

## **Butcher, baker, body part maker – futurists vote on tomorrow's jobs**

### **Launch of new Fast Future Foresight Study on ‘*The shape of jobs to come*’**

Space pilots, vertical farmers and body part makers are just some of the jobs our kids could be doing in 20 years time.

Commissioned by the [Science: \[So what? So everything\]](#) campaign, expert future researchers from Fast Future analysed future trends, such as population growth and climate change, alongside developments in science and technology, to create a list of 20 potential jobs of the future.

The study paints an exciting picture of the jobs we could be doing by 2030:

- The digital revolution will continue to accelerate, ushering in the need for virtual lawyers, virtual clutter organisers, waste data handlers and personal branders
- Safeguarding the environment will be more prominent than ever, with climate change reversal specialists, vertical farmers and weather modification police all attempting to deal with the impact of climate change and population growth
- Old age wellness managers, memory augmentation surgeons and body part makers will be needed to cope with an ageing society, enhancing the quality of life for a population where life expectancies could reach over 100
- Breakthroughs in space travel will lead to people swapping the office for the final frontier as space pilots, space architects and space tour guides

Of the top 20 future jobs highlighted, a global survey of future thinkers revealed:

- Brits are keen to ‘boldly go’, with space jobs the most aspirational, alongside nano-medics and memory augmentation surgeons
- Cars, crops and older people could be the focus for many in tomorrow’s workforce, with old age wellness managers, vertical farmers and alternative vehicle developers creating the most jobs
- For those looking to make the big bucks, nano-medicine, memory augmentation surgery and virtual law are the areas you should be telling your kids about, with the Fast Future panel predicting that these will be the best paid jobs in 2030
- Future jobs that benefit society will be most popular, with climate change reversal specialist, social ‘networking’ worker and old age wellness manager topping the poll in the popularity stakes
- Work won’t all be ‘fun’ in the future with the least exciting jobs being weather modification police, to protect us from ‘cloud theft’; quarantine enforcers preventing the spread of diseases and waste data handlers who will dispose of our electronic mess

The Prime Minister Gordon Brown said:

“A priority for this Government is to prepare Britain for the economy of the future and to make sure our young people can seize the opportunities that innovations in science and technology will bring. The *shape of jobs to come* shows what might be on offer for the next generation. I hope it will inspire young people to gain the skills and training they will need to succeed.”

Science and Innovation Minister, Lord Drayson said:

“These jobs are no longer the stuff of dreams. Today's schoolchildren could become our first generation of scientists to build a flying car or help reverse climate change! Science is moving at an incredible pace. My message to them is be part of it!”

Fast Future CEO, Rohit Talwar, who conducted the study said:

“The list of future jobs highlights the vast array of exciting things today's school children could be doing in 20 years time, all made possible by fields of science and innovation in which Britain has real expertise. We're crossing the boundaries between science fiction and reality, and what we're seeing in the movies are becoming genuine career opportunities. Alongside futuristic sounding high tech jobs at the cutting edge of scientific fields like nano-medicine, the jobs of the future also include very 'high touch' occupations such as old age wellness managers, narrowcasters and personal branders. Although these are made possible by science they won't necessarily require a high level of scientific expertise in themselves. You can find out more about people already doing some of these jobs on the Science: [So what? So everything] website by logging-on to [www.direct.gov.uk/sciencesowhat](http://www.direct.gov.uk/sciencesowhat).”

Stephen Fry, supporter of the [Science: \[So what? So everything\]](#) campaign said:

“This is a fascinating list of jobs. I'd go for the nano-medic first up – that's exciting, really exciting. To be a pioneer, in the van of a new technology, and one that might deliver spectacular help and improvements to the world – yes please! After that I'd like to be an avatar manager – this will happen and we shouldn't be frightened by the idea, which could make huge strides in education.”

Kate Bellingham, ambassador of Science: [So what? So everything] and the Government's STEM (science, technology, engineering and maths) careers champion says:

“Last year, the new careers information, advice and guidance strategy stated that 'the top 10 jobs that exist in 2010 did not exist in 2004.' This Science: [So what? So everything] study reminds us

how jobs in the future will change even more. It is very hard to prepare for such a transformation, but it is clear that education and training in STEM subjects keeps your options open, and can lead to a wide range of fascinating and important roles, solving the problems of our time and helping to shape our future.”

The [Science: \[So what? So everything\]](#) campaign commissioned Fast Future to conduct *The shape of jobs to come* study to show how science is shaping the nation’s future jobs. The campaign aims to help people understand the impact that science has on their everyday lives, and the wealth of exciting job opportunities available in the fields of science and technology. To find out more about the jobs of the future, and to find out how you might be able work in one of these areas, visit [www.direct.gov.uk/sciencesowhat](http://www.direct.gov.uk/sciencesowhat).

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### **Notes to editors**

For more information on the study please go to [www.fastfuture.com](http://www.fastfuture.com) or contact Rohit Talwar on +44 (0)20 8830 0766 or email [rohit@fastfuture.com](mailto:rohit@fastfuture.com).

### **Case studies**

We have a range of people available for interview, all working in jobs that will become these jobs of the future. To talk to a space architect, a scientist working in human tissue growth, an expert in waste data handling or an alternative vehicle developer, please call the Science: [So what? So everything] team on 020 7612 8800 or email [science@kindredagency.com](mailto:science@kindredagency.com).

### **The shape of jobs to come list of 20 jobs**

1. **Body part maker** Advances in science will make the creation of body parts possible, requiring body part makers, body part stores and body part repair shops.
2. **Nano-medic** Advances in nanotechnology offer the potential for a range of sub-atomic 'nanoscale' devices, inserts and procedures that could transform personal healthcare. A new range of nano-medicine specialists will be required to administer these treatments.
3. **'Pharmer'armer of genetically engineered crops and livestock** New-age farmers could be raising crops and livestock that have been genetically engineered to improve yields and produce

therapeutic proteins. Possibilities include a vaccine-carrying tomato and therapeutic milk from cows, sheep and goats.

4. **Old age wellness manager/consultant** Specialists will draw on a range of medical, pharmaceutical, prosthetic, psychiatric, natural and fitness solutions to help manage the various health and personal needs of the ageing population.
5. **Memory augmentation surgeon** Surgeons will add extra memory capacity to people who want to increase their memory capacity. They will also help those who have been over-exposed to information in the course of their life and simply can no longer take on any more information thus leading to sensory shutdown.
6. **'New science' ethicist** As scientific advances accelerate in new and emerging fields such as cloning, proteomics and nanotechnology, a new breed of ethicist may be required, who understands a range of underlying scientific fields and helps society make consistent choices about what developments to allow. Much of science will not be a question of can we, but should we.
7. **Space pilots, tour guides and architects** With Virgin Galactic and others pioneering space tourism, space trained pilots and tour guides will be needed, as well as designers to enable the habitation of space and other planets. Current projects at SICSA (University of Houston) include a greenhouse on Mars, lunar outposts and space exploration vehicles.
8. **Vertical farmers** There is growing interest in the concept of city-based vertical farms, with hydroponically-fed food being grown in multi-storey buildings. These offer the potential to dramatically increase farm yield and reduce environmental degradation. The managers of such entities will require expertise in a range of scientific disciplines, as well as engineering and commerce.
9. **Climate change reversal specialist** As the threats and impacts of climate change increase, a new breed of engineer-scientists will be required to help reduce or reverse the effects of climate change on particular locations. They will need to apply multi-disciplinary solutions ranging from filling the oceans with iron filings, to erecting giant umbrellas that deflect the sun's rays.
10. **Quarantine enforcer** If a deadly virus starts spreading rapidly, few countries, and few people, will be prepared. Nurses will be in short supply. Moreover, as mortality rates rise, and neighbourhoods are shut down, someone will have to guard the gates.
11. **Weather modification police** The act of seeding clouds to create rain is already happening in some parts of the world, and is altering weather patterns thousands of miles away. Weather modification police will need to control and monitor who is allowed to shoot rockets containing silver iodine into the air - a way to provoke rainfall from passing clouds.

12. **Virtual lawyer** As more and more of our daily life goes online, specialists will be required to resolve legal disputes which could involve citizens resident in different legal jurisdictions.
13. **Avatar manager / Devotees** Virtual teacher Avatars could be used to support or even replace teachers in the elementary classroom, for instance, as computer personas that serve as personal interactive guides. The Devotee is the human that makes sure that the Avatar and the student are properly matched and engaged, etc.
14. **Alternative vehicle developers** Designers and builders will create the next generation of vehicle transport using alternative materials and fuels. Could the dream of underwater and flying cars become a reality within the next two decades?
15. **Narrowcasters** As broadcasting media becomes increasingly personalised, roles will emerge for specialists working with content providers and advertisers to create content tailored to individual needs. While mass market customisation solutions may be automated, premium rate narrowcasting could be performed by humans.
16. **Waste data handler** Specialists will provide a secure data disposal service for those who do not want to be tracked, electronically or otherwise.
17. **Virtual clutter organiser** Specialists will help us organise our electronic lives. Clutter management would include effective handling of email, ensuring orderly storage of data, management of electronic IDs and rationalising the applications we use.
18. **Time broker / Time bank trader** Alternative currencies will evolve their own markets – for example time banking already exists.
19. **Social 'networking' worker** Social workers will help those in some way traumatised or marginalised by social networking.
20. **Personal branders** An extension of the role played by executive coaches giving advice on how to create a personal 'brand' using social and other media. What personality are you projecting via your blog, Twitter, etc? What personal values do you want to build into your image - and is your image consistent with your real life persona and your goals?

### **Contact details**

For more information on the study please go to [www.fastfuture.com](http://www.fastfuture.com) or contact Rohit Talwar on +44 (0)20 8830 0766 or email [rohit@fastfuture.com](mailto:rohit@fastfuture.com).

For case studies of UK organisations helping realise the technologies and innovations of the future

please contact Lucy Dormandy on 020 7612 8840 or Jessica Green 020 7612 8844 or email [science@kindredagency.com](mailto:science@kindredagency.com)

### **Further details on campaign and *The shape of jobs to come* study**

1. The Science [So what? So everything] campaign was launched by the Department of Innovation, Universities and Skills, DIUS, (now the Department of Business, Innovation and Skills, BIS) and the scientific community in January 2009. It aims to create a more science literate society and highlight the science behind people's everyday lives.
2. *The shape of jobs to come* study was commissioned by the Science: [So what? So everything] campaign and carried out by futurist research company, Fast Future.
3. In order to identify the jobs, Fast Future undertook a 'horizon scanning' exercise drawing on a wide range of existing sources on future global trends to identify a sample of key science and technology trends and developments that could occur over the next 20 years. The horizon scan enabled Fast Future to identify a number of economic, political, socio-demographic, and environmental and science/technology features of what might be considered the 'central' or expected scenario in 2030. Based on the trends identified in each of these arenas, Fast Future identified and profiled a sample selection both of the kinds of 'jobs that don't exist yet' and of current jobs that could become more prominent. From this list of future jobs, 20 were selected and profiled in more detail. These profiles formed the basis of an online survey, involving a large number of future researchers as contributors, focusing on the popularity, job impact, environmental impact, educational benefits, developing country benefits, financial rewards and attractiveness of the 20 jobs. The survey attracted 486 responses from 58 countries on six continents – including 104 from the UK – representing 21% of the total sample.

### **Fast Future Research**

Fast Future Research is a global futures research and consulting firm that specialises in helping clients understand, anticipate and respond to the trends, forces and ideas shaping the future. Key areas of expertise include horizon scanning, future timelining, scenario planning and development of future strategy. Fast Future is led by Rohit Talwar – a global futurist, award winning speaker and author of *Designing your Future – Key Trends, Challenges and Choices*. Fast Future works with government agencies, intergovernmental organisations, global corporations and associations in over 40 countries around the world. Key clients include British Aerospace, GSK, IBM, Intel, Nokia, Pepsi, Shell, the OECD and government departments and agencies in the UK, USA, Finland, Singapore, UAE, Saudi Arabia and Nigeria. [www.fastfuture.com](http://www.fastfuture.com)