

Green Hospital: Primary Results (Matthias Stucki)



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Primary Results: Survey

- **Environmental & economic data** were collected from **33 of 155 Swiss hospitals** using a national survey.
- The participation rate of **tertiary medical care hospitals** was highest (participation rate= 56 %).
- Measured by full time equivalent, survey participants represent **> 60 % of all Swiss hospitals**.

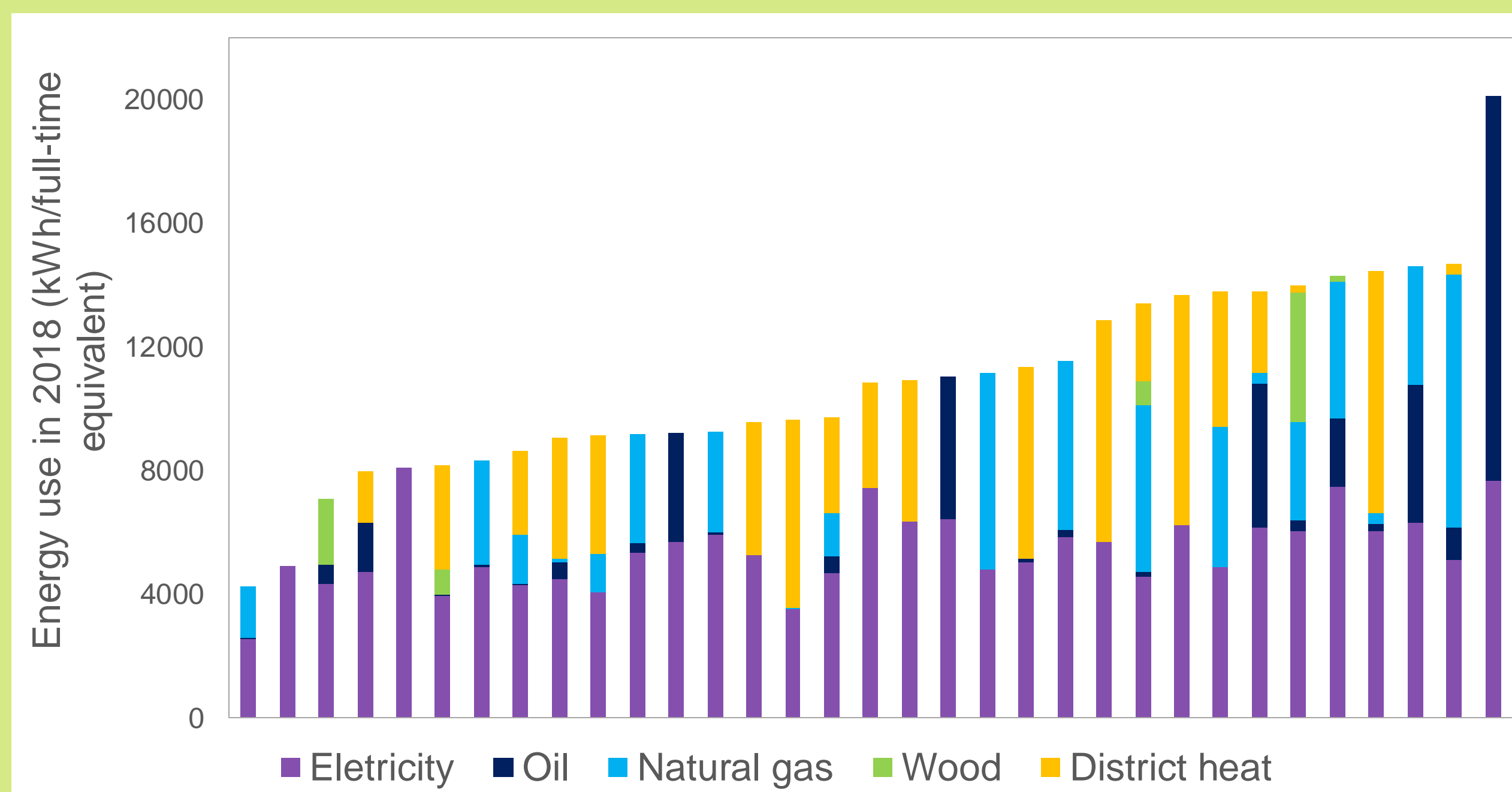


Fig. 1: Energy use of the participating hospitals in 2018 in kWh per full time equivalent.

- **Annual electricity consumption** of the participants was **443 GWh**, approximately the annual electricity consumption of a **small city the size of Lugano** or 60,000 people in Switzerland.
- Survey participants received **personalised evaluations** in Dec. 2019.

Primary Results: Logistical Analysis

- A **logistical potential analysis** for two partner hospitals based on current processes was developed.
- The logistical potential analysis has shown that the two partner hospitals are **already taking first steps towards more efficient logistics**.
- Nevertheless, there is **further untapped potential** in some areas (pharmacy article supply, textiles).
- **Target processes** for the areas selected by the partner hospitals were created.

Experience with Stakeholders

- There is **widespread interest** in determining & improving resource efficiency in the health-care sector.
- Much is in **flux** in hospitals, e.g. construction projects, new infrastructure, reorganisation.
- **Single use vs. reusable** is of great interest.
- Significant **interest in presentations** about and **cooperation** with the project.
- Increasing interest in hospitals carrying out their **own analyses**.

Key Communication to Date

Presentations / Workshops

- Life Cycle Innovation Conference, Berlin 2018
- Life Cycle Management, Poznan 2019
- Swiss Green Economy Symposium, Winterthur 2019
- Zukunftskongress Logistik, Dortmund 2019
- Med.Logistika, Leipzig 2019

Articles

- *Ineffizienter Ressourceneinsatz ade!* 2018, Heime & Spitäler
- *Ökobilanz und Potenzialanalyse beim "Grünen Spital"* 2019, Heime & Spitäler
- *Gemeinsam auf dem Weg in Richtung "Grünes Spital"*, 2019, Competence

Primary Results: LCA

- A **comprehensive LCA** was conducted for two partner hospitals.

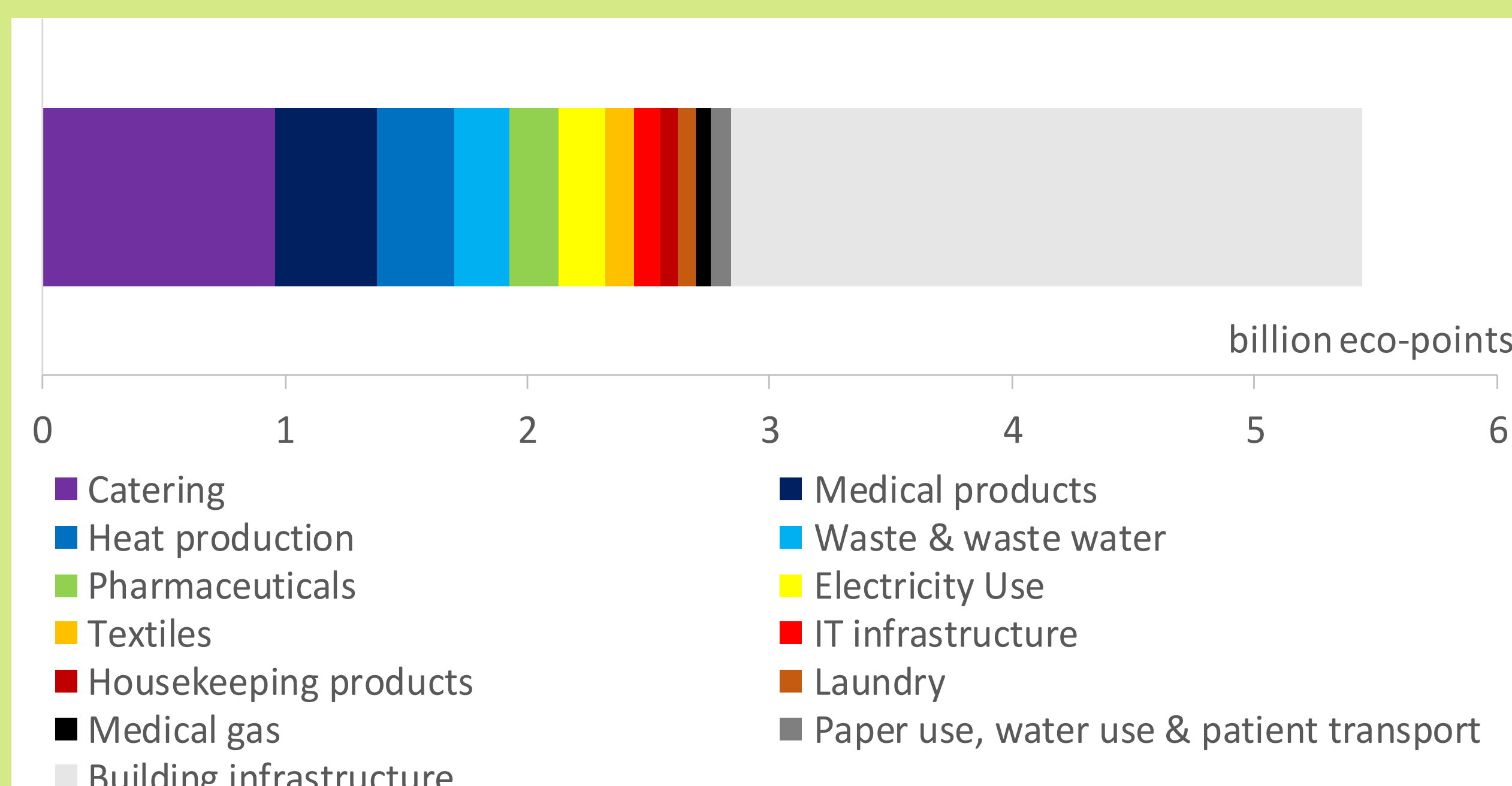


Figure 2: Total environmental impact of one of our partner hospitals in 2017 (billion ecopoints) assessed with the Ecological Scarcity Method (Frischknecht & Büsler Knöpfel, 2013), preliminary results.

- Hotspots are infrastructure, catering, medical products, and heat production.
- A **simplified LCA** is being carried out for **all 33 survey participants**.

Next Steps

- **Finalise LCA** of all survey participants.
- Provide survey participants with **personalised environmental evaluations**.
- **Extrapolate** data to **all Swiss hospitals**.
- Carry out **econometric analysis**.
- **Support** partner hospitals in the **implementation of specific improvement measures** (this year).
- Conduct **LCA quantifying optimisation**.

