CEDR

Conférence Européenne
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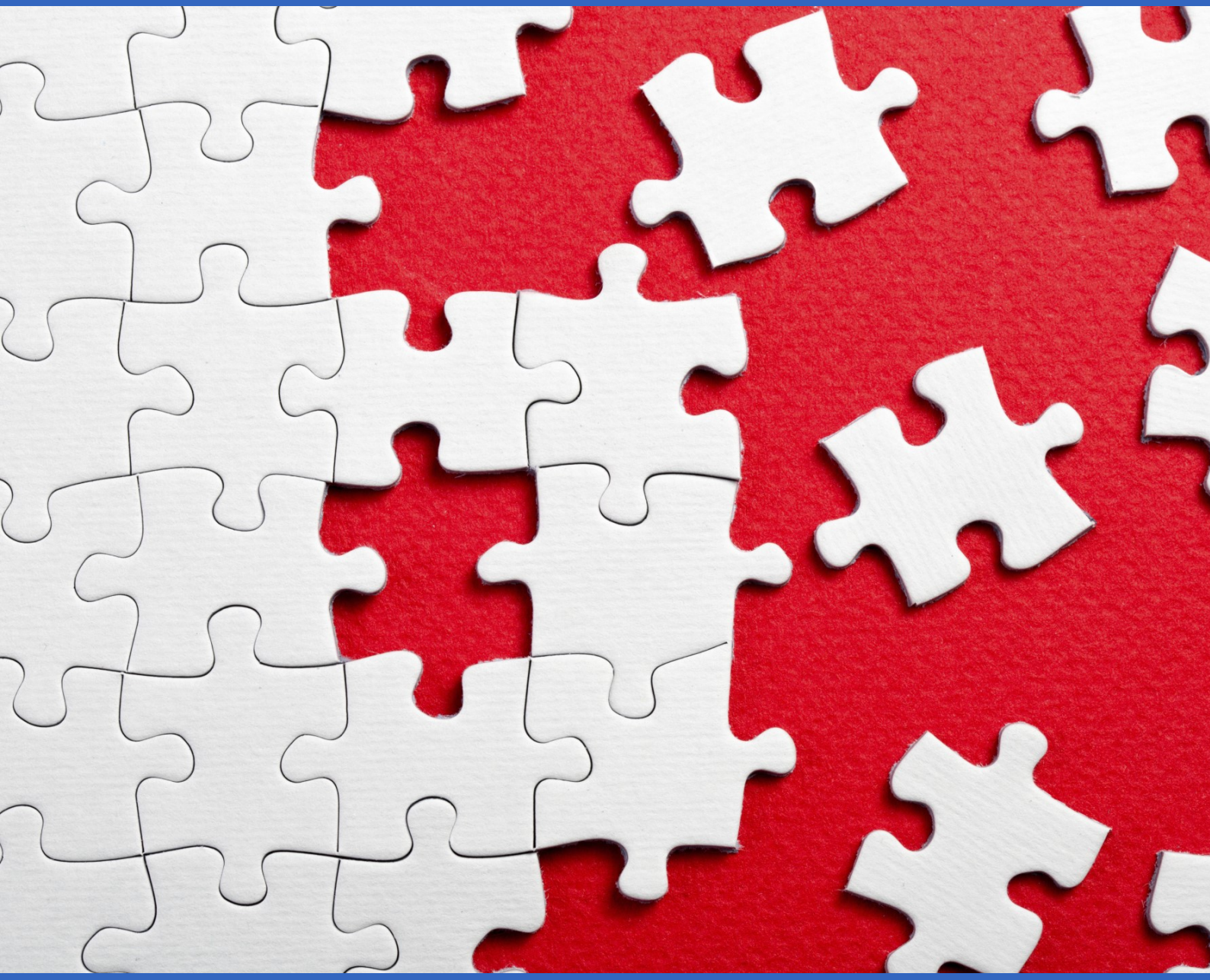
Call 2017 Collaborative Planning

Final Programme Report



April 2021

Call 2017 Collaborative Planning
Final Programme Report

CEDR Contractor Report 2021-02

by

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The Project Executive Board for this programme consisted of:

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Executive summary

The CEDR 2017 Call focussed on the need to develop a common framework to obtain the synergies from interactive planning of infrastructure and spatial development ('collaborative planning'). It consisted of three sub-topics:

1. Topic A: Exploring effective approaches for future-proof road networks based on trends in mobility and spatial development;
2. Topic B: Planning and designing the interface between (trans)national road networks and local transportation ('last mile');
3. Topic C: Assessing the added value from spatial development as a factor in infrastructure planning.

These topics have been addressed with the three projects SPINTRENDS (Topic A), SPINDESIGN (Topic B) and SPADE (Topic C) as highlighted in Figure 1 .

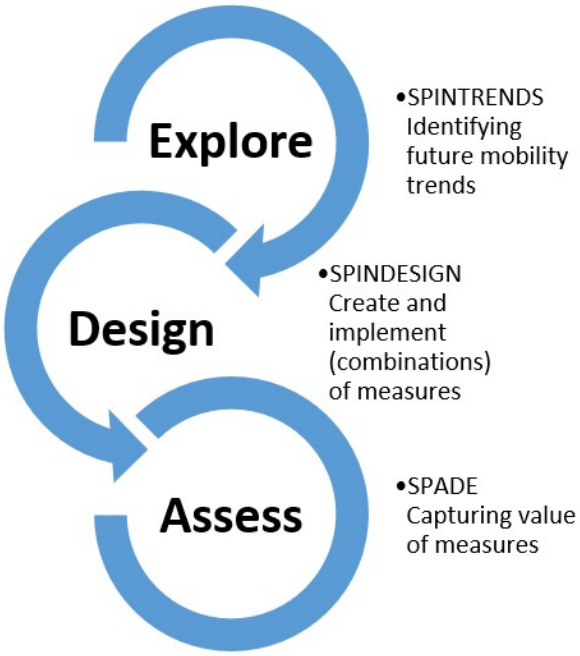


Figure 1: Connection between the three studies

SPINTRENDS concentrated on a trend-based vision for the year 2040. This vision is centered on an altered self-perception of NRAs as they become key players in enhancing regional competitiveness and livability in a region. NRAs provide people-centric transport which is understood as link between the functions of living, working and recreation. This approach ensures a synergetic mix between the network performance of the NRA, the multi-modal connectivity of a functional urban area and the spatial development of a specific location. The elaborated roadmap shows the timeline of implementation based on the most important measures to be taken by NRAs.

In **SPINDESIGN** the focus lies on the development of a generally applicable toolbox including innovative planning approaches for helping to identify and develop specific solution strategies (measures or measure bundles) to local problems. This toolbox is based on a clover scheme and includes the four categories infrastructure, space, nodes, and mobility. Within these categories, measures are developed based on ingredients and recipes. Ingredients can be, e.g., extending, adding, or transforming infrastructure elements, whereas recipes are good combinations of individual ingredients. In SPINDESIGN this toolbox is used for a collaborative development of measures which is tested within several case studies.

Finally, in **SPADE** a collaborative assessment method for mobility measures and measure bundles is developed. This is achieved by dividing this method into two parts, the SPADE process and the SPADE tool. The SPADE process describes the overall steps needed to come to a collaborative assessment of the measures and the tool actually performs and combines the individual assessments of the stakeholders. The tool further consists of a workshop in which the stakeholders either directly participate in the assessment or are presented the pre-determined assessment results.

The **CEDR final conference** as a knowledge exchange event between the project consortia and the NRAs was held in February 2021. The participants agreed that it is now time to start implementing the building blocks of collaborative planning outlined and that an exchange between the national representatives can be valuable for this purpose.

Unsurprisingly, the political commitment in the countries was mentioned in this context, as well as possible restrictions in the implementation (e.g. money, courage). All in all, **collaborative planning** is understood as **"teamwork"** and **"the way forward"**, which is why there is interest throughout in applying the research results in practice. The tools developed under this research call were considered by the participants of the conference a great way to start implementing collaborative planning in practice.

Implementation should always be in focus. The easiest way to achieve this is for each NRA to look at the proposed tools and define the necessary action steps. When using the method, care must be taken to ensure that enough attention is paid to the process and that a neutral facilitator is found.

The main findings of the conference is the recommendation to establish a CEDR working group on collaborative planning of infrastructure and spatial development. This was also suggested by Hans Ring in his closing remarks of the conference. The working group shall have the purpose to measure the progress taken in implementing the outlined steps.

Another important component is the continuous dissemination of information on the activities on this topic. This will ensure that collaborative planning gradually becomes the norm in the planning process. It is also important to disseminate the results of practical experience. This is not only the evidence base that collaborative planning leads to better quality infrastructure projects and ultimately to more efficient, greener and fairer transport. By exchanging practical experiences, we also ensure that best practices are passed on. Finally, we recommend to implement collaborative planning in lectures at universities and start to train members of the national road authorities in using the collaborative planning methods.

1. General information about the programme

The continuous development of the transport system takes place at different spatial scales involving many stakeholders. One may think of the European scale with the TEN-T corridors, the national level at which the National Road Authorities (NRAs) operate, Daily Urban Systems (DUS) at which different regional and urban stakeholders operate or specific locations with specific stakeholders. The achievement of a sustainable and integrated transport system is essential for a good functioning of society, economy and environment.

The development of the transport system would only be half the job. The transport system is embedded in a larger system that comprises society, economy, environment and space. It is influenced by various sources, like population development, economic development, climate change, system state changes, security and sometimes health issues. Stakeholders often face the pressure to collaborate with other stakeholders when planning the future of their part of the transport system.

The NRAs have expressed the need for innovative approaches that address the multi-dimensional nature of the challenges on infrastructure network, multi-modal mobility, spatial development, timing, valuation, as well as institutional and governance dimensions. The central question raised by CEDR is '*How to achieve integrated project development of infrastructure and its spatial surroundings?*'

The challenges are assessed as urgent in the DUS. The urban nodes are a key element in the national networks as well as the TEN-T corridors. The TEN-T guidelines identify 88 urban nodes based on socio-economic criteria. The nodes form the connection between different modes for passenger and freight transport, as well as between international corridors, national, regional and intra-urban networks and links. The DUS play a central role as locations of spatial, technological and socio-economic developments.

Improvements of transport systems should guarantee the network performance through efficient strategies. To obtain these strategies in the transport system, more knowledge on broader impacts of transport infrastructure, which are often excluded in conventional cost-benefit analysis, are required. Planning authorities need to co-operate, not only concerning the development of the transport system, but also concerning spatial development. A collaborative planning of infrastructure and spatial development is needed.

CEDRs members see three important, mutually related, issues that need to be addressed regarding the collaborative planning:

1. *Exploration* of an integrated spatial and infrastructure development (issue A). This relates to insights in trends in mobility and spatial development;
2. *Design* of an integrated spatial and infrastructure development (issue B). This topic relates to creating and implementing combinations of spatial and multi-modal infrastructure development;
3. *Assessment* of an integrated spatial and infrastructure development (issue C). This issue focusses upon the assessment of the added value of the integrated plans and designs, in order to get an insight in the societal relevance of collaborative planning.

Three research projects of the collaborative planning program received funding to address these issues and started in 2018. The projects finalized in 2021.

2. Findings

This section provides information on main results of the projects and serves as starting point for the chapters to follow focusing on the relationship between SPINTRENDS, SPINDESIGN and SPADE as well as challenges in the implementation.

1.1 SPINTRENDS - SPace and INfrastructure TRENDS

Factsheet	
Duration:	01/09/2018 – 29/02/2020
Budget:	EUR 162,802
Coordinator:	Karin Markvica, AIT Austrian Institute of Technology GmbH, Austria
Partners:	MUST Städtebau GmbH, Germany
	TEMAH, The Netherlands
	Ecorys Nederland BV, The Netherlands

Background and objectives

SPINTREND relates specifically to Topic A: Exploring effective approaches for future-proof road networks based on trends in mobility and spatial development. The proposed methodology for this research puts practice-based research in the centre.

Approach

The first phase provides a solid basis for the development of the vision as well as the roadmap. It consisted of the identification of trends in mobility and spatial development, resulting in a structured description of these trends including interdependencies and influence factors. Furthermore, it included the screening of innovative measures and concepts that can deal with the identified trends. This screening led to a catalogue of generic concepts and solutions and therefore serves as overview of good practices and applications.

In the second phase, a vision document for collaborative planning was prepared in an iterative 5-step-approach by combining and analysing the results of the first phase. Based on the vision document a roadmap that clarifies the route towards collaborative planning for future-proof road networks has been elaborated. The roadmap defines short- and medium-term actions and transitions needed to reach the objectives mentioned in the vision.

Outcomes

- overview of future trends in mobility and spatial development
- overview of innovative measures/concepts to deal with growing mobility demand
- vision document for CEDR's members
- roadmap that clarifies the route towards collaborative planning for future-proof road networks.

The project SPINTRENDS provides a vision and roadmap for National Road Authorities (NRAs) as a guideline for future work based on trends in mobility and spatial development and innovative measures and concepts. A backcasting method has been used to define the guiding principles of

the vision, develop the measures to achieve these intermediate goals and set an appropriate time frame.

As competences in the transport sector are positioned differently in European countries, the role of spatial planning authorities and NRAs (including ministries in some countries due to their scope of action) was further investigated by literature review and a survey distributed among the CEDR members. A SWOT analysis for the prototypical NRA makes the picture complete and provides insights to be addressed in the vision.

The overall vision can be summarized by pointing the following three main aspects:

1. By 2040, NRAs in Europe are not merely network maintainer, network operator or network manager but key players in enhancing regional competitiveness and livability in a region. Transport is understood as a link between the functions of living, working and recreation and not as an end in itself.
2. NRAs not only stand for transport but for people-centric transport which is multimodal, shared, accessible, CO_2 neutral, flexible, safe, coordinated and efficient.
3. Collaborative planning together with other modalities and spatial authorities leads to a synergetic mix between the network performance of the NRA, the multi-modal connectivity of a functional urban area and the spatial development of a specific location.

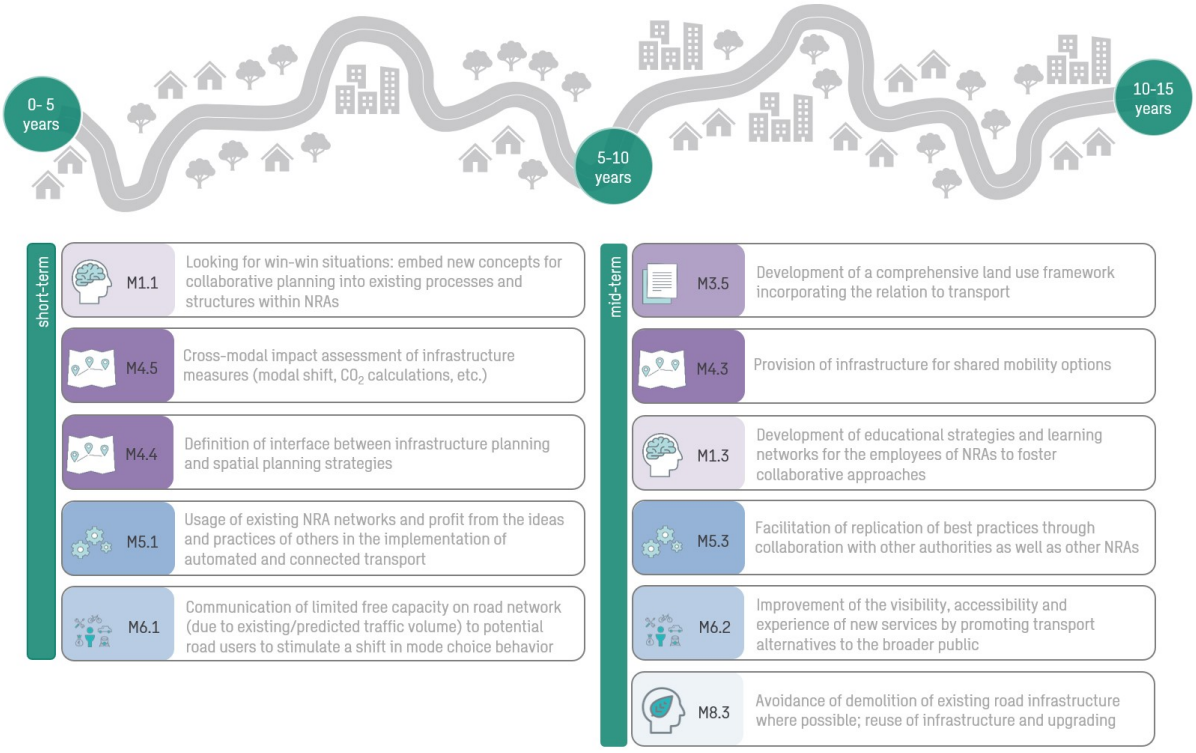


Figure 2: Roadmap with the eleven most important measures to set within ten years

To make the vision tangible and to ensure practical relevance, eight guiding principles have been extracted. To serve these guiding principles and achieve the overall vision, 35 measures have been elaborated. Each of the eight guiding categories is covered by three to eight measures. A measure assessment was performed by six experts to identify the most important steps to take. The ranking by experts revealed eleven measures that should be set very soon as they have incremental value on the route towards collaborative planning for future-proof road networks. A SWOT analysis was carried out to consider the strengths and weaknesses of the implementation in advance and to point out problem areas.

The temporal aspect plays a decisive role in the achievement of the vision in the year 2040. A prototypical timeline was generated to shed light on the temporal course of events and clarify the route towards collaborative planning for future-proof road networks (see Figure 2). However, the timeline is just an excerpt of all measures to be implemented until 2040.

1.2 SPINDESIGN - SPace and INfrastructure DESIGN

Factsheet

Duration:	01/07/2018 – 31/10/2020
Budget:	EUR 380,386
Coordinator:	Robert Broesi, MUST Städtebau GmbH, Germany
Partners:	TEMAH, The Netherlands
	Sweco International AB, Sweden
	Ecorys Nederlands BV, The Netherlands
	AIT Austrian Institute of Technology GmbH, Austria

Background and objectives

SPINDESIGN relates specifically to Topic B: Planning and designing the interface between (trans)national road networks and local transportation.

Approach

The SPINDESIGN project consisted of a good practise study, a toolbox and a vision on collaborative planning and design of transportation in the urban region. The toolbox helps NRAs to optimize the multimodal performance of their networks in the context of recent trends in mobility and spatial development.

The SPINDESIGN toolbox consists of series of tools that helps optimizing the multi-modal performance of the transport system of the interface and the spatial developments in the surrounding areas. The toolbox supports NRAs in initiating an integrated, multiscalar and collaborative approach. Integrated stands for a broad scope that includes different modalities and spatial planning aspects. Multiscalar refers to taking three spatial scale levels into consideration: the corridor, regional and local scale level. And collaborative means that key actors from both the infrastructure planning, spatial planning, person and freight transport sector are being involved. The vision document for CEDR's members contains strategies on how to improve the connection between long-distance and last mile, and on how NRAs can combine and use the 'basic' solutions and measures from the Toolbox for tailor-made designing and planning of the interface at the DUS level.

Outcomes

- Inventory of good practices
- Toolbox for collaborative planning
- Vision document for CEDR's members.

The project SPINDESIGN deals with the challenges that arise from the interface between (trans)national road networks and local transportation. Across Europe, these sections are known to be very demanding in terms of transport quality and area quality. These segments often have limited space, high ambitions and various stakeholders. Improvements in the planning and design process have to build upon a broadened approach to infrastructure planning and should consider

spatial preconditions, social and technological influences (trends) and the knowledge and interest of different stakeholders.

After identifying the main characteristics of the interface between the corridor and the last mile, the gathered information on trends and good practices has been translated into a Toolbox for tailor-made designing and planning focussing on a balance between freight and person mobility. This Toolbox addresses internal interfaces as relations between various elements of multimodal transport systems as well as external interfaces as relations of transport systems with other spatial elements. It consists of measures in the four areas infrastructure, space, nodes and mobility that can be set alone or in combination (see Figure 3).

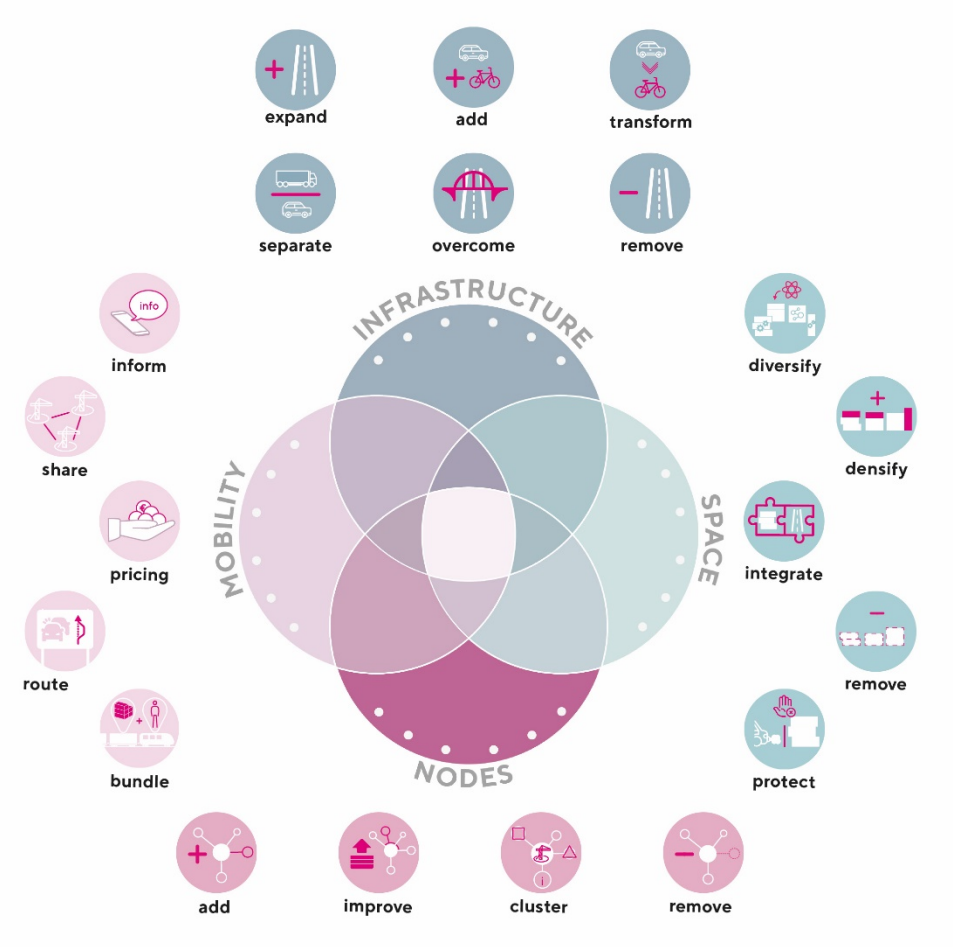


Figure 3: Toolbox for tailor-made designing and planning

To ensure the usefulness of the Toolbox for the NRAs, pilots took place that encountered projects in different phases of the planning cycle. These workshop settings revealed that the Toolbox can be enhancing in every stage of the project but is especially beneficial in early stages as it helps to discuss project scopes that are not narrowed down yet. An independent host of the pilot session has been found to be a crucial success factor for the application of the Toolbox as he or she can help to enhance an open mindset among the stakeholders. Furthermore, the role of the moderator has been highlighted by the academic advisory board that has accompanied the project and its progress.

The project shows that infrastructure planning procedures need to be embedded in a regional perspective on multimodal mobility and spatial development. The pilots revealed the need to incorporate skills that come from both infrastructure and spatial planning within the NRAs to deal with the interface between the corridor and the last mile. As the scope of NRAs varies across Europe, for some that means spanning the boundaries of the current organization. As the process

of implementing such a mindset and the Toolbox into practice is challenging, it would be recommended to follow and monitor the pilots over a longer period. This is the only way to ensure that the Toolbox is a useful addition to the existing portfolio of NRAs and is used in those project phases in which it is most promising.

1.3 SPADE - Collaborative Planning of Infrastructure and Spatial Development

Factsheet

Duration:	01/09/2018 – 31/10/2020
Budget:	299,424
Coordinator:	Jan Kiel, Panteia BV, The Netherlands
Partners:	Institute of Transport Economics (TØI), Norway
	HaCon Ingenieurgesellschaft mbH, Germany
	AIT Austrian Institute of Technology GmbH, Austria

Background and objectives

SPADE relates specifically to Topic C: Assessing the added value from spatial development as a factor in infrastructure planning.

Approach

SPADE focused on assessing existing planning tools based on different planning levels. The assessment method proposed is based on a process and a tool:

- The process comprises a description of collaborative planning in which stakeholders from different backgrounds, with different 'wish lists' and different planning procedures need to work together.
- The tool is a combination of a digital workshop and an assessment tool. The assessment tool has been developed for Rijkswaterstaat (NL) and combines a multi-criteria analysis (MCA) with a cost-benefit analysis (CBA).

The assessment method is used at different stages in the collaborative planning process. At the beginning of the process, when the amount of data and information is limited, the method works mainly with the MCA. Along the process, when more information becomes available, it is possible to add CBA information.

Outcomes

- review of the state-of-the-art literature and good practice cases
- validated valuation tool
- vision document for CEDR's members.

The project SPADE aims to develop an easy-to-use evaluation method for individual measures and packages of measures in infrastructure and spatial planning. Besides purely economic criteria, socio-ecological criteria are also considered which facilitates decision making.
The developed SPADE evaluation method comprises a process and a tool. The process consists of five phases (see Figure 4) and describes the collaborative planning of policy measures, in which actors with different backgrounds, different "wish lists" and different planning procedures work together. The tool supports the process and combines the use of (digital) workshops with an evaluation tool that integrates multi-criteria analysis (MCA) and cost-benefit analysis (CBA).

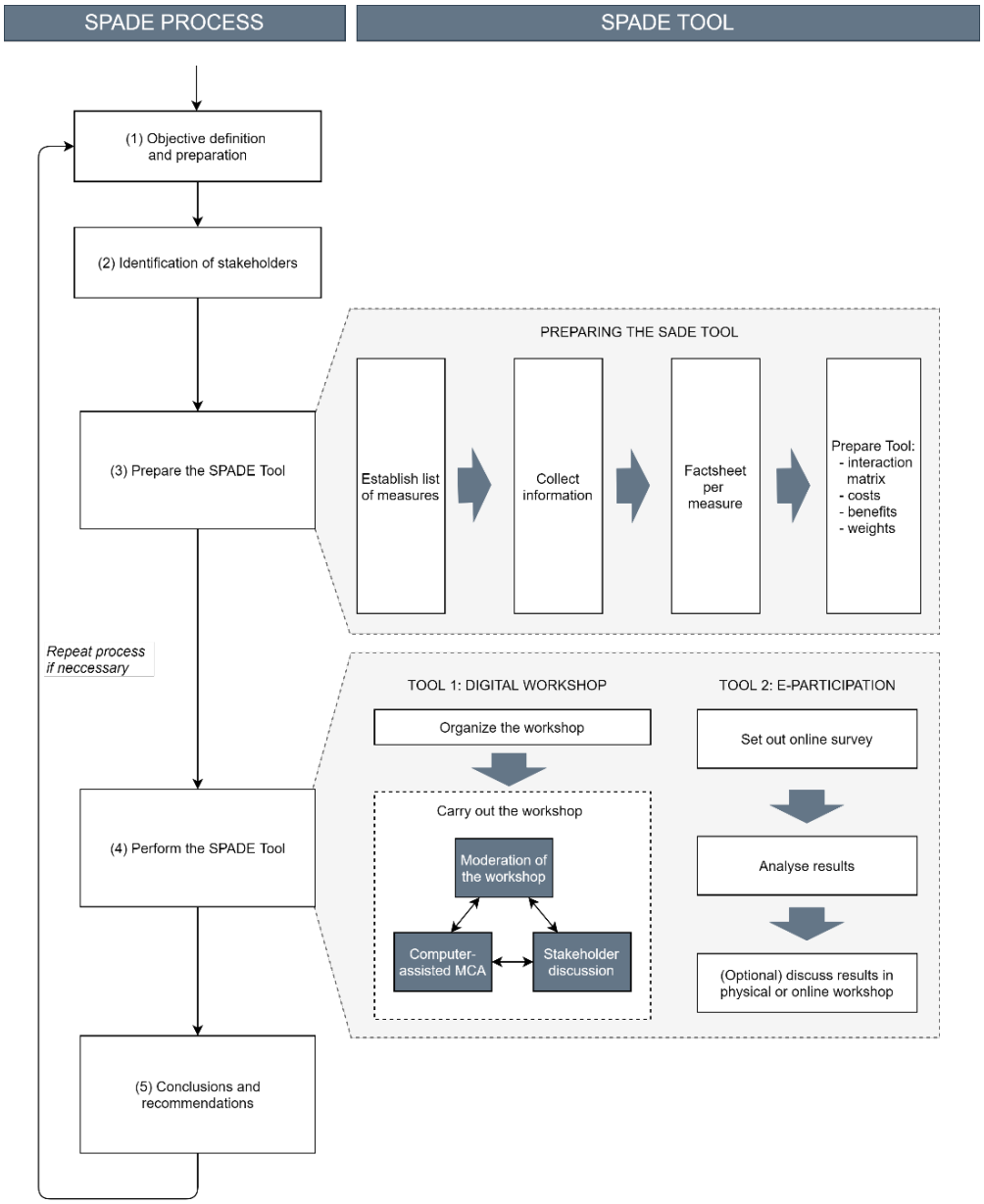


Figure 4: SPADE evaluation method

The evaluation method was originally developed for infrastructure planning but can also be applied flexibly in other contexts and is used to narrow down a long list of options (policies, infrastructure solutions) to the most valuable. The application can be used in different phases of cooperation between actors with different backgrounds, different "wish lists" and different planning procedures. The process combines (digital) workshops with an assessment tool for multi-criteria analysis. Within SPADE, the extended method was tested using three different (urban and rural) case studies in Europe to demonstrate its practical effectiveness and to identify and improve the strengths and weaknesses of the method.
The pilots show that the SPADE evaluation method provides a better understanding of planning objectives / options for action due to the direct involvement of different stakeholders (input, evaluation) and serves the mutual support of actors / other stakeholders through (early) involvement in the evaluation and planning process.

3. Implementation potential and shortcomings

The following sections gives insights on the relationship between the three projects, their main implementation challenges and remaining open questions as well as the overall vision of the projects.

1.4 Relationship between projects

In simple terms, the interaction of the three projects can be summarised under the title Explore-Design-Assess (see Figure 5).

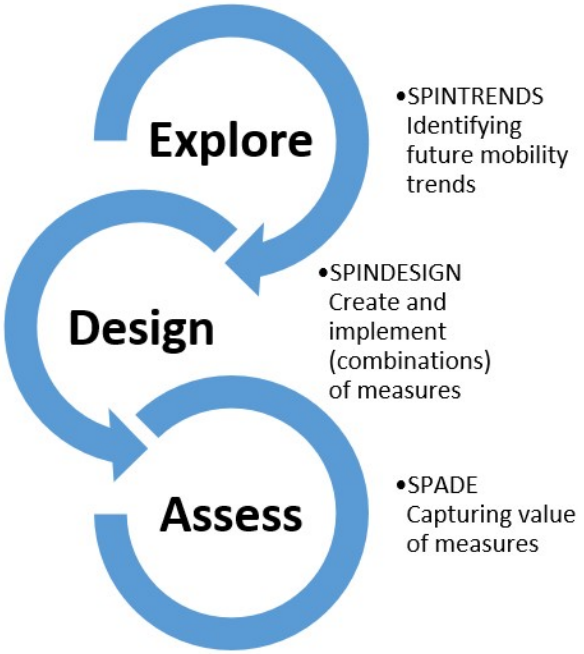


Figure 5: Connection between the three studies

SPINTRENDS provides the breeding ground for two things by analysing spatial and infrastructural trends, concepts and best practices: the future orientation of the NRA and its self-image as well as an initial input for the development of measures. In SPINDESIGN, these aspects are implemented by a broad stakeholder process that is in line with the new mindset and by presenting the identified concepts to the stakeholders. This provides a first input to look at the identified interface in the system from a different perspective and to develop new measures. The developed measures are then evaluated in SPADE, which again requires a strong involvement of different stakeholders. On the one hand, the actors are required to carry out the evaluation, on the other hand, the results of the evaluation are discussed and compared again with the stakeholders in order to address any uncertainties and ambiguities in the evaluation. The main outcome are recommendations for measures to be set (see Figure 6).

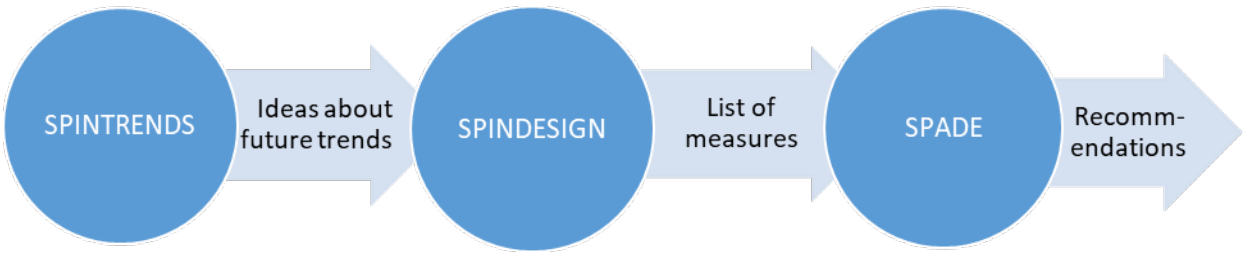


Figure 6: Interfaces between the three studies

1.5 Main implementation challenges and open questions

There are major differences in the tasks and organisation of NRAs in Europe. While some have a clear focus on the road, others are responsible for several modes. This results in very different activities that have to be set. In addition, some NRAs have rigid organisational structures and a traditional approach, which are obstacles to the successful implementation of collaborative planning.

In SPINTRENDS we compared areas of responsibility, framework for action and focus among the NRAs in Europe. We found the close connection with the state or ministry to be advantageous for strategic change and the existing European network between NRAs through the CEDR membership. Furthermore, the expandable strategic responsibility and exchange with spatial authorities offer potential. The main weaknesses were the predominant focus on motorized traffic as well as the emphasis on construction- and management-heavy tasks. Long established structures might be hindering for strategic change as well as many additional tasks (driver's license etc.) are binding the workforce and make it difficult to focus on development issues.

For the implementation of measures to address current trends in the future work of the NRAs we could identify eleven weaknesses and seven threats that could be hindering in the implementation and which have to be addressed by the NRAs concerned (see Table 1).

Within the work of SPINDESIGN it has been found that logistics and freight are often a blind spot and have to be considered by NRAs as they contribute significantly to the overall traffic volume. The work with stakeholders on the list of measures for the interfaces showed the need for a leading party in the process that ensures the facilitation of this informal planning approach before the formal planning process starts. NRAs could be identified as suitable drivers for these processes due to existing capacities and contacts.

During the content processing it became apparent that the measures must be regarded as realistic by all those involved and that it is clear which phase of elaboration they are currently in. In the case of more complex measures, sufficient time must be allowed for discussion and sufficient information must be available to permit an evaluation.

Table 1: SWOT analysis for the implementation

Strengths – existing development potentials	Weaknesses – existing barriers to development
1 Facilitated implementation through technologies and infrastructures currently available or under development	1 Technologies and infrastructures not yet known not considered (completeness)
2 Consideration of the available network (inventory optimization) instead of completely new planning	2 Missing real data on the expansion stages of the transport network in the next 10 years
3 Demand behavior of the population is known and can be depicted	3 Emissions of new technologies only partially known (calculated vs. real values)
4 Consideration of legal and organizational framework conditions	4 Extent of landscape fragmentation due to new transport routes difficult to map (various designs possible)
5 Transport system design is carried out at European level and thus across borders	5 For the time being, the scope of the study is limited to Europe
6 Integration of expert knowledge	6 Responsibilities for spatial development issues vary from country to country
7 Estimation of spatial, economic developments and anchoring spatial planning instruments possible	7 Strong city land gradient in infrastructural conditions
8 Replication of measures in countries with similar or close to similar planning background	8 Large number of possible influencing factors makes it difficult to assess measures accordingly
9 Broad stakeholder involvement ensures implementation	9 High number of stakeholders must be involved
10 Cost benefit from cooperation for all involved stakeholders	10 Evaluation of the measures is difficult due to the multitude of influences
11 Citizen involvement fosters public acceptance	11 No uniform planning culture in Europe
12 Network with prospective main actors is available and accessible	
13 Methods for impact assessment are available to monitor success of implemented measures	
Opportunities – development potential to be tapped	**Threats – potential barriers to development**
1 Strong demand for new technologies and infrastructures	1 Future demand/need changes
2 Cross-border network design improves the countries' position in location competition	2 Price development uncertain, as state subsidies play a role
3 Pioneering role of Europe through knowledge lead	3 Conflicts with neighboring countries (e.g. through different refugee policies) as a barrier to network development
4 Knowledge for the targeted allocation of resources	4 Radical changes in the legal and organizational framework due to political changes at European or national level
	5 Successful lobbying of technology companies instead of choosing the best solution
	6 Actors with conflicting interests can make it impossible to implement various measures
	7 Acceptance of mobility approaches by users is unclear and could therefore make implementation more difficult from a political point of view

Our work with stakeholders revealed several open questions for SPADE and SPINDESIGN which have to be addressed. They should be considered by the NRAs leading the process to provide an approach tailored to the interface:

- Which (specialist) experts in the organisations can/should participate in the tools? Is this the project team or is it also suitable to carry out with external stakeholders, such as residents or business organisations?
- How many experts should be provided per organisation/company?
- Which measures are to be assumed as given ("reference case")? Just the existing infrastructure? Planned projects? Projects already decided? Projects already financed?
- In which stage of the planning process shall SPADE be carried out?

- Which criteria shall be included in the assessment of SPADE? And who determines the weights of the criteria?
- What do you do if other measures emerge as best than what you had in mind beforehand?
- How to deal with stakeholders that are not willing to find a consensus?
- How to encourage the uptake of SPADE and SPINDESIGN by NRAs?

1.6 Linking the visions

The development of a vision was part of all three projects. The elaborated visions address different levels of observation.

In SPINTRENDS the vision was produced to strengthen NRAs as organizations and to drive them towards collaborative planning in the transformation of organizational culture. To make the vision tangible and to ensure practical relevance, the following eight guiding principles have been extracted (see Figure 7):

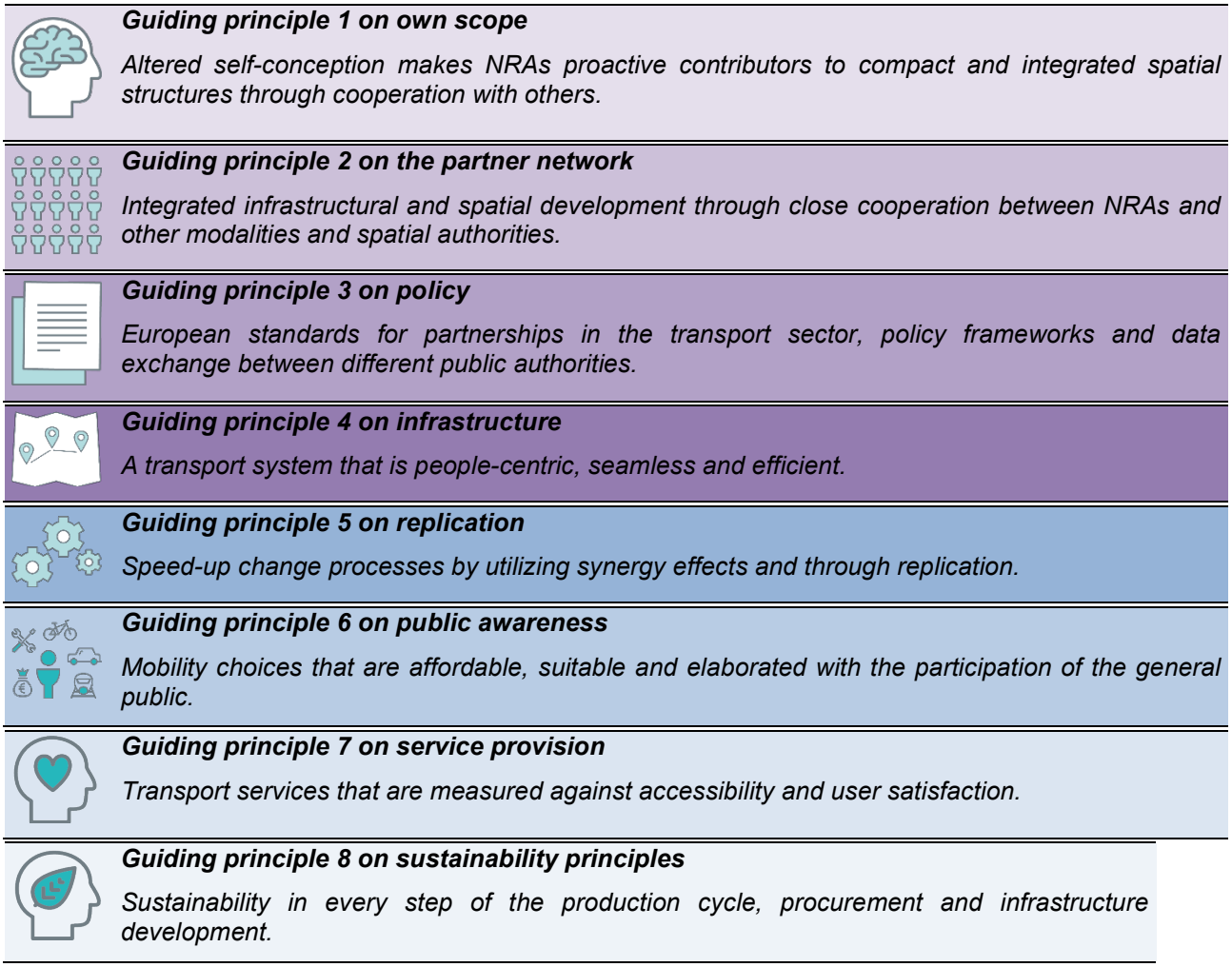


Figure 7: Guiding principles of the vision

The Guiding principle 4 on infrastructure is the breeding ground for SPINDESIGN and SPADE as their focus is much more on infrastructure and the spatial dimension. The main aim is to accompany changes in space by a process, i.e. collaborative planning is used in concrete use cases to broaden the perspectives of the people involved and to improve the results.

The SPINDESIGN Toolbox envisions the balance between infrastructure, multimodal mobility and spatial development as well as between freight and person mobility. SPINDESIGN further outlines the importance of a people-centric, custom-made approach toward the development of interfaces which is summarized in a vision on the application of the Toolbox:

a. **Stakeholder management instrument**
   The toolbox can be used as a stakeholder management instrument to improve understanding and relations, and thereby improve value. The results from the toolbox can help a NRA to better understand the interests and possible contribution of stakeholders (like regional or local planning authorities or local infrastructure authorities).
b. **Scoping Instrument**
   The toolbox can be used for project management as a scoping instrument to identify synergetic scopes in a collaborative planning process.
c. **Area development instrument**
   The toolbox can be used as an integrated planning instrument in order to formulate an integrated strategy for mobility and spatial development.

The **SPINDESIGN Toolbox helps to assists NRAs to span its boundaries in infrastructure planning**. The toolbox produces material for discussion. During the process information is shared and inspiration from the best practices is provided. Consensus is drawn out of that information by multiple actors. This can be the basis for a collaborative planning strategy. A second important conclusion for the vision is that a that a successful collaborative planning approach requires a **custom-made mix of measures** in the range of infrastructure, spatial development, nodes and mobility (see Figure 3).

The **SPADE planning tool** is suited to produce rankings of different sorts of impacts over groups of stakeholders. Moreover, the SPADE planning tool is used to evaluate how stakeholders consider impacts relative to each other. The SPADE pilots revealed similar success factors as SPINDESIGN as well as the need to limit the number of measures or policy packages to be assessed, to select measures with a similar level of complexity and discuss the details of the measures to ensure that all stakeholders have the same level of knowledge. This ensures that SPADE speeds up the planning processes:

a. By reducing the number of potential planning solutions;
b. By gaining deeper understanding of the effects of potential planning measures, in particular qualitative measures;
c. By gaining stakeholders support through their involvement in the decision-making process.

4. Recommendations

European countries are very differently positioned in terms of competences in the transport sector. The designation “National Road Authority” (NRA) suggests that responsibility for the road network lies with a single body and is thus misleading. The distribution of competences is very individual depending on the country in question (see Figure 8).

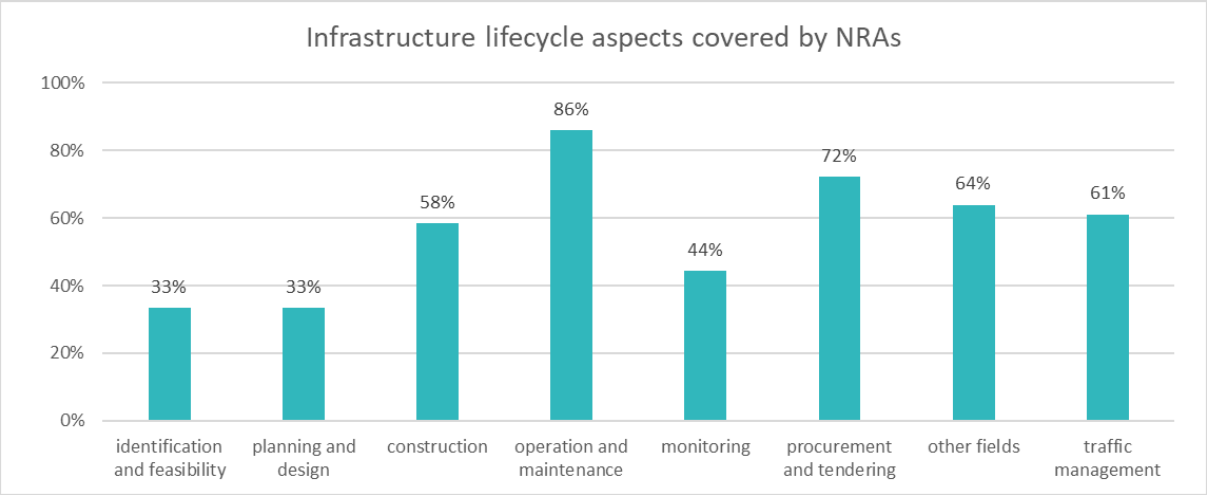


Figure 8: Infrastructure lifecycle aspects covered by NRAs (n=36)

In some cases, there is a single point of contact. In other cases, areas of responsibility are divided among various institutions and/or subcontracted to private organizations (see Figure 9).

Not only is the competence situation very diverse in Europe, but the self-image of NRAs also varies and so do the areas of responsibility that are covered. Across Europe the NRAs show a large variety in the way they operate their planning activities, the modalities covered by the NRA, the typical planning scope and the activities in the infrastructure lifecycle (identification and feasibility, planning and design, construction, operation and maintenance, monitoring). In this respect one can almost speak of different categories of NRAs operating under the guise of CEDR.

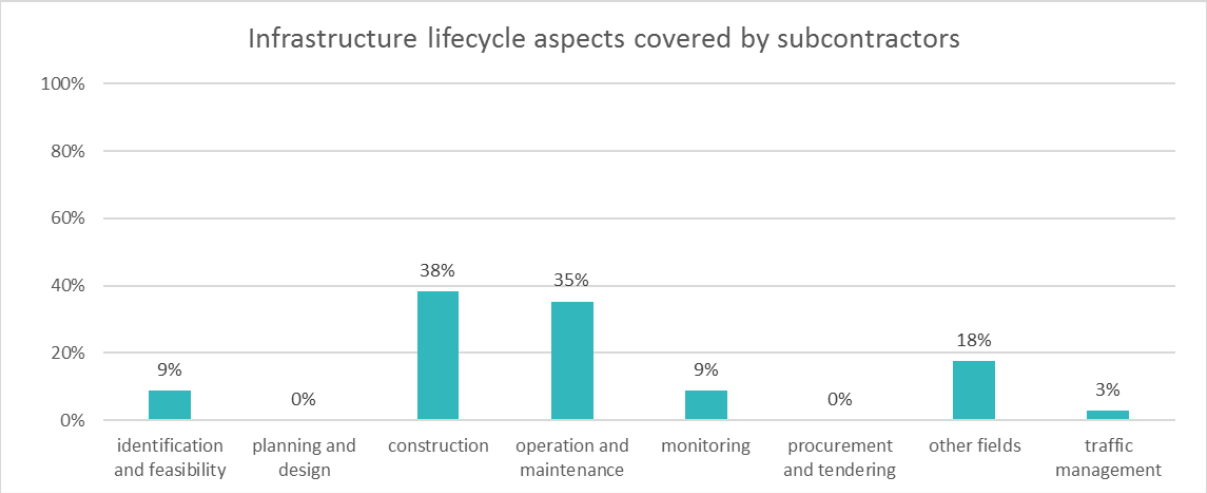


Figure 9: Infrastructure lifecycle aspects covered by subcontractors (n=16)

A uniform approach of all NRAs is difficult due to the framework conditions. According to the profile they have, different challenges arise for the transport network which might be of relevance today but not such a big deal in the years to come. We therefore recommend concentrating first and

foremost on the strengths, weaknesses, opportunities and threats that are about the same in every country, as revealed in the SPINTRENDS online survey among NRAs (see Table 2).

Table 2: SWOT analysis for prototypical NRA

Strengths – existing development potentials		**Weaknesses – existing barriers to development**	
1	Close connection with the state or ministry advantageous for strategic change	1	Predominant focus on motorized traffic
2	Existing European network between NRAs through CEDR membership	2	Focus on construction- and management-heavy task areas
Opportunities – development potential to be tapped		**Threats – potential barriers to development**	
1	Expandable strategic responsibility	1	Many additional tasks (driver's license, etc.)
2	Expandable exchange with spatial authorities	2	Long-established structures might be hindering for strategic change

To implement the results from the three projects, different aspects carried out in the Guiding principles of the Vision must be considered. That includes the focus on the scope of the NRA, on the partner network and the infrastructure provision. The SPINTRENDS roadmap gives recommendations on which measures to set first within the NRA in order to facilitate the implementation of the SPINDESIGN and SPADE method.

The SPINDESIGN pilots focussed on the interface of long distance and last mile transport. The lessons learned resulted in a series of recommendations for a successful implementation of the toolbox:

a. Synergetic selection of participants

Essential in designing the interface between the first and last mile / the functional area and the corridor, is the balance between the infrastructure, its role in a multimodal mobility network and its function in a sustainable regional development strategy (including the role in the corridor and local strategy). This implies it is crucial for a successful application to include representatives and experts from a NRA combined with representatives from relevant public authorities, relevant additional network modality asset managers or operators (such as rail, water, etc.) and representatives in the field of spatial development.

b. Planning stage

The SPINDESIGN approach will flourish the most when there is flexibility in the project scope and approach. Often this implies an early stage of the planning cycle.
In the toolbox participants are challenged to formulate a collaborative development strategy. It helps the discussion when project scopes are not narrowed down yet. This gives the participants the faith their knowledge can influence the scope and it helps the project organisation to formulate a scope that is in line with regional development strategies and is supported by relevant stakeholders.

c. Informal planning

The toolbox is best in facilitating an informal planning approach. The participants should be in a setting where they have the freedom to instantly react on insights from the toolbox from his/her craftmanship and expertise. A formal planning approach might limit this freedom and might lose momentum due to the time needed to align an organisations formal point of view. However, formal planning approach needs to be a follow up.

d. Independent host

A crucial success factor for applying the toolbox is an independent host. If the SPINDESIGN process is hosted by one of the stakeholders, this can limit the open mindset and can obstruct

a common ownership of the results. CEDR Could play an important role in initiating and facilitating these planning processes.

e. Moderator

The moderator plays a crucial role in the application of the Toolbox. A neutral moderator and a balanced composition of the target group should counteract bias and the persistence of viewpoints. He/she guides the process but also plays an important role as a process manager. The experiences in the past show this goes beyond the process. Also, an excellent knowledge of integrated infrastructure, mobility (freight and passenger) and spatial development is needed to stimulate the discussion depth. A moderator has to be able to not only talk but also draw. Designing and visualization of an approach or concept helps to reach consensus, clear miscommunication and summarize the essence of a workshop

The toolbox is best applied in an informal planning process. The participants should be in a setting where they have the freedom to instantly react on insights from the toolbox from his/her craftmanship and expertise. A formal planning approach might limit this freedom and might lose momentum due to the time needed to align an organisations formal point of view. The SPINDESIGN project has developed a process scheme for a successful implementation of the Toolbox (see Figure 10).

Each NRA decides which steps to take first and in which thematic areas it is already well positioned. Regarding the methodology of SPINDESIGN and SPADE, it should be noted that the process is set up with the greatest possible care, so that the framework conditions fit the participants.

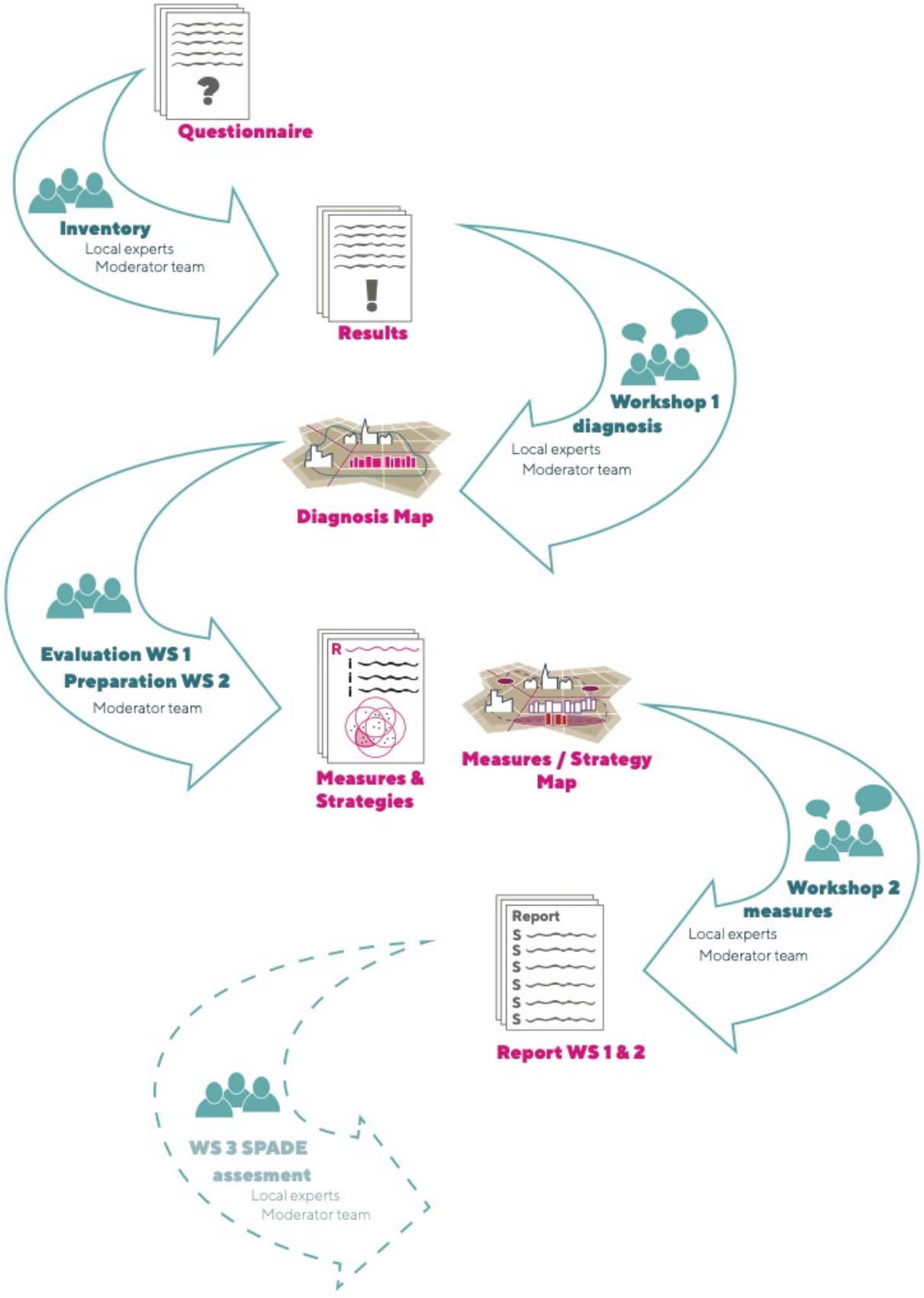


Figure 10: Process Scheme for the SPINDESIGN Toolbox

The results from the SPINDESIGN Toolbox can be used as input for the SPADE method (see

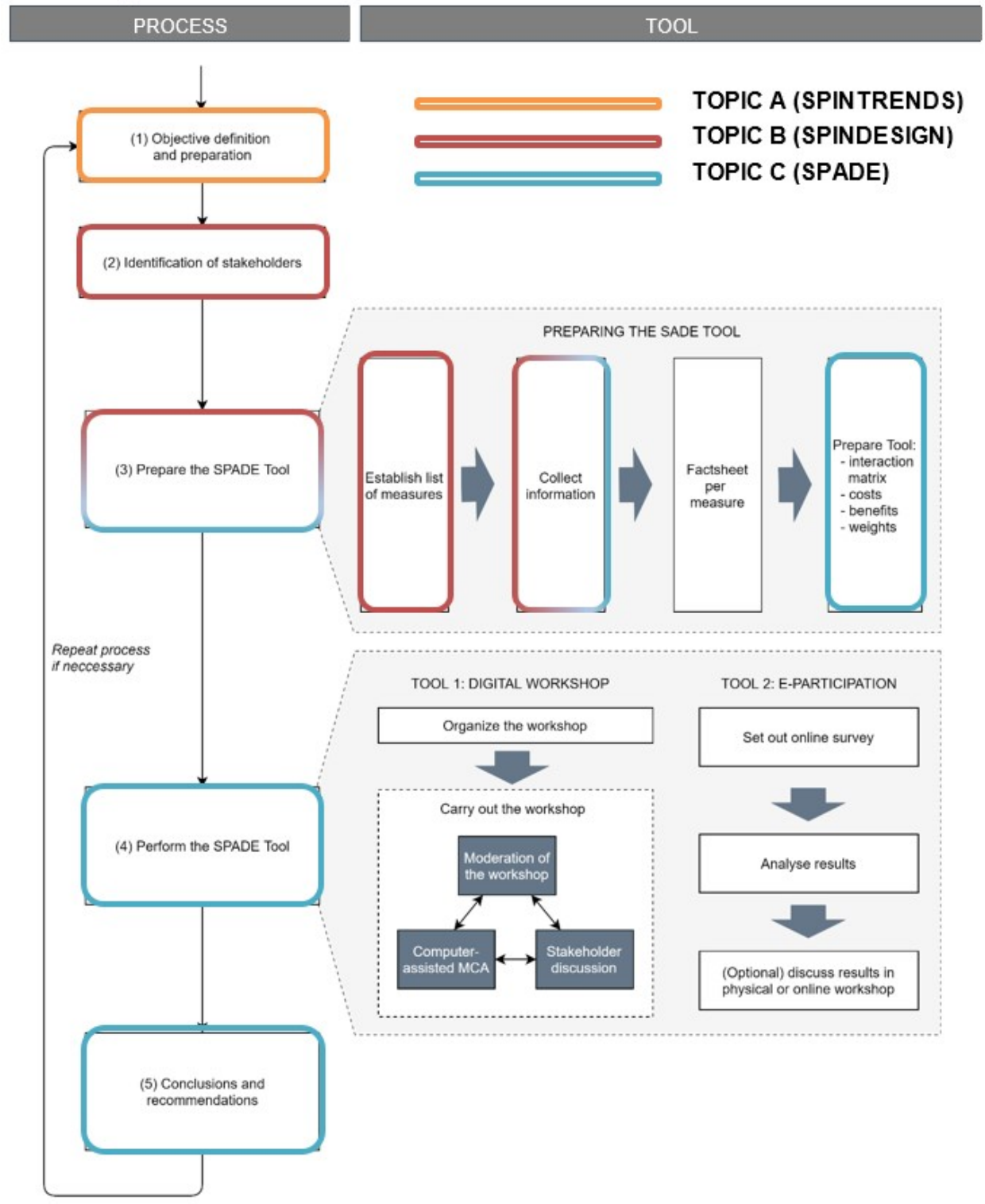


Figure 11).

In SPADE three pilots were carried out. The lessons learned from the SPADE method have been implemented in the SPADE Guidelines. This document helps to set up the method. For a successful implementation we recommend the following:

a. Selection of stakeholders

In a setting of the collaborative planning of infrastructure development and spatial planning, different stakeholders should be identified. The NRAs, but also local, regional and national governments, interest groups and industry can take part in the selection and assessment of

policy measures or solutions. This is essential, as the assessment is not only about ranking measures, but also about creating a common ground of understanding and support. The project will be more successful if stakeholders are heard. Therefore, we recommend to carefully select the stakeholders.

b. Drafting lists with measures, solution strategies or policy packages

A project to solve a planning issue or to develop infrastructure differs in size and planning stage. Usually at the beginning a long list of measures is required. These can vary not only according to their content but also at their planning stage. Usually at the beginning of a project we need a strategy, which requires thinking which direction to take. Measures are not detailed. The next stage is about the tactics. This is about more detail of the measures; they are more concrete. Either way, the list of solutions, measures of packages is needed in order to make the assessment.

c. Preparation of the assessment

The preparation of the assessment comprises different steps. Most important is making factsheets of the measures, inviting a moderator to guide discussions, to prepare the assessment tool and to make a survey (either an online survey or a survey for a digital workshop). The preparation should give each stakeholder the same basic knowledge about measures, to help them in the assessment. Make sure the measures are in a similar planning stage. It is not recommended to compare strategic measures with operational measures.

d. Carrying out the assessment

The assessment itself is carried by the stakeholders. This can be done by the experts of a stakeholder. The assessment is carried out using the SPADE tool. It can be done beforehand using an online survey or live. Either way, a good moderator is needed to guide the discussion. These will in principle be about those criteria where the experts disagree. The moderator will ask for exchanging the arguments. Often, this shows a different interpretation of the impact of a measure.

e. Discussion about the results

The discussion marks the final step. Once the measures are ranked a discussion can be done, to exchange the views on the results. If the experts or stakeholders agree on the ranking, the results can be taken further in the planning process. If needed a second round can be done at a later stage in the planning process.

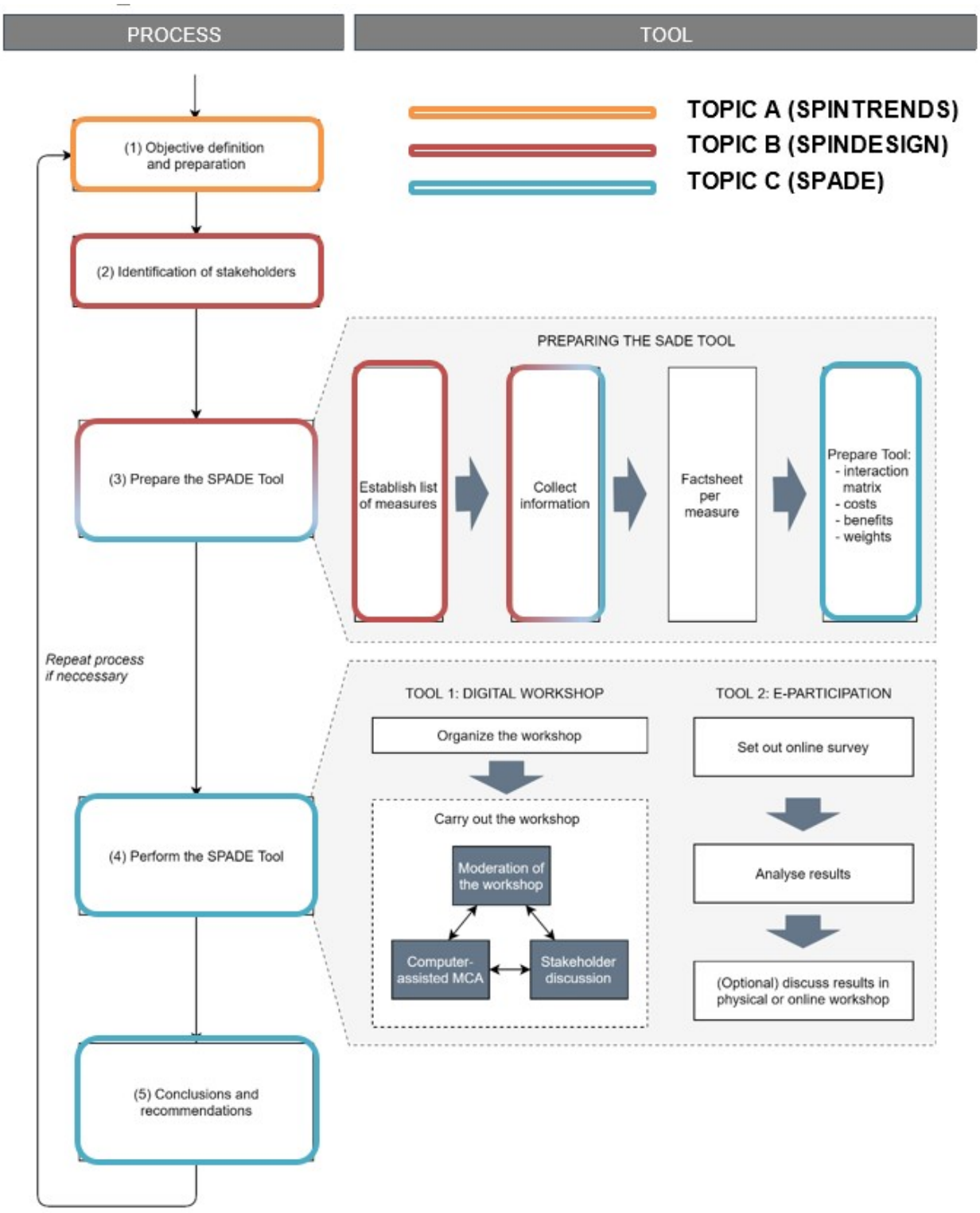


Figure 11: Flowchart from a collaborative planning perspective

5. Conclusions

The CEDR 2017 Programme aimed to foster 'collaborative planning' by developing a common framework to obtain the synergies from interactive planning of infrastructure and spatial development. The central question raised by CEDR is '*How to achieve integrated project development of infrastructure and its spatial surroundings?*' with overall intention to improve the management of the European road network and make it future proof. This is necessary as NRAs face many challenges such as:

- Infrastructure and mobility investments which are closely connected as well as their social and environmental impact.
- Rapidly changing context in terms of international competition, climate change, mobility behaviour, liveability, health etc.
- Need for sustainable and cost-efficient solutions.

These challenges require a shift from a small scope towards an inclusive scope. To develop a common framework to obtain the synergies from interactive planning of infrastructure and spatial development, the three projects provide NRAs with knowledge and methods to explore, design and assess:

- **Exploring** effective approaches for future-proof road networks based on trends in mobility and spatial development (Topic A: **SPINTRENDS**)
- Planning and **designing** the interface between (trans)national road networks and local transportation ('last mile') (Topic B: **SPINDESIGN**)
- **Assessing** the added value from spatial development as a factor in infrastructure planning (Topic C: **SPADE**).

The results of the **CEDR 2017 Programme** equips NRAs with the necessary background knowledge and tools to promote collaborative planning in their own sphere of influence. In concrete terms, the stakeholders can draw on the following project results:

- Catalogue of future trends in mobility and spatial development in the fields of
  - Technology
  - Behaviour
  - New economies
  - Sustainability and social equality
- Catalogue of innovative concepts and measures
- Vision for 2040 including eight guiding principles
- Roadmap towards collaborative planning for the prototypical NRA with concrete measures to set
- SPINDESIGN Toolbox for interfaces including recommendations on
  - Synergetic selection of participants
  - Planning stage
  - Informal planning
  - Independent host
  - Moderator
- SPADE collaborative assessment method for mobility measures and measure bundles including recommendations on
  - Selection of stakeholders
  - Drafting lists with measures, solution strategies or policy packages
  - Preparation of the assessment
  - Carrying out the assessment
  - Discussion about the results

The **CEDR final conference** in February 2021 was well received by the conference participants and provided them with information on the building blocks of collaborative planning. Presentations introduced the programme and results of the projects; a **Collaborative Planning Game** allowed the NRA representatives to use the SPINDESIGN Toolbox and SPADE Assessment for a fictitious planning scenario.

It has been found that collaborative planning is understood as "teamwork" and "the way forward" by many already. The **CEDR 2017 Collaborative Planning Programme** encourages the exchange of knowledge on the implementation process among NRAs to improve the quality of infrastructure and mobility solutions provided.

Over the last decade, NRA's are slowly becoming aware of the advantages of collaborative planning. The next step is to apply Collaborative Planning in practice. The tools developed under this research call were considered by the participants of the conference a great way to start implementing collaborative planning in practice. Special attention should be made to the recommendations on the implementation provided in this report.

Implementation should always be in focus. The interest of CEDR members is important for this. Therefore, a CEDR working group on collaborative planning of infrastructure and spatial development might be a promising approach to foster this topic further. This was also suggested by Hans Ring in his closing remarks of the conference. This is important not least because of the upcoming update of the CEDR action plan, especially at this point in time.

Another important component is the continuous dissemination of information on the activities on this topic. This will ensure that collaborative planning gradually becomes the norm in planning processes. It is also important to disseminate the results of practical experience. This is not only the evidence base that collaborative planning leads to better quality infrastructure projects and ultimately to more efficient, greener and fairer transport. By exchanging practical experiences, we also ensure that best practices are passed on.

Annex I: Final Conference Agenda

CEDR Transnational Research Programme
Collaborative Planning

Agenda of the FINAL CONFERENCE

Friday, February 12th, 2021

Webinar:
https://ffg.zoom.us/j/91240491289?pwd=K2hBRGY0RzFoZGhsZE9MdU9Gcmxwdz09
Meeting-ID: 912 4049 1289
Passwort: 096039

Programme

10:00	Welcome by Steve Phillips (CEDR)
10:05	Project presentations: Collaborative planning, incl. Q&A • Introduction - Sjaak van der Werf (RWS) • SPINTRENDS – Karin Markvica (AIT) • SPINDESIGN – Tertius Hanekamp (TEMAH) • SPADE – Jan Kiel (Panteia)
12:00	Break
12:45	Interactive Collaborative Planning Game • Introduction – Jan Kiel (Panteia) • SPINDESIGN Game – Spindesign Consortium • SPADE Game – Panteia Coffee break during the Game
14:45	Group Discussion in the Plenary, led by Prof. Jos Arts (University of Groningen) • Introduction on 'the vision of collaborative planning' • Implementation issues • Open questions • Next steps
15:45	Recap and concluding remarks – Hans Ring (CEDR)
16:00	End of the day

Annex II: Conference highlights and remarks

A conference was held online on 12th of February 2021. The conference was organized by the FFG and hosted by the project consortium. It included the presentation of all three projects, a planning game and group discussions (see Annex I: Final Conference Agenda).

Conference outline

After the project presentations the following questions are discussed in the plenum focussing on highlights, the implementation and open question:

- What project outcomes are considered the most important?
- How can the project outputs be implemented in NRA activities? What are the benefits and obstacles for implementation?
- What questions remain to be solved?

In the *Collaborative Planning Game*, the attendees experienced the SPINDESIGN and SPADE method in a fictive Case Study. Objective of the Game is for the participants to gain a better understanding of the collaborative planning methods developed within the project. The game is interactive, and the participants are involved actively.

The case is based on a hypothetical and simplified planning scenario prepared by the project team in advance. The participants go through the planning scenario and the SPINDESIGN and SPADE method are used during the process.

The focus of the case is to understand the SPINDESIGN and SPADE methods, rather than having results on the specific planning scenario. The case is therefore short and simple. The Game has been planned for the whole group of attendants of the conference which were divided into sub-groups. We do not intend to discuss details as would be appropriate in a real-life project.

From our experience of presenting this work at conferences, the audience gains a better understanding of the methods once concrete planning examples are given. That is why we used a plenitude of examples explaining the measures that can be chosen and evaluated during the game.

Scenario

The game is based on a fictitious planning scenario. The scenario combines various issues that we have encountered in the case studies and is a good reflection of the general mobility-related planning issues cities and regions face. We used the following fictional region “Linzburg” as a basis for the scenario (see Figure 12).

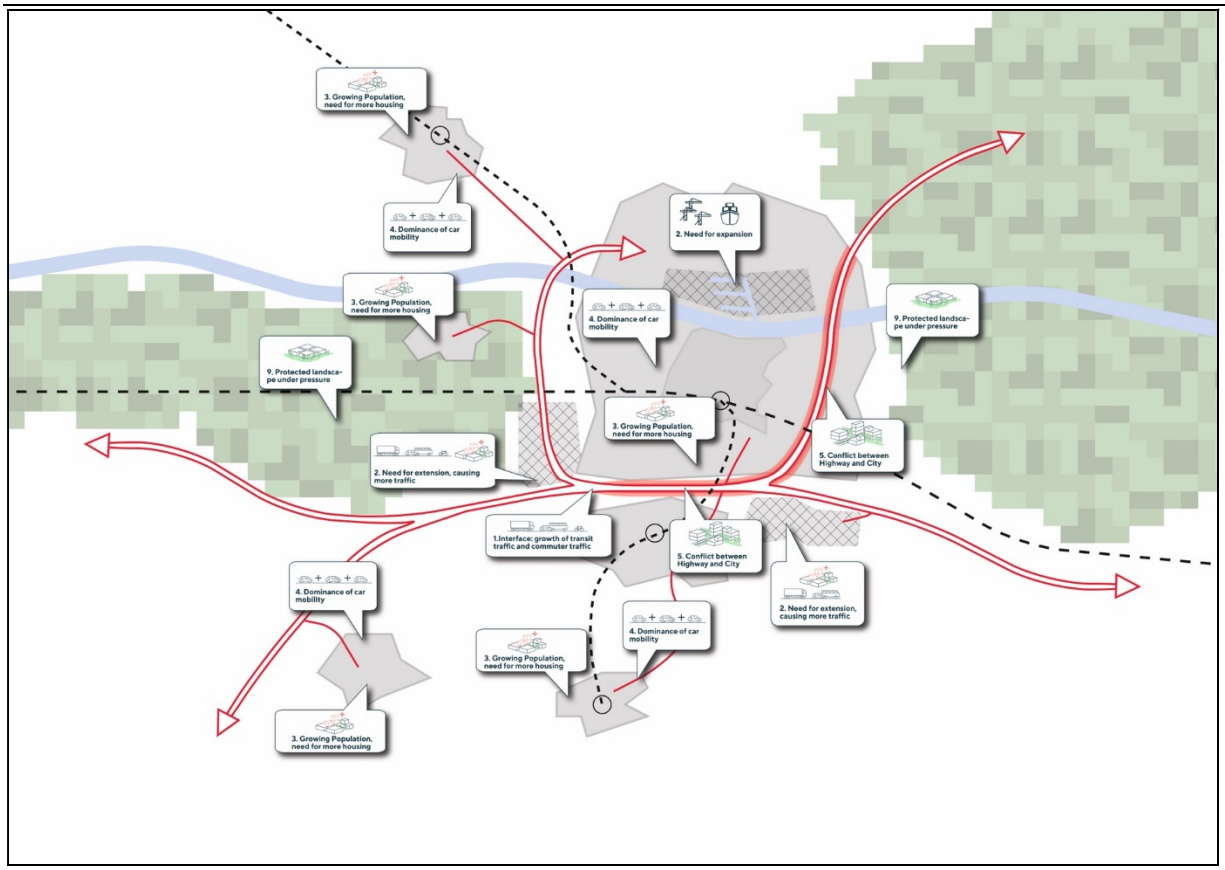


Figure 12: Interface of the fictional case “Linzburg”

The region faces a number of challenges, namely

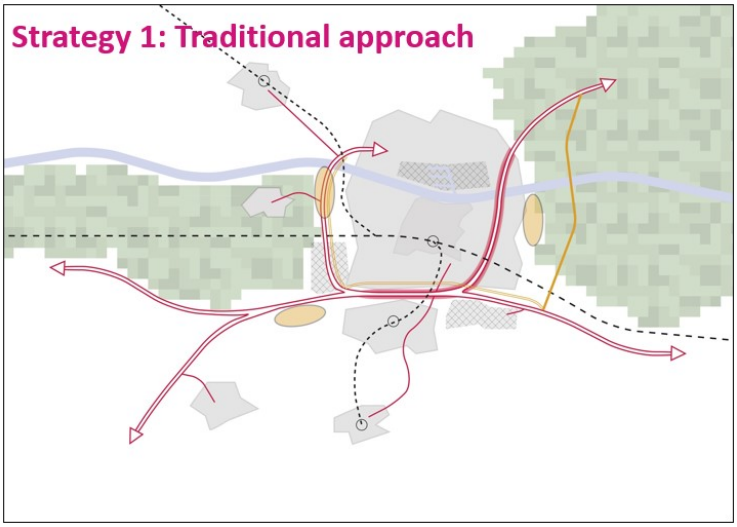
1. Growth of transit traffic and commuter traffic
2. Need for extension, causing more traffic
3. Growing population, need for more housing
4. Dominance of car mobility
5. Conflict between Highway and City
6. Protected landscape under pressure

Part 1: SPINDESIGN

The attendees are introduced to three strategies that could be used to solve transport challenges in “Linzburg”:

- Strategy #1 – Traditional approach (see Figure 13)
- Strategy #2 – Transit Oriented Development (see Figure 14)
- Strategy #3 – Integral approach (see Figure 15)

The strategies are explained in detail and examples for best practices provided. In a next step, the participants are assigned to breakout rooms to discuss the strategies that would be appropriate for their countries transport issues. The moderators of the breakout rooms summarize the discussion results in the plenary session.



Measures

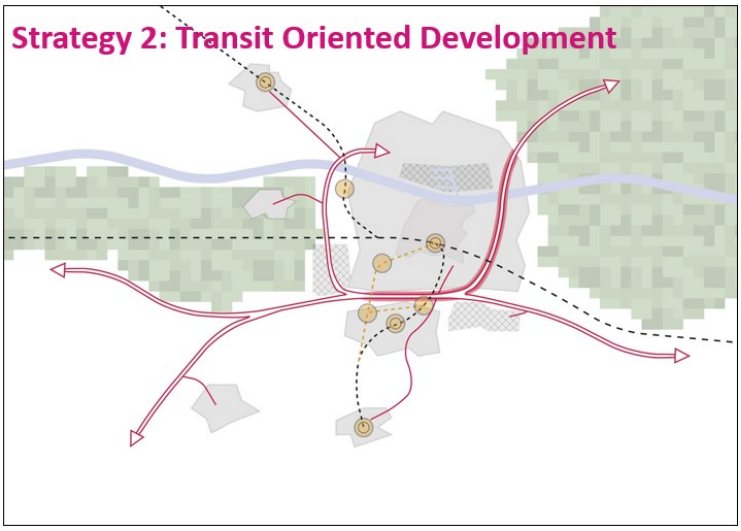
Infrastructure:

- **Add**: new Bypass East
- **Expand and separate**: Highway south and east

Space:

- **Expand city**: city edges

Figure 13: Strategy #1: Traditional approach



Measures

Infrastructure

- **Expand** rail
- **Expand** bike (feeder lines)

Nodes

- **Add** nodes (rail stations)

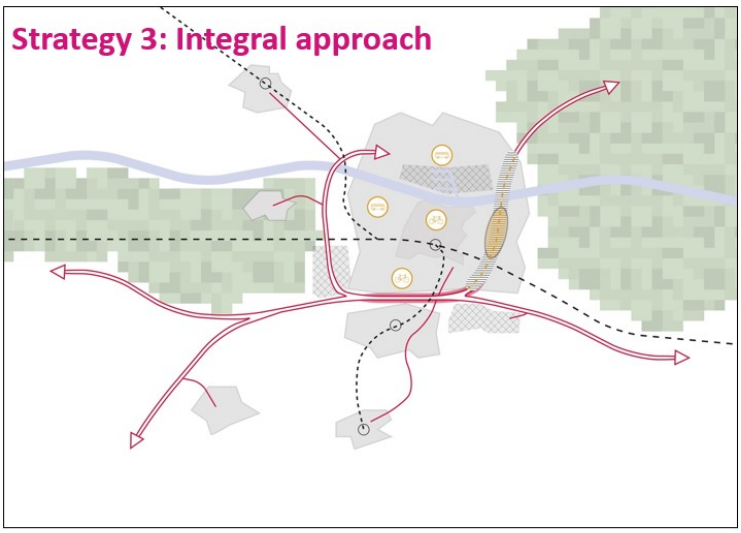
Space

- **Densify**: around railway stations (housing)
- **Specialize**: regional program around southern highway

Mobility:

- **Pricing**: charge car use / parking in city (tax)

Figure 14: Strategy #2: Transit Oriented Development



Measures

Infrastructure

- **Separate**: separate transit and local traffic along Highway South
- **Transform**: Downgrade Highway East and create space for other modalities (public transport, bike)

Space

- **Densify**: increase density in the city along Highway West: space for new housing and commerce
- **Mobility**: promote bike and Public transport in the city

Figure 15: Strategy #3: Integral approach

Part 2: SPADE

During the SPADE part of the planning game, the participant will rate each strategy as such (see Figure 16) as well as on different criteria: time savings, accessibility, emissions, safety, regional economy and support from citizens. Therefore, the software Mentimeter shall is used.

Figure 16: Mentimeter survey on strategies in the plenum (n=16)

During the workshop:

- Introduction of the assessment method and how it will be carried out
- Participants score the strategies on time savings, accessibility, emissions, safety, regional economy and support from citizens using Mentimeter
- Finally, the participants weigh the criteria
- Processing of the results
- Presentation of the results

Finally, the method for measures and assessment are discussed by the conference participants with special focus on:

1. Are the results expected or counter intuitive?
2. Exchanging pro's and con's, do's and don'ts
3. Further feedback
4. Some statements to encourage a debate
5. Wrap up

Input from conference participants in the group discussions

23 to 51 people were present during the conference, who were assigned to three virtual rooms moderated by project members of SPINTRENDS, SPINDESIGN and SPADE.

Breakout room #1 (moderated by Robert Broesi)

In break out room #1 we had contributions from Slovenia and Finland, Norway and the Netherlands (see Table 3). In Slovenia strategy #1 (adding highway infrastructure) is closest to their NRA's

practice, however some first attempts for strategy #2 (improving public transport) are being carried out. Finland clearly favors strategy #2, as this strategy can be realized with a multitude of small measures. In Norway strategy #3 is common business: “A city without a tunnel is not a city”. In the Netherland strategy #1 used to be common practice. In the last decade however, a shift is being made towards both strategy #2 and #3.
All participants feel that the toolbox would be helpful in setting up improved collaboration between national, regional and local authorities. The question however is: how?
Both the representatives from Slovenia and Finland emphasize that there tends to be a focus on the bigger cities while the rural areas are being neglected. This might be counterproductive as a part of the traffic is coming from the rural areas. Furthermore, this might cause a social separation between the urbanized regions and rural areas.

Table 3: Breakout room #1 participants

Name	Country	Notes	Role/position
Bine Pengal	Slovenia	Is asked to attend the webinar by the NRA from Slovenia. Finds the collaborative planning approach very interesting.	Works for an environmental agency
Seepo Serola	Finland	Strategy #2. Is member of the PEB Collaborative Planning	NRA representative
James Odeck	Norway	Strategy #3. Is member of the PEB Collaborative Planning	NRA representative
Jos Arts	Netherlands	Initiator of the Collaborative Planning Research. PEB Member	Professor University Groningen
Jasper Snippe	Netherlands	Former Chairman of the PEB Collaborative Planning. RWS. Strategy #2.	NRA representative

Breakout room #2 (moderated by Niels Heeres)

In breakout room #2 we had contributions from Poland and Austria (see Table 4). Both participants state that strategy #1 is closest to their NRA’s practices. It is perceived easier for NRAs to comprehend. The participants state that strategies #2 and #3 are interesting approaches, but would be difficult to implement in the contexts that they are working in.

Both participants do feel that the toolbox would be helpful in setting up improved collaboration between national, regional and local authorities.

However, they state that change is difficult due to issues with costs/budget/financing, processes and the system of decision making. “In the end, it is politics that decides about the scope and the tool does not influence that”. On that basis we have concluded that in addition to a tool such as SPINDESIGN, also ways of objectifying the value of integrated approach would be useful. That would also help in getting this started from the beginning of projects, rather than starting with a sectoral approach, getting stuck and having to shift to a more integrated approach later on.

Table 4: Breakout room #2 participants

Name	Country	Notes	Role/position
Mark Rolla	Poland	He likes collaboration. The difficulty is cooperation.National: transit trafficLocal traffic: local traffic. It is difficult to have an integrated idea. He does not decide	Worked for long time in department of planning
Naida Muirhead	CEDR transnational research coordinator	She likes the practical site of the projects No further opinion	
Ruud Smit RWS	Netherlands	Not available	
Markus Pijavec	Austria	Difficult that he thinks is the best. It depends on different things: strategy #1 preferred as a professional. But on the other departments might like the second strategy, for personal the third strategy is very interesting	Ministry planning of motorways

Breakout room #3 (moderated by Tertius Hanekamp)

In breakout room #3 we discussed among participants from Poland, Estonia, Sweden, Germany and Austria. Three of them from NRAs (see Table 5).

First, planners focused on strategy #1, now the view is that broadening the road doesn't solve the problem. Estonia has a strong planning authority on the local level. Therefore, the regional aspects should be strengthened. Influence of real estate is a topic as well as more focus on multimodality as car focused solutions won't be funded by the EU or the national level anymore. Funding can enhance development and different institutional settings. Starting points of cities and towns are very different (more organized, rural pre-regulations etc.). Poland and Austria have many regions with smaller and medium towns which is challenging. Furthermore, the 4-step-principle of Stockholm has been discussed.

Table 5: Breakout room #3 participants

Name	Country	Notes	Role/position
Karin Markvica	Austria	Researcher with mobility focus	Consortium member
Lukasz Kubiak	Poland	Has experience in consulting for road authorities	NRA representative
Mari Jüssi	Estonia	Sustainable mobility expert	NRA representative
Niklas Galonske	Germany	Consultant for different mobility related topics	SPADE consortium
Tomas Holmlund	Sweden	International coordinator, market and planning at Trafikverket	NRA representative

Input from conference participants in the plenary

In the group discussion, the implementation horizon was the main topic. In this context, it was emphasised that many participants in the collaborative planning process already know each other and that it should therefore be easy to make decisions without having to talk to everyone individually. Furthermore, the scalability at EU level and the regional application to corridors was a topic.
In the aftermath of the match, there were lively discussions regarding the various criteria listed for evaluating the three strategies proposed. Time saving as criteria was perceived as effect that is

only temporal and perceived differently using public transportation as one can use the travel time. It is also a very controversial topic and perception might change due to COVID-19 and working from home regulations.

One participant mentioned, that public transport (strategy #2) can cover much more locations than the other two strategies, which are mode specific. Strategy #3 was criticised for its environmental impact as much concrete is needed. It was further noted that the impact of building and maintenance needs to be considered as it is often overlooked. Regarding safety issues the measurement of accidents has been discussed as small accidents often remain unregistered but should be weighted accordingly. The citizen support changes for different strategies over the years, as one participant stated. A few years ago, strategy #1 would have been an option for many more persons. It was further stated that it is hard to see the benefits for the public using strategy #2 as people are against more dense urban regions.

One NRA representative mentioned that public health and related costs should be incorporated. It was also noted that the assessment of costs is missing, as it is relevant in terms of the total cost of mobility as well as the user costs. The discussion among the participants revealed that funding mechanisms are important as well since this has originally been provided by the central government.

Input from conference participants via Mentimeter

The reaction of the participants of the CEDR conference to the project presentations was positive throughout. With regard to SPINTRENDS, the importance of recognising trends in time and preparing for them as an NRA was addressed. The necessary cultural change in NRAs was also a topic. the SPINDESIGN project has been perceived as very useful, just like the SPADE project (see Figure 17, Figure 18).

Figure 17: Mentimeter survey on the applicability of the SPINDESIGN project (n=18)

Regarding SPINDESIGN, dealing with resistance to collaborative planning was discussed and the need to provide a neutral facilitator in the method was pointed out. Participants also noted that it is a practical and simple method and that valuation is important. The SPADE assessment method has been recognized as helpful, reliable but also provocative, as it can trigger very controversial discussions between stakeholders.

Figure 18: Mentimeter survey on the applicability of the SPADE project (n=30)

The participants of the conference were relatively unanimous that now is the time to live collaborative planning and start implementing the knowledge generated (see Figure 19). At the same time, it was pointed out that in some cases the political will of stakeholders is needed. The exchange between NRAs was emphasised by the participants, which could be done, for example, via a dedicated platform. In any case, mutual support was emphasised.

Figure 19: Mentimeter survey on the next implementation steps (n=26)

Financial aspects, courage and dissemination were mentioned as stumbling blocks in the implementation of the projects. furthermore, best practices and people who feel responsible for the implementation and have the corresponding commitment are required (see Figure 20).

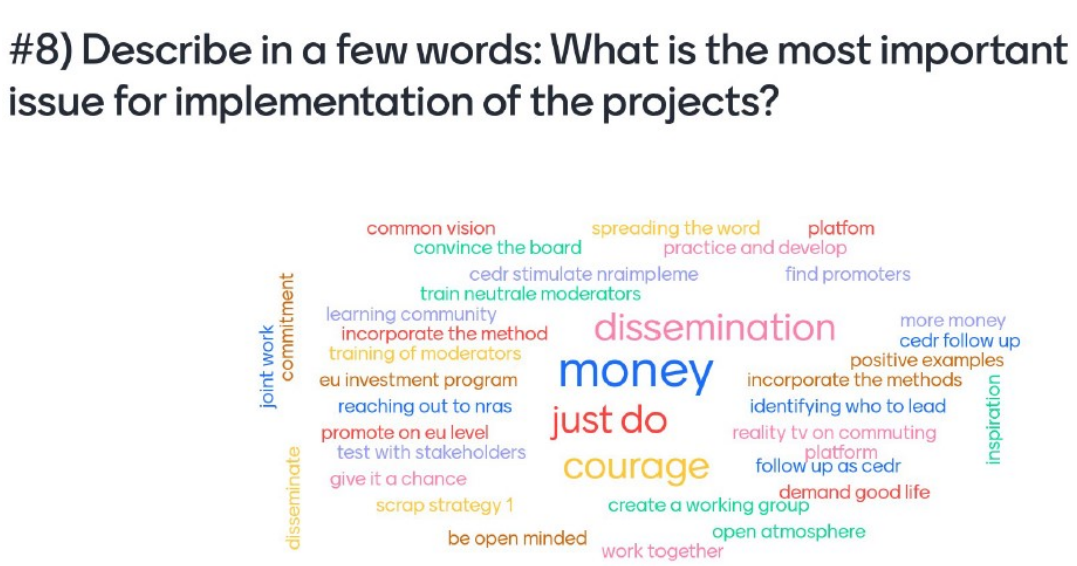


Figure 20: Mentimeter survey on the most important implementation issues (n=43)

All in all, collaborative planning is strongly associated with teamwork and is recognised as a promising solution for the future that is expected to have positive spatial, social, environmental and economic effects (see Figure 21).

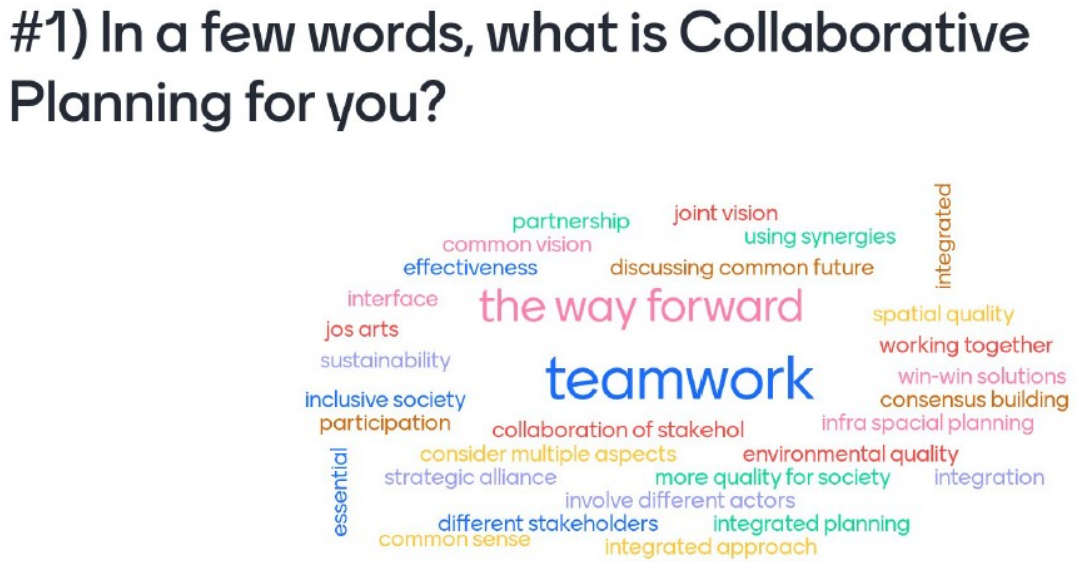


Figure 21: Mentimeter survey on the notion of collaborative planning (n=34)

This common denominator was highlighted by Hans Ring, who believes that the need for collaborative planning will increase if we are to move forward with the Green Deal and other sustainable initiatives such as multimodal transport. Furthermore, it was emphasised that implementation is always in focus and that the interest of CEDR members, who participate in workshops and working groups, is important for this. This is important not least because of the upcoming update of the CEDR action plan, especially at this point in time. Hans Ring furthermore mentioned that a CEDR working group on collaborative planning of infrastructure and spatial development might be a promising approach to foster this topic.

Annex III: List of participants of the final Conference

Name	Organisation
Naida Muirhead	CEDR
Ana Coelho	Infraestruturas de Portugal
David Callejo	Ministerio de Transportes, Movilidad y Agenda Urbana
Ruud Smit	Rijkswaterstaat
Robert Broesi	MUST Städtebau GmbH
Peter Staelens	EUROCITIES
Anna Wildt-Persson	Swedish Transport Administration
Jos Arts	University of Groningen
Alexandra Isabel Oliveira	Infraestruturas de Portugal, SA
Markus Pijavec	Federal Ministry of Austria for Climate Action, Environment, Energy, Mobility, Innovation and Technology
Sandra Kainz	BMK
Vasco Gonçalves	Infraestruturas de Portugal
Marit Due	Statens Vegvesen
Andreas Blust	Federal Ministry Climate Protection, Energie, Environment, Mobility, Innovation and Technology
Robert Zerafa	Infrastructure Malta
Zanda Jaunsproge	Ministry of Transport
Mari Jüssi	Estonian Transport Administration
Liesma Grīnberga	Latvian State Roads, SLTD
Kaspars Belovs	Latvian State Roads
Indra Muizniece	Latvian State Roads
Ruud Smit	RWS
Niklas Galonske	Hacon Ingenieurgesellschaft mbH
Jaan Tarmak	Estonian Transport Administration
Bartlomiej Lustofin	Generalna Dyrekcja Dróg Krajowych i Autostrad
Dawid Dudek	Generalna Dyrekcja Dróg Krajowych i Autostrad
Tomasz Lorek	GDDKiA
Bine Pengal	Slovenian national building and civil engineering institute
Lukasz Kubiak	GDDKiA
Tomas Holmlund	Trafikverket
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