The Great Disruption

Presentation to the Motor Summit 2016
12. October 2016
Thomas Vellacott, CEO WWF Switzerland
1. What needs to happen

2. What is happening

3. What will happen
A high risk experiment

CO2 CONCENTRATION IN THE ATMOSPHERE

PPM

2100 Higher Emissions Scenario

2100 Lower Emissions Scenario

2008 Observed
I DON'T BELIEVE IN GLOBAL WARMING
Conférence sur les Changements Climatiques

COP21/CMP11

Paris, France
Greenhouse-gas emissions from human activity

GIGATONS OF CO₂EQUIVALENTS

**Current trajectory** (not including large-scale burning of biomass) would probably result in a greater than 4°C rise in average global surface temperature.

**Current pledges** from all countries would still fall short.

**Levels needed** to avoid a 2°C temperature rise over preindustrial levels.

Source: U.N. Environment Program
THE WASHINGTON POST
1. **What needs to happen**

2. **What is happening**

3. **What will happen**
Rapid transition to clean energy

Source: BNEF, 2015

WORLDWIDE ADDITION OF POWER GENERATION CAPACITY
GW

FOSSIL FUEL

CLEAN ENERGY

Forecast

2010 2013 2015 2020 2025 2030

105 141 110 91 62 64

Oil
Gas
Coal

Forecast

2010 2013 2015 2020 2025 2030

93 143 164 208 242 279

Hydro
Nuclear
Solar
Wind
Biomass & waste
Geotherm.
Flat carbon emissions, positive economic growth

WORLDWIDE GREENHOUSE GAS EMISSIONS

GWt

Source: IEA, 2016
Motors are a key driver of decarbonisation.

### FACTORS DRIVING STAGNATING CARBON EMISSIONS

<table>
<thead>
<tr>
<th>Factor</th>
<th>Annual change, in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>1.6%</td>
</tr>
<tr>
<td>Energy intensity</td>
<td>1.2%</td>
</tr>
<tr>
<td>Fuel mix</td>
<td>0.8%</td>
</tr>
<tr>
<td>10-year average</td>
<td>0.4%</td>
</tr>
<tr>
<td>2015</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Source: BP, 2016
NO ORDINARY DISRUPTION

The Four Global Forces Breaking All The Trends

Richard Dobbs, James Manyika, and Jonathan Woetzel
Features of the great disruption

**Incumbents:** deer in the headlights

**Shapers:** business model innovation

**Conditions:**
- Accelerating change,
- Big opportunity,
- Considerable risk

**Losers:** Regulation to the rescue

**Winners:** Beyond dreaming

Source: WWF, 2016
Conditions: Accelerating change

TIME TO ADOPTION BY 1/4 OF US POPULATION
Number of years

Facebook
The Web
Mobile Phone
PC
Television
Radio
Telephone
Electricity

Sources: Sinfulatiry6, Internet World Statistics, Citi Research
Conditions: Opportunities and risks

TIME TO MARKET CAP OF USD ONE BILLION

AVERAGE LIFETIME OF S&P 500 COMPANIES

Sources: S. Ismail, 2014. R. Foster, 2001
TWO THIRDS OF THE COMPANIES THAT WILL MAKE UP THE S&P 500 IN TEN YEARS DON’T YET EXIST...
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- **Incumbents:** deer in the headlights
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Source: WWF, 2016
Incumbents: Change? What change?

SOLAR PV INSTALLED CAPACITY, IEA FORECASTS AGAINST ACTUAL GW

Sources: IEA, Carbon Tracker, 2015
Incumbents: Change? What change?

AUSTRALIA NATIONAL ELECTRICITY MARKET, ACTUAL VS. FORECAST ELECTRICITY DEMAND, 2004-2025

"I do not believe the introduction of motor-cars will ever affect the riding of horses."

John Douglas Scott Montague, 1903
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Source: WWF, 2016
AUTOMOBIL?
NEIN!
Arizona to impose new tax on solar lease customers

The State Department of Revenue has reinterpreted its tax policy, reassessing leased solar panels as "merchant power plants" that must be taxed.

07. May 2014 | Applications & Installations, Global PV markets, Industry & Suppliers, Markets & Trends | By: Ian Clover

The battle lines for solar in Arizona are being redrawn this week following an about-turn on PV tax policy from the State Department of Revenue.

In a move that has angered solar supporters in the state and beyond, Arizona's State Department of Revenue has proposed a reinterpretation of a tax policy that exempts solar equipment from property tax. The exemption currently covers all types of rooftop solar panels, but the State Department now says that only those solar panels owned outright are exempt from tax, with homeowners who lease solar panels facing a possible $152 increase to their annual property tax bill.
5,300,000,000,000 USD
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*Source: WWF, 2016*
I believe the auto industry will change more in the next five to 10 years than it has in the last 50.

Mary Barra
CEO and Chairman of General Motors
We've hit peak home furnishings, says Ikea boss

Company’s head of sustainability says consumption of many familiar goods is at its limit
Features of the great disruption

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Source: WWF, 2016
“People who say it cannot be done should not interrupt those who are doing it.”

-GEORGE BERNARD SHAW
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CONGRATULATIONS, WORLD LEADERS, on securing the Sustainable Development Goals. But we’re not going to achieve them unless we take action on CLIMATE CHANGE. Organizations working with more than 6,000,000 COMPANIES AROUND THE WORLD want an ambitious climate deal at COP21 in Paris this December.
Together possible
Contact

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