

SINGAPORE'S NEW PARADIGM in Technology Transfer


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Conventional Technology Transfer


Research Performer → Industry



IDENTIFYING NEW TECHNOLOGIES




PROTECT THE TECHNOLOGY
Patents
Copyrights
Trade Secrets



COMMERCIALISE THE TECHNOLOGY
Marketing
Licensing
Start-ups


Technology Readness

SINGAPORE'S NEW PARADIGM in technology-transfer




The Evolving Landscape

- **Globalisation**
 - Global partnerships for global issues
- **Open Innovation**
 - Increasing cost of research
- **Push for IMPACT**
 - Economic Impact
 - Societal Impact



FACTORS OF EVOLUTION & REVOLUTION

SINGAPORE'S NEW PARADIGM in technology-transfer



A New Paradigm

Research Performer & Industry



IDENTIFYING & PROTECTING NEW TECHNOLOGIES WITH INDUSTRY

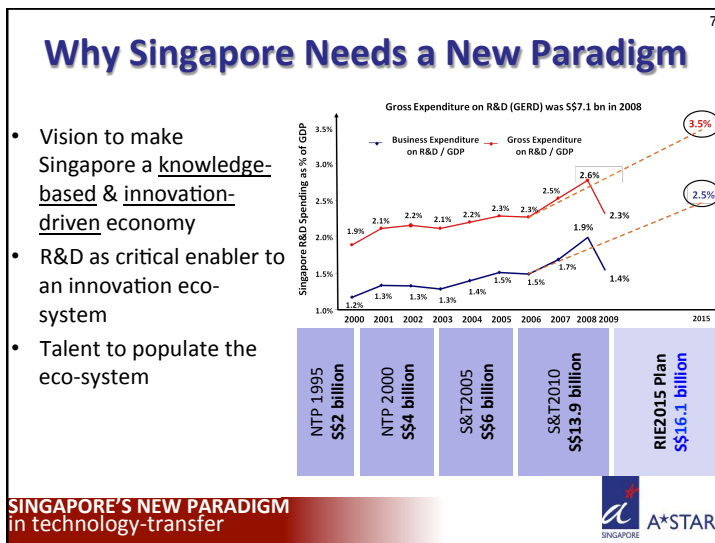
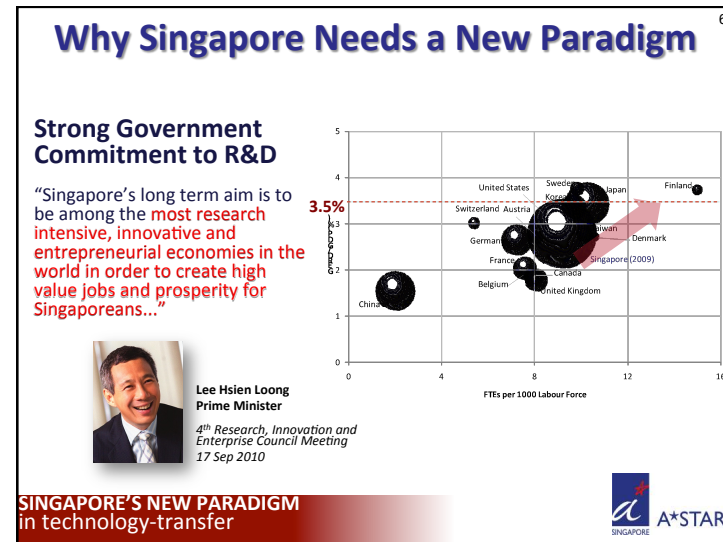
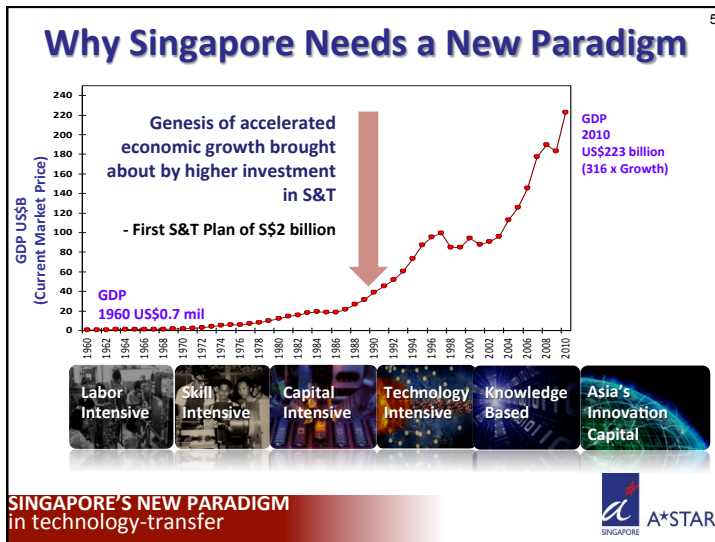




Technology Readness

SINGAPORE'S NEW PARADIGM in technology-transfer





Industrial Capital
Industry Engagement

Industrial Capital

Integration to Drive Innovation

Building a US\$27b industry in Singapore by:

- Anchoring multinational companies
- Transferring technologies along the value-chain to build local supporting industries

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Industrial Capital
Industry Engagement

Industrial Capital

Successful Translation to Build a New Sector

BIOLOGICS
6 Manufacturing Plants, >US\$1.5 billion in total investments & 1,300 jobs created

SINGAPORE'S NEW PARADIGM
in technology-transfer

Industrial Capital
Industry Engagement

Industrial Capital

Gearing SMEs for Growth

- Leveraging on existing technologies to **gear up** capabilities of companies
- Leveraging on existing Research Performers (e.g. Research Institutes & Polytechnics) to **proliferate** the approach

Centre of Innovation

PE COI
Precision Engineering Centre of Innovation

Helping SMEs leverage on technologies for innovation and growth, with over 1350 industry partners

GET-Up

Technology for Enterprise Capability Upgrading (TECU)
Operation and Technology Roadmapping (OTR)
Technical Advisory Support (TAS)

GET-Up sent out 190 T-Up RSEs in the last tranche; *60% increase in next tranche

SINGAPORE'S NEW PARADIGM
in technology-transfer

Industrial Capital
Industry Engagement

Industrial Capital

Seeding Start-ups for Surprises

- Develop indigenous Industrial Capital through Start-Ups and Spin-offs
- Cultivate companies along the Value-Chain
- Develop accelerators for technology hot-spots

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Key Ingredients for Industrial Capital

**MISSION ORIENTED
& ALIGNED WITH
INDUSTRY
ROADMAPS**

**RESPONSIVE &
FLEXIBLE**

**INTEGRATED ACROSS
A SPECTRUM OF
WORLD-CLASS
CAPABILITIES**

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Human Capital

Asia is a Nexus for Global Scientific Talent

Within Asia a multi-pronged strategy for talent attraction and development is brewing

- Attracting global thought leaders
- Attracting high-potential global talent
- Grooming local scientific talent

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Intellectual Capital

A Diverse Landscape of Research Performers

Corporate Labs

Public Research Institutes

Hospitals

Universities & Polytechnics

BIOPOLIS

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Intellectual Capital

Excellent Science as a Unique Advantage

Construction of the world's smallest controllable gear sets the stage for new, revolutionary mechanical devices.

Step-by-step rotation of a molecule-gear mounted on an atomic-scale axis.
Published in Nature Materials
IMRE . June 2009

Researchers have discovered a protein that could help create higher quality iPSCs more efficiently.

Tbx3 improves the germ-line competency of induced pluripotent stem cells.
Published in Nature
GIS . February 2010

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Next Phase of Growth



HUMAN CAPITAL



INTELLECTUAL CAPITAL



INDUSTRIAL CAPITAL



Our drive for innovation will continue to be relentless because of revolutions on the horizon

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REVOLUTIONS ON THE HORIZON:



MANUFACTURING WITHOUT FACTORIES

EDUCATION WITHOUT SCHOOLS



SCIENCE 2.0:
YOU SAY YOU WANT A REVOLUTION?

The collaborative online tools people are using in other parts of their lives, such as Facebook, YouTube, and blogs, are rolling the disciplined world of scientific communication

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THANK YOU

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