Navigating the regulatory interface between transport and land use

Foundation paper for the Regulation 2025 strategy project

Purpose of foundation paper

Webb Henderson was commissioned to research how the land transport and land use regulatory systems interface with one another. Land transport regulation aims to facilitate mobility, while land use regulation manages how land is used.

Context

The transport and land use regulatory systems have been set up independent of each other which has resulted in barriers to integration between the two regimes. Despite these barriers, the two regimes must regularly interact and accommodate each other.

Key themes

- The transport and land use regulatory regimes are structured differently. Social and technological changes in the future will further highlight these differences.
- There is a two-way interaction between transport and land use policy. Choices in the transport sector affect land use determination and vice versa.
- The interface is premised on a high level of car ownership and use; however, New Zealand may be following an international paradigm towards less ownership. Future paradigms are difficult to predict due to the range of social and technological changes.
- Changing social trends, paradigms and emerging technologies will have a large impact on transport policy and its interface with land use regulation.

Emerging findings

Land transport legislation (the Land Transport Act 1998 and Land Transport Management Act 2003) is designed to improve access to transport and facilitate mobility, while also ensuring that health, safety and environmental standards are being met. Land use regulation, such as the Local Government Act 2002 and the Resource Management Act 1991, involves managing how land is used and developed. It covers spatial elements and strategic considerations, such as how land use affects social, economic and environmental interests.

Land transport regulation affects land use regulation; and vice versa, both directly and indirectly, because the two regimes form an integrated system. Transport decisions impact land use by changing the type and amount of land used for transport infrastructure which changes the accessibility of land for alternative use. Land use regulation affects the demand for travel, which may create pressure for new transport investment or demand management. It also indirectly affects the transport system through dimensions of safety, responsiveness, integration and sustainability. The complex interactions suggest the need for an integrated policy approach. The paper suggests implementing a policy framework that integrates the two regulatory regimes to ensure resilience in the future.

To implement an integrated regulatory regime, policy makers may face several challenges such as the different independent statutory instruments, policy drivers and values that each regime has. Regulatory responsibility, decision making and regimes vary between central and local government. Intergration between the two regimes will require further coordination between central and local decision makers. There are also pragmatic difficulties preventing this integration, such as perceptions of legitimacy and funding.

Impact of technology and social change

The potential for technology and social change is profound, and will likely affect transport policy in unpredictable ways. As change emerges, it will have a large impact on transport policy, including the interface with land use regulation.

This paper identifies four emerging technologies that have the potential to affect the transport sector. Two transport technologies, the intelligent transport systems and autonomous vehicles have clear implications for the transport sector. New energy technology, such as solar power and electric battery technology may influence the way transport is powered. Non-transport technology, such as advances in information technology and telecommunications may in some circumstances reduce the need for transport capacity.

There are a number of social trends that may change the future needs of the transport system, including demographic changes, a shift towards asset sharing, increased emphasis on consumer choice and economic change.

Individual changes, such as autonomous vehicles or a move towards a shared economy, will have profound implications for the transport system. These individual changes, as shown in Diagram 1 will have a systematic flow-on effect for land use decisions.

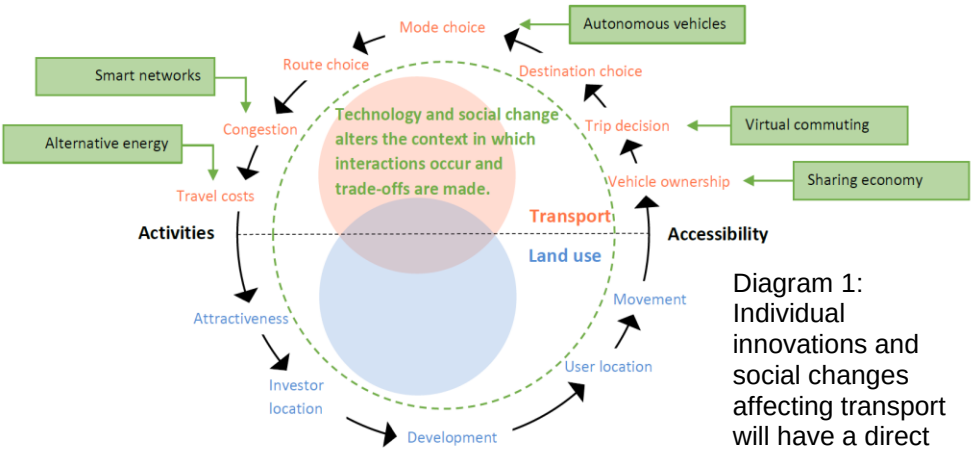

Diagram 1: Individual innovations and social changes affecting transport will have a direct impact on land use decisions. Those impacts on land use will alter the context in which transport decisions are made.

The possible paradigm shift away from private car ownership will affect the interface between the two regulatory systems. The popularity of private car ownership changed the understanding of land use regulation, as urban form developed around this concept. Any future shift away from car ownership will be the result of a combination of different social changes and technological innovations.

Regulatory implications

Technological innovation and changing social trends have disrupted segments of the transport sector, challenged prevailing market dynamics and regulatory settings. These innovations may provide new tools to address regulatory issues. Transport regulation is likely to be able to adjust to changing circumstances. Land use regulation, however, is more rigid as decisions based on these regulations are often long term and difficult to reverse. Rigidity also makes land use regulation the strategic leader which both constrains transport regulation but facilitates coordination between the two regimes. The result is that technology and social changes may promote responsive transport policy, however the interface with land use regulation may constrain new transport initiatives.

The rigidity of land use regulation may be required for sustainability in the long run. This suggests that if integration between the two regimes can be achieved, long term policy change is more likely to be successful.

Conclusion

Land transport and land use regulation are systematically connected. This interface suggests the need for an integrated system between the two. At the same time, the potential change due to emerging technology, social trends and paradigm shifts is profound. The transport regime appears to be capable of adjusting to changed circumstances; however, land use regulation is more rigid. This rigidity and interface may constrain the implementation of new transport initiatives but also simplify the coordination between the two regimes.

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