

# S'pore's future is in intellectual capitalism

**It is set to ride the next technology wave but lacks originality: physicist**

By **CHEN HUIFEN**

SMART toilets that monitor your health through the waste substances from your body. Mass customisation of the clothes that you wear. A super rice strain that can be grown in any environment. These scenarios are not that far off in the future envisioned by renowned physicist and author Michio Kaku.

Using such examples to illustrate that the future belongs to what he calls "intellectual capitalism", he said that Singapore "has got it right" by investing in its people.

"Intellectual capitalism does not mean Bill Gates," explained Dr Kaku. "Intel-

lectual capitalism means movies, writing books, telling a joke, drawing a picture, things that robots cannot do. Common sense, basically."

Through building a strong foundation in education, he foresees that Singapore will be able to benefit in the transition from commodity capitalism - underlined by food produce and natural resources - to intellectual capitalism. Already, its students regularly beat Americans in mathematics and science. And the republic is looking at emerging technologies - nanotechnology, biotechnology, artificial intelligence - which he predicts will be key to the future economy.

"These are the technologies of the future that will energise the job market," he said.

Dr Kaku made those comments during a media

briefing that followed his keynote address at the newly opened Fusionopolis yesterday morning. The guest speaker, who is also a professor of physics at City College New York, painted a future world driven by solar-hydrogen energy, in which objects can be moved by sheer thought; cars be driven by machines; and colonoscopy replaced by a camera in a pill.

While Singapore stands in good stead to ride the next technology wave, it lacks originality. If it wants to compete on the same level as the US, it will need to breed a pool of people who are highly imaginative and nourish them, he said.

He also gave the audience an idea of the employment landscape. Jobs of the future will be those that require common sense and analysis. These include leaders, scientists, artists,

writers and any occupation where unique situations or encounters are prevalent.

Contrary to what many had thought, robots will not take away jobs from people because they do not have common sense and are lacking in pattern recognition.

"Everybody says garbage men are going to be out of jobs very soon - robots will be collecting garbage," he said. "Wrong. Our most advanced robots cannot recognise garbage. Every piece of garbage is different. How do you recognise it?"

On the flip side, jobs that are repetitive will be on the losing end as they can be replaced by machines. The Internet may also make low-level brokers and middlemen redundant if they cannot value add.

For businesses to survive, Dr Kaku said that the "trick is not to be first" so



**Dr Kaku:** Singapore needs to breed a pool of highly imaginative people

that they can avoid making all the major mistakes, "but not to be last".

For instance, solar power has been touted to be next generation energy source for decades, but did not seem plausible until recent years when prices of solar cells started falling. Yet if investors only start looking at it 10 years from now, it would have been too late for them to ride the wave.

"The trick is to come in after the first," he added. "That's the whole trick. How do you do that? By knowing what the science is."