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IGES
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Co-innovation

Collaborative and iterative approach to jointly innovate, manufacture and scale up technologies for low carbon development

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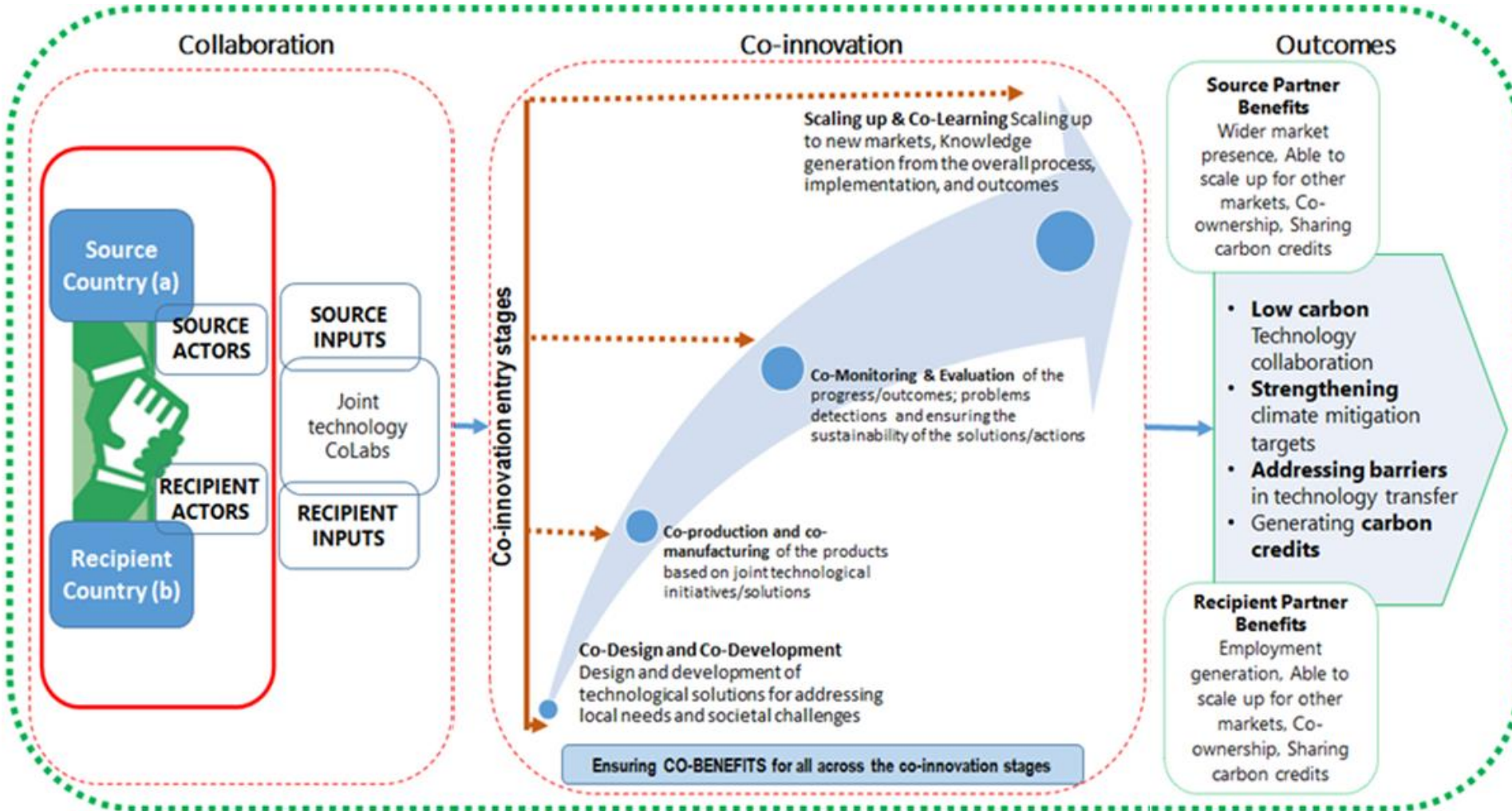
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BACKGROUND

- Demand for **clean technologies** in developing world has been growing as countries aiming to meet climate goals.
- Demand for **newer technologies** will grow as there is a push for greater ‘**self-sufficiency**’ and need for ‘**strengthening local economies**’ as part of COVID-19 economic recovery.
- Limitations of traditional technology transfer: Affordability (Cost), Adaptability (Adapting to local needs) and Market Competition.
- **Co-innovation - *jointly innovating and manufacturing*** - can be of great importance to areas where closer collaboration among stakeholders are critical.

“ Co-innovation is a collaborative and iterative approach to jointly innovate, manufacture and scale up technologies ”



Case Studies: India-Japan: Maruti Suzuki



Indonesia: Surabaya City and Kitakyushu City, in fine-tuning Takakura Composting

Vietnam: Yokohama City and Da Nang City collaborating in water pumping systems

Cambodia: Installation of water distribution block system in Phnom Penh. Water Supply Authority (PPWSA) and JICA and Kitakyushu City government, Japan

Technology Transfer vs. Co-innovation

Category	Technology Transfer	Co-innovation
Discretion	Based in source country or entity	Locally-led
Research & development	By source partner	Joint R&D
Supply	Import-basis	Local production
Product specifications	Specifications originally made for source partner	Localized
Funding	Product is largely developed by source partner funding	Co-financing
Human resource	Dispatch of managers and experts from Source partner	Local human resource development
Pricing	Often high cost	Competitive

Approach

- Collaborative in Ideation to production to marketing
- Local knowledge driven
- Cost effective

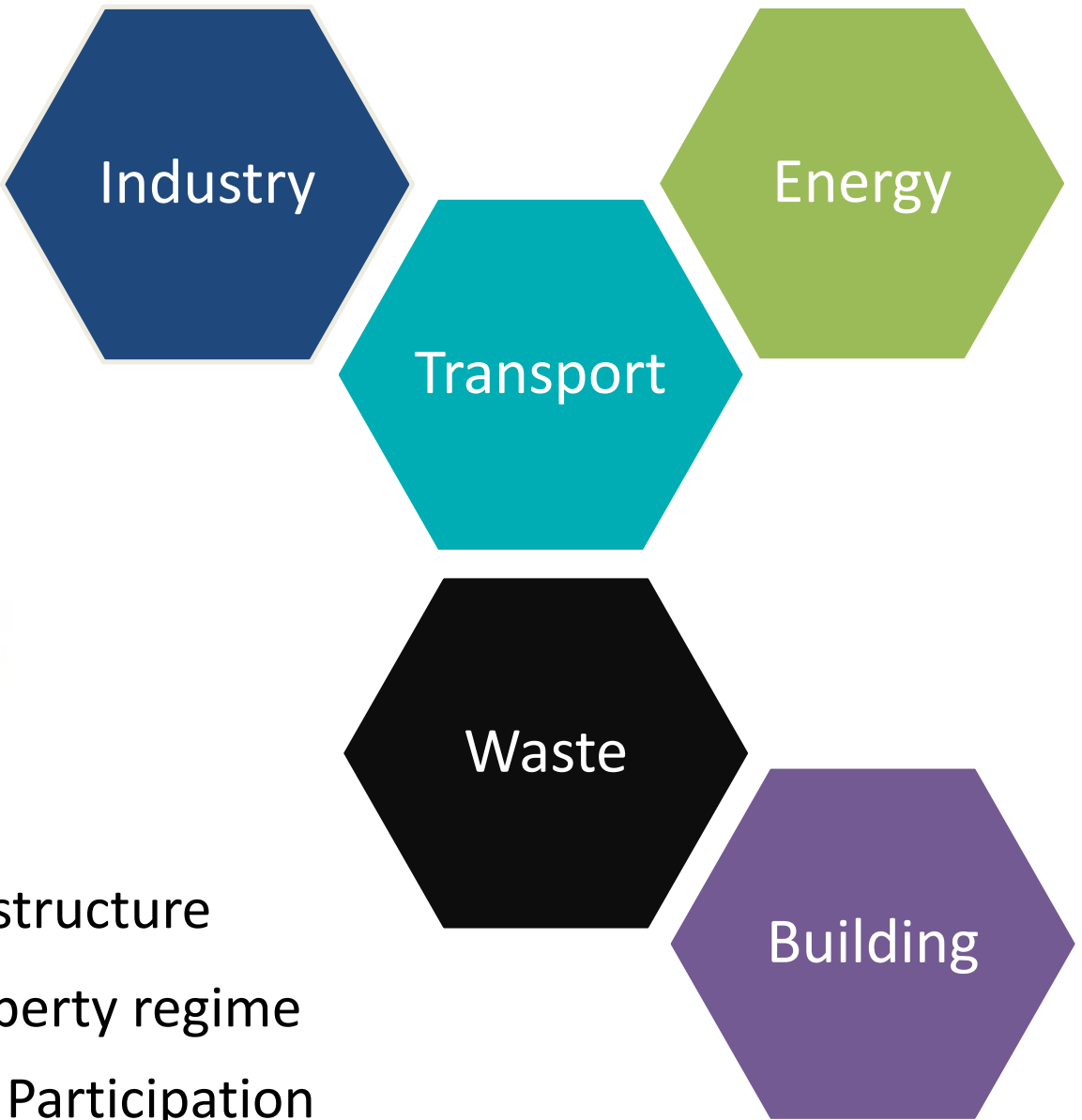
Focus Areas

- Low-carbon technologies
- Air pollution, Energy & industry
- Balancing climate & recovery

Benefits

- Involving multiple stakeholders
- Multiple advantages for source and recipient partners

Key Focus Areas



Policy focus

- Building Policies & Institutional infrastructure
- Shaping a conducive Intellectual property regime
- Need for finances and Private Sector Participation

Thank

you

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References:

- Janardhanan, N., Bao, P. N., Hibino, K. & Akagi, J., 2021. Japan's low-carbon technology collaboration with Southeast Asia: Co-innovation and Co-benefits. In: H. Farzaneh, E. Zusman & Y. Chae, eds. *Aligning climate change and sustainable development policies in Asia*. Tokyo: Springer.
- Janardhanan, N., Ikeda, E., Zusman, E. & Tamura, K., 2020. *Co-innovation for Low Carbon Technologies: The Case of Japan-India Collaboration*, Hayama: Institute for Global Environmental Strategies.
- **Picture source:** Unsplash, WNN