
THE FUTURE OF ASIA AND ITS PLACE IN THE WORLD

Centre for Strategic Futures, Singapore
Foresight Conference 2011



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ABOUT THE CENTRE FOR STRATEGIC FUTURES

The Centre for Strategic Futures (CSF) was established in early 2009, as part of the Strategic Policy Office in the Public Service Division of the Prime Minister's Office. This situates it at the heart of the government, with the ability to reach across agency stovepipes.

The Centre is very much like a think tank within government, with the freedom to focus on issues of strategic importance even if they are not perceived to be immediately urgent.

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BACKGROUND

The Centre for Strategic Futures (CSF), Singapore held its inaugural Foresight Conference on 20–21 October 2011 at the Raffles City Convention Centre. The Conference was one of three events comprising the inaugural Singapore Foresight Week, held on 17–21 October 2011. The other two events were:

- ▶ The **4th International Risk Assessment and Horizon Scanning Symposium** organised by the Horizon Scanning Centre at the National Security Coordination Secretariat, on 17–19 October 2011; and
- ▶ The **Complexity Methods Workshop** organised by the Nanyang Technological University and the Santa Fe Institute, which was held concurrently with the Foresight Conference on 20–21 October 2011.

For the Foresight Conference, the CSF convened a small group of multidisciplinary experts¹ to discuss the theme of '*The Future of Asia and its Place in the World*'.

The Foresight Conference opened with a series of plenary sessions addressing the following sub-themes: (a) geopolitics and geo-economics; (b) internal pressures in uncertain external environments; and (c) resource security; as well as the question of complexity as applied to the future of Asia.

In each of these plenary sessions, designated ‘Conversation Sparks’ made brief remarks on the assigned topic, following which the participants engaged in a moderated discussion. After these conversations, the Conference broke into smaller groups of 6–8 participants each to create ‘stories of the future’: possible narratives of key trends and how they would affect Asia in the next decade. The Conference concluded with a plenary presentation and discussion of these narratives².

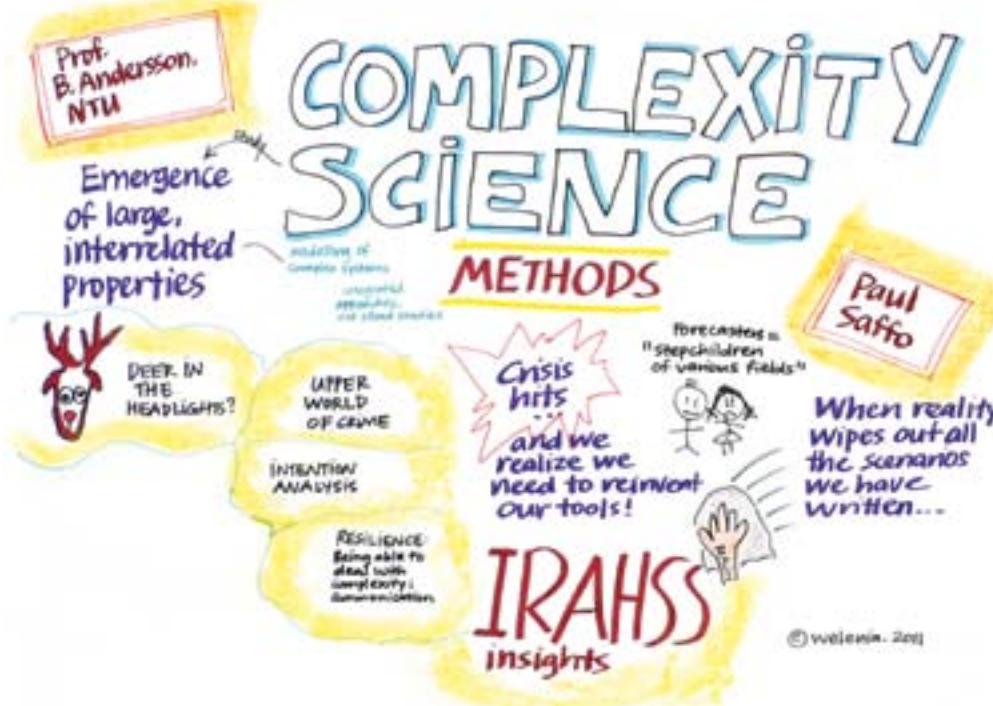
The Conference prompted a fresh look at the frames and lenses through which we perceive Asia, as well as the risks, uncertainties, challenges and opportunities Asia’s future would have for governments and global governance. These Conference Proceedings capture the key ideas discussed during the Conference.

¹ See page 25 for the list of participants

² See page 24 for the programme

CSF FORESIGHT CONFERENCE

20 - 21 Oct 2011
Raffles City Convention Centre



Plenary Session 1:

FROM GEOPOLITICS TO GEO-ECONOMICS... AND BEYOND?

“What we see is two empty chairs:
we have the institutions, but who’s going to show up?”

Participants agreed that global institutions had not adapted to the massive shifts in the underlying geopolitical structures between the developed and developing world, and between creditor and debtor states. The global vacuum in leadership might lead to a ‘G-Zero world’, or what one participant called ‘a principal-agent problem without principals’.

In such a world, new poles of power organised around common interests could emerge. Cities could grow to become more powerful, compared to national governments distracted by domestic politics or economic woes. Participants noted that the dynamic interaction between national and local governments was a complex system in itself, and it was unclear if central governments would be able to steer the directions of cities, or let nature take its course with a more decentralised approach. The increasing significance of large multi-national corporations vis-à-vis states could add another layer of complexity to this. Corporations and cities were likely to gain leverage against states going forward, blurring national boundaries and creating new challenges for governance.

With regard to China, participants noted that geopolitics and geo-economics were so closely intertwined that any distinction between the two could almost be deemed irrelevant: China’s increasing geopolitical influence was a consequence of its economic resurgence, and its (perceived or otherwise) economic might could be attributed to its geopolitical power. Trading partners could find themselves economically and politically constrained when dealing with China.



Participants felt that geo-technology was a key driving force that had been neglected in global developments. For example, social media played a significant role in incidents of social unrest such as the Arab Spring. There was also a tendency to focus on information technology, without recognising opportunities in other areas such as bio-technology and nano-technology.



Plenary Session 2:

INTERNAL PRESSURES IN UNCERTAIN EXTERNAL ENVIRONMENTS

“How will an explosion of participation take place?”

Participants noted that there was no single model in managing tensions between internal domestic pressures and global issues. For example, in the face of global economic imbalances, Asian economies managed to retain their surpluses, while Western economies went into severe deficit. Suppliers of energy resources continued to capitalise on high prices, even as others struggled to reach a collective agreement on carbon emissions.

Without a grand global bargain or an international community, participants expected that countries would band together in opportunistic alliances to address the common challenges of geopolitical tension, capital flows, ageing populations and resource insecurity. In addition, other participative units such as Oxfam, with the will to act in legitimate and functional ways, could rise in leadership alongside nation-states to set global norms.

This new global architecture could result in governments facing a ‘trilemma of governance’, in which they could be increasingly forced to make a choice between (i) staying in power; (ii) managing internal pressures; or (iii) dealing with international expectations. The challenge would be to maintain strong governance amidst the fragmenting legitimacy of nation-states.

China

With the advent of new media and a rising education level, there could be increasing tension between the political elite’s attempts to exert control and the general population’s demands for participation and transparency. This could compromise the ability of China’s political system to adapt to a possible ‘participation explosion’. Participants noted that even though China had liberalised considerably (e.g. permitting alternative types of political expression), more could still be done on democratisation (e.g. selecting top leadership beyond a small pool of elites).

Some participants questioned China’s ability to absorb and maximise the value of a diversity of views borne of increasing political participation, given the challenges of managing an ethnically diverse population. Uncertainties were also raised regarding China’s ability to manage its demographic shifts, and whether it would grow old before growing rich.

Russia

Russia's adoption of the Nigerian 'kleptocracy' model depended on its control of natural resources to obtain cooperation from other Eastern European states. Corporations could become increasingly involved in governance to guarantee access to natural resources. As these natural resources dwindled and neighbour states found alternative options, Russia would need to recalibrate its strategies to remain relevant. There were opposing views as to whether Russia had the ability to reform from within, given its shortage of human capital.



Plenary Session 3:

RESOURCE SECURITY

“It’s startling how easily materials obtained from Radioshack can be used to assemble guided weapons.”

Participants discussed how water, food and energy were inextricably interlocked in a resource nexus. The fragility of the energy sector was raised as a key example of this. Though energy production was the top industrial user of water, almost half of the oil-producing countries were experiencing high or extreme water risk. Agriculture was another sector at risk, as it was the single largest industrial user of water.

Despite the numerous nuclear plants under construction in India and China, nuclear energy would only contribute 4–5% of the energy mix in these countries. The two key limiting factors to the use of nuclear energy would be technology and a shortage of trained nuclear engineers. The few companies capable of producing safe and reliable nuclear energy relied on vast supply chains that would need to be greatly expanded to increase supply. The nuclear power plants developed in the 1960s and 1970s were also nearing the end of their usable life.

One participant noted that we were entering ‘an era of volatile transitions’. Governments were facing a crisis of indecision, inequality and insecurity on the availability of resources. There was also a concern that the securitisation or politicisation of energy issues (e.g. access to natural resources) could lead to a political conflict over the right of stakeholders to intervene.

In these times, the integration of expertise between the public and private sectors was crucial to developing new approaches to investment and innovation in resources, to ensure a good quality of life in the coming decades. However, participants suggested that there was a lack of political will to develop infrastructure to scale up alternative energy supplies in the near future.

Resource constraints could also provide powerful motivation for producing game-changers, such as:

- ▶ the horizontal proliferation of technology (e.g. guided rocket ammunition, missiles and mortars threatening security of access);
- ▶ a leapfrog in carbon-intensive methods in Asia, spurred on by new threats to the energy landscape;

- ▶ new solutions to energy storage;
- ▶ exploitation of unconventional oil and gas sources due to time-limited reliance on Middle Eastern oil; and
- ▶ transformation in governance and regulation.

These game-changers could potentially recalibrate the global power balance by enabling smaller players to more effectively challenge the influence of their richer and more established counterparts.



In Conversation:

COMPLEXITY AND THE FUTURE OF ASIA

“Governance has not kept up with complexity...
but can we really hope to scale up governance?”

The participants discussed the idea that one’s perceptions about issues were very much influenced by the lenses through which one interpreted cultures. Given the vast differences between cultures, one must be careful not to interpret Asian cultures through Western lenses, and vice versa. People living in socially atomistic Western societies might view themselves as living within an aggregation of individuals, whilst citizens of socially communitarian Asian societies might derive their identity more from their role within a community group.

Such interpretation differentials extended to other realms as well. It might be inappropriate to impose Western models of democracy on every other allegedly ‘non-democratic’ state, or assume that such states would want to adopt these models in the first place. For example, the Chinese appeared to focus more on gaining access to resources, than converting others ideologically.

There were also dangers in making generalisations about people of the same nationality, as they were unlikely to be bound by a single narrative. For example, China had adopted some Western values and institutions during the years of Western encroachment. As such, some Chinese nationals were as individualistic as some Westerners. Cultural differences between individuals within a country could also be more significant than those between representative individuals across countries.

Besides culture, participants suggested that one could look to other important variables to better understand societies. For example, government policy decisions shaped behaviours in society through the system of incentives and disincentives they created. Languages also influenced societies in the way they impacted the cognitive processes and subsequent actions of people.

Participants also discussed the idea of religion as the operating software for societies, and a fundamental aspect of human life. In addition, timeframes were seen as playing an important role in shaping countries’ approaches in dealing with problems and confronting the future. Civilisations with longer histories, such as India and China, tended to take a more patient approach towards resolving issues, whereas younger countries like the US were more intentional about setting deadlines to solve problems.

COMPLEXITY and The FUTURE OF Asia

— 20 Oct 2011, CSP Foresight Conference, Singapore

HOW DO WE
ACTUALLY MAKE
SOMETHING
HAPPEN?



We don't get a lesson until we change our behaviour.

CONQUEST
OF IDEOLOGY
BASED ON
SHEER MASS

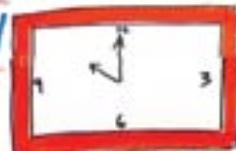
DO YOU SEE
THE TIGER
OR THE FOREST?
CULTURAL DIFFERENCES

OBLIQUITY

a very Chinese way of
doing things

Is China actually
as individualistic
as the U.S.?

The Chinese are
losing confidence
in their own
education system?



TIMEFRAME MATTERS

THE GREATER
DIFFERENCE IS
IN OUR NARRATIVES.

POWER

~Distributed Cognition, Centralized
Decision-Making~

INNOVATION COMES FROM
STARVATION PRESSURE
& PERSPECTIVE SHIFT



Biology
Genetic Diversity & Stability

matters
more than
we have believed historically...

WHAT
WE NEED
IS A NEW RELIGION!

Big to humans!

GOVERNANCE CRISIS?

ONLY AUTHORITARIAN
CULTURES CAN TRANSFORM??

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One participant identified three characteristics of complex adaptive systems: distributed cognition, disintermediation and finely granulated objects. Of these, distributed cognition would lead to better solutions in navigating complex environments as it tapped on a wide range of independent observations. Despite having a largely communitarian set-up, Asian societies did not impose constraints on the sensing capabilities of individuals. Such societies tapped on the collective wisdom of individuals, which was more effective than relying on a single source of information and leadership.

By nature, complex issues were cross-cutting and had simultaneous global effects. Participants wondered if the world was facing a crisis of governance today, as traditional governance systems tended to assume that problems could be analysed systematically and linearly, ignoring the complex interlink of issues faced in the world. Affirming the importance of drawing in new expertise to solve governance issues, participants called for the involvement of the public to find solutions to these difficult problems.

Participants also said that it was important to consider how foresight practitioners could engage decision-makers to address wicked problems. For example, shocks created by wicked problems could be prevented or mitigated if policy-makers better understood the underlying trends and driving forces. Scenario narratives could complement quantitative data in informing decision-makers of such underlying forces, but only to the extent that they were able to persuade them to undertake meaningful changes in strategy.

New Ideas in Conversation:

WHAT ARE OUR VISIONS FOR THE FUTURE OF ASIA?

“Tribes, Institutions, Markets and Networks will gain ground against traditional hierarchies.”

Everything is now priced: One participant said that governments were held hostage by financial markets, and that finance was now the tail that wagged the dog. There was a need for policy-makers to exercise greater responsibility in the regulation of financial products. Financial instability, coupled with rising living costs and inequality, could fuel social upheaval.



The power of social movements: With the right set of tools, people could tap on the power of social movements to move ahead of governments and rally around issues within a short span of time. Social media was simultaneously improving the policy-making process through the crowdsourcing of ideas to solve problems, and hindering it by creating more gridlocks. Participants also questioned when we would reach the critical tipping point, where pressures amalgamated from social media movements would alter financial norms away from the system's current excesses.

The power of networks: Social movements have accelerated the formation of networks. Referring to David Ronfeldt's TIMN framework — that Tribes, Institutions, Markets and Networks underscored the evolution and organisation of societies — participants highlighted the impact of more and stronger networks on the social compact and the set of beliefs that formed the foundation of state-society relationships. These networks could challenge the trust bond, and pose challenges to tackling governance issues such as the cost of social welfare. On the other hand, a transition towards a network-based society could also promote mutual generosity and learning between citizens.

Research on nuclear energy: Despite the potential risks in nuclear generation and nuclear waste management, research should persist as there was untapped potential in nuclear energy and we were still at a primitive level of development.

REVERSE TIMELINE AND WILDCARDS

The CSF presented a reverse timeline of changes that had occurred in the last 10 years, in order to illustrate the fast pace of change in areas such as innovation, information and the free market¹.

In response, participants suggested the following strategic surprises and wildcards that could also take place over the next 10 years:

► **A stronger European Union and USA:**

We might see renewed political success in the US and Europe instead of stagnation. However, it remained to be seen whether 'Merkopoly' could rise to the challenge to integrate fiscal and monetary policy in the EU.

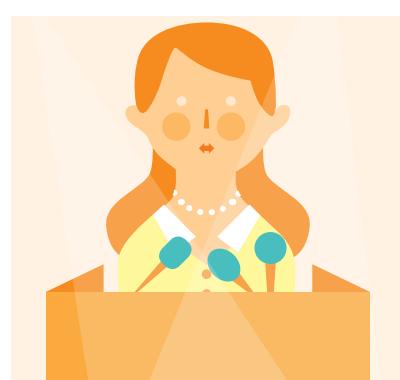


► **Risk of war:** The situation in Pakistan was unsustainable and risky, and the temptation of attacking Pakistan to gain possession of its nuclear power was great. A declining US could also be pushed to attack rising powers to reassert its superiority.

► **Rise of Indonesia:** Indonesia had done well since President Suharto's era and a stronger Indonesia could emerge to lead other emerging countries.

► **Awakening of North Korea:** The development of North Korea was also highlighted as a wildcard.

► **Rise of women:** Women could rise to assume greater global leadership in politics and the military, for example, in the next 10 years.



► **Privatisation of foreign policy:** There were already 6–8 individuals (who formed an alternate 'G8') who were spending more money on foreign relations than every other country except the US. Their aspirations might not reflect those of nation-states, and this might have implications on foreign policy.

¹ See page 22 for the reverse timeline

- ▶ **Deviant globalisation:** Citing the book *Deviant Globalization: Black Market Economy in the 21st Century*¹, globalisation could lead to the parallel development of illicit trade, which would have immense consequences on society.
 - ▶ **Rise of South America:** There could be democratic reforms in South America which would enhance its global influence.
 - ▶ **Fall-back of Africa:** Half of the world's population under 16 years would be in Africa, and there would be immense social, economic and political consequences if Africa contracted.
 - ▶ **Extreme weather:** Climate change could lead to unpredictable and extreme weather, with substantial impact on food supplies, leading to resource scarcity.
 - ▶ **Technological advancements:** These included the rise of synthetic biology, fusion-based energy, exploration of stars and developments of artificial intelligence.



REVERSE TIMELINE AND WILDCARDS

¹ Gilman, Nils, Jesse Goldhammer, and Steve Weber. 2011. *Deviant Globalization: Black Market Economy in the 21st Century*. New York: Continuum.

STORIES OF THE FUTURE OF ASIA IN 2020

The following narratives were generated by the Foresight Conference participants in their break-out groups. These are neither predictions, nor do they represent Singapore's views on likely or preferable scenarios for the future. Rather, we hope to study the ideas from these stories to identify gaps, risks and opportunities which we should prepare for.

Cooperation, Competition and Conflict

The future is a world where cooperation, competition and conflict co-exist. Brought about by the complex interaction of social media and the rise of non-state actors such as global businesses as key driving forces, traditional boundaries of nation-states are blurred. Against this backdrop, India and China develop unevenly due to tensions arising from social inequality. Underclass conflict increases, resulting in riots and the growth of organised crime in Asia and Russia. To allow a more complex society to flourish, China allows domestic politics to partially liberalise while retaining relatively strong central control. As such, it is able to maintain a coordinated approach in its external relations.

The international system becomes increasingly complex, with a greater potential for conflict amidst increasing competition and cooperation.

The US' relationship with China faces two possible extremes. In one trajectory, the US seeks pre-Bush era eminence. In response to widening trade gaps, it hardens its stance towards China, resulting in trade conflict that potentially escalates to actual conflict. In another trajectory, the US recognises the benefits of competition/cooperation (or 'co-opetition') and finds opportunities in an increasingly complex Chinese landscape.

In comparison, Europe becomes withdrawn and is no longer a major player. Concurrently, Europe suffers a reverse brain drain from immigrants who seek opportunities in China, Turkey and the Middle East. With high energy prices, shale gas gains viability as an alternative to Russian gas. In turn, 'gas diplomacy' similarly increases in complexity within Europe and elsewhere. Overall, Europe grows in tandem with Asia but is not connected to it. Among the G3, Japan is a 'wildcard' in this scenario, where Japanese citizenry openly oppose increasing Chinese influence, given prior armed conflict with China.

The impact of climate change mounts, causing widespread water scarcity. Large Chinese geo-engineering hydroelectric projects result in adverse impacts downstream on the Mekong delta, cutting the supply of water to several Southeast Asian countries and threatening their economies and livelihoods.

The Quiet Decade

'The Quiet Decade' reflects a world that has become accustomed to slow economic growth and development, in the aftermath of continued turbulent events such as massive earthquakes, global pandemics and global financial shocks. These events test societies' resilience and trigger an inflection point in governance, as people realise the limitations of existing economic and political systems in protecting their welfare and interests.



Despite stagnant or minimal growth in the 2000s, Japan emerges best from the shocks and becomes an ideological benchmark for a reassessment of people's belief systems and consumption patterns. The model of genteel, gradual decline is seen as a more humane way to live, compared to the insatiable drive for growth. A great awakening emerges, as a new wave of moderated expectations and lower consumption becomes the model to follow, where happiness becomes the overriding desired outcome.

The rapid succession of crises challenges the legitimacy of governments and international institutions. The short term is full of destructive and disruptive upheavals, such as a dysfunctional financial market and widespread social unrest in the developed world. However, in the long term, a more representative, organic social compact between the state and its citizens emerges, with social media supporting a more transparent and less complex economy.

Global Pessimism

'Global Pessimism' reflects a 2020 world dominated by short-term, exploitative self-interest. It is an aggressively zero-sum world. In the face of global challenges and complex threats, states choose to exploit the short term for their self-interests and disregard the long term.

The US remains the pre-eminent military and cultural world leader despite endemic fiscal and financial disrepair across the globe. Rather than use this influence to rally the world to solve the problems, it chooses to use its influence to serve purely American interests, such as charging for port visits by the Navy's 7th Fleet to provide protection.

With a self-serving US and the lack of global leadership, the rest of the world descends into a Hobbesian ecosystem — where the life of nations and corporations is 'nasty, brutish and short'. Nations and corporations wage trade wars over vital commodities such as food and energy, and conduct cyber attacks to manipulate online financial markets to meet short-term needs and undercut opponents.

States no longer care about the long term, and are instead prepared to ruthlessly exploit their comparative advantages.

The winners in this world are those who can provide stability and security — oligarchs, autocrats and ultra-realists. Smart autocrats will hold investors' money in a safe place and charge depositors for such a service; this would be akin to a bank charging a negative interest rate.

Panda Embrace

The 'Panda Embrace' scenario sees China embracing India, Southeast Asia and Japan, by building a network of 'new Silk Roads'. China tries to convert Asia and drives the region's economic growth and prosperity, through closer economic integration, or the decline of non-Chinese economies.

Further developments in Central Asia, Siberia and North Korea augment the Chinese sphere of influence, allowing China to dominate globally.

China grows increasingly hegemonic and outsources labour requirements to lower-wage countries such as Indonesia, resulting in greater nationalism along ethno-religious lines. However, a series of environmental disasters across the Asia-Pacific region ensues, such as volcanic eruptions in Indonesia that disrupt regional logistics supply chains, floods and typhoons that affect agricultural production and industry in Bangkok and Mumbai, and devastating earthquakes in Tokyo. China remains relatively unscathed and provides economic and humanitarian assistance to affected countries, thus overcoming nationalism and spurring further regional economic integration.

South by South West

Referring to the geographical location of India, ‘South by South West’ describes a scenario where India surpasses China and Japan to dominate the global economy.

With high English literacy rates and further technological innovation, India absorbs the demand for cheap labour from China, which yields significant benefits to India. India also harnesses hydropower from the Himalayas, resulting in serious ecological consequences. This spurs the development of thorium-based nuclear technology, allowing India to dominate the production of thorium-based nuclear generators globally. In China’s place, other East Asian countries like Japan seize the opportunity to develop their economies.

A stagnating China is eventually surpassed by India. The latter comes to dominate the global economy, as well as other East Asian economies.

What Asian Century?

‘What Asian Century?’ challenges the expectation of an ‘Asian-centric’ century, in which Asia dominates global affairs. In this scenario, the US, whose economy has never recovered from the 2007 financial crisis, is too big to ignore but also too weak to make a difference. The US fails to provide effective international governance and leadership. Scarce resources and natural disasters lead to a decline in international relations in the absence of US intervention.

Within Asia, a series of crises impede the development of Asia as a whole. India and Pakistan engage in nuclear conflict, in addition to regional border conflict. The manufacture of oil and gas infrastructure is disrupted by war between North and South Korea, as a substantial percentage of oil and gas infrastructure is currently manufactured in South Korea. This causes spikes in oil prices, weakening economies globally. Constrained by resource scarcity, China faces a decline in export-driven growth, resulting in the rise of growing internal divisions and conflicts. War in the South China Sea also breaks out. The anticipated rise of Asia fails to materialise in light of these conflicts.

THE WAY FORWARD

The Foresight Conference provided a platform for participants to discuss emerging issues related to Asia, as well as broader questions of population and resource sustainability.

Beyond the interesting stories generated and the ideas encapsulated within, the CSF will be looking more closely at the following areas of interest:

- ▶ **Governance 2.0:** The future of governance will be shaped by driving forces such as the desire for greater citizen participation, an increasing influence of non-state actors as global leaders, and the rise of mega hubs as convenors of talent and resources. The potential of crowdsourcing through social networks will also present opportunities for Governments to tap on the creativity of other stakeholders to resolve complex issues. Together, these trends will contribute to the dynamic transition from Governance 1.0 in its linear and systematic form, to Governance 2.0, which signals a rebalancing of power and responsibilities as citizens become co-creators and collaborators in resolving governance issues.
- ▶ **Reviewing the growth concept:** There is an emerging interest to explore alternative ways to achieve contentedness, as discussions on what constitutes happiness, quality of life, and ‘what else other than economic growth?’ come to the fore.
- ▶ **Integrated risk management:** In an increasingly uncertain and complex world, it is even more important to develop effective ways to signpost trends and detect emerging strategic issues to predict and mitigate the impact of crises on communities and nation-states.
- ▶ **Influencing decision-makers:** A key value of foresight work lies in being better prepared for the future through more informed public policy-making. Therefore, it is important to ensure foresight work and products are able to contribute meaningfully to the decision-making process of our leaders.

The CSF would like to thank all participants who gave so freely of their time and views and for making the Conference a memorable and successful occasion. We continue to welcome comments on the ideas presented in this report, and suggestions on the curation of the Conference.

DISCLAIMER

The views expressed in this report do not necessarily reflect the views of the CSF or the Singapore Government.

Annex 1:

REVERSE TIMELINE WHAT HAPPENS IN 10 YEARS



INNOVATION

How is technology expanding our realm of possibilities?



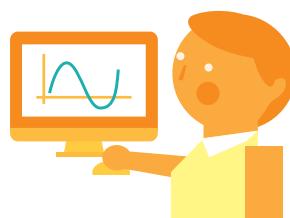
INFORMATION

To what extent has technology changed the landscape of information?



LEARNING

Have we seen the demise of formal houses of learning?





FREE MARKET

How “free” has the free market become?



NETWORKING

How has society been shaped by social networks?



POWER

To what extent have states ceded power to non-state actors?



Annex 2:

PROGRAMME FOR THE CSF FORESIGHT CONFERENCE

20–21 OCTOBER 2011

20 October 2011

- 08:30** Opening Address by Peter Ong, Head, Civil Service, Singapore
- 08:45** Remarks by Professor Bertil Andersson, President,
Nanyang Technological University
- 08:55** Setting the Context
- 09:15** Plenary Session I: *From Geopolitics to Geoeconomics ... and Beyond?*
- 10:15** Plenary Session II: *Internal Pressures in Uncertain External Environments*
- 11:15** Blackberry Break and Refreshments
- 11:45** Plenary Session III: *Resource Security*
- 12:45** Lunch
- 14:00** In Conversation: Complexity and the Future of Asia
- 15:00** New Ideas in Conversation
- 15:45** Reverse Timeline and Wildcards
- 16:15** Blackberry Break and Refreshments
- 16:45** Breakout Discussions: Telling Stories of the Future
- 18:00** Executive Time
- 19:30** Dinner hosted by Peter Ong, Head, Civil Service, Singapore

21 October 2011

- 09:00** Reflections from the Future
- 09:15** Breakout Sessions: Refining Stories of the Future
- 10:30** Stories of the Future
- 11:00** Blackberry Break and Refreshments
- 11:30** Point and Counterpoint
- 12:00** Closing Reflections
- 13:00** Reflections on Singapore's Foresight Week
- 13:30** Closing Lunch hosted by Peter Ong, Head, Civil Service, Singapore

Annex 3:

PARTICIPANTS FOR THE CSF FORESIGHT CONFERENCE

20–21 OCTOBER 2011

Isaac Ben-Israel	Professor, Tel Aviv University
Jeremy Bentham	Vice President, Global Business Environment, Royal Dutch Shell
Jocelyne Bourgon	President, Public Governance International
Ian Bremmer	President, Eurasia Group
Roger Dennis	Foresight and Innovation Consultant
Barry Desker	Dean, Rajaratnam School of International Studies, Nanyang Technological University
Ann Florini	Visiting Professor, School of Social Sciences, Singapore Management University Senior Fellow, Brookings Institution
Rosemarie Forsythe	Director, International Political Strategy, Exxon Mobil Corporation
Ian Goldin	Director, James Martin 21st Century School, Oxford
William Halal	President, TechCast LLC
Peter Ho	Senior Advisor, Centre for Strategic Futures
Parag Khanna	Senior Research Fellow, New America Foundation
Desmond Kuek	Permanent Secretary, Ministry of Environment and Water Resources, Singapore
Mean Luck Kwek	Deputy Secretary (Industry), Ministry of Trade and Industry, Singapore
Hairong Lai	Executive Director, China Center for Overseas Social and Philosophical Studies
Bernice Lee	Research Director (Energy, Environment and Resource Governance), Chatham House
Soo Hoon Lim	Permanent Secretary, Public Service Division, Singapore
Lenny Mendonca	Chairman, McKinsey Global Institute
Richard O'Neill	President, Highlands Group (<i>Chief Facilitator for the Foresight Conference</i>)
Paul Saffo	Managing Director, Discern Analytics
Peter Schwartz	Former Chairman, Global Business Network
Dave Snowden	Chief Scientific Officer, Cognitive Edge
Didier Sornette	Professor on the Chair of Entrepreneurial Risks and Director of the Financial Crisis Observatory, ETH Zurich
Oliver Sparrow	Director, Challenge! Network
Neal Stephenson	Author
Arvind Virmani	Executive Director, International Monetary Fund Affiliate Professor and Distinguished Senior Fellow, George Mason University (School of Public Policy - Center for Emerging Market Policies)
Steven Weber	Professor of Political Science, University of California, Berkeley
Linton Wells II	Director, Center for Technology and National Security Policy, National Defense University
Lionel Yeo	Deputy Secretary (Development), Public Service Division, Singapore

CSF

CENTRE FOR STRATEGIC FUTURES