



# How can digitalization unlock the circular economy's potential?

THE CONFERENCE BOARD  
**SUSTAINABILITY WATCH**



ESG Center  
Global Sustainability Center



# Panelists



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Partner, Hunton & Williams

Council Director, Environment & Regulatory Affairs Council, The Conference Board

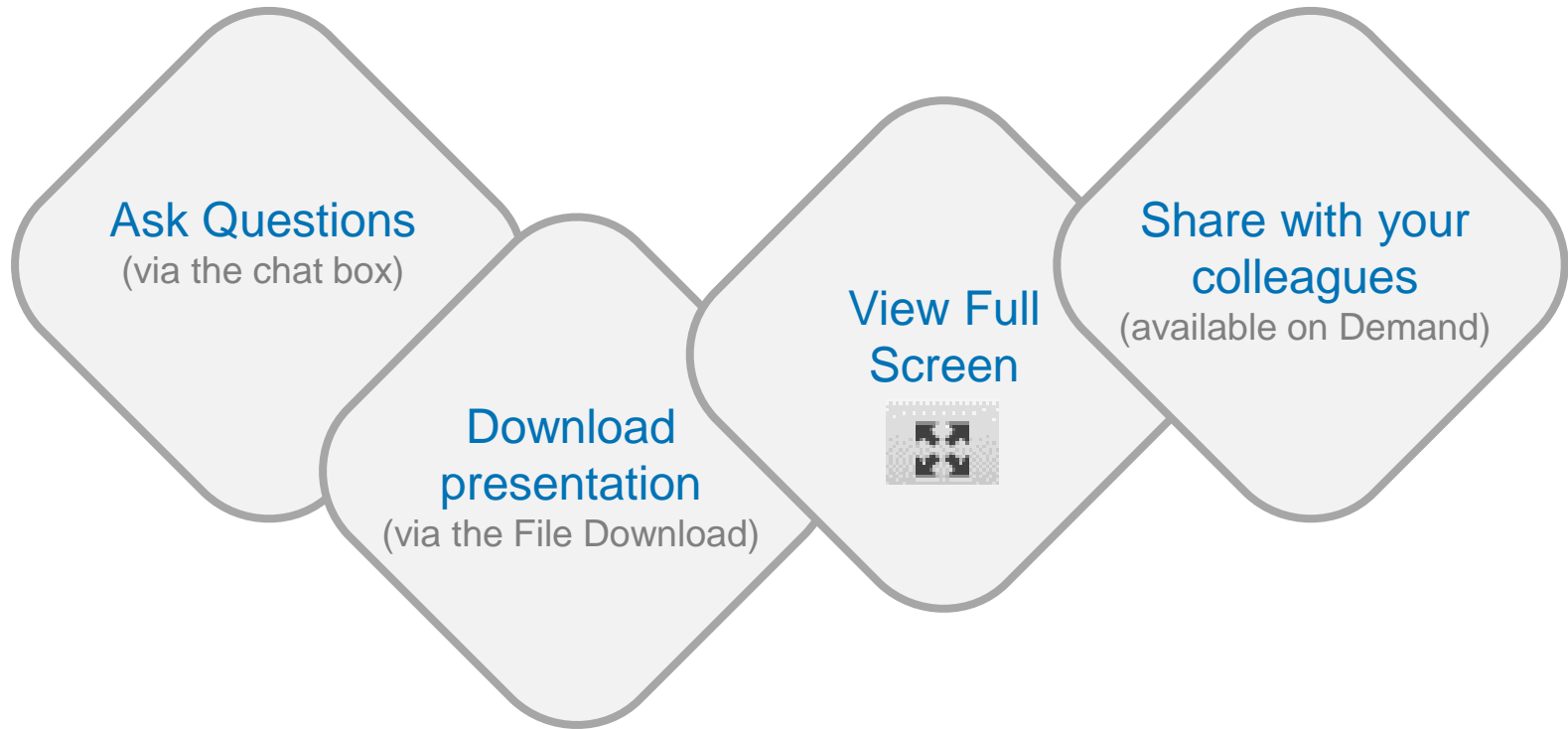


**Anuj Saush (Moderator)**

Senior Researcher, The Conference Board



# Making the most of the webcast



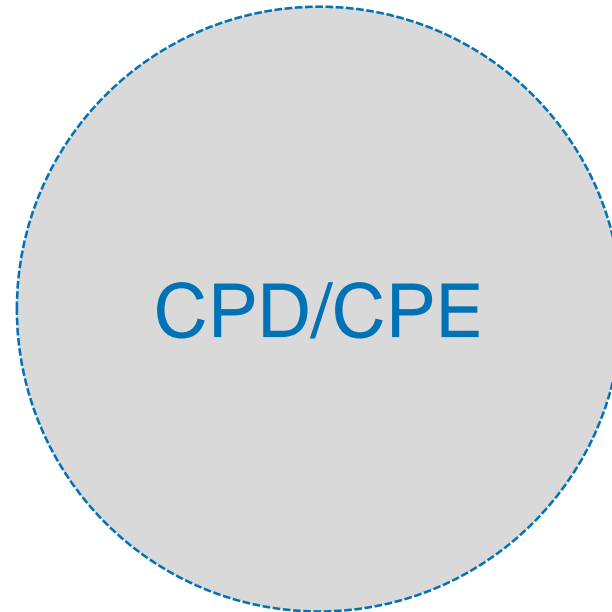
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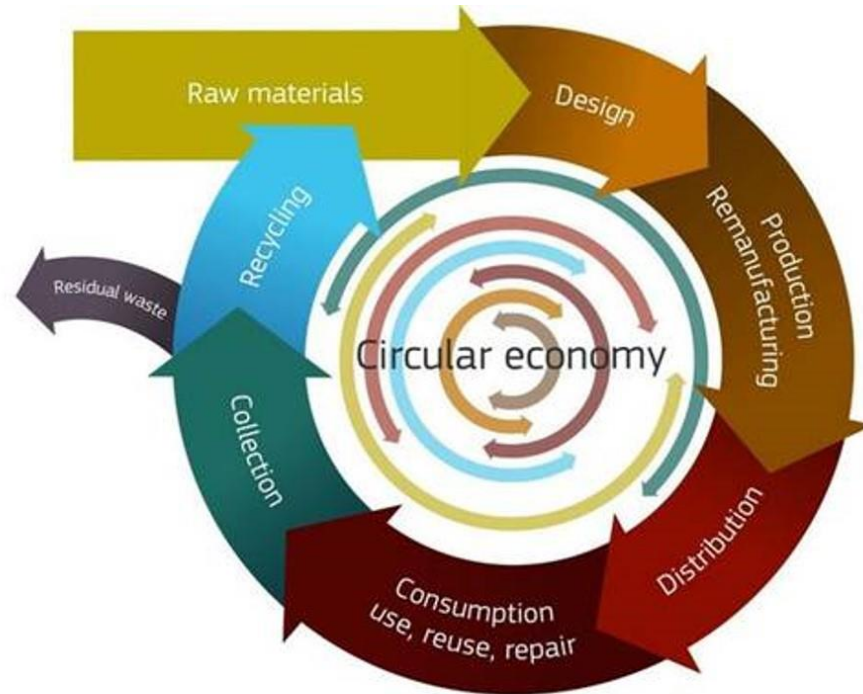
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# Circular Economy and Digitalization

# Circular Economy

- Maintaining the value of products and materials for as long as possible;
- Minimising resource use and waste;
- Increasing repair, recovery/reuse of materials and products + recycling rates.



Linear economy



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## The EU's Green Deal

“How to make Europe the first climate-neutral continent by 2050, boosting the economy, improving people's health and quality of life, caring for nature, and leaving no one behind”

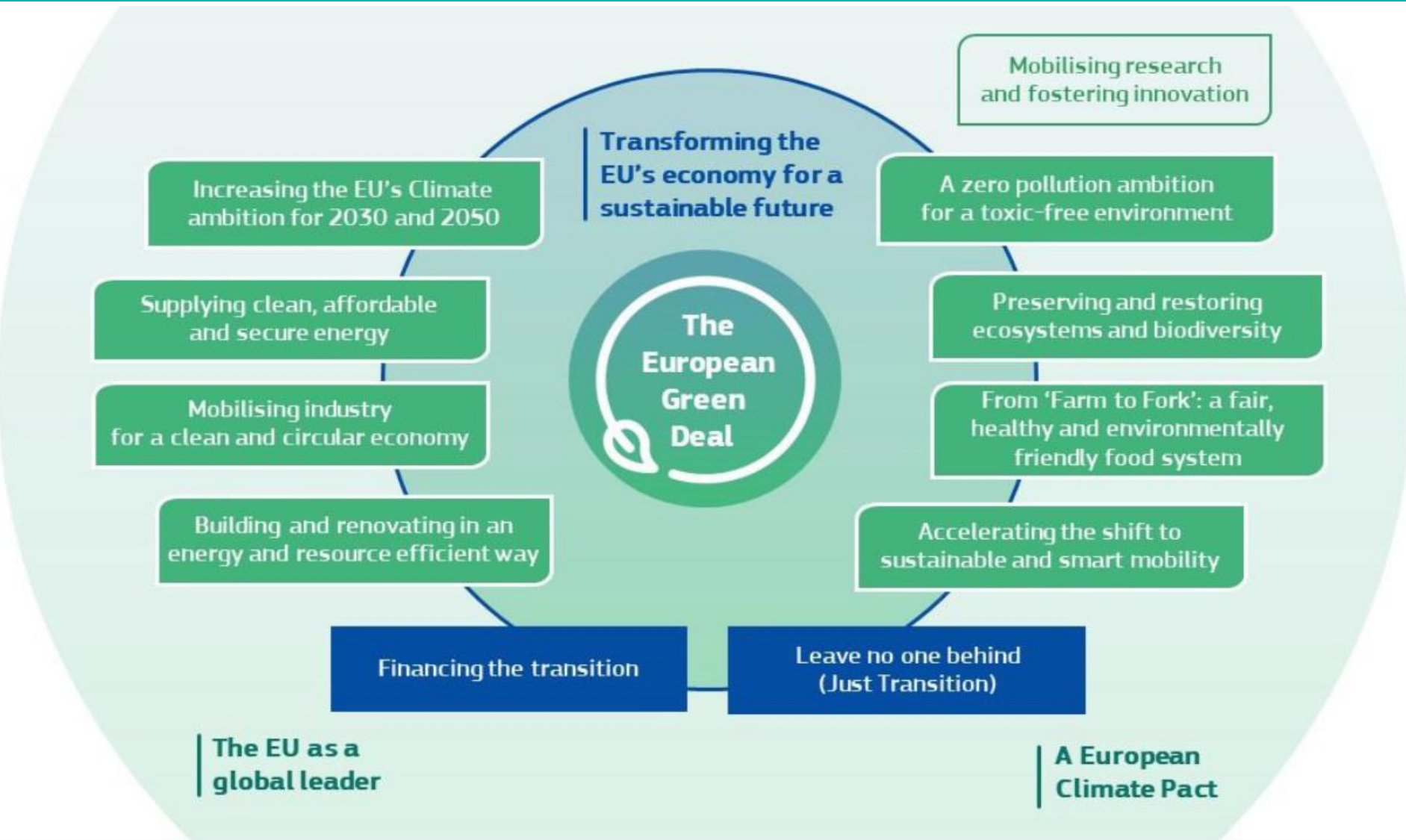
**Lucas Bergkamp**

Partner, Hunton Andrews Kurth LLP

- Presented in December 2019 by **new European Commission** headed by Ursula von der Leyen, President
  - Frans Timmermans, Vice-President for the EU Green Deal, responsible for implementing Green Deal
- **Objective of Green Deal:** making EU's economy **sustainable** by turning climate and environmental challenges into **opportunities**
  - across all policy areas
  - making the transition just and **inclusive** for all



- The European Green Deal is **new growth strategy** – “for a growth that gives back more than it takes away”
  - “**transform our way of living** and working, of producing and consuming to live healthier and make our businesses innovative”
  - becoming global leader by **moving first** and moving fast to address “climate and environmental emergency”
  - **industrial strategy**



- **Initial roadmap** (subject to updating) with actions to boost the efficient use of resources by the following actions:
  - move to a **clean, circular economy**
  - stop climate change
  - revert biodiversity loss
  - cut pollution
- Outlines policies and laws, investments needed and financing tools to be made available
- 'Climate Pact' to give citizens a voice and role in designing new actions

- Industrial Strategy and **Circular Economy** Action Plan
  - **Green and digital transformation (digital is enabler)**
  - “Achieving a climate neutral and circular economy requires **full mobilisation of industry**. It takes 25 years to transform an industrial sector and all the value chains. To be ready in 2050, decisions and actions need to be taken in the next five years.”
  - **Circular economy action plan** will guide **transition of all sectors**, action will focus in particular on resource-intensive sectors such as textiles, construction, electronics and plastics, consider ‘**right to repair**’, and curb **built-in obsolescence**
  - ‘**Sustainable products**’ policy to support the **circular design of all products** based on a common methodology and principles

- Industrial Strategy and **Circular Economy** Action Plan
  - Prioritize **reducing and reusing materials** before recycling them
  - **New business models** contemplated
  - Minimum requirements to **prevent environmentally harmful products from being placed** on the EU market – link with **chemicals policy**
  - **Extended producer responsibility** to be strengthened
  - **Waste law** -- prohibit waste exports, tackle over-packaging and waste generation, and impose mandatory recycled content for packaging, vehicles, construction materials and batteries
  - **Develop emerging technologies**, such as clean hydrogen, carbon capture and storage, fuel cell, energy storage, and alternative fuels, with first commercial applications by 2030

- European Parliament endorsed Green Deal
- European Council to endorse next
- **Commission will bring forward the measures announced in European Green Deal roadmap**
  - in **March 2020**, the Commission intends to adopt an EU **industrial strategy** to address the twin challenge of the **green transformation and the digital transformation**
  - in **March 2020**, new **Circular Economy Action Plan** to modernize EU economy and capitalize on opportunities of the circular economy domestically and globally, **stimulating development of lead markets for climate neutral and circular products**

EU ACTIONS	INDICATIVE TIMETABLE
Proposal for a Just Transition Mechanism	January 2020
Proposal for "Climate Law"	March 2020
Circular Economy Action Plan	March 2020
EU Industrial Strategy	March 2020
Biodiversity Strategy	March 2020
Farm to Fork Strategy	Spring 2020
Comprehensive plan to increase EU 2030 climate target to 50-55%	Summer 2020
Chemicals strategy for sustainability	Summer 2020
Renewed Sustainable Finance Strategy	Autumn 2020
Review of Non-Financial Reporting Directive	2020
Proposal for waste reforms	From 2020
Climate Change Adaptation Strategy	2020/21
Legislative proposals to deliver on climate objective (including changes to EU ETS, Renewable Energy, Energy Efficiency and Energy Taxation Directives)	June 2021
Zero pollution action plan for waste, air and soil	2021
Proposal for carbon border adjustment mechanism for selected sectors	2021

Digitalization as an enabler for circular economy



# Digital Roadmap for a Circular Economy

European Policy Centre (EPC) Task Force  
2017-19

**orgalim**  
EUROPE'S TECHNOLOGY INDUSTRIES



**HELSINKI**  
EU Office

**Luke**  
NATURAL RESOURCES  
INSTITUTE FINLAND

**A?**  
Aalto University



**midt**  
Central Denmark Region

provincie limburg



**eit** Climate-KIC  
Climate-KIC is supported by the  
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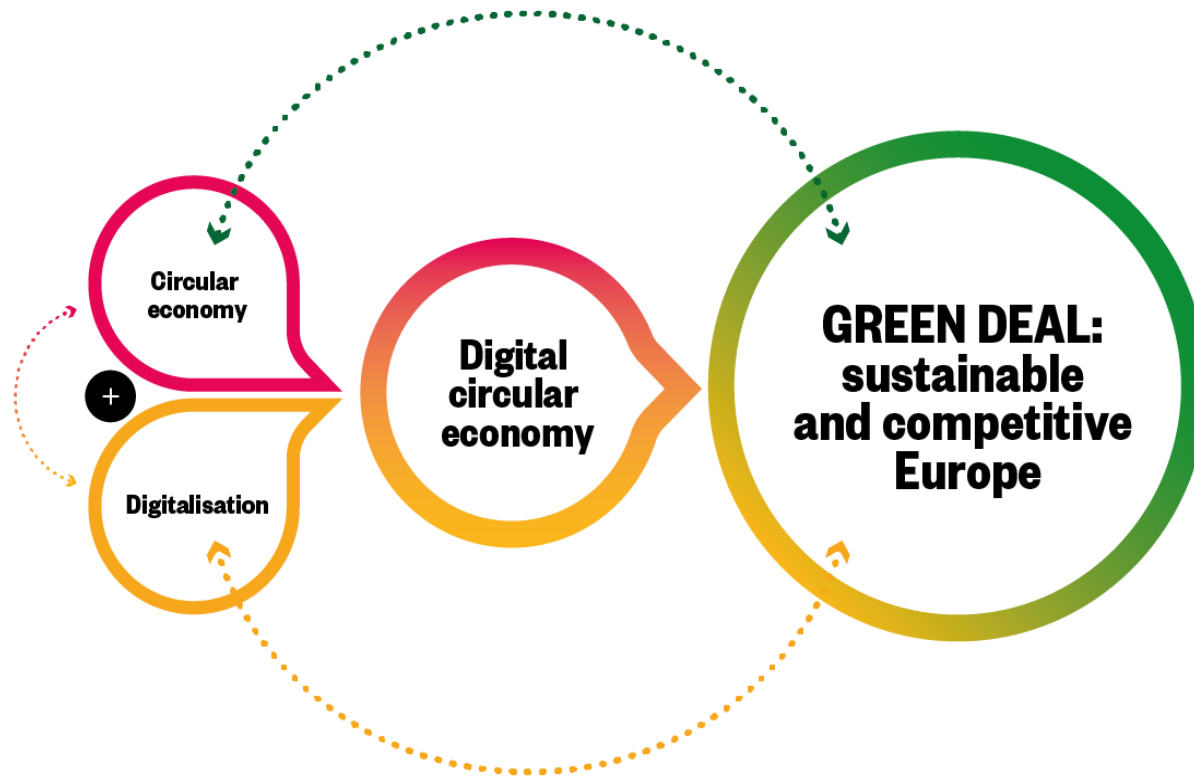


- EPC Discussion Paper: [Creating a digital roadmap for a circular economy \(7/2019\)](#)
- EPC Book: [Digital Circular Economy \(3/2020\)](#)

# Digitalization as a catalyst for a circular economy



# Digital circular economy: a driver for a Green Deal



# Digitalization as a catalyst for circular economy



## Improve Connections and Information Sharing

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- Collect information
- Turn data into information
- Facilitate partnerships
- Enable information transfer

## Makes products, processes and services more circular

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- Improve design
- Improve production & processes
- Improve reuse, repair, disassembly, durability
- Enable service-based business models

Improve  
connections and  
information sharing



e.g. **Evolution3** – Michelin's sensor system for  
tires

## Improve connections and information sharing



e.g. **TagItSmart** – smart tags allow stakeholders to trace items using a QR code

e.g. **Circularise** – improving transparency and communication in circular value chains via blockchain

Make products,  
processes and  
services more  
circular



e.g. **Accelerated Metallurgy project (ACCMET)**:  
using AI to identify environmentally-friendly metal  
alloys and create new materials

Make products,  
processes and  
services more  
circular



e.g. **Winsun** used 3D printing in Suzhou Industrial Park, which helped to cut construction material usage by 30-60% and costs by half



Make products,  
processes and  
services more  
circular



e.g. **IoT** for predictive maintenance

# What customers need?



- We don't need to own lamps > We need light
- We don't need to own cars > We need mobility
- We don't need to own CDs > We want to listen to music
- We don't need to own a washing machine > We need to wash our clothes
- We don't need to own the chairs > We need to sit
- We don't need to own pesticides or fertilizers > We need healthy plants and food

# What customers need?



- e.g. “**Clothing as a service**” online platforms like Tale Me and MUD Jeans
- e.g. HP **Instant Ink** cartridge replacement service: printers send ink level information to HP via IoT. When ink levels get low, the company automatically ships replacement cartridges



## Upcoming webcasts

### Sustainability Innovation

Thursday, March 19

03:00 PM CET (Brussels) | 09:00 AM ET (New York)

### Organizational Characteristics of US Benefit Corporations

Thursday, April 16

03:00 PM CET (Brussels) | 09:00 AM ET (New York)

## Feedback

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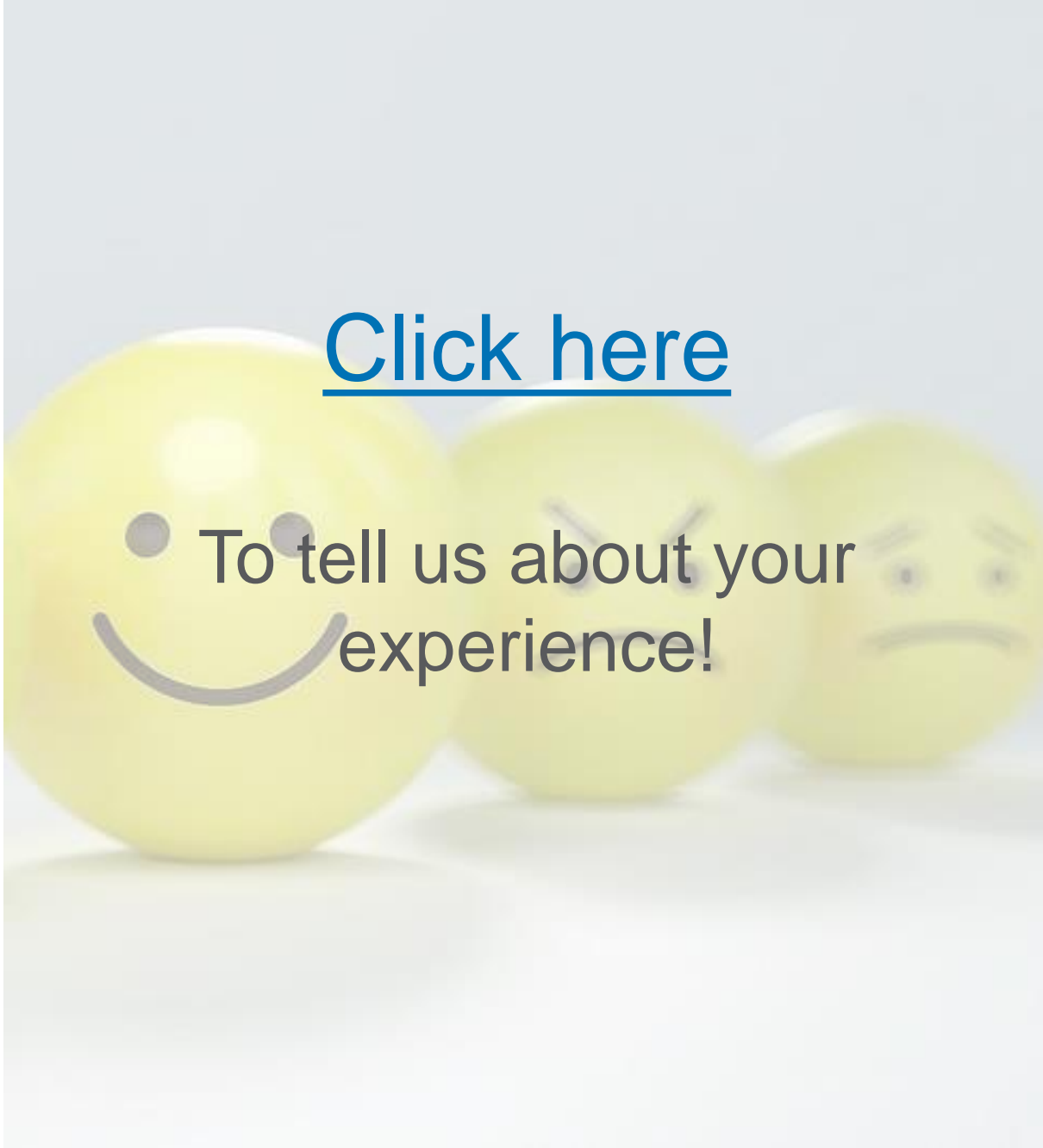
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