level.

PUBLIC AND POLITICAL AWARENESS

Not all cities shared a deep understanding of the multi-level benefits and profound impact of strategic renovation of the municipal building stock beyond the environmental focus. Social and economic indicators were the hardest to implement as they would need a higher degree of cooperation among different departments and external contractors. This lack of awareness also made it hard for the staff engaged in the project to formalise the implementation of the BUILD UPON Framework on city level.

Nevertheless, the cities also identified the powerful potential of the BUILD UPON Framework for data- and evidence-based advocacy and how they can use it to advocate for further funding. For example, it allows them to show proof of the potential impact of a specific measure. Also, looking outward, the data can be used to engage the tertiary and private building.
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With input from all Green Building Councils involved in the project and the BPIE

With more than 1,800 members spread across 27 European countries, Climate Alliance is the largest European city network dedicated to fair and comprehensive climate action.
1. Introduction

Challenges and lessons learnt from the BUILD UPON² BUILD UPON Framework's Testing Phase of both Pilot and Follower Cities.
1.1 BACKGROUND

As a Horizon 2020 funded project, BUILD UPON², and its partner organisations set out to develop the "BUILD UPON Framework - Capturing the Benefits of Renovation" (BUILD UPON Framework) - a multi-level renovation impact framework - to advance the EU’s goals around the decarbonisation of its building stock by 2050. This BUILD UPON Framework aims to support cities and municipalities in pro-actively shaping the design and implementation of deep renovation strategies and systematically assessing the potential and actual impact of different measures. That is possible through systematic and regular local data collection and assessment.

The BUILD UPON Framework brings a holistic approach to renovation initiatives by focusing on three key areas: environmental, social and economic. The environmental key indicators allow tracking emissions reductions, energy efficiency improvements, the uptake of renewable energy on both a project and city level and the overall annual energy renovation rate. The social key indicators look at thermal comfort and air quality and the reduction of energy poverty on city and project levels. Finally, with the economic key indicators, cities can assess the developments regarding local investment, jobs, training for renovation measures and financial savings.

To ensure usability and uptake of the BUILD UPON Framework, the project engaged cities and municipalities – many of the Covenant of Mayors (CoM) signatories – throughout the development of the BUILD UPON Framework. Velika Gorica (Croatia), Budaörs (Hungary), Dublin (Ireland), Padova (Italy), Rybnik (Poland), Valladolid (Spain), Eskişehir (Turkey) and Leeds (United Kingdom) were the initial cohort of Pilot Cities giving direct input and feedback during the BUILD UPON Framework development and prototyping the implementation of the same. In addition, a diverse second cohort of cities - the so-called Follower Cities - in the eight project countries had the opportunity to discuss the BUILD UPON Framework and highlight potential challenges and barriers they would face regarding the implementation and flag training and capacity building needs.

1.2 REPORT’S PURPOSE

The purpose of this report is to summarise the BUILD UPON Framework Testing Phase of BUILD UPO and collect learnings from both Pilot and Follower Cities that impacted the BUILD UPON Framework and the project as a whole. It will also allow for country-specific reflections and support further development and implementation of the BUILD UPON Framework beyond the project’s timeframe.

1.3 RELATION TO OTHER PROJECT'S ACTIVITIES

This report represents the core of the BUILD UPON² Work Package (WP) 4 “Testing and Applying the BUILD UPON Framework”. As such, it is vital to understand the needs of cities when engaging them in the BUILD UPON Framework implementation and inform the work done for Task 4.2, “Identify Training Needs of Local Authorities”. Furthermore, the definition of the final version of the BUILD UPON Framework, both the indicators and the definition of a methodology for reporting and monitoring the implementation of the BUILD UPON Framework (D3.3), utilises the feedback given during the Testing Phase. It also contributes to the definition of the policy recommendations (D4.5) and selection of mechanisms for D4.7 “Technical assistance: Local authorities needs and upcoming policy”. Finally, it references the potential integrations of the BUILD UPON Framework into the Sustainable Energy and Climate Action Plans (SECAPs) under Task 4.5 “Integration of BUILD UPON Framework in SECAPs”.

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**BUILD UPON FRAMEWORK CAPTURING THE BENEFITS OF RENOVATION**

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2. The BUILD UPON Framework Testing phase
A key element of BUILD UPON² and the focus of this report is the BUILD UPON Framework Testing Phase (Testing Phase) situated in the WP 4 under the lead of Climate Alliance (CA). CA was responsible for the overall conceptualisation of the Testing Phase and coordination of the outputs. In contrast, the national Green Building Councils (GBCs) interacted directly with the Pilot and Follower Cities and delivered meetings and workshops on the local level.

The general purpose of the Testing Phase was to gather teams of multi-disciplinary city officials to evaluate the BUILD UPON Framework and pilot its implementation on a city or project level. The expected outcomes were recommendations to the indicator selection, their scope and the connected methodology, training and capacity building needs and potential barriers and challenges to local implementation of the BUILD UPON Framework.

The overall Testing Phase was structured in three phases. For the initial phase – the first round of Pilot City Workshops – each national GBC engaged with one Pilot City in their country and hosted a workshop/meeting on the BUILD UPON Framework’s (D2.8) usability in the real-life context. The second phase is a continuation of phase one and the work with Pilot Cities, focusing on assessing initial implementation attempts across the project and planning a road map to full implementation in each Pilot City. Finally, the GBCs recruited up to four additional cities generally interested in the BUILD UPON Framework and its implementation for the third and final phase. These Follower City Meetings aimed to promote the BUILD UPON Framework and get other input on training and capacity building needs and challenges and barriers to the BUILD UPON Framework implementation.

2.1 Pilot City Workshops - Phase 1

The first series of Pilot City workshops were held in the eight Pilot Cities – one per each of the project countries - between September and December 2020. This workshop series aimed to test an earlier version of the BUILD UPON Framework and the proposed indicators on actual initiatives at the local level. Further, it sought to understand the cities’ Level of Readiness (LoR) in pursuing building renovation initiatives. Where possible, the BUILD UPON Framework’s suitability in terms of data availability and the impact of the information provided by the indicators to improve the everyday practise or business-as-usual was tested in a real-life scenario.

To bring all relevant municipal services into the discussions and assess the BUILD UPON Framework’s suitability, different departments and different levels of the public administration were invited to contribute during the workshops. The following is a (non-exhaustive) list of departments that were involved:

- Urban/Regional Planning
- Building and Energy (energy management and construction of municipal buildings)
- Climate Protection and Sustainability
- Statistics and IT
- Public Health
- Social Services
- Economic Development

In light of the COVID-19 pandemic, the workshops were held either in person or online. If held online, the workshops were usually split into two half-day meetings. Two sessions took place in person, and six were held as online meetings.

2.1.1 RESULTS’ SUMMARY

The results of the first round of Pilot City workshops can be clustered around the following questions:

- **Is the indicator useful to capture the results of the initiative and to support qualitative decision-making?** If not, what could be an alternative, what is needed?
- **Is sufficient data available to support the monitoring of the indicator in the long term?** If not, what are the main reasons and what is needed to collect the data?
- **Do you have an adequate monitoring system (e.g. a digital tool) in place to collect, store and process the data?** What would be needed?
- **Do you have sufficient and qualified staff to operate the data collection and processing in the long term?** If not, what would be needed?

THE USEFULNESS OF THE BUILD UPON FRAMEWORK

The BUILD UPON Framework is considered a valuable tool to support building renovation at the city level across participating countries. Several opportunities are attached to this purpose, including making sure that building renovation becomes or remains a political priority at the local level, engaging in peer-to-peer exchange with Pilot Cities and creating opportunities for interaction between and among municipal departments. However, the BUILD UPON Framework was also seen as ambitious. During the discussion, it became clear that implementing the BUILD UPON Framework requires additional work and resources for the local administrations, besides clarifying several indicator definitions and methodological proposals. Additionally, cities raised the interest of testing the BUILD UPON Framework initially only on a project level.

DATA AVAILABILITY, OWNERSHIP, AND QUALITY

Capturing the necessary data for the indicators was seen as the main challenge in implementing the BUILD UPON Framework. Nonetheless, there are differences between the Pilot Cities concerning the collection of environmental, social and economic indicators. Most Pilot Cities at this point can collect sufficient data on environmental indicators for municipal buildings. In contrast, data for social and economic indicators and, in general, for private and tertiary buildings is scarce or not yet collected in most cases.

MONITORING SYSTEMS

The eight Pilot Cities start from different local and administrative conditions. Therefore, several monitoring systems were highlighted as opportunities to create for implementing the project’s proposed BUILD UPON Framework. Regarding the environmental indicators suggested, these are to be only monitored or are planned to be observed shortly in several Pilot Cities, with linkages to the CoM Reporting BUILD UPON Framework.

When it comes to the social and economic indicators proposed by the project, several key challenges were identified by the Pilot Cities. The most relevant one is that there is no comprehensive monitoring system to capture the progress made on all the proposed social and economic indicators.

Due to a lack of incentives regarding data collection, cities struggled to justify the allocation of staff and resources to this task. It is further intensified by the scarcity of resources and multiple pressures already existing on local authorities. Another challenge is the lack of definition for the
social benefits, which risks the exclusion of the social indicators from the BUILD UPON Framework implementation in many cases.

**STAFF RESOURCES**

The eight Pilot Cities taking part in the BUILD UPON² project show different organisational structures (i.e., Municipal Services and Departments) and sizes in terms of geographical extension, population and resources. Several Pilot Cities have established Departments and staff dedicated to collecting data related to specific indicators enclosed in the Impact BUILD UPON Framework, which provide essential opportunities, especially for the environmental indicators.

Despite the positive developments described above, most Pilot Cities highlighted challenges in relation to staff availability to implement the Framework. Most specifically: a) the need for additional staff resources or dedicated cross-sectoral Departments within the City Councils; b) the need for training on data management of public or private buildings, and c) the need for training on data management at city or project level, especially in the manipulation of EPC data.

**2.2 PILOT CITY WORKSHOPS - PHASE 2**

Due to the continuing COVID-19 pandemic, which in 2021 limited the possibilities to gather in person, most GBCs opted to hold the second round of pilot city workshops online. In some cases, the workshop was spread into two half-days. Others concluded full-day meetings. Only GBC Croatia held the workshop in a hybrid format, gathering city representatives of Velika Gorica in person and bringing in representatives of interested followers through Zoom.

With the second round of workshops, the project aimed to empower Pilot Cities further using the BUILD UPON Framework. It was done according to the Level of Readiness (LoR) of the Pilot Cities:

- **LoR1:** Discuss a progressive Strategy/Roadmap to implement the BUILD UPON Framework at the city level progressively;
- **LoR2:** Pilot the BUILD UPON Framework on real-life projects, including gathering data for the indicators proposed and understanding to which extent these data can be monitored over time;
- **Combining LoR1 and LoR2:** Focus on project-level data analysis in the first half of the workshop and discuss a broader Strategy/Action Plan in the second half.

Consequently, the preparation of the Pilot City workshops depended on the LoR that the Pilot City was at. Therefore, for the Pilot City to be prepared to discuss either a strategy/roadmap to be able to implement it in the future or the piloting of the BUILD UPON Framework on real-life projects, it is essential that they had sufficient time to engage with the strategy/roadmap (LoR 1) or the selected projects (LoR 2) before the meeting.

Tailored to the Pilot City’s needs, the workshop was addressed to the city’s administrative and political levels. That included technical staff in charge of project development, political team, and national government representatives (the latter, if needed and felt necessary). The list of engaged departments was similar to the first round.

**2.2.1 SUMMARY OF THE RESULTS**

The results of the second round of pilot city workshops can be clustered around the following questions:

- **LoR1:** Discuss a progressive Strategy/Roadmap to implement the BUILD UPON Framework at the city level progressively;
- **LoR2:** Pilot the BUILD UPON Framework on real-life projects, including gathering data for the indicators proposed and understanding to which extent these data can be monitored over time;
- **Combining LoR1 and LoR2:** Focus on project-level data analysis in the first half of the workshop and discuss a broader Strategy/Action Plan in the second half.

As the Pilot Cities of BUILD UPON² operate in significantly different contexts and are on various stages of the roll-out of energy efficiency and renovation measures, they rank on different Levels of Readiness.

Two cities are in progress to implement the BUILD UPON Framework on a city level. Both orient themselves along with the data collection necessary for SECAP and other strategies in their contexts. Consequently, they have experienced challenges with the amount of data and the extensive staff hours needed. As an answer, they looked into different options of cooperating with external partners, e.g. piloting data management software.

The second group of cities has already tried or is planning to work with the BUILD UPON Framework on concrete retrofit projects. This approach to the implementation allowed the cities to identify existing and missing data sets concretely. The environmental indicators and economic indicators 1 and 2 are proven as the least complicated. In most cases, collecting data for the social indicator was only partly or not at all possible. Nevertheless, qualitative methods such as the Leeds Contractor and Occupant Questionnaires were welcomed with much curiosity.

The final group are cities where the national context does not yet give vital guidance on renovation initiatives and the connected data or a lower level of public and political buy-in. As a result, these cities were only able further to explore potential challenges for data collection and management.

**INTEGRATION INTO EXISTING OR PLANNED PROJECTS AND INITIATIVES ON THE CITY LEVEL**

All BUILD UPON² cities are engaged in different sustainability measures in regards to their municipal building stock. Most of them are CoM Signatories and, therefore, are or starting to be involved in the reporting for their SECAPs. Further, many of them are part of other pan-European initiatives and projects such as the EU City Facility (EUCF), the Agenda 2030 SDGs, and national reporting efforts.

Even though many do not aim to integrate or harmonise the use of the BUILD UPON Framework into the CoM SECAP reporting, it has been pointed out as a worthwhile option long term. Interesting is that the focus of those initiatives seems to correlate with the LoR and status-quo of the overall retrofit approaches on a national and city level. Some cities focus more on overhauling systemic measures such as the energy grid and share of renewable energy sources. Others prioritise social housing retrofits on a holistic level or just upgrading parts such as heating or ventilation systems.

**NEXT STEPS AND LONG-TERM PERSPECTIVE**

As different as the starting points of the Pilot Cities, so were their commitments to the next steps. Nevertheless, all saw a huge opportunity to link the implementation of the BUILD UPON Framework to the roll-out of other initiatives such as ISO 50001 systems or within the context of SECAP reporting.

Those cities exploring the implementation on a City Level are those that have the most concrete action steps. Here the project expects already first deep analysis of the BUILD UPON Framework’s impact by the
turn of the year with the cities’ annual reports. Other cities are foreseeing a political validation of the planned implementation by the end of the year. Finally, one city wants to test the BUILD UPON Framework on a Project Level, selecting only those indicators relevant for the specific project.

This diversity of approaches is the strength of the BUILD UPON Framework as presented by BUILD UPON². It allows cities to utilise the flexibility regarding its implementation to a point where it is relevant and valuable for their context. Nevertheless, it also points out that municipal building retrofit efforts are still in very different stages. All the Pilot Cities indicated that the biggest challenge to advancing the BUILD UPON Framework implementation is the lack of funding and staff capacities. Therefore, a digital tool to support data collection and management is considered vital by most cities.

2.3. FOLLOWER CITIES WORKSHOPS

The Follower City workshops compared to the Pilot City workshops varied both in scope and content. Based on the BUILD UPON², the scope of the meetings with the 24 follower cities was as follows:

AIMS:

- Familiarise with the BUILD UPON Framework proposed and approaches to its implementation;
- Portray the opportunities linked to the use of the BUILD UPON Framework, including supporting progress in tracking and showing tangible results in building renovation, increasing investment efficiency and mitigating energy poverty;
- Map capacities, training needs and responsibilities in the city/municipality regarding the implementation of the BUILD UPON Framework.

OBJECTIVES:

TANGIBLE OUTCOMES RELEVANT FOR PROJECT PROGRESSION:

- List/map critical barriers, challenges, and existing opportunities/possible solutions to implement the BUILD UPON Framework at the project or city level.
- List of concrete needs regarding resources, training and capacities for the implementation of the BUILD UPON Framework.

Nevertheless, many GBCs used the workshops to promote the BUILD UPON Framework and explore potential roadmaps for the individual cities, similar to what was done in the second round of pilot city workshops. In some countries, the partners faced challenges in recruiting the expected number of Follower Cities due to different factors such as the ongoing COVID-19 pandemic and low uptake due to restrictions on municipal spending for retrofits.

2.3.1 SUMMARY OF RESULTS

Much of the feedback received by the Follower Cities echoes one to one what has been already collected from the Pilot Cities. Nevertheless, focusing on the core purpose of this part of the Testing Phase, the results of the Follower City workshops can be clustered around the following question:

What are the training and capacity building needs cities indicate for a successful BUILD UPON Framework implementation?

TRAINING AND CAPACITY BUILDING NEEDS

Overall, the municipal staff’s training and capacity building needs can be divided into three skill and knowledge groups - project, BUILD UPON Framework, and general skills.

Project level learning needs can be addressed through different aspects of the BUILD UPON² project in itself. Primarily, Follower Cities were interested in learning from other cities involved in their country but also beyond. There is a rich well of good practices and innovative approaches to challenges among the participating cities. The second aspect that could be addressed from the project’s learning is uncertainties around national and European governance and support structures for building retrofits and long-term renovation strategies.

Training needs regarding the BUILD UPON Framework are especially significant when it comes to the social indicators and the job market related economic indicators. As they go beyond what is typically assessed for the impact of building interventions, there is an apparent lack of understanding and comfort to engage with the related methodology. Some of the cities further indicated the need for training on adapting or expanding the BUILD UPON Framework for the local realities and integrating the BUILD UPON Framework into existing reporting responsibilities.

Finally, all cities asked for in-depth training on data collection and management on the general skill level. In addition, they raised concerns regarding data acquisition across multiple governance levels, structured but simplified data input and visualisation and GDPR and data ownership, among others. Finally, they were interested in learning more about data-based advocacy and promotion and external stakeholder engagement.
3. Implementing the BUILD UPON Framework
The BUILD UPON project proposes to address one of the main barriers limiting the proper public management and consequent upscaling of Deep Energy Efficiency Renovation: the lack of an adequate, widely shared Impact BUILD UPON Framework. It contains a suite of milestones and measurable progress indicators for building renovation strategies, integrating data and insights from the city level.

The Testing Phase with the different Pilot and Follower Cities across the eight projects countries has benefited from the following good practices around the BUILD UPON Framework implementation and unearthed local challenges and needs.

Check here for the full report on the last version of the BUILD UPON Framework, its overall methodology, and national adaptations.

3.1 INDICATOR SELECTION AND PROGRESSIVE INTRODUCTION

The BUILD UPON Framework is made up of two sets of indicators:

- The 13 core indicators that are intended as the group of indicators needed to complete a full analysis of the impacts of building renovation activities and are common across all localities and complimented by national indicators where relevant;
- The non-core indicators are intended as secondary indicators to address relevant priorities across all countries involved in the project. Non-core indicators are also additional indicators relevant to analysing impacts with data and information of non-primary relevance.

Both sets are formulated as national progress and local progress indicators to indicate the type of data needed to support the indicators and at which scale is referred the specific impact. The project has developed an extensive methodology for assessing the core indicators, which are evaluated on a main metric level and offer optional sub-metric assessments. Furthermore, the indicators are classified according to their reference category: environmental, social and economic indicators to address particular goals contributing to European priorities.

The separation into core and non-core indicators is based on the urgent feedback of Pilot Cities during the first round of workshops to not overload the administration with high-demand data collection and procedural challenges. This concern can represent a significant barrier to advancing the BUILD UPON Framework's implementation beyond the project's scope.

Cities implementing the BUILD UPON Framework can start by assessing only a selection of the core indicators based on local relevance due to the BUILD UPON Framework's modular nature and then introduce additional ones progressively as they grow more familiar with the methodology. It will still allow them to gain a more and more holistic overview of the impact of their retrofit initiatives. Once they are familiar with the processes and required data, they can progressively introduce some of the non-core indicators (where relevant) to complement and deepen their understanding. It needs to be mentioned again that there is currently no methodology developed for those.

3.2 LEVELS OF READINESS

Considering the results of the first Testing Phase and the goals the project set out to achieve, it was proposed that the Pilot Cities explore the BUILD UPON Framework implementation on two different Levels of Readiness (LoR 1 & 2) – City or Project Level. The choice between these two levels additionally counteracts the concerns mentioned above and the need for flexibility by allowing a further gradation for the BUILD UPON Framework implementation approaches.

3.2.1 CITY LEVEL – LOR 1

Cities choosing LoR 1 aim to mainstream the BUILD UPON Framework across all renovation measures implemented among the local authority’s building stock. Therefore, it is generally advised to develop a strategy to implement the BUILD UPON Framework in each Pilot City. The following steps are a suggestion tested in some of the LoR 1 Pilot Cities:

- Step 1 – Setting the critical conditions for the BUILD UPON Framework to be put into practice, including responding to the following questions:
  - What is the appropriate scale for the BUILD UPON Framework to be implemented in the city (e.g. at the project and/or city level)?
  - What types of actions or step-wise methodology need to be put in place to implement the BUILD UPON Framework in the future?
  - What formal process of adopting the BUILD UPON Framework should be put in place (e.g. MoU/council decision)?

- Step 2 – Define the City Council's structures supporting the implementation of the BUILD UPON Framework and define and build the internal infrastructure behind the BUILD UPON Framework with the Pilot Cities to have the BUILD UPON Framework up and running and build the necessary buy-in from senior management and decision-makers. To ensure that the BUILD UPON Framework will be used to guide decision-making in the future, there is a need to define a process through which that is possible. It includes answering the following questions:
  - What roles and responsibilities of staff need to be defined?
  - What systems for data collection and monitoring need to be adapted/put in place?
  - What are the key steps to get senior management and political support for the BUILD UPON Framework to be used?
  - What would be needed to ensure the long-term application of the BUILD UPON Framework?

3.2.2 PROJECT LEVEL – LOR 2

Cities deciding to work with LoR 2 pilot the BUILD UPON Framework on real-life projects. The condition for this approach is that the city has selected one or two projects representative for building renovations that are ongoing or upcoming within the municipality. By working on specific renovation projects, the cities will be able to:

- Step 3 – Establishing partnership agreements or liaisons with other administrative levels and external stakeholders and defining a way to include different administrative levels (e.g. regional/national level) or external stakeholders (e.g. service providers, banks) to support data collection and share responsibilities in terms of long-term monitoring of specific indicators. That also includes establishing a link with the national LTRS coordination and other national reporting requirements to work towards using the BUILD UPON Framework as a reference for the implementation and follow-up of the LTRS.

- Step 4 – Identifying the conditions for the BUILD UPON Framework to be included in existing strategies. For example, if local climate (e.g. SECAP) or renovation strategies are available, integrating the BUILD UPON Framework will be essential to generate the necessary buy-in. Even though this process might not be entirely straightforward at the workshop, it is important to scope the required steps.

Test to what extent data can be gathered across the environmental, social and economic indicators identified, distinguishing between actual and calculated datasets and deciding which indicators will be applied for the selected projects.

Test which indicators are already monitored – through the use of existing local, regional or national databases –
and to what extent other monitoring systems can be brought together for pursuing of implementing the BUILD UPON Framework;

Understand the extent to which the BUILD UPON Framework could be sustained within the services of the municipality beyond the duration of the project, including potential adjustments to staff/budget;

Understand the extent to which the BUILD UPON Framework could be up-scaled from the initial level to the whole city, in line with the objectives of the Long Term Renovation Strategy, SECAP and the EU Renovation Wave.

LoR 2 is ideal for cities uncertain about the relevance and usability of the BUILD UPON Framework for their local realities. They can utilise the BUILD UPON Framework’s methodology on a small scale without rearranging internal processes or handling excessive data.

3.3. LOCAL NEEDS AND CHALLENGES

Based on the Testing Phase, we identified the following local needs and challenges for the implementation of the BUILD UPON Framework as well as broader municipal renovation strategies. However, it is relevant to mention that the levels in both Pilot and Follower Cities were very different. Therefore, not all needs and challenges apply equally in each of them. For a more detailed analysis, please refer to the National Snapshots in the next chapter.

RESOURCES AND STAFF CAPACITIES

All BUILD UPON cities identified significant challenges for the implementation based on lack of resources and staff capacities. That manifests on three levels. The first two were financial and structural. Often the overall processes for the use of the BUILD UPON Framework were significantly disjointed. It was unclear which departments or concrete staff members were responsible for certain aspects in some cities, and engaged city representatives were uncertain how to increase cooperation.

One clear suggestion to overcome this was to find one dedicated person among the municipal staff responsible for the BUILD UPON Framework’s handling. Nevertheless, that was identified as a surprisingly challenging option as it would mean additional work for an existing position or the employment of a new one. Moreover, cities could neither see the needed resources nor the necessary political will for that.

Thirdly, on skills and technical capacity level, some cities stated that there were significant needs for specialised training to ensure correct handling of the data assessments needed to utilise the BUILD UPON Framework’s potentials.

STREAMLINING DATA AVAILABILITY AND MANAGEMENT

As data collection and management are at the BUILD UPON Framework’s core, the cities engaged reflected extensively on this aspect. One main challenge here is on which governance level the data is available and the uncertainty if the cities have access to all needed data to feed the BUILD UPON Framework. For example, the necessary data regarding energy poverty might not even be collected in some project countries, as this term is not defined on a national level. Furthermore, a connection to the buildings as a contributing or corrective factor was not established where population data was collected. Additionally, the long time intervals between consecutive assessments of some data sets impede the consistent monitoring via the BUILD UPON Framework. It is enhanced by the staff turnovers or outsourcing so that the initial intent to monitor data on a particular initiative loses focus.

Another challenge is data management within the cities. Only a few have systematic ways of assessing, sharing and storing data. In some cases, data was collected by hand, and the format and processing software utilised in different departments varies significantly. Moreover, smart meters and other automated solutions are only sparsely available. A digital adaptation of the BUILD UPON Framework that makes the use of Excel spreadsheets obsolete and automatically populates with data sets from different sources would increase the implementation rate and, therefore, the impact of the BUILD UPON Framework significantly.

An exciting and promising approach is already piloted in Valladolid and Zaragoza with its cooperation in developing the REHAVIVA tool.

PUBLIC AND POLITICAL AWARENESS

Some of the BUILD UPON cities have pointed out that a lack of awareness for the relevance and potential impact of strategic renovation of municipal building stock exists in their context. That is true for policymakers, senior management and the general public. Consequently, it is hard for the staff engaged in the project to advocate for the implementation of the BUILD UPON Framework. Additionally, cities stated that even if there is buy-in on the municipal level, an extension of the BUILD UPON Framework to the private and tertiary sectors is highly challenging due to public disengagement. Here one of the enormous potentials of the BUILD UPON Framework for evidence/data-based advocacy is only identified by a few of the project cities.

The lack of awareness in the public sector also poses additional challenges for assessing and recognising the Social Indicators. For example, when it comes to the inquiring thermal comfort of citizens in public housing, a deeper understanding of the direct relevance of the building sustainability and energy efficiency on the inhabitant’s life might ease this process. For these indicators also the municipal staff indicated a lack of relevance. It, in part, is because some of the terms - especially Energy Poverty - are not official defined or mainstreamed. Here a comprehensive European standardisation might prove beneficial.

TAILORED AND ACCESSIBLE FUNDING SCHEMES

The process of refining the BUILD UPON Framework in cooperation with the Pilot Cities has shown repeatedly that complexity and the connected workload are the biggest obstacles for every kind of initiative. Constraints posed to municipal budgets has, in many cases, led to insufficient staffing overall and high workloads for the individual employee. That also represents a substantial obstacle for cities to apply for existing funding schemes. Often the complexity and extent of the preparation for an application deter cities from pursuing such opportunities.

On the other hand, some cities mentioned that existing funding schemes do not match their needs for strategic municipal retrofits. For example, there were contexts in which funding for specific interventions such as ventilation modernisation was unavailable. Further, cities criticised that funding for retrofits in many cases does not cover costs for additional staff or capacity building. To overcome this, funding schemes need to offer cities a certain degree of flexibility to adjust to the present local realities.

Closing it needs to be emphasised that all these challenges are interconnected and need to be addressed as a whole. Policy and funding makers have to have top of mind the additional burden potential initiative can implicate for municipal administrations and staff at all times. Therefore, it is highly recommended to consult municipal contacts from the ideation on. Using the BUILD UPON Framework on a project level could help establish a business case for future retrofits projects and therefore affect and shape funding opportunities in the future.
4. National Snapshots
31 local authorities in 8 project Countries

Click on the Countries to download the single Snapshots.
Final report on cities’ feedback on the application of selected indicators and monitoring procedure

All of the cities involved agreed and suggested integrating the BUILD UPON Framework with national data monitoring tools for the energy performance of buildings: SMIV (System for measuring, identification and verification of energy performance) and ISGE (Energy Management Information System).

ABOUT CROATIA GREEN BUILDING COUNCIL

Croatia Green Building Council was founded in 2009 as a non-profit, non-governmental organisation with a mission to become a nationwide platform for promoting sustainable building practices. Croatia GBC function on consensus base, wherein all activities are initiated and managed by its members and partners to create a platform for the implementation of green building principles, not only in Croatia but also in the region of Central and Eastern Europe, through close cooperation with the network of GBC’s in neighbouring countries.

CONTACT INFORMATION
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COUNTRY DATA AVAILABILITY:

Croatia shows a high level of displacement of quality data, which represents a significant challenge when measuring the quality of the indicators within the BUILD UPON Framework, which was recognised as one of the main issues. Furthermore, although specific indicators’ quality and measurable data exist, it is often unavailable because different sources hold the required data. Therefore, any search of the needed data and information would require ample time to contact all the data holders, considering that there is often no unique database.

An additional challenge noticed was the lack of potential to compare the data. Such occurrence is most often when it comes to environmental indicators. Because of data not being collected regularly, nor under the same source, even if new data is being successfully gathered, it would be extremely challenging to compare it with the previous state and therefore achieve a clear image of the success or progress.

Read more here

THE BUILD UPON FRAMEWORK IMPLEMENTATION IN CROATIA

The Croatian Pilot City Velika Gorica decided to explore the implementation of the BUILD UPON Framework on a Project Level. They chose to pilot it on the retrofit of the elementary school Nikola Hribar in Velika Gorica. This project had a high financial investment but faced challenges during the realisation. The existing gas heating system was replaced with a more efficient one.

Analysing the individual indicators, the city pointed out that it was only possible to collect data for some indicators and formulate ideas for dealing with some of the missing ones. The second and third environmental indicators data was readily available as it was also needed for permits and funding. For Environment 1, the national benchmark was missing, and for the fourth one, they could not install sensors. As a result, none of the social indicators could be assessed, and of economic indicators, only a benchmark of the second.

Overall, the implementation of the BUILD UPON Framework might at the current moment only be possible on a limited scope as too many external factors such as missing national definitions or benchmarks or insufficient funding shrink the possible data sets. However, that does not indicate that Croatian cities are not advancing other aspects of sustainable development and energy efficiency.

Follower Cities have experienced similar challenges when it comes to analysing the implementation possibilities of the BUILD UPON Framework. Most have recognised environmental indicators as possible for data collection, primarily from the energy certificate, but data comparability to identify the effects is lacking. Zagreb and Karlovac highlighted the aspects of earthquake resilience, especially after several earthquakes between March and December 2020. Also, measuring and implementing indicators on renovation projects focused on cultural heritage buildings was challenging because of significant restraints posed by conservation bodies.

Read more here

COUNTRY DATA AVAILABILITY:

HUNGARY

Data availability proved difficult. While data for municipal buildings can be provided, residential and commercial buildings prove challenging. Data related to residential buildings could be partially collected through the funding system announced yearly for residential properties. Over time, the growing data set would allow extrapolation to the entire residential building stock.

The most critical data is commercial buildings, where cities have neither direct control nor funding to ensure a capillary collection. Data collection at the national level from multiple sources (such as statistics, national public and private funding schemes, etc.) was significant, especially for the residential sector. However, including it in the overall data management would require additional resources.

Read more here

THE BUILD UPON FRAMEWORK IMPLEMENTATION IN HUNGARY

The Hungarian Pilot City Budaörs decided to explore a roll-out for the entire municipal building stock in the context of the extension of the ISO 50001 system and the issuing of EPCs. Nevertheless, before this can take place, there are several obstacles to overcome.

Like many cities in Hungary, Budaörs is negatively affected by a spending freeze for municipalities. That makes it nearly impossible for them to allocate staff and resources to an extensive reporting and monitoring measure as needed for The BUILD UPON Framework implementation. They can build on the existing monitoring software EMS for the environmental and some of the economic factors, but the collection, even with it, would be manual and time-intensive. Despite the difficulties, Budaörs envisions
Final report on cities’ feedback on the application of selected indicators and monitoring procedure

monitoring data in all municipal buildings by 2022 and setting up the organisational BUILD UPON Framework. Further, much of the data is disjointed and only available at certain governance levels. Therefore, the participants have committed to a three-step process in the second Pilot City Workshop: 1. Setting the condition for the BUILD UPON Framework to be put in practice, 2. Define Mayor’s Office and city companies organisational structure for implementation, and 3. Establishing partnerships and liaisons, especially with energy service providers.

The Follower Cities stated similar challenges. It became clear that besides the financial, technical and human resource needs, specialised training and an intelligent data collection and management system could help to speed up monitoring results of energy renovations. For improvements around the social indicators, partnerships of data sharing with energy service providers are recommended as well as occupier surveys to complement this with data obtained on small samples. E.g. for actual energy use or indoor air quality. Additional indicators could be added later, but initially, the focus should be practical and feasible.

All the indicators that were suggested must be cross-referenced to existing local and national policies, targets, and legislation.

For instance, references to the National Climate Action Plan renovation targets must be added. Read more here.

Hungarian Follower City Budavár is one of the cities to implement the BUILD UPON Framework on a city level and integrate it into its SECAP. Also, two additional cities (Erzsébetváros, Zugló) decided to use the BUILD UPON Framework to monitor their building stock retrofits adopted in their Climate Strategies.

ABOUT HUNGARY GREEN BUILDING COUNCIL

The HuGBC has been bringing together the actors of the real estate sector and the housing industry for more than ten years. Its mission is to disseminate environmentally responsible and economically profitable construction practices through professional and social cooperations and create the necessary market, educational and legislative conditions. The HuGBC also relies on international experience, bringing strategic principles, methodology, and practices to the forefront in Hungary. The Council has 114 members as of 2021 October.

CONTACT INFORMATION

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Henrietta Budai  Secretary-General

IRELAND

Pilot City:  Dublin City
Follower Cities:  Cork City, Kilkenny, Laois County, Offaly County

COUNTRY DATA AVAILABILITY:

To be successful in Ireland, the BUILD UPON Framework must suit local authorities and the central government’s needs. It must also add value to their actions. It could, for instance, be used to improve transparency, engage with key stakeholders, and ultimately drive change.

The balance between the development of reliable data that can support policy and simplicity of use was extensively discussed. The lack of data and the lack of resources to capture quality data may be an issue. To deal with this challenge, the BUILD UPON Framework must be efficient and easy to use. One suggestion was to use as much as possible existing data and possibly to complement this with data obtained on small samples.

Dublin, the Irish Pilot City, applied the BUILD UPON Framework retrospectively at the project level on the Energy Performance Contract project by Codema (energy renovation of leisure centres). As a result, they successfully gathered data for Env 2 and 3 and the economic indicators 1 and 5. However, due to its retrospective nature, it was not possible to add additional indicators. Still, it was made clear that it would have been possible to aggregate other data if resources had been allocated to this process.

Dublin is committed to trailing the BUILD UPON Framework in 2021 on different social housing retrofits. Should that prove effective and relevant, a roll-out to all municipal retrofits by 2025 is the target and will integrate the next development plan for private projects by 2026.

A similar picture came out of the Irish Follower Local Authority Workshops. The four local authorities confirm interest in initially using the BUILD UPON Framework for their social housing retrofit projects and perhaps rolling it out for the entire residential sector later. The environmental indicators are evaluated as easy to measure, whereas social and economic present different challenges and barriers.

All local authorities said that if they had to report on the BUILD UPON Framework indicators at the national level (either as part of their reporting on the Climate Action Plan or to access funding), they would be more likely to use the BUILD UPON Framework and allocate resources to its use.

ABOUT IRISH GREEN BUILDING COUNCIL

IGBC is the leading authority on sustainable buildings in Ireland. With a network of over 250 member organisations, the IGBC is working to transform the Irish construction and property sector into a global leader in quality and sustainability. The mission of the IGBC is to educate and advocate for a more sustainable built environment. To support Ireland’s transition to a low carbon economy, the IGBC has also developed the Home Performance Index (HPI), Ireland’s first national certification for quality and sustainability in new residential developments.

CONTACT INFORMATION

Marion Jammet
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indicators per initiative in each chapter. They aim at assessing the outcome of each action. Many BUILD UPON² environmental and economic indicators have been included here. Secondly, Impact indicators are cross indicators that measure the plan’s effectiveness in each sector (built environment, mobility, infrastructures.). The BUILD UPON² framework is going to be almost completely integrated into this set of indicators. The municipality is currently working on the development of a SECAP reporting procedure that includes the impact indicators.

ABOUT THE GREEN BUILDING COUNCIL ITALIA

GBC Italia is a non-profit association of the companies, associations and professional communities operating in the sustainable building segment. It promotes a process of transformation of the Italian building market through communication activities, advocacy training, research and the promotion of third party certifications and its certification protocols (GBC Tools) developed for the specificities of the Italian market.

CONTACT INFORMATION

Secretariat

COUNTRY DATA AVAILABILITY:

Data for the calculation of most environmental and economic indicators are potentially available in Italy from different sources. One of them is national subsidies for building renovation. So far, municipalities have requested these data to the public entities to mainly prepare SECAP’s BEIs or other local plans. Specific agreements are needed for a continuous flow of information and data from national entities. Data can be collected from documents and templates submitted to receive building and renovation permits and other procedures at the local level. To simplify data collection and elaboration, municipalities need to develop internal databases where all offices upload data and final users and professionals can upload directly. This bottom-up approach for data collection would reduce the effort of the municipality's staff on data collection. In addition, local utility companies (energy services, water services, etc.) and large suppliers at the national level hold data about consumption and payments of bills that could be very beneficial for some framework indicators. However, with the free market regulation, the choice of the service provider is more and more scattered in every territory. Therefore, a national regulation that obliges companies to share data with local authorities to improve local policies would be beneficial.

Social indicators were considered more difficult to collect as a definition, and a methodology does not support energy poverty calculation at the national level. There is no specific regulation for indoor comfort parameters’ assessment on site. Dealing with the issue through questionnaires, as suggested by the experience of the city of Leeds, is considered time-consuming and too expensive.

Read more here

THE BUILD UPON FRAMEWORK IMPLEMENTATION IN ITALY

From the meetings held with Italian cities of the project, three significant pieces of advice came out. Italian cities are already called to answer several environmental indicators (Urban Ecosystem, ISTAT). The BUILD UPON Framework should be aligned to optimise the effort of cities in monitoring and reporting. Many data are already available, but there is the need for a local digital database to collect, elaborate and share data for the reporting purposes of the municipality. Agreements with public entities and private organisations holding data at the municipal level are necessary to facilitate a regular flow of data to the municipality for supporting the monitoring of indicators.

The Italian Pilot City Padova is one of the cities to implement the BUILD UPON Framework on a city level by integrating it into their SECAP reporting into two chapters of the document: “A more efficient city” and “A more resilient city”.

BUILD UPON² indicators can support both the implementation and monitoring of the SECAP. Two sets of indicators have been identified. First, as Result indicators, two

COUNTRY DATA AVAILABILITY:

Monitoring of the effects of building renovation in Poland is practically non-existent. The long-term Renovation Strategy, which has not been officially submitted, shows a lack of reliable data on existing building stock. It makes it impossible to track and control the progress of renovation in Poland vs EU targets and the comfort of users, which has been completely neglected until now. The BUILD UPON Framework is a perfect tool to help change this.

It is optimistic that municipally-owned buildings are sufficiently monitored when it comes to their environmental performance. There are often pre and post-renovation audits or EPCs issued, which help calculate the results achieved. Also, more and more municipalities have started to collect data from their buildings’ managers on actual energy consumption. Of course, at the same time, expenses incurred for renovation are very carefully recorded, especially considering that renovations are most often performed with external funding. However, there is some information entirely omitted at a local level - social aspects of renovation, especially those concerning the comfort of building users. Thus, the most to be done is to make it possible to measure the social effects of renovation, including energy poverty, which unfortunately will not be possible to monitor without introducing a national definition and methodology for tracking this phenomenon.
In terms of data availability, there are still significant progress to be made not only at the local level but also at the national level, but the implementation of the BUILD UPON Framework and its successive expansion to include more data and groups of buildings will undoubtedly have a significant impact and allow to look holistically at the renovated building stock.

THE BUILD UPON FRAMEWORK IMPLEMENTATION IN POLAND

The Polish Pilot City, Rybnik, aimed to test the BUILD UPON Framework on a project level. Therefore, they explored the feasibility of different indicator groups. The environmental indicators were identified as easiest to assess. The data sets for indicators 1, 2 and 3 are already monitored in approximately 130 of the 180 municipal buildings under the “Przemek” program, which collects information from buildings managers about actual energy consumption. As the city has only a few installations for renewable energy sources, the roll-out of monitoring for environmental indicator 4 could be done quickly. The use of social and economic indicators, on the other hand, is significantly more complicated. For all social indicators, no baseline exists, and there are concerns that informal housing and external conditions might distort data. Economic indicators 1, 2 and 5 could be possible for the public building stock excluding residential buildings after overcoming some structural challenges within the administration. The other two economic indicators could only be potential for municipal staff and therefore be highly distorted. Despite those challenges, Rybnik is interested in using the BUILD UPON Framework for projects by only selecting relevant indicators for the still outstanding retrofits and after 2025 for the re-assessment of buildings that are not up to standard.

Overall, the uptake of the BUILD UPON Framework in Poland was minimal. In parts, this is due to missing national guidance and definition of indicator related concepts such as energy poverty. Cities often have very limited resources available for soft measures around retrofits. The overall poverty and other social disparities already tie up most municipal staff potentially assessing the social indicators.

Therefore, PLGBC will attempt to integrate the BUILD UPON Framework with the National Register of Buildings Emissions CEEB, which will require significant commitment and time. There will also be a need for collaboration at the national level on the definition and collection of data on energy poverty.

ABOUT THE POLISH GREEN BUILDING COUNCIL

PLGBC is a non-governmental organisation, which since 2008 has been carrying out a mission to radically improve the design, construction and use of buildings in Poland so that sustainable construction becomes the standard. Together with our members, we strive to carry out a significant construction industry transformation to be healthy and sustainable. This is our response to climate change and care for the planet.

CONTACT INFORMATION

Anna Jurczak

SPAIN

COUNTRY DATA AVAILABILITY:

In Spain, there is a lack of availability of factual data for many of the indicators. Furthermore, the data is available only for renovation projects that receive public subsidies, mainly housing in many cities. This means that mechanisms have to be put in place to obtain the information needed and optimise the existing data sources. In this sense, the priority is to use the existing mechanisms that capture data and update them to collect additional helpful information to follow up building renovation and its benefits. Further, an increase in the political awareness of the importance of monitoring would speed up the changes. Finally, there is a lack of baselines for most data sets - neither local nor national.

THE BUILD UPON FRAMEWORK IMPLEMENTATION IN SPAIN

Valladolid, the Spanish Pilot City, implemented the BUILD UPON Framework within the context of two city-wide initiatives derived from their sustainability policies - the Housing Plan (2021 - 2025) and the 2030 Urban Agenda. Therefore a particular focus is put in assessing the municipal residential buildings but having a comprehensive approach to cover all building types as a long-term vision. As Valladolid has been engaged in developing the digital tool REHAVIVA together with the city of Zaragoza, it was possible to complement the project level BUILD UPON Framework implementation with a city-level assessment of the environmental and partially the economic indicators. This digital tool pools data from databases across governance levels and connects them to real-live data of renovation projects collected and validated by the engaged technicians. The possibility to directly embed the BUILD UPON Framework into a digital significantly advanced the acceptance and utilisation among municipal staff.

Further, the REHAVIVA tool has a flexible nature. It can quickly adapt future modifications of the Impact BUILD UPON Framework and at the same time add other data/indicators of interest for the city that extend its potential beyond the energy renovation of buildings. Therefore, the city has planned a timeframe for applying the BUILD UPON Framework through Rehaviva with a 6-month first stage that will allow analysing in January 2022 how has it worked, what would be the next steps for progressively implementing additional elements of the BUILD UPON Framework and assessing the positive aspects of the Rehaviva tool, its shortcomings and how it can be improved. Long-term, once they finish this first stage of implementation of the BUILD UPON Framework, Valladolid is interested in further harmonising the BUILD UPON Framework with the SECAP reporting responsibilities to avoid duplicate work.

All three Follower Cities attended the Pilot City Workshops of Valladolid. This approach was a very beneficial experience as they could learn directly from the processes and experiences there. They also indicated the peer-learning materials such as the Leeds Questionnaires and schematic SECAP integration from Padova as a significant...
THE BUILD UPON FRAMEWORK IMPLEMENTATION IN TURKEY

The Turkish Pilot City, Eskisehir, decided to test the BUILD UPON Framework on a project level. Therefore, they explored the feasibility of different indicator groups. As a result, the environmental indicators were identified as easiest to assess. Nevertheless, there are several obstacles to overcome for reaching other indicators’ data.

Like many cities in Turkey, Eskisehir is negatively affected by economic problems. That makes it impossible for them to allocate staff and resources to an extensive reporting and monitoring measure as needed for the BUILD UPON Framework implementation. They could build on the existing monitoring software for some environmental indicators, but the collection, even with it, would be manual and time-intensive. Further, much of the data is disjointed and only available at certain governance levels.

The Follower Cities stated similar challenges as well. It became clear that besides the financial, technical, and human resource needs, specialised training and an intelligent data collection and management system could help to speed up monitoring results of energy renovations.

About the Turkish Green Building Council CEDBIK started its activities in 2007 with its 25 founding members. The main establishment objectives of CEDBIK are ensuring the development of the building sector in the light of sustainability principles, ensuring the spread of environmentally friendly green buildings, and raising social awareness. In addition, CEDBIK organises introduction and technical training regarding some of the international green building certification systems widely used worldwide. CEDBIK has also developed the BEST (Ecological and Sustainable Design in Buildings) Residential Certification system, which can be implemented for new residential projects in Turkey.

COUNTRY DATA AVAILABILITY:

In Turkey, a lack of coordination between metropolitan and district municipalities exists, having little knowledge of the SECAP process and lack of data related to building renovation. Therefore, the starting point to capture the related data on indicators might be EPCs.

Further challenges are the limited authority of the municipality for renovation. Even though the retrofits are implemented locally, studies and workflow should handle on the national level. Further, there is a delay in the BEP compliance process for existing buildings. According to the BEP, existing buildings had to obtain an EPC legally in Turkey, but there are still problems with receiving EPCs of existing buildings. In addition, the lack of data on existing building stock is detrimental to creating a building inventory that will cover all existing buildings. Renovation works carried out without obtaining a permit is one of the main problems.

Read more here

THE UNITED KINGDOM

One of the biggest challenges faced by the UK is Brexit and the uncertainties this brings regarding EU-driven policies. In addition, due to the devolved nations, national policies vary between England, Wales, Scotland and Northern Ireland. Also, many UK cities and Local Authorities are setting more ambitious targets and procedures than the national government.

Consequently, the UK framework is slightly different to the EU master framework and must be flexible enough to weather the rapidly changing political landscape. It also needs to address the variations in local, devolved and national policy without creating an entirely different or bespoke framework for every single Local Authority.

COUNTRY DATA AVAILABILITY:

In the United Kingdom, a lack of policy without creating an entirely different or bespoke framework for every single Local Authority.

Read more here
THE BUILD UPON FRAMEWORK IMPLEMENTATION IN THE UK

The UK Pilot City Leeds has tested the BUILD UPON Framework on concrete ongoing social housing retrofit projects - TIBB & Holbeck Phase 2. This application was understood as a beta-test for the potential further roll-out of the BUILD UPON Framework within the municipality. The most challenging aspects and concerns were staff capacity and funding, obtaining historic fuel bills, and GDPR concerns. Also, a concrete localization of the responsibility within the municipal staff was unclear. Another concern was the possibility of assessing the project before the start and then again beyond the 12-month mark after completion, as these moments are not covered within traditional funding schemes.

Leeds developed questionnaires for contractors and inhabitants to assess the social and economic indicators. These allow the city to collect qualitative data simply and efficiently and are good practice examples of BUILD UPON². Nevertheless, they represent a challenge concerning GDPR concerning private data, and the user might again implicate additional staff hours for trust-building and the actual handling of the inputs.

Overall, the cities involved in the UK have found the BUILD UPON Framework useful on a project level as it allows them to argue for retrofit measures politically. The data collected enables them to formulate evidence-based arguments addressing political priorities such as green jobs, financial savings and reduction of CO2 emission. Nevertheless, the cities have remarked that funding is often only available for hard measures (e.g. structural changes to the building) and rarely for soft measures such as a contact person for inhabitants. Furthermore, all the cities stated interest in having conversations with other cities engaged in BUILD UPON2 to share learnings and cooperate on challenges. Therefore, the project and BUILD UPON Framework could become a valuable tool for cross-city/region generally sharing ideas about retrofits.

ABOUT THE UK GREEN BUILDING COUNCIL

A charity with over 400 member organisations spanning the entire sector, the UK Green building council represents the industry's current and future leaders striving for transformational change.

CONTACT INFORMATION

Secretariat
5. Implications for BUILD UPON²
5.1. OVERALL PROJECT FLOW

Based on the first series of workshops held between September and December 2020, the Pilot Cities have considered the BUILD UPON Framework instrumental in supporting the upscaling of building renovation across Europe. However, at this stage, the implementation of the Impact BUILD UPON Framework as a whole is perceived as challenging. On the one hand, Pilot Cities are well placed to implement and monitor the environmental indicators proposed by the BUILD UPON Framework, especially on their own building stock. This stems from existing data and infrastructures driven by own initiatives within the Pilot City or by being part of the CoM. Beyond that, many of those data points are already necessary for applications for funding, permits or subsidies. On the other hand, the social and economic indicators proposed by the Indicator BUILD UPON Framework pose several challenges to the Pilot Cities, especially in relation to the renovation of private buildings. Furthermore, monitoring social and economic indicators requires Pilot Cities to have comprehensive datasets available, adequate monitoring systems, and sufficient staff capacity, which are crucial elements currently lacking in most cities.

Based on these considerations, it becomes apparent that the objective to implement the BUILD UPON Framework fully would not be achieved entirely in the Pilot Cities. Therefore, while keeping the original ambition of the BUILD UPON Framework, it is of crucial importance to provide enough flexibility to the cities in the way the BUILD UPON Framework is implemented to ensure its adoption. Furthermore, it would allow an incremental implementation of the Indicator BUILD UPON Framework so that the Pilot Cities can start monitoring a limited number of indicators in the beginning and gradually expand the use of the BUILD UPON Framework over time. On this basis, each Pilot City has adopted a specific and locally tailored approach to overcome the barriers mentioned. This is the result of the interest generated by the project and increased awareness about the following steps to be taken.

With the project finishing in November 2021, the partners have engaged in different activities to ensure the longevity of the BUILD UPON Framework and its methodologies. They have contacted service providers to assess the doability of developing a digital version of the BUILD UPON Framework responding to cities’ needs to simplify the data collection and analysis as much as possible. All GBCs are committed to further working with their Pilot and Follower Cities and extending the pool of cities engaged. Those, who found challenges by directly involving cities, are looking into different mechanisms and partners to work with.

5.2. TRAINING MATERIALS AND GBC BUSINESS PLANS

To secure the BUILD UPON² and the BUILD UPON Framework’s long-term impact and enable the GBCs to continue working with cities to advance the implementation, the project developed two support documents - the BUILD UPON² Training Materials and the GBC Business Plans. Both are internal project documents.

The BUILD UPON² Training Materials are a collection of methodological and content blocks that simplify developing strategic training offers for cities in each project country. The methodological blocks provide templates for educational activities such as email series, webinars, checklists, and recommended methods. The content blocks consist of core and national content topics. Both are based on the training and capacity building needs identified in the Follower City Workshops. They include in-depth introductions to the BUILD UPON Framework, its methodologies and aspects such as SECAP harmonisation. In addition, data management, stakeholder engagement, and organisational mapping can be supported through good practices collected within and beyond the project. Nevertheless, the scope of the training materials, especially regarding the last-mentioned skills, does not replace specialised and technical training, which could not be developed within the BUILD UPON Framework of the project.

The GBC Business Plans are internal project documents that look at how the BUILD UPON² project and the BUILD UPON Framework could continue beyond the current timeframe of the project. The GBCs have examined where further training sessions and materials are required for cities to use the BUILD UPON Framework - such as in areas like data collection and management and the potential integration of the BUILD UPON Framework into SECAPs. The reports also look at who the potential customers would be for this extended training (at different government levels, for example). The BUILD UPON Framework could be rolled out further, including payment models for how this could be funded.
6. Synergies with the Covenant of Mayors for Climate & Energy

Focussing on sustainable municipal buildings and the connected deep energy retrofits, the CoM and its SECAP was a natural benchmark for BUILD UPON².
The CoM is a crucial actor when it comes to fostering building renovation in Europe.

The city network launched in 2008 counts today more than 9,000 local and regional authorities across 57 countries and is, therefore, one of the most relevant multipliers of any climate change initiative. Furthermore, as most municipalities use the SECAP to adjust their emission reduction strategies and goals, communicating the importance of building renovation for sustainable transitions helps implement the necessary changes directly on the ground. Also, an essential part of the CoM’s work is capacity building and the sharing of best-practice examples among the numerous signatories with their various backgrounds. This way, good projects can easily be adapted to other community members and become a benchmark in climate change mitigation policies. The community also includes regional signatories and coordinators, and supporters who are additional multipliers for clients who are maybe not a part of the Covenant community yet. Lastly, the CoM’s office and working groups are used by the different institutions of the European Union to get an insight into the municipalities wishes and needs. So the network enables bottom-up communication for future policy development and can, therefore, even have a non-negligible influence on the further implementation of the European Green Deal and the Renovation Wave if the signatories use this potential.

6.2 SECAP HARMONISATION

Regional and local authorities play a significant role in leading and achieving climate initiatives, not only in drafting and implementing building policy but often in implementing even more ambitious local targets than the national ones. The BUILD UPON Framework’s harmonisation with the methodology of SECAPs of the CoM reinforces reaching the ambitious mitigation goals in the buildings sector, which is one of the highest contributors to GHG emissions.

CoM’s SECAP is a reporting scheme that aims to translate the political commitment of signatories into practical measures and projects. Upon joining the CoM, cities commit to reporting on the progression regarding the key actions outlined in their SCAP every two years. The plan includes a Baseline Emission Inventory to track mitigation actions and a Climate Risks and Vulnerability Assessment. The city’s adaptation strategy can either be part of the SECAP or developed and mainstreamed in a separate planning document. The local authority can either set the overall CO₂ emission reduction target as an absolute or per capita reduction number.

To achieve what the SECAP and especially the emission inventory set out to do in a timely fashion, they need a well-defined set of indicators. However, the CoM’s methodology does not have a predetermined set of indicators, and all documents contain only indicative recommendations. This fact makes the BU2 Framework a highly effective tool to use alongside a city’s SECAP as the concrete indicator can easily produce data-driven proof of the impact of implemented actions.

The BUILD UPON Framework aligns with the SECAP’s reporting methodology and can be useful for municipalities to identify a more realistic strategy and more targeted and efficient actions. Many of the Pilot and Follower Cities of BUILD UPON, even if they are signatories of CoM and have well-established procedures for reporting and monitoring, prefer to use BU2 at a project level rather than city level. As the BUILD UPON Framework targets and considers all major aspects of a building renovation initiative, it can help to plan and monitor it more effectively. Thus the cities implementing the Framework would have a better chance to reach the strategic goals relating to building-related emission reductions.

6.3 ACTIVE PARTICIPATION THROUGH SUPPORTING MECHANISMS

On the consortium level and as individual organisations beyond the project’s duration, we identified two opportunities to engage with the CoM long-term – the Group of Practitioner and the Coalition of the Willing. This form of engagement would allow the BUILD UPON Framework and the experiences collected during its development and implementation to be shared with a broader audience and integrate the feedback from practitioners outside the project into future evolutions of the BUILD UPON Framework.

6.3.1 THE GROUP OF PRACTITIONERS

The CoM offers adequate support to all its signatories, according to their specific progress and capacities. Thus, the Group of Practitioners unites front-runner cities and regions, coordinators and supporters willing to contribute to consolidating and developing the initiative. On a regular basis, the members of this group share their experience and expertise in climate change mitigation and adaptation at a local level and the alleviation of energy poverty. During workshops, they get in touch with experts and representatives of the EU to foster and debate future developments of more general guidance and broader thematic questions. Additionally, the Group of Practitioners is consulted on a regular basis to help improve the CoM’s methodology and user-friendliness, for instance, of the reporting template.

Here the knowledge regarding the monitoring of the impact of building renovation generated during the consultative development of the BUILD UPON Framework can be extrapolated and applied to future indicator developments of the CoM. Some of the Pilot Cities could be interlocuter here.

6.3.2 COALITION OF THE WILLING

The six Coalitions of the Willing working groups are less consultative regarding the cities than the Group of Practitioners. Instead, it brings together representatives of different organisations, political leaders and experts to focus on the crucial topics of each coalition: Adaptation, City-Citizens Empowerment, Energy Poverty, Heating & Cooling, Sustainable Building & Neighbourhoods, and Sustainable Mobility.

Based on the diverse expertise of the organisations and individuals involved in BUILD UPON², an engagement in different working groups could be envisioned. The most obvious is, of course, the coalition on ‘Sustainable Building & Neighbourhoods’ but also ‘Energy Poverty’ and ‘Heating & Cooling’ are tightly connected with social indicators of BUILD UPON Framework.

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7. Annexes
Final report on cities' feedback on the application of selected indicators and monitoring procedure

THE BUILD UPON FRAMEWORK
(EUROPEAN LEVEL)

bit.ly/BU_Framework

THE BUILD UPON FRAMEWORK
EXCEL TEMPLATE

bit.ly/BU_Framework_Excel

DEFINITION OF A METHODOLOGY FOR
REPORTING AND MONITORING THE
IMPLEMENTATION OF THE
BUILD UPON FRAMEWORK


REPORT ON BEST PRACTICE INITIATIVES
TO SUPPORT THE IMPLEMENTATION OF
THE BUILD UPON FRAMEWORK

With more than 1,800 members spread across 27 European countries, Climate Alliance is the largest European city network dedicated to fair and comprehensive climate action.

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