

# Smart Future Cities 2015

Smart Transportation – it's not just about the technologies, it's what you do with them that counts

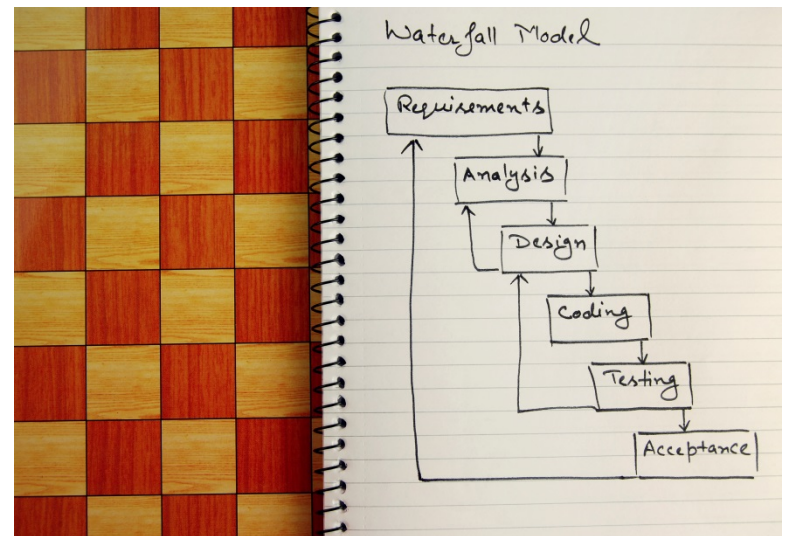
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# A Technocrat's Perspective

- Through system engineering lenses, a highly structured, traceable process
- User needs and requirements are identified and analysed
- Functional and technical specifications are then prepared





# But there are....Multiple parties, Multiple Objectives, Competing Needs



Roads  
Agency:  
More roads?

Public Transport  
Agency:  
Focus on buses,  
rail, ferries

Urban Development  
Agency:  
More  
housing/commercial  
centres?

Community, Environmental, Health, Local  
Gov't Agencies: More green spaces,  
healthy living (bike/walking paths)



# And.....Technology is the enabler, not the driver

- Look beyond the technology
- Focus on outcomes to be achieved by technology
- Paint the vision (in Plain English) for stakeholders and end users
- Buy-in and agreement on vision is critical before system engineering commences



The system engineering process does not manage behavioural changes – a key success factor for smart transportation projects

# A question of transformation and change

- System engineering is not the only process required to implement smart transportation
- A transformation and change management process needs to be rolled out in parallel, if not prior, that is not dissimilar to the approach for business transformation and organisational change – EXCEPT the organisation is a whole community or society



# A holistic process

- Integrated agency approach (silos will present roadblocks and risks to successful implementation)
- Long term common vision required
- Align interests of the various parties BEFORE anything else
- Top down leadership with clear allocation of accountability between agencies and within agencies





# Barriers to change

- “Solution” push vs “need” pull
- “Techno-speak” baffles the laymen (majority of stakeholders)
- Vested interests of different parties
- Fear of the new and unknown
- “Exactness of solution” (technocrat’s view) vs “Good enough” (pragmatic policy makers and general public)
- Risk of emerging technologies – leap of faith required at times



# Challenges

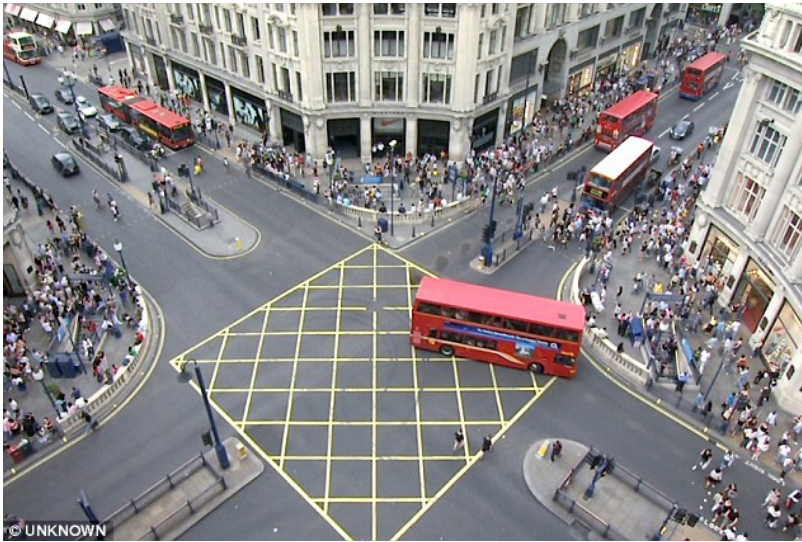
- “What’s it in for me?” mindset of each stakeholder
- Ownership through the life cycle of the project
- Reward and empower the visionaries within the organisation





# A successful example

Oxford Circus **Before** – designed for vehicles and to herd people



[www.dailymail.co.uk](http://www.dailymail.co.uk) ©unknown

Oxford Circus **After** – shared by vehicles and people (no barriers)

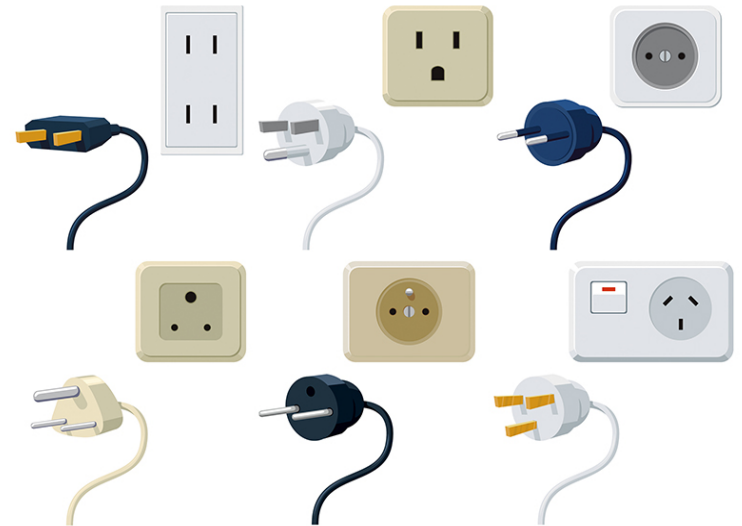


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This exemplifies technology as an enabler to effect the change from before to after

# One size (solution) does not fit all

- Various case studies from different countries show that there is no “one-size” approach toward smart transportation projects
- However, the common successful ingredients are:
  - ✓ a clear understanding of the benefits of technology to the community at large
  - ✓ Two key processes being undertaken – change management and system engineering process
  - ✓ Inter-agency collaboration in evidence



# Risk and Opportunity

- In a world of Big Data and the Internet of Things, exciting **opportunities** to be realised from smart technologies for transportation projects
- However, beware of the **risks** of being baffled by the technologies themselves – there is a significant change component that is not necessarily within the expertise of the engineers and the technologists

