

CITYfied

RepliCable and InnovaTive
Future Efficient Districts and cities

Inspiring Stories from our Community

A replicable, systemic
and integrated
strategy to transform
European cities
and urban ecosystems
into the Smart Cities
of the Future



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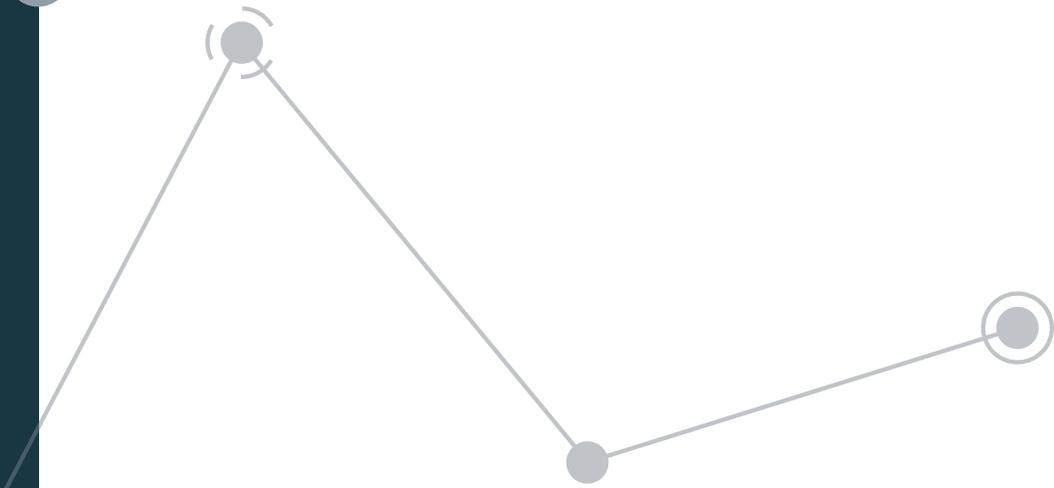
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CITYFiED is a successful experience in smart city and energy efficiency retrofitting.

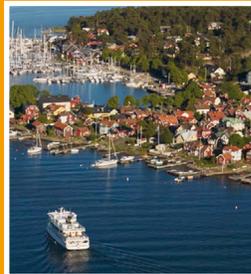
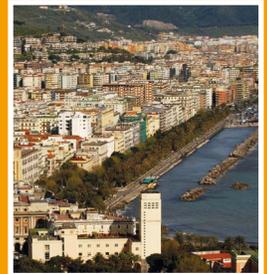
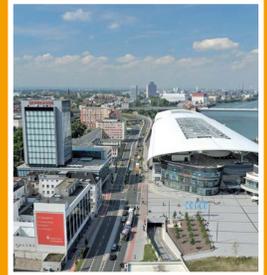
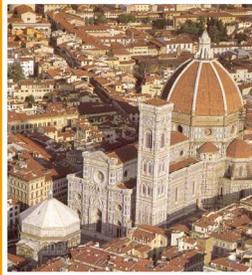
Across Europe, 59 cities are now set to enjoy a more sustainable future.

Our story started back in 2014. A story about creating and testing better places for people to live – smart cities of the future. For 5 busy years, project partners, urbanism experts and local communities all worked towards CITYFiED's goals.

We wanted a sustainable future to happen now at our three demo sites in Laguna de Duero (Spain), Lund (Sweden) and Soma (Turkey). And we wanted them to offer long-lasting inspiration to many other towns and cities.

Altogether, we created a broad community of 59 European cities where each has a forward-looking ecosystem involving local citizens, associations, experts and technicians. This has extended CITYFiED's reach to EU and global experts and stakeholders' communities, thus fostering knowledge exchange and networking.

We now hand our results over to you. These have been achieved through “community” – one we built over the years and which stands today as CITYFiED's leading legacy. Through our collection of best practices in Community Building, Community Engagement and Community Acceptance, we hope this guide will help you navigate towards a smarter future.



Replication by city clustering

Facilitating replication starting with the locals

One of CITYFiED's major objectives was to help other cities outside the project to achieve the same outcomes, but in a faster and more optimal way. To this end, the lessons learnt at the project's demonstration sites were to be streamlined into practical replication guidelines.

However, the best replication method was to set up and manage a city cluster with assigned technical and local facilitators. This allowed the three demo sites to share knowledge with 11 other cities with similar challenges. The facilitators thus ensured the flow and uptake of relevant information and data, helping their cities to overcome the cultural, language and technical barriers to replication.



Tips

- Replication needs to be built on an interactive development with other cities.
- Expert facilitators should be appointed to ensure the lessons learnt and technical knowledge is transferred.
- Facilitators should know the local culture and context of the replicator cities.



Strengths

- Strong local foundation.
- Adjusted for knowledge uptake.
- Flexible.



Opportunities

- New business opportunities for involved players.
- Local adjustment can trigger new inventions.
- Intercultural knowledge transfer.



Weaknesses

- Reliance on expert knowledge.
- Time consuming for the cities involved.
- High level of involvement by key players required.



Threats

- Loss of key players.
- Non-technological barriers not understood.
- Language barriers.

How we built the CITYFiED communities: a smarter route to the future

When community is about growing with others

“United we stand, divided we fall”. This could have been CITYFiED’s motto as the project, in its earliest stages, sought to build a community of cities which had shared interests, outlooks and challenges. Three types of community were set up: 3 demo site cities, 11 Cluster Cities to replicate the project’s results and 44 cities known as Community of Interest which can benefit from networking activities with other municipalities worldwide.

Representatives from the cities were individually informed about the project and invited to join according to their interest and commitment. The project team kept the cities updated, distributed their news through CITYFiED channels, and invited representatives to join CITYFiED meetings, study tours, webinars and other events.



Tips

- Select cities: list cities you’ve already worked with, cities active at EU level and with similar goals.
- Connect: let cities know they’re part of the big picture, put them in contact (tools, emails, repository) and animate the debate.
- Get involved: set a good example and engage cities in activities and events.



Strengths

- Real community of people to rely on.
- Shared interests and goals.



Opportunities

- High replication potential.
- Relations can go beyond the project.



Weaknesses

- Geographic and spatial barriers.
- Difficult to maintain constant and regular exchanges.
- Hard to maintain the interest.



Threats

- Lack of participation by cities.
- Lack of implemented replication activity.

Online communication: a to-do strategy for successful community building

“Coming together is a beginning, staying together is progress, and working together is success”. A story of community

Communities reflect people’s ideas, thoughts and habits both online and offline. They respond to the human need to belong to something shared with others. With this in mind, CITYFiED set up a solid online community from the outset.

Social media and websites are not just about using technology; they’re also about connecting people and ideas. The CITYFiED online community achieved this, successfully connecting thousands of people, businesses, policy makers and stakeholders in general, who helped each other to progress.



Tips

- Identify your target: it’ll be your mirror.
- Feed it: don’t run out of inspiring ideas, positive challenges and tangible results, that’s your reliability.
- Listen to it: communities have a lot to say, always stay tuned in.



Strengths

- Worldwide connectivity.
- Shared interests.
- Friendly and informal approach.
- Real-time information sharing.



Opportunities

- Active community beyond the end of the project.
- Feedback from around the world.
- Set up conversation and receive feedback worldwide.



Weaknesses

- Age-oriented: cannot reach people of all ages.
- Fast-paced activity: users may experience information overflow.
- Social interaction ≠ real commitment (no way to measure).



Threats

- Negative comments that may harm project’s reputation.
- Low engagement from followers.



The role of CITYFiED web apps: the Linero district case

Energikollen: a smartphone app to help tenants take control over their energy bills

Kraftringen, a local energy company based in Sweden, has created *Energikollen*, a fun and interactive smartphone app to help tenants keep tabs on their energy consumption. As Kraftringen has a utility franchise over the electricity grid in the area, the company can use the collected data for the app. Moreover, all data gathered before the installation of the app is also available. To raise the tenants' awareness about energy, two home visualisation apps were developed. The apps allow tenants to evaluate their electricity use based on real time and historical data.

A monitor was installed in the common outdoor area of the district. It shows each building's energy use, and ranks each building depending of its monthly energy performance. The purpose is to create a competition among the tenants of each building, thus resulting in increased incentives towards a reduced energy use.



Tips

- Know your target users! If you want to reach unexperienced users, the app needs to be simplified but if the target users are more experienced and inquisitive, the app needs to be more advanced or they will be disappointed.
- A good front end is as important as a good back end!



Strengths

- Increased energy awareness among the users.
- Access to historic energy data.
- Simple installation.



Opportunities

- Satisfied customers might buy more services.
- Other companies might buy the concept.



Weaknesses

- Complicated login system.
- Only works within the franchise areas.
- Does not generate any income.



Threats

- Customers might change energy supplier.
- Running costs might be higher than the benefit.
- Unsatisfied customers due to transparency of their data.



The role of CITYFiED web apps: the Torrelago district case

Tools and platforms for visualising and analysing the data collected

Three types of tools have been developed in Torrelago:

- Support tools for commissioning, deployment and monitoring
- Display/recommendation tools
- Key Indicator Calculation/Display Tools (KPIs)

Information on the platform mainly comes from the monitoring system of the biomass heat network based and from the domestic wireless sensors that measure electricity consumption and comfort values. The solutions implemented empower the different users (residents, energy operator and technical staff) and assist them in making decisions to improve the district's energy efficiency.



Tips

- Tools should be constantly adapted and upgraded to make them interesting for stakeholders.
- Joint ventures with device providers are necessary for presenting these tools as services complementing their catalogue.
- Being able to collect data from many users and districts will lead to opportunities to extend data-related services.



Strengths

- Decision-making support for different stakeholders.
- User empowerment in energy use.
- Managers can determine data accuracy and relevance.
- Support for correct system and device commissioning.



Opportunities

- Tools can be easily applied in other projects and domains.
- Information can be easily shared via Open Access Data.



Weaknesses

- Similar applications are available in the market.
- High investment in sensors and devices necessary for collecting domestic data.



Threats

- Stakeholders may consider them as additional gadgets and do not use their full potential.
- Data collected by sensors is not suitable for billing. Users tend to compare with bills.



The role of CITYFiED web apps: the Soma - Manisa district case

Reengen energy monitoring app improves the energy behaviour of tenants

One of CITYFiED aims was to make tenants more aware of energy consumption. Reengen, a start-up based in Istanbul (Turkey), has developed an easy-to-use mobile application that goes in this way.

Through the IoT platform Provolta, Reengen could monitor the energy consumption of the Soma - Manisa demo site. Next, monitoring data were used for the application to help tenants keep their energy consumption under control and thus save energy. The app was presented at a local meeting with residents, all of whom showed a keen interest in it.



Tips

- User-friendly is key to involve users.
- Constant monitoring, updating and accuracy of data is crucial.



Strengths

- User-friendly.
- Smart way to save energy.
- Tenants showed interest.



Weaknesses

- Expensive data collection.
- There is no business case (no additional income).
- High effort for continuous monitoring of the app and problem solving.



Opportunities

- Market ready and open to such tools.
- Low awareness in energy consumption means much room for improvement.
- Hardware is adaptable to different locations.



Threats

- There might be differences with the bills, not using the same devices. Might lead to trust issues.
- Interest in the app might decrease.

Cities' commitment, networking and study tours: from CITYFiED to the cities

Cities' connections to ensure replication

From the very beginning, CITYFiED built a solid cluster of cities to increase replication potential. Cities were asked to identify a district and provide qualitative and quantitative data, like district energy consumption, ownership of the buildings, best practices in overcoming non-technical barriers, etc.

The city members committed quickly to the project, showing their wish to learn from the demo sites and share good practices. Five study tours were organised to foster cooperation between cities. Two of these tours took place in two of the cluster cities: Ludwigshafen (Germany) and Udine (Italy). Such events were key to strengthening the CITYFiED community, networking and fostering real replication.



Tips

- **Involve:** keep cities posted and invite them to the projects' events.
- **Empower:** make cities feel responsible for their participation in the project.
- **Reward:** highlight cities' benefits, recognise their role in the project.



Strengths

- Project more concrete.
- Higher replicability potential.
- More data available and hands on experiences.



Opportunities

- New relations can go beyond the project.
- Learning from other cities by sharing difficulties and good practices.
- Visiting other cities and their solutions.



Weaknesses

- Difficult to keep online relations.
- No control over the actual replication activities.



Threats

- Low participation of cities.
- Hard to gather sound data for replication.

Stories from Linero: local events to increase social acceptance

Informal meetings to engage citizens

To gain involvement and acceptance it's important to engage tenants upfront. Linero's strategy, besides the formal meetings, was to organise informal meetings in the residential area.

The purpose was to gain trust, but also to allow tenants to know the project team directly. By creating different activities for all generations, we encouraged tenants to get involved and have their say. Such activities give tenants a sense of belonging in the project, increasing its overall success.



Tips

- Find different events of benefit to both consumer and housing company (workshops, pilot house visits, barbecues).
- Collaborate and network (tenants, local organisations, companies).
- Aim for activities that can attract different generations (food, entertainment, children's activities, etc.).



Strengths

- Increased involvement.
- Better understanding of the process.
- Improved the social capital.



Opportunities

- Different arenas for exchanging information.
- New projects in the area (art project).
- A bridge between tenants and housing company.



Weaknesses

- Challenging to give proper feedback.
- Some tenants are more resistant to change.
- Not all tenants are reached.



Threats

- Resistance to the project.
- Unpredictable conditions (weather).
- Unpredictable participation.

Stories from Linero: Let tenants get involved

Tenants as district influencers

Involving tenants in the project requires doing so in the right ways. Tenants can influence developments for their own flats, outdoor areas and other common areas.

When they are involved, they feel more motivated and positive about change. Furthermore, they feel gratitude and pride in their residential area, and recognise the lower management costs in the long term.



Tips

- Give tenants the opportunity to participate and get involved whenever possible.
- Create events and workshops in early stages to define what the tenants want in their apartment, outdoor environment, etc.
- Create sub projects that tenants can be responsible for.



Strengths

- Satisfied tenants/consumer.
- Lower management cost.
- Increased security.



Opportunities

- Less damage on apartments, common areas, etc.
- Network between different groups in the area.
- Increased involvement.



Weaknesses

- Increased work in distribution and administration.
- Time consuming.
- Not possible to influence all retrofitting strategy.



Threats

- Low participation.
- Negative attitude.
- Less involvement in smaller projects.

Stories from Torrelago: the choice of the facade colours

How to create a district identity within the city and a new identity of the housing blocks

Torrelago district is composed of 31 residential blocks and 1,488 dwellings. Over the years, many residents made several changes that affected the neighbourhood's look unevenly.

To give the district a new identity and shared, brighter look, a white base was chosen. We, together with the residents, decided to add some spots of colour to give the block a unique and recognisable aspect. Finally, we added a rhythmic pattern to improve the dynamism of the buildings.



Tips

Tips and technical considerations when choosing colours:

- The primer and finish layers should be the same colour. This allows the right shade of colour to be obtained.
- When applying the finish layer, divide the façade into several stages to avoid colour staining.



Strengths

- Common visual identity.
- A more dynamic and colourful district.
- Light increased.



Opportunities

- Orientation inside the district.



Weaknesses

- Use of chemical products.
- Time-consuming activities.
- Difficulty to deal with neighbours' disagreeing about the facade colour.



Threats

- Fading colours due to sunlight.
- Vandalism. Direct attacks on the solution.

Stories from Torrelago: Creating local employment + local “ambassador”

Developing the local economy and increasing citizen participation

The characteristics of the Torrelago blocks give the district a high potential for energy savings. An External Thermal Insulation Composite System was selected as the better option. However, the general lack of information about the interventions to come was the main objection found.

Consequently, many meetings with residents were held to illustrate the solution. Additionally, 3IA ran a work training programme to help residents find employment in the Torrelago retrofitting works. It consisted of several campaigns to train and hire residents with previous experience in the construction sector.



Tips

- If citizens benefit from the project from the start, their acceptance is more likely.
- Draw on the district residents' previous work experience.



Strengths

- Increase in the specialist knowledge and experience of local workers.
- Reduction of local unemployment in the construction sector.
- Sense of belonging to the project within the local community.



Opportunities

- Availability of construction workers.
- Long-term retrofitting processes can offer work for a long time.
- Previous residents' knowledge of the district.



Weaknesses

- Local employment only in the construction sector.
- Time necessary for training workers.



Threats

- Training more expensive than expected.
- Lack of interest and/or trust from local workers in the new technologies.
- Complexity of the technologies.

Stories from Torrelago: Collaborative development of the web app

Workshops, brainstorming sessions, and meetings with the Torrelago residents to develop the web app features: concept and design stage

The overall objective of the **concept phase** was to identify and select the most relevant user profiles (stakeholders), their needs (objectives within the project) and solutions (scenarios, technologies and requirements). This phase worked with the residents, the stakeholder map, the user profiles, the objective of the analysis, the needs, and opportunities detected, focusing on reducing energy consumption in the dwellings.

The overall objective of the **design phase** was to design solutions (interfaces) that are useful, easy to use and appealing during interaction (engagement), as well as validating the solutions with user tests.



Tips

- Measure user acceptance of the technological and non-technological solutions aimed at reducing energy consumption.
- Analyse the user-friendliness of the solutions and identify any issues. Test criteria can include effectiveness, efficiency, use, content and structure.



Strengths

- Good participation in the workshops and meetings.
- Working with diverse neighbours' profiles.



Opportunities

- Most of the users accept the solutions as for reducing their energy consumption.



Weaknesses

- Difficulties in identifying the icons in the app.
- Difficult to integrate all the information into a small device.



Threats

- Residents' continuous use of the app.
- Residents' data protection (GDPR).

Stories from Soma: Stakeholder Meetings

The unexpected is just around the corner: deal with it to reach your goal

Tenants in the Soma demo area are employed in different institutions within the city. Early in the project when the first meeting with tenants had taken place, the demo site was privatised. This overshadowed all other issues and it suddenly became harder to involve tenants in CITYFIED.

The project team had to carefully navigate this situation and some interventions were partially accomplished. Eventually the tenants praised the results: at the last meeting they even tried to find additional solutions to overcome local administrative barriers.



Tips

- Being honest and straightforward increase the trust of tenants.
- Involving tenants increases success rate.
- The earlier tenants are involved the higher their commitment will be.



Strengths

- Increased involvement leads to higher satisfaction of tenants.
- Better understanding of the needs and requests of tenants.
- Increased awareness and willingness to invest in energy efficiency and renewables.



Opportunities

- Networking with different audiences.
- Introduction of new financial instruments to facilitate investment in energy efficiency and renewable energy.
- Greater awareness could have a positive impact on retrofitting.



Weaknesses

- It is challenging to handle questions from sceptical tenants.
- Impossible to reach all tenants.
- Meetings give qualitative feedback open to interpretation.



Threats

- Tenants might have other problems rather than retrofitting.
- Risk of low participation.





Fostering Community Acceptance through effective Communication

In smart cities projects, communication alone is not enough to foster acceptance

Building a strong community and nurturing it with tailored messages and inclusive communication is essential to keeping the audience informed. We raised awareness about the project and its outcomes and we also designed and delivered eye-catching messages and content.

However, our communication strategy went further by devising an innovative set of measures for engaging with citizens and other stakeholders locally and across Europe, both on- and offline. This enabled us to build a pioneering framework for community engagement which has been acknowledged as a fundamental driver for the project's success and sustainability.



Tips

- Understand your community, set a strategy to reach and interact with it;
- Be open and start early to engage with your community;
- Develop relations and identify local ambassadors in community engagement activities.



Strengths

- Multi-channel, flexible strategy.
- Measurable, repeatable, timely, insightful and reliable indicators.
- Consistency with the project.



Opportunities

- Replication in other projects.
- Strategy evolution and upgrade.
- Inclusive and participatory decision making process.



Weaknesses

- Impossible to fully control the strategy's performance.
- Difficult to keep the community active after the project ends.
- Fairly inflexible implementation of technical measures.



Threats

- Social barriers.
- Local cultural and political context.
- Type of ownership of buildings.

100% success in social acceptance in Linero

Clear communication and involvement are key to social acceptance

Before a building retrofit can be performed, tenants must formally agree. Good communication and tenant involvement upfront are therefore key to the social acceptance of the project.

Our strategy for the Linero case was to find different ways of interaction with tenants both formal and informal. This was mostly carried out by arranging different events such as meetings, workshops, showings, barbeques. It was immediately clear that being transparent with the information during the whole project is crucial to gain tenants' trust and reliability for the retrofitting works.



Tips

- Start communicating early (1 year before work starts).
- Involve tenants in the retrofitting process.
- Be honest and direct with the information/communication.



Strengths

- Good internal and external communication.
- Good internal management.
- Clear and common goals.



Opportunities

- Increasing relations with tenant.
- Involving tenants at an early stage.
- Changing negative attitudes.



Weaknesses

- Time consuming.
- Costly.
- Project delays.



Threats

- No retrofitting.
- Resistance to the project.
- Unforeseeable conditions in the building/area.

Turning a “no” into “yes”: the “TorrelagOpina” case

Changing the social perception of CITYFiED in Torrelago district (Laguna de Duero)

CITYFiED was approved by 86% of residents. However, a small group of owners (around 30 out of 1,488) strongly opposed the project and they set up an association (named TorrelagOpina) to scrap it.

In a truly cooperative approach, the CITYFiED team therefore strengthened their engagement with the local community and a local “ambassador” was appointed to deal with residents’ complaints and concerns. “TorrelagOpina” belongs to the past and represented less than 3% of the district’s population. Nowadays there is broader support for the project among the residents, who are happy and proud of the energy retrofitted district. CITYFiED’s work in Torrelago has benefited more than 4,000 inhabitants and their testimonies have played a key role in shaping the conversation with the project’s stakeholders.



Tips

- Communicate and engage with residents right from the beginning.
- Use representatives from the local community (ambassadors) to liaise between the project team and residents.
- Adopt a collaborative approach from the stakeholders’ group.



Strengths

- Highly experienced team.
- Multidisciplinary team.
- Capacity building.



Opportunities

- Close contact with the residents.
- Wide network of contacts and success benchmarksEU backing.



Weaknesses

- Resistance to change.
- Limited resources.
- Lack of financial instruments.



Threats

- Opposition to the project.
- Lack of knowledge and awareness about energy efficiency and energy district retrofitting.
- Legislation.
- Lack of financial support.

Demo sites' evaluations

Social acceptance is key for the success of retrofitting projects

From the outset, project partners knew they would need to involve residents through the renovation process. Consultations and other activities were organised over the project's lifetime.

In addition, a method for assessing the energy measures acceptance was designed, and residents were given questionnaires and interviewed after the interventions were complete. Some 65% of interviewees said they were satisfied with CITYFiED. However, as this is subjective and limited to a population sample from the district, a comparison with the real benefits more objectively measured is also required.



Tips

- Involvement of the local community in planning and development may lead to higher social acceptance.
- Use questionnaires and interviews to gather much data which, when correlated, can help clarify opposing opinions.
- Include demographic data of participants helps to contextualise technical outcomes.



Strengths

- Multidisciplinary team able to define an integrated approach of the social evaluation.
- Social evaluation complements the success of the retrofitting measured in terms of comfort, energy savings and cost savings.



Opportunities

- Replicability of the social evaluation tool developed for other retrofitting projects.
- Close contact with the residents.



Weaknesses

- Limited resources to perform the social evaluation.
- Limited number of interviewees.
- Evaluation conditioned strongly on human factor.



Threats

- Possible opposition to the project.





SET Plan 2016 – Central European Energy Conference X poster session

Best poster of SET Plan 2016 – Central European Energy Conference X: CITYFiED

SET Plan 2016: [program](#) and [poster](#)

SET Plan – Central European Energy Conference X was held during Slovakia's EU Council Presidency and created a prestigious international platform for open discussion about current **EU energy policy** and research and innovation policy between stakeholders. The conference examined the process of creating the **European Energy Union**, looking specifically at the research and innovation strategy which is key to producing a breakthrough in transforming the EU energy sector. The aims were to improve the visibility of the Energy Union, identify policy options and priorities and plan future actions. At the end of the conference, draft recommendations were approved, which can be used to implement policy for the SET Plan and Energy Union.

The SET Plan 2016 – Central European Energy Conference X poster session aimed to provide energy sector stakeholders the opportunity to present their work, exchange ideas and share information on innovative projects, best practices and original research findings.

CEEP-CSR Label 2016

In November 2016, 25 public utilities service providers obtained the CEEP CSR Label: Krafringen Energi AB was recognised for its outstanding CSR effort

[CEEP-CSR Label 2016](#)

The award ceremony was held at the Caisse des Dépôts et Consignations (member of CEEP France) in Paris and organised with CEEP France. A [compendium of practices and enterprises awarded](#) was also given out on this occasion.

"This label shows that public utilities providers in Europe do more than fulfilling their services. They are also particularly aware and active when it comes to positively impacting the society and the environment," said Valeria Ronzitti, CEEP General Secretary.

Pascal Bolo, President of CEEP France emphasised: "Corporate Social Responsibility (CSR) is in their DNA, as public utilities companies and organisations combine private interests and management practices with the values of the public. They answer the call for modernity and efficiency with a positive vision, favouring long-term views and outlook and not only looking for short-term benefits. These companies also draw primarily on local resources and help create jobs." Corporate social responsibility is key to managing public services and this was why the CEEP, in 2008, created the CEEP-CSR label, specifically for those public utilities providers advancing CSR.

5th Global District Energy Climate Awards 2017

Winner 2017 – Emerging market: Torrelago District Heating network

[5th Global District Energy Climate Awards 2017](#)

The 2017 Global District Energy Climate Awards were revealed on October 2017, during the International District Cooling and Heating Conference in Qatar. The finalists were selected from cities and communities across the globe which demonstrate leadership in providing local clean and sustainable energy solutions.

The 5th Global District Energy Climate Awards - Emerging market category highlights the successful implementation of a District Energy system in a country that does not yet have an established District Energy market.

Award ceremony recording: https://www.youtube.com/watch?v=yRM_f2_pxLw&feature=youtu.be

Mapei Award for Sustainable Architecture 2017

Accésit: CITYFiED

[Mapei Award for Sustainable Architecture 2017](#)

The Mapei Award for Sustainable Architecture is a national architectural competition for professionals who promote sustainable projects that combine high architectural quality with minimal impact on the environment.

Awards ceremony recording: <https://www.youtube.com/watch?v=Mj5vzejrvyE>



Smart 50 Awards 2018

Honouring the 50 most transformative smart projects each year. Energy Awards: CITYFiED

[Smart 50 Awards 2018](#)

Smart Cities Connect is where the smart cities community meets. It provides meaningful content and connects a thoughtful community of decision makers to empower smart cities at all stages of growth. Smart Cities Connect accelerates the adoption of smart technology solutions, aid in problem solving, and amplify city resources for the betterment of cities, communities, and their citizens.

Smart 50 Awards, in partnership with Smart Cities Connect, Smart Cities Connect Foundation, and US Ignite, annually recognise global smart cities projects, honouring the most innovative and influential work.

7th Edition of the Sustainable Buildings Awards 2018

Best Collective Building category: Torrelago district

[7th Edition of the Sustainable Buildings Awards 2018](#)

The **7th Edition of the Sustainable Construction Awards** of Castilla y León (Spain) celebrates projects and building actions carried out during from 2010 to 2016 which are pioneering in sustainability, and which act as a benchmark to the rest of the building stock.

Awards ceremony recording: <https://www.youtube.com/watch?v=imbbmfQwhrY>



Conclusions

Energy efficiency is a reality at the three CITYFiED demonstration cities, Laguna de Duero (Spain), Lund (Sweden) and Soma - Manisa (Turkey). Indeed, CITYFiED's high investment in these cities – more than €22m – has provided many different benefits to citizens and local stakeholders. Examples include lower energy consumption and associated cost savings, healthier indoor environments and increased industrial productivity.

As main users of the city environment, citizens can directly benefit from CITYFiED solutions: first, they can support the economic growth of their city, which can lead more jobs and a better urban environment and quality of life. Second, citizens of a smart city can participate in the renovation of their districts and benefit from more up-to-date technologies and better services. Even utilities and other energy providers benefit in a number of ways from CITYFiED energy efficiency measures: lower costs for energy generation, transmission and distribution, improved system reliability, less price volatility in wholesale markets and the possibility of deferring costly system upgrades.

CITYFiED actions have already reached more than 5,500 inhabitants. Reducing energy consumption and CO₂ emissions is not only about adopting new technologies, but also ensuring that the public adopt such technologies. Concrete examples of proven efficiency allow us to push ahead with new retrofitting projects and solutions beyond CITYFiED towards the transformation of urban areas into more sustainable and inclusive environment.

AWARD OF EXCELLENCE
EXPANSION

J DHC SYSTEM
TU, ESTONIA



Salaspils
Siltums

This is to certify that the J DHC System in Tartu, Estonia has been officially recognized by a team of international experts chaired by the International Energy Agency (IEA) Energy Technology Network, for its outstanding achievement in demonstrating local District Energy leadership in providing clean, sustainable energy solutions to protect against the risk of climate change.

AWARD OF EXCELLENCE
MODERNIZATION

SALASPILS SILTUMS
SALASPILS, LATVIA



مرفق قطر
Marafiq Qatar

Congratulations to Marafiq Qatar for its outstanding achievement in demonstrating local district energy leadership in providing clean, sustainable energy solutions to protect against the risk of climate change. The International Energy Agency (IEA) Energy Technology Network's team of international experts officially recognizes Marafiq's energy services' Lusail City District Cooling in Lusail, Qatar.

AWARD OF EXCELLENCE
NEW SCHEME

LUSAIL CITY
DISTRICT COOLING
IN LUSAIL CITY, QATAR



VEOLIA

To certify that the TorreLAGO District Heating in Laguna de Duero, Spain has been officially recognized by a team of international experts chaired by the International Energy Agency (IEA) Energy Technology Network, for its outstanding achievement in demonstrating local District Energy leadership in providing clean, sustainable energy solutions to protect against the risk of climate change.

AWARD OF EXCELLENCE
EMERGING MARKET

TORRELAGO
DISTRICT HEATING
LAGUNA DE DUERO,
SPAIN

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DISTRICT
ENERGY
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Tuesday, 24 October 2017
Doha, Qatar



NETWORKING

URBAN ECOSYSTEM

COMMUNITY

INTEGRATED