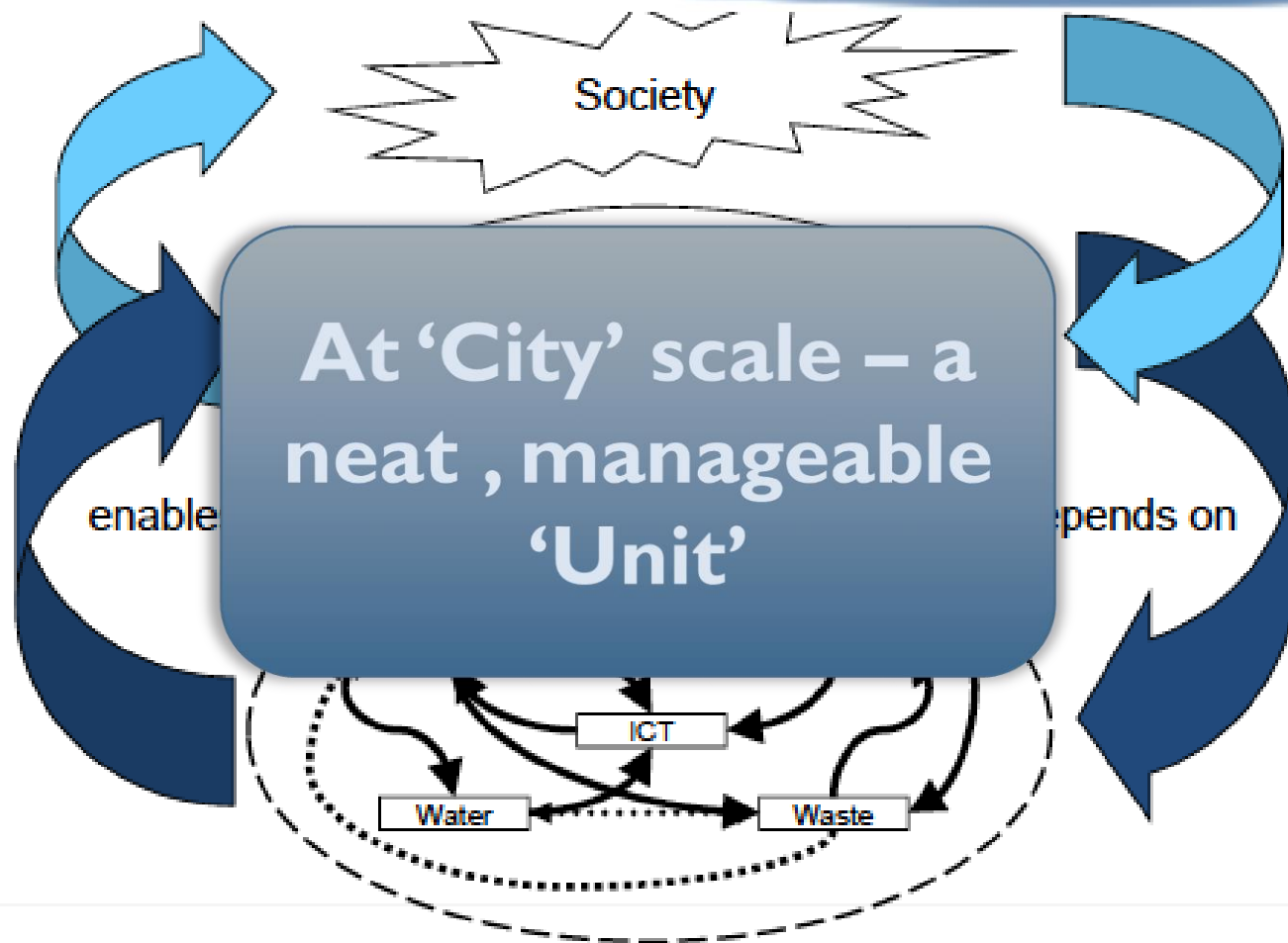


Flood and Coast 2017

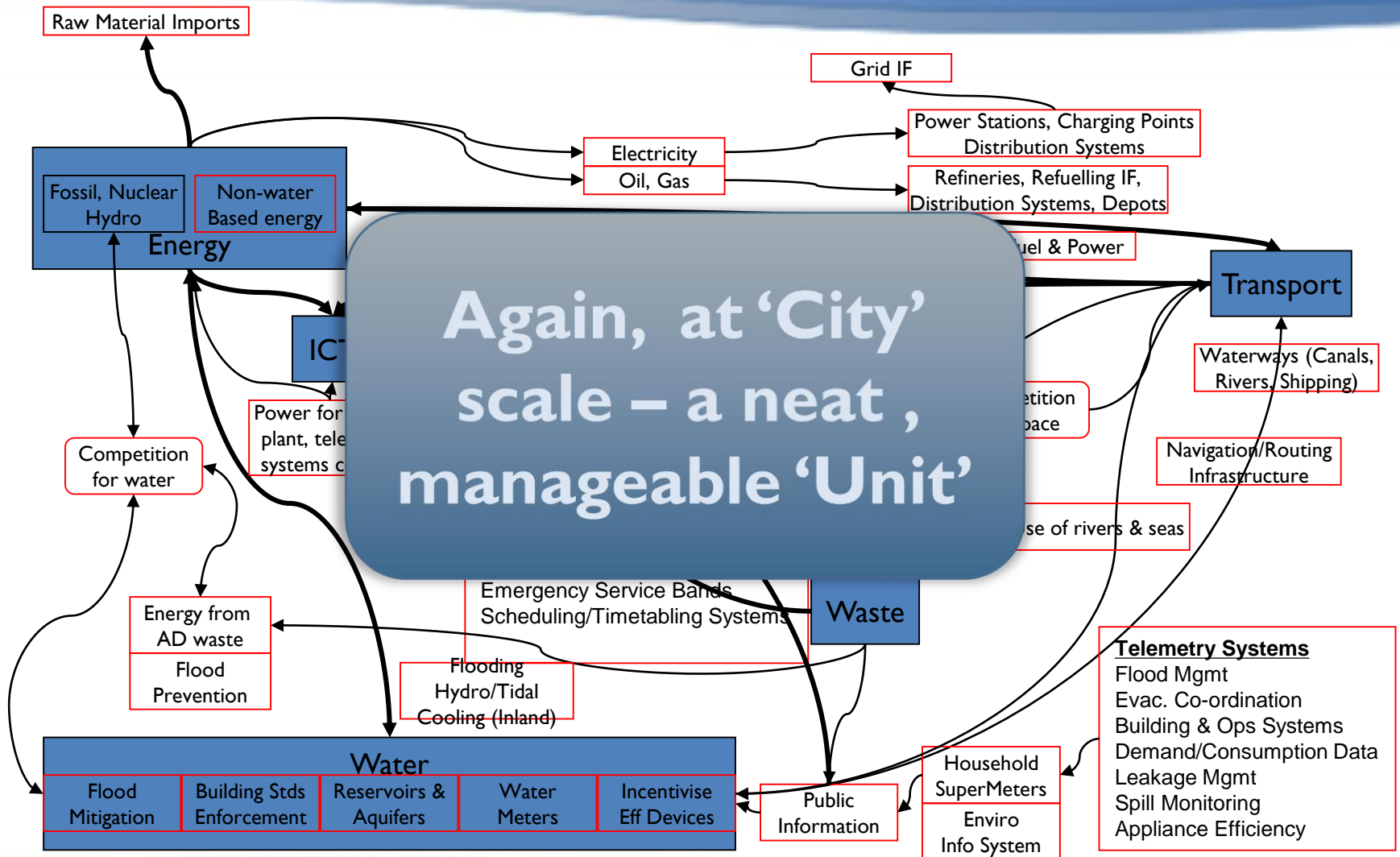
John Dora CEng FICE FRMetS FPWI

Infrastructure serves society



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It is complex and interconnected!



Vulnerable to hazards



Hurricane Katrina w



bc.co.uk

Cascade impacts less appreciated!



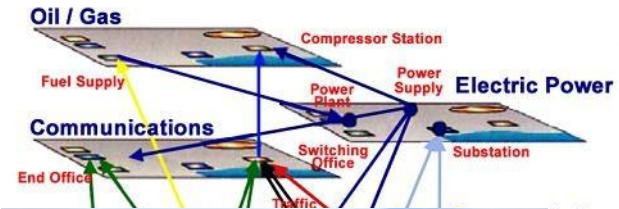
2011 Tōhoku earthquake and tsunami (Fukushima)
www.vice.com



UK Winter 2015 – Storm Desmond etc
Electricity North West

Examples of impacts

- 🔹 Hurricane Katrina – **civil unrest**
- 🔹 Tōhoku earthquake and tsunami (Fukushima) – **Honda factory**
- 🔹 UK Winter 2015 – **Energy for 60,000**
- 🔹 Eyjafjallajökull Volcano – **Global air travel for days**



All Departures		
	Gate	
11:45 Heathrow	BA1443	Cancelled
11:55 Hahn	FR4383	Cancelled
12:10 Paris CDG	AF1055	Cancelled
12:15 Cologne	4U363	Cancelled
12:30 Birmingham	BE446	Cancelled
12:35 Newquay	BE673	Cancelled
12:35 Milan Malpensa	EZ3486	Cancelled
12:50 Amsterdam	KL1280	Cancelled
13:10 Belfast City	BE686	Cancelled
13:10 Paris CDG	EZY6955	Cancelled
13:20 Shannon	FR1147	Cancelled
13:30 Manchester	BE294	Cancelled
13:30 Copenhagen	DY3503	Cancelled
13:45 Frankfurt	BO3481	Cancelled
13:45 Heathrow	BA1445	Cancelled
14:00 Gatwick	BA2941	Cancelled
14:00 Kirkwall	BE6897	Cancelled
14:20 Niederrhein	FR6242	Cancelled
14:20 Isle Of Man	BE6813	Cancelled
14:20 Birmingham	BE858	Cancelled

All Departures		
	Gate	
14:25 Heathrow	UH8517	Cancelled
14:40 Manchester	UH9556	Cancelled
14:55 Southampton	BE1768	Cancelled
14:55 Belfast Intl	EZY496	Cancelled
15:10 Dublin	K255	Cancelled
15:15 Cardiff	WV2004	Cancelled
15:15 Birmingham	BE690	Cancelled
15:25 Gatwick	BE324	Cancelled
15:35 Manchester	BE296	Cancelled
15:40 Stansted	EZY238	Cancelled
15:40 London City	AF5554	Cancelled
15:50 Bratislava	FR9534	Cancelled
15:55 Heathrow	BA1443	Cancelled
15:55 Gabeick	BE2706	Cancelled
16:05 Belfast City	BE688	Cancelled
16:15 Brussels	UH9509	Cancelled
16:25 Copenhagen	BO1905	Cancelled
16:30 Southampton	BE1770	Cancelled
16:40 Amsterdam	KL1285	Cancelled
16:40 London City	BA3707	Cancelled

Thoughts...

- 💧 Infrastructure is fundamental to a functioning Society - *resilient infrastructure fundamental to a resilient Society*
- 💧 Much resilience-building in recent times BUT driven by reactions to flooding
- 💧 At a National scale, the importance of protecting infrastructure from flooding *is still less of a priority*

BUT tremendous opportunities exist:

- 💧 As we build the infrastructure for our growing population
- 💧 As we renew our older assets and adapt for climate change
- 💧 At 'City scale', where infrastructure systems are more 'self contained', often under ONE authority, so focussing priorities