



HUMAN CAPITAL × AI

The UNSDG Sustainable Business Challenge

Powered by SEL. Co – created by AI. Designing human-centered solutions for global sustainability

Sargassum

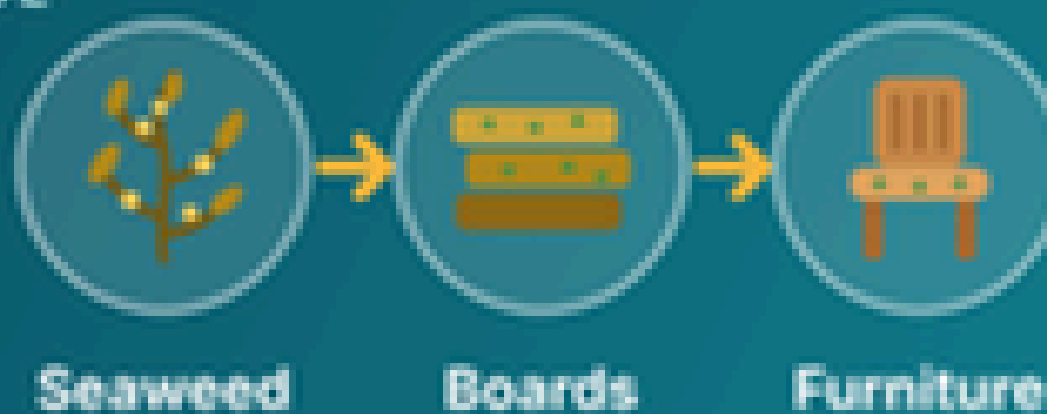
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HUMAN CAPITAL × AI · UNSDG SUSTAINABLE BUSINESS CHALLENGE

SARGASSUM TO FURNITURE

Waste into worth.



12
RESPONSIBLE
CONSUMPTION
AND PRODUCTION

TARGET
UNSDG 12
Responsible
Consumption &
Production

1 THE HUMAN CRISIS & UNSDG TARGET

When seaweed becomes waste,
people and nature suffer.



Ecosystems
damaged

Unpleasant
odors

Tourism
disrupted

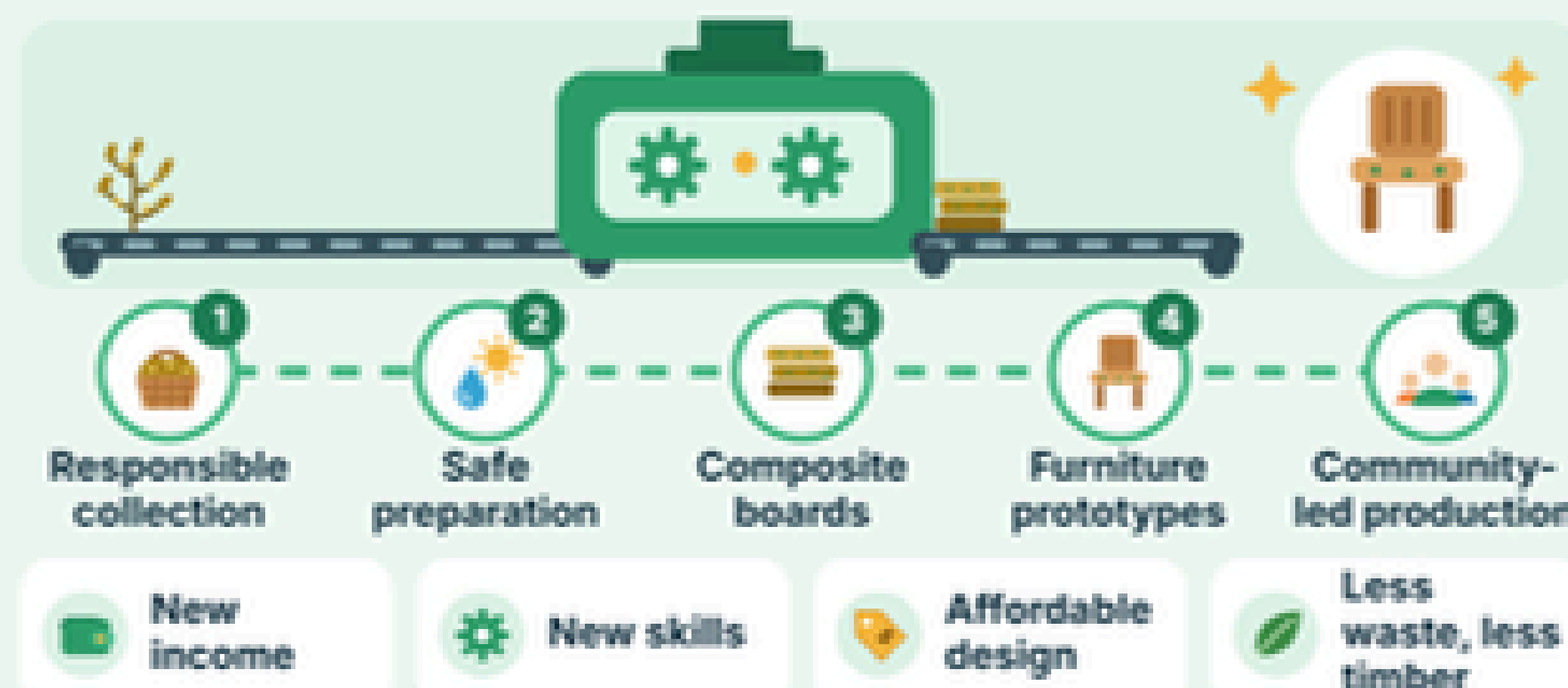
Cleanup costs
rise

UNSDG 12 gap: waste piles up while timber is still used.

2 THE HUMAN-CENTRED SOLUTION

Waste into
worth.

Sargassum-based composite boards could replace
some wood panels. Coastal communities collect it and
local designers turn it into furniture.



3 SUSTAINABLE BUSINESS & REVENUE MODEL

A circular social enterprise

From coastal cleanup to
commercial furniture. Profits
fund fair wages and research.

Composite board sales

Tested panels for furniture makers
and interior designers.

Pays: Manufacturers, workshops

Finished furniture

Tables, shelves, stools and panels
with a coastal identity.

Pays: Homes, hotels, cafés, offices

Collection & processing

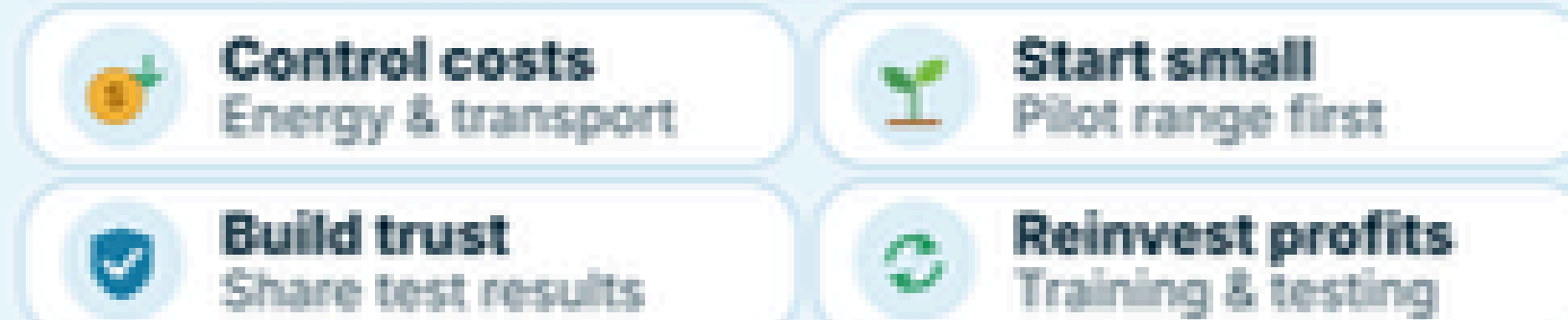
Contracted collection and
preprocessing partnerships.

Pays: Municipalities, businesses

FINANCIAL SUSTAINABILITY CYCLE



HOW IT STAYS SUSTAINABLE



KEY INDICATORS



4 AI COLLABORATION & TEAM REFLECTION

AI generated possibilities.
Humans decide.

CONCEPT

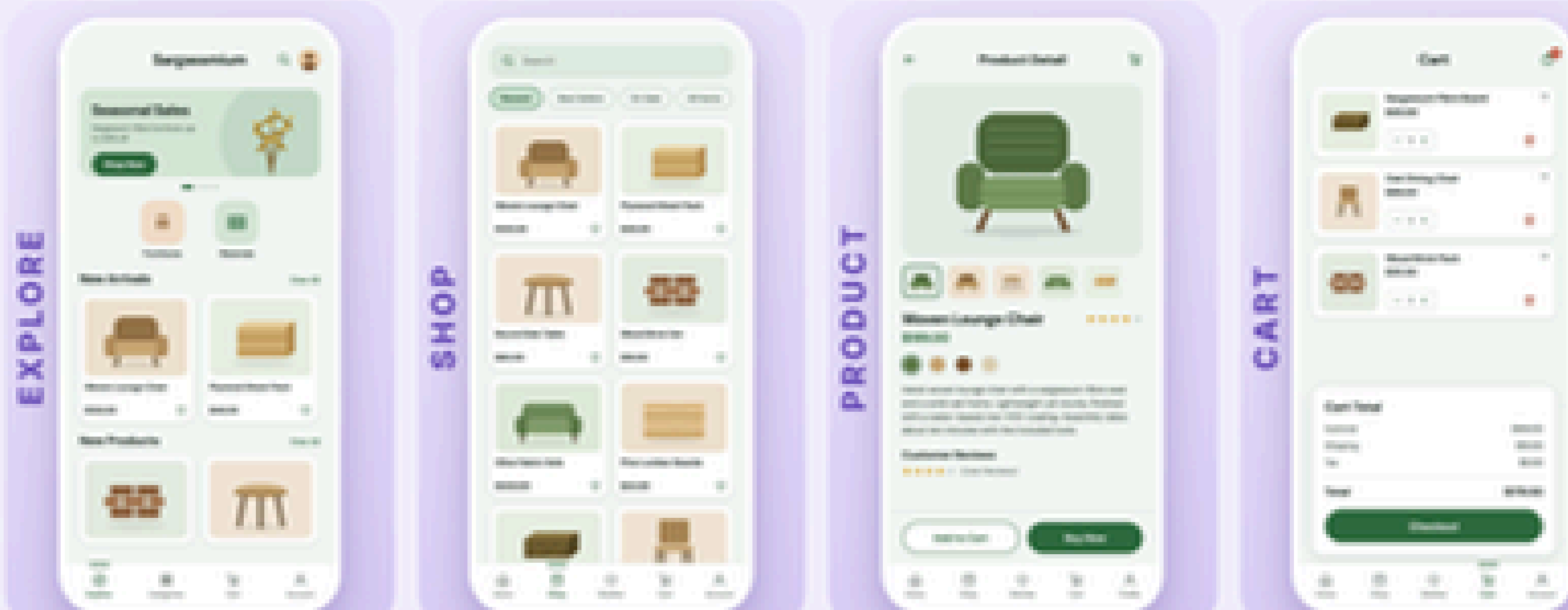
- Suggested seaweed-fibre panels and designs.
- Treat as hypothesis. Test strength and safety.

REVENUE

- Proposed boards, furniture and services.
- Validate demand, costs, fair wages, profit.

ETHICS

- Spotted waste recovery and less timber use.
- Check ecosystem harm, binders, reuse.



Team reflection Critical thinking Collaboration Ethical responsibility Human-centred innovation



SARGASSUM
TO FURNITURE

"Sargassum is not just a coastal waste challenge. It may become a valuable resource
when science, design, business and communities work together."

Waste into worth.



南臺科技大學
Southern Taiwan University of Science and Technology

SCAN TO WATCH
Our 3-4 minute
presentation

