LCC and GPP: competing or complementary approaches?

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1. LCC in public procurement
2. The environmental dimension
3. Considerations related to environmental aspects
4. Final considerations
“LCC is a method for calculating the costs of products, services or works throughout their life cycle”

ISO 20400 Sustainable Procurement-Guidance (2017)
LCC in public procurement

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Ecolabels, standards and certifications</td>
<td>46%</td>
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<tr>
<td>Monitoring and reporting SP implementation</td>
<td>43%</td>
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<tr>
<td>Climate change policy goals through procurement</td>
<td>40%</td>
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<td>Greater linkage of environmental-social-economic aspects</td>
<td>39%</td>
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<td>Training and capacity building</td>
<td>38%</td>
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<tr>
<td>Link of sustainable procurement to sustainable development goals (SDGs) and broad policy objectives</td>
<td>37%</td>
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<td>Life-cycle costing</td>
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<td>e-procurement platforms and tools</td>
<td>35%</td>
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<td>Recognition of procurement as a strategic tool by organizations</td>
<td>35%</td>
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<td>Transparency in supply chains</td>
<td>34%</td>
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<td>Business case for sustainable procurement</td>
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<td>Procurement of innovative products, services or works</td>
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<tr>
<td>Estimating sustainability impacts/outcomes/benefits of sustainable procurement</td>
<td>32%</td>
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<tr>
<td>Green economy / Green growth</td>
<td>31%</td>
</tr>
<tr>
<td>Circular economy / Circular procurement</td>
<td>29%</td>
</tr>
</tbody>
</table>

Global Review of Sustainable Public Procurement (2017)
LCC in public procurement

- Non-monetized externalities
- Cost of externalities environmental/social
- Costs/benefits of risks/opportunities
- Acquisition, use & end of life costs
- Purchasing Price

All life cycle costs and impacts

Life cycle costs (LCC)

Total cost of ownership (TCO)

Price

Organization

Society

ISO 20400 Sustainable Procurement Guidance (2017)
LCC in public procurement

• When to apply LCC in a procurement process?

Before tendering  
During tendering  
After tendering
The environmental dimension of LCC

• Why LCC is promoted by SPP advocates?

• “Traditional” LCC ≈ TCO:

  "Internal" costs, that is costs bared directly by any of the actors in the "product" life cycle (be it the producer, supplier, procurer, user/beneficiary, end-of-life manager).
... a “traditional” LCC does not become an environmental tool just because it contains the words life cycle.

STM LCC for rail tractors

Devault C. and Malouin E. Coût total de propriété — exemple de l'étude sur l'électrification des véhicules de travaux de la STM (2018)
The environmental dimension of LCC

Adell A. Les avancées et outils utilisés par les administrations européennes leaders en achat durable (2018)
The environmental dimension of LCC

• “Evolved” LCC = internal + external costs:

"External" costs, that is the costs of the monetised effects of environmental impacts that a product, service or work causes during its production, use or handling but that no one is directly paying for.
The environmental dimension of LCC

Adell A. Les avancées et outils utilisés par les administrations européennes leaders en achat durable (2018)
<table>
<thead>
<tr>
<th></th>
<th>Supplier 1</th>
<th>Supplier 2</th>
<th>Supplier 3</th>
<th>Supplier 4</th>
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<tbody>
<tr>
<td>Mini cars</td>
<td></td>
<td></td>
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<tr>
<td>Car cost</td>
<td>8297.38</td>
<td>10064.76</td>
<td>9526.01</td>
<td>8821.76</td>
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<tr>
<td>Fuel cost</td>
<td><strong>5724.18</strong></td>
<td>4336.5</td>
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<td><strong>5463.99</strong></td>
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<tr>
<td>Maintenance cost</td>
<td>5884.29</td>
<td>4765.62</td>
<td>4892.03</td>
<td>3373.95</td>
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<td></td>
<td>19905.85</td>
<td>19166.88</td>
<td>18754.54</td>
<td><strong>17659.7</strong></td>
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<tr>
<td>Ecological cost</td>
<td>298.83</td>
<td>232.72</td>
<td>232.72</td>
<td><strong>552.03</strong></td>
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<td>Cost 18 vehicles</td>
<td>20204.68</td>
<td>19399.6</td>
<td>18987.26</td>
<td><strong>18211.73</strong></td>
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<tr>
<td>Rank with the other award criteria</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Tarris B. Life cycle Cost for passenger cars purchase in Niort (2016)
The environmental dimension of LCC

- Review of Directive 2009/33/EC:

  Setting minimum procurement targets (based on share of vehicles below defined emissions thresholds) can effectively reach the objective of impacting market uptake of clean vehicles in comparison to relying on the internalisation of external cost into overall procurement decisions, while noting the relevance to consider environmental aspects in all procurement decision.
The environmental dimension of LCC
Constraints of environment-related aspects

- Not all environment-related cost drivers can be transformed into cost in a robust, fair and comparable manner.

Cost drivers

Parameters to transform them into costs
Constraints of environment-related aspects

• Inherent deficiencies of environmental externalities evaluation and monetisation:
  – Oversimplification of reality
  – Fail to quantify certain externalities (irreversible changes, unknown future problems…)
  – Even more to monetise them
...not everything that can be counted counts,
and not everything that counts can be counted.

Final considerations

- At least TCO should be considered in management/planning as much as possible (acceptable a certain degree of inaccuracy)
- In a tendering process robustness must be ensured (consider relevant cost drivers as technical specifications or independent award criteria)
- Select where to apply it
- **Ensure GPP first**, not relay on the potential of LCC
  - If LCC doesn’t compensate the higher upfront costs of green alternatives
  - If no correlation exists between lower LCC and lower environmental impact
SKI TCO for computers

- Framework agreement for computers for 40 municipalities
- Minimum environmental requirements as defined by the Danish EPA procurement guidelines (ensure minimum environmental quality)
- Awarding considering TCO – **Purchase + Energy use** over 3 year time

Rotterdam TCO for street lighting

- Street light projects for the city
- Tender to change the fixtures included minimum requirements: LED lamps, armature durability of at least 20 years, individual components should be removable and replaceable, etc.
- Financial cost based on TCO:
  - Number of fixtures to illuminate the street
  - Price of the fixture, LED light source and driver
  - Energy consumption and maintenance costs over a period of 20 years

Final considerations

- At least TCO should be always considered in management/planning (acceptable a certain degree of inaccuracy)
- In a tendering process robustness must be ensured (consider cost drivers as technical specifications or independent award criteria)
- Ensure GPP first, not relay on the potential of LCC

Ensure purchasing decisions pull in the right direction even if it means a cost premium
"Life cycle costing is primarily an economic tool and, while it may have positive implications for sustainable procurement, it is not a panacea. As such the application of whole-life costing methodology is necessary but not sufficient to guarantee sustainable procurement.

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