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Endeavour in space

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MALAYSIA'S involvement with the space sector started with the implementation of the "Blueprint for the Development of the Malaysian Aerospace Industry" in 1995. Among the key recommendations is the establishment of a national level steering committee, in the form of a National Aerospace Council (NAC).

This council will formulate key decisions in terms of directions, priorities and strategies for the aerospace industry.

The NAC demonstrates the Government's commitment in pursuing its aerospace endeavour. The NAC is chaired by the Prime Minister Datuk Seri Dr Mahathir Mohamad and members include the Deputy Prime Minister and Ministers from the Ministry of Defence, Finance, Transportation, Education and Science, Technology and Environment.

The membership of NAC reflects the smart partnership and synergy between government support and the private sector initiative needed to transform the aerospace industry into a major economic activity.

One of the points discussed in the meeting was the proposal to launch a constellation of small satellites in the near equatorial orbit. It is good to hear that the council is very receptive to the idea.

The increasing capability of low-power microelectronics has enabled a new breed of highly capable smaller and cheaper satellites for space missions. The lessons and experience gained from the launching of Malaysia's first microsatellite TiungSAT-I are tremendous.

A cadre of trained engineers and scientists who make up the national capability in the fabrication process of a satellite for a variety of applications has been realised. The TiungSAT-I satellite programme helped to produce mission analysis, attitude determination and control systems, RF and communications, ground station operations, launch campaign preparation and mission exploitation.

Touted as the final frontier, the space programme has been expressed as the next large-scale exploration and settlement project for humanity. But how can we participate and develop in such a grand project?

To answer this question, it is most appropriate to consider this question: "How did Neil Armstrong and Buzz Aldrin land on the moon?" The easy way out is to answer by dealing with the specific technical details of the Apollo-Saturn V launch vehicle that they travelled in and the physics that plotted their trajectory.

Alternatively, we could answer it by looking at the environment that enabled both of them to be the first persons to land on the moon. Looking more closely, we see a startling similarity in both.

Both were men, both were United States citizens, both were white, both were aeronautical engineers and both had served as test pilots for military aircraft. The similarity and the opportunity they have are by no means a coincidence, but planned by a matured space development programme.

The aerospace industry, Government and institutions of higher learning need to co-operate with imagination, purpose and vigour in order to bring about the early realisation of our space endeavour.

The NAC is seen as the right platform. Prior to the launching of TiungSAT-I, the emphasis of our space programme was on a sort of learning process about space science. But in the next decade, Malaysia should refocus its space programme by emphasising economic benefits.

It is believed that in order for our space programme to enjoy continued

public support, R&D should be focusing on enhancing the economic well-being of our country. In today's fierce competition in the aerospace sector, it requires our space-related funds and talent to be refocused on activities that will encourage economic growth, employment, tax revenue and strengthening our commercial competitiveness in the space business.

The creation of large, economically attractive, space-related markets must be given as much attention as the solution of space technology, engineering and operating problems. In this respect the Malaysian Defence Industry Council (MDIC), chaired by the Defence Minister can play a larger role in creating a conducive market for our space programme.

A new and revamped policy to reflect new priorities of our space programme will make it easier for MDIC for example, to allow and encourage private-sector exploitation of space.

Space business in Malaysia continues to be a government preserve, a situation not conducive for any space programme. The NAC can be the focal point of our space programme so as to ensure that the Government, industry and universities are proceeding in the right direction in consonance with each other.

The Government needs to understand what aerospace firms are trying to accomplish, and encourage and help these firms. Hopefully, with the launching of our very own constellation of small satellites, a new era in our space programme will be realised.