How the right information can better enable effective & efficient port management

- Especially: Port Resilience

Andrew Grainger, Duncan R Shaw, Kamal Achuthan

Andrew.Grainger@nottingham.ac.uk; Duncan.Shaw@nottingham.ac.uk; k.achuthan@ucl.ac.uk



The Idea: Port Resilience



First things first: What is a port?



What can go wrong?



MARS: Simulation Tool









MARVIN



A Directory of Port Related Information Sources and Uses

Growth curve of how companies use information



What is Big Data?

Big data is the personal minute to minute diary of everyone and everything – B2C, B2B and your machines.

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- A more precise use of resources, a more personalised service.
- Always a missing piece of the puzzle...what data do you need?



- Considerable scope for application in Port Resilience Planning
- Access to information needed, but currently not known where to locate or access it

What data is produced as cargo flows through a port?



'Bagatelle': pennies or steel balls drop between nails



https://commons.wikimedia.org/wiki/File:Flickr_-ronsaunders47_-YESTERDAY%27S_AMUSEMENTS._ISLE_OF_WIGHT_UK..jpg?uselang=en-gb

Imagine pennies bouncing on different flow routes



MARVIN: gives better quality alternatives

- A crisis occurs and a node in a flow of cargo is blocked, flooded, destroyed ... or something else.
- Information is needed to choose an alternative routing of the flow – just like the penny.
- MARVIN will be a *directory* of where to get that information.
- And would contain some of it to suggest *alternative options* & help in choosing... and look like Google Maps.
- Son of MARVIN would be an *access point* to that information.
- Grandson of MARVIN identifies strategies to fill information gaps & use latest analytics technology.

Eye in the Sky...



- Position, Location and Movement:
 - AIS, GPS
- Advance Notice:
 - Climate and weather; Tides;
 "Space Weather"
- Images:
 - Port facilities; Infrastructure;
 "eye in the sky" verification
- Communications
 - Satellite Phones
- Mapping
 - Topography; Infrastructure; Transport Systems