AREA 21

Interreg Baltic Sea Region

EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND

Webinar Summary

Energy Improvement Districts: An Instrument for Local Cooperation on Energy Efficiency

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Webinar Summary

The first webinar presented the AREA 21 project, its aim and goals, the seven pilot areas in the Baltic Sea Region and stressed the work done towards successful stakeholder engagement.

Prof. Jörg Knieling, the lead partner and project manager of AREA 21 at HafenCity University (HCU) in Hamburg, Germany, presented the main features as modules of the EID concept in AREA 21 and the importance of cooperative energy planning processes, with their challenges and opportunities.

Jonas Fischer, a project coordinator at HCU, gave a detailed insight on proccess and guidance on three different phases of the EID development.

The outcomes of the pilot areas implementation phase were further elaborated during the panel discussion session with representatives from the EID pilots. They were invited to present their results based on their specific context and experiences.

Agenda

as conducted on 1st Sept, 2020

14:00	Introduction | Meeting Check-In *Jörg Knieling, HafenCity University Hamburg*
14:10	AREA 21 Energy Improvement District *Jörg Knieling, HafenCity University Hamburg*
14:25	Guidelines of EID implementation *Jonas Fischer, HafenCity University Hamburg*
14:40	Panel discussion with AREA 21 EID Guides *Moderation by Jörg Knieling, HafenCity University*
15:20	Conclusions *Jörg Knieling, HafenCity University Hamburg*

Moderation

Jörg Knieling

HafenCity University Hamburg

Lead Partner & Project Manager

Jörg is the Head of the Department of Urban, Regional and Environmental Planning and professor for Urban Planning and Regional Development at HafenCity University.

Meet our panelists

Patrik Hermansson

Energy Utility Öresundskraft, Helsingborg

Head of Strategy and Innovation Department

Patrik has over 25 years of experience from innovative energy solutions and has had a key role in the developed partnership between the energy utility Öresundskraft and the public property owner Region Skåne.

Yury Nurulin

Peter the Great Saint-Petersburg Polytechnic University

Professor

He has an experience of more than 35 years of scientific work, more than 80 research publications. His research interests are automated control systems, innovation management, social-technical systems.

Juho Rinta-Rahko

City of Tampere

Project Manager

Juho works as a project manager in the city of Tampere and is an expert in energy efficiency in buildings. His main task is to develop measures to promote energy efficiency renovations in the building stock.

Jana Viital

Kohtla-Järve

Project Manager

Jana is Chief Specialist at the Urban Development Department, Kohtla-Järve Town Government and has 13 years of experience in public service and local government, mainly on public service and cooperation development, administrative procedures.

Meet our panelists

Steffen Sperlich

Wandsbek District Office

Civil servant & Project Coordinator

Steffen, employed in the area of technical environmental protection, is responsible for the Area21 project implementation. Before joining the Wandsbek district, he worked as a product engineer for an environmental company in Dresden.

Antti Roose

Tartu Regional Energy Agency

Project Manager

Antti is a project manager at Tartu Regional Energy Agency. He has experience in environment and energy nexus in urban areas, spatial planning and climate adaptation and has contributed to numerous urban plans and local agendas.

Monika Kłos

Lublin City Office

Deputy Director of the Department of European Funds

Monika is responsible for monitoring the implementation of non-investment (soft) projects in the Municipality of Lublin, related to environmental protection and energy efficiency, also as an expert and authoress of studies and analysis.

Jonas Fischer

HafenCity University Hamburg

Project Coordinator

Jonas is AREA 21 project coordinator at HafenCity University Hamburg and has working experiences in sustainable mobility and energy efficiency in buildings.

Project Key Facts

Funding Programme: Interreg Baltic Sea Region

Duration: 10. 2017 – 09. 2020

Priority: Natural resources

Spec. objective: Energy efficiency

Aim: To pilot Energy Improvement Districts through the strategic planning and implementation of energy efficient solutions

Partner consortium

- HafenCity University Hamburg (DE) (Lead Partner)
- City of Hamburg | District Wandsbek (DE)
- Kohtla-Järve Town Government (EE)
- Tartu Regional Energy Agency (EE)
- Tampere University of Applied Sciences (FI)
- City of Tampere (FI)
- City of Lublin (PL)
- St. Petersburg Polytechnic University (RU)
- Region Skåne (SE)
- Öresundskraft AB (SE)

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AREA 21 Energy Improvement District

Jörg Knieling, HafenCity University Hamburg

Jörg Knieling presented the main features as modules of the EID concept in AREA 21 and the importance of cooperative planning processes, with their challenges and opportunities. The EID concept is an instrument of AREA 21, which provides a framework for the implementation of cross-sectoral cooperation surrounding district energy planning. The cooperation of different actors involved is challenging. Hence the main goal of EID concept is to bring them together creating a strategic joint cooperation group, where mainly regional and local actors seeking to reduce CO2 emissions and increase energy efficiency at a district level. The EID concept has a modular approach, where external and local conditions have to be considered based on different contexts. Energy demand savings, efficiency improvements in energy production and use of renewable energies and innovative energy technologies are the core goals of the EID concept.

Diverse phases on which the EID concept is based were further explained. Initiation, organisation and cooperative formats, financing schemes and required timeframe to run a project are details presented by Jörg Knieling during today‘s webinar. Addressing the energy topic in parallel with other local issues is perceived as an opportunity to bring in various resources and produce innovative and multi-purpose solutions. The implementation of the case studies confirms its potential. The EID concept can be a functioning instrument to achieve the climate mitigation goals on the national and EU levels.

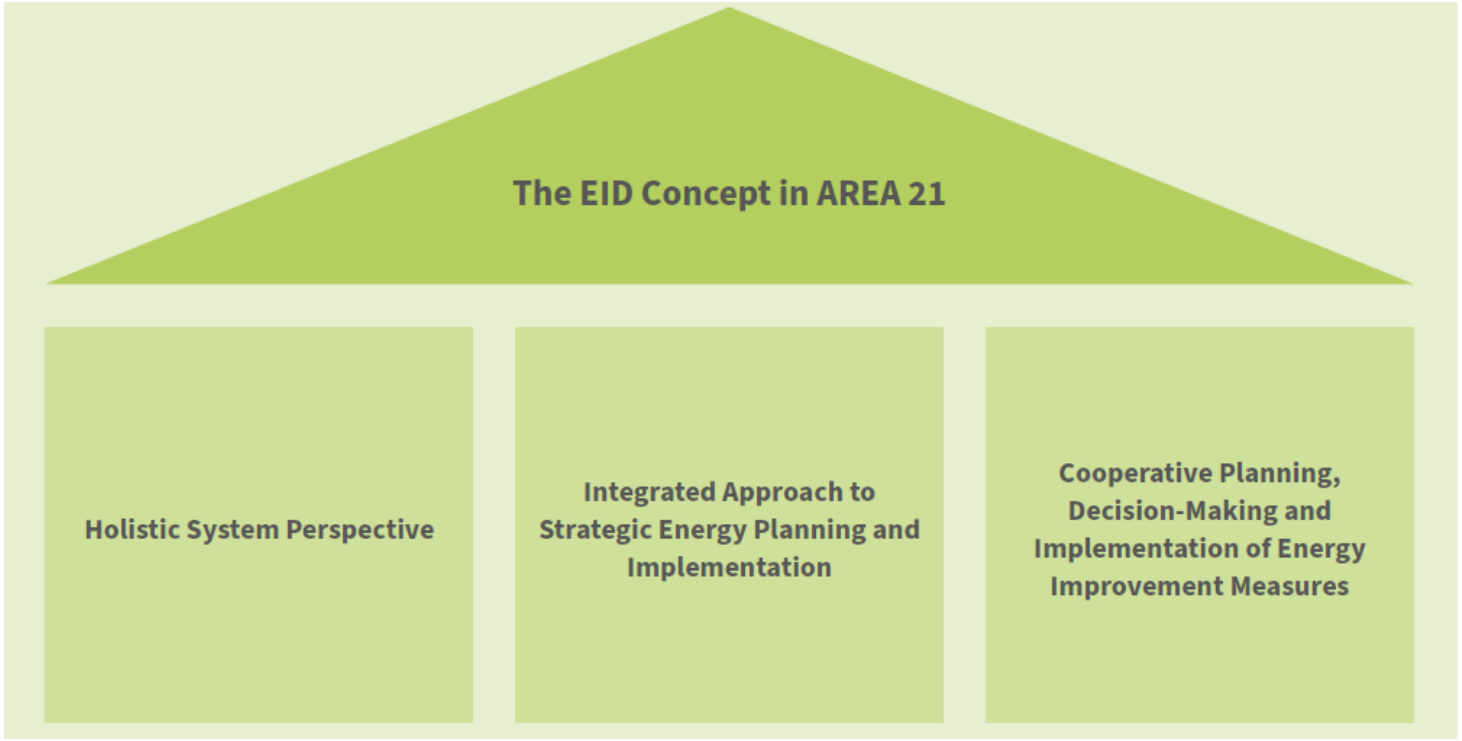
EID Concept

Goal:

- providing a framework for the implementation of cross-sectoral cooperation surrounding district energy planning

Target groups:

- local, regional and national actors in energy planning that are seeking instruments to reduce CO2 emissions and increase energy efficiency at the district level



The EID concept as a modular approach

External conditions,
e.g. energy system & policy, economical situation, funding programs

Local conditions,
e.g. energy infrastructure, demographic and political structure, shrinking vs. developing city

EID
Thematic goal(s)

- savings in energy demand
- efficiency improvements in energy production
- use of renewable energies & innovative energy technologies

Main features as modules of the EID concept

- Initiation
- Area identification & delimitation
- Organization & cooperative formats
- Financing & incentives
- Timeframe

Essential Actors in the EID

User-driven

Civil society

e.g. local citizens, property owners, housing communities

Utilizer-driven

Private actors

e.g. companies, businesses, business clusters

Provider-driven

Academia

e.g. knowledge and educational institutes, universities, research and development bodies/ organizations

Enabler-driven

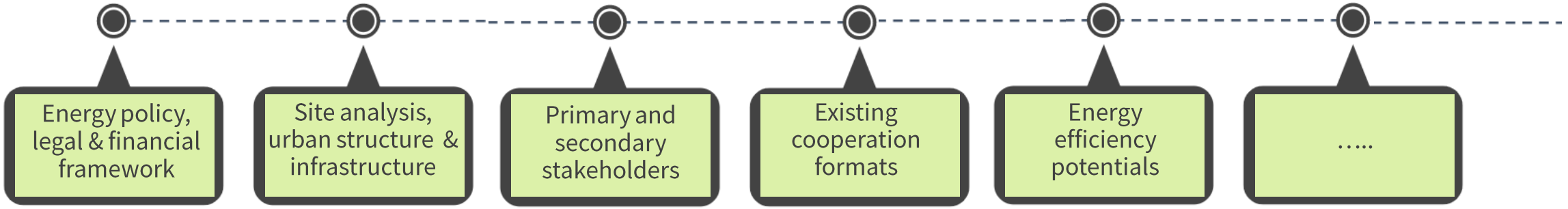
Public authority

e.g. government, municipality, public sector organizations, regional development agencies, policy makers

Either a bottom-up or a top-down are both valid approaches to initiate the project. Most important is uniting all actors in a strategic cooperation group in order to ensure representation of all interests and concerns in the development of the EID strategy and goals.

7 Pilot Areas (EIDs)

- Hamburg: EID Barmwisch-Bramfeld
- Helsingborg: EID Hospital Area
- Kohtla-Järve: EID Järve District
- Lublin: EID Wieniawa
- St. Petersburg: EID Polytechnic
- Tampere: EID Härmälä
- Tartu: EID Annelinn



Governance and on-site analysis

Cooperative Planning Processes

CHALLENGES	THREATS	OPPORTUNITIES
– Low awareness of energy efficiency potential – Lack of finance and support processes – Lack of cooperation and interest amongst diverse stakeholder groups – Lack of data or insufficient data quality	– Passive participation in cooperative activities – Instability (e.g. political) – Market developments – Lack of experience in cooperation	– Targeted funding schemes – Overarching city-level strategies – New technologies – Increasing environmental awareness – Potentials for synergies and resource savings

Conclusion

- The EID concept is supported by **three pillars** and was tested in **seven pilot districts**.
- The modular approach breaks down the concept into **five main features** that need to be defined according to local conditions following a flexible framework prepared as part of the EID concept.
- The development of the EID concept is a response to the hypothesis that **district energy planning is a relevant arena for the implementation of energy efficient measures** and the consequent **curbing of carbon emissions**.
- Addressing energy in parallel with other local issues is perceived as an **opportunity** to bring in various **resources** and produce **innovative and multi-purpose solutions**.
- The implementation of the case studies confirmed the **EID concept's potential**.

Guidelines of EID Implementation

Jonas Fischer, HafenCity University Hamburg

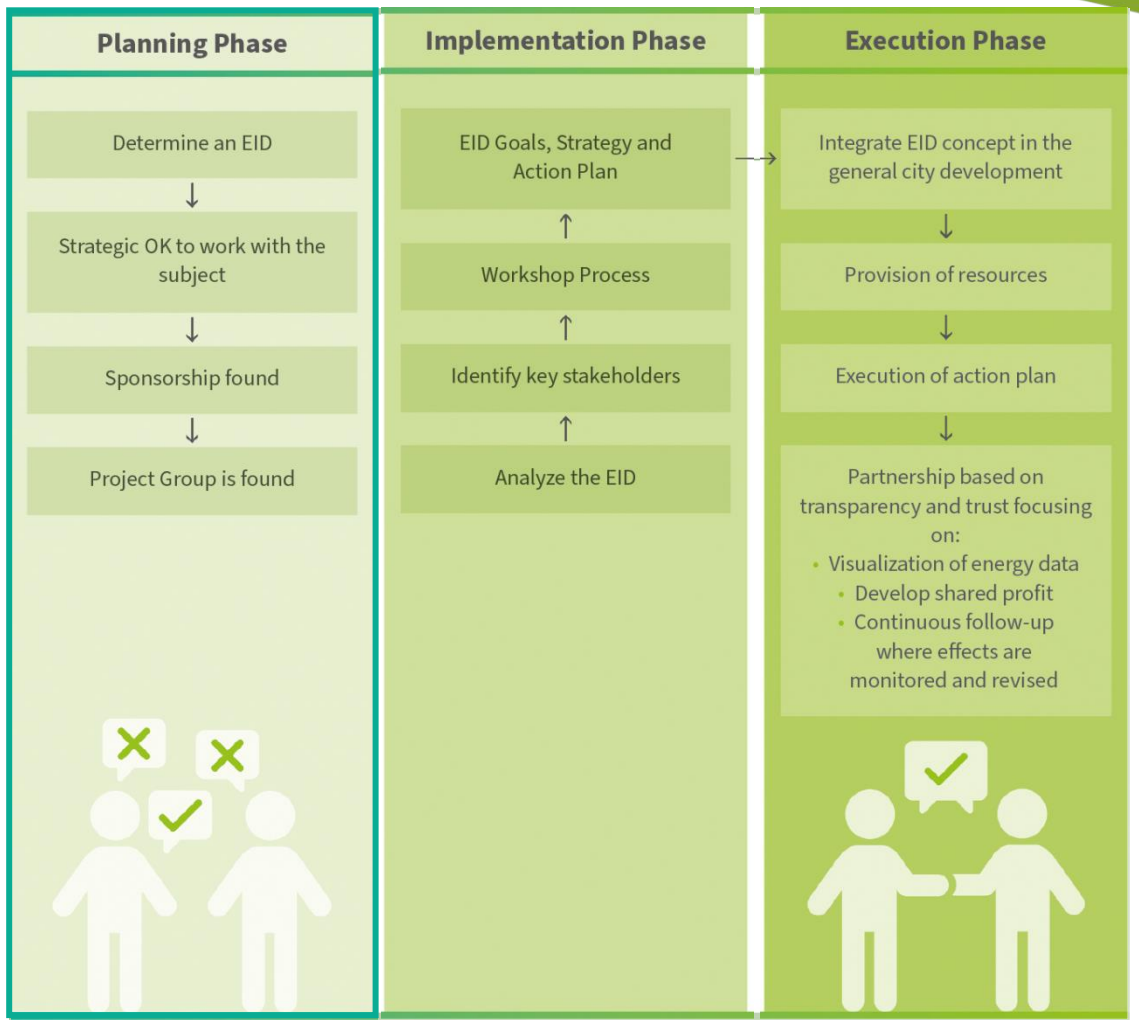
Jonas Fischer, in his presentation, gave some insight on the three main phases and several steps to follow during the EID implementation, which can indeed be used as blueprint, as they are transferable to other areas adapting and taking in consideration the specific context. Each phase has specific steps pursue. During the planning phase an area definition regarding the particular context is needed where potentials of the area are found, followed by the aim and goals definitions, working closely with the third step of seeking for sponsorship, which includes not only funding, but also political support. These steps are finalized with a core project group formed, important to initiate and implement the EID concept.

The implementation phase starts with the status quo analysis, which is very important as it identifies the needs and challenges of the area and it is a good base to work later on the execution phase and check the improvement from the initial situation. Identifying the key stakeholders is essential; the more actors are involved, the higher the ownership, but also the more complex is the case. Workshops bring all stakeholders together, developing the goals, strategy and action plan for the area.

The last step is the execution phase where the EID concept is integrated in the city development, resources are provided and the action plan is executed. True collaboration reduces costs, increases cooperation and ownership. It is a win-win situation.

Summary of Guidelines of EID Implementation

- All steps can be used as **guideline** for planning, implementing and executing an EID concept
- The steps are **transferrable** and can be applied to context-specific cases
- True collaboration reduces costs, increases cooperation and ownership – **win-win situations**



Discussion Session Summary

During the discussion session, representatives for our 7 pilot areas updated us with each project‘s outcomes from the implementation phase, their approach on different contexts, benefits and major challenges.

- Patrik Hermansson states that the Helsinborg EID project was a success so far, becoming a good set-up and promising solution on energy standards improvement, based on a great strategic-level cooperation. This project has special characteristics as it is based on a hospital area. A joint cooperation between the city and the customer was fruitful.
- The St. Petersburg EID had a totally different frame, developed for an university area, where students are the key stakeholders. The main challenge was that cooperation with students is not easy as there is no economic benefit for them. However, several formats and different motivations were used to actively involve them. This successful activation and collaboration is one of the most important outcomes of the project.
- Different challenges were tackled in the Kohtla-Järve EID, firstly because of the shrinking population issue and the buildings‘ historical status. The EID is seen as a great tool on raising awareness, mapping and standardizing the procedures. The next key task is to grow financial possibilities and incentives, which momentarily are lacking in the city.
- In the Tartu EID, half of the buildings are already reconstructed, a near-zero energy kindergarten is opened. The process was supported by the national funding scheme, where 30-50% of the total reconstruction cost was covered. Future plans are to install new metering devices as automatic readers and further strategies to tackle urban heat island in the area. Additionally, stakeholders interest to participate pushed the process.

What was the role and involvement of relevant stakeholders in your EID?

Prof. Yury Nurulin, St. Petersburg

We have developed ways to engage and activate students for energy savings, even though they don‘t have direct economic motivation. That lack of motivation makes them difficult to motivate but we have overcome this. The EcoGen Cup student competition is one good example.

Patrik Hermansson, Helsingborg

We have seen a very successful cooperation in the Hospital Area in developing the EID including the hospital, the region, and ourselves (energy provider). Our exchange has increased and deepened, and the effects will be lasting.

What was the role and involvement of relevant stakeholders in your EID?

Antti Roose, Tartu

Half of the buildings are already reconstructed, a near-zero energy kindergarten is opened. The process was supported by the national funding scheme, where 30-50% of the total reconstruction cost was covered. Future plans are to install new metering devices as automatic readers and further strategies to tackle urban heat island in the area. The stakeholders interest to participate pushed the process.

Steffen Sperlich, Hamburg

Our main partners are housing cooperatives. They have a very important role for affordable housing as their first interest is to represent and work for their shareholders who are also tenants. They are important for a sustainable urban development across generations that includes all parts of society.

What are the future plans for the EID?

Monika Kłos, Lublin

Students are a large percent of the local population and we find it similarly difficult to motivate them to reduce energy like in St. Petersburg. We plan to continue their engagement and use competition formats as modelled in St. Petersburg.

Jana Viital, Kohtla-Järve

The EID concept is seen as a great tool on raising awareness, mapping and standardizing the procedures. The next key task is to grow financial possibilities and incentives, which momentarily are lacking in the city.

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