JAMPRO
TRADE & INVESTMENT JAMAICA

Forum on the Future:
Jamaica 2030 and Beyond

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How can Jamaica survive and thrive?

- 2010: WEF Competitiveness Index: Jamaica down 17 places in 3 years; 95/132 nations.
- 2011: WEF Index: Jamaica down another 12 places; 107/146 nations.
- 2013: World Bank Doing Business report: Jamaica down 4 places to 94th; down 51 places in 10 years.
- 2015: WEF: Jamaica 86/140 countries.
- **Issues:** violent crime, corruption, bureaucracy, low labour productivity, cost of energy.
- 11th October 2015: US Ambassador Moreno: "Without a safe, stable and secure environment, we are going to have trouble getting investment."

So (1) remove the impediments; (2) grow the economy.

There are only two ways that an economy can grow:

- Increase the size of the workforce.
- Make each worker more productive.

JAMAICA CAN DO BOTH

- Increasing the workforce does not necessarily mean increasing the population. Encouraging people to transition from the informal to the formal sector, better training for employment, removing barriers, later retirement can all increase the effective size of the workforce.
- Making the workforce more productive involves e.g. making better use of technology, removing impediments to investment, training programs to enhance skills.

But training them to do what?

There is no point in giving people redundant skills, training them to work in dying industries.

Important to focus on increasing the supply of trained, skilled labour in 'sunrise' business areas.

So the key questions are:

- Which jobs are about to disappear?
- Where are the new business opportunities? Where will the jobs be created in future?
- What should people be trained to do? What kind of skills will they need?

THE FUTURE OF EMPLOYMENT: HOW SUSCEPTIBLE ARE JOBS TO COMPUTERISATION?

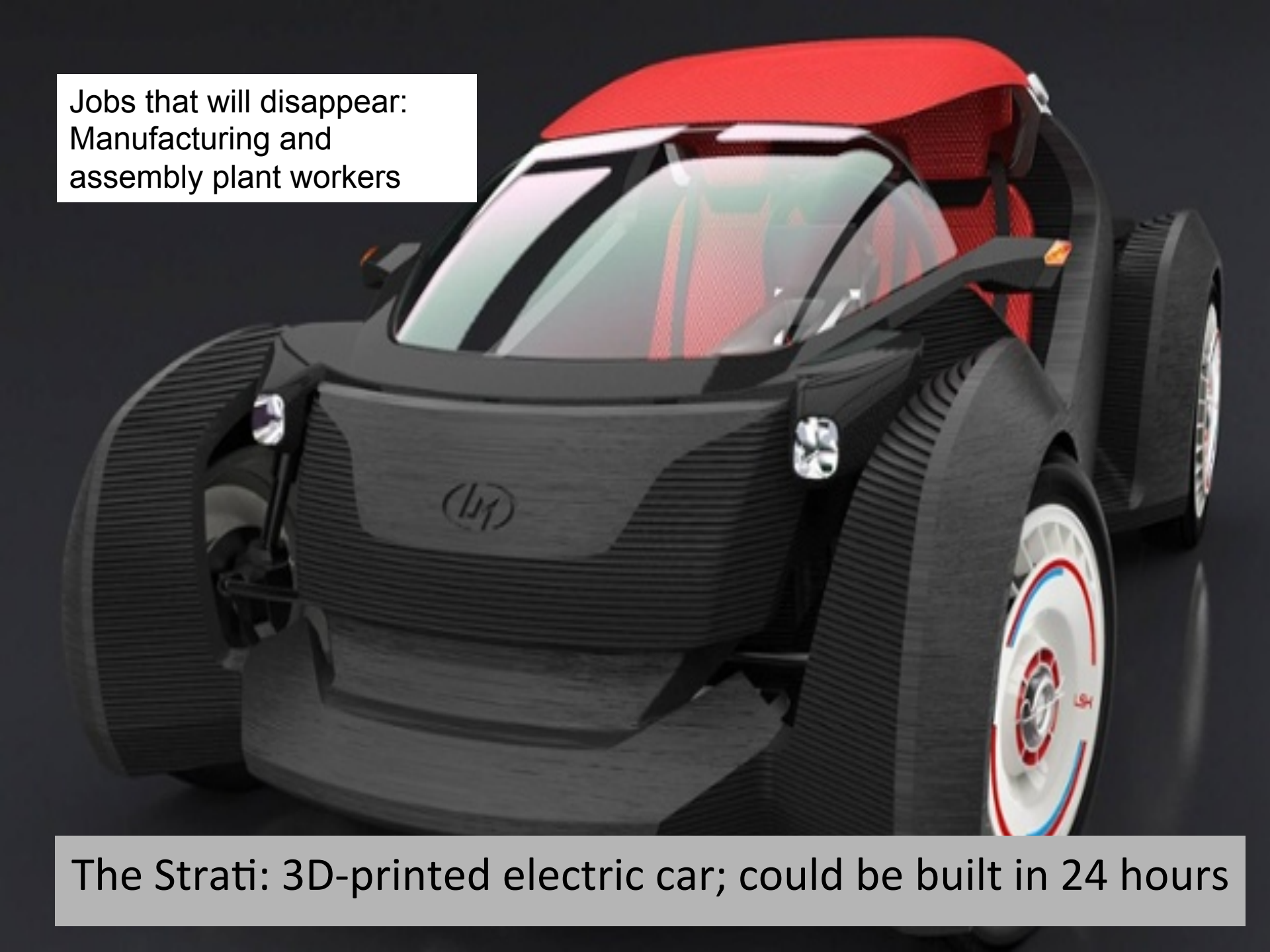
Carl Benedikt Frey and Michael A. Osborne

September 17, 2013

About 47% of all current jobs in the USA could be replaced by computers.

Chinese company WinSun used four 10m x 6.6m printers to spray a combination of cement and construction waste to build detached houses. The buildings are made using recycled materials, and the process does not require labour, so each house can be printed for less than US$5,000


WinSun 3-D printed villa
Jobs that will disappear:
Construction workers
Architects



The Strati: 3D-printed electric car; could be built in 24 hours

Jobs that will disappear:
Fighter pilots

Taranis: Very advanced combat aircraft with ‘high level autonomy’

Do we need public servants?

- Estonia: almost all transactions between people and the government are now via the internet – so far fewer civil servants are required.
- Georgia: Passport application, traffic exam etc. are all computerized. This minimizes opportunities and incentives for corruption, reduces cost.
- Singapore: government takes just 15% of GDP (France over 50%).

Jobs that will disappear:
Public servants

Do we need academics?

The University of London offered a MOOC for its international program; got over 200,000 registrations.

When the University of Edinburgh offered MOOCs over 300,000 students registered.

When Harvard offered its first MOOCS they had more people sign up in one year than have attended the university in its entire 377-year history.

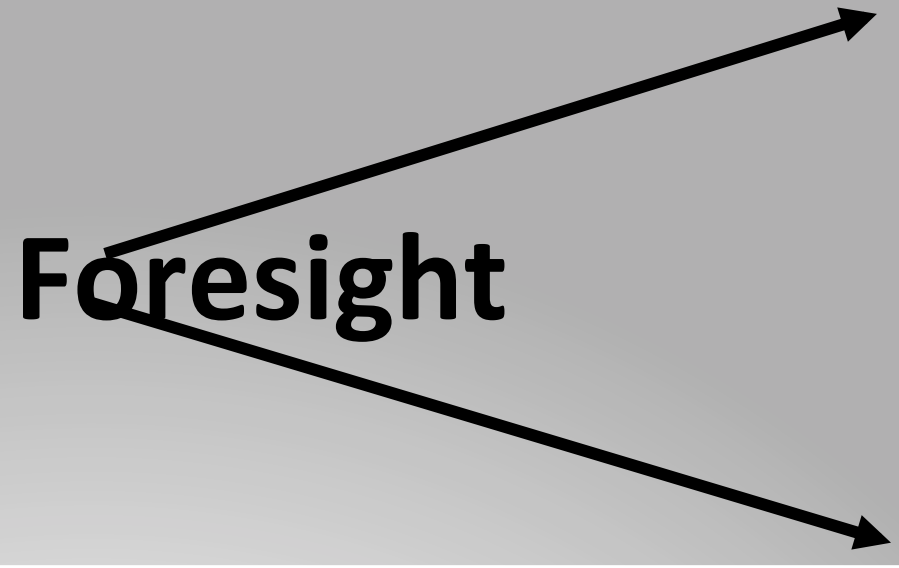
Jobs that will disappear:
Lecturers

So where will the new jobs come from?

Key development parameters

- Environmental challenges
- Technological frontiers

- Economic implications: risks and opportunities for Jamaica
- Using Foresight to plan for the future



World development parameters: the good news

People around the world are healthier, wealthier, better educated, increasingly connected, living longer.

- Child mortality rate has dropped 47% since 1990.
- Average life expectancy has increased 10 years over the past 20 years to reach 70.5 years today.
- Extreme poverty fell from 50% in 1981 to 21% in 2010.
- Access to safe water up from 76% to 89% of the population.
- Primary school completion rates grew from 81% in 1990 to 91% in 2011.
- By 2017, over 80% of population will have access to wireless broadband internet.

Sources: UN SDGS, The state of the future: 2013–14

World development parameters: threats

- 25% of nations with water shortages, main fishing grounds seriously depleted, nearly 50% topsoil degraded, agricultural output could fall & urban areas be lost to rising seas as result of climate change.
- High youth unemployment, high/rising inequality.
- Number of civil conflicts rising (mainly ethnic/ religious), enormous flows of refugees.
- Organized crime makes $2 trillion per year, double all world military budgets. High levels of crime, tax evasion and bribes undermine democracy.

Sources: UN SDGS, IPCC, The state of the future: 2013–14

The impact of crime on development

2009: UNODC estimated that TNOC generated $870bn; equivalent to:

- 1.5% of world GDP.
- 7% of world exports of merchandise.
- Over six times total world development assistance.

But this did not include money-laundering and tax evasion.

2011: Tax Justice Network estimated that governments worldwide lose over $3.1 trillion in annual revenue to tax evasion; equivalent to:

- 5.1% of world GDP.

Highest rate in South America; tax evasion equivalent to 20.5% of GDP.

Tax evasion in North America equivalent to 10.8% of GDP.

Tax evasion in Greece equivalent to 27.5% of GDP.

2012: Tax Justice Network estimated US$21-32 trillion of accumulated untaxed wealth is now held offshore. This includes funds from tax evasion, embezzlement, proceeds of crime & money-laundering.

Equivalent to GDP of USA and China combined.

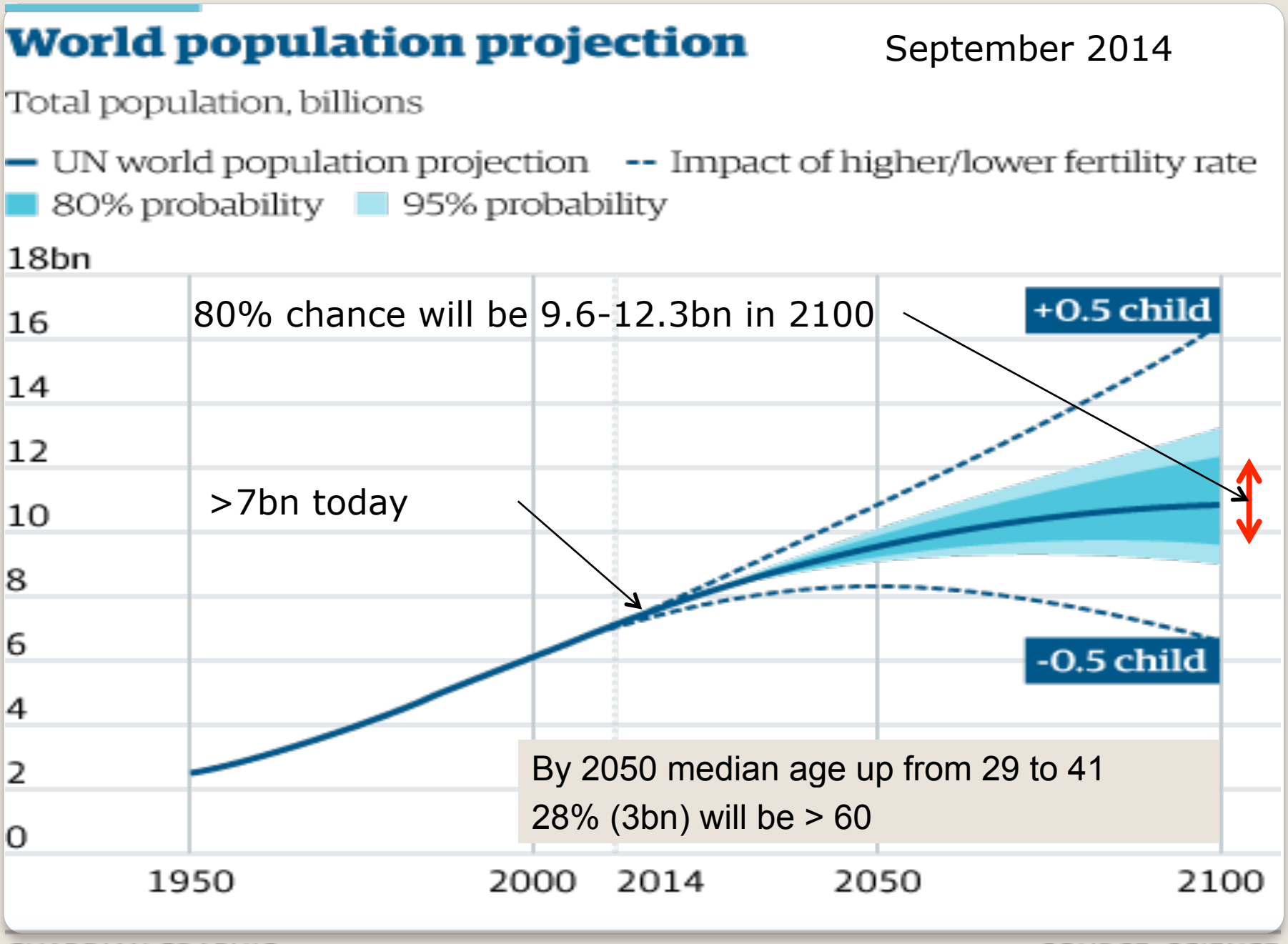
Future world?

US National Intelligence Council report:
World demand for food, water, and energy will grow by approximately 35%, 40%, and 50% respectively by 2030, due to the increase in the global population and increased consumption. Climate change will create instability in many regions by contributing to water and food shortages.

On current trajectory: most likely outcome is surging demand for energy and materials from emerging economies; potential shortages of some key resources; possible environmental disasters in some regions; increased number and complexity of conflicts; refugees.

World population projection

September 2014



GUARDIAN GRAPHIC

SOURCE: SCIENCE

Life expectancy

Life expectancy for a Roman in 100BC was ~20-25 years.

Over next 2,000 years (to 1900) life expectancy rose to 30 years.

That's a rate of improvement less than 1 extra day of life per year.

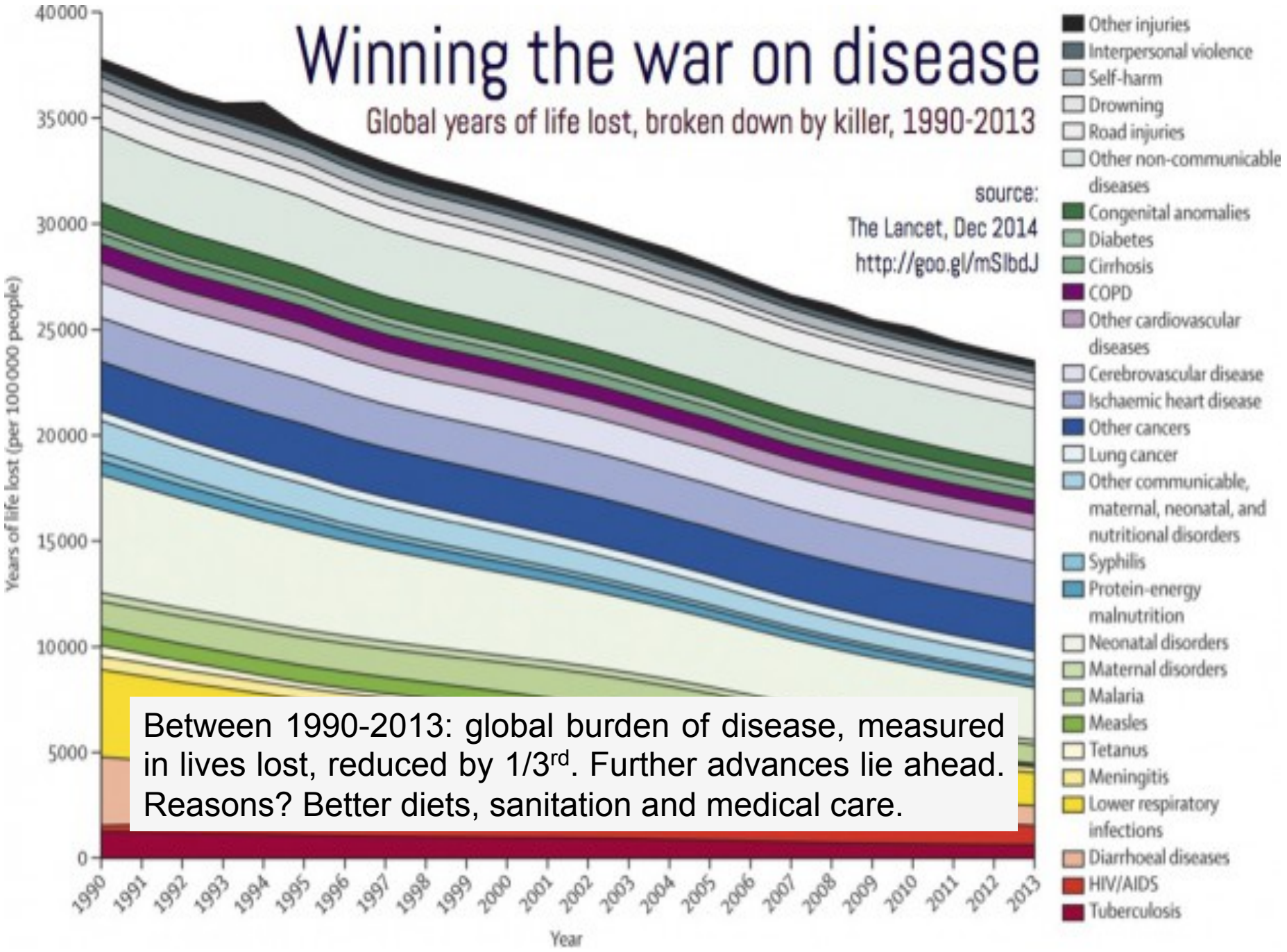
Life expectancy doubled between 1900 and 2000.

That's a rate of improvement of 110 days of life per year.

So the rate of improvement suddenly went up >100-fold.

Causes: improvements in agriculture and food storage, water and sanitation, medicine and health care, and increases in productivity that generated enough wealth to support a larger population.

By 2012 world average life expectancy was 70 years; it is approaching 90 in a few countries.



Between 1990-2013: global burden of disease, measured in lives lost, reduced by 1/3rd. Further advances lie ahead. Reasons? Better diets, sanitation and medical care.

Demographics and disease

* People used to die of infectious disease. Now most die of age-related degenerative and non-communicable diseases.
* Example: by 2006, about 40% of all deaths in the UK were from cardiovascular disease. This costs the UK economy US$45bn/year in healthcare expenditure and lost productivity.
* By 2050 over 1/3rd of Europeans will be aged 60 or over; there will be two pensioners for every child.
* Ratio of elderly dependents to active members of the workforce will invert.

The innovation frontier

So we need to find ways to:

- Be more efficient with energy, water and resources.
- Develop low carbon energy supplies.
- Efficient urban living (energy, waste, transport etc.).
- Solve social tensions and conflicts.
- Adjust to an ageing society.
- Deal with organized crime & corruption.

Jamaica is developing significant expertise in several key areas

Indicators of a vibrant economy

Economies with:

- High rates of innovation
- Consistent strong growth
- Vigorous competition
- High rates of business failure and bankruptcy.

The challenge for Caribbean governments

USA: 1/3rd of Fortune 500 firms in 1970 were gone by 1983.

UK: >2/3rds of FTSE 100 firms in 1984 were taken over, failed or downgraded to FTSE 250 by 2006 –

- while the total market capitalization of FTSE 100 rose from £100bn to £1.54 trillion over the same period.

There is no status quo

- Schumpeter (1950): innovative ideas and technologies create new opportunities, demands and markets - but simultaneously render old technologies obsolete and associated skills redundant.
- Innovations continuously disrupt and restructure the competitive environment.
- The ability to drive, anticipate or respond positively to change is therefore critical.

- PROBLEM: Civil service culture is typically focused on process rather than results, continuity rather than change, risk-avoidance rather than innovation…

Key points

- Every innovation creates new opportunities – but makes old technologies obsolete and associated skills redundant.
- You can't 'protect jobs' unless you also prevent innovation.
- The accelerating rate of technological change makes it difficult to determine what skills will be required in future.
- We can, however, identify key trends. For example:

1. Manual tasks can be automated. The UK, for example, produces a greater volume of cars with about one-fifth of the workforce that was required thirty years ago.
2. In 1980-90s, low-skill jobs went to Asia - but now China, India, Brazil, Malaysia and Taiwan etc. are highly competitive in services and high-skill manufacturing.
3. The next wave is the replacement of service tasks.

The future for Jamaica

- So how/where can Jamaica compete?
- Small islands such as Jamaica cannot compete in bulk commodity markets. A better strategy is to focus on niche markets and services.
- But these typically require relatively advanced R&D, management capacity, quality control, sophisticated marketing and strong relationships with customers, suppliers and brokers.
- So what skills will be required?

Skills that will be in demand

- **Thinking skills:** critical thinkers, problem-solvers, policy analysts, business strategists
- **Technical skills:** research scientists, engineers, technicians
- **Creative skills:** designers, visionaries, conceptualizers
- **(Social) networking skills:** people good at managing groups, i.e. customers, fans, digital communities, moderate online discussions, mavens (people who detect trends, are trusted sources, influence networks), team-builders, managers and leaders.
- **Logistical skills:** organizers, project aggregators and coordinators, open-source project managers, logistics and supply-chain strategists.
- **Entrepreneurial skills:** people who can network between different networks, e.g. scientists, financiers, and the businesses that control the manufacturing, supply and distribution networks
- **Generic skills:** ICT-fluent, can multi-task, network, high EQ (emotional intelligence)

The role of foresight

- Use a **horizon scan** to get a sense of where future problems and opportunities might lie, identify the major **drivers of change**, identify possible **future scenarios**, then **backcast** to present day to identify the key decision points.
- Help governments, businesses and research institutions to prepare a coherent strategy for the changes that lie ahead.

Thank you !

Planning versus foresight

Extrapolate current trends, try to predict outcomes.

Where are we today?

↓

Where will we be in x years?

Plans assume continuity, so disruption is costly.

Planning is based on a range of possible future scenarios.

Where do we want to be?

↓

What do we need to do today to achieve preferred future?

Goal is to manage process of change towards best available outcomes.