

UNDERSTANDING THE PUBLIC SECTOR ENGAGEMENT WITH THE CIRCULAR ECONOMY (CE)

Introduction

Work Package 3 (WP3) explores the role of public sector organisations, their strategies, plans, and operational activities for a Circular Economy (CE) transition. Attention to date on the CE has been largely confined to the private sector, especially manufacturing. However, a full CE requires input also from the public sector, both in terms of its relationship to the private sector (e.g., through both purchasing and regulation) and its own operational activity.

It is the aim of WP3 to examine public sector engagement with the CE via the following questions: 1) How are public sector bodies incorporating circularity into their own behaviour and what is the role of practices and strategies in bringing this about? 2) How can circularity be assessed in public sector organisations and what indicators are useful in measuring the extent of circularity in public sector organisations?



WP3.1: Circular economy practices and organisational change strategies in public sector organisations

Natacha Klein



Supervised by [Tomás B. Ramos](#) and [Pauline Deutz](#)

Objectives:

- Review existing literature on CE practices and strategies in the public sector and build a conceptual framework with the main areas for CE management in public sector organisations;
- Empirically identify CE practices suitable in public sector organisations;
- Identify factors influencing CE adoption and strategies addressing change toward circularity using an organisational change management approach;
- Characterise the extent of CE implementation in the Portuguese central public sector.

Results:

- [Research on CE in the public sector is limited](#) describing CE practices as incremental and targeted towards resource efficiency, recycling, and reducing waste, and advocates for more transformational practices that promote behavioural change;
- [Identified CE practices for the public sector include](#) circular requirements for public procurement, practices related to efficiency of buildings, dematerialisation of administrative processes, and reducing and reusing resources;
- Organisational culture, leadership, awareness, learning, collaboration, communication, and assessment are key elements to address with the appropriate strategies in shifting towards circularity in public sector organisations;
- Survey of the Portuguese central public sector revealed early stages of CE implementation, thus showing great potential for further CE integration including circular purchasing, improving building efficiency, enhancing CE

communication and assessment, and rethinking the role of employees and the bureaucratic governance structures of the public sector.



WP3.2: Circular Economy assessment in public sector organisations
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Objectives:

- Understanding how the topic of CE appears on the agenda of public sector organisations;
- Analysing current CE assessments for public sector organisations;
- Developing with stakeholders a sector specific CE assessment framework for public sector organisations;
- Identifying challenges for CE assessment in public sector organisations and strategies to overcome them.

Results:

- [Engaged individuals can play a significant role in anchoring the topic of CE](#) on the agenda of public sector organisations and can drive implementation of initiatives;
- [CE assessment literature does not focus on public sector organisations](#) and there are very few contributions on this topic
- [Important areas for CE assessment in public sector organisations](#) are resources, operations and processes, as well as social and employee related activities;
- [Collaboration is key](#) for understanding and driving CE assessment in public sector organisations.
- CE assessment implementation in public sector organisations still faces [challenges](#) that need to be overcome

CE in public sector organisations

Circularity can take many forms in the public sector. Nevertheless, during our research, we have identified several areas common to public sector organisations in the literature and have built a framework of a public sector organisation as a multi-dimensional system transitioning to circularity with areas that are essential to address for CE implementation (Klein et al., 2020).

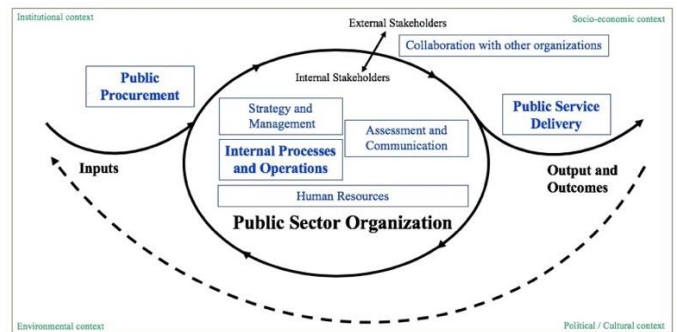


Figure 1: Conceptual framework of CE in public sector organisations
 Public sector organisations purchase resources (products, services and works) via public procurement processes in which requirements based on CE principles can be selected by public procurers to encourage suppliers to deliver circular products and services.

Also, public sector organisations consist of various processes and operations that can be optimised in resource and energy use, that can be dematerialised, and that can incorporate circular practices in everyday tasks in the workplace. Collaboration with other organisations like markets, suppliers, local and national associations is crucial to establish circularity. Technical efficiency-oriented practices as well as human-centred CE practices focusing on consumption and sharing behaviours are important for public employees (Klein et al., 2021a).

The areas related to strategy and management, human resources, assessment and communication, and the various contexts in which public sector organisations operate have the potential to drive or slow the implementation of circular practices in public sector organisations.

A deeply rooted bureaucratic culture with long-established rules and rigid procedures has been identified as a significant barrier for the public sector. Siloed organisational structures and constraints from short-term political cycles have also been identified as major obstacles for change towards circularity. Thus, suggestions include creating collaborative cross-departmental and cross-organisational governance dynamics with trained employees and managers encouraged to be part of an assessed, monitored and communicated CE transition in the public sector organisations (Klein et al., 2021b). This research enables a holistic view on CE change processes in public sector organisations.

CE assessment in public sector organisations

The inclusion of CE assessment in public sector organisations can drive the CE transition by evaluating and communicating an organisation's progress (Droege et al., 2021c). It is crucial to assess the CE engagement of public sector organisations to be able to design and prioritise circular solutions that can contribute to sustainable development based on actual evidence (Droege et al., 2021d). Literature on CE assessment suggests several assessment tools and measures, most commonly indicators. They should be clear, unambiguous, and provide a basis for comparison. Worldwide, experts share the understanding that assessment can ease transition. They highlight the effect of systemising existing CE efforts and knowledge, providing a standardised CE language, simplifying CE information exchange, facilitate learnings between departments and organisations or by providing a basis for organisational and regulatory change. Recent works reviewed CE assessment and identified there is no generally accepted conceptualisation for CE performance and there is no commonly accepted CE assessment framework for the micro level (e.g. Droege et al., 2021a).

Together with the Portuguese public sector organisations we co-developed a CE assessment framework as a departure point for CE assessment in public sector organisations and we identified current challenges for CE assessment implementation.

The framework covers the following components: (i) a system definition; (ii) a definition of 35 CE assessment elements; (iii) CE assessment targets; and (iv) CE indicators. The framework contributes to the understanding of circularity from a public sector perspective considering three key aspects: resources, operations and processes, as well as social and employee related activities. Implications for CE assessments in the public and private sector encompass the importance for an early involvement of stakeholders to get a sector specific perspective, the need to address user-friendliness and the requirement for continuous testing of CE assessments.

Currently cultural barriers, particularly a lack of public and political pressure, as well as a resistance towards change, are considered the main challenges for CE assessment implementation. Cultural challenges drive structural ones such as a lack of leadership commitment, the voluntary nature, and a missing clear governance for CE assessment. Technical and financial challenges, contrary to previous findings of the literature, are not prioritised and are seen as a result of the cultural and structural challenges (Droege et al., 2021b). Overall, the research suggests that CE assessment is often a discussion among academics and highly specialised practitioners. In order to drive its implementation, the debate has to involve stakeholders beyond expert circles to trigger awareness for its necessity and to facilitate usage for a broader audience.

Recommendations

To academia:

1. **Use the conceptual framework in Figure 1 to guide their research interest** and focus on specific areas of a public sector organisation, to

- explore how circularity is practiced in these dimensions and to study the interrelations;
2. **Examine and evaluate specific CE change programmes** in public sector organisations and pursue case studies in other national, regional, and local public sector contexts;
 3. **Further explore the application of an organisational change management perceptive to CE implementation** in other organisations, including private companies;
 4. **Analyse the contextual and institutional factors** impacting a CE implementation process in public sector organisations;
 5. **Engage in stakeholder involvement methodologies** to accelerate the implementation of a CE in the public sector;
 6. **Establish a more common understanding of micro level CE assessments.** Currently there is no common way of assessing micro level CE, which makes it more difficult for organisations to implement it;
 7. It is also needed that **sector specifics are gaining more attention in the CE assessment literature.** CE assessments that work for a manufacturing organisation might differ from assessments working in a service-based organisations. The specifics need to be better understood;
 8. It is of paramount importance to **make sure that the increased circularity of public sector organisations leads to overall sustainable development.** The relationship between CE and sustainability needs to be better understood.

To practitioners:

1. **View circularity as a means towards sustainability** moving beyond the current sustainability efforts;
2. **Use the identified CE practices and supporting strategies to find opportunities and define priorities** for planning, implementing, and monitoring CE in their organisations.

3. **CE assessment frameworks from the literature can be valuable to public sector organisations** but need to be fine-tuned by relevant stakeholders, namely CE assessment practitioners in public sector organisations with regards to the specific organisation it is applied to. The application of CE assessment frameworks requires testing and validation.
4. After developing tailored CE assessment frameworks, **public sector organisations need to ensure a clear and strategic direction for other entities** such as local and regional public sector organisations.

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