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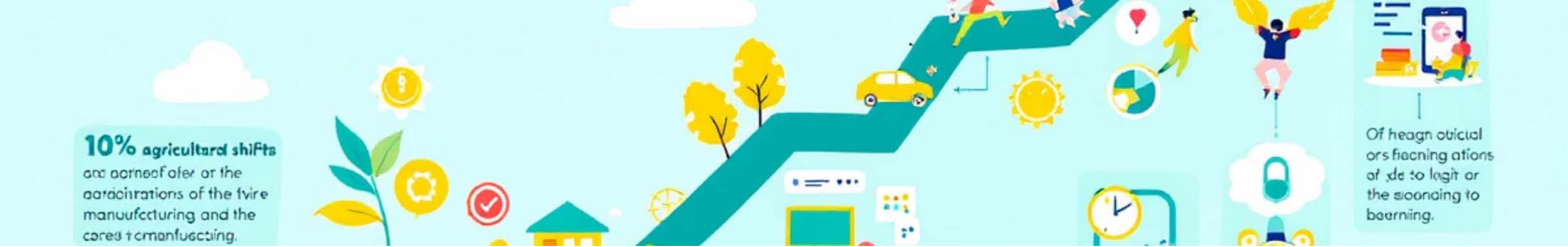
Ha Noi, 21.11.2025

Viet Nam's Roadmap for Science, Technology, Innovation and Digital Transformation Breakthroughs

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10% agricultural shifts and a corresponding increase in the contributions of the private manufacturing and the core ICT manufacturing.

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Vietnam's Development Journey Through GDP Growth

1 Historical Context

Since the 1986 "Đổi Mới" reforms, **Vietnam's GDP per capita rose from \$95 in 1990 to \$3,700+ in 2022.**

The economy **shifted from agriculture (40% of GDP in 1986) to manufacturing (30%+ today)** and emerging digital services, showing clear links between policy reforms and economic growth.

2 GDP Indicators

Vietnam has **sustained 6-7% annual GDP growth for over two decades**, with peaks of 7.2% (2004), 7.1% (2018), and 8.0% (2022).

These surges followed **key S&T policies**: the 2000 Science and Technology Law, 2017 Industry 4.0 Initiative, and 2021 National Digital Transformation Program, boosting manufacturing and digital services.

3 Innovation Milestones

Vietnam's economic leaps align with specific breakthroughs: the 2000-2010 telecom boom (mobile penetration from 1% to 80%), 2010-2020 manufacturing revolution (\$20B+ investments from FDI), and current digital transformation with 55,000+ IT firms and growing software exports (\$5.5B in 2022).

Vietnam's Current International Rankings

120

GDP per Capita

Vietnam's global ranking

0.5%

R&D Investment

Of GDP, one-third of world average

44

Global Innovation

GII ranking in 2024

18.3%

Digital Economy

Contribution to GDP

Existing Challenges in S&T, Innovation and Digital Transformation



Institutional Bottlenecks

Legal frameworks, mechanisms, and policies remain the bottleneck of bottlenecks, failing to unleash resources, particularly in administrative procedures and accepting new innovations.



Research Limitations

Research and application lack breakthrough progress, with low S&T spending and significant gaps compared to developed nations in mastering strategic technologies.



Human Resources

Shortage of high-quality human resources and talent, with insufficient synchronised infrastructure and ongoing information security challenges.



Awareness Gaps

Incomplete understanding across all levels, sectors, and citizens regarding S&T, innovation, and digital transformation importance and implementation.



The Necessity for Breakthrough Development



The Party and State Guidance Direction

1 Resolution 57 Foundation

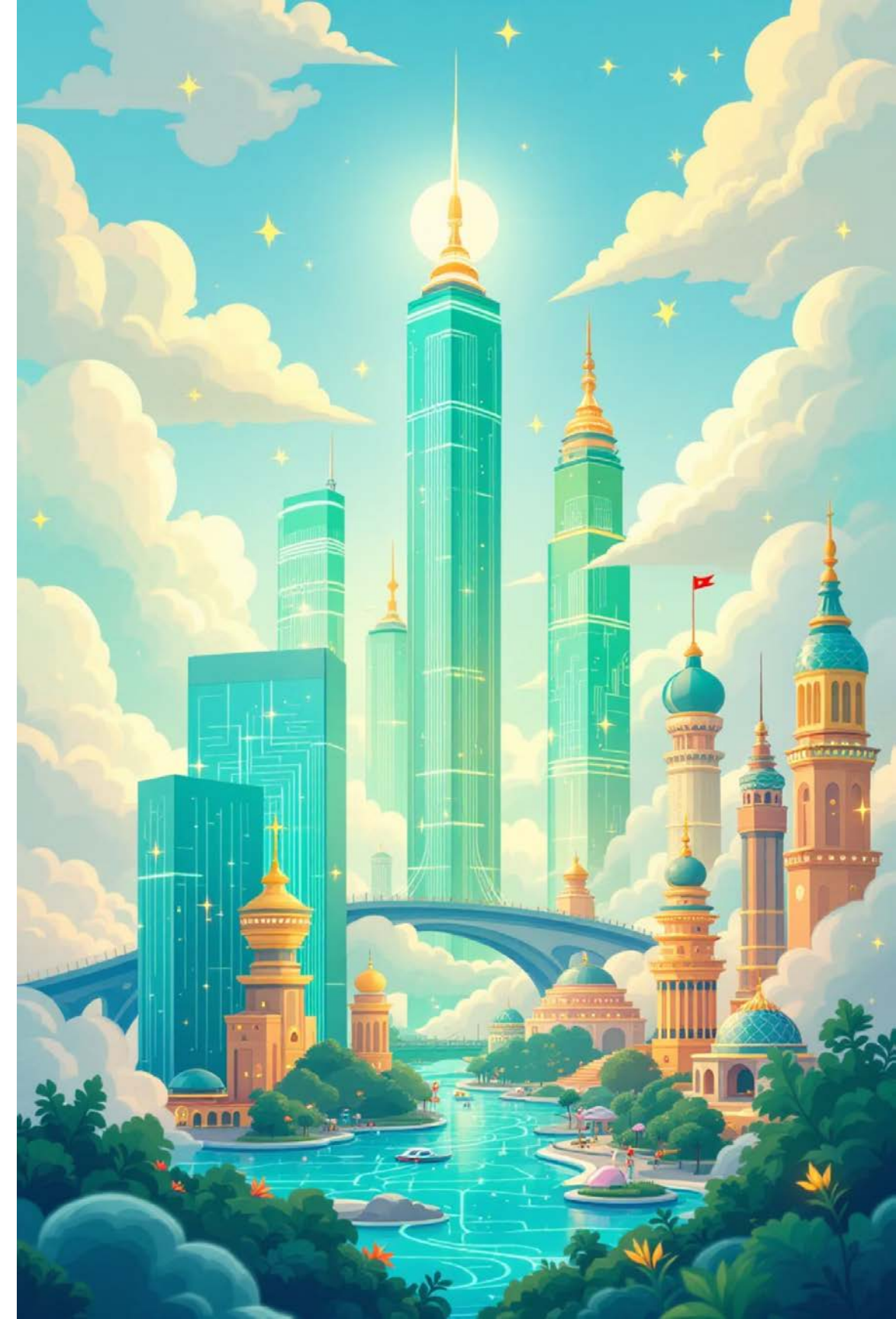
Core guidance from Party and State on S&T, innovation, and digital transformation development framework and principles.

2 Advanced Standards

Vietnam's S&T, innovation, and digital transformation must reach world-class advanced levels through systematic development.

3 Economic Contribution

Target contribution of over 50% to economic growth through integrated S&T, innovation, and digital transformation initiatives.



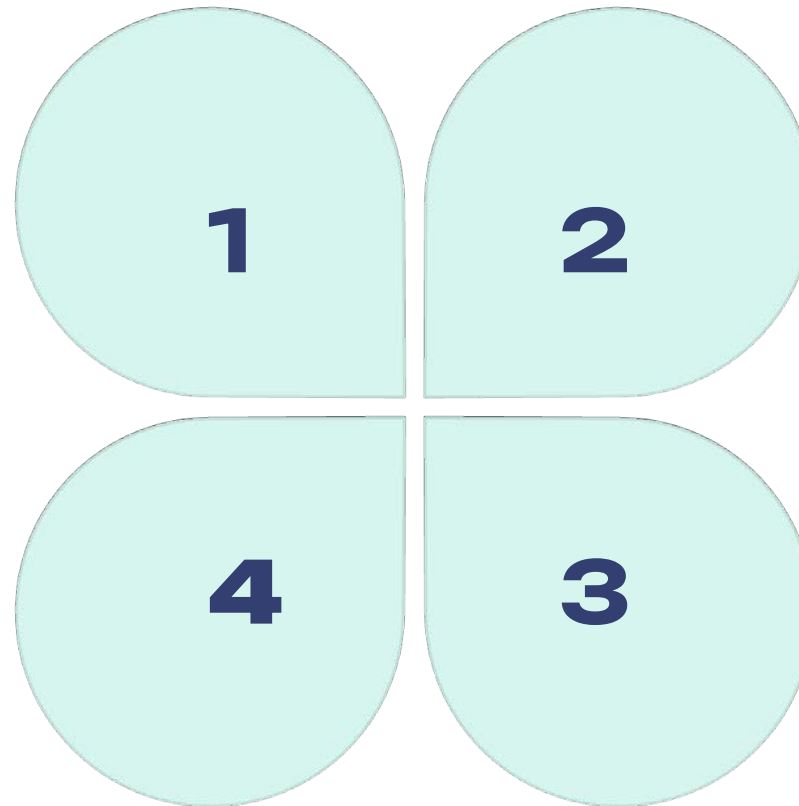
The Trinity: Science & Technology, Innovation, and Digital Transformation

Science & Technology Foundation

Creates knowledge and new tools through basic research and technology development, forming the fundamental base for advancement.

Strategic Integration

Vietnam pioneers the integrated approach, with fewer than 5% of countries recognising the importance of unifying these three elements into one ecosystem.



Innovation Process

Transforms knowledge and technology into practical products, services, processes, and models with real-world value through creative application.

Digital Environment

Creates favourable digital environments that accelerate S&T and innovation development whilst enabling rapid dissemination of new products into daily life.

Viet Nam's Strategic Opportunities

Despite the challenges, Viet Nam possesses significant opportunities that position us well for the breakthrough development. Our unique advantages create a strong foundation for sustainable development.



Strong Political Will

Consistent leadership direction and broad societal consensus provide stable foundation for long-term STID strategy implementation and sustained investment.



Strong Domestic Market

With nearly 100 million people, Viet Nam offers immense demand for STID applications across sectors, creating natural testing grounds and scaling opportunities.



International Cooperation

Viet Nam actively seeks collaboration with global partners, experts, and organizations to accelerate learning and joint development initiatives.



Young Dynamic Workforce

Our younger generation excels in mathematics and technology, providing solid foundation for developing world-class STID talent and innovation capacity.



VIET NAM NEW WAY:
Making Breakthroughs in
S.T.I.D.

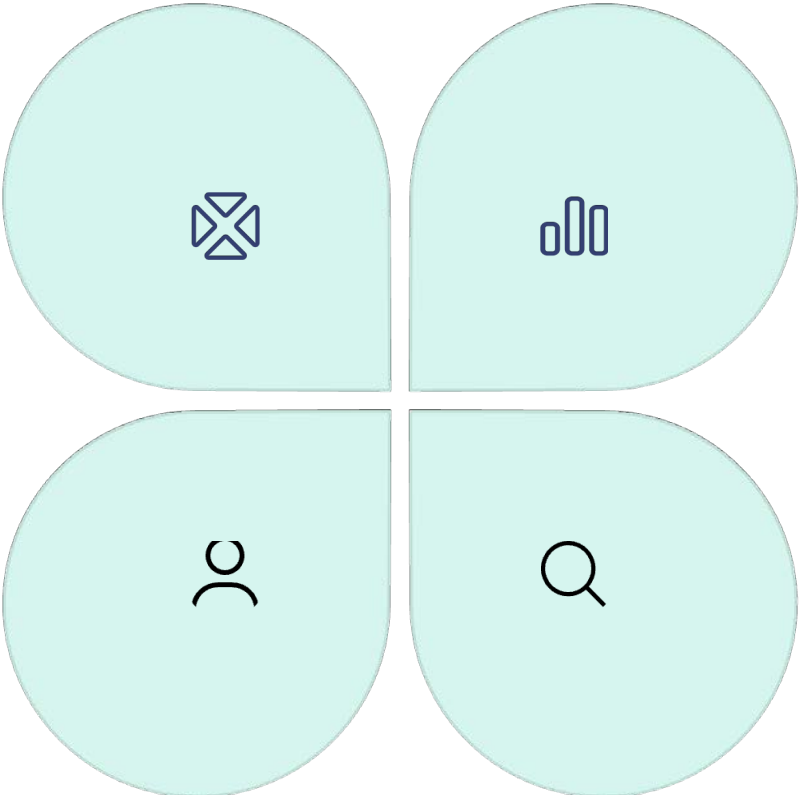
Results-Oriented and Measurable Development

Ultimate Goals

Development must aim for enhanced competitiveness, economic growth contribution, and improved quality of life for citizens.

Effectiveness Criteria

Ministry of Science and Technology will issue comprehensive criteria for evaluating S&T, innovation, and digital transformation effectiveness.



Measurement Systems

Must measure contribution to economic growth - without measurement, management, promotion, and efficiency assessment become impossible.

Output Focus

Shift from input spending focus to output measurement and evaluation, ensuring effective resource utilisation and meaningful results.

Transition from Input to Output Management

1

Management Shift

From pre-audit to post-audit, input to output management, process to objective management

2

Investment Approach

From cautious spending to increased investment, from 1% to 3% of budget allocation

3

Commercialisation

From returning results to state to allowing research institutions to commercialise findings

4

Researcher Benefits

From receiving only research fees to sharing commercial results and legitimate wealth creation

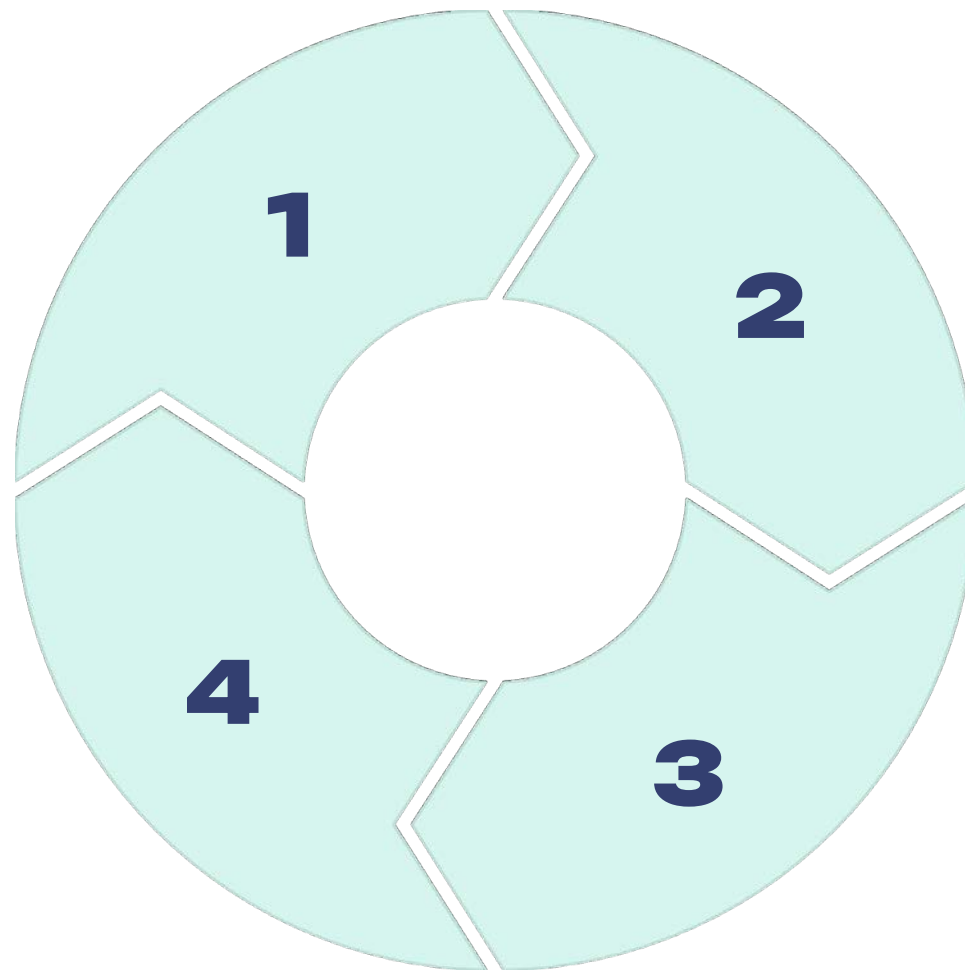
Development within an Ecosystem

Ecosystem Components

Includes environment, living subjects, and their interactions and connections, enabling mutual development and shared benefits.

Balanced Development

Failed countries typically lack ecosystems or have imbalanced ones, such as over-reliance on FDI or research institutes.



Complete Balance

Must include institutions, infrastructure, education systems, talent development, state agencies, research institutes, and enterprises.

Sustainable Growth

Ecosystem approach enables both rapid and sustainable development, with stronger subjects benefiting the entire system.

Positioning within Context of Digital Transformation

Digital Revolution

Fourth Industrial Revolution: 50% of Industry 4.0 technologies are digital, the remaining 50% rely on digital technology for development.



New Resources

Digital transformation creates data, but S&T/innovation is needed to convert it into value. In addition, New talents for national DX and AX agenda



Digital Innovation

70-80% of innovation is digital innovation, and 82% of technology unicorns are digital technology unicorns.

The biggest characteristic of our era is digital transformation (AI transformation). The development of science, technology, and innovation (S&T/Innovation) must be placed within this context to rapidly popularize new applications. Digital transformation is both a fertile ground for development and a goal of S&T/Innovation, helping Vietnam master strategic technologies and ensure safety in the transformation process. **But digital talents badly needed.**

Reversing the Traditional Approach

1

Traditional Approach

Science → **Technology** → **Innovation** → **Digital Transformation**, typically applied in developed countries with established research ecosystems.

2

New Approach

Digital Transformation → **Innovation** → **Technology** → **Science**, using practical needs and development requirements as new sources of input for S&T research.

3

Enterprise-Led Collaboration

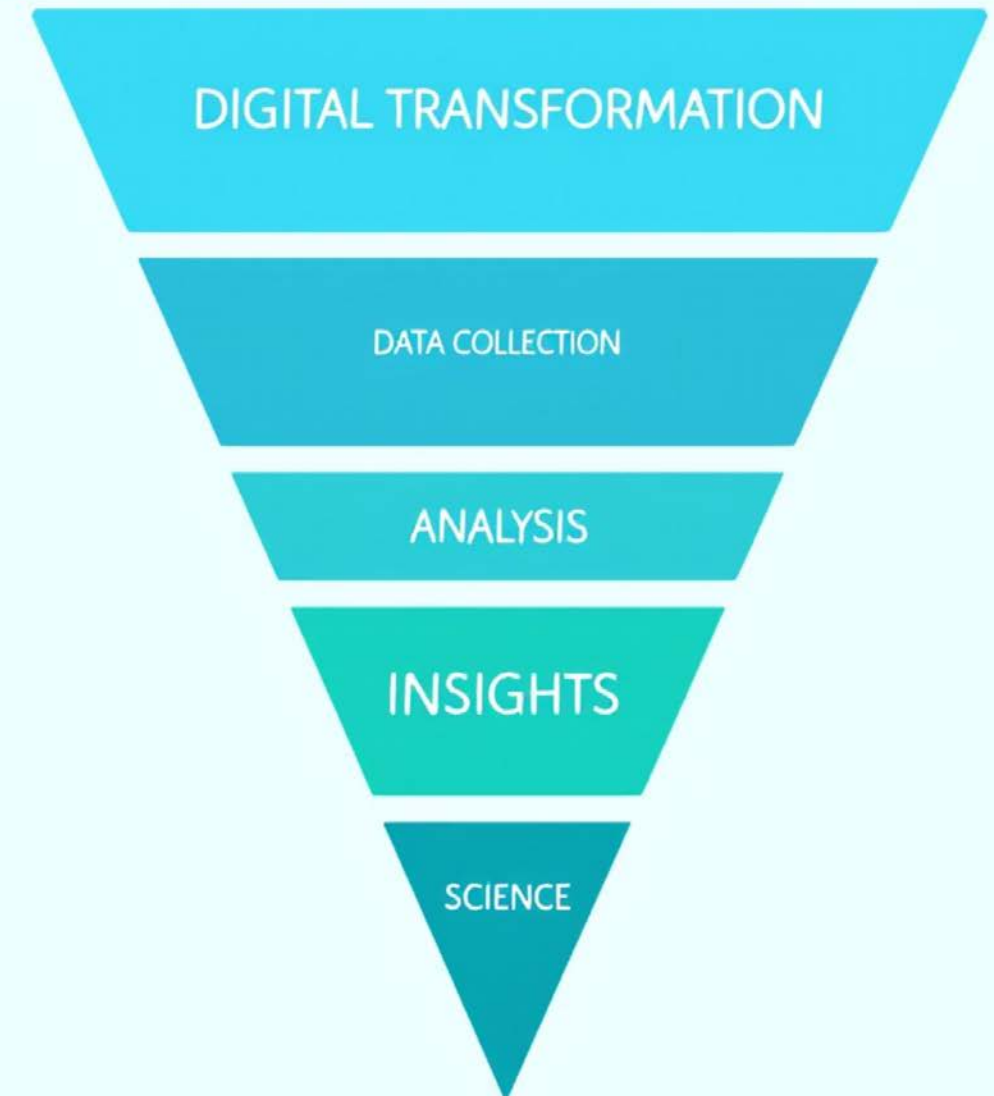
Three-way relationship now includes Enterprise → Research Institutions → State direction, where businesses bring their problems to research institutions for collaborative solutions (PPP, APPP models).

4

Problem-Focused Research

S&T, innovation, and digital transformation must concentrate on solving Vietnam's major challenges, including double-digit growth, streamlined governance, and strategic technology mastery.

THE BOTTOM-UP
OF THE PYRAMID.





Mastering Strategic Technologies and Industries

Strategic Technology Focus

Vietnam concentrates on blockchain technology for virtual assets development, robotics for labour enhancement, and AI for knowledge expansion - targeting the three growth factors: capital, labour, and total factor productivity.

State Support Framework

Government supports through 25/75 principle (state covers 25% of strategic technology R&D costs) and serves as first consumer of strategic products, providing both input and output support.

Enterprise Leadership

Large enterprises, regardless of state or private ownership, are assigned to develop strategic products and technologies. Early successes include VinGroup's automotive ventures and Viettel's telecommunications equipment development.

Higher Education: Driving National Strategic STID Development

Pivotal Role in R&D

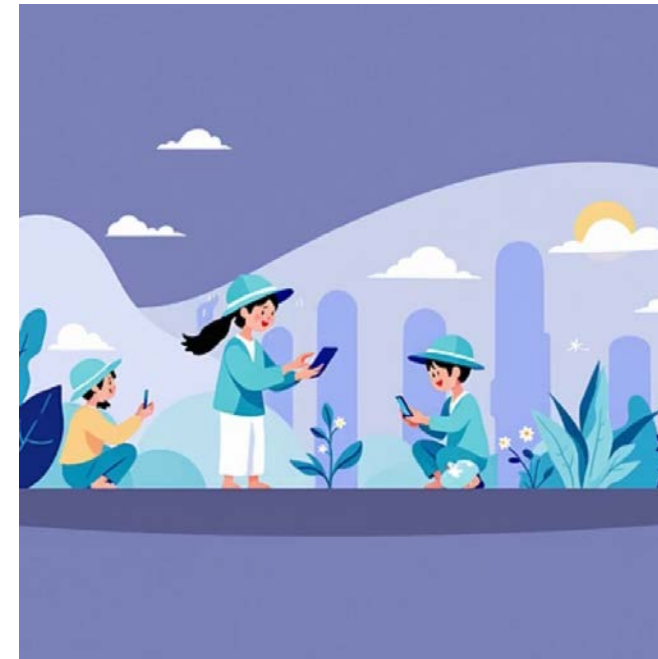
Higher Education Institutions (HEIs) are instrumental in advancing Vietnam's Science & Technology, Innovation, and Digital Transformation (STID) strategy, primarily through their substantial contributions to the **research and development** of strategic technologies.

Unique Opportunity

HEIs perceive this as a distinct opportunity to align their institutional missions with national development objectives, thereby cultivating an ecosystem where academic innovation directly propels **strategic technological mastery** and national advancement.



Creating Innovation Spirit Throughout the Nation



Vietnamese people possess two crucial strengths: excellent **STEM competence** enabling strong performance in science and technology, and superior application abilities facilitating effective innovation. These core competencies are essential for the S&T, innovation, and digital transformation era. **Innovation** serves as the development driver - promoting innovation means promoting development, and planning innovation means planning the future.



Conclusion: Vietnam's Path Forward

Strategic Vision

Vietnam is committed to an accelerated development path, leveraging S&T, Innovation, and Digital Transformation as core drivers.

Unique Methodology

A distinctive, results-oriented approach emphasizes output management, ecosystem integration, and a reversed traditional development model.

Future-Focused Growth

Prioritizing strategic technology mastery and cultivating a nationwide innovation spirit to achieve sustainable and competitive development.

THANK YOU for your attention!

Our message: The success of this cause requires the consensus of the entire nation, from the Party and State leaders to each enterprise, institutions and citizen; additionally importance of INTERNATIONAL COOPERATION.

**Thank you very much and ..
Look forward to the cooperation in future!**

