



Welcome to General Assembly 2024 in Munich

6 – 8 March 2024



Funded by
the European Union

ASCEND : One Year in short

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Philippe Fournand (BLS)



2023 a busy and intensive year for ASCEND



7 roadmaps delivered in 2023

→ 2 in the Lhcs detailing the measures timeline line and expected results

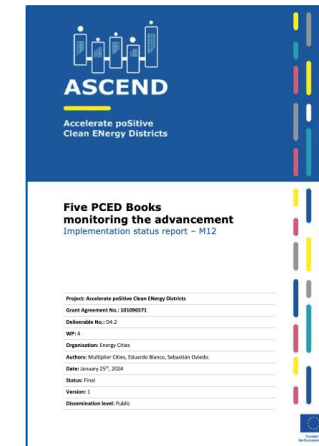
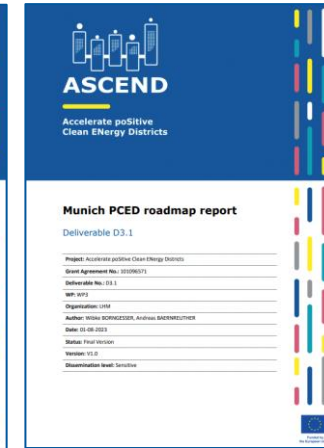
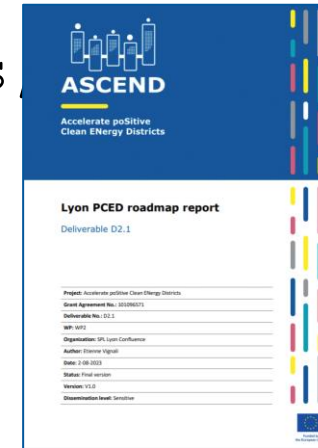
→ 5 in the Mcs : Alba Iulia, Budapest, Charleroi, Porto, Prague

On time!

Different types of District

- Existing (Alba Iulia, Budapest, Lyon, Munich, Porto)
- News (Charleroi/Prague)

Explaining the difference in terms of achievements



Governance is in place in most of the cities

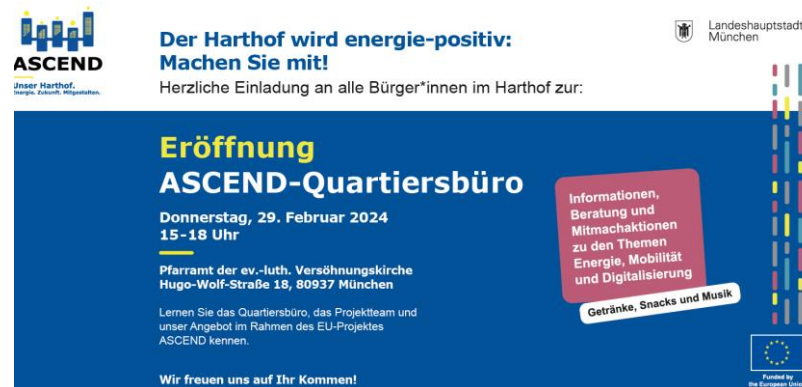
We have built the local governance and the local implementation team and structures and started the participatory process



PIC's workshops in Lyon

→ Running in Lyon/Munich/Porto/Stockholm

→ Ongoing in Budapest/Charleroi/Prague



ASCEND
Inser Harthof, Energie, Aktivität, Mitgestaltung.

Der Harthof wird energie-positiv: Machen Sie mit!
Herzliche Einladung an alle Bürger*innen im Harthof zur:

Eröffnung ASCEND-Quartiersbüro
Donnerstag, 29. Februar 2024
15-18 Uhr

Pfarramt der ev.-luth. Versöhnungskirche
Hugo-Wolf-Straße 18, 80937 München

Lernen Sie das Quartiersbüro, das Projektteam und unser Angebot im Rahmen des EU-Projektes ASCEND kennen.

Wir freuen uns auf Ihr Kommen!

Informationen, Beratung und Mitmachaktionen zu den Themen Energie, Mobilität und Digitalisierung

Getränke, Snacks und Musik

Landeshauptstadt München

Funded by the European Union

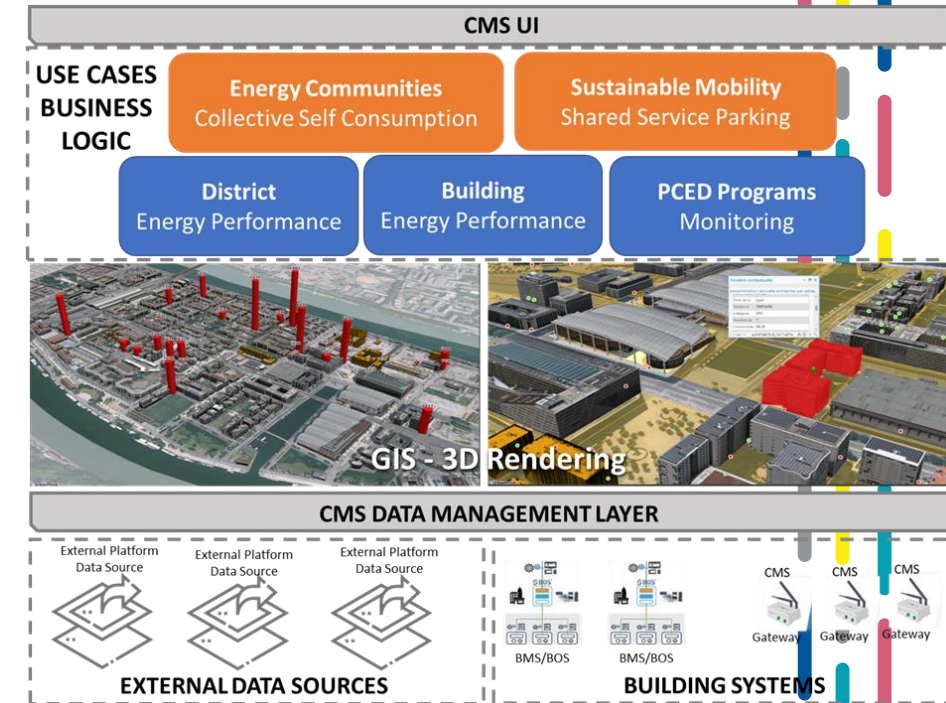
Opening a neighbourhood office in Harthof

Digital tools : components have been defined and implementation will follow soon

→ **CMS** (Lyon) and **Digital Twin** (Munich) concepts and use cases have been defined, implementation will follow on 2024

→ **Porto** is well advanced and consider to integrate energy data into Porto's Urban Data Platform and develop the PCED digital twin

→ **Prague** is working on identifying data set and use cases for PCED Digital Twins



Kickstarting Energy Communities in most of the of the cities

Lyon PCED

- **Large scale energy sharing project**
(collective self-consumption)
- PV systems installed mainly on private buildings under construction
- Objective : 1 MWp of PV systems by 2028

Munich PCED

- **Direct use of the PV production by tenants**
(energy tenants models - Mieterstrom)
- PV systems installed mainly on buildings to be refurbished
- Objective : Energy tenants model implemented in 47 buildings

Porto

- Several collective self-consumption projects
PV systems installed on schools, social housing, and other municipality-owned assets (police, swimming pool, ...)
- Creation of a renewable energy community (REC)



Buildings : intensive preparation and first results

- Most of the operations are in the design and consulting phase in Munich, Lyon
- Concrete implementation has started in Lyon (14,552 m² have been refurbished and developers selected or under selection for new buildings)
- **Alba Iulia** is implementing is new PEB Campus within PCED Area (CRESCENDO)
- **Porto** high energy performance building in Serralves Foundation



Decarbonised mobility feasibility studies and first implementation

→ **Munich/Budapest/Alba Iulia** : micro mobility station



→ **Lyon/Budapest** : new public space and decarbonised logistic hub



Capacity Building program is on track and will be deployed in 2024 (WP4 supported by WP6)



INPUT

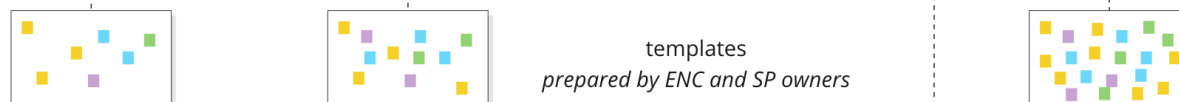
Library of Resources videos, articles and tools provided by SP owners



2024											
January	February	March	April	May	June	July	August	September	October	November	December
		GA Munich Site Visit 1	CoP 1 online		CoP 2 online				Site Visit 2 ExTr 1 live ExTr 2 live ExTr 3 live	CoP 3 online	

EXCHANGE

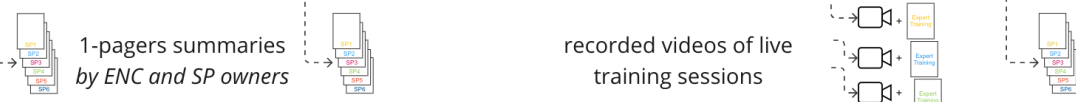
Miro



templates prepared by ENC and SP owners

DISSEMINATE

Website



1-pagers summaries by ENC and SP owners

recorded videos of live training sessions



SP Name and Icon

CoP Topic

Resources

Session Summary

Common Challenges

Main Takeaways

Participant's Quote



WP5 :set up of the core pillars



Enabling

Understanding business models and financing



Mindset shifting

Scaling by design requires data, engagement
It starts now



Assessing

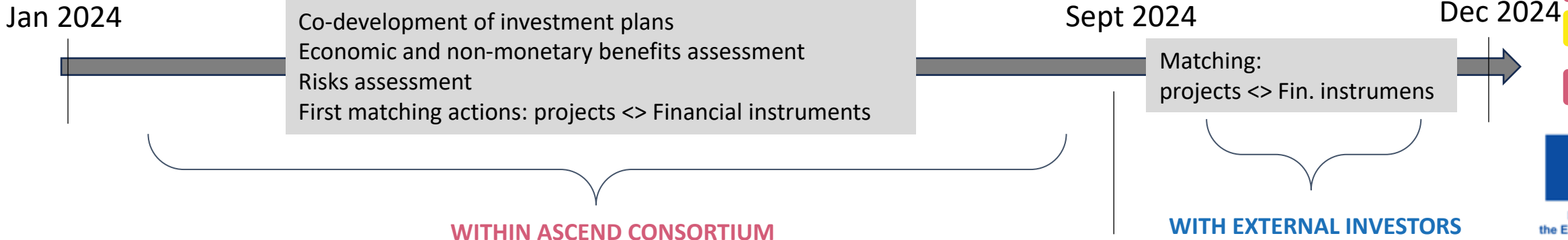
Monitoring the deployment of the solutions through a maturity model



Testing

Engage a dialogue with investors and cities

2024 first iteration:



We have built tools to support the project and monitor its impact

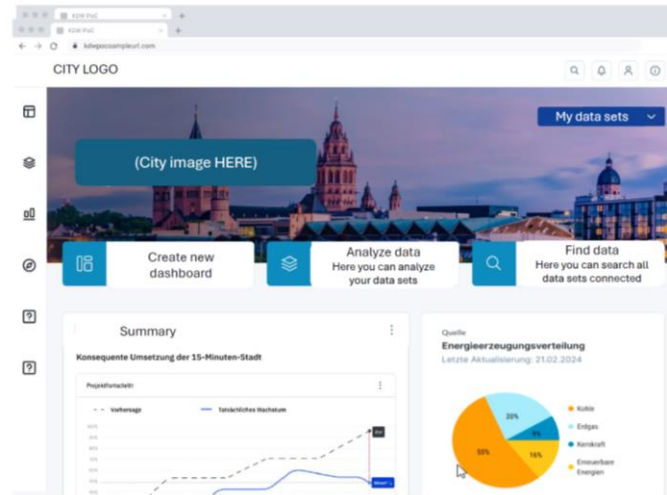
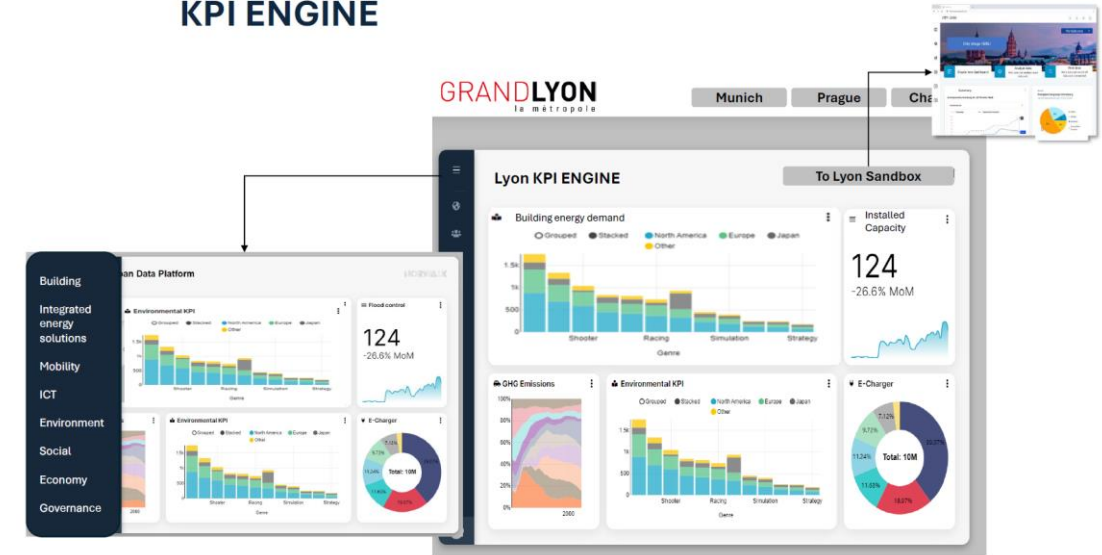
KPI ENGINE

KPI engine

- A collaborative effort led by WP6 to define 30 Core KPIs

A **sandbox** and more in 2024

The SOA of 18 solutions

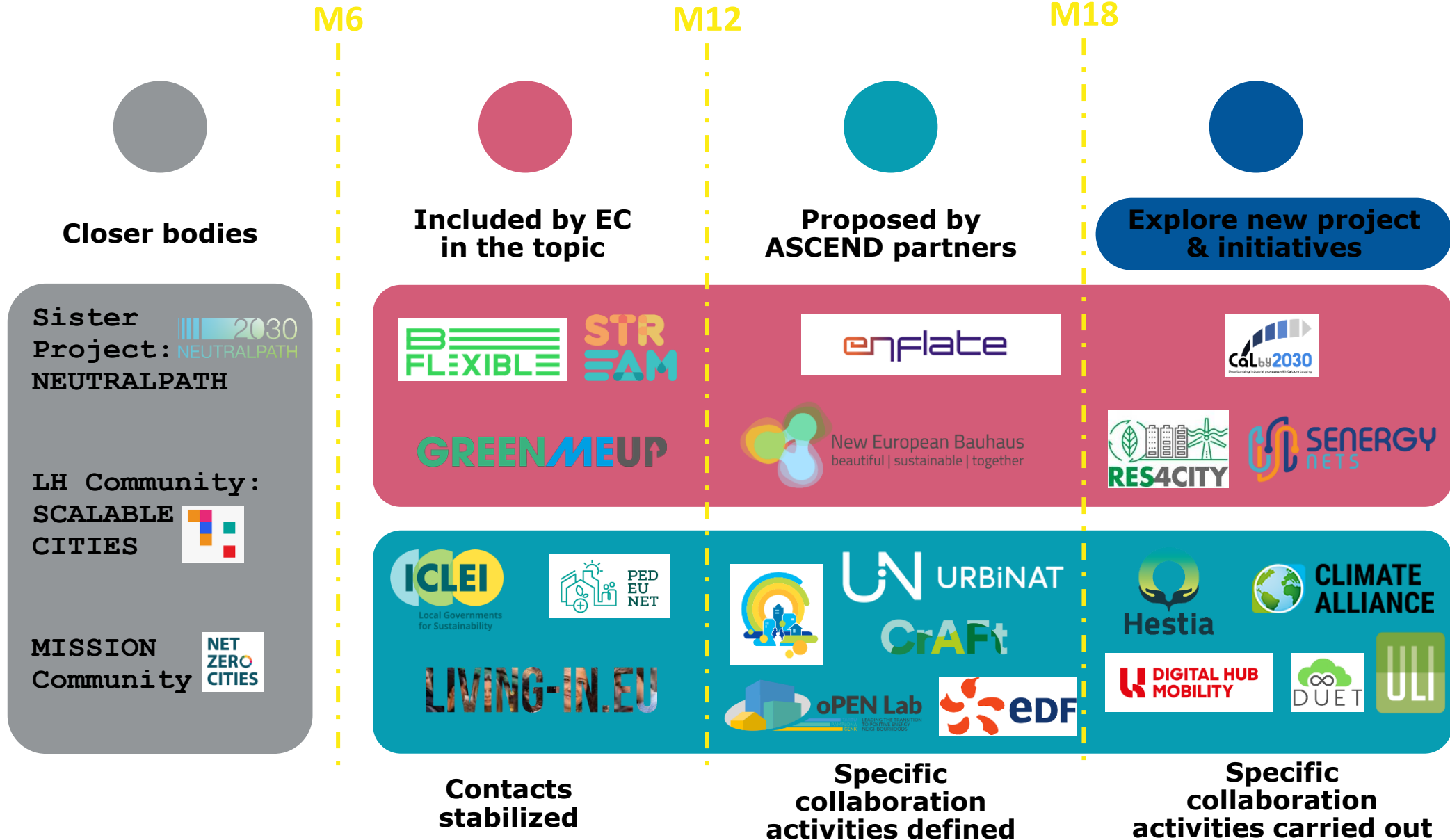


	Munich	Lyon	Multiplier City
SP1	Digital Twin	CMS Urban Data Platform	Prague: Urban data platform (Golemio)
SP2	Photovoltaics Tenant Electricity Project	YDEAL Confluence	Porto: Asprela + Sustentável
SP3	Refurbishment with pre-fabricated elements	Super-efficient buildings	Budapest: Heat exchanger with potable water
SP4	Mobility Points	Micro hub	Alba Iulia: Car charging infrastructure
SP5	Climate Council	Building Operating System (BOS)	Stockholm: Scaling Smart City Solutions
SP6	n/a	SPL Lyon Confluence	Charleroi: Igretec

Table 1: PCED solutions according to ASCEND's solution packages



A collaboration roadmap set up



A significant investment in communication and dissemination

sefa

YOUR FINANCIAL ASSESSMENT

Investment	Net	Gross	Net
Investment	0.00	0.00	0.00
Energy efficiency measures, for buildings renovation	0.00	0.00	0.00
Renewable	0.00	0.00	0.00
Renewable	0.00	0.00	0.00
Renewable	0.00	0.00	0.00
Renewable	0.00	0.00	0.00

Energy Agenda | Investors Dialogue on Energy Meeting

23 January 2024
Renaissance Hotel & Online



Solution Packages

At the core of ASCEND lie our six Solution Packages. Building upon the successful approach implemented by previous SCC projects like SPARCS and Sharing Cities, we propose smart solutions as a comprehensive system consisting of integrated technical, social, infrastructure, business-related, and governance modules. When combined, these modules create a package that facilitates the implementation, replication, and scaling-up of solutions across diverse European cities.

Each Solution Package will be developed under the guidance of a coordinating entity: SP1 focuses on digital infrastructures and ICT tools supporting flexible energy systems and PCED; SP2 involves the deployment of energy communities and prosumer services; SP3 focuses on energy-efficient buildings integrating renewable energy sources and storage; SP4 focuses on energy-efficient buildings integrating renewable energy sources and storage; SP5 emphasises energy-efficient buildings integrating renewable energy sources and storage; SP6 focuses on energy-efficient buildings integrating renewable energy sources and storage.

ASCEND HOME ABOUT CITIES WHAT'S NEW SOLUTION PACKAGES CONTACT US

Amplifying PCED Results for Lighthouse and Multiplier Cities

Multiplier cities, MCs, will **report back on their progress**, providing updates on technical governance, stakeholder analysis, as well as an overview of the challenges met during PCED implementation.

MCs will **adjust their objectives** based on feasibility studies and new learnings from the process of capacity building. They will build key partnerships, define processes and business models, financing schemes, and new procurement schemes.

Implemented actions include:

- the retrofitting of social and municipal buildings in Alba Iulia, Budapest, and Porto,
- the development of **energy communities** based on photovoltaic production in all MCs,
- the development of **data platforms**, giving access to citizens for awareness raising by all MCs,
- Vehicle to grid**, V2G, solutions in Budapest and Alba Iulia,
- a **district heating system**, based on waste heat and local resources in Charleroi,
- Citizen engagement activities** to support citizens in changing behaviours, engage in energy communities, investing in electrical energy and renewable energy production, and transitioning to e-mobility.

ASCEND will produce and implement a **four-years capacity building programme** to plan, organise, and implement a detailed capacity building programme for both LHCs and MCs, promoting the exchange between the cities. This programme will include thematic communities of practice, expert training, and study visits.

MCs will mirror LHCs demonstrators actions, working on the implementation of their own PCED. These will include aspects of governance, citizens engagement and services, digital ecosystems, flexible, clean and efficient energy systems, and mobility.

ASCEND HOME ABOUT CITIES WHAT'S NEW SOLUTION PACKAGES CONTACT US

Mitigating climate change

ASCEND aims to create **Positive Clean Energy Districts**, PCEDs, and make them a routine occurrence in cities across Europe to mitigate the effects of climate change and enable citizens to live in **inclusive, resilient, and smart communities**.

Delivering PCEDs

ASCEND will create two PCEDs in the Lighthouse cities of Lyon and Munich. These new districts will address crucial citizens' needs such as **inclusion, social cohesion, health, and economic development**, technical integration between systems triggered by the new energy system, and other easy-to-use solutions.

ASCEND will also engage six Multiplier cities: Paris, Charleroi, Stockholm, Prague, Budapest, and Alba Iulia who will be spearheading and replicating the concept of PCEDs further across Europe.

Engaging a diverse ecosystem of cities and stakeholders

Together, ASCEND cities cover a large diversity of districts such as city centre, urban outskirts, ageing residential areas, or industrial brownfields.

Cities will use local ecosystems to deliver the PCEDs and bring together key stakeholders such as policymakers, industries, SMEs, property developers, financial actors and investors, research and development organisations, academic, energy service providers, and citizen associations.

Measuring impact

All impacts will be assessed through an **Integrated Monitoring and Evaluation Methodology**, utilising a fully automated data collection - the **SPS engine** - to provide evidence for the feasibility and co-effectiveness of the implemented PCEDs.

In a Nutshell:

- Durations: 2023-2028
- Coordination: SPL Lyon Confluence
- 8 Demonstration Areas
- 30 Partners in Europe

What are Positive Clean Energy Districts?

Positive Clean Energy Districts are **energy-efficient and flexible urban areas of connected buildings** which produce net zero greenhouse gas emissions.

ASCEND PCEDs will make cities:

- HEALTHIER
- SMARTER
- SUSTAINABLE
- INCLUSIVE
- RESOURCE EFFICIENT

PCEDs help speed up and scale up the deployment of smart and sustainable energy district solutions and technologies, and work towards achieving net zero goals and energy independence.

How do PCEDs work?

PCEDs stand on five pillars: **active citizenship, zero-carbon frugal buildings, smart energy grids, decarbonised public spaces and mobility, and digital tools**.

All pillars revolve around an **"urban orchestrator"**, a public entity aggregating all components and services of a PCED to implement long-lasting change at district level.

In ASCEND each pillar of the PCED will be connected to the urban orchestrator through a federating digital platform and a "human network" of local stakeholders.



WHAT ARE OUR CHALLENGES AND NEXT STEPS?



Challenge two : coping with the changing economic context

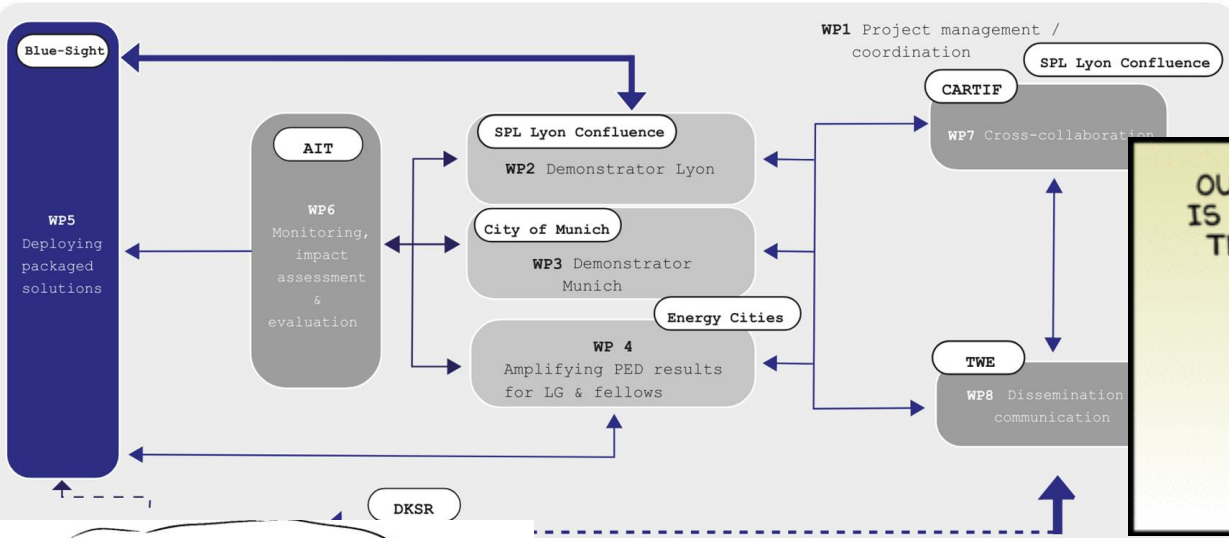
- Prices have sky rocketed and continue to increase, however more slowly.
- The building industry has been severely hit and investments and programs can be postponed or not implemented waiting for a better context
- Shortage in competencies in the industry is a main barrier
- The impact is not easy to assess because we are in a highly uncertain context: is it a temporary or more structural crisis?



CHALLENGE 3 OVERCOMING SILOES

Bernd
At the end
Augsburg wins!

Maxime
Nice haircut



WE GIVE YOU FIVE YEARS TO CREATE PCEDS, MAKE THEM REPLICABLE, CREATE AND IMPLEMENT COMMON TOOLS AND PROTOCOLS FOR DATA COLLECTING AND SAMPLING, USE COMMON KPIS, CREATE A FLEXIBLE SOLUTIONS PACKAGE...



Maxime Bernd

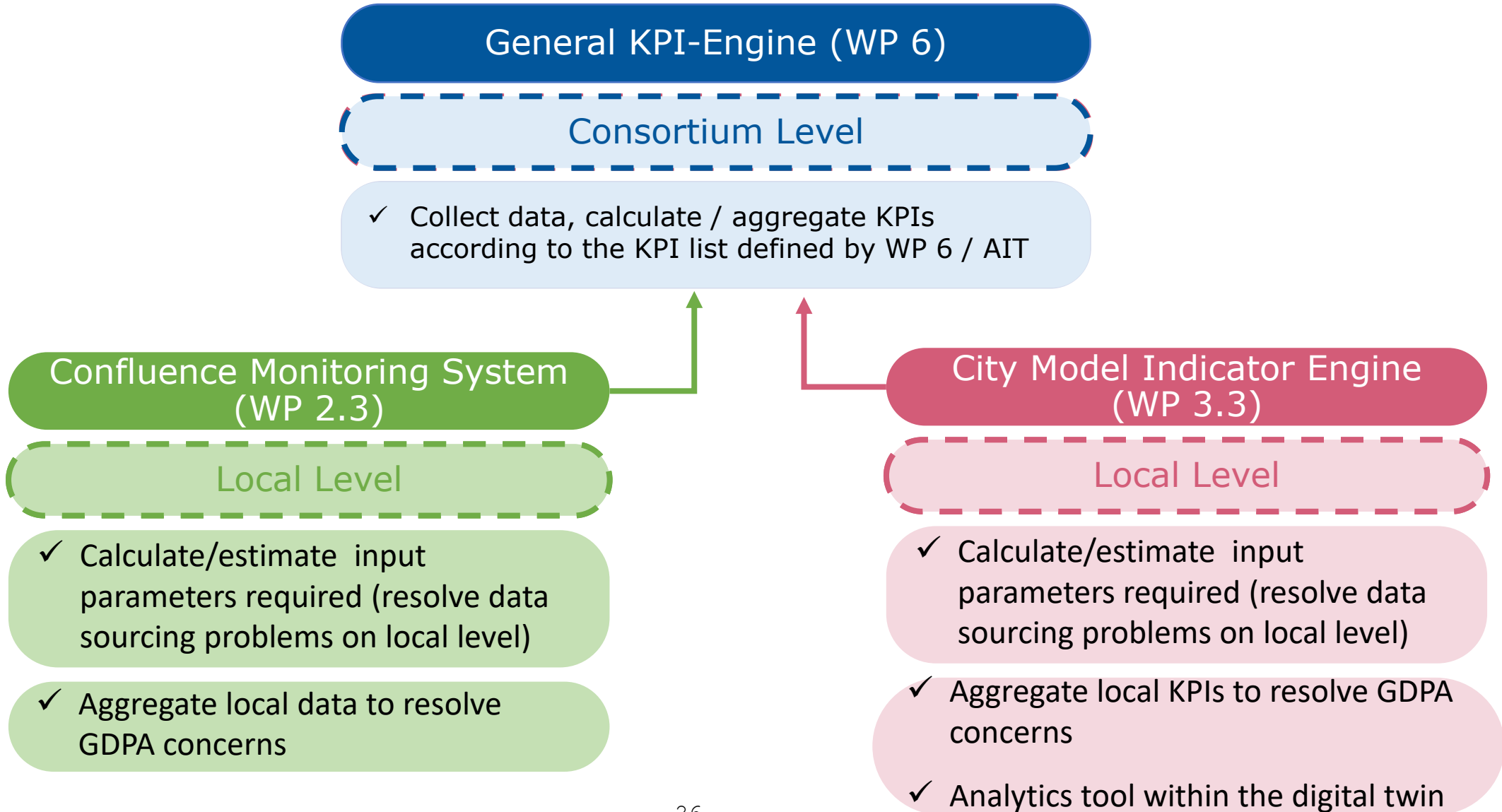


CHALLENGE 3 : OVERCOMING SILOES

- CBP Building as the main lever to install transversality and sharing
- Enabling Sps owners to conduct this process
- Using tools proposed by transversal WPs
 - Sandbox
 - Web Based platform with a set of tools
 - Sharing tools (We have two KPI engine and this is a good news)
 - UoL can develop basic algorithms to optimise energy consumption for instance
- But the objective is not sharing for sharing
- But to solve our second challenge, our real problem!



KPI Engine vs Confluence Monitoring System (Lyon) and City Model Indicator Engine (Munich)



CHALLENGE NUMBER 4 / TACKLING OUR REAL PROBLEM

The hard problem

- Delivering Positive Clean Energy Districts (PCED)
- Ascend stands on the shoulders of the previous SCC projects

The real problem!

- Deploying, scaling
- Not being stuck in the pilot trap
- Channeling more funding and financing

Ascend ultimate goals

Speed and scale the adoption of our solutions to enable a wave of PCEDs in Europe

We need to start to think upscaling now or scaling by design our solutions

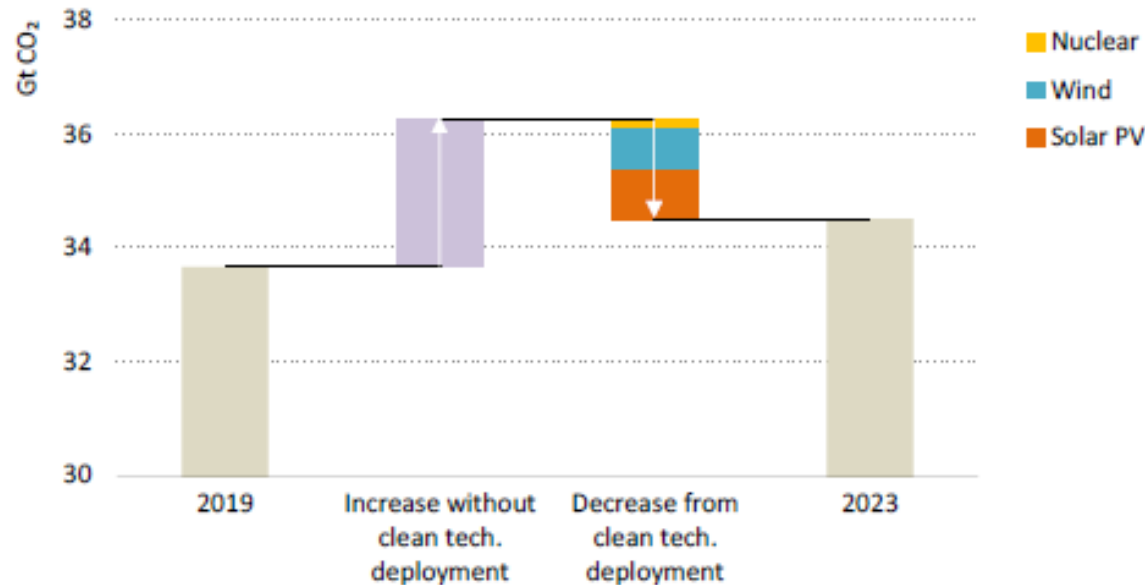
And not at the end of the project when no one has time for that!



Energy transition must be economically viable. Innovative business models need to be identified, tested and validated so that demos actions can be implemented and replicated in a non-subsidised scenario (Florencio Manteca Stardust Coordinator)

Speed and scale our innovations is working if you look at the latest IEA Report

Figure 3: Change in CO₂ emissions from energy combustion and avoided emissions from deployment of major clean technologies, 2019-2023

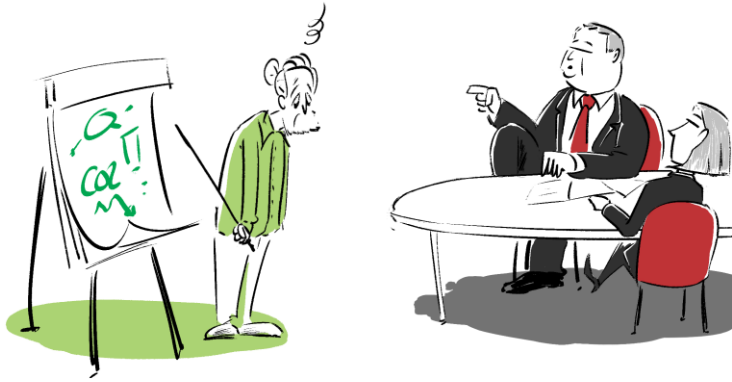


CO₂ Emissions in 2023 A new record high, but is there light at the end of the tunnel?



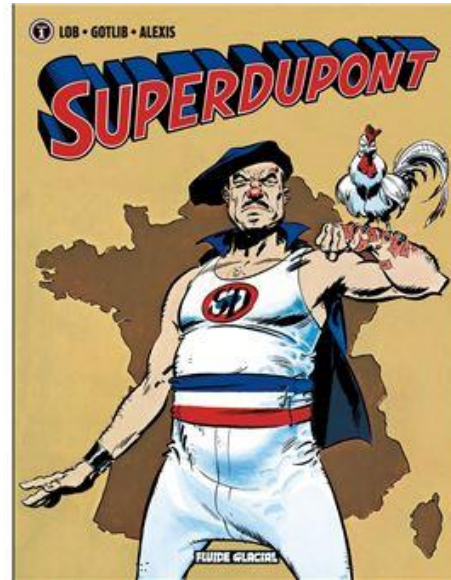
How to tackle our real problem?

FUNDRAISING

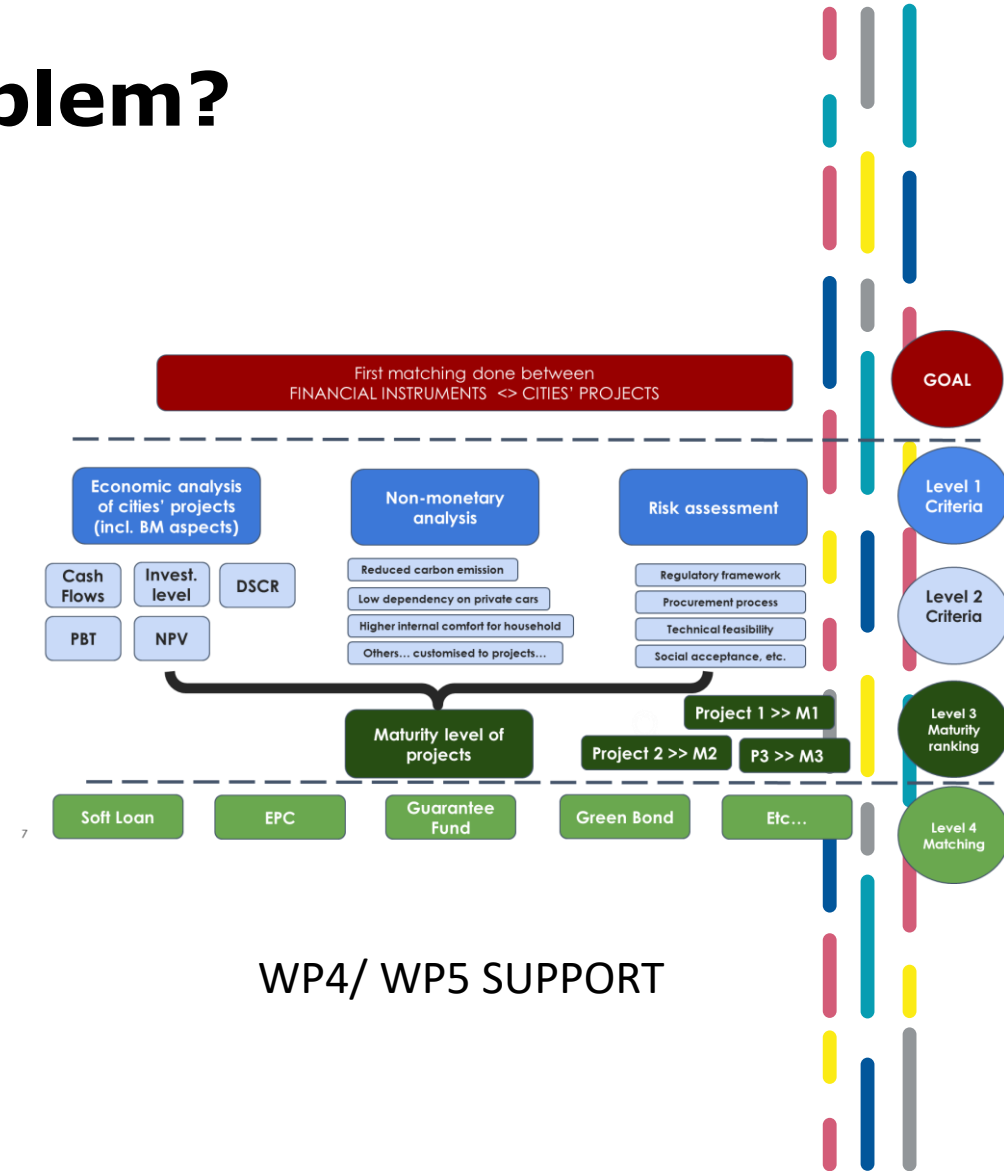


"WHAT DO YOU MEAN WITH 'PAID IN SOCIAL BENEFITS'?"

Cities



ASCEND SCALE UP TEAM
SUPER MIND CREATOR



WP4/ WP5 SUPPORT



Two questions to conclude

- To become Pced,
 - We must electrify the usages
 - However, this shift should trigger an increase in energy consumption, probably exceeding what we can produce locally
 - How to deal with this apparent contradiction?
- In terms of carbon emission, production matters more than transportation
 - How becoming PCED if we have no sustainable EV, PV etc.
 - How financing the investment needed

