

## Digitalization and the circular economy

### Case studies of a data and digitally-enabled circular economy

Department: Sustainable Development

Research group: Innovation Studies

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### Project description

Digitalization can be an enabler and accelerator for the transition to a circular economy. (Big) data and digitally-enabled solutions like online platforms, smart devices and apps, blockchain, artificial intelligence (AI) and the Internet of things (IoT) can support a more efficient use of resources (e.g. assets sharing, dematerialization, servitization), improve production processes, and facilitate the reuse, repair and remanufacturing of products. Innovative digital technologies also play a key role in facilitating knowledge exchange and connections between relevant stakeholders across the value chain (e.g. producers, consumers, recyclers). With promises come also various challenges, many of which relate to sharing and integrating available data across multiple actors and to achieving collaboration.

Despite the potential of digitalization to foster a circular economy, research that brings together digital technologies and the circular economy – what has been referred to as ‘digital’ or ‘smart’ circular economy – is still in its infancy and practical applications in companies remain understudied. The research activities of the Bright Minds assistant will include:

- A review of the applications and sustainability impacts of a data and digitally-enabled circular economy to identify case studies, best practices, and frontrunners (firms, application examples);
- Collecting empirical data on case studies within the digital circular economy (we will define the exact scope and industry together) for comparative analysis in the EU and/or global context;
- Contributing to a scientific paper that summarizes the key findings of the case studies (to be submitted to a conference and/or an international peer-reviewed journal).

You will have regular meetings with the supervisors (either in person at the Copernicus Institute of Sustainable Development or on MS Teams, depending on the Covid-19 regulations in place during the project). Meetings will be weekly or by-weekly depending on the timeline and activities.

### Job requirements

We are looking for a proactive and enthusiastic student who is highly motivated, well organized, detail-oriented, and genuinely interested in the circular economy/digitalization topic. Ideally, you have a background in sustainability, innovation, or business studies. You should also be willing to learn, open to working in a team and have excellent English writing/communication skills.