Welcome to the Future

Martin Kruse


10.20 Strategic foresight and how to use it

What is foresight and futures studies and how can it help us plan for the future?

- The future of transport and logistics
- The futures of business and organisations
- The future of demography and sustainability

Dialog: Vad betyder detta för svenska regioner?
12.15 Lunch

13.15 Strategic foresight and how to use it…forts.

14.25 Kaffe
Copenhagen Institute for Futures Studies

- Founded in 1970 by Thorkil Kristensen
- Member based non-profit Cross disciplinary thinktank
- Private, neutral and independent
- Analysis, inspiration and international strategic advisors
- DK, Norway, Europe and South America
Transitions scenario

1. Diplomatic Gestures
2. Show of Force
3. Breaking Off of Diplomatic Relations
   Embargo or Blockade
4. 
5. Evacuation
6. War

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The baseline future

By 1940 every street in London will be buried under nine feet of horse manure. - Times of London 1894
USA, 1950”America 2000 - this is your future!”

3D Color TV Wall-Panel  Slide-back Roof  Personal Helicopter & Roof Landing Area  Moving Stairway  House-control Panel

Glass Walls Dust-free Floors Menu Selector & Microwave Stove Giant-size Fruit Ultrasonic Laundry Electrical Heat Unit Phono-vision Receiver
So you’re saying people will “tweet” what they’re eating for breakfast?

And “upload” pictures of their breakfasts to a “Facebook”?

And other people will look at the breakfasts and make comments?

Sorry to burst your bubble, dudes, but you asked. Yes, that’s the future.

No offense, future man, but is everyone in your time retarded?

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## Accelerating pace of change

<table>
<thead>
<tr>
<th>2000</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nokia</td>
<td>1. Samsung</td>
</tr>
<tr>
<td>2. Motorola</td>
<td>2. Nokia</td>
</tr>
<tr>
<td>3. Ericsson</td>
<td>3. Apple</td>
</tr>
<tr>
<td>4. Siemens</td>
<td>4. ZTE</td>
</tr>
<tr>
<td>5. Panasonic</td>
<td>5. LG Electronics</td>
</tr>
</tbody>
</table>

**Change in Fortune1000**

Kilde: Nathan Furr, Big Business ... The End is Near: Why 70% of the Fortune 1000 Will Be Replaced in a Few Years. Forbes. 21 April 2011
That’ll be the day...

The United States is in dialogue with us when they have a black president and the world has a Latin American pope."
“If the rate of change on the outside exceeds the rate of change on the inside, the end is near.”

Jack Welch
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Riskmatrix
- From trends to scenarios

Extraction to scenarios

Riskmatrix
- From trends to scenarios


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Scenarios ”Realistic” stories about the future

Scenarios are normally
• NOT predictive
• Different from the present
• Possible (internal konsistant)
• Argumentative
• ”Probable”
• Longer time horizont

We will likely witness a growing number of middle-income countries becoming competitors, but also markets if we understand working under their different political and cultural circumstances. By 2005, we can expect China, and perhaps India, to among these countries.

Source: Copenhagen Institute for Futures Studies "Towards the year 2005", 1980
The emotional journey

Feeling of Success

Free from prejudices

Information overload

Desorientation

Feeling of Success Superhero with a new vision

Some ideas will be disregarded

Source: Shell, 2006
Breakthrough in manpower substituting technologies

Capitalism Reinvented

The Great Transformation

Prioritized

Sustainable Business


Not prioritized

Fragmented World


People

2011 2011

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Future of Transport & logistics
Freedom from ownership
Self driving cars

Introduction curve

Note: Lines smoothed for visibility
Source: Citi GPS, 2016
Autonomous car

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New distribution and logistics solutions
• Salary during transport?
• Virtual meeting becomes accustomed, working more from home.
• MIT Research 300,000 robot taxies in Singapore could replace all types of personal transport incl. 800,000 personal vehicles
• Parkingspots
• How will the centre of town look like if most purchases are done online?
Renewables towards price parity

Cost of lithium-ion battery packs for cars (l) and average electricity cost Europe, US & China (r)
This is the future but not in 2025
Brainstorm and discussion

- 1 min post it by yourself: What did you hear?
- 5 min (Group) Join the group what was heard? (only new post its)
- 10 minutes what questions arise/what dilemmas? What could this mean to your region?
Future of Business and organisations
Product 2 service

IoT

- Run for the bottom
- Intelligent real-time monitoring
- Optimisation
- Early warning
- Predictive analytics
Selfservice and Smartsumption

- Store 2025
- 2nd most typical job in the US
- No people
- Hyper specific customer data
- Personalised marketing
- -Just for you
"Software substitution, whether it's for drivers or waiters or nurses ... it's progressing. ... 20 years from now, labor demand for lots of skill sets will be substantially lower. I don’t think people have that in their mental model." Bill Gates
Employment by Industry

Share of total

% 80 70 60 50 40 30 20 10 0


Services

Agriculture

Manufacturing

Mining

* Data are interpolated between 1900 and 1910
Sources: ABS; RBA; Withers, Endres and Perry (1985)
Leadership in the Gig Economy

The office  Co-working  Public places  Working from home

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Risk: The perfect storm

- Structural unemployment
- Polarization
- Allocation policy
- More hostility to immigrants
- Populism
- Two-stage EU, possibly breakup
- FDI
- Uncertain markets
- Destabilization
Necessary answers

- Further education and focus on entrepreneurship
- Structural reforms
- Cultivate resilience
- Competence boost
- Great mismatch
- Resist the desire to protect yesterday’s winners
- Prepare the labour market for new business models
Brainstorm and discussion

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- Increase in Singles
- Singles moving out of cities
- Young singles move together
- Mini urbanisation
- Fall in nuclear families
The United Nations’ population projections for each continent now include a range of numbers (darker shades are the most probable forecasts), rather than a single line.
Can refugees and migrants solve Europe’s aging problem?

- Many great individual stories
- Unemployment among non-European immigrants is 20%
- In Sweden and Belgium the number is 33%
- Unemployment among second generation non-European immigrants is 50% higher than among non-immigrants
Need in the elderly sector 2020 (DK)

Source: Rambøll

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The Challenge

- High skilled jobs
- Low skilled jobs
- Unemployment
- Automation
- Immigration

The Lisbon dream

- High skilled jobs
- Low skilled jobs
- Unemployment

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Parts of ASIA and MENA too hot for humans.

"...and it shall come to pass, that when they shall be hungry, they shall fret themselves, and curse their King”

(The old Testament Isaiah 8)
Sustainability

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The Global Living Planet Index (LPI) shows a decline of 52% between 1970 and 2010. This suggests that, on average, vertebrate species populations are about half the size they were 40 years ago.

In other words, the number of mammals, birds, reptiles, amphibians, and fish across the globe is, on average, about half the size it was 40 years ago.
The latest auction of solar energy capacity in India has achieved a new record low price of 4.14 rupees/kWh, prompting the country’s energy minister Piyush Goyal to say that solar tariffs are now cheaper than coal-fired generation.

The results of a reverse auction tender of 420MW of solar capacity conducted by the Rajasthan government revealed this week that Finnish group Fortum Energy bid the lowest price of 4.14 rupees/kWh for a 70MW solar PV plant.

It is the lowest price obtained so far in India, which aims to install more than 100GW of solar by 2022, and was hailed by Goyal as a sign that solar power is now cheaper than coal power.
"End" of fossil fuels

Renewables attracted more than double the $130 billion committed to new coal and gas generation.

Global investment in fossil fuel: $130 billion

Vs

Global investment in renewables: $286 billion

Costs in 2040 for different energy sources/technologies, relative to 2014

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Utility forced into sun

CAISO ‘Peaking’ Duck Chart

CAISO Net Load --- 2012 through 2020

Net Load = Load - Wind - Solar

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Regulators might come to the aid

- Fossil-fuel firms and electricity utilities are substantially debt financed,
- Fossil fuel and other carbon-intensive companies make up one-third of the $2.6tn global leveraged loan market.
- Financial stability issues if sudden revaluation of stranded assets.
- The EU financial system has significant direct exposure to fossil-fuel firms. The exposures of European financial institutions (including banks, pension funds and insurers) to fossil-fuel firms exceed €1tn.
Dialog: Vad betyder detta för svenska regioner?
Discussion in plenum