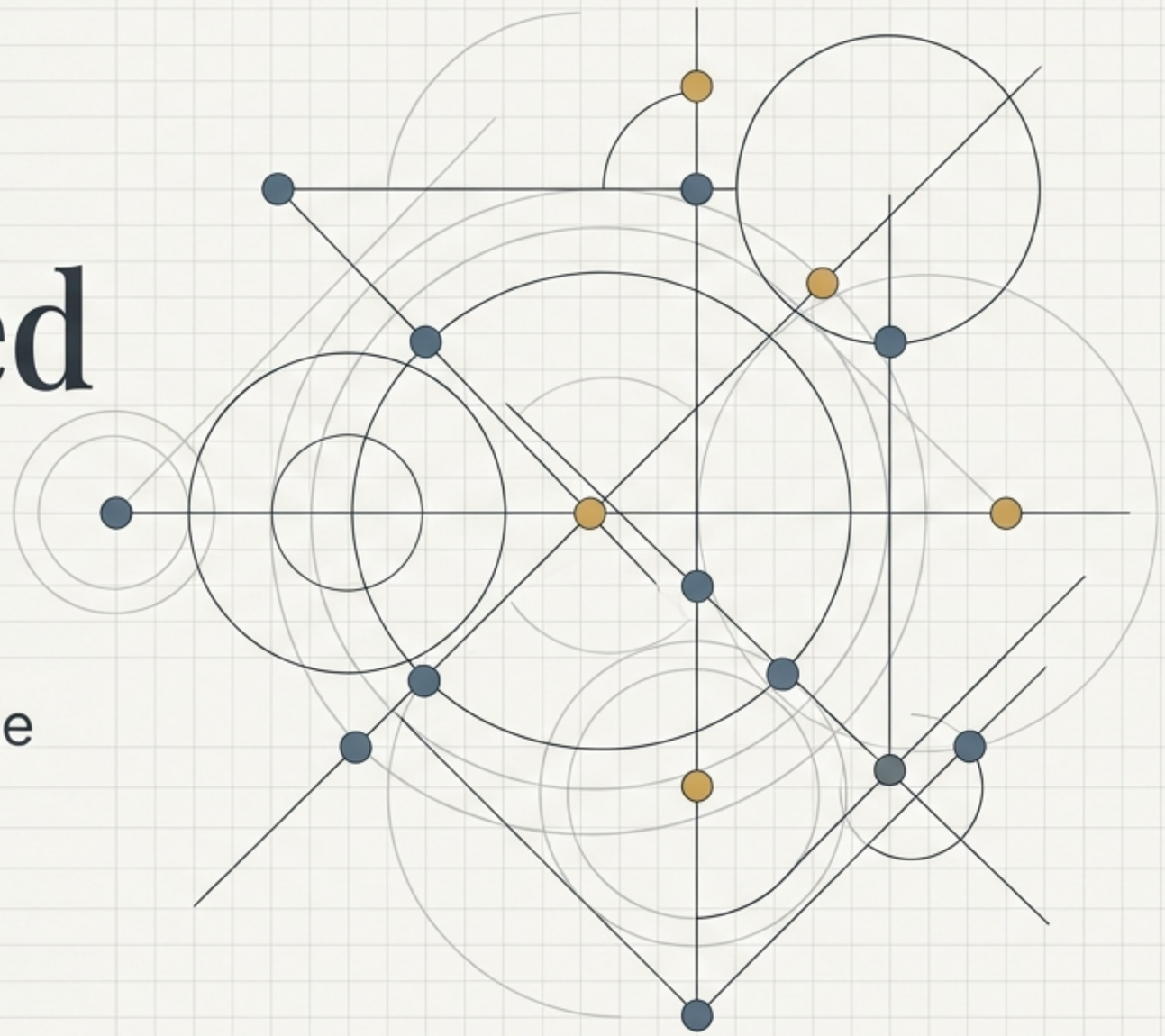
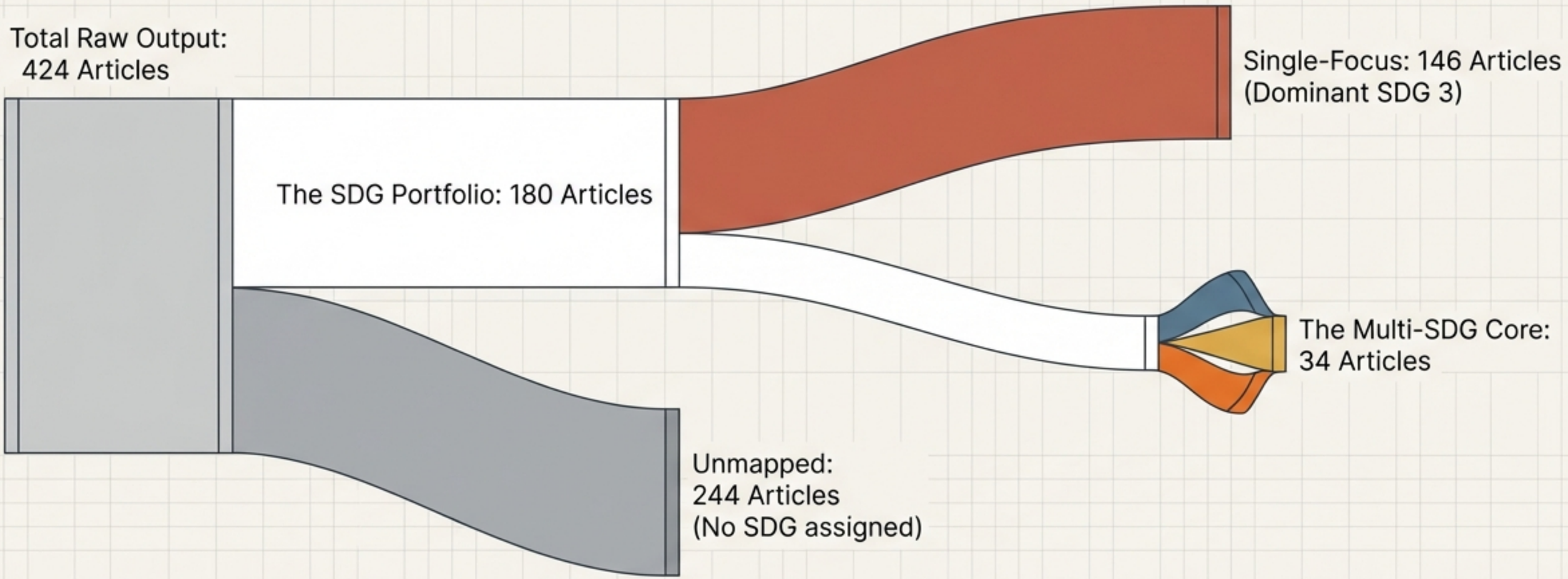
The Connected Blueprint

Revealing Delta University's Hidden Water-Energy-Tech Engine in 2023 SDG Research



NotebookLM

34 Papers Drive the Integrative Impact



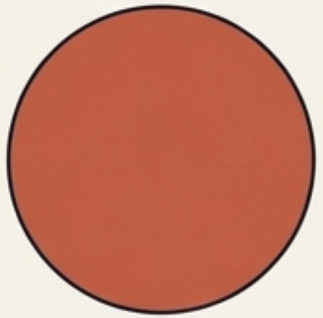
While 180 articles generated 229 total SDG assignments, the true cross-disciplinary impact resides within a concentrated core of just **34 multi-SDG publications.**

NotebookLM

The Tale of Two Portfolios: Volume vs. Integration

The Volume Engine (Single-Focus)

- **Dominant Field:** Medical and Health (48 single-SDG articles)
- **Gravitational Center:** SDG 3 (Good Health and Well-being) - 93 occurrences total
- **Strategic Profile:** High-volume, discipline-contained, single-issue focus



The Integration Engine (Multi-Focus)

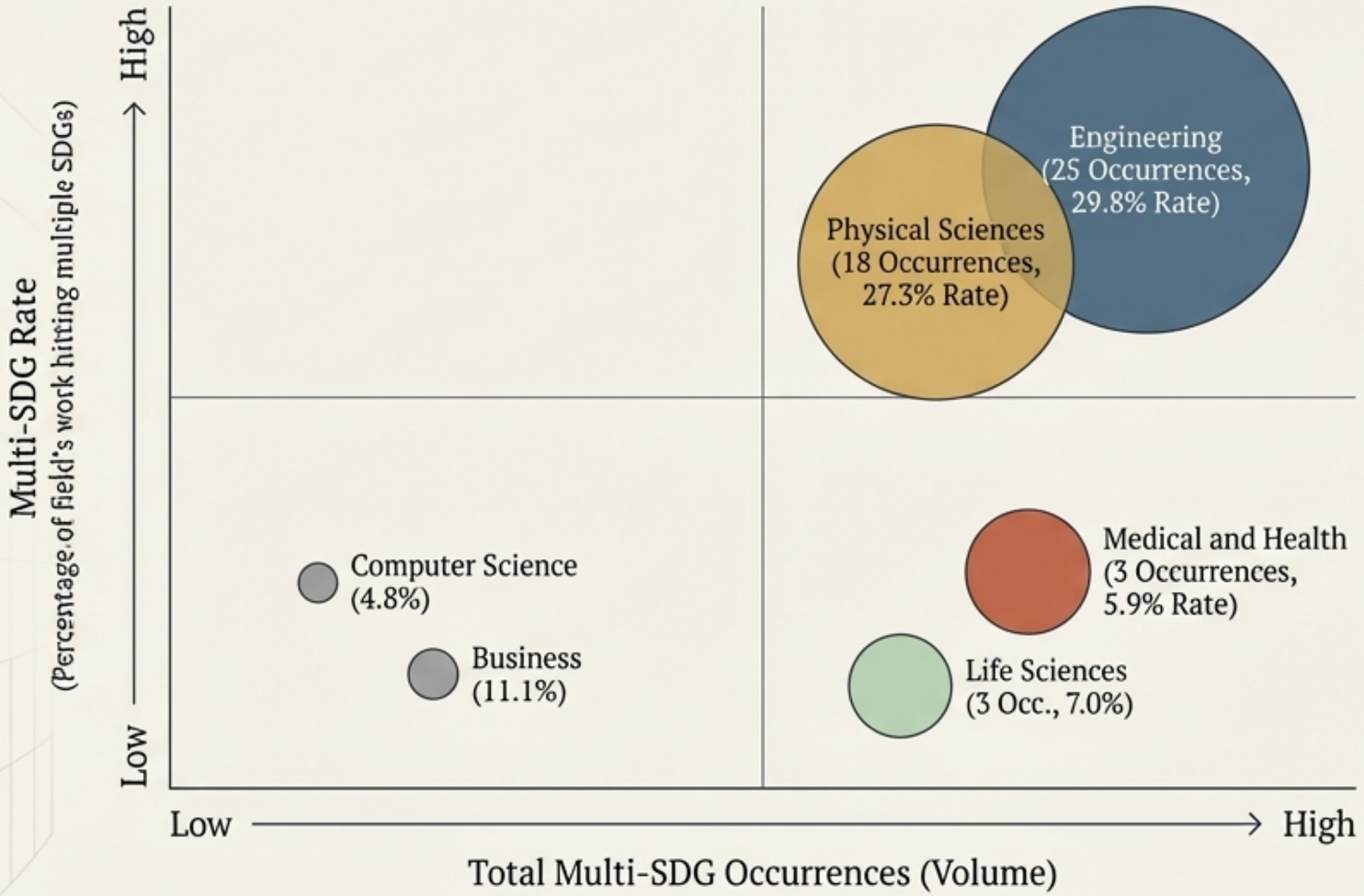
- **Dominant Fields:** Engineering (59 single, 25 multi) & Physical Sciences (48 single, 18 multi)
- **Gravitational Center:** The SDG 6 / 7 / 9 / 12 Nexus
- **Strategic Profile:** Highly integrative, technically applied, cross-cutting solutions



A superficial look at total counts suggests a health-focused institution. The multi-SDG data reveals a powerhouse in applied environmental and energy technology.

NotebookLM

The Times Higher Education (THE) Field Gravity Map



Together, Engineering and Physical Sciences account for 76.7% of all multi-SDG field occurrences.

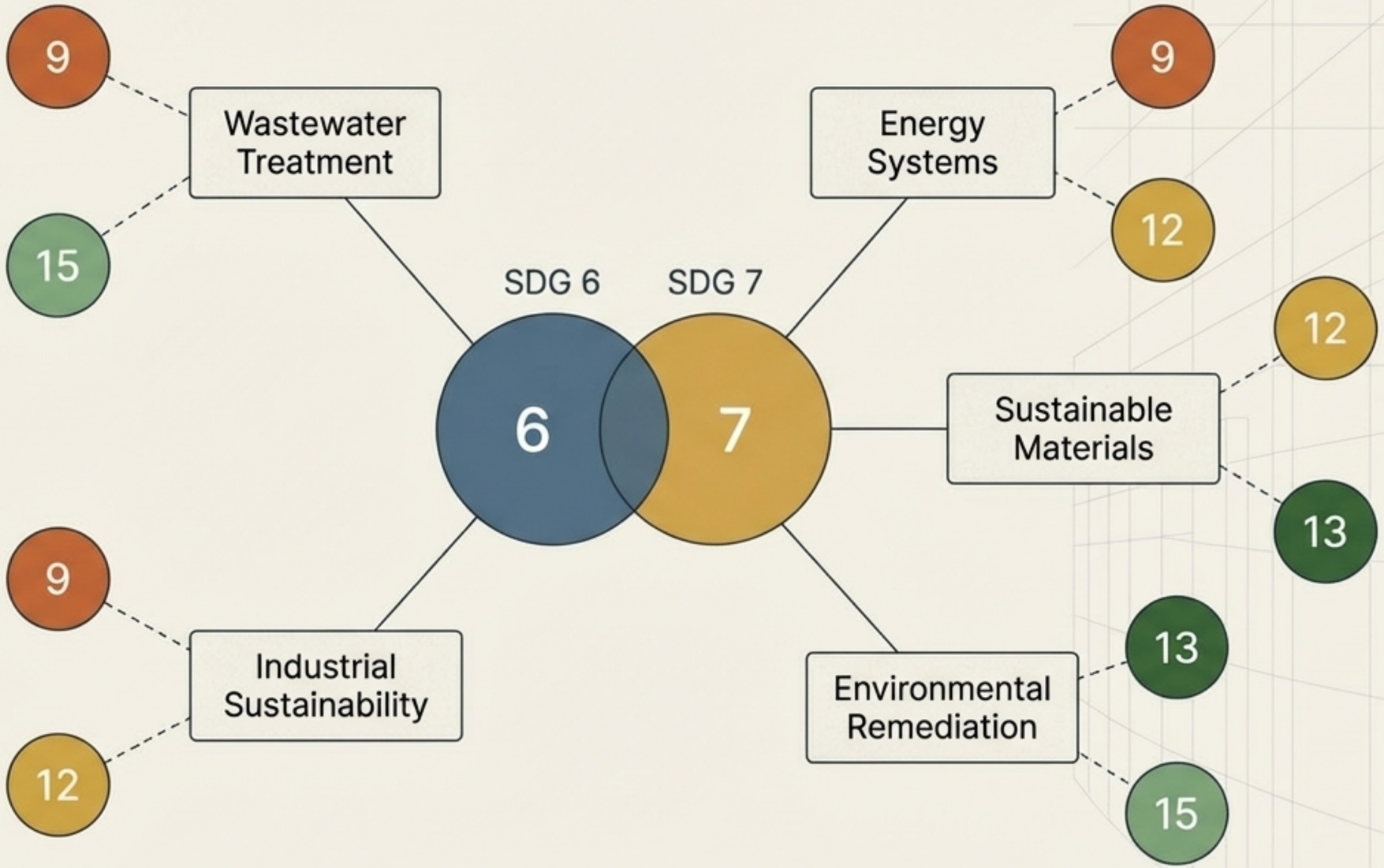
Note: Arts & Humanities/Social Sciences omitted due to insufficient volume (1 occurrence each).

NotebookLM

The Water-Energy-Tech Engine

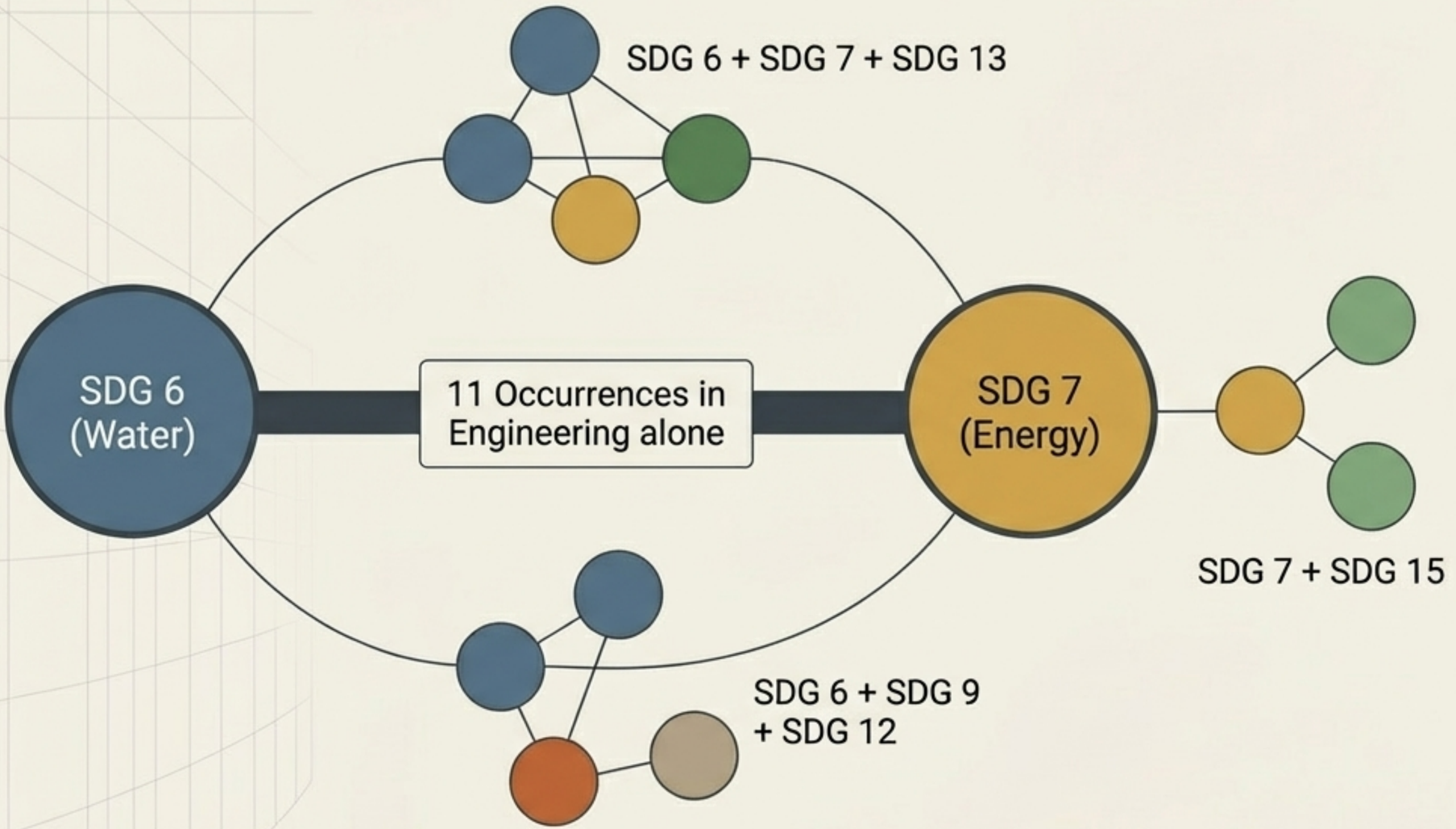
DU's multi-SDG research is not evenly distributed or randomly scattered.

It is a highly specific, repeatable phenomenon driven by technically applied research.



NotebookLM

The Nexus Network: SDG 6 + SDG 7



Engineering Profile

Dominated by SDG 7 (19 hits) and SDG 6 (17 hits).

Physical Sciences Profile

Dominated by SDG 6 (16 hits) and SDG 7 (15 hits), aligned with environmental chemistry.

NotebookLM

The Multi-SDG Exclusivity Grid

11 Topic Clusters (representing 14 articles) exist only in the multi-SDG set. They do not appear in any single-SDG work.

Corrosion Resistance and Magnesium Oxide in Concrete

81.818

4 SDGs: 12, 13, 14, 15



High-Performance Supercapacitors with Advanced Materials

97.973

4 SDGs: 7, 9, 11, 12



Integrated Energy Systems and Market Dynamics

95.749

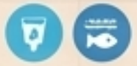
High Volume: 3 articles
3 SDGs: 7, 11, 15



Biogas, Biochar, and Microbial Fuel Cells

98.954

Water/Energy Core
2 SDGs: 6, 14



NotebookLM

Top 0.1% Global Prominence



Geopolymers: Sustainable Materials for Enhanced Concrete Performance (SDGs: 9, 12)



Metaheuristic Algorithms for Optimization Challenges (SDGs: 6, 7)



Innovative Solar Solutions for Water Desalination (SDGs: 6, 7)

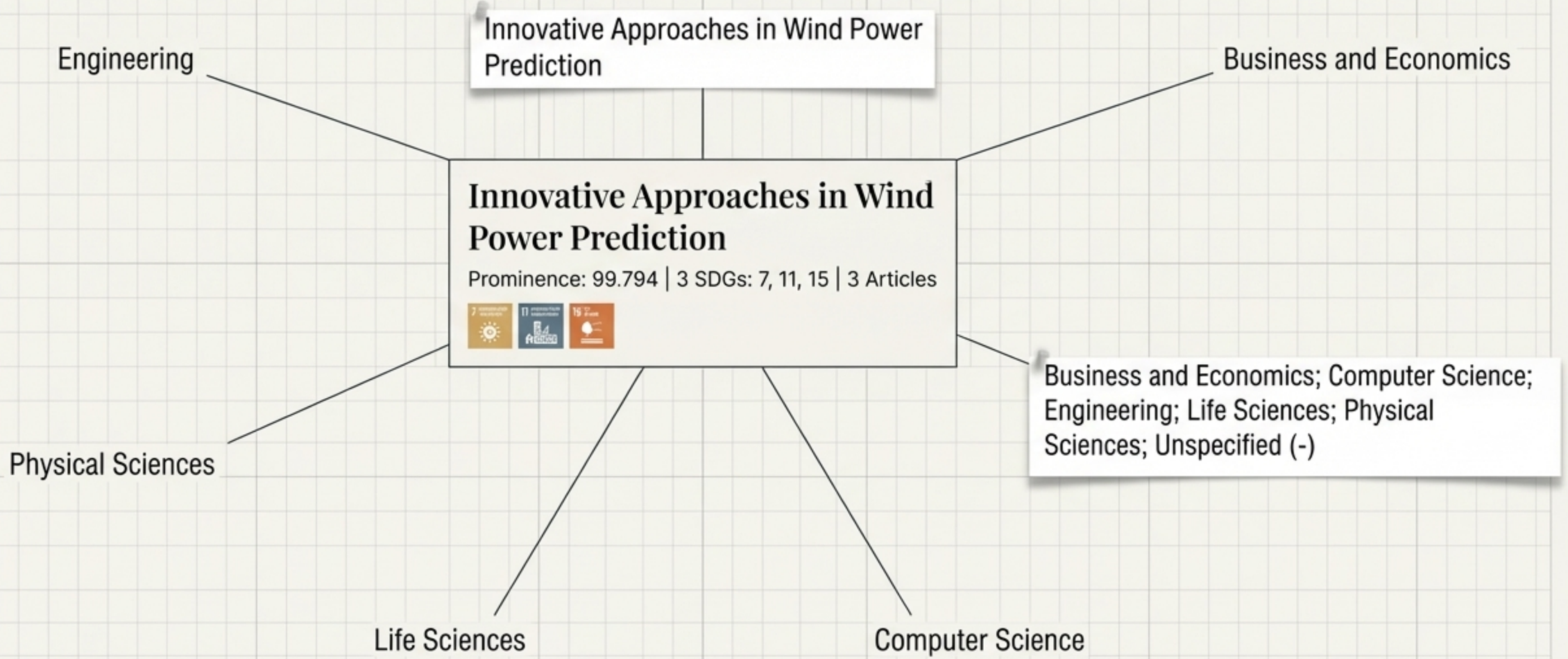


Sustainable Carbon Materials for Energy Storage and Conversion (SDGs: 7, 9, 11, 12)

The strongest multi-SDG topics are not just broad; they are globally elite fields centered on sustainable materials, renewable energy, and desalination.

NotebookLM

The Most Interdisciplinary Node



NotebookLM

The Tracking Blindspot: ‘Unspecified’ Fields

10 single-SDG and 3 multi-SDG articles are currently orphaned in the dataset without a valid THE field assignment, recorded simply as ‘Unspecified (-)’. High-value, highly interdisciplinary research is losing its

A. **Frameworks for Sustainable Building Assessment Tools** (4 SDGs, 91.489 Prominence)

Data label:
Unspecified (-) ——— Original topic text:
“Frameworks for Sustainable Building Assessment Tools”
(from <IMAGE 0>)

B. **Innovative Approaches in Reinforced Concrete and Composite Materials**

Data label:
Unspecified (-) ——— Original topic text:
“Innovative Approaches in Reinforced Concrete and Composite Materials”
(from <IMAGE 1>)

Actionable Fix: Update database routing to ensure all applied sustainability frameworks map correctly to Engineering or Physical Sciences.

NotebookLM

Redefining Delta University's Impact Narrative

1

Re-center the Narrative

While SDG 3 (Health) provides total volume, the university's strongest narrative for THE Impact Rankings lies in the 34 highly integrated Water-Energy-Tech papers.

2

Fund the Nexus

Resource allocation and strategic hiring should target the overlapping spaces between Engineering and Physical Sciences—specifically around sustainable materials, desalination, and renewable energy prediction.

3

Fix the Tracking

Resolve the 'Unspecified (-)' data gaps to ensure 100% of multi-SDG research correctly bolsters the university's institutional THE field scores.

DU's competitive advantage is not isolated excellence; it is the blueprint of integrated, applied sustainability.

NotebookLM