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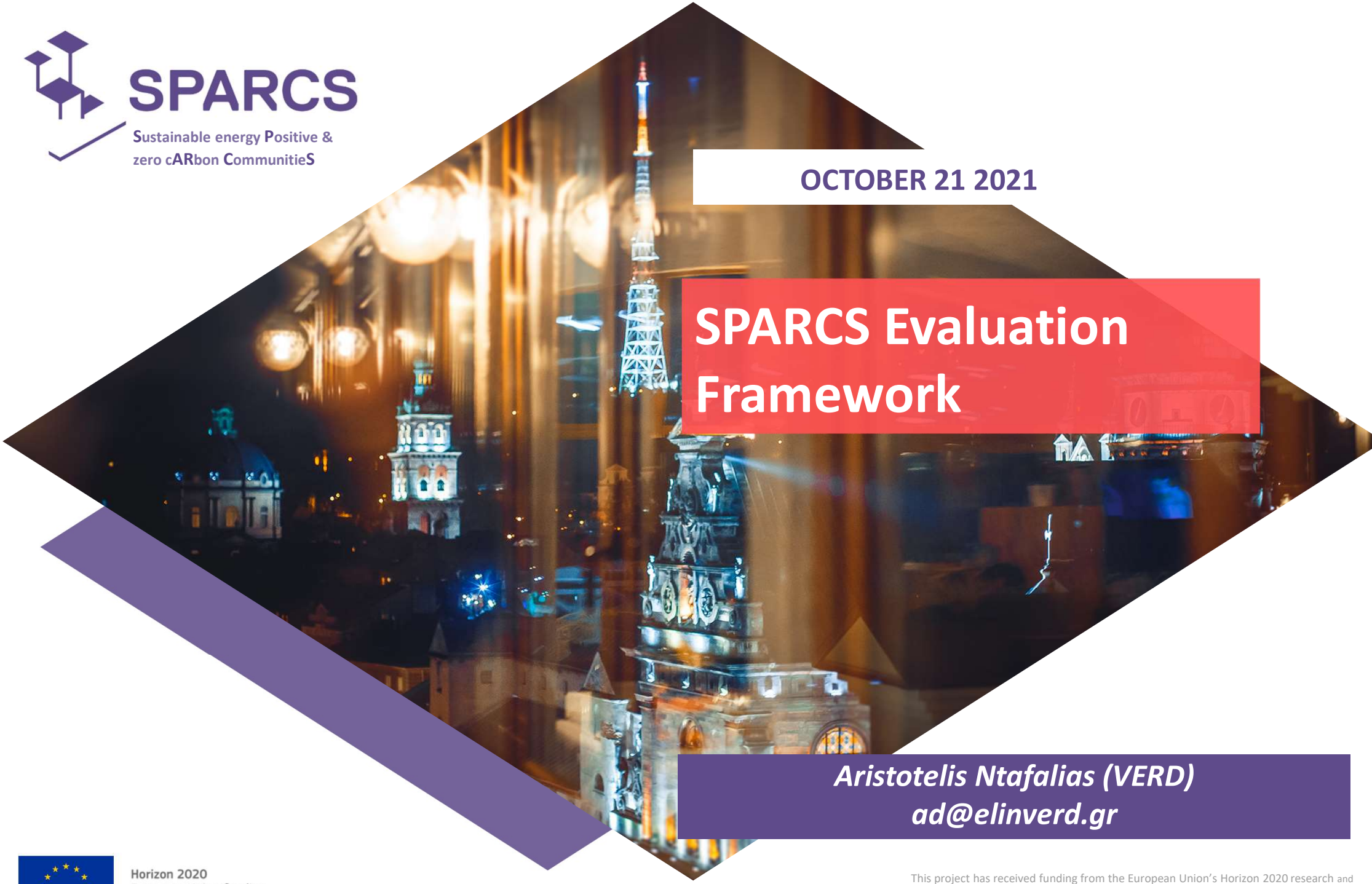
Sustainable energy Positive & zero cARbon CommunitieS



OCTOBER 21 2021

SPARCS Evaluation Framework

Aristotelis Ntafalias (VERD)
ad@elinverd.gr

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Topic: LC-SC3-SCC-1-2018-2019-2020: Smart Cities and Communties

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Framework agenda

1) Necessity of assessment frameworks

2) SPARCS Methodology

3) Considerations

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Necessity of assessment frameworks

- 68% of world's population is projected to live in urban areas by the year 2050
- Cities will be required to transform their infrastructures in a smarter, more efficient and resilient way
- The concept of urban transformation involves more than just creating technically sustainable urban areas and stimulating economic development

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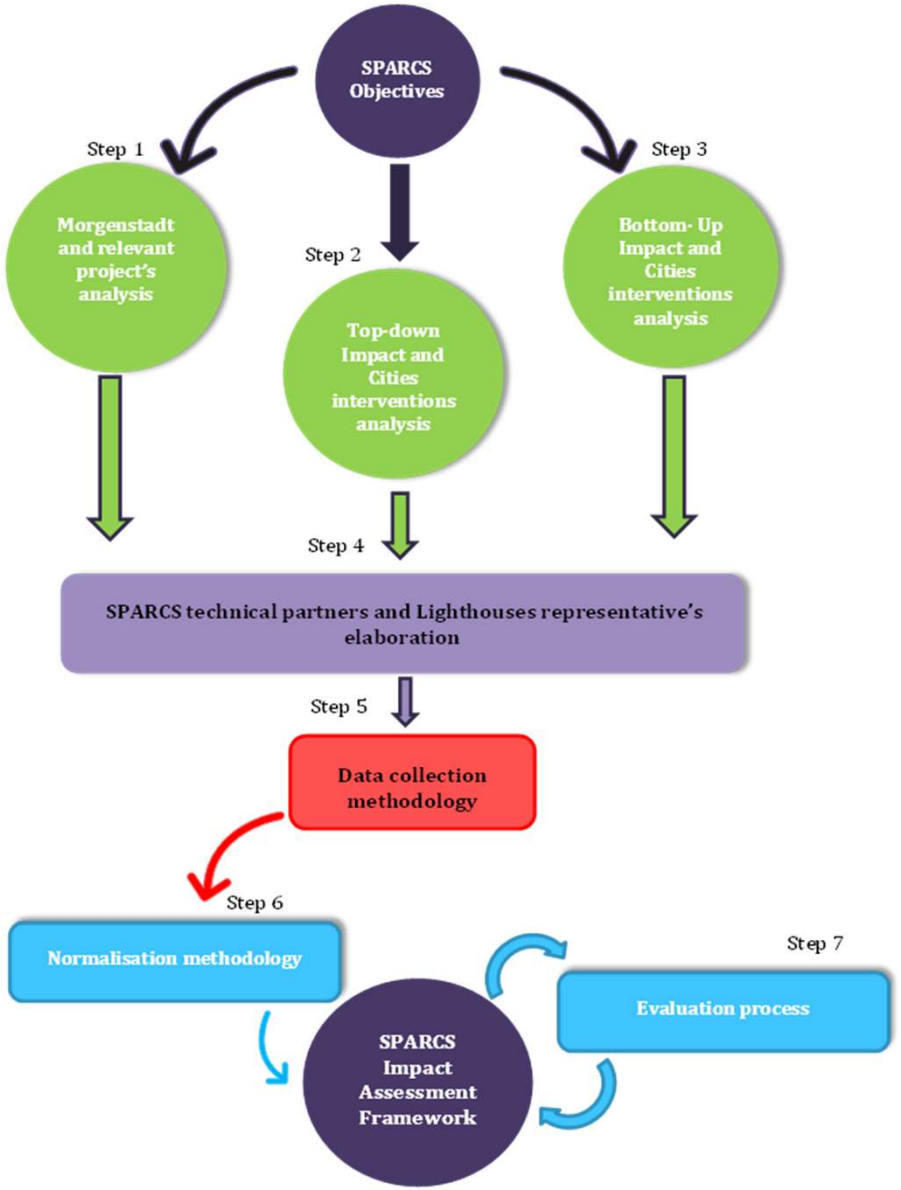
SPARCS 7 steps Methodology



1. Review of five prominent projects, relevant to SPARCS scope
2. A top-down approach based on the overarching objectives of SPARCS
3. A bottom-up approach based on the planned SPARCS demo site actions
4. Collaboration of technical partners and city representatives and finalization of KPIs list and
5. Definition of data collection methodology
6. Definition of normalization approach
7. Evaluation process

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Relevant initiatives and H2020 projects

	Morgenstadt	SCIS	CITYkeys	CIVITAS	Triangulum	SPARCS
Number of indicators	107	38	101	30	79	197
Type of indicators	Pressure, State, Impact	Core and Supporting impact	Impact	Process, Impact	Impact	Impact (29) Intervention (151) Replication (17)
Assessment scale	City	City, District, Building	City	City	City, District, Building	City, District, Building
Impact categories covered	Energy, Mobility, ICT, Economy/ Governance, Urban resilience, Emission excess, Innovation Leadership, Budget allocation	Technical, Environmental, Economic, ICT, Mobility	People, Planet, Prosperity, Governance Propagation	Global Environment, Quality of life, Economic success, Mobility system performance	Energy, Transport, Socioeconomic, Citizen engagement, ICT	Energy, Economic, Social, Technology

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Top-Down analysis and initial KPIs definition

SPARCS targets:

- The increased integration of renewable energy in the generation process
- An optimized excess heat management method
- The optimisation of the local energy systems
- An improved energy performance of buildings and districts
- The reduction of GHG emissions and improvement of local air quality and urban well-being

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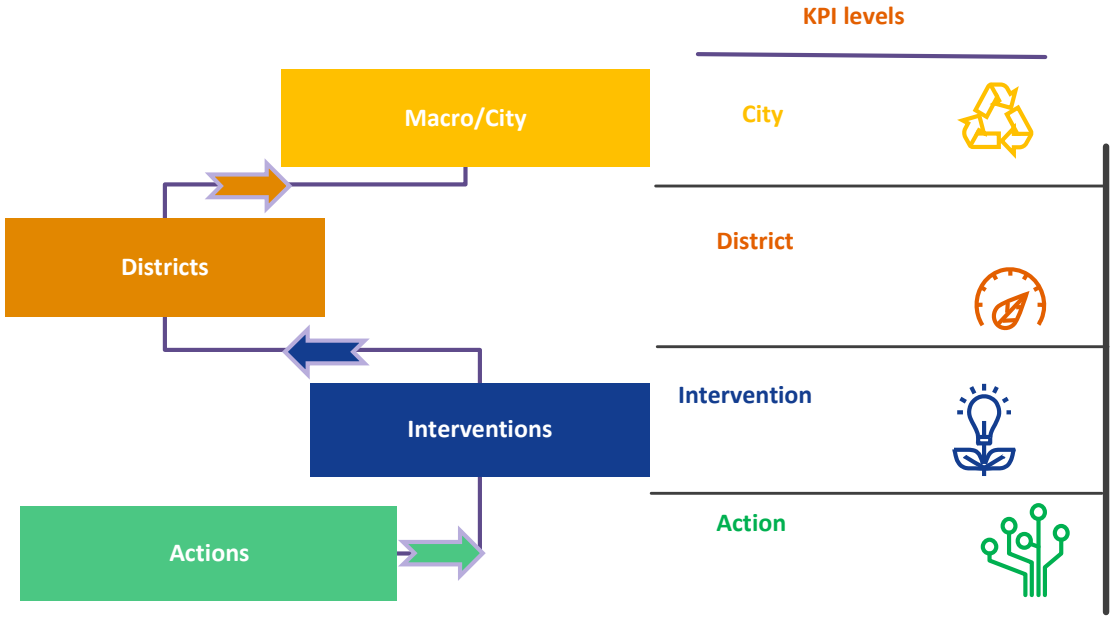
Bottom –up approach and technical analysis



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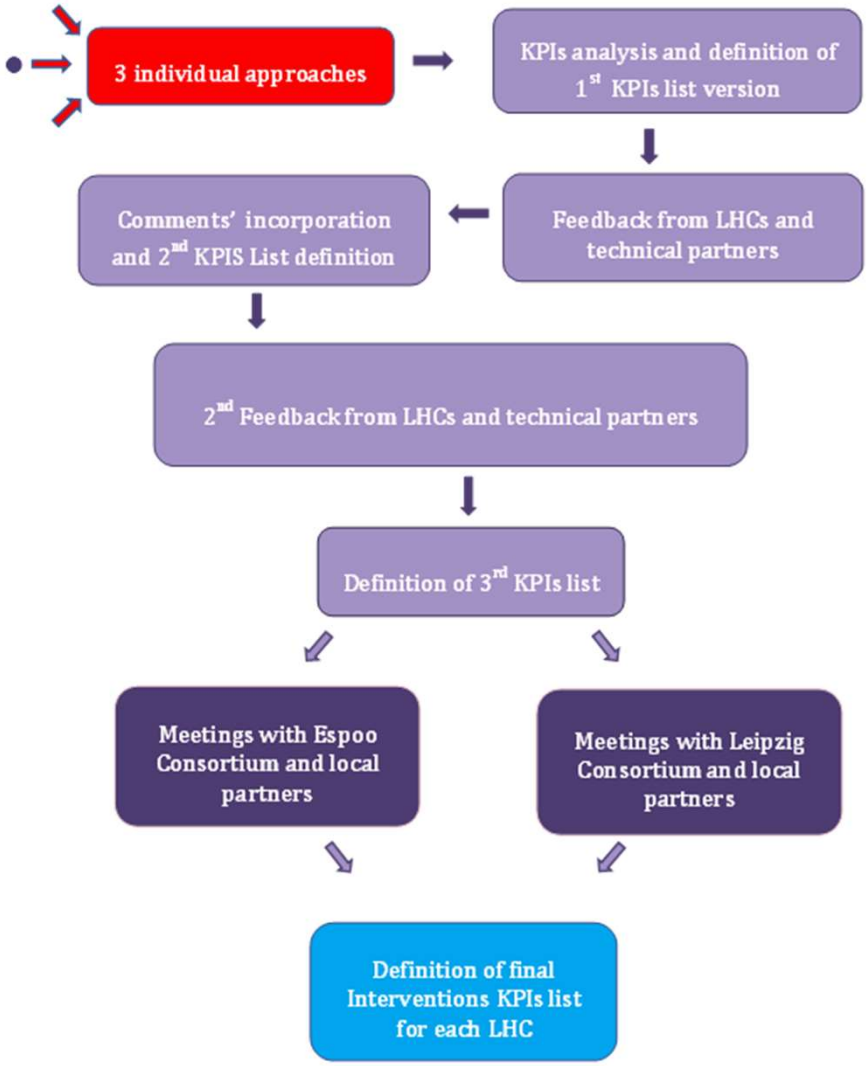
Collaboration of partners



Type of indicators

- Interventions Indicators
- Replication Indicators
- Impact Indicators

LEIPZIG

ESPOO

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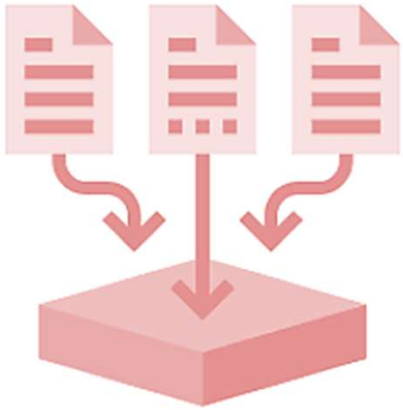
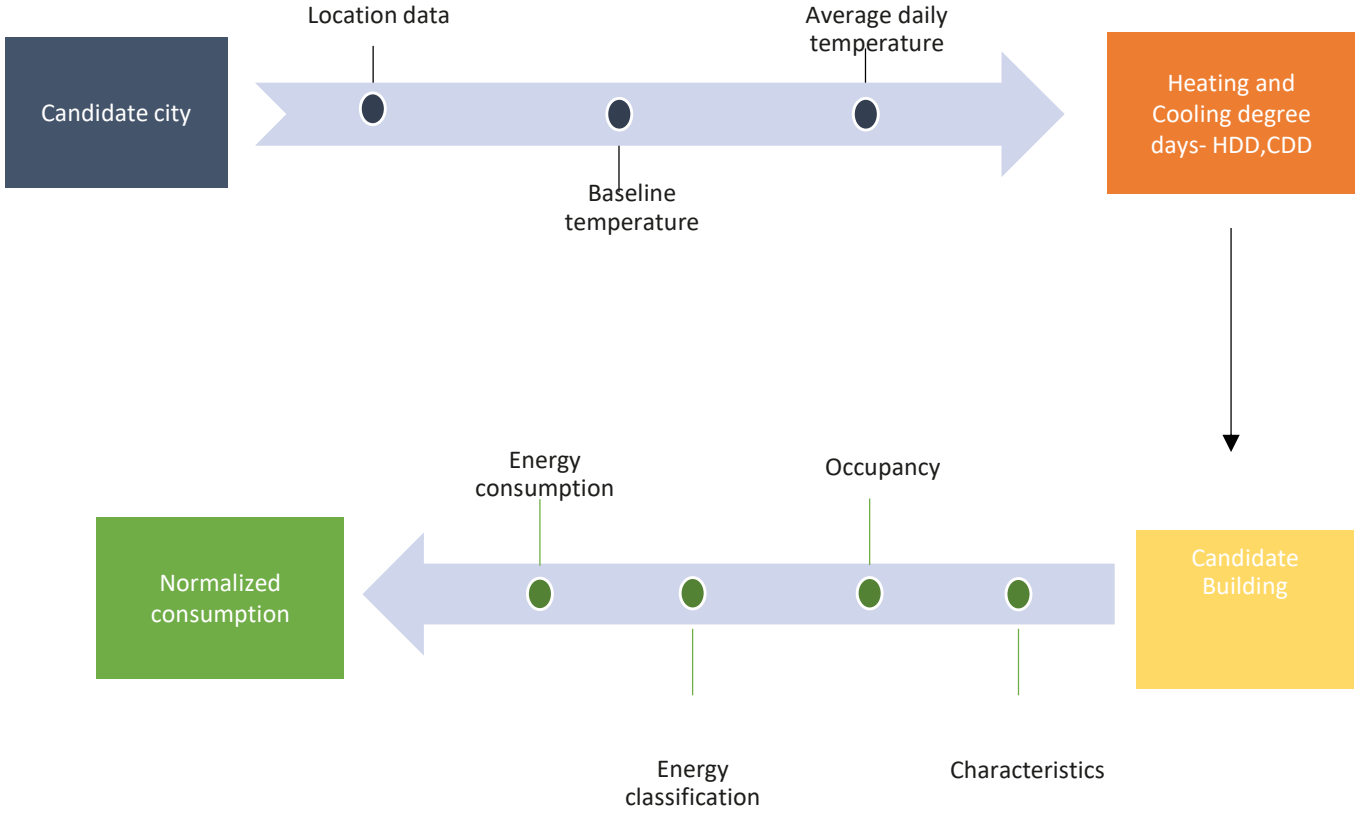
Data collection methodology and normalization





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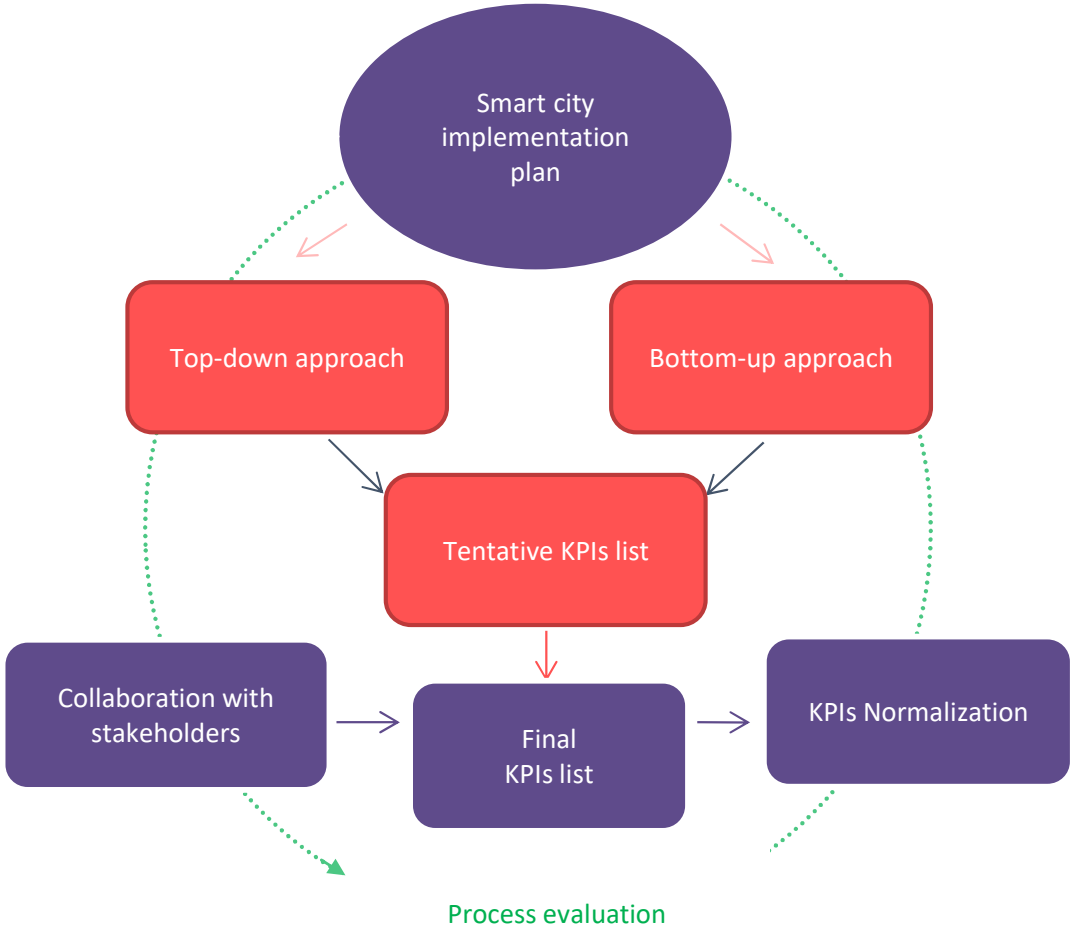
Process evaluation



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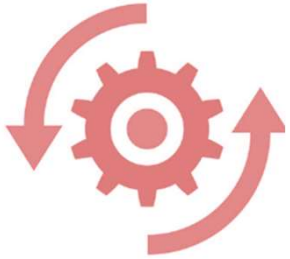
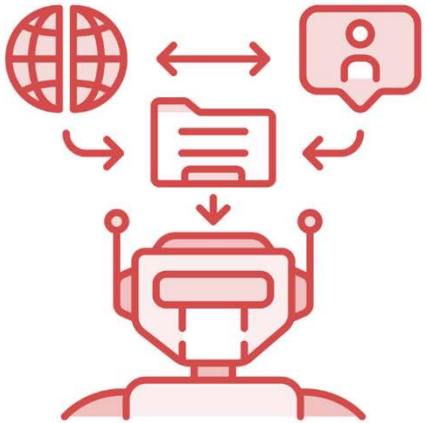
Considerations



- Updates to KPIs
- Basic data collection
- Actual data collection



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Thank you!

Questions?

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ad@elinverd.gr

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https://www.sparcs.info/

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