THE VISION 2030 PROJECT: ROADS TO THE FUTURE

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INTRODUCTION

At the start of the 21st Century, forward thinking is regarded as an essential part of long term planning whether for transport or other activities. The purpose of forward planning is to develop 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.

The Transport White Paper (1) published in 1998 and more recently the 10-Year Plan (2) set out the Government's approach to provide a more integrated transport system to tackle the problems of congestion and pollution. Forward thinking remains an essential part of this approach.

World-wide, many organisations are looking ahead at future trends and opportunities. In 1999, the Highways Agency (HA) acknowledged that little work was being done in its own organisation beyond the usual 5-10 year planning cycle. Therefore the project "Vision 2030" was commissioned to enable the HA to look further ahead.

BACKGROUND

Visions of the long-term future of transport are not new and numerous studies have been published. Recent concerns about traffic congestion, global warming, and environmental sustainability have highlighted the need to think and plan further ahead. The UK Department of Trade and Industry's Foresight Programme (3) is a major initiative in this area and has developed four scenarios with a time horizon to 2040. The Foresight Transport Panel (4) 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 Network (5).

In the United States, the Department of Transportation has just completed a forward visioning exercise. The Changing Face of Transportation (6) reviews the major policy milestones over the past 25 years and the social and economic context for those milestones. Looking ahead, the Policy Architecture for the 21st Century (7) has been developed through a series of 2025 Visioning Sessions with hundreds of stakeholders including industry, labour, academia, government, the general public, USDOT employees, and other interest groups.
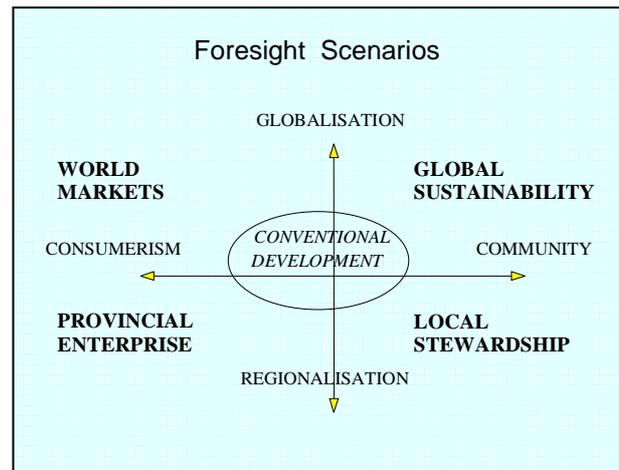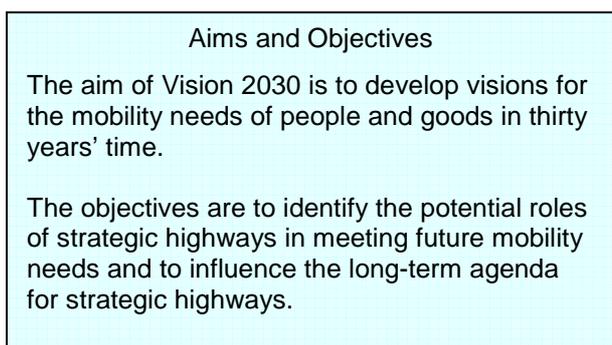

Figure 1, Foresight Scenarios

VISION 2030 PROJECT

The Vision 2030 project provides an opportunity for the Highways Agency to network with other organisations. Key stakeholders include certain government departments (especially Department of Transport, Local Government and the Regions, DTLR), local authorities, the automotive and telecommunications industries, the freight and road haulage industry, the police, motoring organisations and the public. The remit for the Highways Agency is the future of the strategic road network in England. However the HA needs to work in strategic partnership with other organisations in order to achieve its particular aims.

Figure 2, Project Aims and Objectives

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.

Within the time-scale and resources available, it has been possible to provide only a snapshot of future possibilities. The approach has been to try to identify the essential factors that are likely to influence transport over the next 30 years or so and document the main trends and possibilities.

METHODOLOGY

The project methodology comprised five sequential main stages:

Initiation;

Information gathering;

Visioning and scenario development;

Evaluation of alternative scenarios; and

Preparation of deliverables and conclusions.

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

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.

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.

Transport is influenced by a range of social, economic and technological factors. It is a large

consumer of energy and has profound environmental impacts. The political and legal context will also influence what happens. Collectively these topics are all embracing and intertwined, therefore the approach has been to focus on some of the key drivers affecting transport by preparing a series of papers on trends on the main topics. The aim was to provide comprehensive and consistent information for each topic.

Arising from the information gathering exercises, a variety of social and economic trends were identified and subsequently analysed in the next stage of the project.

Vision 2030 Overview of Future Trends

Social trends

Traffic growth and user behaviour

Environmental concerns

Energy issues

Vehicle design and technology

Freight and logistics

Travel substitution

Emerging concepts and technologies

Relevant European projects

Figure 3, Vision 2030 Overview of Future Trends

VISIONING AND FUTURE SCENARIOS

As network operator, it is essential that the HA has a vision of the road network of the future, so that it can identify a "road map" of how to get there from here. Simply building more and bigger roads is no longer seen as the answer to tackling the problems of traffic congestion and pollution.

Finding the right way forward is not easy when the changes we are experiencing are fundamental and profound. We are beyond fine tuning our existing systems and there is increasing evidence that we need new ways to think and act. Visioning and scenario planning are techniques for helping organisations look ahead in to an uncertain future.

Visioning is an essential tool for strategic planning. It encourages local involvement in action by looking at

Where we are now?

Where we are heading?

Where we want to be? and

The practical first steps of how to get there?

Visioning can be used by nations, individuals, businesses and community groups. It is important to help us to look ahead - with a clear vision of where we want to be we can identify exactly what we should be doing now.

SCENARIO PLANNING

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.

Figure 4, What is a Vision?

To encourage new ways of thinking many organisations engage in scenario building as a part of the strategic planning process. Scenarios are tools for helping organisations take a long view in a world of great uncertainty. Scenarios are specially constructed stories about the future. For each story, 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.

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.

VISION 2030 SCENARIOS

A "Visioning Workshop" including a broad range of Agency staff and external experts was held to develop scenarios for Vision 2030.
The first stage was to recognise the key issue or decision and then to identify the primary driving forces (e.g. social dynamics, economic issues,

technological issues, and political issues). Three alternative socio-economic scenarios were developed each associated with a vision for the future of the transport network. The three scenarios were a market-driven approach, a community based lifestyle approach, and a regulation based approach as shown below.

Vision 2030 Scenarios

Global economy

- market driven approach
- Global corporations dominate
- De-regulation

Quality of life

- Lifestyle approach
- Local sustainability
- Community action and interests

Control and Plan

- Regulation based approach
- "best interests of society"
- Democratic consensus

Figure 5, Vision 2030 Scenarios

Having developed these three scenarios, the next stage involved identifying the inter-urban transport visions which could accompany each scenario. This process led to the development of a number of future transport concepts and issues which offer potential areas of activity and business development for the HA.

EVALUATION

The next stage of the project was to evaluate whether the issues and concepts which emerged were worthy of further refinement and relevant to the HA. Each theme was tested against several criteria to identify those concepts which the HA should be most pro-active in pursuing. The criteria covered:

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 concept 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?

Ten "Propositions" emerged through this process that have important implications for the Highways Agency. Each proposition 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 business.

These visions enable the identification of attainable and credible goals. Through a process of "back-casting", specific intermediate goals or stepping-stones can be identified in the process of reaching the long-term aims which are implicit in the visions.

BUSINESS DEVELOPMENT AREAS

The propositions or business development areas challenge conventional views of the future 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.
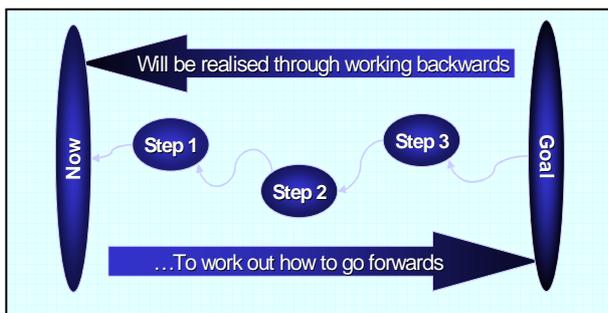

Figure 6, The "Back-casting" Process

The ten propositions are listed below.

The Green Highway

Freight First

Zero Accidents

Averting Gridlock

Managing Demand

Travel Substitution

Favouring Public Transport

Understanding the Customer

The Connected Customer

Easy Interchange

CONCLUSIONS AND NEXT STEPS

The Vision 2030 project and approach has been useful in encouraging new ways of thinking about the transport problems of the future. In particular, the approach steps aside from the usual incremental planning process and allows the development of challenging views of the future. This is influencing the development of the Highways Agency's research and development programme, and of the longer-term strategy for developing and managing the strategic road network.

The end-product of the Vision 2030 work is intended to be the starting point for developing the ten business development areas identified above. This further work will also need to take account of related developments in forward transport planning, both in the UK and overseas.

ACKNOWLEDGEMENTS

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