

## Accepted Manuscript

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PII: S2210-6707(18)30646-2  
DOI: <https://doi.org/10.1016/j.scs.2018.08.026>  
Reference: SCS 1224

To appear in:

Received date: 4-4-2018  
Revised date: 27-7-2018  
Accepted date: 18-8-2018

Please cite this article as: Vuarnoz D, Cozza S, Jusselme T, Magnin G, Schafer T, Couty P, Niederhauser E-L, Integrating hourly life-cycle energy and carbon emissions of energy supply in buildings, *Sustainable Cities and Society* (2018), <https://doi.org/10.1016/j.scs.2018.08.026>

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# Integrating hourly life-cycle energy and carbon emissions of energy supply in buildings

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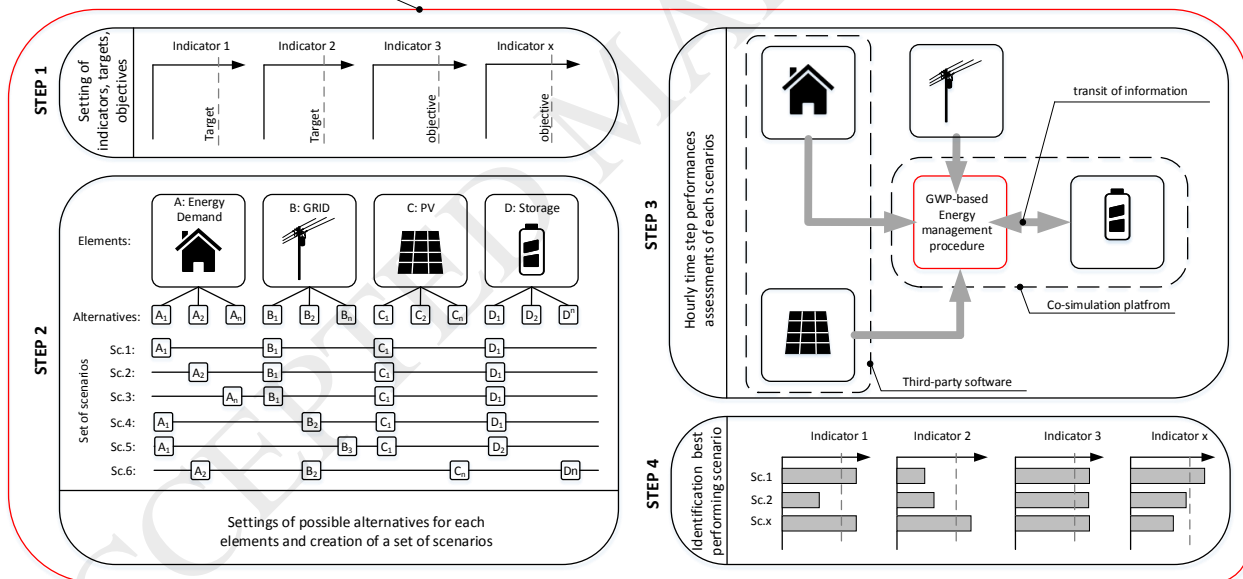
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## Graphical Abstract

Multi-criteria performance assessment framework



The two main aspects investigated in the study are the performance assessment framework using a multi-criteria approach and the GWP-based energy management procedure

## Highlights:

- A novel GWP-based energy management procedure for buildings is tested
- An hourly-based life-cycle performances assessments framework is developed
- Both have been tested on a building case study located in Switzerland

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