



A consultation on how charges can improve efficiency

Industry workshop

February 2016



Part 1: Welcome and setting the scene

Chris Hemsley

Deputy Director, Railway Markets &
Economics

How we'll structure this morning

PART 1 – The opportunity

- | | |
|--------------|---|
| 09.30 | <input type="checkbox"/> ORR: welcome and setting the scene |
| 09.50 | <input type="checkbox"/> DfT: Rail money flows and incentives |
| 10.10 | <input type="checkbox"/> RDG: CP6: Priorities for change |
| 10.30 | <input type="checkbox"/> Freightliner: A rail freight operator's perspective on ORR's review of Charges |

10:50 Refreshments and break

PART 2 – Consultation proposals and next steps

- | | |
|--------------|---|
| 11.05 | <input type="checkbox"/> ORR: Proposals |
| 11.15 | <input type="checkbox"/> ORR: The infrastructure costs package and the value-based capacity package |
| 11.40 | <i>Breakout session 1</i> |
| 12:10 | Refreshments and break |
| 12:25 | <input type="checkbox"/> ORR: The improvements package |
| 12:40 | <input type="checkbox"/> Next steps |
| 13:00 | <i>Breakout session 2</i> |

Why charges matter

Working with the industry to review the structure of charges paid by train operators to Network Rail for using the network was a key PR13 commitment

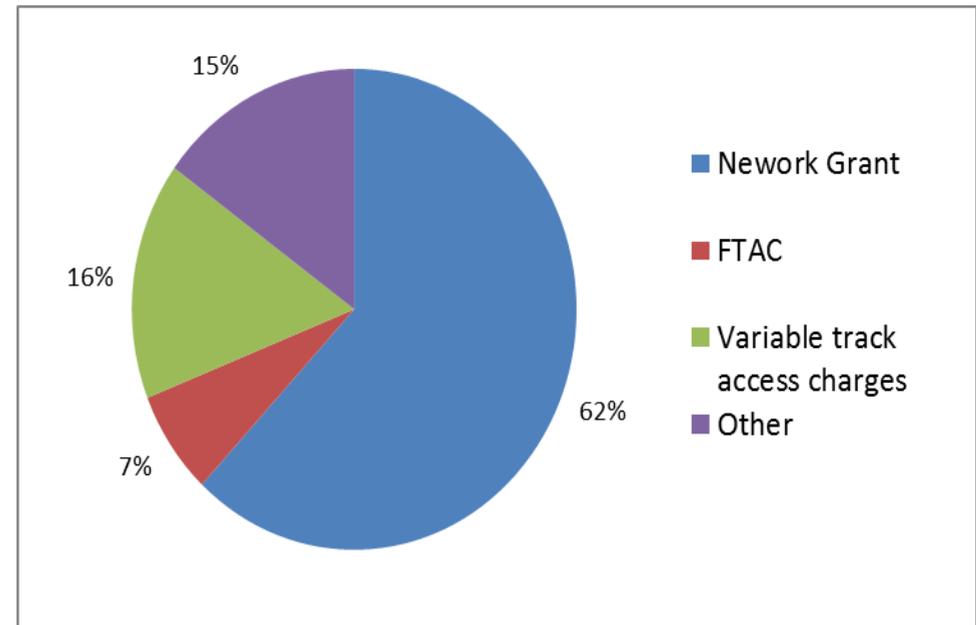
■ The structure of charges:

- affects the costs faced by franchise, freight and open-access train operators;
- has the potential to affect how train companies and Network Rail interact;
- affects the prospects for, and impacts of, open-access entry; and
- is one tool available to better align the incentives faced by all parties in the rail sector.

Why review the charging structure?

- The current structure was designed when the rail industry was expecting declining demand, and emphasises charges to recover short-run variable costs.
- This context has now changed to one with sustained growth in demand for freight and passenger services and significant congestion on certain parts of the network.
- There are other limitations of the current charging structure:
 - cost-reflective variable charges only account for a **small proportion of Network Rail's income** (16%);
 - a further 7% of Network Rail's income comes from the fixed track access charge (FTAC), which is **not linked meaningfully to costs**;
 - more than 60% of Network Rail's income is forecast to come directly from a government subsidy (Network Grant) in CP5 which is **not linked to costs and provides no incentives to Network Rail or operators**;
 - Franchised train operators only have limited **exposure to the current charges**.

Network Rail's income for CP5



What our review could help with

Reduce network costs



Supports whole industry efforts to reduce network costs

Improve wider decision making



Supports informed decisions e.g. around enhancements, franchising and subsidy

Improve network use



Improves operator and funder incentives to use the network efficiently

Support competition



Creates a more level playing field for different types of passenger train operators

Improve network provision



Supports Network Rail handling of cost, capacity and performance trade-offs

Facilitates understanding and response



Supports a stable business environment, reduces complexity and improves transparency

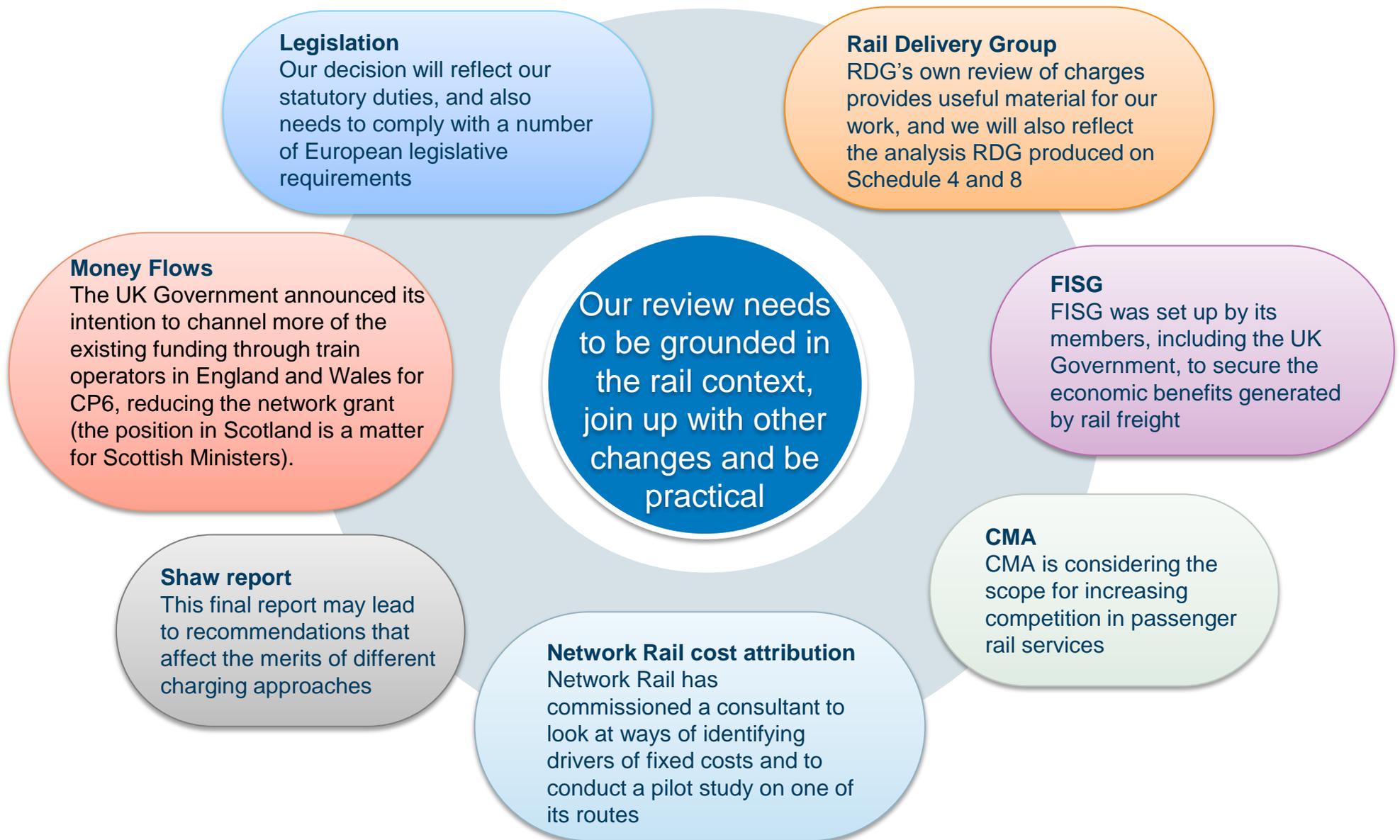
Possible 'size of the prize'

- We commissioned consultants Steer Davies Gleave (SDG) to estimate the benefits of an improved understanding of Network Rail's costs.
- SDG's case study evidence suggests that rail decisions could be improved through a better understanding of costs (whether or not such improved information is transmitted through charges).



- Even a small (1%) additional cost saving would be significant, e.g. per control period 1% opex = **£134m**, 1% renewals = **£121m**.

Wider context



Rail money flows and incentives

Department for Transport

Jim Robinson & Simon Smith

Rail Delivery Group

PR18: Priorities for charges

Jonathan Hulme

12th February 2016

Purpose

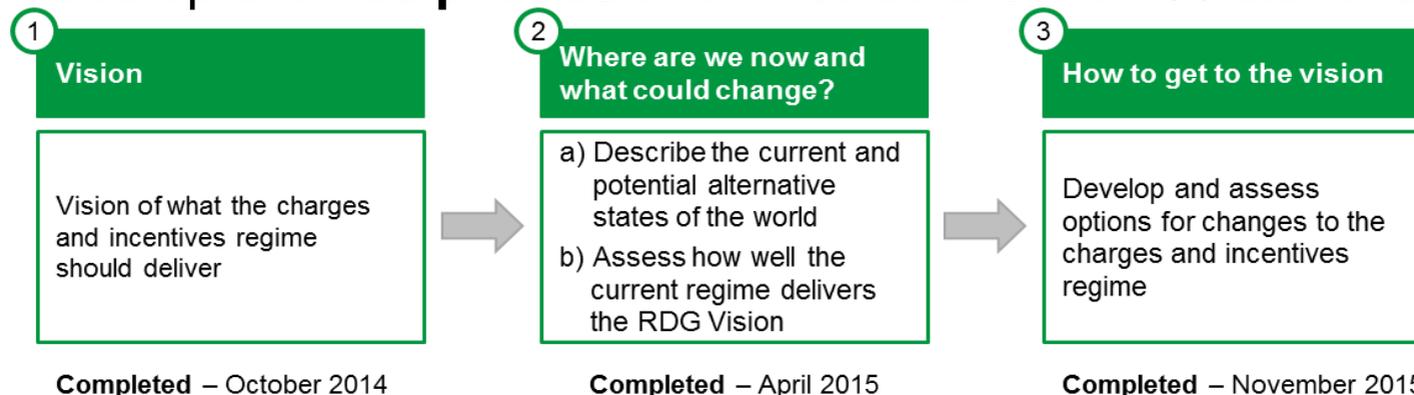
- The purpose of this presentation is to provide answers to the following questions:
 - What is the Rail Delivery Group?
 - What is RDG's Review of Charges?
 - What did our review say about priorities for CP6 charges?
 - What are our next steps?

What is the Rail Delivery Group?

- Established in May 2011
- Purpose is to enable **passenger** and **freight** operators and **Network Rail** to succeed by delivering better services for their customers.
- RDG's work is focused on four transformational portfolios:
 - Enable improvement in today's railway
 - Transform customer experience
 - **Inform industry reform to enable excellence**
 - Plan for tomorrow's railway

What is the RDG Review of Charges?

- Two years ago, the industry decided to take a **fresh look** at:
 - How Network Rail should charge for access to its rail infrastructure
 - Money flows relating to network disruption
 - Incentives that seek to encourage better industry outcomes
- We wanted to do this **in advance of PR18** so that it could inform ORR's decision making so we set up the Review of Charges project
- It was made up of **three phases** and involved around 100 stakeholders:



Phase 1 - RDG Vision for Charges and Incentives

Here, 'efficient' means that the greatest net benefits for the whole system are delivered

Axioms

- System safety
- Consistency with law
- Funding of Network Rail efficient costs
- Allowance for market conditions
- A single approach for the network as a whole

Objectives

- Service costs recovery
- Efficient whole-system whole -life industry net costs (balance of benefits and costs)
- Efficient long run investment decisions
- Efficient performance management
- Efficient use of network capacity

Outputs

The **optimal charges and incentives mechanism will depend on the state of the world**, but will result in:

- Network Rail accountability
- Non-arbitrary allocation of costs
- Optimal traffic growth
- Aligning industry incentives
- Value for money for funders, taxpayers and users

Judgement criteria

- Predictability
- Simplicity
- Transparency
- Low transaction costs

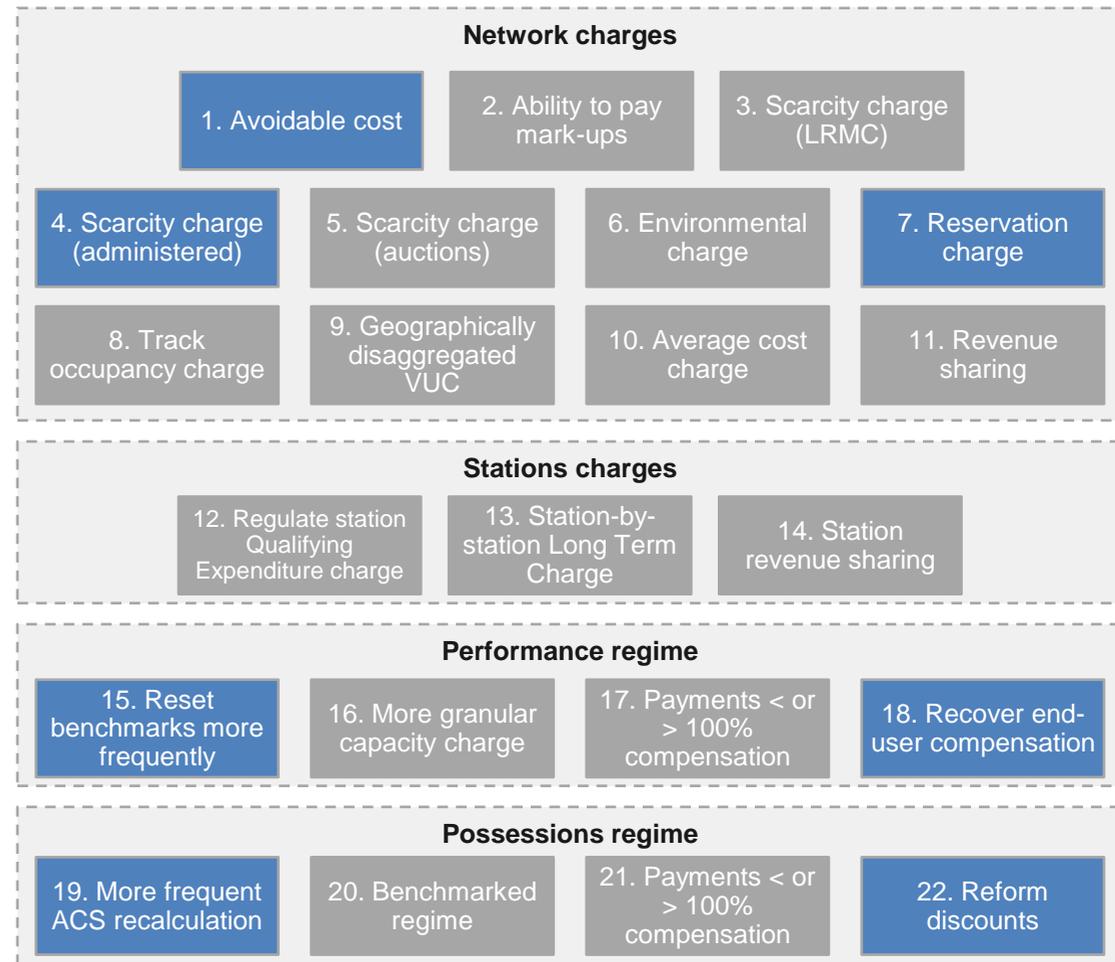
Phase 2 – Assessment of the current regime

Our assessment highlighted a number of key points that were relevant for the whole charges and incentives regime:

- Should have a **broader and clearer understanding of the purpose** and aim of the regime
- Should be **realistic about the limits of what the regime can achieve** and how closely it can be aligned with the ideal regime
- The regime should **align with: other parts of the industry's regulatory and contractual framework**; public transport policies; and the needs of customers
- The regime needs to **provide stability** to allow for business planning and industry investment
- We identified a number of gaps between the RDG Vision and the current regime but there were **aspects of the current regime that the industry thought should be retained**

Phase 3 – Assessment of 22 different options for making changes to charges and incentives

- Considered 22 options, primarily reflecting the gaps from our assessment of the current regime
- Each option was assessed against 19 criteria based on the RDG Vision
- Further analysis on seven of the options to explore the impacts on these options further
- CEPA carried out the assessments but had the benefit of significant input from industry representatives



Priorities for CP6

- Developing a clearer and better understanding of the **purpose of the regime**, and each of its elements – not well understood by industry, funders and broader stakeholders
- Resolving **issues with the Capacity Charge** - the purpose of the charge is not well understood and it is not considered to accurately reflect the financial impact of additional delay
- Developing a better **understanding of Network Rail's cost drivers**. However, there was only limited support for using such information in charges, particularly in the current State of the World
- Exploring links between **passenger compensation and the performance regime**. There was some consensus on considering this option for PR18
- Reviewing **discount structure** for possessions regime to address concerns that it encourages Network Rail to book possessions too early

Next steps

- ORR should build on the work that the industry has carried out
- We are currently **developing RDG's response** to ORR's network charges consultation
 - In this response we will ask ORR to respond to RDG's work on charges and incentives
- We are also continuing to **communicate the findings** of RDG's Review of Charges with stakeholders
- We will **close the project** at the end of March. However, RDG will **continue to support** passenger operators, freight operators and Network Rail throughout PR18 on this topic
 - We think that ORR should work with RDG to set-up a PR18 industry working group to continue the positive engagement

Any questions?

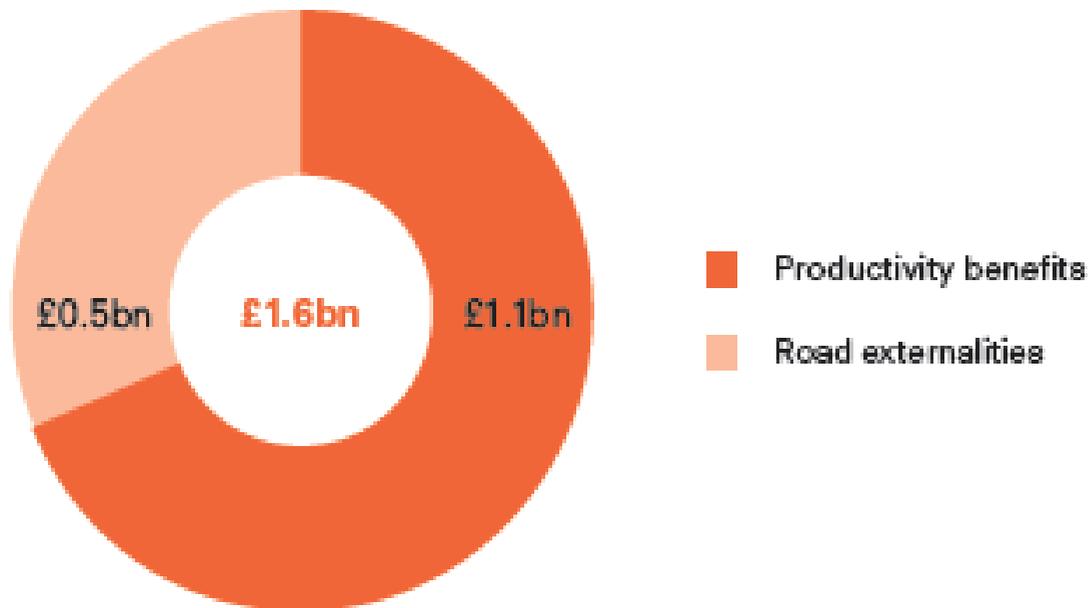
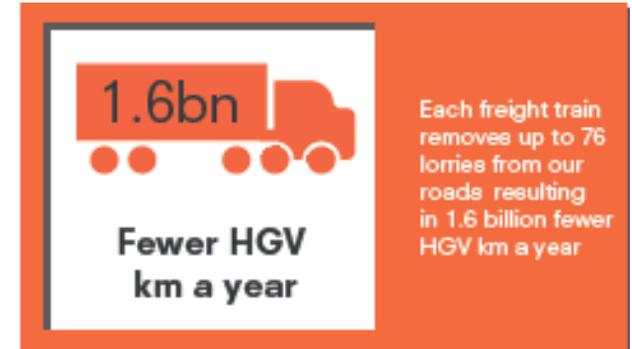
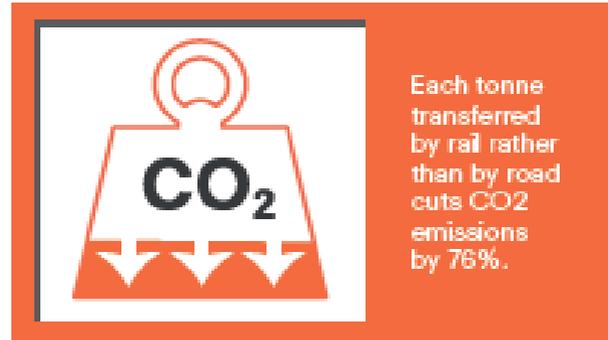
For more information about RDG's Review of Charges and to view the documents that we have published as part of the review, please visit:

<http://raildeliverygroup.com/what-we-do/our-work-programme/contractual-regulatory-reform/review-of-charges.html>

**A rail freight operator's
perspective on ORR's
review of Charges
Freightliner**

Lindsay Durham

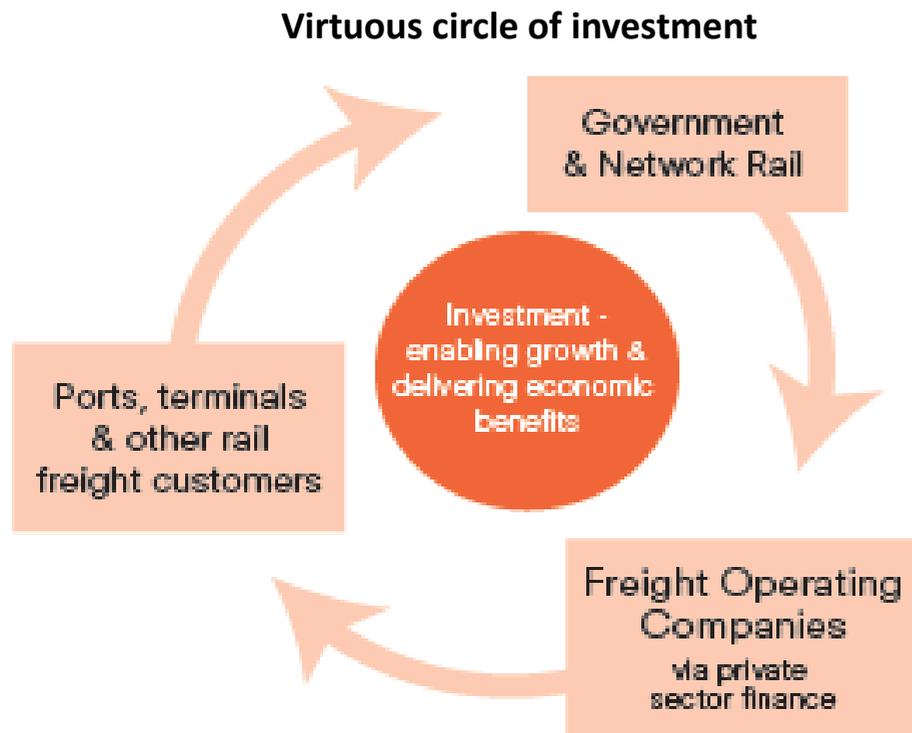
The benefits of rail freight to the UK economy



- Productivity Benefits**
£1.1bn per year productivity benefits
- Congestion Benefits**
£0.3bn per year congestion benefits
- Environmental Benefits**
£0.2bn per year environmental benefits

Taking into account the support received from the taxpayer net of track access charges paid, rail freight generates between £6 and £25 of benefits to the UK economy for every £1 of taxpayer support

Investment in rail infrastructure – a symbiotic partnership



- Freight Operators have invested > £2bn in new locomotives, wagons and other capital equipment since privatisation.
- Many ports, power stations and distribution centres have made significant investments in infrastructure.
- Government funded investments of over £700m related to rail freight

- There is a symbiotic relationship between public and private investment
 - Public sector investment
 - **And** a stable and competitive charging structure for rail freight
- Will give confidence to the private operators, ports, terminals to continue to invest.
- Investment will lead to more efficiencies and productivity benefits for the UK

Some thoughts...

- What are we trying to achieve?
- Who is being incentivised?
 - Franchised passenger operators?
 - Department for Transport?
 - Open access operators?
 - Freight operators?
 - Customers?
- What is the equivalent for lorries?
- More transparency ✓ but.....
 - There are many cost allocation methods
 - none are “right” or “wrong”
 - Damaging practical impacts should be avoided

Research by Campaign for Better Transport found that HGVs are subsidised by around £6.5bn per annum and pay less than a third of the costs associated with their activities in terms of road congestion, road collisions, road damage and pollution.

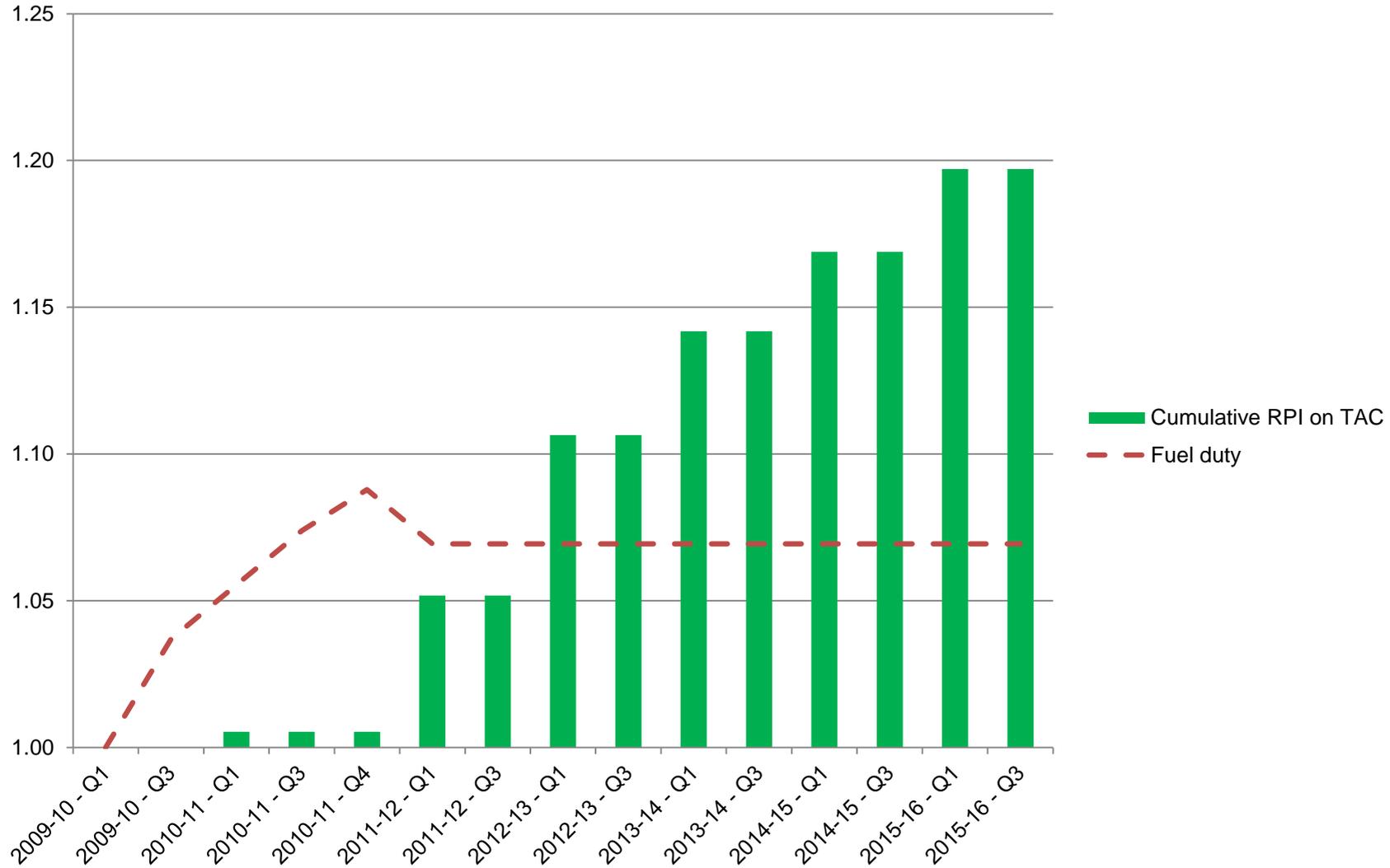
RDG have already given a lot of time and thought to a charges structure – use this work which has the support of the industry

Rail Freight Market

This slide is left intentionally blank as there is no such thing

Track Access Charges v Fuel Duty

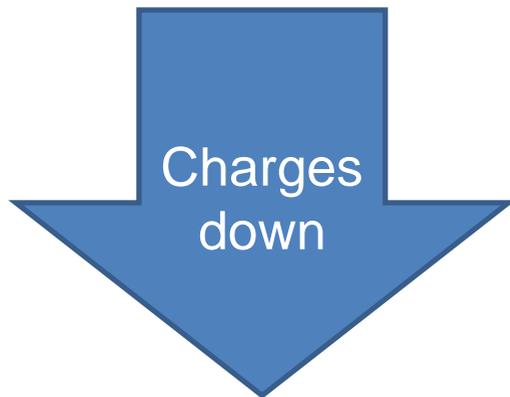
Increases to fuel duty and track access charges since start CP4



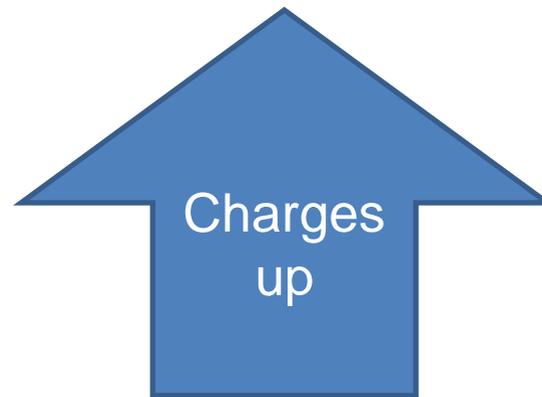
Geographical Charges?

- Increase complexity
- Do not apply to road
- Create perversities

East Coast Main Line



Joint Line



- What are the benefits and to whom?

Efficient use of capacity – a better answer than charges?

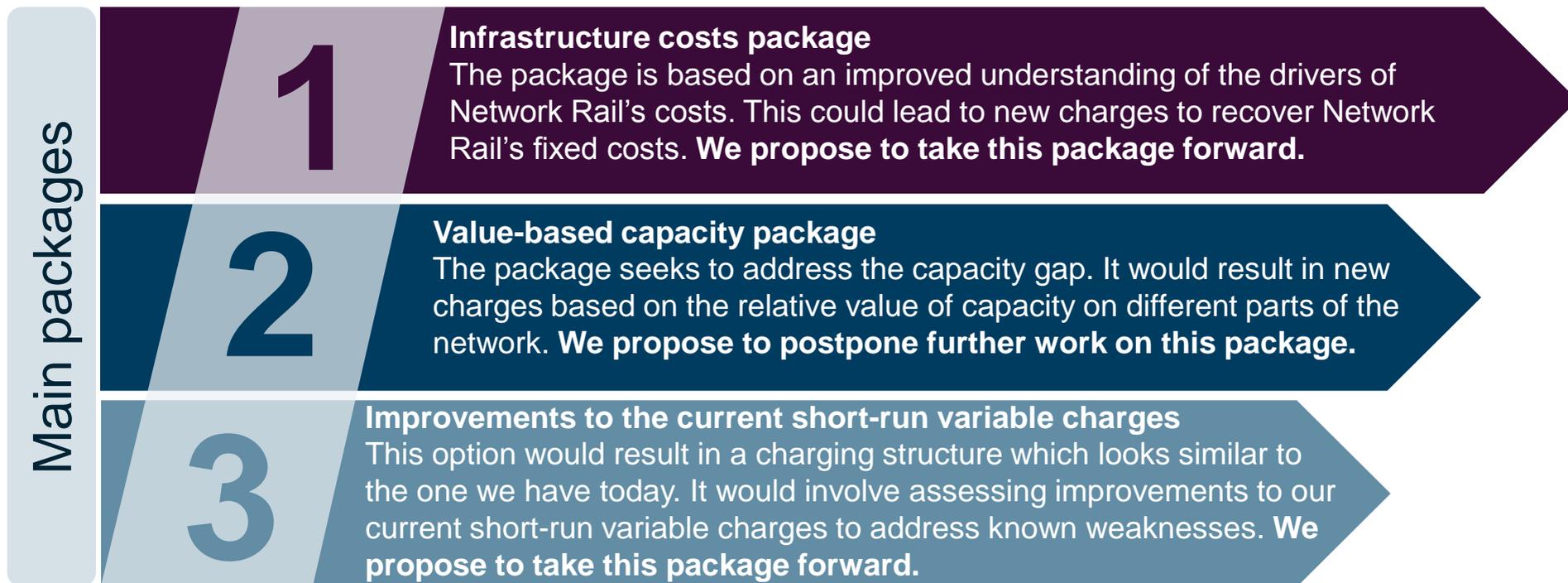
- > 2000 paths already given up by freight operators – voluntarily
- 611 of these paths now identified as Strategic Capacity
- But there are issues that paths intended for freight growth:
 - Have not been validated and when bid for don't actually exist
 - Disappear because of retiming of passenger services
 - This had led to a loss of confidence by operators
- **A properly working system of Strategic Capacity**
 - That properly identifies opportunities for growth on key routes
 - Will encourage freight operators to give up under used paths
 - Will enable stricter use of Part J – such as use it or lose it
 - Support 6 monthly reviews of freight access rights
 - Will support operator and customer investment
 - Will support freight growth and increase UK benefits



PART 2: **Our proposals**

Alexandra Bobocica

High-level options



Supporting packages

Competition options

We are considering whether some open access operators should make a greater contribution to network costs, particularly where capacity is scarce and most valuable.

Complexity options

We think that complexity could be limiting the effectiveness of existing charges and we have considered what proportionate changes might improve the ease with which charges are understood.

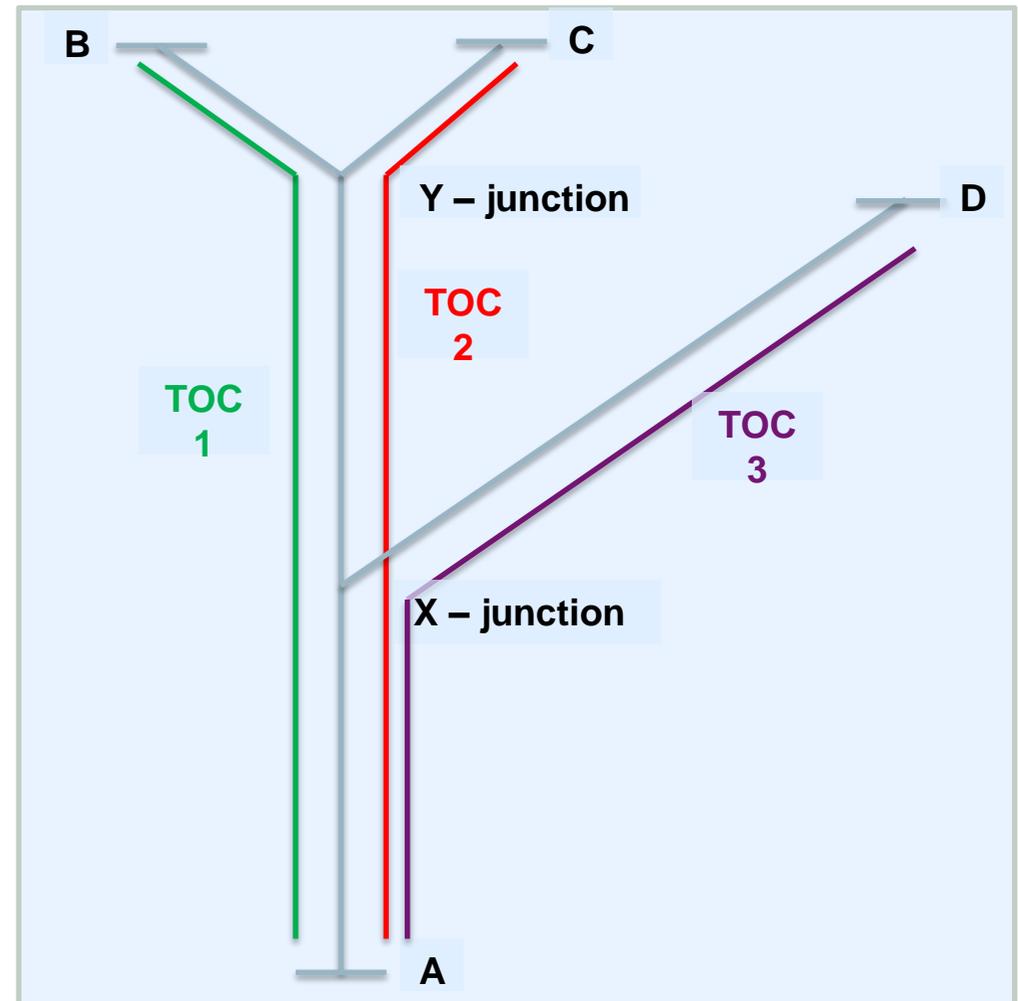
Illustration of geographic attribution

We have developed the following example to illustrate the concepts behind the packages in our consultation.

We use the example of geographical disaggregation of cost, but the general principles would apply to other changes to better reflect cost/value in charges.

High-level assumptions:

- TOC 1 operates A-B
- TOC 2 operates A-C
- TOC 3 operates A-D
- Each path is the same distance
- Each TOC runs the same type of vehicle and same number of trains



Type of costs	Consider the impact if...	Under current approach	Under an alternative approach	Potential benefits
Fixed costs (e.g. FTAC)	<ul style="list-style-type: none"> Section X-D has higher fixed costs than sections X-B and X-C 	<ul style="list-style-type: none"> Under the current FTAC methodology, each TOC would pay the same level of charge as fixed costs are calculated at route level and then allocated to operators based on simple metrics (primarily train miles) Information on cost differences is largely absent 	<ul style="list-style-type: none"> Under the infrastructure cost package, costs would be allocated to operators on the basis of their use of different parts of the network Since TOC3 is the only one using path X-D, it would pay a higher charge than TOC1 and TOC2 Improved information about cost variations 	<ul style="list-style-type: none"> TOCs would be allocated the costs of the parts of the network they actually use Improved understanding of costs and ability to reduce them Improved capacity use
Short-run variable costs (e.g. VUC)	<ul style="list-style-type: none"> Section X-D has higher wear-and-tear costs compared to other sections of the route 	<ul style="list-style-type: none"> Under the current approach each TOC would pay the same variable usage charge as it is calculated based on a network-wide average rate for each vehicle type 	<ul style="list-style-type: none"> Under an alternative approach where the VUC is geographically disaggregated, TOC3 would pay a higher VUC rate compared to TOC1 and TOC2 that do not use section X-D 	<ul style="list-style-type: none"> This could lead to similar benefits as with the infrastructure cost package, but smaller in magnitude
Value-based capacity costs	<ul style="list-style-type: none"> There are no spare paths on track section X-D 	<ul style="list-style-type: none"> Current charges do not reflect the value of train paths on different route sections Under this approach TOCs pay charges to recover fixed costs and short-run variable costs 	<ul style="list-style-type: none"> Under a value-based capacity approach, TOC 3 would be faced with a value-based charge in addition to its other charges to continue using track section X-D TOC1 and TOC2 would not face value-based charges because they are not using capacity constrained section of the route 	<ul style="list-style-type: none"> Incentives for TOCs to re-time, re-route or withdraw services in order to make the best use of the network capacity



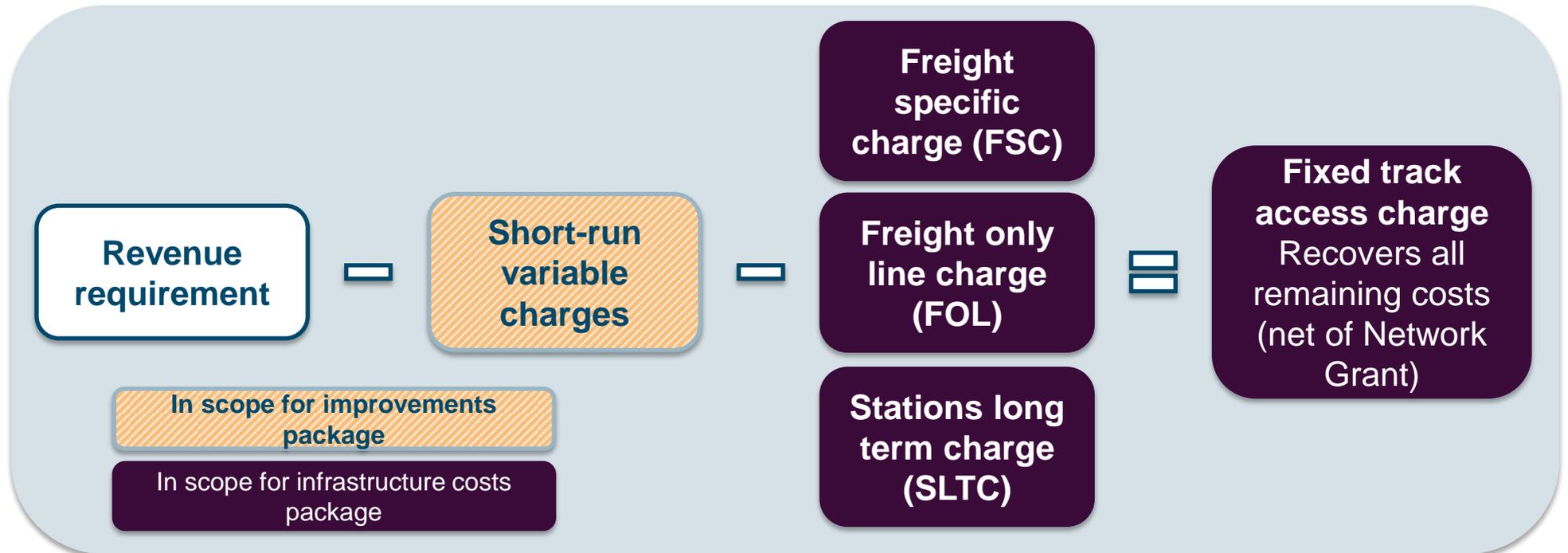
The infrastructure costs and value-based capacity packages

This session

- In this session, our goal is to ensure everyone has a good understanding of the infrastructure costs package and the value-based capacity package and their potential impacts
- We will set out:
 - what we mean by each of these packages and the rationale for them;
 - the high-level options under each of these packages;
 - Impacts of each of these packages
 - The evidence base for the proposals set out in our consultation was summarised as part of three impact assessments (one for each of our main high level packages)
 - The impact assessments look at each package of options individually. They do not compare the packages to each other
 - In this section, we set out the key impacts of the **infrastructure costs** and **value based capacity** packages – the incremental improvement package will be discussed later today



Infrastructure costs package: scope



What are the issues?

1

Relatively low degree of understanding around the drivers of infrastructure costs

FTAC lacks cost reflectivity

2

Infrastructure costs package: high-level options

- The primary objective of the infrastructure costs package is to develop a charging structure in which the costs currently captured by fixed charges (i.e. the costs which are fixed or vary only in the medium to long-run) are recovered in a way that better reflects their cost drivers



1 Sub-option 1: an improved attribution of Network Rail's infrastructure costs

This would lead to a step-change in the industry understanding of these costs and what drives them.

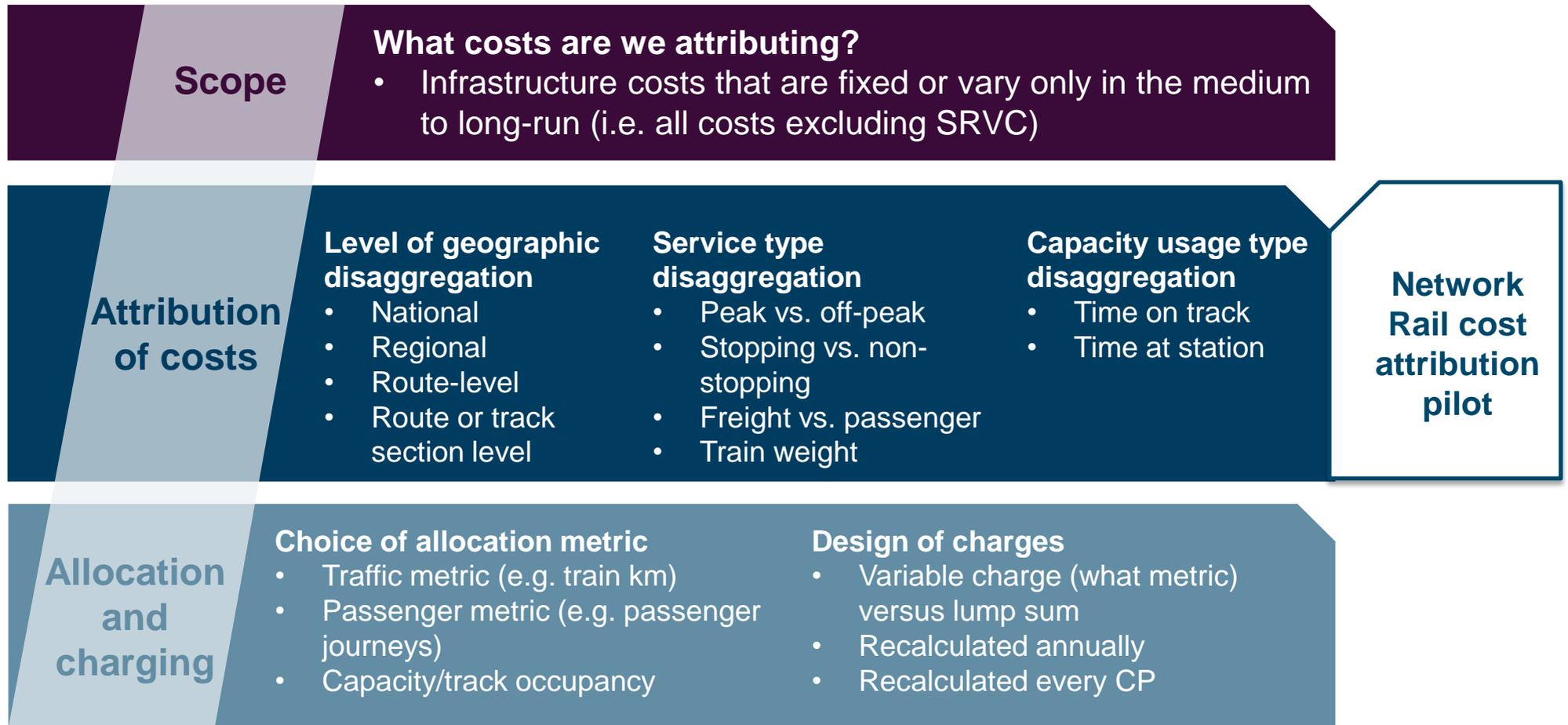
2 Sub-option 2: exposing operators to charges which reflect an improved attribution of infrastructure costs

This would lead to a step-change in the industry understanding of these costs and what drives them, together with the resulting development of a more cost-reflective charging structure on the basis of this attribution.

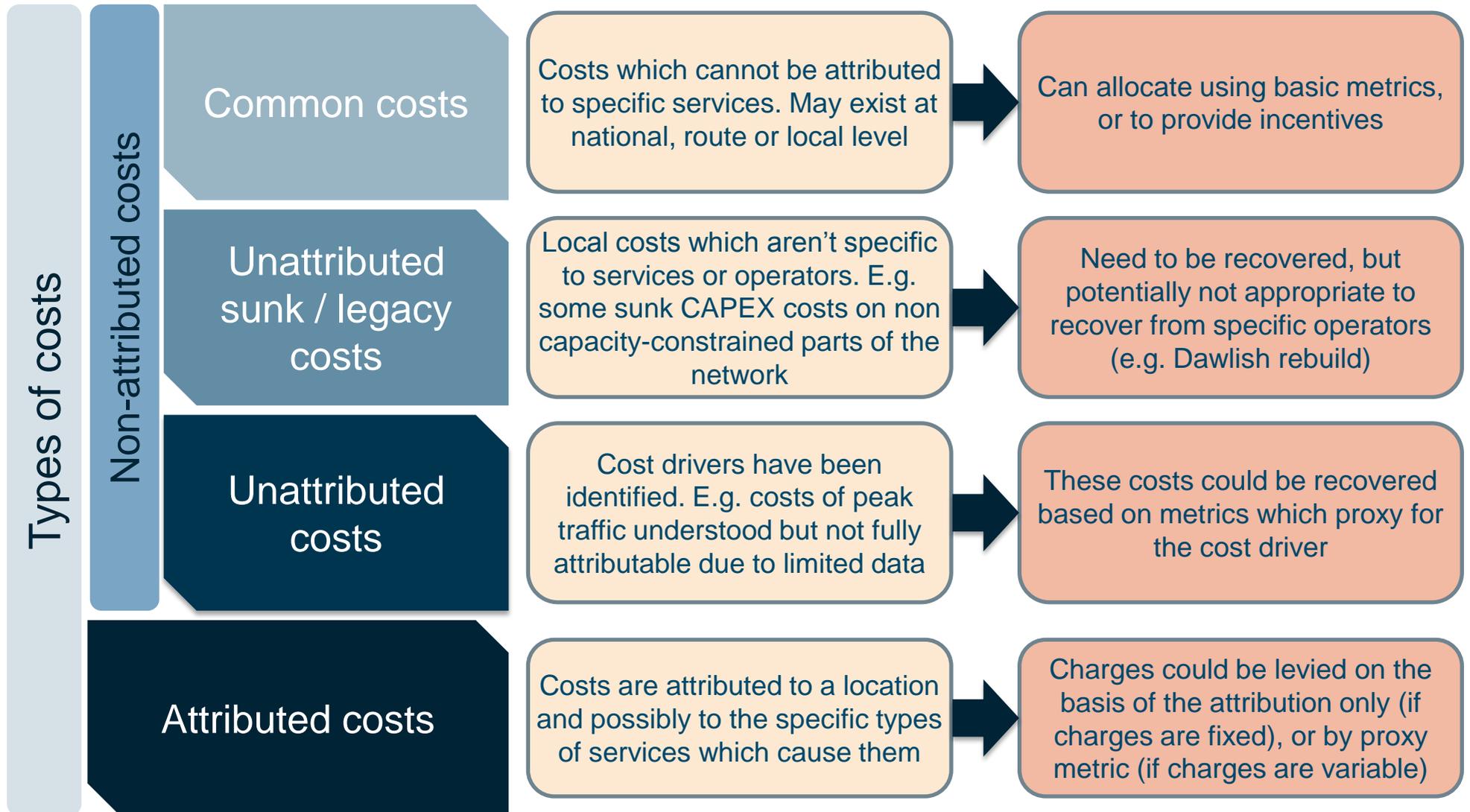
- These changes could be implemented over more than one control period

Infrastructure costs package: development (1)

Illustration of the process for developing more cost reflective charges:



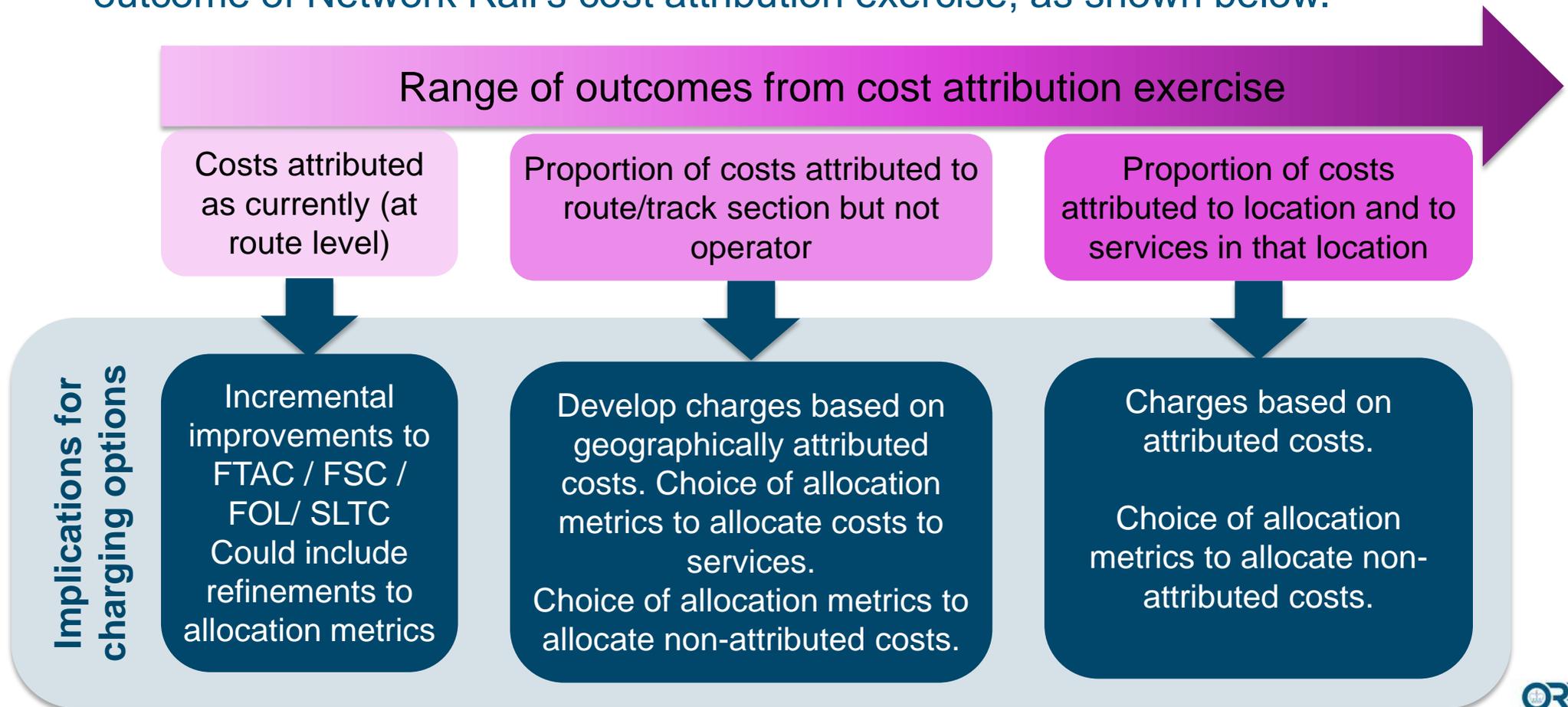
Infrastructure costs package: development (2)



Infrastructure costs package: development (3)

The next phase of our work is focused on developing more detailed options and understanding their relative merits.

The development of these more detailed options will also depend on the outcome of Network Rail's cost attribution exercise, as shown below.



Impacts of the infrastructure costs package (1)

Sub-option 1

An improved attribution of Network Rail's infrastructure costs

Benefits

Support Network Rail and ORR as regulator in reducing network costs

Support better franchising decisions using better information on the costs of using the network

Inform investment decisions

Improve decisions made by Network Rail and ORR on the allocation of access rights.

Increased transparency of governments allocation of funding

Support devolution through more accurate attribution of costs between regions

Challenges

Would require collecting more granular data than is currently needed/available

Require engagement of significant resources to develop

For benefits to be realised, the information will need to be used so we need to ensure sufficient awareness and understanding of methodology

Impacts of the infrastructure costs package (2)

Sub-option 2

Exposing operators to charges which reflect an improved attribution of infrastructure costs

Benefits

(in addition to those of sub option 1)

Further support lower network costs. A more cost-reflective charging structure will provide operators with better incentives for efficient decision making

Further support lower network costs by allowing operators to better hold Network Rail to account

Challenges

If charges were levied on a variable basis, this would reduce the predictability of charges for operators and would increase the variability of Network Rail's income

Distributional impacts – charges levied on some parts of the network on some operators would go up, while charges to other would go down

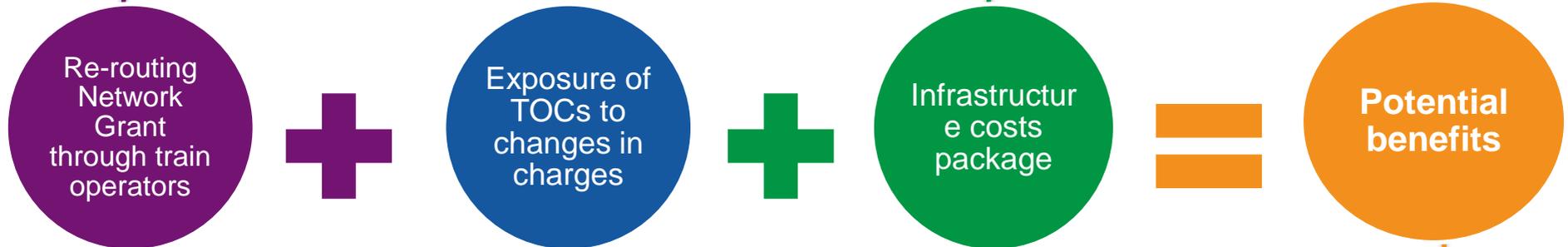
Familiarisation costs for the industry – this could be reduced by having a sufficiently long lead-in period

Money flows and the infrastructure costs package

Changing the way money flows between Network Rail and operators is a first step in achieving some of the transparency benefits discussed previously.

To unlock the full benefits, it is important that there is clarity and transparency about where costs are incurred.

The purpose of our infrastructure costs package is to gain a better understanding of what is causing the costs to be incurred (i.e. cost drivers) and alternative ways of allocating these costs to improve cost-reflectivity of the charging structure.



DfT is currently considering whether future franchise agreements should partially expose franchised train operators to changes to the rate of charges which they have the ability to influence.

A change to the current level of franchise protections would greatly increase the magnitude of all of the impacts described under the infrastructure cost package (and other packages we are consulting on).

-Improved alignment of incentives between rail industry party

-A more conventional relationship between Network Rail and its customers

-Transparency benefits

-Better decision-making across Government and the rail industry

Value-based capacity package: rationale and options

- Demand for capacity may be above the level of capacity available on some parts of the network. In a competitive market, a shortage in supply will ultimately result in higher prices, which would ration demand to those willing to pay a premium.
- Network Rail cannot adjust its charges in order to reflect a shortage of capacity and provide information and incentives to operators and/or funders.
- As a result, users who place a higher value on capacity may be unable to access the network.

At a high level, the value-based capacity package is a broad approach that would result in a charging framework which reflects the value train operators place on scarce capacity through the charges they pay to access the network.

Least to most complex options (in terms of implementation)



Capacity utilisation charging

A charge varying based on capacity utilisation, to act as a proxy for the value of paths on a specific part of the network.

A measure of capacity utilisation would be used to vary charges (either existing charges, or a new capacity-specific charge).

Auctioning

Auctioning slots could reveal the value of capacity to different operators. This approach would overcome the difference between the information held by DfT/Transport Scotland/ORR/Network Rail and train operators as to the relative value they place on train slots.

Scarcity charging reflecting opportunity cost

Scarcity charges would reflect the opportunity cost of using capacity where demand is constrained.

This would require a calculation of the value (private and social) of train paths to different users. The outputs of this calculation would then need to be converted into charges.

Value-based capacity package

Benefits

(better information only)

Better information used by Network Rail and ORR to improve allocation of paths. It could also be used by funders at the time of re-franchising

Support lower network costs by highlighting areas of particularly high value, which helps Network Rail to allocate its resources more effectively between different parts of the network

Improve decision-making by funders, Network Rail and ORR on options for enhancing the network

Benefits

(passing information into charges)

Improve use of the network by providing an incentive for capacity to be used by services with the greatest commercial and social value

Value-based capacity charges could send price signals to Network Rail in terms of the most efficient way to allocate capacity to operators, as well as encouraging it to accommodate additional requests in general

Challenges

Without a better understanding of the drivers of network costs, value based charges could result in volatility in charges and unintended incentive effects

A greater degree of flexibility in franchising would be needed in order to make these charges effective, so that train operators and Network Rail are able to respond to the incentives provided

Implementing could be complicated and costly. A redesign of the billing system might be needed for example to accommodate different charge rates at different times of day (not currently possible)

A charge underpinned by complex economic models would require the industry to incur costs to understand and be able to respond to these new charges

Questions for breakout session

Proposals

- Would you expect the infrastructure costs package to deliver more (or fewer) benefits than the value-based capacity package at this stage and, if so, why?

Infrastructure costs package

- What costs and benefits do you see with this package?
- To what extent do you think the benefits of this package can be realised through more information, rather than through the use of charges?

Value-based capacity package

- What costs and benefits do you see with this package?
- To what extent do you think the benefits of this package can be realised through more information, rather than through the use of charges?



The package of improvements

Rishi Mandavia

Package description

- We are proposing to continue work to identify improvements to address known weaknesses with:
 - the current method of recovery of short-run variable costs; and
 - the volume incentive and the route-level efficiency benefit sharing (REBS) mechanism
- Aspects of this package could be combined with the infrastructure costs package and the value- based capacity package.

Rationale for package

- Evidence suggests our current charges and incentives have some successes in reducing costs and improving decision-making. For example, the 2014 Credo report cites:

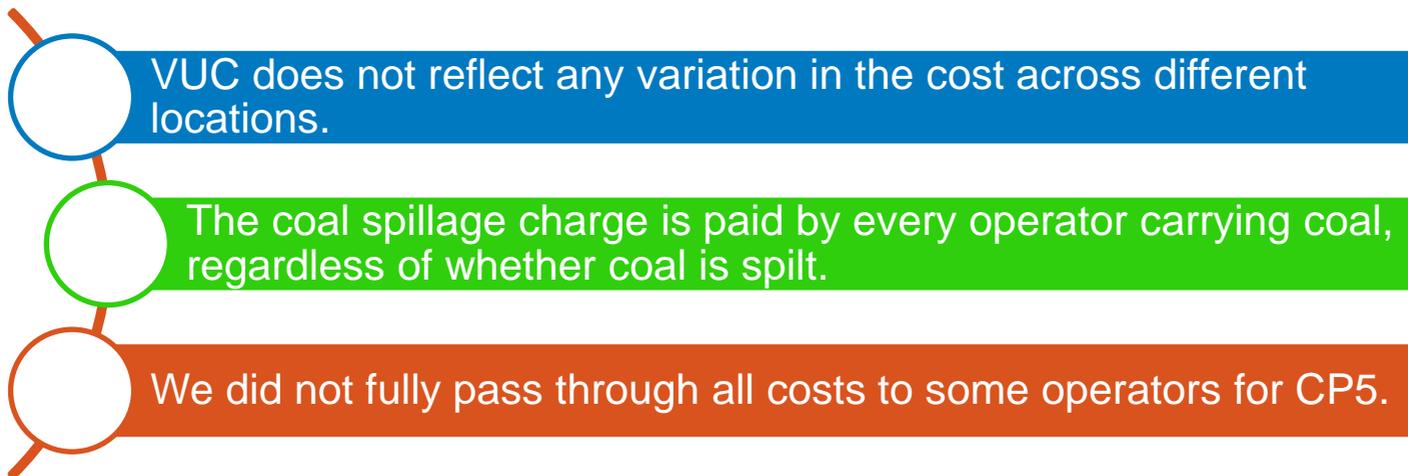
Variable usage charge:

Operators, rolling stock owners and train manufacturers state that they respond to the VUC.

Electric current for traction charge:

Operators investing in eco-driving programs, considering train temperature strategies, stopping patterns and regenerative braking to reduce their EC4T charge.

- However, we know that some charges are not fully cost-reflective. For example:



Impacts of improvements to current charges

Benefits

Strengthened incentives on operators and Network Rail - Improved cost-reflectivity means operators and Network Rail face more accurate costs, allowing more efficient decisions

Closer alignment of industry incentives - More incentives on TOCs to work together with Network Rail to drive down costs

Reduce the funding requirement from governments
Cost reductions would drive efficiencies and reduce taxpayer support

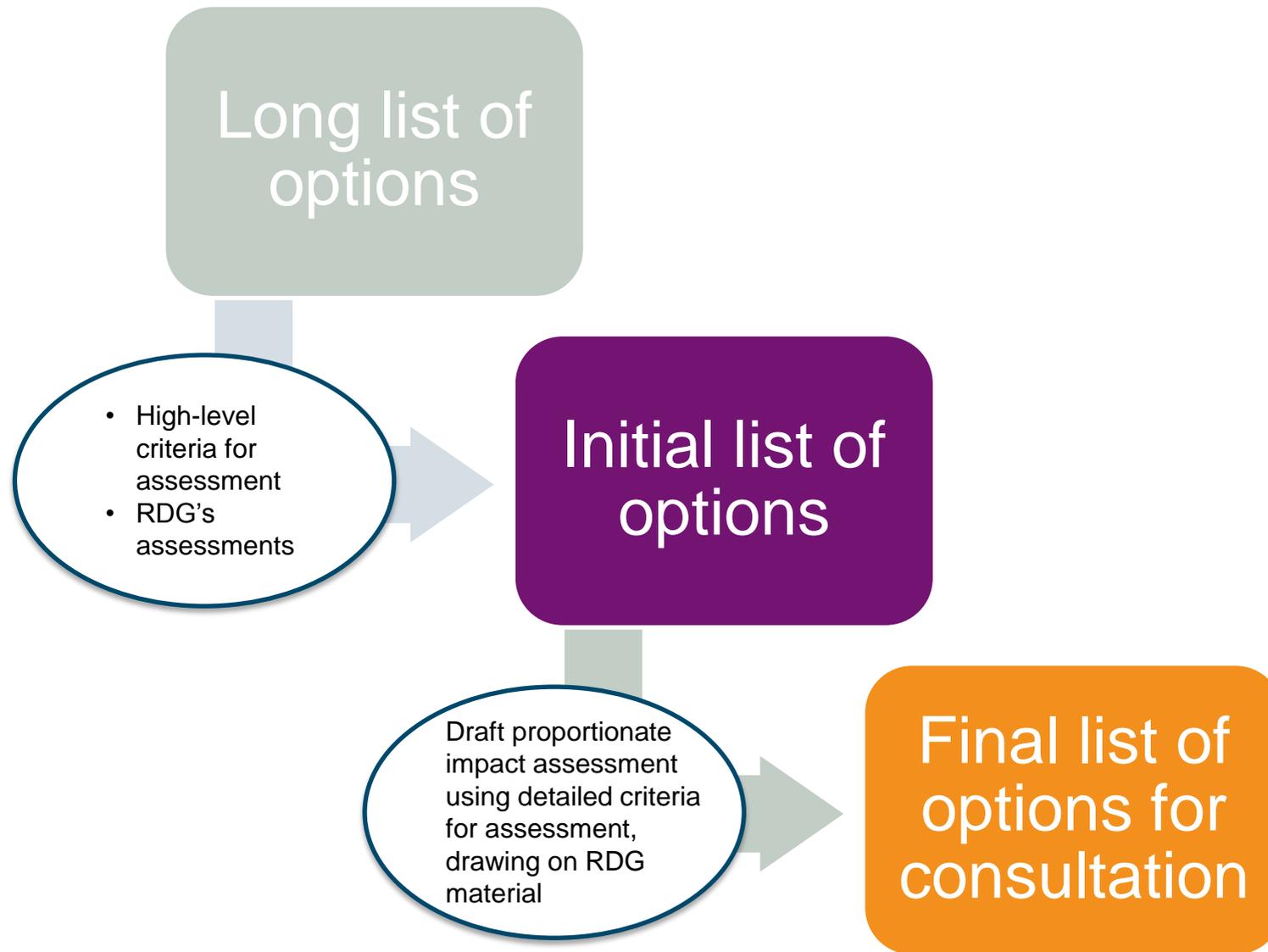
Challenges

Scale of impacts – The charges in this package account for less than 20% of Network Rail's income. Impacts will be limited

Difficulty in setting the right incentives - The potential for incentivising behaviour will depend on the level of exposure TOCs have to any changes

Transition costs to Industry - Any costs incurred by industry in understanding, engaging and responding to changes should be proportionate

Next steps for the improvements package



Proposed criteria for assessing options



e.g. will it encourage more efficient decision making to support lower network costs?

e.g. are there any constraints and does it support effective competition?

e.g. are there impacts on the environment, or the equalities groups?

Is it legally consistent?

Long list of options for initial consideration (1)

Current charge	Options
Variable usage charge (VUC)	<ul style="list-style-type: none"> - Ensuring full recovery of costs that vary with traffic - Disaggregation to reflect cost drivers - Improve robustness of VTISM for VUC
Capacity charge	<ul style="list-style-type: none"> - Further disaggregation to improve cost reflectivity - Recovery of costs through other mechanisms/charges - Methodological changes - Review wash-up mechanisms
Electrification asset usage charge (EAUC)	<ul style="list-style-type: none"> - Combine EAUC with another charge, such as VUC to reduce complexity
Electric current for traction	<ul style="list-style-type: none"> - Update methodology around transmission losses, modelled rates and partial fleet metering - improve incentives for metering
Coal spillage charge	<ul style="list-style-type: none"> - Increase incentive property of the charge - Recover costs elsewhere or combine with VUC

This is a long list of options that have come from RDG's long list, previous commitments or ideas that have otherwise been put to us either formally or informally.

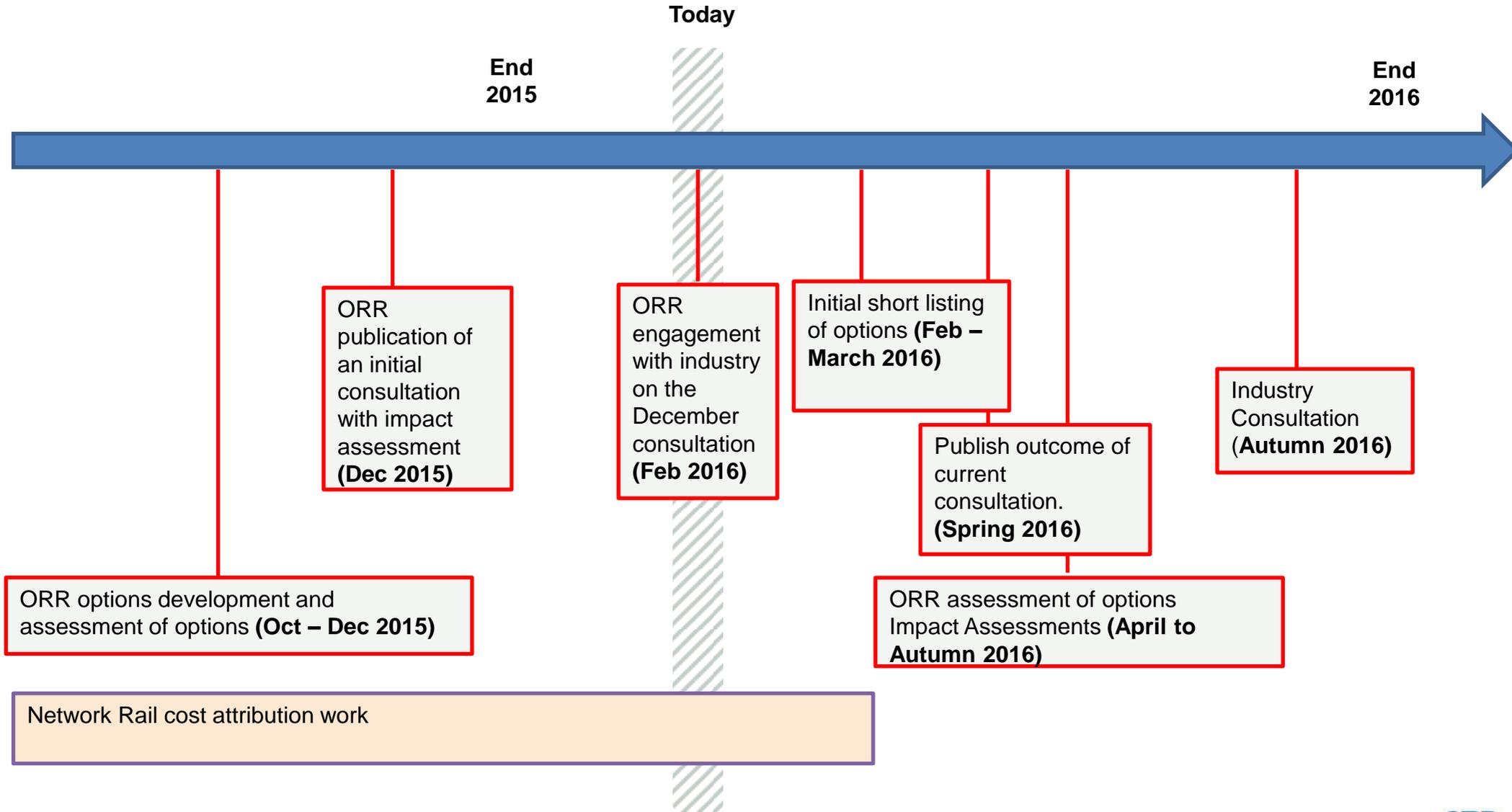
Long list of options for initial consideration (2)

Current charge/incentive	Options
No charge currently recovering these costs	<ul style="list-style-type: none"> - Externality charges e.g. for noise, environment - Charge for biomass spillage or effluence clear up - Average cost charge - Occupancy charge/ Capacity utilisation charge - Reservation charge
Volume incentive	<ul style="list-style-type: none"> - Improve the payment rates (e.g. by improving evidence base for calculation) - Geographic disaggregation - Improve NR internal transmission mechanisms
Route- level efficiency benefit system (REBS)	<ul style="list-style-type: none"> - Methodological improvements to REBS - Revisit TOCs' exposure to Network Rail's costs through charges and REBS

This is a long list of options that have come from RDG's long list, previous commitments or ideas that have otherwise been put to us either formally or informally.

Charges review next steps

Indicative dates, at this stage



Questions for breakout session

Improvements package

- What options would you expect to see in a long list?
- What areas do you see as a priority for this package?

Next steps for the charges and incentives regime

- How would you like us to engage with you as we progress work on this regime?