

Going Beyond Comparative Advantage: How Singapore Made It 30 April 2014

Presented by

Philip Yeo, **SINGAPORE**

Chairman, **Standards, Productivity and Innovation for Growth**
SPRING, www.spring.gov.sg, 2007-to-date

Chairman, **Agency for Science, Technology and Research**
A*STAR, www.a-star.edu.sg, 2001-2007

Chairman, **Economic Development Board**
EDB, www.edb.gov.sg, 1986-2006

Singapore's Urban Development



Then



Now

Singapore's Housing Development

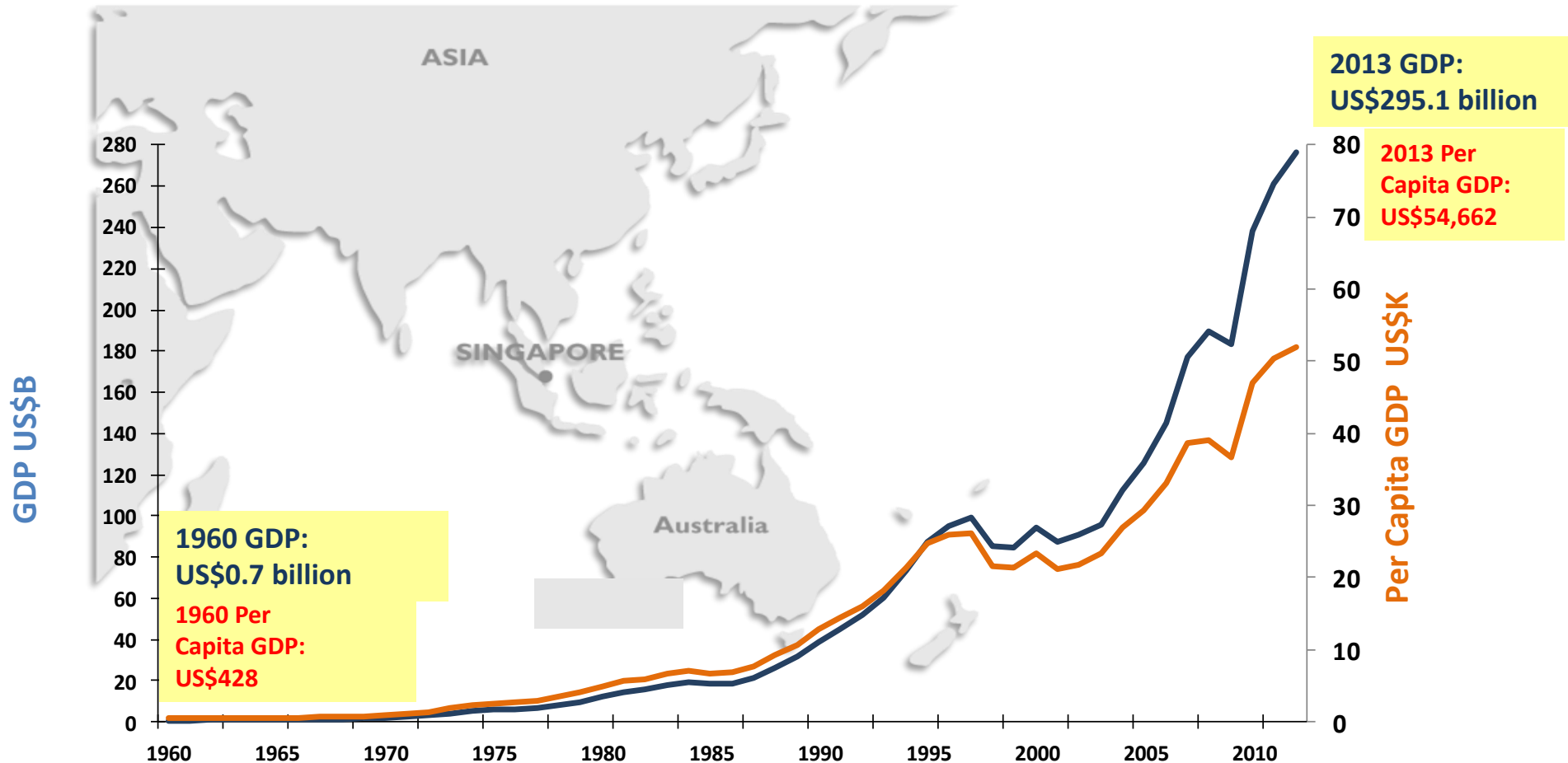


Then



Now

Growth of Singapore's Economy



1960s
Labour
intensive

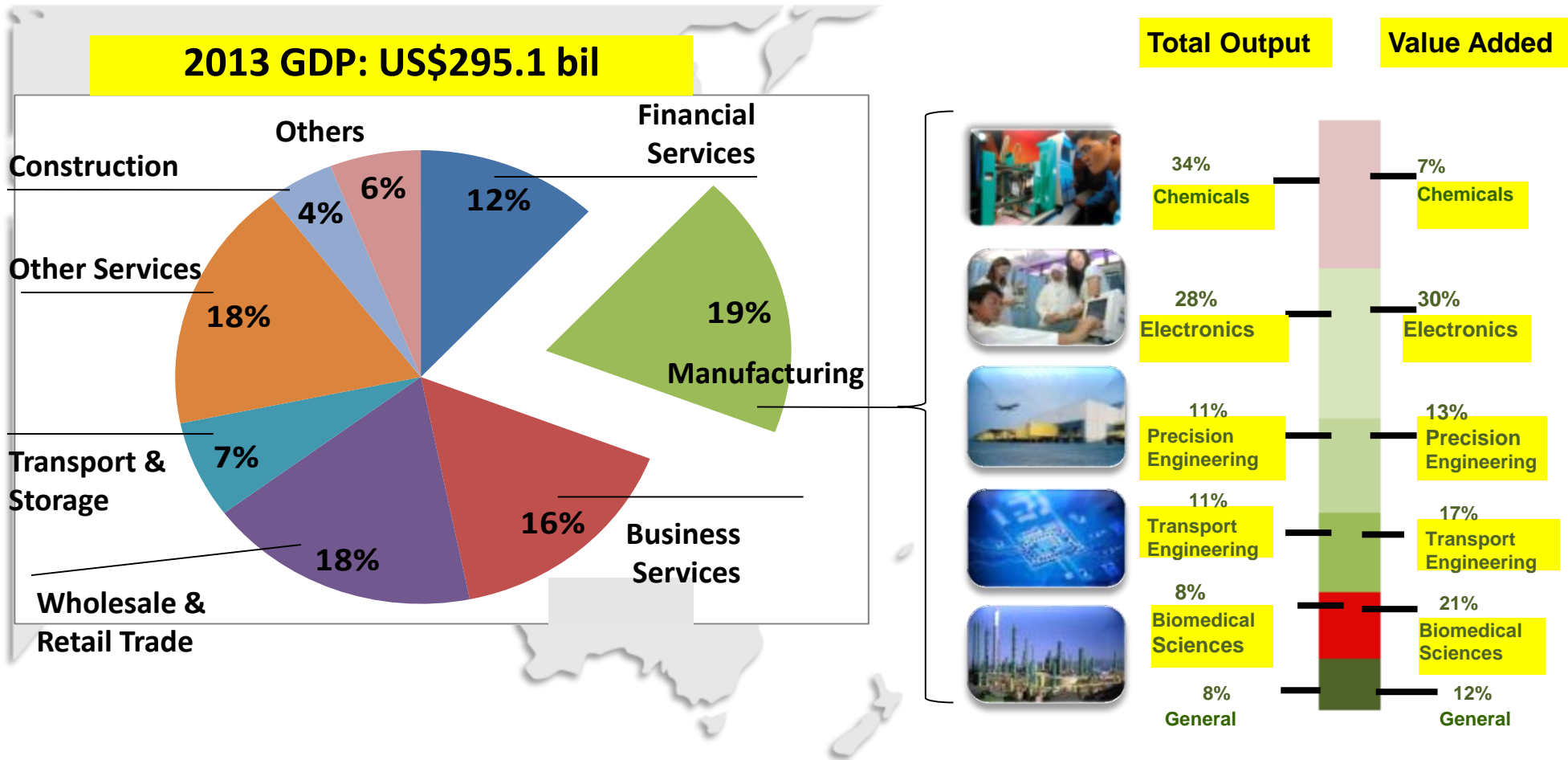
1970s
Skill
intensive

1980s
Capital
intensive

1990s
Technology Intensive

2000...
Knowledge &
Innovation Based Economy

Singapore's Economy Today



Phases of Singapore's Economic Development

Jobs & GDP Growth

Knowledge Intensive

Technology Intensive

Capital Intensive

2000s

Knowledge-based Economy

1990s

Cluster Developments: Key Game Changer

One-North Development
200 hectares
2000-20 Master Plan

Skill Intensive

1980s

Creating Business Parks: Twin Engine of Manufacturing and Services

Jurong Island Petrochemical Complex

1970s

Industrial estates with amenities at the fringe of residential towns

Singapore Science Parks

Labour Intensive

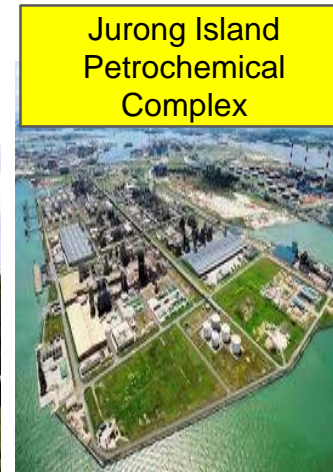
1960s

The First Industrial Township

Jurong Industrial Estate



Flatted Factories



Our Approach: Industry Development

***We have no markets, no raw materials.
All the industry we've created is illogical. But what choice do we have?***

ELECTRONICS



- 40% of world's hard disk media production
- 14 silicon wafer fabrication plants
- 20 semiconductor assembly & test operations
- 40 IC design centres

CHEMICALS



- One of world's top 3 export refining centres
- > 95 leading petroleum, petrochemicals and specialty chemicals on Jurong Island, Singapore's centrepiece for the energy & chemicals industry

PRECISION ENGINEERING



- Largest & most comprehensive aerospace maintenance, repair & overhaul centre in Asia
- 70% of world's production of jack-up oil rigs and FPSO conversion; 20% of world's ship repair market

BIOMEDICAL SCIENCES



- > 50 commercial scale manufacturing plants, including 7 world leading biopharmaceutical companies & 25 medical technology companies
- 7,000 researchers in > 50 companies, universities and public sector research centres

Our Approach: Investment Promotion

7,000 Multi-national Corporations

60% with regional responsibilities

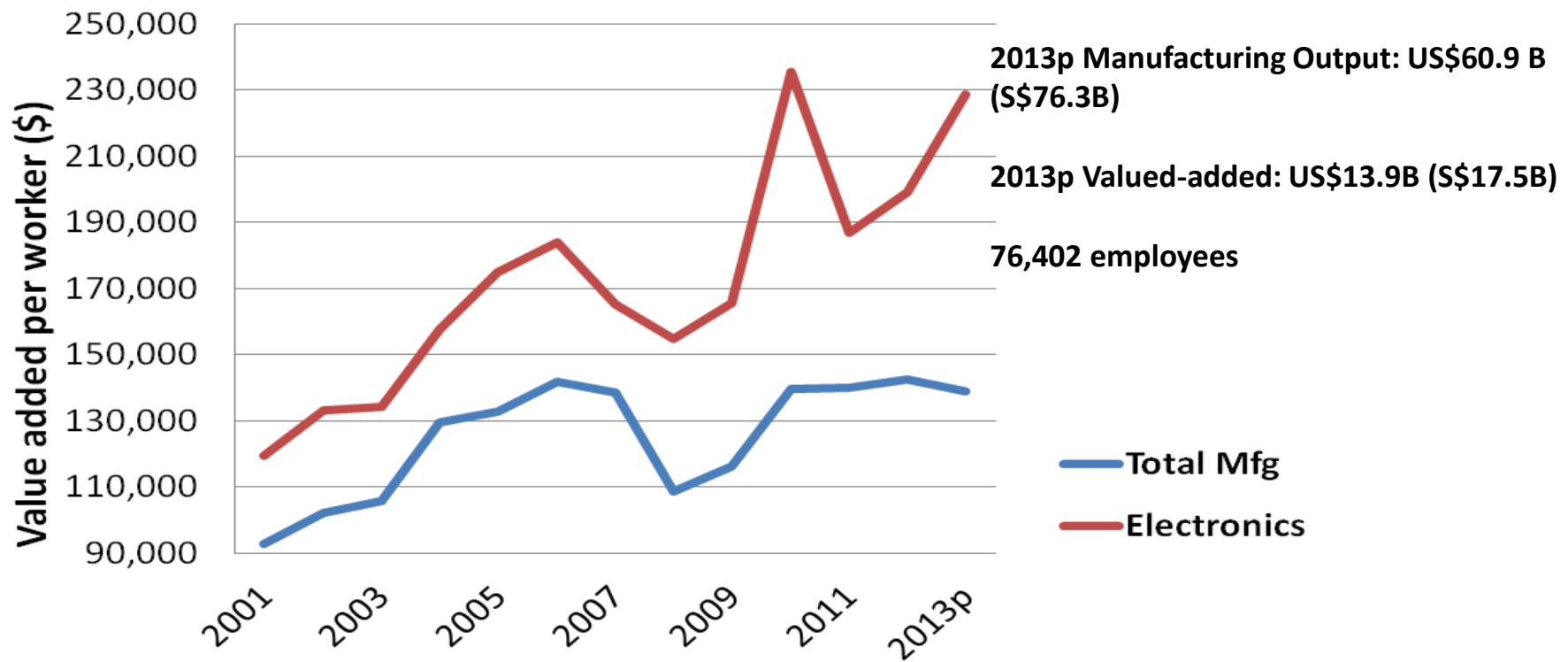
37,400 International Companies, including 3,200 from China, 4,400 from India, 7,900 from ASEA (excluding Singapore)



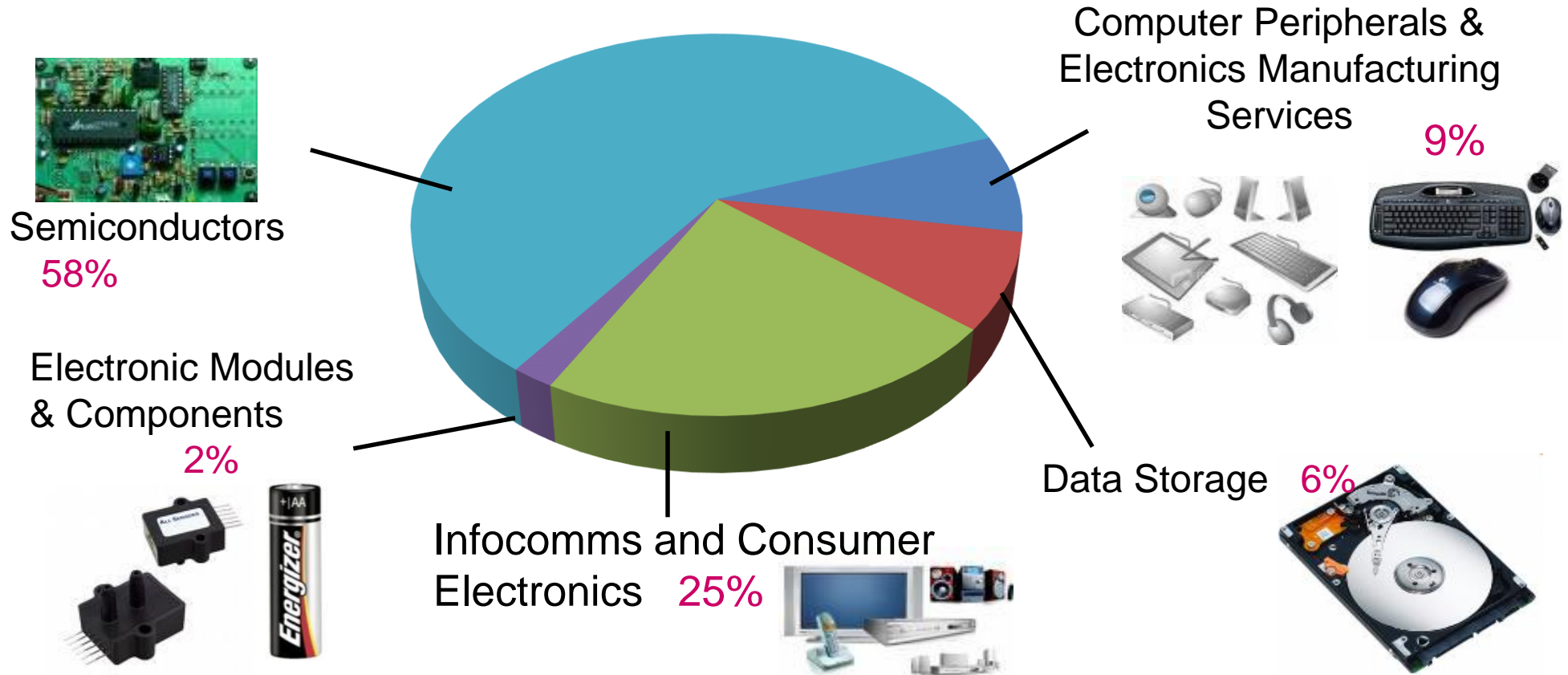
Industrial Development - Electronics

Backbone of Singapore's economy, contributing 30% of the total manufacturing value-add

Value-Added (VA) per worker for electronics industry consistently exceeds manufacturing average

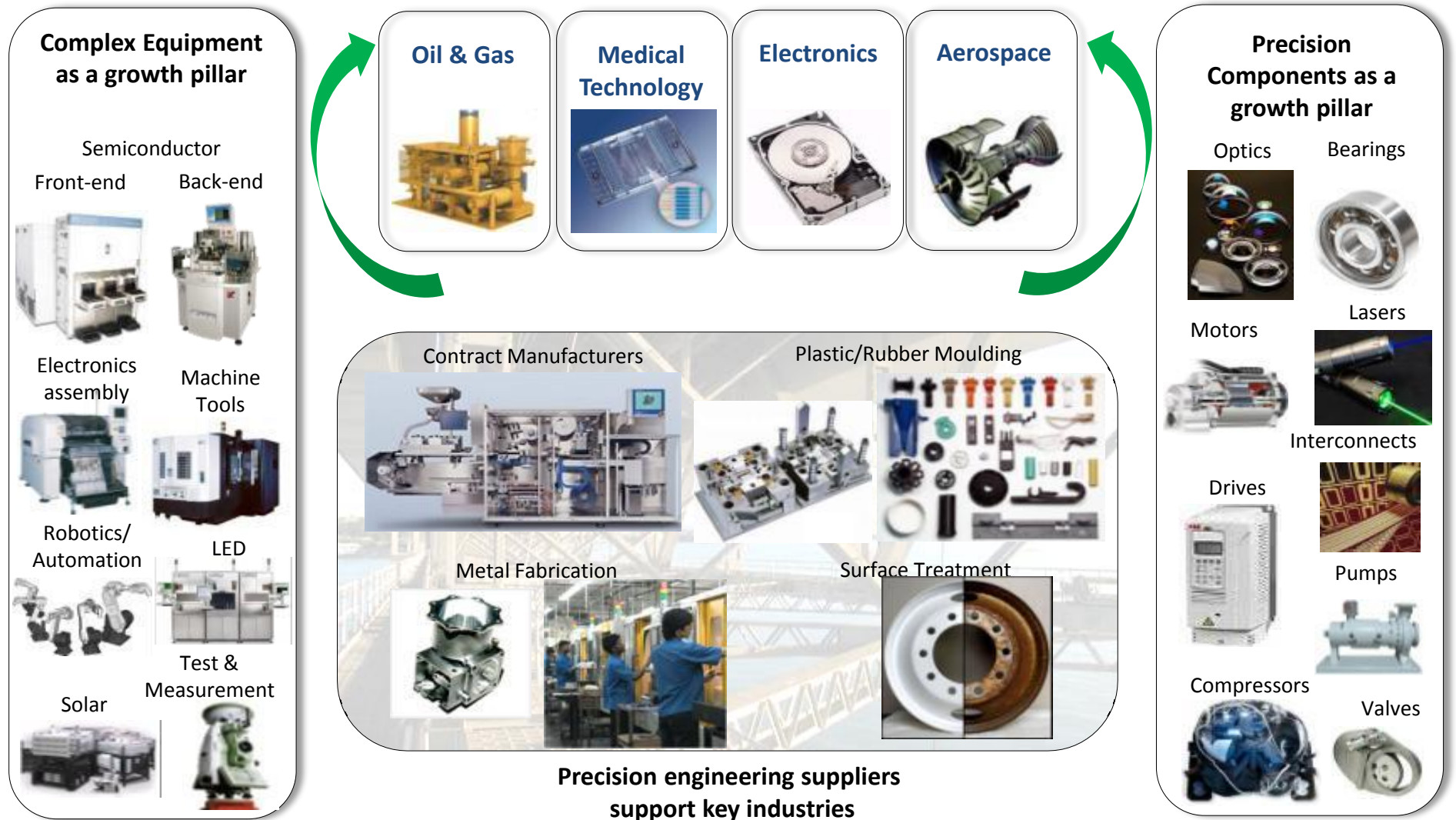


Industrial Development - Electronics



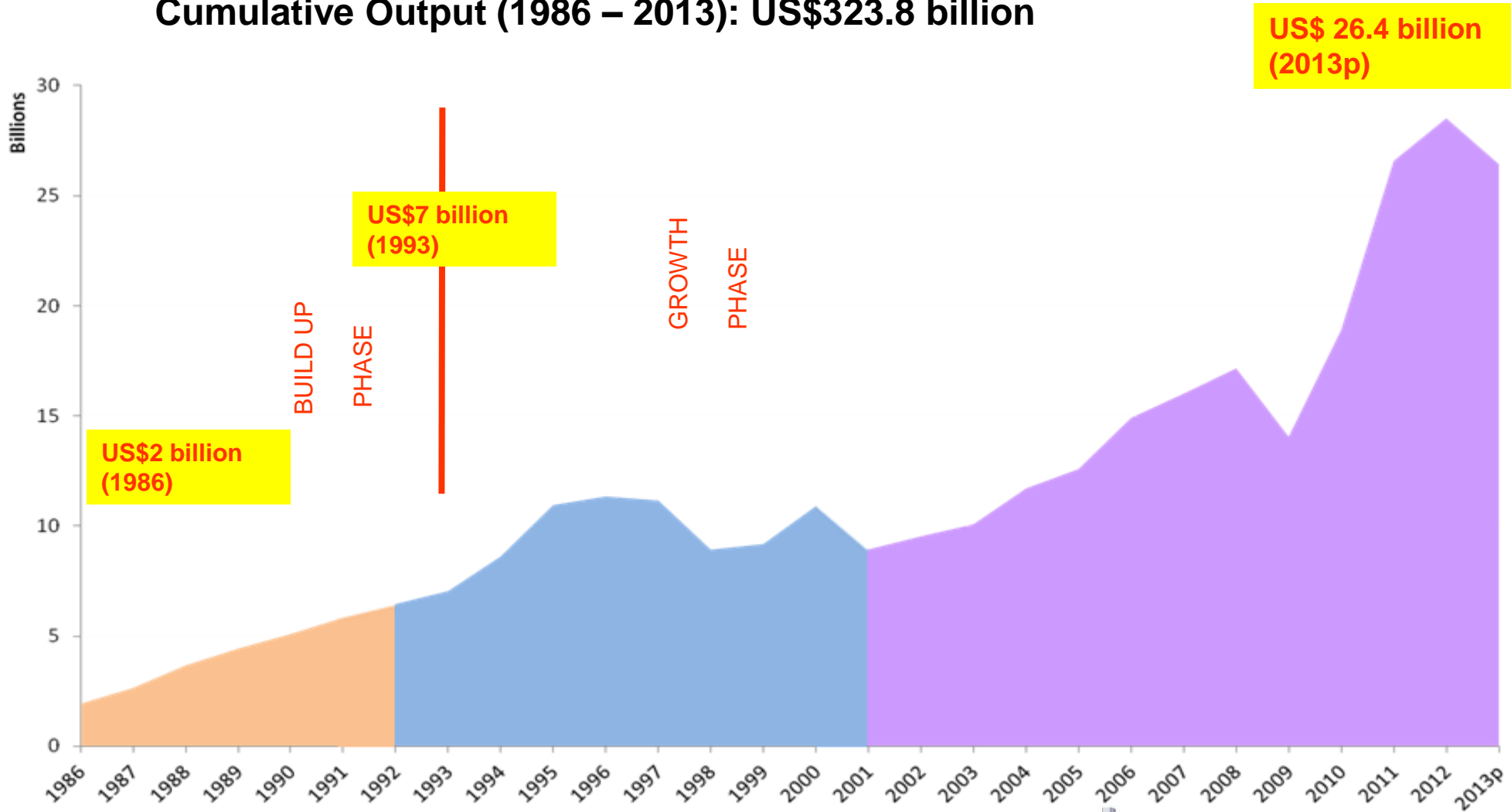
Manufacturing Output 2013p: S\$76.3b

Industrial Development - Precision Engineering



Industrial Development - Precision Engineering

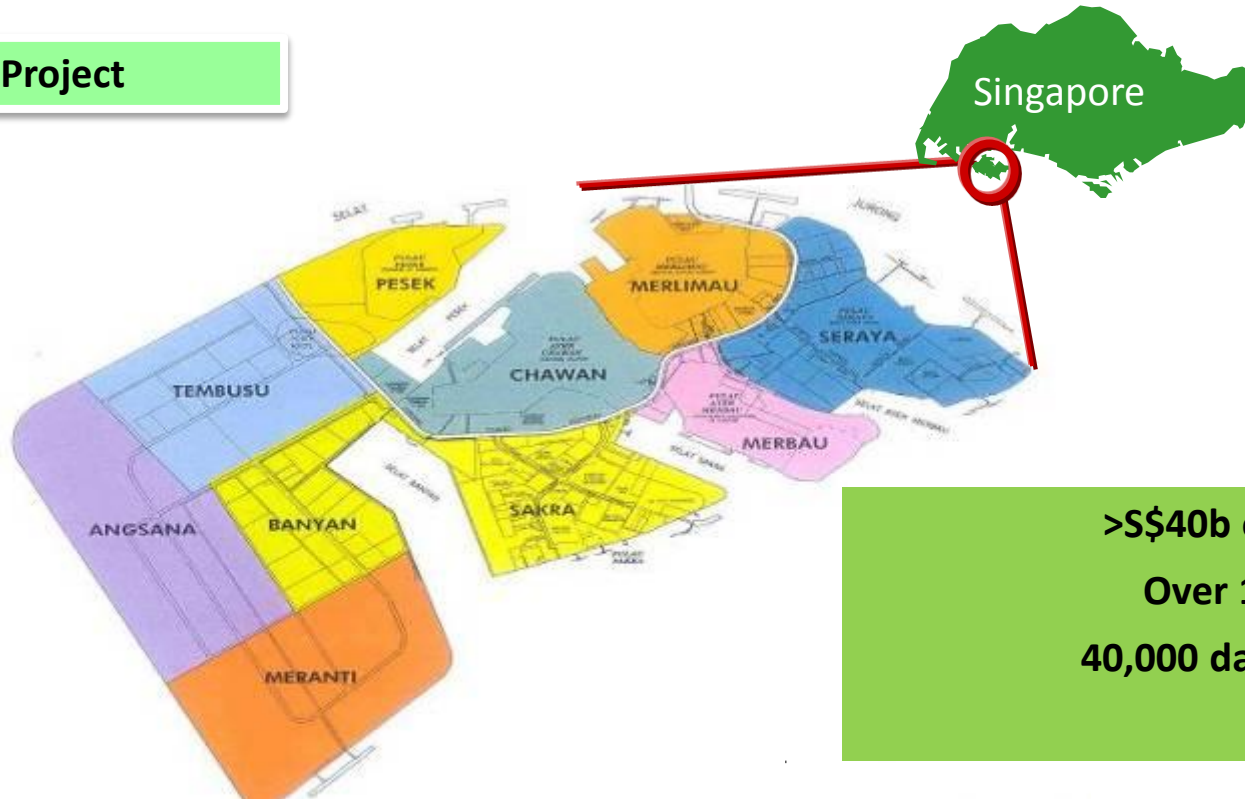
Cumulative Output (1986 – 2013): US\$323.8 billion



Industrial Development - Chemicals

Jurong Island: Heart of Singapore's Chemicals Hub

S\$ 7 billion Reclamation Project

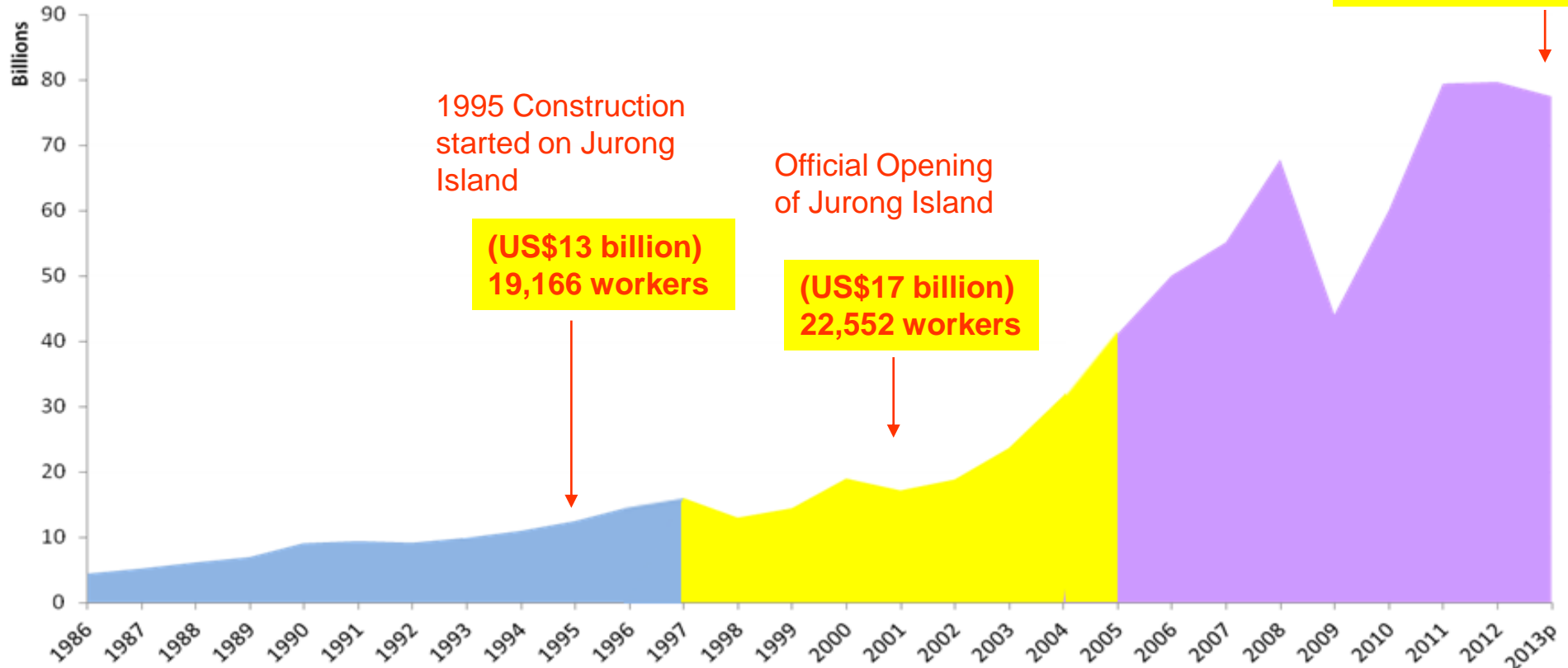


>S\$40b of investments
Over 100 companies
40,000 daily commuters
3,000 Ha



Industrial Development – Chemicals

Cumulative Output (1986 – 2013) : US\$807.2 billion



Source: EDB



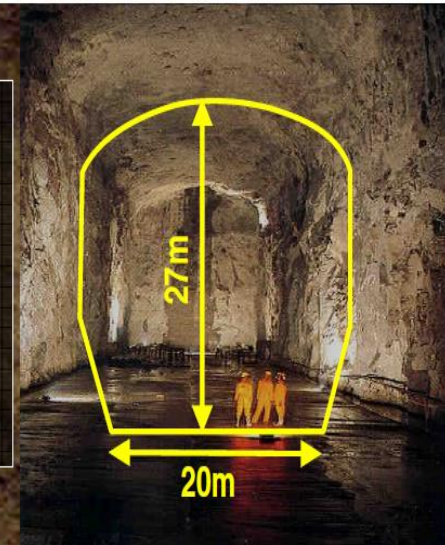
Jurong Rock Cavern

- \$950 million project
- Save 60 ha of land
- Increased fuel storage security



Cross section of the cavern

- 9 storeys high
- Length = 340 m
- Excavation using Drill and Blast Method with Grouting (if required)
- Volume per storage cavern = 165,000m³
(equivalent to 64 Olympic-sized swimming pools)



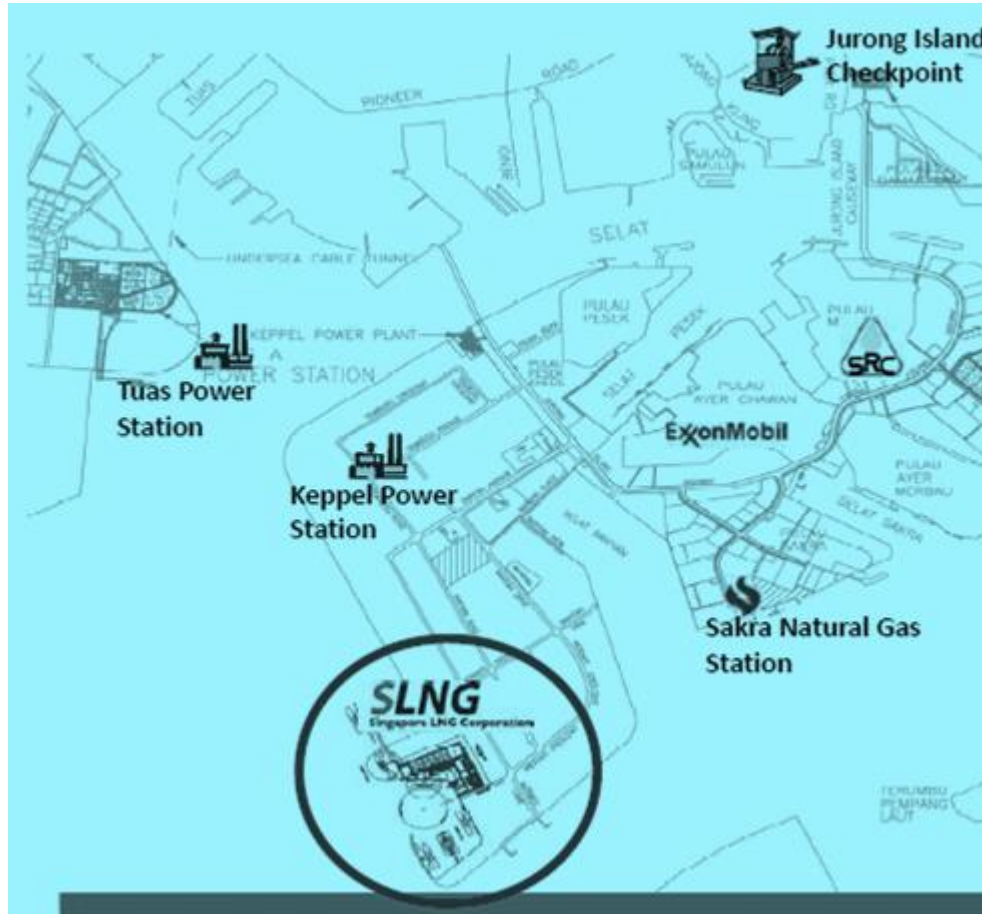
Mid 2013

First 2 caverns ready

End 2014

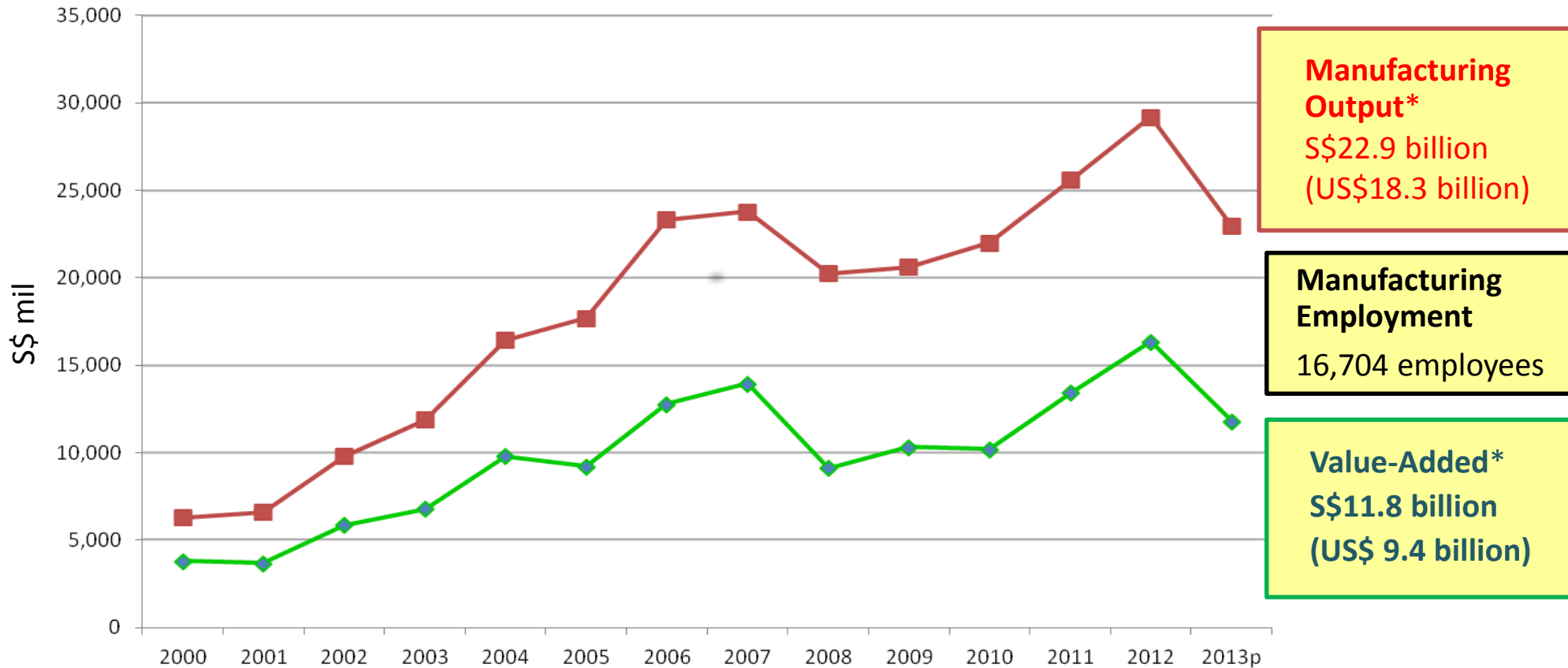
Next 3 caverns ready

LNG Terminal



- **Regasification capacity of 3.5 mtpa of LNG**
- **Terminal officially opened in Feb 2014**
- **SLNG Terminal facilities:**
 - **Berthing of LNG vessels**
 - **Unloading and reloading of LNG**
 - **Pumping and vapourisation of LNG**
 - **Metering and send-out of regasified LNG**

BioMedical Sciences (BMS) in Singapore



Manufacturing Output*
 S\$22.9 billion
 (US\$18.3 billion)

Manufacturing Employment
 16,704 employees

Value-Added*
 S\$11.8 billion
 (US\$ 9.4 billion)

Launch of BMS Initiative

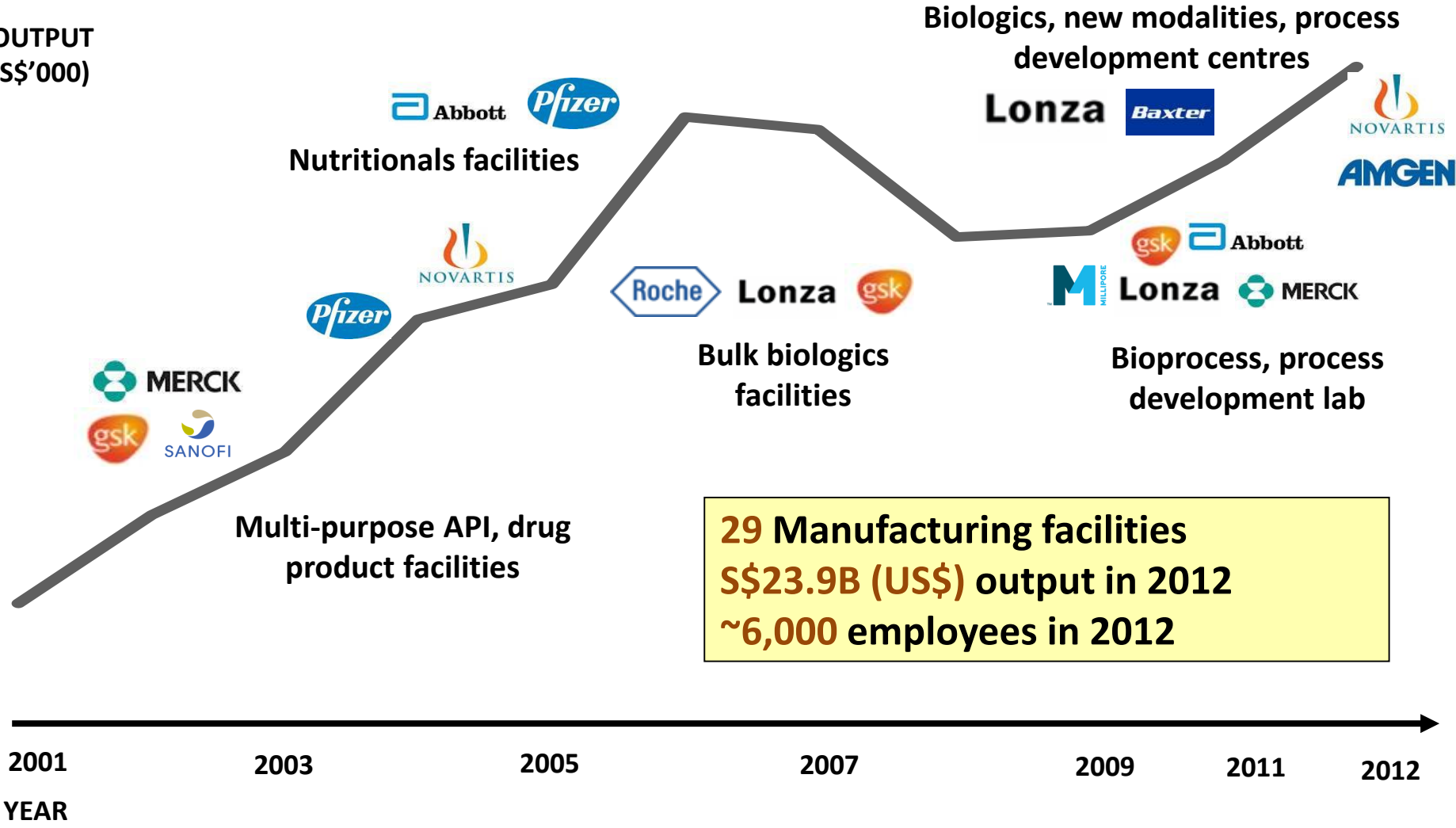
Opening of Biopolis

GDP Share (2013): 3.81%
Total Employment: >20,000
CAGR (2013): 10%

Compounded Annual Growth Rates (CAGR) computed over 5 years
**Value-Add = Labour Cost + Depreciation + Interest Cost + Profit before Tax + Land Cost*

Pharma Manufacturing Growth in Singapore

OUTPUT
(S\$'000)



Pharma HQs in Singapore

Pharmaceutical companies with Regional HQs in Singapore



Highlights of Headquarters in Singapore



GSK's Emerging Markets & Asia-Pacific Hub

Regional headquarters and control tower for all of GSK's operations in Asia-Pacific, Latin America, and African regions



Quintiles's Asia-Pac Regional Headquarters

Quintiles Singapore functions as Asia-Pac headquarters providing a full range of clinical development and commercialization services



Novartis's Regional Headquarters for Asia Cluster

Regional headquarters for pharmaceutical operations across Asia cluster

MedTech Cluster in Singapore

30 Manufacturing Plants
9,900 employees

26 R&D Centers
500 Researchers & Engineers

29 Regional HQs
1,500 employees



Recent MedTech Investments

Manufacturing

Medtronic Pacemaker Manufacturing Facility



Medtronic opens manufacturing facility for cardiac rhythm disease management (CRDM), which will produce pacemakers and leads.

Agilent Instrument Manufacturing



Agilent Technologies opens its new life sciences manufacturing facility to produce Liquid Chromatography/Mass Spectrometry instruments for global markets.

R&D and Innovation

Menicon R&D Centre and Manufacturing Facility



Menicon established its first R&D and manufacturing facility for its new line of daily disposable "Flat Pack" contact lenses in Singapore.

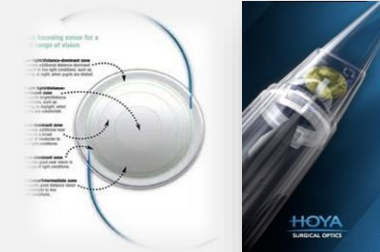
Life Technologies Global Instrument Centre of Excellence



Life Technologies established its Global Instrument Centre of Excellence in Singapore.

Headquarters

Hoya Surgical Optics Global Headquarters



Hoya Surgical Optics relocates its global headquarters from California, US to Singapore.

Siemens Medical Instruments Global Headquarters



Siemens Healthcare relocates its Audiology Group global headquarters in Singapore under Siemens Medical Instruments

MedTech Company Headquarters (HQs)

The **Top 10 Medical Device Companies** have Regional HQs in Singapore



Highlights of Headquarters in Singapore



Becton Dickinson's Shared Services Centre

Shared services hub supports all BD's operations in Asia-Pacific region.



Siemens Medical Instruments Global Headquarters

Global HQ for hearing aids business. Singapore R&D and Manufacturing facility supplies 30% of the world's hearing aids

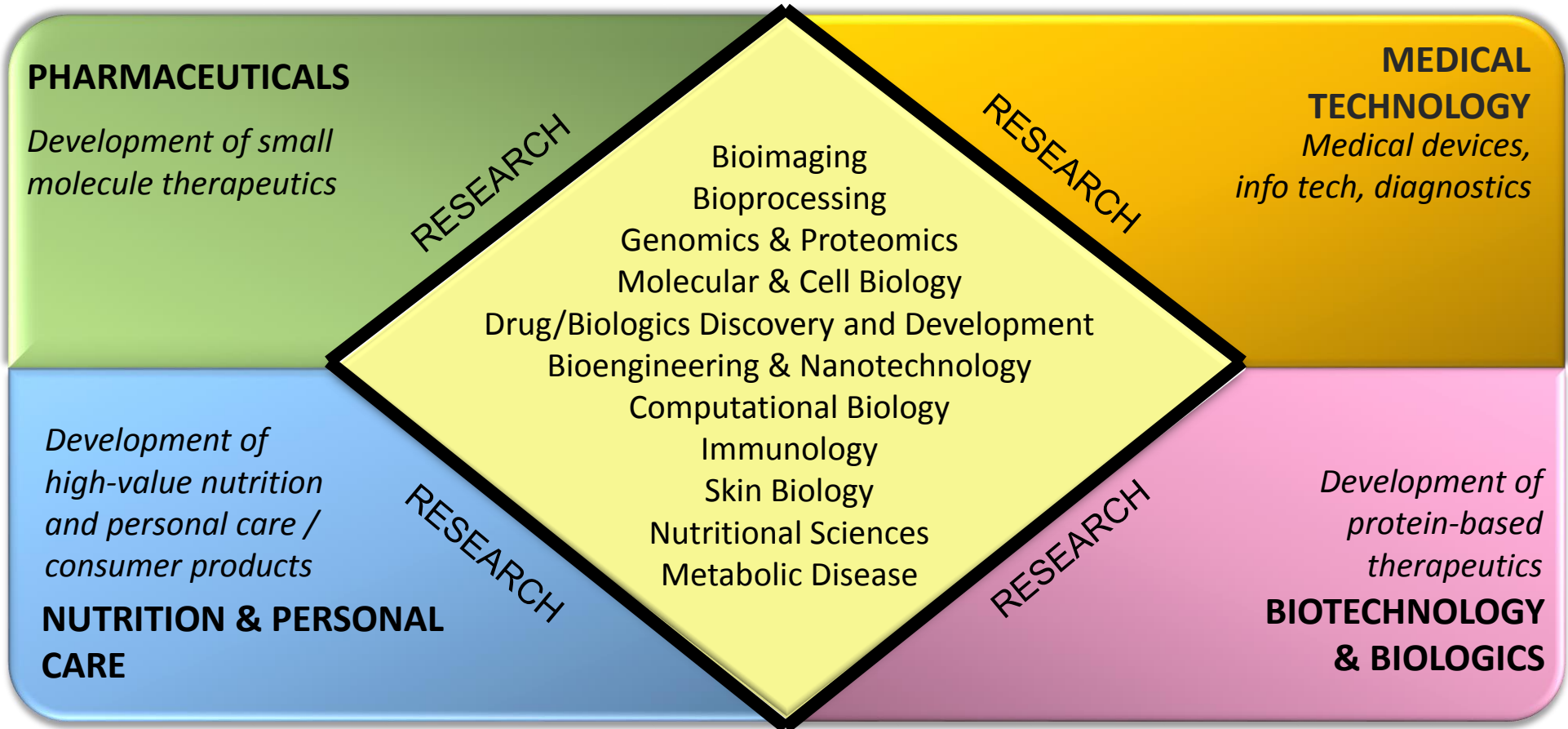


Essilor's Asia-Pacific Headquarters and R&D Hub

Asia-Pacific R&D centre and coordination hub developing lenses for Asian consumers.

BioMedical Sciences (BMS) Initiative

INDUSTRY



BMS Phase 1: Developing Basic Research Capabilities

World Class Expertise

Core technologies and expertise in areas including genomics analysis, animal disease models, stem cells, drug screening, construction and mass production of monoclonal antibodies, bioimaging

World Class Infrastructure

Biopolis: 4M sq ft integrated research campus



World Class Talent

Pioneers and thought leaders from around the globe



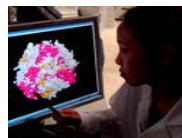
Institute of Molecular & Cell Biology



Bioprocessing Technology Institute



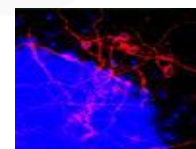
Genome Institute of Singapore



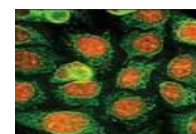
Bioinformatics Institute



Institute of Bioengineering & Nanotechnology



Singapore Stem Cell Consortium



Singapore Bioimaging Consortium



Experimental Therapeutics Centre



Singapore Institute for Clinical Sciences



Institute of Medical Biology

Pre-2000

2000

2001

2002

2003

2004

2005

2006

2007 onwards

BMS Phase 2: Translational & Clinical Research (TCR) Efforts

Basic Research

Translational and Clinical Research (TCR)

Phase I, II & III Clinical Trials

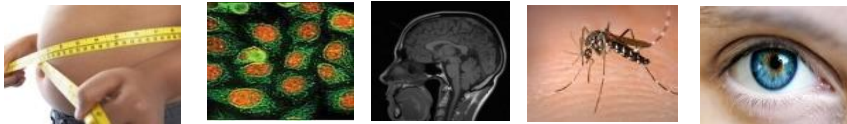
Medical Applications

Initiatives to promote TCR

1 (TCR) Flagship Programme

- 5 strategic disease-orientated areas
- Each awarded S\$25mil over 5 years

Cancer Metabolic Disease Eye Disease
Neuroscience Infectious Diseases



2 Bedside & Bench Grant Call

- Foster collaboration between basic scientists and clinical investigators
 - Funded for up to 3 years

Supporting Infrastructure

- Investigational Medicine Units
- Singapore Clinical Research Institute
- Clinical Imaging Research Centre



Talent Attraction / Development

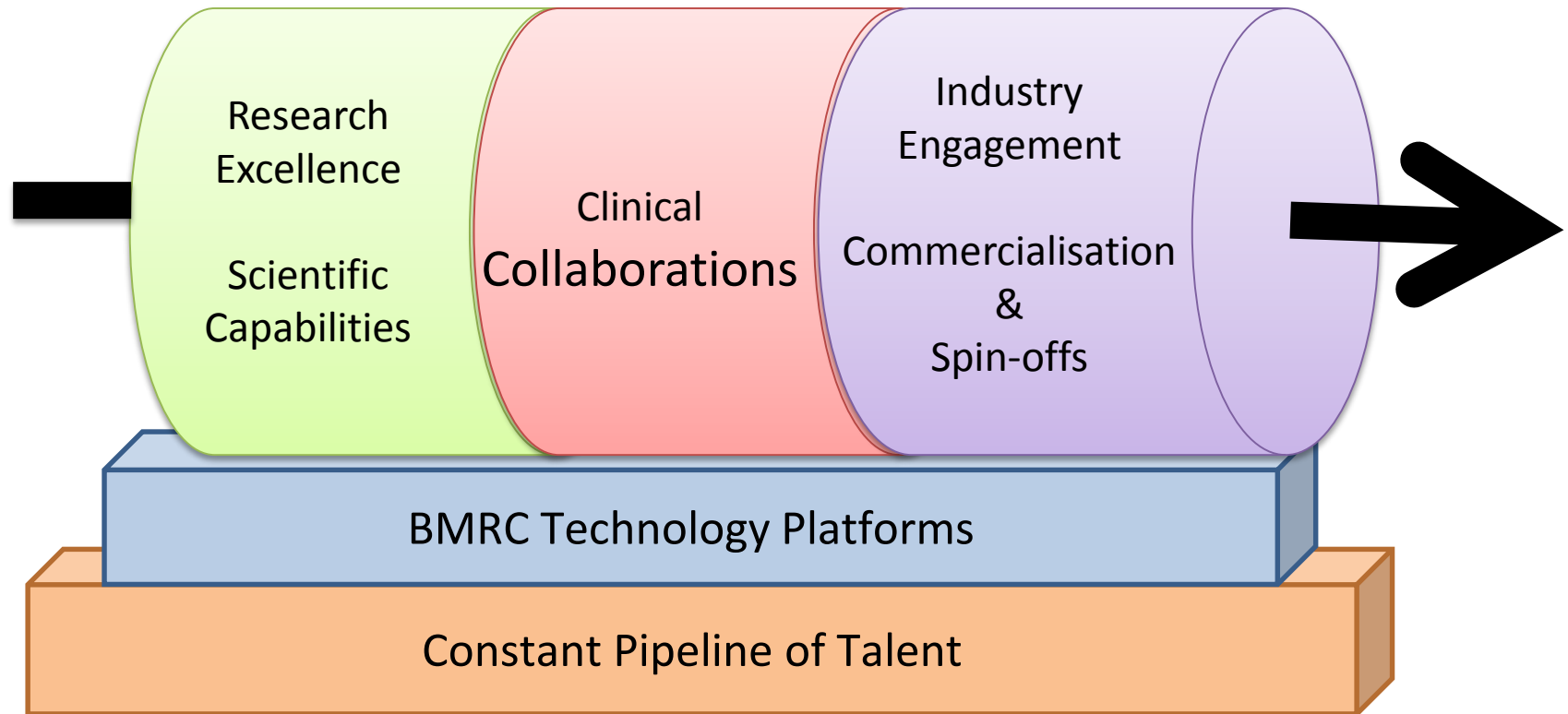
Developing a pipeline of Clinician Scientists

- S'pore Translational Research Investigator Award (STaR)
- Clinician Scientist Award (CSA)



BMS Phase 3: Integrating for Impact

Basic Discovery Translational Clinical Research Economic and Health Outcomes



Entrepreneurship

Support



YES! Schools

Provides schools with grants to put in place a entrepreneurship learning programme for their students.

Incubator Development Programme (IDP)

Grant support for incubators & venture accelerators that assist innovative startups.



innovativesingapore
Microsoft Innovation Centre

Grant

Action Community for Entrepreneurship (ACE) Start-ups

Provides grant support to entrepreneurial Singaporeans to set up their business on a \$7 : \$3 matching basis



Technology Enterprise Commercialisation Scheme (TECS)

Support early-stage Proof-of-Concept (POC) and Proof-of-Value (POV) projects

Equity



Equity-based co-financing for Singapore-based start-ups with innovative products and /or processes.

Sector Specific Accelerator (SSA) Programme

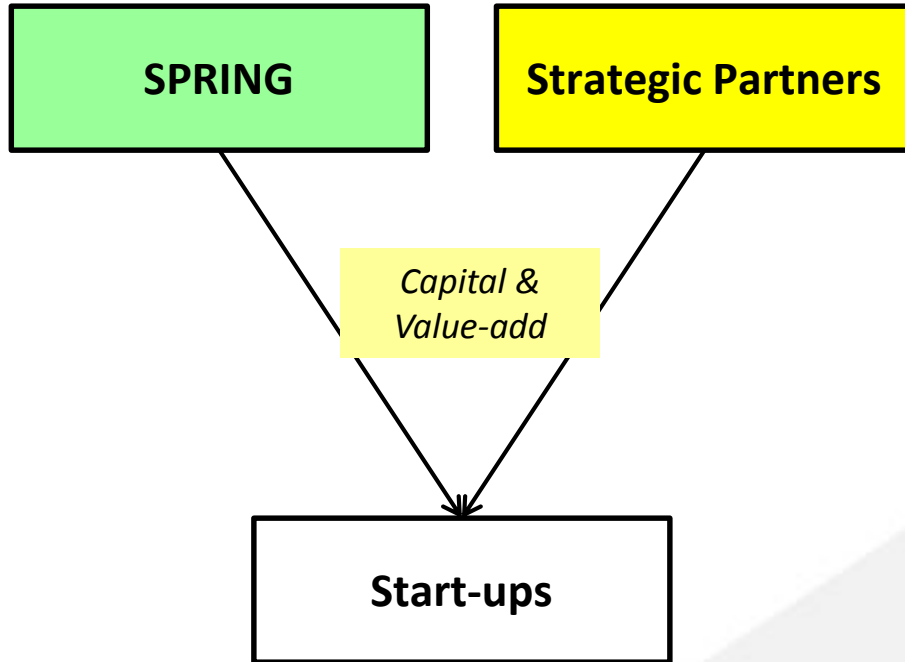
Equity-based co-financing with accelerator partners for Singapore-based high-tech startups in nascent sectors such as medical technology.

*at least 30% equity owned by Singapore citizens / permanent residents

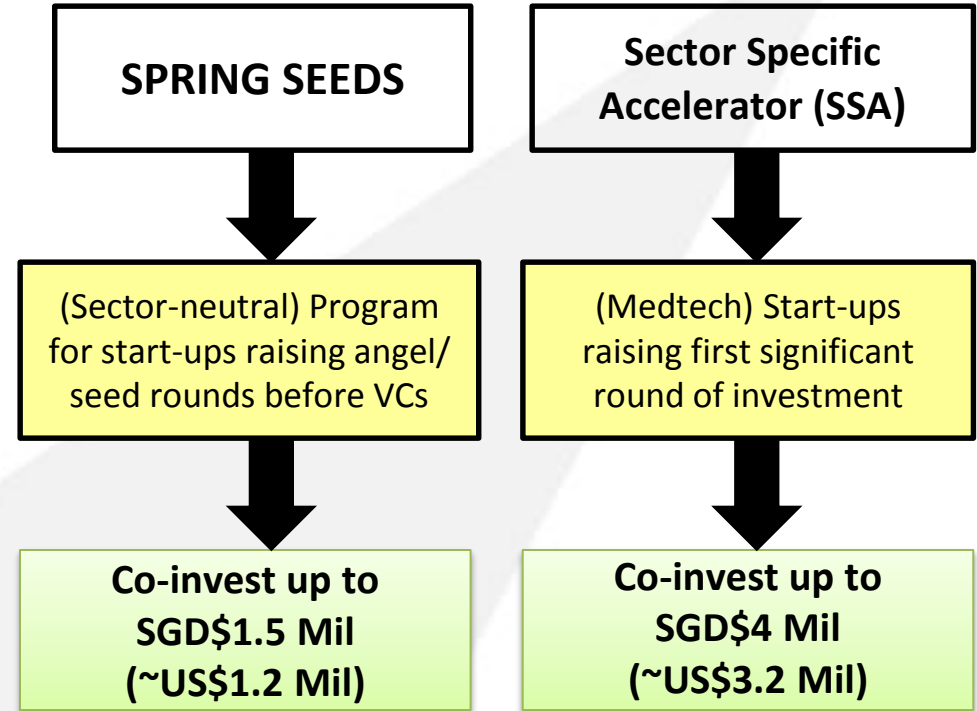
YES : Young Entrepreneurs Scheme

Financing & Support for Start-ups

Co-Investment Approach



Programs



Our partners include...



MedTech Start-ups Support

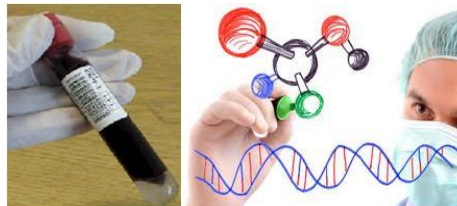
- Supported through Commercialisation Grants (Proof-of-Concept / Proof-of-Value) and /or Equity Co-investments (SEEDS/SSA)
- > 40 local Med Tech Start-ups currently being helped



- Spin-off from National University of Singapore (NUS); advisors include founder of Biosensors Int'l.
- Developed non-invasive “liquid biopsy” platform using a microfiltration biochip to isolate rare CTCs from whole patient blood.
- Raised institutional round in 2013 from Temasek-linked fund
- Partnered National Cancer Centre Singapore (NCCS) and Singapore General Hospital (SGH) to set-up region’s first Circulating Tumour Cell Centre of Research Excellence



- Spin-off from research programmes between NUS and UK/Australian universities.
- Developing a rapid point-of-care diagnostic tool that accurately discriminates between benign and malignant ovarian cysts; also offers proprietary tests for prenatal screening & diagnosis.
- Received partnership interests from various world renowned institutes, as well as investment from prominent local investors.



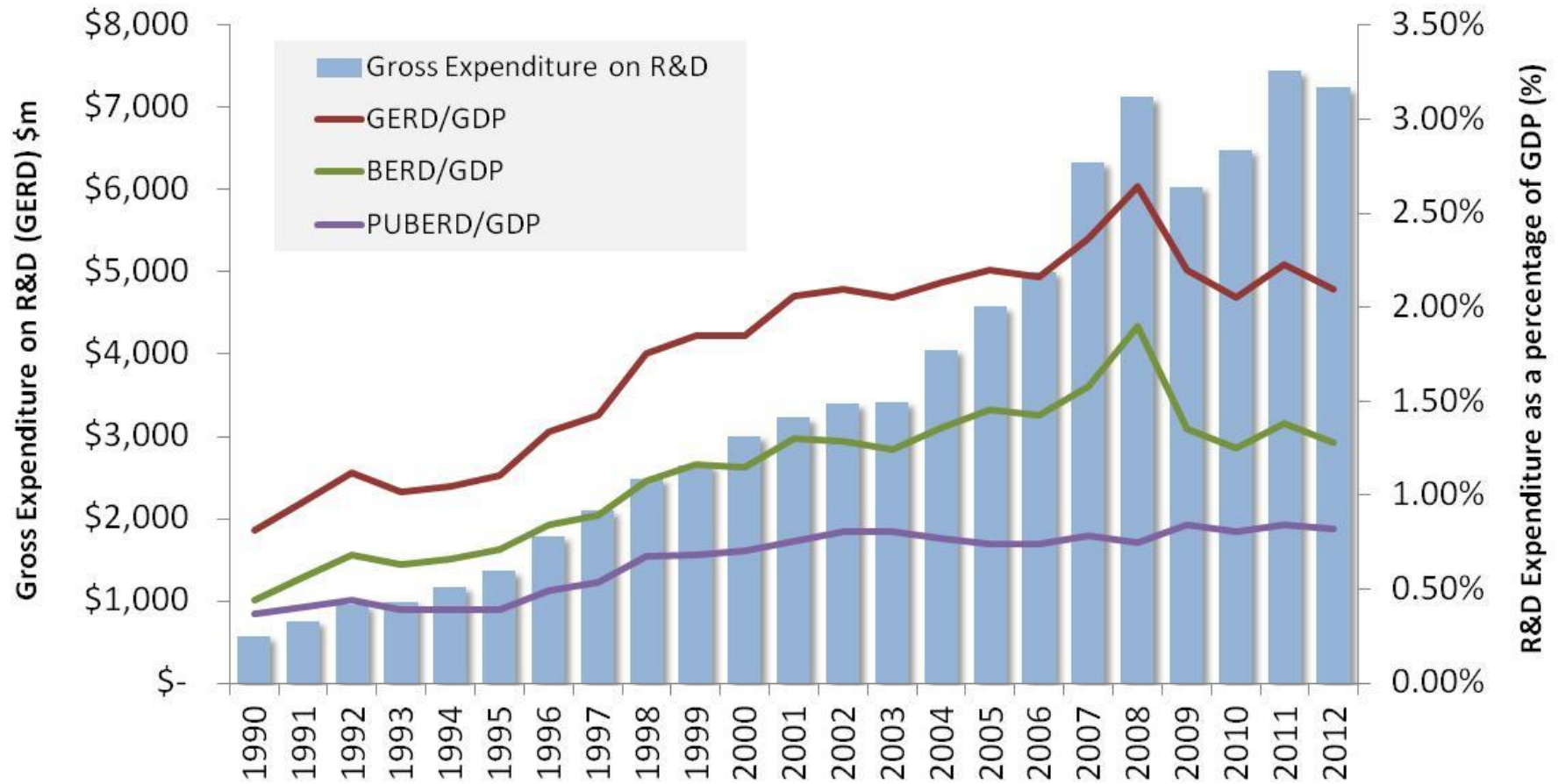
- Spin-off from Nanyang Technological University
- Developed an innovative surgical implant for use in hernia repair.
- Received clearance to market its Class IIB hernia mesh product from FDA in Jan 2013; public launch unveiled at MEDICA 2013.



- Biomedical instrumentation company commercialising a unique digital PCR system.
- Applicable for detections of rare mutations and copy number variations, in areas such as drug discovery and clinical diagnostics.
- Currently mentored and supported via at a local high-tech incubator.

Commitment to All R&D

GERD – Gross Expenditure on R&D, BERD – Business Expenditure on R&D, PUBERD – Public Expenditure on R&D



5-year
S&T Plans

National
Technology
Plan
(1991-1995)
US\$1.5 bn

National
Science &
Technology Plan
(1996-2000)
US\$3 bn

Science &
Technology
Plan 2005
(2001-2005)
US\$4.8 bn

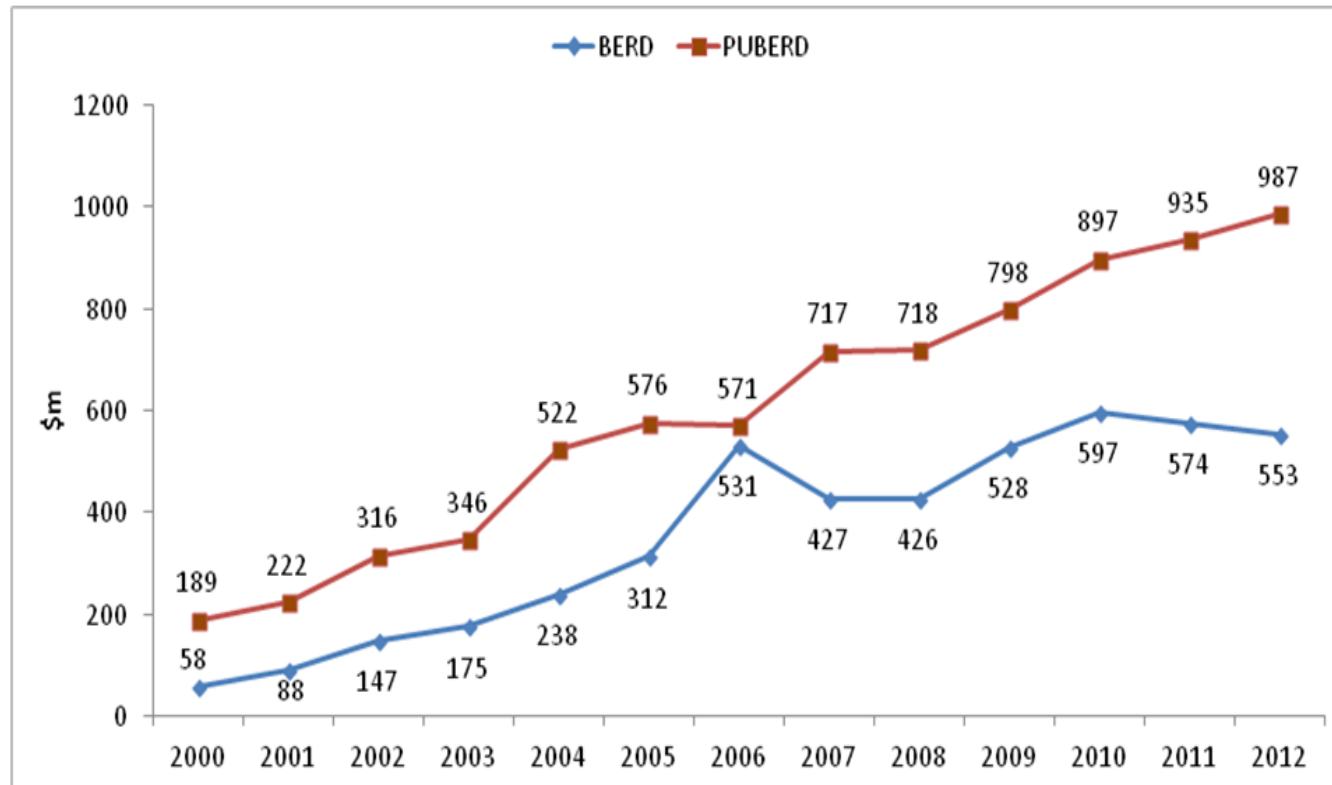
Science &
Technology
Plan 2010
(2006-2010)
US\$10.7 bn

Research,
Innovation &
Enterprise Plan
(2011-2015)
US\$12.3 bn

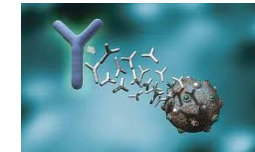
Gross Expenditure on BMS R&D

Moving up the value chain from manufacturing to innovation

BERD for BMS (2012): \$553 mil
BERD CAGR (2000-2012): 20.7%



Source: National R&D survey 2012, Singapore



Chugai Pharmbody Research
 Established in July 2012
S\$200M (US\$160.3M), 60 jobs



P&G Innovation Centre
 TOP in Nov 2013
S\$250M (US\$200.4M), 500 jobs



First Asian research center outside Japan
S\$9.1M (US\$7.3M) over 5 years

Knowledge Capital

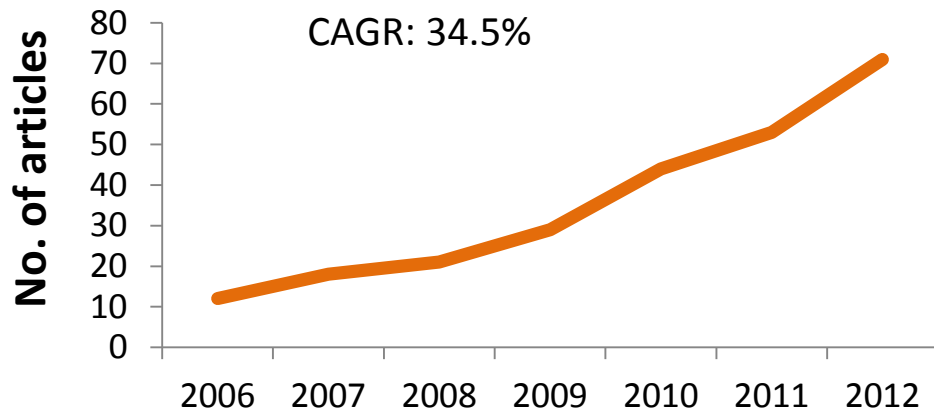


Country Rankings 2012

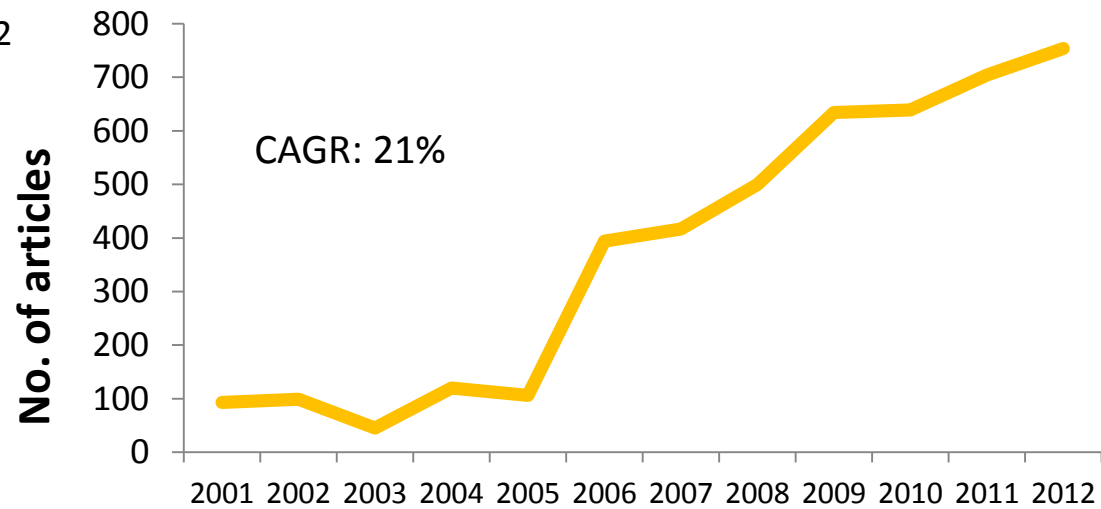
Overall: 5th

Most productive among top 5 countries

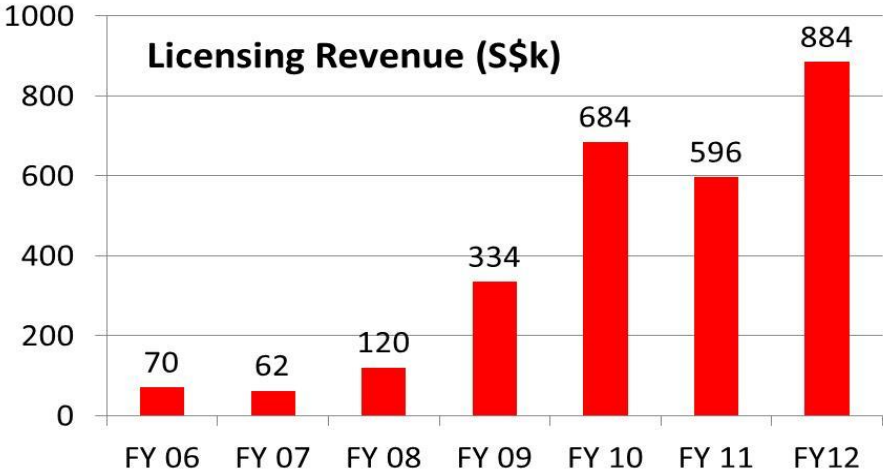
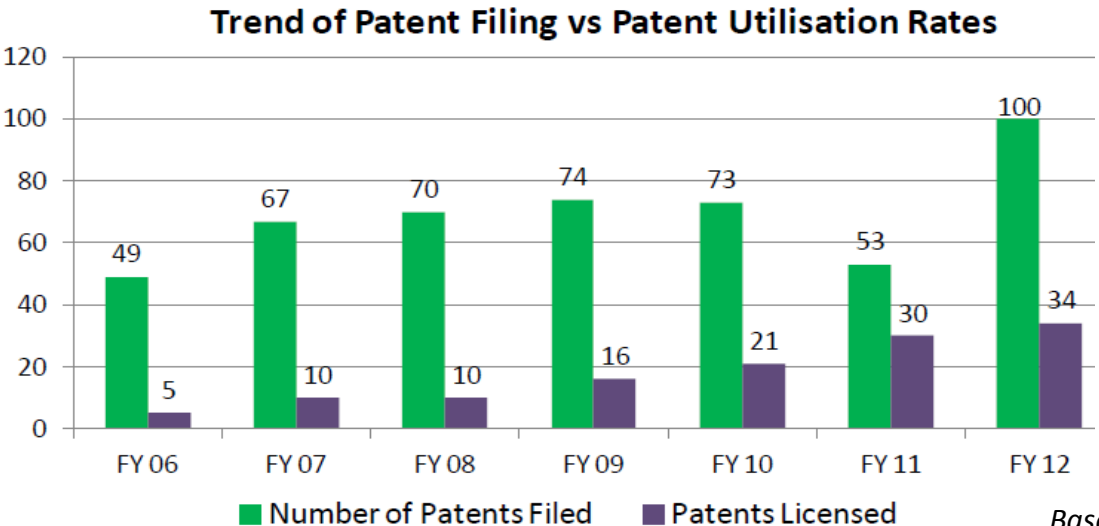
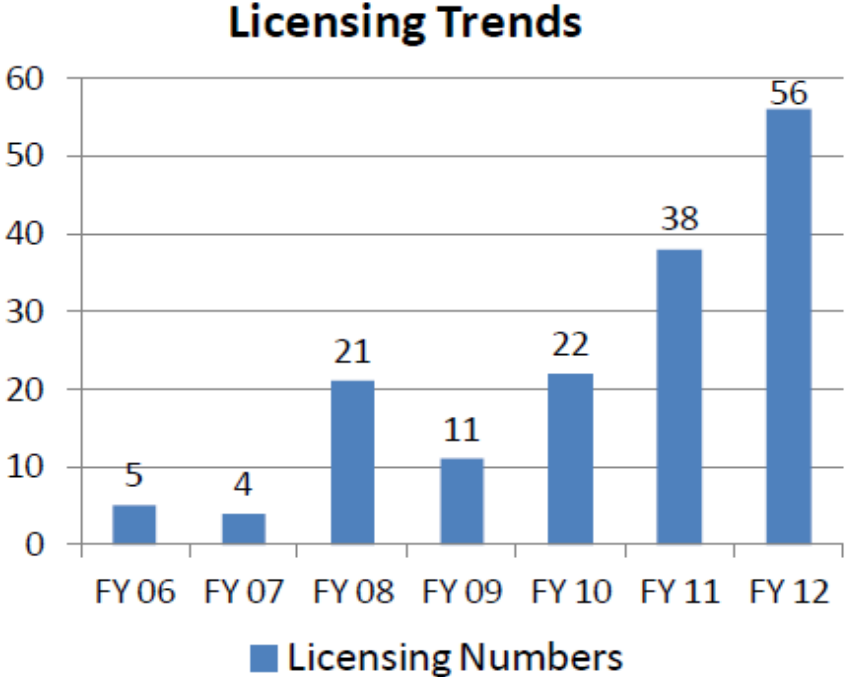
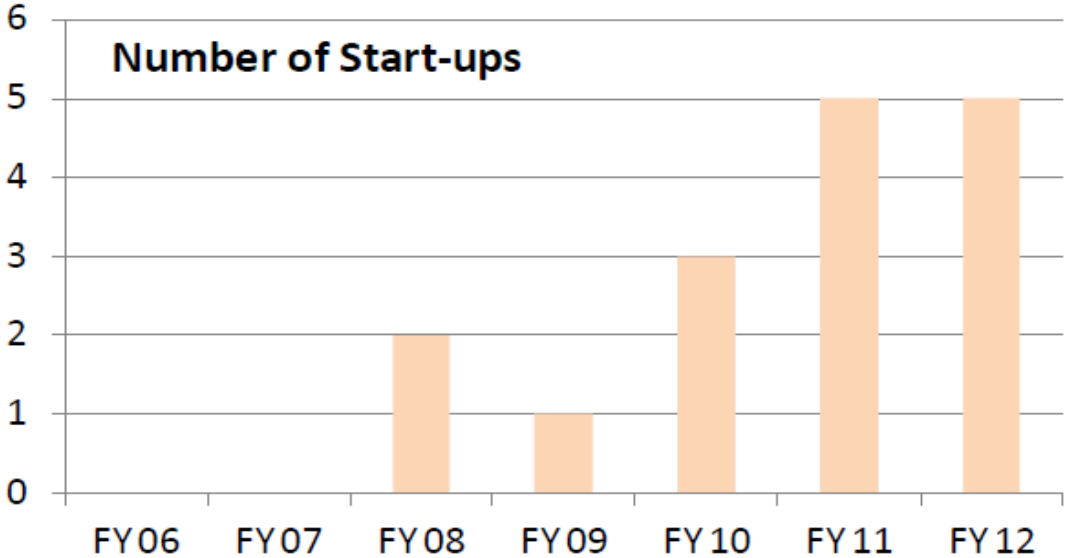
NATURE PUBLICATIONS SINGAPORE



A*STAR Biomedical Publications

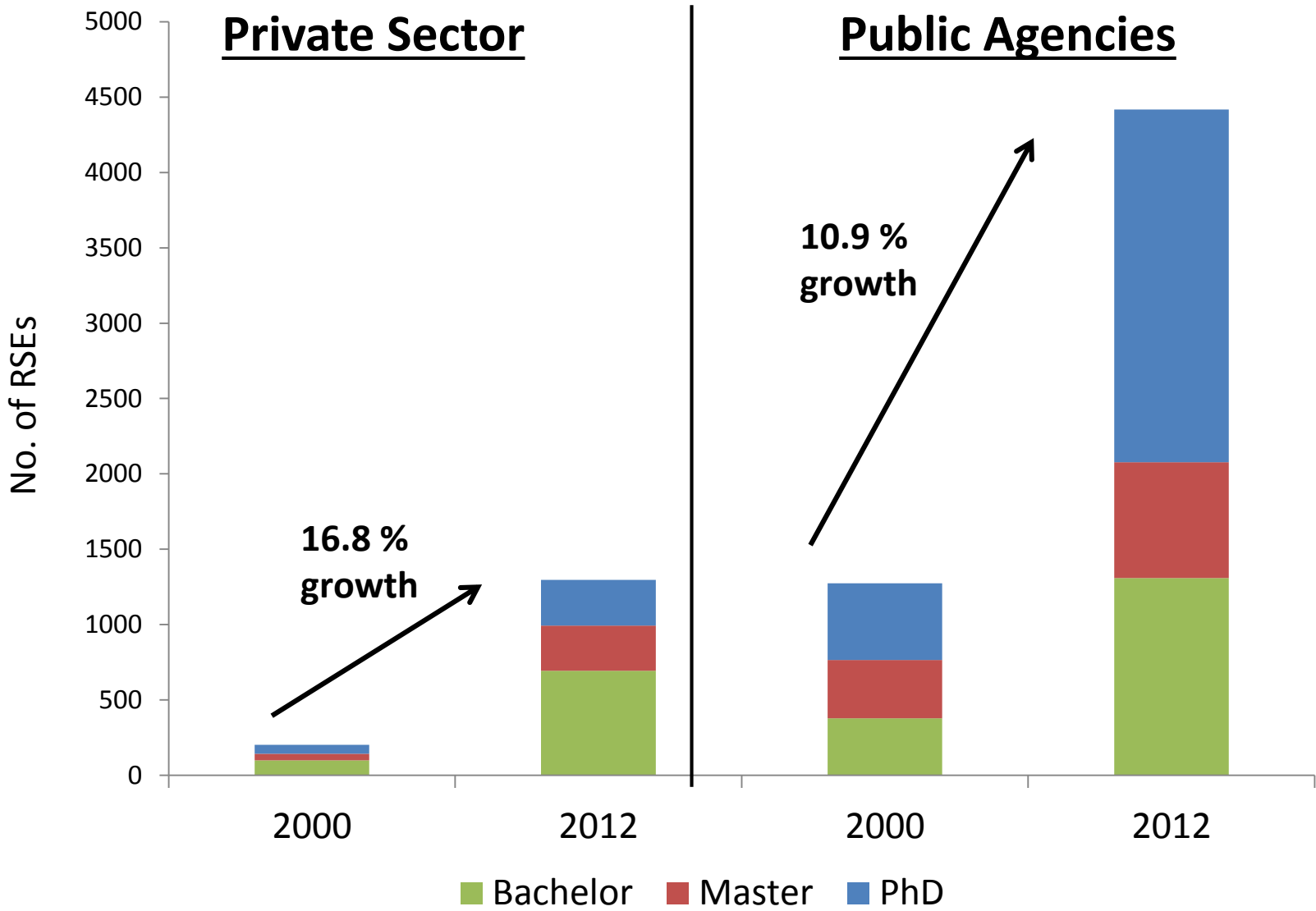


Innovation Capital



Based on A*STAR & extramural projects managed by A*STAR ETPL

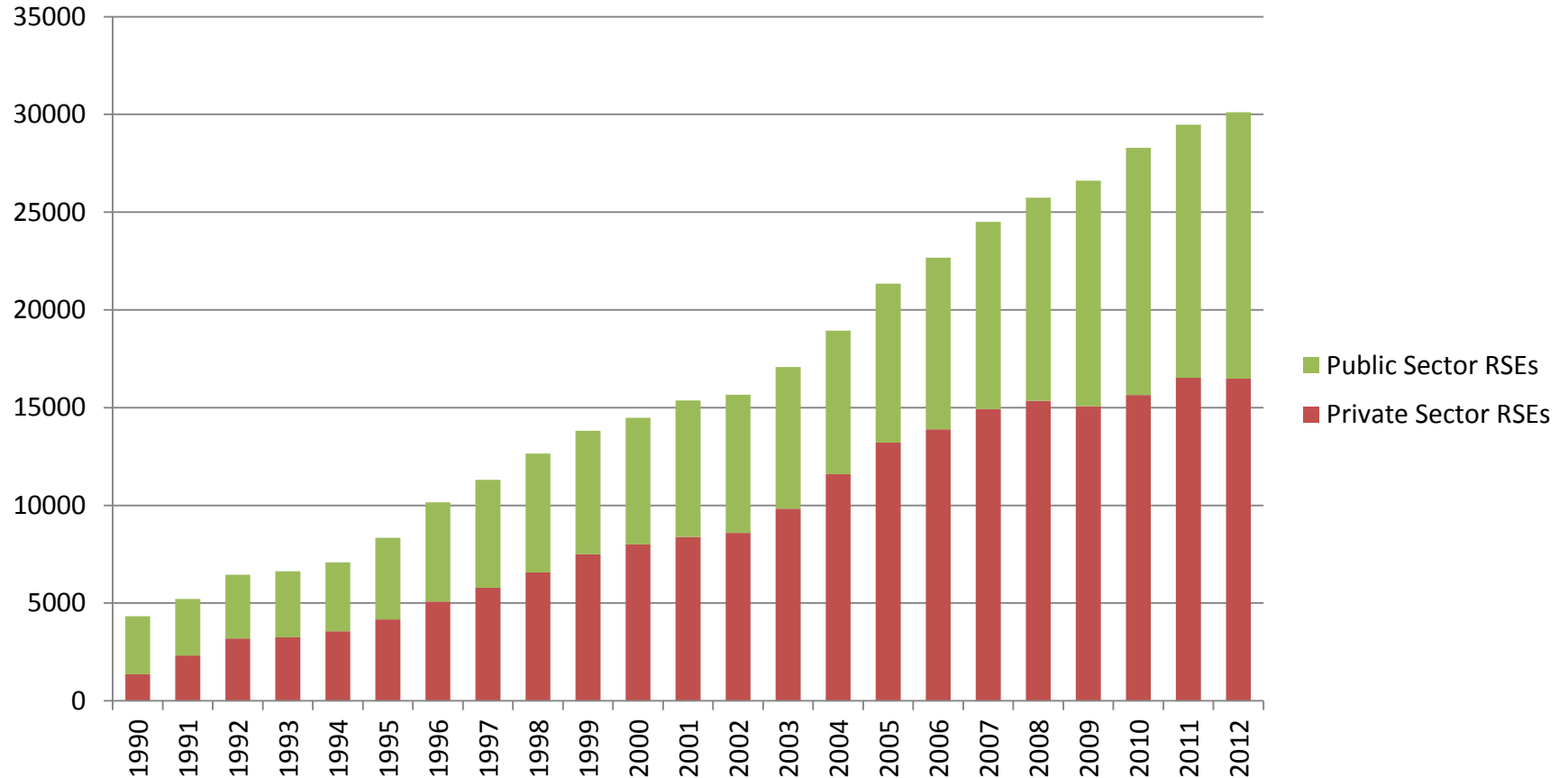
Human Capital



Source: National R&D survey 2012

Building Up R&D Human Capital

Research Scientists & Engineers (RSEs) grew from 4,300 to 30,100 (between 1990-2012)
RSEs in the private sector grew more than tenfold from 1,360 to 16,500



Manpower Growth	Public	Private	Total
CAGR 1990-2012(PhD)	9.6%	15.8%	10.3%
CAGR 1990-2012 (Overall)	7.2%	12.0%	9.2%

55% of total RSEs work in the private sector

Building up Human Capital: Catch a few **Whales** Senior Scientific Leaders to help develop local talent



Dr Philippe Kourilsky
Chairman, SigN



Dr Alan Colman
Exec Dir, SSCC



Dr Sydney Brenner
Scientific Adviser, A*STAR



Dr David Srolovitz
Exec Dir, IHPC



Prof Charles Zukoski
Chmn, SERC



Sir George Radda Chmn, BMRC



Dr Edward Holmes
Exe Dy Chmn (TCSG),
BMRC &
Chmn, NMRC



Dr Judith Swain
Exec Dir, SICS



Prof Paola Castagnoli
Scientific Dir,
SigN



Dr Dale Purves
Exec Dir, NRP



Prof Dim-Lee Kwong
Exec Dir, IME



Dr Keith Carpenter
Exec Dir, ICES



Dr Pantelis Alexopoulos
Exec Dir, DSI



Dr Phil Ingham
Dy Dir, IMCB



Sir David Lane
Chief Scientist



Dr Birgitte Lane
Exec Dir, IMB



Dr Frank Eisenhaber
Director, BII



Dr Alex Matter
Director, ETC



Dr Edison Liu
Exec Dir, GIS



Dr Jackie Ying
Exec Dir, IBN



Prof Stephen Quake
Consultant



Dr Jean Paul Thiery
Dy Dir, IMCB



Prof Peter Gluckman
PI, SICS



Dr Davor Solter
PI, IMB



Prof David Townsend
Head of PET and SPECT Group, SIA
Acting Exec Dir, IMCB

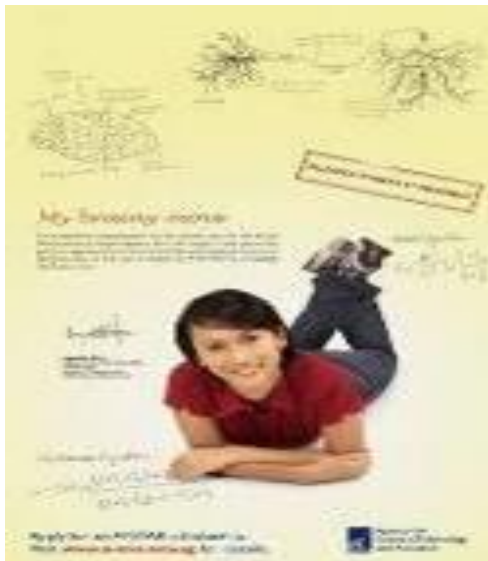


Dr Stephen Cohen

Local Human Capital – Grow PhD Guppies



Guppy – 0.03 meters

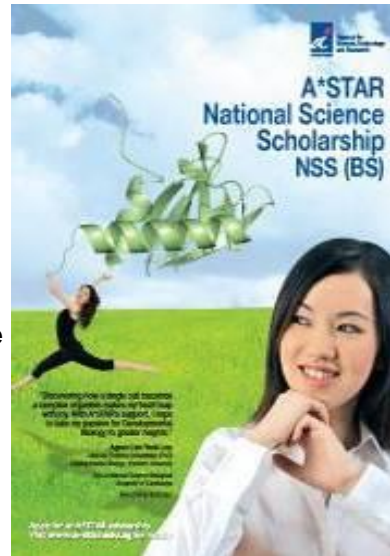


1,200 new Singaporean PhDs@ One-North



**Cambridge
Chemistry
PhD**

**Imperial College
Chemistry
BSc**



**Stanford
Developmental
Biology
PhD**

**Cambridge
Natural Science
Biology
BSc**



**Cambridge
Medicine/PhD**

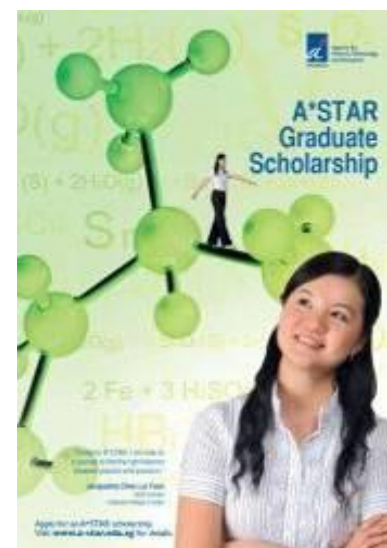


**NUS
Biomedical
Sciences
PhD**

**NTU
Biological
Sciences
BSc**



**Stanford
Genetics
PhD**



**Imperial College
London
Cancer Biology**

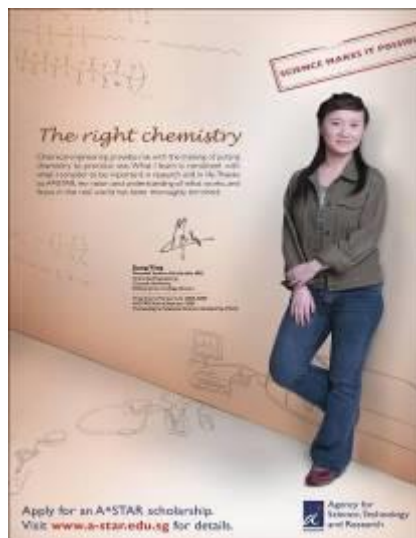


**Harvard
Stem cells
Post-Doc**

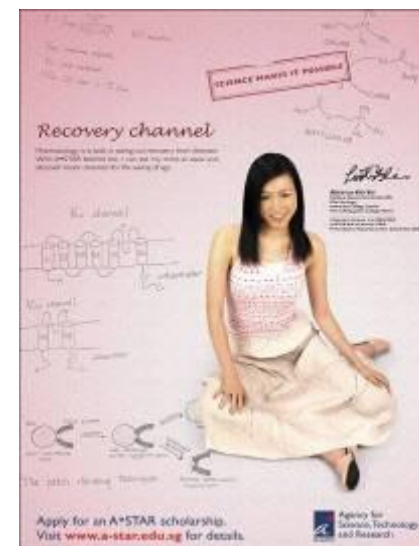
Human Capital: International Guppies



MIT
Materials Science
& Engineering
(Malaysia)



Stanford
Chemical Engineering
(Shanghai)



MIT
Bio Engineering
(Hong Kong)



Stanford
Electrical Engineering
(India)



MIT
Chemical Engineering
(Vietnam)

Evelyn Thangaraj
 2005 A*STAR YRAP Scholar
 from India
 (currently A*STAR Scholar,
 Medicine,
 Imperial College, London)



Long Term Human Capital Pipeline

Le Ngoc Phuong Lan
 2005 A*STAR YRAP Scholar
 from Vietnam
 (currently A*STAR Scholar,
 Pharmacy, University of
 London)



Guppies

Senior
Guppies

Young
Whales



10-14 yrs



15-18 yrs



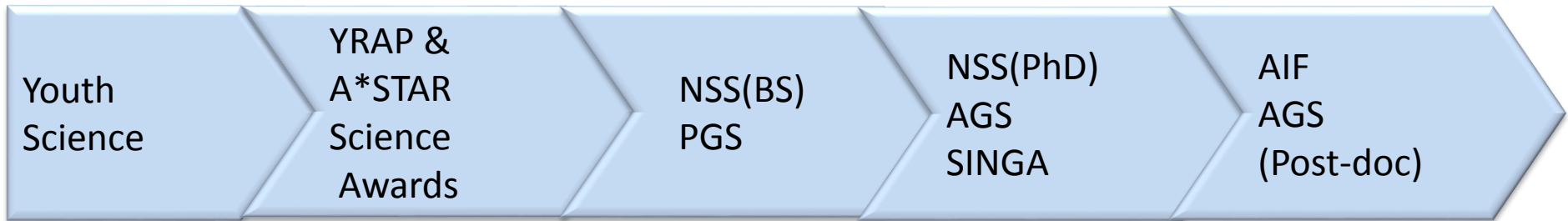
19-23 yrs



24-30 yrs



< 35 yrs



YRAP - Young Researchers Attachment Programme
 A*STAR - Agency for Science & Technology Research
 NSS - National Science Scholarship
 PGS - Pre-Graduate Scholarship

AGS - A*STAR Graduate Scholarship
 SINGA - Singapore International Graduate Award
 AIF - A*STAR International Fellowship

Nurturing a Talent Pipeline of 1,200 Singaporean PhDs

Awarded **more than 1,200 PhD Scholarships**
to develop Singaporean R&D talent since 2001
More than 350 scholars have completed their PhDs and are contributing to Singapore's
Research, Innovation and Enterprise (RIE) environment

Dr Karen Crasta
Lee Kong Chian School of Medicine,
Nanyang Technological University (NTU)
A*STAR International Fellow
NRF Fellow 2013



Dr Cheok Chit Fang
Principal Investigator, IFOM-p53 Lab
National Science Scholar (PhD)



Dr Melissa Fullwood
Yale-NUS College
Principal Investigator, Cancer Science
Institute
National Science Scholar (BS-PhD)
NRF Fellow 2013

Dr Jonathan Loh Yui Han
Principal Investigator, Institute of
Molecular & Cell Biology (IMCB)
A*STAR Graduate Scholar



Dr Seah Kwang Hwee
Associate Patent Examiner, Intellectual
Property Office of Singapore (IPOS)
A*STAR Graduate Scholar

Scientific Career Development

Scholars Contributing to Public R&D

Young Scientific Leaders Heading Research Labs



Cheok Chit Fang
NSS (PhD) 2001

Snr Research Fellow,
IFOM-p53lab

- Heading IFOM-p53 lab jointly funded by A*STAR and IFOM, Italy



Andrew Wan
NSS (PhD) 2001

Team Leader &
Principal Research Scientist,
IBN



Ho Swan Ying
NSS (PhD) 2002

Research Scientist, BTI

- Set up & leads
Metabolomics Group in BTI



Jonathan Loh
AGS (NUS) 2003

Principal Investigator, IMCB

- 2010 A*STAR Investigatorship
- 2010 S'pore Youth Award for S&T
- 2009 Young Scientist Award
- 2012 TR35 @ Singapore



Joel Yang
NSS (PhD) 2004

Scientist, IMRE

- 2009 A*STAR Investigatorship
- 2012 TR35 @ Singapore
- 2010 R&D 100 Awards
- 2012 Young Scientist Award (PSTA)

Exploring Academic Positions in Local Universities



Ho Han Kiat
NSS (PhD) 2000

Assistant Professor,
Dept of Pharmacy,
Faculty of Science, NUS



Melissa Fullwood
NSS (BS) 2002
NSS (PhD) 2006

Assistant Professor, Yale-NUS College

- 2009 L'Oreal Singapore for Women in Science National Fellowships
- 2010 Lee Kuan Yew Postdoctoral Fellowship, Duke-NUS GMS
- 2010 GE & Science Regional Prize for Young Life Scientists
- 2013 NRF Fellowship



Quek Su Ying
NSS (PhD) 2002

Scientist, IHPC
Adjunct Asst Prof, Div of Physics
& Applied Physics, NTU

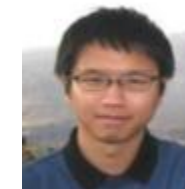
- 2013 NRF Fellowship



Juliana Chan
NSS (BS) 2002
NSS (PhD) 2006

Adjunct Asst Prof, Div of Bioeng, Sch of Chem. & Biomolec. Eng., NTU

- 2010 S'pore Women's Weekly Great Women of Our Time Award (S&T)
- 2011 L'Oréal For Women in Science National Fellowships



Vincent Tan
NSS (PhD) 2006

Scientist, I2R
Adjunct Asst Prof, Dept
of Electrical & Computer
Eng., NUS

Scientific Career Development

Scholars Contributing to Industry

Young Entrepreneurs



Gideon Ho
IF 2003

Chief Commercial
Officer, HistoIndex

- Co-founded HistoIndex, spun off from A*STAR – which provides stain-free, 3D, quantitative imaging solutions to visualise & stage fibrosis



Lee Yong Yeow
AGS (L) 2006

Postdoctoral
Fellow, IBN

- Team developed DropArray ,
- a unique miniaturisation platform - led to spin-off Curiox Biosystems in 2008
- Winner (Open Category), 8th Start-Up @ S'pore Business Plan Competition '07

Building up SME Capabilities via T-Up



Chow Keat Theng
AGS (NUS) 2001

T-Up: SPN Intern'l Pte Ltd

- Completed secondment to SPN International, scaled up coating production



Ryan Chaw
AGS (NUS) 2003

T-Up: HVS Eng Pte Ltd

- Completed secondment to HVS Eng., maintenance solutions for fluid-cooled tube & shell heat exchanger systems
- Currently at IPI



Eu Zhi Ang
AGS (NUS) 2006

T-Up: Hoiiio

- Prog. Mgr (Telecomms) & Scientist, Hoiiio
- Working on Voice Over IP technologies

Scientists Contributing Expertise to Industry



Tanu Kustandi
AGS (L) 2003

- Joined Procter & Gamble after working in IMRE
- Being trained in Japan



Natalia Tansil
AGS (L) 2004



Yar Kar Peo
NSS (PhD)
2001

Principal
Engineer, ST
Electronics

- Worked in I2R
- Heads digital comms section in ST Electronics
- Current work: digital comm. aspect of Satellite systems



Lim Yiping
AGS (O)
2006

Process
Dev't
Engineer,
Lonza

- Contributed to process development at Lonza Biologics



Harmeet Singh
AGS (NUS)
Research Scientist,
L'Oreal Research &
Innovation

- Worked in IMB
- Now involved in validation of technologies / techniques for skin & cosmetic applications



Low Yen Ling
NSS (PhD)
2002

Abbott
Nutrition

- Opportunity to work with industry while in SICS
- Seconded, transferred to Abbott,
- Health products & diet

Biomedical Research Infrastructure



Centros



Matrix



Genome



Helios



Chromos



Proteos

Research Community



BIOPOLIS



Nanos



Neuros & Immunos



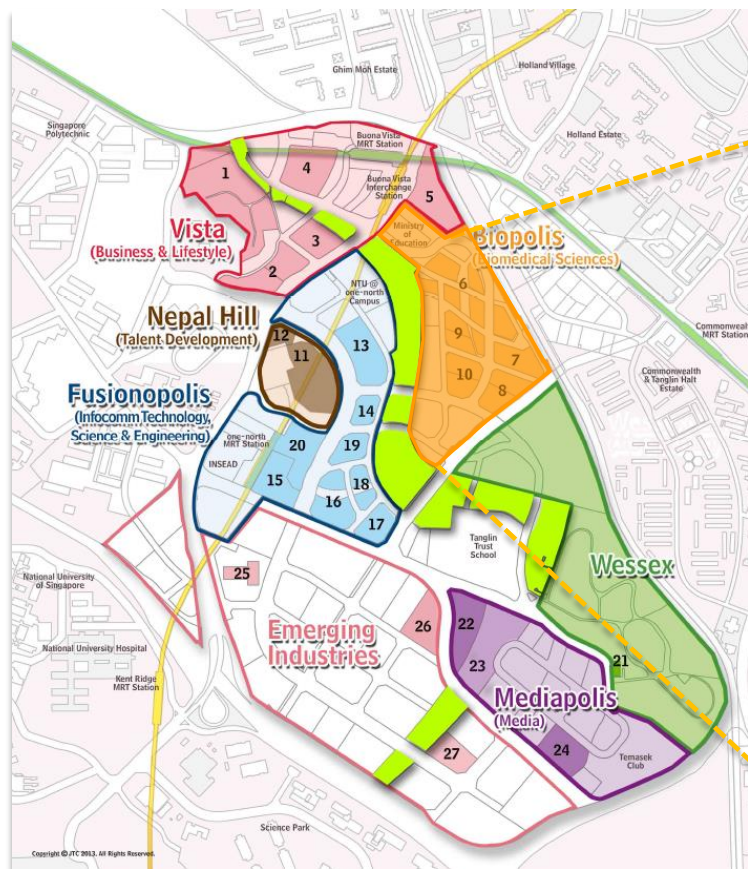
Biopolis - The Biomedical Hub of Asia

Breaking Ground in Dec 2001: Biopolis Phase 1



one-north: Biopolis

Home for Biomedical Sciences Research



Biopolis Phase 1: Cluster of 7 Linked Buildings Completed in 2004



Biopolis Phase 4 (P&G) Completed in 2013



Biopolis Phase 2 Completed in 2006



Biopolis Phase 5 To Complete in 2014



Biopolis Phase 3 Completed in 2011

**Land Area: 7.5 ha
GFA: 350,000 sqm**



Biopolis – Phase 1

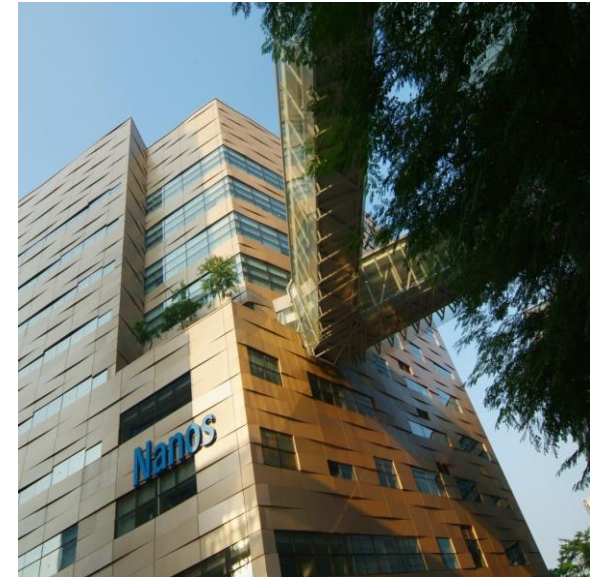
Helios



Matrix



Nanos



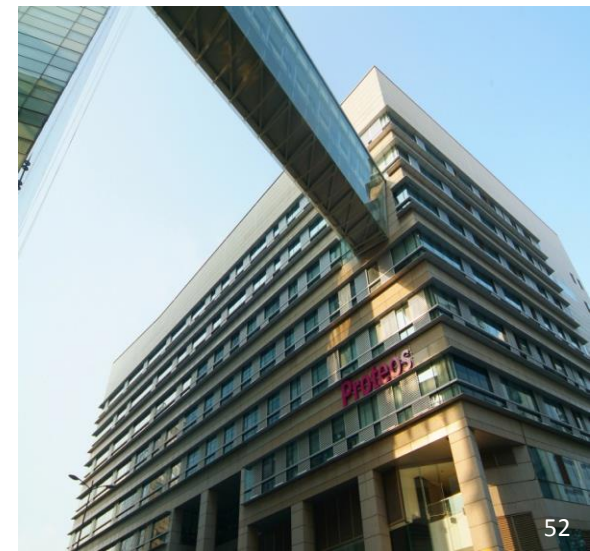
Centros



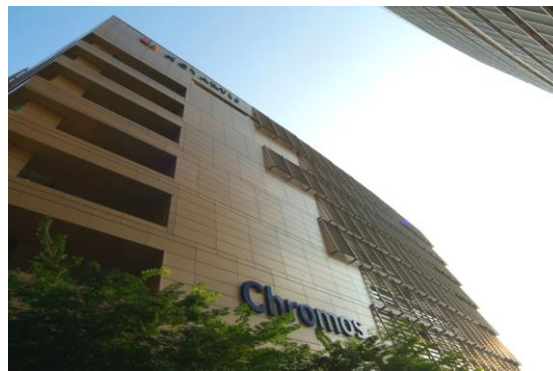
Genome



Proteos



Chromos



one-north: Fusionopolis

Home for Science, Engineering, Infocomm & Media



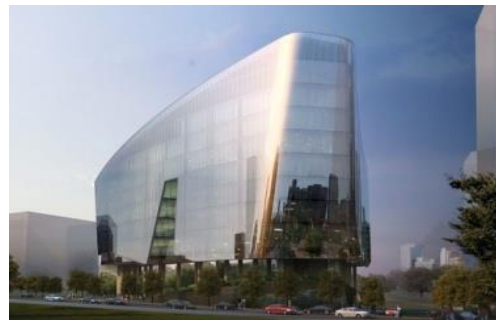
Fusionopolis Phase 1
Completed in 2008



Fusionopolis Phase 3
Completed in 2013



Fusionopolis Phase 2A
To Complete in 2015



Fusionopolis Phase 4 (LucasFilm)
Completed in 2013

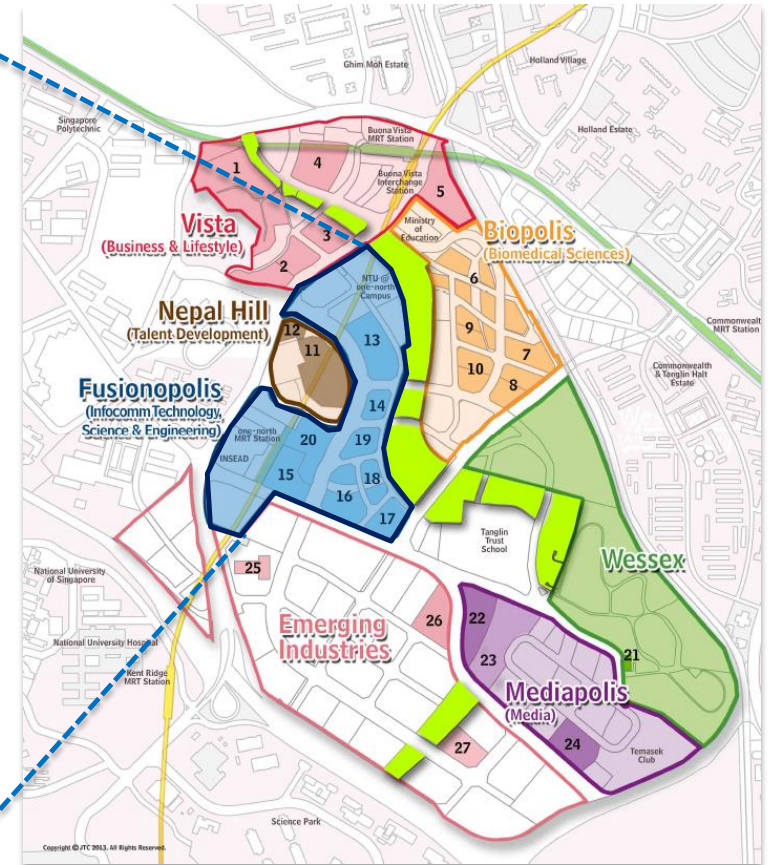


Fusionopolis Phase 2B
Completed in 2010



Fusionopolis Phase 5
To Complete in 2014

Land Area: 6.5 ha
GFA: 400,000 sqm



Fusionopolis Phase 1

Infrastructure and scientific platform to fuse and to synergize the knowledge for different domains, bringing together public and private R&D activities



Fitness Gym & Pool



Shared Conference Rooms



Retail and F&B Podium



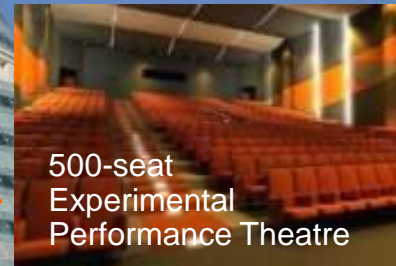
one-north MRT Station



Serviced Work-Live Apartments

Skybridges and Sky Gardens

Business and Research Space



500-seat Experimental Performance Theatre

One-North Residences



Projects In Other Countries

- Singapore started to share its town-planning and industry development expertise with other cities from the 1990s
- The early projects included Batam Industrial Park in Indonesia and Wuxi-Singapore Industrial Park in China
- Over 900,000 jobs have been created in parks developed outside Singapore



Batam Industrial Park in Indonesia



Wuxi-Singapore Industrial Park in China

China- Suzhou Industrial Park



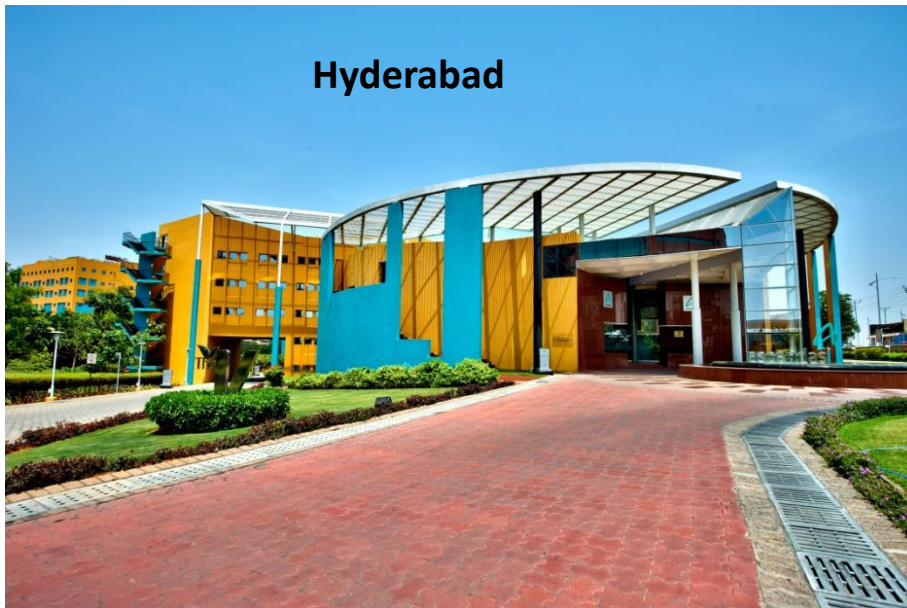
**Over 500,000 Jobs Created (Source:
China Economic Review)**

Industrial Parks in India



Bangalore

77,000 IT Jobs Created



Hyderabad



Chennai

Vietnam Singapore Industrial Park



140,000 Jobs Created Over 4 Parks

Over US\$6 billion of investments

Groundbreaking of 5th Park in Sep 2013

Located in Quang Ngai province, central Vietnam

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