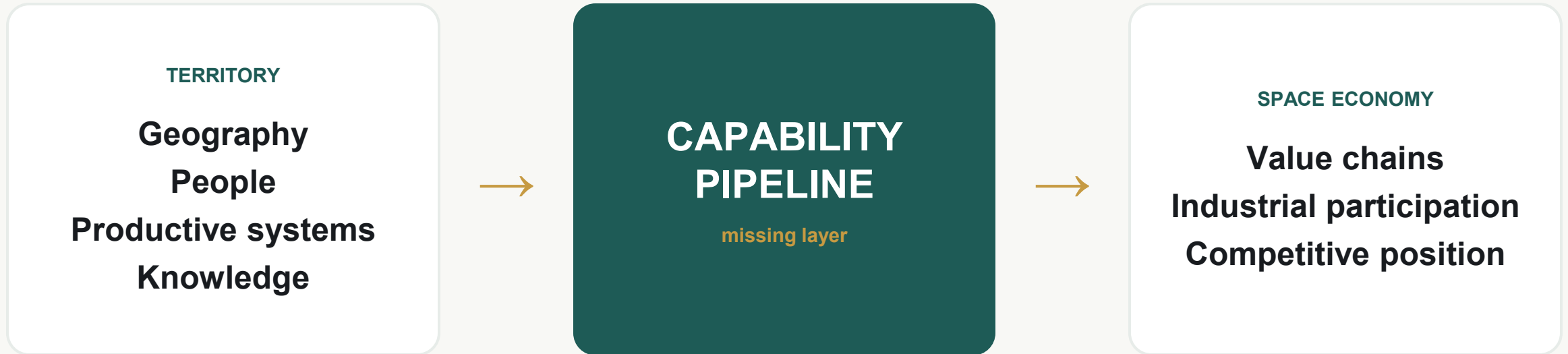


THE ASSET EXISTS. THE PIPELINE DOES NOT.

Building inclusive capability pathways into the space economy



Colombia as a living case

The challenge is not only access to space technology — it is the pathway that turns territorial assets into capabilities and industrial participation.

FROM TECHNOLOGY ACCESS TO CAPABILITY FORMATION



The missing layer is not technology.

It is the pathway that transforms people and territories into capability holders.

01

USE

Absorb and apply

02

ADAPT

Solve local needs

03

CREATE

Generate new value in Science, Technology and Innovation (STI) capabilities

THE SPACE INCLUSIVE HUB (AIH)

A TERRITORIAL CAPABILITY BUILDING UNIT

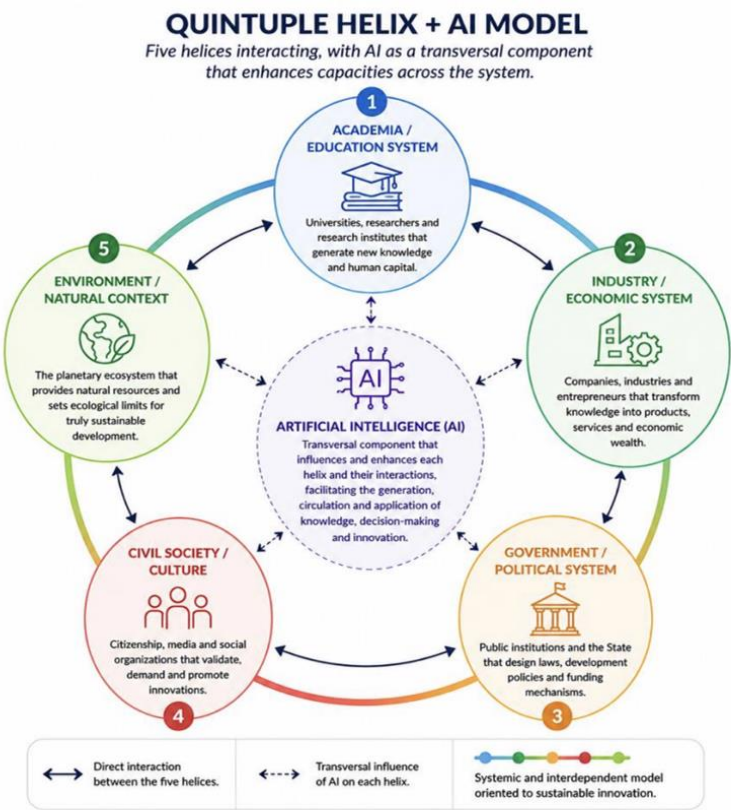
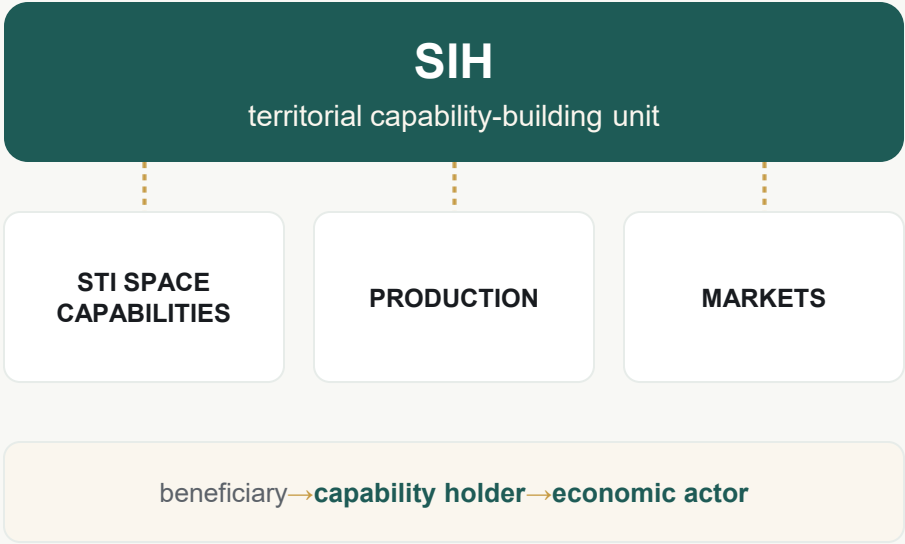


Figure X. Quintuple Helix + AI Model. Source: Authors' own elaboration based on Carayannis et al. (2024) and Carayannis & Preissler (2025). Authors' own elaboration

BUILDING PEOPLE BEFORE BUILDING PIPELINES

A Territorial Capability-Building Unit

COMMUNITY + EDUCATION

- Psychosocial strengthening
- Inclusive formation
- Digital transformation
- Ancestral knowledge certification

SPACE TECHNOLOGY

- Earth Observation · Drones · AI
- Geospatial intelligence · Copernicus
- Connectivity · Remote sensing

SIH · 50 families · 24 months

INDUSTRY + MARKET

- Value chains · EUDR compliance
- Block negotiation · Carbon credits
- Multilateral finance (BID, Green Climate Fund)

ECOSYSTEM PARTNERS

- Universities · Government · Industry
- International organizations
- Research institutions · Investors

From beneficiary → capability holder → economic actor in the space economy

user → learner → operator → creator → producer → entrepreneur → innovator

BUILDING PEOPLE BEFORE BUILDING PIPELINES

Space Technology as Productive Infrastructure



BEFORE

- 30–40% crop losses, no warning
- Price imposed by intermediary
- Productive isolation, no market access
- Youth migrating out of territory
- Coca as only economic alternative

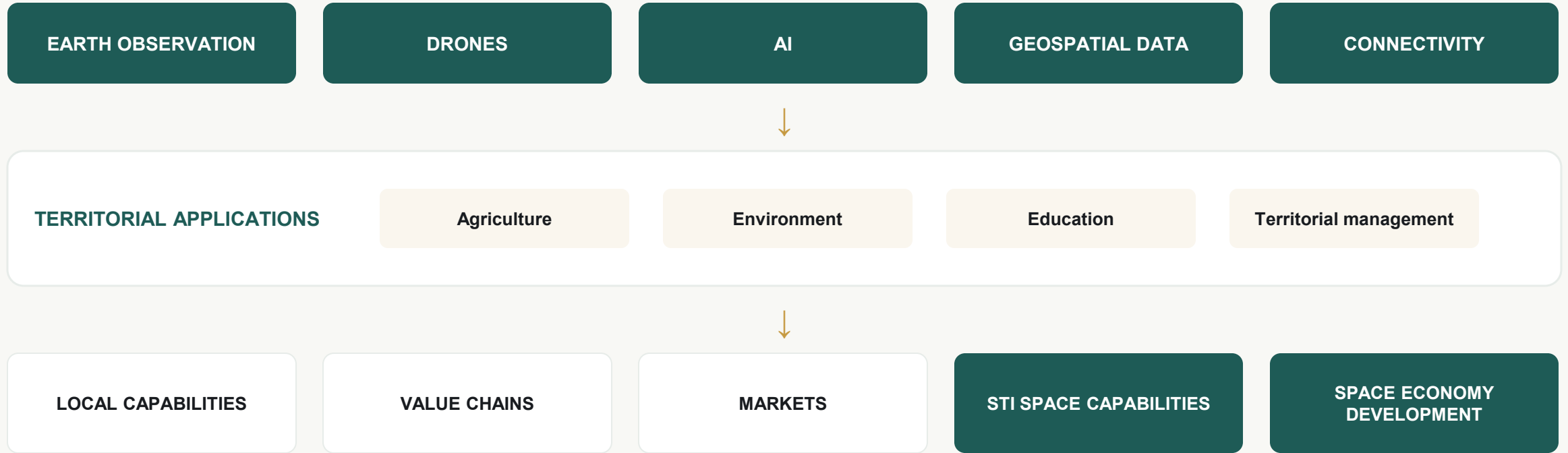


WITH SPACE HIGH IMPACT HUB PROGRAM

- Early warning: Bajo / Medio / Alto weekly
- Block negotiation · EUDR premium → producer
- MRV by satellite · Carbon ARR · BID finance
- Community with an aerospace project of life
- Cacao as verified peace crop — 2030 roadmap

"The same Copernicus data that monitors climate for Europe monitors peace for Colombia."

WHEN SPACE TECHNOLOGY BECOMES PART OF THE PRODUCTIVE SYSTEM



Space becomes infrastructure for industrialization.

INCLUSION CAN BE AN INDUSTRIALIZATION PATHWAY.

1. INCLUSIVE DEVELOPMENT

2. CAPABILITY FORMATION

3. INDUSTRIAL PARTICIPATION

4. SPACE ECONOMY

5. TERRITORIAL SPACE SOVEREIGNTY

TRANSFERABLE TO YOUR COUNTRY

- **Start with the person**, not the technology
- The community is a **cohélice of innovation**, not a beneficiary
- **Open satellite data** + local capability = market access
- Inclusion that generates productivity is **industrial policy**
- **Prescindibility** is the metric—autonomy at month 24

**DON'T JUST BRING TECHNOLOGY TO COMMUNITIES.
BUILD THE CAPABILITIES THAT ALLOW COMMUNITIES TO
PARTICIPATE IN THE SPACE ECONOMY.**

"Inclusion is not the outcome of the aerospace economy. It can be part of its infrastructure."