



Hotmaps

How to use Hotmaps for the Comprehensive Assessment, EED Article 14 Annex VIII

Final conference of the Hotmaps project

Lukas Kranzl, TU Wien

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EED Annex VIII

- Article 14(1) and (3) of Directive 2012/27/EU (Energy Efficiency Directive — EED) require each Member State to carry out and submit to the Commission a comprehensive assessment of the potential for energy efficiency in heating and cooling.



EED Annex VIII





- ° Part I: Overview of heating and cooling
- ° Part II: Objectives, strategies and policy measures
- ° Part III: Analysis of the economic potential for efficiency in heating and cooling
- ° Part IV: Potential new strategies and policy measures



Hotmaps for the EED Annex VIII

- ° Part I: Overview of heating and cooling
- ° Part II: Default data and policy measures
 - Default Data
 - Visualisation of own data
 - Guidelines
- ° Part III: Potential new strategies and policy measures
- ° Part IV: Potential new strategies and policy measures

Hotmaps for the EED Annex VIII

- °  Part I: Overview of heating and cooling
- °  Part II: Objectives, strategies and policy measures
- °  Part III: Analysis of the economic potential for efficiency in heating and cooling
- °  Part IV: Potential policy measures
 - Hotmaps approach
 - Calculation Modules
 - Guidelines



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Section 1

Hotmaps database & toolbox for Annex VIII Part I



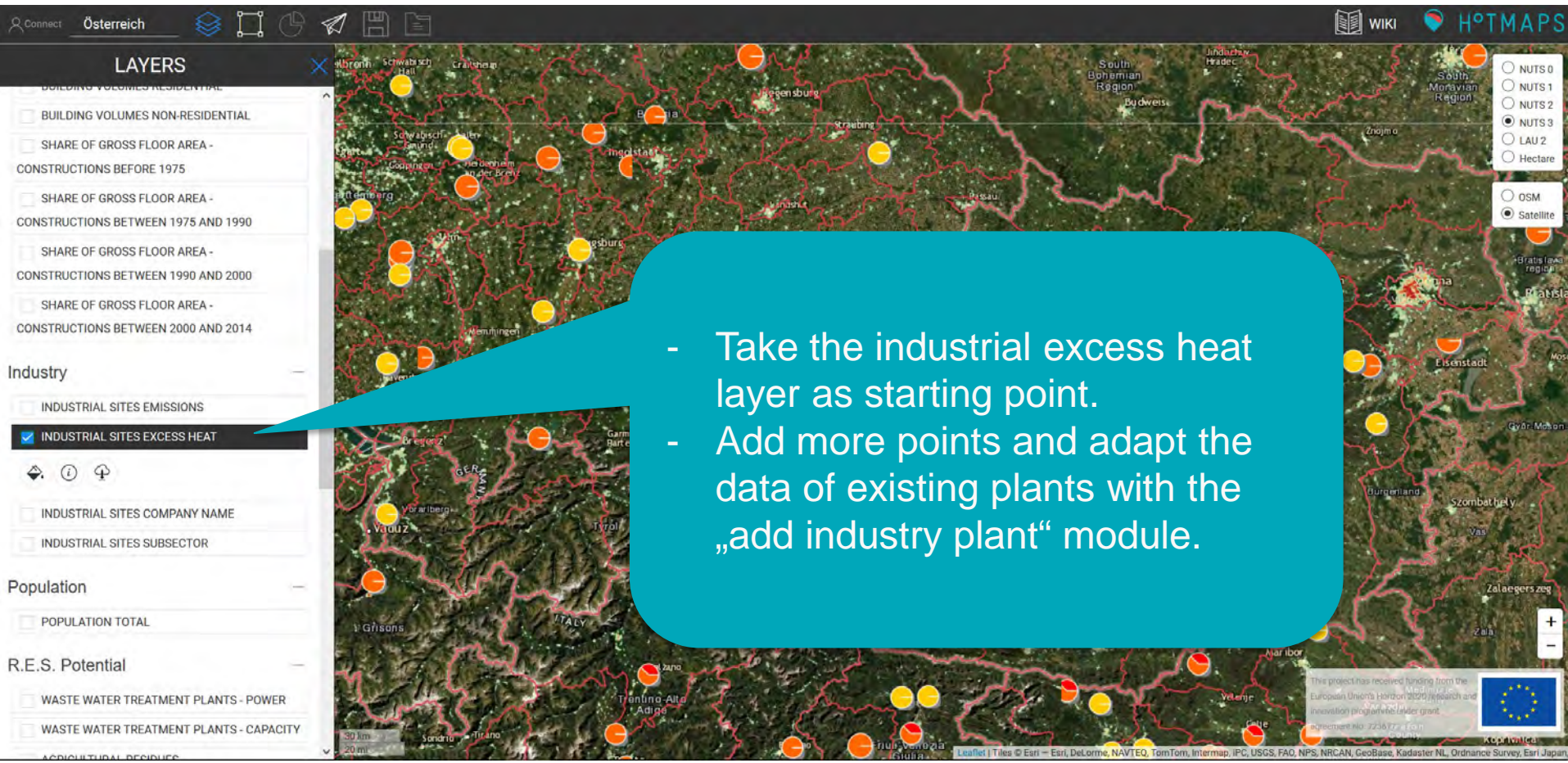
Annex VIII Part I

- Available default data for the different data to may be included in the Comprehensive Assessment (CA)
- Data download function
- User account and data upload function



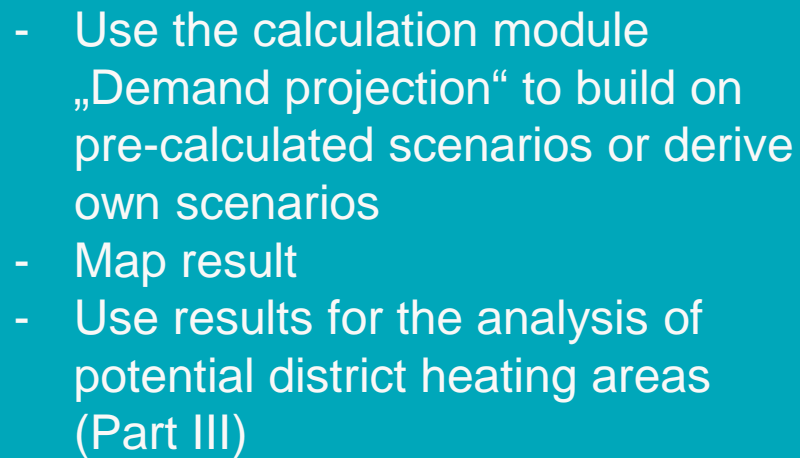
Annex VIII Part I: example waste heat

Identification of installations that generate waste heat or cold and their potential heating or cooling supply





forecast of trends in the demand for heating and cooling until 2030 and 2050





Annex VIII Part I

- Scientific journal paper on default data set for heat demand in buildings
 - "Open Source Data for Gross Floor Area and Heat Demand Density on the Hectare Level for EU 28"
 - published in Energies
 - Abstract: <https://www.mdpi.com/1996-1073/12/24/4789>
 - PDF Version: <https://www.mdpi.com/1996-1073/12/24/4789/pdf>



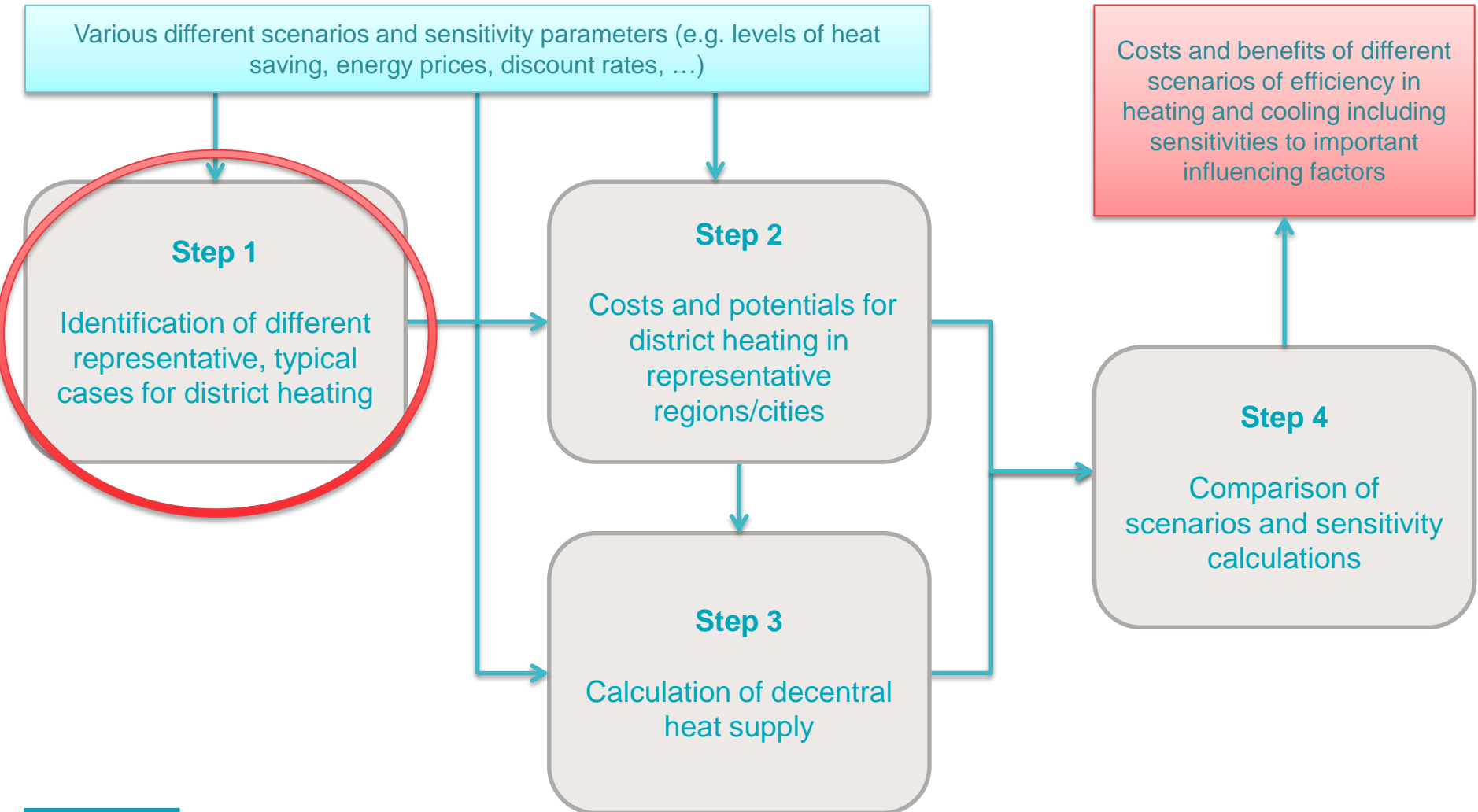
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Section 2

Hotmaps database & toolbox for Annex VIII Part III

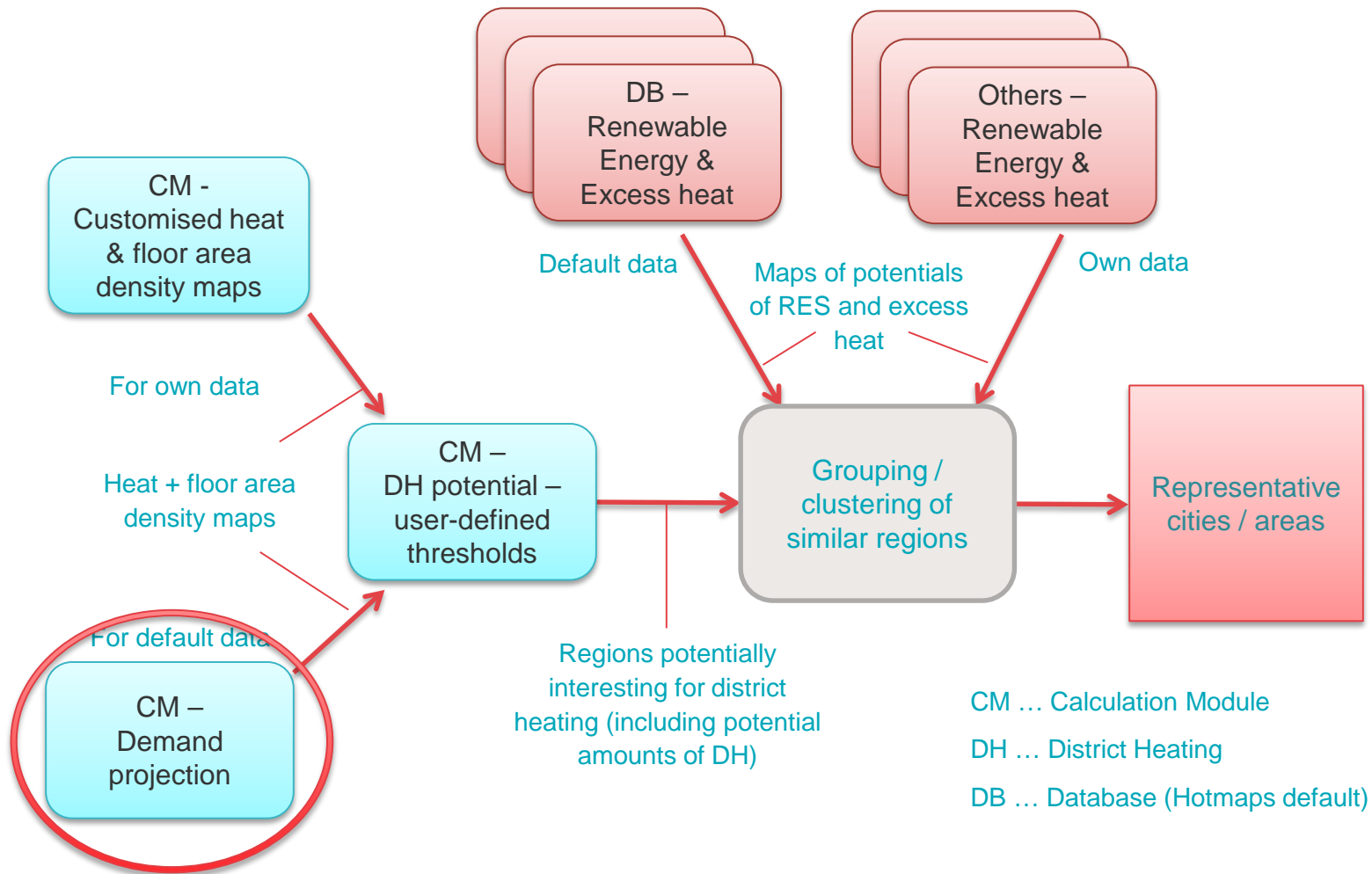


Annex VIII Part III



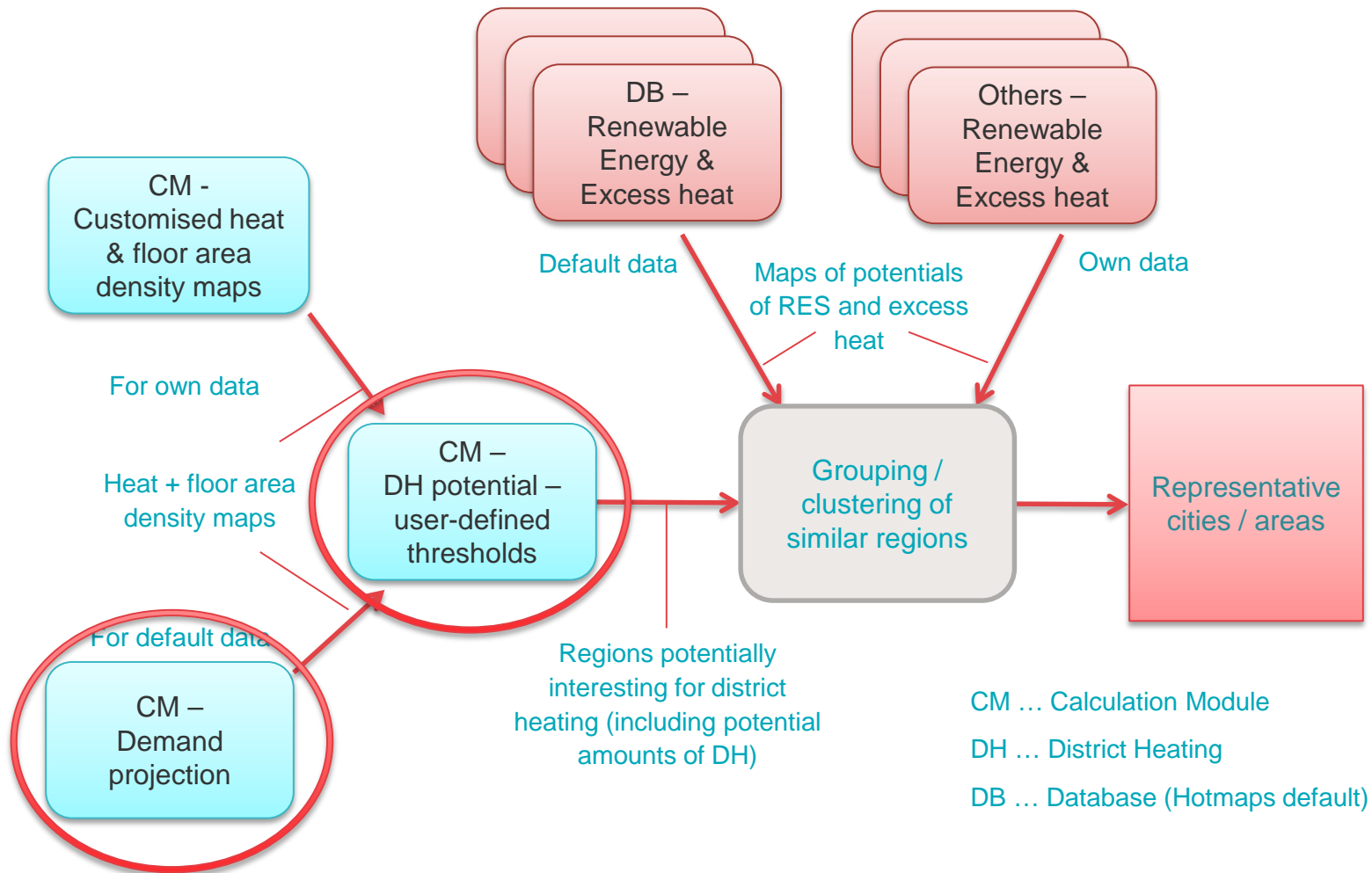


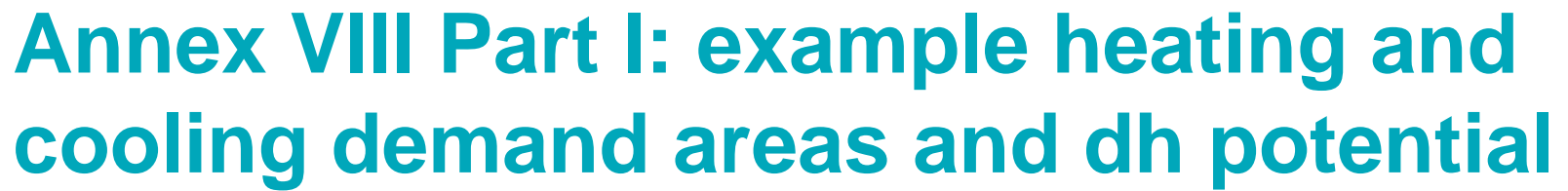
Annex VIII Part III





Annex VIII Part III





map covering the entire national territory
identifying heating and cooling demand areas

CM - District heating potential areas: user-defined thresholds

Name of calculation module session

This computation module calculates district heating potential within the selected region. As output, a layer for the potential areas are shown. Click on the regions to get their corresponding potential. Within the indicator/graph window, relevant indicators and charts regarding DH potential within the selected zone and potentials in sub-zones are illustrated.

INPUTS

Min. heat demand in hectare - (value: 333MWh/ha)

333

Min. 1MWh/ha; Max: 10000MWh/ha;

Min. heat demand in a DH area - (value: 30GWh/year)

30

Min. 0.1GWh/year; Max: 5000GWh/year;

INPUT TYPE SELECTION

Two: heat

- Carry out the calculation module „district heating potential areas“
- Identify potential share of district heating
- Do sensitivity analyses for different thresholds

RESULTS

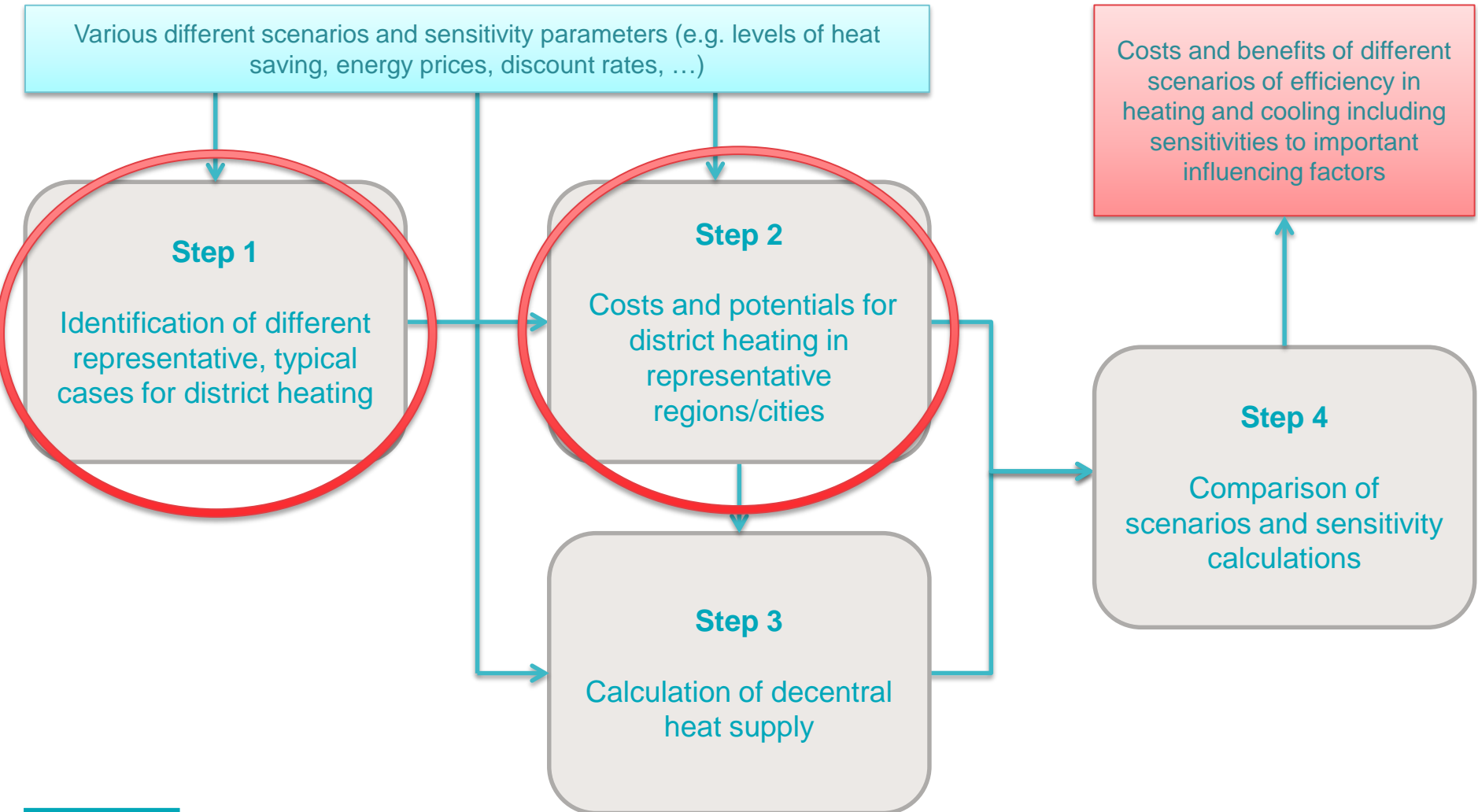
Overall

INDICATORS GRAPHICS

INFORMATION	VALUE
HEAT DENSITY TOTAL	
Heat demand total	82 417.75 GWh/yr
Counted Cells	651 505 cells
Heat density min	0.01 MWh/(ha*yr)
Heat density max	9 131.42 MWh/(ha*yr)
Average heat density	126.5 MWh/(ha*yr)
CM - DISTRICT HEATING POTENTIAL AREAS: USER-DEFINED THRESHOLDS	
Total heat demand in GWh within the selected zone	82 417.75 GWh
Total district heating potential in GWh within the selected zone	31 940.3 GWh
Potential share of district heating from total demand in selected zone	38.75 %

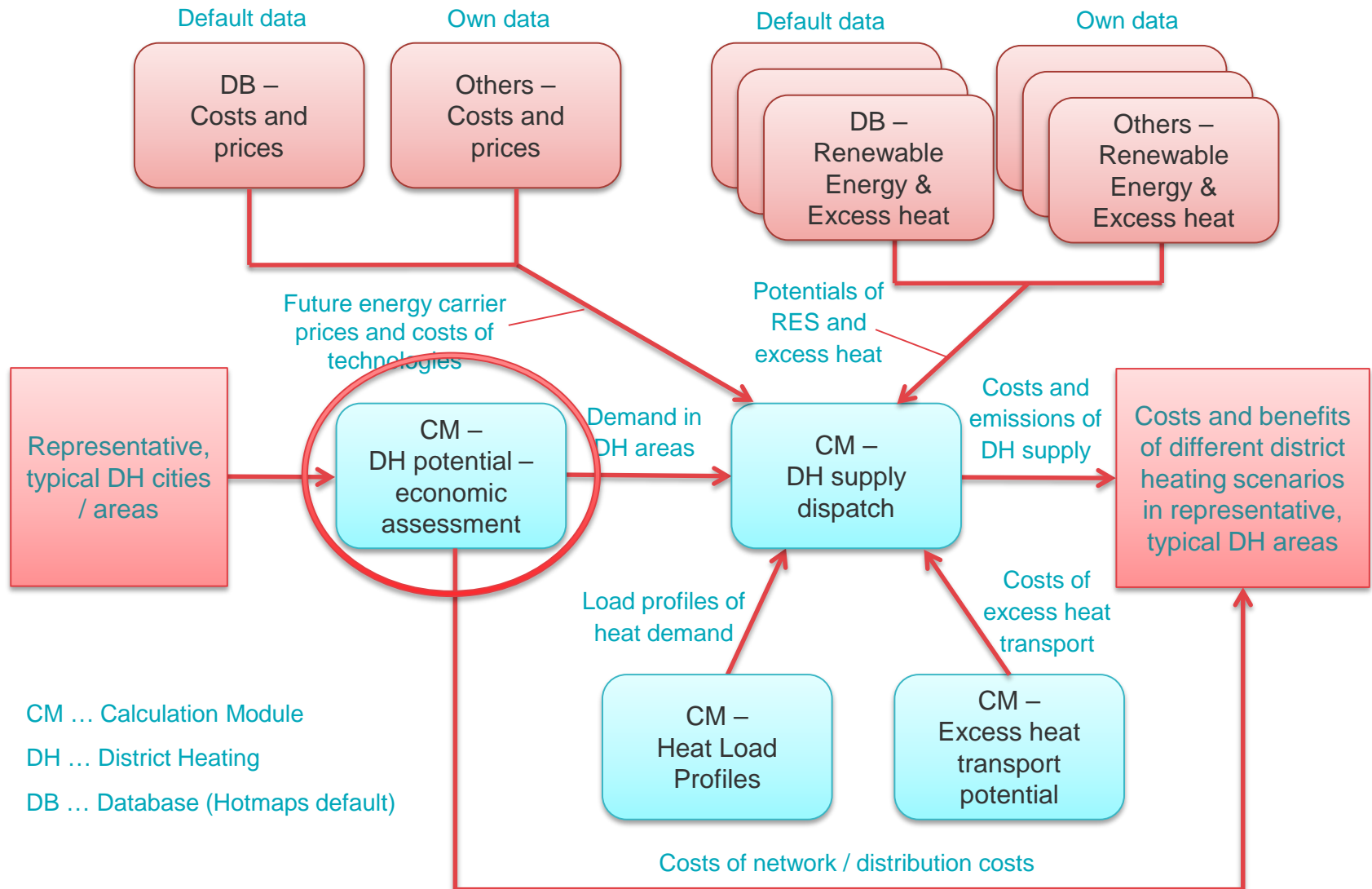


Annex VIII Part III





Annex VIII Part III



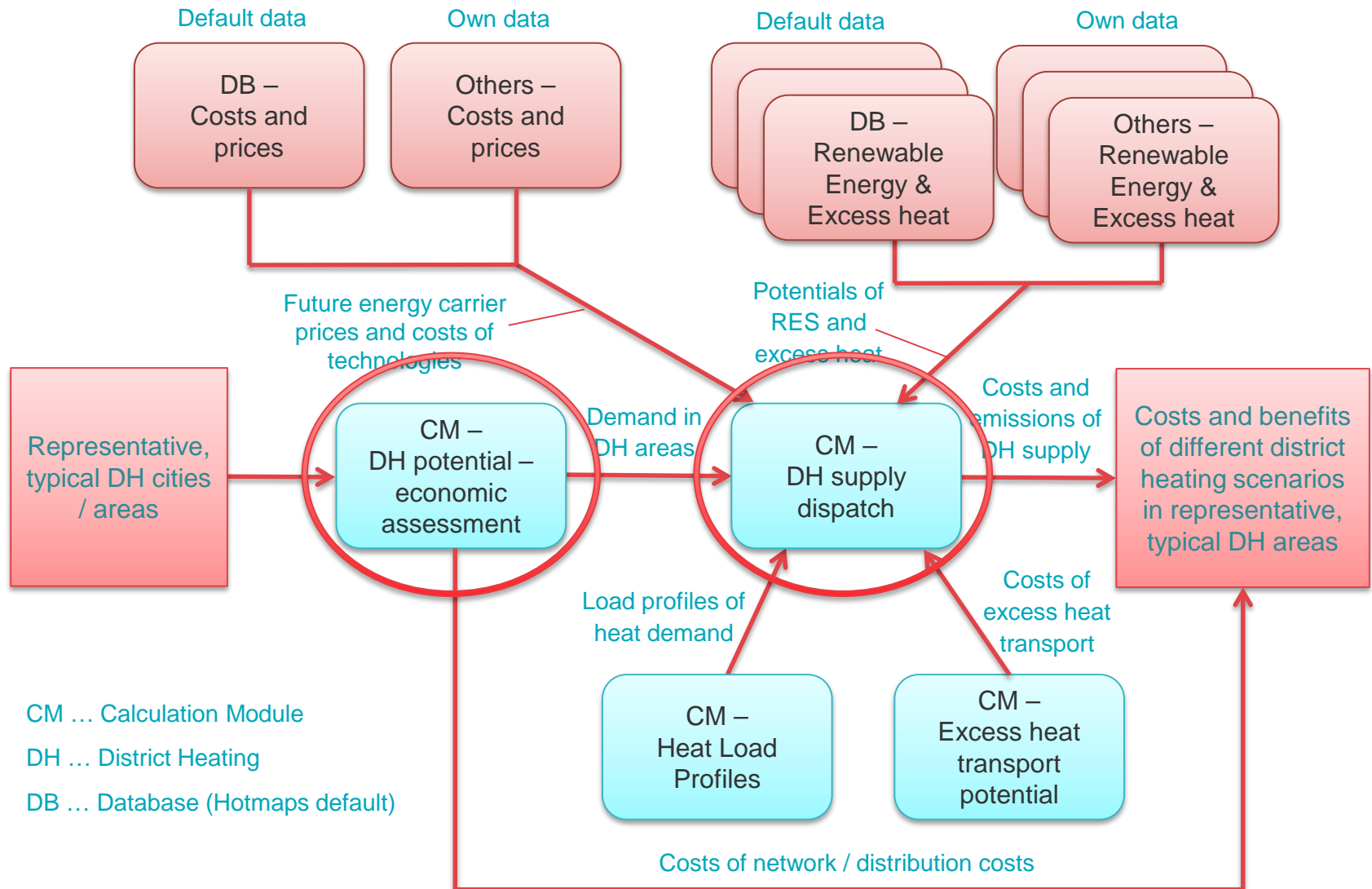
CM ... Calculation Module

DH ... District Heating

DB ... Database (Hotmaps default)

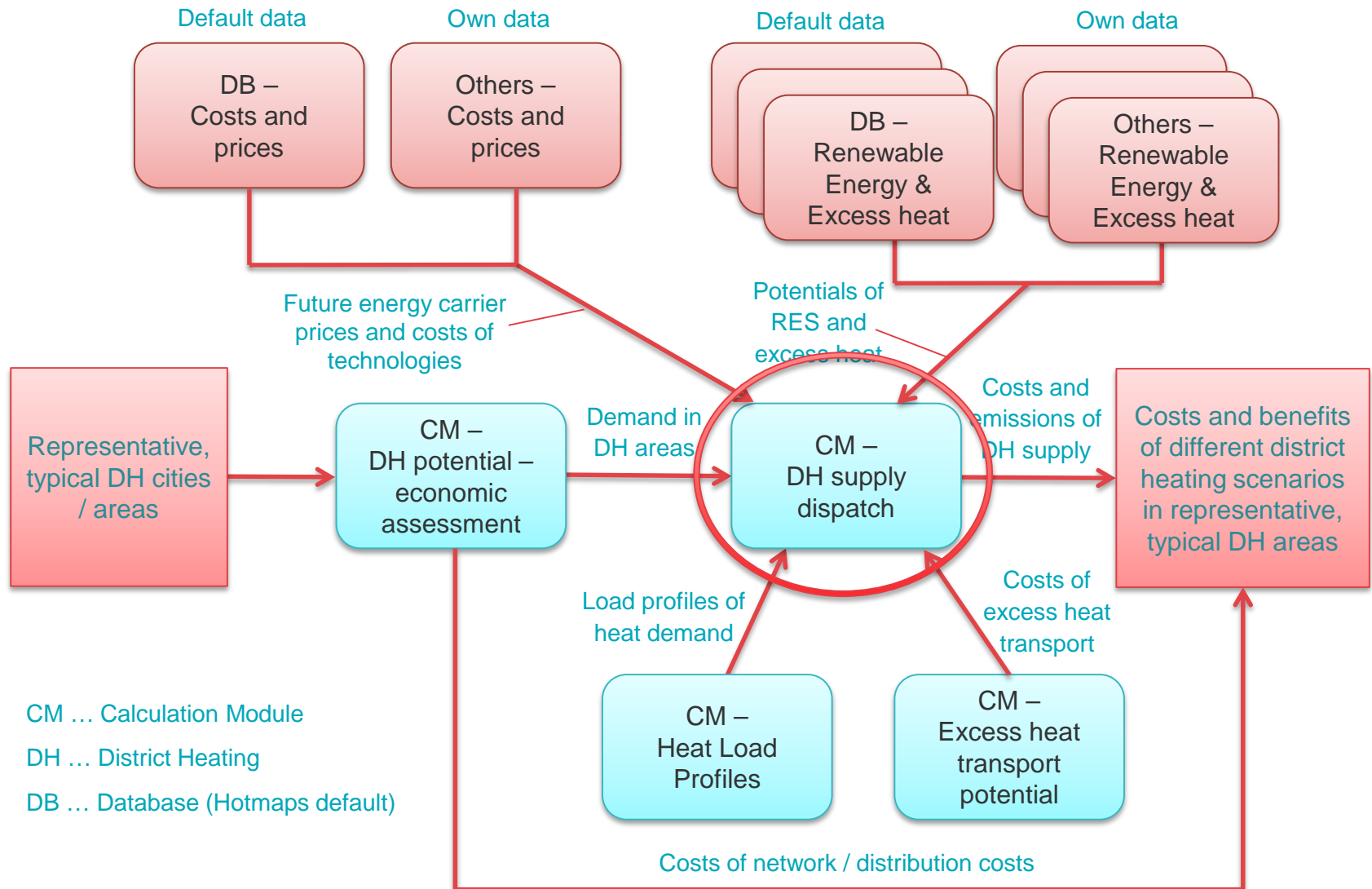


Annex VIII Part III





Annex VIII Part III



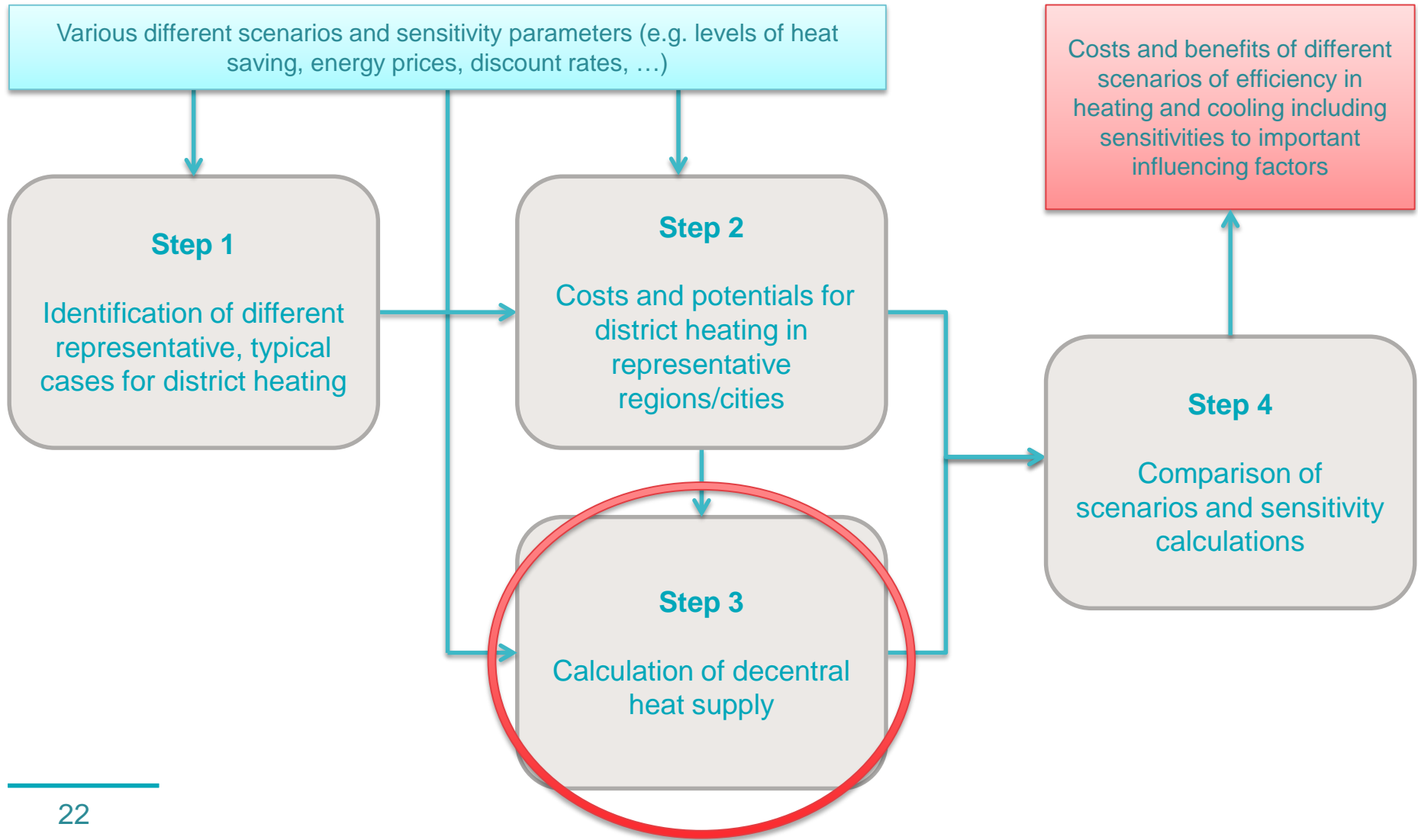
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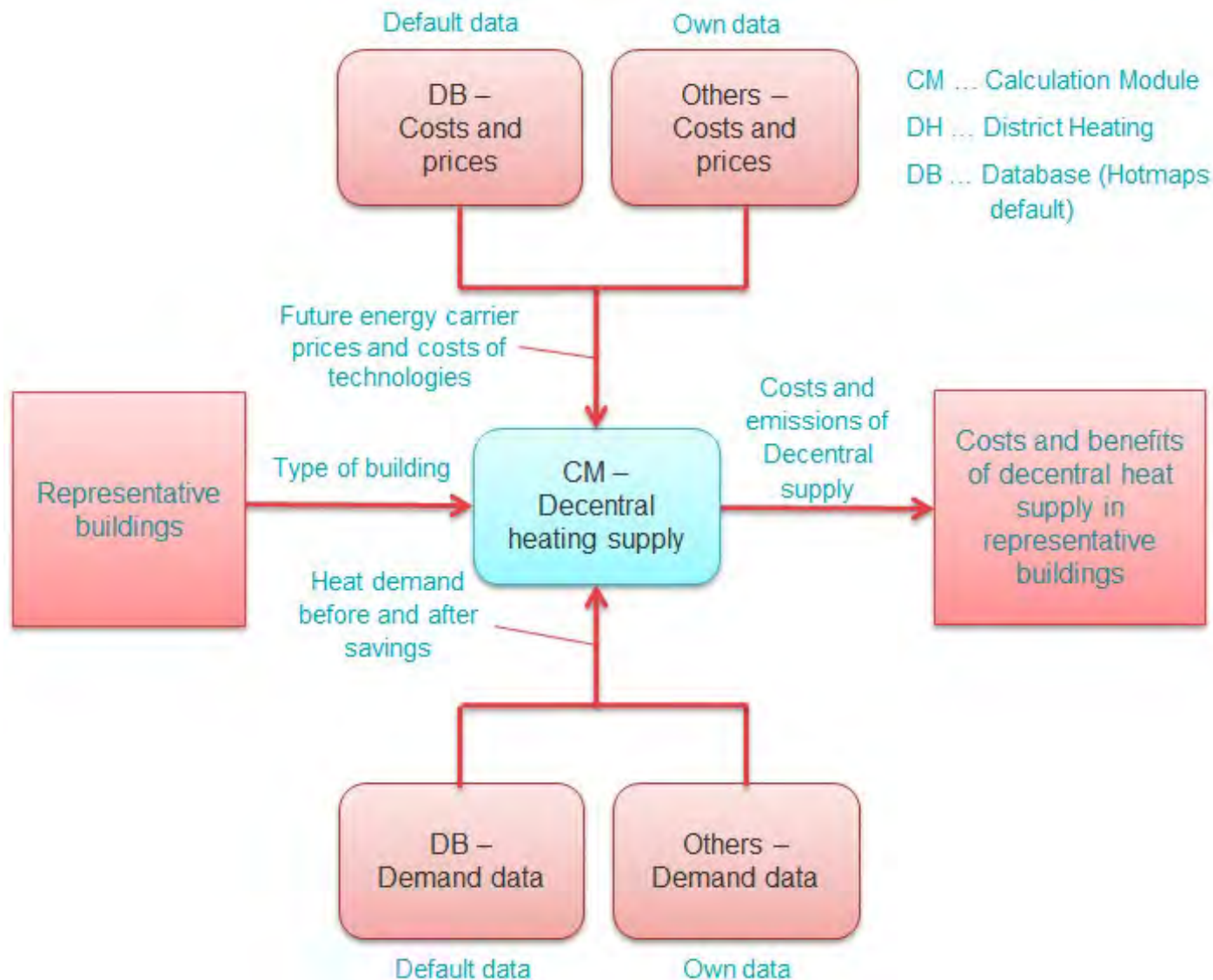


Annex VIII Part III



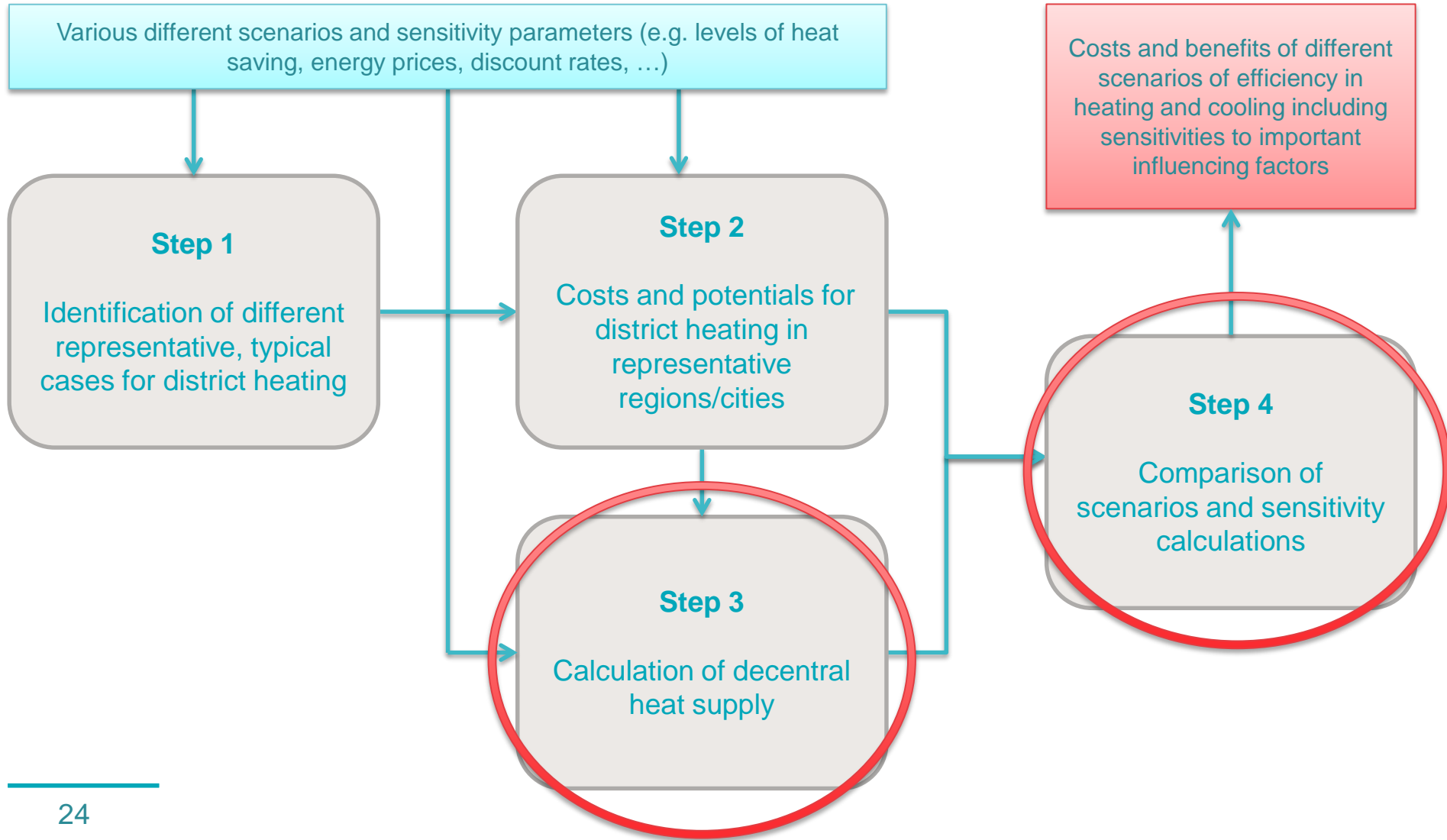


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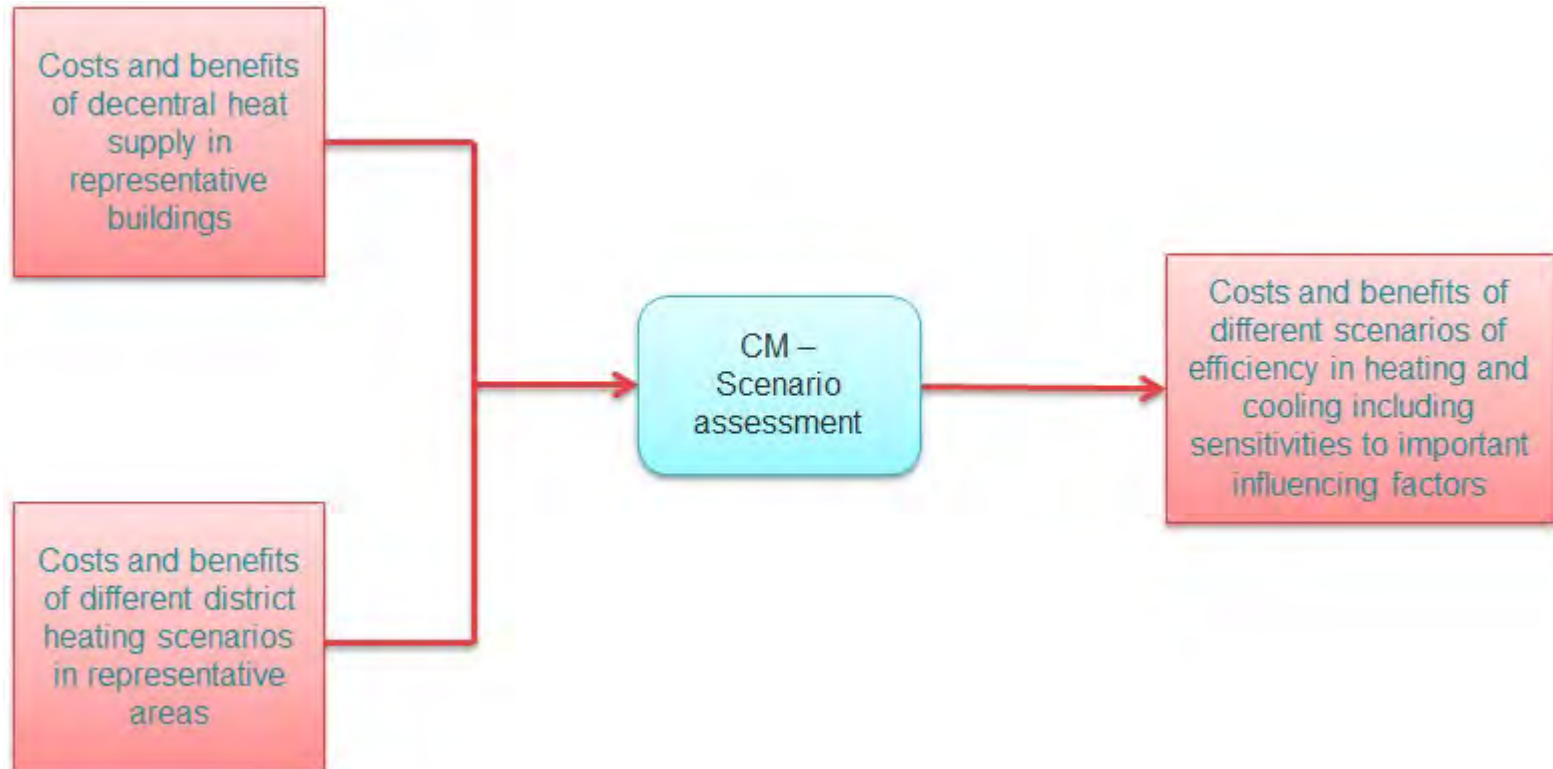


Annex VIII Part III



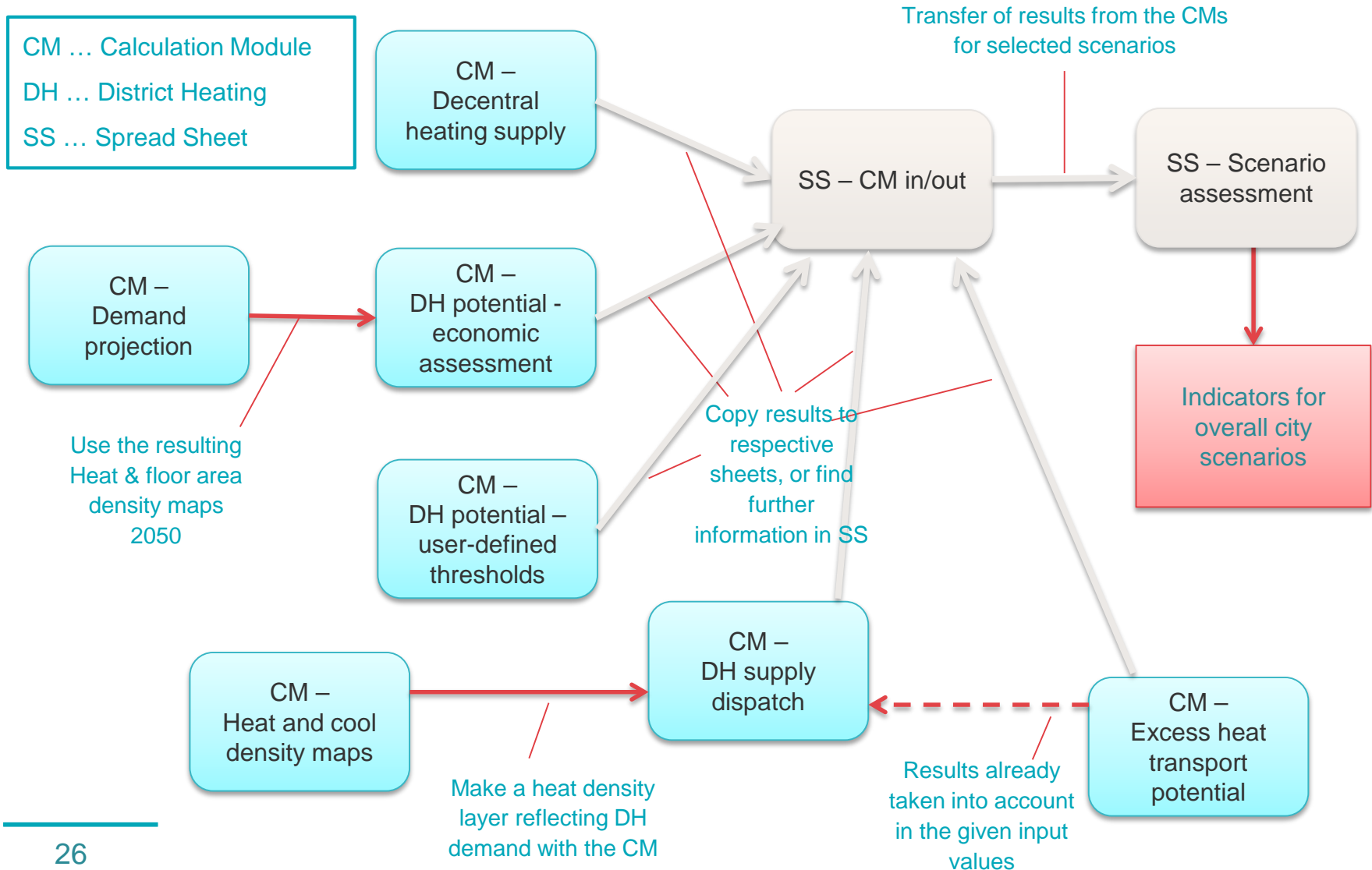


Annex VIII Part III





Exemplary Scenario Toolchain





Explore Hotmaps

- Software:
www.hotmaps.eu
- Project:
www.hotmaps-project.eu
- Open Source Data:
<https://gitlab.com/HotMaps>
- Open Source Modules:
<https://github.com/HotMaps>
- Wiki:
<https://wiki.hotmaps.eu>
- Guidelines Comprehensive Assessment:
<https://wiki.hotmaps.eu/en/guide-national-level-comprehensive-assessment-eed>



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Contact

Lukas Kranzl

lukas.kranzl@tuwien.ac.at

TU Wien

www.hotmaps-project.eu

