

OECD the 95th Steel Committee

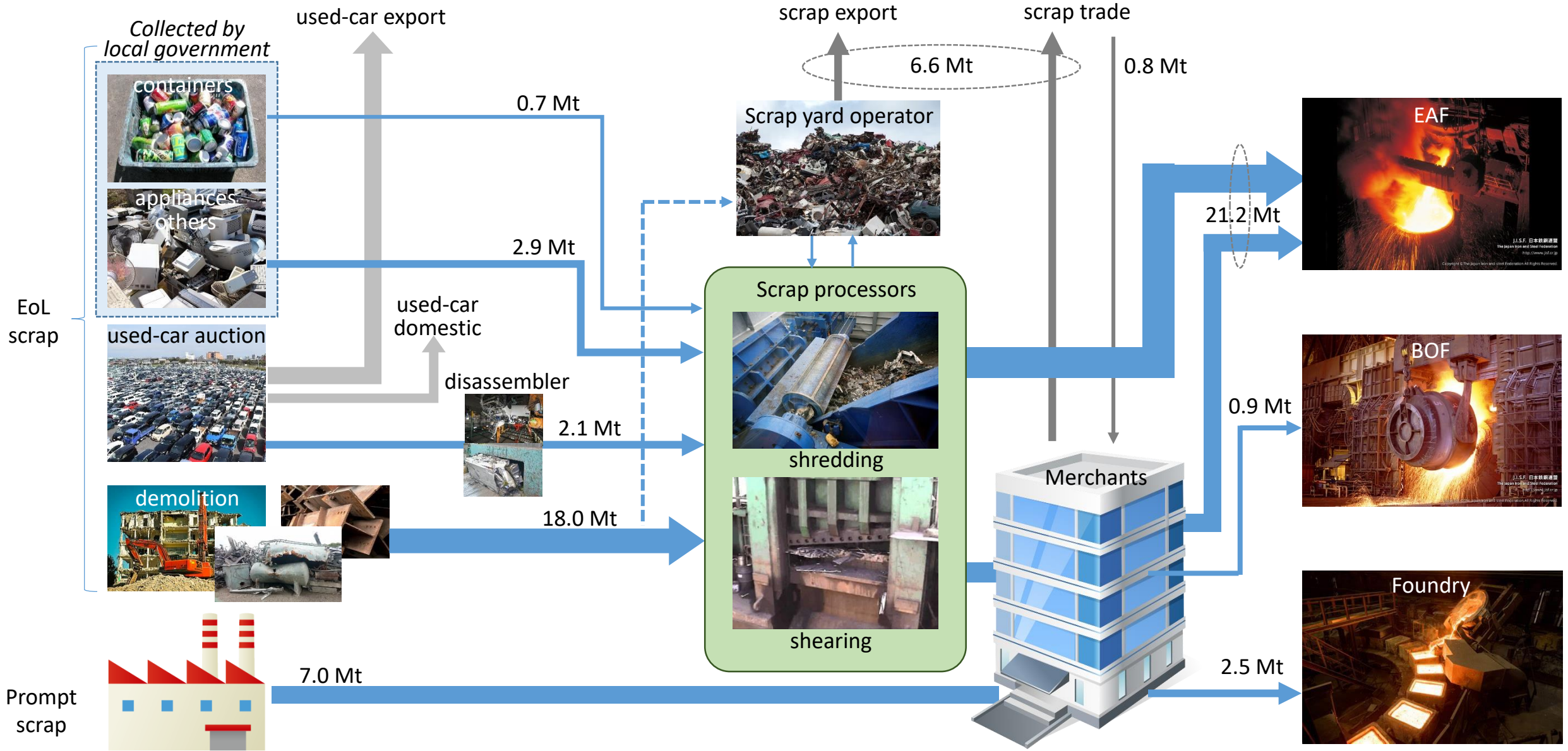
Item 9. Circularity, raw materials, and long-term scrap trends

A long-term prediction on advanced scrap use in Japan

25th March, 2024

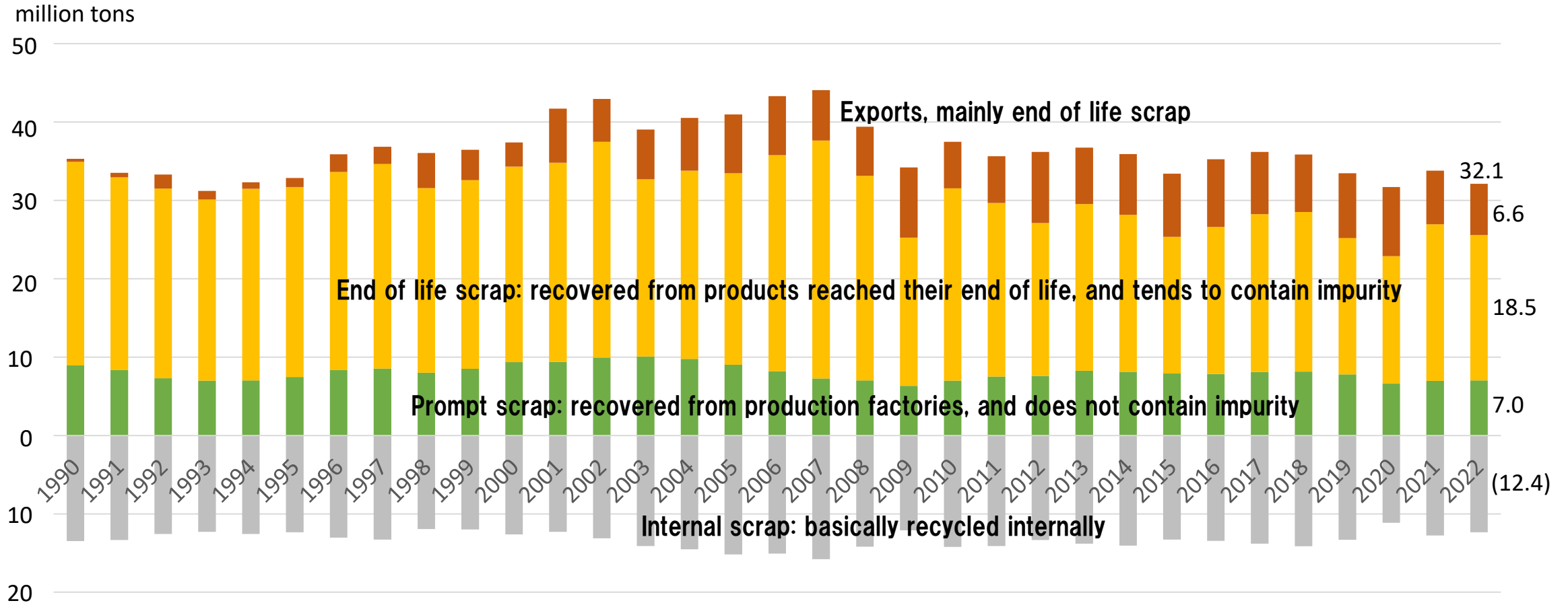
The Japan Iron & Steel Federation

Scrap supply chain in Japan



Trend of scrap generation in Japan

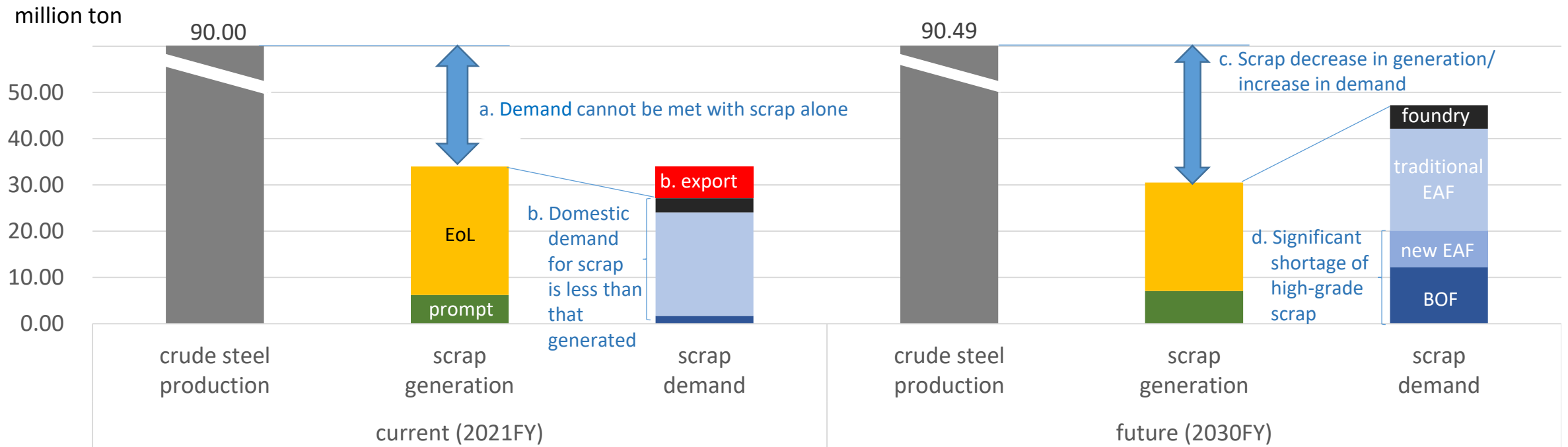
- ✓ Domestic scrap generation and usage is on a gradual decline
- ✓ 6 to 8 million tons of scrap is exported annually



Data source: Ferrous material annual report 2023, The Japan Ferrous Raw Materials Association

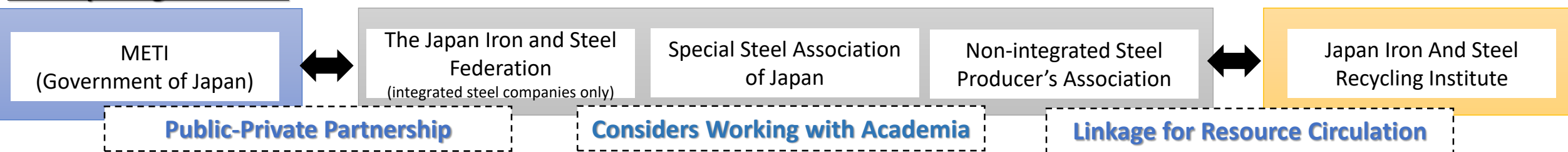
Scrap demand and supply prediction in Japan

- a. **Both currently (2021FY) and in the future (2030FY),** the amount of domestic scrap generated is significantly lower than the amount of crude steel production → **Scrap alone cannot meet with steel demand**
- b. **Currently (2021FY),** the amount of domestic scrap generated exceeds the domestic demand, and **6-7 million tons of EoL scrap are exported** → Mainly due to a decrease in steel demand for civil eng. and construction, where EoL scrap is used.
- c. **In the future (2030FY),** while the amount of domestic scrap generated will decrease, the demand for scrap will significantly increase due to the **conversion of blast furnace manufacturers to electric furnaces,** leading to a **shortage of scrap.**
- d. **In particular,** there will be a **significant shortage of high-grade scrap** necessary for manufacturing high-grade steel with high quality requirements.

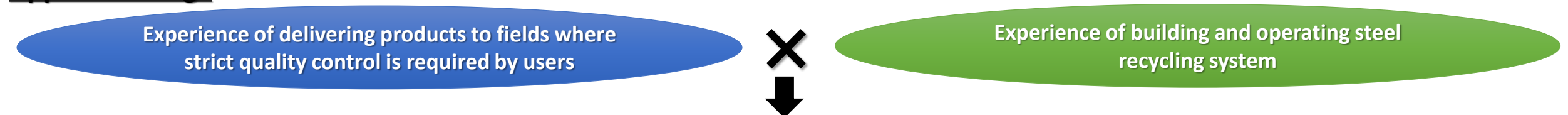


Circular Economy Partnership

Participating members



Approach image



**Create a new circulation of high-grade steel scrap from a portion of mostly recycled steel scrap!
Also innovates existing circulation in all of Japan!**

a. Creation of large quantities of high-grade steel scrap

Remove tramp elements from obsolete scrap to create large quantities of high-grade scrap, creating a cycle that continues to improve the quality of steel scrap.



Contributed to the achievement of JISF N Action Plan



Strengthening the industrial competitiveness of the steel and steel recycling industries as a whole

b. Innovations in steel scrap distribution



Overcoming environmental and resource constraints and economic security enhancement

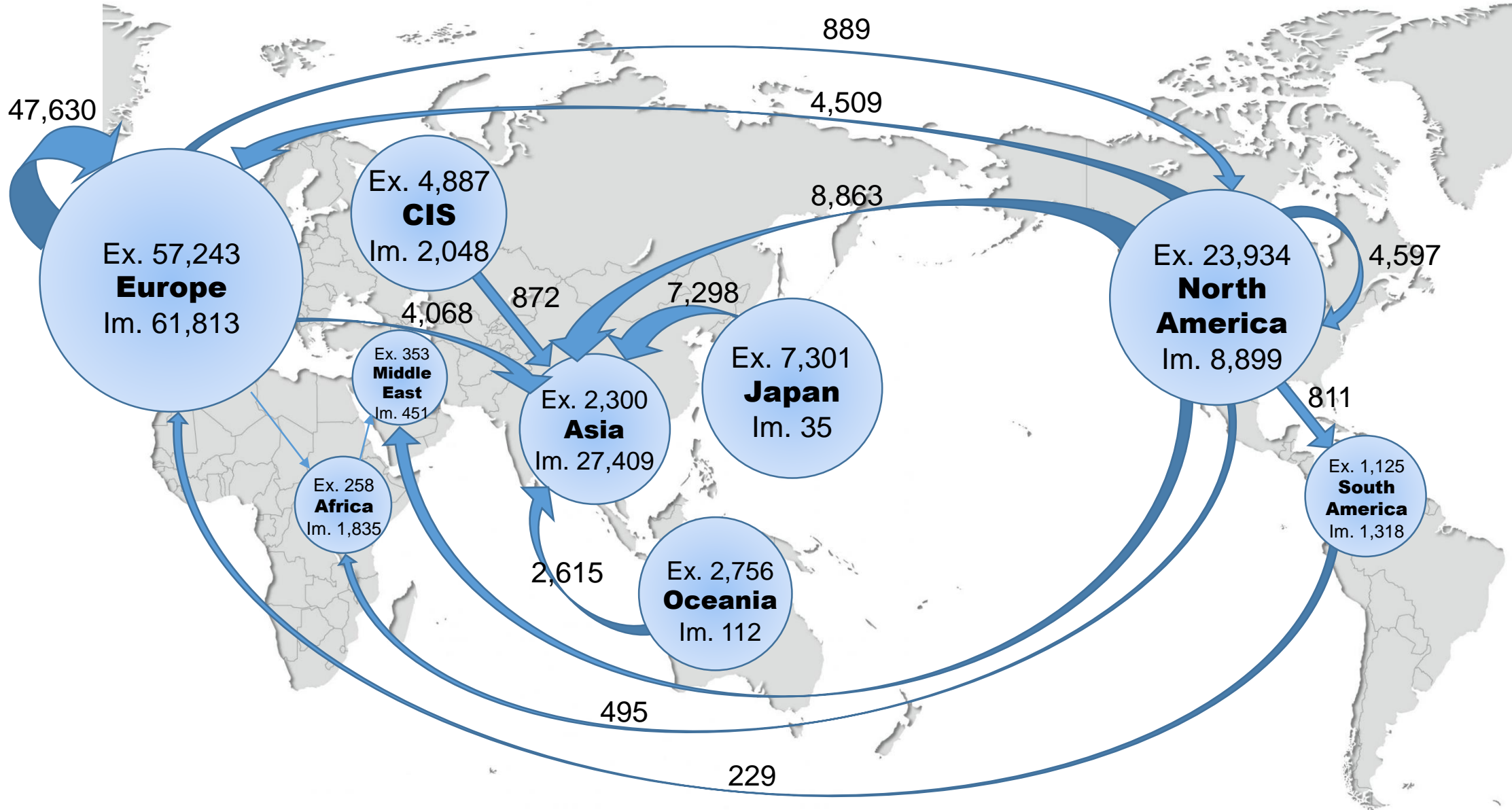
c. Addressing social issues surrounding steel recycling

Promote understanding of iron scrap as a valuable resource throughout Japanese society by encouraging appropriate corporate activities and proper dust disposal.



Solving social problems surrounding steel recycling

Scrap trades in 2021CY



Data Sources: Trade statistics, The Japan Ferrous Raw Materials Association, worldsteel

Conclusions

- ✓ Most of the steel materials (more than 90%) are recycled (closed-loop recycling) based on economic rationality due to the high recycling properties of iron and steel.
- ✓ To achieve a higher level of scrap recycling in the future, the key is to reduce and control the amount of tramp elements contaminated in scrap.
- ✓ It is necessary to advance efforts to improve quality in the scrap supply chain (demolition, disassembly, collection, processing, yard operation, etc.). It is also necessary to develop new scrap standards that reflect the scrap quality.
- ✓ Since almost all steel resources are recycled in a closed loop and scrap alone cannot meet with steel demand, evaluation of steel materials based on recycled content will lead to competition for limited scrap without contribute to resource conservation nor climate change mitigation. Evaluations based on recycled content should be avoided in the steel sector.

The Japan Iron & Steel Federation