ASCEND

Welcome to General Assembly 2024 in Munich

6 – 8 March 2024

ASCEND : One Year in short

Maxime Valentin (SPL)

Bruno Gaiddon (HESPUL)

Philippe Fournand (BLS)

2023 a busy and intensive year for ASCEND

7 roadmaps delivered in 2023

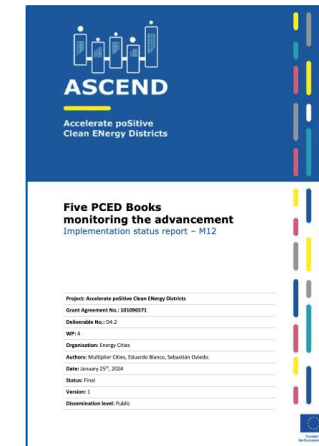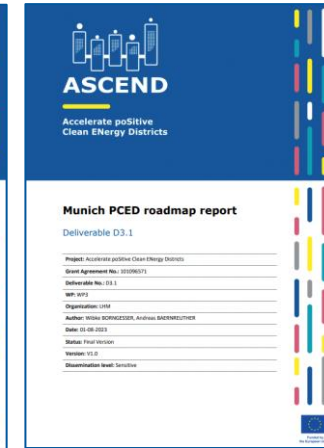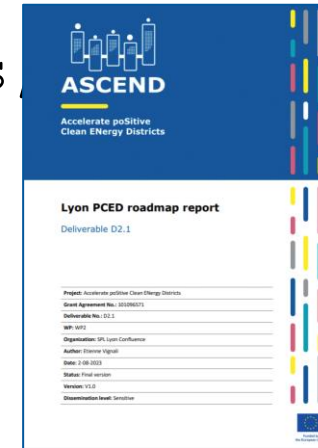→ **2 in the Lhcs** detailing the measures, timeline line and expected results

→ **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
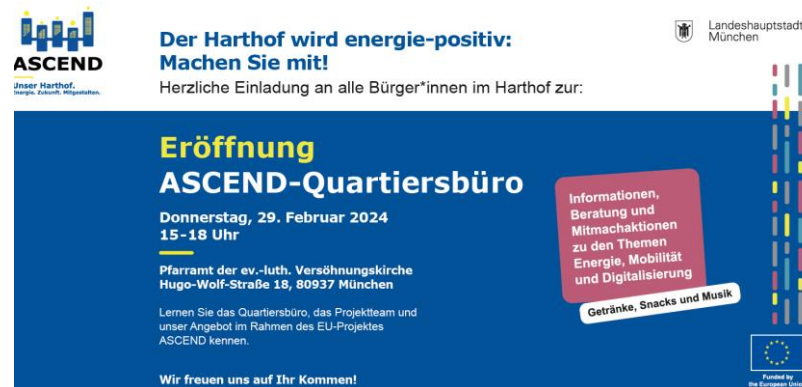
Governance is in place in most of the cities

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

→ **Running in Lyon/Munich/Porto/Stockholm**

→ **Ongoing in Budapest/ Charleroi/Prague**

PIC's workshops in Lyon

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
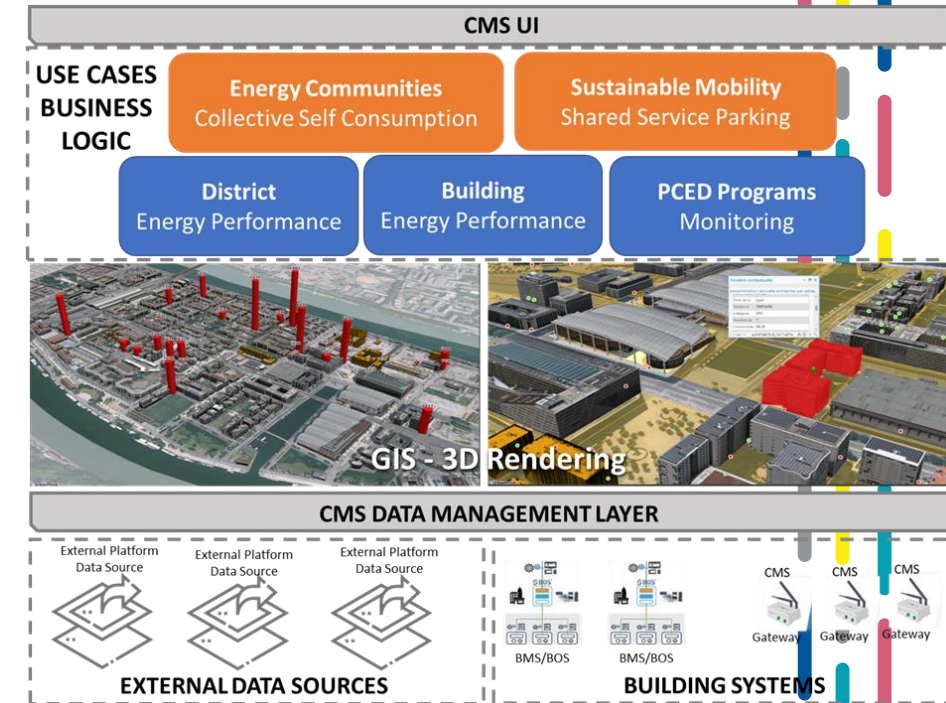
Kickstarting Energy Communities in most of the of the cities

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

→ **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)
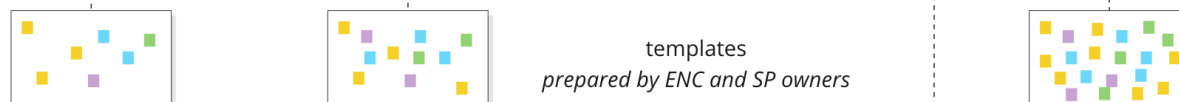
INPUT

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
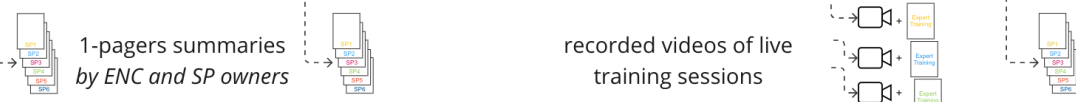
Miro — templates *prepared by ENC and SP owners*

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

Funded by the European Union

WP5 :set up of the core pillars

Enabling

Understanding business models and financing

Mindset shifting

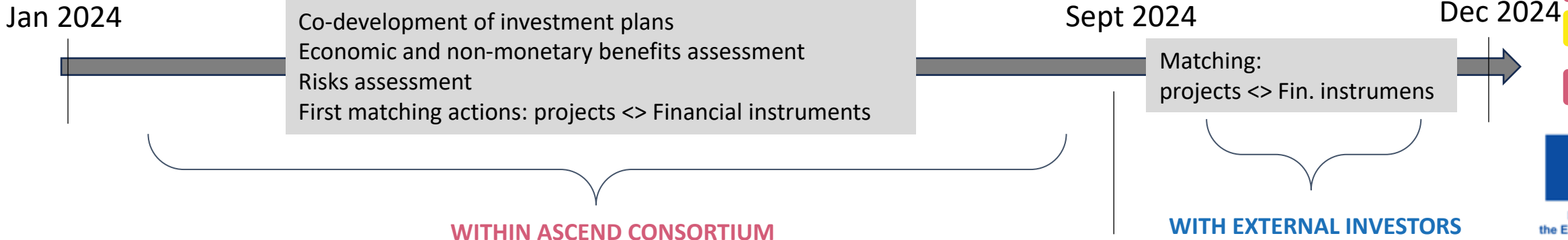Scaling by design requires data, engagement

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:

Jan 2024

Co-development of investment plans
Economic and non-monetary benefits assessment
Risks assessment
First matching actions: projects <> Financial instruments

Sept 2024

Matching:
projects <> Fin. instrumens

Dec 2024

WITHIN ASCEND CONSORTIUM

WITH EXTERNAL INVESTORS

ASCEND

Funded by
the European Union

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

KPI engine

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

A sandbox and more in 2024

The SOA of 18 solutions

KPI ENGINE

Sandbox
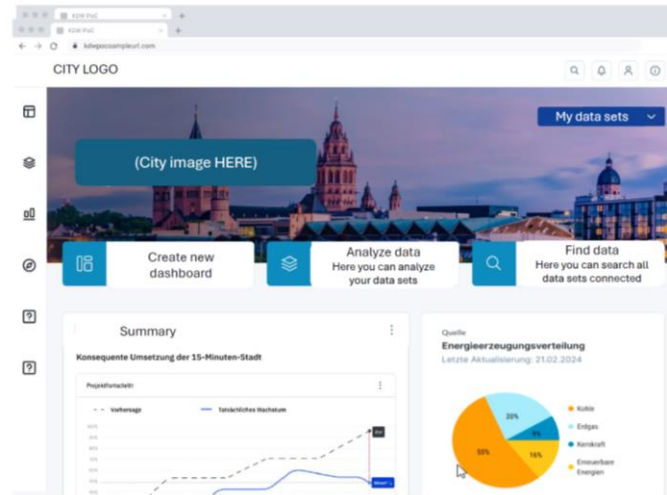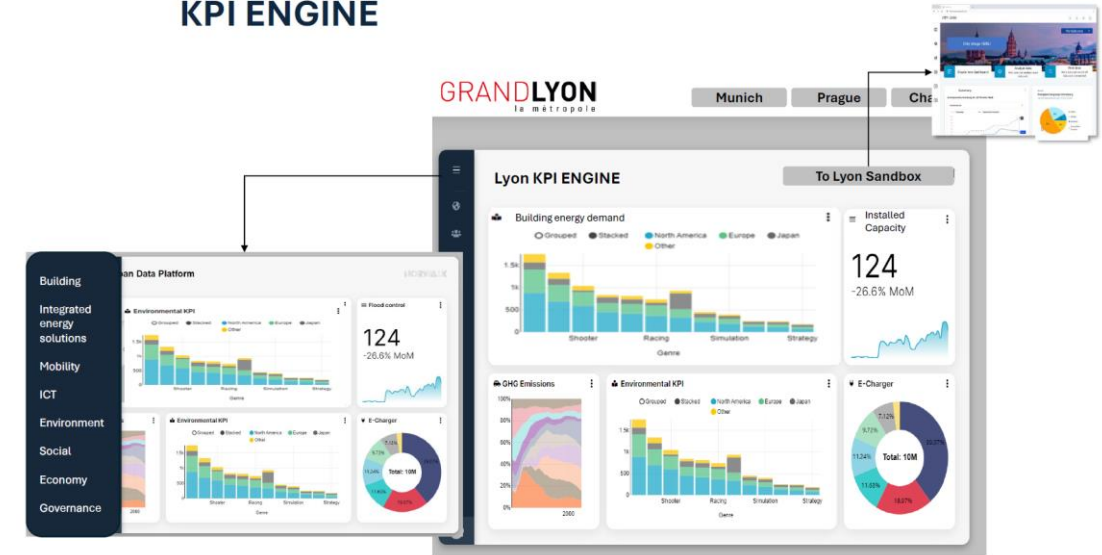
		Munich	Lyon	Multiplier City
SP1		Digital Twin	CMS Urban Data Platform	**Prague:** Urban data platform (Golemio)
SP2		Photovoltaics Tenant Electricity Project	YDEAL Confluence	**Porto:** Asprela + Sustentável
SP3		Refurbishment with pre-fabricated elements	Super-efficient buildings	**Budapest:** Heat 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

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A collaboration roadmap set up
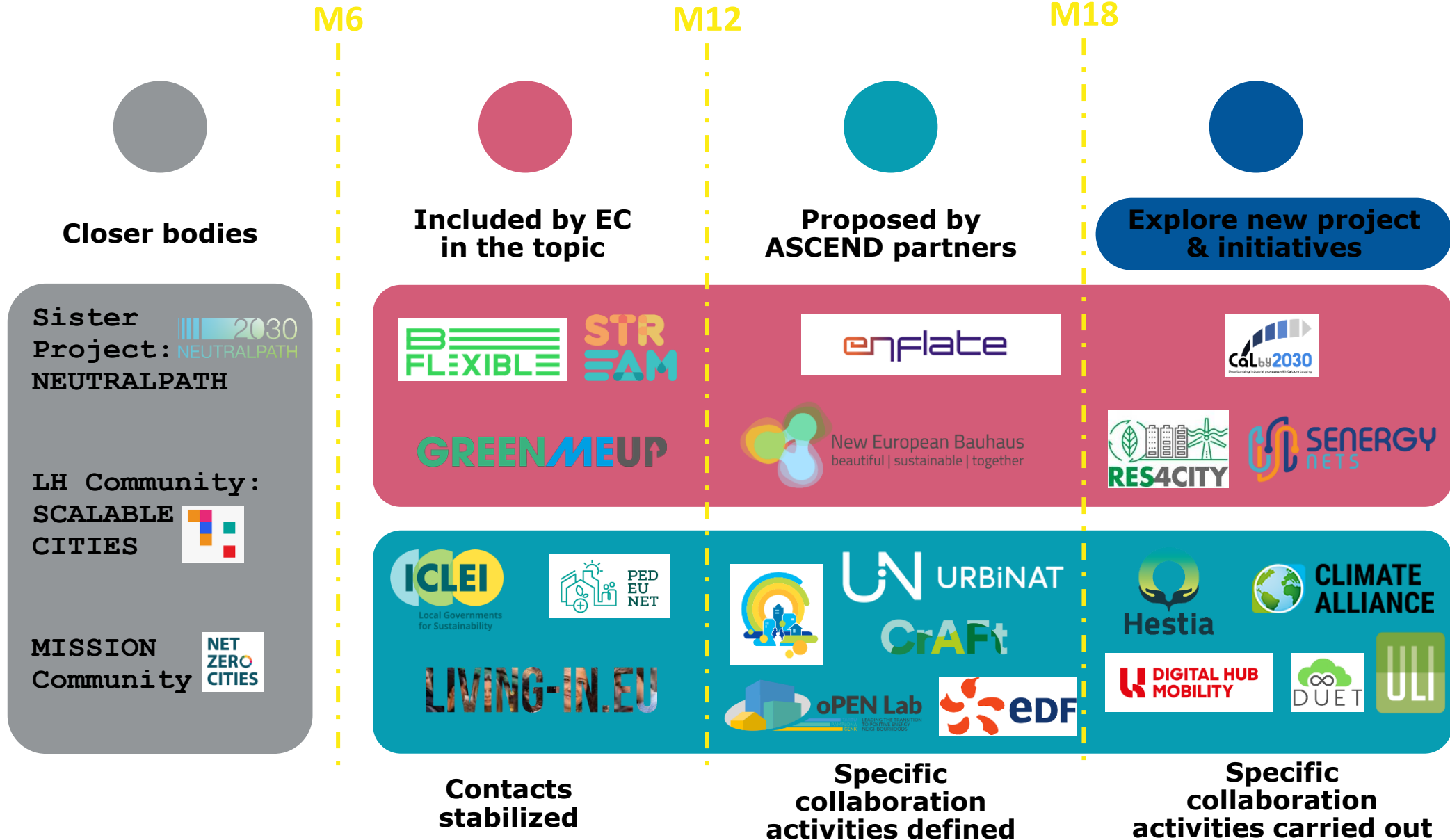
A significant investment in communication and disssemination

WHAT ARE OUR CHALLENGES AND NEXT STEPS?

Challenge 1 Dealing with uncertainty and complexity (Stardust)

Reality

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?

Funded by
the European Union
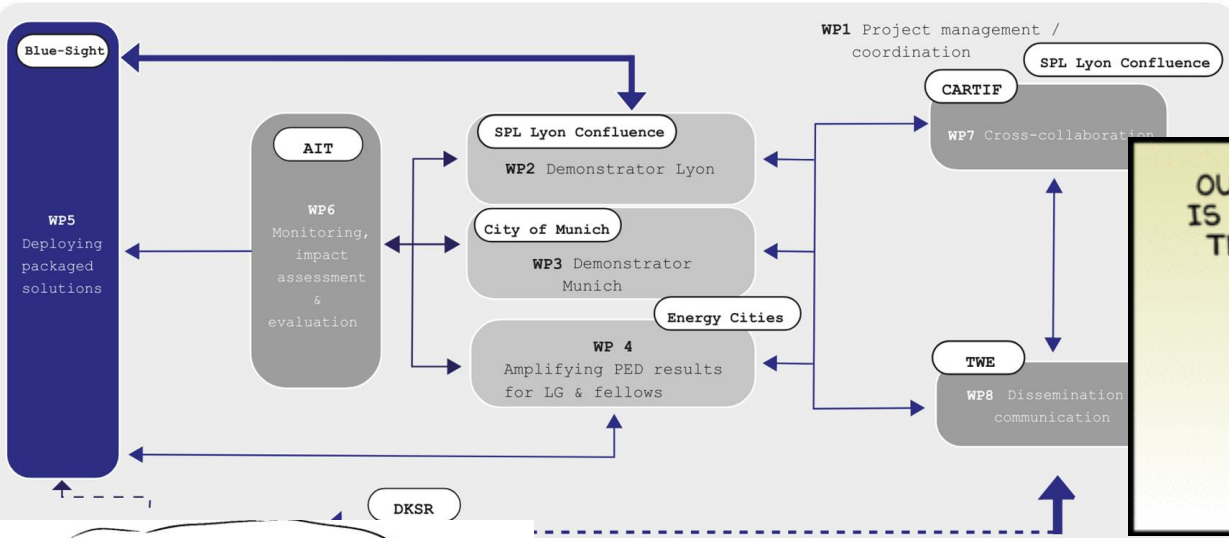
CHALLENGE 3 OVERCOMING SILOES

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)

General KPI-Engine (WP 6)

Consortium Level

- ✓ Collect data, calculate / aggregate KPIs according to the KPI list defined by WP 6 / AIT

Confluence Monitoring System (WP 2.3)

Local Level

- ✓ Calculate/estimate input parameters required (resolve data sourcing problems on local level)
- ✓ Aggregate local data to resolve GDPA concerns

City Model Indicator Engine (WP 3.3)

Local Level

- ✓ Calculate/estimate input parameters required (resolve data sourcing problems on local level)
- ✓ Aggregate local KPIs to resolve GDPA concerns
- ✓ Analytics tool within the digital twin

Funded by
the European Union

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

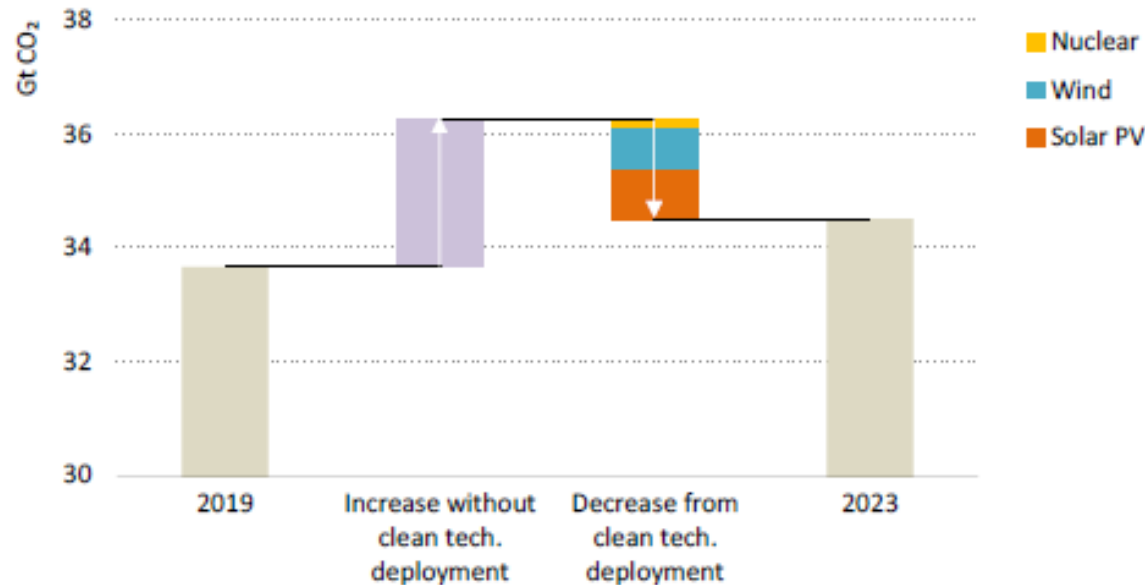**We need to start to think upscaling now or scaling by design our solutions**

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

Funded by
the European Union

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 CO_2 emissions from energy combustion and avoided emissions from deployment of major clean technologies, 2019-2023
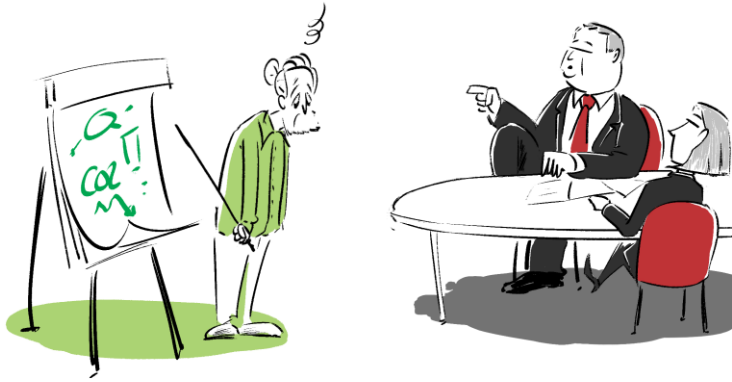
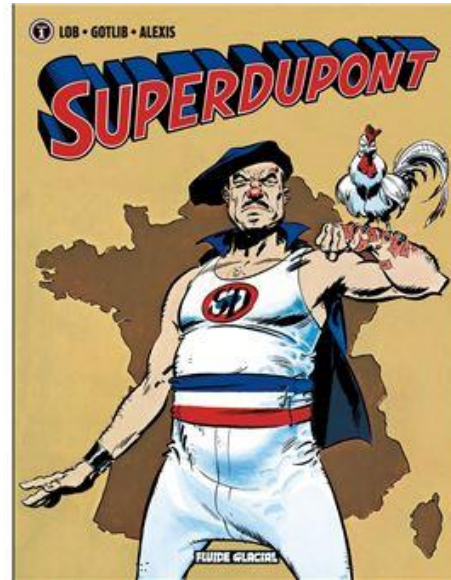CO2 Emissions in 2023 A new record high, but is there light at the end of the tunnel?

Gt CO_2

- Nuclear
- Wind
- Solar PV

2019 | Increase without clean tech. deployment | Decrease from clean tech. deployment | 2023

How to tackle our real problem?

Cities

ASCEND SCALE UP TEAM
SUPER MIND CREATOR
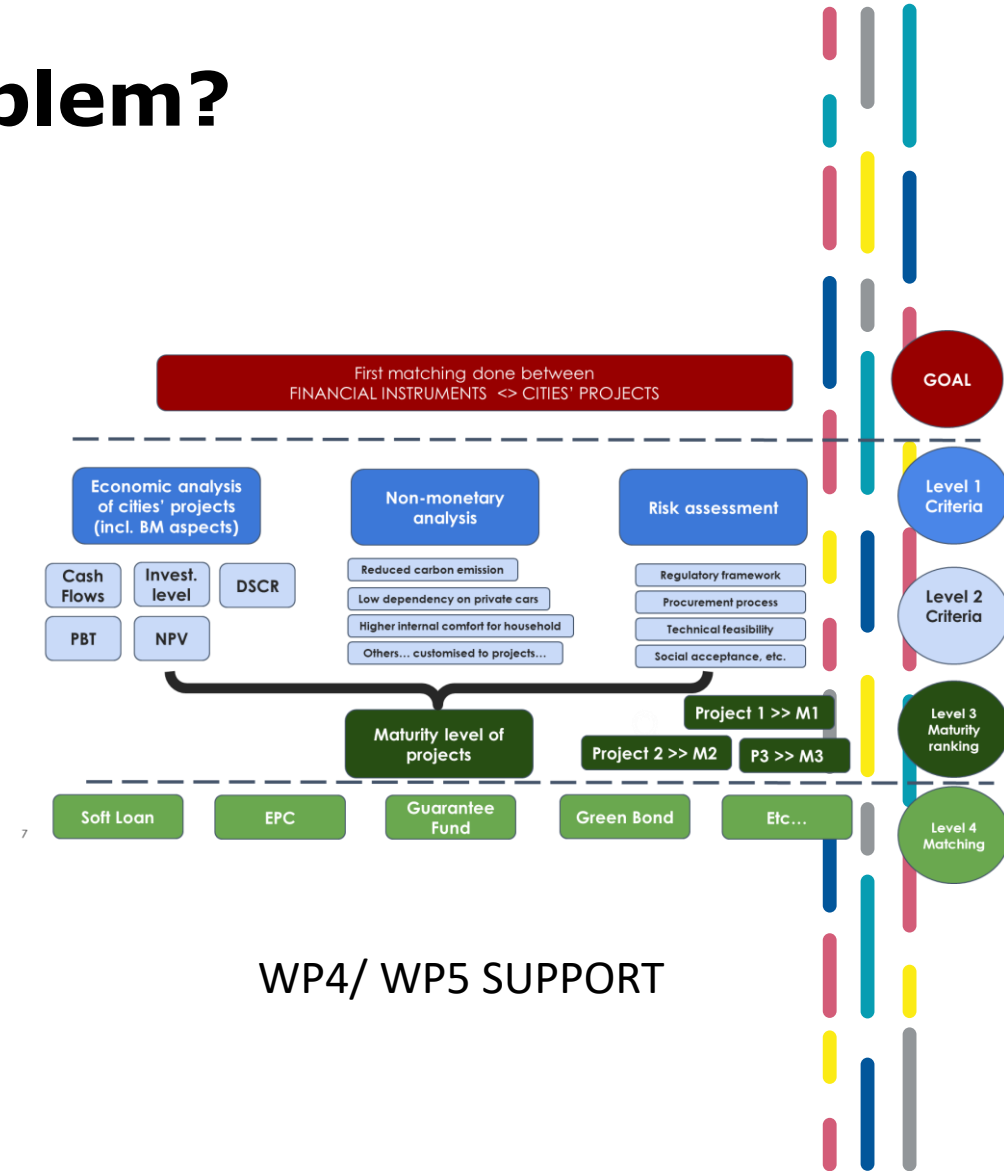
WP4/ WP5 SUPPORT

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**