Environmental Literacy: Clearer CrossProfessional Dialogue, Stronger EIAs

LESSONS FROM THE PILAR NATIONAL UNIVERSITY CASE

IAIA26 QUÉBEC CITY, CANADA

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UNIVERSIDAD NACIONAL DE PILAR

Location of Quebec and Pilar in the Americas

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2024

Public Institution	National Reach	Law 27,728

NotebookLM

Target 2026

3	12	6,000
Faculties	Programs	Students

NotebookLM

UNPILAR

- Production & Technology
- Health Sciences
- Human Development

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Production & Technology

Current programs and future development

CURRENT DEGREE

BSc in Food Science and Technology

CURRENT DEGREE

BSc in Biotechnology

IN DEVELOPMENT

A new bachelor's degree focused on technological fields

Technical Degrees

Software Development	Automation and Control
Food Science and Technology	Biotechnology

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We do not lack environmental passion in our students. What we lack is a clear sequence, explicit connections, and a shared language.

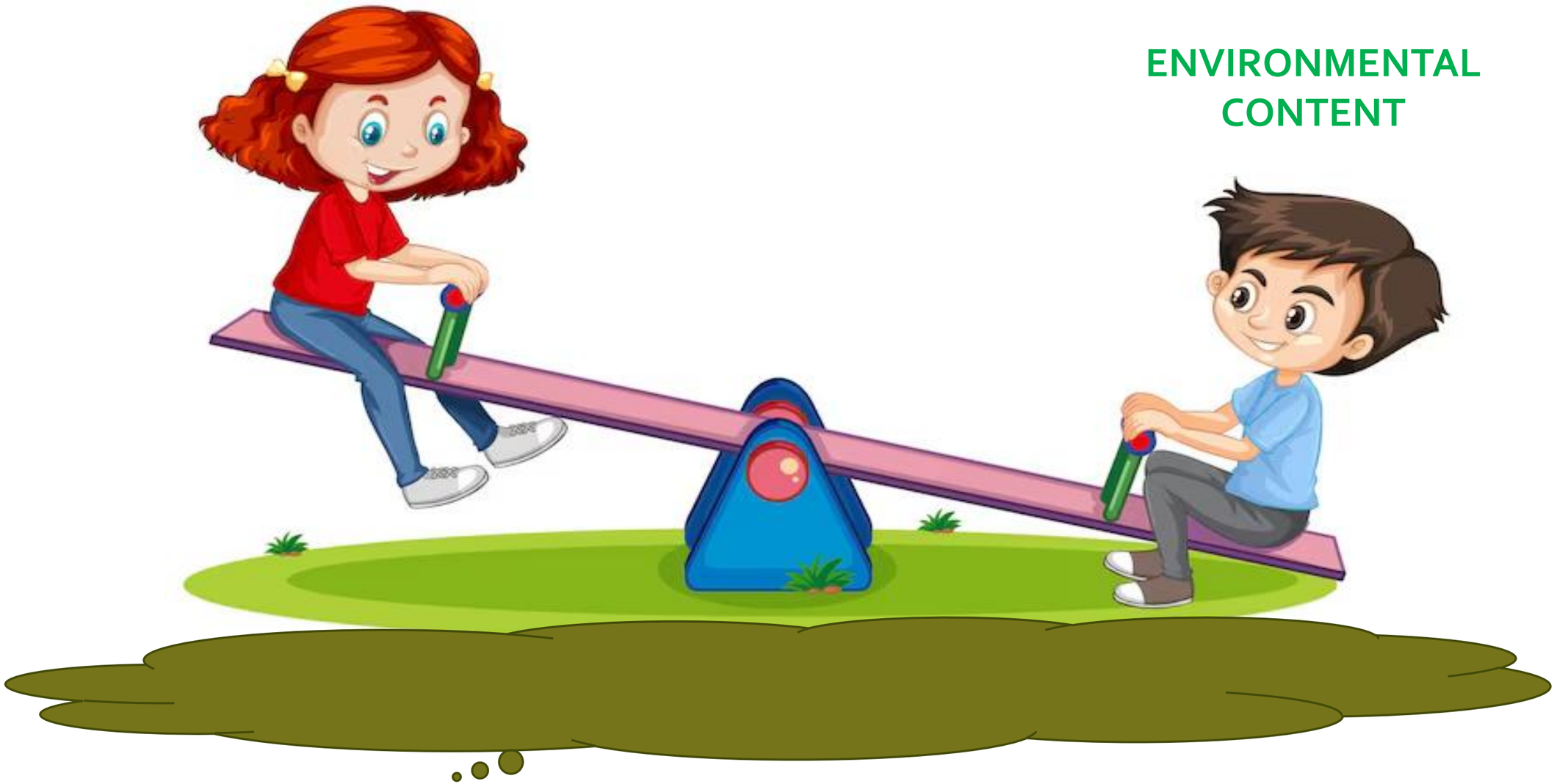
Sequence

Connections

Shared Language

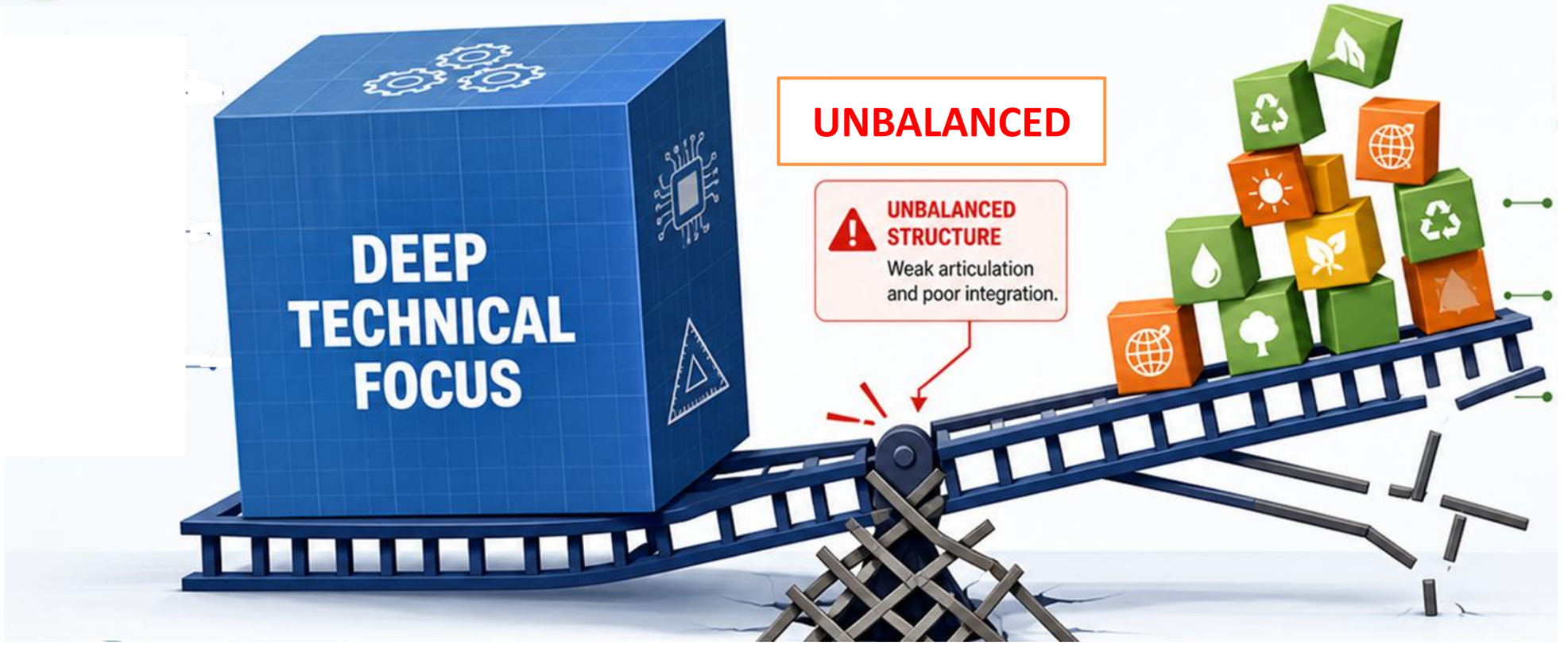
TECHNICAL FOCUS

ENVIRONMENTAL CONTENT



THE PROBLEM IS NOT ABSENCE

DISPROPORTIONATE WEIGHT
Technical content dominates time, depth, and visibility in the curriculum.



IMPLICIT ENVIRONMENTAL CONTENT

- Exists, but not explicitly visible.
- Fragmented across topics.
- Weakly articulated and hard to trace.

The problem is that environmental knowledge is not well connected or integrated.

The Integration Spectrum

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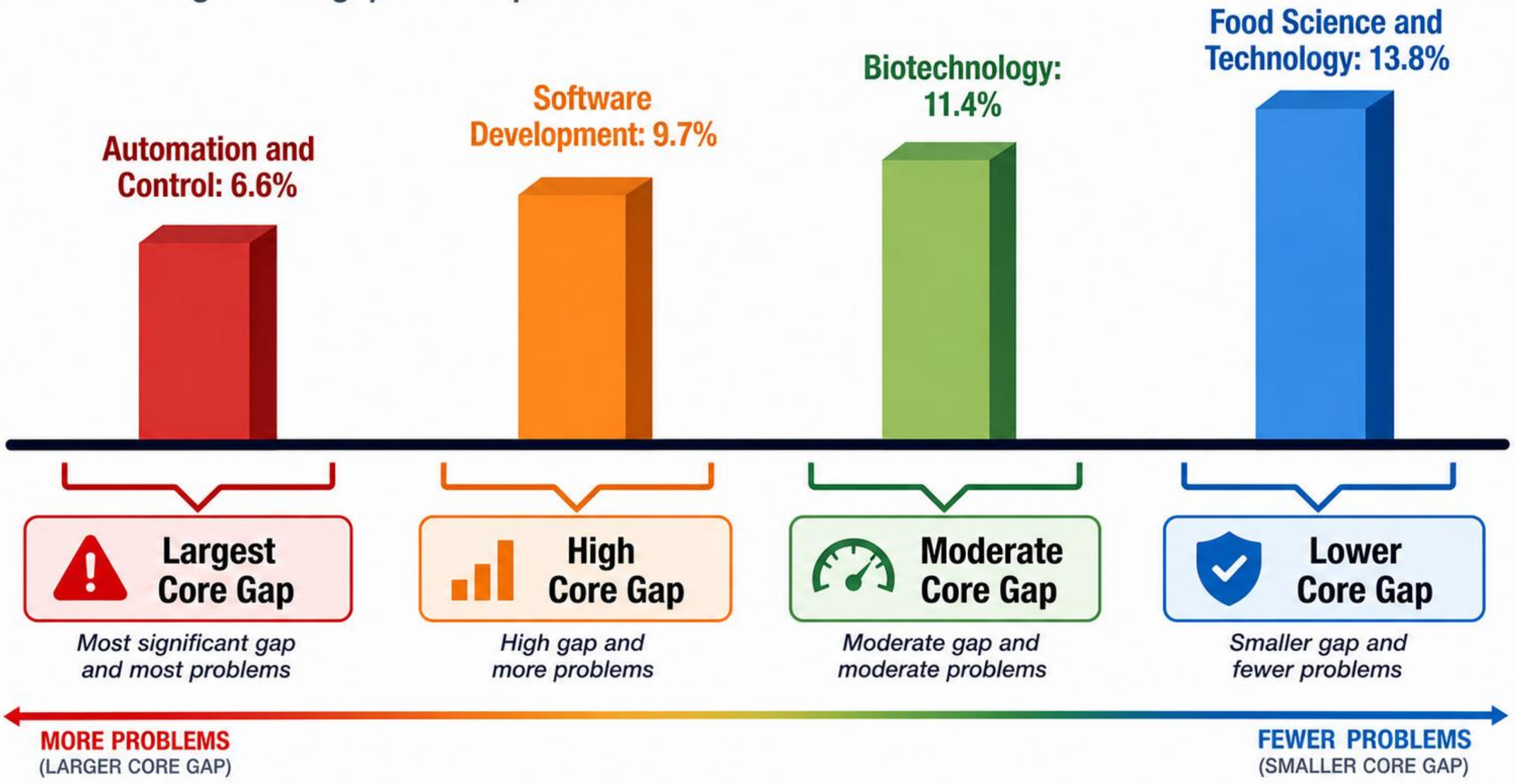
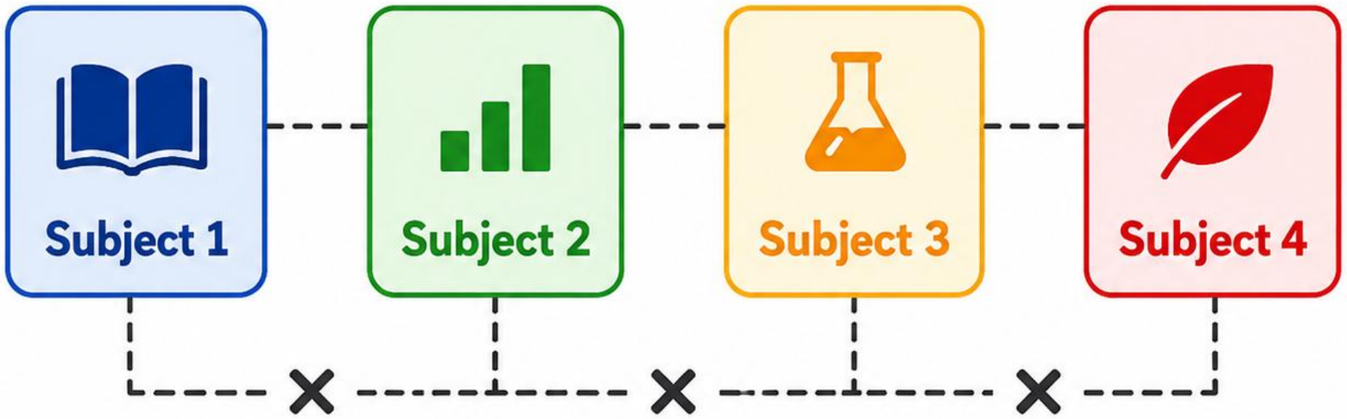
Lower % = larger core gap / more problems



Subject-Based Paradigm (Current)



- **Focus:** What ? And how do we teach it
- **Result:** fragmented knowledge
- **Effect:** Unbalanced proyects

Value: limited integration and siloed learning

EXAMPLE

Robotics as a Gateway to Sustainability

From environmental awareness to technology-based solutions

Robotics moves students from **environmental talk** to **real-world tech solutions**.

1 LEARN THE TOOLS

Sensors
Motors
Coding
Automation

2 DESIGN WITH PURPOSE

Air quality
Smart irrigation
Waste sorting
Energy saving

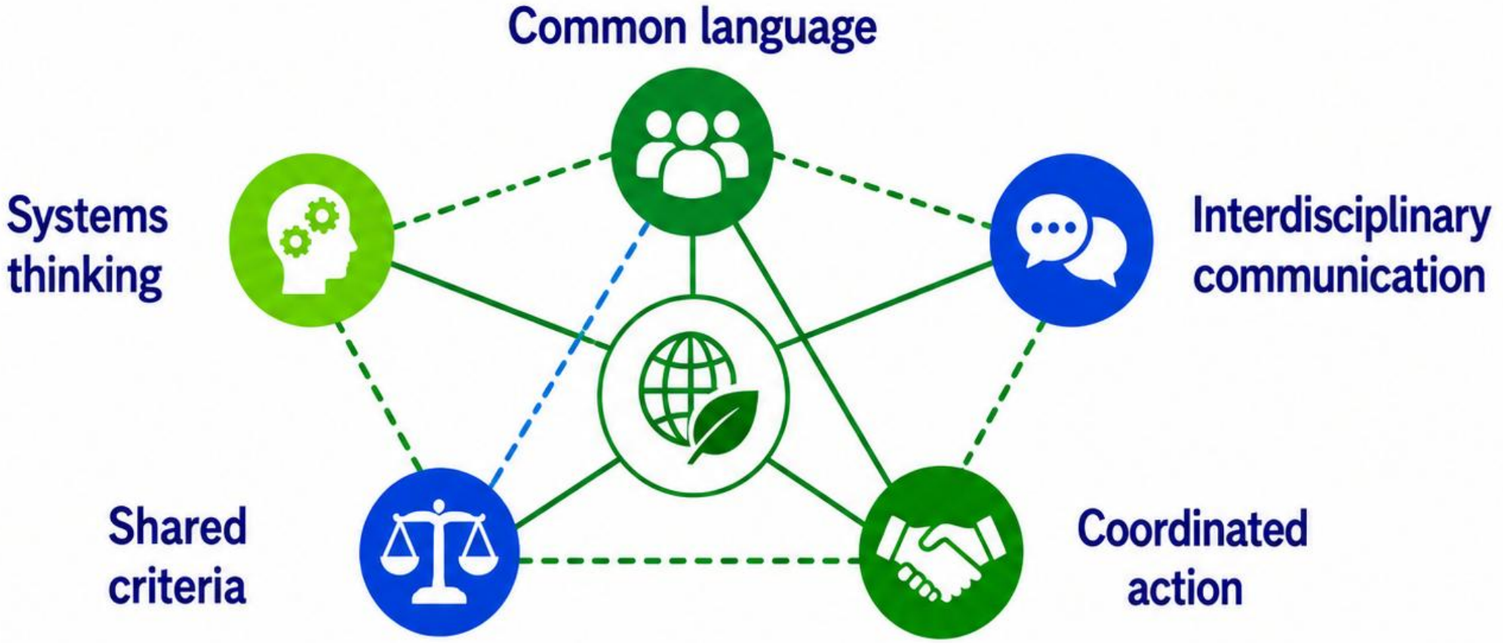
3 MEASURE IMPACT

Prototype
Test with data
Measure impact
Improve

Key idea: Robotics turns sustainability into action.

Project-based learning: identify a real problem → build a prototype → test with data → improve.

Competency-Based Paradigm (Future)



- **Focus:** what is built
- **Result:** shared competencies
- **Effect:** more coherent environmental practice

Value: dialogue, cohesion, and better EIA performance

The Next Step: Building the Competency Map

A simple path to integrate environmental competencies

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Im here in this process

1

Step 1
Curricular Diagnosis

Identify what exists and what is missing

2

Step 2
Cross-cutting Integration

Connect competencies across the curriculum

3

Step 3
Pedagogical Sequence

Introduce → Develop → Consolidate

Developed at UNPILAR, with potential to inform similar efforts across LATAM

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Shared competencies improve environmental practice

A common competency base helps align language, criteria, and action across environmental processes.

WHAT IMPROVES?

- Better interdisciplinary dialogue
- More consistent environmental criteria
- Stronger EIA teams and decisions
- Improved environmental outcomes

From fragmented preparation to aligned environmental practice.

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Let’s continue the conversation!

Message me your questions or comments in the IAIA26 app.

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