

Technical Invention for Museums:

**New technologies and older
people**

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We don't know ...

... about museums

But that's OK!

'The Importance of Ignorance in Requirements Engineering', Berry, 1995

We do know

- About **requirements engineering** – how to establish what people want new socio-technical systems or digital technologies to do
- About **user-centred design** – how to do this in a way that takes into account the needs, wants, abilities and limitations of potential users
- About ways of bringing about **technical innovation**
- About ways of working with **older people** in doing this

We are here today because ...

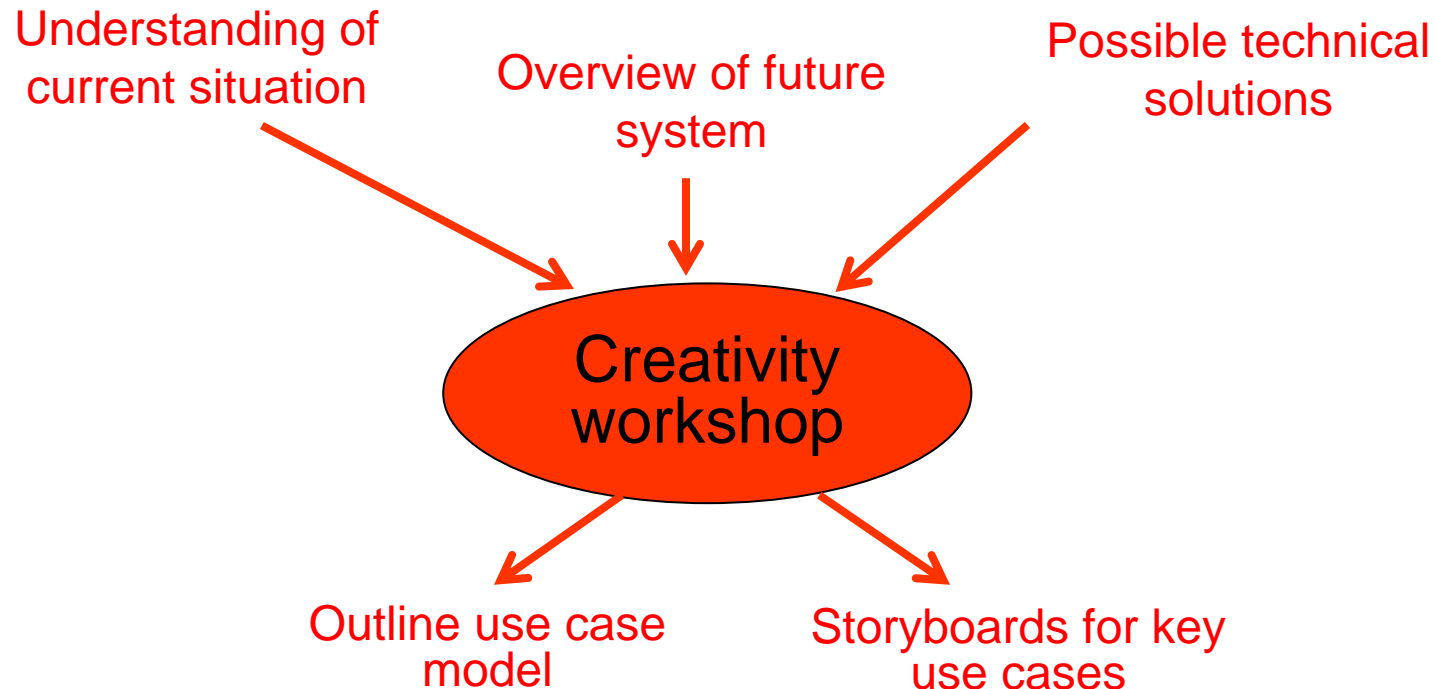
We would like to help facilitate communication between the different cultures/stakeholder groups represented here today to explore and help bring about technical innovations that can provide a more inclusive experience of museums, especially for older people.

or

We would like to do what we do with you!

Creativity Workshops

A space for creating and inventing ideas



Invent ideas with which to write specifications

DMAN: Departure MANager

Departure manager for major European airports

- Sponsored by Eurocontrol
- Software project over 12-month period
- Joint project involving UK and French national bodies
- Applications including Heathrow & Charles de Gaulle



Other projects

- CORA-2, MSP, EASM , VANTAGE – air traffic control;
- PITO – use of biometric technologies in policing;
- APOSDLE – development of work-based learning;
- Traceback – providing support for food traceability.

Creativity Workshops



Pin boards
structured by
use case

System
models
available
to all

Facilitated
guidance at
all times

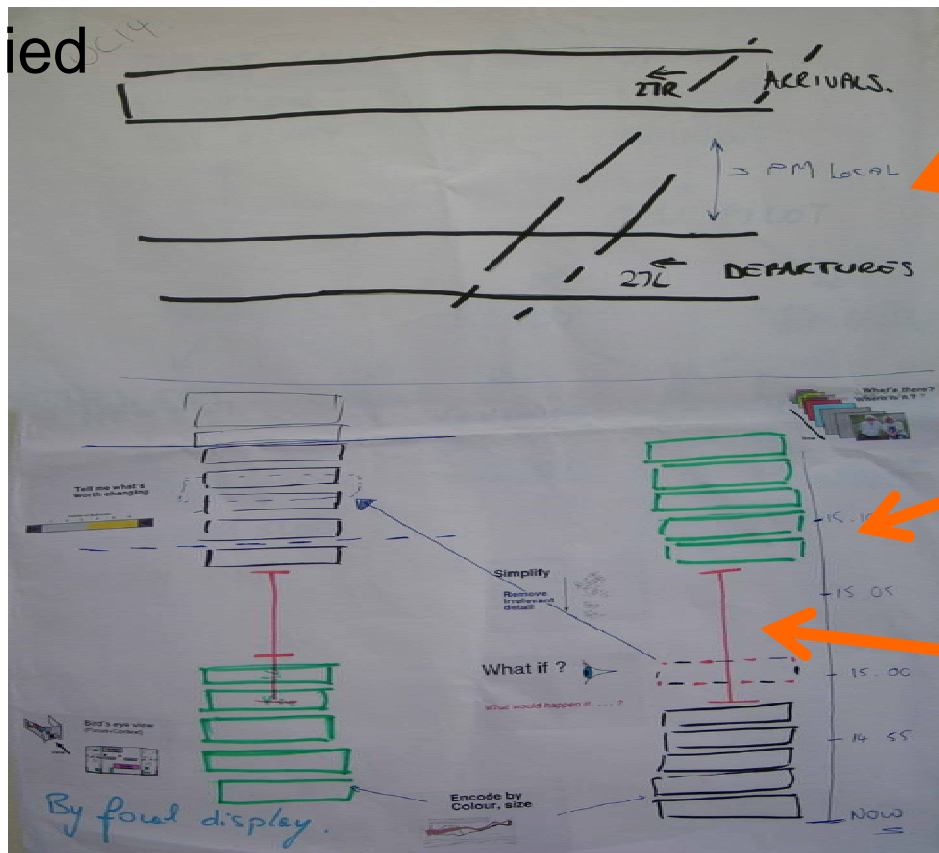
Colour-
coded snow
cards for
ideas

U-shaped table
for talks and
report backs

Games to
encourage
playfulness

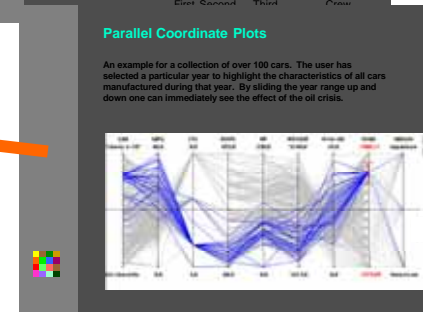
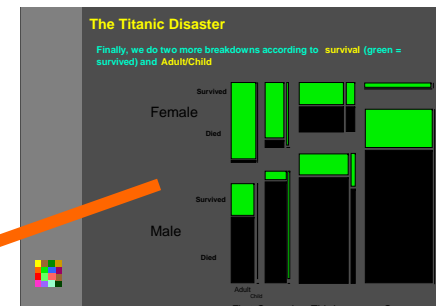
Information Visualisation

Looking at current problems/needs/opportunities and how information visualisations might be applied



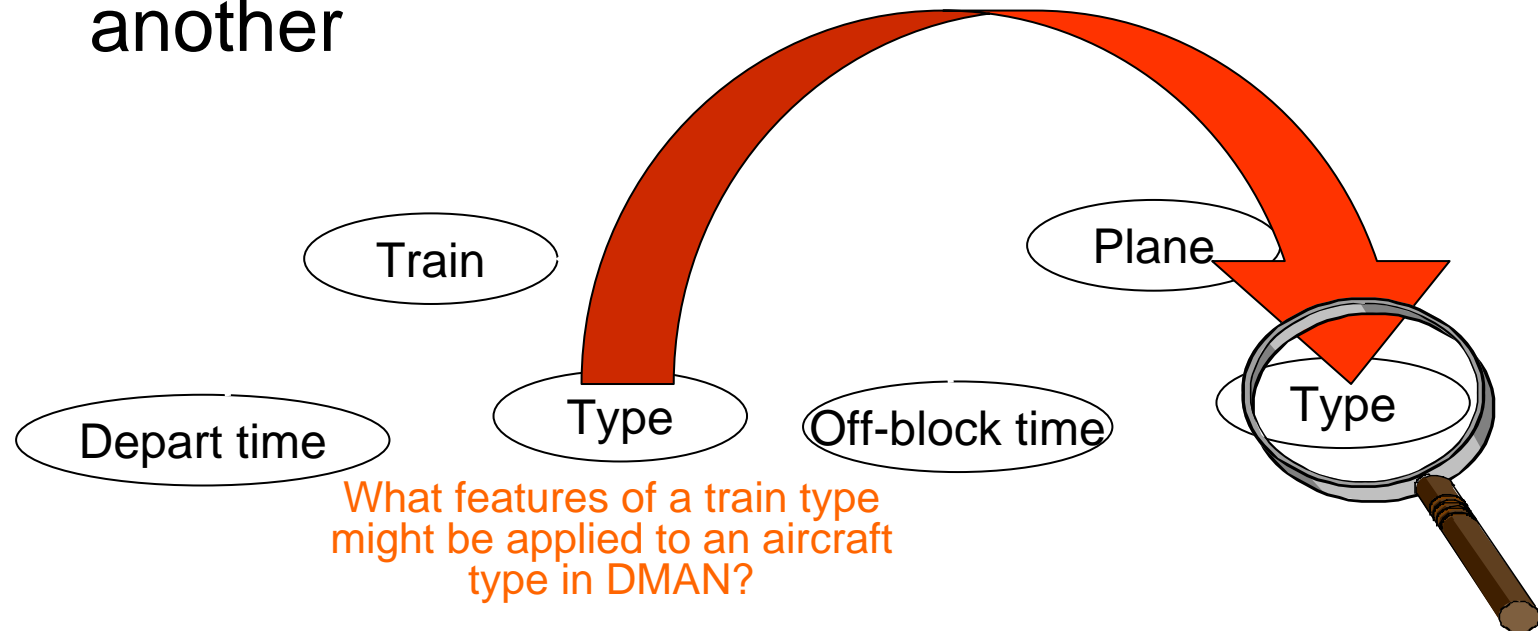
UC17: Departure Planned from another airport in TMA

When a DMAN at another airport in the TMA plans a departure time, this may place a constraint on departures because of flow limits over downstream fixes. In some cases DMAN at another airport will request a change to the departure sequence so it can manage its own traffic more efficiently.

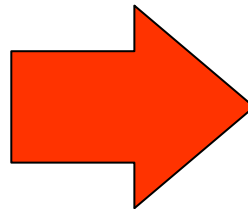


Facilitated Analogical Reasoning

Important technique for creative thinking, involving transfer of knowledge from one domain into another



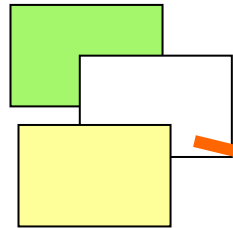
1. Turnaround time
2. Speed and time to move
3. Length and platform fits
4. Typical routes followed



1. Turnaround and cleaning time
2. Taxi speeds
3. Aircraft size and gates
4. Terminals and flight routes

Storyboarding

Storyboards integrate ideas from other workshop activities to envision future systems


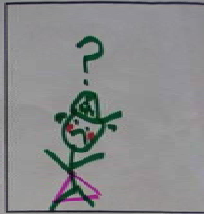
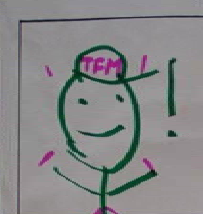
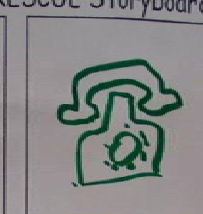
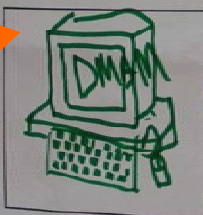
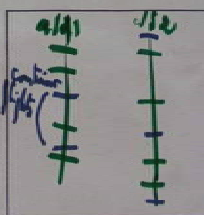
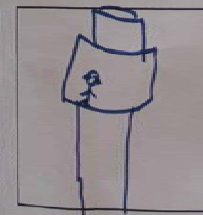
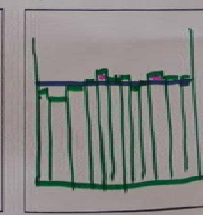


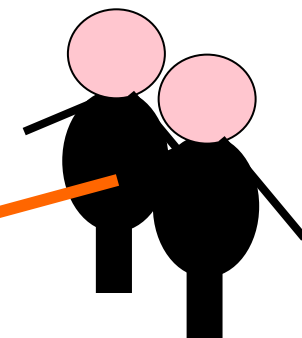
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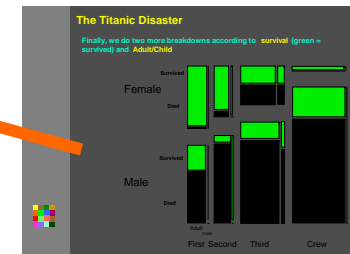
Use Case No/Name: 17

RESCUE Storyboard

			
Flow problem detected.	Consider options (comu, MDI, dep arr) re-sequencing	Devise strategy (deprate MDIs, dep. Metering)	Call airports. MATHS?
			
TFM Departs the constraints about and diminish times in DMAN	DMAN reschedule flights.	Airport controller see & back to new schedule. (Maintaining Text control)	Not Tactical / how manager. Res are updated

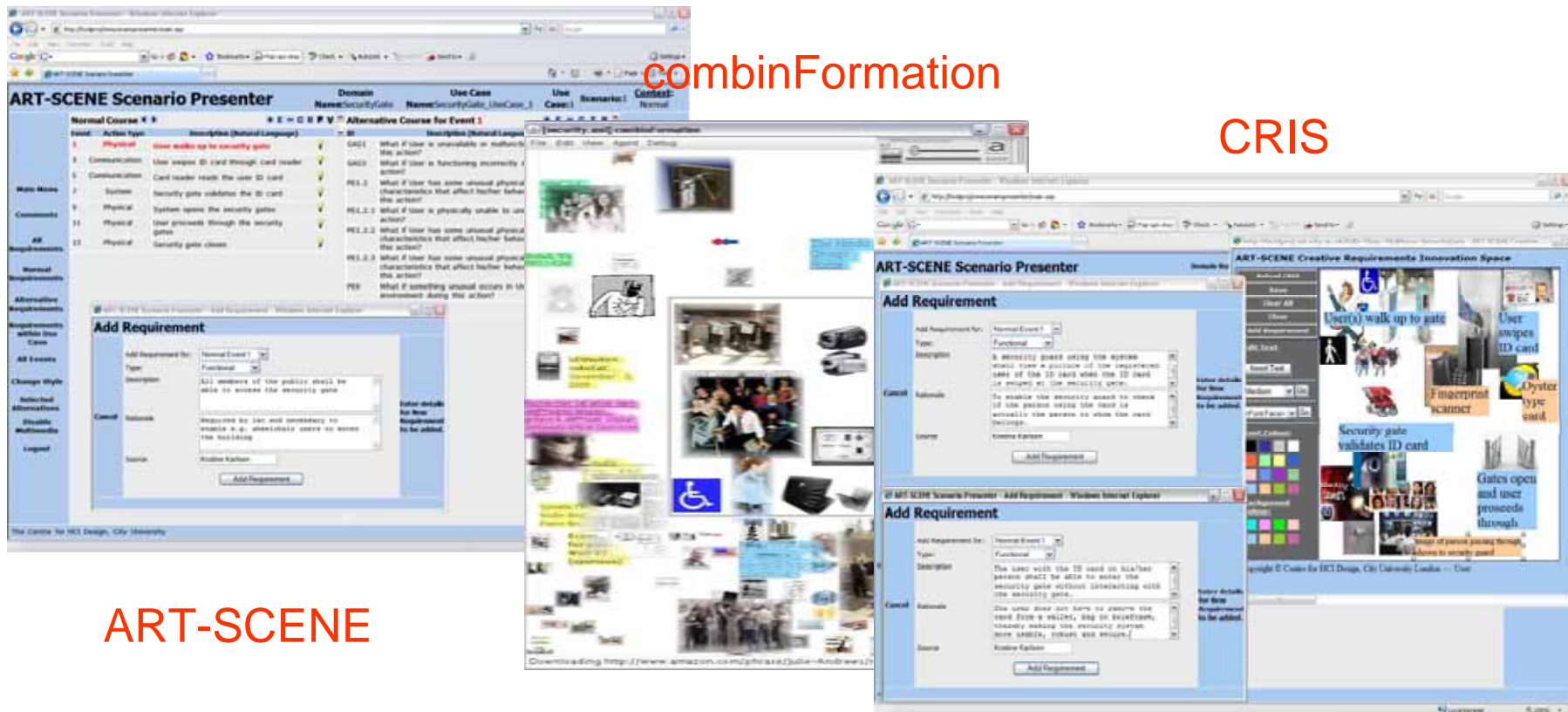


More new ideas



Creativity Support Tools

We have some prototype creativity support tools for use by individual designers ...



Creativity Support Tools contd.

... or by teams of designers



Involving older people

We are also developing ways of doing co-design with older people



Thank you!

Questions?

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