

**SPEECH BY TUN DR MAHATHIR BIN MOHAMAD AT CYBERJAYA
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MALAYSIA: TODAY'S KNOWLEDGE ECONOMY

1. I would like to thank the organisers for this invitation to talk on Malaysia – Today's Knowledge Economy.
2. I hope what I have to say will be relevant to the subject.
3. Independent Malaysia has always been forward looking. As a result Malaysia has always been planning for the future.
4. To plan for the future a crystal ball is not necessary. But one has to know, appreciate and study trends. Nothing really happens in the future which is totally divorced from what is happening now and in the recent past. By knowing the happenings now and before, we would be able to foretell more or less accurately what will happen in the future. It is perhaps easier today because we keep records and data of significant things and events which happen throughout the days, months and years so we may refer back to these records in order to determine the trends. These records provide us with actual figures of the birth and death, the growth of population, the economy and the social and political developments often with analysis and indications regarding the causes and the results.
5. Based on all these recorded data we would be able to predict what would be likely to happen in the future. We would also be able to influence and shape the future through policies and plans.
6. It stands to reason that the demands in the future for infrastructure, can be predicted by the trend in the increase in the population and their purchasing power as indicated by GDP and per capita income growths of the past. Thus, so much new electrical power and so much water would need to be made available during the planned period. By extrapolation we would know roughly where we would be heading over the longer term and we would then determine the ultimate target. The objective of becoming a developed country by 2020 was what we decided should be the target as it seemed it was well within our capacity to achieve.
7. In the late 1980's and early 1990's it was noticed that there was a new trend caused by the rapid advancements in communication technology. At about the same time the computer had achieved a breakthrough so that the point & click system replaced the need to punch keys in computer language in order to access the data in the computer. This made it easy even for untrained people to gain access to the data in the computer. The result was to put in unlimited data

into the computer for universal use. The result was the initiation of the Multimedia superhighway and the Internet system. It is this ease in obtaining information via the Internet that really led to the birth of the Information Age.

8. It is the smart people who quickly realised that information would shape life and business much more than the industrial production of goods and services. To facilitate this new search engines were developed to classify information so that access to desired information was made easier and easier. Beginning with Microsoft we now have Yahoo and Google to help in the search for information and data on practically anything that one might want to know.

9. Malaysia recognised this information revolution early and decided to jump into the Information Age quickly to avoid being left behind as happened with the Industrial Age. With this decision, Malaysia set out to provide the facilities and the personnel to enable the fullest use of information for the development of the country.

10. The result was the setting up of Multimedia Super Corridor, conceived as a corridor of land between Kuala Lumpur and the KLIA in which all the hardware and software would be located so as to support the information age businesses. This included the incubators for budding researches and businesses to develop and test their ideas. For the whole country to complement the MSC telephonic infrastructures were put in place. Very quickly the country was dotted with tower for relaying wireless signals within the country and with the rest of the world.

11. Recognising the need for trained personnel, the Government and quickly the private sector set up universities and faculties to enhance education in IT and initiated training of workers so as to qualify them for manning the information based industries at various levels. A university was built specialising in multi-media and related disciplines. A whole new town, Cyberjaya, was planned and built for this knowledge-based industry. The town was planned to be populated by people working and supporting the expected setting up of information-age industries.

12. It was recognised that these information industry people would be special people with ideas and creativity as a part of their attributes. The environment in which they will live must be conducive to creative thinking. They would provide the intellectual inputs for the Multimedia Super Corridor. They would be coming from all over the world. While in Cyberjaya they should be able to interact with others with similar attributes and their interaction would give birth to myriads of ideas for application in information technology, and the software and hardware to render these applications possible.

13. The presence of the Multi-Media University in the Cyberjaya itself is very important because of the expected interaction between the academics and the cyber personnel resident or working in Cyberjaya. Obviously the facilities of

both the industries and the university could be used for research and development of unlimited ideas. The scientists working with the industries should also teach in the university. Such teachers would be invaluable as they not only have the knowledge but the experience in actual applications.

14. The environment of Cyberjaya has to be such that these people can relax as they think up ideas for the application in the software and hardware to improve further the versatility of Information Technology. In IT or the knowledge age, it is brain power that counts. Calm environment has always been considered as essential for the human mind to work. Cyberjaya will provide this calm environment.

15. It was expected that many of the engineers, scientists and researchers as well as those employed in management would be foreigners. Their presence would be invaluable as they would bring with them ideas and expertise to enhance the capacities of other personnel in the Cyber city. These people have a need to be mobile, to be able to come in and go out of the country freely. For this the Government had made available multi-entry visas so that they can choose to travel at any time and at their convenience. The officials' particular immigration officials must see to it that this privilege is really accorded to them.

16. With these special provisions the MSC (Multimedia Super Corridor) has become very attractive to foreign investors and their foreign personnel. As they are not citizens they should cause no political problems. Still in certain cases it would be well for Malaysia to accord them with permanent residency or even citizenship.

17. Acknowledging that we do not have a monopoly of ideas, the MSC has invited a lot of foreign experts to sit on a special panel, the International Advisory Panel, to assess and advise the management of the MSC and the Malaysian Government on the needs and the direction of the development of the Multi-Media Super Corridor. The IAP has met yearly and has proven itself invaluable in keeping the MSC development on track in keeping with the progress made by Information Technology. Their annual meetings also offer local IT entrepreneurs opportunities to exhibit their products and to gauge the response. Very often the IAP experts were able to suggest improvements of software and products.

18. Special incentives and ease of approvals have made investment by industries in Cyberjaya very attractive to foreign IT companies as well as local companies. The availability of English speaking personnel is also an important factor for the investors to decide to locate in Malaysia. During the industrialisation of Malaysia it was noted that irrespective of the nationalities of foreign investors, their instructors and supervisors all use English to communicate with their employees.

19. Outsourcing is now the way to render business viable and profitable. Outsourcing includes producing parts or components or even the end-products in other countries where production costs would be lower or the skill would be higher. It also includes bringing in foreign experts to contribute towards the special inputs such as knowledge and IT skills into the businesses. While in Malaysia many foreign experts have been involved, such is the level of expertise acquired by Malaysians that many are now advising and managing the operations of foreign multi-national facilities in other countries, including managing their start-ups.

20. This development has made many industries lose their identification with their countries of origin. This is especially so when their shares are owned also by non-citizens. This is not bad as everyone realises that the world is getting smaller and there must be spill-over between countries of the rich to the poor countries through capital investments and technology and the poor to the rich via lower cost of labour and other local inputs including lower cost buildings and raw materials. Properly managed both the investors and the host countries would benefit.

21. Malaysia has certain other competitive attributes due to the multi-racial character of its population. Operators out of Malaysia find no language difficulties in communicating with more than 2.5 billion people of the world whose languages are spoken by Malaysians of Indian, Chinese and Malay origins. Thus India (1.1 billion), China (1.4 billion) and Indonesia (230 million) actually make up the Malaysian hinterland language-wise. In addition most Malaysians speak English and English is now the lingua franca of the world and is the home language of most of the peoples of the former British Empire and the United States of America. Malaysians therefore have no difficulty in communicating with the peoples of these former colonies. Most foreign investors find this working knowledge of English useful, whether they be American, Japanese, French, Germans or Italians. Some in Malaysia may not be happy with this fact but for the workers of Malaysia, this is an asset that they value much.

22. This particular attribute is useful for processing bank businesses worldwide. Back-room work is now often carried out via telephone centres in distant countries, where the cost is lower. It could prove very useful for other businesses as well. Malaysia has certainly benefited from this development and thousands are now gainfully employed on shifts on a 24-hour basis.

23. All these attributes which place Malaysia in the forefront of the Knowledge Economy are supported by up-to-date country-wide communication infrastructure. We started installing the new communication network very early and has been updating the facilities all the time.

24. The availability and status of Malaysia's communication facilities have done much to propel Malaysia into the Knowledge Economy. All these were

made possible because the Government of Malaysia works very closely with the private sector. The Government is thus able to know the needs of private businesses and industries as well as the latest in terms of technology. Privatisation has also helped in speeding up technological update. Where before Telecommunications was a Government monopoly, today not only has the Telecommunication Department been privatised but several private (public listed) companies also provide the complete telecommunication service. The private enterprises are usually more efficient than Government departments. After all the bottom line is more important to the private sector than to Government. That is why the privatisation of Telecommunications in Malaysia has proven to be so beneficial to the country's progress into the knowledge economy.

25. The competition between the private telecoms companies has resulted in improved services and lowered costs. How much the improvement can be gauged by the time taken to get a telephone line. When Telekom was a government department it took 2 years to get a line. The telephone charges were such as to discourage telephone usage. Today it is almost instantaneous and the users use the telephone a great deal more than in the past. We no longer talk of overseas telephone calls because the same cellular phone can be used anywhere in the world. The charges are low enough to make long distance call almost as cheap as local calls. It is private sector management which has enabled this to happen.

26. In many ways Malaysia has succeeded in turning itself from an industrial economy to a knowledge economy. What is more important is that it has done so at the same time as most developed economies. It is therefore in a good position to compete and to assist IT investors and other investors to site their operations in Malaysia.

27. Today's knowledge economy is very challenging, not only for countries but for the industries themselves. A wrong decision or step may mean the demise not just of a company but a whole segment of the economy.

28. One example is provided by the Iridium satellite telephone system. The inventors and investors must have felt sure they had a very good system. Land lines had limited coverage while wireless was as yet not fully developed. A large number of satellites would be placed in orbit so as to receive signals from anywhere on earth. The signals would then be transmitted to other satellites until it is received by a satellite closest to the receiver. The receiver would then be able to get the signals, through a rather big handset with a long antenna. The claim was that anyone can call or receive a call anywhere on earth, whether at the poles or in the deserts.

29. Then a new system was developed using transmitters placed on high towers erected everywhere that the users might be. These cellular phones now cover the world wherever the transmitting towers can be erected. Perhaps the signals may not be transmitted or received at the poles or in the desert for lack of

transmission towers. But not too many people would be at these remote places. If they are they can probably use Iridium. But generally the cellular phone can transmit and receive signals almost anywhere in the world. Such is the quality of transmission with cellular phones that it is not possible to distinguish voices from over thousands of miles with those next door.

30. The versatility of the cellular phone is phenomenal. Every time a new feature is added, someone would come up with additional new feature. Truly the cellular phone is the symbol par excellence of the Information Age. It has made the knowledge economy possible in every way. It is really a tiny computer with all the capacities of the computer and the television.

31. As a country Malaysia is as up-to-date as can be in terms of wireless telephone communication and accessibility to the Internet system. It is really a full member of the Information Super Highway of the world.

32. As a result it has been possible for Malaysia to have a knowledge economy, an economy in which knowledge plays a major part of the industrial make-up of the nation. Knowledge and telecommunications can not only create new industries for Malaysia but they will also enhance the old industrial (manufacturing) capacities.
