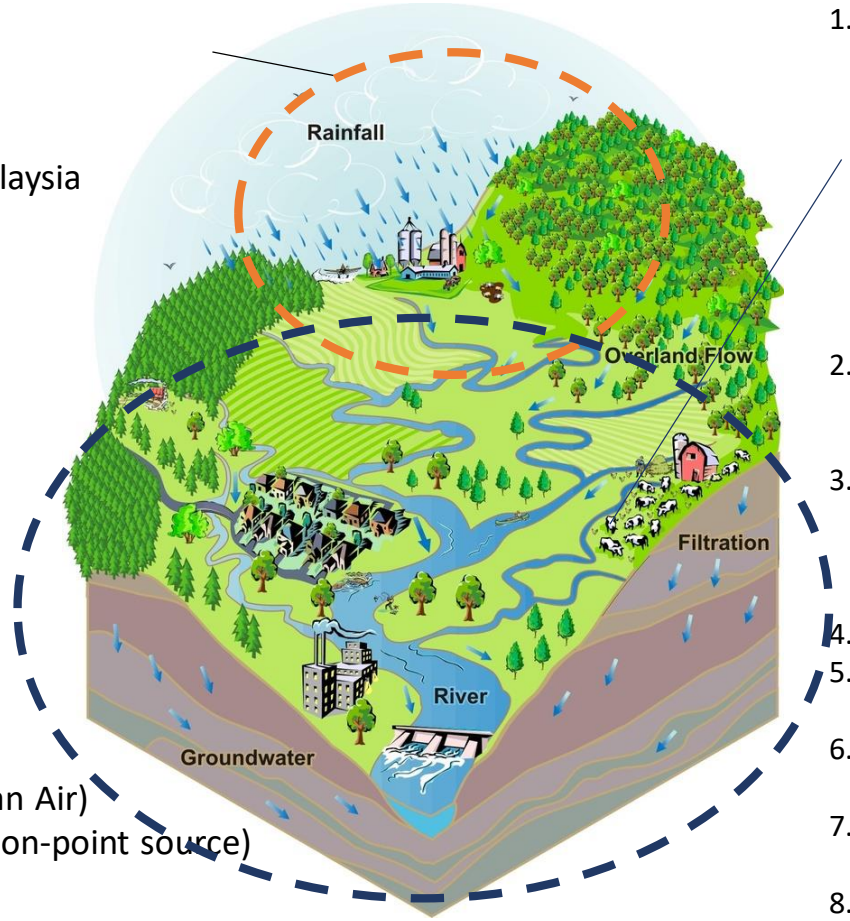
WATER SECTOR TRANSFORMATION: WATER BEYOND ENABLER

Ministry of Economic Affairs

Various stakeholders involved in protecting water resources

UPSTREAM

1. Kementerian Air, Tanah dan Sumber Asli
   i. Jabatan Mineral dan Geosains
   ii. Jabatan Perhutanan Semenanjung Malaysia
   iii. Jabatan Ketua Pengarah dan Galian
2. Pihak Berkuasa Negeri
   i. Pejabat Tanah dan Galian
   ii. Jabatan Perhutanan Negeri
   iii. Jabatan Pengairan Saliran



WATER QUALITY CONTROL:

1. Jabatan Alam Sekitar (Point-source)
2. Jabatan Kesihatan (Pusat rekreasi, Loji Rawatan Air)
3. Pihak Berkuasa Negeri/ Kerajaan Tempatan (non-point source)
4. SWCorp
5. JPS

DOWNSTREAM

1. Kementerian Air, Tanah Dan Sumber Asli
   i. Jabatan Bekalan Air
   ii. Jabatan Perkhidmatan Pembentungan
   iii. Suruhanjaya Perkhidmatan Air Negara
   iv. Pengurusan Aset Air Berhad
   v. Syarikat/ Operator Bekalan Air
   vi. Syarikat/ Operator Pembentungan
   vii. Jabatan Pengairan dan Saliran
   viii. Jabatan Mineral dan Geosains
2. Kementerian Pertanian dan Industri Asas Tani
   i. Jabatan Pertanian
   ii. Jabatan Perikanan
3. Kementerian Perumahan dan Kerajaan Tempatan
   i. JKT
   ii. Jabatan Pengurusan Sisa Pepejal
   iii. SWCorp
4. Kementerian Pembangunan Luar Bandar
5. Kementerian Wilayah Persekutuan
   i. Plan Malaysia
6. Kementerian Kesihatan
   i. Jabatan Kesihatan
7. Pihak Berkuasa Negeri
   i. Pejabat Tanah Daerah/ PBT
8. Jabatan Laut Malaysia
9. FELDA
10. JAKOA

Many policies, acts, enactment, management instruments created to improve water governance

Enabling Environment

- National Water Resources Policies 2012
- National Biological Diversity Policy 2017
- National Environment Policy
- National Climate Change Policy
- National Green Technology Policy
- Rancangan Fizikal Negara 3

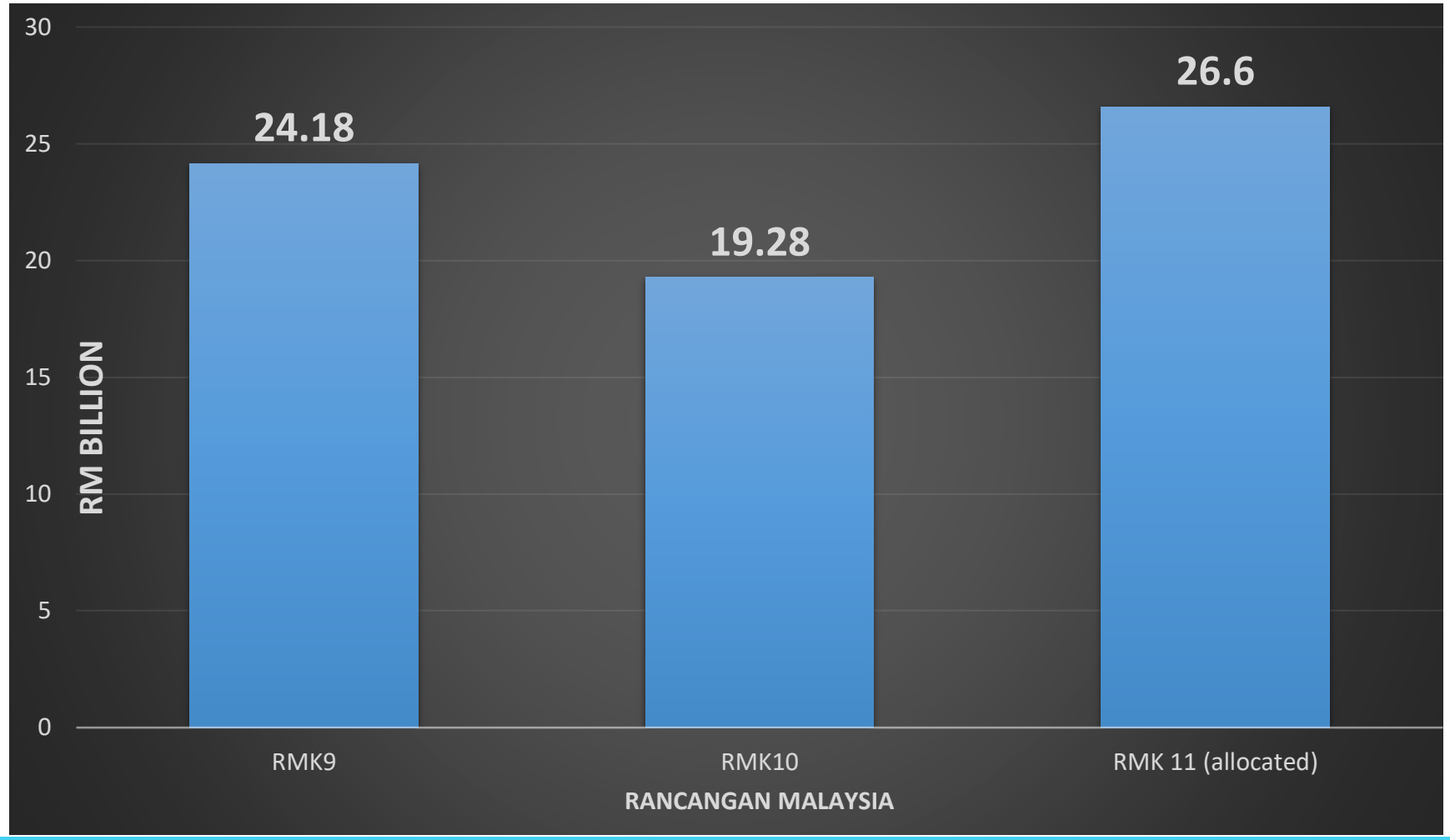
Institutional framework

- Establishment of NRE in 2004
- Establishment of KeTAK in 2004 and KeTTHA in 2009
- Majlis Sumber Air Negeri
- Majlis Tanah Negara
- Majlis Teknologi Hijau dan Perubahan Iklim
- Other technical and research agencies

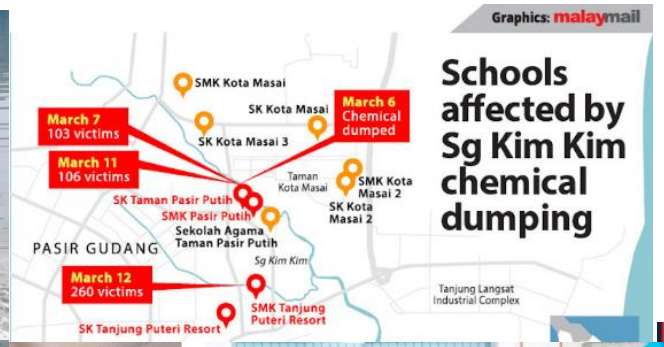
Legislation

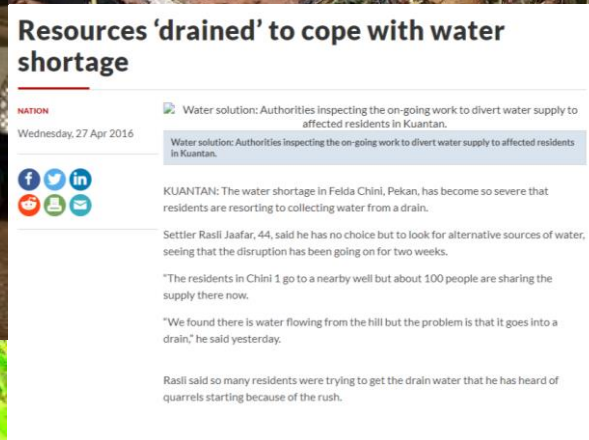
- States Water Enactments/ Ordinance (Sabah, Selangor, Kedah, Pahang, Johor, Negeri Sembilan, Melaka, Pulau Pinang, Perlis, Sarawak)
- Waters Act 1920
- Environmental Quality Acts 1974

Total Water-Related Development Expenditure



However, managing water continue to remain challenging





Resources 'drained' to cope with water shortage

NATION

Wednesday, 27 Apr 2016

Water solution: Authorities inspecting the on-going work to divert water supply to affected residents in Kuantan.

Water solution: Authorities inspecting the on-going work to divert water supply to affected residents in Kuantan.

KUANTAN: The water shortage in Felda Chini, Pekan, has become so severe that residents are resorting to collecting water from a drain.

Settler Rasli Jaafar, 44, said he has no choice but to look for alternative sources of water, seeing that the disruption has been going on for two weeks.

"The residents in Chini 1 go to a nearby well but about 100 people are sharing the supply there now.

"We found there is water flowing from the hill but the problem is that it goes into a drain," he said yesterday.

Rasli said so many residents were trying to get the drain water that he has heard of quarrels starting because of the rush.

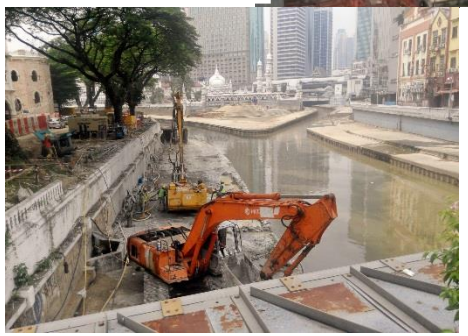
Huge expenditures for water resources; recovery; & addressing pollution

Batu Ferringhi Remediation Cost
RM11.8 mil

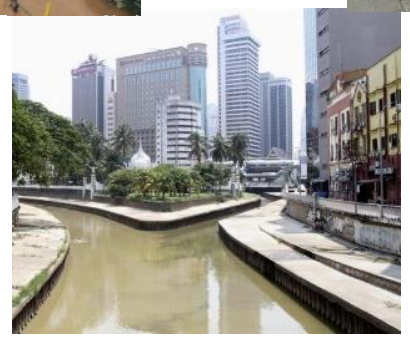
NRW Reduction
2013-RM253mil
2014-RM184 mil
2015RM109 mil
2016RM844 mil

Post-Disaster Cost (Flood 2014)
>RM1.5 bil

To Unclog Blockage in Sewerage System
>RM26 mil /year



River of Life Cost
>RM1 bil



River Remedial Works
2016 >RM1.66 bil
2017 >RM1.59 bil

and the list goes on …

Pressing Issues

- **Water catchment areas are being compromised** for economic activities
- **Water resources quality** issues-high turbidity due to land use change, industrial pollution, pesticides/ fertilizers, salt water intrusion
- **Unreliable supply** of water for industrial activities- affect investor's interest
- **Improper planning**- water availability is given least concern in considering new development areas
- Existing water resources infrastructure **not functioning-dams/ reservoirs**
- **High NRW/ low** utilization of surface **run-offs water**
- **Flood**/ flash flood occurences
- **High operational and maintenance costs for plants**
- **High capital expenditure** to build/ upgrade water and sewerage infrastructure
- Focus were given more to urban areas- **access of rural population** to water supply and sewerage services **are still limited**

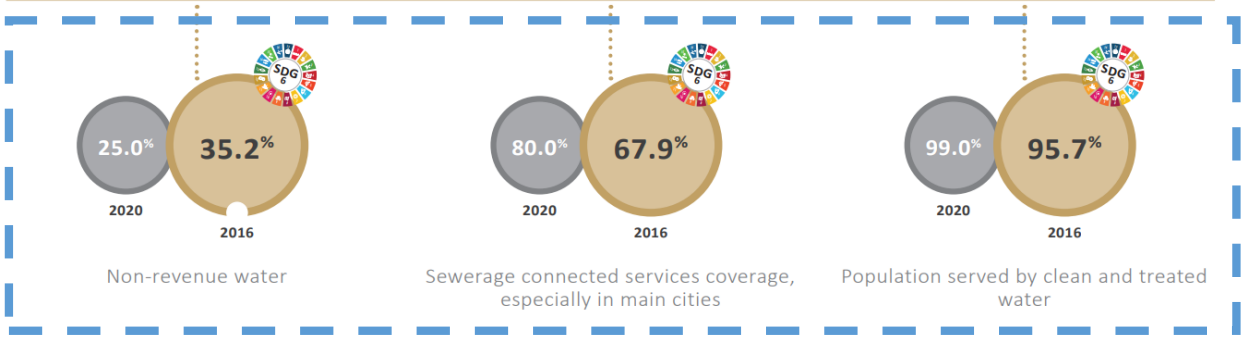
12TH MALAYSIA PLAN 2021-2025

TRANSFORMING WATER SECTOR

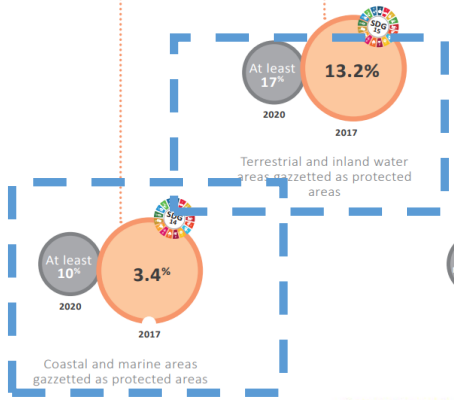
6 CLEAN WATER AND SANITATION

SUSTAINABLE DEVELOPMENT GOALS

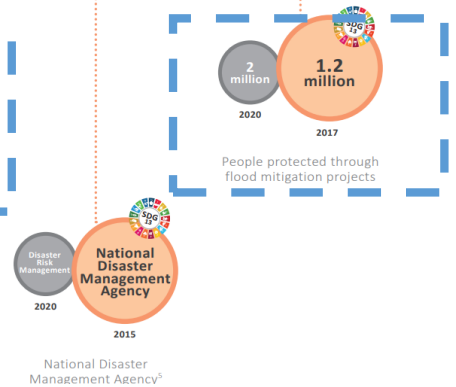
Continuing the transition to a new water services industry framework



Conserving natural resources for present and future generations



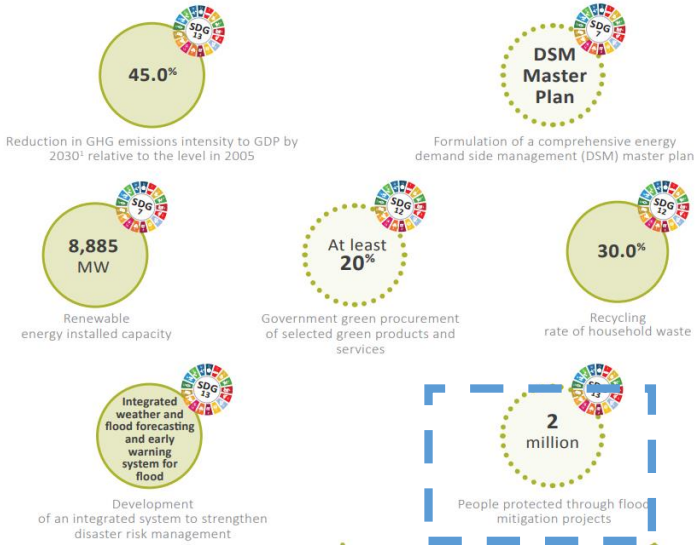
Strengthening resilience against climate change and natural disasters



Providing quality infrastructure

mid-term review of the
ELEVENTH MALAYSIA PLAN 2016-2020
new priorities and emphases

Combating climate change and reducing disaster risks



6 CLEAN WATER AND SANITATION

6.1 By 2030, achieve universal and equitable access to **safe and affordable drinking water for all**

6.2 By 2030, achieve access to **adequate and equitable sanitation and hygiene for all** and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

6.3 By 2030, **improve water quality by reducing pollution**, eliminating dumping and minimizing release of hazardous chemicals and materials, **halving the proportion of untreated wastewater** and substantially **increasing recycling and safe reuse globally**

6.4 By 2030, substantially **increase water-use efficiency** across all sectors and **ensure sustainable withdrawals and supply of freshwater** to address water scarcity and substantially reduce the number of people suffering from water scarcity

6.5 By 2030, **implement integrated water resources management** at all levels, including through transboundary cooperation as appropriate

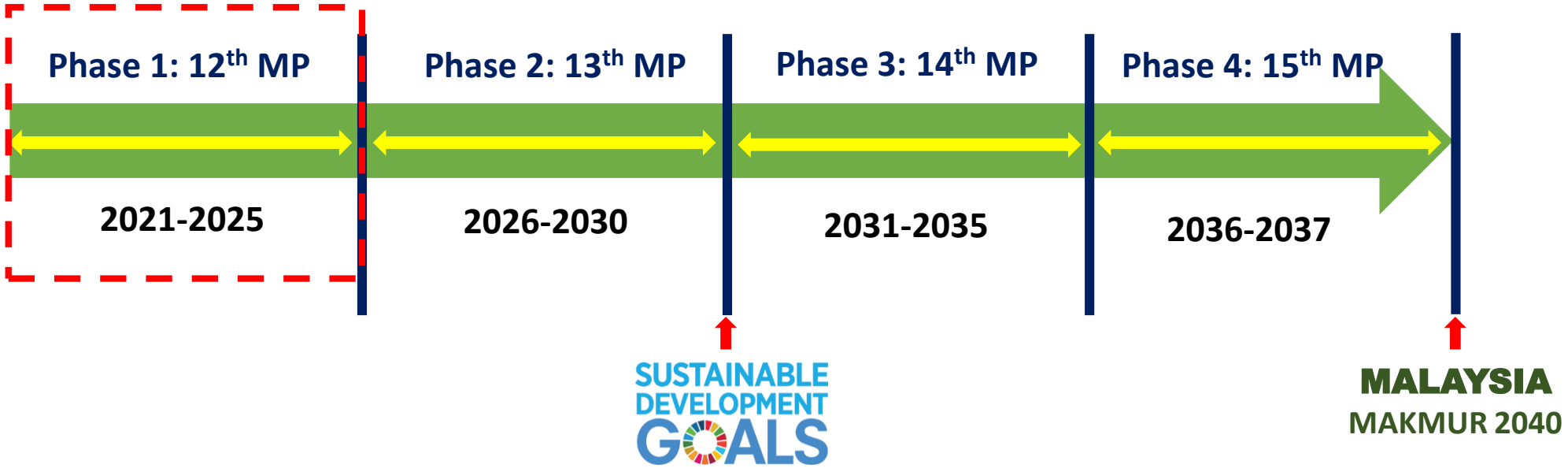
6.6 By 2020, **protect and restore water-related ecosystems**, including mountains, forests, wetlands, rivers, aquifers and lakes

6.A By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

6.B Support and strengthen the participation of local communities in improving water and sanitation management

Visions for Water Sector Transformation

1. **Achieve an inclusive and sustainable provisions of safe and affordable water supply and sanitation systems**
2. **Recognise water as a wealth creation sector**
3. **Putting Malaysia as a tropical Asian frontier in Integrated Water Resources Management**



12th Malaysia Plan

Why do we need transformation? Why can't we live in BAU?

What does transformation means for water sector? What will it looks like? What benefit we'll gain?

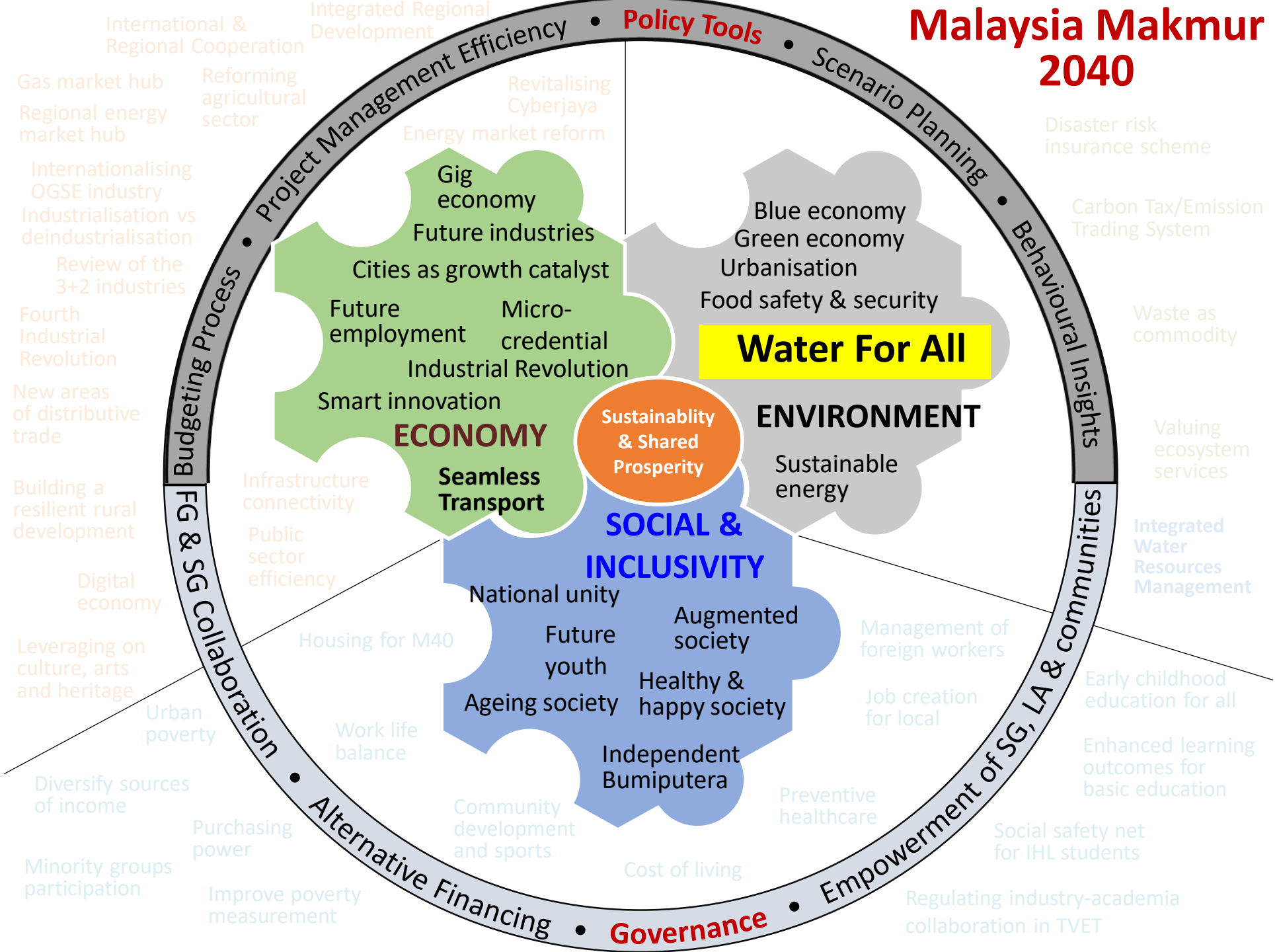
Who will do the transformation? Who will be affected? Who will benefit?

How do we transform the sector? How much does it cost?

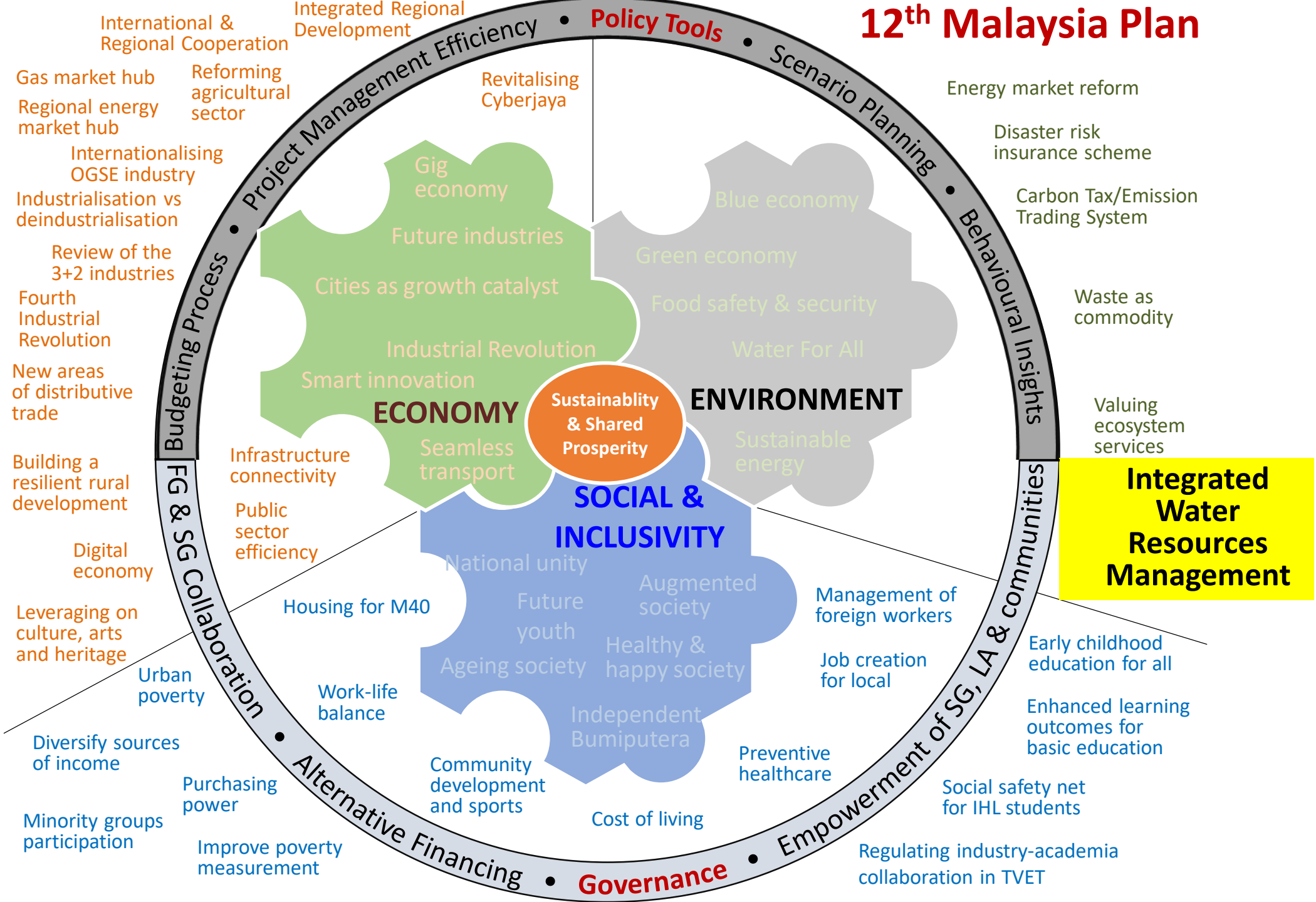
When do we start the process? When do we want to see the result?

Where should it begin? Where shall it ends?

Malaysia Makmur 2040



12th Malaysia Plan



THE 4th INDUSTRIAL REVOLUTION

Five global mega trends shaping the future

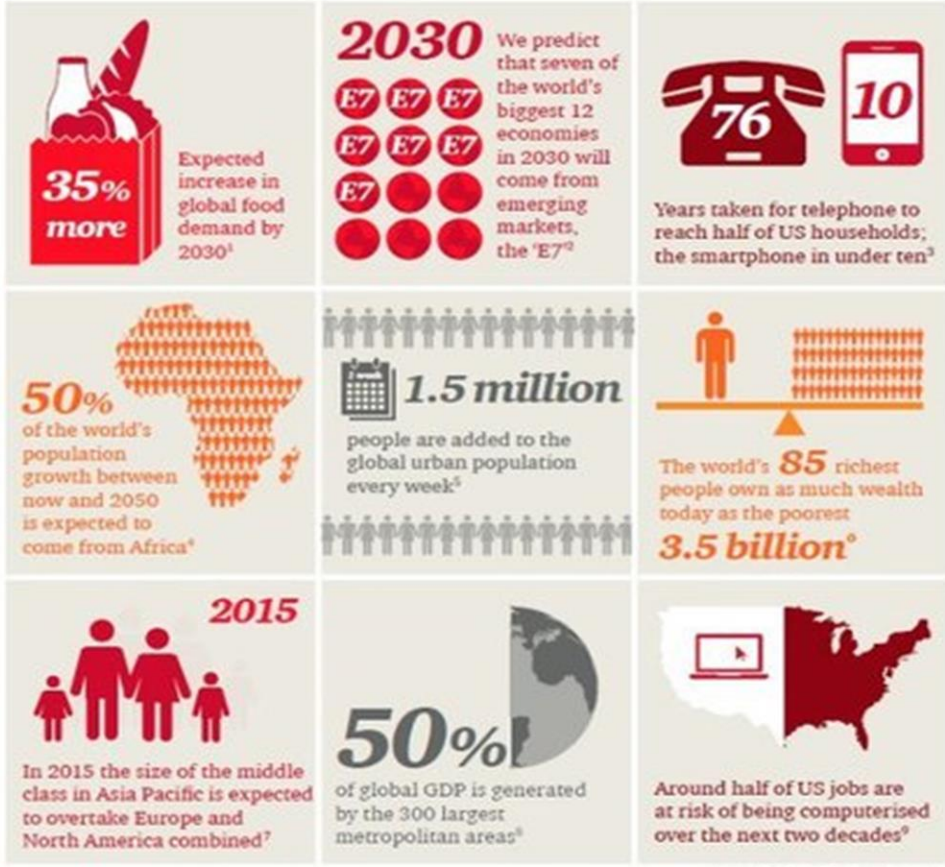
Rapid urbanisation

Demographic and social change

Climate change and resource scarcity

Shift in global economic power

Technological breakthroughs

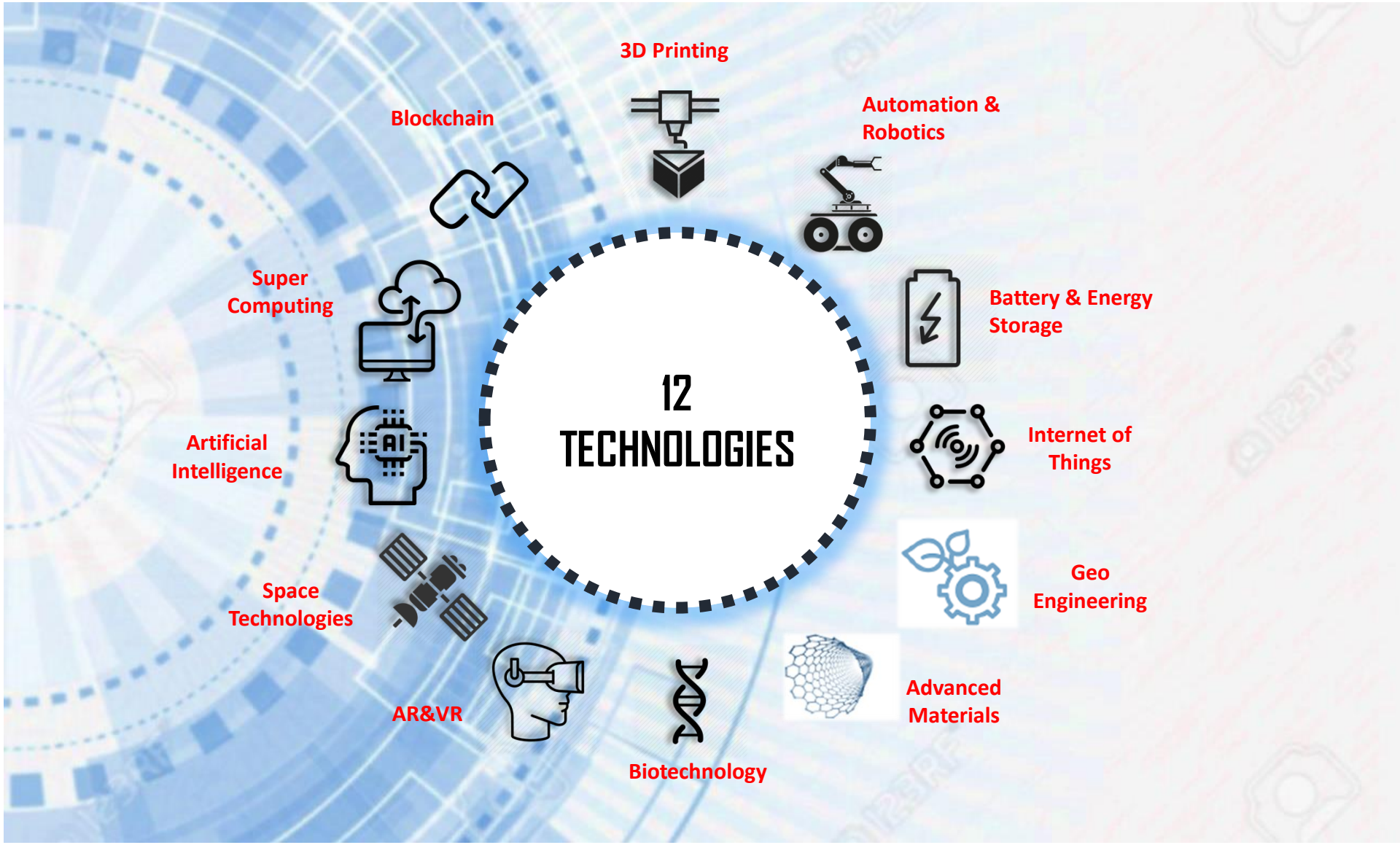


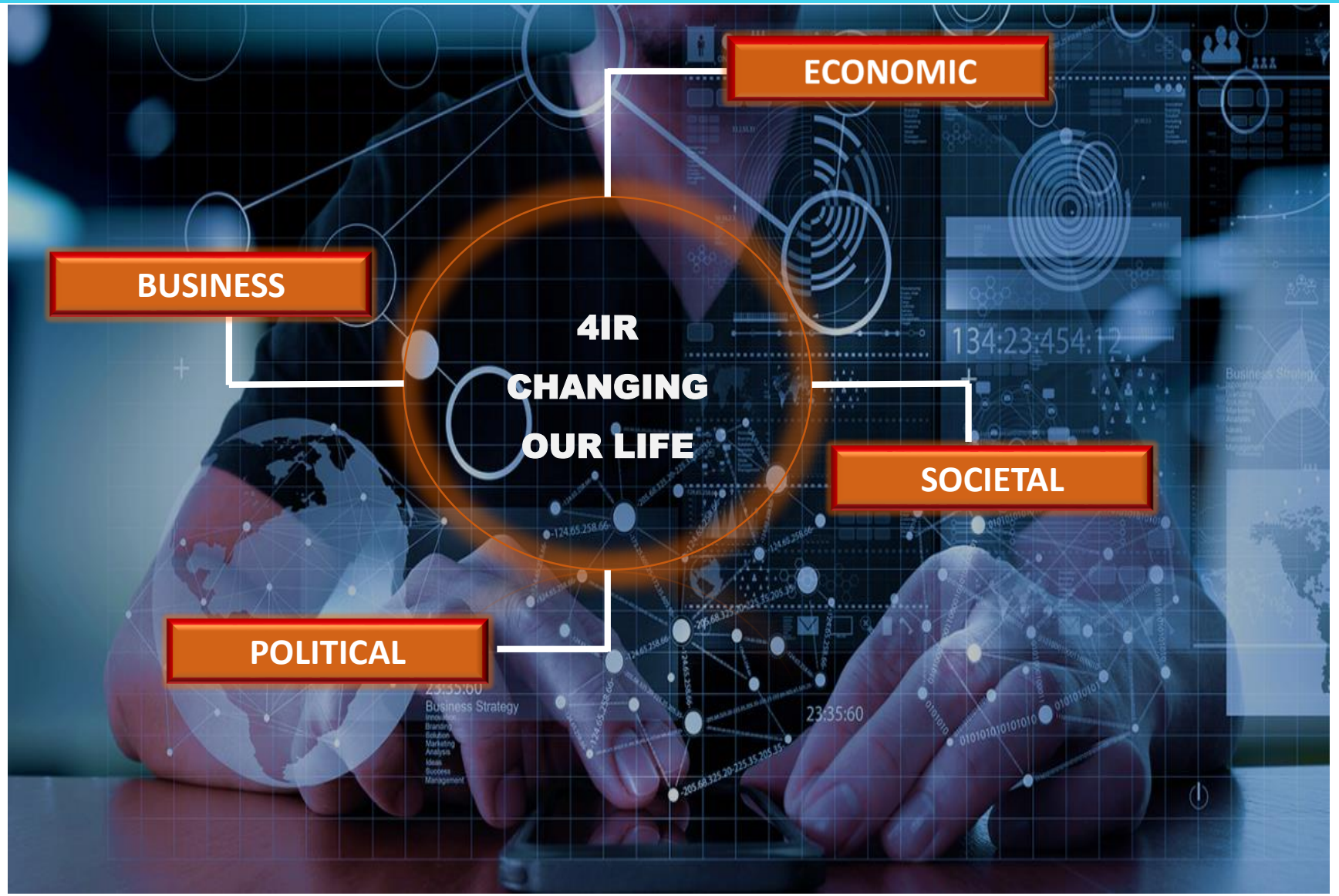
THE POWER

How long to reach 50 million users?

THE POWER


IN 60 SECONDS...
1 NEW DEFINITION IS ADDED ON URBAN
1,600+ READS ON Scribd
13,000+ HOURS MUSIC STREAMING ON PANDORA
12,000+ NEW ADS POSTED ON craigslist
New Craigslist Ads
370,000+ MINUTES VOICE CALLS ON skype
98,000+ TWEETS
320+ NEW twitter ACCOUNTS
100+ NEW Linked in ACCOUNTS
1 associatedcontent NEW ARTICLE IS PUBLISHED
THE WORLD'S LARGEST COMMUNITY CREATED CONTENT!!
6,600+ NEW PICTURES ARE UPLOADED ON flickr
50+ WordPress DOWNLOADS
695,000+ facebook STATUS UPDATES
125+ PLUGIN DOWNLOADS
79,364 WALL POSTS
510,040 COMMENTS
1,700+ Firefox DOWNLOADS
694,445 SEARCH QUERIES
Google
Google Search
168 MILLION EMAILS ARE SENT
60+ NEW BLOGS
1,500+ BLOG POSTS
70+ DOMAINS REGISTERED
600+ NEW VIDEOS
25+ HOURS TOTAL DURATION
QUESTIONS ASKED ON THE INTERNET...
100+
40+
Answers.com
YAHOO!
20,000+ NEW POSTS ON tumblr.
13,000+ iPhone APPLICATIONS DOWNLOADED
LARGEST
GO-Globe.com


3D Printing
Blockchain
Automation & Robotics
Super Computing
Battery & Energy Storage
12 TECHNOLOGIES
Artificial Intelligence
Internet of Things
Geo Engineering
Space Technologies
AR&VR
Advanced Materials
Biotechnology


ECONOMIC
BUSINESS
4IR
CHANGING
OUR LIFE
SOCIETAL
POLITICAL

FGD: To gain input to develop a strategic paper for the 12th Malaysia Plan

- **Transforming issues and challenges** facing water sector Malaysia into opportunities
- **Mainstreaming water management** in development activities. Covers upstream to downstream-source to services-intake to discharge
- **Focus and reprioritise strategies** to transform water sector by 2040
- **Targets and KPIs for 12th MP** to transform the water sector by 2040 to be identied, supportive to national and global targets: **SDG 6, GTMP 2030** etc
- **Estimate allocation needed** according to the proposed strategies

Thank You