

ADEPT Conference

Manchester 24th November 2016

Natural opportunities for growth

Infrastructure – building resilience, supporting growth

Some thoughts from John Dora, Chair, Infrastructure Operators' Adaptation Forum

Acknowledgements to Network Rail, Getty Images, JDCL, RSSB, BBC for the images used

Synopsis....

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- 💧 The 'Infrastructure Operators' Adaptation Forum'
- 💧 What is 'Infrastructure' and how does it underpin society?

The 'Exam Questions':

- 💧 How can new and existing infrastructure be made resilient to the future environment and climate?
- 💧 What mechanisms and what infrastructure can local government influence or control?
- 💧 What policy levers can help local government to build resilience?

What opportunities are approaching?

Won't pretend to answer the questions...some thoughts offered!

IOAF: Terms of reference

Vision

For our assets and services to be resilient to today's natural hazards and prepared for the future climate

Aims

- ◆ To support and challenge national and local government policy on infrastructure and adaptation, including the National Adaptation Programme
- ◆ To inform weather resilience and adaptation planning, action and regulation
- ◆ To enable a more integrated and evidence-based approach
- ◆ To develop 'champions', who promote action and good practice both within and outside the group
- ◆ To inform and support the activities of other relevant groups from academia, industry, regulators and government

IOAF: Terms of reference

Benefits to members to include

- ◆ A channel for dialogue with other operators, Government and others on adaptation actions and policy.
- ◆ The opportunity to learn of existing and new approaches to adaptation from other members.
- ◆ Access to knowledge and information in support of adaptation, including that required to support reporting.
- ◆ The potential to reduce vulnerability to points of dependence on other systems.
- ◆ The potential to realize opportunities offered by points of dependence on other systems.
- ◆ The opportunity to influence key research projects and to learn of relevant research and innovation results.

IOAF Members

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Operators

Anglian Water
Yorkshire Water
HS2
TfL
Tube/ TfL
National Grid
Highways Agency
Openreach
Network Rail
Severn Trent
Heathrow Airport
Transport Scotland

Professional Bodies

Institution of Civil Engineers (ICE)
Institution of Engineering and Technology (IET)

Trade Bodies

Energy UK
Energy Networks Association
British Ports
Water UK
UK Major Ports
UKPIA
TechUK

Government

Cabinet Office
HM Treasury
DECC
Defra
DfT
The Adaptation Sub-Committee
The Welsh Government
Natural Resources Wales

Regulators

ORR
OfGem
OfWat
Environment Agency

Research community

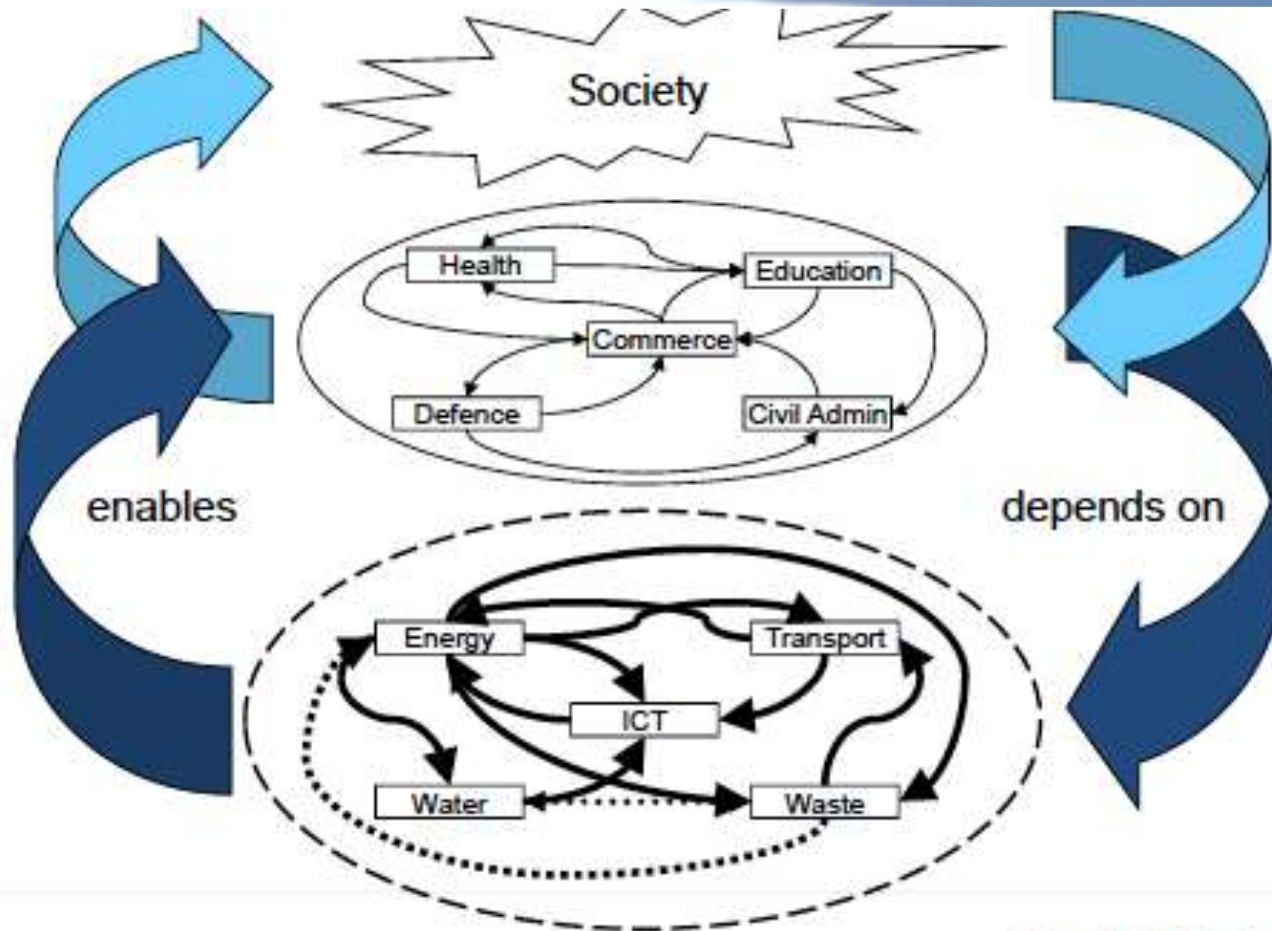
UCL
Natural Environment Research Council (NERC)
ARCC Network (Adaptation & Resilience in the Context of Change)

Others

Climate UK
UKCIP
CIRIA
BRE
Atkins
Adaptation Scotland
John Dora Consulting (Chair)
Environment Agency's Climate Ready Support Service (Secretariat)

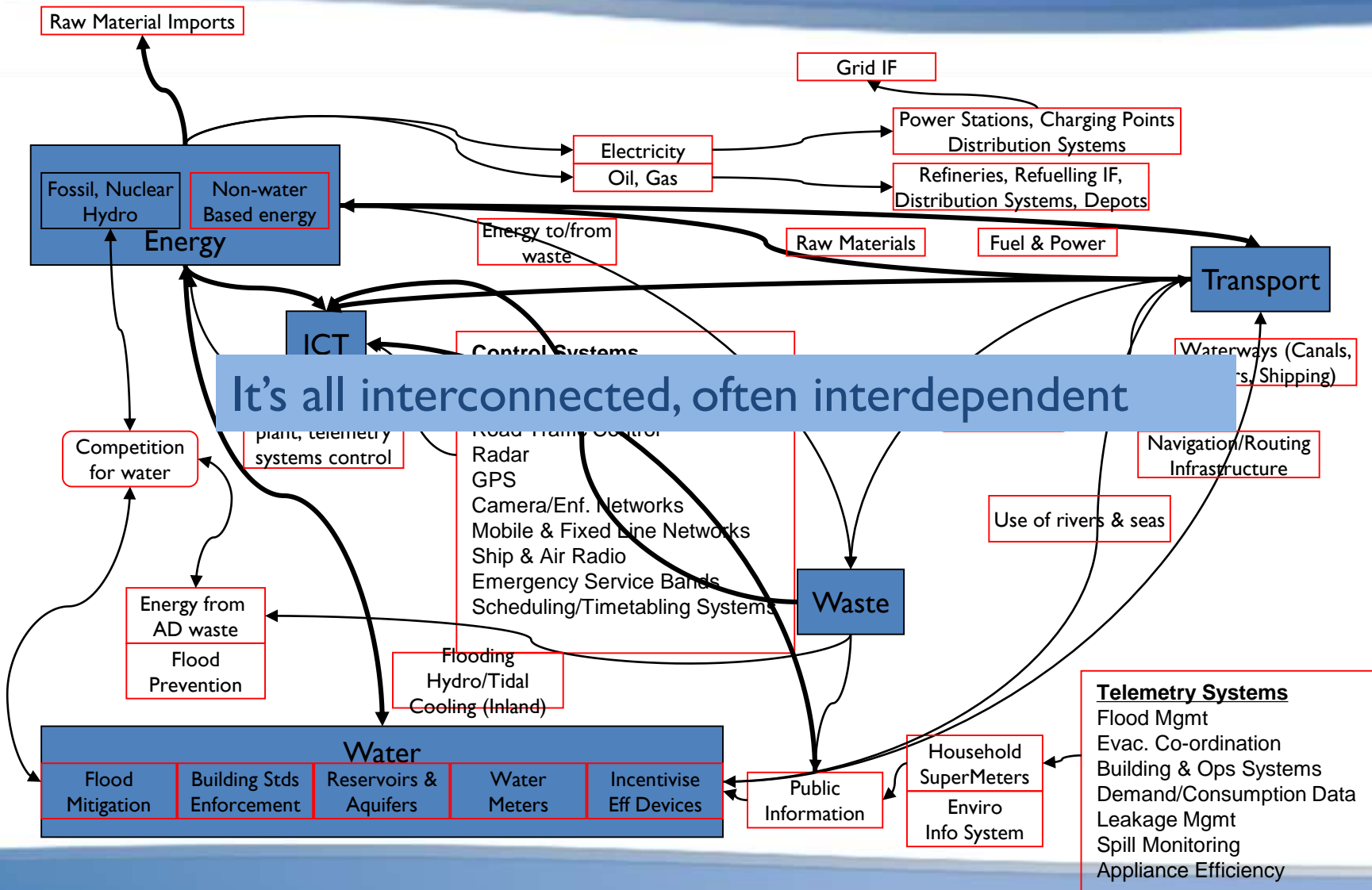
Next slides cover 'Infrastructure'

Infrastructure and society



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Complexity!



What is 'infrastructure'?



What is 'infrastructure'?



en.wikipedia.com



en.wikipedia.com



www.lifeinoakville.com



itv.com



www.belfasttelegraph.co.uk

What is 'infrastructure'?



www.telegraph.co.uk



www.bbc.co.uk



www.leverageacademy.com

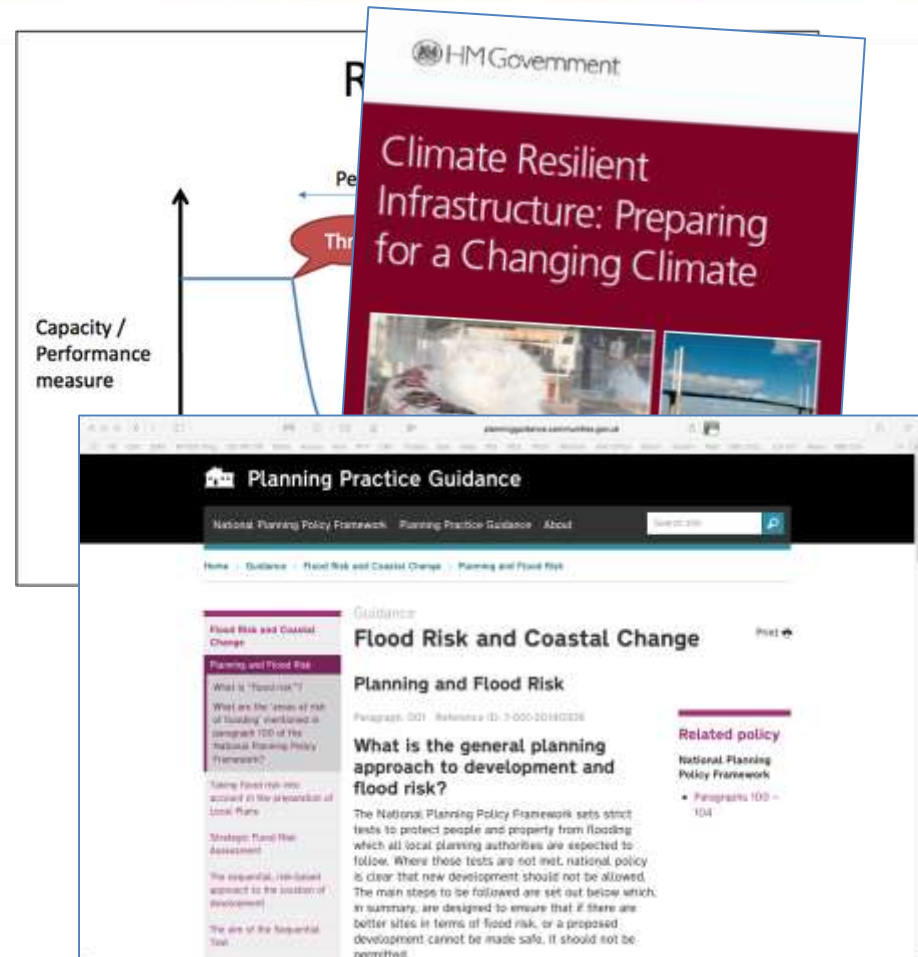


en.wikipedia.com

On 'resilience'...

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- 💧 What's 'resilience'?
- 💧 How much do you control?
 - 💧 Directly? Indirectly?
- 💧 What guidance is around?
 - 💧 Government...?
 - 💧 Research...?
 - 💧 Self-derived..?
 - 💧 Standards?
 - 💧 Aimed at whom?
- 💧 Who is in charge?
- 💧 Do they know enough?



Consider...

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- 💧 All relevant
- 💧 *Degree of relevance up to whoever governs the process*
- 💧 Governance important
 - 💧 Embedding learning?
- 💧 Reorganisations??



- 💧 Is there the 'capacity'?
 - 💧 Governance, skills, resources
 - 💧 Are they stable through time?
- 💧 Are the right measures in use?
 - 💧 Metrics need to recognise infrastructure **purpose and performance**
- 💧 Are things being put in a sensible place?
 - 💧 Location
 - 💧 Joint use of Infrastructure
- 💧 Is there proper 'learning'?
 - 💧 Flood reviews ??...!!

Opportunities

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💧 Growth + Development = Opportunity

qv: World Bank @ COP 22 Marrakech:
***‘two thirds of the infrastructure needed by 2050
has yet to be built’***

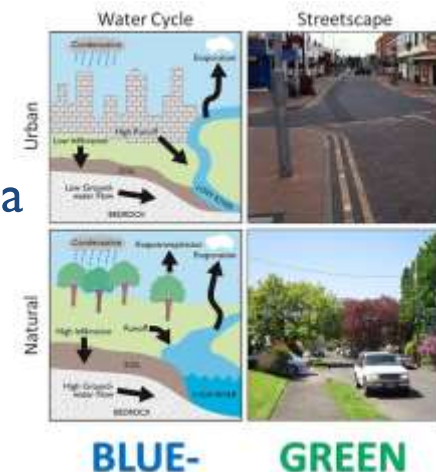
Given leadership, we can build a more resilient society

We have the tools to work *with* the Environment rather than against it:

- 💧 Adopt blue/ green infrastructure
- 💧 Build in better resilience as infrastructure is replaced = a no/ low cost strategy
- 💧 Tap into Engineers’ skills – given the problem, they’ll solve it!
- 💧 PLEASE! *be more critical of Economic assessments!*



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BLUE- **GREEN**

From the *best infrastructure operators...*

- 💧 Language is important – eg think Corporate Risk Register and (current) Resilience – eg: what about corporate reputation v failure?
- 💧 Risk assessments – baseline NOW, and look at the future
- 💧 Technical standards are VERY useful – and YOU can set these
- 💧 Embed knowledge in the organisation NOT an individual!
..but a Champion (with clout) to lead resilience planning is recommended
- 💧 Resilience planning is NOT emergency response planning!
- 💧 Influence resilience eg: flood management through RFCCs, SUDS; set planning policy rules that cover siting of critical infrastructure
- 💧 Challenge ‘traditional’ economics!
- 💧 Align metrics with system purpose, and make sure they work from the bottom to the top

Thank you