

Sustainable Place 2022 - 8 September
Innovative solution, Supporting cities' transition

PED-readiness indicator tool

*How to quickly and simply assess whether
a city is ready for Positive Energy Districts*



R2M Solution, Rachel Desmaris



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Making-city project



MAKING-CITY aims to address and demonstrate the urban energy system transformation towards smart and low-carbon cities
Based on **the Positive Energy District (PED) concept.**

Definition of a Positive Energy District

WHAT IS A POSITIVE ENERGY DISTRICT?

A PED is “a delimited area of buildings and public spaces where **the total annual energy balance is positive**. Therefore the area will deliver, in average, an energy surplus to be shared with other urban or peri-urban zones.”

Towards 100 PEDs by 2025



Initiative supported by the [JPI Urban Europe Towards 100 Positive Energy Districts and Neighbourhoods by 2025](#).

Demonstration activities

2 LIGHTHOUSE CITIES

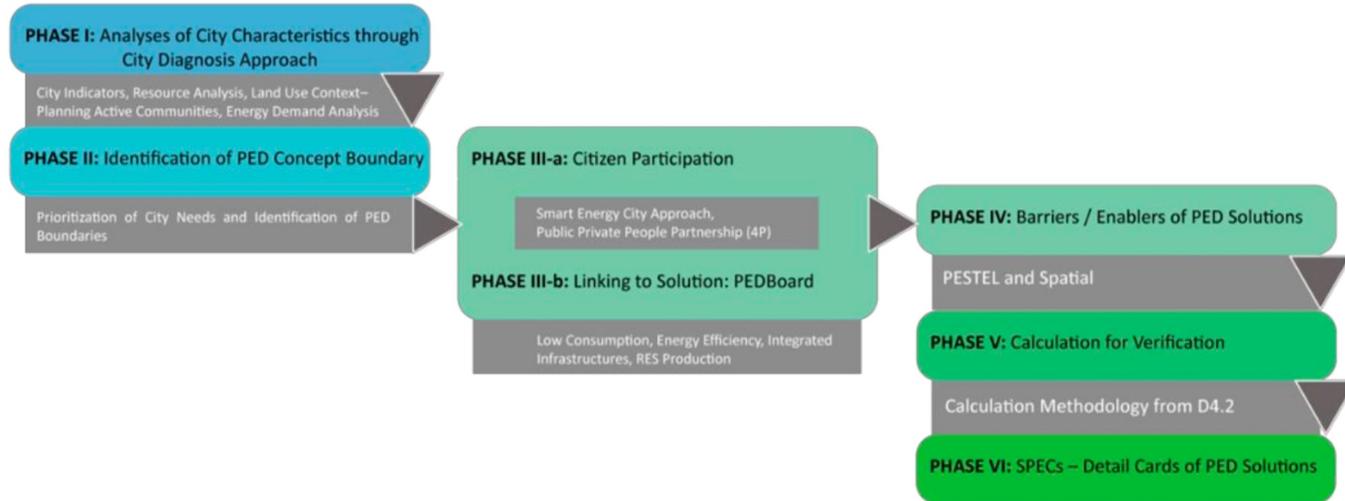
Groningen (Netherlands)
Oulu (Finland)

6 FOLLOWER CITIES

Bassano del Grappa (Italy)
Kadiköy (Turkey)
León (Spain)
Lublin (Poland)
Trenčín (Slovakia)
Vidin (Bulgaria)



Methodology for PED Design developed in Making-City



Exploitation perspective

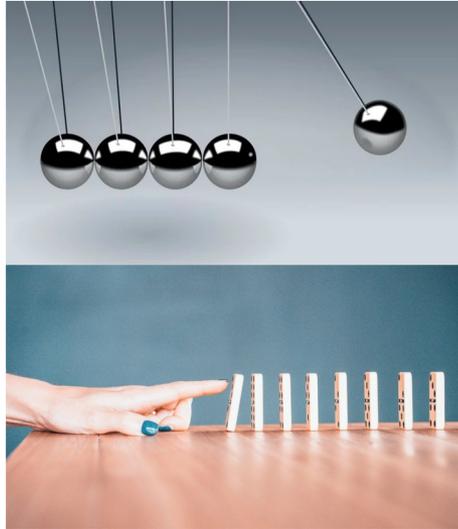


How to spread this amazing work in other cities?

How to motivate other cities to get started in the development of a PED?

Tools and toolbox to support the spreading / initiate of PED development

“Sometimes all it takes is a little extra push to get started”



Financial Tool-Box
Innovation
management ToolBox
Business model
handbook
PED readiness tool

What is the PED-readiness indicator tool?

A tool to **enable cities** to position with regards to the **key factors of success** of the MAKING-CITY sustainable business models

These key success elements include **technology, market and organizational readiness**

The tool also helps cities **identify structural weaknesses** in their usual approach



How it have been developed? - Research approach

DESKTOP RESEARCH

- Literature review
 - Business models of cities
 - Business ecosystem
 - Key success factors
- Compliance with other WPs

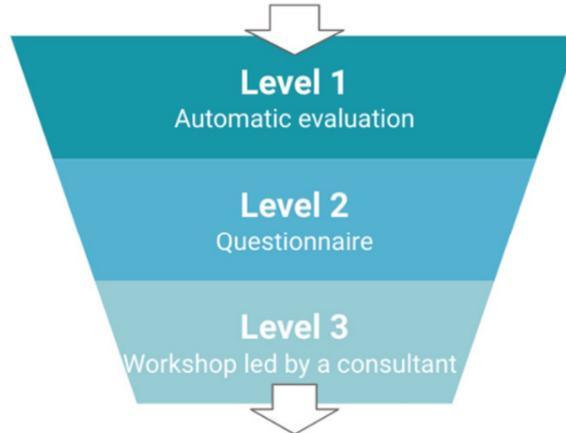
ITERATIVE PROCESS

- Workshops
- Interviews
- Testing

The PED Readiness tool concept



European cities



Level 1

Automatic evaluation

Level 2

Questionnaire

Level 3

Workshop led by a consultant



Cities ready to start the
PED methodology

Pre-calculated and generic indicators at city and country scale



Identified KSF upon energy system and team motivation



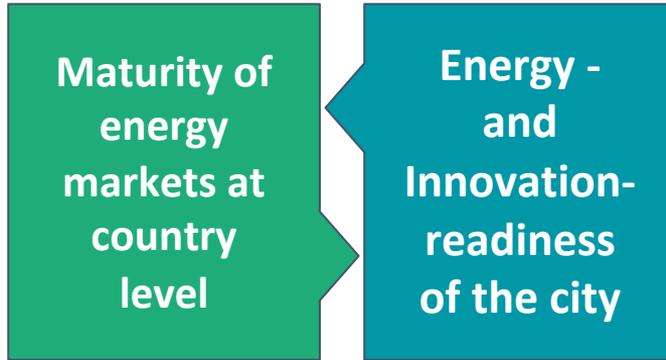
2-4 hours Workshop - to raise awareness upon one of the following KSF

- > Business Ecosystem,
- > Team Alignment
- > Stakeholder engagement
- > Energy approach



Level 1 - Pre-evaluation

Evaluation criteria

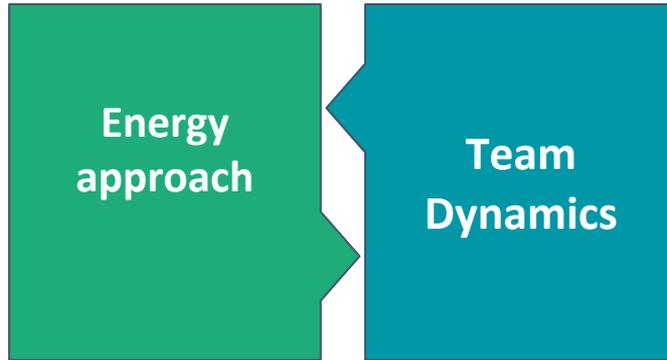


Result

Score from 1 to 10

Level 2 - Questionnaire on identified KSF

Evaluation criteria

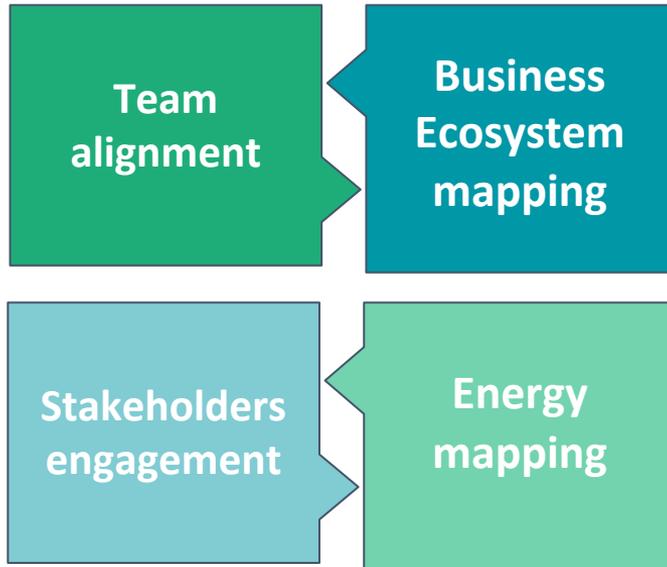


Result

Classification in 9 profiles
(from "super ready" to "not ready")

Level 3 - Dedicated workshop

Focus areas (KSF)



Result

- > Disseminate best practices & lessons learned from MAKING-CITY
- > Help cities with the first steps: where to start ? good partners

Level 1 - Evaluation criteria

Maturity of energy markets at COUNTRY level

CO-1. Is competition in retail energy markets effective?

CO-2. Does renewable energy benefit from support schemes?

CO-3. Has a long-term renovation strategy (LTRS) been published, in compliance with the Energy Performance of Buildings Directive (EPBD)?

CO-4. Is there a market for demand response?

CO-5. Is Energy Performance Contracting (EPC) well developed in the public sector?

CO-6. What is the GDP per capita at country level?

Energy- and Innovation-readiness of the CITY

CI-1. What is the size of the city? (in number of inhabitants)

CI-2. Has the city elaborated a SEAP or SECAP?

CI-3. Is the city hosting a university or a research centre active in the energy sector?

CI-4. Has the city already participated in an SCC (smart cities and communities) project?

Level 1 - Results

Country	Country score	Total number of cities considered	Cities above threshold
Austria	7	191	2
Belgium	6	400	9
Bulgaria	1	136	4
Croatia	1	81	2
Cyprus	3	22	1
Czech Republic	5	279	4
Denmark	9	22	8
Estonia	4	25	2
Finland	6	208	9
France	6	389	10
Germany	9	602	41
Greece	1	144	3
Hungary	2	281	2

Ireland	8	136	5
Italy	3	145	14
Latvia	1	83	1
Lithuania	2	71	0
Luxembourg	5	17	0
Malta	1	66	0
Netherlands	9	400	20
Poland	3	400	5
Portugal	2	400	3
Romania	2	400	2
Slovakia	2	110	1
Slovenia	4	213	1
Spain	5	400	25
Sweden	7	271	6
Turkey	4	252	5
TOTAL EU-27 + Turkey		6144	185

Level 1 - Sanity check

(score from 1 to 10)

LHCs	Country	Project	Final score city only	Final score country & city
Groningen	Netherlands	MAKING-CITY	8.6	8.6
Oulu	Finland	MAKING-CITY	8.6	8.0
Limerick	Ireland	+CityxChange	8.6	8.3
Amsterdam	Netherlands	ATELIER	10.0	9.7
Bilbao	Spain	ATELIER	8.6	7.8
Leipzig	Germany	SPARCS	7.1	7.5
Espoo	Finland	SPARCS	8.6	8.0
Alkmaar	Netherlands	POCITYF	7.1	7.5
Evora	Portugal	POCITYF	8.6	6.9
Turku	Finland	RESPONSE	7.1	6.9
Dijon	France	RESPONSE	7.1	6.8

Level 2 - Evaluation criteria

Energy Approach

EA-1. Does your city dedicate some budget to sustainable development?

EA-2. How does your city municipality take into account the European regulations which encourage carbon neutrality?

EA-3. How is your knowledge of the energy system of your city (how energy is produced and how it is used)?

EA-4. Are there public companies owned or co-owned by your municipality?

EA-5. Some energy equipment needed to reach carbon neutrality can take significant land space. Do you have some land available?

EA-6. How is your knowledge of the building stock of your municipality (consumption, need for renovation...)?

Team Dynamics

TD-1. Are energy topics taken into consideration by all your municipality divisions?

TD-2. When it comes to technical details, do you estimate that your city municipality has a good problem solving mind?

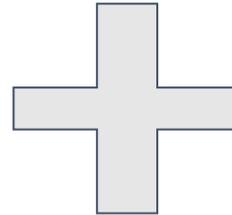
TD-3. Does your municipality have a good knowledge of the city business ecosystem (actors that deliver urban services: energy, transport, building...)?

TD-4. Is there a good level of citizen engagement in your municipality?



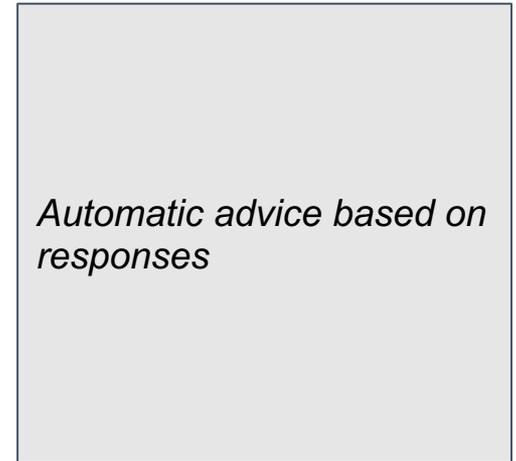
Level 2 - Result

MATRIX POSITIONING



Team dynamics

ADVICES



Level 3 - first ideas

Team alignment

- > MAKING-CITY best practices
- > Will be derived from the tools developed by Strategyzer on team alignment
<https://www.teamalignment.co/>

Business Ecosystem mapping

- > MAKING-CITY best practices
- > The AIMS (International Association of Management Strategy) developed three tools to modelize the business ecosystem.

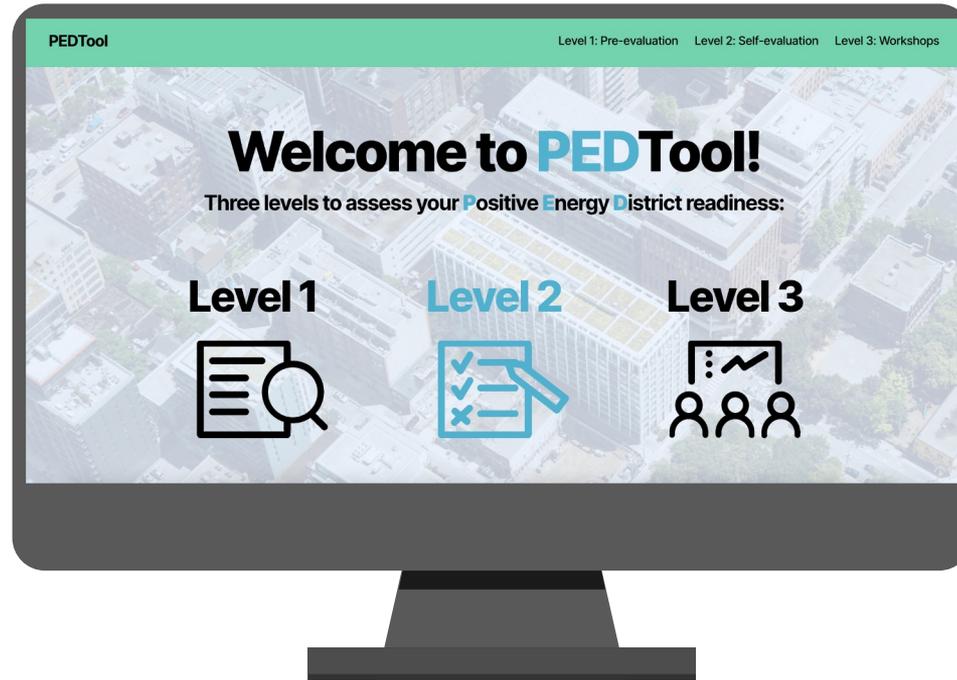
Stakeholders engagement

- > MAKING-CITY best practices
- > MAKING-CITY methodology

Energy mapping

- > MAKING-CITY best practices
- > MAKING-CITY methodology

We launch TODAY a user friendly online version !!



<https://ped.r2m.cloud/>

Level 2 – Self-evaluation

Here we are! Answer only **10 questions** to know whether your city is ready for PEDs. If it's not, we have some solutions for you! The first **6** questions have been conceived to assess your **Energy Approach** and the remaining **4** to assess your **Team Dynamics**. This level is meant for municipal officials.

Just click the button above to start!



Level 1 – Pre-evaluation

Use the **city search bar above** to visualize our selected simple indicators at the country and city level. They are conceived to provide you a preliminary assessment of the city's readiness for

Screenshot



Level 3 – Workshops

This Level 3 is intended to support cities with low scores at [Level 2](#).

The MAKING-CITY team has designed tailored workshops to disseminate best practices, remove municipalities' initial barriers upon the following key success factors:

- Team motivation alignment
- Business ecosystem mapping
- Citizens engagement mapping
- Energy mapping

Any questions



Test - Use it

Any feedback:

PEDTool@r2msolution.com

Thank you

Get in touch for more information!



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