

# Emerging Technologies towards Realising SDGs



**Academy of Sciences Malaysia**

Think Science . Celebrate Technology . Inspire Innovation

An agency under the Ministry of Energy, Science, Technology, Environment & Climate Change

# Academy of Sciences Malaysia established in 1995 has the mandate

- To be the ‘**Thought Leader**’ of the nation for matters related to science, engineering, technology and innovation.
- To **pursue excellence** in the fields of science, engineering and technology for the **benefit of all**.

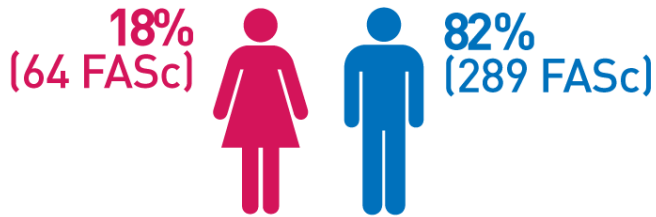
# ASM MEMBERS

**6** Honorary Fellows

**353** Fellows

**28** Senior  
Fellows

**325** Ordinary  
Fellows



Fellow of the Academy of Sciences Malaysia (FASc) are elected for life based on their scientific and scholarly achievements through a rigorous selection process.



**20** Information Technology & Computer Sciences



**64** Engineering Sciences



**64** Medical & Health Sciences



**40** Chemical Sciences



**76** Biological, Agricultural & Environmental Sciences



**45** Mathematics, Physics & Earth Sciences



**37** Science & Technology Development Industry



**07** Social Sciences & Humanities

# OTHER EXPERTS

## 40 Associates

A pool of diverse expertise appointed on a two-year terms to fullfil the increasing interdisciplinary demand of knowledge

## 133 TRSM

Top Research Scientist Malaysia

Recognition of outstanding active research scientists for their work in various disciplines

## 158 YSN-ASM

Young Scientists Network

Represent the young voice, committed towards making an impact to society

## 10 MSA Laureates

Mahathir Science Award

Recognition for contributions and innovations towards solving problems in the tropics through S&T



7 Individual



2 Organisations



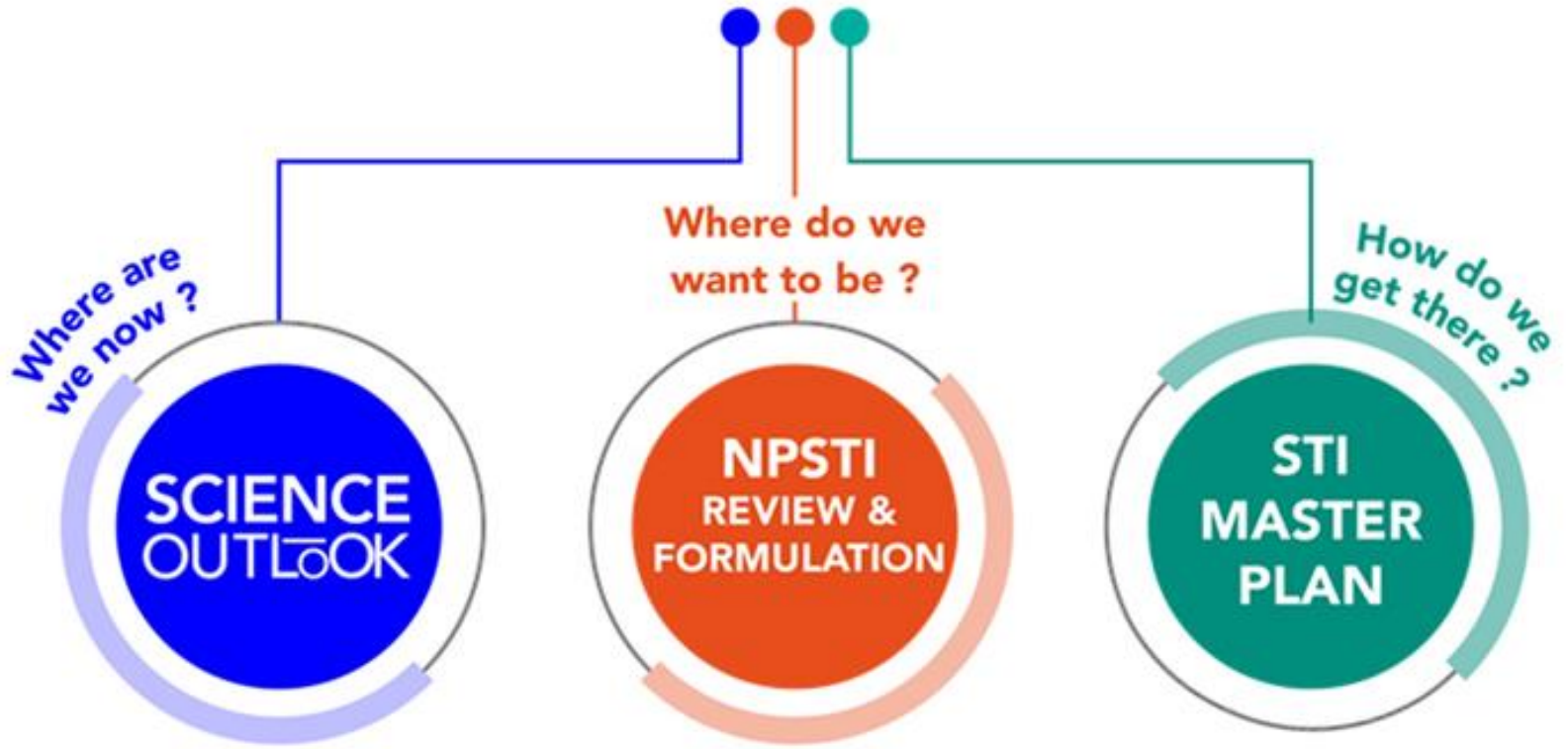
1 Team

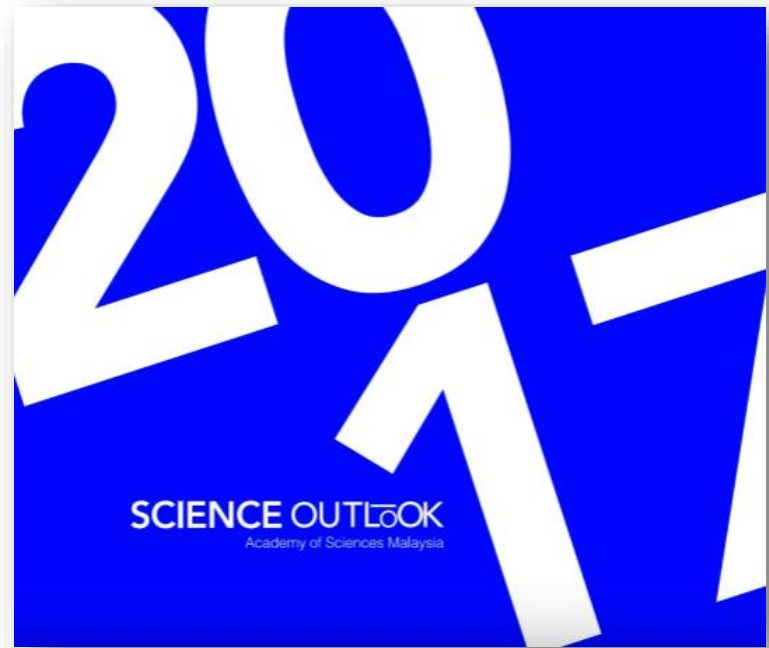


KEMENTERIAN SAINS, TEKNOLOGI DAN INOVASI  
MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION

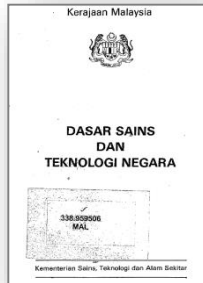


# PROGRESSIVE MALAYSIA 2050





# Macro STI Policy



First National S&T Policy  
(1986 – 1989)



Second National S&T Policy  
(2002 – 2010)



National Policy on Science, Technology & Innovation  
(2013 – 2020)



National Policy on Science, Technology & Innovation  
(2021 – 2030)

# Mega Science (MS) Studies

## MS 1.0 (2010): 5 SECTORS (WEHAB)



Water



Energy



Health



Agriculture



Biodiversity

## MS 2.0 (2013): 5 SECTORS (HITEE)



Housing



Infrastructure



Transportation



Environment



Electricals & Electronics

## MS 3.0 (2015): 5 SECTORS (FACT/PC)



Furniture



Automotive



Creative



Tourism



Plastics & Composites

## RATIONALE

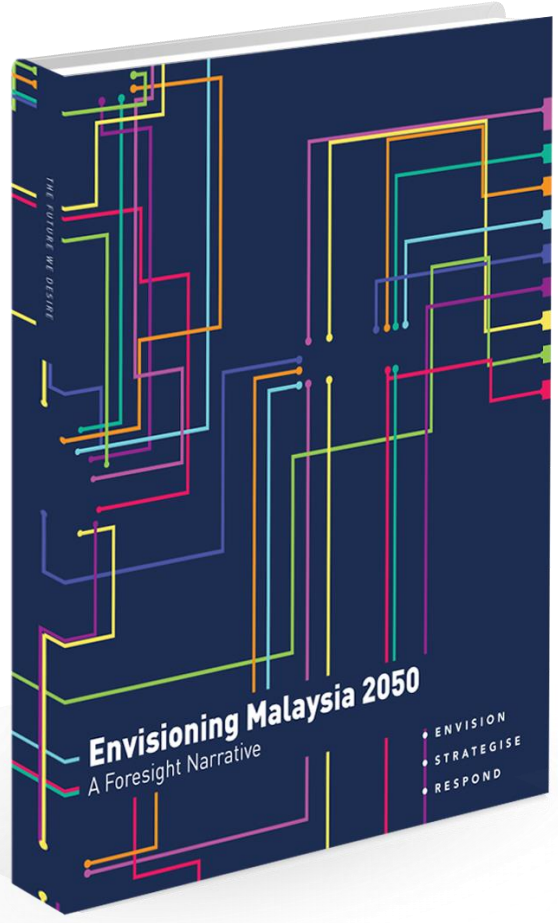
Addressing  
basic  
necessities

Tackling  
people's  
well-being

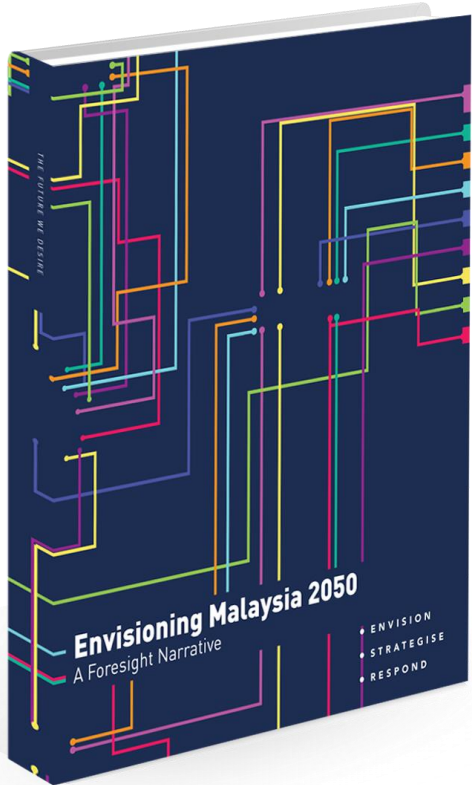
Catalysing key  
economic  
sectors  
through  
STI for wealth  
creation

**HOW  
STI  
PLAYS  
A ROLE**

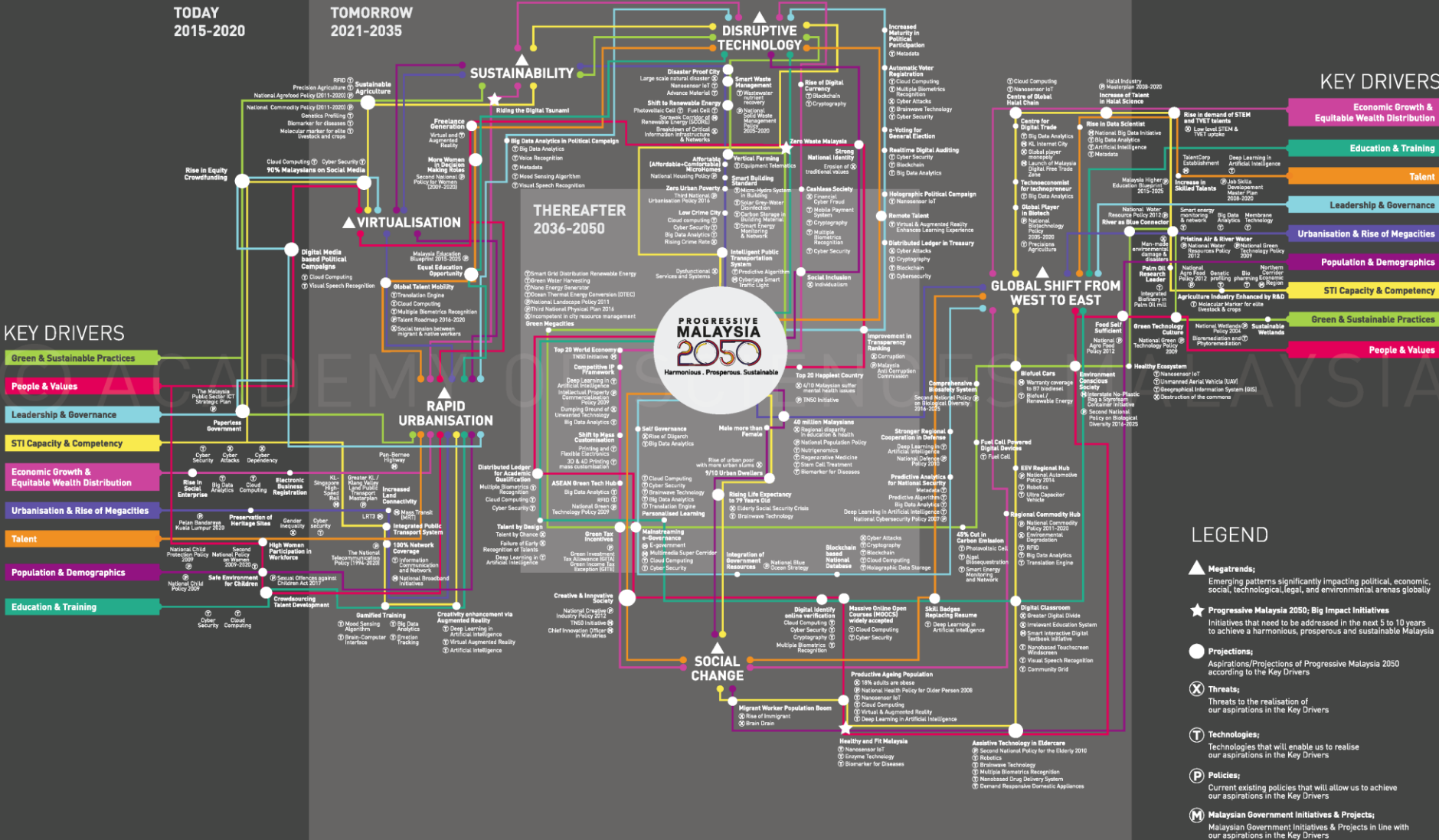




# 9 Key Drivers for Progressive Malaysia 2050



# PROGRESSIVE MALAYSIA 2050: TRENDS AND ATTRIBUTES MAP



# Technology Areas in ESET Study



*Green Technology*

Crucial emerging technologies for the realisation of SDGs towards 2030 from the perspective of scientists



*Neurotechnology*

Energy technologies as well as **information, communication and computer technologies** maybe the two most crucial technology clusters for the SDGs (Global Sustainable Development Report 2016)



*Nanotechnology*

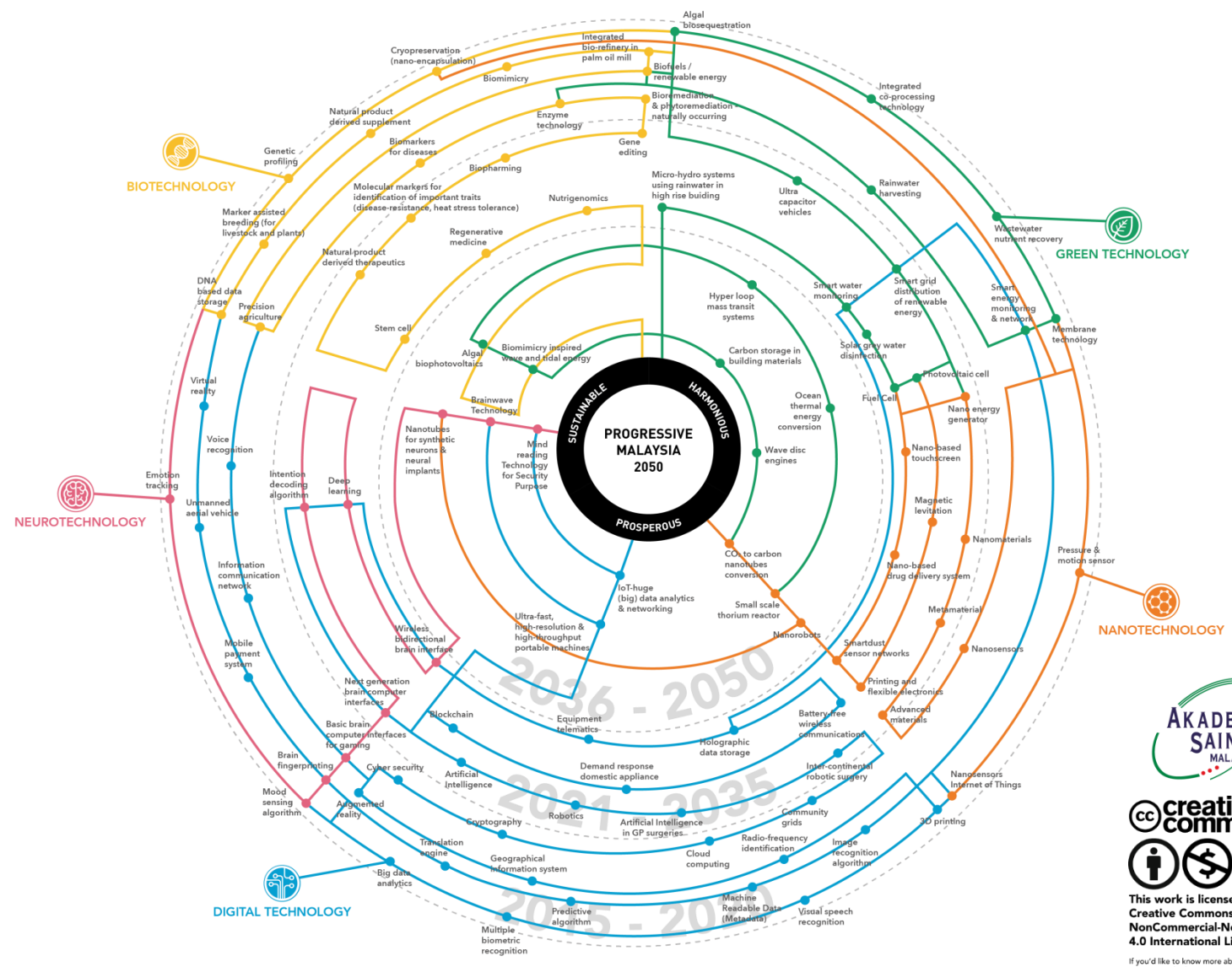


*Biotechnology*



*Digital Technology*

# Emerging Science, Engineering and Technology (ESET) Malaysia's 95 Emerging Technologies 2015 - 2050



**AKADEMI SAINS MALAYSIA**

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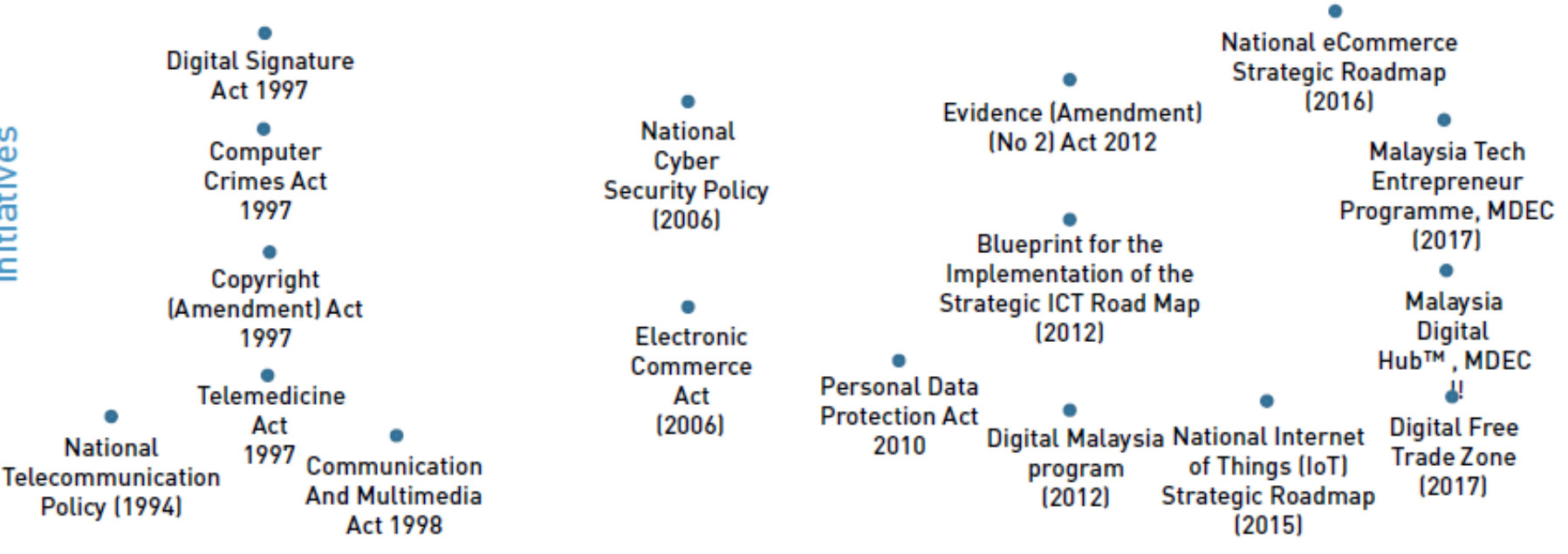
**BY NC ND**

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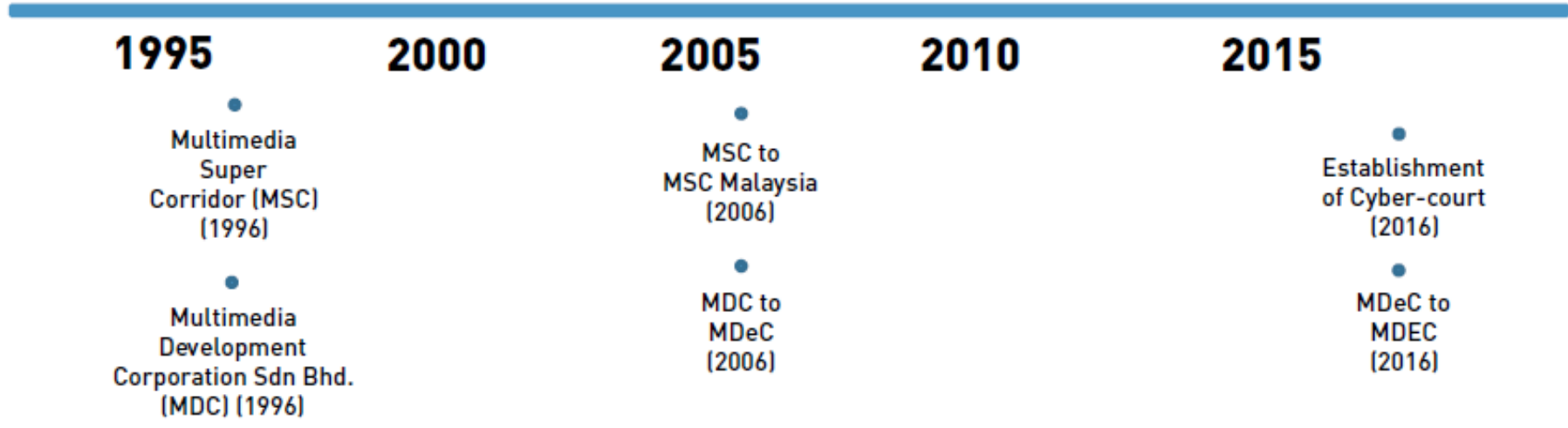
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# Digital technology development in Malaysia

Policy documents / National Initiatives

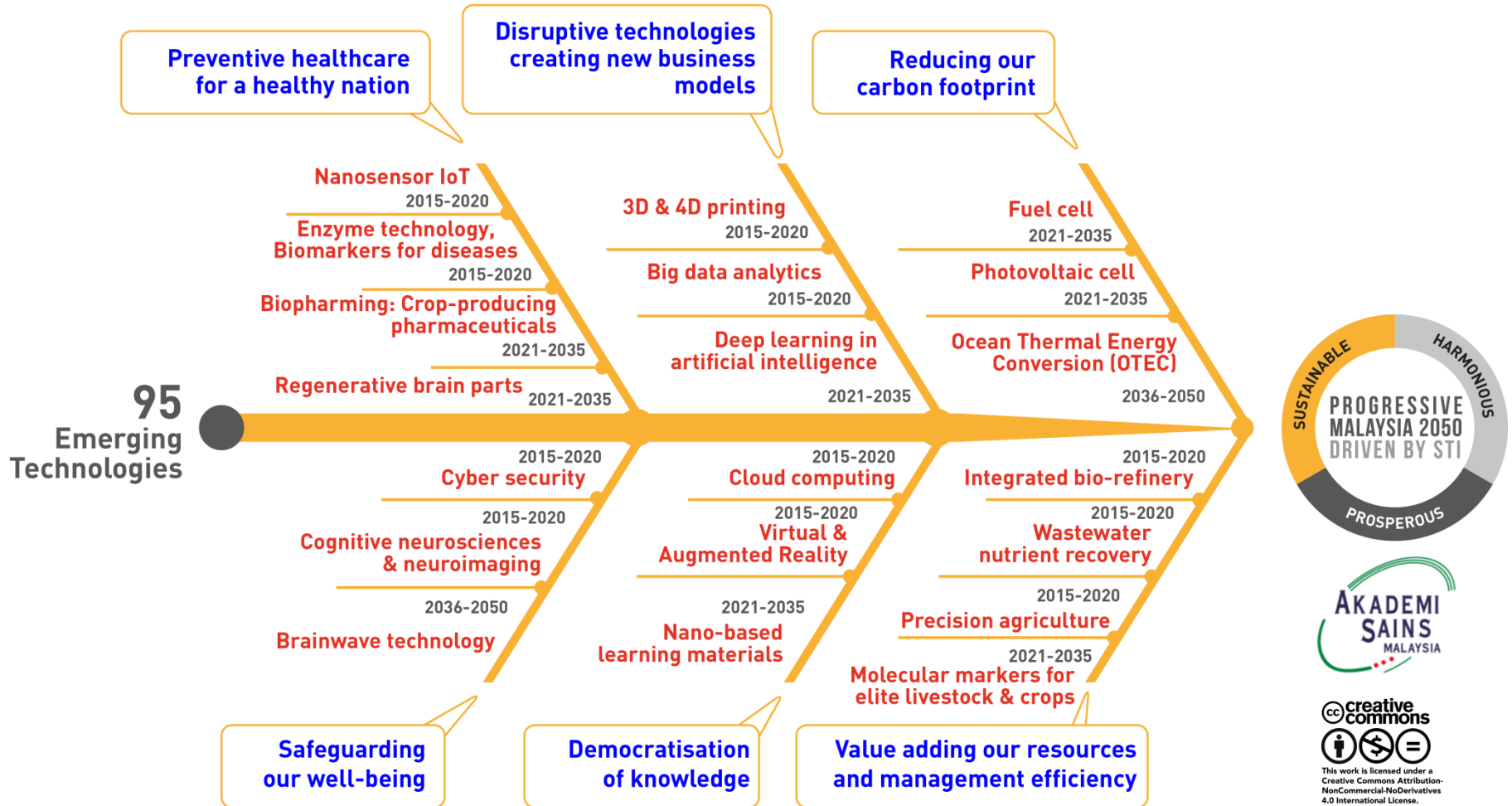


Organisations





# Technology Tree : 21 Impactful Emerging Technologies for Malaysia's Well-Being, Wealth Creation and Governance





Accelerate socio-economic transformation leveraging the digital tsunami towards:

1. Reducing the inequality divide between the rural and urban population by increasing accessibility, affordability and availability of technological interventions
2. Enhancing livelihood through creation of new business models utilising disruptive technologies
3. Democratisation of knowledge to empower people to make informed decisions

# Thank You

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