

The purpose of the information in this presentation is to guide ICA programs and provide members with information to make independent business decisions.

Antitrust Guidelines for Copper Industry
Trade Association Meetings

The following guidelines with respect to compliance with antitrust laws of the United States, Japan and European Community¹ are intended to govern the conduct of participants in copper industry trade association meetings, both at the meeting itself and in informal discussions before or after the formal meeting.

Price: Competitors should not discuss future prices (including terms of sale) of their products. There is no blanket prohibition against the mention of or reference to current or past prices but limits must be observed. Such references or mentions should occur only when necessary in connection with the development of association programs. For example, reference to a particular price level in comparing the cost of a copper product to a competing product is permitted. Whenever possible, such references should be discussed in advance with legal counsel.

Competitive Information: Competitors should not discuss the market share of a particular copper producer or copper fabricator's products. Furthermore, nothing should be said at a meeting which could be interpreted as suggesting prearranged market shares for such products or producer production levels. The overall market share of copper products may be discussed with regard to competition with non-copper products and general market acceptance.

New Products: Competitors should not encourage or discourage the introduction of a new product by another competitor or reveal a particular copper company's plans to change the production rate of an existing product or to introduce a new product. No company should disclose to another company whether it is in a position to make or market a new product. New products may be discussed in a technical manner or from the standpoints of competition with non-copper products and general market acceptance. In addition, proposed methods for and results of field and laboratory testing can be considered.

The Role of Legal Counsel: Legal counsel attends association meetings to advise association staff and other meeting attendees regarding the antitrust laws and to see that none of the matters discussed or materials distributed raise even the appearance of antitrust improprieties. During the course of a meeting, if counsel believes that the discussion is turning to a sensitive or inappropriate subject, counsel will express that belief and request that the attendees return the discussion to a less sensitive area.

A paper entitled 'Copper Industry Trade Associations and Antitrust Laws' is available upon request.

10/92, 5/93, 10/10

1. Other foreign competition laws apply to International Copper Association, Ltd. (ICA)'s activities worldwide.

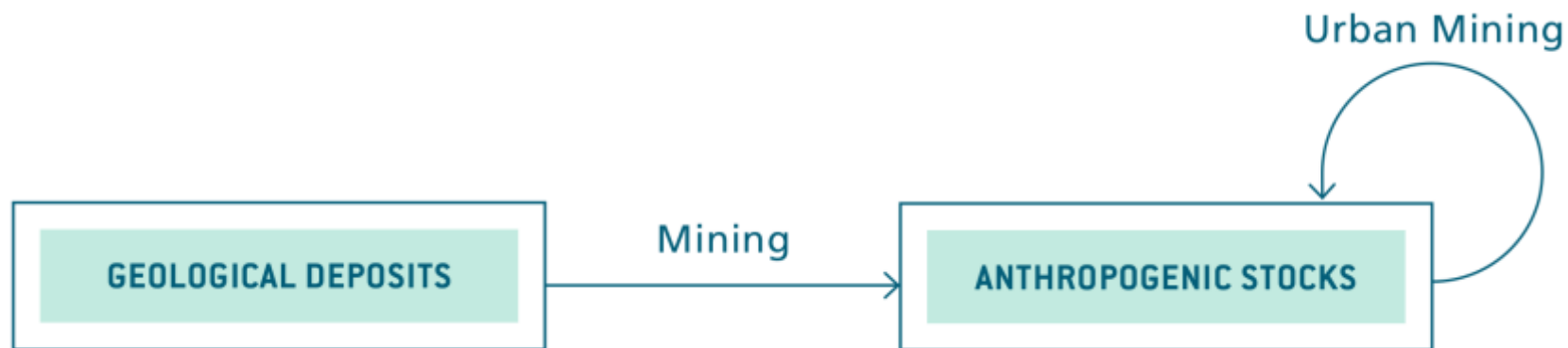
THE FUTURE OF URBAN MINING

Luis Tercero Espinoza, Leon Rostek, Antonia Loibl & Denis Stijepic
ICA Session | CRU World Copper Conference | April 2021



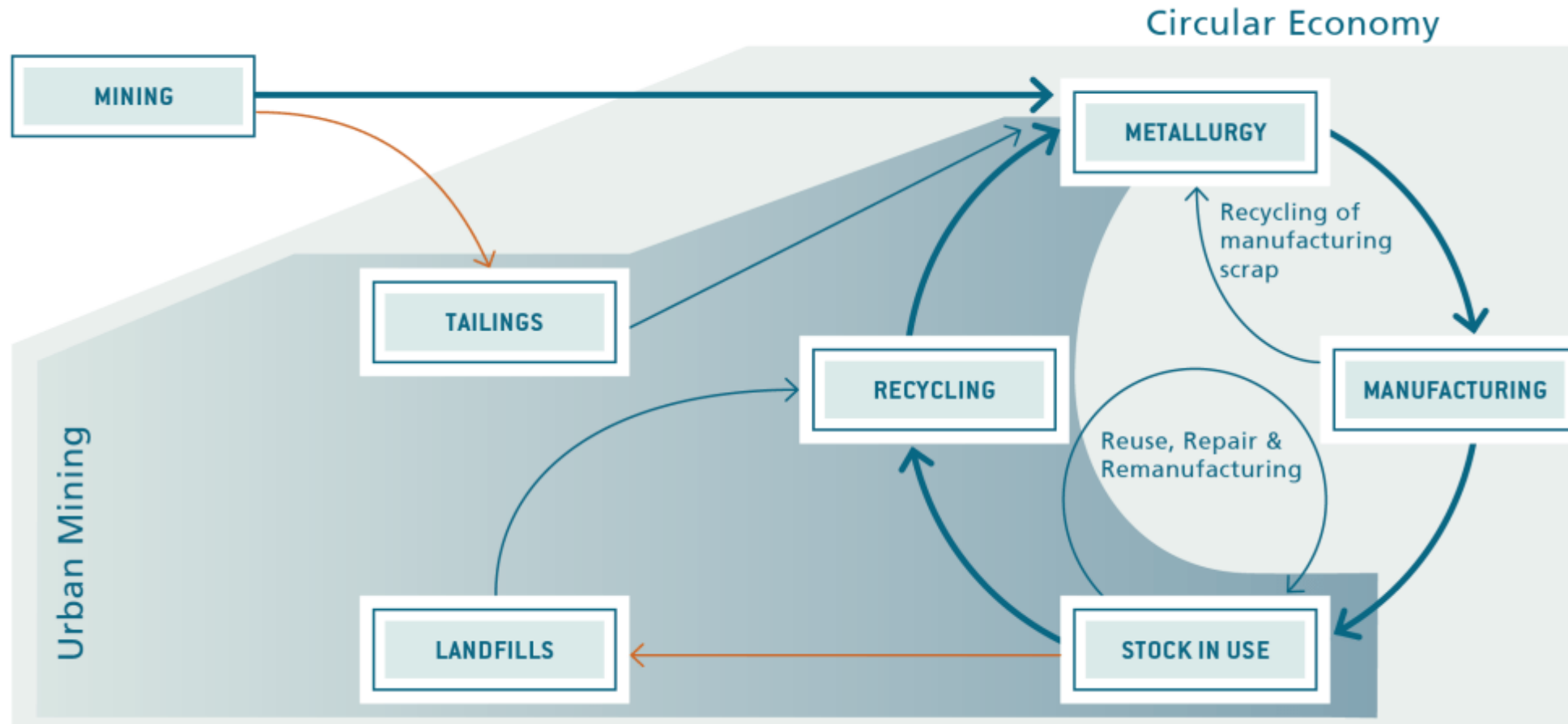
What is Urban Mining?

- People and everything made by people belong to the anthroposphere
- The anthroposphere contains a wide variety and vast amounts of materials
- Urban Mining aims to manage and use these materials as a source of raw material supply
 - utilize the waste of today
 - anticipate and capture the value contained in the waste of tomorrow
- All metals and minerals in the anthroposphere came from “conventional” mining



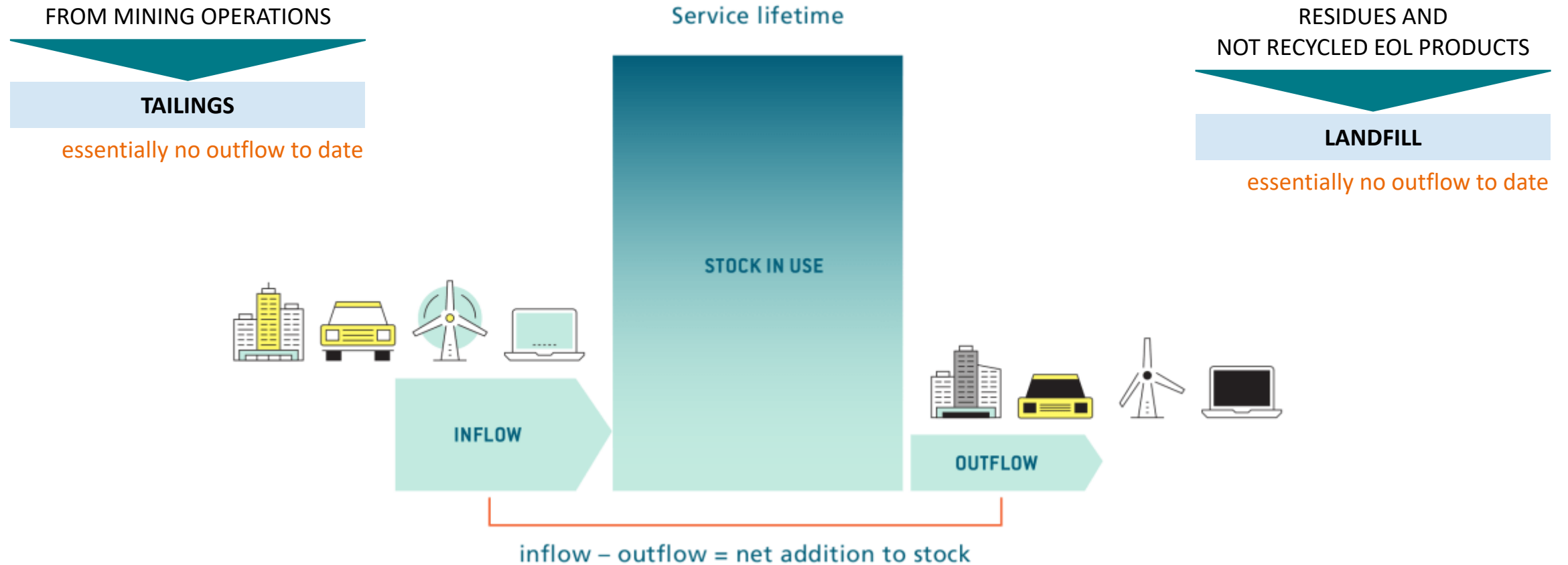
Tercero Espinoza et al. (2020): The promise and limits of Urban Mining. Karlsruhe: Fraunhofer ISI

Urban Mining is an integral part of the Circular Economy



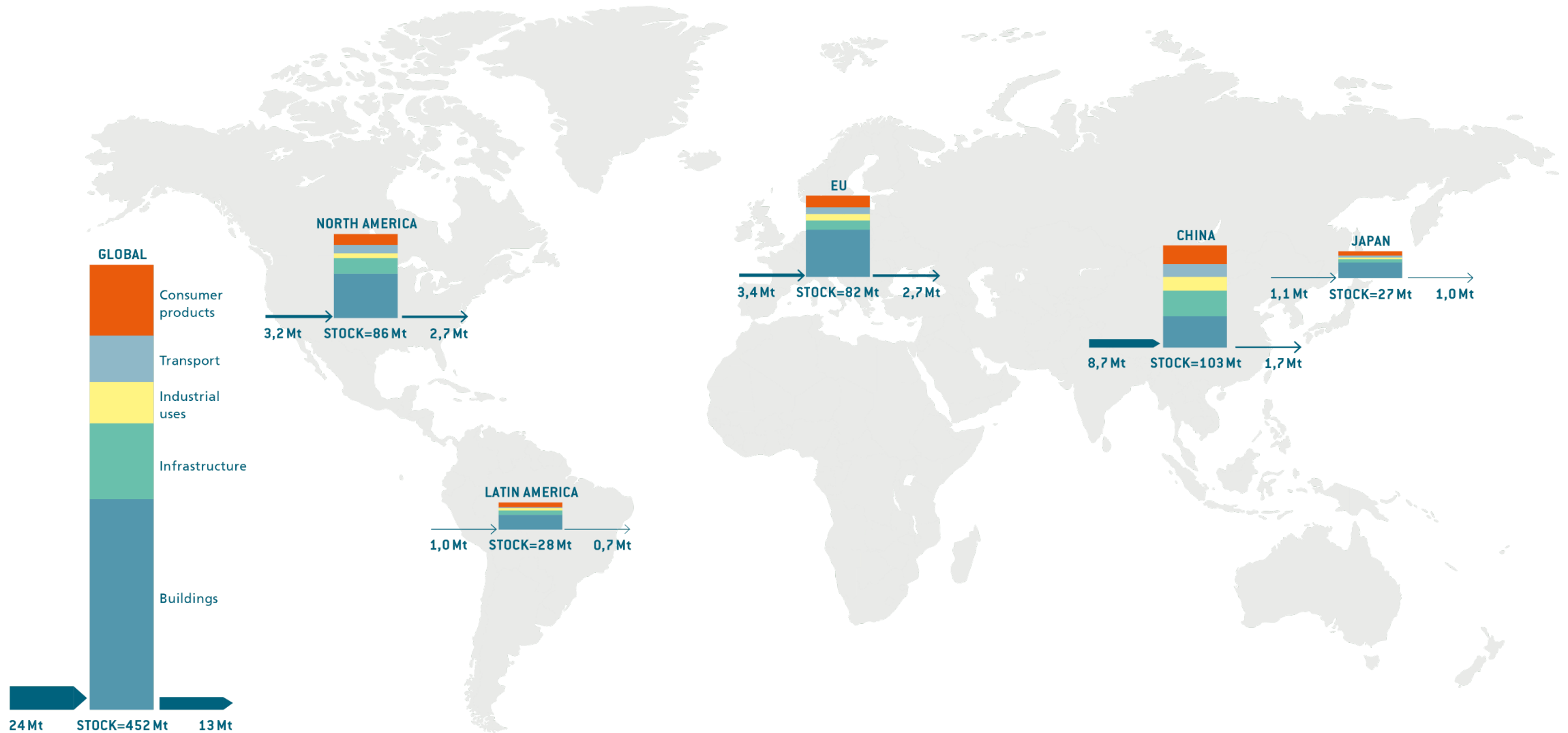
Tercero Espinoza et al. (2020): The promise and limits of Urban Mining. Karlsruhe: Fraunhofer ISI

How the Urban Mine grows: Tailings, stocks in use and landfills



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Global and regional Urban Mines (copper, 2018)

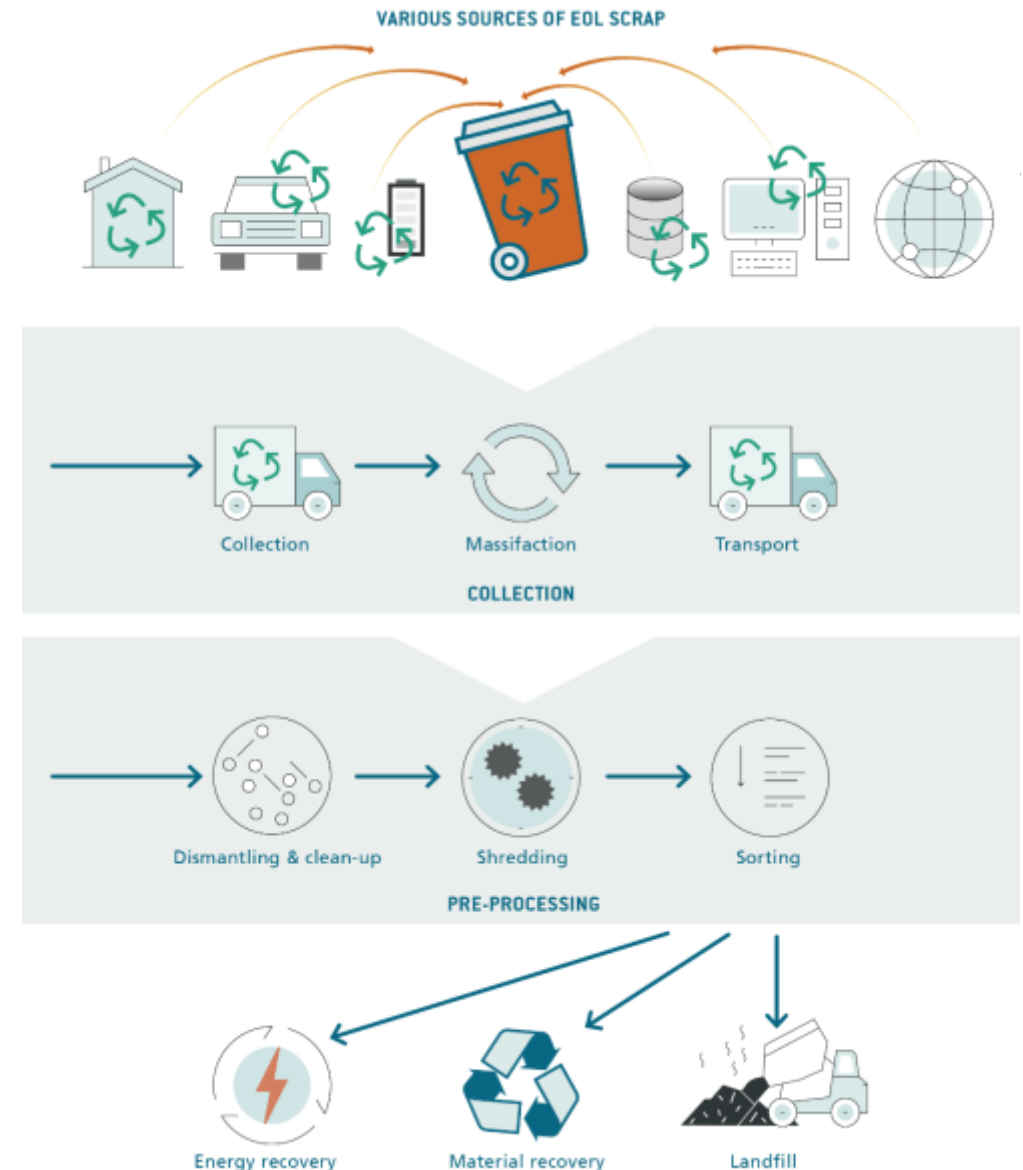


Tercero Espinoza et al. (2020): The promise and limits of Urban Mining. Karlsruhe: Fraunhofer ISI

The long chain between discards and recovered raw materials

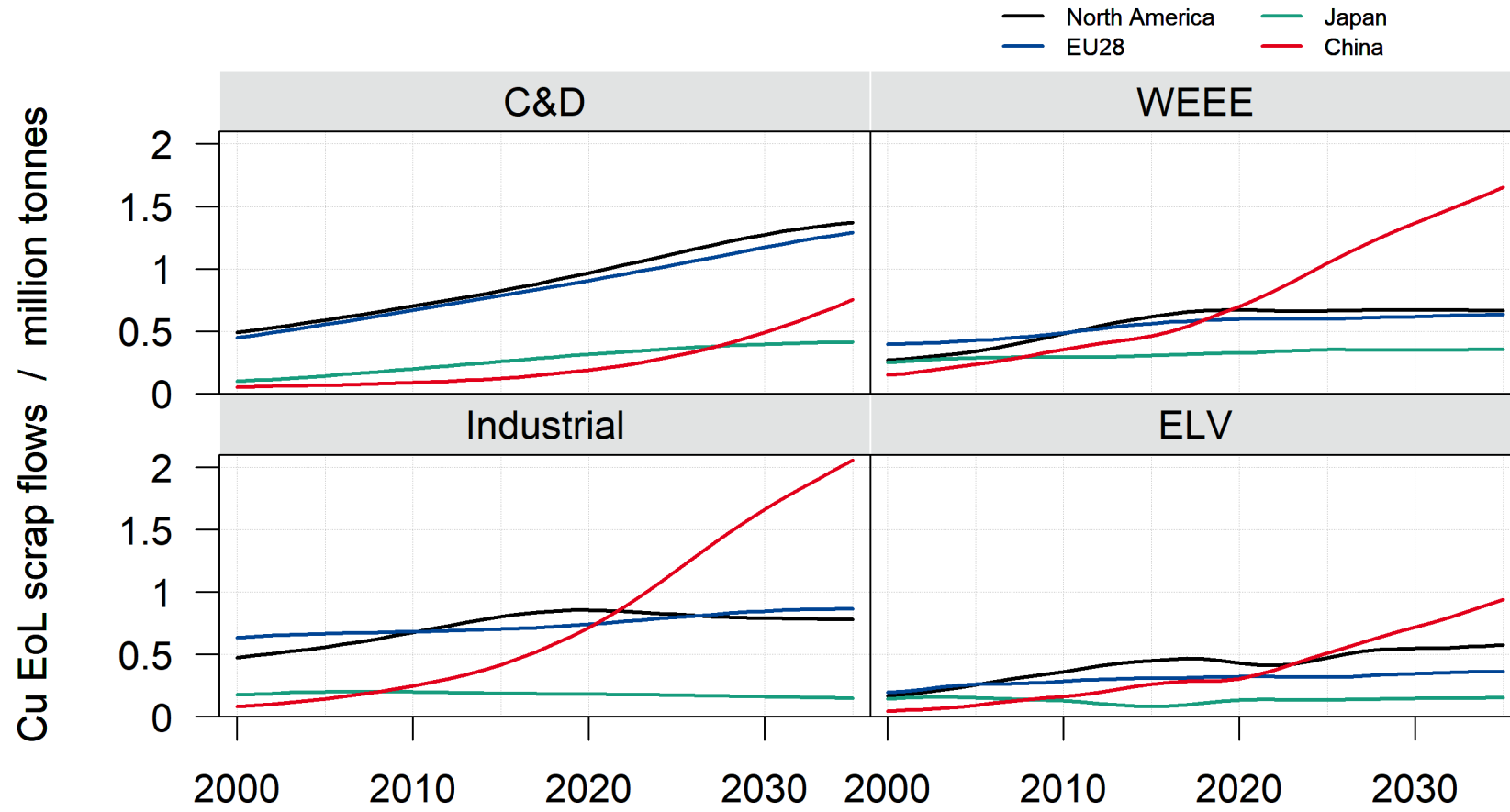
- The Urban Mine is distributed worldwide
- Main driver for recycling is profitability
- Material value must pay for
 - logistics
 - processing
 - all other costs (financing, compliance, etc.)

Handle with care:
Different recycling rates
measure efficiency
at different points along the chain



Tercero Espinoza et al. (2020): The promise and limits of Urban Mining. Karlsruhe: Fraunhofer ISI

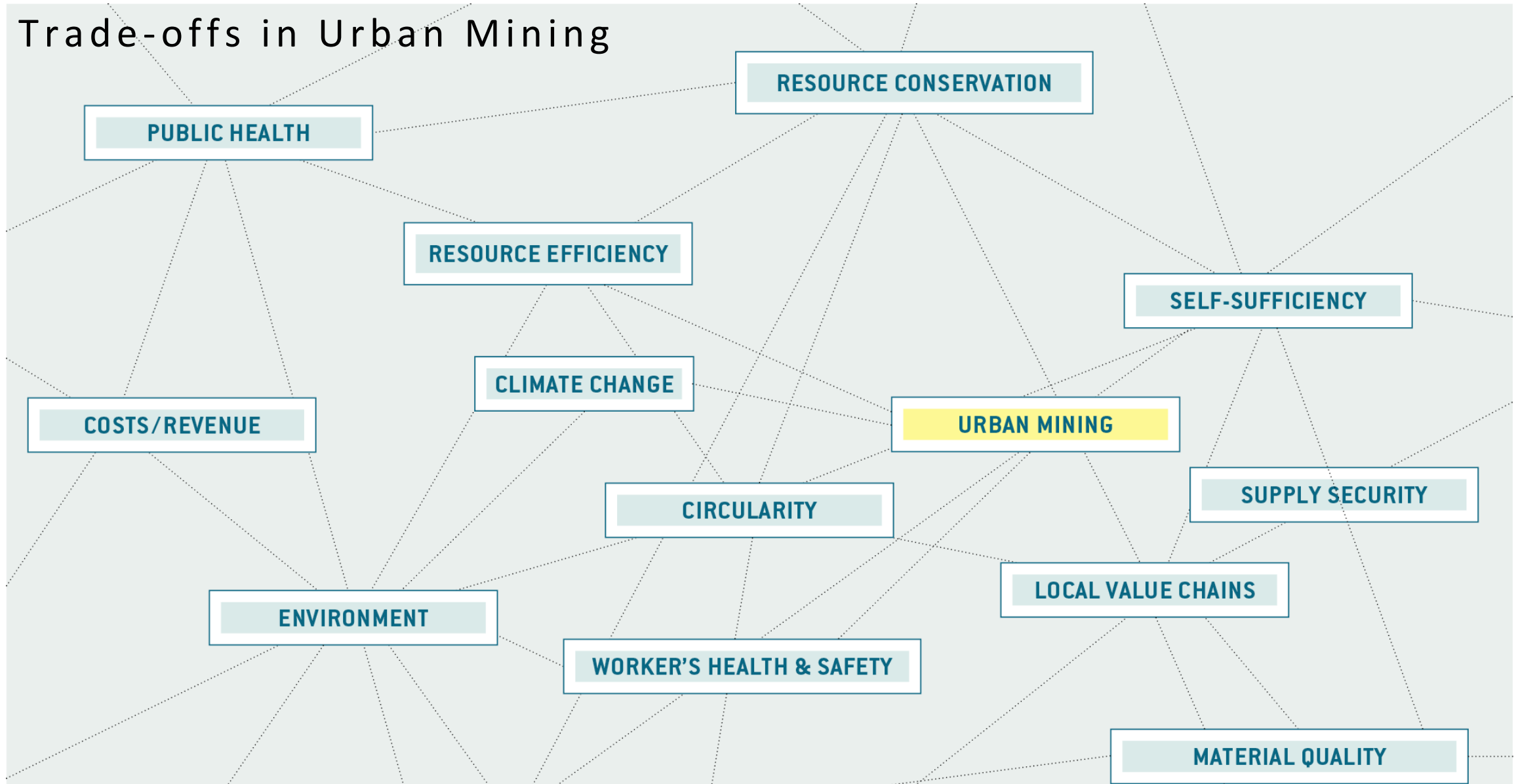
EoL scrap increasingly important



- EoL scrap grew faster than new scrap 1990-2018
 - new: +30%
 - EoL: +140%
- expect continued trend

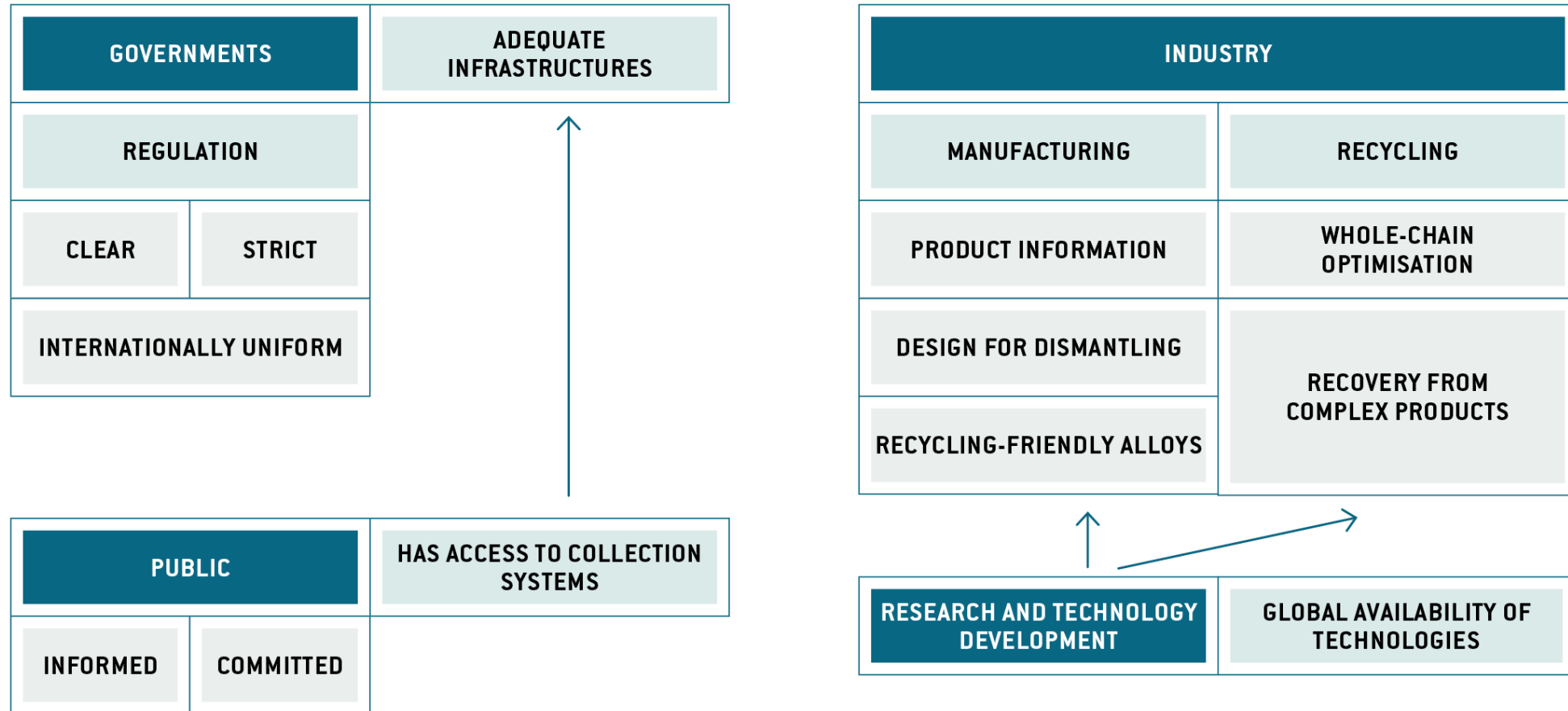
Tercero Espinoza et al. (2019): Shaping the future of copper recycling.
 Loibl & Tercero Espinoza (2021): Current Challenges in Copper Recycling: Aligning Insights from Material Flow Analysis with Technological Research Developments and Industry Issues in Europe and North America. Resources Conservation and Recycling (in press)

Trade-offs in Urban Mining



Tercero Espinoza et al. (2020): The promise and limits of Urban Mining. Karlsruhe: Fraunhofer ISI

Who can support Urban Mining and how?



Tercero Espinoza et al. (2020): The promise and limits of Urban Mining. Karlsruhe: Fraunhofer ISI