SDSN Thailand Public Forum 2026

Thailand Beyond 2030:

Transforming Pathways to Sustainable Development



Professor Dr. Sukit Limpijumnong

President, NSTDA

SDGs 2030: Building the Foundations for a Sustainable Future

17 global goals • 169 targets • a shared ambition for 2030

THE GLOBAL AGENDA



PEOPLE • PLANET • PROSPERITY • PEACE • PARTNERSHIP

FROM TARGETS TO LONG-TERM CAPABILITY



2015 — 2030 — BEYOND

SDGs adopted → Accelerate achievement → Sustain and transform

ACHIEVE & BUILD

Advance SDG outcomes while building long-term capabilities.

Systems | Infrastructure | Skills | Institutions

SUSTAIN • ADAPT • TRANSFORM

2030 is a milestone for progress; beyond it, Thailand must sustain, adapt and transform.

From Global Goals to Thailand's Transformation Gaps

Four interconnected systems that STI must help transform.

The challenge is to translate global sustainability ambitions into national transformation capabilities.

01 PRODUCTIVE & CLIMATE-RESILIENT ECONOMY

Food, manufacturing, energy and mobility that can compete and adapt.

2 8 9 13



02 HEALTHY & INCLUSIVE SOCIETY

Accessible health, ageing support and inclusive services.

3 4 10



03 LOW-CARBON & CIRCULAR THAILAND

Carbon, resource efficiency, circular materials and resilient cities.

7 11 12 13



04 TRUSTED DIGITAL & PUBLIC SYSTEMS

Secure AI, interoperable data and more effective public services.

9 16 17



The Science of Transformation

Technology matters when it travels the full pathway from knowledge to real-world adoption.

1

GLOBAL GOALS

Shared ambition



2

NATIONAL MISSIONS

Strategic priorities



3

SCIENCE

Evidence & discovery



4

TECHNOLOGY

Solutions & platforms



5

VALIDATION

Pilots & testbeds



6

SCALED IMPACT

Markets & public benefit



ENABLING CONDITIONS

- Data & evidence
- R&D infrastructure
- Talent & skills
- Standards & policy
- Business models
- Scale-up partners

Three Transformation Pathways for Thailand

National STI missions supply capabilities; transformation pathways connect them to outcomes.



PATHWAY A

RESILIENT BIO-CIRCULAR ECONOMY

Farms → high-value food → circular use



PATHWAY B

INCLUSIVE HEALTH & HUMAN SECURITY

Medical innovation → access → Quality of life



PATHWAY C

INTELLIGENT, LOW-CARBON INDUSTRY

Advanced technology → Cleaner industry

CROSS-CUTTING: Trusted digital systems · Skills · Standards · Partnerships · Climate resilience

KEY MESSAGE Siam initiatives build strategic capabilities; pathways put those capabilities to work across Thailand.

Pathway A: From Food Security to a Circular Bioeconomy

Siam Terra connects science-led agriculture with higher-value products and circular systems.

TRANSFORMATION CHAIN

1. **Climate-smart production**
   Resilience and agricultural productivity
2. **Biotechnology & molecular science**
   Discover and validate bio-based value
3. **Functional food & ingredients**
   Create high-value products
4. **Pilot production & standards**
   Demonstrate quality and safety
5. **Market adoption & circular use**
   Scale and reduce losses



SDGs ENABLED

2 8 9 12 13

ILLUSTRATIVE NSTDA CAPABILITIES

BIO Agri-biotechnology • Functional Food platforms • Food Innopolis

BEYOND 2030: High-value food industry · stronger farm income · reduced waste

KEY MESSAGE Sustainability means higher value, greater resilience and less resource use across the food system.

Pathway B: From Medical Innovation to Inclusive Health

Siam Medica links biomedical research to prevention, care delivery and equity.

TRANSFORMATION CHAIN

1. **Biomedical research & diagnostics**
   Evidence, biomarkers and detection
2. **Medical AI & digital platforms**
   Enable prevention and connected care
3. **Clinical validation**
   Demonstrate safety and real-world benefit
4. **Health-system integration**
   Adoption, standards and benefit schemes
5. **Equitable access**
   Quality care beyond hospital walls



SDGs ENABLED

3 9 10 17

ILLUSTRATIVE NSTDA CAPABILITIES

A-MED Care • Diagnostics • Medical devices • Precision medicine

BEYOND 2030: Earlier detection accessible care health technology capability

KEY MESSAGE Health innovation creates impact when trusted solutions reach people and improve their lives.

Pathway C: Intelligent and Low-carbon Industry

Siam Silica supplies key electronic capabilities alongside clean energy and advanced materials.

TRANSFORMATION CHAIN

1. **Measure**
   Carbon, resource and readiness data
2. **Model**
   AI, IoT and digital-twin intelligence
3. **Modernize**
   Advanced electronics and automation
4. **Decarbonize**
   Clean energy and circular materials
5. **Scale**
   Standards, adoption and investment



SDGs ENABLED

7 8 9 12 13

ILLUSTRATIVE NSTDA CAPABILITIES

TMEC • Thailand i4.0 Index • Advanced materials • Energy platforms

BEYOND 2030: Smarter factories stronger tech supply chains lower impacts

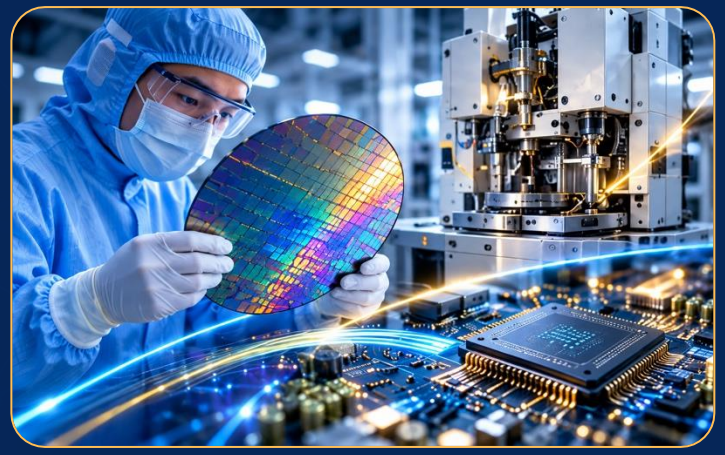
KEY MESSAGE Competitive industry beyond 2030 must also be resource-efficient, low-carbon and adaptable.



MHESI Strategic Directions: Economic Growth & Equity

Thailand's Strategic STI Missions that can generate enduring value beyond 2030: Siam Silica • Medica • Terra

SIAM SILICA



Semiconductors & advanced electronics

Photonics • Chip design • Power devices

KEY SDGs

4 8 9

BEYOND 2030 CAPABILITY

High-skill industry and advanced technology capacity

SIAM MEDICA



Advanced medical and health technology

Medical AI • Diagnostics • Precision medicine

KEY SDGs

3 9 10

BEYOND 2030 CAPABILITY

Improved access and competitive medical innovation

SIAM TERRA



Agri-biotechnology and future food

Biotechnology • Functional food
•Climate-smart agriculture

KEY SDGs

2 8 12

BEYOND 2030 CAPABILITY

Resilient, high-value bioeconomy and shared value

NSTDA

National Science and Technology Development Agency

The national powerhouse in science, technology, and innovation



3,128 Personnels

>70% Researchers & Academic Staffs

5 National Research Centers (NC)

165 Labs

BIOTEC a member of NSTDA
MTEC a member of NSTDA
NECTEC a member of NSTDA
NANOTEC a member of NSTDA
ENTEC a member of NSTDA



5 National Quality Infrastructures (NQI)

TBES Toxicology and Bio Evaluation Service Center
CTEC
PTEC
NCTC NSTDA Characterization and Testing Service Center
NFED NSTDA Fabrication and Engineering Service Division

4 National S&T Infrastructures (NSTI)

THAILAND SCIENCE PARK
FoodInnopolis
SOFTWARE PARK THAILAND
EECi

NSTDA's Transformation Engine

Four layers connect deep science to deployment and system-wide impact.

04 ECOSYSTEM ORCHESTRATION

Government • Industry • Universities • Communities • Investors



03 TRANSLATION & DEPLOYMENT

Pilots • Technology transfer • Standards • Business models



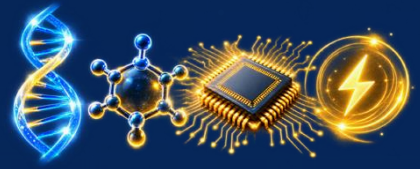
02 NATIONAL PLATFORMS & INFRASTRUCTURE

Labs • Testing • Computing • Data • Pilot facilities



01 DEEP SCIENCE & TECHNOLOGY

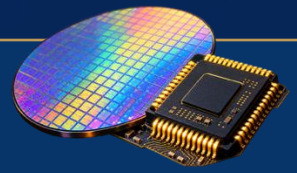
Bioscience • Materials • Electronics • Nanotechnology • Energy



ENABLES NATIONAL MISSIONS

SIAM SILICA

Advanced electronics



SIAM MEDICA

Health innovation



SIAM TERRA

Bioeconomy



A connector and enabler, not the sole implementing actor.

Beyond 2030: Five Commitments to Action

Five connected commitments can move Thailand from project outputs to sustained transformation.

The goal is not more activity alone, but stronger capabilities, adoption pathways and long-term national impact.



Build capabilities today → sustain progress → transform Thailand beyond 2030

Science • technology • innovation • partnerships • measurable impact



Thank You

National Science and Technology Development Agency

Contact Us

0 2564 8000

info@nstda.or.th

www.nstda.or.th

NSTDATHAILAND

@NSTDATHAILAND

@NSTDA

111 Thailand Science Park (TSP), Phahonyothin Road,
Khlong Nueng, Khlong Luang, Pathum Thani 12120, Thailand