

**State of the University Address 2009  
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President, National University of Singapore  
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**SCALING NEW HEIGHTS IN A CHANGED WORLD**

NUS Pro-Chancellors

Chairman and Members of the NUS Board of Trustees

Distinguished Guests, Colleagues, Students, Alumni and Friends

Ladies and Gentlemen

Our world is changing rapidly and profoundly.

As our Prime Minister, Mr Lee Hsien Loong noted in his speech to Parliament on 29 May, "After this crisis, the world is not going to be the same again. It's not just another cyclical downturn and recovery. The world's economy is undergoing a structural shift."

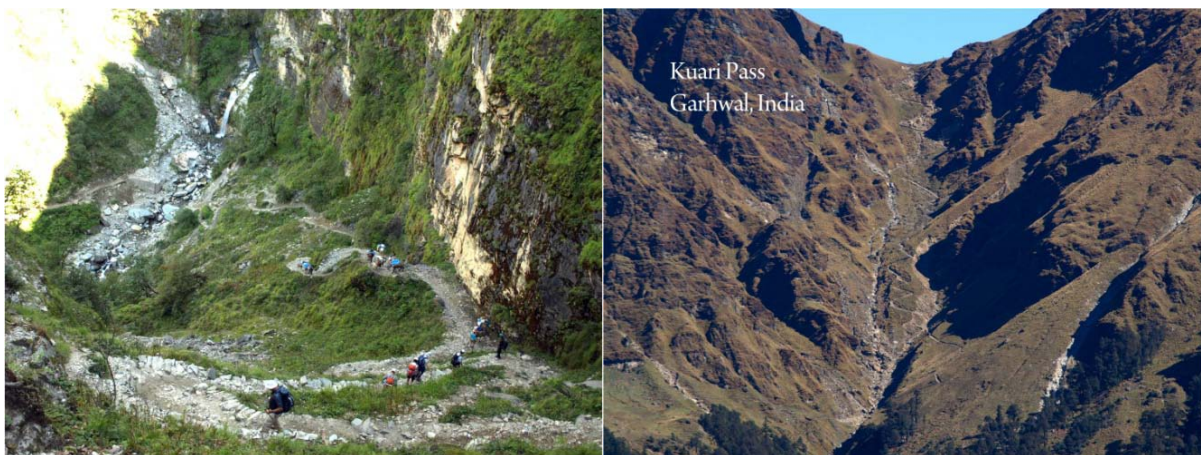
What does all this mean for NUS?

Is there a need for us to do anything? And if so, what should we be doing?

Over the past year, the NUS Board and management have pondered these questions and devised strategies. Earlier this month, I was doing some trekking in Northern India and had time to further reflect on these issues.

Interestingly, the trek had a profile a bit like the financial markets – it went up and down a lot. An average day would include a net 600- to 800-metre drop followed by an 800- to 1,000-metre climb. The paths ran up and down the mountains in a series of long and steep zig-zags.

At 6 am two weeks ago, my wife and I were starting on our way up to the Kuari Pass. Periodically, I would look up and could make out the path zig-zagging up as high as I could see. At points, it felt as if I had reached the end of the ascent, but rounding the bend, I realised it was the start of the next series of paths up.



We were breathless – breathless from the exertion and altitude; our legs were aching and our hands were numbed by the cold wind.

There was a strong temptation to stop.

A strong urge to halt frequently and to have a good rest. To find a comfortable viewing point and linger for some time.

But we continued walking because we knew that to ascend in spurts and stops was the most tiring and ineffective way to get to the top – or not even to get there. And to also risk being overtaken by other teams determined to climb faster than us.

We should certainly enjoy the views as we ascend, but we cannot stop. Instead, we must keep our strong, sustained and resolute pace up.

For me, these long steep ascents are as much a test of the strength of the mind and of the will, as of physical endurance. Adapting to the endless series of climbs, descents and changing conditions is a test of mental nimbleness and resilience.

No one can foresee precisely how the post-crisis world will turn out. But it is likely that it will be a world marked by ever more frequent and dramatic changes, with many ups and downs.

Does this matter to us at NUS?

I am sure that there will be some who feel that these global events go way beyond our University, and that there is nothing we can, or need do; that NUS is pretty comfortable as we are now and in fact, this might be a good time to consolidate, perhaps have a breather.

That will be a big mistake.

It is precisely during periods of widespread and deep dislocation that there are the greatest opportunities to make a quantum leap forward and to stand out internationally.

So, like a team of fellow trekkers, journeying together on a worthy but difficult quest, we must have that strong sense of institutional pride and self-belief, that strength of mind and collective purpose, that nimbleness and boldness, to make full use of this unique window of opportunity to impel our university forward, to scale new heights in a changed world.

The key question is this: What are the greatest opportunities? And how do we best position ourselves to seize them?

Let me start with what, in my view, should not change – things that we must continue to aggressively build upon despite the changed world.

These are Talent, Transformative education and World-class research.



The first is TALENT. We must keep our singular focus on talent.

Not just recruiting and rooting top talent from overseas, but nurturing our own “home-grown” talent.

Not just assembling talent but creating the conditions that enable all talent – local and from abroad – to flourish and to excel as thought-leaders internationally.

Under the able leadership of Provost Tan Eng Chye, Deputy President Barry Halliwell and our Deans, we have worked very hard on this over the past year.

The good news is that this collective effort is bearing fruit. Let me briefly mention a few illustrative examples.

This has been an exceptional year in terms of the high quality of students admitted to NUS. Apart from Medicine, Dentistry and Law which always attract the brightest students, three Faculties which did well in enrolling excellent local students were Business, Engineering and Science. For example, for our Global Engineering Programme launched this year, the first batch of 11 students is very strong. They include Ms Goh Tian, one of the top students from Raffles Junior College, who passed over other prestigious scholarships to enroll in NUS.



I am also happy to report that many of our faculty have distinguished themselves as academic leaders internationally.

Some quick examples:

Professor Chua Tat Seng's group from Computing is at the cutting edge of multimodal information search and extraction.

Professor Li Baowen from Physics has put NUS on the map in the new field of phononics, which studies innovative approaches to manipulate the transfer of heat.

Professor Brenda Yeoh from Geography is doing ground-breaking work in several areas including transnational migration and global cities.



(From left) Professors Brenda Yeoh, Chua Tat Seng and Li Baowen

The NUS Teaching Academy, comprising 18 past winners of the NUS Outstanding Educator Award, is leading the push to enhance the culture of teaching excellence on campus.



Over the past year, we have also recruited a bumper number of exceptional new faculty who are working closely with our existing staff.

There is a Chinese saying that goes something like this: “A clever person turns great troubles into little ones, and little ones into none at all.” (大事化小，小事化无)

I am sure we all agree that we need more of this type of people around!

Well, the growing international impact of our “home grown” faculty and the fresh infusion of top talent is creating a potent mix, which is not just solving problems, but driving our education and research to new heights of excellence.

The second fundamental that remains relevant is that we must continue to transform NUS education.

Our goal is to nurture graduates and leaders who are critical thinkers, creative, articulate and globally effective. In short, graduates who stand out and who are keenly sought after. To achieve this, we must strive to provide a top-rate global education which challenges each of our students to reach and achieve beyond what they thought possible.

Going ahead, we will also put a strong focus on transforming the quality of our graduate education. Top-notch graduate students and programmes are vital for Singapore's knowledge-based economy and for NUS as a leading research-intensive university. The continuing transformation of NUS' education will ensure that NUS graduates, and Singapore's human capital, will keep their strong edge despite growing global competition.

The third fundamental that remains relevant is to make our research world-class, with peaks which are among the leaders in the world.

Yes, G-10-10 is still alive! A key part of our University's strategy is to develop 10 programmes or departments which are among the top 10 globally. From a broader perspective, NUS has very strong undergraduate education, an area we continue to actively build upon. But while we have made excellent progress in research, we still need to do more to make our research really world-class. In the end, we must have two equally strong legs, in education and research, to succeed as a leading global university.

Talent, transformative education and world-class research are constants that remain vitally important for us.

It is crucial, however, for us to consider the aspects of the changed world for which we should make strategic shifts.

Despite the profound changes afoot, most writers predict that the process of globalisation will continue in the post-crisis world.

But growth in the post-crisis world is likely to have a "saw-tooth" profile, with more frequent, large changes, not unlike my Indian trek. This is because, as the current global financial crisis has shown in the most dramatic way, the world has never been more interconnected in its history. We should therefore expect that events in one

country or sector can very quickly have a serious impact on several related sectors around the world.

It is also clear that the global financial and economic crises are hastening the shift to a multi-centric world – a world in which Asia is playing an increasingly central role.

Our trek in India passed through several remote villages. This gave me a sampling of some of the deep changes slowly but surely permeating the society there.

Notice the solar panel on the thatch-roofed hut in a village 3 days' walk from the nearest town. This is a picture of satellite dishes on the roofs of 2 houses in the same village. Here is our local trek leader. Notice his solar-powered radio – he uses it to follow the latest cricket scores. And here, in the shadow of the Indian Himalayas, he is trying to get a signal on his mobile phone!





In Indian cities, the changes are, of course, much more profound and rapid. Similar dramatic changes, some of even greater scale and complexity, are occurring in the rest of Asia, and especially in China. Here for example are 2 photos I took of Xian in China: the first in 1988, and the second in 2006. The pictures speak for themselves.



Asia is urbanising rapidly. In 1900, only 10% of the world's population lived in cities. 2008 was a watershed with 50% living in cities. And in 2050, some 70% of the people on this planet will live in cities. Much of this rapid and massive urbanisation will occur in Asia.

So, what are the strategic adjustments that NUS must make in view of the changed world?

In two earlier speeches, I had spoken at length about the NUS community of students, faculty, staff and alumni, and about NUS education. So for today's address, I would like to focus on research and institutional development.

I believe we have to make 3 strategic adjustments.

As the story of a rising Asia unfolds, we must work to ensure that NUS is a significant player in it.

The growing importance of Asia on the world's centre stage is, of course, not a new topic in NUS. Professor Kishore Mahbubani, the Dean of our Lee Kuan Yew School of Public Policy, is a much sought-after voice on this subject.

On 8 February 2008, Kishore handed me a copy of his book, *The New Asian Hemisphere*. I remember this incident very well because he gave the book to me for free, which is quite unusual. Kishore will be glad to know that I actually read the book.

Kishore's book speaks about the Asian Renaissance and argues a strong case that the rapid rise of Asia, and in particular China and India, is a positive force for global growth and development.

The Asian Renaissance will indeed drive economic progress and improve the lives of countless people. At the same time, in Asia's rapid growth, humanity will also face some of its greatest challenges. One could think, for example, of environmental sustainability and the mitigation of global warming; of public health and the pressures of rapid demographic shifts; of income inequalities and financial security.

Both the growth and the challenges of Asia hold great opportunities for NUS. There will be a pressing need for better research and understanding, and for more innovative solutions ranging from clean water and energy, to urban planning and building design, to community building and smart transportation systems, among many others.

I believe the Asian Renaissance can substantially hasten NUS' rise as a leading global university.

And that the first strategic adjustment for NUS is to intensify our efforts to make our university a pre-eminent knowledge centre on Asia.

A well-connected knowledge hub which distinguishes itself by providing a new and more integrated understanding of critical issues in Asia particularly China and India.

A vibrant node that draws top students, scholars, policy-makers and private sector leaders from around the world.

How might we go about doing this?

As context, let me stress that the success of our research depends on the quality and creativity of our faculty who pursue questions they find interesting and important. These efforts are valuable and are making many high-impact contributions to knowledge and thinking.

This is the heart of our research enterprise, and we will continue to strengthen and support it.

However, the most critical challenges facing Asia, such as sustainable urbanisation and ageing, are multi-faceted and have complex interconnections. To address them adequately, we need research which is much more integrative – that is, research that combines both depth and breadth of cross-disciplinary coverage, and which addresses the key interconnections between issues.

If NUS is to make a real impact on these crucial challenges, we must organise ourselves differently to carry out more integrative research.

I do not think we can achieve this by simply using the typical Research Institute model. Instead, I propose for these complex areas a much more dynamic approach, based on what I call “integrative research clusters”.

Let me explain.

We have embarked on the task of building 5 such research clusters, which are largely supported by competitive research funding with some seed funding from our endowment returns. Each cluster provides a loose but dynamic structure which brings together researchers in related fields, and promotes integrative research among them. Each cluster pursues globally competitive research, with an

appropriate Asian focus. The clusters will also provide unique opportunities for students to learn more holistically, in a highly collaborative environment.

For example, the Finance and Risk Management cluster includes the Risk Management Institute, the Institute for Real Estate Studies, researchers from Business, Economics and Mathematics, as well as the newly set up Saw Centre for Quantitative Finance. Most of the researchers are co-located in the I-Cube building and the cluster is chaired by the Provost, who works with the groups to develop synergistic collaborations that address large research questions.

Two other clusters which are growing nicely are Biomedical Science & Translational Clinical Research, and Ageing.

Looking ahead, we will focus on advancing more integrative research in two more clusters, namely Asia Studies, and Sustainability.

The new NUS Global-Asia Institute set up in September this year will provide the platform for integrative Asia studies. Following extensive faculty consultations, an initial set of research themes has been defined which, for a start, are centred around critical issues for Asian cities in a globalising world.

These include: Challenges for Asian cities in the globalised world economy, for example, in relation to economic stress; the future of urban society in Asia, including issues relating to education, public health and health care, and community building; and managing resources for liveable cities in Asia, including water, waste management, energy and food security, and housing.

For example, what are the innovative technological solutions, policy options and partnerships that could be adopted to solve these issues in an efficient and sustainable manner?

The first grant call to be launched in November will support researchers from NUS departments and Research Institutes to work together in small groups on key research questions that cross disciplinary boundaries.

GAI will also draw eminent overseas scholars to NUS, to work on these areas for 3- to 6-month periods.

The GAI Director, Professor Seetharam from the Lee Kuan Yew School of Public Policy, will convene regular workshops where data is shared, findings integrated, and new areas of inquiry identified. The GAI will produce high-impact research publications, a unique learning milieu for students, as well as conferences and monographs that provide rigorous, integrative studies of key issues in Asia, the interconnections between them, and between China and India.

A critical output of GAI, however, will be how these contribute to finding solutions to real-world problems.

In the same way, we will establish an Integrative Sustainability Solutions Cluster. The aim is to create powerful synergies among the many NUS research groups and centres working in the area of environmental sustainability.



Finally, when the 5 research clusters have been formed, we will create ways for researchers to work together across clusters. These would include regular symposia, and funding schemes for collaborations that address key research questions that cross cluster boundaries. If we can do these well, we would effectively have created a “super-cluster of research clusters”.

The super-cluster would also provide a more effective interface between the deep pools of research talent in NUS, and partners, agencies and industry seeking large-scale integrative R&D and solutions.

Explaining all this reminds me of an anecdote from David Attenborough’s memoirs “Life on Air”. When David Attenborough joined the BBC in 1952, he attended a training course and he noted:

“One of the first lectures was given by a gentleman who came armed with a large box of coloured chalks. He drew a series of rectangles on the blackboard, wrote initials in them and connected them by lines, some continuous, some dotted. The finished diagram, we were told, represented the structure of the BBC. It came as no surprise to me later to discover that he was also the author of an authoritative book on witchcraft in medieval England.”

Creating a “super-cluster of research clusters” structure will not be easy, but I don’t think it will require witchcraft. I am convinced that it can and should be done, and that it would give NUS a strong competitive advantage in our changed world.

It will, however, require a strong sense of collective purpose, trust, creativity and intellectual boldness among our faculty, administrators and staff.

Henry Ford, the pioneer of the automobile, famously said:

“If I’d asked my customers what they wanted, they would have said a faster horse.”

Many of the world’s really important challenges will clearly benefit from incremental improvements to existing approaches. But these would not be enough. We must also have novel disruptive innovations. We also need integrative research that gives

a more complete understanding of major issues and which produces more integrated and holistic solutions.

To meet the breadth of expertise required for such an approach, we have to draw existing staff from across NUS to take part in these clusters. We also need to recruit top-notch faculty. The regular budget for each Faculty already provides for new faculty and staff hiring. Last year, I set up a new strategic recruitment fund for the Provost to work with Deans to build up our strengths and to fill gaps in strategic areas.

You can tell that the Heads, Deans and Provost have been working really hard because we have made several outstanding additions to our faculty. I will just mention a few.

Professor Deng Yongheng is one of the most highly-cited researchers in real estate finance and urban economics, and as the new Director of the NUS Institute of Real Estate Studies, joins our homegrown faculty who are also international leaders in their fields.

Professor Phil Koeffler, who joined the NUS Yong Loo Lin School of Medicine, is one of the foremost authorities in leukaemia research. His recruitment will significantly boost NUS' existing strengths in cancer research.



(From left) Professors Deng Yongheng, Phillip Koeffler and Prasenjit Duara

Professor Prasenjit Duara is a renowned historian of China and Asia and, at the same time, has deep insights and connections in India.

In summary, the first strategic adjustment NUS should make is to position ourselves as a significant player in a rising Asia, by becoming a well-connected knowledge hub that provides a new and more integrated understanding of critical issues in Asia.

The second strategic adjustment is that we have to become even more nimble.

On a trek, a lack of nimbleness may result in you being washed down a gushing stream, falling off a cliff, or being left far behind.

So too will it be in a world that has many frequent ups and downs.

At the University-level, we have taken steps to become more responsive to change. A key measure in 2008 and 2009 was to reduce spending on less important areas. We did this even though our financial position is strong, in order to create a significant resource pool which we could use to invest in strategic priorities.

For example, in July this year, we made a supplementary budget allocation to accelerate a number of key academic programmes, such as the Design Centric Curriculum in Engineering, as well as programmes in Design and Environment.

We have also seeded some strategic research initiatives with funds from philanthropy and our endowment returns.

I am delighted that individual faculty members and departments have also been very proactive in responding to new opportunities. They have secured significant funding for projects of strategic value to NUS and to Singapore.



To be nimble, our University must have a world-class administrative system that supports the academic enterprise effectively. Under the leadership of Deputy President Joe Mullinix, much progress has been made. Later this year, we will be adding a crucial new programme to our staff development schemes. The Grooming Excellent Managers programme will give promising Executive and Professional staff tailored development opportunities including training attachments in top universities overseas.

The third strategic adjustment is to boost our standing as a global university by extending our global reach.

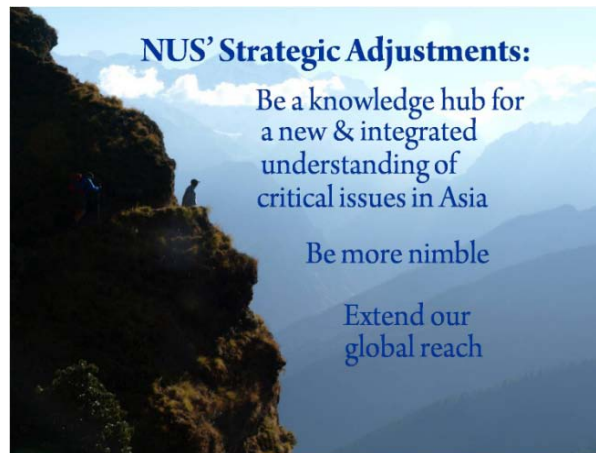
One of the most distinctive features of NUS is that we are a global university, one that pioneers novel models in global education and partnerships. As globalisation proceeds, NUS must keep at the forefront of innovation in global education, research and institutional networks.

In this area, NUS is lucky to be “powered by two Lilys”.

Vice President Lily Kong is mapping our globalisation strategies and leading key initiatives.

CEO of NUS Enterprise, Dr Lily Chan is working to extend our NUS Overseas Colleges to more sites in Asia, the Middle East and beyond. I have also asked NUS Enterprise to develop a programme to carry out comprehensive analyses of business and innovation ecosystems and practices in Asia.

We will also look into setting up research centres based in China and India that are closely linked to our integrative research clusters, to increase their academic connectivity and reach.



Making these three strategic adjustments will require much boldness and hard work. However, these are the directions that have clearly emerged from our collective deliberations over the past year. Personally, I am convinced that we can and must pursue them vigorously, having reflected on these issues for some time and particularly during this recent trek in India.

To reach the starting point of my trek, we had to travel along many winding mountain roads. One charming aspect of driving in this part of India is seeing the bright yellow signs put up by the Border Roads Office.

I couldn't resist showing this one: "Don't nag him, let him drive".

Here's another that reflects the philosophical bent of India. Our bus was going so fast that the picture is blurred, but the sign read: "Life is a journey, Complete it".

And this one, I really like:

"Impossible will take time,  
Difficult will be done immediately"

We should adopt this as our motto!



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I think this road sign is very apt because as one travels in India, one does get a strong sense of a continent on the move. Huge numbers of bright, hard-working, hungry talent with high aspirations for the future. Those of us who visit China will have noticed the same energy, drive and ambition there too.

The changed world and the rise of Asia present unique opportunities for NUS to make a quantum leap to become a leading global university.

To be a significant player in a rising Asia, we must make ourselves a pre-eminent knowledge hub, one that provides a new and more integrated understanding of critical issues in Asia.

We must be more nimble to respond quickly to rapid change.

And we should extend our global reach to enhance our position as a global university.

The changed world will also pose big challenges for NUS.

Asian countries, especially China and Korea, are making huge investments in their best universities, to make them world-class. This has further intensified the competition for top talent, particularly those seeking to relocate to Asia.

However, NUS is well placed to succeed. In the recent Times Higher Education QS World University Rankings, our University retained its top 30 position in the world.

Our talent pool is growing by leaps and bounds. Our dynamism and creativity help us stand out as a global university.

But like trekkers on a demanding quest, we cannot stop.

We must push on harder and with even fiercer energy, impelled forward by our steely resolve, our fire in the belly, and above all, our self-belief.

It is not just our strategies and our plans, but our mental strength and attitude that will determine if we will succeed or not.

Colleagues and friends, we have what it takes to succeed.

The changed world has opened unprecedented new prospects.

Our University needs your passion, your energy, your commitment and your support, to seize these new opportunities to scale new heights in a changed world.

And to make NUS a leading global university centred in Asia!

Thank you.