



Time to get real on infrastructure costs

Governments around the world routinely underestimate how much large infrastructure projects will cost

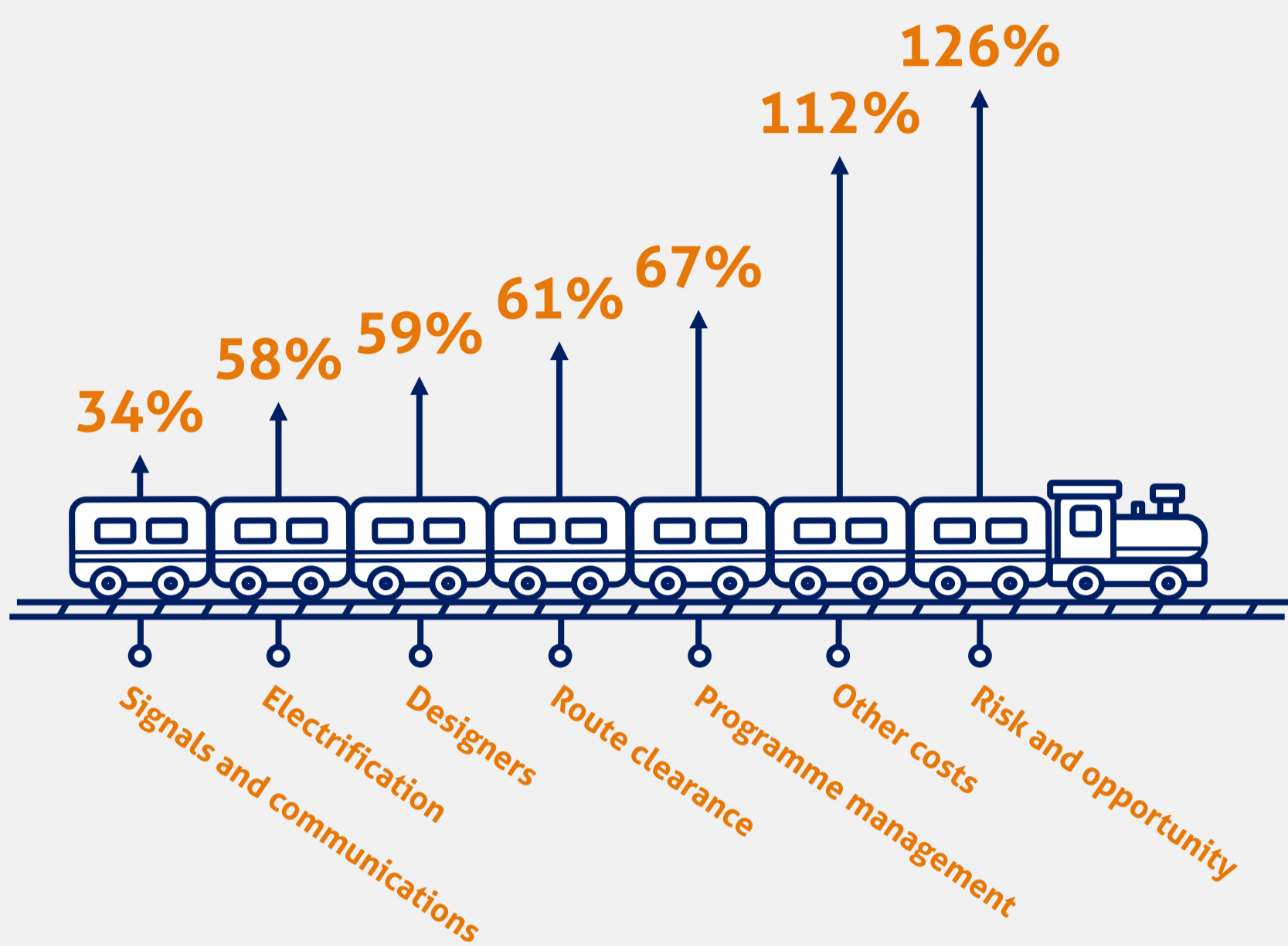
9 in 10

Projects costing more than £1bn run over budget, internationally

Source: Flyvbjerg, 2014

Cost overrun in the UK: Great Western Railway

How GWR electrification costs increased, 2014-16



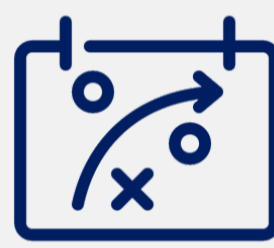
Source: National Audit Office, 2017

Three factors that make it hard to predict costs

1

Strategic misrepresentation

...intentionally understating costs to make a project look like a good investment



2

Optimism bias

...the unconscious tendency to underestimate the costs and risks of favoured projects



3

Anchoring and adjustment

...fixating on the first 'anchor' number you hear and not adjusting your expectations away from it, even if the anchor number is flawed



The solution: "reference-class forecasting"

4

Future project data can then be used to strengthen the reference-class

1

Data from previous projects...



3

Which is used to predict the cost of future projects

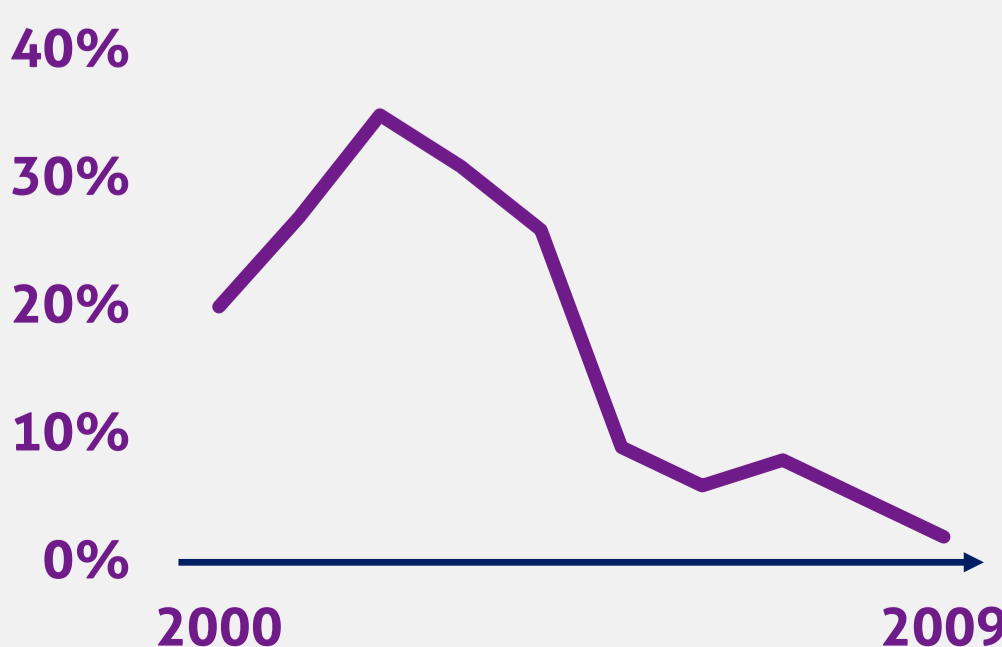
2

Are combined in a "reference-class" of data...

Reference-class forecasting in action: Highways England

Highways England successfully reduced their average forecasting error from...

20% to 2% in 9 years



Source: Highways England, 2015