

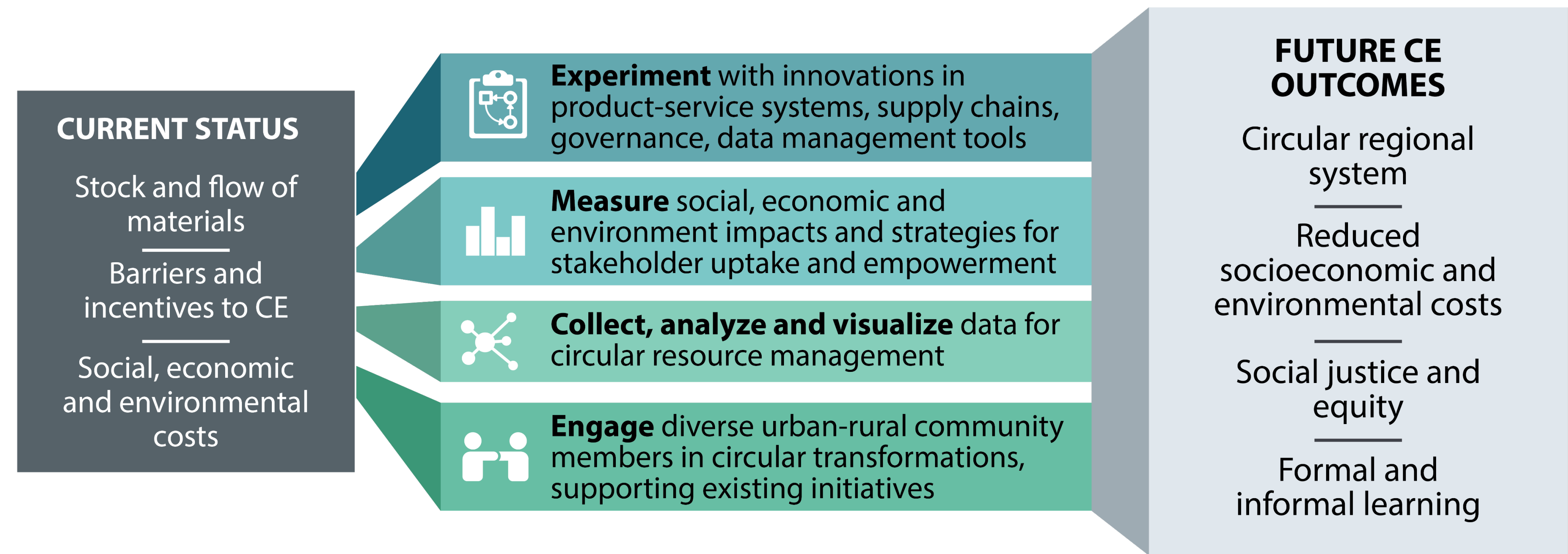
## Project overview

Using the Metro Chicago region with its urban-rural linkages, this SRS network explores the underlying system structures and interactions that give rise to unsustainable resource consumption and waste generation, and identifies potential solutions grounded in the emerging field of the Circular Economy (CE).

The research network has:

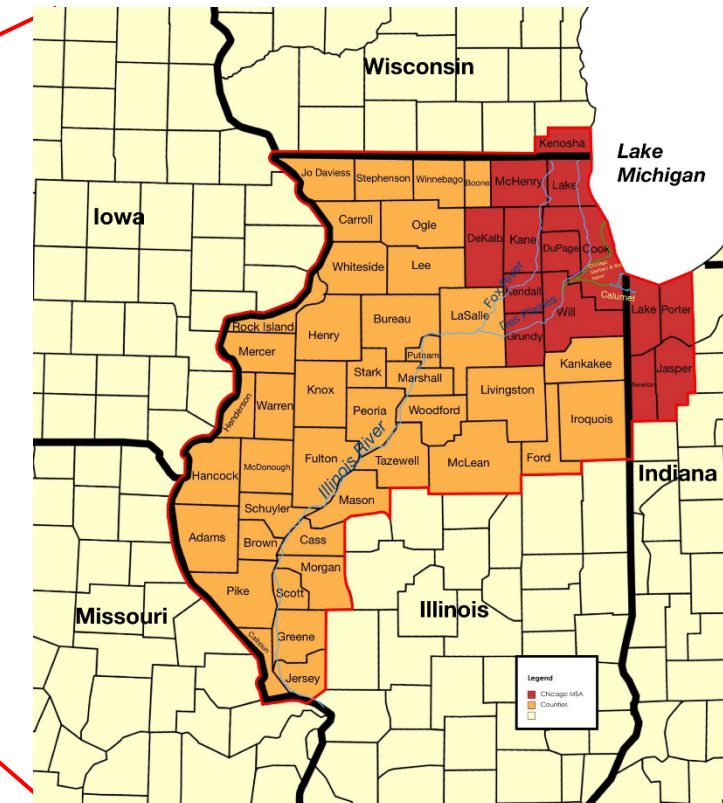
- 1) engaged interdisciplinary researchers and non-academic partners in a process to co-create a research agenda for transforming regional systems towards CE;
- 2) explored convergent research mechanisms for deep integration of knowledge, methods, tools, and expertise from diverse perspectives that can advance the study of regional circular economies; and
- 3) initiated a collaborative platform upon which the scientific community and key stakeholders can share knowledge, translate findings, and enhance diversity and engagement.

## Research approach



## Study Area

Chicago MSA plus urban-rural linkages in Illinois, NW Indiana and SE Wisconsin



	Rural	Urban
Area	21,585 mi <sup>2</sup>	10, 857 mi <sup>2</sup>
Population	1.2M	10M
GRP	~\$70B	~\$700B

## Emergent focal areas

### RESEARCH PROJECTS INITIATED

**Baseline assessment of circularity across region** – current material flows, policies, incentives, circularity potential within and across different industrial sectors and jurisdictions

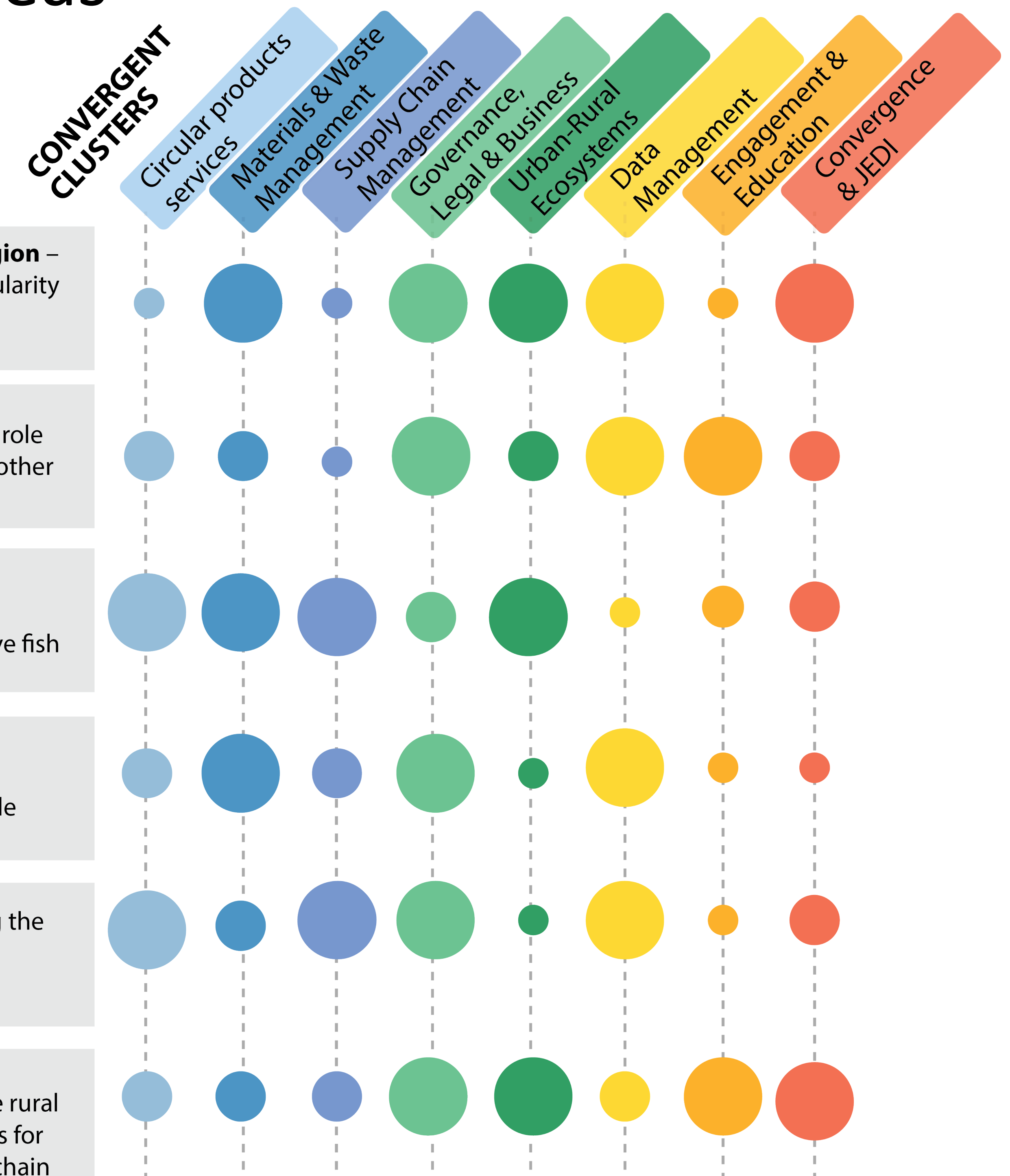
**Household recycling across urban and rural regions** – randomized control trials evaluating role of information, infrastructure, AI, financial and other incentives

**Circular management of “Copi”** – building a circular supply chain, shared governance and management around the Asian Carp, an invasive fish species in the Illinois river

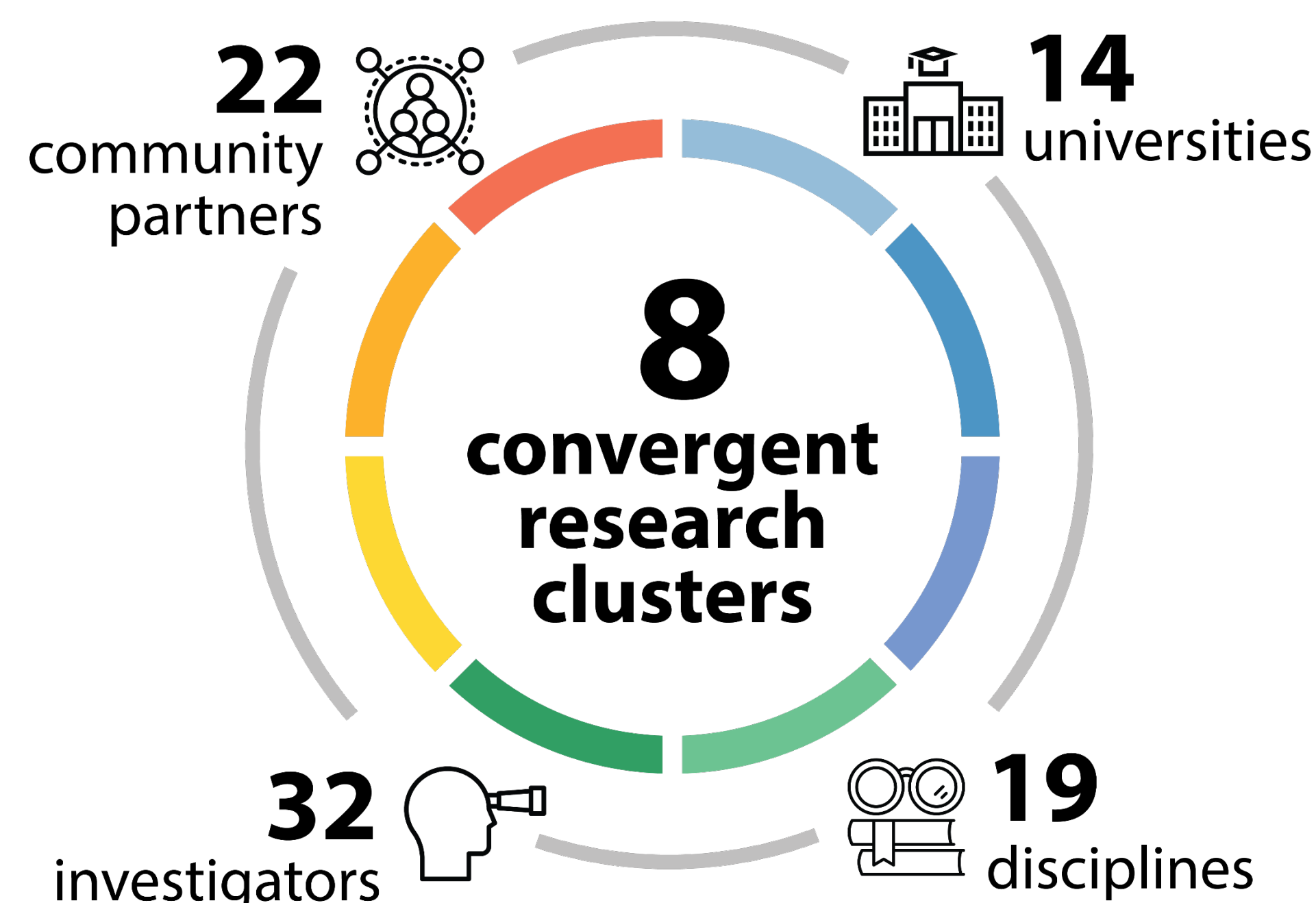
**Regenerative materials** - AI-guided design of alternative raw materials using municipal and organic waste that satisfy technical and life cycle performance requirements

**Blockchain Applications in the CE** – assessing the benefits and trade-offs of using blockchain to manage end of life materials for recirculation

**Justice, equity and circularity** – examines disparate impacts of linear economy on diverse rural and urban communities and explores strategies for job and business creation along circular value chain



## Network structure and organization



- 26 Monthly meetings
  - 13 meetings for research discussions
  - 13 interviews with community partners
- 8 convergent research clusters with 20+ biweekly meetings
- 1 Face-to-face meeting (August '22)
- 3 internal surveys
- 2 papers in preparation