SOUTH EAST ASIA

Malaysia

Global
Innovation
Policy
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nesta

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Innovate UK

ALPHA CATALYST CONSULTING

UNDERSTANDING MALAYSIA'S INNOVATION SYSTEM

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Disclaimer: Information and data was collected in March 2018. Parts of this report might have since been subject to changes. The 2018 elections notably brought consequential changes to the information shown on page 10 and 11.

1.
COUNTRY PROFILE

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1.1 INTRODUCTION

Malaysia has undergone a remarkable growth journey, transitioning from a country dependent on primary commodities, to manufacturing and heavy industrialisation, and the present knowledge and innovation-driven economy. Having rebounded from the earlier economic crisis, by 2014 the country had achieved a gross national income (GNI) per capita of US$11,000[1], just 11 per cent short of the high income threshold. In 2017, within a year, the World Bank revised the GDP growth forecast from 4.5 per cent to 5.2 per cent.[2] Central to this growth was the emphasis on innovation as a core driving factor for the economy. Critical to the aforementioned turning point was the declaration of Malaysia's Innovation Year[3] in 2010, which set off a series of activities which formed the nucleus of Malaysia's economic progress.

While innovation was not unknown in Malaysia, its growth in importance in the following years meant that its scope widened beyond the limits of science and technology. Agensi Inovasi Malaysia (AIM) was set up as a statutory body, overseen by the Prime Minister and seven ministers, from education to finance and trade, with members from academia, the corporate sector and government agencies. AIM leads the development of Malaysia's innovation ecosystem[4] through multiple initiatives from supporting the development of mid-tier and large corporate organisations, strengthening the industry-academia collaboration, social innovation and inculcating a culture of innovation. This was in addition to the work that MIGHT and MOSTI were doing, which had a stronger technology focus. To ensure a comprehensive approach towards innovation, other institutions such as MaGIC and TERAJU were set up to boost the entrepreneur community, while YIM looked at how innovation could be inclusive from the citizens' perspective.

The focus on entrepreneurship led to a disbursement of RM5.88 billion by the various ministries and agencies, for SMEs and startup development.[5] This covered human capital development, access to funding, providing market access, innovation and technology adoption and infrastructure development.

However, all these efforts towards propelling Malaysia to being an innovation-led economy resulted in overlapping initiatives and policies. There were 81 national policies of which 56 were related to science, technology and innovation (ST&I), with 458 agencies promoting or implementing them. These agencies and institutions were not working collaboratively and were often seen competing among each other. This was counterproductive in fully harnessing Malaysia's ST&I potential. The main reasons for implementation weakness were the insufficient political will and legislative drive to address ST&I issues, absence of an overarching ST&I master plan and most importantly, failure to converge ST&I with economics and finance, geopolitics as well as society and culture.[6]

Over the past two and a half decades, a key driving force in Malaysia's transformation was Vision 2020, which outlined how it would be a developed nation by 2020. The Government had put in place numerous programmes, the latest being the 11th Malaysia Plan and National Transformation Policy.[7] As the future of Vision 2020 began to be uncertain, in 2017, the Government launched 'Transformasi Nasional 2050' or TN50 as a strategic plan for the future of Malaysia in the period 2020 to 2050.[8]

1. The World Bank, 2017a.
2. Ragananthini, V., 2017.
3. The World Bank, 2010.
4. Agensi Innovasi Malaysia (AIM), 2017.
5. Xavier, S.R., Sidin, S.M., Guelich, U., Nawangpalupi, C., 2016.
6. Academy of Sciences Malaysia, 2015.
7. The Star Online, 2017a.
8. Transformasi Nasional 2050, 2018.

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1.2 KEY INNOVATION NUMBERS

INDICATOR	MALAYSIA
Global Innovation Index Rank (2017)	37/128[8]
Global competitiveness index (2016-2017)	25/138[2]
R&D gross domestic expenditure as % of GDP (latest available)	1,26 (OECD, including company spending)
High-Tech exports, in % of manufactures exports (2015, Worldbank)	42,80%
Patents per million people (2016)	45 (2014)[4] 2299 patents 30.33mln population(2015) = 75.80[1] 2636 (2016(6)) – population 31.19 million[7] = 84.5
Per cent growth in total patent applications between (2001-2015)	46,8[1]
Time in hours required to start a business	18.5 days [5] (18 days for men, 19 days for women)
Percentage of the 18-64 population who believe they have the right/skills/knowledge to start a business	Slightly above 25%[3]

1. World Intellectual Property Organization, 2017.
2. WEF, 2016.
3. GEM, 2016.
4. UN Data, 2018.
5. World Bank, 2017b.
6. MyIPO, 2016.
7. World Bank, 2016.
8. Global Innovation Index, 2017.

1.3 HIGHLIGHTS OF KEY INNOVATION PROGRAMMES

TN50 – TRANSFORMASI NASIONAL 2020

One of Malaysia's goals is to become a high income country by 2020. Through TN50 they attempt to design a future shaped by the people, where any citizen of Malaysia can join in a discussion or share his/her vision for the upcoming 30 years after 2020. The topics discussed include society, the environment, the economy, technology and connectivity, and governance. The Government engaged almost two million Malaysian youths to gather over 60,000 projects for possible implementation. (https://mytn50.com/)

MAGIC CER CIRCLE

MaGIC CER Circle is a national initiative to facilitate greater corporate and private sector involvement in entrepreneurship development across Malaysia. It aims to connect corporates and startup communities and help them capitalise on disruptive technologies and build a continuous innovation pipeline through partnerships. The platform connects some of the biggest corporations across various industries with startup communities. (https://mymagic.my/programs/)

NATIONAL CORPORATE INNOVATION INDEX (NCII)

The NCII was an initiative of the National Innovation Agency (AIM) to drive innovation within the corporate sector. Suitable for SMEs and large corporates it set 32 areas of innovation, such as innovation process, risk, leadership, level of collaboration, impact of innovation and many others. (http://www.ncii.my/)

HIGH IMPACT PROGRAMME 2 (HIP2)

A collaborative effort between SME Corp and AIM, an end-to-end innovation and commercialisation facilitation platform, it aims to remove market and financing barriers to innovation. (http://www.platcomventures.com/HIP2-@-High_Impact_Programme_2.aspx)

LAUNCH OF DFTZ (DIGITAL FREE TRADE ZONE)

Malaysia launched the world's first Digital Free Trade Zone (DFTZ) which is expected to double the growth rate of SMEs' goods export, increase overall goods export by US$25 billion, and create 60,000 jobs by 2025. With DFTZ, the contribution of Malaysia's digital economy to the GDP is expected to exceed the 20 per cent target by 2020 from the current 17 per cent. https://mdec.my/news/malaysia-launches-worlds-first-digital-free-trade-zone

1.4 TIMELINE OF INNOVATION POLICIES AND INITIATIVES

2010

ECONOMIC TRANSFORMATION PROGRAM

This programme implemented the New Economic Model (NEM) by identifying National Key Economic Areas (NKEAs) and six strategic reform initiatives.

NATIONAL INNOVATION STRATEGY

An inclusive plan to promote innovation as a key component towards achieving Vision 2020. It had three main thrusts; nurturing skills and providing capital; enable more innovation through platforms and collaboration, and thirdly, streamlining PRI research and nurturing high potential firms towards global penetration.

2011

TENTH MALAYSIA PLAN

The Tenth Malaysia Plan contains the aspirations of both the Government Transformation Programme and the New Economic Model, based on high income, inclusiveness and sustainability, and includes new policy strategies and programmes that will enable the country to develop as a high income nation.

DIGITAL MALAYSIA

An initiative to build an ecosystem that promotes the use of ICT in all aspects of the economy, to create globally connected communities which interact in real-time.

2013

SCIENCE TO ACTION (S2A)

The Science to Action (S2A) initiative aims to translate the broad policy framework of the National Science, Technology and Innovation Policy into specific action measures.

NATIONAL SCIENCE, TECHNOLOGY AND INNOVATION POLICY (NSTIP)

The National Science, Technology and Innovation Policy provides a framework for improved performance and long-term growth of the Malaysian economy.

2016

ELEVENTH MALAYSIA PLAN

The final leg in the journey towards realising Vision 2020 to achieve full development in Malaysia. Productivity and innovation are basic pillars for the Plan, which is based on six strategic thrusts:
1. Enhancing inclusiveness towards an equitable society; 2. Improving wellbeing for all;
3. Accelerating human capital development for an advanced nation; 4. Pursuing green growth for sustainability and resilience; 5. Strengthening infrastructure to support economic expansion;
6. Re-engineering economic growth for greater prosperity.

1. The Organization for Economic Co-operation and Development, 2014.
2. Prime Minister's Office, 2015.
3. Degelsegger et al., 2014.

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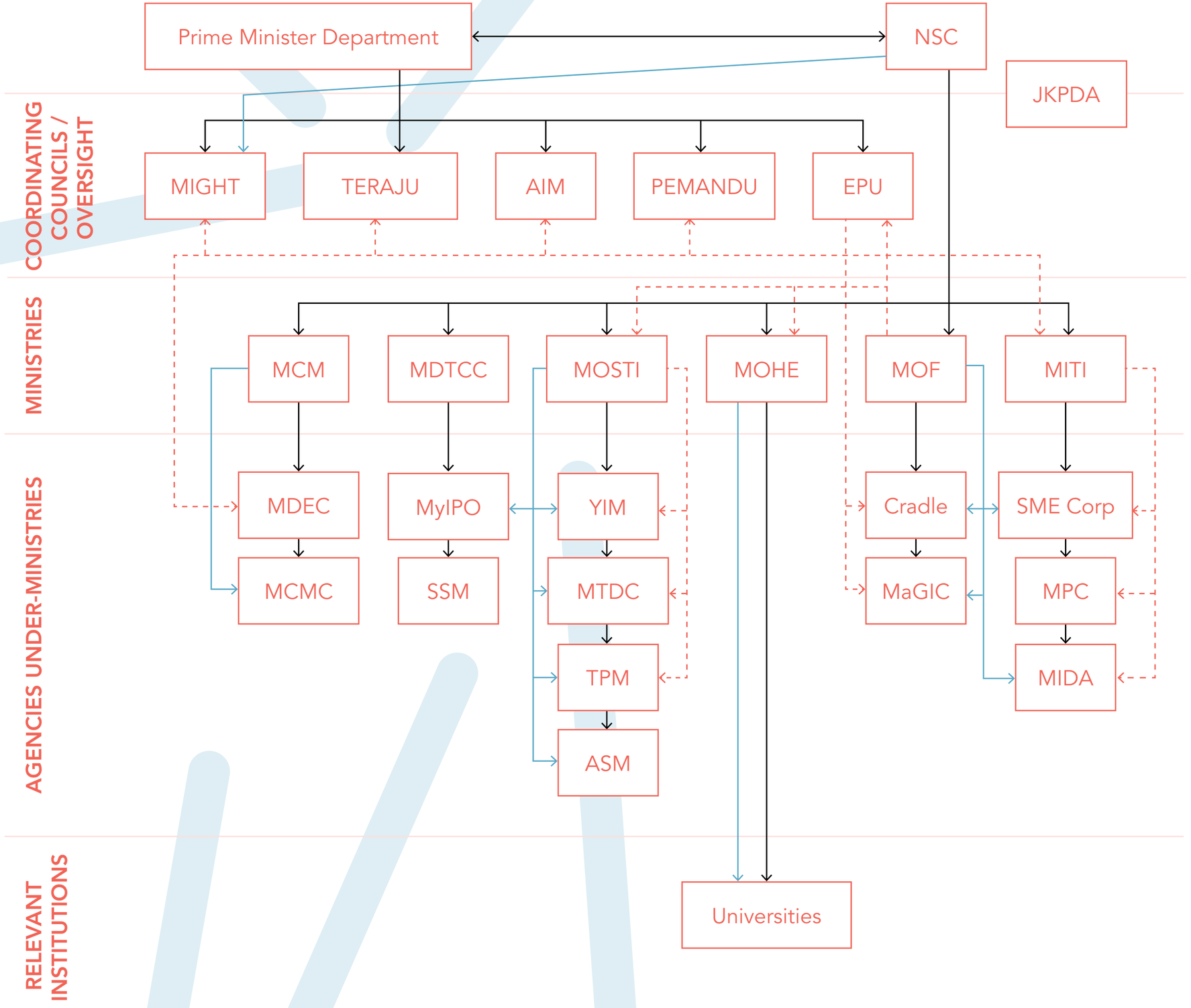
1.5.1 INSTITUTIONAL MAP OF THE INNOVATION SYSTEM

While MOF is the keeper of the country's coffer, EPU acts as a screening organisation on which projects would get funding, prior to a decision by MOF.

JKPDA funds projects related to R&D and C&I.

PEMANDU has been disestablished since March 2017 and its role is taken over by a newly formed Civil Service Delivery Unit, under EPU.

* Disclaimer: Following the 2018 General Elections which resulted in a change in government, there have been modifications to the list of ministries, with disbandment of some and formation of new ones. The distribution of the agencies under them have also changed.



Attached to

Provides funds

Political influence

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1.5.2 ROLE AND INFLUENCE DIAGRAM OF KEY MINISTRIES AND AGENCIES

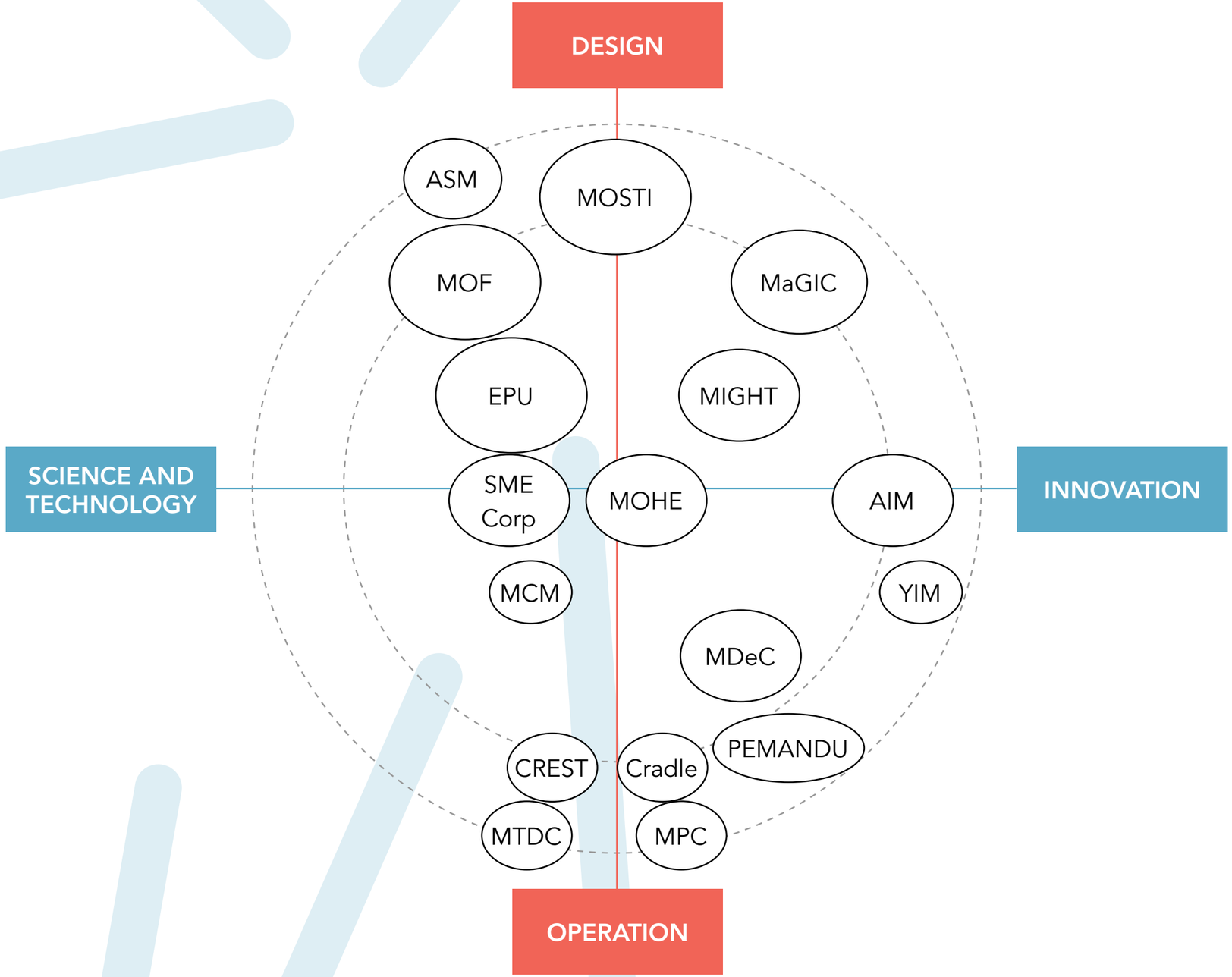
These are the more active/important ministries and agencies relating to innovation policy design and implementation.

Some of the players within the wider network of agencies in relation to driving and supporting innovation in the country may not have been included. There also appears to be a disconnect between organisations at the 'design' and 'operations' end of this diagram, resulting in policies which are not totally aligned with the industry needs. There is also no clear channel for organisations at the 'operation' end to feed back to the organisations in charge of 'design'.

* Disclaimer: Following the 2018 General Elections, the influence of the various agencies has also changed, with some playing a less prominent role.

Level of influence: the bigger the size of the bubble, the more influence in the innovation system.

This influence map is indicative and reflects the insights of the project team rather than a formal statement of roles and structures.



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1.6 GLOSSARY OF INSTITUTIONAL ABBREVIATIONS AND ACRONYMS

A short note on PEMANDU

Performance Management & Delivery Unit (PEMANDU) was formally established in 2009 as a unit under the Prime Minister's Department. Its main role and objective was to oversee the implementation, assess the progress, facilitate as well as support the delivery and drive the progress of the Government Transformation Programme (GTP) and the Economic Transformation Programme (ETP). They were mandated to catalyse bold changes in public and private sector delivery, support the ministries in the delivery planning process and provide an independent view of performance and progress to the Prime Minister and ministers.

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- **AIM:** Malaysian Innovation Agency
- **ASM:** Academy of Sciences
- **CIP:** Cradle Investment Programme
- **CREST:** Collaborative Research in Engineering, Science and Technology
- **DFTZ:** Duty Free Trade Zone
- **ECF:** Equity Crowd Funding
- **EPU:** Economic Planning Unit
- **INTAN:** Institut Tadbiran Awam Negara @ National Institute of Public Administration
- **ISTIC:** International Science, Technology and Innovation Centre
- **JKPDA:** Jawatan Kuasa Pelaburan Dana Awam (JKPDA) @ Investment Committee for Public Funds
- **KHAZANAH:** Khazanah Nasional Berhad
- **MaGIC:** Malaysian Global Innovation and Creativity Centre
- **MAMPU:** Administrative Modernisation and Management Planning Unit
- **MBC:** Malaysia Biotechnology Corporation
- **MCM:** Ministry Of Communication and Multimedia
- **MDEC:** Malaysia Digital Economy Corporation
- **MDTCC:** Ministry of Domestic Trade, Co-operative and Consumerism (KPDNKK)
- **MIDA:** Malaysia Investment Development Authority
- **MIGHT:** Malaysia Industry High Technology Group
- **MITI:** Ministry of International Trade and Industry
- **MOF:** Ministry of Finance
- **MOH:** Ministry of Health
- **MOHE:** Ministry of Higher Education
- **MOSTI:** Ministry of Science, Technology and Innovation
- **MPC:** Malaysia Productivity Corporation
- **MTDC:** Malaysia Technology Development Corporation
- **MyIPO:** Intellectual Property Cooperation of Malaysia
- **NCII:** National Corporate Innovation Index
- **NHESP:** National Higher Education Strategic Plan
- **NIBM:** National Institute of Biotechnology Malaysia
- **NSC:** National Science Council
- **NSRC:** National Science and Research Council
- **PDPA:** Personal Data Protection Act
- **PEMANDU:** Performance Management & Delivery Unit – This has been disestablished since March 2017 and its role is taken over by a newly formed Civil Service Delivery Unit, under EPU.
- **PEMUDAH:** Pasukan Petugas Khas Pemudahcara Perniagaan @ Special Task Force to Facilitate Business
- **PMO:** Prime Minister's Office
- **PSMB:** Pembangunan Sumber Manusia Berhad
- **PTD:** Malaysian Civil Service administrator
- **RSOG:** Razak School Of Government
- **SC:** Securities Commission Malaysia
- **SITEC:** Selangor Information Technology & E-Commerce Council
- **SME CORP:** SME (Small and Medium Enterprises) Corporation Malaysia
- **SSM:** Suruhanjaya Syarikat Malaysia @ Companies Commission of Malaysia
- **STEM:** Science, technology, engineering and maths
- **ST&I:** Science, technology and innovation
- **TDA:** Technology Depository Agency
- **TERAJU:** Unit Peneraju Agenda Bumiputera
- **TN50:** Transformasi Nasional 2050
- **TPM:** Technology Park Malaysia
- **UTM:** Universiti Teknologi Malaysia
- **YIM:** Yayasan Innovasi Malaysia

1.7 STRENGTHS AND WEAKNESSES ANALYSIS

HUMAN CAPITAL / KNOWLEDGE ASSETS

STRENGTHS

Ample resources set aside and initiatives to develop the human capital in SMEs, in higher education and in science, technology and innovation.

- For 2017, the Government has provided funding of RM137.7 million to develop SME human capital.[1]
- Implementation of the NHESP, aimed at widening access and improving the quality of education, including research and innovation.[2]
- MyBrain15 – Funding support focused on creating 100,000 high-calibre graduates (with Masters and PhDs) by 2023.[3]
- Global Science and Innovation Advisory Council – set up in 2011 to improve and optimise Malaysia's capabilities in the field of science and innovation, chaired by the Prime Minister.
- Establishment of Malaysia's first National Science, Technology, Engineering and Mathematics (STEM) Centre to encourage the participation of students into STEM.[5]

WEAKNESSES

Current apparent low demand from industry.

- Many of the large global companies located in Malaysia that focus on manufacturing and assembly are shifting their operations to other countries – this impacts on the need for highly skilled knowledge workers.[6]
- Low percentage of skilled workers. The current level stands at 28 per cent of the total workforce of 14.76 million.[7] This has not improved significantly over the last decade, from 25 per cent in 2007.[3]

1 Thiruchelvam, K. et.al, 2013.
2 Degelsegger et al., 2014.
3 OECD, 2013.
4 Ministry of Higher Education, 2018.
5 The Star Online, 2017b.
6 Tang, R., 2017
7 Saieed, Z., 2016.

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1.7 STRENGTHS AND WEAKNESSES ANALYSIS

FUNDING

STRENGTHS

Extensive amount of funding available – spanning entire breadth from basic research, seed to commercialisation.

- Five-year tax exemption for VC companies, Business Growth Fund – RM150 million for public sector research and tax deductions for R&D activities for private sector – TechnoFund, InnoFund, CIP.[5]
- In Oct 2014, 1DANA, a one-stop portal for all grants and funding offered by the Government for research, development, commercialisation and innovation. The portal, under JKPDA aims to streamline the funding landscape and reduce duplication.[6]

Forward thinking role regulators take on.

- Malaysia was the first country in ASEAN to introduce a regulatory framework to facilitate ECF. In 2016, SC announced six peer-to-peer (P2P) financing platform operators to widen funding avenues for SMEs.[3] This has since raised RM12.6 million and funded 19 companies.[4]
- Bursa Malaysia launched Leading Entrepreneur Accelerator Platform (LEAP) Market, first of its kind in ASEAN, aimed at increasing funding for SMEs from the capital market. As part of the SME Masterplan, the Government targets SMEs to contribute at least 41 per cent of the country's economic value by 2020.[7]

WEAKNESSES

While a significant amount of funding is available, access to the funding proves challenging.

- Vast number of agencies involved causes overlap and competition in disbursing funding – 15 ministries and 55 agencies have funds for research, development, commercialisation and innovation (R,D,C&I).[2]
- Funding opportunities for commercialisation are not equally distributed between urban and rural areas.
- Despite vast number of funds available, securing it proved to be a significant hindrance, especially for SMEs. While the volume of capital had increased, the number of deals had not.[1]
- Most available funds are geared towards early stage investment and there is a gap in Series A to C funding rounds.[8]

1 Thiruchelvam. K et al., 2013.
2 1Dana, 2018.
3 Suruhanjaya Sekuriti, 2016.
4 CM2, 2017.
5 Razak, N., 2017.
6 Hasnan, H.A., 2014
7 Kok, C., 2017.
8 Lee, L., 2015.

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1.7 STRENGTHS AND WEAKNESSES ANALYSIS

BROADER ENVIRONMENT

STRENGTHS

Extensive attention is being given to developing a connected population.

- Launch of world's first Duty Free Trade Zone (DFTZ) which is expected to spur the growth of ecommerce and contribute RM211 billion to GDP by 2020.[1]
- 77.9 per cent household broadband penetration with 28 million mobile broadband subscriptions.[2]
- Inclusivity of policy – 'eRezeki' Programme by MDEC, provides a trusted source of income for Bottom-40 (B40) income group, leveraging digital technology.[3]

WEAKNESSES

Disparity in distribution of infrastructure.

- Discrepancy in distribution of broadband or internet access, with poorer penetration (hovering about 50-60 per cent) on the east coast of Malaysian peninsula and East Malaysia.[2] This is important in the broader view of spurring the innovation and digital economy.

1 MDEC, 2017.
2 Malaysian Wireless, 2017.
3 MDEC, 2015.

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1.7 STRENGTHS AND WEAKNESSES ANALYSIS

INSTITUTIONAL FRAMEWORK

STRENGTHS

There are an immense number of initiatives to spur economic development in the country, principally through attracting foreign direct investment (FDI) and developing SMEs.

Principle Hub Tax Incentive

- Tax exemption for multinational corporations (MNCs) in strategic, business or shared services to set up regional hubs in Malaysia. Tax rates vary from 0 to 10 per cent.[1]

Investments and support to grow SMEs.

- SMEs form backbone of Malaysia's economy, 98.5 per cent of businesses.[2]
- SME Masterplan (2012-2020) aims to bring SMEs to the next level – to raise their contribution to GDP to 41 per cent by 2020.[3]

Creation of new policies to spur growth of new industries/startups.

- The Government launched a National Regulatory Sandbox to enable innovators to test their solutions or products in a conducive environment.[4] The move is to enable Malaysia to compete with other developed countries and attract foreign and domestic investors.

WEAKNESSES

Uncoordinated efforts to align science, technology and innovation players from public and private sector.

- Weak implementation of policies and strategies.
- There appears to be a semblance of competitiveness among the various agencies as to who should take the lead to align and oversee innovation initiatives.
- The involvement of the private sector in science, technology and innovation efforts is still lacking.

1 Malaysian Investment Development Authority, 2017.
2 SME Corp Malaysia, 2017.
3 SME Corp Malaysia, 2016.
4 The Star Online, 2018.

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1.7 STRENGTHS AND WEAKNESSES ANALYSIS

ECOSYSTEM CONNECTIONS

STRENGTHS

Active efforts have been made to strengthen the connections with the global ecosystem, from an academic, private and public sector perspective.

- Formation of the Global Science and Innovation Advisory Council – to advance innovation in all sectors while enhancing strategic international alliances.
- MaGIC's Corporate Entrepreneurship Responsibility (CER) platform, an initiative to facilitate greater corporate and private sector involvement to develop the entrepreneurship ecosystem.[1]
- High Impact Programme 2 (HIP2), a collaboration between PlaTCOM Ventures Sdn Bhd – a subsidiary company of AIM – with SME Corp has impacted SMEs, universities and research organisations.[2]
- Regulatory sandbox to facilitate the creation and commercialisation of startups in five key sectors: smart cities, agrotech, digital health, clean energy and mobility.[3]

WEAKNESSES

Unclear regulations in emerging areas.

- Regulators are slow and hesitant in designing standards to help embrace emerging trends as they permeate various industries (Bitcoin, Uber, crowdfunding etc.).
- Unclear boundaries and roles between the various ministries and government agencies. Many have overlapping responsibilities resulting in duplication of effort, or sometimes oversight on certain issues.

1 Rasid, A.H., 2017.
2 Perera, V., 2016.
3 Christopher Gomez. O., 2018.

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2.
CAPACITY BUILDING FOR INNOVATION IN MALAYSIA

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2.1 UNDERSTANDING THE RANGE AND SPREAD OF MALAYSIA'S INNOVATION POLICYMAKERS

Where are innovation policymakers based?

- Overarching decision-making or advisory bodies like National Innovation Councils.
- Core national government departments relating to innovation: e.g. Business, Economics, Science and Technology or Universities, Finance and their associated agencies.
- Other national government departments with significant innovation roles and agencies: e.g. Defence, Health, Agriculture, Energy, Education.
- Non-governmental bodies with a significant influence on innovation policy: e.g. development banks, think tanks, learned societies, industry bodies.
- Regional and Municipal Governments.

POLICYMAKER SENIORITY	CHARACTERISTIC
Level 1: Politician (Minister/Deputy Minister) or Secretary General	Likely to be politician or senior government officer. Responsibility for policy-setting strategy, including budget allocation, possibly across multiple areas of the innovation system. Politician will probably change with new government, however the Secretary General may not.
Level 2: Director / Under Secretary/ Deputy Director General	Has responsibility for programme design and executing the policy strategy developed by Level 1s. Broad responsibility for how innovation policy is implemented and innovation programmes deployed.
Level 3: Programme Director / Division Secretary	Civil servant. Responsible for the implementation of fairly major innovation programmes.
Level 4: Programme Manager	Likely to be a civil servant – responsibility for management and implementation of innovation programmes and policy initiatives.

2.2 INNOVATION POLICYMAKER MAPS

Country	L1	L2	L3	L4	Total Core Innovation Policymakers
Malaysia	39	32	43	16	130

The estimates above are likely to be an underestimate of the real number of people involved, in particular for L3 and L4 positions. This is due to the dearth of information and detail regarding the actual numbers.

The numbers were derived by calculating the number of officers, according to the organisation chart on the official websites of the various ministries/agencies. The levels of responsibility are inferred, based on the job levels. The numbers took into account agencies and ministries that are directly involved with innovation policies: MOSTI, MIGHT, AIM, MOF, MITI, ASM, EPU, MCM, SME Corp. Bearing in mind that innovation currently cuts across many ministries and agencies, this is likely to be an underestimation. The degree of involvement in innovation/innovation related activities of the various individuals (based on job level) cannot be determined.

2.3 INNOVATION POLICYMAKER PERSONAS

Deputy Secretary General

After ten years of working in the capital markets and various positions in government regulatory bodies, she assumed her current position, in charge of developing bilateral ties within the ASEAN region to stimulate innovation and trade.

She has a Masters qualification but no training in public or innovation policy.

"We have highly educated government officials however, they are not placed in functions where their knowledge can be maximised."

"We don't stay long enough to see through the implementation of the policy (that we helped design), and those who take over from us, do not have the in-depth background knowledge which led to the policy design."

"Policies are sometimes designed over such short periods that there is insufficient time for an in-depth study and proper engagement of stakeholders."

KEY INDIVIDUAL AND COLLECTIVE CHALLENGES

- "I was trained in a different area. I am working on policies in subjects which I am not familiar with. Once I was back from training, I was sent to another ministry, just to fill in a job grade vacancy."
- Policies in the country are sometimes a knee-jerk reaction to a certain event, and not looked at in a holistic way. This results in policies which become irrelevant or redundant quickly.
- The understanding of the corporate sector is very shallow, making policy design which affects the corporate sector ineffective.
- There is no consequence of something not being done, resulting in certain ministries dragging their feet (when trying to implement a cross-ministry policy).

A DESIRE TO LEARN FROM INTERNATIONAL BEST PRACTICES AND IMPROVE COLLABORATION IN INNOVATION POLICYMAKING

- Believes that policymaking should be an 'expertise' with formal training and some kind of 'professional qualification' to it.
- Ideally, it would be best to have a team of cross-ministerial senior government officers who collaborate to apply knowledge gained into action on a real life policy case.
- Exposure to international best practice and sharing of experience from others who have done things differently would be welcomed.
- Close communication and guidance in the pilot stage of design and implementation of new policy would be appreciated.

Deputy Secretary General

Fifteen years in service in the public sector and has held various positions in multiple ministries. Previous position involved setting up a community innovation fund. He has also played a role in formulation of policies for the energy, green technology and water sectors and the National Renewable Energy Policy.

He holds a Bachelor in Economics and a Masters in Science & Technology Policy Studies.

"There is no appreciation on knowledge seeking, just do what you are supposed to do."

"Learning how other countries are doing things and building the network with ASEAN counterparts is very useful."

"We need to be very clear of the outcome for the programme. It should have a tangible output where impact can be measured."

KEY INDIVIDUAL AND COLLECTIVE CHALLENGES

- Policy design is robust, however, when it comes to implementation, there is poor execution of the policy resulting from poor cross-ministry collaboration.
- The person I report to is not supportive of me obtaining further training in policymaking – they don't see the seriousness of it and think it's a waste of time.
- The short time frame we are sometimes given results in superficial stakeholder engagement sessions, we seem to be 'telling' more than we are 'listening'.
- The definition of 'ecosystem' is taken lightly, where it is not really all encompassing or holistic enough.
- There is a lack of monitoring and evaluation parameters during policy implementation.

A DESIRE TO LEARN FROM INTERNATIONAL BEST PRACTICE AND IMPROVE COLLABORATION IN INNOVATION POLICYMAKING

- Interested to learn how to divide up a policy for implementation, how to set KPIs and how to measure the impact of policies.
- It would be best to work together and learn from a team of cross-ministerial senior government officers, be really hands-on for a real project.
- Keen to learn how to collaborate better on policy formulation, and how to address newer challenges faced by the country.
- Interested to know how to set up an effective sandbox for prototyping new regulations and how to change the mindset of others to embrace change.

3.
ASSESSMENT OF CURRENT AVAILABLE RANGE OF SUPPORT AND TRAINING FOR INNOVATION POLICYMAKERS

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Institutions which offer training in policymaking:

INSTITUTIONS	COMMENTS
1 **UTM Perdana School of Science, Technology & Innovation Policy** [1] • Master in Science, Technology & Innovation Policy • Master of Philosophy (Policy Studies) • Doctor of Philosophy (Policy Studies)	• The only school that focuses on science, technology and innovation policies • Only about 20 Malaysian civil service officers have attended
2 **University of Malaya** • Department of Science and Technology Studies[2] • International Institute of Public Policy and Management (INPUMA)[3]	INPUMA offers courses which are broader based/ general in terms of policymaking
3 **Razak School of Government (RSOG)**[4] • Policy Leadership and Strategic Change	Focuses on short courses
4 **National Institute of Public Administration (INTAN)**[5]	Is more suitable for younger/more junior PTD (Administration and Diplomatic) Officers
5 **KISTEP-ISTIC (Korea)** S&T Innovation Training Program for High Level Policymakers[6]	Feedback from a previous participant was that Korea is so advanced that much of what is shared is too far ahead of the curve for the Malaysian participants
6 **GRIPS National Graduate Institute for Policy Studies (Japan)**[7]	115 Malaysians have gone through this institution[8]

1 UTM, 2018.
2 UM, 2018a.
3 UM, 2018b.
4 Razak School Of Government, 2018.
5 INTAN, 2018.
6 KISTEP, 2017.
7 GRIPS, 2018a.
8 GRIPS, 2018b.

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4.
ASSESSMENT OF LIKELY AREAS OF FOCUS FOR A GLOBAL INNOVATION POLICY ACCELERATOR TEAM FROM MALAYSIA

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Likely areas of focus for the Policy Accelerator:

1.
Translating foresight to robust policies

There is a rich tapestry of insights which have arisen from foresight sessions, namely by ASM, MIGHT and MOSTI. However, these are not fully utilised as a resource when developing policies for the country, namely ones that are more anticipatory in nature. There is a clear need for the country to shift its approach towards policymaking, while maximising and leveraging upon research and data which have currently been aggregated.

2.
More data-driven policy development

There is clearly a need for data-driven policies. However, a significant stumbling block appears to be the willingness to share data by the various agencies/ministries, presumably because there are no clear guidelines on the matter. There is also an awareness that smart policymaking requires a more collaborative approach from various ministries. Thus a clear framework or policy towards a more collaborative approach between various ministries and agencies, for data-sharing and policymaking is needed.

3.
Clear approach towards revamping old policies or conceptualising new ones

The fast pace at which technology is moving has spurred many new startups, however, current policies appear to be stifling the growth of these startups, as archaic legislation is not renewed or reviewed. There is also an equal number of startups who are entering a previously un-regulated space. The absence of clear policies and regulation curtails the growth of these startups, due to the uncertainty, in addition to alienating investment. A clear space for experimentation is needed.

4.
Capability building

The lack of systematic approach towards policymaking was evident. Having a clear methodology to develop the capability of policymakers would be beneficial.

6.
DIAGNOSIS AND RECOMMENDATIONS

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Malaysia has made great strides in moving forward economically and creating an inclusive economy across the population. The current administration is making a concerted effort to streamline innovation efforts and accelerate growth within certain areas (namely: agriculture; biotechnology; building; education; energy; financial; food; green technology; healthcare; hospitality; smart cities; sports; telecommunication; transportation; tourism; water management; and waste management). The announcement of the regulatory sandbox paves the way for a new approach towards policymaking. Additionally, creating a protocol for data-sharing between ministries or agencies should form a subset of the project.

Key players in moving this forward are:

1.
MAGIC AND CYBERVIEW
Agencies responsible for driving the Futurise Centre, the National Regulatory Sandbox. Additionally both agencies are chaired by the Chief Secretary, Ministry of Finance, who personally wants to see change in the approach towards policymaking.

2.
ASM AND MIGHT
ASM and MIGHT are the key agencies that have done a lot of work on foresight for the country. They will be able to contribute data to the areas that are the most important to address.

3.
MOH AND MITI
These two ministries have done a significant amount of groundwork in moving towards a regulatory sandbox model. MOH is currently faced with numerous med-tech startups, which is driving the pressing need for change within medical related policies. In addition, the current Director General of Health is extremely supportive and passionate about making a change in the ecosystem, which will help to see the project though.

While the aim of the Policy Accelerator appears to be ambitious, it is also feasible because of the support from high level leaders in the public sector. The alignment with the national agenda is also helpful in ensuring that tangible value is derived from the project.

6.
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7.
INTERVIEWEES

ORGANISATION	JOB TITLE
University of Malaya (UM), Department of Science and Technology Studies.	Visiting professor to UM, Professor at the Perdana School of Science, Technology and Innovation Policy, UTM and has been involved in several policy studies, including the National Science, Technology and Innovation Policy
Ministry of International Trade and Industry	Ex-Deputy Secretary General of MITI
UTM Perdana School of Science, Technology and Innovation Policy	Professor and Deputy Dean
Nano Malaysia	Senior VP, Operations, CEO's Office

Other notes from interviews:

There was a recurring view that individuals from the civil service were qualified and knowledgeable when it came to policymaking, however the environment was not conducive or supportive in allowing them to apply this capability. At times, the expertise which had been developed by the individual is not utilised in the proper field. The source of the issue appears to be an underlying disconnect of the human capital division.

The UTM Perdana School of Science, Technology & Innovation Policy is the only dedicated institution designed to produce individuals competent in the formulation and implementation of science, technology and innovation policies. However, the enrollment from the public sector remains relatively low, with only 20 individuals from the civil service.

Instances of successful implementation of policies:

1 Where there was a clear objective to be achieved, with a tight deadline.

One such instance was the task to raise Malaysia's ranking for ease of doing business (2012-2013). Malaysia went from number 18 in 2011 to number 6 in 2013. This was overseen by PEMUDAH, which is headed jointly by Chief Secretary to the Government and head of Federation of Malaysian Manufacturers. Key KPIs to be achieved by the various ministries were set and a very strict approach was adopted. This highlights how leadership was a key success factor in driving the change for policy implementation.
*In February 2007, PEMUDAH, a high-powered task force to address bureaucracy in business-government dealings was established. It comprised 23 highly respected individuals from both the private and public sector. PEMUDAH has two working groups on: (i) Efficiency related issues; and (ii) Policy issues to look into the efficiency of the public delivery system and government policies impacting business respectively.

2 Where there is strong leadership

An instance was cited by the interviewee where a particular Minister was chairing a cross-ministerial committee for policy implementation and insisted that only the very senior level officers represent their respective ministries and that if any were not up to date with the progress they were supposed to make, they were asked to leave the meeting.

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