

#### **NORTHERN LINE EXTENSION PROJECT**







# Using lean to deliver a new railway

Graeme Shaw, Transport for London











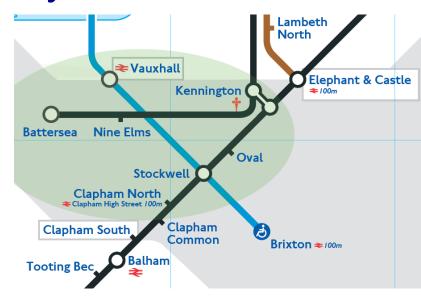






## **The Northern Line Extension**

- £1bn, 3.2km new railway
- 2 new stations
- 18,000 new homes
- 24,000 new jobs
- Complete by 2020













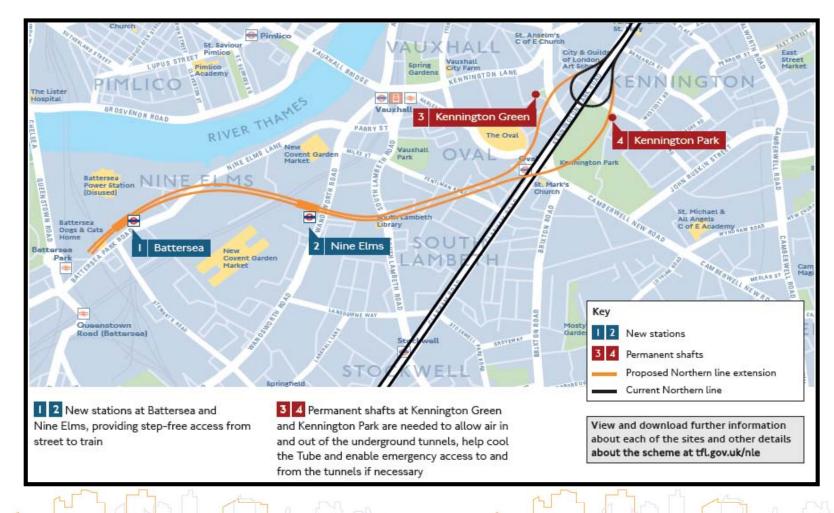




#### #projectsarepeople

#### The Route



















# **Trojan Tube**

- LU Station Upgrades
- LTP
- 220,000 work hours
- Over £20m of savings
- Cultural change <u>achieved</u>

















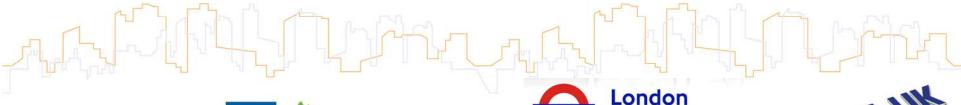


#### The NLE will be

- The Eden Project
- Collaborative BS1100(?)
- Empowered and embedded
- Laughter, not screams























#### The NLE will have

- No rear view mirrors
- Minimal email traffic
- Challenging discussions
- Perpetual Challenge <u>from below</u>

















## The NLE will

- Transform the supply chain
- Rotate, and rotate, and rotate
- Direct the help we need
- Ask why without fear

#### WHY NOT?





















#### The NLE team will become

- Leaders in waste elimination
- Behaviourally focussed
- Understand motivation



Relentless, Inquisitive, Loud





# Why so sure we will succeed?

- They are better than we think
- Empowerment creates shiny eyes
- They will solve problems we don't know exist
- Let me explain why..





#### **NOWRI**

## Notice Of Works Ready For Inspection

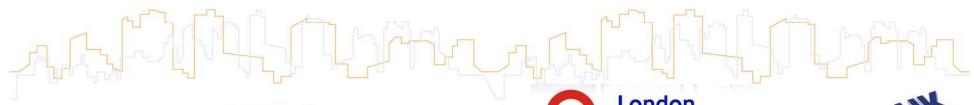
'You may use your bathroom now'





# The step shouldn't move





















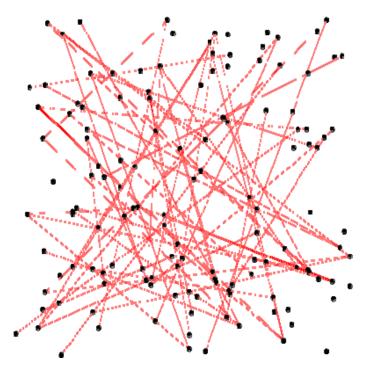
# Work the contract, stupid

- 573 overdue responses blame culture
- Leadership style experiment 543 overdue responses
- 5 day LBE 35 overdue responses





## OMG the central line is closed





















# Who do you work for?







## **Dropping the ball?**

- Reviewing via the mirror
- Fragile belief
- Chasing the screams
- Return of old fears



Desire remains – but flames unfanned









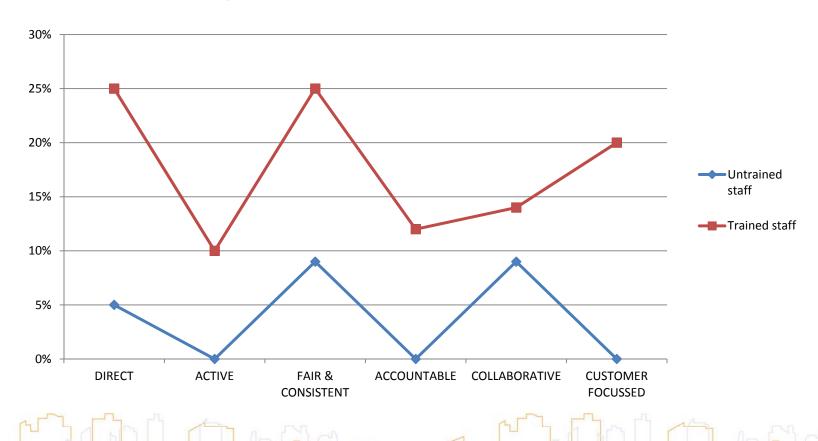








# Why will we succeed



















#### How we will ensure success

- Publicity
- External References
- What is 'no'?
- Persistence
- People want to add value











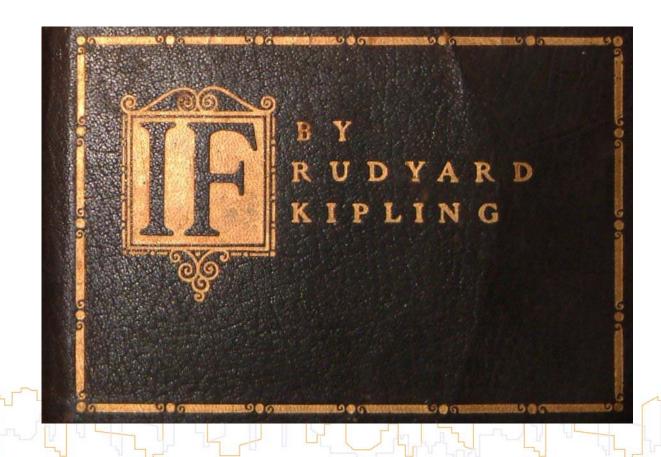








# **Shiny eyes**



















## **Questions?**

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30th October 2014. Birmings

# Lean Infrastructure Meeting the challenges of Construction 2025

Metropolitan College







