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Directors of Schools

Students

Ladies and gentlemen

Introduction

A very good morning to all of you. It is a great pleasure to see you here and I am also very pleased to be here to celebrate the successes and accomplishments in innovation and technology at Republic Polytechnic's Technology Day 2013.

2 This year, the theme of the Technology Day is "Productivity and Sustainability 360". As Mr Seto has explained, this forum will allow participants to explore how technology and innovation can be used to achieve the very important objectives of productivity and sustainability in the three areas: food and nutrition; environmental technologies; and information and communication technologies.

3 I am very heartened and excited to see that the research projects that have been undertaken here in Republic Polytechnic are not only seeking implementable solutions to help Singapore move forward in becoming a productive economy with good jobs for everyone, but also furthering our ambitions to become a sustainable global city that can hopefully be a role model for others. This is a noble cause and one that I would greatly encourage Republic Polytechnic to keep promoting and emphasising. Indeed, Republic Polytechnic has been a good partner with my ministry over the years in promoting sustainability and environmental causes.

Global Environmental Challenges

4 The world today faces many environmental challenges. The last few years have seen an increased frequency of extreme weather events around the world, most notably but not exclusively in Australia, China and the United States. Besides Superstorm Sandy, there have been record-setting heat waves and droughts on the one hand, and massive cyclones and floods on the other. Here in Singapore, we are also witnessing record high

temperatures as well as very intense thunderstorms, some of which have led to flash floods. While there is no way to prove for certain that any one of these individual events happened solely because of human-induced climate change, the most recently released United Nations IPCC AR5 climate experts' report states that it is, and they use the words "virtually certain" that human activity did contribute significantly to at least half of the extreme weather events in the last two years. The scientists said that when they use the words "virtually certain", they mean 99 percent sure.

5 Apart from this, the world is also running out of resources to cope with the growing consumption needs of its population. A global crisis involving food, water and energy is on the brink of erupting and indeed in some regions, the crisis of water has indeed erupted. Water is especially vital, because as any doctor will tell you, it is the most basic necessity for human existence apart from air. Without air, you can only survive for minutes. Without water, you can only survive for days. Without food, you can still survive for weeks. So, water is vital. It is the most indispensable input into all forms of food production, whether it is the basic primary agriculture or in food processing. Fortunately, with the advancement of technology, especially that of reverse osmosis, it has become possible for water scarce countries like Singapore to overcome the shortage of water.

6 However, the use of these technologies is dependent on another scarce resource and that is energy. My colleagues at the PUB are constantly looking for ways to reduce this dependency on energy for water production and I am personally very gratified that many in the private sector, academia and research communities are working closely with PUB and with the ministry to address this. It is imperative for us to continue to seek new and innovative solutions to address these challenges, not just for Singapore's sake but also for the rest of the world. Doing so involves not only big multi-million dollar research projects, which we do have, but also smaller innovation, process and application projects that address practical challenges like the ones that Republic Polytechnic is doing with its partners.

Singapore as a Sustainable Global City

7 As outlined by leading thinkers like Edward Glaeser, a dense city like Singapore can be the most sustainable way of life for human beings, simply because people have to move around much less and can enjoy economies of scale in many daily activities in the city. You may or may not agree with this paradigm, and Edward Glaser's paradigm is somewhat controversial, but Singapore being necessarily small and dense can at least be a role model of the best green city for others to emulate. We cannot change our circumstances, especially our very urbanised environment, but we can certainly make the most of them and turn challenges into opportunities. Our clean, green and blue environment has been a competitive advantage for Singapore in the past, since independence, and we see this becoming even more important going into the future, as more cities emerge as sustainable models and as the competition for investment and talent heats up.

Planning Ahead –Singapore’s Sustainable Blueprint

8 Unlike some other developing countries, Singapore recognised quite early, the significance that liveability and sustainability and the roles that they play in our national development is vital. Right from the very beginning, at independence in 1965, when our per capita GDP was less than \$1500 and unemployment was high, we could see many problems looming on the horizon. The government then still took a developmental path that ensured that even as we grew our economy and our labour force, the environment also needed to be nurtured and cherished. Three things that I would cite, as examples at that time - the government decided that there would no coal-powered power plants and would only entertain the idea of fuel-powered power plants, which was and is still more expensive today. Another thing that we did was we set out to make Singapore the cleanest and greenest city that could be. At that time, we required a tremendous amount of work, not just on the part of the government and the civil service, but also in terms of campaigning with the people to change the culture. The other thing we did was to embark on the cleaning up of the Singapore River, then very much an open sewer and highly polluted. If anyone drank the water, they ran a very high risk of being very sick after that. Today, it has been cleaned up.

9 Singapore’s efforts at sustainable development have been guided by three key principles. The first is long-term integrated planning, which requires us to prioritise strategic and holistic perspectives over short term and parochial ones. This disciplined approach does not just hold during planning but is also carried through into implementation. Secondly, we adopt a pragmatic and cost-effective mind-set and are prepared to incur short-term costs in order to achieve the benefits of longer-term goals. It is what works and what is viable that is the winner, not an adherence to any orthodoxy or ideology. Third, we embrace new technologies so that we can respond to the challenges quickly and develop new and improved capabilities expeditiously. All these approaches have served us well in many areas such as land-use planning, pollution control, water management, waste management, energy efficiency, and transportation management.

10 In 2009, Singapore released our first Sustainable Singapore Blueprint (SSB), which set out our goals for 2020 and 2030 for sustainable development and also outlined the strategies to help us achieve these targets. This year, the Government has started a review of the SSB and we aim to complete it by the end of 2014. As part of the review, the SSB 2014 will articulate Singapore’s latest strategies in green and sustainable growth and development, and present a renewed sustainability vision and enhanced roadmap for the future. It is still a work-in-progress, so I cannot share with you too much today.

Closing Remarks

11 To achieve the goals set out in the SSB, it is already very clear that members of the public and the corporate sector have to be brought along and inspired to start their own ground-up initiatives. My team in the ministry cannot get our work done without most, if not all, of Singapore working alongside us.

12 To the students who are here with us today, I encourage you to engage in deep discussions with people from different disciplines as sustainability issues cut across many different fields and disciplines. I encourage you to participate actively in projects, which will not only give you the opportunities to think creatively about sustainability solutions, but will also equip you with the necessary tools and knowledge as well as the desire to become leaders and innovators in the future.

13 To the leaders and educators in RP, your support and guidance will make a big difference in nurturing the younger generations, not only on the know-how, but also in the commitment and passion to create a sustainable Singapore. Your continuing effort in sustainability education is vital and as I said, and I reiterate again, my ministry greatly appreciates that.

14 To the companies here, I would encourage you to embed green practices in your corporate culture and to allow it to pervade everything you do. In some cases, this may pay off in the financial sense immediately, but in others it may take a little longer to pay off. Another way you can contribute, as what we see today, is by supporting research to discover new breakthrough technologies and innovations to make our city more sustainable. Apart from their intrinsic technological value, these innovations can create excellent business opportunities, and provide Singapore, the region and the world with more sustainability solutions.

15 Finally, let me thank everyone again for being here at this event. I want to wish everyone a pleasant day ahead and every success in your future endeavours.

16 Thank you.

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