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# Co-Created Open Innovation for Inclusive Education

Digital Fabrication & Assistive Tools Co-creation

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I will introduce  
how **sharing models and co-creating across roles** can transform inclusive education  
and open new possibilities for learners.

# The Challenge

Millions of learners still face:

1. **High cost** assistive devices
2. Technology designed **without users**
3. **Limited access** in schools and communities
4. **Lack of teacher training**

Technology alone does not create inclusion.  
**Co-creation does.**



# Our Approach

## People-first, Co-creation-based Innovation

### We bring together:

- Persons with disabilities (need-knowers)
- Educators and therapists
- Students and makers
- Designers and engineers

→ Working **together**, not separately

→ From “provider–recipient” to **equal partners**

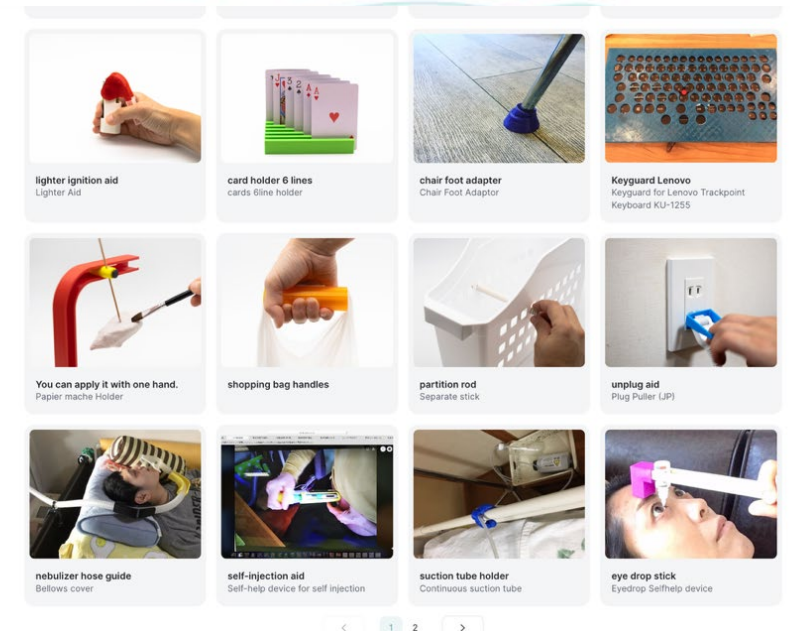
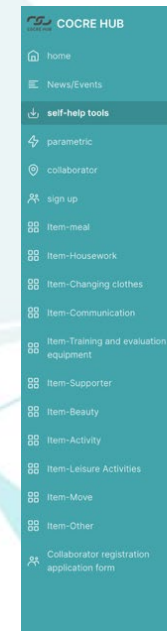
**Shared ownership and mutual respect is essential for inclusion**



# The Model: COCRE HUB

An open platform for:

- Sharing 3D-printable assistive tool models
- Local adaptation and improvement
- Documentation and learning materials
- Community collaboration



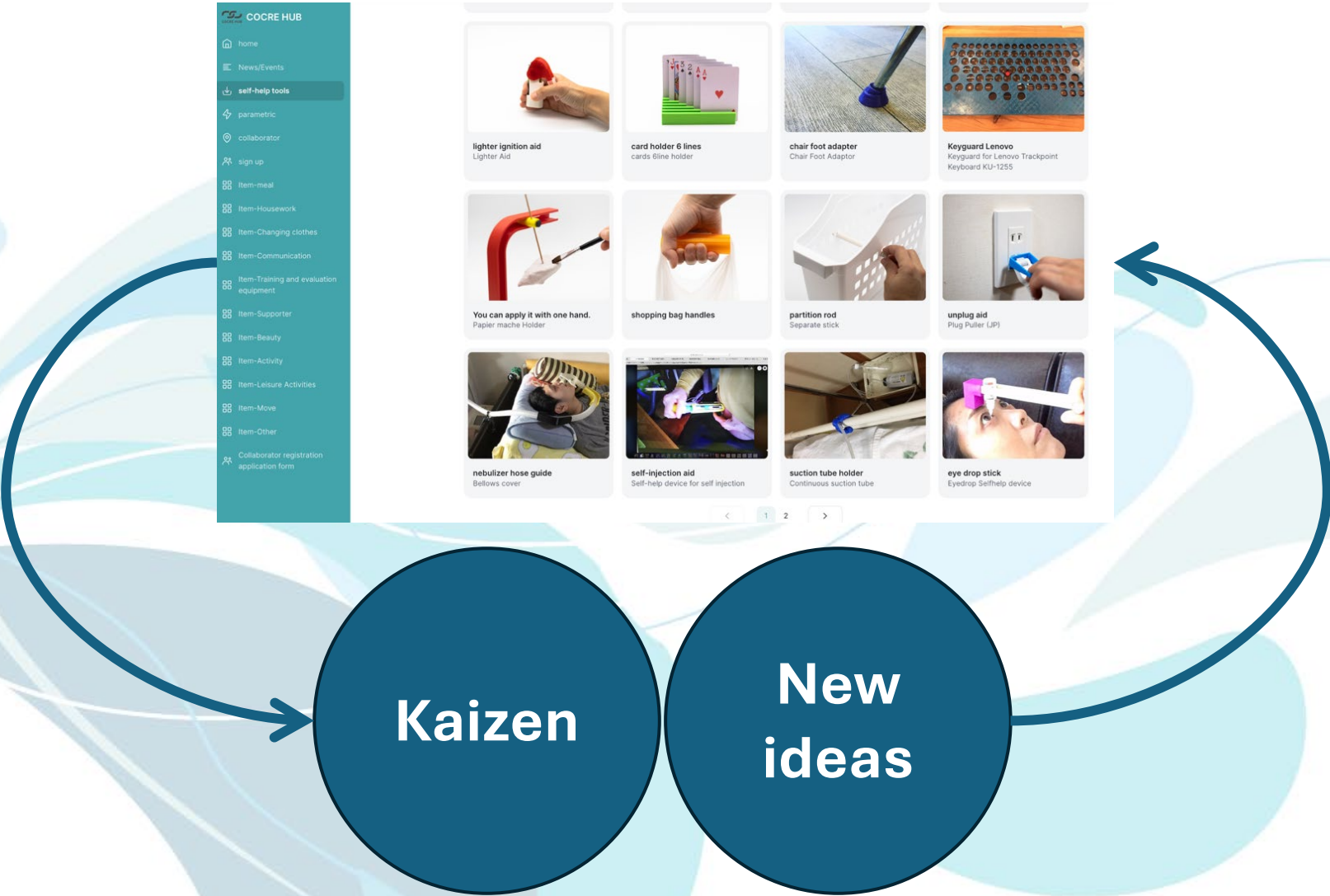
Today: **300+** shared models

Low-cost / locally manufacturable / open access



# The Model: COCRE HUB

## Create ecosystem of collaboration



# Models as Hope Showcases

Shared models reveal possibilities

When people see:

- real tools made for similar challenges
- created by peers and communities

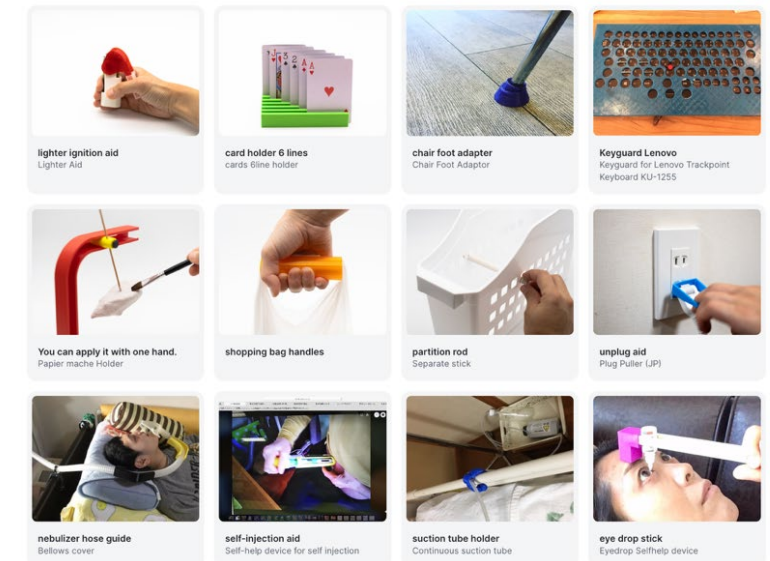
They realize: “I didn't know this was possible for me.”

Impacts:

- ✓ Awareness of latent needs and hopes
- ✓ Self-advocacy
- ✓ Expanded imagination
- ✓ New participation and co-creation



Change is possible!



# Case Example

## Inclusive Makeathon in a Japanese High School, 15-16/Nov./2025 Japan

### Participants:

- Students
- Persons with disabilities
- OT faculty and students
- Makers

### Outcomes:

- 3D printed assistive tools
- Understanding and empathy
- Empowerment through collaboration

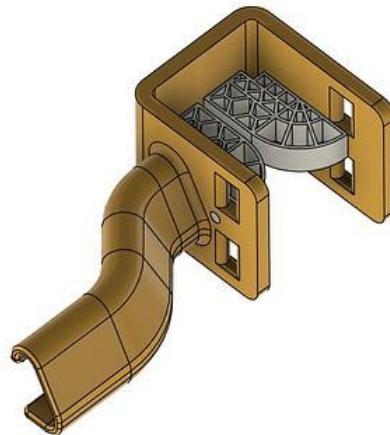
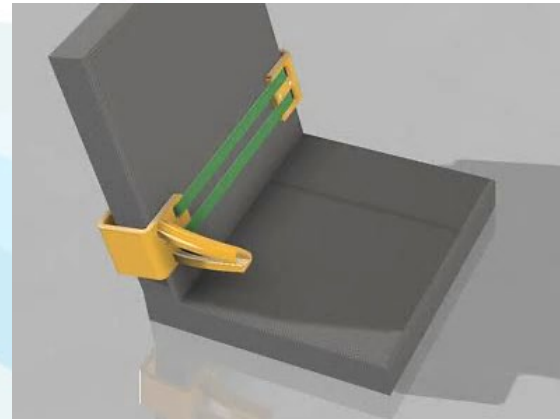


**The model is reproducible in education settings**



# Example 1 Inclusive Classroom Seating Attachment

**“I want to sit in the same chair as my classmates.”**



## **Example 2 Adjustable-Angle Learning Desk**

**Designed with and for a student with cerebral palsy**

- **Difficulty maintaining head position at a flat desk**
- **Adjustable angles co-designed with teacher analysis**
- **Increased learning endurance**
- **Fabricable using wood + 3D parts**

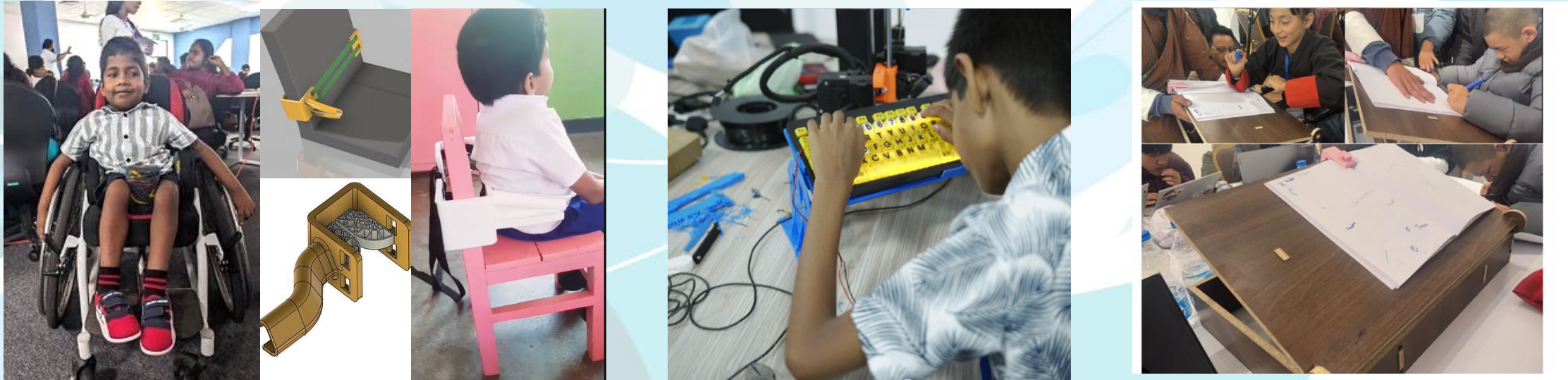




# Why It Scales in Asia

This model works in developing contexts because:

- Very low production cost
- Open, modifiable designs
- Production in schools
- Builds local capacity and ownership



→ Supports **15% for the 15%** goal through education-driven inclusion



# Toward a Regional Network

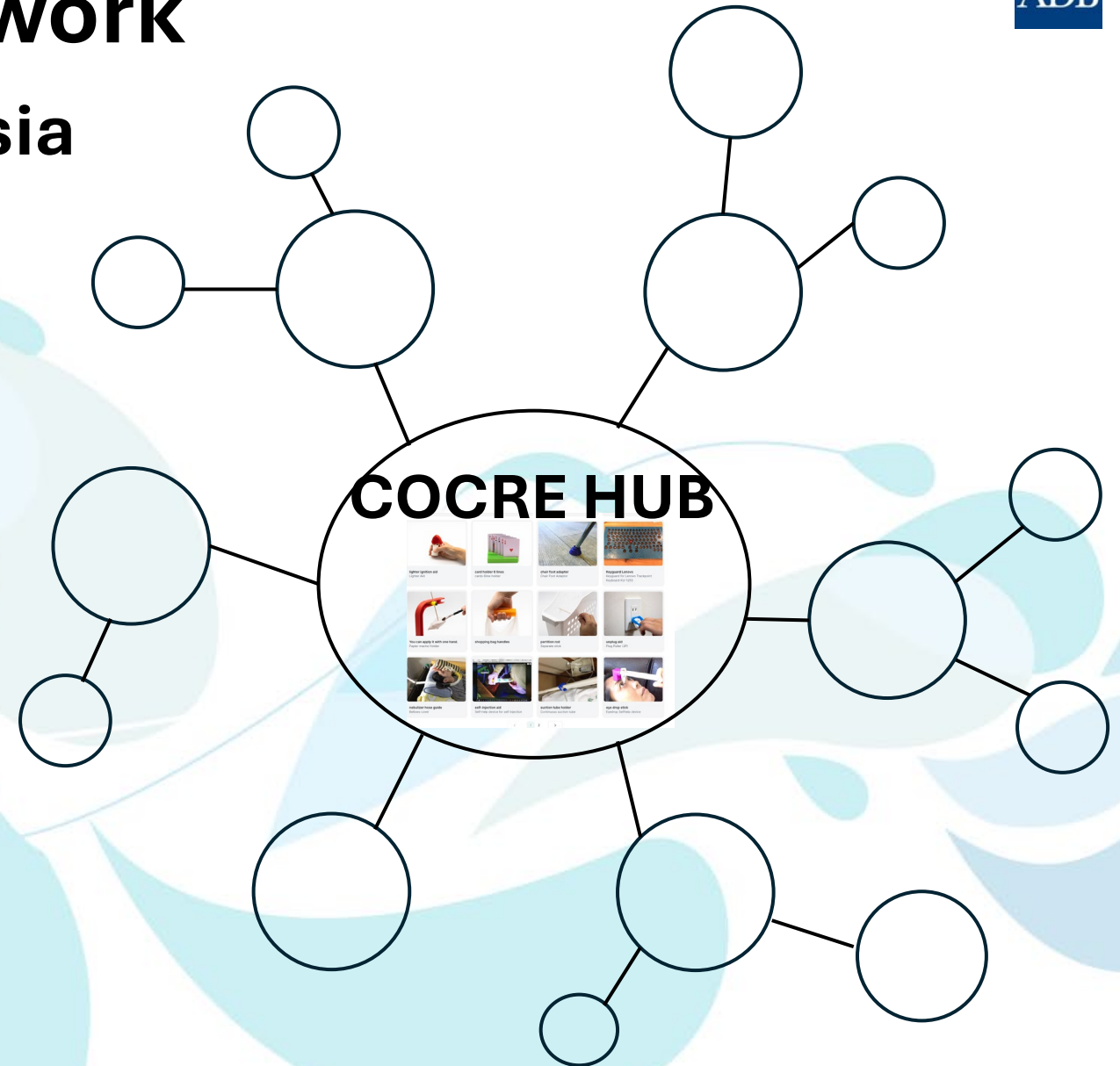
## Hub-and-Spoke Model for Asia

### COCRE HUB as:

- Shared repository
- Training resource
- Collaboration platform

### Local hubs:

- Schools
- TVET centers
- Universities
- Makerspaces



regional collaboration, shared learning, and continuous improvement

# Call to Action

Let's make **education** a place where:

- learners create solutions together
- persons with disabilities lead innovation
- schools become inclusion engines



**Inclusion happens when we create together.**