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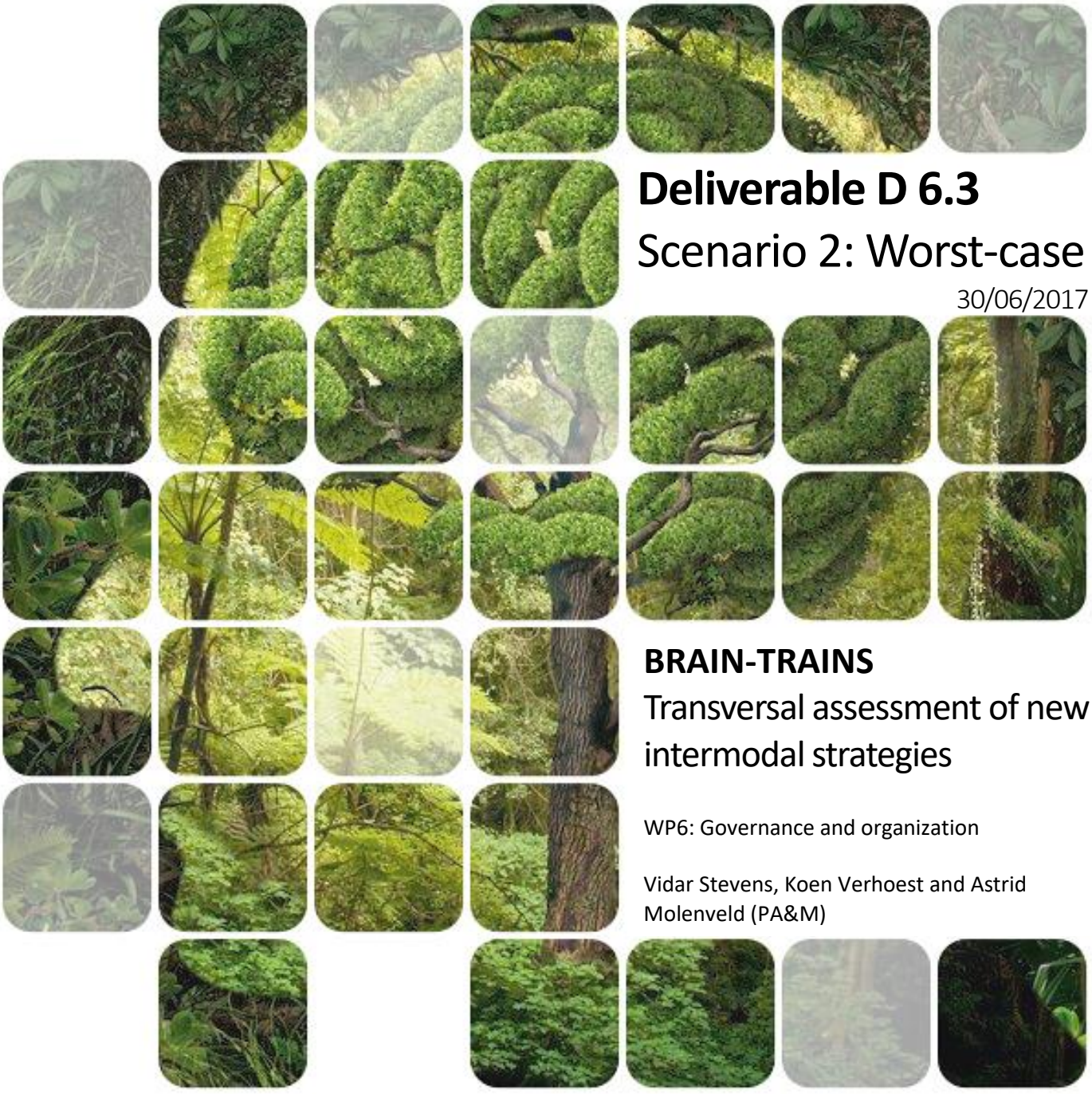

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Scenario 2: Worst-case

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BRAIN-TRAINS

Transversal assessment of new intermodal strategies

WP6: Governance and organization

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CONTENTS

1. INTRODUCTION

This paper is a part of the BRAIN-TRAINS[1] project, which deals with the possible development of freight intermodality in Belgium. Freight intermodality is a rather theoretical concept – one that is slightly abstract, yet also one that shows some common sense logic. We understand the concept as 'combining several modes of transport during the same journey to get goods shipped from place A to place Z'. Starting point of the BRAIN-TRAINS project is the relative limited usage of this form of transport in Belgium. Therefore, the main goal of the BRAIN-TRAINS project is to see how in 2030 intermodal freight transport can become a more dominant mode of transport in Belgium.

The research project is split into various work packages. Each work package addresses a specific research question. In the first stage of the BRAIN-TRAINS project, we determined what the current strengths and weaknesses are, as well as the treats and possible opportunities to the future development of intermodal freight transport. Subsequently, future scenarios were created based on the outcomes of these SWOT-analyses. In this paper, we reflect on the coordination relations, structures, strategies and instruments (i.e. coordination architecture[2]) that are necessary to turn each of the possible future scenarios into reality. This is also the main focus of what is called work package 6 (WP6).

In order to draw some conclusions with regard to the necessary coordination architecture for each of the scenarios, we require two things: a reference situation that sketches the current level of integration between involved departments and agencies regarding issues of intermodal freight transport, and the required level of integration between involved political and administrative actors for each of the scenarios. On the basis of these insights, we can reflect on the coordination architecture that is most useful to reach the ambition level for each of the three scenarios.

In work package 6, we thus focus on the aspect of 'integration'. With the term 'integration', we mean 'the (stable) relationships and interdependencies that exist among a multitude of organizations within a particular policy subsystem[3]' (Meijers and Stead, 2009). An important distinction that has to be made for this study is the difference between 'policy-level integration' and 'administrative integration'.

Policy-level integration refers to the extent to which political actors try to create greater coherence in decision-making for issues that transcend the boundaries of established policy fields, and which do

[1] The abbreviation stands for: Belgian Research Action trough Interdisciplinary Networks on Transversal Assessment of Intermodal New Strategies. The research project is subsidized by BESLPO through contract number BR/132/A4/BRAIN-TRAINS. In the project, scholars collaborate from various universities and research institutes. To be more specific, different scholars from the Department of Transport and Regional Economics from the University of Antwerp, as well as, researchers from the Department of Chemical Engineering and the Research Center in Quantitative Methods and Operations Management from the University of Liège were involved in the data-gathering process and scenario creation process. For more specific information on the paper and data-gathering methods, see the Vanelslander et. al. (2015) paper.

[2] Coordination architecture is here understood as the instruments and mechanisms that aim to enhance the voluntary or forced alignment of tasks and efforts of organizations in the public sector. These mechanisms and instruments are used in order to create greater coherence, and to reduce redundancy, lacunae and contradictions within and between policies, implementation or management (Bouckaert et al., 2010).

[3] A policy subsystem is an aggregation of all involved state-actors that directly or indirectly affect a specific policy area or sector.

not correspond to the institutional responsibilities of individual departments (Meijers and Stead, 2009. Administrative integration, then, denotes the extent to which involved administrative actors (together with private or privatized companies, civil society organizations, etc.) streamline practices and activities in the policy implementation phase (Mulford and Rogers, 1982).

As such, we will identify for each of the constructed scenarios what the required level of policy-level and administrative integration is, as well as identify the current status of both forms of integration of the reference situation. With the help of these analyses, we will draw on existing academic literature, as well as findings which follow from our own case studies, to indicate for each scenario how policy makers and government officials in a collaborative manner can make intermodal transport a more dominant transport mode in Belgium by the year 2030. We continue as follows in this paper. First of all, we will elaborate on the findings with regard to the current levels of integration. Subsequently, we will define the required levels of integration for the best-case scenario. Then, we compare these different levels of integration. Finally, we elaborate on what coordination architecture is required to overcome the existing discrepancy between the different levels of integration, in order to turn the best-case scenario into practice by the year 2030.

2. CURRENT LEVEL OF ADMINISTRATIVE AND POLICY-LEVEL INTEGRATION

2.1. A holistic strategy for sustainable and intermodal transport

In an earlier document, we already discussed in greater detail the methodology that we use in WP6 to come to an answer to the following research question (BRAINTRAINS, 2016):

"How should public administration and policy-making be organized and coordinated to optimally implement intermodality under each of the future development scenarios?"

In this previous document, we stated that in order to gain a notion of the current administrative and policy-level integration, we analyse two specific cases. The analysis of the first case, which is the attempt of the Federal Department of Transport and Mobility to establish a holistic government strategy for sustainable and intermodal mobility and (freight) transport encompassing the different levels of government and policy sectors, was already published and validated as a research deliverable of the BRAIN-TRAINS project (BRAINTRAINS, 2014). This specific policy process started in 1997 and finished around 2010; however, the result was limited.

On the basis of this case analysis, we made a list of enablers and impediments that together explain why it was difficult to design and diffuse this particular holistic government strategy across the different levels of government in the Belgian dualistic federal state (see figure 1). Moreover, we made an assessment of efforts and strategies of the coordinating actor, to see why these efforts were not able to turn the tide. Overall, we concluded that in this specific case actors did not really work together, but rather 'next to' each other without much mutual interference or commitment.

FIGURE 1. LIST OF ENABLERS AND IMPEDIMENTS OF THE FIRST CASE ANALYSIS.

1. The willingness of the involved actors to work across organizational and governmental boundaries and the role of the coordinating actor in the constellation;
2. The inclusiveness of actors in procedures and communication;
3. Impatience, strict deadlines and the demand for quick wins;
4. The compatibility of policy orientations among involved actors;
5. The fit with operational policy plans;
6. Regionalization of transport competences;
7. The growing influence of the European Union and transnational institutions;
8. Sectorial changes and demands that have to be taken into account;
9. Political proliferation (after elections);
10. Budgetary cuts and austerity measures.

To some extent, the first case served as a pilot case. It helped us to get a sense of the political and administrative debates and developments in the (freight) transport domain. However, because the first case ended in 2010, we made the decision to look at a second, more contemporary, case to see whether similar research findings come up.

2.2. The transposal of the EU ITS-Directive case

Specifically, we studied for this second case the transposal of the EU ITS directive into the dualistic federal system of the Belgian state. This EU directive establishes a framework for the deployment of Intelligent Transport Systems (ITS) in the field of road transport and for interfaces with other transport modes. ITS-systems are advanced applications which without embodying intelligence as such aim to provide innovative services relating to different modes of transport and traffic management and enable various users to be better informed and make safer, more coordinated and 'smarter' use of transport networks (European Union, 2010:L207/1). More concretely, ITS integrate telecommunications, electronics and information technologies with transport engineering in order to plan, design, operate, maintain and manage transport systems.

The directive lists 6 priority actions that the EU member states are supposed to design policies and projects on. These priority actions are:

- the provision of EU-wide multimodal travel information services;
- the provision of EU-wide real-time traffic information services;
- data and procedures for the provision, where possible, of road safety related minimum universal traffic information free of charge to users;
- the harmonized provision for an interoperable EU-wide eCall;
- the provision of information services for safe and secure parking places for trucks and commercial vehicles;
- the provision of reservation services for safe and secure parking places for trucks and commercial vehicles.

Within the scope of the requirements under Article 17(2) of the 2010/40/EU directive, Belgium has in recent years put considerable effort in conforming to the expectations of this EU framework. The federal government has, for example, invested considerably in the eCall system to guarantee the highest quality for this new channel for emergency calls (FOD M&V, 2012:6; interview 1).

The competences in the transport domain in Belgium are, however, allocated across the federal and regional levels of governments. The public bus, tram and subway transport all fall, for example, under regional competences. The technical specifications of vehicles for ITS (rules and requirements), traffic safety and traffic regulations, freight transport by road, the handling of personal data and market supervision belong, in contrast, to federal competences.

Due to this complex competence division, it was decided that the federal, Flemish, Walloon and Brussels-Capital authorities are in charge of the ITS-activities on their own territories (European Commission, 2014[4]). Hence, the different governments have mainly designed their own policies and projects, which they are currently working on. The Flemish government, for example, puts in its policy plans a lot of effort in incident management, whereas the Walloon authority is busy with the WHIST-programme that is concentrated on the structuring of the road network (Ibidem). So far, no National ITS-strategy has been developed (interview 1), though some private stakeholders would prefer the establishment of such a holistic government strategy (e.g. ITS Belgium).

At the political level, the different governments do, however, from time to time get together to assure a greater coherence, and to reduce redundancy, lacunae and contradictions among the different projects, activities and policy actions of the involved administrations. The latter is necessary for three specific reasons (interview 1).

First of all, the mobility and transport problem is the outcome of the interaction of different transport/mobility modes. As the responsibility about policies on these different modes is allocated at different levels of government, there is a strong need to coordinate and work together. This also means that the federal administration is often dependent upon collaboration with regional administrations in order to attain their set goals.

Second, the 2010/40/EU directive demands EU-wide interoperability of the ITS-systems. Therefore, the projects, technical systems and procedures of the federal and regional administrations also need to be harmonized as much as possible in order to adhere to this call.

Third, there are always unintended spill-over effects of policy actions of one administration that affect the policy realities of another administration – which require a form of collective action to minimize the negative impact of these effects.

In sum, this means in terms of policy-level integration that overall the political actors in the case of the transposal of the EU ITS-directive work rather autonomously from each other, and only get together if this is really necessary. Up till now, there has only been very limited collaborative effort to establish a comprehensive policy strategy that transcends the different levels of government.

[4] http://ec.europa.eu/transport/themes/its/road/action_plan/doc/2014_be_its_progress_report_2014_en.pdf

A similar image emerges when we take a closer look at the implementation-phase of the EU ITS-directive in the Belgian federal state, and the extent to which the responsible administrative actors from the different levels of government seek some form of integration in their practices. Figure 2 provides a visual overview of the clustering of the administrative actors in the implementation-phase. The overview was produced on the basis of a list of all the projects that were set up by the different administrations to implement actions in accordance with the EU ITS-directive.

Specifically, we performed a Social Network Analysis with the help of the software-program UCINET (see Stevens and Verhoest, 2016). In total we identified 81 projects. Subsequently, for each project it was indicated which actors (from government, semi-autonomous organizations, civil society and private sector) were involved. As such, a link between two actors in the visual overview represents a shared project between them, or a shared project of which they are both a part alongside various other organizations. The thickness of the line further indicates how closely linked the two actors are; i.e. the thicker the line, the more they are together a part of in various projects.

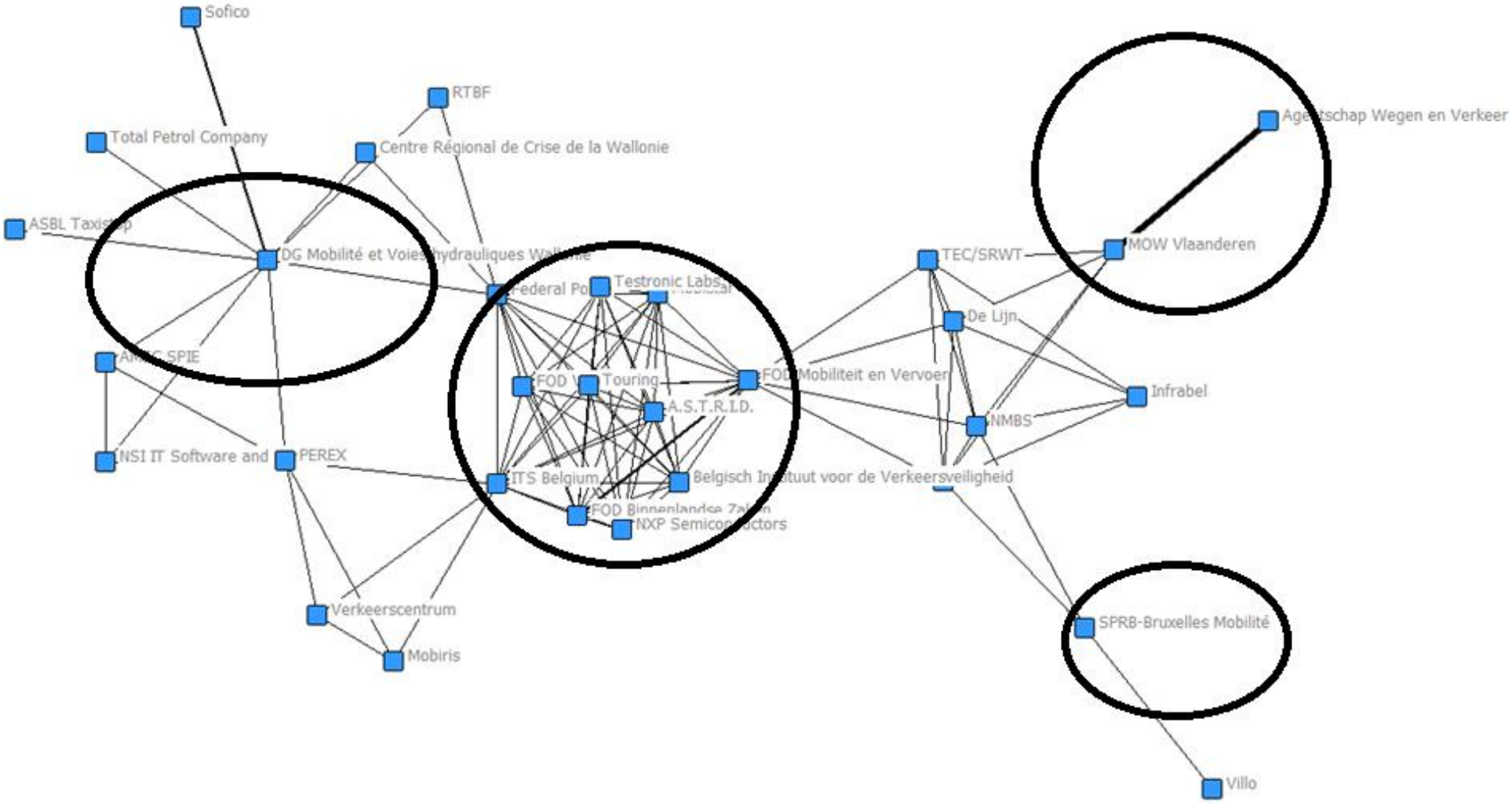
If we take a closer look at figure 2, we see four big clusters of actors with the departments of Transport and Mobility from the different administrations as unique centres (see DG Mobilité et Voies hydrauliques Wallonie, FOD Mobiliteit en Vervoer, MOW Vlaanderen, and SPRB Bruxelles Mobilité). None of these clusters are linked through a direct line between these centres (i.e. departments of Transport and Mobility), which implies that between the different administrations there were no shared (implementation) projects established, except for some projects between FOD Mobiliteit, the NMBS and the regional agencies for bus/tram traffic.

This may seem obvious considering the fact that the governments have drawn up their own policy plans. However, even in the implementation of policy actions, we oftentimes see that organizations from different administrative levels collaborate, for example, to streamline activities, share data and information, etc. Yet, this proved little to be the case in the implementation of the EU ITS-directive (interview 1). Instead, the clusters of actors are only linked through private actors or semi-autonomous organizations, as the different administrations organizations sometimes involve the same private or semi-autonomous organizations to perform certain tasks in their policy projects (see for an example PEREX, RTBF or TEC/SRWT).

2.3. Assessment of the two “current level” cases

On the basis of the insights that follow from the two discussed cases, we argue that in practice political and administrative actors of the transport domain in the Belgian federal state, most often work independently of each other, unless that there is a real need or urgency to coordinate political and administrative activities. This implies in terms of policy-level and administrative integration, that the practices of the federal and regional governments and their administrative organizations are only to a very limited extent coordinated. This overall conclusion of the current level of policy-level and administrative integration, will in the remainder of the document also be the reference point to which we compare the desired levels of integration, if the best-case scenario has to be turned into reality by the year 2030. Yet, before we can make recommendations about the most useful coordination architecture for the three different scenarios, we specify the foreseen levels of policy-level and administrative integration of the best, medium and worst case scenario in the next sections.

FIGURE 2. ADMINISTRATIVE INTEGRATION IN EU ITS-DIRECTIVE CASE



3. DESIRED LEVELS OF INTEGRATION FOR THE SCENARIOS

3.1. High level of ambition for the best case scenario

Figure 3 is a table that was created in the scenario-development phase. It shows the scenario values compared to the reference values that are considered in the BRAIN-TRAINS project. As can be noted in the last column of the table (the change percentage column), we foresee a high level of ambition in the best case scenario. By 2030, there is an expected reduction in the values of transport emissions (CO_2, NO_2, SO_2, NHMC and Dust), energy consumption, infrastructure and maintenance costs, noise exposure and operational costs, even though the amount of transported tkm increases by 70 per cent (see figure 4).

FIGURE 3. SCENARIO VALUES BEST-CASE SCENARIO

	Parameters			Reference value		Scenario value		%
BEST-CASE	Transport emissions	CO_2	Road	72	g/tkm	58	g/tkm	-20%
			Rail (electric)	18	g/tkm	11	g/tkm	-40%
			Rail (diesel)	35	g/tkm	21	g/tkm	-40%
		NO_x	Road	0,553	g/tkm	0,445	g/tkm	-20%
			Rail (electric)	0,032	g/tkm	0,019	g/tkm	-40%
			Rail (diesel)	0,549	g/tkm	0,330	g/tkm	-40%
		SO_2	Road	0,090	g/tkm	0,072	g/tkm	-20%
			Rail (electric)	0,064	g/tkm	0,039	g/tkm	-40%
			Rail (diesel)	0,044	g/tkm	0,027	g/tkm	-40%
		NMHC	Road	0,054	g/tkm	0,043	g/tkm	-20%
			Rail (electric)	0,004	g/tkm	0,002	g/tkm	-50%
			Rail (diesel)	0,062	g/tkm	0,037	g/tkm	-40%
		Dust	Road	0,016	g/tkm	0,013	g/tkm	-20%
			Rail (electric)	0,005	g/tkm	0,003	g/tkm	-40%
			Rail (diesel)	0,017	g/tkm	0,010	g/tkm	-40%
	Energy consumption		Road	1082	kJ/tkm	975	kJ/tkm	-10%
			Rail (electric)	456	kJ/tkm	365	kJ/tkm	-20%
			Rail (diesel)	530	kJ/tkm	425	kJ/tkm	-20%
	Infrastructure and maintenance costs		Rail	0,0698	EUR/tkm	0,0555	EUR/tkm	-20%
			IWW	0,0219	EUR/tkm	0,0198	EUR/tkm	-10%
	Noise exposure			?	?	?	?	?
	Market players and links			12	(3 links)	17	(5 links)	-
	Rail tkm			7300	mio tkm	17000	mio tkm	+133%
	Network charges			?	?	?	?	?
	Operational costs		Road (long haul)	0,070 - 0,020	EUR/tkm	0,063 - 0,018	EUR/tkm	-10%
			Road (short haul)	0,100 - 0,040	EUR/tkm	0,090 - 0,036	EUR/tkm	-10%
			Rail	0,025 - 0,019	EUR/tkm	0,018 - 0,013	EUR/tkm	-30%
	O-D matrix			-	-	-	-	+15%
	Road taxes			?	?	?	?	?
	Passenger traffic			?	?	?	?	?
	Monopoly/Duopoly			Not present		Not present		-

3.2. Changes in modal split and tkm values in best case scenario

The latter expected increase in tkm, is not only foreseen in road transport, but also in the modes of rail and inland waterway transport. Figure 4 shows the exact rise in the values of modal split and tkm (per mode of transport) in the best-case scenario. As the figure further shows, a rise in modal split is particularly expected in the modes of rail and inland waterway transport. Within many of the policy documents of the federal and regional governments, these two modes of transport are considered to be more 'environmental-friendly'. Hence, we argue – given the ambition level of the scenario values and the projected changes in modal split – that by 2030 the federal and regional governments have

to invest in 'more' and ambitious (perhaps even 'radical') sustainable solutions in all modes of transport in order to turn the best-case scenario into reality.

FIGURE 4. SCENARIO MODAL SPLIT VALUES AND RISE IN TKM

		Total transport	Road	Rail	IWW
REFERENCE	tkm	50,000	32,100	7,300	10,400
	modal split	**100%**	**64%**	**15%**	**21%**
BEST	tkm	85,000	47,000	17,000	21,000
	% rise in tkm	**70%**	**46%**	**133%**	**102%**
	absolute rise	35,000	14,900	9,700	10,600
	modal split	**100%**	**55%**	**20%**	**25%**
MEDIUM	tkm	71,500	41,500	12,000	18,000
	% rise in tkm	43%	29%	64%	73%
	absolute rise	21,500	9,400	4,700	7,600
	modal split	100%	**58%**	**17%**	**25%**
WORST	tkm	57,000	36,500	8,000	12,500
	% rise in tkm	14%	14%	10%	20%
	absolute rise	35,500	4,400	700	2,100
	modal split	100%	**64%**	**14%**	**22%**

This assignment is not something obvious. In fact, the earlier discussed cases in section 2 reveal that the federal and regional governments mainly work within their own governmental silos. However, the competence division in the transport domain is such that the competences are spread across the different levels of government. Specifically, the federal departments and agencies are mainly responsible for the developments in the rail sector, whereas the regional departments, each within their jurisdiction, are responsible for the developments in the domains (and modes) of road and inland waterway(s).

This means that in order to bolster an ambitious and radical sustainable shift in all modes of transport (instead of a small shift), political actors should look beyond their own policy objectives and see what is in the best interest of Belgium as a whole, and administrative actors should seek for more cooperation, coordination and collaboration across conventional and governmental boundaries.

3.3. Ambition level of medium case scenario

FIGURE 5. SCENARIO VALUES MEDIUM-CASE SCENARIO

	Parameters			Reference value		Scenario value		%
MIDDLE-CASE	Transport emissions	CO_2	Road	72	g/tkm	58	g/tkm	-20%
			Rail (electric)	18	g/tkm	14	g/tkm	-20%
			Rail (diesel)	35	g/tkm	28	g/tkm	-20%
		NO_x	Road	0.553	g/tkm	0.445	g/tkm	-20%
			Rail (electric)	0.032	g/tkm	0.026	g/tkm	-20%
			Rail (diesel)	0.549	g/tkm	0.44	g/tkm	-20%
		SO_2	Road	0.090	g/tkm	0.072	g/tkm	-20%
			Rail (electric)	0.064	g/tkm	0.051	g/tkm	-20%
			Rail (diesel)	0.044	g/tkm	0.035	g/tkm	-20%
		NMHC	Road	0.054	g/tkm	0.043	g/tkm	-20%
			Rail (electric)	0.004	g/tkm	0.003	g/tkm	-25%
			Rail (diesel)	0.062	g/tkm	0.050	g/tkm	-20%
		Dust	Road	0.016	g/tkm	0.013	g/tkm	-20%
			Rail (electric)	0.005	g/tkm	0.004	g/tkm	-20%
			Rail (diesel)	0.017	g/tkm	0.014	g/tkm	-20%
	Energy consumption		Road	1,082	kJ/tkm	920	kJ/tkm	-15%
			Rail (electric)	456	kJ/tkm	388	kJ/tkm	-15%
			Rail (diesel)	530	kJ/tkm	450	kJ/tkm	-15%
	Infrastructure and maintenance costs		Road	0.218	EUR/tkm	0.208	EUR/tkm	-5%
			Rail	0.0698	EUR/tkm	0.0698	EUR/tkm	-5%
			IWW	0.0219	EUR/tkm	0.0219	EUR/tkm	-5%
	Noise exposure	Major road	Lden > 55 dB	250	people/km	200	people/km	-20%
			Lden > 65 dB	116	people/km	93	people/km	-20%
			Lden > 75 dB	10	people/km	9	people/km	-10%
		Major Railway	Lden > 55 dB	321	people/km	290	people/km	-10%
			Lden > 65 dB	92	people/km	83	people/km	-10%
			Lden > 75 dB	10	people/km	9	people/km	-10%
	Unlinked active intermodal players			6	(+3 linked)	4	(+0 linked)	-
	Rail tkm			7,300	mio tkm	12,000	mio tkm	+64%
	Operational costs		Road (long haul)	0.070 - 0.020	EUR/tkm	0.063 - 0.018	EUR/tkm	-10%
			Road (short haul)	0.100 - 0.040	EUR/tkm	0.090 - 0.036	EUR/tkm	-10%
			Rail	0.025 - 0.019	EUR/tkm	0.022 - 0.017	EUR/tkm	-10%
			IWW	0.0076 -0.0381	EUR/tkm	0.00684 - 0.03429	EUR/tkm	-10%
	Road taxes			0.11 - 0.14	EUR/km	0.121 - 0.165	EUR/km	+10%
	Monopoly/Duopoly			Not present		Dominant players		-

In comparison to the parameters of the best-case scenario, the ambition levels of the medium-case scenario are less high but still challenging. Also in the medium case scenario, policy makers and government officials seek to achieve a reduction in the values of transport emissions (CO_2, NO_2, SO_2, NHMC and Dust), energy consumption, infrastructure and maintenance costs, noise exposure and operational costs, in a situation where the amount of transported tkm increases by 64 per cent (see figure 5). The goals for a more 'sustainable transport' are, nonetheless, lower than in the best-case scenario.

3.4. Changes in modal split and tkm values in medium case scenario

The increase in tkm in the medium-case scenario is expected in all modes of transport. Figure 4 shows the exact rise in the values of modal split and tkm (per mode of transport) in the medium-case scenario. As the figure indicates, a rise in modal split is mainly expected in inland waterways transport, and only to a lesser extend in the mode of rail transport. In the medium-case scenario, the dominance of road transport as main mode of transport is higher than the best-case scenario.

The regional governments are, each within their own territory, responsible for the developments in the modes of road and inland waterways. The federal government is mainly responsible for the developments in the rail sector. To achieve the lower levels of ambition regarding the sustainable developments in the transport domain, the collaboration between the levels of government can be more loosely coupled as compared to the policy situation in the best-case scenario. That is to say, a partial integration between the federal and regional level is sufficient to reach the ambition levels of the ambition levels of this scenario. Most of the efforts of the governments can be done within their own jurisdictions. Most integration, perhaps, should be between the regional governments, because inland waterways do not stop at the borders of the jurisdiction of a regional authority.

3.5. Ambition level worst case scenario

FIGURE 6. SCENARIO VALUES WORST-CASE SCENARIO

	Parameters			Reference value		Scenario value		%
WORST-CASE	Transport emissions	CO_2	Road	72	g/tkm	43	g/tkm	-40%
			Rail (electric)	18	g/tkm	16	g/tkm	-10%
			Rail (diesel)	35	g/tkm	32	g/tkm	-10%
		NO_x	Road	0.553	g/tkm	0.330	g/tkm	-40%
			Rail (electric)	0.032	g/tkm	0.029	g/tkm	-10%
			Rail (diesel)	0.549	g/tkm	0.495	g/tkm	-10%
		SO_2	Road	0.090	g/tkm	0.054	g/tkm	-40%
			Rail (electric)	0.064	g/tkm	0.058	g/tkm	-10%
			Rail (diesel)	0.044	g/tkm	0.040	g/tkm	-10%
		NMHC	Road	0.054	g/tkm	0.033	g/tkm	-40%
			Rail (electric)	0.004	g/tkm	0.004	g/tkm	0%
			Rail (diesel)	0.062	g/tkm	0.056	g/tkm	-10%
		Dust	Road	0.016	g/tkm	0.010	g/tkm	-40%
			Rail (electric)	0.005	g/tkm	0.004	g/tkm	-20%
			Rail (diesel)	0.017	g/tkm	0.015	g/tkm	-10%
	Energy consumption		Road	1,082	kJ/tkm	755	kJ/tkm	-30%
			Rail (electric)	456	kJ/tkm	410	kJ/tkm	-10%
			Rail (diesel)	530	kJ/tkm	475	kJ/tkm	-10%
	Infrastructure and maintenance costs		Road	0.218	EUR/tkm	0.240	EUR/tkm	+10%
			Rail	0.0698	EUR/tkm	0.0768	EUR/tkm	+10%
			IWW	0.0219	EUR/tkm	0.0241	EUR/tkm	+10%
	Noise exposure	Major road	Lden > 55 dB	250	people/km	150	people/km	-40%
			Lden > 65 dB	116	people/km	70	people/km	-40%
			Lden > 75 dB	10	people/km	6	people/km	-40%
		Major Railway	Lden > 55 dB	321	people/km	290	people/km	-10%
			Lden > 65 dB	92	people/km	83	people/km	-10%
			Lden > 75 dB	10	people/km	9	people/km	-10%
	Unlinked active intermodal players			6	(+3 linked)	2	(+2 linked)	-
	Rail tkm			7,300	mio tkm	8,000	mio tkm	+10%
	Operational costs		Road (long haul)	0.070 - 0.020	EUR/tkm	0.063 - 0.018	EUR/tkm	-10%
			Road (short haul)	0.100 - 0.040	EUR/tkm	0.090 - 0.036	EUR/tkm	-10%
			Rail	0.025 - 0.019	EUR/tkm	0.030 - 0.023	EUR/tkm	+20%
			IWW	0.0076 - 0.0381	EUR/tkm	0.00912 - 0.04572	EUR/tkm	+20%
	Road taxes			0.11 - 0.14	EUR/km	0.11 - 0.14	EUR/km	0%
	Monopoly/Duopoly			Not present		Present		-

The ambition levels of the worst-case scenario are the least challenging of the three developed scenarios. Nevertheless also in the worst case scenario, policy makers and government officials seek to achieve a reduction in the values of transport emissions (CO_2, NO_2, SO_2, NHMC and Dust), energy consumption, infrastructure and maintenance costs, noise exposure and operational costs, in a situation where the amount of transported tkm increases by a small ten per cent (see figure 6).

3.6. Changes in modal split and tkm values in worst case scenario

The increase in tkm in the worst-case scenario is expected in all modes of transport. Figure 4 shows the exact rise in the values of modal split and tkm (per mode of transport) in the worst-case scenario. As the figure further indicates, a change in model split is not really expected. In the worst-case scenario, road transport remains the dominant mode of transportation, and the growth of inland waterway transport and rail transport is minimal to none. This means that in the worst-case scenario the different levels of government do not plan a substantive effort to make the transportation of goods by the year 2030 more sustainable. Each within their jurisdictions the governments will plan to cope with the substantial rise in tonkm and adhere to the set scenario values regarding transport emissions and costs. Integration, both at the administrative and political level, is not really necessary. Perhaps, only a shared plan at national level to adhere to the call of the European level to present a Belgium strategy for sustainable freight transport.

4. A TOOLBOX FOR POLICY-LEVEL AND ADMINISTRATIVE INTEGRATION

This toolbox is an ongoing research project. Many of the given coordination instruments and mechanisms are based on good practices and lessons from earlier (international) studies. Currently, we are conducting new case studies, to make the toolbox more applicable to the context of the Belgian federal state. The full toolbox will be the final product that we will deliver in WP6. This means that we will further elaborate this toolbox in each scenario deliverable, with the final full version being included in the report for the third scenario. As such, the given list of instruments is not yet a definite and exhaustive list. Moreover in the subsequent versions we will elaborate how the instruments referred too can be used effectively in the context of intergovernmental coordination for intermodal transport.

There is a rich literature on inter-organizational collaboration and integration. In this section, we will draw on the lessons from existing literature to develop a toolbox for administrative and policy-level integration. Some of the instruments are also derived from case studies we have conducted in this project. For a social scientist it is extremely difficult to predict what the specific policy-making and implementation issues will be. Hence, the strategies which we mention in the next paragraphs must be regarded as an extensive list of tools that policy-makers or government officials can use in collaborative work processes, dependent on the expected outcome and the contingencies which determine the collaborative context. We will first elaborate in this section on how at the political level actors can enhance their collaboration across conventional sectoral and governmental boundaries, and then we will deal with the question of how administrative organizations can intertwine their activities across organizational borders.

4.1. Uncertainties surrounding policy-level integration

In Belgium, often intergovernmental networks are established to integrate (political) activities across governmental levels. An example of such a network is the ICMIT (better known as Interministeriële Conferentie voor Mobiliteit, Infrastructuur en Telecommunicatie), which is an intergovernmental network between the responsible Ministers of Transport, Infrastructure and Telecommunications of

the federal and regional levels of government established with the purpose to seek more unison and alignment in big policy dossiers like the GEN, issues of multimodality, etc.

In these sorts of networks, interactions between political actors can be extremely difficult as they can have different policy preferences, opinions, policy goals and jargon. For all political actors at the beginning of the network process, this results in a high degree of uncertainty about how the process will be handled and how the interaction with other political actors will develop. A goal for coordinators or 'network managers' then is to reduce the amount of uncertainty that the network participants experience.

TABLE 1. STRATEGIES TO OVERCOME SUBSTANTIVE UNCERTAINTY (KOPPENJAN AND KLIJN, 2004)

Strategy	Description
Furtherance of goal intertwinement	Initiating a search for solutions that can unite the diverging objectives of the involved parties, by, for example, integrating subjects, package deals, mitigating and compensating measures, or offering a perspective of future benefits.
Promotion of substantive variety	Increasing the scope for seeking goal intertwinement by stimulating the parallel development of competitive solutions and the parallel linking of these activities with the process of problem and objective formulation.
Breaking through asymmetrical policy discussions	Bringing the knowledge conflicts and asymmetries into light in the policy discussion and seeking the possibility of reducing these. For example, through the promotion of frame reflection, the formulation of new agendas, the bridging of language differences and the development of fully-fledged counter voices.
Preventing premature cognitive fixations	Ensuring at the beginning of the process that the focus is on the question of how the process should be organized and not on the content of the problem. A substantive decision can be used to jumpstart the process as long as it is open to adjustment.
Promoting cognitive reflection	By consciously introducing new actors and roles such as entrepreneurs, brokers and devil's advocates. In order to bring up for discussion perceptions that are taken for granted.
Organizing substantive selection	The conscious organizing of the process in which substantive selection occurs by making agreements over how solutions will be chosen (by whom, when, in what manner and by which criteria).
Linking arenas of research and problem solving	Conducting research in a second, parallel arena in addition to the negotiation arena. Research questions and findings are continuously traded back and forth between these two arenas.
Facilitating instead of decisive research	Ensuring research that is not focused on settling knowledge conflicts, but on supporting interaction by addressing diverging knowledge issues and demonstrating the consequences of alternatives, showing the bandwidth within which the solutions can be generated or to nuance these, suggest new angles, account for and explain research findings and offer the opportunity to reformulate conflicts as knowledge questions.
Joint commissioning of research	Coordinating the research efforts of parties by the joint commissioning of research in order to mutually adapt expectations and demands with regard to research questions, assumptions, methods, scope, length and the selection of researchers.
Boundary work	Guaranteeing the independence of research by making agreements about boundaries and role assignments between the research and negotiation arenas. Instituting a scientific forum as a guarantee for scientific quality and to arrive at an inter-subjective, agreed standpoint in the case of inconclusive findings.

Within the literature three sorts of uncertainties are identified which need to be addressed/tamed in network settings by coordinators: substantive, strategic and institutional uncertainty (Koppenjan and Klijn, 2004). **Substantive uncertainty** has to do with uncertainty with regard to the (different interpretations actors involved have of the) nature of complex problems and possible solutions. In addition to substantive uncertainty, there is **strategic uncertainty**. This stems from the strategic choices actors make with regard to articulating their preferences.

Finally, networks are characterized by **institutional uncertainty**. That is to say, the political actors will have different institutional backgrounds in terms of how they usually address issues, organize their processes, make decisions, arrange their activities, etc. This has its consequences for what specifically political actors expect with regard to how discussions and the process itself in networks are organized and accommodated. For each of these types of uncertainty, we will list possible coordination strategies and mechanisms that can overcome these different sorts of uncertainty.

4.1.1. Overcoming substantive uncertainty

Substantive uncertainty, thus, is about differences in perception between political actors about the nature of the policy problem and thereby possible ways to tackle it. To avoid substantive fixation (i.e. a situation in which political actors will remain in their fixed positions and do no effort to move closer to a shared policy understanding and a collaborative approach to tame the issues), coordination or the management of substantive uncertainty should therefore not focus on the ex-ante creation of an authoritative problem and objective formulation that guides the process of problem solving (Koppenjan and Klijn, 2004: 245). Instead, network managers are advised to work with the variety of perceptions and objectives in order to further goal intertwinement.

Table 1 shows various coordination strategies a network manager can use to overcome substantive uncertainty among political actors in networks. A network manager can, for example, unite diverging objectives by looking for package deals, or putting discussions about mitigating and compensating measures on the agenda of the network meetings. Another possible strategy is to offer or show the political actors a perspective of future benefits if they do reach some sort of unison about a policy issue. In the latter case, the network manager is not only mediator but also a story-teller that infuses the discussions between political actors with fresh energy and future outlooks about what is possible if political get past their divergences.

Besides these mediation strategies of a network manager, 'research' can play an important role in facilitating decision-making between political actors that look quite differently at policy situations. Research can demonstrate the consequences of certain policy ideas, show the bandwidth within which solutions can be generated, suggest new angles, etc. Network managers are advised to not use research for settling knowledge conflicts, but rather as a facilitating instrument to stimulate discussions. Specifically, this means that research outcomes must not be seen as decisive. It helps a lot if research efforts are commissioned jointly. In this way, parties can mutually adapt expectations and demands with regard to research questions, assumptions, methods, scope, length and the selection of researchers.

4.1.2. Overcoming strategic uncertainty

Where the coordination of substantive uncertainty is focussed on 'understanding each other', or even 'getting a shared understanding', the management of strategic uncertainty is more zooming in on the (strategic) actor behaviours in the discussions and collaborative activities. Every political actor makes strategic (behavioural) choices that influence the debates and collaborations in networks. Collaborations in networks bloom when actors do not perceive each other as opponents, but rather as 'collaborators' and 'partners'. Specifically, strategies aimed at 'managing the game' between political actors can spur collaboration, and reduce the impact of strategic actor behaviour on the decision-making process.

TABLE 2. STRATEGIES FOR OVERCOMING STRATEGIC UNCERTAINTY (KOPPENJAN AND KLIJN, 2004)

Strategy	Description
Initiating or terminating interactions	Through coupling or uncoupling of actors, arenas and games.
Coupling actors, arenas and games	Bringing about new interactions through which opportunities for goal intertwinement and learning are created.
Uncoupling actors, arenas and games	Terminating dysfunctional interactions.
Arranging interactions	Choosing a light or heavy arrangement for the coupling. Varying from informal agreements, via cooperative agreements and contracts, to joint legal cooperations, either public or private.
Designing games (agreements about)	Promoting agreements between stakeholders about the rules of the game.
Agreements about the objective	Formulating the objective of interaction, the agenda of do's and don'ts, guided by the principle of an agenda.
Agreements about participation	Indicating participants, their quality, and entry and exit rules.
Agreements about working methods	Structuring work activities via sub-arenas, task division, inclusion of research and experts, symmetrical representation, and work forms in which the principle of multiple cross-links is used.
Agreements about information	Determining between whom, in what manner and under what conditions information is exchanged.
Agreements about process-steps	Timing and sequence of activities, what deadlines apply and how are these handled.
Agreements about decision-making	Determining what criteria and decision-making rules apply, who makes decisions, how decision making will proceed and what objection and appeal procedures apply.
Agreements about external coordination	Moments, intensity and nature of communications with constituents, media and third party interests.
Facilitating the game:	Supporting the interactions between stakeholders
…at the beginning	Focusing activities on the motivation of parties, the creation of game rules, a balanced composition of the game field, expectation management, creating a friendly atmosphere.
…during the interaction	Attending to the provisions of interaction, maintaining an attractive agenda, promoting substantive variety, assuring communication with the environment, conflict management, etc.
…at the end	Preventing destructive strategies in the view of the conclusion of the process, point to future dependencies and opportunities.

Table 2 shows various strategies a network manager can deploy to manage the game between political actors. A network manager can, for example, simply initiate new interactions or terminate if certain interactions prove to be dysfunctional. Moreover, all sorts of agreements can be proposed to stimulate interactions. These can be agreements about the objective of collaboration, process steps, mediation, decision-making, etc. For example, a network manager can make an agenda of do's and don'ts in the participative process, or decide together with the network participants under what conditions information and data is exchanged.

It is important to mention that the management focus of the coordinator will differ in the various stages of the collaborative process in the network. In the beginning of the process, the activities of the network manager must mainly focus on motivating the involved political actors, manage the expectations, and try to create a friendly atmosphere. During the interactions, the network manager must do its utmost to keep the dialogue between political actors going. Near the end of the process,

the network manager must avoid destructive strategies of political actors in the view of the conclusion of the process (i.e. non-compliance), and try to point to future dependencies and opportunities.

The style in which a coordinator performs these activities may vary depending on the situation. A network manager can, for example, utilize a more hands-off or hands-on style approach (Sørensen and Torfing, 2011).

4.1.3. Overcoming institutional uncertainty

In making process agreements and supporting interaction, the management of strategic uncertainty has already partially considered the institutional uncertainty surrounding collaborations in networks. To repeat, institutional uncertainty is about how to deal with clashes of different institutional regimes in networks and how therefore the interaction between political actors will develop. Parties who interact from different institutional backgrounds and do not share a common frame of reference and who act according to different rules, can thus be facilitated by making agreements about the rules of the game before dealing with the problem(s) at hand.

Strategic and institutional uncertainties, however, can also be managed by influencing factors at the institutional level through, what we call 'institutional design'. This may be necessary when it is clear that the institutional bottlenecks are so systematic that they inhibit interaction and problem solving, especially in the long run. Institutional design involves changing the institutional characteristics of a network: i.e. the relation patterns and the institutional rules that support these relations, the (patterns of) opinions that guide strategic behaviour within a network, and the institutional arrangements that shape the relations between parties. This institutional design can also be aimed at enhancing the compatibility of processes within different networks or by establishing institutional cross-linkages.

By adapting institutional arrangements, the nature and stake of concrete games around complex problems can be altered significantly. It might change actor participation or stimulate actors to select different strategies given the changes in the frames of reference or the reward structure that guide them. It might also be that other arenas are formed or are composed differently for example. In short, the conditions under which the game is played can change through institutional measures.

However, institutional measures are not easy to achieve because, among other reasons, they only take hold in the long run. Changing formal relations must be accomplished in a game. This involves the recognition that processes can only be controlled to limited extent, so that the effects of attempts at institutional design are uncertain. Table 3 offers a list of strategies a network manager can deploy to try and overcome institutional uncertainty.

TABLE 3. STRATEGIES FOR OVERCOMING INSTITUTIONAL UNCERTAINTY (KOPPENJAN AND KLIJN, 2004)

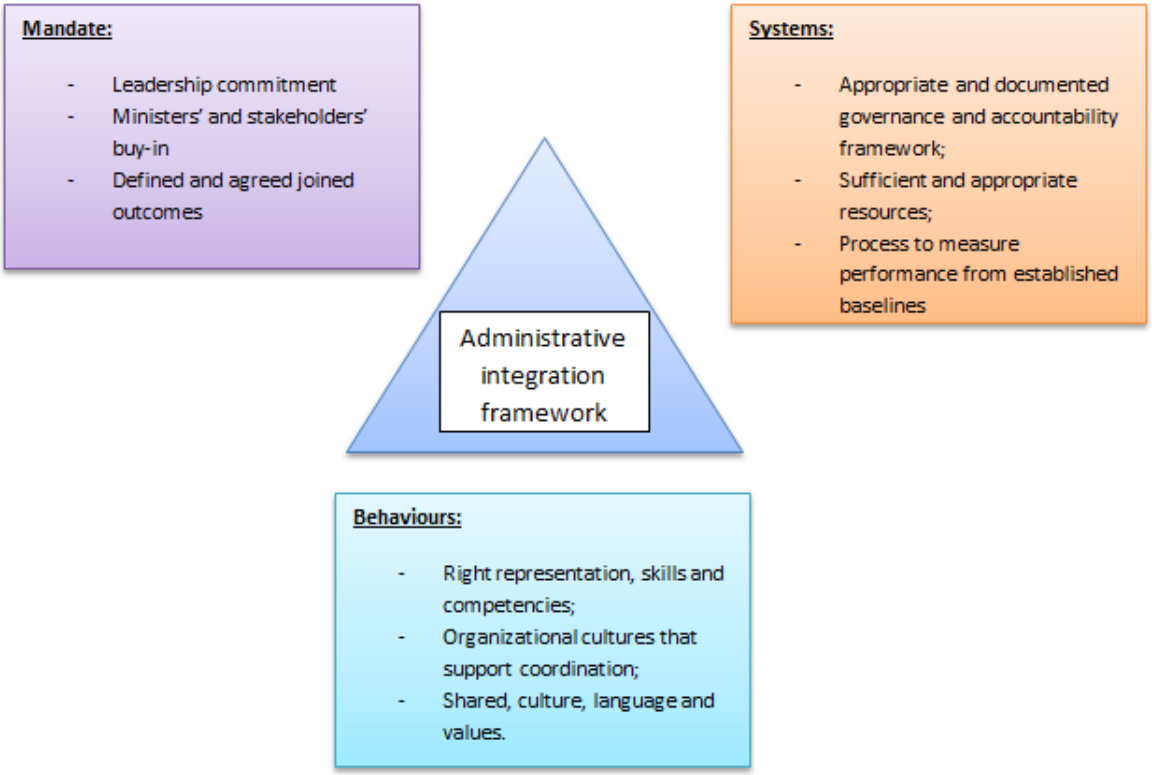
Strategy	Description
Changing network rules focused on composition	Changing the number of actors, their positions, entry rules, process of network formation, and degree of self-regulation.
Changing network rules focused on outputs	Changing the reward end evaluation rules, setting guidelines of actors' behavior and influencing professional codes.
Changing network rules focused on interactions	Adjusting the arrangements that regulate the interaction of actors in concrete games such as conflict regulation mechanisms, procedures, certification, standardization and regulatory regimes.
Reframing through the launch of major plans	Introducing new ideas or values by drafting strategic policy documents.
Reframing through narratives	Presenting authoritative narratives as new frame of reference within which problems and solutions can be regard in a sector or network.
Reframing through sensitizing concepts	The use of sensitizing to bring attention to proposals for a new idea, method or organizational form.
Reframing through the use of focusing events	Using invasive, striking events in order to introduce and emphasize the urgency of new working methods or evaluation frameworks.
Managing trust through institutional design	The promotion of trust between parties through institutional regulations such as the introduction of a certification system, conflict regulating institutions and regulators.
Redesigning the primacy of politics	Redefining the role of politicians, political bodies and administrators for policy preparation and decision-making: from authoritative allocation of values to initiating and guiding interaction processes by which meaning and values are discovered and assessed.

4.2. Strategies for establishing administrative integration

Even if political actors do reach unison at a certain policy-level, it does not immediately imply that administrative integration is evident. In fact, many studies in the public administration and implementation sciences have elaborated on various aspects of implementation and administrative failures, such as goal-displacement, mistrust, lack of accountability, administrative inconsistencies, policy alienation, etc.

Within the literature on implementing transversal policies and administrative integration, nine success factors are consistently mentioned (see figure 7). These success factors can be clustered in 3 dimensions: mandate, systems and behaviours. These 3 dimensions are interrelated and mutually reinforcing. As such, these dimensions (and their success factors) together make a framework which we consider as the 'administrative integration framework'. This framework is not static. It neither assumes that all nine factors have to be in place before transversal implementation activity can occur. It simply recognizes that if these factors are put in place over time, coordinated transversal implementation activity is more likely to be successful. In the next paragraphs we will elaborate on each of the dimensions of the framework as well as its antecedents.

FIGURE 7. ADMINISTRATIVE INTEGRATION FRAMEWORK AND ITS DIMENSIONS (STATE SERVICE COMMISSION NEW ZEALAND GOVERNMENT, 2008)



4.2.1. Mandate

The dimension of mandate is linked to the status of the integrated way of implementation. Not only the mandate for the civil servants within the administrations that are stimulated to work across organizational and governmental boundaries, but also the extent to which they are supported in their boundary-spanning activities by their organizational leaders. This is also immediately the first success factor that is identified: leadership commitment.

4.2.1.1. Organizational leadership commitment

Broadly speaking, senior administrative leaders of involved organizations should have invested sufficient time and energy supporting the integrated way of working (Gratton and Erickson, 2007). They must do their utmost to seek out opportunities for their staff to work with other organizations. First of all, they can do so by incentivizing staff involved in the coordinated work. Second, they can ensure that 'enough' resources and time are available for the activities of the 'boundary spanners'. Third, boundary spanners are helped by their senior leaders if stakeholders' and political pressures are managed properly (Hughes and Weiss, 2007).

Fourth, it helps if the joint activities are given sufficient priority within the involved organizations, and integrated in the wider system of performance management. It further helps if joint activities are also sufficiently translated into departments' operational priorities and outputs. Lastly, boundary spanners are supported if budgets are allocated to cross-cutting activities. It might even help if organizations set up shared budgets for their cross-cutting activities (Ibidem).

4.2.1.2. Ministers' and stakeholders' buy-in

Related to the aspect of leadership commitment, is the success factor of ministers' and stakeholders' buy-in. This entails that ministers, decision-makers and external stakeholders keep on supporting the coordinated activity throughout the implementation process (Mattessich et al., 2001:13). Support and engagement from these parties is particularly necessary for when 'the going gets tough'. With more political support for the coordinated activity, civil servants are expected to be less risk aversive to look past the portfolio of their own organization and thus consider more the activities, objectives and practices of civil servants in other organizations with which they collaborate.

A way to secure the support of ministers, cabinet-members and external stakeholders is to spend enough time throughout the process engaging with these parties, to check whether the outcomes of the joint activities are relevant and realistic, and meet their requirements. A second strategy civil servants and their senior administrative leaders can utilize is to keep monitoring the political climate during the coordinated activity, and respond adequately if there are any shifts of priorities (Hopkins et al., 1995:9).

We are a little hesitant to advise the early engagement of stakeholders in the early stages of a coordinated transversal activity. On the one hand, this can be a benefit – as more data and information can be obtained, and the output parameters of the coordinated activity can be adjusted to the context the transversal policy is targeting. On the other hand, an early stakeholder buy-in can increase expectations to such an extent that external parties can get disappointment with the results of the transversal activity.

4.2.1.3. Defined and agreed joint outcomes

Besides leadership commitment and ministers' and stakeholders' buy-in, it is further important in coordinated activities that actors are working towards clearly-defined and mutually-agreed joint outcomes. If objectives are unclear or not shared, organizations in collaborations may work towards different, incompatible goals and fail to achieve desired outcomes. To overcome this risk, all participating organizations need to have a clear understanding of both the goals and agreed timeframes towards which they are working (Hopkins et al., 1995:9).

Moreover, to be successful, the outcome that a group of organizations is seeking needs to be greater than the sum of the individual outcomes of each of the contributing organizations. This 'added value' is what keeps collaboration on track.

In addition, joint outcomes can only be successful if civil servants feel they are attainable, and not too long term. Furthermore, in order to increase motivation it is wise to not only measure the extent to which outcomes are achieved but also outcomes and results for the civil servants themselves – therefore we advise that two sorts of outcome should be monitored: impact outcomes (relating to the progress and impact of the project on the issue addressed), and process outcomes (relating to what the group is achieving for tis members and their organizations, such as information-sharing).

4.2.2. Systems

The dimension of 'systems' relates to the overall structure in which transversal implementation activity takes place. On the whole, structures or systems need to be in place in order to give

relationships or cross-cutting collaborations resilience. However, too much structure or too many systems can impede the collaboration's ability to adapt to changing circumstances. In these paragraphs, we elaborate on what structural aspects may help collaborations across conventional organizational boundaries. We start with the success factor of governance- and accountability frameworks.

4.2.2.1. Appropriate and documented governance and accountability frameworks

Participants need to clearly understand and agree on their own and others' roles, responsibilities and accountabilities, and how to carry their tasks out. This requires that civil servants have a clear oversight of the accountability, governance and coordination structures that are in place (Mattessich et al., 2001:21). Bouckaert et al. (2010) have identified different possibilities. Important to mention is that no single structure provides the ultimate solution for how transversal coordination must be arranged. In some situations a horizontal organization of activities may be more appropriate than a hierarchical chain of command and control.

When tasks and outcomes are, for example, clear cut a strict plan of activities will be more beneficial in contrast to situations where civil servants need space to innovate and use their creativity. Where there is a possible conflict between 'vertical' accountability frameworks and horizontal governance structures, senior leaders should carefully manage these discrepancies and see how these hierarchical lines of accountability can add to horizontal collaboration instead of impede it.

To avoid inter-organizational conflict, ensure transversal continuity and manage risks surrounding these collaborative processes, we advise administrative actors to clearly document the governance, accountability and coordination frameworks as well as establish and agree on clear conflict regulatory mechanisms. In this way, the amount of (possible) confusion about tasks, roles and responsibilities among actors from different organizations can be reduced (Hughes and Weiss, 2007: 122-131).

4.2.2.2. Sufficient resources

Resources are also critical if a coordinated is to be sustainable and 'value for money'. When we talk about resources we do not only refer to monetary resources, but also to resources like knowledge, competences, personnel, time, etc. (Koppenjan and Klijn, 2004). For transversal implementation activity, the main resources requirements are a dedicated budget, a working pace that can sustain the progress without overwhelming the group of actors that are involved in the collaboration, and most importantly, sufficient time to establish working relationships, achieve outcomes, and nurture the required organizational tasks and routines (Mattessich et al., 2001:27).

The resource of money is found to be a double-edged sword. On the one hand, it can cause civil servants active in transversal activities to lose sight of shared objectives and instead create a struggle over 'turf' and resources. On the other hand, it can contribute significantly to an initiative's capacity and can work as a stimulus to keep organizations at the table. Here the key is timing; if money precedes the development of trust, commitment to shared outcomes and agreement about how to implement an initiative, then this can result in problems and severe discussions about money (Hopkins et al., 1995:18).

4.2.2.3. Performance measurements

The third success factor of the dimension of 'systems' is the success factor of performance measurement processes with clearly established baselines. No matter whether they are long or short term, transversal initiatives are not different from other implementation activities in that their progress should be monitored and action taken if performance is unsatisfactory. To do so, involved organizations in the transversal activity have to agree on action plans, responsibilities, timeframes and deadlines, and reliable performance measure to track progress.

For measuring the progress, the quality of information is very important. The more time is invested in understanding what data is required and creating a baseline, the more accurate the progress towards the demanded outcomes can be measured, the more effective the transversal policy is likely to be. However, systems of measurement must serve the transversal project and its outcomes, not replace them (Hopkins et al., 1995:18).

Ensuring 'early wins' is important both for the motivation of the civil servants active in the transversal activities well as a way to secure resources and 'buy-in'. Furthermore, dividing large initiatives into smaller measurable activities can help identify more manageable short-term objectives. Lastly, measuring progress as early as possible helps civil servants demonstrate the progress they are making to their political leaders and external stakeholders (Idem:35).

4.2.3. Behaviours

Successful transversal implementation activities further require that civil servants within the involved organizations have the authority to represent their organizations and the skills to work across conventional organizational boundaries. The latter touches upon the last dimension of the administrative integration framework, which is the aspect of 'behaviours' of the civil servants that act as boundary spanners between involved organizations in the transversal activity.

4.2.3.1. Right representation, skills and transversal team leadership

Transversal activities often include functions from different units within involved organization. This means that each representative or boundary spanner that is involved in a transversal activity must be able to speak for all units or functions he or she is representing (Hughes and Weiss, 2007). However, when major decision are made, for example about changing the way of working or the objectives of the transversal activity, there should be enough time allocated for the representatives or boundary spanners in the organizations to take information back to their home organizations to confer with their colleagues, senior leaders, and perhaps cabinet members about what the decision should be.

An important skill of boundaries spanners is that they must not only focus on the demands of their home organization, but must also display an open attitude to work as a team with other involved organizations; thereby establishing working relationships based on mutual support and trust, acknowledging their differences and sharing information and ideas openly (Sørensen and Torfing, 2011).

Within transversal implementation networks, the 'lead organization' (i.e. the organization that is assigned with the task to coordinate the holistic government strategy) can create value for partnering organizations by reducing administrative burdens associated with coordination, reporting

and evaluation functions. Furthermore, the boundary spanner of the lead-organization needs to be able or have the capacity to employ a range of coordination instruments, varying from political instruments and communicative instruments to process management skills and techniques, to supervise the transversal implementation process (Jackson and Stainsby, 2000:11-16).

4.2.3.2. Shared culture, language and values

Activities in a transversal arrangement flourish if the boundary spanners of the organizations involved develop a sense of shared culture and joined ownership of the way the collaboration works and of the results it produces. Here developing trust among boundary spanners is key (Vangen and Huxham, 2003). Barriers can arise because of individuals' preconceived notions of the attitudes or skills of people from different institutional backgrounds, compounded by a lack of understanding of the other organizations' mandates, cultures, and ways of working. Individuals in transversal arrangements need to be aware of these differences and understand that discomfort is a part of the process of developing a shared culture (i.e. how we work together in a transversal collaborative arrangement).

Trust can be developed by stimulating 'learning' among actors about the others' objectives (Ansell and Torfing, 2014). In these learning activities individuals must present intentions and agendas honestly. Furthermore, participants should look at the 'language' used and identify whether actors involved do understand each other's jargon. If there is a negative shared history between certain boundary spanners, if would be wise to try and resolve these issues.

In the end, successful transversal initiatives require boundary spanners to work together almost as if they were employed by the same organization. Participants need to know how their colleagues in other organizations operate, make decisions, allocate resources and share information. Further they need to have a clear understanding of the other's organizational structures, policies, procedures, cultures and norms.

Nevertheless, there will be always certain elements of risk and divergences in transversal working activities, as not all risk can be managed. Hence, we advise boundary spanners and their home organizations also to accept this reality.

4.2.3.3. Organizational cultures that support boundary spanners

Within involved organizations, boundary spanners oftentimes find it also hard to balance the outcomes and priorities of the collaborative initiative with those of their own organization. It helps if the organizational culture supports the activities and practices of a boundary spanner, as it literally can make or break transversal working activities.

Particular practices can help build an organizations culture that supports inter-organizational collaboration. Senior administrative leaders can, for example, purposefully model and invest in building collaboration. Moreover, training, coaching and mentoring can help 'boundary spanners' in their activities. Lastly, support for informal community-building between boundary spanners makes it easier to overcome divergences and discrepancies between organizational working routines (Gratton and Erickson, 2007: 100-109).

4.3. Closing remarks

To conclude, the best and medium case scenario both indicate that within the transport domain involved political governmental actors can work more across conventional organizational and governmental boundaries. With regard to the worst-case scenario no further administrative or policy-level integration is necessary. Our recommendations list coordination tools that political and administrative actors can utilize to seek more policy-level and administrative integration. In the next scenario report we will further elaborate on the specific conditions under which the different coordination tools might work effectively in the federal Belgian context.

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Interview1: an interview with three civil servants of the Federal Department of Transport and Mobility.