



# GIS as a Strategy to Programme Management

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# Summary



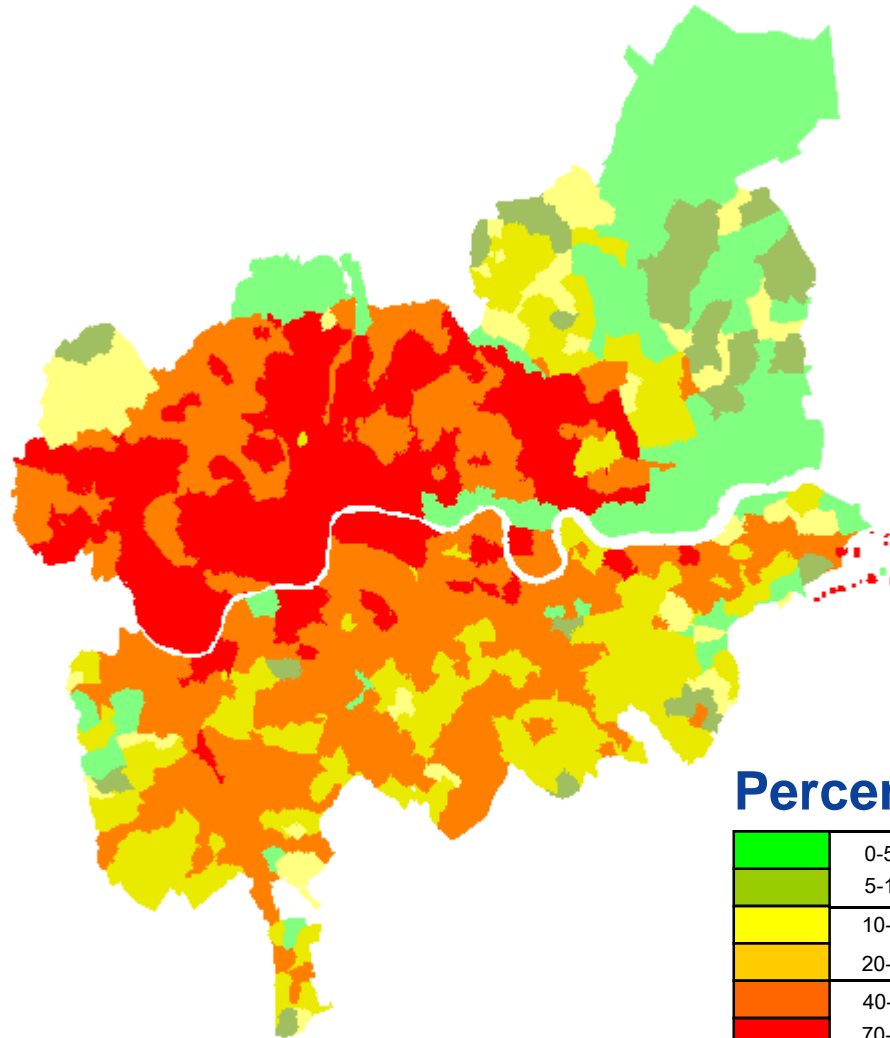
- Project Background
- GIS Strategy
- Planning for ROI
- Delivery the Strategy
- Demonstrating Business Benefit and ROI
- Future Scoping
- Challenges and Successes
- Live Demo
- Questions

# Project background









- Needed to reduce the problem of the capital's Victorian sewers overflowing into the River Thames.
- Part of solution required to ensure compliance with **Urban Wastewater Treatment Directive**.
- Discharges of untreated sewage currently occur more than once a week on average, via 57 overflow points.
- New challenges make scheme increasingly urgent - eg population growth, more intense storms linked to climate change & increasing urbanisation.
- Years of studies have shown that the London Tideway Tunnels are the most cost effective way of tackling this unacceptable problem.
- Simply, the system needs more capacity to meet the needs of modern day London.

# London's sewerage system today



## Percentage Connected

	0-5 %	Separate system
	5-10 %	
	10-20 %	Partially separate system
	20-40%	
	40-70%	Combined system
	70-100%	

# Discharging CSO





# GIS Strategy – why do we need one?



- Outlines short, medium and long term delivery
- Helps with project and client acceptance
- Outlines project benefits
- Outlines cost and effort road map
- Outlines roles & responsibilities
- Drives recruitment plan
- Feeds into programme schedule
  - Deliverables can be tracked
- Demonstrates information management
- Centralises geographic data

# GIS Strategy – getting it accepted



- Present document outlining your strategy and delivery plan
- Frequent GIS 'Info Sessions'
  - highlight project benefits
  - how to use information
  - what it can do
- Get Project Director sign off
  - don't delay delivering initial tools
- Produce GIS deliverables
- Report on progress regularly
- Don't underestimate individuals understanding of the technology
- Steer away from technical terminology

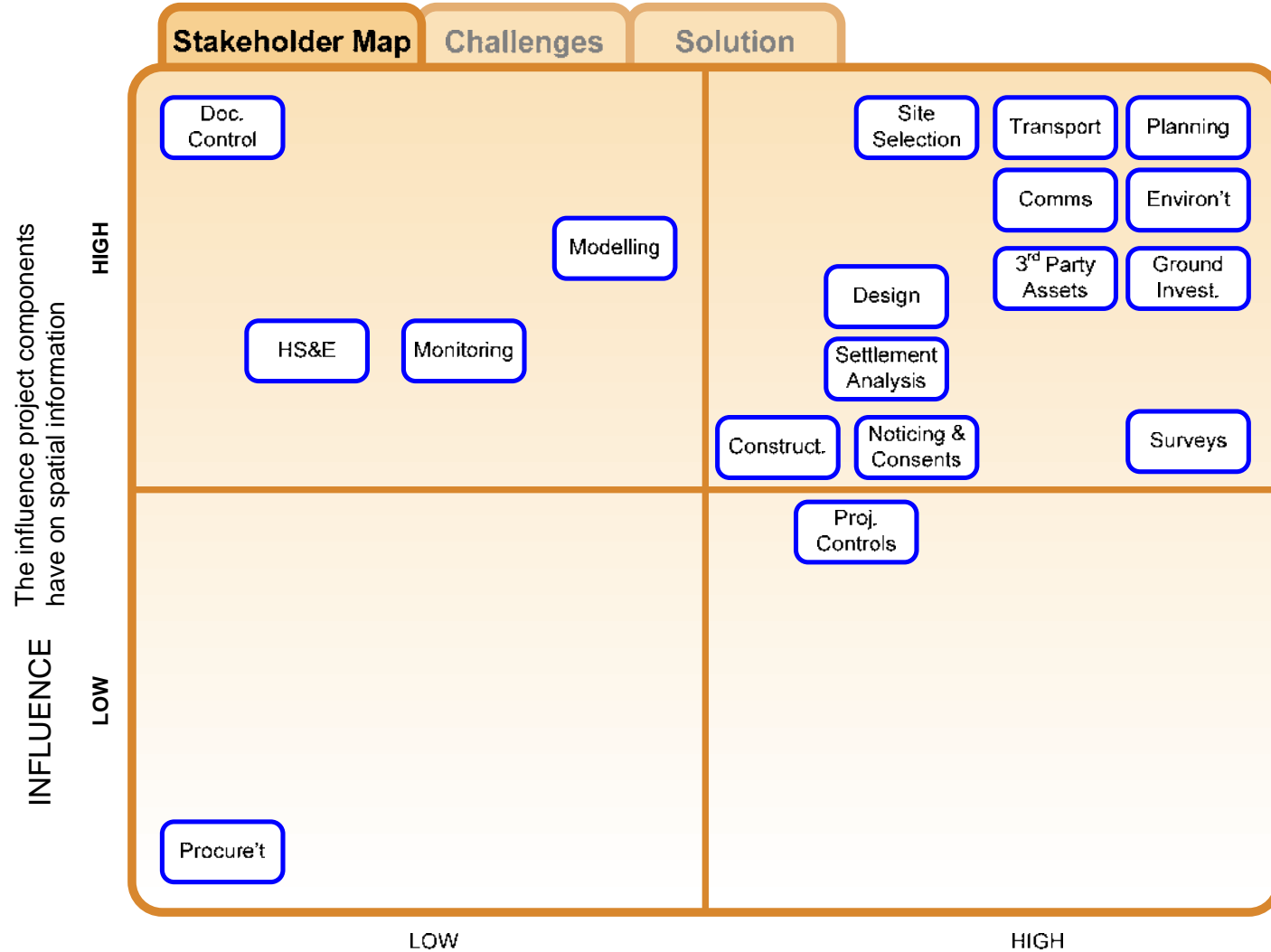


# GIS Strategy – planning ROI



- Fundamental to future success
- Not always tangible
- Selling time savings through efficiency
- Access to information
  - right time, right cost, right format
- Trust in information
- Provide usable products
- Record requests and deliveries against WBS
- Map and engage stakeholders early while project is still finding its feet

# Delivering the GIS Strategy



DEMAND

The demand for information, services and support by the project on GIS

# Delivering the GIS Strategy



Stakeholder Map

Challenges

Solution

Geographically disconnected project office

Hardcopy original data – circa 1865 ACD

Multiple contractors – mostly external of project office

Easy access to variety of information

Interaction with other relevant data

Familiarity with project locations

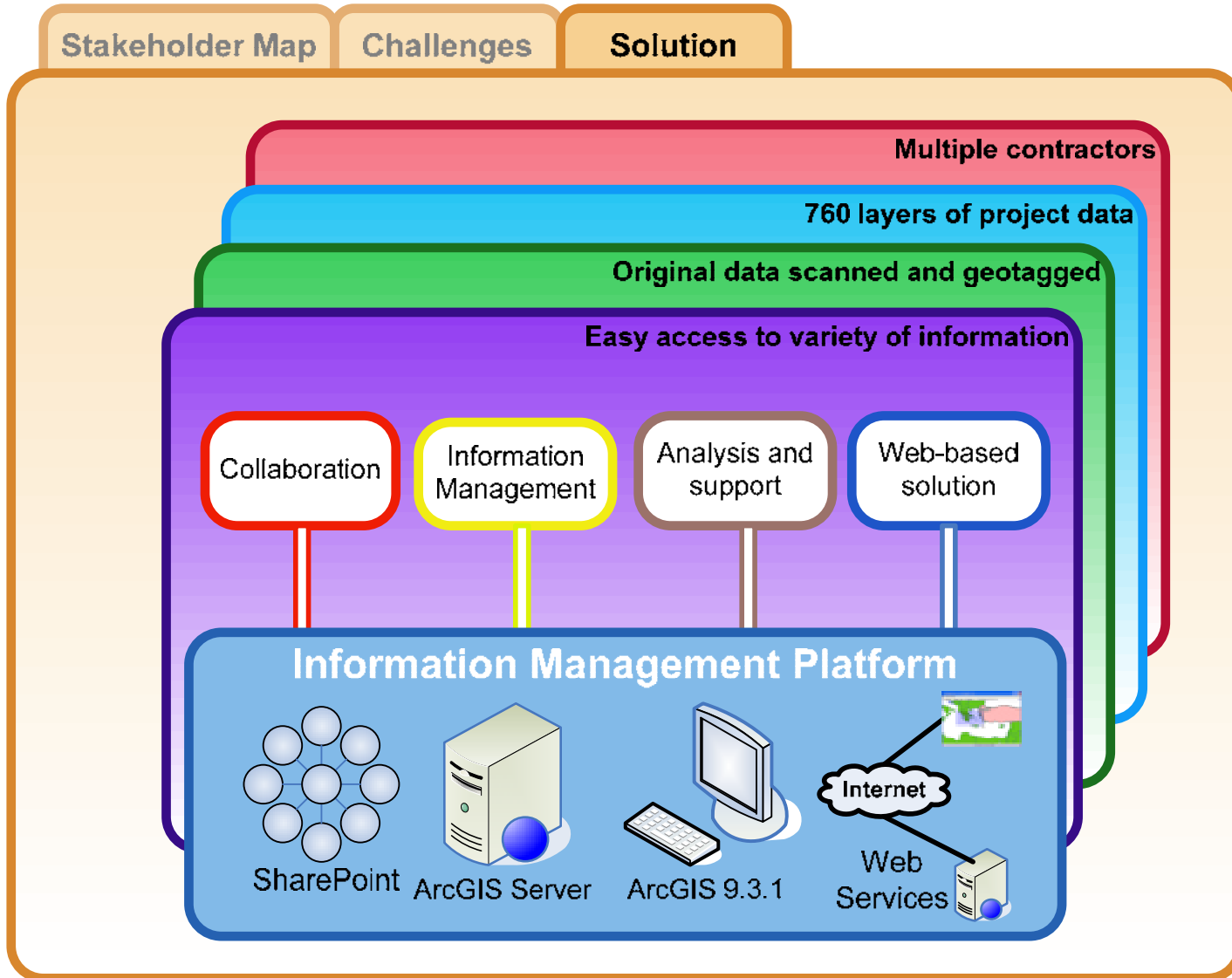
Project data vs Operation data

Traditional vs Modern technology users

Existing assets in GIS format

**No Common Information Platform**

# Delivering the GIS Strategy



# Demonstrating Business Benefit & ROI



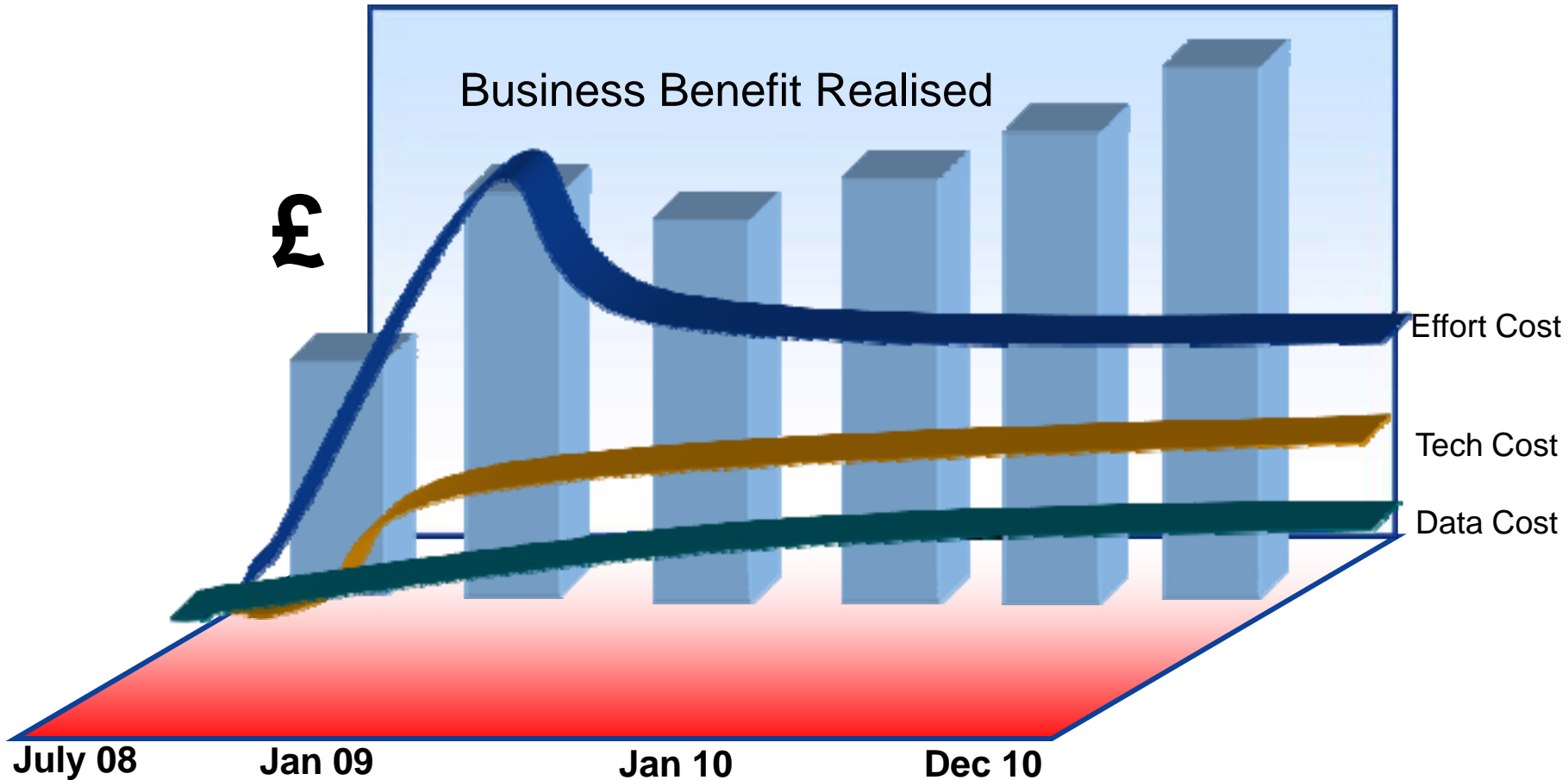
- Why do I need this thing called GIS?
- Will it cost me a lot of money?
- What does it do that my existing tools don't do?
- Is it not just a nice to have?

# Demonstrating Business Benefit & ROI



- Demonstrate time savings for using GIS vs another technology
- Speed of accessing information
- Trust in 'Single Source of Truth'
- Importance of visualisation
- Deliver custom changes where appropriate
- Keep solutions as vanilla as possible
- Demonstrate efficiency in delivery support
- Communicate to client, project directors and managers successes
- Culture is the toughest hurdle

# ROI Graph



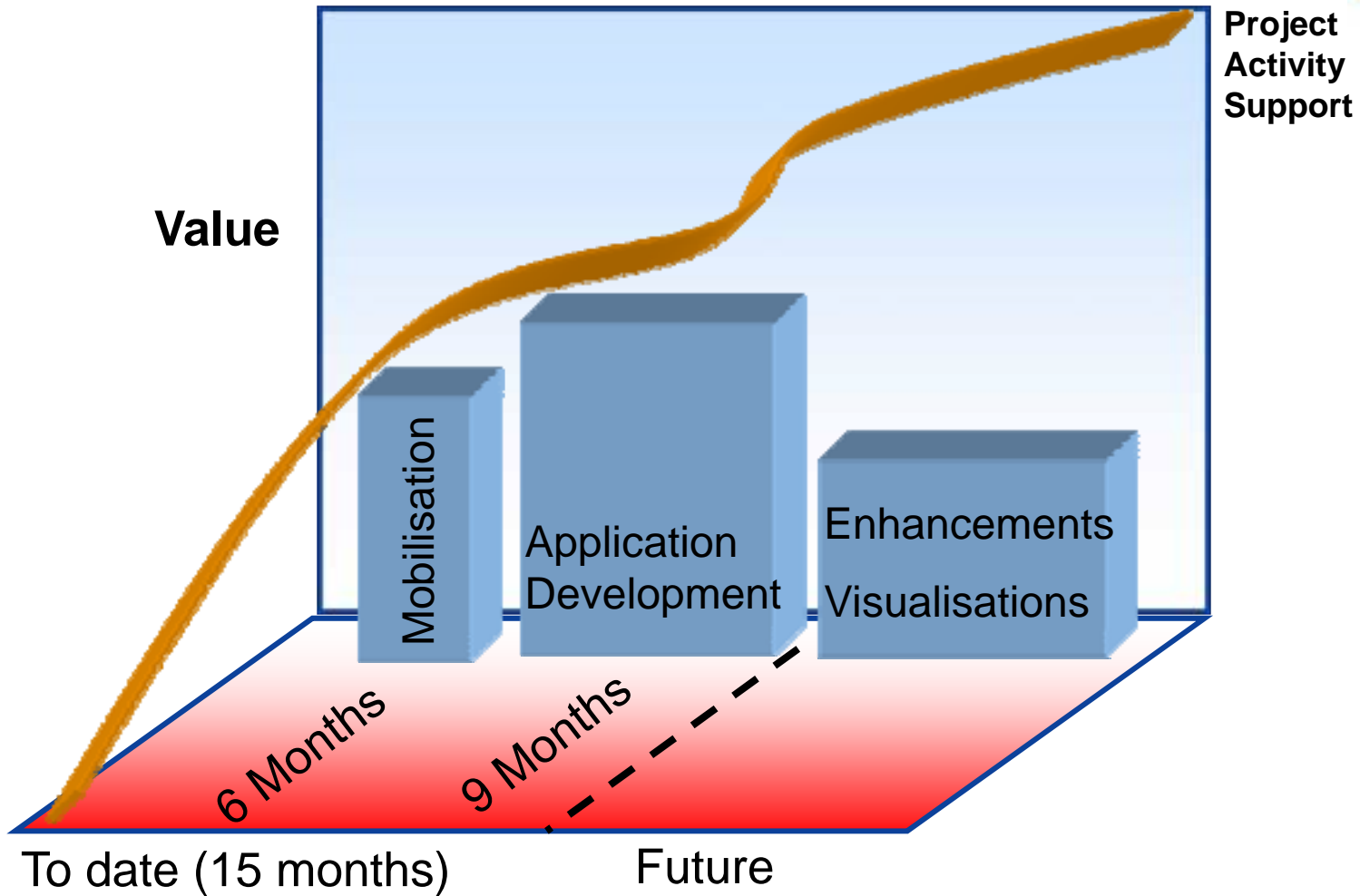
# Current Status



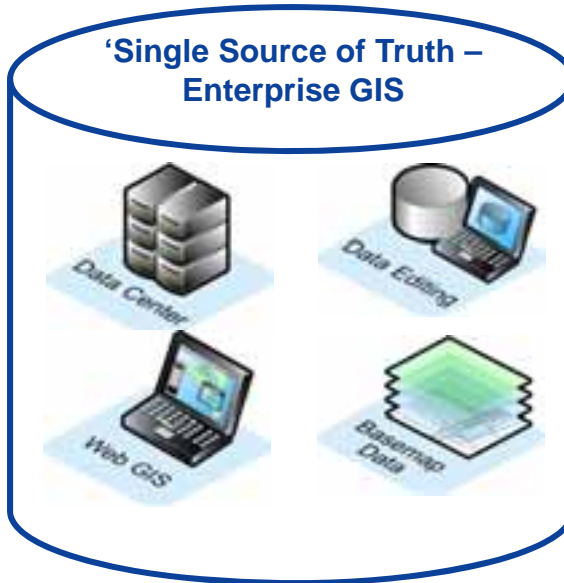
- GIS Mobilisation project delivered
- GIS Viewer applications delivered
- Growth in ongoing project support
- Strong uptake on the use of GIS for decision making
  - daily use of GeoViewers
  - GeoViewers used in workshops
  - GIS outputs required daily
- Central to Information Management processes
- **ROI being used to scope demand in next financial year**
- **Seen as an integral component of the project**
  - **not a 'nice to have'**



# Lifecycle Overview



# Future Scoping



- Information Management
- Deliver Efficiency
- Visualisation
- Integrate with Programme Management Tools
- Decision Support
- Web Mapping
- Stakeholder Engagement

- Public Consultation
- 3rd Party Assets
- Site Selection
- Public Consultation
- Reference Design
- Utility Works
- Modelling
- Field Mapping
- Prelim Design
- Sustainability
- Suitability Analysis
- Planning
- E A
- System Master Plan
- Monitoring & Sampling
- Ground Investigation

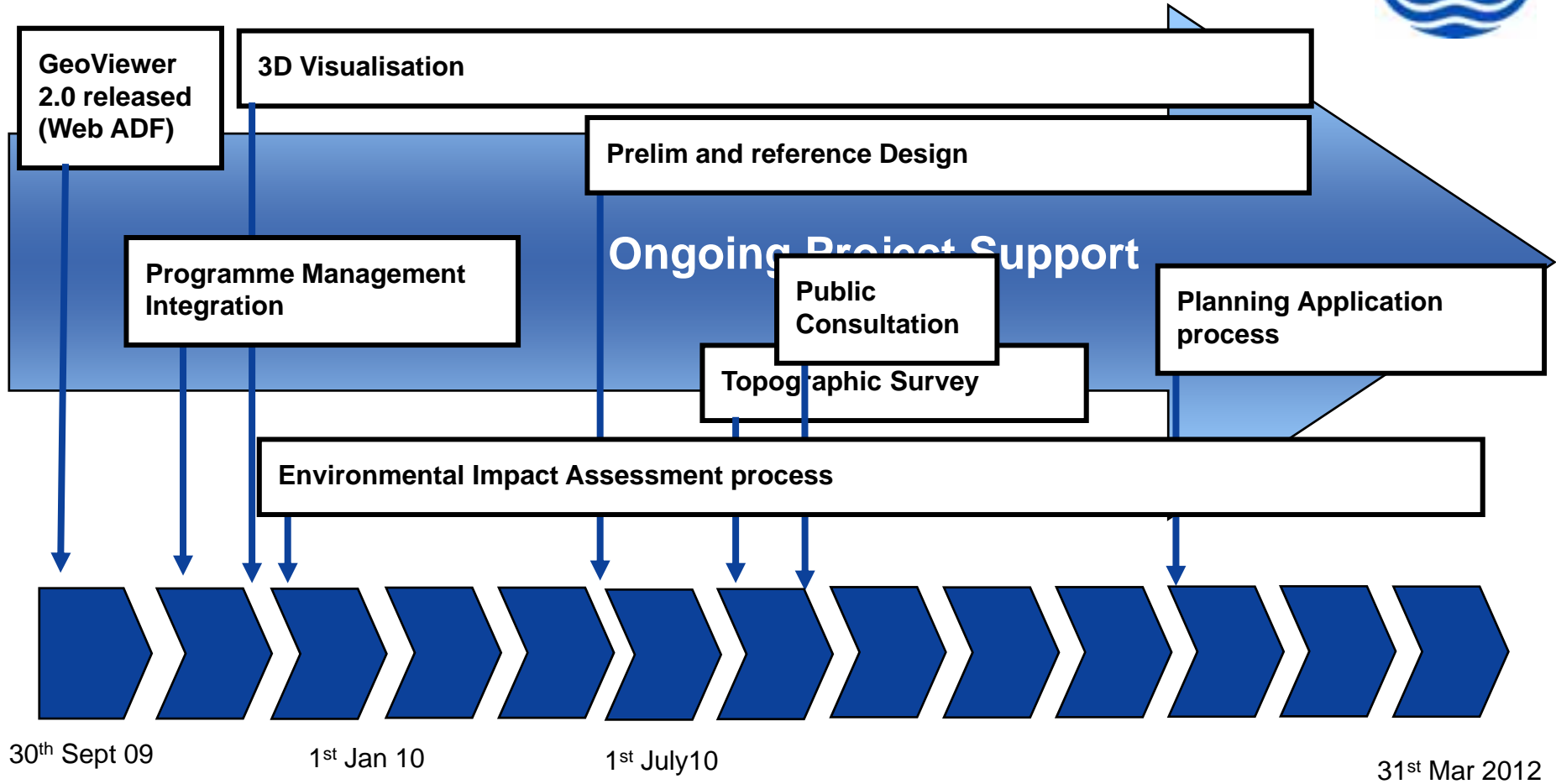


**2007** **2012** **2020**

**Pre-construction Phase** **Construction Phase**

Planning, Design Development, Land Acquisition, Tender Bid Assessment and Award TBM Design and Manufacture, Shaft Construction, Tunnel Boring, CSO Works, M&E, Utility Works, Testing and Commissioning

# Future Scoping



# Other project tools



## Currently integrate with:

- Microsoft SharePoint
  - Collaboration
  - Access to project documents through GIS
  - Access GIS web applications
  - Progress reporting and visualisation
  - Knowledge sharing (wiki's and blogs)

## Future tools to integrate with:

- Bentley ProjectWise for design management
- Primavera P6 web for scheduling

# Challenges & Successes



## Challenges

- Fast paced project
- Project activity already started
- High volume of data
- Framework data agreements needed establishing
- High demand for information
- GIS unknown to most on the project team

## Successes

- GIS Strategy to drive delivery and ROI
- Standards, Policies and Procedures early
- Begin education process immediately
- Roll out data access quickly
- Applications delivered on time to budget
- User uptake better than expected

# Live Demo



me > Programme Offices > Spatial Information > GISDocs > GIS

GeoLite v1.1.3



GeoLite



National Grid Coordinates E: 532,095 N: 180,582.6

GeoViewer



# Questions



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