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Organizational Climate Impact Accounting

from Blame Distribution to Accounting for Action

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Organizational Climate Impact Accounting: from Blame Distribution to Accounting for Action

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Introduction:

To reach the Paris Agreement's climate target, urgent reductions of GHG emissions are needed. Therefore, there is no time for suboptimal reduction initiatives and thus a need for evidence-based decision support. This poster explores how consequential LCA can provide this evidence-based decision support to organizations to make decisions that matter. The paper proposes a shift from traditional climate accounting to climate *impact* accounting, to quantify the potential impacts of decisions and assess the system-wide impacts of potential decisions, thereby avoiding potential burden shifting and suboptimal reduction initiatives. The impact accounting approach is actively feeding into the climate action plan that AAU is currently developing.

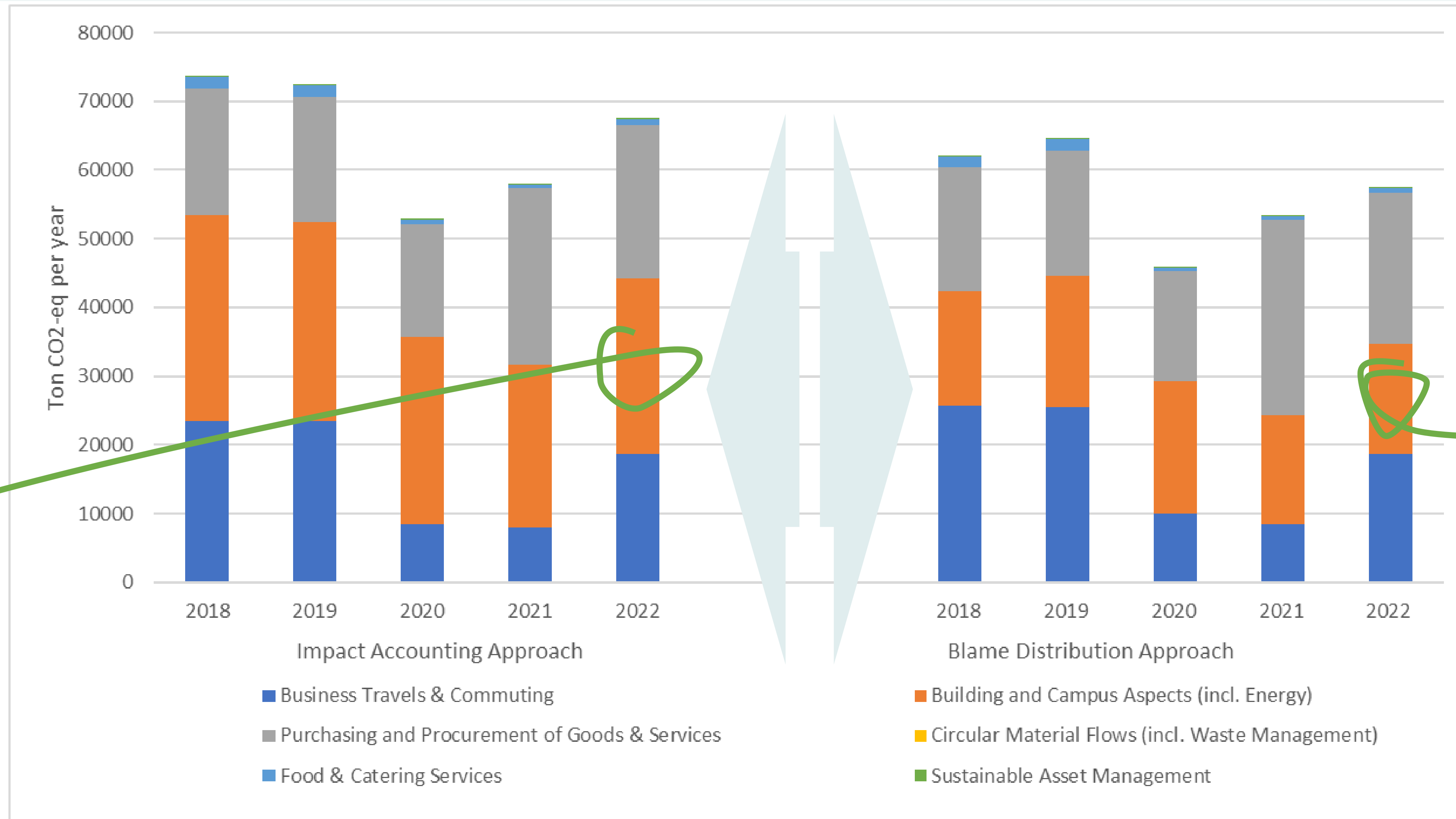


Figure 1:

Aalborg University's GHG emissions split into the university's action plan areas based on the two different approaches

Key Differences:

The key differences between the two approaches are that the Impact Accounting Approach considers the system-wide effects that a change potentially could have and takes the current development of the system into account by utilizing marginal suppliers and technologies. Whereas the Blame Distribution Approach provides a snapshot in time, without accounting for the system-wide impacts of a decision or the current development of the system. It is crucial to consider the systemic changes that a decision might have and the current development of the system if the accounts are to be utilised for evidence-based decision support e.g., when it comes to reducing the emissions from electricity the Impact Accounting Approach would argue that Power Purchase Agreements are needed, as this will lead to an increased share of renewable energy in the electricity grid, whereas the Blame Distribution Approach could argue for Green Energy Certificates. Green Energy Certificates ensure that the organization only utilised electricity from sustainable sources, but they don't necessarily lead to an increase of electricity produced by renewable sources and could push other companies that utilised this sustainable electricity already into utilizing fossil-based electricity sources instead. If this is the case, then there are no changes to the system and global emissions remain the same. Therefore, the only difference, in that case, is that the organization's share of the global emissions has been reduced, whereas PPA's would lead to a reduction of global emissions as they increase the share of sustainably produced electricity.

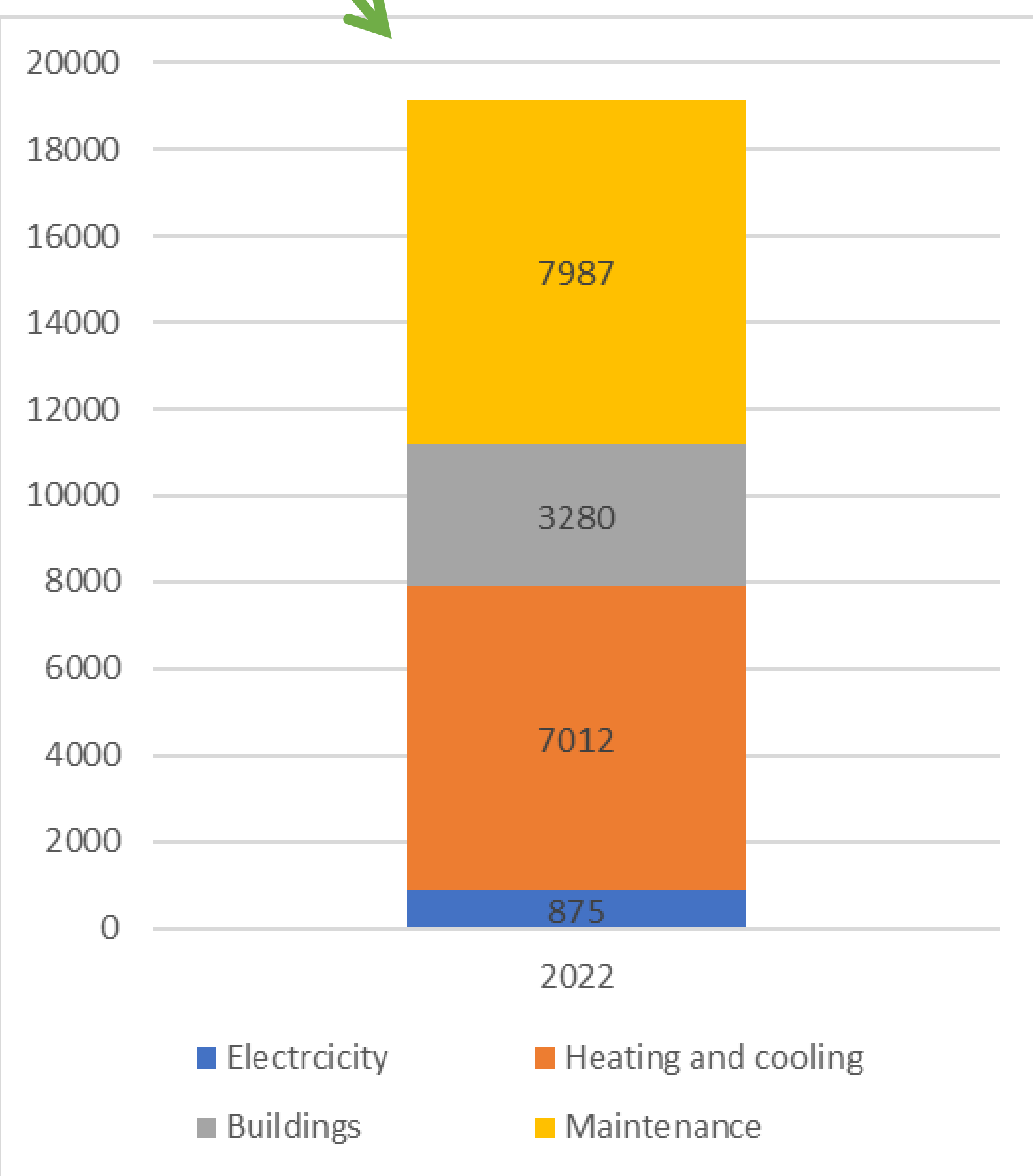


Figure 2:

Impact accounting approach: Building and Campus Aspects emissions

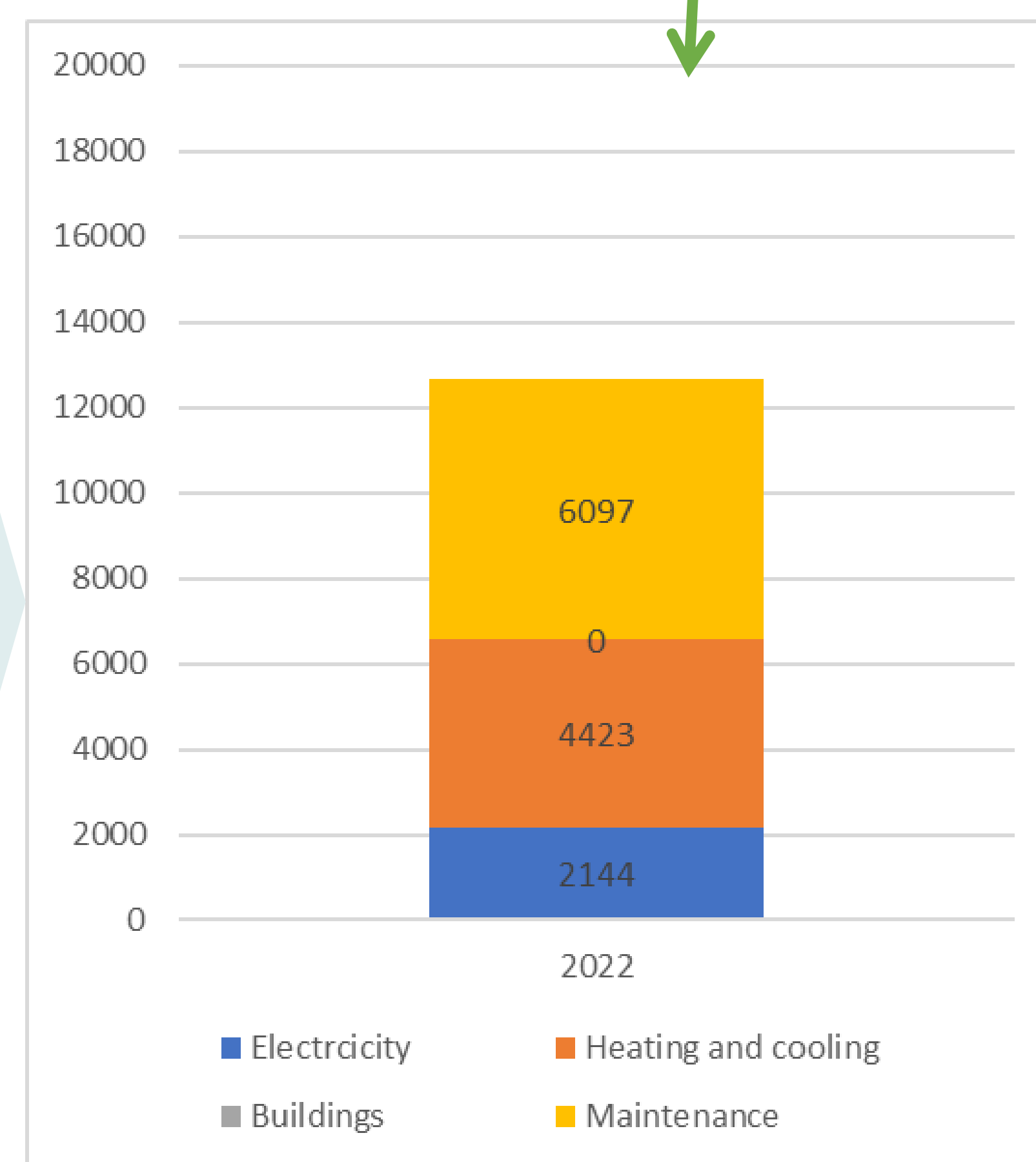


Figure 3:

Blame distribution accounting approach: Building and Campus Aspects emissions

Difference in Key Takeaways (Building consumption):

The occupation of buildings (offices, classrooms, labs etc.) has an impact, emissions don't only occur in the first year after construction. In more traditional accounting approaches such as the GHGP, a building is only accounted for the year that it completes construction and only maintenance and operations are accounted for yearly. This has two main downsides; firstly, it means that a building would be climate neutral if no maintenance or operations are conducted and thus it is climate neutral if it remains unoccupied. Secondly, it disregards the impact of occupying a building, as this will force other expanding organizations to construct new office space, whereas a reduction of building mass, will release m2 to the market for buildings, thereby displacing the construction of new offices. Electricity is already transitioning to a more sustainable mix, whereas heating is not, therefore it should be a priority to reduce heating demand and assist the transitioning of the heating grids to a more sustainable alternative.

Difference in Key Takeaways (Energy consumption):

Electricity has a sizeable impact currently and therefore efforts should be taken to reduce it (Note: this includes the Danish 200% rule, which allocates emissions from heat production to electricity production in co-production, based on a generalised energy assumption). This disregards the fact that the electricity grid is already rapidly transitioning towards a more sustainable grid, and therefore could lead to suboptimization as decisions are focused on an issue that is already improving compared to heating that is not transitioning as rapidly. Heating is a sizeable impact category but not as large as in the Impact Accounting Approach (this is mainly due to the aforementioned 200% rule).

