

ORGX INSIGHT

AI AS THE NERVOUS SYSTEM OF THE CIRCULAR ECONOMY

We often talk about the circular economy as if it is mainly a waste or recycling challenge. It is not.

*At its core, **circularity is an information and coordination challenge across materials, products, and value chains.***

Materials cannot stay in use at high value if information about them is fragmented or lost along the way.

LET'S TAKE A LOOK

Why circularity struggles to scale

The circular economy breaks down not because of intent, but because of **disconnected information flows**.

Designers rarely see real end of life constraints.

- Manufacturers rarely understand how design choices affect recyclability.
- Recyclers rarely receive detailed, usable product composition data.
- Waste operators collect information that is often too late or too fragmented to influence upstream decisions.

Individually, these systems function.
Together, they fail to form a coherent feedback loop.



Every circular system needs a nervous system

Circularity only works at scale when information flows continuously across the value chain.

To preserve value, systems need more than infrastructure. **They need intelligence.**

That means.

- Visibility across lifecycle stages
- Traceability of materials and products
- Real time feedback loops between actors
- Predictive understanding of material flows and constraints

Without this, circularity remains linear systems with circular intentions.



This is where AI enters the picture

AI is not the circular economy solution.

But it may be the coordination layer that makes it operational.

Its **value lies in connecting fragmented systems.**

- Connecting product design data with material recovery realities.
- Connecting waste composition with upstream procurement decisions.
- Connecting historical waste patterns with future flow predictions.

In this sense, AI acts less like a tool and more like an integrator of system intelligence.



The future is not AI for efficiency

The next frontier is not simply AI for efficiency.

It is **AI for resource intelligence.**

If the circular economy is about redesigning how value is created, maintained, and recovered, then AI may become the operating layer that allows that redesign to function at scale.

The question is no longer whether AI has a role in circularity.

The real question is **whether we can build the trust, transparency, and collaboration required for it to operate as a shared system rather than a set of isolated optimizations.**



WANT TO LEARN MORE?
Let's schedule a meeting!



From Amsterdam throughout Europe
Overschiestraat 65 • 1062 XD Amsterdam
office@orgx.com • www.orgx.com