

ID 1618 | HOW CONGRUENCE BETWEEN FORMAL AND INFORMAL INSTITUTIONS EFFECTS INTEGRATED TRANSPORT AND LAND USE PLANNING: A STUDY ON DUTCH NATIONAL PLANNING PRACTICE

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ABSTRACT: The field of transport planning is in flux, influencing the way developed countries plan, program and budget their transport infrastructure. Planning scholars and policy makers increasingly acknowledge that integrating land use and transport planning generates opportunities for synergetic benefits and helps evade unwanted consequences such as project time and cost overruns. Despite this emerging concept of integrated infrastructure planning, examples of successful employment remain scarce. For this paper the institutional context associated with infrastructure planning has been studied to identify incongruences which hamper integrated infrastructure planning practices. The explicit focus is on how horizontal (cross-sectoral and cross-border) and vertical (between scales) integration in road infrastructure planning is adversely influenced by counteracting formal and informal institutions in different phases of the policy cycle. Evidence is derived from a six-month research project on the current Dutch national infrastructure Planning, Programming and Budgeting System. This research has studied how integrated infrastructure planning is influenced in the different phases of the policy formulation, policy adoption, policy execution and monitoring and evaluation. Findings are distilled by triangulation of literature research, policy analysis, interviews with 22 experts, 2 focus groups and a workshop. In addition, multidisciplinary sounding board meetings, including both scholars and practitioners, were organized to reflect on interim findings. Results illustrate that every phase of the decision making process presents distinct formal and informal institutional incongruence which hampers integrated infrastructure planning. Furthermore, insights were generated on the different roles formal and informal institutions play in affecting integrated infrastructure planning practices. Findings of this study may be used as input for institutional design strategies which aim at enhancing the integration between infrastructure and land use planning as well as for developing further research trajectories.

1 INTRODUCTION

As scholars and practitioners increasingly acknowledge the synergies that can be obtained through transport and land use integration a change it witnessed in the way public authorities plan, program and budget transport infrastructure (Gudmundsson et al., 2015). Despite land use and transport integration is a central goal of contemporary transport policies in developed countries, successful implementation of such integration remains insufficient (UN-Habitat, 2013). As a result potential value is missed, which could have been acquired from the synergies that arise when transport and land use planning are integrated in processes of policy formulation and project delivery.

Land use transport integration has been a topic of research for a long time (e.g. Wegener and Fürst, 1999). Multiple scholars have emphasized the need for an institutional perspective in addressing the adverse influence of institutional barriers on achieving integration (e.g. Marsden and May, 2006; Hull, 2010). Curtis and Low (2012) even state that “time and time again it appears that institutions block the way” (p.13). A growing body of literature on this subject provides insight in how general barriers block the formulation and implementation of integrated transport policies. Isaksson et al. (2017) suggest there appears to be a demand for more in-depth understanding of the multifaceted and chaotic institutional conditions in which these barriers operate as transport planning still tends to exist in siloes (UN-Habitat, 2013).

This study focusses on the Dutch planning context where land use transport integration has been a policy goal for decades. Since the 1990's a converging trend between transport planning and spatial planning is witnessed (WRR, 1998). National government has undertaken multiple attempts to redesign the national transport infrastructure planning programming and budgeting (PPB) system to achieve further land use transport integration. PPBSs function as institutional vehicles structuring different phases of policy

formulation, adoption, execution and evaluation. Hatzopoulou and Miller (2008) point out that the influence of frameworks for appraisal and implementation on the delivery of integrated transport policies can also be negative.

This paper addresses the effects of institutions to integrated transport planning on national level. It aims to offer to a more detailed understanding on how congruence between institutions influence land use transport integration in different phases of infrastructure planning, programming and budgeting. Data is collected in an depth case study research taking Dutch national PPBS as unit of analysis. Through a sociologic historic institutional perspective differentiating between formal and informal institutions a more comprehensive perspective is offered on the effect of different institutions within different phases of the PPBS. The theoretical perspective adopted in this study is introduced in the next paragraph. The subsequent section elaborates on the data collection within the applied case study methodology. Thereafter research findings are presented and interpreted a discussion and conclusion section.

2 ANALYTICAL FRAMEWORK

2.1 CONCEPTUALISING LAND USE AND TRANSPORT INTEGRATION

Transportation planning is traditionally characterized by a sector-oriented, technocratic, predict and provide approach resulting in narrowly defined infrastructure projects aimed at enhancing network capacities. Driven by societal developments such as increased environmental awareness, emergence of the network society, scarcity of space and changing financial-economic contexts this approach broadened through processes of internal and external integration (Heeres et al., 2012). Ambitions for multi-modal solutions through coordination between different modes and networks to influence mobility behaviour lead to a process of internal integration. Concurrent to this development a process of external integration, emphasizing the reciprocity between transport systems and land use systems, as stressed by Wegener and Fürst (2004), lead to a strong focus on the integration of transport planning with other spatial sectors. The concept land use and transport integration captures this contemporary approach to transportation planning in developed countries. Elaborating further on this notion, a more detailed conceptualization is provided by distinguishing in dimension and types of land use and transport integration. The interpretation of land-use transport integration used in thsi research is summarized in table1 .

2.1.1 HORIZONTAL AND VERTICAL INTEGRATION

The distinction between the horizontal and vertical dimensions of integration are widely recognized and discussed in spatial and transportation planning literature (e.g. CDS, 1999; Stead and Meijers, 2003; Harzopoulou and Miller, 2008). The horizontal dimension refers to inter-sectoral, intra-sectoral, and cross-territorial integration. Vertical integration occurs between different layers of government. Although transport planning is often a responsibility of national governments, Isaksson et al. (2016) see the local and regional planning scale as key arenas for implementing integrated mobility solutions. Transport systems in itself are multi-scale of nature (Arts et al., 2014); within any particular government layer there are specific conflicts and synergies between domains of transportation and between transportation and land use (Gudmundsson et al., 2015). Successful land use transport integration includes both dimensions.

2.1.2 POLICY AND PROJECT INTEGRATION

Scholars agree that land use transport integration differs at the strategic level and the operational level (e.g. Cowell and Martin,2003; Heeres et al., 2012; Gudmundsson et al. 2015). Integration at the strategic level is here referred to as policy integration, along with Stead's et al. (2004) definition. Stead et al. (2004) present a hierarchical distinction between cooperation, coordination and integration, which produce different output and levels of interaction. Policy integration "includes dialogue and information (as in policy cooperation), transparency and avoidance of policy conflicts (as in policy coordination, policy coherence and policy consistency) but also includes collaboration, attempts to create synergies and the use of the same goals to formulate policy (Stead, 2008, p.140). Policy integration is based on shared goals, as such requiring a higher level of interaction than coordination and cooperation, creating stronger

interdependencies between horizontal and vertically dispersed actors. Integration at the operational level, defined here as project integration, focuses on the integration of land use and physical infrastructure in integrated area development projects. Multiple researchers have shown how combining transport infrastructure with other local land use goals, such as housing, energy and recreation, enables different interests to merge, enhancing the societal, economic and environmental revenue of projects (Arts et al, 2014; Elverding, 2009). This type of integration is associated with the better, faster or cheaper achievement of interests against a decreased effort and enhanced overall outcomes for an area, in form of higher quality or more sustainable results (Heeres, 2017,p.14).

	Horizontal	Vertical
Land use transport policy integration	Inter-sectoral, intra-sectoral, and cross-territorial integration between land use and transport policies.	Multi-level (between government layers) integration between land use and transport policies.
Land use transport project integration	Integrating infrastructure development with other land use development within area development projects.	Integrating transport interests and land use interests dispersed across government layers in area development projects.

Table 1 – Conceptualization of land use transport integration as a comprehensive notion which can be subdivided into four components.

2.2 AN INSTITUTIONAL PERSPECTIVE ON LAND USE TRANSPORT INTEGRATION

For this study institutions are defined as any form of human devised constraint (both formal and informal) structuring social interaction (North, 1990). It is argued that all planning and decision-making takes place within a certain institutional context (Alexander, 2005). These ‘rules of the game’, a much used appellation for institutions, influence the behaviour of actors in the process of designing, negotiating and funding policies by prescribing what is considered appropriate, adequate, right and wrong in specific situations (March and Olsen, 1989). As such institutions help explain why specific patterns of collective behaviour occur as they do. Within any process of policy formulation and implementation a variety of different ‘nested’ institutional contexts meet and interact (Alexander, 2005). This study focusses on both formal and informal institutions as defined by Hemke and Levidsky (2004,p.727). The focus on both types of institutions is crucial to capture all incentives and restrictions underlying behaviour (Helmke and Levisky, 2004).

Due to their structuring influence on social interactions institutions are considered to influence processes of land use transport integration. Marsden and May (2006) show how institutions play an important role in the development and delivery of integrated transportation policies. Institutional congruence is used here as a concept to gain a deeper understanding on the the way institutions influence land use transport integration efforts. Institutional congruence fits with historic institutionalism from a new institutional sociologists perspective, as formulated by Hall (2010). He states that a society “replete with multiple layers of institutions...that provides footholds for many courses of action” (p.22). Institutionalization can be described as a “historic accretion of culturally specific forms and practices with their origins and diffusion related to their specific contexts: sectors, societies and subcultures” (Alexander 2005, p.212). The choices made when an institution is formed, will have continuing influence on policy in the future (Peters, 1999). As such it is said that emerging institutions are inspired by existing ones (Thelen, 1999). The development of institutions is regarded as a path dependent process resulting in unintentional consequences (Taylor and Hall, 1996) Institutional congruence focusses on the mutual influence between different formal and informal institutions. Institutions can either reinforce, have no impact on, or weaken each other’s effect (De Jong, 2008). Two types of congruence can be distinguished. First, a (mis)match between old and new institutions. Institutional structures which have been appraised in the past can effect institutional structures underlying contemporary policy objectives. The second type of congruence infers a (mis)match between existing institutions which have been developed from diverging strategies (De Jong, 2008).

2.3 SYNTHESIS

The structuring influence of institutions on social interaction patterns makes institutional theory appropriate in the context of land use transport integration. Achieving land use transport integration requires interaction between a variety of actors dispersed across horizontal and vertical dimensions. These interaction patterns change in the different phases of planning, programming and budgeting of transport infrastructure. Due to the structuring influence of institution on social interaction patterns, both formal and informal institutions are important in the formulation and implementation of integrated land use and transport policies. This research aims to provide an in depth perspective on how institutions influence land use transport integration by studying the congruence between the institutions within the phases of policy formation, adoption, execution and evaluation.

3 RESEARCH DESIGN

The findings discussed in this article are derived from a six months research project on Dutch national spatial and infrastructure planning. This project studied how land use transport integration is hampered in the different phases of the policy formulation, policy adoption, policy execution and monitoring and evaluation of the Dutch infrastructure Planning, Programming and Budgeting (PPB) System. As will be discussed in section 4, the Dutch PPB System, MIRT, is undergoing a major change in which both horizontal and vertical integration are pursued. Although the findings are to some extent specific for the Dutch situation, lessons can be drawn for other countries as well, since PPB Systems are a common instrument for connecting policy and practice in transport planning, which all struggle to successfully bring integration from the strategic policy level to the project practice (UN-Habitat, 2013). In order to assess the integration and the role of formal and informal institutions, we applied methodological triangulation that included besides the literature research, policy analysis, interviews, focus groups, a workshop and sounding board meetings.

First, policy analysis was performed, which included the Dutch Spatial Planning Act (In Dutch WRO), the Dutch Infrastructure Planning Act (in Dutch Tracéwet), the series of documents of the National Spatial Strategy, the National Mobility Strategy , and the Long-range Programme for Infrastructure, Spatial Development and Transport (in Dutch MIRT), and supporting policy documents. The policy analysis provided the input for 22 interviews that were conducted. These interviews were semi-structured, allowing for a structured discussion of relevant concepts emerging from the literature study, as well as flexibility for interviewees to bring up their own experiences and conversation topics (Liamputtong and Ezzy, 2005). The interviewees were all experts working at the Ministry of Infrastructure and the Environment (in Dutch Ministerie landM) and the Directorate-General for Public Works and Water Management (in Dutch Rijkswaterstaat). All are closely involved with implementing the current spatial planning and infrastructure policies, or engaged in the revision of the PPB System.

Subsequently, 2 focus group discussions enabled the findings from the interviews and policy analysis to be discussed in a broader group of people. As such the focus groups combine interaction, obtained through participant observation, with in-depth knowledge of experiences, obtained through in-depth interviewing (Morgan and Spanish, 1984). The participants were chosen based on their organization, either from the Ministerie landM or from Rijkswaterstaat, their orientation towards policy or practice and their "articulateness": their ability to reflect on their field and form and express their opinion.. The focus group discussions were held around statements derived from the policy analysis and interviews. These statements provided the starting point for discussion, and proved to be successful in activating the participants.

Finally the workshop and multidisciplinary sounding board meetings, including both scholars and practitioners, were organized to reflect on interim findings. During these meetings the progress of the research was discussed, sources and contacts were disclosed and avenues for future research were identified.

4 RESULTS

4.1 CASE INTRODUCTION

The Dutch national government carries a legal responsibility for planning, building and maintaining national surface transport infrastructure networks. A national Infrastructure Fund secures annual budgets for executing this task. The allocation of this fund is done with national PPB system called MIRT - Long-range Infrastructure, Space and Transport Programme - which serves as an official annex to the national budget planning. The MIRT rules provide a formal administrative institutionalization structuring the procedure of policy integration, policy adoption, policy execution and monitoring and evaluation. In several distinct phases separated by formal administrative decisions, ministerial strategic transport policy goals are translated into clearly outlined projects (see figure 1). As such MIRT is an institutional instrument structuring policy implementation. Since its adoption in the early 90's the MIRT rules have been periodically revised to reflect the gradual policy shift from a sectoral transport planning to integrated land use and transport planning. A short historical perspective is offered on the context in which the PPB System was developed and evolved. For a detailed historical perspective this research refers to Arts et al. (2016).

In 1991 MIT, the precursor of MIRT (without R which stands for 'ruimte': space), was introduced, during a period of New Public Management, as a transport PPB System to operationalize controllability, transparency and output steering. MIT was designed to move away from a planning system which was at that time considered bureaucratic and received increasing social critique (Van den Brink, 2009). In line with private organizational management principles a division was made between policy making at ministerial level, and policy delivery by governmental agency Rijkswaterstaat. Alongside the incremental adoption of New Public Management principles, a shift occurred towards integrated planning (Heeres et al, 2012). Land use transport integration became a central policy goal. This goal was even captured in the Traffic and Transport Planning Act (1996) to "emphasize the need for integrated traffic and transport policy. This means intersectoral integration and integration with spatial planning, environment and economy"¹. This converging trend between transport planning and land use planning continued, uniting two disciplines with divergent rationales (Filarski and Jeekel, 2016; WRR, 1998).

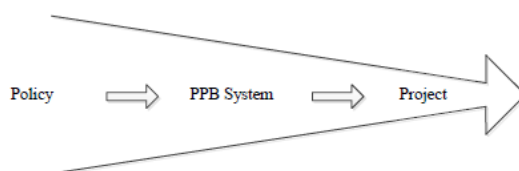


Figure 1 – The current MIRT procedure and its development throughout the years

In 2008 the 'R' was adopted in MIRT. The Ministry of Transport, Public Works and Water Management and The Ministry of Housing Spatial Planning and the Environment merged into one Ministry of Infrastructure and the Environment. Also Rijkswaterstaat as executive agency underwent a reorganization as a new management framework stressing public-orientation and interactive planning (van den Brink, 2009). Despite these, and several other institutional adaptations, the implementation of land use transport integration has shown to be limited successful (Lambrigts et al., 2016). A review of the MIRT procedure, initiated in 2014, resulted in revised MIRT rules in 2016 aimed at stimulation land use transport integration along the principles broad scope, custom-fit and collaboration (Ministerie IenM, 2016). The next paragraphs describe how this goal of land use transport integration is institutionalized into the MIRT rules and how other formal and informal institutions are influencing the extent to which that goal is achieved in practice.

¹ Parliamentary Papers II 1996-97, 25 337, nr. 3, p.13

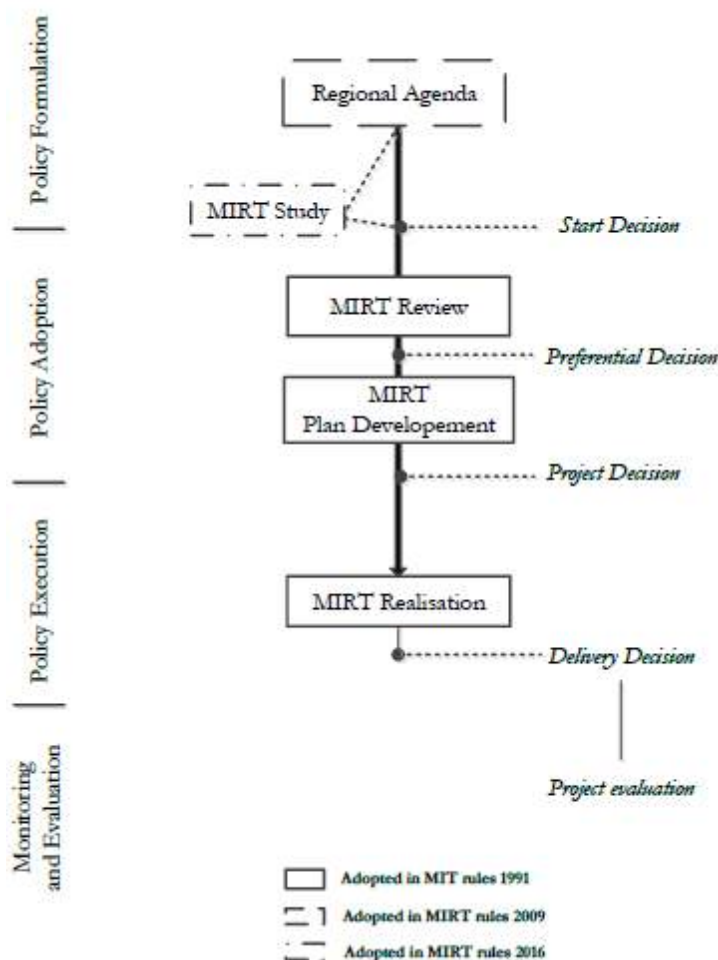


Figure 2 – The current MIRT procedure and its development throughout the years

4.2 POLICY FORMULATION IN MIRT

Traditionally MIRT aimed at efficient and transparent project delivery. Policy formulation was separately done at ministerial level. As the ambition for land use transport integration developed the front end stage of the MIRT was redesigned to facilitate policy development and policy integration. In 2009 the Regional Agenda was formally introduced in the MIRT Rules and periodical administrative consultations were adopted in the decision making process to encourage policy integration (Ministerie VandW, 2009). The Regional Agenda functions as a platform for integrated agenda setting at regional scale. Its aim is to establish collaboration and integration between different governmental bodies (vertical and horizontal) and between sectors within one of the seven defined agenda regions (Ministerie landM, 2016). These agendas provide input for formal decision making that done by national , regional directors and when relevant market an civil society actors during annual administrative consultations. The MIRT rules describe this as a strategic deliberation process in which formal decision making occurs and transport related policy issues are defined. A policy problem is formally adopted with a start decision, this marks the transition towards the next phase of the MIRT process. When more insight is required in the policy issue it is an option to start a MIRT Study. The phase of policy formulation ideally policy makers and decision makers from different governmental bodies, as well as market and civil society actors.

The traditional top down sectoral orientation of MIRT, limited employability of the Infrastructure fund and political culture are described by respondents as the institutions influencing land use transport integration in this MIRT phase.

“From a historical perspective policy making at national level has occurred in siloes, separated in different departments” (Respondent B2, 2017). “The infrastructure component is very dominant. A MIRT

administrative consultation, put very black and white, is all about public officials safeguarding projects (Respondent C8, 2017). Respondents describe a culture where collaboration between departments and ministries is obvious. This can be illustrated by the following three quotes. “The added value of taking an integrated approach in national level cannot be expressed in economic benefit, and current culture economic benefit or enhancing effectivity are the main incentives for collaboration”(Respondent B5, 2017). [On a ministerial visit of a government official responsible for the allocation of housing development sites] “he says: I want to build these houses as fast as possible so we should develop on pasture. Developing in urban areas is too much hassle” (Respondent B5, 2017). “I just notice that the collaboration and coordination between ministries is not very good. Multiple accidents are happening because we do not coordinate well” (Respondent c8, 2017). Furthermore MIRT is said to be very much top down as national interests are dominant, and “the money contributed by regional partners is usually much lower” (Respondent C4, 2017).

The allocation of the Infrastructure Fund is legally confined to the construction, management, maintenance and operation of transport infrastructure for people and goods¹. Potential land use planning solutions for transport issues can therefore not be financed with the Infrastructure Fund. In line with findings of IBO Werkgroep (2016), multiple respondents have defined this as a barrier for land use transport integration. The follow quote reflects this: “as soon the topic changes to finance problems emerge. Mobility mingles with other policy issues and things get difficult” (Respondent B1, 2017)

Decision making in MIRT is strongly influenced by politics. “Members of the parliament and aldermen, they demand projects. That is how they discern themselves” (Respondent B5, 2017). It influences how the MIRT Rules are interpreted “it is a very nice model. But every now and again projects just come falling from the sky” (Respondent B4, 2017); examples are given of projects that start at the MIRT review phase (Respondent B6, 2017). Research by Mouter (2016) confirms the strong influence of political games on decision making. This political culture is also mentioned as a barrier for collaboration: “Politics and trust do not mingle well. I mean look how things go in the Tweede Kamer [Dutch Lower House of Parliament], people are constantly trying to bring each other down” (Respondent C7, 2017).

4.3 POLICY ADOPTION IN MIRT

The phase of policy adoption is institutionalized with the instruments MIRT Study, MIRT Review and MIRT Plan Development. The MIRT Study aims at providing additional insights into a, in the administrative consultation, defined transport policy issue by e.g. delineating the scope, pinpointing its relation to other policy topics or distinguishing involved actors. This instrument aims at providing an integrated perspective. The outcome of a MIRT Study can be to that no further action is required, that measures should be taken outside MIRT or a start decision is made and the policy issue proceeds to MIRT Review. The MIRT Review consists of a problem analysis and the formulation and weighing of different solutions, aiming to formulate a preferred alternative. MIRT Review is a very structured procedure starting divergently, looking for diverse solutions, and then converging working towards specific project formulation (Rijkswaterstaat, 2010). MIRT Rules stimulate a broad and inclusive perspective by requiring the consideration of at least one alternative that does not comprise infrastructure development. A preferential decision, marking the transition between MIRT Review and MIRT Plan Development, is made during administrative consultation. MIRT Plan Development translates the chosen alternative solution into executable planning along. The MIRT rules prescribe a project approach for sectoral oriented solution and a programme approach for integrated solutions comprising multiple interrelated projects. A project decision binds the involved actors legally to execute their task.

A central topic in the interviews and focus groups on the policy adoption phase is the cultural clash that occurs between policy makers and project managers. Ambitions of integration from policy makers strokes with project-management culture. “Practice shows the more things you try to combine, the more complicated a project becomes. Project managers are accounted for keeping within time and money. So then you do not want to make things complicated” (Respondent B1, 2017). The strong focus on projects in MIRT is seen as negative influence on the adoption of integrated policies. Programme management is introduced in latest MIRT rules as intermediate structure between integrated land use transport policies

¹ Parliamentary Papers II 1990-91, 21 912, nr. 3

and project execution (Ministerie IenM, 2016). Programme management is widely acknowledged by respondents as a potential approach to stimulate the delivery of integrated policies. On the current employment of programme management a respondent states “you see that programmes are very much focused on a single modality [...]we have a wonderful railway programme [...] but this programme can be considered a collection of different projects to get. This works fine, but integrated? Not really” (Respondent B6, 2017).

4.4 POLICY EXECUTION IN MIRT

During the MIRT Realisation the focus is on project or programme delivery. The scope, time planning and budgets have been translated into contractual arrangements before the start of this phase. That makes MIRT Realization a clearly delineated and straightforward process. The delivery decision provides accountability on the realisation process and marks the end of this phase.

Respondents agree that there is minimal room for integration during MIRT Realisation . “Once you entre MIRT Realisation you are dealing with ridged scope leaving no room for negotiation” (respondent B6, 2017). For project managers it is attractive to keep the scope of the project narrow as it creates. The emphasize on clear project delineation is one of the reasons why project delivery is still very much a transport planning oriented endeavor. “Creating a robust network. That is why I realize infrastructure. Not because I want the road to be beautiful” (Respondent C4, 2017).

4.5 MONITORING AND EVALUATION IN MIRT

The MIRT rules do not contain policy evaluation instruments. Evaluation delivery decision does contain a project evaluation, which is performed a year after project delivery, that monitors if the legal norms (e.g. air pollution, noise level) are met.

Outside the MIRT rules the Environmental Management Act requires an Environmental Impact Assessment for infrastructure projects which possibly have a negative environmental impact. This can be considered another type of project evaluation. Evaluation loops from project delivery to the policy from which they originate are non-existent in MIRT at the moment (Respondent B1, 2017). But this is changing as “the minister specifically asked for MIRT monitoring [referring to Regional Agenda] in two administrative consultations” (Respondent B5, 2017). Currently there are several initiatives to establish policy evaluation instruments, but these have not been formally institutionalized. “We want to specify the Regional Agendas to enable their evaluation. At the moment this is not possible [...] it requires the regional agenda’s to be more specific” (Respondent B5, 2017). Also “there is a lot of resistance for policy evaluation from the regional partners involved in MIRT” (Respondent B5, 2017).

5 CONCLUSION

Transportation planning in developed countries has shifted from a technocratic approach towards a focus on land use transport integration. Despite this shift, successful implementation of land-use transport integrating remains scarce. Multiple scholars have referred to the influence of institutions land use transport integration. Through an in-depth case study on within the Dutch national transport PPB System we have tried to gain a deeper insight in how institutional congruence influences land use transport integration. This was done by analyzing the different phases of policy formulation, adoption, execution and monitoring and evaluation and disentangling land use transport integration into four components by distinguishing between dimensions (horizontal and vertical) and integration types (policy and project). Distinguishing between phase and components of land use transport integration was valuable. This enables to show, first of all, that each of the four phases has distinct role in achieving land use and transport approach. And second that distinct institutions, both formal and informal, influence specific dimensions or a specific type of land use transport integration.

As such the institutional congruence approach deployed here has led to a more detailed understanding on how land use transport integration is achieved. Due to focus on the whole planning programming and

budgeting system our findings remain somewhat. A more in-depth analysis of each of the different phases is expected to reveal a more detailed understanding on how a complex whole of different institutional structures, informal and formal, originating from different time frames, collectively shape the process of land use transport integration.

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