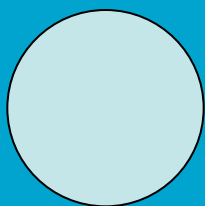
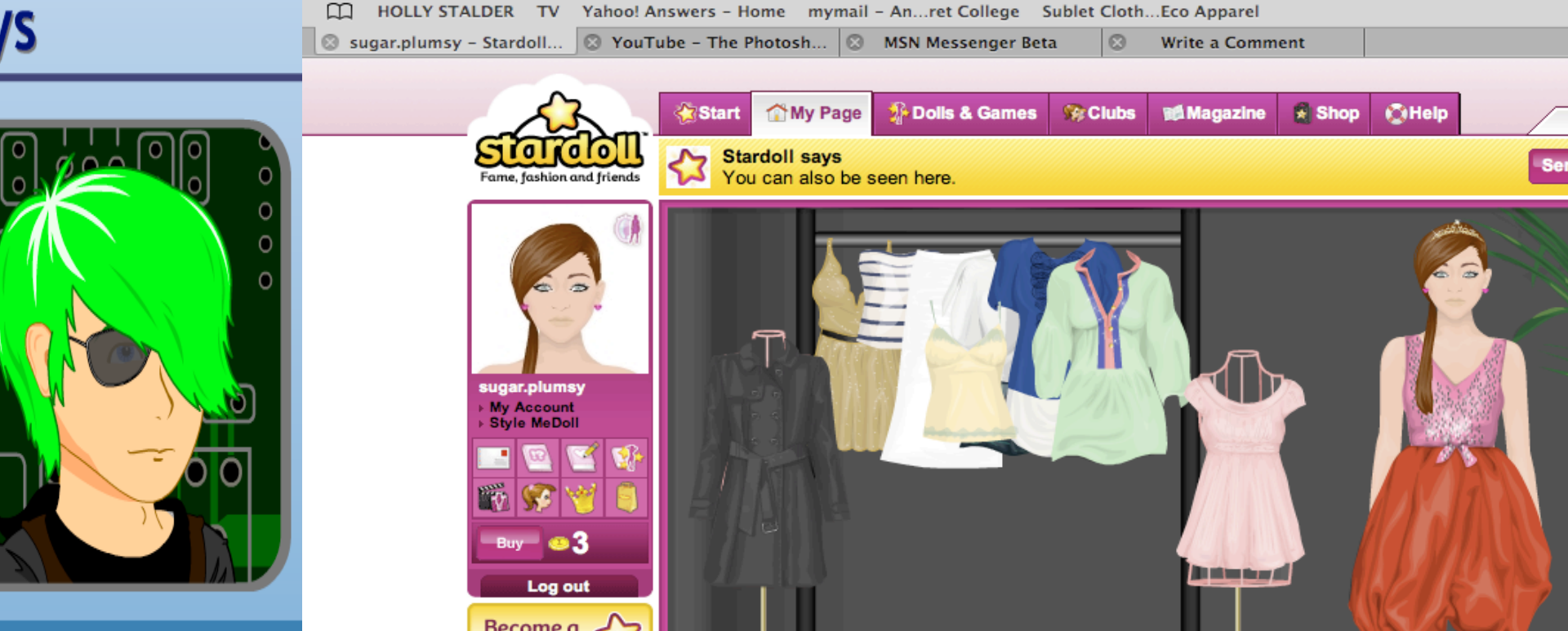


**The
Second Bounce
of the
Ball ●**

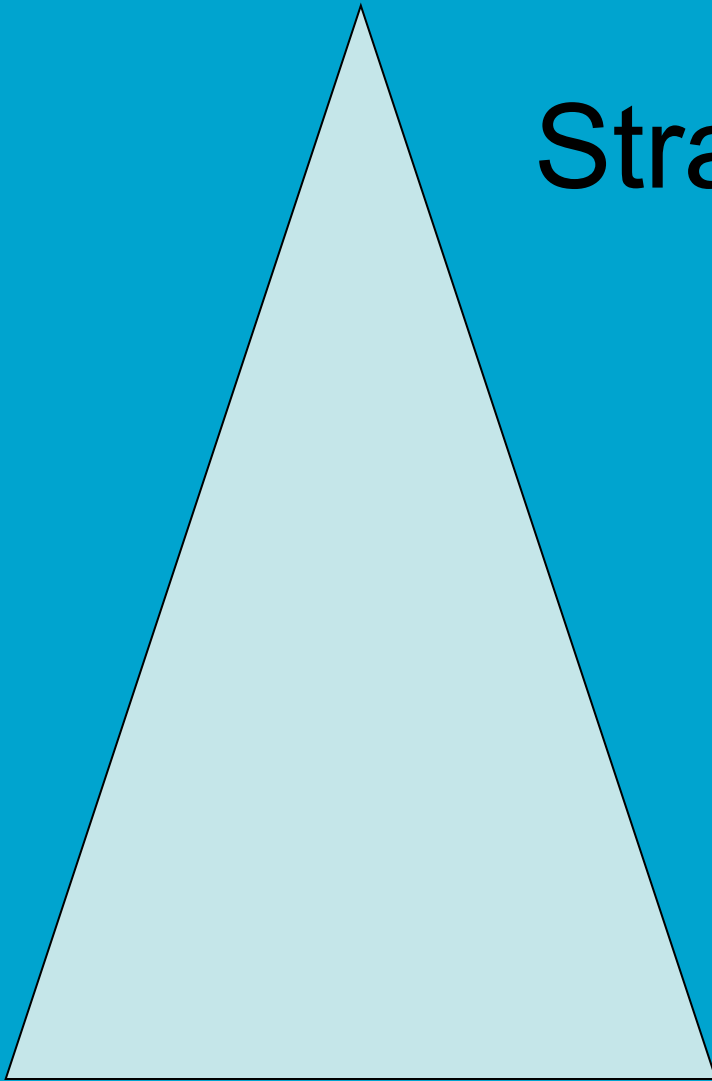
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An avatar is a computer user's representation of himself/herself or alter ego.

Virtual reality (VR) is a technology which allows a user to interact with a computer-simulated environment, be it a real or imagined one.



Strategic Knowledge



Information



Data

Large Numbers

a thousand 10^3

a million 10^6

a billion 10^9

a trillion 10^{12}

a quadrillion 10^{15}

in a pinch

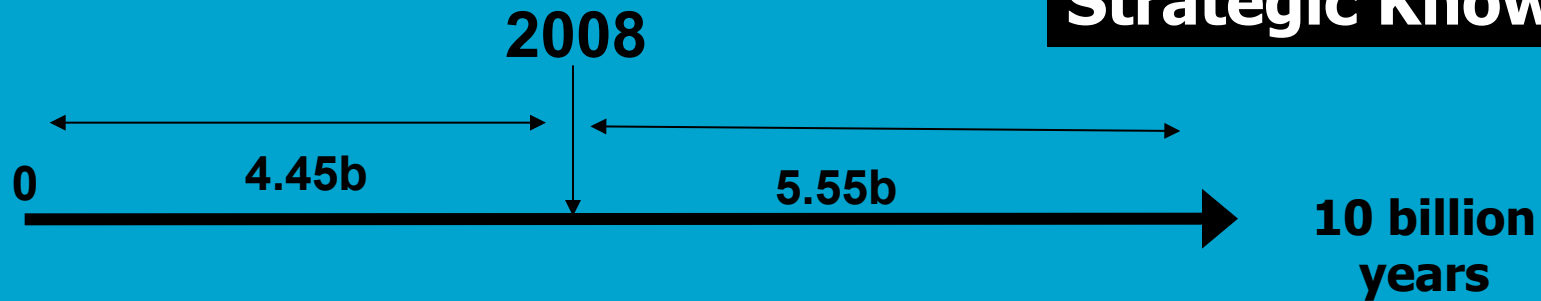
in a cup

in a bathtub

in a classroom

in a 100 floor office block

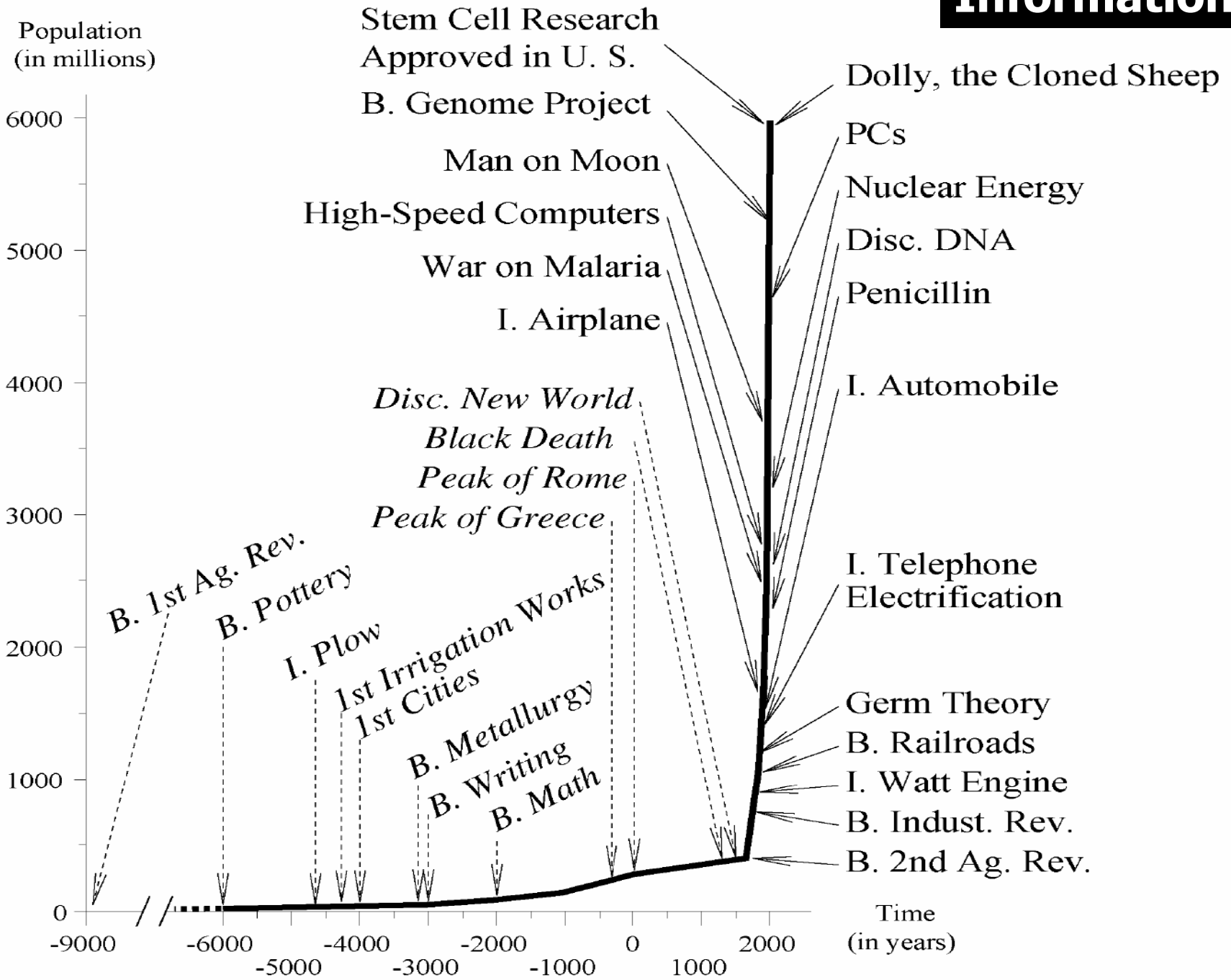




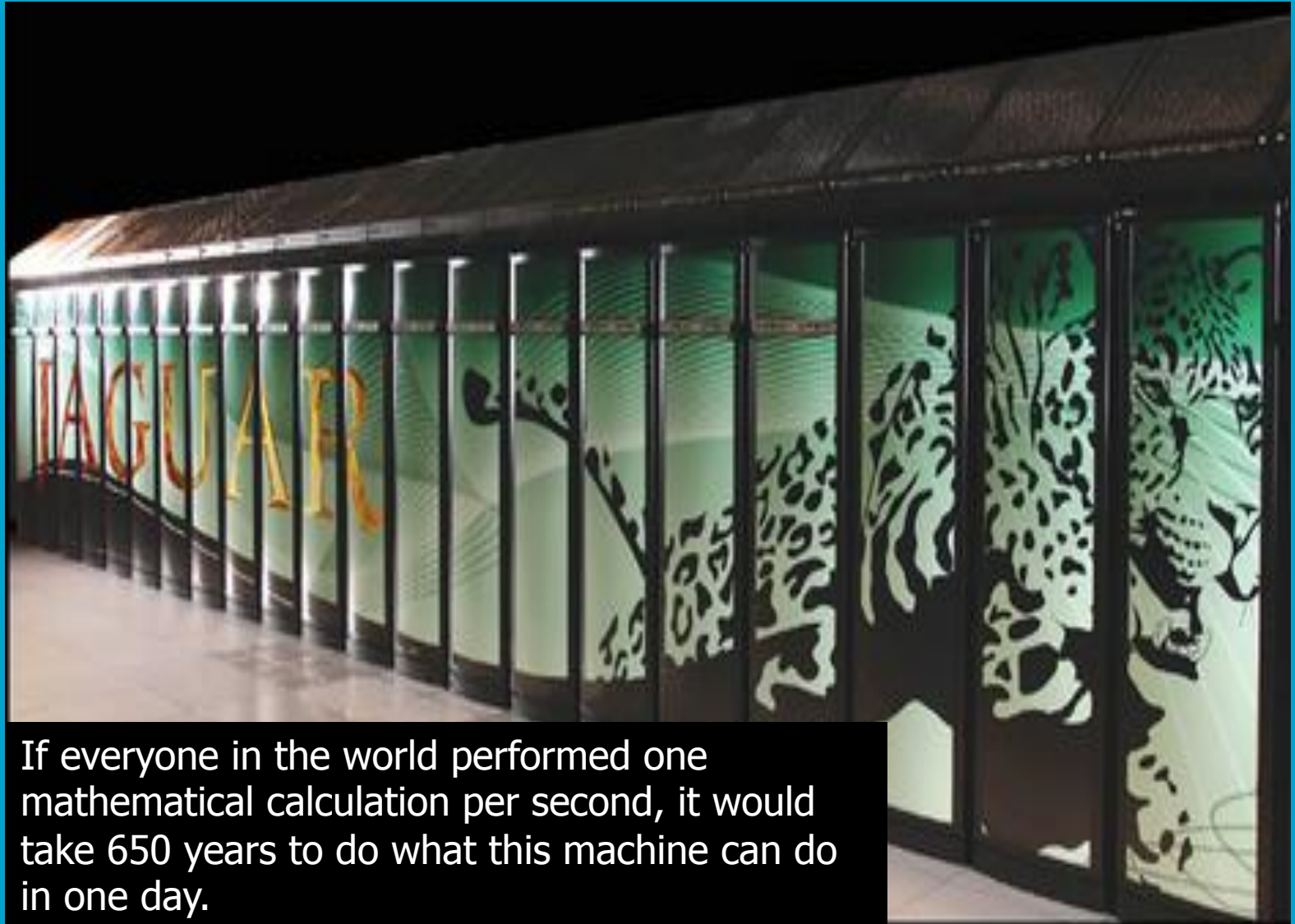
Two million years ago, evolution tells us...

Habilis – the archetypal jack-of-all-trades, inquisitive scavengers prepared to try almost anything to survive. They were tough, active, gregarious and noisy, always on the move and always alert to the possibility of a ... meal.

Boisei – specialised in only one niche, lived within a strict social structure and were led by a dominant male whose strength and power held the group together.



The US Department of Energy's Oak Ridge National Laboratory Computer can crunch a 'quadrillion' calculations per second



If everyone in the world performed one mathematical calculation per second, it would take 650 years to do what this machine can do in one day.



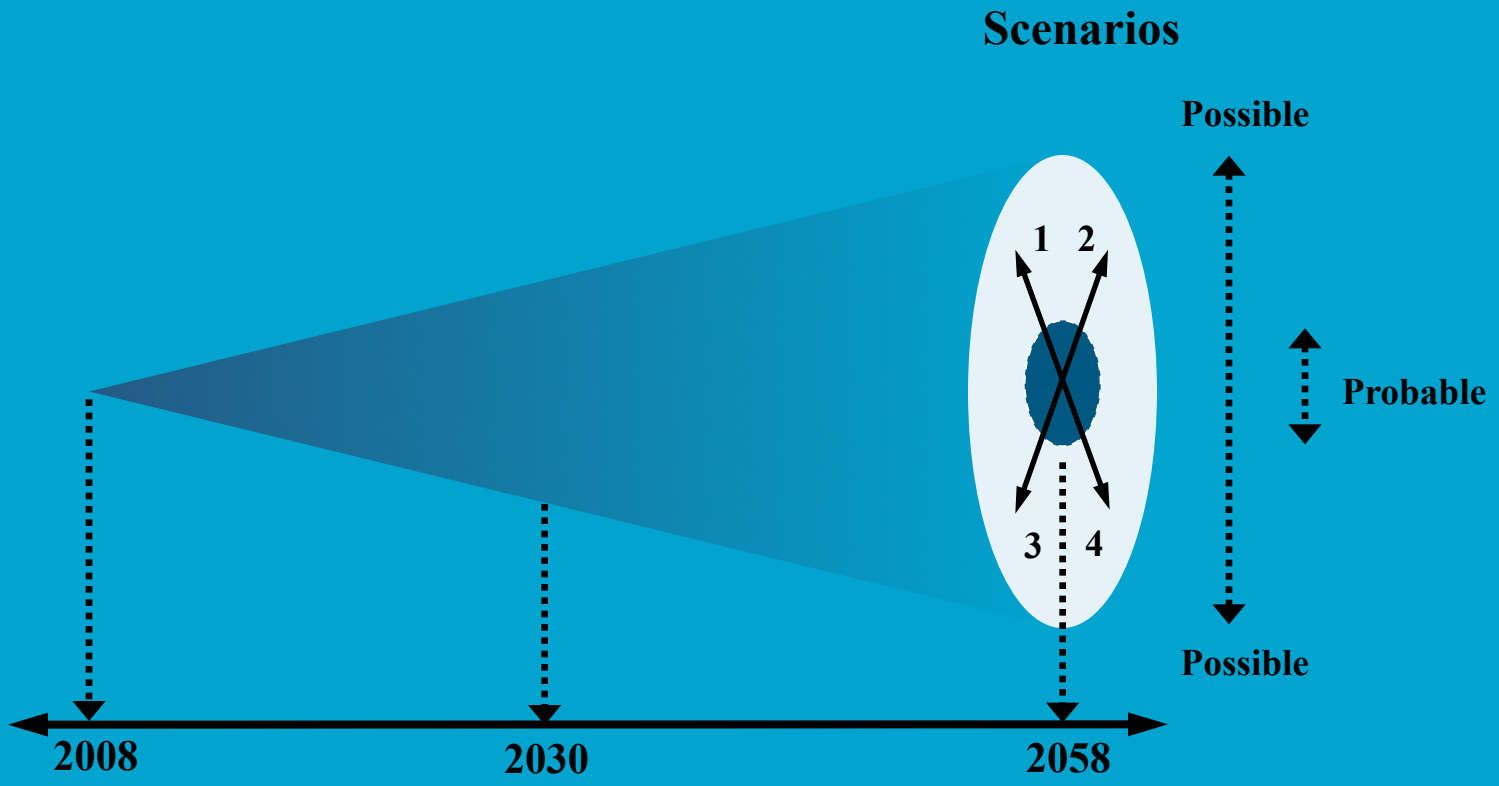
Man & Machine?

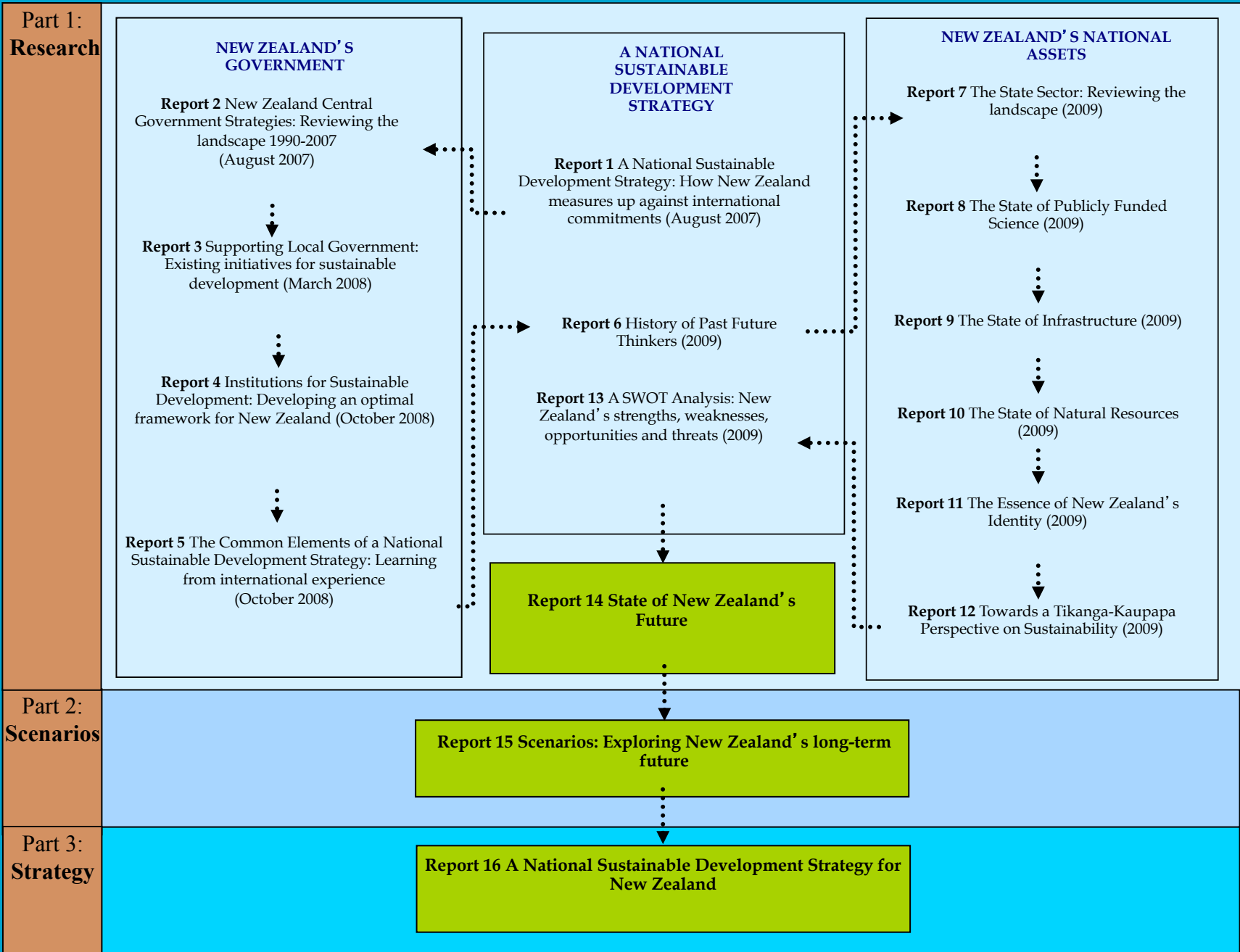
Man is expected to create a machine with the equivalent of a human brain by 2029...

Futures Studies

- 1. Probable futures:** forecasting and sometimes prediction
- 2. Possible futures:** scenarios, risks (Explorative)
- 3. Preferred futures:** strategies and agendas for change, propelled by innovation and leadership (Visionary)
- 4. Present trends:** indicators, broad macro-changes
- 5. Panoramic views:** systems thinking, integral futures, and 'big picture' attempts
- 6. Questioning:** the necessary questioning and critiquing of all of the above, all of the time.

Project 2058





Change Agents

1. Climate
2. Demographics
3. Ecosystems
4. Land, Food & Water
5. Energy Production
6. Values & Beliefs
7. Justice & Freedom

Response to Change Agents

1. Management of Ecosystems & Resources
2. Infrastructure
3. Security & Terrorism
4. Technology
5. Governance & Institutions
6. Economics
7. Information & Ideas

Wild Cards

Given the

- **increase in population**
- **increase in consumption per capita**
- **climate change &**
- **the existence of wildcards**

Wild Card 1

Technology

- **Info**
- **Nano**
- **Bio**

Wild Card 2

Terrorism & War

- **Crime**
- **War**
- **Nuclear War**

Wild Card 3

Health & Safety

Antibiotic R.

- **Pandemic**
- **Food**
- **Water**



What are the implications for New Zealand?

Crime is now global

- **\$1 trillion pa Illicit Trade**
- **150 unauthorised use of nuclear or radioactive materials in the last 4 years**
- **20,000 active nuclear weapons**



Our Methodology

Scenario Matrix	...the World does manage its opportunities and threats	...the World does not manage its opportunities and threats
New Zealand does manage its strengths and weaknesses and..	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Fail
New Zealand does not manage its strengths and weaknesses and...	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> Fail

Watch for Weak Signals

Responses for *Powerful* counties

- Self-sufficient, heavily armed and a fortress mentality or
- Serious engagement with all the problems of the planet

Responses for *Small* counties

- Ignore
- Adapt (monitor closely what is happening)
- Support global leadership (UN, WB, etc)
- Build alliances (state of Australia, Pacific Alliance?)
- Try to shape (lead by example)

**New Zealand
needs a
'National Strategy'
to optimise our
future,
to align our industry,
to reinforce our
national brand and
to be an example of
what is possible**

Thank You

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