



FutureScape Issue 7 – October 29th 2009 – Good Futures and Science & Technology Horizons

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Speaking in South Korea in December 2009 – A Request for Help

Rohit will be delivering a keynote speech on 'Future Outlook 2010-2020' in Seoul on December 18th 2009. While in Seoul he is interested in generating additional speaking opportunities and would also welcome introductions to interesting future focused organisations, research centres and think tanks to meet during this trip. Please email rohit@fastfuture.com with any suggestions.

Launch of Survey on Conventions 2020 – The Future of Meetings, Conventions and Exhibitions

We are running a study on the future of convention centres for the International Congress and Convention Association (ICCA). The first part of this study is a survey on what you as attendees will expect from live meetings, conventions and exhibitions in 2020. We have posed a number of scenarios regarding events in 2020 and would welcome your responses. We would really appreciate it if you would take a few minutes to complete the survey – just follow the link below.

<http://www.zoomerang.com/Survey/?p=WEB229QJ5L93BP>

We'd be grateful if you could share this link with your colleagues. Everyone who completes the survey and leaves their email address will get a copy of the final report. Fast Future will donate US\$1 to the charity The Children's Society for every respondent.

Getting the Most out of Futures Studies

An interesting by-product of the economic downturn has been a noticeable upturn in the amount of 'futures work' being undertaken around the world. Governments and business alike have become more interested in understanding what comes next, developing the capacity to 'see round corners' and establishing better early warning systems for future shocks.

However, there is also a growing sense that while more futures studies, consulting projects and workshops are being commissioned, a lot of this foresight work doesn't really have significant impact on those who commissioned it. So what's going wrong? Why did so many governments ignore the warnings of an impending financial meltdown that were appearing in the economic scenarios studies they were commissioning? Why did finance ministries miss the impact on pensions of the research being commissioned elsewhere in government to improve human health and extend lifespans? Why do universities' future strategies take little account of the research being performed by their own faculty on personalised and accelerated learning, cognition enhancing drugs and electronic memory enhancement? Why do companies continue to miss the transformative impact of open innovation, crowdsourcing and social media?

One reason is that although we might talk about 2015, 2020 or 2030 in the title of a study, in practice we tend to play down the elements that are most radically different to the present. This is particularly true when it comes to discussing the impact of advances in science and technology, transformational changes in governance structures, new business models and radical shifts in societal values and beliefs. This becomes a circular problem – we rule out that which will be different and so rule out the biggest imperatives to change.

In practice, many of the intended 'clients' of a study don't necessarily want to consider radical future changes, or they may not see how the longer term insights can help address the immediate challenges they are facing. Hence, this pressure to 'be practical' forces the researchers to play down anything that challenges the status quo and focus instead on discussing the most immediate issues. As a result, there

can be a big 'so what' element to the final output with the end customer then feeling like they haven't learned anything new!

Furthermore, many of the issues we face today are the results of short termist thinking and ignoring key longer term trends and developments. Long term thinking can only help tackle immediate issues if we start by establishing a real sense of what's coming over the horizon, creating a forward looking perspective on what we want to achieve and then tackle the short term issues as a stepping stone to achieving those longer term ambitions.

For example, we have seen organisations struggling with the new product development process – success rates are declining, market response to new products is poor, development times are increasing and costs are rising. Their first attempts at Open Innovation are half hearted and lack conviction – as a result they fail. It is only when they fully embrace the futures science and technology development timeline and social media trends that they realise that an open, networked and listening approach will be critical to future survival. Open innovation is then seen as a vital first experimental step in developing a more open culture and business model and the level of support and internal conviction rises significantly.

Good futures research is at its most effective when it is used to help make better decisions today about the preferred future(s) we are pursuing. It can help us ensure that when we write strategies and set goals for 2015, 2020 or 2030 they are informed by insights into the world we are likely to inhabit – rather than simply projecting the current situation into the future. By creating a clearer sense of our longer term vision and strategic direction we create a baseline against which to test our short term decisions to ensure they are taking us towards rather than away from our preferred future. Without the willingness to start with this longer term perspective, foresight methods may not be the right approach to tackling more immediate issues. Hence, it becomes ever more critical to be clear on the purpose of any futures exercise from the outset, to identify the key questions we want to answer and the timescales we are willing to consider.

Fast Future's Top 50 Forecasts for the Global Economy in 2010 – Part 2 – Emerging Topics in Science and Technology

In the last issue we highlighted the first ten of our top 50 forecasts for 2010. In this issue we highlight ten areas of science and technology that we think will gain increasing prominence and media coverage in 2010 – even if the science itself may take decades to develop.

1. ***The Rise of Citizen Science*** – Public participation in scientific research will become increasingly popular. Amateurs will see and seek out greater opportunity to gather data, participate in collaborative studies run by both professionals and amateurs and lend their computers to large scale 'grid computing' efforts such as SETI (the Search for Extraterrestrial Intelligence).
2. ***NBIC-convergence***: The convergence of the domains of nanotechnology, biotechnology, information technologies and cognitive science offers the potential for truly transformational scientific breakthroughs in fields as diverse as brain science, energy, environmental protection and food production.

3. **Synthetic Biology:** Synthetic biology involves designing and building basic biological building blocks that can perform functions as diverse as cleaning up toxic waste, growing electronic circuits, and producing artificial drugs food and fuels.
4. **Personalized Medicine:** Commercial services are already available that can read and map the bulk of an individual's genome for less than \$10,000 in a matter of days. Advances could see the price fall to around \$100 to sequence our entire genome in eight hours or less. This would enable medical treatments to be tailored to our unique genetic profile.
5. **Novel Energy Sources** – As the level of government and private venture capital funding for green technology increases, so the range of candidate technologies will grow. Expect to see regular coverage of 'breakthrough concepts' as diverse as energy producing kites, liquid and printable batteries and a variety of initiatives attempting to capture energy from human motion.
6. **Food Production Methods** – A variety of approaches will be discussed for closing the gap between production and demand. Expect to see Genetic Modification back under the spotlight along with concepts such as vertical farming, salt water farming, precision farming using satellites to optimise seeding and harvesting and artificially reared meat.
7. **3D Printing / Personal Fabricators** – Three dimensional printing techniques have been used for some time in manufacturing to create 3D items by bonding particles together layer by layer. As the costs and footprint of 3D printers come down, so the potential emerges for 'print on demand' fabricators to be deployed on the high street – enabling stores to offer a far wider range of products while reducing the physical stock holding. The ultimate would be the personal fabricator which sits at home next to the washing machine and which enables us to print items (for example a plate) locally – using 'recipes' we have purchased and our own designs.
8. **Ambient Intelligence** – The expectation is that everyday objects from wallpaper to carpets, furniture and our clothing will all have embedded intelligence and an IP (Internet Protocol) address so that our environments can interact with and adapt to us. For example, picture the scene, we are having a stressful phone conversation, our mobile phone picks this up and responds. It communicates to our clothes to increase the air circulation around our body, requests the wallpaper to display a brighter tone and instructs the photo frame to display a happy or uplifting image. While all of these may sound far fetched, each development is already being worked on in the labs and ambient intelligence is seen as the glue to help link these developments together and shape the environment to the needs of the individual.
9. **Self Replicating Artificial Intelligence (AI)** – Real world applications of AI surround us – from satellite navigation to aircraft autopilots and washing machine control systems. The next generation of AI programs to emerge from the labs will demonstrate ever greater capacity to learn, adapt to their surroundings and even replicate themselves.
10. **The Singularity** – The basic concept was popularised by futurist Ray Kurzweil. He argues that we can expect the continued application of Moore's law – the doubling of computer power every 12-18 months – for many decades. Moore's law coupled to advances in AI will lead to a point around 30-40 years from now when devices will have so much computing power that machine intelligence will exceed human intelligence. A film on this concept is scheduled for release at the end of 2009 and will lead to widespread debate on the issue.

Fast Future's Top 10 Forecasts for Global Travel in 2010

As part of our work on the future of the travel industry, we have identified the following as being important developments on the industry horizon for 2020.

1. ***Air Today, Gone Tomorrow.*** As airlines continue to struggle, airports will be under intense pressure to diversify their business models and ensure they can survive under even the worst case economic scenarios. The airlines globally will lose \$8-10Bn in 2009. In addition the pattern of airline closure continues - airline update.com lists 90 airline failures and 7 mergers for 2008 and a further 31 failures and 6 mergers to date for 2009. We can expect 30-40 more failures and further mergers by the end of 2010. This will result in further reductions in schedules and flight frequencies - particularly for routes in Europe and the US. This could lead to airports having to close and will create major challenges for some destinations in attracting sufficient travellers.
2. ***Staycationing.*** Nervous consumers in western economies in particular will continue to exercise caution in their spending decisions for fear of a 'double dip recession'. The middle classes will stay at home in large numbers and vacation in their own country.
3. ***Asia Asia.*** The speed with which Asian economies are recovering from the downturn is highlighting their increasing power and importance. This will see a significant rise in business tourism as foreign firms tour the region in search of partners and opportunities.
4. ***Rail Reborn.*** The arrival of more high speed trains in Europe and environmental considerations will see a significant rise in people taking vacations by rail.
5. ***Cruise it or Lose it.*** A massive recent increase in capacity coupled with sluggish demand will result in continued bargains for cruise passengers - particularly in the US.
6. ***Mind the Gap.*** Rising numbers of people of every age group will choose to take a year, half-year or quarter off to do extended travel - possibly combining working opportunities and volunteer work on their travels.
7. ***Agent Seeks Model for Profitable Relationship.*** The desperation to find a viable travel agency business model will intensify. As airline commissions continue their inevitable slide to zero, agents will find themselves squeezed as they struggle to compete with internet travel booking services for straightforward transactions like airline ticketing. Only those who can provide a truly fantastic service will be able to charge their customers a fee for the value added. Otherwise they will have to choose between turning the customer away or doing the airline booking for free in the hope of building customer loyalty and then charging the customer fees for other more complex bookings in the future.
8. ***We love Grandma.*** Stresses in the workplace and concerns over job security will see increasing numbers of parents chose to stay at home and work while their children take vacations with their grandparents.
9. ***Ethnocations.*** The quest for authenticity means people will increasingly seek out the opportunity to visit and live with tribal people in their indigenous habitats.
10. ***The World in Your Hand.*** 2010 will be the year when we see an explosion of take up in the travel applications that are emerging for smartphones such as the Apple iPhone. You'll be able to get background information on every cultural site you visit, see animations or videos of how people used to live in ruined cities such as Pompeii, check out what every seat looks like on a particular plane before making

your choice, swap your home for a vacation and receive instant personalised offers as you walk past particular shops in a tourist destination.

Rohit on the Road

In the coming weeks, Rohit will be delivering keynote speeches on foresight driven innovation, winning in a downturn, the future of the global economy, drivers of change, outlook 2020 and a number of industry focused themes. He is currently scheduled to be in London, Cologne, Berlin, Florence, Nice, Dublin, Brussels, Seoul, Taipei, Jeddah and Florida. If you would like to meet with him or organise a speech for your organisation while he is in your city, please contact rohit@fastfuture.com

About Fast Future

Fast Future is a research and consulting firm which focuses on helping clients anticipate and develop innovative responses to the forces, patterns of change and ideas shaping the future. To discuss your needs for research, consulting, a speech or workshop, contact rohit@fastfuture.com or call +44 (0)20 8830 0766

Forthcoming Dates for your Diary

(R – Indicates Rohit is speaking at or chairing the event).

November 5th - 6th (R), Courage! – 7th Annual European Food Service Network CEO Conference, Cologne, Germany.

November 7th – 11th (R) – International Congress and Convention Association (ICCA) Annual Event, Florence

November 16th – 19th (R) - Global Airport Development Conference - Berlin

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