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Creating Sustainable Institutions: A Systemic Framework for Lasting Institutional Change



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Whole School Approach to ESD (WSA) within the years

Emerging in the 1990s, a "whole system redesign" in education

- **Integrating sustainability into school life and operations**
- **The school becomes a learning community for sustainability and a hub for promoting sustainable practices and actions within the wider community.**
- **Policy change & system signaling: International bodies have adopted WSA as a recommended route to embed sustainability**

Recurrent limitations of WSA



Projectization instead of transformation

- Often reduced to curriculum enrichment/ green projects. Without governance, budgets, or accountability, efforts fade with staff turnover or the end of a grant/ program.

Reliance on champions

- Dependance on a small group of motivated teachers.

Assessment & quality assurance misalignment

- National assessment/inspection rarely values ESD outcomes, which squeezes WSA when high-stakes priorities dominate.

Scale & durability problems

- International cooperation (i.e. UNECE) encourages pilots, but limited co-financing and monitoring mean few cases mature into school- or system-level norms.

Fragmentation across domains

- Curriculum changes often outpace operations and procurement, so students learn about sustainability while the campus runs "business as usual," weakening the hidden curriculum effect.

How school is seen through WIA;

- An open, flexible and adaptable place and space of learning and action for sustainability and not an education organization narrow oriented to traditional forms of schooling

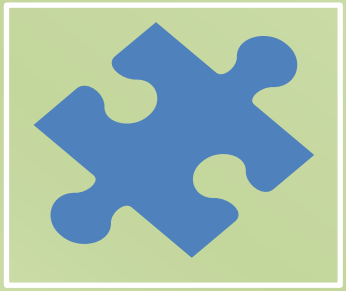
Why WIA is seen as the only way for ethos and culture change;

- It targets culture, not just programs. By embedding sustainability into every aspect of school life, WIA converts values into routines- the essence of school ethos
- It integrates vertical & horizontal implementation of sustainability: WIA connects classroom practice with school/ campus operations and community partnerships, and aligns school-level work with system policies, providing the missing links that stalled many WSA efforts.
- It's measurable and improvable: New instruments (i.e. self-evaluation tools, accreditation frameworks) let schools and systems diagnose the lived experience of sustainability (for learners and staff), making culture visible and governable over time.

SUSEDI



The question behind SUSEDI Project



What are the intrinsic elements of a systemic framework on WIA and ESD, and how can this framework be feasible, adaptable, meaningful, and practical in application, ensuring the long-term sustainability of institutions across contexts?

To present a systemic framework for implementing WIA for sustainability in a meaningful way — without "re-inventing the wheel".

01

SHIFTING THE FOCUS

Focus is not on the "Whole School" approach, but on a "Whole Institution" approach, moving beyond narrow performance indicators.

02

AN OPEN LEARNING COMMUNITY

The school/education organization is reimagined as an open learning community that:

- Responds to global challenges defined by the 17 SDGs.
- Self-organises and redesigns itself.
- Functions as a living lab on sustainability.

03

BUILDING ON EXISTING KNOWLEDGE

The project builds on existing literature, research, and past efforts rather than reinventing the wheel.
It uses the Wals & Mathie (2022) Flower Model as a starting point.

04

CONNECTING THE THREE PILLARS

- The three pillars — social, pedagogical and organisational — work together to
  - Advance the vision and mission of the school/educational organisation.
  - Embed sustainability in all operations and structures.

How the WIA and ESD framework developed?

Analysis of key national and regional frameworks for WSA/WIA in ESD

Sustainable Schools Framework (UK, 2006–2010)	• Applied in school settings. • Promoted "doorways" of action (e.g., energy, food, transport, inclusion). • One of the early **whole-school sustainability approaches**
Regional / National Frameworks	• **German "WIA to ESD"** (KMK & BMUB strategy). • **Australian Sustainable Schools Initiative (AuSSI)**. • Both adapt WIA to local education systems
Greening Universities Toolkit (UNEP/UNESCO, 2013)	• Aimed at higher education institutions. • Framework for integrating sustainability into **teaching, research, campus operations, and outreach**
UNECE Strategy for ESD (2021–2030)	• Recognises the need for a **whole-institution, systemic approach**. • Encourages integration of sustainability into teaching, governance, campus operations, and community partnerships
UNESCO's Whole-School/Whole-Institution Approach	• Presented in UNESCO's *Education for Sustainable Development Roadmap (2020–2030)*. • Calls for embedding sustainability in **curriculum, institutional culture, operations, and external relations**.
Flower Model (Wals & Mathie, 2022)	• Represents sustainability in education as a **core ethos surrounded by six petals** (dimensions such as pedagogy, governance, community, research, etc.). • Emphasises interconnectedness and systemic change

Theoretical basis:
Wals & Mathie (2022) Flower Model: Why it was chosen



Flower model **offers a *structural vision* (what areas of the institution need transformation)**

Core Ethos of sustainability
Surrounded by **5 petals**
(e.g., pedagogy, governance, community engagement, capacity building, curriculum)
Emphasises interconnectedness: all petals must align with the core ethos

Integrates 5 cross-cutting principles (5Rs)

Responsiveness	Reflection
Resourcing	Relevance
Reforming	

Methodology-Research design for developing the Systemic Framework of WIA on ESD

Approach

A Constant comparative method to explore patterns across cases, with triangulation through interviews.

Theoretical background

B Frameworks, literature reviews, UNECE/EU reports on ESD Strategy implementation, and policy documents recognizing WIA as a contributor to institutional transformation for sustainability.

Data

C Desk research

26 institutional case studies (7 schools, 12 universities/university partnerships, 2 ministries/government initiatives, 3 trusts, 1 after-school program, 1 EU body) from 13 countries.

D Field research

15 expert interviews (9 academics, 4 policymakers, 2 formal & non-formal educators) from 5 countries [list of experts]

Desk and field research can be found at https://susedi.projectsgallery.eu/main-results/

Two-stage data analysis

STAGE 1: Identification of pillars' dimensions based on case studies and interviews

STAGE 2: Operationalization of WIA through component-level analysis of each identified dimension using desk and field research

→ **Output** Formation of the Systemic Framework of WIA on ESD based on empirical results and existing models.

Rationale for Selecting “Good Cases”

Case selection criteria used to identify credible and transferable examples of WIA for ESD

Selection rationale

We selected cases that show credible, transferable evidence of WIA to ESD. Specifically, each case demonstrates:

Breadth

Activity across multiple school subsystems (beyond single projects).

Depth

Changes to norms, routines, or governance (not just one-off events).

Integration

Clear links between teaching/learning and campus/community practice.

Sustainability

Mechanisms that outlast a grant cycle (policies, roles, budgets).

Evidence

Artifacts (policies, plans, data) and stakeholder testimonies.

Expert criteria and interview focus areas used to capture cross-system perspectives on WSA/WIA and ESD.

Expert selection criteria

Who counted as an expert: Individuals with broad, deep ESD understanding and proven competence (knowledge, skills, experience) from practice and/or study.

Eligible profiles: Policy makers; academics; think-tank experts; journalists; inspectors; school principals; NGO/public/private directors; researchers; teachers/educators; VET/adult/lifelong-learning providers; youth; social-media bloggers; opinion leaders; local-authority representatives.

Selection criteria (screening)

- **Recent, demonstrable impact** in ESD at local/national/regional/international levels.
- **Active role** in ESD (e.g., policy, curricula, youth engagement, professional development, research).
- **Familiarity with WSA/WIA** and ability to provide concrete inputs based on personal experience and career.

Interview protocol

Examples of ESD at national level / policies / regulation: addressed education forms; integration in formal (incl. HE) and non-formal education; gaps/challenges; organizational integration; strengths/weaknesses; and how WSA/WIA supports ESD and national applicability

WSA/WIA & ESD focus: what is mapped to WIA strands: vision/ethos/leadership & coordination; institutional practice ("walking the talk"); capacity building; school infrastructure; community connections; curriculum; pedagogy & learning

Strengths / weaknesses: proud elements, and strands needing development/support (why)

Recommendations / Next Steps: SWOT for WSA/WIA & ESD; priority dimensions to strengthen and how; ensuring viability and long-term implementation; and the role of regional/international initiatives and funding

Results:

STAGE1- Identification of dimensions of the social, pedagogical and organizational pillars

Pillar	Dimension	Where Identified (Cases/Interviews)	Indicative Practices
Social	Collaboration	Cases 1, 3, 4, 5, 10, 17, 18, 21, 22, 23, 24, 25, 26; Interviews 1–3 (GR), 4–5 (PL), 12 (CY), 13 (MT)	Partnerships with NGOs/communities; cross-sectoral networks; bottom-up initiatives; community integration
	Transformative Action	Cases 7, 8, 9, 10, 13, 14, 18, 21, 25; Interviews 1–3 (GR), 6 (IT)	Student councils, civic campaigns, benchmarking, municipal youth councils
	Green Identity	Cases 1, 5, 6, 7, 8, 9, 13, 14, 17, 18, 20, 24, 26; Interviews 13 (MT)	Daily eco-responsibilities; values & mission; recognition schemes; eco-literacy
Pedago-gical	Curricula	Cases 1, 3, 6, 10, 14, 15, 17, 21, 24, 25, 26; Interviews 11 (ES), 14 (DE)	SDG-aligned projects; transdisciplinary integration; thematic modules; postgraduate programs
	Capacity Building	Cases 3, 4, 11, 12, 13, 17, 22, 25; Interviews 12 (CY), 14 (DE)	Teacher training, mentoring, hackathons, digital platforms, competence centers
	Teaching & Learning	Cases 1, 3–6, 8–10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 24, 25, 26; Interviews 7 (IT), 11 (ES)	Outdoor projects, design labs, gamification, inquiry-based & transdisciplinary learning
Organi-zational	Strategy	Cases 1–4, 12, 17, 18, 22, 24, 25, 26; Interviews 12 (CY), 15 (DE)	Sustainability in visions & roadmaps; national/regional strategies; monitoring & audits
	Leadership	Cases 1, 4–7, 9, 10, 13, 17, 18, 21, 23, 24, 25; Interviews 15 (DE)	Sustainability officers, cross-department champions, bottom-up leadership, national alliances
	Governance & Functions	Cases 2–4, 7, 9, 10, 17, 18, 21, 23, 24, 25, 26; Interviews 12 (CY), 15 (DE)	Councils/committees; ESD in policies; management systems; monitoring & evaluation
	Infrastructure	Cases 1, 2, 4, 6, 7, 16, 18, 20, 23, 24,	Green buildings; smart resource mgmt;

WIA dimensions through experts' views

Component	Key Insights	Interview Examples
Sustainability Ethos	Shared values, guiding vision, institutional commitment	Greece (1–3): moral imperative Cyprus (12): UNESCO-aligned strategy Malta (13): ethos in School Development Plan
Sustainability Culture	Lived practices, routines, norms, campus design, activities	Greece (1–3): eco-projects, partnerships Poland (4–5): interdisciplinary teaching, private sector links Malta (13): solar panels, committees, events
Social Dimension	Partnerships, participatory culture, community engagement	Italy (6): student–municipality waste mgmt Poland (9): limited, teacher-driven outreach
Pedagogical Dimension	Curriculum integration, student agency, transdisciplinarity	Germany (14): curriculum-wide ESD, teacher training Spain (11): project-based, community learning Poland (10): isolated projects
Organizational Dimension	Strategy, leadership, governance, infrastructure	Cyprus (4): SDG policy + infrastructure Germany (15): evaluation indicators Greece (3) / Poland (8): fragmented, teacher-dependent

Social Pillar			
Dimensions (Petals)	Collaboration	Transformative action through social roles	Green self- identity
Components	SC1: Among stakeholders	STA1: Responsibility for promoting sustainability in the community	SS1: Developing strong sense of self-worth
	SC2: Among school and local community	STA2: Active role of students for school functioning	SS2: Clear understanding of meaningful roles in society
	SC3: Among school and labour market	STA3: Students as leaders for school operations	
	SC4: Established networking mechanisms	STA4: Educating to manage socio-environmental issues and transform society	
Pedagogical Pillar			
Dimensions (Petals)	Curricula	Capacity building	Teaching and learning
Components	PC1: Interdisciplinary, horizontal, coherent	PCB1: Employability	PTL1: Formal and non-formal
	PC2: SDG integration	PCB2: Scaling of skills	PTL2: Connection to labour market
	PC3: Skills for the future	PCB3: Monitoring	PTL3: Student-led
	PC4: Localized/adaptable	PCB4: Mentoring	PTL4: Promotes awareness of changes on the planet and impact on human life
	PC5: Promote critical thinking	PCB5: Facilitating teacher integration in community-shaping of social identity	PTL5: Practical, hands-on experiences
	PC6: Extracurricular ESD activities	PCB6: Sustainability of school actions through time	PTL6: Alternative learning processes
	PC7: ICT	PCB7: Recognition of work	PTL7: Multi-modal learning environments

Organizational Pillar				
Dimensions (Petals)	Strategy	Leadership	Governance and functions	Infrastructure
Components	OS1: Adjustability	OL1: Youth leaders	OG1: Taylor-made administrative tasks	OI1: Creating and mobilizing sustainability on location
	OS2: Facilitates collaborations	OL2: Participatory decision making	OG2: Policy formation	OI2: Outdoor spaces as classrooms
	OS3: Commits teachers to engage in ESD	OL3: Role models	OG3: Monitoring mechanisms	IO3: Building local energy sources
	OS4: Integrates non-formal education		OG4: Coordination mechanisms	
	OS5: Promotes accountability		OG5: Networking mechanisms	

Results stage 2:

Operationalization of WIA dimensions-

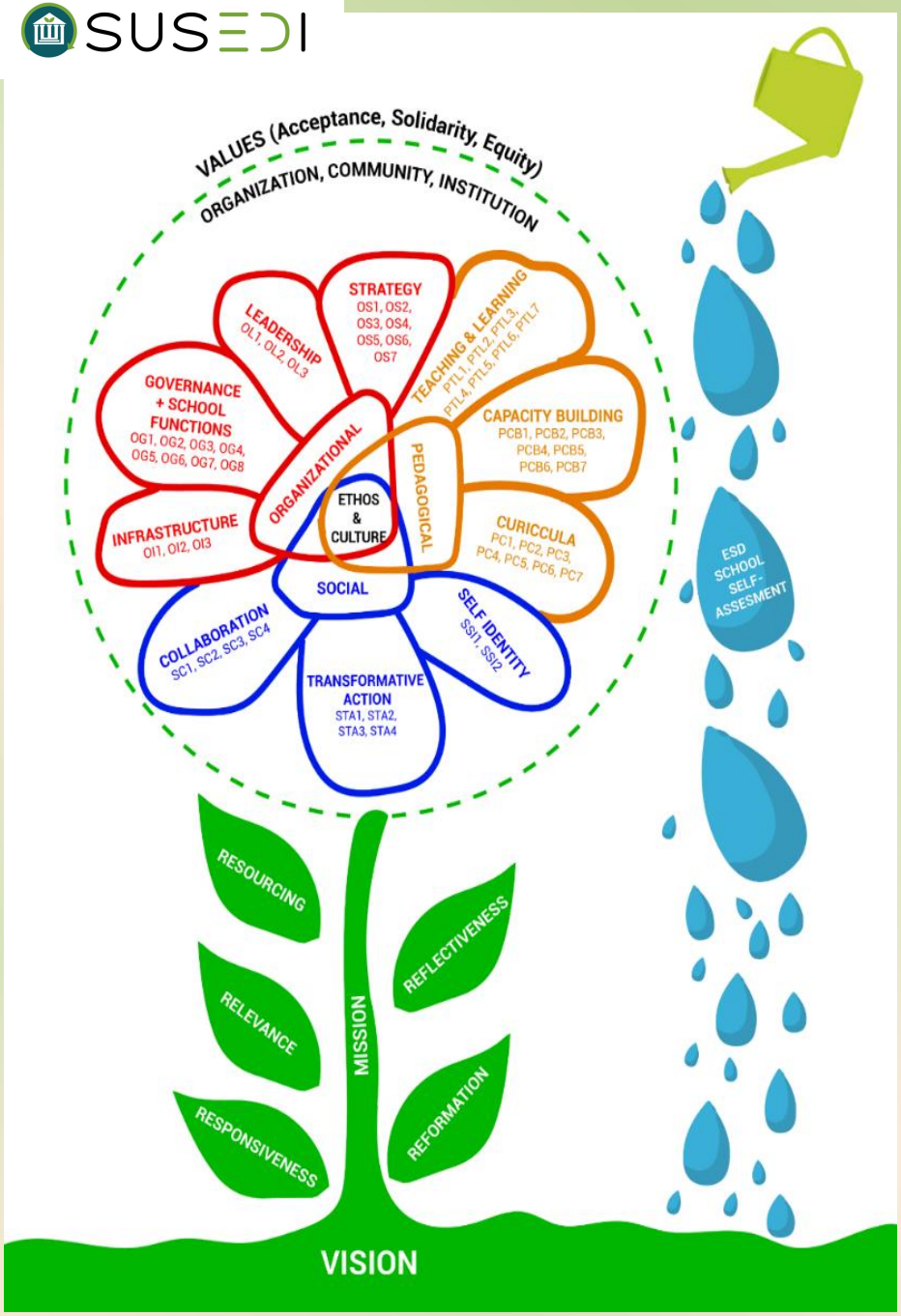
IDENTIFICATION OF COMPONENTS

- Each dimension was analyzed in components based on practices implemented by organizations (cases) and experts (interviews)

From pillars to dimensions and from dimensions to components

ORGANIZATIONAL (O)	O	Infrastructure	OG	Governance & school functions	OL	Leadership	OS	Strategy
	OI1	Creating & mobilizing sustainability on location	OG1	Taylor-made administrative tasks	OL1	Youth leaders	OS1	Adjustability
	OI2	Outdoor spaces as classrooms	OG2	Policy formation	OL2	Participatory decision making	OS2	Facilitates collaborations
	OI3	Building local energy sources	OG3	Monitoring mechanisms	OL3	Role models	OS3	Commits teachers to engage in ESD
			OG4	Coordination mechanisms			OS4	Integrates non-formal education
			OG5	Networking mechanisms			OS5	Promotes accountability as to how ESD-related WIA is implemented
			OG6	Top-down support			OS6	Alignment with Agenda 2030
			OG7	Allocated time for ESD-related actions			OS7	School action plans

Systemic Framework Proposed



- **Center** = Sustainability culture & ethos

- **Roots-** Vision (long term, based on context specificities)

- **Stem**= vision (sustainability plan/ roadmap)

- **Core** = Organizational, pedagogical, social pillars

- **Petals** = Dimensions (Collaboration, Curricula, Leadership, etc.) Each petal is operationalized as per stage 3 of results

- **Leaves**= Pre-requisites- 5Rs (Responsiveness, Reflection, Resourcing, Relevance, Reforming)

Flower form justification

- WIA sustainability plans can be operationalized and adaptable to context of education organization
- Sustainability as ethos + culture across all interconnected pillars
- Circular, dynamic, refined via self-evaluation

Comprehensive framework development

- Analyzes existing models in combination with empirical data from European countries.
- Contributes a more integrated and detailed framework that supports organizations in moving holistically towards sustainability.

Flexible and transformative application

- Provides an explanatory framework adaptable to different contexts.
- Aims at enhancing quality and qualitative education.
- Ensures the necessary conditions and prerequisites for change.
- Encourages the creation of a new ethos grounded in sustainability.
- Seeks to cultivate a culture of sustainability where the school functions not only as an educational institution, but as a *"chorotopos"* (place and space).

What is *chorotopos*?

•The Greek term *chorotopos* translates as **"place/space"**, but in the educational sense it goes beyond physical location.

•In the **in-depth approach** (Trimis & Savva, 2009), chorotopos is understood as the **social, cultural, and physical environment** where learning happens.

•It includes not just the classroom or museum walls, but also the **interactions, relationships, and cultural resources** that shape meaning-making.

Why the proposed WIA and ESD framework matters?

01 WHAT IT GIVES US

Usefulness

- **One shared WIA roadmap**

  Operationalises WIA through 3 interconnected pillars and clear components that institutions need to address.

- **From policy to practice**

  Dimensions and components explained through practical examples and ideas.

- **Tools for action**

  Diagnostic rubrics; mapping, planning and monitoring templates; accreditation schemes.

- **Across all sectors**

  Applicable in schools, VET, higher education and non-formal settings.

02 WHAT IT CAN CHANGE

Potential impact

- **Culture & ethos**

  Sustainability in routines, roles and decisions, with stronger student and community voice.

- **Learning outcomes**

  Sustainability competences become visible in assessment.

- **Operational improvements**

  Healthier spaces, upgraded school infrastructure, more efficient governance and operations.

- **Equity & partnerships**

  Purposeful collaboration with municipalities, NGOs and industry.

03 HOW WE SCALE

Conditions for success

- **Leadership & time**

  Invest in leadership development and allocate time.

- **Dedicated funding**

  Provide clear budget lines for implementation.

- **Feedback loops**

- **Inspection & accreditation**

  Embed WIA to avoid short-lived “projectization”.

- **Needs-led implementation**

  Use the framework to identify institutional needs, gaps and aspirations.

Thank you

Questions and discussion

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