

**Bold thinking**  
A model to fund our future roads

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**CBI:**

Sana Nabi  
Transport Policy Advisor  
CBI  
T: 020 7395 8185  
E: sana.nabi@cbi.org.uk  
www.cbi.org.uk

**Aggregate Industries:**

Miles Watkins  
Director of Sustainable Construction  
Aggregate Industries  
T: 01530 816 667  
E: miles.watkins@aggregate.com  
www.aggregate.com

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# Foreword

## John Cridland



At the heart of this report is a clear message to government: we need a road network that supports and enables growth. Businesses depend on our roads every day, whether to move freight, to reach customers, or simply to get their employees to work. But they face growing congestion, poor surfaces and an increasing lack of capacity. When the majority of businesses believe the road network is deteriorating, it is clear that the current model is not working.

While government can, and should, front-load its short-term roads investment programme to ensure that we get spades in the ground as quickly as possible, this is not a long-term solution. There is a £10bn shortfall in funding for Highways Agency projects that cannot be filled in the next spending period – or the one after that. We have to accept a ‘new normal’ for public investment: in an era of fiscal constraint, the government cannot fill the spending hole and bring our roads up to the standard we need. Without a change of approach, the UK’s roads infrastructure will, despite best efforts, continue to slip down the international league tables.

That’s why the message of this report is ‘think big and bold’. For too long we have allowed the constraints and boundaries of our current roads model to set the parameters of our ambition. This report seeks to turn the debate on its head. We want to start a conversation about the kind of road network we need, and the kind of model that will provide sustained investment to deliver it.

I think Government is ready for this dialogue. In March 2012, the Prime Minister set out his stall by advocating greater private investment in our roads and looked to the water industry as a possible template. I agree with this approach – and as the government looks to conclude its feasibility study into alternative models, I think the time is right for a gear-change.

The choice is simple: if we want a better performing, more efficient network, we have to find a new way to supply it. This is no longer a question of ‘if’ but ‘when’. It is easy to lose sight of the prize when you start picking through the detail, but I believe a solution is achievable. With this report to kick-start debate, business stands ready to help government design and implement a model that boosts performance, supports trade and underpins economic growth for the benefit of all.

A handwritten signature in black ink that reads "John Cridland". The signature is written in a cursive, slightly slanted style.

John Cridland  
**CBI Director-General**

# Foreword

## Alain Bourguignon



As a major supplier to national infrastructure developers, as well as a significant user of that infrastructure, we see the UK road network through different lenses. From an international perspective, we see the impact of under-investment on the UK's competitiveness – but we also see what this looks like on the ground. Our domestic construction firms, like thousands of other businesses up and down the country, are unable to maximise their productivity due to an unreliable road network. We hope that the ideas outlined in this report will address some of the key issues we see with the current network model.

We understand that government tries to make the most of a limited funding pot – but the most cost-effective course of action is rarely followed. Repair and maintenance programmes are often driven by a 'worst-first' rather than 'best value' approach, with insufficient consideration given to the suitability of materials and the effectiveness of the repairs. Such an approach places real limitations on the ability of firms to deliver best value for taxpayer money.

By transferring the management and maintenance of essential road infrastructure to long-term investment vehicles, we could see better planning, procurement and design of the assets, leading to far better outcomes for all stakeholders.

A lack of connectivity between the national network and local roads provision is also leading to bottlenecks and a two-tier system. Too often businesses and private users of the road network are held up on their journeys through poorly planned interventions, adding unnecessary cost and delay.

Joined-up thinking and a long-term vision – focused on the cost of roads over their life-cycle – is critical to delivering a performing road network and best value to businesses and local communities alike. We believe that bringing a commercial emphasis to the management of the road network will inevitably lead to better scheduling of works and additional capacity for all users.

As a major supplier of construction products across the UK, we very much look forward to a high quality road network that better enables us to meet our customers' requirements on a consistent basis. Improved connectivity of people, goods and services should lead to further economic growth at an essential time.

We very much welcome this report from the CBI and recommend that government acts quickly to reform the UK's road infrastructure model for the benefit of industry and consumers alike.

A handwritten signature in black ink, appearing to read 'Alain Bourguignon', with a stylized flourish at the end.

Alain Bourguignon  
**CEO, Aggregate Industries**

## Executive summary

This report sets out the CBI's vision for the future of our roads network. When UK businesses are competing for global capital, it is vital that they are supported by world-class infrastructure. But there is a disconnect between the desire of government and business to create a world-class roads network and the public funding available to deliver it. With the public purse strings firmly tied in the foreseeable future, we need new sources of investment. In March 2012, the Prime Minister articulated his ambition to close this gap through new innovative funding mechanisms to attract large-scale private investment to the UK road network. The recommendations outlined in this report offer an indicative model to attract this investment to create a more efficient, high-performing network for the benefit of all road users.

The CBI proposes introducing a model for the roads network that has a proven track record in utility sectors for generating significant private investment and better standards for motorists. We believe that a regulated asset based (RAB) model – in which an independent, price-setting regulator oversees investment from private operators for stable, capped returns – could deliver the government's ambition.

A RAB model would address the insufficient investment and uncertainty caused by current short-term funding cycles by taking the road network out of the government's budget. It could provide a secure revenue stream through user charging – created initially by reclassifying vehicle excise duty but with the flexibility to explore other mechanisms, such as tolling, once established – that would attract sufficient private investment to both maintain the current network and expand capacity. In this model, a roads regulator would

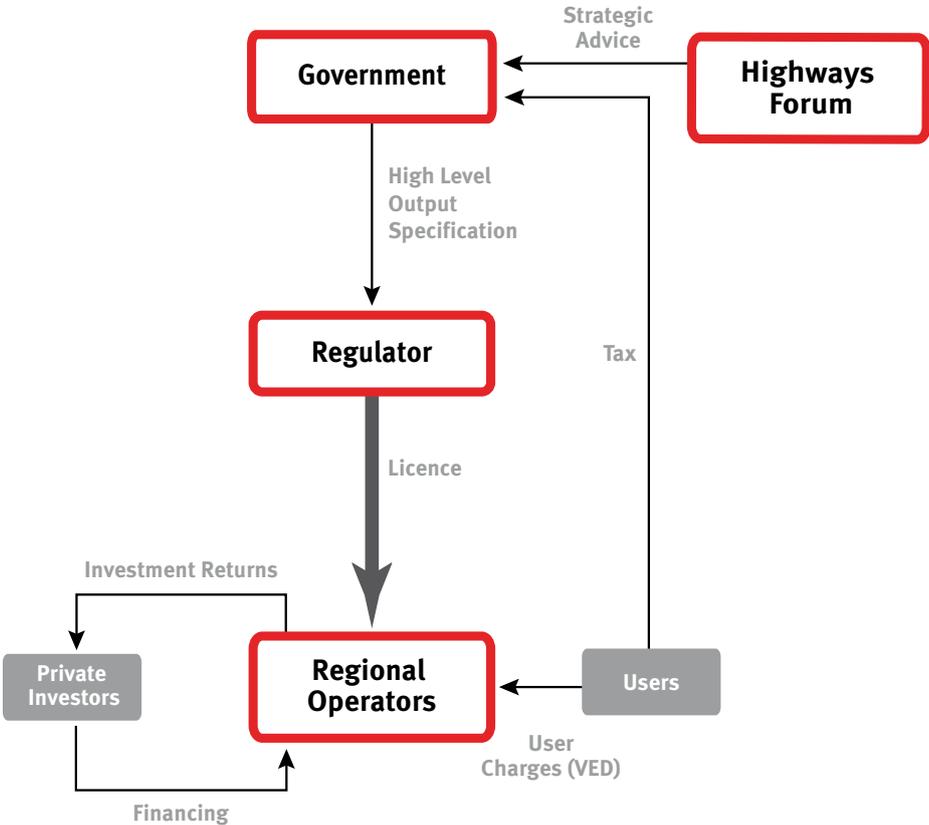
champion standards for motorists and ensure value for money through its licences and capped charges, with government learning lessons from the experience of regulators in other sectors. The CBI believes that implementing this kind of model is a way of securing a well-funded, high-performing network that works for users and investors alike.

Introducing this model would be a bold move – but for businesses, bold thinking from government cannot come soon enough. Every day, firms up and down the country lose time and money as freight deliveries, commuters and business travellers get stuck in an increasingly saturated network. Congestion costs the UK economy up to £8bn a year, and the CBI's own research shows that half of companies have seen a decline in the standard of motorways, while two-thirds report deterioration in local roads. Insufficient network capacity and poor quality maintenance are both common business frustrations.

We need a roads network that supports and enables firms to grow. As the government looks to conclude its feasibility study into future funding and ownership of the roads, now is the time to think big. With this report, we hope to shape that discussion, arguing that:

- A gear change in investment, performance and efficiency is required to upgrade our road network
- Delivering change requires the buy-in of both users and investors
- A regulated model could drive investment and improve performance.

### A future model for the road network



# 1

## A gear change in investment, performance and efficiency is required to upgrade our road network

**The UK's road network spans almost 400,000km across the country, providing a backbone for trade, helping to attract inward investment and supporting economic growth. Every day, our roads facilitate the movement of goods and passengers, and connect businesses with their employees, customers and suppliers. With 95 per cent of business leaders citing that the UK's roads are important to their business and its productivity, but nearly two-thirds dissatisfied with the current network, it is clear that something needs to change.**

Businesses are feeling the strain and lack confidence in the prospect of future improvements. While government can demonstrate some success in attracting private investment into other areas of infrastructure, the road network is still primarily funded by the public purse. Revised government spending plans have caused delays to investment programmes, while the short-term budget cycles of the Highways Agency continue to constrain effective planning and governance. Despite positive announcements in recent months, such as the green light for the long-awaited A14 project, negative perceptions – both domestic and international – linger through a combination of rising motoring costs and persistent congestion. Looking forward, concerns about falling motoring tax revenue and diverging performance between strategic and local roads must be addressed. Businesses want to see a gear change in performance, delivered through greater investment and efficiency, to help support their growth ambitions.

### **A well-functioning road network is inherently linked to the UK's growth potential**

Business leaders have long called for an improved road network to support long-term growth. The CBI's 2012 infrastructure survey, *Better connected, better business*, demonstrates that infrastructure can have a substantial impact on investment decisions, with transport infrastructure often critical: 84 per cent of businesses reported that the quality and reliability of transport infrastructure had a significant bearing on their investment decisions.<sup>1</sup> With 83 per cent of all goods in the UK being transported by road, there is no question that the performance of our road network is crucial to making the UK an attractive place to invest.

Our 2010 report, *Tackling congestion, driving growth*, set out the strong economic case for road investment from a business perspective, building on the work of Sir Rod Eddington. In his 2006 Transport Study, Eddington estimated that a 5 per cent reduction in journey times for all business travel on the road network could generate around £2.5bn of cost savings.<sup>2</sup> In his 2011 review of the Highways Agency, Alan Cook further highlighted the need for performance by exposing the cost of failure.<sup>3</sup> He described how one incident alone, which had closed Junction 7 of the M25 at rush hour, cost the economy £1.74m, or £62,000 an hour.

It is clear that a well-functioning road network can deliver wider economic benefits. It can help regions maximise their economic potential by opening access to new markets and expanding labour catchment areas. It can help with operational resilience, ensuring that employees can efficiently commute to and from work at peak hours. Looking further afield, it plays a vital role in underpinning an export-led recovery, providing direct routes to international gateways and boosting business investment prospects.

The long-term benefits of road investment are well-known; however, much can also be gained in the short-term by prioritising essential upgrades and maintenance work. Construction activity is estimated to generate £2.84 to the economy for every pound spent.<sup>4</sup> Frontloading investment can not only deliver quicker improvements for business users and the public, but it can provide a vital boost to the UK's construction sector. Improvements to the A1(M) in the North East demonstrate how road investment can have beneficial impacts on job creation and the local economy (**Case study 1**).

### **But limited government funding has delayed investment programmes and hampered the network's capacity to meet increasing demand**

Businesses recognise that restoring the UK's credibility in the markets through fiscal consolidation must be the government's priority, but they also acknowledge the potential growth impact of capital investment in transport. In the 2010 Comprehensive Spending Review, the Department for Transport's overall capital budget did not suffer the same degree of cuts as many other departments. Nevertheless, the cuts that were put in place had a significant impact on the Highways Agency's investment programme and resulted in several key projects – such as the A14 – being temporarily shelved.

### Case study 1

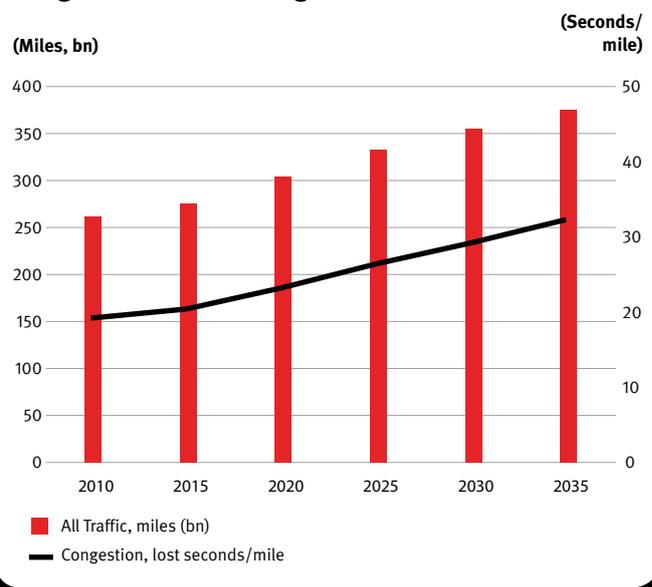
#### The A1(M) – more than just a road improvement

The expansion and improvement of the A1(M), improving the motorway link between Newcastle and London, is creating jobs and local investment along the route. Carillion and Morgan Sindall have led the latest £318m phase of the project, from Dishforth to Leeming in North Yorkshire. This has seen:

- ➔ £221m invested in the local economy during the construction phase from 2009-2012
- ➔ 600 jobs created during the peak construction phase
- ➔ 36 community projects benefiting from investment during construction
- ➔ 150 staff trained in accredited construction skills courses

Both the strategic road network (SRN), managed by the Highways Agency, and the local network have seen funding cuts – but figures for the SRN stand out. In 2010, the Highways Agency took a 35 per cent reduction in capital spend. While there is certainly room for greater efficiency savings in the Agency’s operations – as outlined in the Cook Review – the disconnect between funding available and funding required is significant. Arup has estimated a £10bn shortfall in funding for highways projects – for a network that carries one third of all road traffic and two thirds of heavy freight traffic.<sup>5</sup> This disconnect is symptomatic of a ‘new normal’ for public investment – government cannot meet its fiscal obligations and at the same time invest to keep the road network up to scratch.

**Exhibit 1 Forecast of volume of road traffic and congestion levels in England**



Despite the government’s efforts, the deterioration in the network is noticeable. Congestion already costs the UK economy up to £8bn each year and without measures to tackle this, the figure could rise by £22bn a year by 2025.<sup>6</sup> At present, 95 per cent of businesses are worried about the levels of congestion on the network.<sup>7</sup> As the CBI’s 2012 infrastructure survey demonstrates, this concern is not just confined to maintenance requirements; it is clear that capacity is becoming an increasing problem. While 94 per cent of business leaders surveyed cited surface quality as a key concern, 84 per cent pointed to lack of investment in new capacity as adversely affecting the quality of the UK’s road network.

The Department for Transport’s traffic projections illustrate the future challenge. The volume of traffic across our network is set to increase, predicting a rise of 46 per cent in traffic volumes by 2035 and 54 per cent longer average delays than 2003 (**Exhibit 1**).<sup>8</sup> For many businesses working with sensitive cost margins, especially

the road-intensive logistics and freight firms, an increasingly saturated network will damage their ability to deliver on time and to act competitively. It is clear that a future model must address both operational and capital requirements. More broadly, without a plan from government to address the challenges, these projections undermine business confidence and diminish the UK's competitiveness in the eyes of international investors. At present, UK businesses, on balance, are not confident that government can deliver an improved strategic or local road network within the next five years (**Exhibit 2**).

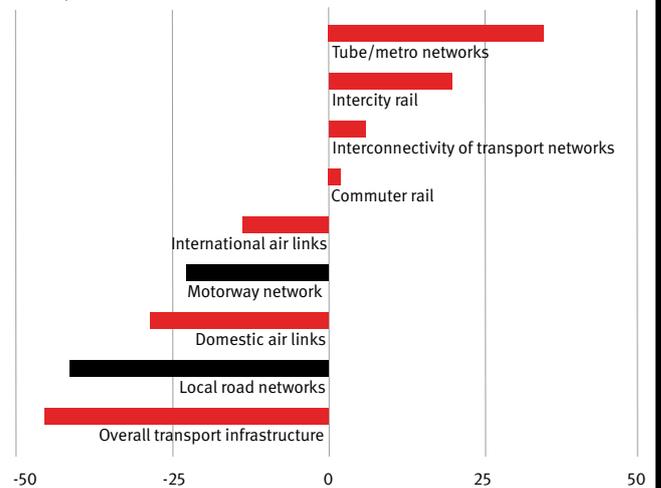
The state of the network is already having an impact on the UK's international competitiveness. The World Economic Forum's 2012 Global Competitiveness report ranks the UK 24th on quality of roads infrastructure, far behind our major European competitors France (1st) and Germany (10th). This assessment is echoed by UK business leaders: 61 per cent compare the UK's transport networks unfavourably to international benchmarks.<sup>9</sup>

In addition, UK motorists pay more on average for our road infrastructure than many countries ranked above us. An Infrastructure UK study benchmarked eight road projects in the UK and the Netherlands (ranked 11th) and found that the UK projects were, on average, 10 per cent higher based on the unit cost per lane kilometre.<sup>10</sup> This demonstrates the triple problem facing government: not only is capital investment inadequate and performance of the network decreasing, but the amount of funding allocated to improving the network is not being used as efficiently as possible.

### Future investment is threatened as existing motoring tax revenues are set to decline

While the network experiences under-investment, under-performance and inefficiency, the cost of driving has been steadily increasing. In 2009-10, motorists paid £35bn in taxes specific to road users (including VED and fuel duty) but in that same period, expenditure on the road network – including maintenance and the local network – was only around £9.4bn.<sup>11</sup>

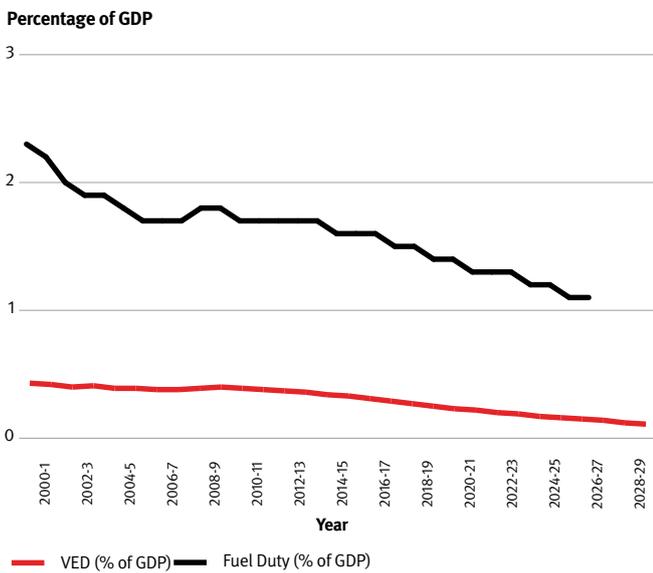
**Exhibit 2 Business confidence levels on whether UK passenger transport will improve in the next five years (% balance)**



Note: Figures based on balance of 'confident' rating responses minus 'not confident'

The most direct fix – hypothecation – is not a sustainable solution for many reasons. In a fiscally constrained environment, as a general rule, government must be able to allocate tax revenues in the most efficient way to support economic growth. Hypothecating motoring taxes for roads investment alone would set a precedent for other sectors. Furthermore, hypothecation would not address a more fundamental problem with the current motoring tax regime: the funding pot is set to get smaller, largely due to innovation in the motor industry.

**Exhibit 3 Long-term motoring tax revenue projections (Vehicle Excise Duty and Fuel Duty)**



The UK’s motoring taxes are intrinsically linked to the environmental performance of vehicles. Greater vehicle efficiency will mean cars will fall into lower VED emission bands, which could result in 85 per cent of new cars being exempt from VED altogether by 2030, and future fuel receipts will progressively decline.<sup>12</sup> Indeed, a recent report by the Institute for Fiscal Studies found that the UK could potentially see fuel duty receipts falling from 1.8 per cent of GDP in 2010 to 1 per cent by 2030, with VED receipts falling from 0.4 per cent of GDP to 0.1 per cent over the same period.<sup>13</sup> These projections anticipate a £13bn hole in the Treasury’s finances (**Exhibit 3**) – a hole caused not by reduced car journeys but by increased vehicle efficiencies. Looking ahead, any new model for funding our roads will need to address this declining revenue.

**The structure of the current road network has created a two-tier system**

Despite constrained government spending, the Highways Agency (HA) has continued a reduced investment programme that has had some success in maintaining key strategic roads. However, this HA investment in vital trunk routes is not always supported by local authority investment in adjoining local roads, which are vital to provide quick access and exit from the SRN. Motorists are not concerned whether a road is a national or local road – and they expect a smooth experience when travelling from one to the other. The current network does not always deliver this. This disconnect can result in motorists leaving a free-flowing motorway to face gridlock on the local road – and vice versa – especially when those roads are key trade routes. A future network must address this inconsistency between the SRN and local roads.

One road that illustrates this point is the A272 in the South East – a key arterial road under local authority control. It is one of two roads that provide east to west access to the south of London – the other being the heavily congested A27. The road crosses and connects some of the UK’s key strategic roads, including the A3(M), the A3 and the A23 – all of which are under Highways Agency control. With the A272 under local authority control, decisions over its running and maintenance are not made in line with improvements to the key SRN roads it supports.

# 2

## Delivering change requires the buy-in of users and investors alike

**With limited public funding available and future tax returns set to decline, attracting private investors is the only way to deliver vital road upgrades. While UK networks would have to compete for private investment against road projects across the globe, they are primarily an attractive asset. However, much will depend on the structure of the network – including the ability to secure a stable revenue stream – and how government sells the opportunity to investors.**

To secure that vital revenue stream, government needs to ensure that it creates a future network that is equally attractive to motorists. As the state of the network is already a business concern, government must deliver a network that provides value for money, quality and ease of access.

### Investors have their pick of projects across the globe – attracting them to UK roads requires a secure revenue stream and low risk exposure

The CBI's recent report, *An offer they shouldn't refuse*, highlights the attractiveness of infrastructure to private, especially institutional, investors.<sup>14</sup> Infrastructure represents a relatively low-risk asset that can deliver long-term stable returns – the perfect package for pension funds and sovereign wealth funds, for example. Existing roads are particularly appealing: the asset is already built and operational, but what we do not currently have is a mechanism to produce a funding stream for private investors.

In designing a new road funding model, both operational and capital investment – for existing and new capacity respectively – will be needed to sustain the UK road network. To attract investors to deliver this combination, we need a model that does two things: produce long-term stable revenue streams and provide certainty about future investment needs. With these boxes ticked, the risk profile of UK roads would be greatly improved.

➔ **Long-term sustainable revenue streams:** would be required to demonstrate clear returns for investors. Significant motoring taxes are currently generated indirectly through VED and fuel duty. Although this revenue cannot be hypothecated in full, as explained in the previous chapter, a proportion could be diverted from the Treasury coffers and used to attract investors. However, converting a proportion of motoring tax revenue to a more stable usage charge may not be sufficient alone to attract investors to take on riskier capacity projects, especially those projects involving significant construction activity. This is where an additional revenue stream, such as road tolling, could be required to fund new roads. To ensure success, investors would need to be confident that future volume projections are able to sustain adequate rates of return – and future volumes would depend on any new model enshrining user affordability at its heart. Motorists would need to be incentivised to use the road – through better performance – to achieve the volume to justify the investment. An example where charge affordability and volume projections have not converged is the M6 toll road (**Case study 2**), which competes with an improved M6 motorway for drivers. Any new model would need to overcome this issue.

➔ **A clear pipeline of road projects:** would provide certainty and clarity on future investment requirements and is vital for investors to be able to plan ahead. Capital is highly mobile and investors have a vast number of investment options from which to choose. Putting in place a clear and detailed future pipeline, combined with a stable and transparent investment framework, would allow investors to evaluate the construction risk involved alongside other greenfield investment options. Government already sets out such a programme in other sectors – such as the High Level Output Specification in the rail industry – so it should not be a difficult transition to start applying a similar process of longer-term project cycles for roads.

## Case study 2

### The M6 Toll

The M6 Toll was tendered in the late 1980s as the first user-tolled motorway project in the United Kingdom. The investment group, Macquarie Infrastructure, won the contract to build and run the toll road until 2054. The road provides an alternative to the highly congested M6 Motorway.

The toll road has seen a 175% rise in prices since 2004 levels – combined with the ‘free’ alternative of the normal M6 route, these factors have resulted in lower than expected usage. The original motorway, which falls under Highways Agency control, has seen a number of improvements and upgrades over the years, improving its performance and drawing away potential toll users.

### Users of the network demand affordable quality with ease of access

Businesses need to move up and down the country quickly, reliably and easily with minimum impact on their cost margins. The needs of the user must be at the heart of road reform: a new model based on private investment must not result in an immediate cost burden that drives motorists away from the network.

Although it will be vital to ensure that the overall cost of roads to motorists does not increase in the short to medium term, given the £10bn shortfall for road projects and the government’s intention to constrain future spending, additional user costs may be required in the longer-term to fund new capacity. Any long-term charging

increases must be offset by improvements to the network, which translate into efficiency cost savings, and provide demonstrable gains for the driver. Any additional charges must be affordable, interoperable and produce a better quality network.

Businesses already face yearly motoring tax increases without visible improvements to the network – a move towards a user-pays principle would require significant change. In designing a new network model, government must ensure that the following user requirements are met:

- **Affordability:** without motorists on the road, the network has no revenue stream. It is vital that a future roads system is affordable for all types of users. Road-intensive industries, such as freight and logistics, are of particular interest as they distribute goods up and down the country at all hours of the day. The industry runs at extremely tight cost margins, meaning that small increases to the cost of travel can have a significant impact. Any additional charges in the long-term, such as road tolls, or efficiency savings through better road connectivity and surface quality would have to be factored in. A future network must take a holistic view of taxes and other charges to ensure that the overall package does not have a disproportionate impact on frequent road users.
- **Interoperability:** any network must be simple to use, providing ease of access with any charging mechanisms fully interoperable. Businesses do not want to have to deal with different paying mechanisms and different systems on a day-to-day basis. In France, a badge system has been implemented, whereby road users use various tolls with the same badge and receive only one bill at the end of the month. The French system is also flexible in terms of management. One regional operator may utilise a road toll, while another may operate ‘availability contracts’, similar to the UK’s shadow toll roads, in the same region; however the motorist interacts

### Case study 3

#### International lessons – the French user charge model

In 2012, France achieved the top spot for its road network in the World Economic Forum's Global Competitiveness Report. France is recognised for the design and service quality of its road infrastructure and is flexible about the mechanisms it uses to fund the network. The country is highly committed to drawing on private finance to deliver roads investment – of its 6,900 miles, 5,500 are tolled. In addition, other highways are managed under PPP contracts.

The majority of the strategic network is based primarily on regional concessions for maintenance and development of the network. These concessions have delivered significant projects, such as the widening of the A63 between Salles and Saint-Geours-de-Maremne. However in 2005, France saw the privatisation

of major networks of autoroutes, resulting in the four largest highway operators each managing a network greater than 500 miles in length. Across these networks, the user requirement is placed at the heart of the concession. The approach taken to setting tariffs and investment plans is similar to that taken in the UK's utility sectors: the strategy for each concessionaire's network is agreed with the government every five years, with a view to preserving the quality of service provision. An agreement is made on the levels of service that is to be delivered under the concessions.

User charges and toll roads are vital in providing a dedicated revenue stream for the concessionaires, but activity in this area is controlled. Government policy restricts tolls to inter-urban routes and prohibits tolling around metropolitan areas due to the potential impact of traffic transferring onto local roads.

Source: *Providing and funding strategic roads: an international perspective with lessons for the UK*, Arup and RAC Foundation, 2011

with the network in a similar way in both regions (**Case study 3**). This balance of user and investor needs has been very effective, and France is now ranked first in the WEF Global Competitiveness report for the quality of its road infrastructure.

 **Quality:** a road user paying motoring taxes and abiding by the rules of the road expects a good quality, well-functioning network to be provided in return. Any network – especially one that charges at the point of use – must therefore have a minimum service level guarantee in place. This would apply to the existing network and any new capacity built.

A future roads network must meet all needs: a model that satisfies users and attracts private investors. Much has been written by academics and industry experts on what this model might look like, but the debate has become mired in detail before the fundamentals are agreed. It is time for government to build consensus on the need for private investment and user-charging to deliver better roads. Once this consensus is reached, we can delve into the detail.

“The needs of the user must be at the heart of road reform: a new model based on private investment must not result in an immediate cost burden that drives motorists away from the network.”



# 3 A regulated model could drive investment and improve performance

**The CBI proposes introducing a new model for the roads network that has a proven track record in utility sectors for generating significant private investment and better standards for motorists. We believe that a regulated asset based (RAB) model – in which an independent, price-setting regulator oversees investment from private operators in an established asset (in this case – the UK strategic road network) for stable, capped returns – could deliver the government’s ambition for better-funded, higher-performing roads infrastructure.**

RAB models are widely used in utility networks in a range of countries and demonstrate a strong track record of attracting private capital, regulating performance and controlling prices. A combination of low risk and steady returns has proven relatively resilient even in difficult financial environments. KPMG ascribes this resilience to a long-term perspective, well-defined asset base and clear framework.<sup>15</sup> Such models are prevalent because they are not homogeneous; RABs are flexible and can be adapted and tweaked to fit the infrastructure – and political climate – in question.

There are many different ways to introduce such a model, and much has been written by industry experts and academics on the best fit. Here, we have proposed an indicative model that draws on lessons learnt from other regulated sectors, such as the water and rail industries. This model transfers responsibility for quality and affordability to a new regulator, risk and returns to private investors, provides an improved network for drivers and leaves government in control of the strategic vision and roads policy (**Exhibit 4**). Most importantly, it provides the government with a starting position, from which a more detailed debate is encouraged.

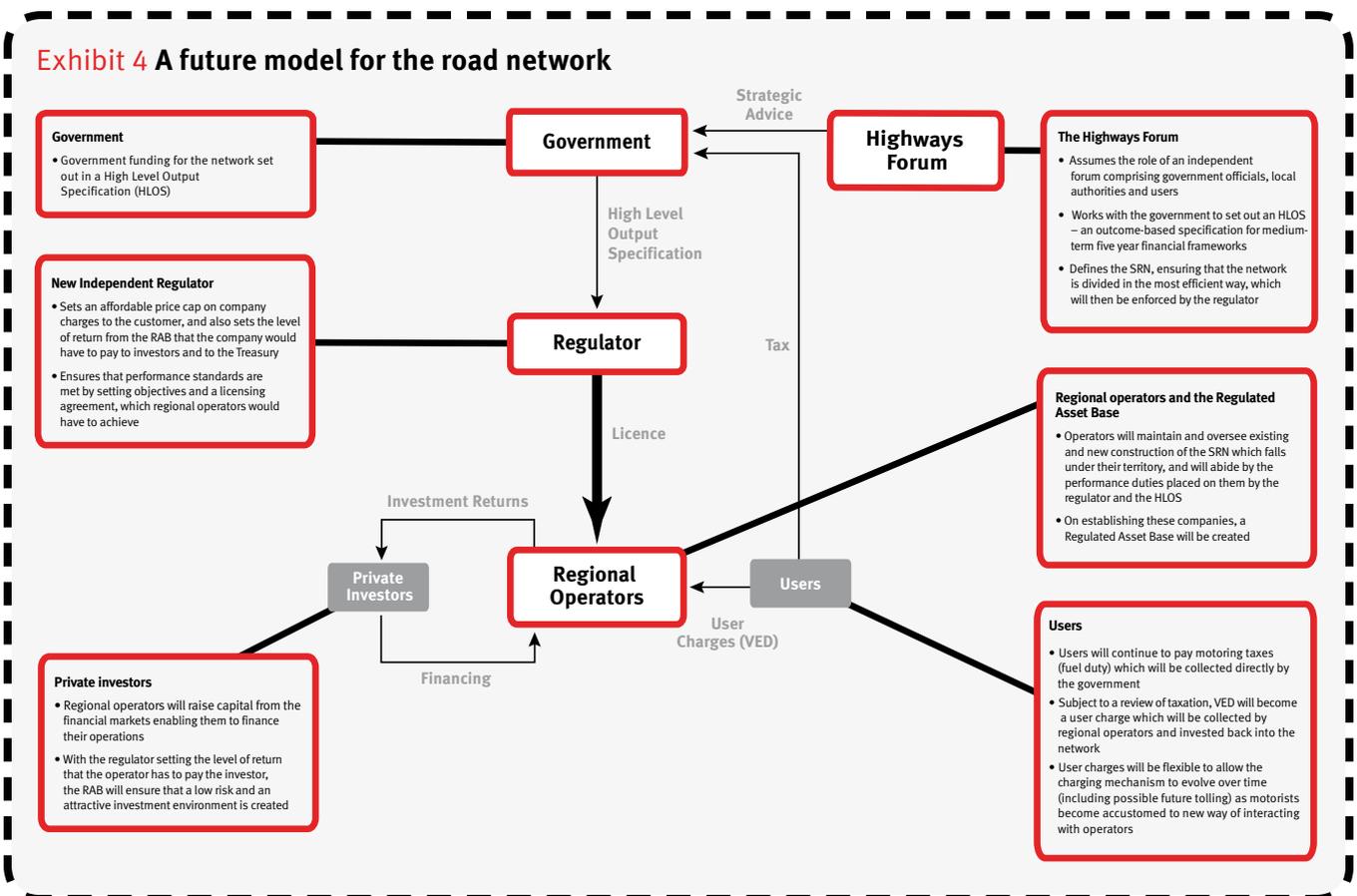
## A future UK road network that combines government vision and private sector delivery

The model proposed in this report could address the problem of long-term funding head-on by taking the road network out of the government’s budget. At the heart of the model would be a new independent regulator, responsible for ensuring the continued operation and quality of the network. The regulator would have the power to issue licences to private operators – who would own and operate regional sections of an expanded SRN, and be incentivised to improve standards and efficiencies through the terms of these licences – while capping costs and investor returns to ensure a fair deal for road users.

Drivers would continue to pay reduced motoring taxes directly to government, with a proportion having been converted to a user charge – controlled by the regulator – to access the expanded SRN and provide a revenue stream for investors. With this revenue stream, private operators can access further investment from the debt markets and finance essential upgrades to the network.

There could be scope in the future, once the model was established, for user charges to become more flexible to meet the demands of capacity upgrades – for example, through additional road tolling – with the regulator minimising the aggregate cost burden on motorists.

The overall strategic vision for the network would remain with government, with future capacity upgrade programmes being communicated to the regulator – and ultimately delivered through private operators – through a five-year High Level Output Specification (HLOS) from the Department of Transport. This programme of strategic upgrades would be informed by a new Highways Forum, comprising key stakeholders from user groups, local authorities and government officials. The Forum would also help government determine the parameters of the SRN, ensuring that the network includes key economic routes and links seamlessly with the local road network.



**Secure and sustainable revenue streams could deliver a bigger bang for the user’s existing buck, while attracting additional investment from private sources**

The fundamental problem with the current roads regime is the inability of government to attract additional sources of funding. At present, to increase investment we must see either taxes going up or the Exchequer relinquishing more motoring revenue – in the new economic climate, neither option is palatable. This indicative model, however, could open the door to greater private investment.

The combination of a steady user charge and efficiency incentives through operating licences will inject a bigger bang for the user’s existing buck, while the clear and predictable cash flow would allow regional network operators to approach private investors for additional funding in exchange for a secure return on their investment.

The methods by which user charging could be introduced and how it could actually operate have been much-debated issues. Here, the CBI’s proposed model has some degree of flexibility. Setting up a RAB model with a revenue stream to fund capital maintenance and

repair could be done relatively simply by converting VED revenue to a user charge that would be paid to regional operators. This charge could initially be set up as an access charge for the SRN. While this mechanism would be easier to implement, it might not be sufficient in the long term to leverage the kind of future investment needed to finance bigger capacity projects that might be required through the HLOS. Private operators would have to finance such projects through long-term borrowing, which could require additional revenue streams, such as tolling, above a standard charge. The initial network model must be flexible to allow the charging mechanism to evolve over time as drivers become more accustomed to new ways of interacting with the operators. Of course, the regulator would be in place to ensure that any changes to the charging regime are offset where possible and that the cost burden on intensive users is not disproportionate and uncompetitive.

### **A new independent regulator could cap costs, incentivise efficiency and drive up standards for users**

The CBI has long argued that the current roads governance structure needs greater independence to deliver value for money. Short budget cycles and funding uncertainty has led to an inefficient and under-performing management system at the Highways Agency, hindering the quality of maintenance and improvements of roads for the motorist. Within the constraints of his review, Alan Cook outlined key concerns regarding the functioning of the Agency and made some recommendations to the government which he estimated could save around £200m a year in efficiencies across the network.<sup>16</sup> A more fundamental restructuring of network governance under a RAB model, replacing the Highways Agency with an independent regulator, would allow previous concerns about independence, funding and long-term vision to be addressed more fully.

The UK has substantial experience of using RAB regimes for the governance of the water, rail and energy sectors. The role of the regulator is fundamental to the model, and while regulator performances have varied over time they have been broadly successful at increasing investment and capping costs for users. Of course, when it comes to applying a RAB model to roads, lessons must be learned from experiences in other sectors to ensure that the role of the regulator is tightly defined and consistent over time.

An independent regulator for the road network could regulate the activities of operators and have the power to remove operating licences if investment and customer satisfaction objectives are not met. The regulator could also outline funding arrangements necessary to deliver the government's capital programme – set out through an HLOS – ensuring that appropriate and affordable caps on user charges and returns for investors are set. The price cap and performance standards strictly enforced by the regulator would ensure that the network reflects the key user criteria of affordability and quality. The mechanism would see the regulator setting and enforcing the level of return on investment, ensuring that the model is low risk and attractive to private investors.

### **Operators could provide a more coherent approach to regional networks**

This proposed model could see a redefinition of the SRN based on economically significant routes – those strategic roads and junctions that underpin UK growth. These routes could be managed by private regional operators, who would hold responsibility over the maintenance and running of the regional strategic network. Similar to the water industry, the private operators would be required to deliver the terms of their licence and work closely with local authorities, enabling the regulator to benchmark performance and providing strong pressure across the network for cost efficiency and network improvements for the driver. Once the model was up and running, there could be scope for operators to think more creatively about charging mechanisms – within regulatory cost constraints – to incentivise off-peak use of the network and respond more to the needs of regional users. Traffic patterns and user profiles differ across the country – by being more innovative, operators could boost the efficiency of the network, underpinned by the regulator's licence requirements on performance standards and price caps.

While government may have concerns about losing some economies of scale through a regional approach, these concerns can be offset in two ways. Firstly, while procurement is currently done on single tranches of a specific road cutting across regions, this indicative model could see regional operators procuring for a network of roads within their region. The actual size of the procurement project would not necessarily be smaller. Secondly, by moving away from one year “stop-start” funding cycles towards a longer-term programme of projects, economies of scale would also improve.

### The government can learn from working models in the water and rail industries

In roads reform, while the government has plenty of international RAB examples to ponder, there is also an array of useful domestic comparisons. The governance and funding regimes in both the rail and water industries demonstrate predictability of revenue streams, affordability, significant levels of investment and higher user standards. The models have been attractive to investors as they are low risk and have created investment certainty, which in turn has helped to drive improvements in both sectors.

The levels of investment across the water industry have been substantial, allowing the sector to improve performance and customer satisfaction. Since privatisation in the late 1980s, the industry has made big gains in efficiency and delivered £98bn of investment to bring about improvements in drinking water, environmental standards and levels of customer service (**Case studies 4 and 5**).<sup>17</sup>

In the case of rail, the main benefit of a RAB model has been a stable framework for planning, regulation and delivery. Each year over £5bn is invested in maintenance and modernisation of the network and, in the current Control Period, the industry is set to outperform its targets and deliver £600m of financial value added (FVA).<sup>18</sup>

## Case study 4

### Delivering infrastructure upgrades: China Investment Corporation (CIC) and Thames Water

In January 2012, CIC – China’s sovereign wealth fund – bought an 8.68% minority stake in Kemble Water, the parent company of leading UK utility group Thames Water, which supplies water and sewerage services to approximately 14m people in London and the Thames Valley. Kemble Water, a consortium of investors led by Australian bank Macquarie, first acquired Thames Water in 2006 from Germany-based RWE for £8bn (US\$12.4bn). Although CIC did not disclose the value of its purchase, analysts estimate the sovereign wealth fund likely paid between £600m and £700m.

CIC is viewed as a highly attractive new investor given the fact that the state-owned fund currently has approximately US\$410bn worth of assets under management, and was first established in 2007 to invest the proceeds from China’s vast foreign exchange reserves, which total more than US\$3trn.

Keen to upgrade its ageing facilities, Thames Water has been drawing in major investors as it implements a £5bn investment programme that forms part of the broader drive by the UK to upgrade an outdated national water supply system. With Beijing recently taking a much harder line on buying government debt in the troubled Eurozone, the growing preference of Chinese investors for low-risk physical assets offering safe and stable returns means that CIC’s initial foray into UK utilities will likely be followed by more substantial investments in the future.

## Case study 5

### Delivering water to the North East and South East of England: Northumbrian Water Ltd

NWL operates in the north east of England, where it trades as Northumbrian Water, and in the south east of England, where it trades as Essex & Suffolk Water. Northumbrian Water currently provides water and sewerage services to 2.7m people and Essex & Suffolk Water provides water services to 1.8m people in a combined area of over 12,260 square kilometres.

NWL's vision is to be the national leader in sustainable water and waste water services. The company has seen significant levels of investment and was recently acquired by Cheung Kong Infrastructure –the largest publicly listed infrastructure company in Hong Kong. NWL will invest £1.2bn in its asset base in this current funding cycle (Asset Management Plan 5 – AMP5) which runs from 2010 to 2015 and on average re-invests almost half of its turnover on infrastructure improvements.

NWL reports to OFWAT on an annual basis on its water quality and performance. The regulator's ability to benchmark performance across the industry pushes the company to keep standards high. The company has seen a significant drop of 40% in complaints regarding sewerage services and the amount of complaints CCWater needs to investigate on behalf of NWL is amongst the lowest in the country.

The five year AMP provides the company with a secure finance structure which enables them to plan for projects with more certainty. This also provides more certainty to supply chain partners, allowing the development of long term relationships which results in a better deal from the supply chain.

The Regulated Asset Base model has attracted investment into NWL which has, as a result, improved customer performance and water quality and helped it achieve many prestigious awards.

However, there are issues with the rail industry model that should be kept in mind when designing a model for the roads network. Due to the funding arrangements for the network – mainly grants provided by government with capital raised under the security of a government guarantee – there have been regular fare increases for travellers to help pay for additional investment and drive down the levels of government subsidy. On roads, the government must be careful that the new funding regime does not introduce a hike in costs for motorists. Furthermore, with a single network manager running the rail track across the UK, there is limited opportunity to benchmark performance of the network – this would not be the case for roads if regional operators were introduced.

To put the rail industry on a greater financially sustainable footing, it is currently undergoing reform. Following the McNulty review, the government is making moves to restructure Network Rail's regional operations further, with a consultation currently underway. Greater 'alliancing' is also being pursued, which aims to incentivise collaboration between train and track.<sup>19</sup> This signalled shift towards a more regional approach to the network is similar to the existing operation of the water industry and closer to the CBI's proposed model for the road network.

### **Government must lay the foundations for change**

In order to implement this proposed model, government would need to take vital steps now to lay the foundations for the future. Due diligence is required to ensure that a well-planned system is established and to allow for a smooth transition from where we are today to where we want to be in the future.

### **Network improvements must continue while a new model is designed**

It is welcome news that the government already has a number of studies, consultations and projects in the pipeline – the outcome of which can help to pave the way towards a new network model. The government's feasibility study on road ownership and funding should kick-start the process, while its roads strategy and review of VED can both help to build momentum. Mitigating action can also be taken to improve the current state of the network in the short-term – the government should look to front-load its capital expenditure on roads in the next spending review to ensure that projects are delivered sooner and the multiplier effect of construction activity is maximised.

In the 2011 Autumn Statement, the Chancellor announced the government's intention to introduce innovative funding mechanisms to attract private sector investment for the A14 – a key strategic link road to the Port of Felixstowe. The Department for Transport has recently confirmed that a widened and enhanced section of the road running through Cambridgeshire will be subject to tolls. The nature of these tolls is still unclear and construction on the network is not expected to start until 2018.

This project is a welcome example of the leadership needed from government – but businesses assert that the proposed timescales are too long. Government should look to run planning and procurement processes in parallel in order to cut the waiting time – but, most importantly, any revised project timescales and funding mechanisms should complement a timetable and design for reform of the national network model. Successful implementation of the A14 project will help to make the case for injecting private investment into the road network to improve performance and reduce congestion, thereby starting to build public acceptance for a user-pays model. The project cannot be seen in isolation – it should be used to help create a clear and consistent framework, designed to attract private finance on a long-term, sustained basis.

### Steps to set up the new model

If government can achieve political consensus on the shape of a new model, the key building blocks could be put in place within this parliament.

#### ➤ A network audit

An essential component of creating a RAB model is to have an understanding of the value of the asset, in this case the road network. It is important to understand the true state of the network, both in terms of its physical state and attributes, but also existing management costs and financial commitments.

The UK's road network has never undergone a full comprehensive audit and so the quality and condition of the network remains uncertain. Carrying out such due diligence is important for government to know the true value of the network so it licences at the right price, ensuring value for money for the taxpayer. Equally, it is important that potential operators have a full understanding of their investment. Investors need to be able to forecast the costs of an asset – before considering investments they would need to understand their maintenance and service cost requirements.

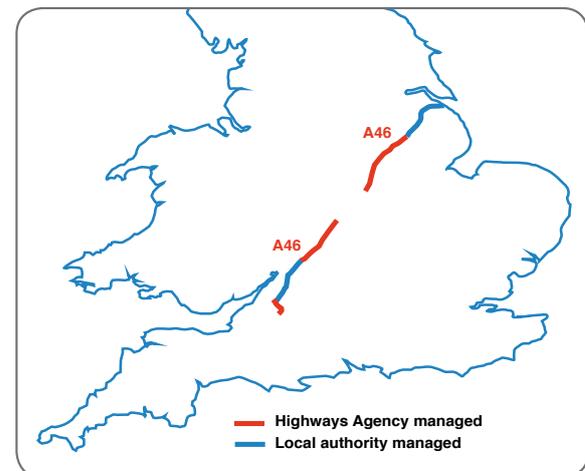
#### ➤ A statutory redefinition of the strategic road network

To address concerns about disparity of performance between the SRN and local roads, and to ensure the strategic network reflects economic reality, the current SRN would need to be expanded to include key local entry points and junctions. Road users care about end-to-end journeys: avoiding a two-tier system and congestion at entry points between the SRN and the local network is therefore crucial. This redefinition of the network should focus on unlocking economic growth. An expanded SRN would include some local roads, where better, more coherent operations and maintenance could help boost local economies (**Exhibit 5**).

### Exhibit 5: Redefining the SRN – the case of the A46

The A46 is an example of a key road with different managing authorities, running between Bath, Somerset and Cleethorpes. Three sections of the road are classified as trunk roads and are managed by the Highways Agency but the other sections are the responsibility of several local authorities:

- A46 North of Bath to M4 J18 is managed by the HA
- From M4 J18 to Cheltenham, the A46 is under the control of local authorities
- From M5 J9 (Tewksbury) to the M6 J2 (Coventry) the A46 is under HA control
- The section between M1 J21a (Leicester) to Lincoln is under HA control
- The A46 from Lincoln to Cleethorpes is under the control of local authorities.



Source: Department for Transport

### Review current motoring taxes and implement a new charging mechanism

Implementing a user-pays model would require government to review current motoring tax revenues and determine how to reclassify vehicle excise duty as a user charge. The review should examine the balance between charging and motoring taxation to ensure affordability for the user, while setting out the case for change to motorists.

The government is currently consulting on the future of the VED regime – this is an opportunity to better align motoring taxes with road infrastructure investment, above current levels of 20 per cent across motoring taxes.<sup>20</sup> If VED revenues were collected as charges and used as an income stream to attract private investors, the government could be successful in securing private investment to maintain the existing network.

Looking to the future, government would need to undertake further study to establish how a new charging structure could evolve over time to incentivise more efficient use of the existing network and provide additional revenue streams to leverage greater investment in a five-year capital programme. The objective of creating a sustainable funding regime cannot be met by existing taxes alone in the long term – an additional revenue stream, such as tolling, could be required to fund future capital programmes. The role of the regulator in capping costs for motorists will be crucial to ensure that the primary onus is on private operators to deliver savings and improvements.

### The time to act is now

A fundamental reform of the road network that will put it on a more secured investment footing is well overdue. The other utility sectors have all undergone significant overhaul and now it is time to do the same for the UK's roads. Reform of the governance and funding arrangements under the model proposed in this report could bring about new efficient ways of managing the network, reflecting the needs of motorists. A sustainable revenue stream could be implemented, removing the uncertainty about future investment that constrains the current network. The model could enhance and support growth across the country and ensure that a new network supports business activity now and in the future.

# Annex: A model comparison – looking at water and rail

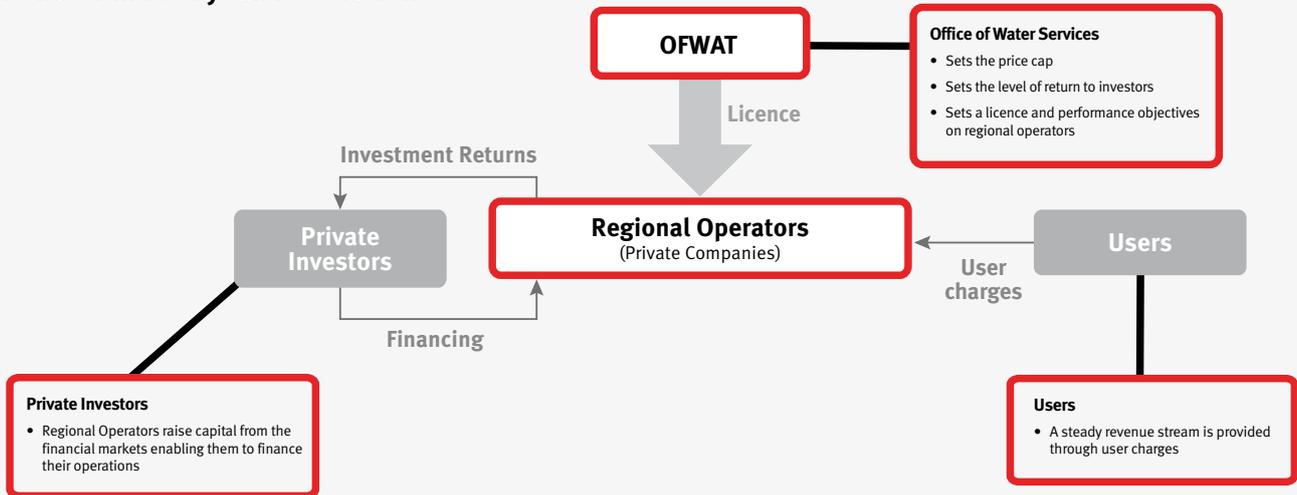
## Principles guiding the regulated utilities – a summary

Although each sector has its distinctive characteristics, a number of key principles can be identified across utilities. They can be summarised as follows:

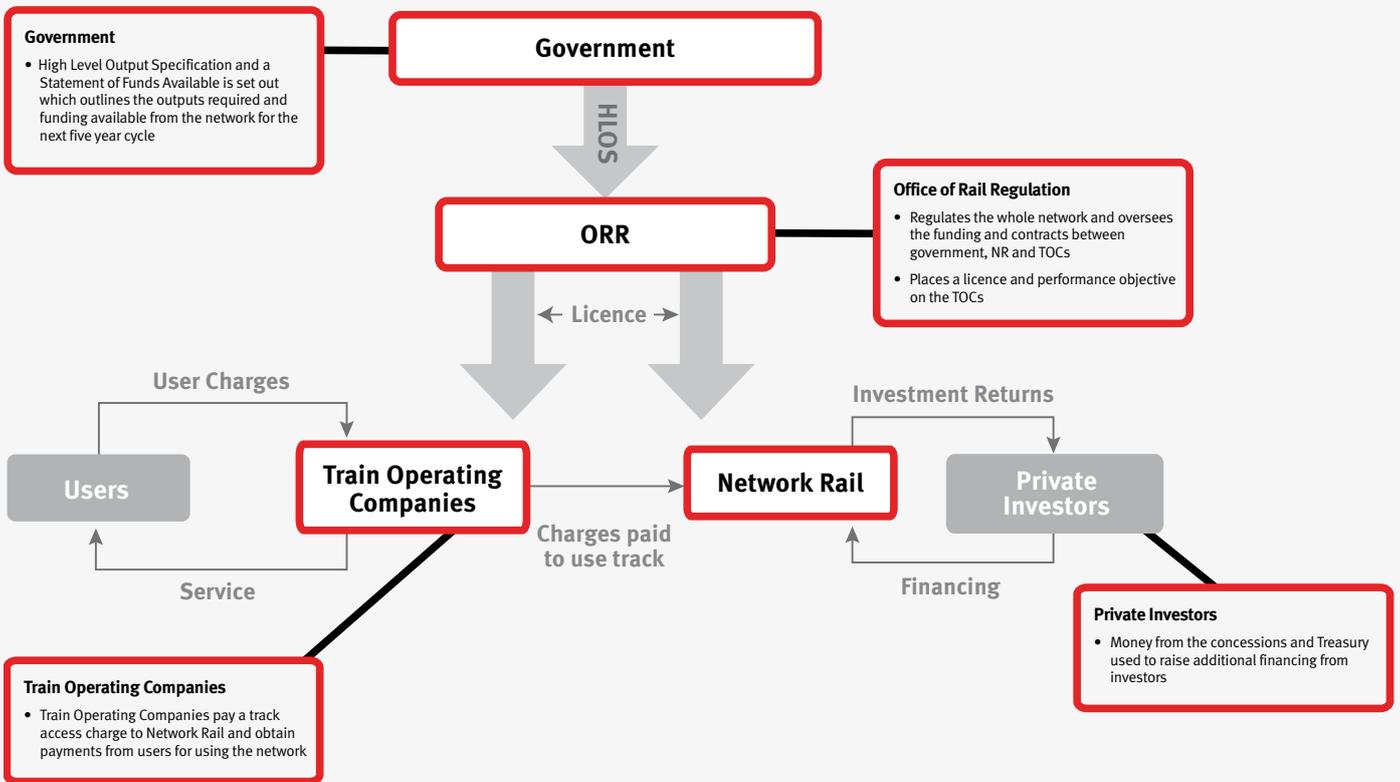
- ➔ **Independent economic regulation** based upon principles of transparency and consistency. Regulators operate under duties to ensure that companies can finance the proper carrying out of their functions – as well as to protect the interests of their customers. The financing duties and regulatory principles are necessary conditions for investor confidence. In those parts of the business that survive as monopolies – a natural characteristic of distribution networks – the regulator prevents abuse of dominant position through excessive pricing, limitation of access to the network or provision of inadequate quality of service
- ➔ **Government role in setting the wider policy context** within which these industries operate and, in the case of water and rail, setting the overall strategy for the sector
- ➔ **The use of medium term financial frameworks** with decisions on price limits, investment and outputs made every five years through regulatory review processes
- ➔ **The use of cost reflective charging regimes** with a clear link between levels of investment and user charges
- ➔ **RPI-X incentive regulation** as the starting point for regulation of these sectors, under which companies are incentivised to outperform the regulatory assumptions made at price reviews, through retention of additional profits for a specified period
- ➔ **A common methodology for price setting** – based upon setting an allowed return (weighted average cost of capital) on a RAB with the value of new investment being added to the RAB
- ➔ In liberalised markets, the extension of **customer choice** as a spur to service improvement and innovation. In monopoly sectors, accountability of companies to their customers and regulators is provided through regular performance monitoring and publication of comparative performance data
- ➔ **Customer protection** provided through a system of customer representation bodies and, in the case of monopoly sectors, guaranteed standards and compensation arrangements for service failures

Source: *Governance and administration of national and local roads in Great Britain*, RAC Foundation, 2009

### The water industry: an illustration



### The rail industry: an illustration



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For further information on this report, or for  
a copy in large text format contact:

Sana Nabi  
Transport Policy Advisor  
CBI  
T: +44 (0)20 7395 8185  
E: [sana.nabi@cbi.org.uk](mailto:sana.nabi@cbi.org.uk)



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