



# Project Controls

## EXPO

---

# Project Controls Expo – 16<sup>th</sup> Nov 2017

## Emirates Stadium, London

**Controls Professionals, Make or Buy**



**Project Controls**  
EXPO

Copyright © 2011. All rights reserved

# About the Speaker

---

**Mike Laws was Head of Reporting and Head of Programme Efficiency at Crossrail, and now supports a wide portfolio of interesting projects for CH2M.**

- A programme manager with 15 years' experience in delivering large, complex change programmes, principally for public sector clients.
  - A Professional bureaucrat
  - A Chartered Management Accountant
  - An interest in how people and organisations communicate and learn

# About the Topic

---

## Topic Outline

- How do we attract, recruit and retain great people
- What are the core skills (competences) which these people need?

# About CH2M

CH2M is a global leader in full-service consulting, design, design-build, operations and program management.

Service Portfolio includes:

- applied science laboratory,
- architecture and planning,
- construction management,
- industrial safety, procurement and many many more!

**9 Years**  
as one of the world's most ethical companies

**5,000**  
clients

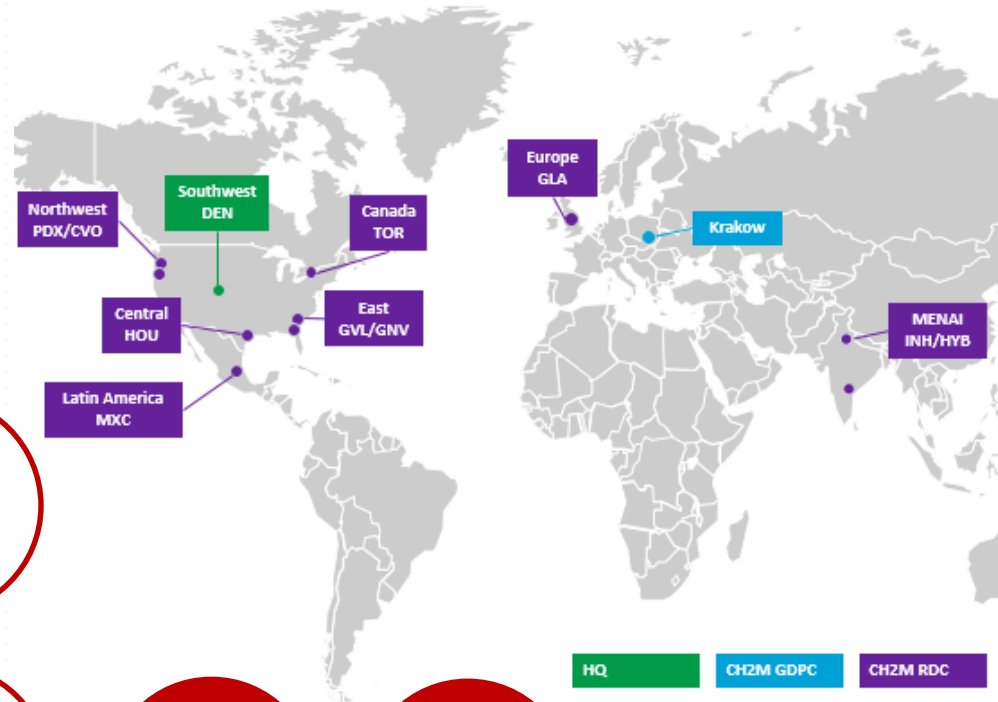
**10,000**  
Communities Impacted

**20,000**  
Employees worldwide

**\$5.2**  
Billion in Revenue  
(2016, US\$)

**3**  
Client operating sectors

**6**  
continents



# Crossrail

## Project Scope

- Europe's largest construction project employing 14,000 people at peak and estimated to contribute £36bn to the UK economy
- New railway route through London from west to east, helping to improve transit, ease congestion, and establish connections to areas east and southeast of the City
- When Crossrail opens it will increase London's public transport network capacity by 10% and help an extra 1.5 million people to access employment

## Our Role

- Programme Delivery Partner, providing project controls and technical services.
- Cost estimation to enable effective risk management.
- Role out of i3P innovation platform and legacy lessons learnt.

*Achievements included a saving of £300m of capital cost by re-structuring the projects in their initial start up.*



# High Speed 2



## Project Scope

- £50 billion programme to build a high speed rail line between London and the West Midlands (by 2026) and on to Manchester and Leeds
- The high capacity rail line, designed to standard European high speed specifications, will have length of 191.5-km, and will operate at speeds of up to 400 km/h

## Our Role

- Programme Development Partner for phase 1, leading the development of the engineering, design, environmental work and project controls for the successful submission of the Hybrid Bill.
- Requirement and assurance including configuration management (CM) on phase 1 and phase 2a providing a fully auditable Bill submission.
- Engineering Delivery Partner for phase 1, which includes provision of technical guidance and assurance, procurement of the main works civils (MWCs) contracts.



*Achievements included the evolution of a technical and change panel that reviewed the impacts of proposed change across all disciplines and deliverables. This enabled robust cost estimation and delivery to an accelerated programme.*

# Team2100

## Thames Estuary Asset Management 2100 (TEAM2100)

### Project Scope

- At £300m, this is the Environment Agency's (EA) largest flood risk programme it is also in the Government's top 40 infrastructure projects
- An efficiency target of £100m over 10 years
- Programme development for the asset management of all tidal Thames flood defences and assets that includes protection of £200bn of property.

### Our Role

- Appointed as delivery partner, and working as integrated team, we are responsible for the design and delivery of streamlined governance procedures, schedule, risk and opportunity management, business case appraisal and outcome focused incentivisation.



*Achievements include establishing a programme management framework (developed from Crossrail) that achieved £4m in efficiency savings (2015) alone and was successfully audited by the IPA and given 'green' status. The first EA project to achieve this.*

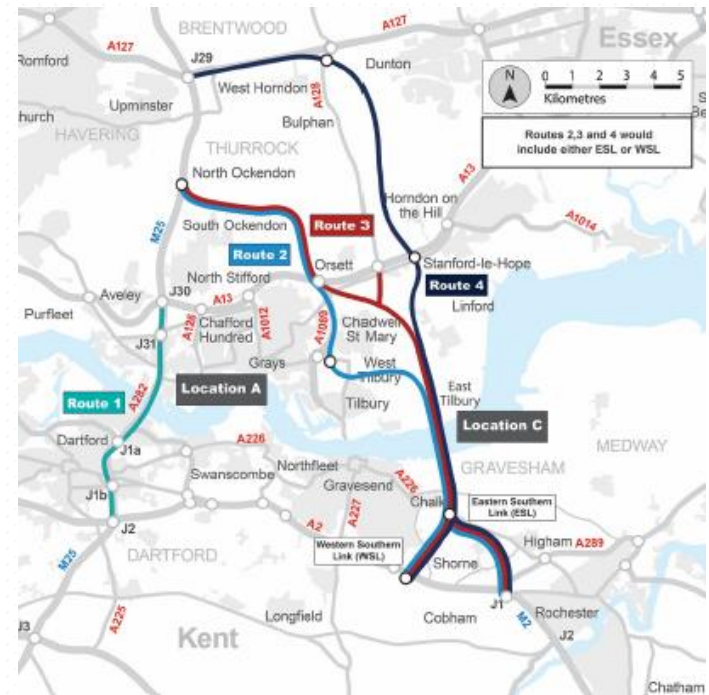
# Lower Thames Crossing

## Project Scope

- A £6.2bn river crossing scheme east of Gravesend and Tilbury
- Increasing capacity in the east of London by 70% and relieving pressure on the Dartford tunnel
- A 13.2 mile route that will be developed as a tunnelling option
- Creation of 6,000 new jobs and contributing £8bn to the UK economy.

## Our Role

- Option selection, strategic programme development and PMO set up through to the Development Consent Order (DCO) application
- Funding strategy, procurement strategy, stakeholder management, cost and schedule development and risk management.



*Provision of procurement advice to inform the next stages of delivery have enabled Highways England to assess the opportunity for PPP/PF2 financing models as well as a greater understanding of the risk levels involved in later stages of the project.*



# Panama Canal

## Project Scope

- \$5.25bn expansion programme
- Construction of new Atlantic and Pacific locks enabling transit of larger and wider ships
- The expansion has doubled the tonnage capacity and enabled 2,000 more ships to pass through each year.

## Our Role

- Providing Programme Management advisory services for both the design and construction of both locks. This included: baseline setup, performance reporting, change management, risk management, document control and contractual close-out.

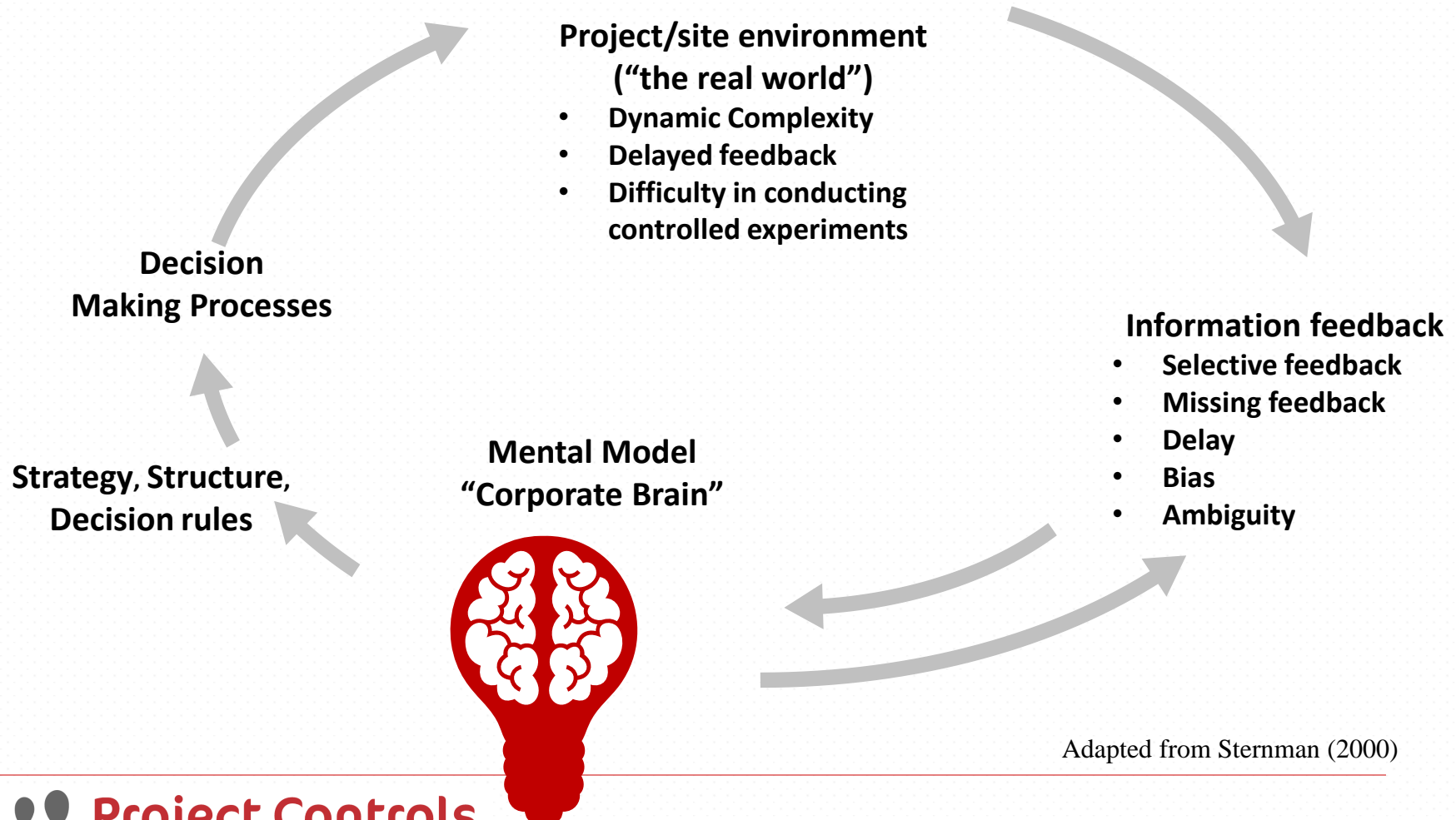


*Management of risk through effective tracking, mitigation, modelling and analysis lead to managed allocation of contingency funding that achieved delivery to budget.*

# Sufficient, Capable, Motivated

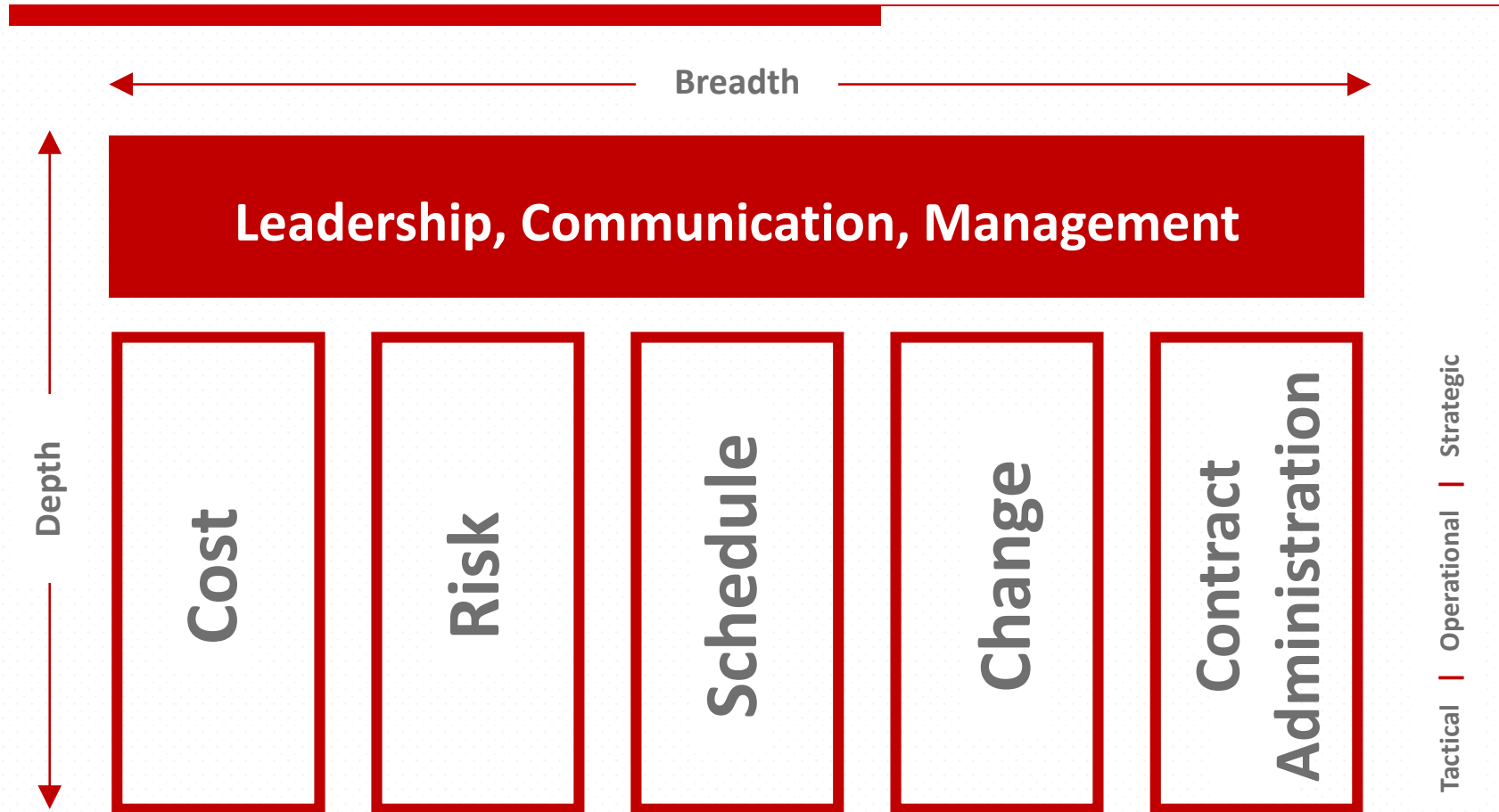
---

# A System Based Model of Programme Communication



Adapted from Sternman (2000)

# Programme and Project Controls



# Some Stories about Communication

---

- **Stories are important ways of sharing understanding in context**