

Emerging risk: connected, complex, concentrated

Nick Beecroft Manager, Emerging Risks, Lloyd's



What is an 'Emerging Risk'?

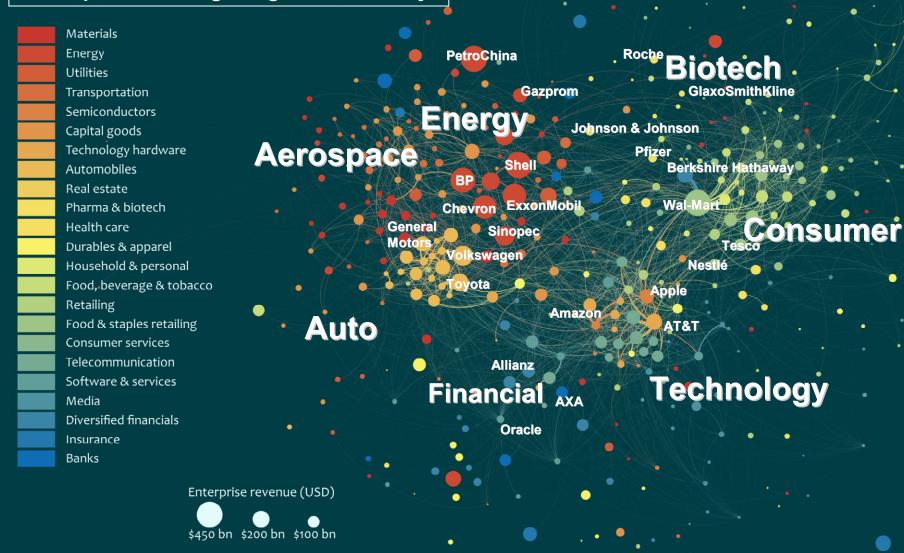
- ► Lloyd's defines an emerging risk as: an issue that is perceived to be potentially significant but which may not be fully understood or allowed for in insurance terms and conditions, pricing, reserving or capital setting
- ► The defining feature of an emerging risk is high uncertainty concerning the essential features of the risk (likelihood and impact)
- ► The aim of emerging risk management at Lloyd's is to *reduce* uncertainty through research and scenario development



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Connected risk in a globalised world

Enterprises driving the global economy

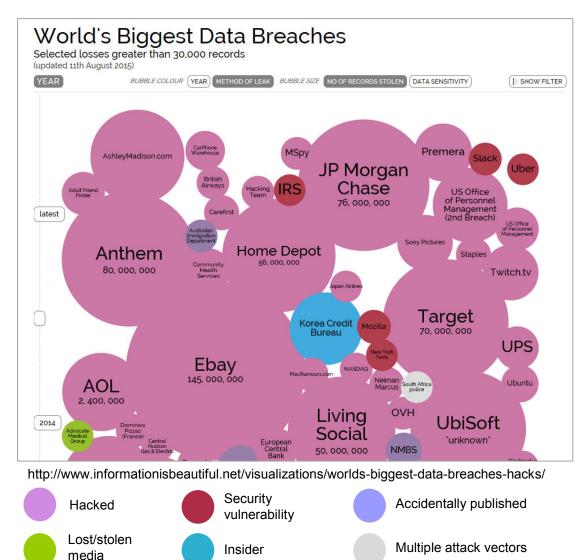




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Cyber Risk

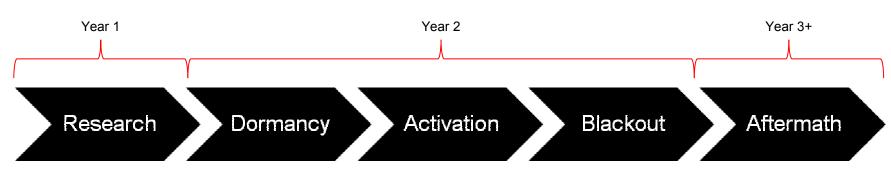


FireEye Cyber Threat Map

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Business Blackout

www.lloyds.com/businessblackout

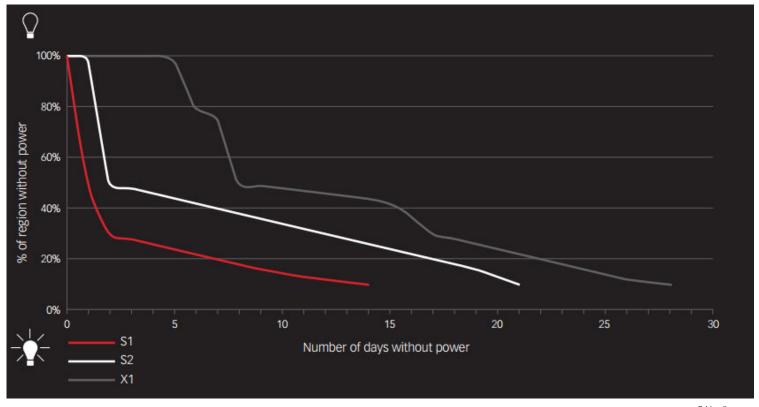




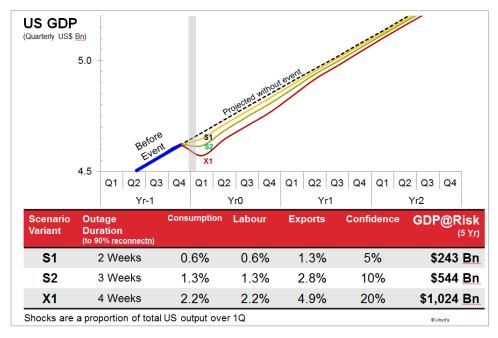


Business Blackout

Scenario	Outage duration, weeks (to 90% restoration)	City-Days	Number of damaged generators	Percentage of generators vulnerable to contagion
S1	2	3.78	50	10%
S 2	3	8.08	50	10%
X1	4	13.83	100	20%



Business Blackout



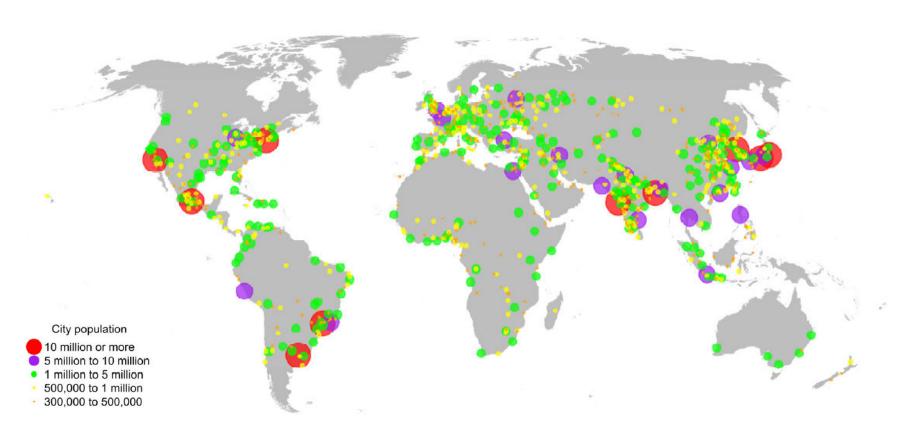
Insurance claims

Power Generation Companies	\$ millions
Property Damage (Generators)	633
Business Interruption (Generator Damage)	3,817
Incident Response Costs	3
Fines - FERC/NERC	4
Other liabilities	
Defendant Companies	
Liability	2,253
Companies that Lose Power	
Perishable Contents	595
Contingent Business Interruption - Suppliers Extension	6,769
Liability	3,120
Companies Indirectly Affected	
Contingent Business Interruption - Critical Vendor	2,928
Liability	749
Homeowners	
Household Contents	465
Specialty	
Event Cancellation	63
Total	\$ 21,398
	For variant S1



World cities population: 1990

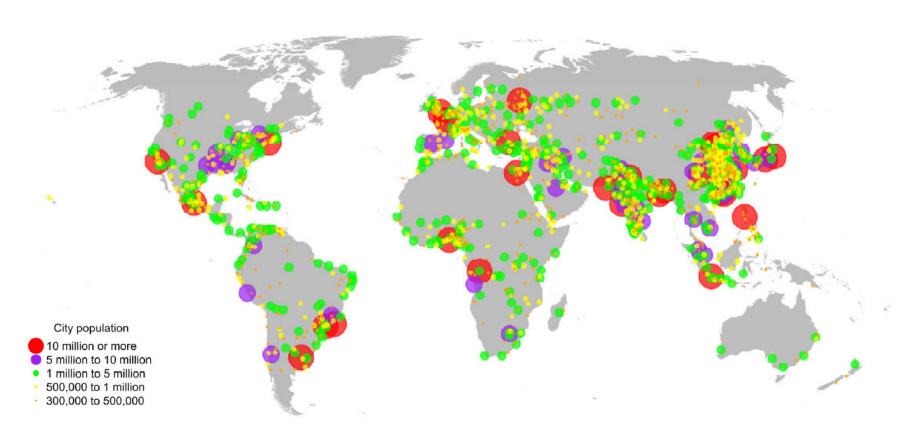
Source: United Nations World Urbanization Prospects 2014





World cities population: 2014

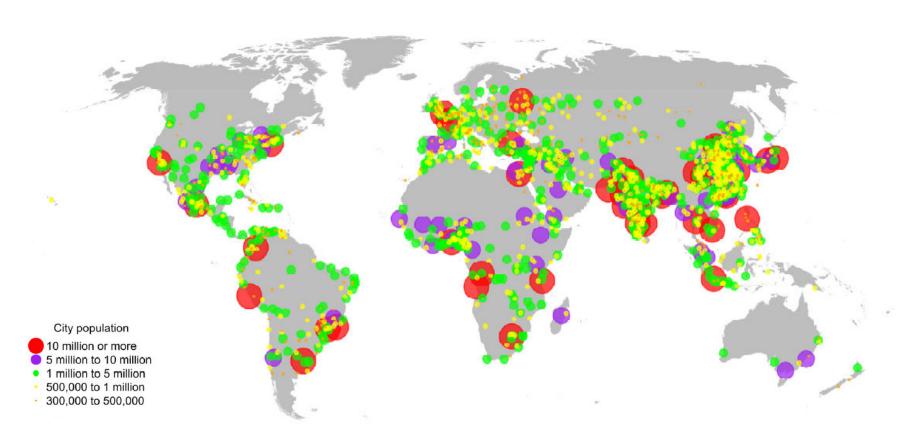
Source: United Nations World Urbanization Prospects 2014





World cities population: 2030

Source: United Nations World Urbanization Prospects 2014



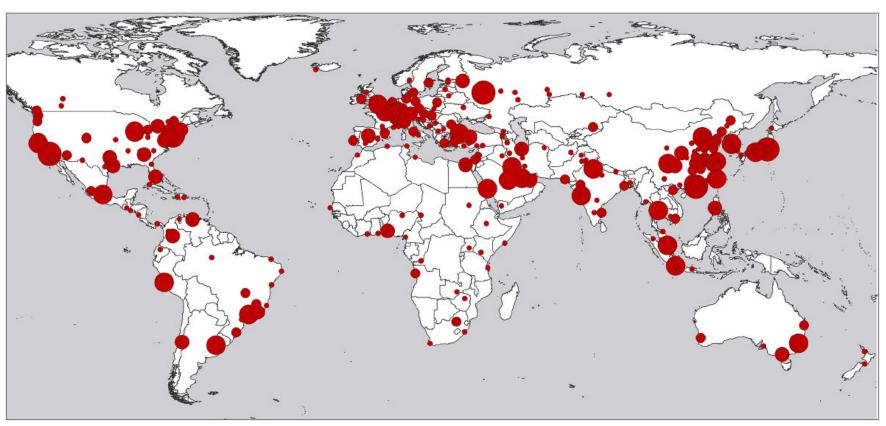
City GDP: 2025



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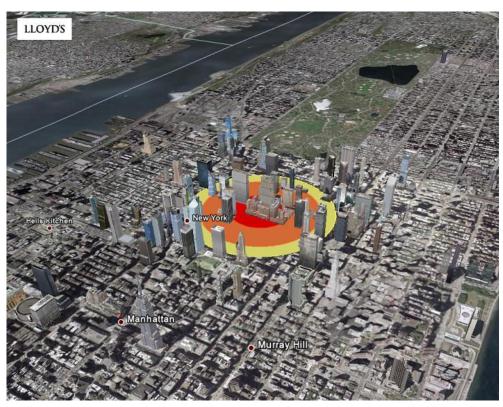


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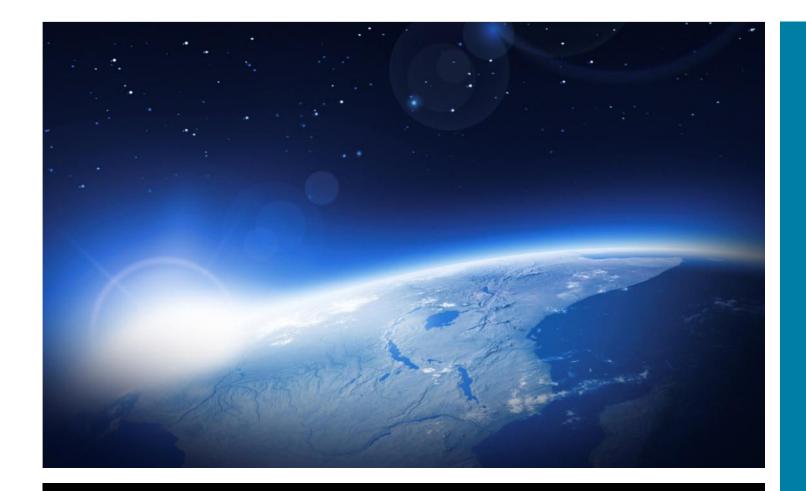
Plausible but extreme

- Emerging risks require expert judgment and imagination applied to quantitative and qualitative assessment
- Cognitive bias is a major influence
- Success will be defined by our ability to measure and manage the emerging connectivity of risk



Lloyd's Realistic Disaster Scenario High impact terrorist attack, Rockefeller Centre, New York City





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