



VISION 2030

VISION 2030 - FINAL REPORT

An investigation into the long-term challenges and opportunities for the UK's strategic highway network



VISION 2030

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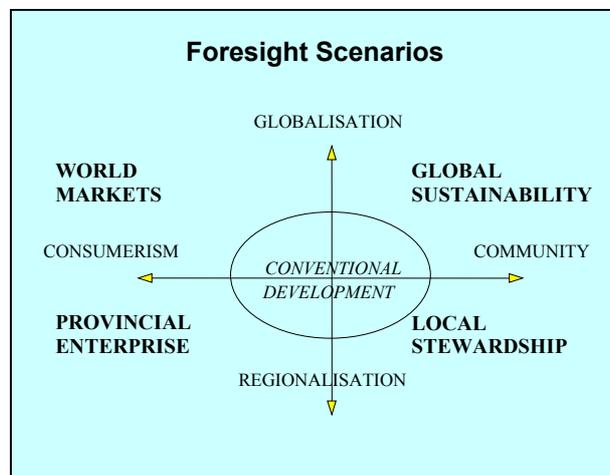
INTRODUCTION

In 1998, the Highways Agency (HA) was given its new role as network operator for motorways and other trunk roads in England. This remit provides an opportunity for the HA to influence and control how the trunk road network is, and will be used so as to provide the best possible service to all users.

To help to pursue its new role, the HA saw potential in looking ahead beyond the normal 5-10 year planning cycle in order to seek opportunities for the development of the network. Therefore the project "Vision 2030" was commissioned to enable the HA to look further ahead and adjust its role on the network; to enhance the range of services available; and to meet changed customer and infrastructure requirements.

Visions of the long-term future of transport are not new and numerous studies have been published. What is clear however is that issues such as traffic congestion, global warming, and environmental sustainability are with us now and highlight the need to think and plan further ahead. The HA needs to know the scale, nature and magnitude of these and other problems it will face in the future so that it can target resources appropriately.

The UK Department of Trade and Industry's Foresight Programme¹ is a major initiative in this area and has developed four scenarios with a time horizon to 2040². The Foresight Transport Panel has examined the implications of these for the transportation business over the next 20-30 years. More recent visions include those of young professionals under the direction of the Transport Visions Network³.



VISION 2030 PROJECT

The Vision 2030 project provides an opportunity for the Highways Agency to forge and strengthen links with other organisations. Key stakeholders include certain government departments (especially Department for Transport, (DfT)), local authorities, the motor and telecommunications industries, the freight and road haulage industry, the police, motoring organisations and the public.

Aims and Objectives

The aim of Vision 2030 is to develop visions for the mobility needs of people and goods in thirty years' time.

The objectives are to identify the potential roles of strategic highways in meeting future mobility needs and to influence the long-term agenda for strategic highways.

The Transport White Paper⁴ published in 1998 and more recently, the 10-Year Plan⁵

set out the Government's approach to provide a more integrated transport system to tackle the problems of congestion and pollution. The HA's Corporate and Business Plans^{6,7}, set out how it will deliver its role as operator of the strategic road network in England. Increasingly the HA's remit will focus on delivering outcomes such as less congestion and fewer road deaths. The role of network operator, delivering modern public services, poses critical challenges. The HA needs to continue to work in strategic partnership with other organisations in order to achieve its particular aims. To meet these challenges, novel, forward thinking is required at every step.

In modern day business, forward thinking is an essential part of long term planning whether for transport or other activities. The purpose of forward planning is to assess those factors that could change a business environment or to scope internal changes to a business to meet customer requirements better. Developing visions of the future, by looking at possible future needs, opportunities and threats and deciding what should be done now to ensure that we are ready for these challenges, is part of that process.

As with any visioning exercise, there are a multitude of factors that can influence forward thinking and likely outcomes. Hence, it is possible to provide only a snapshot of future possibilities. The approach taken in Vision 2030 has been to identify the key drivers and factors, both those within and outside the control of the Highways Agency, which will form and influence the mobility needs of the populace and which will shape the HA's future business strategy and scope of service.

DRIVERS FOR CHANGE

The major driving forces affecting transport supply and demand are covered in the Vision 2030 project report "Overview of

Future Trends", which is the main deliverable from the information gathering phase of the project.

Demographic factors are important in shaping travel patterns. The number of households in England is forecast to grow faster than the population with a projected 19% increase by 2021(1996 base). Due to increasing life expectancy, almost one third of the population will be over 60 by 2031.

Our lifestyles are also expected to change as more land comes under pressure for house building and people have more leisure time.

Environmental issues have risen to the fore in recent years signified by the Kyoto agreement and a growing recognition that we have to find a more sustainable development path. Transport produces 25% of CO₂ emissions and this share is growing. Congestion also raises other issues such as air quality and resource utilisation.

>>see also [Overview of Future Trends](#).

Major Challenges Ahead

In terms of energy, the transport sector is heavily dependent on crude oil, which is a finite and ultimately exhaustible resource. Energy consumption in transport is growing at a faster rate than for other sectors. Alternative and renewable fuels and new vehicle technologies offer some promising opportunities, although the migration process could take decades to complete. Automating vehicles and/or the infrastructure would also lead to a better utilisation of resources, for example, highway capacity.

Tackling the growing demand for transport – both passenger and freight - is a common theme identified in the scenarios. Between 1996 and 2031 car traffic could grow by more than half, according to the central estimate of the National Road Traffic Forecasts. Van and lorry traffic is forecast to grow even faster. Although it is

difficult to predict how drivers will react to increasing congestion, DfT estimates that journey times will increase substantially especially on urban motorways and during the peaks. Air travel is forecast to double both globally and in the UK in 15 years. Providing efficient surface access to airports will be a critical success factor. Demand for rail travel has been steadily increasing over the past five years, and growth is forecast to continue as long as capacity can be provided and service quality improved.

Increasing congestion and growing environmental concerns are imposing rising costs on the freight industry and society. In the longer term, an essential task is to transfer some road freight to other modes but logistics operators are unlikely to use costly and inflexible rail and waterway networks unless they are integrated intelligently and efficiently.

FUTURE SCENARIOS

Visioning and scenario planning are techniques for helping the organisation look ahead in an uncertain future. Scenarios are tools for helping organisations take a long view in a world of great uncertainty. Scenarios are specially constructed narratives about the future.

For each narrative, planners develop a set of strategic implications which are not confined to today's world and are not limited to excluding the unthinkable. They are not exact predictions of the future but rather represent the boundaries of possibilities.

Scenario planning challenges traditional thinking by requiring planners to imagine multiple futures based on a specific trend or factor. Each scenario must present a different image of the future rather than an extension of the past.

In the Vision 2030 project three alternative socio-economic scenarios were developed each associated with a vision for the future

of the transport network. They are:-

- “**Global Economy**” - a market-driven approach;
- “**Sustainable Lifestyle**” - a community based way of living; and
- “**Control and Plan**” based on greater regulation of movement.

Each of the three scenarios was elaborated with reference to the following categories: **P**olicy, **E**conomic, **S**ocietal, **T**echnological, **L**egal and **E**nvironmental. The PESTLE tool is commonly used in strategic planning, as it seeks to identify those external factors in commerce that there is little or no control over, such as government policy. By identifying these factors, at least the organisation can construct a narrative based on an optimistic or pessimistic assumption for that factor.

The PESTLE analysis considered implications not only for the HA but also for its customers, the motor industry, intermediaries, and other stakeholders.

The three Vision 2030 scenarios are summarised in the text boxes that follow and are the subject of a project report “**Socio-Economic Scenarios and Future Transport Visions**”.

>> see also

[Sustainable Lifestyle Scenario](#)
[Global Economy Scenario](#)
[Control and Plan Scenario](#)
[Comparison of Scenarios](#)

“Global Economy” Scenario

There is a vibrant global economy built in response to businesses taking full advantage of the open market. National government has seen many of its legislative and economic controls disappear, either to regional and local government in a process of devolution to the marketplace, or to corporations and to international organisations. In this increasingly consumer-based and hedonistic society, there is a great diversity in lifestyles; thus the boundaries of social exclusion have widened.

Despite this, society has continued to demand a transport system that is comfortable and reliable. Transport services are provided as an integral part of the value chain through which the market organises and provides services to the consumer.

Affordability is key - personalised transport services are provided through new business organisations – travel brokers or lifestyle providers – which buy space on transport networks from the network operators. Large multi-national organisations run and manage these integrated transport networks.

Freight transport and deliveries are organised in much the same way through bespoke travel, serving niche markets. Freight is shipped by forwarding companies which provide door-to-door, multi-modal transport and delivery services.

Urban and inter-urban mobility services are fully integrated. There is high intensity use of existing corridors with increasing levels of automated control to meet the demand capacity, reliability and service level targets – “Sweating the corridor”.

“Sustainable Lifestyle” Scenario

Local communities have emerged to pursue the goal of sustainable living in order to achieve an improved quality of life. Those who hold these new values embrace advancing technologies and adopt day to day lifestyles that reduce their use of energy and dependency on the car. Land use planning takes account of transport needs whilst encouraging people to live and work in sustainable locations.

Improved collective transport, greater use of non-motorised modes, less dependency on the car and increased distribution services are implicit in this scenario. High quality public transport networks service radial routes from city centres to the suburbs. Other mobility needs are satisfied through a combination of walking, cycling, vehicles for the elderly/disabled, hybrid-power taxis, minibuses and home delivery. Parking and interchange at the edge of conurbations encourages those living beyond city limits to use collective transport to access the city centre.

Commercial distribution in 2030 is highly competitive, efficient and well organised. Integrated services for both suppliers and consumers minimise the volume of delivery vehicles on the network.

On the inter-urban network, more trips are now for leisure purposes. Business travel mostly uses the smart corridors between city centres, often on the extended national rail network. Motorways are gradually upgraded to provide a fully automated system. Access to this network is provided at integrated transport hubs and at the boundaries of the conurbations. Freight transport also benefits from the improved transit times and reliability afforded by automation.

“Control and Plan” Scenario

A “top-down” approach of governmental control and regulation, has become a political necessity following repeated episodes of gridlock on the country’s roads, increasing public concern over road safety, and a rapid escalation of international concern about climate change.

Over the past 30 years there have been major changes to the transport system, through investment in the infrastructure and supporting systems, which maintain high quality access in a safe and sustainable manner. Through controlled management of the transport network, an optimised, and in some cases reduced, use of the existing infrastructure is now possible, with increased emphasis on safety.

Government-led initiatives are encouraging the development of integrated multi modal transport and information systems at local, regional and national levels. Road traffic growth continues at a lower rate to that observed at the turn of the Century due to strong regulation and pricing. Supported by national and local government, many towns and cities now have road pricing and zero emission zones which have significantly improved the quality of urban life.

Central investment in infrastructure focuses on systems which reduce speeds and improve driver and vehicle control (e.g. dedicated lanes, speed control devices). Available space on the transport network is rationed through restricted choices of mode, journey time and travel time. Road pricing applies to all inter-urban routes – the system gives freight priority over other traffic recognising its economic importance. The booking, enforcement, access and vehicle control systems all use state of the art technology.

FUTURE TRANSPORT VISIONS

As network operator, it is essential that the HA has a vision of the road network of the future, so that it can plan strategically beyond the next 10 years, and identify how to achieve this. The predict and provide ethos is no longer seen as the answer to tackling the problems of traffic congestion and pollution.

Visioning encourages re-evaluation of traditional approaches by looking at

- where are we now?
- where are we heading?
- where do we want to be? and
- what are the practical first steps of how to get there?

What is a Vision?

A vision is something you want to happen: e.g. Sweden’s “Vision Zero” zero tolerance of accidents.

It has to be attainable.

The uncertainty of the future means that no single vision can claim to be accurate.

Realising a vision may require a process of working backwards in order to decide how to go forwards.

A number of visionary ideas about the possible future of inter-urban transport were distilled from the three Vision 2030 scenarios. The focus was future transport concepts and issues which offer new starting points for activity and business development for the HA. Interestingly, although there are big differences between the three scenarios, there was also a degree of convergence for some aspects. For example, all three envisioned a transport system with a greater degree of automation and control than at present, but for different reasons.

Finding the “right” strategy is not easy when the changes we are and will experience are so fundamental and profound. However, we will soon be beyond fine tuning our existing systems and there is increasing evidence that we need new ways to think and act.

Twelve transport visions emerged from the process. They all have important implications for the HA. Each represents a particular vision for the future of inter-urban travel, whether by road or other modes, and can be mapped on to the Agency’s current business.

1. The Green Highway

“Green Highways” of the future will blend sensitively into both the natural and built environments. Road building and maintenance operations will progressively become more sustainable, through more efficient use of resources, greater application of “green” materials and by using more recycled and industrial waste products.

Global warming will take hold. Climate change will bring increased flooding, and extremes of temperature. Highway design codes will have to be re-assessed.

New ways of mitigating environmental damage from road construction will mean less damaging impacts on the environment than today’s roads. Lightweight materials, greater use of recycling, improved construction and tunnelling methods will all have major impacts on transport infrastructure.

Noise nuisance will be reduced by developing quieter road surfaces and deploying solar noise barriers. Biodiversity will be conserved and enhanced by providing water features such as drainage ponds, and “green bridges” and wildlife tunnels will reduce severance.

>>see also [The Green Highway](#)

2. Zero Accidents

The highway Network Operator will be required to achieve unprecedented standards of safety for road users, and those who operate the network. Crashes and multiple collisions will be virtually eliminated.

To achieve this, the Network Operator will have to forge partnerships with politicians, planners, road maintenance organisations, road administrations, vehicle manufacturers, toll operators, motoring organisations and everyone else who uses the nation’s roads.

The safe mobility of older adults will require a major response. The road network will see improvements in highway design, incorporating “state of the art” road features such as electronic signs, active speed control, better physical barriers, crash cushions, and breakaway devices.

“Smart highways” and “smart cars” will incorporate a number of Intelligent Transport Systems (ITS) to increase safety and reduce the dangers of motoring. New cars will incorporate intelligent speed adaptation; collision warning systems; breath alcohol “sniffer” system; intelligent seatbelt reminder; emergency “may day” system; and route navigation systems. Automatic enforcement techniques will permit better enforcement of road safety laws, particularly speeding, thereby reducing crashes.

The vulnerability of transport networks to security threats will lead to greater levels of surveillance and other defensive measures.

>>see also [Zero Accidents](#)

3. The Connected Customer

The connected customer will have access to all necessary information at all times, irrespective of mode, in order to provide

informed travel choice and options as their journey unfolds.

Laissez-faire management methods will no longer be an option. Ensuring that high quality information is available and correct is a way of ensuring accountability to the customer. Advances in digital and communications technologies will deliver personalised travel information anywhere and everywhere.

Management of congested networks will become the norm. There will be great variation in journey times. Better real-time and predictive information will become indispensable.

Road users' expectations about information delivery will become more sophisticated. This will be combined with other digital services: on-line booking and payment, parking, pick-up, business services, timetables, late-running, forecast travel times, travel costs, interchange options, directions, yellow pages, etc

>>see also [The Connected Customer](#)

4. Freight Foremost

Highways of the future will prioritise freight on the network and guarantee safe, secure, timely, cost-effective and reliable distribution of goods and services in the interests of sustaining Britain's competitive economic position.

Increase in point-of-sale and just-in time inventory systems, express package delivery and e-commerce will prompt rapid growth in van and truck movements.

International markets will put a premium on seamless integration of end-to-end logistic services and efficient operation of the inter-urban transport network.

A major shift from road to rail transport will come with new high-speed rail corridors to connect the ports and airports with major cities. A world-wide emergency response system for hazardous loads will

considerably reduce the risks of breaches of safety.

Increasing volumes of trade with Europe will require efficient port and Channel Tunnel operations integrated with ground transport operations. Larger ferries and container ships, bigger cargo aircraft and 24 hour just-in time operations will add disproportionately to freight traffic around ports, the Channel Tunnel and airports.

In response, the advances in freight logistics will provide opportunities for the Network Operator to influence the supply chain to maximize efficient trunk road use. Active traffic management and development of inter-modal corridor and route management concepts will support this opportunity.

>>see also [Freight Foremost](#)

5. Favouring Public Transport

Reliable, integrated transit services that can compete with the comfort and convenience of the car will be integral to the most heavily-trafficked transport corridors.

Technology offers the prospect of more efficient and flexible, inter-connected transit and vehicle/highway systems (e.g. the door-to-door seamless journey, a personalised journey, more favourable overall travel costs).

There will be widespread use of guided busways and/or dedicated transit lanes, plus queue management to favour transit vehicles. Modal interchange facilities to long-distance and local collective transport will go ahead on a grand scale, eg 'Transferiums', or multi-modal travel centres, offering large-scale park and ride facilities, integrated payment, pre-booking and ticketing arrangements.

Parts of this package can only go ahead with the active cooperation of the highway Network Operator. In future they will work closely with the vehicle operators to

achieve flexible and reliable transit operations, including demand responsive features. Examples are semi-automated road trains of minibuses using intelligent cruise control and/or electronic tow bars.

>>see also [Favouring Public Transport](#)

6. Understanding the Customer

The highway of the future will provide a responsive service and travel experience to match the needs of a diverse and dynamic customer base. The needs of highway users will be greatly elevated. Leading performance indicators will be clean, convenient, quick, accessible, reliable, affordable and safe.

Better information about user priorities and their trade-offs will enable optimisation of demand for road space and customer 'buy-in'. Future patterns of use will be more complex, with leisure and weather driven patterns of use becoming more significant. The retired will have more time for leisure activities. Travel in non-peak hours may increase at a greater rate, relative to commuting travel. People will drive longer distances for both leisure and work. Regional migration will have significant implications for traffic flows on the trunk road network.

Through more sophisticated matching of customer needs with the allocation of roadspace, the concept of 'peak' will decline but there will still be significant surges. Changes in the use of time and mobility will result in leisure becoming the dominant industry, with local, regional, national and world-wide implications. The modal mix will also differ by time and area.

Understanding and predicting these patterns is a prerequisite for planning infrastructure, manpower and pro-active traffic management.

>>see also [Understanding the Customer](#)

7. Easy Interchange

An efficient and attractive network of strategic interchanges for people and goods will optimise links to congested centres and provide safe, secure, efficient transfer.

The role of transport nodes as interchange points, holding areas and transshipment centres will become more significant. Their functioning as activity centres in their own right, providing entertainment, retail and business services, (like airports and railway termini), will grow.

There will be intense pressure to find ways to alleviate local access problems. Access schemes based on high-capacity park and ride will be seen as an attractive alternative - and possibly a necessary complement - to road pricing and congestion charges and other methods of traffic restraint. Existing commercial and shopping centres, airports, sports and entertainment centres, touristic attractions and other major destinations, are all potential candidates.

>>see also [Easy Interchange](#)

8. Institutional change

Pressure will grow to get best value from highways as a national asset and to operate the network in response to society's mobility needs. Innovation and flexibility over financial, contractual and organisational arrangements will follow.

The roles and responsibilities of the network owner, operator and regulator will be more sharply defined. Institutional realignment of enterprises will force horizontal and vertical integration, with European and even global reach.

The network operator will be required to achieve high levels of performance. Operating the highway network safely and efficiently on a 24/7 basis will grow in complexity and importance, with the added

dimension of dynamic controls to meet a diversity of demand patterns.

The delivery of integrated transport, personal logistics and mobility services will be an additional force for change. Work is needed on methods of long-term investment appraisal, innovative finance, risk assessment, value management and whole life costing. New contractual and organisational arrangements will flow from the need to secure efficient, integrated transport operations, probably extending across regional and national boundaries.

>>see also [Institutional Change](#)

9. Managing Supply

Traffic growth and personal travel will continue unabated leading to greater congestion and more extensive and frequent standstills. Active and dynamic traffic management - "Sweating the Corridor" - will be vital to counter long-term regular gridlock.

Without intervention, journey times are predicted to increase considerably, especially on urban motorways. Average journey times on rural motorways are also predicted to increase substantially, especially in the peaks.

In response, future network operating strategies will routinely provide for a dynamic allocation of roadspace serving optional and non-essential movements, as well as high-value journeys and priority movements of freight.

The management of the highway transportation system in its totality will become highly automated and increasingly real-time. Fast intercity travel by MagLev (or an alternative technology) will need to be integrated with existing road, air and rail infrastructure. Dual use of highway corridors may be an option.

New technologies will allow for real-time pricing of transportation facilities to increase efficiency, make better use of

spare capacity, and reducing congestion delays. This will be supported by systems that dynamically control and advise traffic on the network to maintain traffic flow without adversely affecting the local environment.

>>see also [Managing Supply](#)

10. Managing Demand

Space on the highway will be at a premium. Managing demand will be essential for efficient and reliable operation of the network.

Strenuous efforts will be needed to promote travel substitution and other options to reduce the demand for transportation through telecommuting, electronic communications, and alternative work schedules.

Propaganda to suppress travel may be inevitable. ("Is your journey really necessary?"). Rationing of mobility between people and goods, and between competing calls for access to the network, will require instruments to achieve mobility changes without social exclusion.

Introduction of slot allocation and journey booking systems, extensive queue management and rationing of roadspace through dynamic use of priority lanes, as well as mode switching and the use of road pricing (congestion charges), will all be deployed to prevent widespread gridlock.

Enforcement will be an essential tool of network management. Methods of enforcement will be effective, easy on the network operator, respectful of human rights and perceived as fair and reasonable. Privacy, fairness, will be key issues.

>>see also [Managing Demand](#)

11. Co-operative Driving on the Automated Highway

Highways of the future will utilise intelligent infrastructure which interacts with the vehicles and people using it.

Cooperative driving and greater automation of the highway (Cooperative Vehicle-Highway Systems - CVHS) will deliver predictable / reliable journey times and greater safety in adverse weather conditions. However, public opinion may be resistant to futuristic concepts of automation. Complete reassurance on safety, reliability, practicality and sustainability in all circumstances will be required.

A backbone of inter-regional automated highway lanes will be established, segregated for freight and car traffic. The lanes will provide safe, fast and predictable journey times for those willing to pay the price.

CVHS will bring other innovations which help focus on a favoured traffic mix, such as freight convoys. CVHS will make it easier to minimise the disruptive effect of road works (eg diversions) and maintenance programmes (eg access to lanes) and to increase the life of the highway (eg avoid rutting).

>>see also [Co-operative Driving](#)

12. Land Use Planning

An active involvement in planning and development control will be essential to achieving the vision of integrated transport and sustainable use of the highway network.

Proactive involvement in planning decisions is at the heart of future transportation. This includes making best use of existing corridors and land use patterns. Sustainable, integrated land use - transport solutions will be the result of close involvement by the Network Operator in influencing the pattern of development over a long period of time.

Growing concerns about environmental impacts, congestion and highway fatalities will encourage planners to find better ways of utilising the existing highway corridors. By 2030 “Green Corridors” will be the way forward – multimodal “inter-city” and “community” corridors which give priority to smarter “environmentally correct” vehicles, collective and automated forms of transport, cyclists and pedestrians.

The opportunities to create the infrastructure with this standard of efficient, integrated, multi-modal transport may occur only on a piecemeal basis. The importance of development control casework, and Network Operators input to regional planning policies, cannot be under-estimated.

By being pro-active, the Network Operator can influence future patterns of transport supply, (e.g. protection of future strategic transport routes or sites), and transport demand, (e.g. by promoting developments which reduce car dependency for commuting between home and work).

>>see also [Land Use Planning](#)

WORKING WITH THE VISIONS

The 12 Transport Visions challenge conventional approaches to managing the highway network and are intended to provide a starting point for further research and development, and for influencing the longer term strategy for developing and managing the strategic road network.

These 12 transport visions are written up as “**propositions**” for further development by the HA. An analysis sheet has been prepared for each one, giving the case for Network Operator action, and illustrating the long-term goals and short-term actions that the HA might adopt. These must be tested and refined to identify those subjects and issues which the HA should be most pro-active in pursuing.

The visions are not mutually exclusive and further work is needed to take account of

related developments in future transport planning, both in the UK and overseas. The issues raised are also influencing the development of the Highway Agency's research and development program, and of the longer-term strategy for developing and managing the strategic road network.

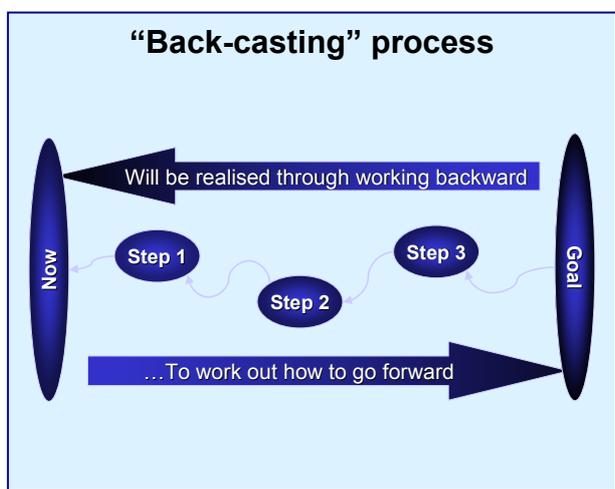
An evaluation process has already started. The Vision 2030 team took three of the future visions and developed them further by involving people in the Agency who had specialist knowledge and expertise.

- The Green Highway
- Cooperative Vehicle-Highway Systems
- Freight distribution

Output from business development sessions included proposals for new research projects, identification of potential strategic partners and ideas for a more pro-active approach by the HA in the three selected areas. Some ideas could be put in hand immediately

“Back-Casting”

Further analysis will enable the identification of attainable and credible goals for inclusion in the HA business plan. Through a process of “back-casting”, as shown in the diagram, specific intermediate goals or stepping stones can be identified in the migration process of reaching the long-term aims which are



implicit in the visions.

From experience within the Vision 2030 project, the key criteria to be applied are:

- **credibility**

For each theme or major issue, how much that is hypothesised or forecast to occur is certain, or speculative and uncertain? What is felt to be the most likely outcome, based on today's perspective? How useful would it be to keep track and manage that uncertainty?

- **relevance to inter-urban travel:**

What are the implications of the issue for inter-urban transport, and the strategic inter-urban network in particular? What kinds of risks are implied – technical, political, organisational, etc? How might these risks be managed and contained?

- **potential for opportunities**

Does the theme offer opportunities for developing synergies with other key players, or new business opportunities that would benefit future operations on the network?

- **potential threats**

Does the issue suggest a potential disaster scenario that should be analysed so that mitigation strategies can be developed in good time? What might be the consequences of failing to plan for these "worst case" scenarios. Are there obvious response strategies that should be explored?

HA Network Strategy

This approach was introduced to Directors and staff from the HA Network Strategy Divisions at a one-day Network Strategy workshop in February 2002. Results confirmed the value of the visioning process and underscored the need for strategic thinking within the Agency about its future role and responsibilities. In doing this, the HA must engage with DfT, the Regions, Ministers, and its customers – the road users and vehicle operators – in a

debate about the Agency's long-term goals. It is not an easy task to build a future vision of transport into today's network strategy. The workshop was appreciated as a way to get this process started.

CONCLUSIONS

The Vision 2030 project set out to develop visions for the mobility needs of people and goods beyond the current planning cycle and examine the consequences for strategic highways. A 30-year timescale was deliberately chosen to encourage forward thinking and to break away from the constraints of conventional forecasting methods. The project has successfully met these objectives.

At a time when the HA is undergoing a period of major change from road builder to network operator, Vision 2030 has provided a new way of looking ahead and considering alternatives from differing viewpoints thus providing a "breath of fresh air". Problems of traffic congestion and pollution are unlikely to disappear without more radical and more forward thinking solutions. The lead times for changes to take place are considerable for many aspects of the transport system – e.g. replacing entire vehicle stock, full automation of the highway, charging for road use.

Benefits of Visioning Process

Vision 2030 has provided an opportunity for all HA staff at all levels in the organisation to be involved in the process of forward thinking, encouraging "thinking outside the box" when embarking on new assignments. Visioning has been found to promote team work through greater collaboration and teamwork.

Vision 2030 has identified some of those "driving forces" which are within HA's control. The "hands-on" experience, in turn, leads to participants having a sense of ownership and commitment to the project. This needs to continue in taking

steps forward to realise the visions. The consensus amongst those who have been involved in the process is that visioning is a helpful strategic planning tool.

Visioning provides a valuable visual representation of the future of transport to share with others – a richness and value that may not otherwise be realised. The Vision headlines have been utilised, and will continue to provide a long-term focus, by the HA Board and staff to prioritise the most pressing issues facing the HA. These statements offer a way of judging what is important and help to consolidate ideas and to converge opinion.

The Transport Visions emerging from Vision 2030 provide a consistent platform for implementation of the HA's future vision in the strategic planning process.

Visioning provides an opportunity for the HA to link with present and future stakeholders. This might encourage stakeholder buy-in to a vision or new initiative and is especially valuable in encouraging cross government collaboration (e.g. with DfT and DTi Foresight) where so many areas of society demand close interdepartmental co-operation for successful implementation.

As the Highways Agency moves away from road-building to a more demanding user and customer focused environment, the HA needs to evolve to a more service-based organisation. The visioning process offers both direction and flexibility and can help the HA to focus on achieving this change.

Next Steps

The Project has delivered a portfolio of 12 Transport Visions that provides a constructive basis for long-term strategy development as well as setting the context for short-term deliverables.

The Visions raise many issues, some critical, and future work will involve identifying which of these can be

addressed directly by the HA, and then understanding the stepping stones required to overcome any potential barriers.

Criteria need to be developed to prioritise the Visions, for example, by looking for common themes and “quick wins”, and compatibility with the strategic goals of the Agency. This will also involve identifying the necessary pre-requirements (e.g. enabling conditions, system architecture) and other priorities for research and possible pilot and/or demonstration projects. The consequences of taking no action also need to be spelled out.

For strategic visions to have impact they must also be embraced by the organisation and begin shaping the way systems and processes evolve. The most direct route is to involve many key stakeholders in developing and refining the vision and strategies and more inter-regional engagement is also likely to be required as the functions of the HA are increasingly dispersed.

The ultimate success of a strategic visioning process is the perpetuity of the visions and the extent to which the HA and key stakeholders adopt the process and visions. HA managers must be involved in leading the process, perhaps with an identified “HA champion” to demonstrate commitment to a specific vision. The visions are robust enough to be challenged, and sufficiently flexible to move with future social, organisational and transportation changes.

POSTSCRIPT: THE VISION 2030 PROCESS

The Vision 2030 project methodology is described in a separate report. What follows here is summary of the five main stages which the project followed to achieve these transport visions:

- initiation;
- information gathering;

- visioning and scenario development;
- evaluation of alternative scenarios; and
- presentations and conferences.

In practice the research process was iterative, as the cycle of information gathering, visioning and evaluation lead to further (new or refined) information requirements.

>>see also [Project Methodology](#)

Initiation

During 1999 the HA held a series of exploratory workshops looking into the future with transport industry professionals and staff. These workshops identified visions for moving people and freight between cities. The aim was to see if further work along these lines would be fruitful. The Agency concluded that it should spend more time and resources looking towards a longer-term horizon and the Vision 2030 Project was initiated.

Information Gathering

A major part of the project has been gathering data, information and opinions from a range of sources, both static and interactive. Information has largely been drawn from recognised sources and authorities. Several information-gathering workshops were held in order to obtain the personal and professional views of a wide range of specialists on long-term future trends. Their knowledge was at the very forefront of modern-day thinking.

This “evidence” has been collated solely for the purposes of the Vision 2030 project; to shape informed discussions at workshops; and to facilitate the development of alternative scenarios. The “Overview of Future Trends”, documents the Vision 2030 information base.

Visioning and Scenario Planning

Visioning is a process that, apart from aiding strategic planning, can also engage

a variety of stakeholders from diverse areas of industry and non-industry related sectors, and allow them to reach a consensus on an agreed vision. Visioning can be used by nations, individuals, businesses and community groups. It is important to look ahead - with an agreed clear vision of where we want to be, we can identify exactly what we should be doing now.

Visioning is a particularly useful tool for organisations which are undergoing change as in the case of the Highways Agency which is pursuing its new role as strategic network operator rather than road builder. Visioning can encourage one to question current assumptions and beliefs. The process is directed toward creating an "end state" and as such, directs thoughts and energy toward the future rather than the past.

A "Visioning Workshop", including a broad range of Agency staff and external experts, was held to develop scenarios for Vision 2030.

Evaluation

Workshops were held with the Highways Agency Board and with senior staff in Network Strategy Directorate to present the initial findings and gauge reaction to the transport Visions. The overall response to the work, was encouraging. There was a consensus that the process is helpful, that the Visions provide useful building blocks, and that visioning is a useful strategic planning tool.

Presentations and Conferences

There has been much interest in the Vision2030 project and several presentations have been made both in the UK and abroad:

- 8th ITS World Congress, Sydney 2001

>>see [Presentation](#)

- SmartCruise 21 Demo 2000, Tsukuba, Japan,2000

- PIARC World Road Association Congress, London 2001
- Automated Highway Systems Conference, London 2001
- HA Regional Staff Conferences
- Foresight Vehicle Thematic Group. October 2001

PROJECT REPORTS

The following Reports have been produced as part of the Vision 2030 process:

- Vision 2030 Final Report
- A Portfolio of Transport Visions
- Overview of Future Trends
- Socio-Economic Scenarios
- Side-by-Side Comparison (as Annex to above)
- Project Methodology
- Groundwork Report
- Freight: A Discussion Paper
- Moving People Between Cities: A Discussion Paper

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THE VISION 2030 TEAM



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The Highways Agency is an Executive Agency of the Department for Transport. They manage, maintain and improve the network of trunk roads and motorways in England on behalf of the Secretary of State. The Agency works closely with other transport operators and with local authorities to integrate the trunk road network with the rest of England's roads and other forms of transport.

Their aim is to secure the delivery of an efficient, reliable, safe and environmentally acceptable motorway and trunk road network.

www.highways.gov.uk



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