

MEGAPROJECTS AND VALUE CREATION

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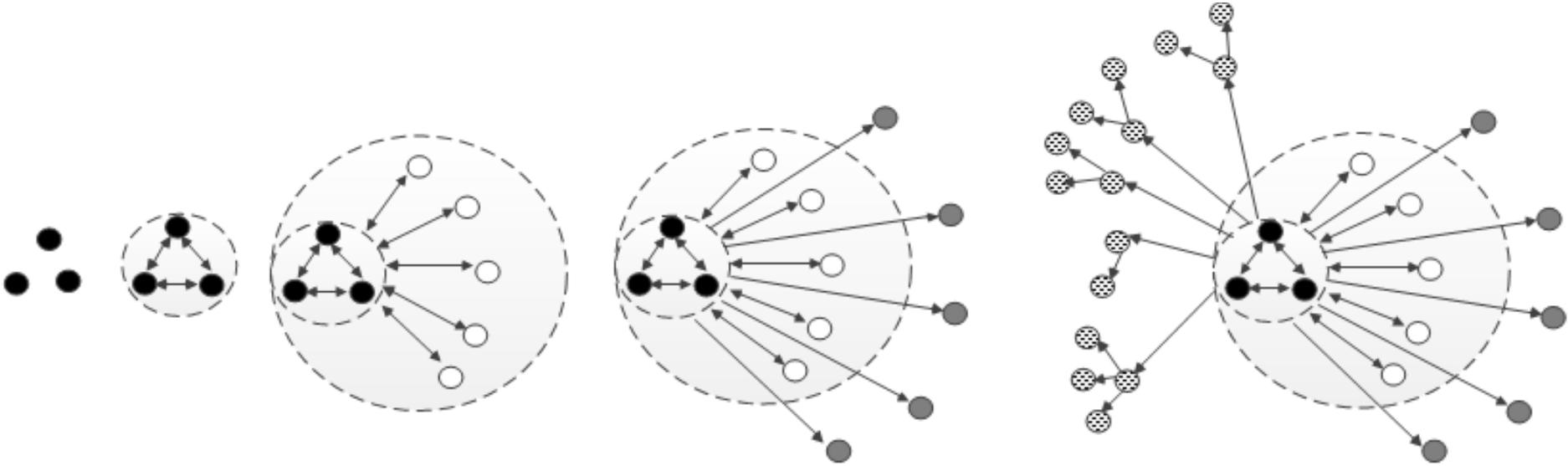
Embassador, *Estates & Infrastructure Exchange (EIX)*

What is a megaproject?



An inter-organizational, project-based *ecosystem designed by Humans* with the purpose of developing durable and shareable capital-intensive technology

Evolving structure of participation



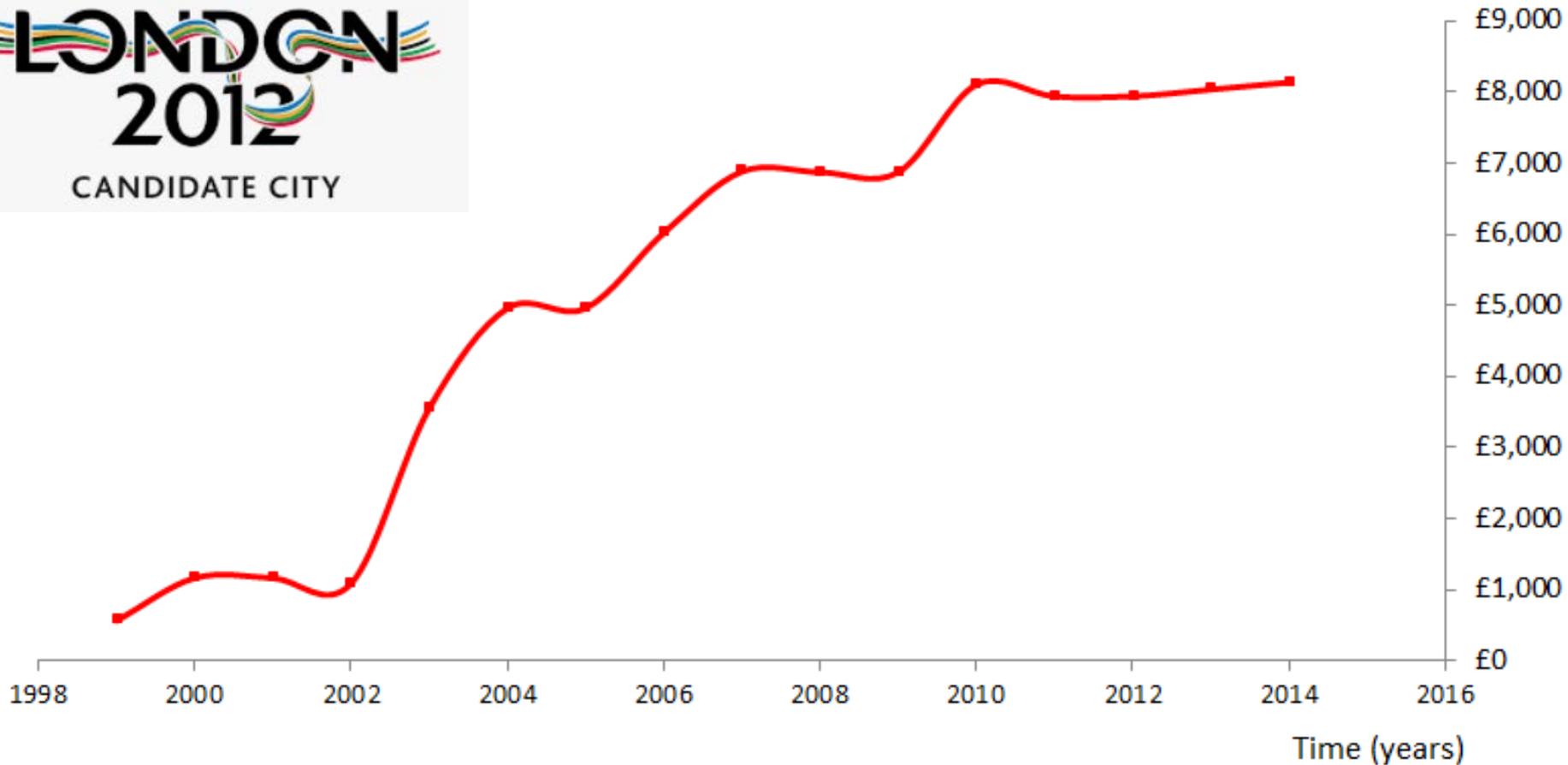
What do we know?

There's a nagging performance issue...



London 2012 Olympic Park

Cost figures
(final prices, millions)

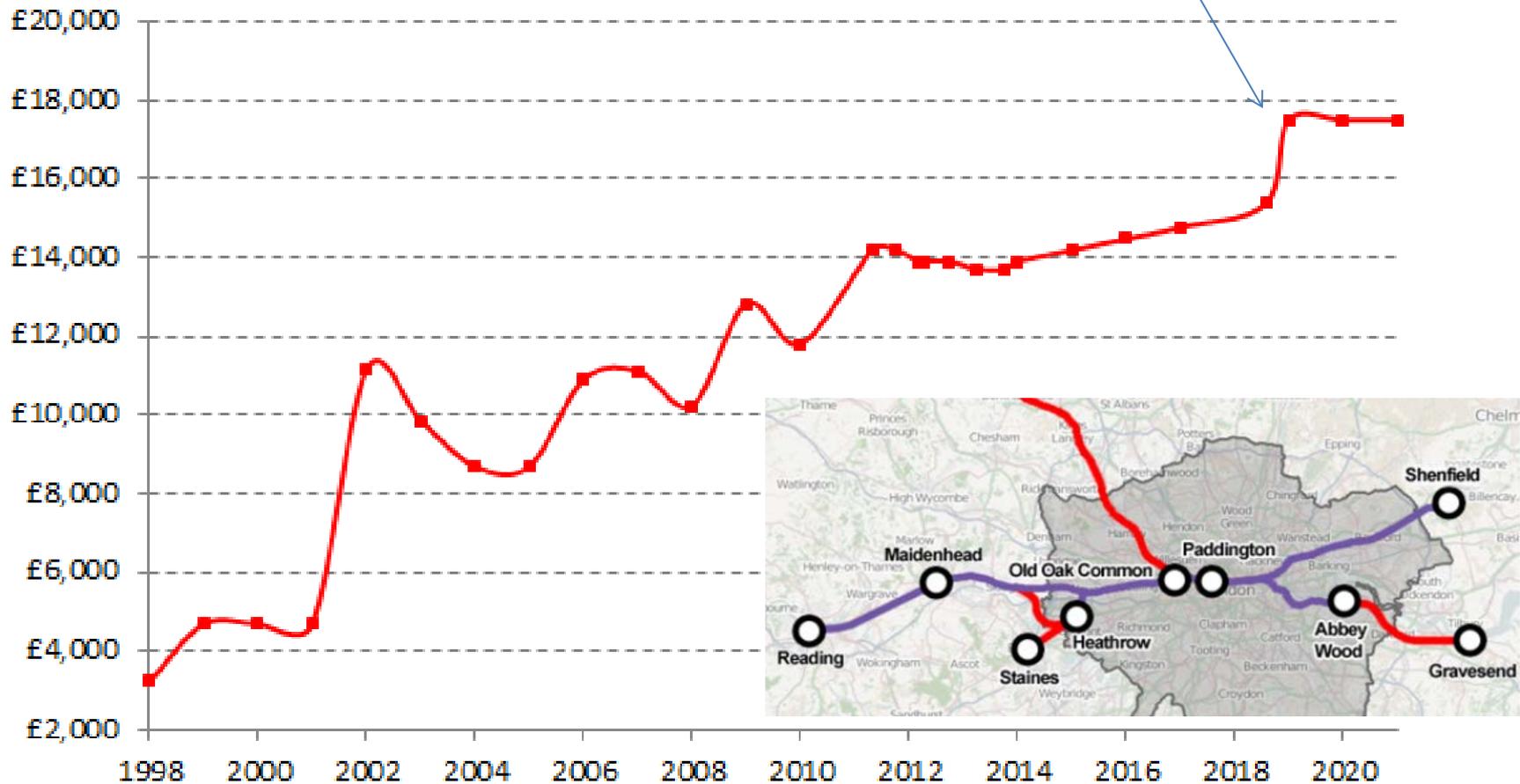


Over and over again

MPs slam transport department over Crossrail delays

Final costs unknown until revised schedule for signalling and operational systems is agreed

Cost forecast
(cash prices, £ millions)



What the heck is going on here?

At best...

Incompetence?

Optimism bias?

Powerful 'external' stakeholders?

At worst...

Strategic misrepresentation?

Suppliers' opportunistic behaviour?

Only a "hero" can succeed?



The Hydra.

Let' s try a different approach

Governance and value creation

Governance: rules and procedures that establish organizational boundaries (“**who is in and who is out**”) and how value is to be created and distributed (“**who gets what**”) (Klein et al 2019)

Value creation and capture

Value: the benefits to be accrued minus the costs to be incurred

Social value: the sum of the value to be captured by all the megaproject participants

So, do you believe megaproject
overruns *destroy* social value or
add value?!

How do megaprojects create value?

Value is created because outputs serve as inputs into wide range of production activities

Megaprojects are means to ends!

Performance targets are
necessary!

Commitment reduces ambiguity in value proposition and gives legitimacy to acquire the resources to achieve the goal

Politicians cannot write blank checks!

So, who is in and who is out?

The promoter enfranchises **key stakeholders** that control much-needed resources that cannot be bought – for example, knowledge, networks of trust, planning powers!

Enfranchising encourages norms of cooperation to flourish and voluntary contributions of resources....**BUT**

Budget becomes a shared resource

Once enfranchised, stakeholders want to directly influence capital allocation

So, the budget becomes *a shared resource*

Now: do you believe in sharing?

Sharing is tough!

Enfranchised stakeholders will leverage their bargaining power to renegotiate value distribution towards a value distribution that *is* perceived to be more equitable

⇒ Free-riders - narrowly self-interested individuals - ~ 20% of population !!

⇒ *Pressure to add scope, relax budget*

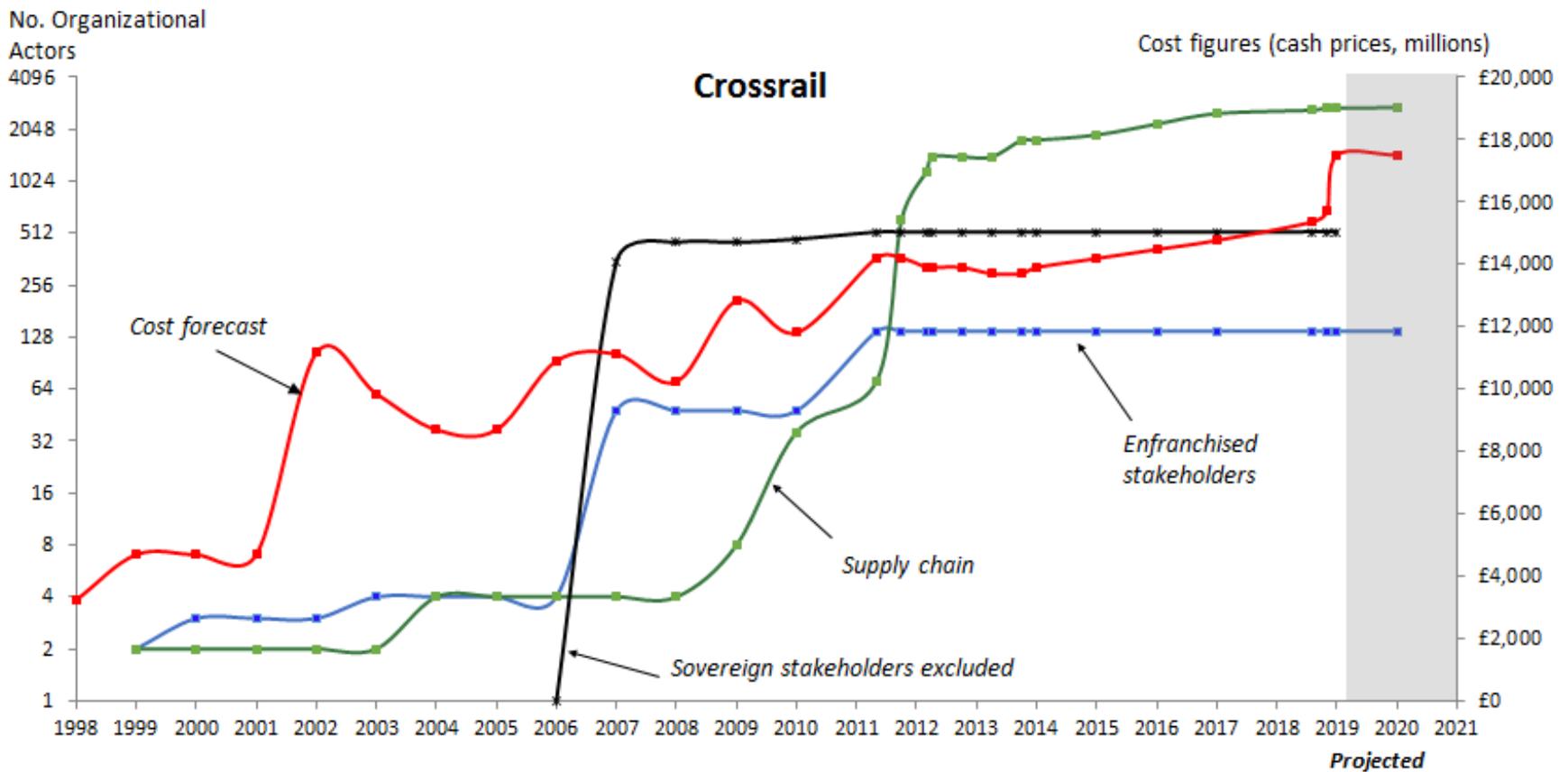
Still, many stakeholders are
excluded...

Exclusion too has costs and benefits

Contracting for resource exchanges can be
costly (financially, political) if markets are
inefficient

But exclusion avoids cost of building consensus

What does the evidence suggest?



Cost hikes *are strongly correlated* with stakeholder enfranchisement => so correlated with negotiations to redistribute (and augment) value to be co-produced!

Cost hikes *are marginally correlated* with excluded stakeholders and with buyer-supplier relations

So, cost overruns can actually add
social value!!!!

Yet, normative expectations will
not change overnight

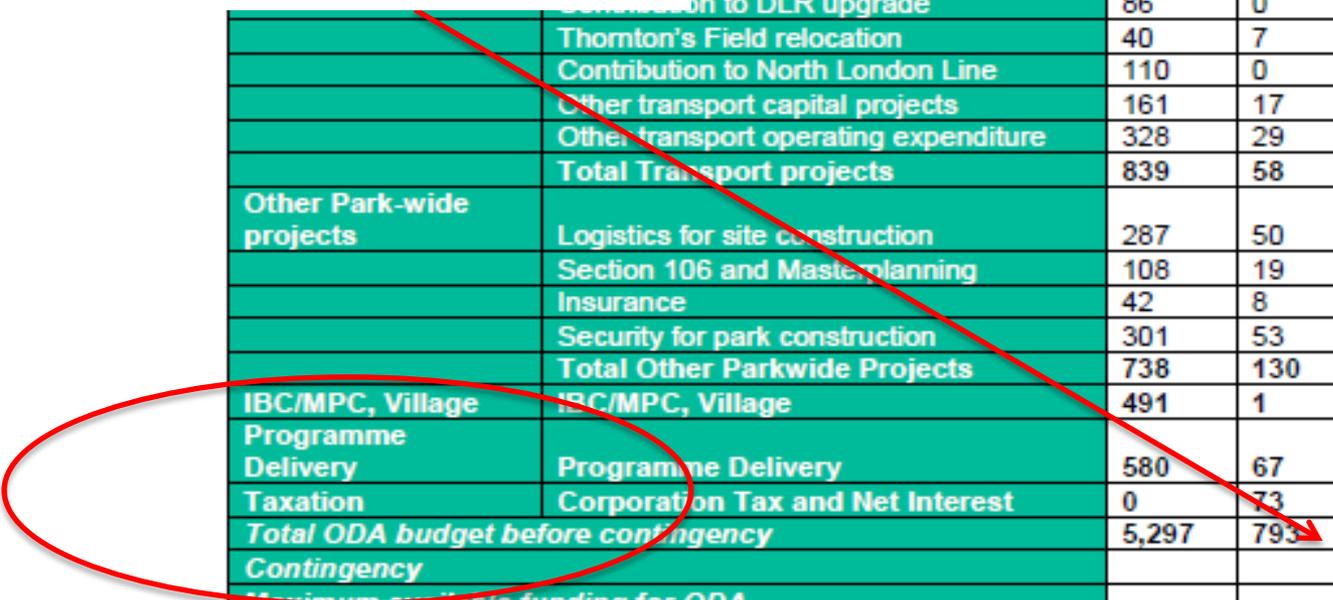
So, advice to practitioners

ONE: If affordable, build contingency



Project	Detailed projects	Base cost £m	Tax £m	Gross cost £m
Site preparation and infrastructure	Powerlines undergrounding	240	42	282
	Utilities	217	38	255
	Enabling works	310	54	364
	Structures, bridges, highways	706	124	830
	Prescott Lock	5	0	5
	Other infrastructure (Greenway, Landscaping)	175	31	206
	Total Site preparation and infrastructure		1,653	289
Transport projects	Stadium	422	74	496
	Olympic Park venues	488	86	574
	Olympic Park venues	86	15	101
	Other venues	996	175	1,171
	Regional station	114	5	119
	Contribution to DLR upgrade	86	0	86
	Thornton's Field relocation	40	7	47
	Contribution to North London Line	110	0	110
	Other transport capital projects	161	17	178
	Other transport operating expenditure	328	29	357
Total Transport projects		839	58	897
Other Park-wide projects	Logistics for site construction	287	50	337
	Section 106 and Masterplanning	108	19	127
	Insurance	42	8	50
	Security for park construction	301	53	354
	Total Other Parkwide Projects	738	130	868
IBC/MPC, Village	IBC/MPC, Village	491	1	492
Programme Delivery	Programme Delivery	580	67	647
Taxation	Corporation Tax and Net Interest	0	73	73
Total ODA budget before contingency		5,297	793	6,090
Contingency				2,009
Maximum available funding for ODA				8,099

Even if it creates a self-fulfilling prophecy



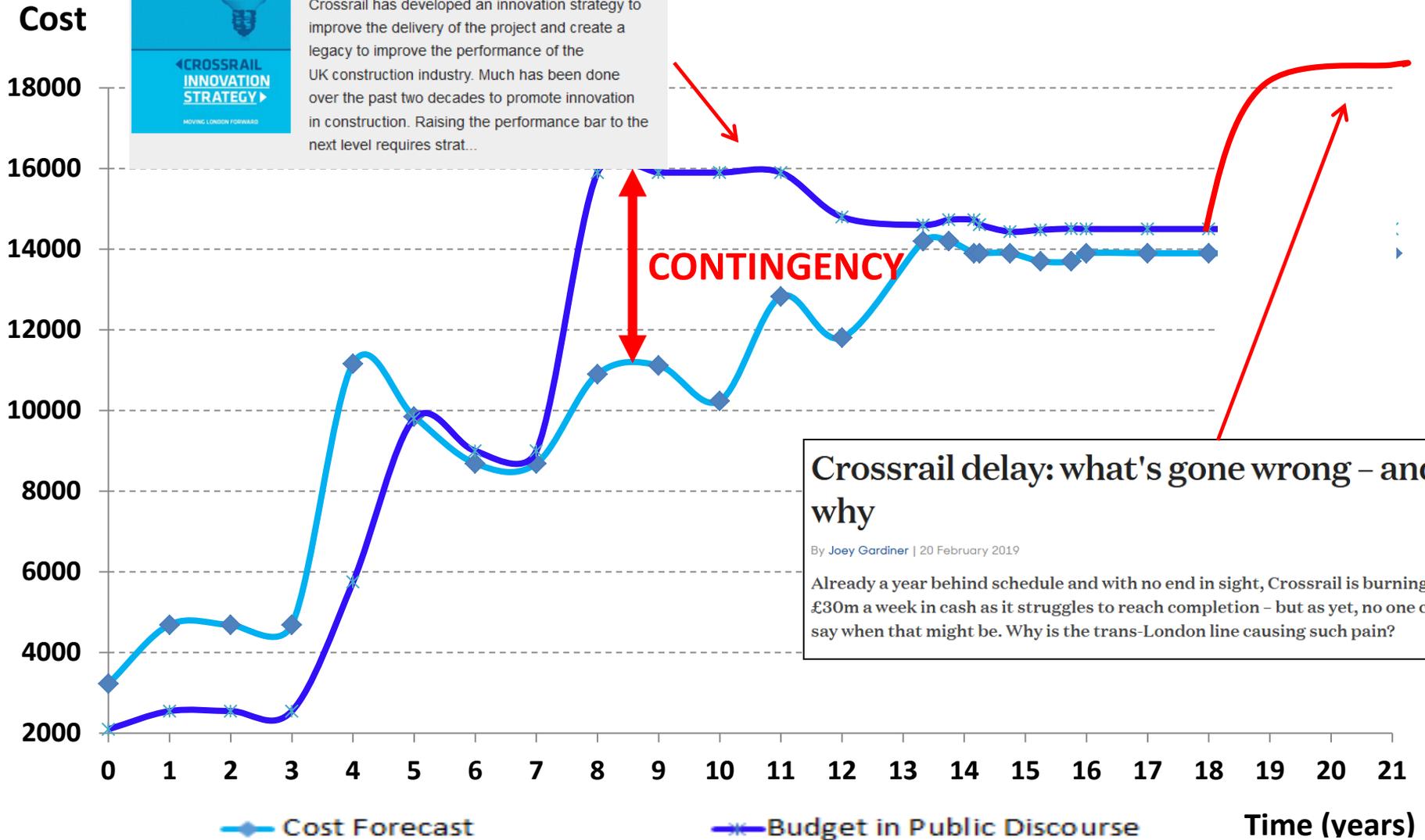
CONTINGENCY HELPS YOU STAY "ON BUDGET" FOR LONGER...UNTIL YOU RUN OUT OF MONEY



Innovation Strategy

Topic area: **Innovation Programme**

Crossrail has developed an innovation strategy to improve the delivery of the project and create a legacy to improve the performance of the UK construction industry. Much has been done over the past two decades to promote innovation in construction. Raising the performance bar to the next level requires strat...



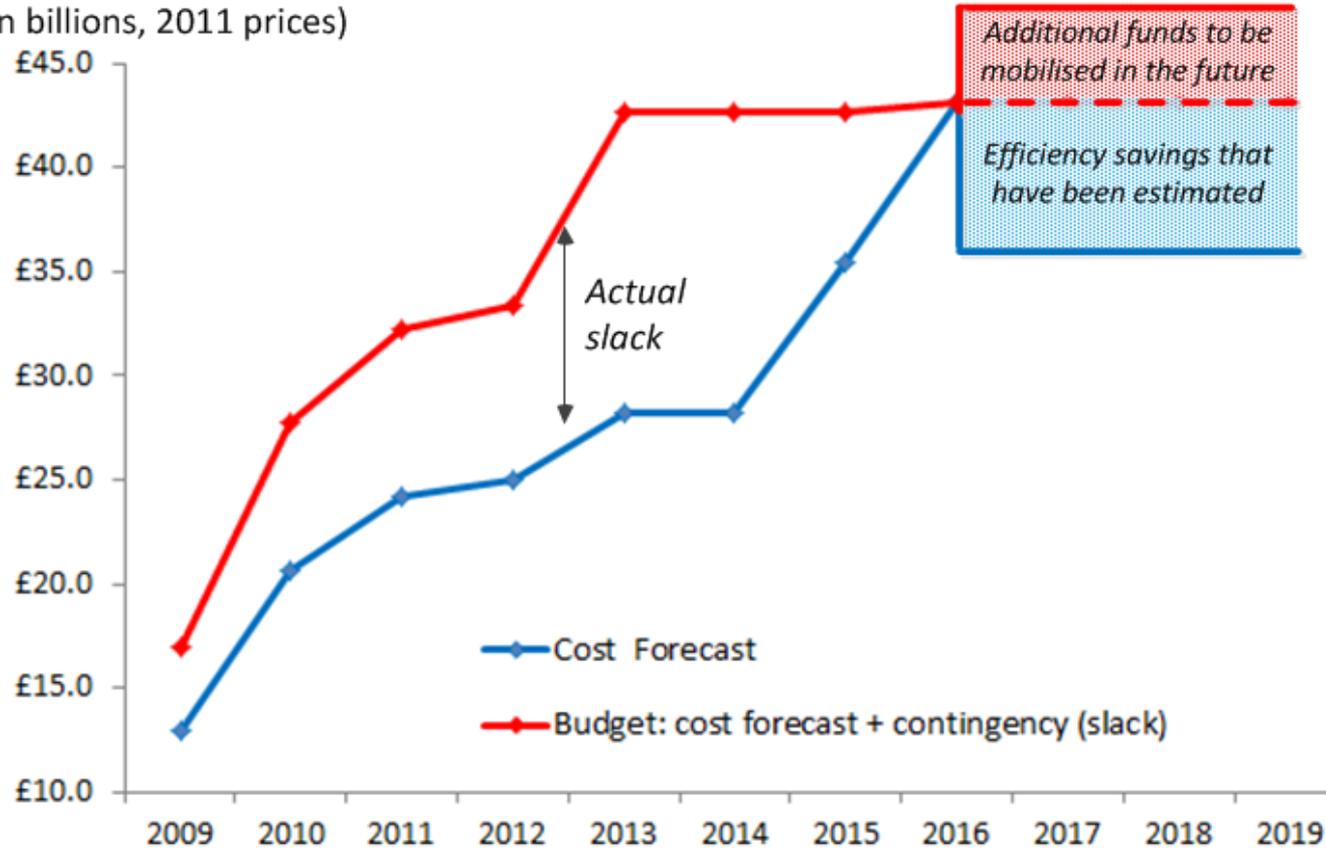
Crossrail delay: what's gone wrong – and why

By Joey Gardiner | 20 February 2019

Already a year behind schedule and with no end in sight, Crossrail is burning £30m a week in cash as it struggles to reach completion – but as yet, no one can say when that might be. Why is the trans-London line causing such pain?

TWO: make credible promises when you run out of money

Expenditure w/o train cars
(in billions, 2011 prices)



Promises can do the trick (survive!) up to a point..

HS2 could be scrapped as critic given role in independent review

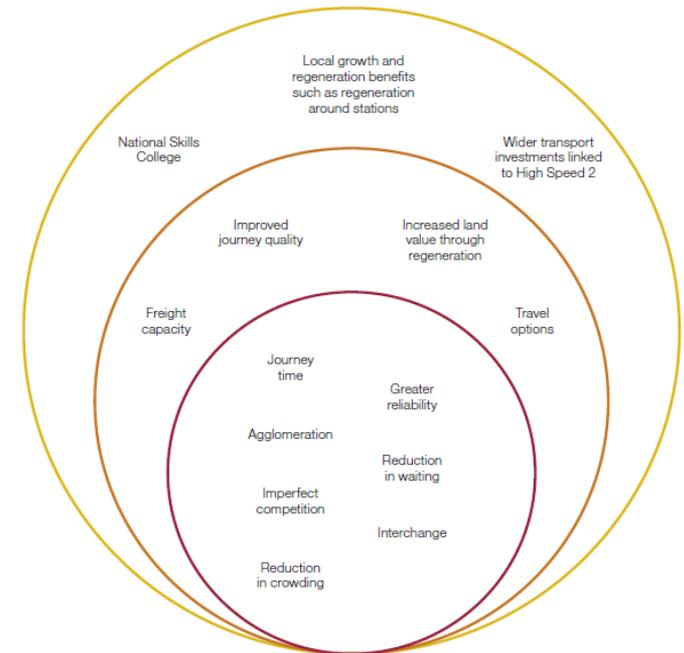
Government needs clear evidence before going ahead, says transport secretary



THREE: try to shift debate away from targets towards value

Value for Money Category	BCR
Poor	Less than 1.0
Low	Between 1.0 and 1.5
Medium	Between 1.5 and 2.0
High	Between 2.0 and 4.0
Very High	Greater than 4.0

Core and wider programme benefits

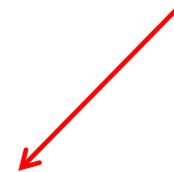


- Core programme benefits
- Core programme non-monetised benefits
- Wider programme benefits

Source: National Audit Office analysis of Department for Transport's data

HS2 BCR >2.0 !!

	Benefit-cost Ratio (BCR) with and without Wider Economic Impacts (WEIs)							
	2009	2010	2011	2012	2013	2015	2016	2017
wo/ WEIs	2.4	2.3	2.2-2.3	1.6-1.9	1.8	2.0	2.1	1.9
w/ WEICs	2.5-2.9	2.7	2.0-3.4	1.8-2.5	2.2-2.3	2.5	2.7	2.3



The Benefit-cost ratio (BCR) summarises the value for money (VfM); VfM is 'high' if BCR >2

FINAL: Bloody hard work.. you must persevere...but



Prepare *emotionally* to get sacked if you hang around for too long

Chairman of flagship HS2 and Crossrail projects to be sacked

Terry Morgan to leave both jobs as performance sparks concern at top of government

