



**OECD HIGH-LEVEL EVENT ON THE KNOWLEDGE TRIANGLE: Enhancing the contributions of Higher Education and Research Institutions to Innovation**

**National Policies to Promote the Knowledge Triangle at Higher Education Institutions (HEIs) and Public Research Organisations (PROs)**

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Distinguished Guests,

Ladies and gentlemen,

Over the decades, Malaysia has moved from being primarily an agriculture-based economy, to one with a strong industrial base. We are now strengthening the newer, knowledge-based sector. Throughout our economy, innovation, creativity and improving productivity are key.

2. We know the impact of R&D on economic prosperity, exemplified by the highly successful rubber and oil palm industries. To reach new heights, we need to expand our economic base beyond such primary commodities into emerging, knowledge-intensive sciences for example biotechnology and nanotechnology.

3. Moving toward this, the Higher Education Institutions (HEIs) has a critical role in supporting knowledge-driven economic growth strategies and the construction of democratic, socially cohesive societies. HEIs assists the improvement of the institutional regime through the training of competent and responsible professionals needed for sound macroeconomic and public sector management. Its academic and research activities provide crucial support for the national innovation system.

4. In 2006, the government introduced a Higher Education Strategic Plan Beyond 2020 which established five research universities over the next three years and raised government funding for higher education. For more than a decade, public expenditure on higher education has accounted for about one-third of the education budget.

5. Malaysia spends more on higher education than any of its Southeast Asian neighbours but the level of commitment had slipped somewhat between 2003 and

2007 from 2.6% to 1.4% of GDP. The government has since restored higher education spending to earlier levels, as it accounted for 2.2% of GDP in 2011.

6. The meteoric rise in scientific publications since 2009 is a direct consequence of the government's decision to promote excellence at the five research universities, namely: Universiti Malaya, Universiti Sains Malaysia, Universiti Kebangsaan Malaysia, Universiti Putra Malaysia and Universiti Teknologi Malaysia. In 2006, the government decided to provide grants for university research. Between 2008 and 2009, these five universities received an increase of about 71% in government funding.

7. Along with this targeted R&D funding, key performance indicators were changed for the teaching staff, such as by making the publication record of staff an important criterion for promotion. In parallel, the Ministry of Higher Education (MoHE) designed and implemented a performance measurement and reporting system for universities in 2009, which were also entitled to conduct self-assessments and self-monitoring.

8. The transformation of the public universities which was initiated few years ago has started to produce some results. Recently four Malaysian public universities (UM, UPM, UTM, UKM) have risen in this year's *Quacquarelli Symonds* (QS) World University Ranking 2016/2017, with a private university (UTP) entering the fray for the first time.

Ladies and gentlemen,

9. The contribution of higher education to jobs and growth, and its international attractiveness, can be enhanced through close, effective links between education, research, and innovation -- the three sides of the 'knowledge triangle'.

10. Under the Eleventh Malaysia Plan, covering the 2016-2020 which was unveiled by Prime Minister Najib last year, focused for greater innovation as well as increase the return on investment on R&D by exploring new approaches.

11. In order to streamline the knowledge triangle, an existing agency will be restructured to become the Research Management Agency (RMA). The main objectives are to strengthen the institutional mechanism to manage public R&D&C&I initiatives to improve effectiveness, maximize outcome and increase return on investment. In addition, the agency will also review existing programmes to eliminate those which are overlapping and supply-driven and reduce low-impact programmes.

12. In the Eleventh Malaysia Plan, the government also has established new intermediaries namely Steinbeis Malaysia, SIRIM Fraunhofer, PPRN and PlatCOM to encourage companies to innovate and improve their market competitiveness.

13. A new initiative called Malaysia Laboratories for Academia-Business Collaboration (Mylab) was also established a few years ago under the Ministry of Higher Education. MyLAB is a program that focuses on research and development in five (5) focus areas which are nanotechnology, biotechnology, transportation: automotive & rail, aerospace and oil & gas.

14. In order to encourage private sector to increase expenditure on R&D several initiative was outlined which includes the establishment of the Aerospace Malaysia Innovation Centre (AMIC). It is a first of its kind in the region; an industrial research institute lead by aerospace OEMs AIRBUS GROUP and ROLLS-ROYCE providing focused R&T research projects with clear technology-recipients from industry and possessing well-defined route to market.

Ladies and gentlemen,

15. For Malaysia to become a developed, high-income status nation, able to compete with the best, regionally and globally, we need the transformative power of science and technology, the dynamism of entrepreneurs, innovation and creativity to propel both public and private-sector performance.

16. It was that same idea behind our decision in Malaysia to launch the Science 2 Action (S2A) initiative in 2013. Its goal is to intensify the application of science and technology for industry development, people's well-being and governance of science, technology and industry. It aims to reinvigorate science so that it is ready and able to generate the new ideas and game changing strategies that will sustainably create wealth and jobs for our people.

17. Guiding the S2A Initiative will be National Science Council which is chaired by the Prime Minister himself. This umbrella platform will be complemented at the international level by the five-year-old Global Science and Innovation Advisory Council (GSIAC), also chaired by the Prime Minister. The GSIAC regularly convenes some of the most accomplished local and world experts in government, industry and academia to help chart Malaysia's route to developed country status.

Ladies and gentlemen,

18. As we move to the Fourth Industrial Revolution, it will dramatically change the business models, products, processes, and will create new jobs that will continue to evolve in the new paradigm. Therefore, the role of higher education institutions, together with public research organisations will be more critical to underpin the development and diffusion of education, research and innovation activities.