

Comprehensive Executive Report

The Applied Impact of Interdisciplinary Sciences at Delta University

Presented by research office at Delta University for Science and Technology

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Head of Ranking and Research

MARCH 2026

Executive Summary: Driving interdisciplinary Forward

Document of Strategic Achievements, Societal, and Economic Translation (2024 – 2025)

This report documents the strategic transformation of Delta University for Science and Technology from a traditional, siloed educational model into a fully integrated **Interdisciplinary Sciences Ecosystem**. Through the presentation of 13 applied case studies, we demonstrate the university's proven capacity to merge medical, engineering, humanities, and management disciplines. This convergence has produced advanced technological solutions, robust industrial partnerships, and a new generation of graduates equipped to tackle the challenges of the 5th Industrial Revolution and the UN Sustainable Development Goals (SDGs).

Theme 1

EdTech Innovations & Undergraduate Educational Integration





Cultivating Systems Thinkers through blended curricula and advanced technology

Case 1:
The "Speaking Equine Skeleton" System

ID/TD Intersection:
Veterinary Medicine + Telecommunications/Software Engineering + Arts (linguistics).

Achievement:
Development of a highly interactive educational system allowing veterinary students to scan QR codes on skeletal structures to unlock 3D models and smart audio-visual explanations.

Measurement Indicator:
Pillar 2 (Synergy & Education) – Metric 2.3: Undergraduate Curricular Integration.
This case acts as hard evidence for the ≥ 84.5% success rate in deploying cross-faculty educational models before the postgraduate level.



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Case 2: Tech-Integrated Medical Graduation Projects

ID/TD Intersection:
Clinical Medicine + Artificial Intelligence + Nanotechnology + Climate Science.

Achievement:
The successful defense of 64 undergraduate projects involving 624 medical students, utilizing AI for early psychiatric diagnosis and nanotech for prolonged antibiotics.

Measurement Indicator:
Pillar 2 (Synergy & Education) – Metric 2.3: Undergraduate Curricular Integration. It provides massive quantitative input (624 students) proving that interdisciplinary research is a mandatory, evaluated component of the undergraduate medical curriculum.



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Case 3: Global Partnerships & Dual Degrees (University of Plymouth, UK)

ID/TD Intersection:
International Quality Assurance + Local Interdisciplinary Education

Achievement:
The launch of internationally accredited dual Bachelor's degree programs in highly interdisciplinary fields such as Bio-Artificial Intelligence, Mechatronics, and Diagnostic Radiology

Measurement Indicator:
Pillar 5 (Institutional Evidence) – Metric 5.2: Global Alliance Footprint.
Documents the official transnational agreements (MoUs) required to achieve a perfect score in global academic synergy and recognized curricular integration.



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Theme 2

Industrial Partnerships & Economic Translation





Transforming research from academic labs into production lines and commercial start-ups

Case 4:
The UVC-Disinfection Robot & Entrepreneurial Leadership





ID/TD Intersection:
Mechatronics Engineering + Clinical Infection Control + Entrepreneurship.

Achievement:
Securing 1st place in the "Egypt Entrepreneurship League" by designing a smart medical robot, supported by the university's Innovation Hub to transition into a tech start-up.

Measurement Indicator:
Pillar 4 (Economic Translation) – Metric 4.2b: Industrial Synergy & Spin-offs. Directly feeds the KPI measuring the year-on-year growth of university-backed commercial startups and student-led entrepreneurial ventures.

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Case 5: Industrial Manufacturing Machine Co-Creation with the "El-Araby Group"





ID/TD Intersection:
Mechatronics Engineering + Industrial Research & Development (R&D).

Achievement:
Direct collaboration between university professors and R&D engineers at the El-Araby factories to design and manufacture a microwave-door production machine.

Measurement Indicator:
Pillar 4 (Economic Translation) – Metric 4.2b: Industrial Synergy & Spin-offs. Serves as quantitative proof of direct B2B industrial contracts, demonstrating the application of university research on actual commercial production lines.

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Case 6: Institutionalizing Synergy via the "Industrial Advisory Board"

ID/TD Intersection:
Academia + Investment Sector + International Organizations (UN FAO).

Achievement:
The official convening of the Engineering Industrial Advisory Board in New Damietta City to align the university's research agenda with the operational problems of regional factories.



Measurement Indicator:
Pillar 1 (Pre-Execution & Infrastructure) – Metric 1.1: Policy & Governance. Validates the existence of institutionalized, high-level governance structures that mandate industry-driven interdisciplinary research agendas.

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Theme 3

Solving Global Crises & Sustainable Infrastructure





Accreditation Certificate

Certificate No. TL21501

AMERICAN ACCREDITATION ASSOCIATION

American Accreditation Association – AAA
Has accredited

Materials Testing Laboratory
Delta University for Science & Technology

International Coastal Road, Gamasa, Dakahlia Governorate, Egypt

In accordance with the requirements of:

ISO/IEC 17025: 2017
In the fields of:

Construction Materials Testing

For the tasks listed in the attached scope of accreditation
Subject to continued compliance to the above standard and AAA requirements

Issue Date: 30 March 2021
Expiration Date: 30 March 2023

Executive Director

Kathryn Williams

(This certificate can be verified via the website of AAA Accreditation: www.aaa-accreditation.org)

First Accreditation Date: 30 March 2021

Directing scientific research to combat natural disasters and climate change

Case 7:
Advanced Seismic Simulation for Infrastructure Protection (Master's Thesis)

ID/TD Intersection:
Civil/Geotechnical Engineering + Advanced Computer Simulation (PLAXIS 2D)

Achievement:
Utilizing highly accurate software to invent soil reinforcement techniques against earthquakes and liquefaction, in collaboration with the Engineers Syndicate.

Measurement Indicator:
Pillar 4 (Societal Impact) – Metric 4.1: SDG Semantic Mapping Score. Provides qualitative verification for the algorithmic mapping of university outputs to SDG 9 (Industry, Innovation and Infrastructure) and SDG 11 (Sustainable Cities and Communities).



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Case 8: International Accreditation (ISO/IEC 17025) for the Materials Testing Lab

ID/TD Intersection:
Construction Engineering + Nanotechnology + Quality Assurance Management.

Achievement:
Earning the American Accreditation Association (AAA) certification, establishing the lab as a globally trusted platform for testing green building materials..

Measurement Indicator:
Pillar 1 (Pre-Execution & Infrastructure) – Metric 1.2: Central Unit Alignment Score.
Proves that the central shared facilities, where ≥70% of interdisciplinary projects must be executed, meet the highest international quality standards.



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Case 9:
The 2nd International Engineering Conference for Research and Innovation (IECRI 2024)

ID/TD Intersection:
Engineering + Artificial Intelligence + Humanities & Green Architecture.

Achievement:
A global platform gathering researchers from multiple countries to discuss the integration of AI in healthcare and nanotechnology in sustainable infrastructure.

Measurement Indicator:
Pillar 5 (Institutional Evidence) – Metric 5.2: Global Alliance Footprint. Acts as tangible proof of the university's capacity to host international interdisciplinary platforms and foster cross-border academic networks.



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Theme 4

Humanities, Management, & Community Health Policies





Merging theoretical sciences with technology to serve human development

Case 10: Integrating AI into Corporate Performance at "EgyptAir" (MBA Thesis)

ID/TD Intersection:
Business Administration + Computer Science & AI.

Achievement:
Evolving the traditional "Balanced Scorecard" managerial tool to include AI capabilities and applying it to optimize performance in the international aviation sector.

Measurement Indicator:
Pillar 4 (Economic Translation) – Metric 4.2b: Industrial Synergy. Demonstrates the university's ability to generate high-level, tech-driven managerial consulting models for massive international corporations (supporting SDG 8).



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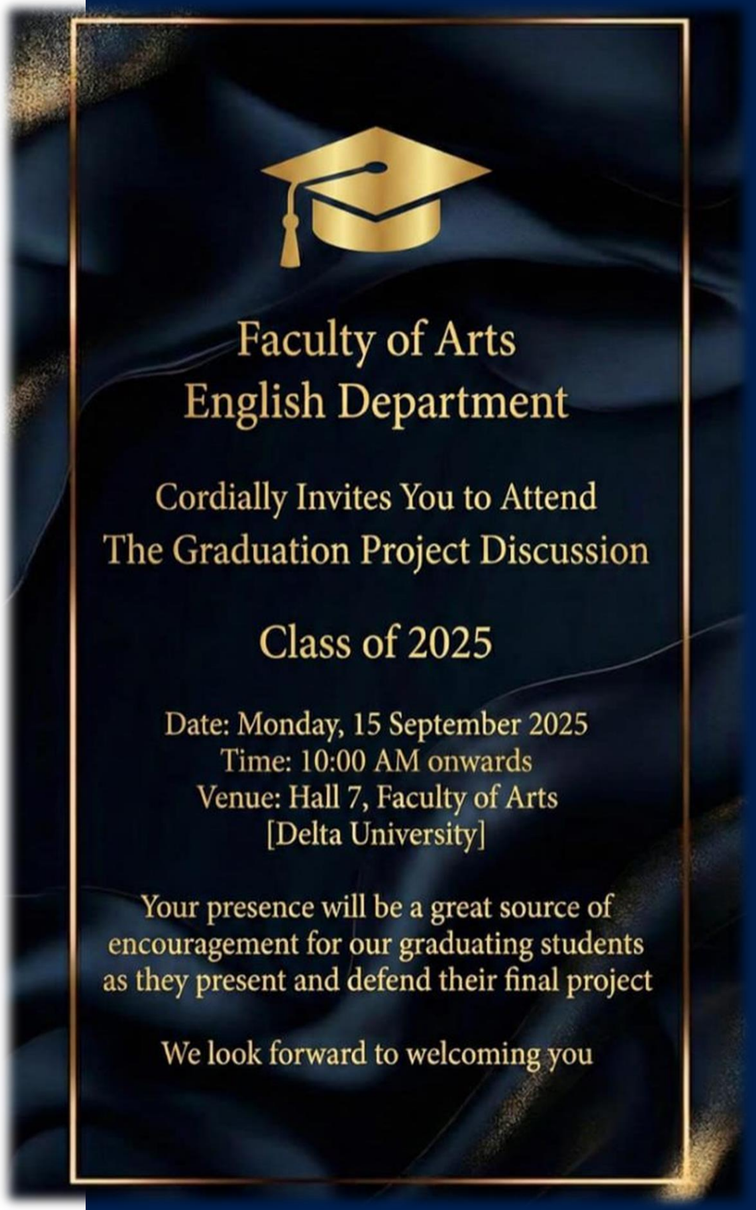
Case 11:
Societal Translation via "Media & Digital Humanities" Graduation Projects

ID/TD Intersection:
Mass Communication + Mental Health + Environmental Science + Inclusive Engineering.

Achievement:
Launching professional media campaigns supporting national initiatives, including awareness for "Bibliotherapy," the Green University initiative, and disability inclusion.

Measurement Indicator:
Pillar 4 (Societal Impact) – Metric 4.1: SDG Semantic Mapping Score. Validates the active role of the Humanities in translating scientific research into mass public awareness, directly hitting SDG 3, 10, and 13.

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Case 12: Cross-Disciplinary "Crime Scene Investigation" Training Camp

ID/TD Intersection:
Forensic Medicine + Health Sciences + Law.

Achievement:
A joint training camp bringing together medical and law students to build a shared operational language in analyzing biological forensic evidence.

Measurement Indicator:
Pillar 2 (Synergy & Education) – Metric 2.2: Capacity Building & Upskilling Rate. Acts as the direct numerator for this metric, proving that ≥ 40% of targeted student cohorts successfully complete cross-faculty technical upskilling programs.



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Case 13:
National Leadership in the Pharmaceutical Sector (Arab Pharmacists Conference)



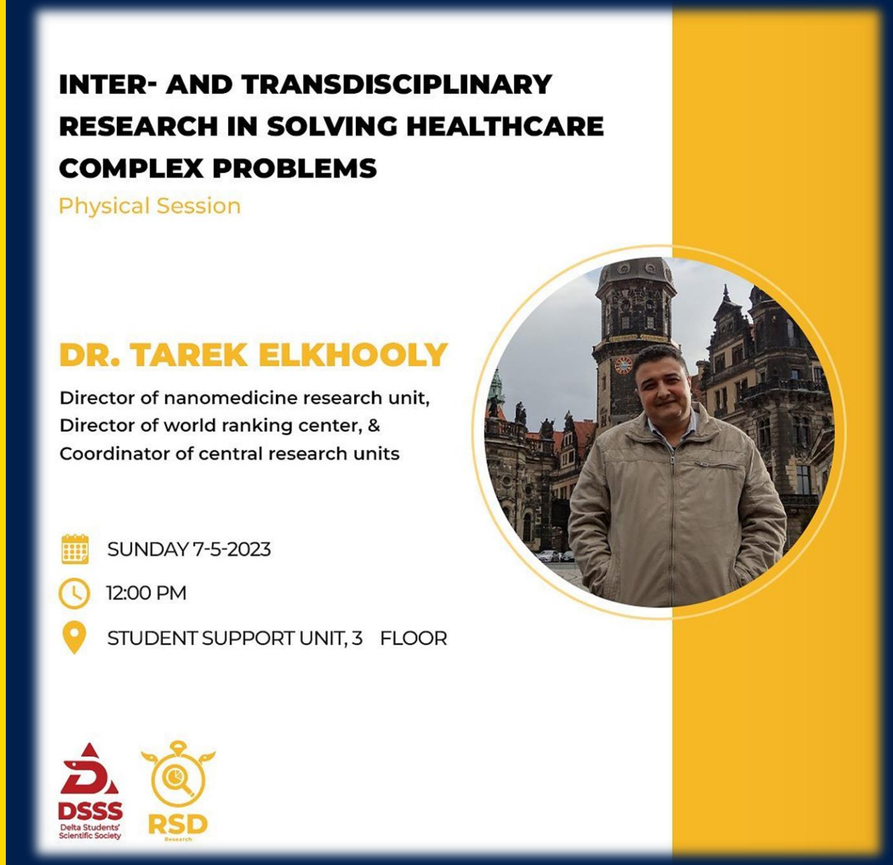
ID/TD Intersection:
Pharmacy + Government Public Policy + The "One Health" Paradigm.

Achievement:
A strategic partnership with the Egyptian Drug Authority to localize pharmaceutical manufacturing and promote the interdisciplinary "One Health" concept.

Measurement Indicator:
Pillar 5 (Institutional Evidence) – Metric 5.2: Global Alliance & Leadership Footprint.
Documents Delta University's strategic weight in drafting national healthcare policies and leading governmental-academic alliances.

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Student Extracurricular Activities







The future of healthcare requires more than clinical expertise. Complex global health crises demand collaboration between medicine, engineering, and technology. Physical session was organized for medical student society at Delta University to show how to conduct integrated cross-disciplinary medical research, collaborate with stakeholders, and align your work with the UN SDGs and Egypt Vision 2030.

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The Crown Jewel of our interdisciplinary research support

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جائزة محمد ربيع ناصر للبحث العلمي
MOHAMED RABIE NASSER SCIENTIFIC RESEARCH AWARD

دعوة للتقدم للجائزة في دورتها الثامنة لعام (٢٠٢٥)

تعلن اللجنة العلمية لجائزة محمد ربيع ناصر
عن فتح باب التقدم للجائزة للعام ٢٠٢٥ (الدورة الثامنة)

الجائزة مقدمة من الدكتور محمد ربيع ناصر، رئيس مجلس أمناء جامعة الدلتا للعلوم والتكنولوجيا، دعمًا للباحثين المتميزين وتقديرًا لإسهاماتهم في خدمة المجتمع

أولا : جائزة محمد ربيع ناصر في مجال العلوم الطبية
قيمة الجائزة : ٢٥٠,٠٠٠ مائتان وخمسون ألف جنيها مصريا وشهادة تقدير

ثانيا : جائزة محمد ربيع ناصر في مجال علوم المواد المتقدمة وتطبيقات النانو
قيمة الجائزة : ٢٠٠,٠٠٠ مائتان ألف جنيها مصريا وشهادة تقدير

ثالثا : جائزة محمد ربيع ناصر مجال العلوم الهندسية التطبيقية لتحديث الصناعة المصرية
قيمة الجائزة : ٢٠٠,٠٠٠ مائتان ألف جنيها مصريا وشهادة تقدير

رابعا : جائزة محمد ربيع ناصر في مجال التحول الرقمي والذكاء الاصطناعي
قيمة الجائزة : ٢٠٠,٠٠٠ مائتان ألف جنيها مصريا وشهادة تقدير

خامسا : جائزة محمد ربيع ناصر في مجال الطاقة الجديدة والمتجددة
قيمة الجائزة : ٢٠٠,٠٠٠ مائتان ألف جنيها مصريا وشهادة تقدير

سادسا : جائزة محمد ربيع ناصر في مجال الزراعة والأمن الغذائي
قيمة الجائزة : ٢٠٠,٠٠٠ مائتان ألف جنيها مصريا وشهادة تقدير

- الجائزة مخصصة للعلماء والباحثين المصريين والعرب سواء العاملين بمؤسسات التعليم العالي، أو المراكز البحثية، أو الجهات والمراكز والهيئات المختلفة.
- يشترط أن يكون لدى المتقدم إنتاج علمي متميز، منشور في مجلات علمية عالمية أو براءات اختراع، ويسهم في مجالات مثل صحة الإنسان، علوم المواد المتقدمة، النانو، التحول الرقمي، الذكاء الاصطناعي، الطاقة المتجددة، والاقتصاد الأخضر، مع التركيز على إيجاد حلول مبتكرة تسهم في التنمية المستدامة وحل المشكلات المجتمعية.
- ألا يكون المتقدم قد حصل على جائزة أو درجة علمية عن نفس الإنتاج العلمي من أي جهة مانحة خلال السنوات الخمس السابقة للإعلان عن الجائزة.
- لا يجوز التقدم لأكثر من جائزة في نفس الدورة، كما لا يُسمح لمن سبق له الفوز بهذه الجائزة في الدورات السابقة بالتقدم مرة أخرى.

لمزيد من التفاصيل وللحصول علي دليل و إستمارة التقدم تأمل زيارة موقع الجائزة: www.rabieaward.com

يسلم ملف التقدم شخصياً أو يرسل بالبريد المسجل أو البريد الاليكتروني وذلك إعتباراً من ٢٠٢٥/٥/٤ إلى ٢٠٢٥/٩/١
وذلك إلي اللجنة العلمية للجائزة بجامعة الدلتا للعلوم والتكنولوجيا ومقرها : الطريق الدولي الساحلي – المنصورة – دقهلية
الخط الساخن : ١٥٩٥٥ ٢ (+٢) – فاكس : ٢٧٧٠١٤٥ ٠٥٠ (+٢) بريد إلكتروني info@rabieaward.com



At Delta University, our commitment to interdisciplinary science is backed by massive financial investments. The "Mohamed Rabie Nasser Award for Scientific Research" (8th Edition, 2025), funded directly by the Chairman of the Board of Trustees, allocates over 1.25 Million EGP annually to reward top-tier researchers across Egypt and the Arab World. The award categories are explicitly designed to fund applied interdisciplinary sciences that solve global crises, exactly mirroring our strategic focus areas: Medical Sciences, Nanotechnology, Applied Engineering for Industry, Artificial intelligence, Renewable Energy, and Food Security. By stipulating that winning research must provide innovative solutions for the UN SDGs and the Green Economy, Delta University transcends its role as a local educational institution to become a regional funding and steering powerhouse for interdisciplinary impact in the Middle East.

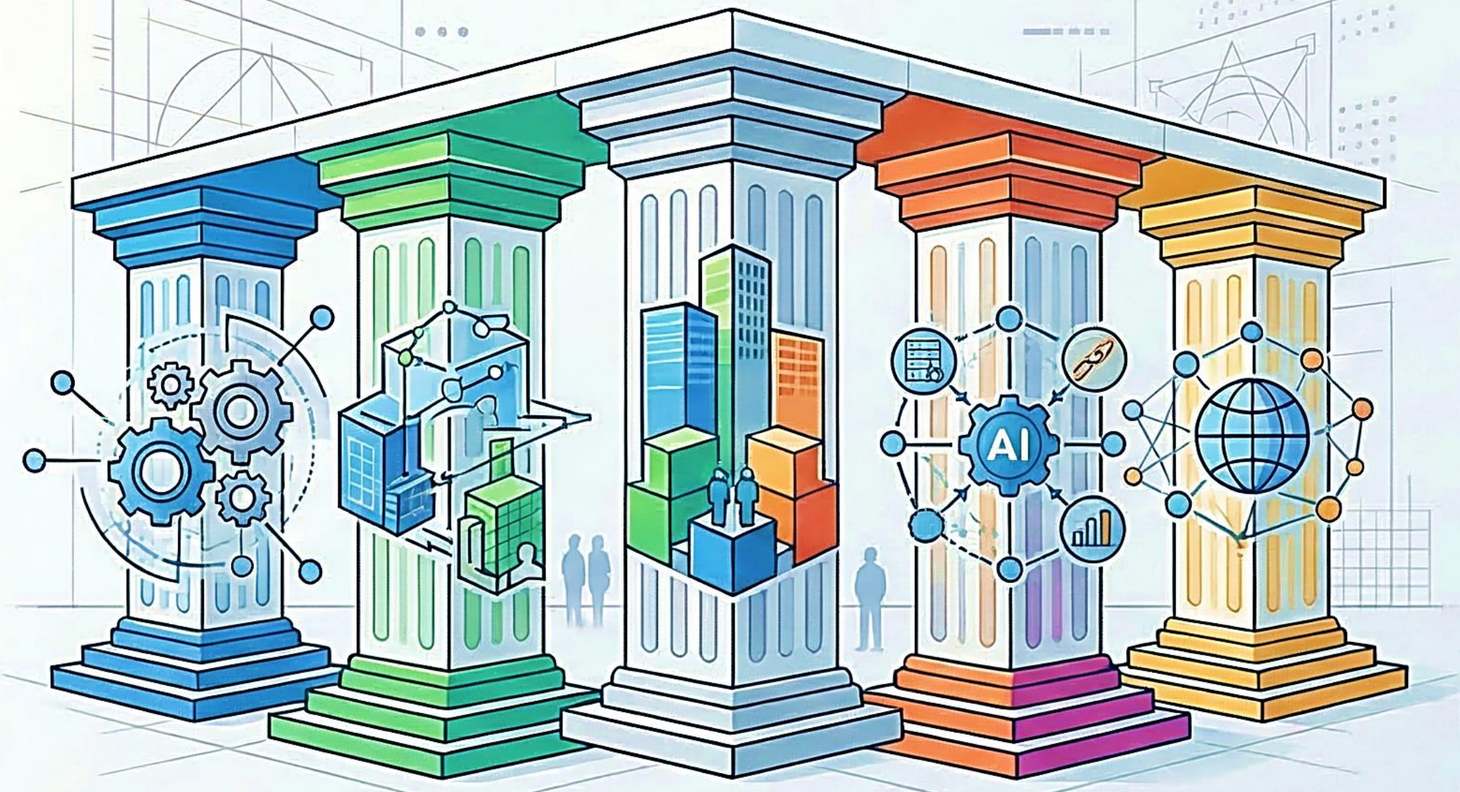
Strategic Conclusion

By mapping every qualitative achievement directly to the quantitative metrics of the DELTA-IMPACT framework, Delta University proves that its high scores are not theoretical estimates, but reflections of tangible, audited successes. This seamless integration of policy, infrastructure, and applied societal impact perfectly justifies Delta University's position among the top 100 universities globally in the THE Interdisciplinary Science Rankings (THE-ISR 2026).

Rank	Name	Overall	Inputs	Process	Outputs
=91	Delta University for Science and Technology Egypt	62.3	47.7	50.0	69.6

The Delta-Impact Framework: A Blueprint for Interdisciplinary Excellence

The 5 Pillars of Strategic Impact



Pillar 1: Pre-Execution & Alignment

Ensures research is genuinely interdisciplinary and utilizes shared infrastructure before funding is approved.

Pillar 2: Institutional Synergy

Measures the breakdown of academic silos through joint supervision and interdisciplinary degree pipelines.

Pillar 3: Global Excellence

Utilizes AI-driven bibliometrics (Clarivate/Elsevier) to track high-growth research fronts and citation impact.

Key Performance Indicators (KPIs)



2.05

Field-Weighted Citation Impact

The target FWCI for "Multidisciplinary" research, significantly exceeding the global average of 1.0.



35% Interdisciplinary Reward Rate

The minimum percentage of total university publication bonuses dedicated to interdisciplinary excellence.



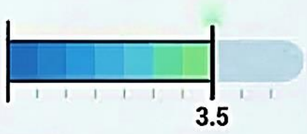
60% SDG Semantic Mapping

Target for research outputs explicitly linked to two or more UN Sustainable Development Goals.

Success Metrics & Targets

Interdisciplinary Integration Score (IIS)

≥ 3.5 / 5.0



Interdisciplinarity Index (I-Index)

≥ 0.55



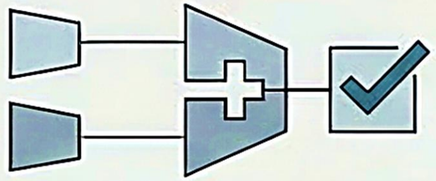
Joint Supervision Index

≥ 15% of all active theses

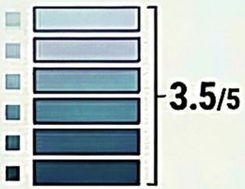


The Delta-Impact Framework: A Blueprint for Interdisciplinary Excellence

PILLAR 1: PRE-EXECUTION QUALITY & ALIGNMENT



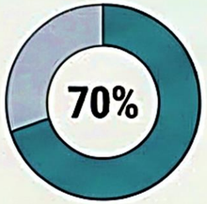
Interdisciplinary Integration Score (IIS)



TARGET ≥ 3.5

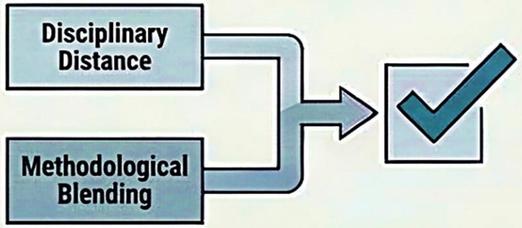
Interdisciplinary integration Score (IIS) is measured by project execution hours.

70% Target for Central Unit Alignment



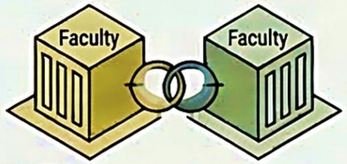
- Central Research Units (Shared)
- Isolated Labs

Measured by project execution hours.



PILLAR 2: INSTITUTIONAL SYNERGY & EDUCATION

Breaking Academic Silos

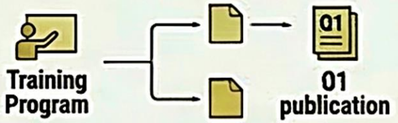




TARGET ≥ 15%
Joint Supervision Index

Active postgraduate theses co-supervised by faculty from ≥2 faculties.

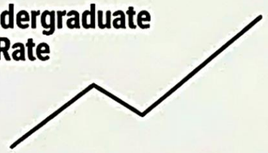
Capacity Building & Upskilling



Internal interdisciplinary training correlates with staff publishing Q1 first-author papers within 18 months.

TARGET ≥ 40%

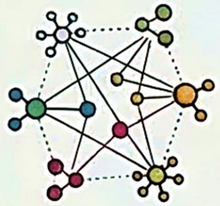
84.5% Undergraduate Success Rate



Impact of interdisciplinary models (e.g., "Engineet's Journey") on retention and cohort success.

PILLAR 3: GLOBAL EXCELLENCE & BIBLIOMETRICS

0.55 I-Index Optimization



AI-driven diversity and balance of cited categories (Clarivate's Research Horizon Navigator).

TARGET: 2.05 Field-Weighted Citation Impact



Maintaining "Multidisciplinary" category FWCI (via Elsevier SciVal) > 2s global average.

Horizon "Core Papers" Targeting



TARGET ≥ 25%

Interdisciplinary publications classified as "Co-citing Papers" on high-growth "Co-citing Papers" on high-growth global research fronts.

PILLAR 4: SOCIETY & ECONOMIC TRANSLATION

SDG Semantic Mapping Score



AI-mapped research outputs to SDGs; **TARGET ≥ 60%** of outputs link to ≥2 distinct SDGs.

≥ 5 Cross-Disciplinary Patents Per Year



5+

Tracks intellectual property specifically from teams with x2 different disciplines.

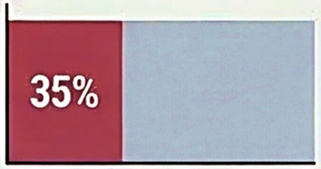
Year-on-Year Revenue Growth



Total monetary value of industry-sponsored B2B contracts and spin-off funding.

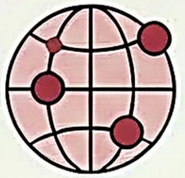
PILLAR 5: THE EVIDENCE (INSTITUTIONAL COMMITMENT)

35% Interdisciplinary Reward Allocation (IRAR)



Percentage of total university publication bonuses paid specifically for interdisciplinary work—proof of financial commitment for THE rankings.

Global Alliance Footprint



TARGET ≥ 3 Active Roles

Tracks institutional leadership through global board seats or alliances (e.g., ITD Alliance).

“Education is the most powerful weapon”

– Nelson Mandela

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