3. Actor-Centred Analysis of the Field of Transport Policy

After having employed discourse analysis in the last chapter to trace out and contextualise the rationale of transport policy, its argumentative foundations, which direct the steps taken by the actors in the field, this chapter examines the resulting practical consequences for transport policy. The Federal Transport Infrastructure Plan is particularly suitable for this purpose, since the various activities in transport policy converge in it, as if placed under a magnifying glass. Following on from this, I offer the first systematic presentation and classification of the actors in the field of transport policy in Germany. This policy analysis complements the discourse analysis and shows who is pursuing which transport policy goals and in whose interest.

3.1 Practical Transport Policy – The Federal Transport Infrastructure Plan

> "This Federal government has invested more than ever before in transport infrastructure. We are investing significantly more, ten percent above the budget appropriation for 1998."

The Federal Ministry of Transport is responsible for implementing the Federal Government's transport policy programme. Its central instrument for shaping transport development is the Federal Transport Infrastructure Plan (*BVWP*), which is an investment framework plan.

While the Ministry of Transport is represented externally by the Federal Minister of Transport and appears to speak with one voice (cf. Heldmann 2002), internally the Ministry is traditionally marked by considerable fragmentation. For a long time, the Federal Ministry of Transport was composed of four departments, representing shipping, road construction, the railways and air transport. Each individual department was relatively autonomous within the Ministry and consistently pursued the interests of its own clientele. Accordingly, the departments had established close contacts with the respective stakeholders from industry and business, and there were internal conflicts between the individual departments over the allocation of funds (cf. Dienel 2007). At the beginning of the 1970s, the social-liberal coalition made an attempt to bring the individual departments more into step with each other and to integrate them into an overall transport plan. To this end, the transport policy department, which had existed for some time, was steadily expanded, until by the end of the 1970s it comprised almost half as many staff as the other departments combined. "It was the first systematic attempt in the Ministry to establish an integrated transport policy. This entailed combined adjustments in investment policy, research policy, regulatory policy and international transport policy in central units in the department" (ibid.: 217f.). However, this attempt failed – internally due to the resistance of the individual departments, which did not want to relinquish any powers of control, and due to a lack of external support. Not only were the respective stakeholders in the transport industry less than receptive to an integrated transport policy, but also the transport researchers at the universities mostly saw themselves as experts in a specific transport sector, to which they also felt personally attached.

The model of integrated transport policy only experienced a renaissance in the 1990s. This rediscovery resulted in the merger of the Federal Ministry of Transport with the Federal Ministry of Regional Planning, Housing and Urban Development, to form the Federal Ministry of Transport, Building and Housing (BMVBW), when the coalition of the Social Democrats and the Greens came to power in 1998. This expressed the Federal government's aspiration not only to pursue a policy spanning the different modes of transport, but also to establish a stronger link be-

tween transport and urban and spatial development. In this respect, the 2003 Federal Transport Infrastructure Plan was regarded as an essential instrument for implementing an integrated transport policy and as "a pivotal measure for the realisation of an integrated transport system" (BMVBW 2003: 6). Due to its programmatic significance and because it served as a kind of "master plan" for the transport policy framework until 2015, it will be used in what follows in order to evaluate current transport development. Following on from that, we will examine the new *BVWP*, dating from 2015, which extends to the year 2030, in order to be able to assess the future development strategy.

3.1.1 Aspiration

The FTIP 2003 was based on programmatic statements formulated by the Federal Ministry of Transport, Building and Housing (BMVBW) in its *Transport Report 2000*. In the introduction, the central perspective is established, which determines the entire subsequent programme and remains valid today. Due to its importance for the argumentation to follow, the relevant section is quoted here in its entirety: "An efficient and effective transport infrastructure is an essential component of Germany as a strong and dynamic location for business as well as a vital prerequisite for growth and employment. Investments in infrastructure ensure the competitiveness of the regions and strengthen structurally weak areas. They not only create the basis for the enduring and sustainable mobility of people and enterprises, but also increase the quality of life in cities and the surrounding areas. In the construction and expansion of infrastructure, particular importance is attached to the interconnectedness of modes of transport, the promotion of railways and waterways, the optimisation of interfaces between modes of transport and the improvement of intermodal transport. The specific strengths of the individual modes of transport must be utilised in order to be able to fully exploit the existing capacities of the transportation system" (BMVBW 2000: 5).

The BMVBW assumed a direct causal relationship between the construction of transport infrastructure, transport growth, economic growth and resulting employment. The logic at the core of the argumen-

tation was the tight interrelationship between transport and economic growth, with growth as the common target value. Reference was not only made to the historical finding that economic growth has always generated transport growth. In addition, the reverse conclusion was drawn from the retrospective observation and became the essential basic assumption of all further deliberations. According to the unswerving conviction of the Ministry, transport growth is not only the result of economic growth, but also its central prerequisite.[1] The Ministry expected both sustainable transport development and a generally improved quality of life to emerge from the growth dynamics generated by the mutually reinforcing interrelationship between transport and the economy. It is only against the background of these assumptions that integrated transport policy – in the sense of improved networking of the different modes of transport – acquires it importance. Accordingly, the function of cross-modal integration is to ensure smooth growth dynamics in the transport sector in order to generate the economic growth that is meant to benefit all members of society.

Based on the assumption of future growth in transport, which is seen as imperative because it is economically necessary but at the same time is also considered desirable because it promotes social prosperity, the concomitant social and ecological problems were also addressed. "Transport policy thus finds itself caught between conflicting social, economic and ecological priorities. In light of this, the task at hand to satisfy the mobility needs of people and businesses while at the same time keeping the undesirable consequences of transport within tight limits" (ibid.: 7). Given the basic assumptions formulated at the outset, however, the prioritisation was clear. By making transport and economic growth the basis of all further deliberations, attending to social and ecological consequences was relegated to damage containment. Accordingly, to this day, the Federal Ministry of Transport sees its task of steering transport and investment policy as consisting in shifting the

1 This was especially true for the "new federal states" in the former East Germany, for which considerable state input in transport infrastructure was considered a prerequisite for more economic dynamism (cf. Hettlich & Schröder 2004).

disquieting limits of the transport system's performance and capability in the direction of expanded transport capacity. On the one hand, the Ministry supposedly aspires to strengthen rail transport and waterways through investments "so that they can significantly increase their share" (ibid.: 10). On the other hand, however, this is directly followed by a much longer passage that emphasises the growing importance of road transport in the future: "The forecast growth in road freight and passenger transport can only be managed if road transport continues to make a significant contribution to transport management in the future and assumes a corresponding position in the Federal government's investment policy" (ibid.). Consequently, the importance of investment in infrastructure is again explicitly referred to in the same passage:

> "Infrastructure measures are therefore indispensable. *We cannot afford to neglect* investments in transport, since to do so would have a detrimental effect on national economic performance, on social standards and on the preservation of the natural foundations of life and production" (ibid., emphasis added).

That endeavouring to avoid traffic is also necessary is abruptly mentioned in one sentence, but is not taken up again in what comes after, let alone elevated to a systematic strategy (cf. ibid.: 11). Rather, priority is assigned to the status quo as orientation. This becomes particularly clear in the strategic decision regarding the direction to be taken by future transport development. In the Transport Report 2000, three transport scenarios were presented, each of which differed in terms of the future cost burden for passenger and freight transport. Revealingly, the scenario that pursues the strategy of a transport turnaround in keeping with the political-ecological approach, that is, seeking to reduce or avoid traffic, is described as an "excessive demand" on the economy and was thus rejected from the outset as an alternative that could not be taken seriously. Between the remaining laissez-faire and the integration scenario, the Federal government finally opted for the latter (cf. Table 1 and Table 2).

Table 1 Transport Performance and Modal Split in Passenger Transport (comparison between 1997 and 2015)

	1997		Laissez-faire		Integration		Excessive Demand	
	Bn. of Passenger km	Share	Bn. of Passenger km	Share	Bn. of Passenger km	Share	Bn. of Passenger km	Share
Road	750	79.6%	915	79.2%	873	77.3%	768	72.8%
Rail	74	7.8%	87	7.5%	98	8.7%	123	11.7%
Public Transport*	83	8.8%	76	6.6%	86	7.6%	93	8.8%
Aviation	36	3,8%	78	6.7%	73	6.5%	71	6.7%
Total	943	100%	1156	100%	1130	100%	1055	100%
*urban rapid transit rail, underground rail, tram, trolleybus and bus transport of municipal, mixed-economy and private companies								

Source: BMVBW 2000: 58

Table 2 Transport performance and modal split in freight transport (comparison between 1997 and 2015)

	1997		Laissez-faire		Integration		Excessive Demand	
	Bn. of km tonnes	Share	Bn. of km tonnes	Share	Bn. of km tonnes	Share	Bn. of km tonnes	Share
Road	236	63.6%	422	69.5%	374	61.5%	353	58.1%
Rail	73	19.6%	99	16.3%	148	24.3%	169	27.8%
Waterways	62	16.8%	87	14.3%	86	14.1%	86	14.1%
Total	943	100%	608	100%	608	100%	608	100%

Source: BMVBW: 58

Compared to the initial situation in 1997, the expected effects of the integration strategy were rather marginal. The increase in rail transport performance remained negligible at 0.9 percent. This gain in the rail sector was more than offset by a decline of 1.2 percent in public road passenger transport (ÖSPV). The expected modal shift from road to rail was correspondingly low at just under two percent. The expected shift in freight transport was also low. Although rail was supposed to increase its share by 4.7 percent by reducing the cost burden by eighteen percent, the cost burden of road freight transport was also supposed to be reduced by four percent, so that its share would scarcely have been reduced (cf. Table 3). Finally, according to the projection, rail gained mainly at the expense of waterways, whose transport performance was to decline by two percentage points. Road freight transport performance would also be reduced by roughly the same proportion (2.1 percent).

Table 3 Change in cost burdens for users depending on the scenarios

User Costs*	Changes between 1997 and 2015		
	Laissez-faire	Integration	Excessive Demand
Road Passenger Transport	-5%	+15%	+70%
Road Freight Transport	-19%	-4%	+14%
Rail Passenger Transport	real constant	-30% for private long-distance travel	-30% for private long-distance travel
Rail Freight Transport	-7%	-18%	-18%
Aviation	real constant	+9%	+18%
Internal Waterways	-25%	-25%	-25%

* User costs are changes in real terms (i.e. adjusted for inflation) in 1997 prices/costs
Source: BMVBW 2000: 58

In other words, the systematic suppression of a traffic avoidance strategy was also expressed in the choice of the transport scenario. The integration scenario did not pursue cross-modal cooperation aimed at modal shift, with the goal of traffic avoidance. Rather, integration here meant cross-modal participation in traffic growth. The transport and economic growth expected and hoped for by the Ministry within the framework of an integrated transport policy was supposed to contribute to an "efficient", "socially compatible" and "environmentally friendly" transport system (cf. ibid.: 11). On the one hand, this was to be achieved by conserving the existing infrastructure and increasing its efficiency rather than through expansion and new construction (cf. ibid.: 12). On the other hand, shortly afterwards in a separate chapter (3.4.1. "The Role of Roads in the Transport System"), the importance of the federal road network was emphasised at length and a significant – in fact record

level – increase was announced in investment in the expansion and maintenance of the road network (cf. ibid.: 21). Finally, in the summary, the framework is clearly defined within which the activities involved in an integrated transport policy – to the extent that the latter is aiming for a modal shift from road to rail – may move:

> "The shares of road transport in both freight and passenger transport can only be partially shifted; with all the undoubtedly necessary efforts to enable the non-road modes of transport to play a greater role in transport growth, it is also necessary to maintain and expand road infrastructure in accordance with the high traffic loads to be expected. In this context, the preservation of the available infrastructure, which represents a considerable economic value, has priority over expansion measures. On the one hand, the latter serve to enhance the synergy effect of the federal motorways by expanding the existing motorways and closing gaps in the network. On the other hand, they are intended to increase the efficiency of federal main roads by bypassing highly congested roads that pass through towns, villages and other built-up areas and to reduce environmental pollution" (BMVBW 2000: 22).

Only directly following these conventional transport policy ideas, intended to eliminate traffic bottlenecks, do we encounter the decades-old insight that this conventional strategy enjoyed only limited success in the past: "Despite all efforts to eliminate bottlenecks in the road network, such as the anti-congestion scheme, it has to be acknowledged that a congestion-free transport system, albeit designed to cope with heavy traffic loads at peak times, is not feasible" (ibid.). Moreover, already back then one would have expected a reference to efforts to eliminate congestion, which had shown that such efforts always end up inducing even more traffic (cf. Motzkus 2004). If the Ministry of Transport had made this insight the yardstick of its thinking on transport policy instead of following the growth paradigm, it would undoubtedly have settled on a different strategy. As it was, however, all the elements associated with the model of an integrated transport policy were assigned a subordinate status. This was reflected in the resulting concrete transport policy.

3.1.2 Reality

When the coalition government of the Social Democrats and the Greens took office in 1998 and the new Federal Ministry of Transport, Building and Housing (BMVBW) was created, a fundamental "turnaround" in transport policy was announced. However, the first appraisal after the famous 100 days in office turned out to be sobering: "Those who expected a turnaround in transport policy will be disappointed: The Federal Minister of Transport, Building and Housing, Franz Müntefering, by his own admission, is banking on continuity: 'Transport policy in Germany can do without disruptions'; at most Müntefering is prepared to accentuate certain aspects of policy" (Schnell 1999: 163). Neither the substantive orientation nor the financing policy controlled by the Federal Transport Infrastructure Plan (BVWP) underwent a directional readjustment. The main objections can be summarised in three points: First, there was no uniform financing concept coordinated with the individual modes of transport. The (previously-mentioned) fragmented institutional structure of the Ministry resulted in a financing practice that was fixated on the individual modes of transport, which stood in the way of a unified strategy. Second, there was a lack of secure financial planning for the FTIP (*Federal Transport Infrastructure Plan*) that was geared to concrete needs. Since every FTIP in the past had turned out to be underfinanced within a very short time, the proposals formulated were hardly taken seriously any more, but dismissed as "wishful and woolly thinking" (in the words of the then Federal Transport Minister Franz Müntefering in 1999, commenting on the 1992 Federal Transport Infrastructure Plan). Thirdly, and lastly, the internal competition in the Federal Ministry of Transport and the associated disputes over the allocation of funds were intensified due to the highly decentralised decision-making in the Federal states. As a result of the fact that the competing interests of the Federal states are not embedded in a uniform Federal transport strategy, the FTIP has repeatedly been a collection of disparate, barely-related, individual projects (cf. Heuser & Reh 2016). Against the backdrop of this widely-shared criticism and the almost unanimous conviction concerning a profound need for reform, correspondingly high expectations were

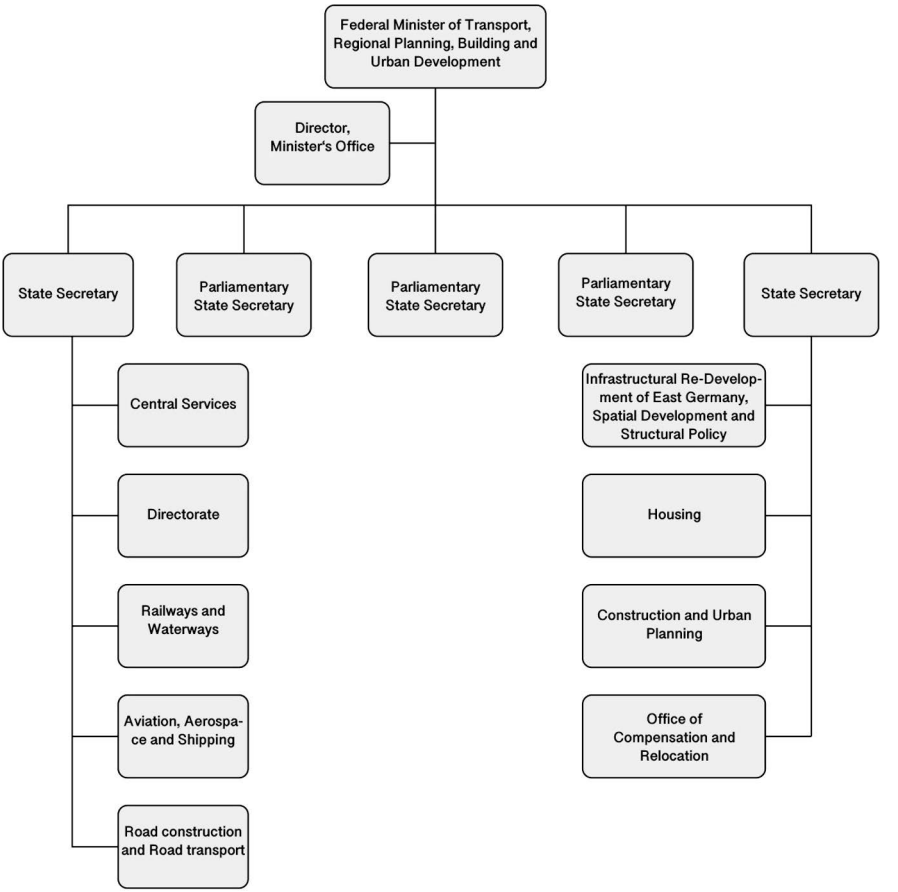
associated with the new FTIP announced for 2003. Now that it has run its course, however, it has become apparent that the implementation of the 2003 FTIP failed yet again, due to structural deficits that, against better judgement, were not eradicated at the time (cf. UBA 2012). The resulting problems persist today, in the form of three dilemmas.

3.1.3 The organisational dilemma

In contrast to the far-reaching expectations, the old structural deficits remained evident. It is true that the dissolution of the old independent Federal Ministry of Transport and its merger with the Ministry of Regional Planning, Building and Urban Development in 1998 was carried out with the declared aim of bringing the previously separate organisational structures more closely into line with each other. Nevertheless, the newly created Ministry of Transport, Building and Housing (BMVBW) was also fragmented in character (cf. Figure 4). On their own, the two separate tree structures of the BMVBW's organisational chart make it clear that the two formally merged ministries in fact exist side by side. Even at the departmental level, there has been no substantive merger.

In the area of transport, a departmental structure was retained that was oriented towards the importance of the individual modes of transport and not towards a substantive, cross-modal, overall concept. The two departments of waterways and shipping of the previously independent department of shipping were added to the departments of railways/waterways and aerospace/shipping respectively and merged into the departments railways/waterways and aviation/aerospace/shipping. In addition, there was a third department, "S", which was the only mono-modal department, grouping the portfolios of road construction and road transport. There was thus no perceptible cross-modal approach in the institutional restructuring. This organisational structure, which is still oriented towards individual modes of transport, was also reflected in the 2003 Federal Transport Plan in the form of parallel financial support for all modes of transport.

Figure 4. Organisational Structure of the Federal Ministry of Transport, Building and Housing



Source: BMVBW 2005

Even the new Federal Transport Plan 2030 has not changed this situation. On the contrary: in the course of the formation of the Federal grand coalition in 2013, the two ministries of construction and transport were again separated, thus putting an end to the idea of integration. While the Ministry of Construction was at least added to the Ministry of the Environment, making synergy effects at least conceivable, the Ministry of Transport again stands isolated, a fragmented, solitary entity. Accordingly, an integrated financing concept has been unsuccessful to date, as a result of the segmented administrative structure of the Federal Ministry of Transport, Building and Urban Affairs. On the other hand, the organisational structure is only one of several structural dimensions and should thus not be overestimated. It is quite conceivable that the individual ministries could be interlinked within the framework of a coherent transport policy strategy and that a common definition of policy goals could also serve to bridge their internal fragmentation. Such a perspective is aimed less at the institutional structures that stand in the way of political objectives, but rather addresses the specific relations of power and dominance in the field of transport policy, in order to influence them in the direction of an integrated transport policy strategy.

3.1.4 The Funding Dilemma

One problem that remains unresolved to this day is the uncertainty of funding for the FTIP. For example, just one year after the 2003 FTIP came into force, its investment base was substantially reduced (cf. Cabinet decision, 23.06.2004). Friends of the Earth Germany (BUND: Bund für Umwelt und Naturschutz) had calculated that for the period from 2004 to 2008 alone, measured against the objectives of the FTIP 2003, there was a shortfall of more than 8 billion euros (cf. BUND 2004). Extrapolated over the entire term up until 2015, the shortfall added up to around 20 billion euros.

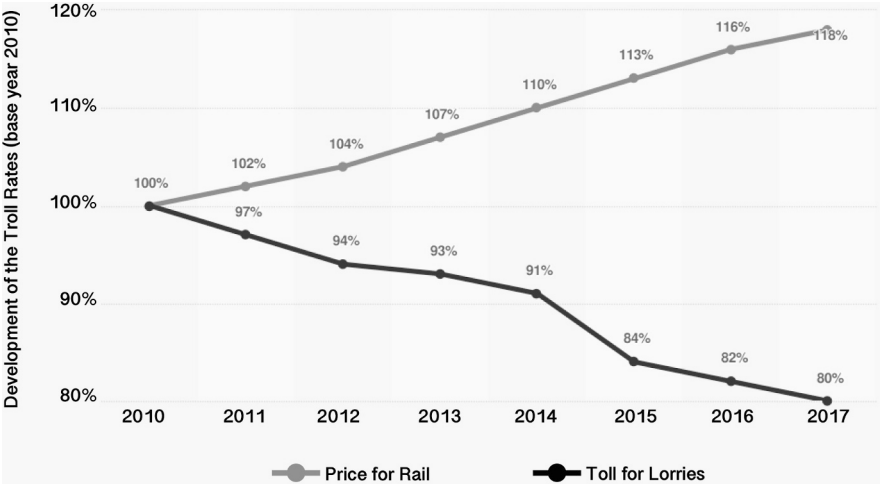
The funding cuts had different effects on the future development of the modes of transport. Although the cuts were supposed to be evenly distributed, the 2003 Federal Transport Plan was used as the basis for calculations, which assumed record investments of 5.2 billion euros an-

nually for road construction. In reality, the budget cuts for road construction therefore merely meant stagnation at the previous year's level and not a real reduction. The situation was different for the railways, for which no increase was envisaged in the 2003 Federal Transport Plan. Here the drop in funds from 4.4 billion euros to 3.7 billion euros resulted in an absolute cutback. The full extent of the cuts becomes clear when one considers the original estimations in the plans for financing the railway reform. The Government Commission on the Federal Railways, which laid the groundwork for the railway reform in the early 1990s, estimated annual investments of 4.5 to 5 billion euros for a successful modernisation and consolidation process of the German Railways (RKB 1993). This investment target was only met in the first two years after the railway reform in 1994. After that, federal funding for rail investments fell again to 2.7 billion euros in 1998. After the investment target put forward by the Government Commission was met again in 2002, there were signs of a trend reversal. This erratic financing practice was not least of all an expression of the structural organisational dilemma of the Ministry of Transport described earlier. The institutional structure, which was oriented towards individual modes of transport, supported parallel funding and at the same time thwarted a cross-modal funding strategy.

> "In light of this situation, the allocation of funds to road and rail in the current Federal Transport Infrastructure Plan is inconsistent. Although the investment offensive for the railways is based on the desire for modal shift, the infrastructure and route planning remains stuck at the point of enabling such shifts and fails to initiate the second step, namely implementing the shifts by putting in place the appropriate framework, out of fear of the declining competitiveness of the German economy" (Kutter 2004: 360). Even the introduction of the highway toll for lorries did not automatically solve this problem, since this new instrument was not employed in order to contribute to a possible modal shift. On the contrary, the highway toll for lorries has been falling continuously for ten years, while – in contrast – the prices demanded for rail routes have risen almost in the same proportion (cf. Figure 5). In addition, there have been a whole series of other political

decisions that contribute to cost increases in rail freight transport and thus systematically worsen its competitive position compared to road freight transport (cf. HWH 2015, Sonntag & Liedtke 2015).

Figure 5. Development of tolls for lorries and rail in Germany. Indexed representation based on average toll rate for lorries and the average price for rail routes



Source: Statistika 2021

Measured against the federal government's ambitions for an integrated transport policy, the strategic aim of which is to strengthen the railways in particular, the current situation thus appears problematic. In order to be able to better assess future development, this snapshot needs to be supplemented by a review of developments over the last few years. In the Transport Report 2000 (BMVBW 2000: 23ff.) the Federal government – more than six years after the railway reform – had already carried out an initial interim assessment. Serving as an orientation here

were the four main goals of the railway reform, in order to examine the extent to which these have been achieved. The goals were:

a) Shifting as much traffic as possible from road to rail
b) Increasing the turnover and productivity of German Rail (*Deutsche Bahn AG*)
c) Introduction of competition
d) Relieving the burden on taxpayers.

With regard to the development of the modal split of road and rail, the Transport Report 2000 comes to the conclusion that services in long-distance passenger rail transport have declined, while local passenger rail transport has increased. All in all, this had led to a stagnation of rail passenger transport services between 1991 and 1999. In rail freight transport, services had even plunged in the same period. The most important goal of the railway reform had thus not been achieved. The same was true for the second goal, entrepreneurial profitability. Although an increase in productivity had been achieved thanks to a major reduction in personnel, this was not linked to an increase in turnover. In view of German Railways' (DB AG) market share of over 90 per cent, competition in rail transport, the third objective of the railway reform, was also not achieved. Lastly, only the fourth objective, providing relief from public subsidy payments, was positively assessed in the Transport Report 2000. In light of these results, the Federal government assessed the overall outcome negatively at the time.[2]

In 2004, after 10 years of railway reform, various parties used the opportunity to take stock once again.[3] In addition, on March 29th, 2004, the public hearing of the Committee on Transport, Building and Housing of the German Federal Parliament on the subject of "railway reform" took place. The outcome: the majority held that transport policy had failed to achieve the four goals of the railway reform that it had set for itself

2 Cf. in contrast the positive interim assessment of the German Railways by Daubertshäuser (2002).

3 Cf. e.g. Ritzau et al. (2003); Pällmann (2004); Gietinger (2004); Ilgmann (2004).

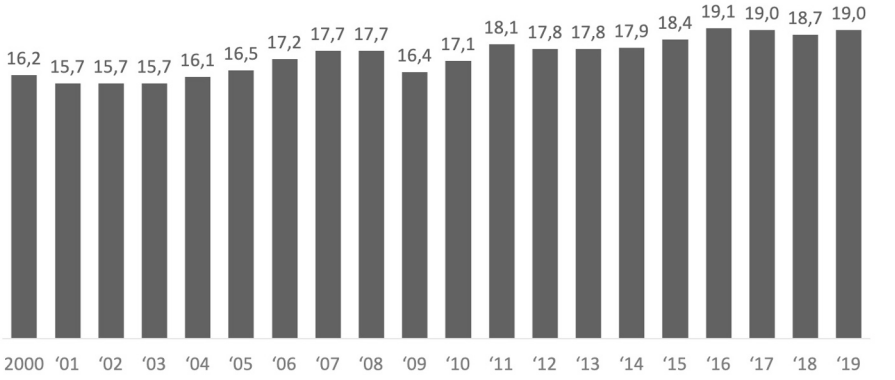
(Deutscher Bundestag 2004). For example, there had been no shift of traffic from road to rail. Particularly in freight transport, the results were clearly negative (cf. UBA & Federal Statistical Office 2004). [4] Turnover per employee has also been negative to date. With a rail transport share of 90 percent, there can also be no talk of a competitive situation. Even the fourth goal, to reduce the burden of subsidies, is now considered, depending on the basis of calculation, either to have been only partially achieved (cf. Mehdorn 2002; Federal Audit Office 2003), not achieved at all (cf. Ilgmann 2005), or as even more negative than before (cf. Wolf 2004; Knierim & Wolf 2014).

Today, after the fifteen-year term of the Federal Transport Infrastructure Plan 2003 has expired, we know that the results turned out to be even more modest than predicted in the integration scenario aimed for at the time (cf. DIW 2014). The volume of passenger transport has declined by around two percentage points, as forecast, and in rail transport it has increased by just under one percentage point. However, once again only local rail passenger transport benefited from the increases in rail transport, which was subsidised for over twenty years with regionalisation funds totalling more than 140 billion euros (cf. Karl 2014). In contrast, the services of German Railways' long-distance rail transport have

4 Railion, the freight transport subsidiary of German Railways, has been recording high losses ever since. As a result, the railway group has repeatedly discontinued unprofitable rail freight services, thus counteracting the political goal of the Federal government to get more traffic onto the rails. Moreover, the Competition and European Affairs Officer for German Railways had already pointed out at the time that in future the group would concentrate its international investment strategies primarily on the lorry business (cf. FR, 9.11.2004). This strategic reorientation – which can be described as a double strategy of withdrawing the railways from the field while at the same time pressing ahead with lorries – contradicts the original idea of integration. While the lorry was supposed to serve as an additional, merely local distributor, complementing the railway to enable door-to-door transport, today it is increasingly replacing rail transport in the field. German Railways took a further step in this direction in 2014 when it discontinued the car-carrying trains and since then has only transported its customers' cars by lorry. Cf. in contrast the Bahn 21 concept of the Transport Club Germany (2004).

been declining, which has been exacerbated by competition from long-distance buses in the wake of market liberalisation in 2013. The situation is even more disappointing in freight transport, where a reduction of two percentage points in road transport had been set as a target, but its volume has actually increased by three percentage points. Rail was only able to benefit from traffic growth by one percentage point and not by five as forecast (cf. Figure 6).

Figure 6. Rail share of freight transport, 2000–2019 in Germany, in percent based on transport performance in tonne-kilometres



Source: Pro-Rail Alliance | 11/2020 | with material from the Federal Ministry for Digitalisation and Transport & Destatis |

The European Court of Auditors attributes this development in particular to Germany setting the wrong priorities in transport policy (cf. ECA 2016). Contrary to the goals of the European Commission, namely to focus freight transport funding on more efficient and sustainable modes of transport, Germany invested more EU funds in roads than in rail between 2007 and 2013. Measured in terms of per capita expenditure, Ger-

many lies far behind Austria and Switzerland in the European comparison (cf. Figure 7).

The new Federal Transport Infrastructure Plan also earmarks more than fifty percent of the funds for investments in the new construction and expansion of road infrastructure by 2030. Accordingly, current forecasts assume a further decline in rail freight transport, to which German Railways repeatedly responds with job cuts (cf. Doll 2017).

Lastly, transport performance on the waterways declined not only by three percentage points, as forecast, but by four, which means that a potentially particularly sustainable mode of transport – along with rail – is losing more and more of its importance.

What were the political consequences of these disappointing results for the 2015 Transport Infrastructure Plan, which regulates financing until 2030, and what are the expected developments? Overall, hardly anything has changed in the conception of the FTIP and the structure of its financing (cf. Heuser & Reh 2016). This is already evident from the fact that the principle of the "backlog", which has been criticised for decades and where projects are carried over unexamined from previous requirement plans, is now being practised again. In concrete terms, this means that the funds for the first nine years of federal transport infrastructure planning have already been earmarked for old projects, i.e. projects that were announced and approved previously but which are not subsequently re-examined to determine whether they are still needed.

An example of this problematic procedure is the extension of Berlin's A100 urban motorway. The decision to finance it was taken in the early 1990s, when it was still assumed that Berlin would experience rapid population growth. When the population growth failed to materialise, the question arose as to whether such an urban motorway was still necessary or sensible. The decision of the Berlin Social Democrats (SPD) to go ahead and build the motorway was therefore not based on transport policy, but on economic policy. The party Bündnis 90/Die Grünen (the Greens), with which the SPD originally wanted to form a coalition, had previously asked the transport minister at the time whether the 400 million euros budgeted for the construction of the motorway could not also

be used for other, much more urgent transport measures, such as the construction of cycle paths. This proposal was rejected by the Minister of Transport, who gave the parties the choice between building the motorway as planned twenty years earlier or returning the funds. While the Greens wanted to forego the construction of the motorway on ethical grounds and return the funds, in accordance with sustainable transport development, the Social Democrats acted pragmatically and stuck to the construction of the motorway, as a way of stimulating the economy. In 2011, the coalition in Berlin between the SPD and the Greens failed as a result of this political controversy, which was decided in favour of economic development.[5]

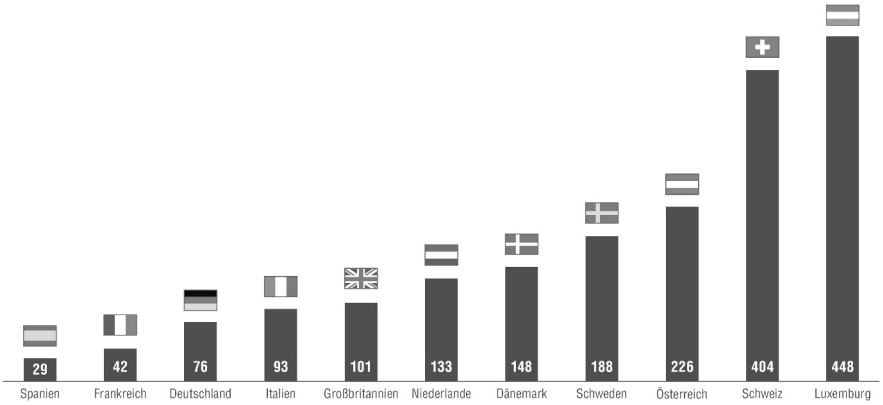
In light of the development of rail transport in recent years – which, when measured against the goals formulated at the outset of the railway reform twenty years ago, can only be described as having remained at a standstill – a negative development is to be expected, as a consequence of the planned absolute cuts in the sector. The fears of Tilman Heuser and Werner Reh seem to be confirmed, in that the present Federal government, in office since 2013, is looking for new sources of funding within the framework of the current underfunded financing structure instead of tackling the reform of the financing and planning system. "It is thus perpetuating the fundamental error of the last 50 years of highway planning far into the 21st century" (Heuser & Reh 2016: 262). Of course, this means that the core element of an integrated transport policy is up for re-negotiation.

The Federal Environment Agency (UBA 2016b, 2016c) recently explained how a change in transport policy in favour of rail transport could be supported politically and the significant role that rail freight transport in particular could play in this change. The existing, ill-advised fiscal incentives in favour of lorries would have to be rectified, whether by reducing the prices for rail routes in relation to the toll for lorries, reducing the tax on electricity or introducing a tax on kerosene

5 The coalition government of the SPD, the Greens and the leftist party, Die Linke, elected in 2016, announced a political turnaround in transport and spoke out against the extension of the A100.

in aviation, or expanding the rail network, which has been in decline for many years compared to the road network, which has been given preferential treatment for decades.

Figure 7. Per capita government investment in rail infrastructure in selected European countries, in euros, 2019



Source: Pro-Rail Alliance | 07/2020 | with material from Federal Ministry for Transport and Digitalisation, EFV (Switzerland: Federal Finance Administration, compilation by Public Transport Assoc.), BMK (Austria: Federal Ministry for Climate Action), MMT (Ministry of Mobility and Public Works, Luxembourg), SCI Verkehr GmbH

The Federal Environment Agency's evaluation of the environmental report (which is required by law as part of the current Federal Transport Infrastructure Plan) is uniformly negative, stating succinctly "that the draft of the FTIP 2030 has in fact 'failed' the environmental assessment" (UBA 2016d: 2). As a result, the current Federal Transport Infrastructure Plan, like its predecessors, once again fails to achieve the goals it set itself.

3.1.5 The Governance Dilemma

The organisational dilemma and the financing dilemma culminate to a certain extent in the governance dilemma. This becomes particularly clear in the relationship between the Federal government and the Federal states (*Bundesländer*), which is regulated by law through the Municipal Transport Financing Act (GVFG). The GVFG defines for which purposes the funds allocated by the Federal government for transport may be used. The financing measures in question are primarily intended for infrastructure; the funding of new, innovative transport services is not provided for (cf. Karl 2008, 2014). Furthermore, the Federal government provides full financing for both the construction and maintenance of federal highways, whereas this has only applied to a limited extent to regional transport infrastructure and environmentally friendly modes of transport such as local public transport and cycling. It follows from this that cities and municipalities are primarily responsible for infrastructure measures, consisting principally of road construction and specifically federal highways. It is not uncommon for the Federal states to choose bypass roads as the reason for building highways. "Due to these structural incentives, regional actors and members of parliament for the constituencies therefore appear to be acting rationally when they push road projects through. This is because the Federal government's road construction investments at least create employment during the construction period, serve the interests of the road construction lobby, pass on follow-up costs to the Federal budget and provide welcome occasions for political grandstanding. Moreover, from their perspective, a less than optimal solution to traffic problems is often still better than none at all" (Heuser & Reh 2004: 43).

While on the one hand the financing procedures lead to a one-sided privileging of road construction, which goes against a philosophy of integration, on the other hand the Federal government can only exert a limited corrective influence on the decisions of the states. Although the projects of the Federal states must in principle comply with the goals of the Federal government, a number of exceptions are formulated in the Highway Development Act, which in the past have repeatedly meant that

it has not been possible to bring the majority of transport projects into line with the specifications of the Federal Transport Plan (cf. UBA 2012).

The new strategy of an integrated transport policy aims in particular to rectify the governance dilemma. In future, the projects of the Federal states are supposed to be embedded more strongly in the overall concept of sustainable transport development formulated by the Federal government in the FTIP. To this end, the advisory board of the Federal Ministry of Transport developed a decision-making procedure that is intended to ensure the selection of transport projects in conformity with an integrated transport policy, with the goal of sustainable transport development (cf. ibid).

This assessment procedure should enable an assessment oriented towards ecological criteria, across all modes of transport. Admittedly, this would have required a fundamental organisational change in the Federal Ministry of Transport, as was originally intended with the creation of the new Ministry. However, as described above, this was not implemented and, moreover, the integration of the two Ministries for construction and transport, which was carried out in 1998, was even reversed. This brings us back to the beginning of the analysis, namely the organisational dilemma consisting in the structural problem of an administration oriented towards individual modes of transport.

3.1.6 Summary

Both the objectives and the transport policy practice of the Federal Ministry of Transport impressively demonstrate the paradigm shift in transport policy from a strategy of traffic avoidance to a strategy of sustainable transport growth, as described above. This means that the idea of a "transport turnaround" with the goal of traffic avoidance has been largely abandoned. Instead, a tight and inextricable causal relationship between economic and transport growth is taken as a given. Accordingly, not only does economic growth induce transport growth, but transport growth is understood as a necessary precondition for economic growth. One could also say that the conviction has prevailed that sustainability can be integrated into economic growth. More than that, the innovation-promot-

ing growth impulses in the transport and economic sector are seen as the basis of sustainable prosperity effects in general. This is undoubtedly a radical change in the manner of viewing the problem and raises the question of the underlying deeper judgement. After all, as late as the 1990s, economic activity without growth had been scientifically established (cf. the overview in Sarkar 2001). In this context, the decoupling of economic and transport growth was also called for, in line with the solution already implemented in the energy sector (cf. Baum & Heibach 1997). It is all the more astonishing when today some of the same authors consider such a decoupling within the framework of an integrated transport policy at best as a long-term strategy for the year 2050 (cf. Beckmann & Baum 2002: 317).[6]

If what was once scientifically demonstrated no longer seems conceivable, because today the conviction prevails that such measures would possibly cause a blockade of economic development in general, then as a result the mental horizons of the actors concerned shrink to the size of the status quo. The half-hearted restructuring of the Federal Ministry of Transport, Building and Housing made this particularly clear. By remaining trapped in the philosophy of growth, the Ministry and those politically responsible turned integrated transport policy into the lubricant of unobstructed growth in transport and the economy. Thus, the strategy of the Ministry was to "secure a self-perpetuating model of growth in road transport, into the future" (Reh n.d.: 8). The original idea of a cross-modal strategy with the goal of sustainable transport development was lost. Instead, the parallel structures remained in place, resulting in parallel financing and amounting to nothing more than parallel activities, running side by side.

In this context, the reform blockades in the Federal Ministry of Transport, Building and Housing are strikingly similar to those of its predecessor, the Ministry for Transport, in the 1970s (cf. Scharpf 1976). It has already been mentioned that in the early 1970s the last major

6 But the authors seem to find even a long-term strategy not entirely convincing: "In the long term, a decoupling of transport development from economic growth seems achievable, but only to a limited extent" (ibid.: 304).

attempt at structural reform of the Ministry of Transport was made, in order to remove administrative obstacles and enable an integrated transport policy across all modes of transport. This was not the least of the consequences of the experience gained from the attempt in the years 1968 to 1972 to establish a set of objectives in the Federal Ministry of Transport with the so-called Leber Plan, which was aimed at a balanced transport policy between rail and road. The analysis of these plans and why they failed concluded even back then that the main reason was to be found in a narrow view of the problem on the part of the ministry officials (cf. Kussau & Oertel 1974). In the foreground of their deliberations were always the restrictions caused by the normativity of the existing situation. At no time was the possibility of expanding the scope for action considered.

> "Thus it is explicable that the scope for dealing with problems cannot be politically expanded beyond what is enforceable, because this requires an understanding of 'political' that includes the discussion of what is desirable and the 'politicisation of restrictions'" (ibid.: 141).

In a comparable fashion, the current Federal Ministry of Transport and Digital Infrastructure (BMVI) is steered by supposed economic constraints to which the entire transport policy strategy is subordinated. The result is both a contradictory set of objectives and a problematic transport policy practice that barely corresponds to the original goals of an integrated transport policy. However, neither the contradictory objectives nor the resulting practice of the Federal Ministry of Transport and Digital Infrastructure can be attributed solely to its structural deficits. Rather, the question arises as to why and how it was possible to redefine the transport turnaround, using the model of integrated transport policy as an artifice to legitimise sustainable growth in transport and the economy. Is there any motivation at all to cast doubt on the status quo, or do positive incentives represented by strong societal interests still prevail today, so that we will continue down this development path? From this perspective, the Federal Ministry of Transport and Digital Infrastructure itself appears to be an expression of social power relations, which are articulated in the concrete interests of individual

social actors. Therefore, in the following, I will examine the constellation of actors in the field of transport policy, which is regarded as the central location for decisions on the direction to be taken by transport policy. The analysis of the field of transport policy field is consequently followed by a contribution to the politicisation of problem assessment in the transport sector.

3.2 The Stakeholders in Transport Policy and their Position in the Field

The following chapter will provide an overview of the most important stakeholders in German transport policy and their political orientation. At the same time, these stakeholders will be positioned in the field of transport policy on the basis of their objectives. This will provide a structured insight into the opaque (con)figuration[7] of the diverging interests of the various actors, which will also make it possible to position the actors in relation to each other and to describe the lines of conflict and convergence between them.

In order to present this complex interplay, I first examine which stakeholders have been actively involved in setting the agenda of transport policy in the past and thereby qualify as stakeholders in transport policy (chapter 3.2.1). The index of political activity presented in the first sub-chapter in turn serves to separate out for closer examination the most active and thus supposedly most influential representatives in the different categories. Following on from that, I present a categorisation of the stakeholders in terms of the role they play in the process of balancing the interests (chapter 3.2.2). Lastly, the representatives are situated in the field of transport policy, where the delineated interplay is illustrated by the integrative sustainability triangle (Chapter 3.2.3).

7 On the (con)figuration approach, cf. Elias (2006).

3.2.1 Identifying the Stakeholders in Transport Policy

In order to be able to examine the relevant stakeholders in transport policy, it is first necessary to identify all the actors that influence the discourse on transport policy, with the help of a structured approach. The screening process is based on several "major events" in transport policy in recent years. It is assumed that the overall state of affairs in German transport policy can be broken down into several individual thematic fields, in which decisions on transport policy are wrangled over. In the course of these temporally-limited negotiation processes, which can involve, for example, defining a strategy in transport policy, the allocation of funds for transport projects and research, or even the development of concrete legislation, the stakeholders try to influence the political decision-making process in their favour. Within this time frame, they show themselves and can thus be identified.

The aim here was to encompass as much as possible of the entire spectrum of actors in the field of transport policy. Accordingly, "major events" in transport policy were selected that lay at cross-purposes to the specific interests of individual modes of transport and in each of which a large number of different stakeholders in transport policy participated.[8] In order to maintain the focus on the German discourse on integrated transport policy, only national events are included in the analysis.

Four such "major events" were identified for the study carried out here; the recommendations of the *National Platform for Electromobility (NPE)*, the elaboration of the *Mobility and Fuel Strategy (MFS)*, the consultation procedure on the *Federal Transport Infrastructure Plan (FTIP)*

8 In contrast, in the debate on the toll for lorries, actors from the road transport sector in particular (e.g. haulage associations, car clubs, etc.) actively participated in the political decision-making process, while, for example, the EU's efforts to liberalise passenger rail transport were mainly influenced by rail operators and passenger associations. Due to the mono-sectoral orientation of the political events, the diverse configuration of actors in the discourse of integrated transport policy is more difficult to apprehend than in the case of events with a cross-modal focus.

and the work of the *Commission on the Future of Transport Infrastructure Financing (FTIF)*.

The NPE and the Commission on FTIF[9] are both advisory bodies to the Federal government. While there is no legally binding connection to transport policy in practice, it has nevertheless become apparent in the past that the work of both commissions has received a great deal of attention in debates on transport policy. For example, the German government's goal of having one million electric vehicles in use in Germany by 2020 was based on the recommendations of the NPE (BMWi 2011). Furthermore, essential parts of the Electromobility Act (EMoG) are derived from the resolutions of the NPE. Stakeholders who belong to the NPE can thus help shape practical transport policy in Germany (BMWi 2015). The Commission on the FTIF also influences agenda setting in transport policy with its work. For example, the 2012 report identified an infrastructure funding deficit of more than 7 billion euros (Daehre Commission 2012: 37). The result was increased pressure on transport policy makers to find alternative forms of financing in order to close the gap. This at least served to encourage the debates on motorway tolls and public-private partnerships (PPP) in road construction.

In contrast to the advisory character of the NPE and the Commission on the FTIF, the MFS and the FTIP are actual work plans of the Federal government that have been developed under the direct influence of stakeholders in transport policy. Both plans were adopted by the Federal Cabinet and thus have a binding character.[10] While the MFS primarily describes the technical options for solving the energy problems in the transport sector, the FTIP sets out concrete investment decisions by the Federal government. Due to the high investment volume of 264 billion euros over 15 years, one can assume that it will have an extraordinary influence on future transport infrastructure and transport development.

9 The Commission on the *FTIF* last presented its report in 2012 under the chairmanship of Karl-Heinz Daehre (Daehre Commission 2012).

10 The MFS and the FTIP were last adopted by the Federal Cabinet in 2013 and 2016 respectively.

The consultation procedure for the FTIP exemplifies the twofold motivation of the stakeholders to participate in the political negotiations. On the one hand, they can influence the concrete development of transport in Germany, e.g. by prioritising investment in a specific mode of transport, and on the other hand, individual stakeholders hope to gain direct economic advantages from the allocation of funds. In the run-up to the new federal transport infrastructure planning, for example, municipalities and federal states compete for investments in the respective local authorities. The construction industry, which is responsible for infrastructure development, also benefits directly from the allocation of funds and thus has an interest in influencing investment decisions.

Participation of stakeholders in the events and involvement of "silent actors"

Within the parameters of the transport policy events in question, a total of 291 stakeholders were identified. To qualify as a stakeholder, a different set of conditions applied in each case. For example, 115 actors participated in the committees of the NPE (BMVI 2015), while the commission on the FTIP included the input of 22 actors in its report (Daehre Commission 2012). The elaboration of the FTIP and the MFS were each accompanied by a consultation procedure or a dialogue with experts, in which 44 and 171 stakeholders participated respectively (BMVI 2013, BMVI 2014).

In addition to the aforementioned platforms for participation in the 'major events', it is also possible for other stakeholders to influence the discourse on transport policy in a roundabout way. This can happen, for example, through direct exchange with political decision-makers (lobbying) or through the influence of the media. Since these stakeholders are not visible at first glance or act informally, they are referred to in what follows as "silent stakeholders".[11] The problem of their 'invisibility' can

11 Thus, the list of stakeholders in transport policy also includes actors who only make their standpoint known at the request of political decision-makers, i.e. they are passive participants in the discourse. These actors elude the analysis of Grandjot & Bernecker (2014: 63), who assume that actors qualify as stakeholders only by being active in transport policy.

be circumvented by referring to the list of lobbyists of the German Federal Parliament (register of associations) as well as the ID list for the Parliament (Deutscher Bundestag 2015; Der Abgeordnetenwatch 2015). The register of associations was used to identify a further 206 stakeholders with a connection to transport policy, while 77 stakeholders relevant to transport policy[12] have a 'house pass' for the German Federal Parliament. The complete list of stakeholders thus comprises 485 entries.[13]

Transport policy activities of individual stakeholders

The data examined provide an insight into the specific transport policy activities of the stakeholders (cf. Table 4). While a large proportion of the actors are either not listed at all or are listed in the register of associations or the ID list of the Federal Parliament (40 %), i.e. they are 'silent actors', 60% of the stakeholders participate actively in the formal procedures. Of these, in turn, 46 stakeholders (9 %) participated in two 'major events", 6 in three events (1 %) and only one in all four events.

12 In this context, stakeholders that are relevant to transport policy are understood as those who either work on issues related to transport policy or are part of the transport industry, e.g. through the production of means of transport or infrastructure.

13 Since some of the stakeholders participate in several events and are simultaneously listed in the register of associations as well as in the house pass list for the Federal Parliament, the complete list is shorter than the sum of the individual events. In addition, the list was expanded to include stakeholders mentioned in Grandjot & Bernecker (2014), Schöller (2006) as well as research institutions with a connection to transport policy and checked to ensure that it is up to date.

Table 4 Distribution of stakeholders based on Index of Political Activity (PAI)

INDEX OF POLITICAL ACTIVITY (PAI)	**NUMBER of stakeholders**	**Share (%)**
0	194	40.0
1	238	49.1
2	46	9.5
3	6	1.2
4	1	0.2
Total	**485**	**100**

Source: Own presentation

The particularly active stakeholders are the Association of German Cities and Towns (*Deutscher Städtetag*: DST), the German Automobile Club (ADAC), the German Association of the Automotive Industry (VDA), the Association of German Transport Companies (VDV), the German Transport Forum (DVF), the Association Pro Mobility and the Federal Association of Road Haulage, Logistics and Disposal (BGL). Particularly noteworthy are the activities of the ADAC, which was the only one of all the stakeholders examined to be involved in all the transport policy events in question. For the DST, VDA and BGL, in addition to the increased activity, it should be noted that each of these stakeholders has a parliamentary pass, providing them with additional opportunities to exert political influence.

The hierarchisation of the stakeholders according to how active they are in transport policy is a first step towards highlighting particularly relevant stakeholders and subjecting them to closer scrutiny. In the following, the number of events in which they participated is described as the Political Activity Index (PAI) of a stakeholder. Since it can be assumed they exert additional influence through the ID list of the Parliament as well as the Register of Associations, it seems to make sense to consider this data. The hierarchisation in terms of "major events", the parliamen-

tary ID list and the Register of Associations is therefore presented in what follows as the Political Influence Index (PEI). The conceptualisation in terms of PAI and PEI will be dealt with later.

In this context, it should be noted that in addition to the mere activity and listing of a stakeholder in the presented data, other characteristics also reflect a stakeholder's capacity to exert influence. For example, Schöller (2006: 52) used the annual budget, membership numbers and citation index to determine the most important representatives. In addition, the number of employees, press contacts, presence of branch offices and leverage, for example through economic clout, can also give a stakeholder special significance in terms of transport policy. However, since in the case examined here the focus was primarily on comprehensibility and simplicity of selection, the factors just mentioned were not taken into account and we only drew on PAI or PEI. While we thus aim at a holistic classification of the actors in the field of German transport policy, future analyses of individual cases should also take into account the other factors mentioned in order to be able to adequately describe the concrete mechanisms of political influence.

3.2.2 Categorising the Stakeholders

The following subchapter presents a systematisation of the stakeholders in transport policy and endeavours to provide answers to two fundamental questions: first, whether stakeholders can be grouped on the basis of certain characteristics, and second, whether it is possible to discern political interplay between the groups and/or what their specific tasks are in transport policy. Since determining the interplay between the stakeholders and assigning characteristics to a category or group are interrelated, the two questions will be answered in combination.

The Groups of Stakeholders

The study by Bjelicic (1990) provides an initial indication of the grouping of stakeholders in transport policy. In his categorisation, Bjelicic distinguishes between stakeholders in practical transport policy and transport researchers. Whereas the stakeholders in research are viewed as a group

without further differentiation, the author divides the actors in practical transport policy into a national and an international category. The organisations representing special interests in the economic sector are divided into further subcategories, whereas state-controlled bodies and special interest organisations in civil society are not further differentiated.

Bjelicic's approach is open to several points of criticism, which will be rectified in the categorisation below. First, it should be noted that the distinction between the national and the international level no longer corresponds to current practice in transport policy. Increasing integration in the E.U. has led to transport policy decisions at the supranational level affecting transport policy decisions at the Federal level in Germany.[14] Through the consultation procedure for legislative developments, which is generally conducted at EU level, supranational political decision-makers and international interest groups can, for example, significantly influence Federal transport policy. Special interest organisations and political decision-makers from Germany also have the opportunity to influence political decisions via the formally regulated EU legislative procedure. The distinction between national and international bodies, with each one only exerting influence at their own political level, thus becomes blurred and no longer seems consistent with a revised categorisation (cf. Chap. 4.2. European transport policy).

Furthermore, it should be noted that the strict focus on subcategories in the economic sector skews the model in favour of special interest organisations from the business sector. For example, while the main category "stakeholders in transport policy research" is not further differentiated, the "special interest organisations" from business are provided with four further subcategories. A subsequent selection of stakeholders to delimit the force field in transport policy on the basis of the categorisation would thus disproportionately represent the business sector in the balance of interests. The final criticism is that the model as presented has many ramifications and thus does not fulfil its claim

14 For example, the amendment of the Passenger Transport Act (PBefG) was initiated by the EU Regulation 1379/2007, which revised the public procurement law in public transport.

to be an easy-to-grasp schematic representation of the stakeholders in transport-policy.

Political Interplay

The results of the work of Grandjot & Bernecker (2014) will provide us with an initial conception of the political interplay between the groups. The authors understand transport policy as a triad consisting of decision makers, decision supporters and influencers. While decision-makers are responsible for making legally binding transport policy decisions, decision supporters prepare and implement them. Influencers, on the other hand, only have social power and have the task of developing ideas in transport policy. According to Grandjot & Bernecker, the relevant decision-makers are mainly governments and ministries, decision supporters are the ministerial bureaucracy and influencers are, for example, associations, trade unions or the business community.

For the purposes of our categorisation here, we will continue using the terms decision-makers, decision-supporters and influencers. In terms of content, however, the category of decision-makers now also includes all actors who are understood by Grandjot & Bernecker as decision-supporters, consisting of the ministerial bureaucracies mentioned above. Since the latter limit or expand the scope of political action by selecting political alternatives, they have a greater significance than mere support in transport policy decisions. Their direct involvement in the formulation of legislative texts or the legally binding interpretation of laws confirms the insight that ministerial bureaucracies are quasi-decision-makers.

In contrast, amongst the stakeholders there is a larger group of actual decision-supporters whom Grandjot & Bernecker categorise as influencers, namely the group "academics and researchers". Despite the obligation to scholarly neutrality, in the view of Grandjot & Bernecker (2014: 73) these stakeholders attempt to influence transport policy either through their own initiative or through a mandate from political decision-makers. Although there's no denying that it is possible for academics and researchers to represent particular interests in transport policy decisions, categorising them as influencers of transport policy

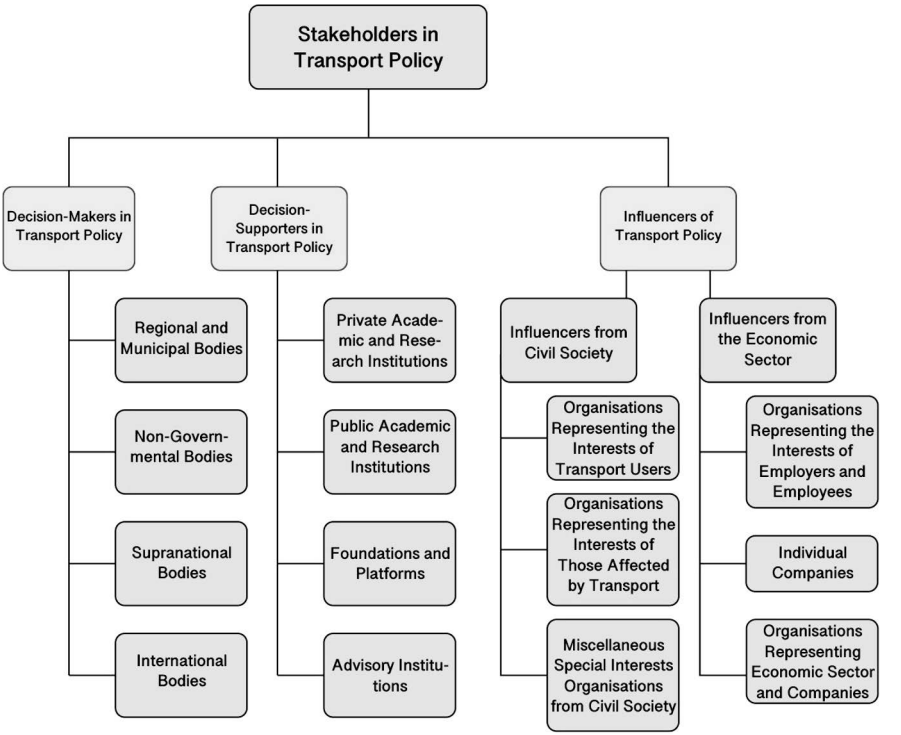
would not do justice either to the social self-image of the research institutions or to their concrete social function. This becomes particularly clear if one compares them with other influencers, such as business or environmental associations, whose motivation is always to represent particular social interests. This cannot be said to apply so definitively to researchers and academics, whose overriding ambition is usually to bring about objective decisions or decisions that are viable for society as a whole. While in the categorisation below influencers thus act *subjectively* or are guided by *particular interests*, decision-supporters in transport policy are oriented towards the common good or *render objective the decision-making process in transport policy.*

(Re-)categorisation of Stakeholders in Transport Policy

Figure 8 presents a synthesis of the findings presented above. Here, the first category of policy-makers represents all bodies and downstream institutions whose task it is to make legally binding policy decisions. As can be seen from the first column, this is the only category that is further subdivided by political level. Decision-makers at the regional and municipal level are, for example, the German Association of Cities and Towns as well as the German Association of Counties. Although these two bodies do not make any legally binding decisions themselves, they do represent their members in the respective regional authorities. Decision-makers at the national level include the *Ministry of Transport* (BMVI), the relevant federal agencies and, downstream, the ministerial bureaucracies. As a decision-maker at the supranational level, i.e. the EU level, the only apparent actor in events relating to transport policy was the Directorate-General for Mobility and Transport of the European Commission.[15]

15 On the international level, although there was no identifiable transport policy maker in the relevant events, the group was added to provide a consistent categorisation and to cater for future developments or other occurrences in transport policy.

Figure 8. Categorisation of Stakeholders in Transport Policy



Source: Own presentation

The second category of decision-supporters is divided into the four groups of private academic institutions, public academic institutions, foundations and platforms, and advisory institutions. The foremost task of the decision-supporters is to render decisions in transport policy objective.

Academic advocacy is divided into two groups (public and private) based on the criterion of funding. The special task of both groups is to conduct research into transport policy alternatives on the basis of crite-

ria of scholarly quality and to make the acquired knowledge available to decision-makers in transport policy.

In contrast, the foundations and platforms have the task, among other things, of providing decision-makers, decision-supporters and influencers with a platform for exchange. Irrespective of their convictions regarding transport policy, foundations and platforms play a major role in the decision-making process, since they can be seen as a link between civil society, business, research and political decision-makers. Foundations and platforms are represented, for example, by party-affiliated foundations, such as the *Friedrich Ebert Foundation* or the *Heinrich Böll Foundation*, or privately-funded foundations, such as the *Bertelsmann Foundation*.

Compared to the established foundations and academic institutions, the advisory institutions are the group of decision-supporters that has received the least attention so far. However, advisory firms, auditing companies or law firms are increasingly being commissioned by political decision-makers to provide expertise.[16] Thus, they have the task of providing policy advice, which, ideally, takes place independently of the respective particular interest. In addition, there are further identifiable sub-groups within this group, which, for reasons of clarity, are not shown in figure 8. The majority of the stakeholders are located in the private sector and are therefore profit-oriented in their actions. Examples include *Dornier Consulting GmbH*, *Ecofys GmbH* and *SCI Verkehr GmbH*. In addition, there are advisory institutions founded by the public sector but operating in the private sector, which almost exclusively take on contracts in the public sector. Amongst these self-proclaimed 'competence centres' are, for example, the *Deutsche Energieagentur GmbH*

16 In this context, it should be pointed out that the advisory institutions have now advanced to become powerful stakeholders in transport policy. In some cases, entire laws are pre-formulated by law firms. In this regard, a request for information from the Green Party reveals that in the 16th legislative period of the Federal Parliament at least three laws were drafted under the aegis of the Ministry of Transport with the help of advisory institutions (Deutscher Bundestag 2009: 15 ff.).

(dena) or *Agora Verkehrswende*. Finally, the last subgroup of advisory institutions is exemplified by institutions such as the *Council for Sustainable Development* or the *German Advisory Council on the Environment*. These stakeholders are not profit-oriented. Unlike the other advisory institutions mentioned, they exclusively provide advisory services for political decision-makers.

The category of influencers in German transport policy is again subdivided into representatives of civil society and the business community. Stakeholders from civil society are characterised above all by criteria of exclusion in comparison with other categories. Unlike political decision-makers, they have no formal right to make legally binding decisions. Furthermore, they are not mandated by the decision-makers to render political decisions objective or to develop solutions that are viable for society as a whole. Instead, they 'subjectify' the discourse, since the social concerns of the actors represented are guided by particular interests. At the same time, organisations from civil society often represent large parts of the population, so that they can be extremely important for the political decision-making process. These actors have specific knowledge in their respective fields of expertise, which is why they are often consulted by policy-makers and decision-supporters. If decision-makers and supporters seek the opinion of influencers on an equal footing, it leads to a more consistent transport policy. That policy-makers recognise this is demonstrated by the advisory processes for the events outlined above.

The influencers from civil society are divided into three sub-categories representing different social groups with transport policy concerns. The group "organisations representing the interests of transport users" includes all clubs, associations, citizens' initiatives or other organised interest groups that represent the ideas of transport users concerning transport policy. These can be, for example, passenger associations such as *PRO BAHN* or automobile and bicycle clubs such as the *Allgemeiner Deutscher Fahrrad-Club* (ADFC), *ADAC* and *Auto Club Europa* (ACE). Organisations representing road safety interests, such as the *German Road Safety Organisation* or the *German Road Safety Council* (DVR), were also included in the group. The interests of transport users are also

represented here, since road accidents occur exclusively among road users.

The second group of influencers from civil society are "organisations representing the interests of those affected by transport". The decisive criterion for classification as a stakeholder in this group is that it is a social sphere that is affected by transport and traffic, but *without* sharing the concerns of transport users. Since this point of intersection issues from the negative external effects of transport, the group almost exclusively consists of interest groups. It should be noted that in contrast to the organisations representing the interests of transport users, the organisations representing the interests of those affected by transport and traffic mostly deal with other political issues besides transport policy. Their participation in the discourse of transport policy can be viewed as reactive with regard to the economic, ecological and social impacts of transport. The relevant organisations include, for example, *Greenpeace*, *Friends of the Earth Germany* (BUND), *Environmental Action Germany* (DUH) or *Federal Association against Rail Noise* (BVS).

The group of "Miscellaneous Special Interest Organisations from Civil Society" includes all organisations that cannot be clearly assigned to the first two groups. These include those actors that represent both the interests of transport users and the interests of those affected by transport and traffic. This special role is played, for example, by the *Parity Welfare Association*, which supports the interests of socially disadvantaged people. One of the Association's concerns is to increase the mobility of people with low incomes, which at the same time represents the interests of transport users. On the other hand, it can also represent the interests of residents who live on noisy roads due to their low income. In this case, it represents the interests of those affected by transport and traffic. Other interest organisations with this special role are the *Federation of German Consumer Organisations* (vzbv), *Germanwatch* or *Mobile with Disabilities*.

Lastly, we have the sub-category "economic influencers" in transport policy, who have several features in common with influencers from civil society. For example, economic influencers also lack politically legitimised power, and influence the discourse on transport policy through

their respective particular interests. Through their know-how, they can substantiate political decisions, which gives them a special significance in the decision-making process in transport policy. In contrast to the influencers from civil society, however, they derive their justification from the private sector. Since the economy is directly dependent on transport, these organisations have a particularly strong motivation to influence transport policy to serve their own interests. Accordingly, the specific requirements of the private sector play a prominent role in guiding political decision-making in Germany.

The economic influencers can be divided into three groups. The first group is the "organisations representing the interests of employers and employees", meaning all organisations that represent a particular interest in different business sectors. These include, for example, professional organisations, trade unions or employers' associations. A decisive criterion for the grouping of this type of organisation is that only one particular interest is pursued within a sector or between several companies. Examples here are the *German Trade Union Confederation* (DGB), *the Association of German Engineers* (VDI) or the *Air Transport Employers' Association* (AGVL).

The second group are private businesses: they act in accordance with economic principles and are in most cases profit-oriented. Due to their respective legal structure (usually a company with limited liability, a corporation with stockholders, or a limited partnership company), most of the stakeholders can be clearly assigned to this group. For reasons of clarity and simplicity, in what follows no further distinction is made between them (for instance, on the basis of the specific transport sector or the industry). Companies that exemplify the group in question are *German Rail* (DB), *Volkswagen* (VW) or *Dekra SE*.

Finally, sector and business organisations aggregate the interests of businesses and represent their political goals. The decision-supporters, who are organised exclusively as associations, are thus given greater weight in the political decision-making process. The group thus includes classic business lobby associations such as the *Association of German Chambers of Industry and Commerce* (DIHK), the *Association of*

the German Automotive Industry (VDA) or the *Federal Association of Road Haulage, Logistics and Disposal* (BGL).

Brief presentation of the distribution of the stakeholders

The categorisation of the identified stakeholders provides an insight into the distribution of the relevant actors in the political decision-making process (cf. Table 5). While 29 of the total of 485 stakeholders (6%) are political decision-makers, 105 (22%) of the actors serve as decision-supporters in transport policy. With 351 actors (72%), the majority are influencers of transport policy. Of these, 55 actors (11%) come from civil society and 296 (61%) from the private sector.[17]

Table 5 Shares and number of stakeholders in transport policy by category and group

Category	Number	Percentage
Decision-Makers	29	6%
Regional and Municipal	4	1%
National	24	5%
Supranational	1	0%

17 The breakdown of the stakeholder groups and the excess of economic influencers makes it clear why Bjelicic's (1990) categorisation shows an imbalance in favour of interest groups in the private sector. It seems plausible that the greater the number of actors, the more distinguishing criteria for the actors can be discerned. The differentiation criteria give rise in turn to the formation of new categories. However, this means losing sight of the fact that the number of actors does not lead to an increase in the range of tasks in transport policy. If the decision-making process is to be adequately represented between the different groups of stakeholders and their respective tasks, the same number of stakeholders must be selected from each category or group. Otherwise, the policy analysis itself would fall victim to the design flaw of favouring the specific interests of certain stakeholders due to their sheer number.

International	0	0%
Decision-Supporters	105	22%
Private Sector	33	7%
Public-Private	45	9%
Advisory Bodies	19	4%
Foundations and Platforms	8	2%
Influencers	351	72%
Civil Society	55	11%
Transport Users	31	6%
Those Affected by Transport and Traffic	18	4%
Miscellaneous	6	1%
Private Sector	296	61%
Businesses	121	25%
Sector and Business Organisations	138	28%
Employers and Employees	37	8%

Source: Own presentation

3.2.3 Situating the Stakeholders in the Field of Transport Policy

On the basis of the foregoing identification and categorisation of stakeholders, they will now be situated in the field of transport policy. The purpose of situating them is to illustrate the relationship between the actors in relation to the overall goal of integrated transport policy. At the same time, by means of the topography, the position of the actors in relation to each other should become evident.

The section is divided into three subchapters. In the first sub-chapter, the methodology of the integrative sustainability triangle (IST) is described in more detail and adapted to the discourse of integrated transport policy. In this context, the advantages of the IST with regard to the diverging interests of stakeholders in German transport policy will also

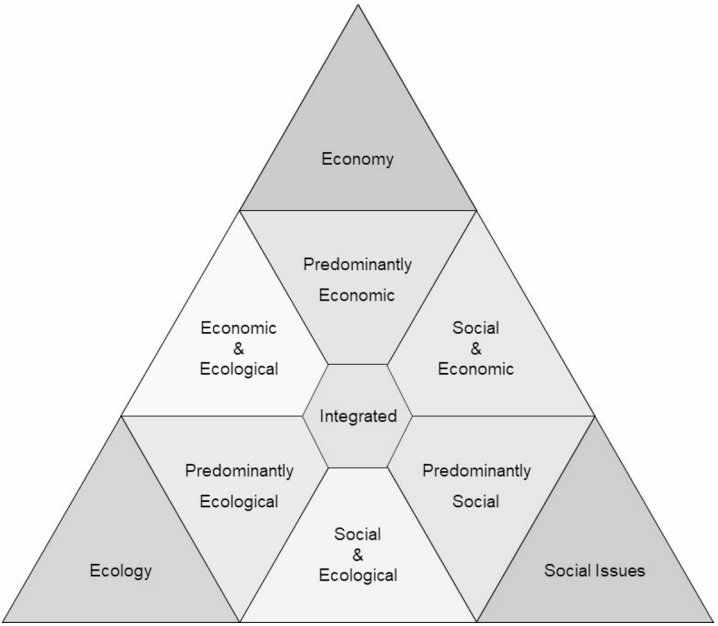
be highlighted. The second subchapter fills out the sustainability triangle with indicators that make it possible to situate the actors' fields of action. At the same time, the indicators can be understood as the most important political points of gravity in relation to the discourse of integrated transport policy. Finally, the sustainability triangle facilitates a classification of the actors on the basis of their objectives. The synthesis of indicators and fields of action thereby provides us with a visualisation of the *topography of the landscape of actors in German transport policy.*

The Differentiated Sustainability Triangle

To systematise the fields of action within the discourse of integrated transport policy, we will apply the integrative sustainability triangle (IST) proposed by Hauff & Kleine (2005). Proceeding from the generally valid guiding principle of sustainable development, which, as we know, is based on the three pillars of economy, ecology and social affairs, the authors voice the criticism that the pillars have so far been considered too much in isolation from each other. This not only neglects important connections between the three integration strategies, but also means that the three-pillar model does not adequately convey the complexity of the political objectives or fields of action. A differentiated sustainability triangle, which presents the three pillars as the outer points of gravity of a triangle and blurs the boundaries between them, could therefore provide a more fine-grained situating of indicators, political objectives and actors (cf. Figure 9). It would also be possible to better describe the relationship between the goals of the different sets of objectives and thus render apparent any possible lines of conflict or positive relationships.

In the following, the IST is first used to structure the objectives in the field of transport policy in terms of the model of integrated transport policy. The three pillars of economy, ecology and social affairs are to be understood as the corner points of the triangle that span the gravitational field of transport policy. The outer triangles of economy, ecology and social issues form the extremities of the 'field of gravity', spanned by the areas of interest of the various actors.

Figure 9. Variables of the integrative Sustainability Triangle (IST)



Source: Own presentation

The intersections between two of the three dimensions of sustainability mentioned at the beginning are represented by the hybrid triangles Economic-Ecological, Social-Economic and Social-Ecological. The boundaries between the "classic" three pillars are thus dissolved, while the degree of integration of the fields of action increases. However, only two of the three dimensions are integrated in each case, while the dimension opposite is largely disregarded in the fields of action.

Furthermore, there are three sub-triangles (predominantly ecological, predominantly economic, predominantly social), each of which still has a strong connection to one of the three points of gravity, but which also have a weak impact on the fields of action of the two dimensions

opposite each other. What is important here is that there is an equal relationship between the two dimensions positioned opposite each other, while the fields of action of the closer dimension are given priority.

Lastly, the central hexagon of integrated transport policy is to be understood as the political guiding principle where all dimensions are fully integrated. All fields of action that display a balanced relationship between the three dimensions of sustainability are gathered here. This can, for example, also be a balanced mixture of the three corner triangles, hybrid triangles and sub-triangles.

Programmatic Indicators of the Integrative Sustainability Triangle

The next step is to identify and classify indicators within the IST. In the following, an indicator is understood as a field of action in transport policy or as the objective of a stakeholder with which the latter positions itself in the process of mediating interests. A stakeholder's fields of action are not limited and result from the set of objectives or the stakeholder's guiding principle. Generally speaking, the guiding principles and self-descriptions of the actors, as documented on their websites, serve as the basis for determining the indicators. These have the advantage that the actors themselves present a concise and precise selection of their most important fields of interest. This limits the danger that the distinct political objectives of the actor in question become blurred in an unlimited list of demands, e.g. in recommendations for political action on the occasion of elections.

The selected actors whose political objectives were coded and used to determine or validate indicators belong exclusively to the categories of decision-supporters and influencers.[18] The decision-makers were excluded from the analysis because, in the ideal case, they are apt to advocate a fair balance of interests conducive to the common good, or an

18 The selection of the stakeholders is based on the Political Activity Index (PAI) introduced in chapter 1.1. For this purpose, an average of three actors were selected from each group. If they were equally ranked according to the PAI, the actors with the higher Political Influence Index (PEI) were then chosen.

integrated transport policy. In addition, in their case there is no political positioning comparable to that of decision-supporters or influencers. Only on the basis of all the decisions made in transport policy would it be possible to establish an indicator for, and to situate, the decision-makers within the IST. On the one hand, this would greatly reduce the comparability of the data, and on the other hand, the sustainable character of the envisaged practical solutions, such as multimodality or electro-mobility, would need to be clarified. However, there is no appraisal here of the instruments of transport policy on the basis of the IST.

Identified Indicators

Figure 10 shows the most frequently occurring indicators in the field of transport policy and assigns them to the features in the IST. The indicators perform three tasks: firstly, as already mentioned, the political objectives of the stakeholders are presented; secondly, the indicators characterise the respective triangles within the IST; thirdly, they structure the discourse in terms of integrated transport policy.

Indicators of the outer triangles ecology, economy and social affairs can be characterised by the fact that they exclusively thematise the respective guiding principle without taking into account the interests of other dimensions. For example, the ecology triangle includes the indicators of nature conservation and environmental protection. In this context, the transport policy objectives are aimed at eliminating the negative impacts of transport on nature. In order to achieve this overarching goal, negative social and economic effects are considered acceptable. Overall, the outer triangle of ecology with its so-called sufficiency strategy represents a sustainability approach strongly oriented towards natural conditions, with the goal of traffic avoidance as the result of a change in transport behaviour.

The strictly economic triangle is characterised by objectives that reflect the aspirations of capitalist economic activity. Here transport policy is understood as a means to maintain and improve the economic cycle as much as possible. To this end, transport policy should, on the one hand, be designed to achieve the greatest possible economic growth and, on the other hand, its implementation should be based on the principle of

equal competition. Further indicators found in this context are the performance principle as well as the principle of full automation and globalised free markets.

Figure 10. Transport Policy Indicators of the Integrative Sustainability Triangle

Source: Own presentation

The strictly social triangle covers all direct human requirements in relation to transport. Here transport policy takes on the task of protecting people's physical integrity and ensuring their mobility needs in order to guarantee the necessary social participation. The relevant indicators are thus human rights, workers' rights and data protection rights, but also the improvement of road safety. The user-oriented perspective plays a prominent role in this context. Thus, transport policy should be ori-

ented towards the interests of users and consider these as decisive. The fields of action within user orientation can be heterogeneous, as demonstrated by the topics of accessibility and low mobility costs, which are not always congruent.

The indicators of the triangles Economic-Ecological, Social-Economic and Ecological-Economic, on the other hand, display a mixed ratio and are inherently closer to the guiding principle of integrated transport policy. For example, the economic-ecological aspiration of economic activity that is resource-conserving or sustainable serves a dual purpose. On the one hand, there is the insight that the destruction of nature is primarily the result of previous forms of economic activity, meaning that the latter must be made more ecologically compatible. On the other hand, there is the realisation within economically-oriented objectives that a transport policy exclusively committed to economic principles exhibits limits to growth, which in turn entail negative economic effects. Consequently, a resource-conserving and thus sustainable transport system should be established for the long-term preservation of the economy. This approach is represented by the so-called efficiency strategy, which aims to achieve gains in efficiency through technical innovations and thus reduce negative environmental impacts (e.g. the development of engines that are more fuel-efficient).

The most important indicators of the social-economic hybrid triangle are the fields of action *infrastructure* and *working conditions*. Both indicators exemplify how demands in transport policy integrate different dimensions of sustainability. On the one hand, a functioning economic system requires a functioning transport infrastructure – for example, for the delivery of goods and commercial transport. On the other hand, infrastructure also fulfils social requirements, for example through leisure traffic. Infrastructure thus also increases the degree of mobility (social objectives), since the potential for movement from one place to another is increased, thus guaranteeing diverse social participation. Working conditions, on the other hand, are a subject area which is not transport-specific and which exhibits interdependencies with the economy and social affairs. On the one hand, the transport

industry provides jobs; on the other hand, it is of social concern that this employment is designed to be as employee-friendly as possible.

The indicators of the social-ecological triangle also constitute a hybrid field of transport policy. The demand for a higher quality of life through an integrated transport policy touches on both social and ecological aspects. Thus, first of all, it is a social requirement to expose people to less traffic stress, which helps to ensure physical integrity. However, this goal can only be attained by managing transport in a more ecological fashion, since it requires reducing the latter's environmental impacts. Another descriptive indicator of quality of life here is reducing traffic noise, brought about by the two outer gravitational points. As the last of the three sustainability strategies in the IST there is the consistency strategy. Since this strategy aims to reduce resource consumption and thereby the environmental impact of transport on the one hand, and on the other hand, it also affects social issues such as the fair distribution of resources, it is positioned in the IST as a dual integration strategy.

The strongest indicators of the "predominantly ecological" subtriangle are land use and climate protection. In addition to the clear reference to ecological aspects, these indicators exhibit a weakened reference to social and economic issues. For example, the economic significance of climate-damaging gas emissions is to be highlighted relative to the pollutant emissions located in the social-ecological triangle. Long-term economic risks are posed by the abstract danger of climate change, which is why the economic dimension is affected. Climate change caused by vehicle emissions, among other things, also has social impacts, for instance through drinking water shortages and flooding. Likewise, the ecological aspect of land use not only raises an issue of social distribution, but the availability of land as a factor in production is also necessary for a functioning economic system.

The decisive indicator of the "predominantly economic" triangle is technology, which likewise includes – albeit to a lesser extent – social and ecological aspects. The field of action is predominantly economic because it has its origins within the economy. The latter brings new technologies onto the market and provides an impetus for their further de-

velopment. At the same time, technology has social impacts, for example through the social changes it brings about. Technology can also increase the negative environmental impacts of transport, for example through the invention of the internal combustion engine in the 19th century, or reduce them, for example through the subsequent development of energy-saving engine technology. This is where the connection to the ecological integration field comes into play. Two illustrative sub-indicators of technology are digitalisation in transport and road safety solutions.

Lastly, the predominantly social indicators "provision of basic supplies and services" and "social aspects" should be mentioned as a field of political action with a weak economic and ecological connection. Politically this triangle stresses the importance of a functioning social system, while at the same time recognising the importance of the economy and social responsibility for an environmentally sound use of resources. Further indicators in this segment of the IST are the provision of basic supplies and services or public transport, as well as the effects of demographic change on transport.

Interim summary

The integrative sustainability triangle as proposed by Hauff & Kleine (2005) has helped us to structure the discourse on integrated transport policy in terms of the three dimensions of ecology, economy and social issues. Three corner triangles, three hybrid triangles and three sub-triangles were formed, each with a different weighting of the dimensions of sustainability. We then identified fields of action in the objectives of the stakeholders in accordance with the different weightings within the integrative sustainability triangle. This made it possible to situate the fields of action that are part of the discourse on integrated transport policy within the integrative sustainability triangle. An important point in this context is the classification of the three sustainability strategies: the efficiency strategy conforms to the ecological-economic hybrid triangle, while the consistency strategy is situated in the social-ecological hybrid triangle. The sufficiency strategy, on the other hand, is placed in the outer triangle of ecology and thus has no aspects that integrate it with the social or economic field.

Visualising the Positions of the Actors

By situating the political fields of action, it is now possible to classify the stakeholders with their different objectives within the integrative sustainability triangle (IST). It is important here that the position of an actor is determined by the general tenor of the organisation's objectives. This means that the subsumption of the coding of all the subsections of the objectives determines where the stakeholder is located in the triangle. If, for example, an actor is active in the strictly economic and the strictly ecological sectors, he is placed in the ecological-economic field. At the same time, the integration of the ecological-economic field with the socio-ecological field means being located in the predominantly ecological sphere and thus closer to the integrating point, since one can ascertain an attraction to economic and social fields of action.

Figure 11 illustrates the programmatic orientation of the stakeholders within the IST. [19] In the following, selected actors will be discussed by way of example and arguments presented for their positioning within the triangle.[20] In this context, the configuration of actors, the position of the actors in relation to each other and their relationship to the respective fields of action will be explored.

The strictly economic camp is exemplified by the *Federation of German Industries* (BDI), *Volkswagen AG* (VW) and the *German Transport Forum* (DVF). These three actors generally advocate a policy oriented towards the key concepts of competition, growth and economic performance. This is particularly clear in the analysis of the BDI, which states:

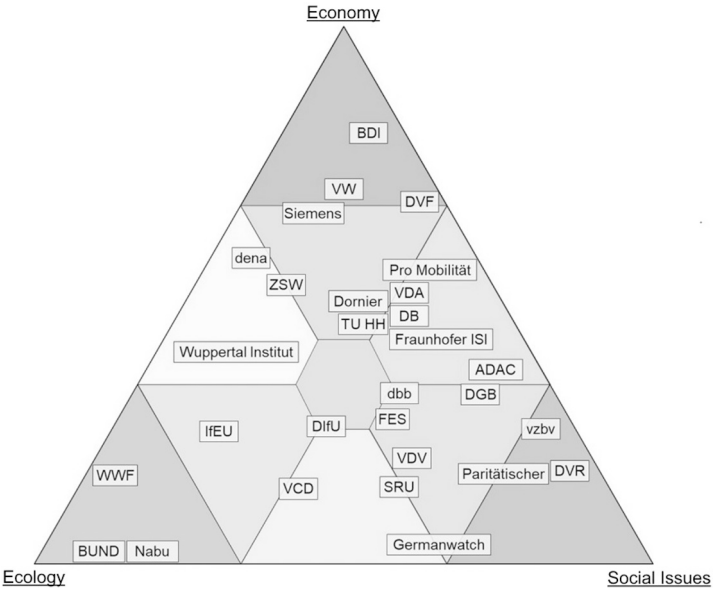
> "Industry constitutes the foundation of the German economy and is decisive for the competitiveness of our country. Prosperity in Germany

19 Although the quantitative data on the positioning of the actors is not visible here, each actor has a specific value that situates it in the sphere of transport policy. This value is divided into three dimensions: ecology, economy and social issues. For example, the stakeholder Volkswagen has an economic value of 70%, a social value of 15% and an ecological value of 15%. A "fully integrated" set of objectives would therefore have the value of 33.3% for each dimension.

20 The selection is made for the sake of clarity; a complete list of all the relevant stakeholders in the field of transport policy can be found in the appendix.

depends to a large extent on the development of the global economy. Internationally competitive companies guarantee that Germany as an industrialised country benefits from globalisation" (BDI 2016).

Figure 11. The Topography of Actors in the Integrative Sustainability Triangle



Source: Own presentation

The implications of this for transport policy can be seen in the guiding principle of the German Transport Forum. It views the "preservation and improvement of mobility as a basic prerequisite for growth and employment" (DVF 2016). Accordingly, a transport policy in concordance with the interests of the DVF is part of Germany's economic policy. Through its "*Group Strategy 2018*", Volkswagen is also gearing the development of the group towards growth in the sphere of international

competition (cf. VW 2014). Although the strategy itself does not formulate any demands concerning transport policy, it is obvious that the objective for decisions in transport policy is to maximise growth in sales and profit and to maintain international competitiveness. At the same time, approaches can be found in Volkswagen's corporate strategy that reveal links to social concerns. Thus, in addition to the focus on economic success, VW also has the ambition to be considered an attractive employer, in order to attract highly qualified and motivated personnel (cf. VW 2014).

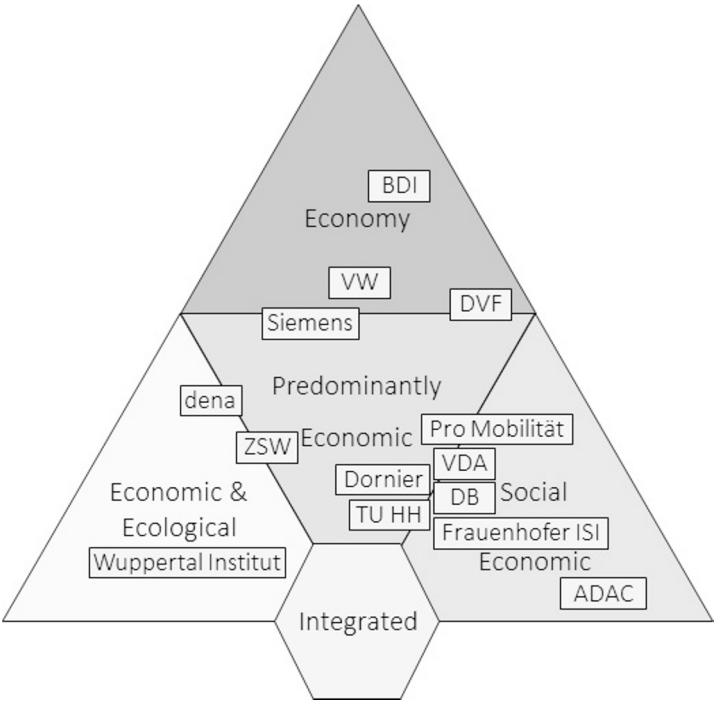
The rudimentarily formulated ambition in the direction of socially acceptable working conditions is an indicator of the transition to the socio-economic sub-triangle of the IST. Similar to the clarification of the social question in the 19th century, the stakeholder here becomes aware of people as a resource and integrates them as a building block of sustainable economic activity. In this way, the socio-economic sub-triangle also marks the historical change from a capitalist industrial society to a modern welfare state. Representative organisations that adopt this partially integrated position are the *German Association of the Automotive Industry* (VDA), *German Railways* (DB), ADAC and the *Fraunhofer Institute for Systems and Innovation Research* (Fraunhofer ISI) (cf. Figure 12).

Politically speaking, for the *German Association of the Automotive Industry*, this position is expressed not only in the technological ambition to "build the best cars in the world" (VDA 2015: 3), but also in the obligation to act responsibly towards its employees (cf. ibid.). The same applies to German Railways (DB), which in its guiding principle sets itself the task of "attracting and retaining qualified employees as a top employer" (DB 2012). In both cases, however, the overriding goal is still economic success. Nonetheless, the social needs of the employees must also be taken into account in order to achieve the goal, which is why a partially integrated positioning of the actors with a stronger connection to the economic gravitational point seems to make sense.

In contrast, the *German Automobile Club* (ADAC) provides a completely different approach to socio-economic integration. On the one hand, the automobile club places the socially-motivated demand on transport policy to provide access to (auto-)mobility as cheaply as pos-

sible (cf. ADAC 2013: 4). On the other hand, this demand is to be met through a high level of competition on the provider side and demand-oriented infrastructure development (cf. ibid.). This opens up the user perspective in transport policy, which focuses even more strongly on people's needs than on economically motivated workplace design.

Figure 12. Segment of the Economically-Inclined Topography of Actors



Source: Own presentation

In addition, the ADAC's demand to expand and maintain transport infrastructure delineates a broad field of action that has the effect of integrating a large proportion of the stakeholders – also those situated outside the socio-economic triangle. Thus, on the one hand – as in the case of the ADAC – the demand can be made with a socially-motivated aspiration for increased mobility and convenient access to it. On the other hand, there is a consensus among the majority of stakeholders that a functioning infrastructure is essential for economic growth and competitiveness (cf. dbb 2013, DVF 2016, VDV 2016, Pro Mobilität 2013, Dornier Consulting 2016). Accordingly, transport infrastructure serves not just users and people, but also the economy. The analysis of the Association of German Transport Companies makes this clear: "a well-developed and efficient transport infrastructure [is] a decisive locational factor for a modern economy" (VDV 2016). In the context of global competition, infrastructure thus goes from being the basis for freight and passenger transport to being an argument for investors to establish business locations and provide jobs. [21]

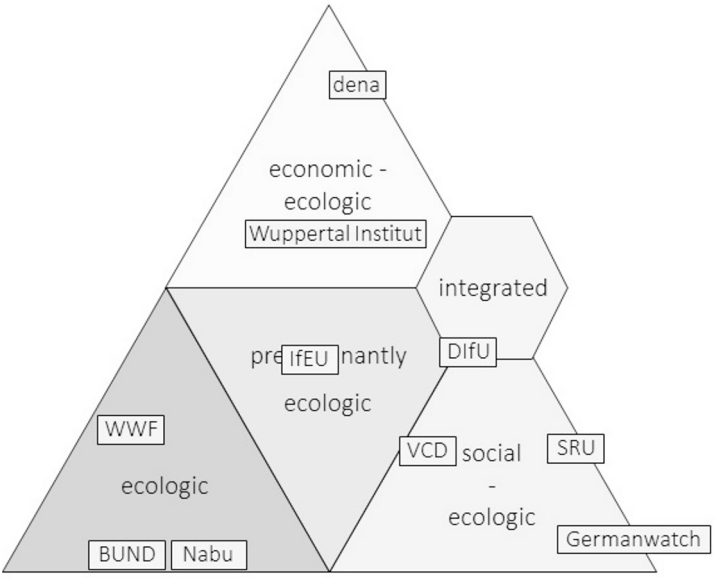
Whereas the argumentation of the stakeholders examined so far has tended to be oriented towards economic policy, the stakeholders situated in the predominantly social triangle see transport policy primarily as a socio-political task (cf. Figure 13).

There is also a connection here to the upkeep of transport infrastructure, as the demands of the German Confederation of Trade Unions (DGB) show:

21 Another demand in transport policy that goes beyond the boundaries of the IST sub-triangles is the improvement of road safety. Thus, there is widespread consensus on increasing road safety or reducing the number of accidents. On the one hand, this objective can be based on the socially-motivated ambition to protect physical integrity, as is shown by the guiding principles of the German Road Safety Council and the German Transport Club (DVR 2014, VCD 2016). On the other hand, this argumentation can also be made from an economic or technological standpoint, for instance, when it is a question of increasing the acceptance of established transport technologies. The VDA (2015: 3) and the DVF (2016) are examples of organisations that pursue economically or technologically-oriented improvements in road safety.

> "For the DGB, transport infrastructure is on the one hand part of the state's provision of public services and on the other hand an important locational advantage for the economy and employment" (DGB 2013: 3).

Figure 13. Segment of the Socially-Oriented Topography of Actors



Source: Own presentation

If the DGB thus also has a socio-economic perspective on transport policy, such demands originate in the social sphere. The stakeholder begins by opening up the socially-oriented field of working conditions, before shifting the focus to securing employment, which is dependent on the economy. The link between the DGB and social policy arises from the fact that, on the one hand, it needs to be clarified how the profits of the

transport industry are distributed within society (working conditions, job preservation). On the other hand, the state is called upon to ensure a satisfactory degree of mobility and social participation for all social groups and thus to increase the quality of life.

The connections between transport and socio-political issues become clear when looking at the programmatic demands of the German Civil Servants' Association (dbb) and the Friedrich Ebert Foundation (FES). The dbb, for example, sees transport policy and planning as being duty-bound to develop concepts that take into account demographic change, especially in rural areas (dbb 2013: 14). As in the case of the DGB, transport policy thus has the task of providing equal access to mobility for all social groups.

Furthermore, the FES identifies conflicting socio-political objectives in the transport sector. On the one hand, it is acknowledged that

> "mobility [...] in our modern society is a prerequisite for [...] participation in [...] social life" (FES 2009: 3), which leads to the demand for a "high degree of mobility for all" (ibid.). On the other hand, "the structures that are required to satisfy mobility needs lead to a reduction in the quality of life, especially in urban areas" (ibid.).

The positive social effects of mobility are thus at odds with the ecological effects of the resulting traffic management. The adverse ecological effects of emissions in turn lower people's quality of life, which leads to a programmatic connection to the level of social-ecological integration. By concurrently taking into account the requirements of the economy, the FES positions itself almost integratively in the IST.

The stakeholders in the strictly social camp deviate from this partially integrated position. These are the *Federation of German Consumer Organisations* (vzbv), the *German Road Safety Council* (DVR) and the *German Parity Welfare Association* (DPW: Paritätischer). It should be emphasised in this context that the strong common social orientation is based on different sets of objectives. The vzbv, for example, sees its task mainly in the protection of consumers vis-à-vis producers. "We fight for fair markets, safe products and clear information" (vzbv 2016). From a transport policy perspective, this implies the protection of users in their consump-

tion of transport offerings. Since, for example, transparent markets for transport offerings ensure increased competition and thus lower prices or profits, this stakeholder tends to be in conflict with the strongly economically-oriented supply side. -Along similar lines, the DPW also sees itself as "committed to the idea of social justice" and to the social and societal policies associated with it (DPW 2014). In contrast, the DVR also demands user protection, but in a physical sense: "The mission of the association is to promote measures to improve the safety of all road users. […] The DVR advocates positions that are apt to save lives and prevent serious injuries" (DVR 2014). Since in this instance appropriate solutions are often seen in technological or infrastructural terms, the relationship with the economic field is more harmonious than that of the vzbv.

Whereas the political demands of the stakeholders have so far mainly involved the conflict between – and the integration of – the economic and social spheres, the representatives of the strictly ecological camp have a special significance in the field of actors (cf. Figure 14).

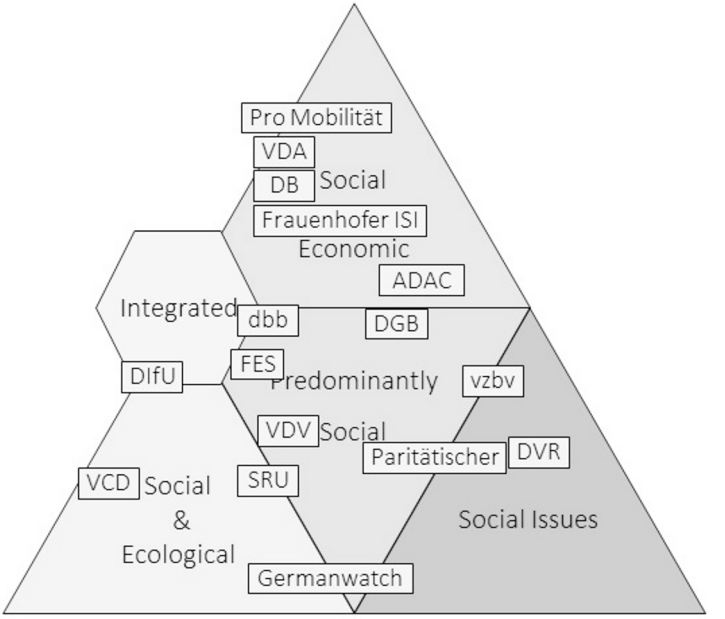
Although the demands of the stakeholders stand in a similarly conflictual relationship to the respective outer triangles, this extends the IST into a third dimension, which entails two further areas of integration. Exemplifying the strictly ecological triangle are the Friends of the Earth, Germany (BUND), the Nature and Biodiversity Conservation Union (Nabu) and the World Wildlife Fund, Germany (WWF). These organisations advocate consistent environmental protection and nature conservation. Nabu describes this in the definition of its goals:

> "We want future generations to enjoy a world worth living in – one that offers a great variety of habitats and species as well as good air, clean water, healthy soil and as large a reserve of natural resources as possible" (Nabu 2016a).

On the one hand, this demand presupposes that people change their current lifestyle; on the other hand, dependence on and the exploitation of finite resources should be reduced to a minimum. From a transport policy perspective, this means a change in transport behaviour with a simultaneous renunciation of fossil fuels. Furthermore, "mobility policy

[…] should aim to drastically reduce traffic where it is superfluous and harmful to the climate and health" (Nabu 2016b).

Figure 14. Section of the Ecologically-Oriented Topography of Actors



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These goals tend to conflict with the requirements of the economy: changing lifestyles and abandoning fossil fuels is incompatible with the current way of doing business. At the same time, placing restrictions on economic growth is held to be acceptable in order to achieve ecological goals. However, the relationship between the social sphere and pronounced ecological interests is ambivalent. On the one hand, the environmental burdens caused by traffic are harmful to people and reducing

them brings positive social effects. On the other hand, imposing a reduction of traffic or a change of lifestyles can restrict individual mobility, which entails negative social consequences.

The favoured approaches to transport policy of stakeholders in the ecological field versus those of actors from the social or economic fields in turn give rise to two integrative options, each of them occupied by actors with different sets of objectives. In line with the clarification of the social question in the 20th century as a result of integrative solutions from the social and economic fields, the two integrative options can thus be seen as the equivalent to the clarification of the ecological question in the 21st century.

The first integrative option encompasses organisations from the ecological-economic field. These are the *German Energy Agency* (dena), the *Wuppertal Institute* and the *Centre for Solar Energy and Hydrogen Research Baden-Württemberg* (ZSW). The focus here is on finding solutions to ecological issues with the help of technology. For example, a central criterion of the development of technology at the ZSW is the "conservation of natural resources" (ZSW 2013). For the Wuppertal Institute, a focal point of its research is "analysing and inducing innovations apt to decouple the consumption of natural resources and the development of prosperity" (Wuppertal Institute 2016). In terms of transport policy, this means privileging efficiency measures in order to reduce environmental pollution. The orientation towards technological efficiency in this context is exemplified by the German Energy Agency and clearly stated in the definition of its goals:

> "*dena* promotes forward-looking approaches with new, intelligent ideas in order to achieve verifiable success in increasing energy efficiency and the more efficient use of renewable energies, as swiftly as possible" (dena2021).

In order to reduce the consumption of resources and environmental pollution, dena thus favours on the one hand the optimisation of existing technologies, and on the other hand innovative approaches such as forms of renewable energy, which are supposed to eliminate the dependence on energy use and resource consumption. Likewise, for the

ZSW, "ecologically, economically and socially viable energy concepts […] are inseparably linked to the use of renewable energies and increased energy efficiency" (ZSW 2013).

Bearing in mind the goals of the stakeholders in question, the linkage between ecology and the economy also becomes evident. On the one hand, the institutions see themselves in a position to "successfully develop key technologies and implement them in conjunction with industry" (ZSW 2013); on the other hand, "challenges in the areas of resources, climate and energy" (ibid.) are central to their work. The solutions offered by technological efficiency have a dual impact, which has an integrative effect on the demands being made. First of all, lower resource consumption can increase growth and prosperity, thus serving to fulfil economic demands. Moreover, ecological goals can be achieved, since lower resource consumption leads to the conservation of natural resources and less environmental pollution. Also fundamental to this balancing of interests are the stakeholders in the purely ecological and purely economic fields. Whereas stakeholders in the sphere of ecological sustainability generally issue demands to reduce environmental pollution and verify compliance with the goals, the technologies to be optimised usually originate from the economic sphere or are transferred back to it after development by stakeholders in the economic-ecological field (opening up new markets and increasing sales).

In addition to these technology- and efficiency-oriented options, the demands of the socio-ecological stakeholders point to additional approaches to finding solutions to the ecological question in the transport sector. The representative organisations in this field are the German Advisory Council on the Environment (SRU), the German Transport Club (VCD), German Watch and the German Institute of Urban Affairs (DIfU).

First of all, it should be noted that, in these instances – unlike in the case of ecological-economic objectives – a connection is established between the environmental impacts of transport and its negative social effects. For example, in the view of the SRU, "automobile traffic […] continues to place an unacceptable burden on the quality of life in urban areas, particularly through air pollutants, noise and the risk of accidents" (SRU

2012: 198). In addition, "the burdens are unevenly distributed socially and spatially" (ibid.). At the same time, "mobility […] is an essential component of social life and is part of the quality of life" (ibid.). The solution to this conflict of goals is therefore seen in "environmentally sound transport" (ibid.). An essential criterion of transport policy is thus to move away from what these actors see as car-centredness. As a result, they call for "speed limits that are environmentally compatible and people-friendly" (VCD 2016), as well as a high share of trips made using diverse forms of eco-mobility (SRU 2012: 199).

In view of the ecological-economic set of objectives already described, technology-based approaches to problem-solving are thus pushed aside in favour of options and goals that are socially-oriented. The social orientation is evident in two respects: first of all, increasing the quality of life becomes the guiding motive for the stakeholders' actions, as opposed to an increase in prosperity. In addition, the demands also take into account the social framework of mobility behaviour. This is shown by the fact that the envisaged paradigm shift in transport policy explicitly includes and calls for a change in the lifestyles of transport users. As these stakeholders see it, an approach that is exclusively efficiency-oriented, with incremental improvements in technology, is not sufficient to achieve environmental goals and fulfil social demands at the same time. This does not mean, however, that the stakeholders fundamentally reject technology-based approaches to problem-solving. Rather, they are considered a valid approach in places where traffic cannot be reduced or relocated without restricting people's mobility. For example, the VCD (2016) states that "one cannot always do without the automobile", which is why the transport club also advocates for "cars that are as efficient and quiet as possible and, in the best case, have multiple users".

3.2.4 Summary

The aim of this study was to structure the diffuse configuration of divergent stakeholder interests in the field of transport policy. Derived from the common goal of an integrated or sustainable transport policy, the ac-

tors were placed in the integrative sustainability triangle on the basis of their objectives.

The presentation of the discourse on transport policy showed that, given an equitable selection of stakeholders representing the gamut of interests in transport policy and society, almost all possible positions in the integrative sustainability triangle are occupied. On the one hand, this means that, as one would expect, certain individual actors mainly represent the positions of one of the three dimensions of sustainability: ecology, the economy and social issues. What is new, however, is that a large number of the stakeholders, as a result of their specific goals, occupy a partially integrative position between the outer positions of the triangle. The existing image of the discourse on transport policy, consisting of static and conflicting interests relative to the three dimensions of sustainability is thereby partially rectified, revealing previously concealed transitions between the sets of objectives.

The field in which social and economic interests are integrated constitutes the most compromise-oriented field in transport policy to date, in line with the proportionately high number of actors in the category. Prominent topics in this context are the development and upkeep of infrastructure as well as road safety, which is traditionally tightly intertwined with German transport policy or has evolved to become so.

In contrast, newer fields with fewer actors are those endeavouring to integrate socio-ecological and economic-ecological interests. These two options delimit the current programmatic dualism in efforts to find answers to the ecological question in transport. If socially viable solutions are to be found – oriented towards an integrated transport policy – the interests of the two groups of actors have to be reconciled through compromises in transport policy. It will not be sufficient to favour one of the two integration options in the formulation of policy.

Even if none of the stakeholders under study here adopts a fully integrated position, this does not automatically contradict the goal or the possibility of an integrated transport policy. Thus, it can neither be assumed nor expected that the stakeholders will orient their objectives in a way that is conducive to an integrated transport policy. Rather, an integrated and thus socially viable compromise should be reached in trans-

port policy decision-making on the basis of the heterogeneous interests. To this end, this study provides two practical aids. On the one hand, the categorisation can be used to select actors for the transport policy decision-making process who each fulfil different social functions. In this way, one achieves a balanced consideration of stakeholders, which is in keeping with the goal of reaching socially acceptable compromises. On the other hand, the transport policy goals of the stakeholders can be illustrated using the integrative sustainability triangle. This makes it clear which compromises between the sets of objectives are necessary in order to achieve a sustainable transport policy.

3.3 Second Interim Summary – from Guiding Principle to Conundrum

> "The future has long since begun: by 2002, about one in three passengers on domestic flights will migrate to rail. […] The switch from air to rail will only be a first step on the way to a change in mobility behaviour." —*Opaschowski 1999*

The debates over transport policy in the 1990s were characterised by a spirit of optimism that gripped all social actors. In the tradition of political ecology, the one-sided dominance of individual motorised transport was critically examined in terms of its ecological and social consequences. For a while, a far-reaching social consensus was established that fundamentally questioned this development. The automobile, it seemed, had reached the limit of its acceptance and the end of the automotive age was proclaimed on all sides (cf. Canzler & Knie 1994). Even the German car industry was caught up in the wave of revolt and was prepared to question its role as a "car-only" manufacturer in order to transform itself into a mobility provider instead, not even shying

away from cooperating with its harshest critics (cf. Vester 1990; Berger & Servatius 1994).[22]

The unanimous goal was a reorientation in the direction of (at the time) marginalised public transport, which was to be upgraded, in particular by moving traffic from road to rail. In addition, ever more observers doubted the social benefits of further traffic growth and advocated a strategy of minimising traffic. The close connection between economic growth and transport growth was to be renegotiated, envisaging a decoupling of this supposedly natural connection. A distinction was made between social mobility and transport, where the former was to be maintained. Lastly, the social paradigm of growth itself was fundamentally called into question. After all, even a successful decoupling of economic and transport growth would contribute to a further increase in the consumption of resources if economic growth continued, as in the energy sector. This debate in transport policy came to a head in the first half of the 1990s with the call for a "transport turnaround" (Hesse 1993).

In the second half of the 1990s, the ambitious project of a transport turnaround was ensnared by the model of integrated transport policy. The discourse of sustainability played a central role in the strategic reorientation of the debates on transport policy, with the 1987 Brundtland Report already constituting an initial caesura. Its significance for a strategic change in the discourse of sustainability was recognised in particular by the opponents of political ecology, which had been strongly represented until then. It opened up new perspectives, especially for economists presenting explicitly neo-liberal arguments: "The expansion of the target field through the Brundtland Report and the consensus-based concepts that followed on from it, e.g. the three-pillar model of

22 The best-known example was the chairman of Ford Germany, Daniel Goeudevert, who had commissioned futurologist Frederic Vester to develop a scenario of future transport development: "The task of the study, carried out using our bio-cybernetic methodology, was to investigate the role of the automotive industry and what possibilities for evolution the future offers for such a widely-ramified economic sector, in a world that is increasingly altered by environmental pressures" (Vester 1995: 9).

the Commission of Enquiry (1994), finally made it possible to break out of the sterile, arrogant and unacceptable ecological dictate" (Willeke 2000: 22). In the German Federal Parliament's Commission of Enquiry into "Protection of the Earth's Atmosphere", the representatives of an integrated transport policy only had a minority vote. The breakthrough of the neo-liberal reformulation of sustainable development has been traced and precisely dated by Jörg Tremmel: "With the publication of the Commission of Enquiry's conclusions in 1998, the ecology faction began to lose its discursive sovereignty" (Tremmel 2003: 149).

Our study here has shown that a comparable power shift has taken place in the debate on transport policy. In the transport sector, the situation with regard to the model of integrated transport policy has since then been similar to the one Holger Rogall (2003) described for sustainable development as a guiding principle. All the actors are in favour of it, in principle. However, a closer look at their specific goals then reveals clear differences.

> "The majority of the groups of actors are not prepared to take the appropriate steps in light of the new guiding principle of sustainability and the threat to the natural foundations of life. It is obvious that not only the actors who are directly involved, but also the majority of those indirectly involved are pursuing symbolic instead of solution-oriented politics. In part (e.g. sections of the private sector), sustainability is defined in such a way that its core is turned on its head. According to this definition, economic development should not take place within environmentally-determined boundaries, but rather environmental protection should be restricted by the framework of what is economically acceptable" (ibid.: 295).

The contradiction between aspiration and reality is explained in the case of integrated transport policy, as well as the discourse of sustainability, by the necessity of cultivating an image by means of symbolic politics, a necessity recognised by all actors. What is practised serves to camouflage their real interests. In this context, it is interesting that certain actors, such as the automobile industry, apparently do not consider such symbolic politics necessary when it comes to integrated transport pol-

icy. This can most likely be explained by the fact that the industry has not yet been subject to any public pressure on this front.[23] This in turn highlights the socio-political functioning of integrated transport policy as a guiding principle. Following Eblinghaus and Stickler (1996), a distinction can be made between a formal and a substantial level: on the one hand, we have the fuzzy formal concept of the guiding principle, with which everyone is basically in agreement, and on the other hand, the substantive definition of the concept of integrated transport policy by the actors involved, which is essentially mediated by the distribution of social power. In essence, this reveals a struggle for the power of interpretation.

The guiding principle of integrated transport policy fulfils an ideological function by pursuing a strategy of harmonisation that sidesteps factual conflicts of interest and in this way denies existing unequal power relations. What Hartwig Berger states regarding the discourse of sustainability as a whole also applies to integrated transport policy, the goal of which is sustainable transport development: "Today's discourse of sustainability differs from the earlier ecology movement not in that it is more comprehensive, but in that it puts aside the movement's partly radical challenges and weakens its strong impulses for social change. Not criticism and conflict, but consensus and communication are the guiding concepts of the discourse of sustainability. The demand to achieve change through and by consensus of all participants – an 'axiom' of most Agenda 21 activities – rapidly leads to omitting or downplaying structures of power distribution and social prestige, and even more so clashes of interests and conflicts. In this respect, the discourse of sustainability is a convenient imposition on power elites" (Berger 2003: 19). In other words, the model of integrated transport policy functions as an instrument for subordinating competing discourses to a neoliberal transport strategy. This is particularly reflected in the dominant discourse, which assumes that more transport leads to more economic growth.

Apart from the unequal power relations in the field of transport policy, a dilemma of sustainable transport development is that it is

23 Even after the emissions scandal in 2015, little has changed.

barely appreciated as a 'public, indivisible good'. Such general interests, which concern everyone equally, lack organisational motivation. "In a thoroughly organised society, it is precisely those interests that don't lend themselves to being organised and don't give rise to conflicts that are politically most difficult to perceive" (Vieler 1986 cited in Alemann 1989: 191). If, however, the idea of an integrated transport policy with the goal of sustainable transport development committed to the common good is to be maintained, then transport policy, which has been underestimated up to now, would have to be fundamentally revalued. Transport policy should no longer remain the plaything of economic vicissitudes, but should be given a louder voice in the political concert by being understood as a significant part of social policy.

In order to come closer to realising this goal, three successive steps are proposed here:

First, a theory of sustainability based on political economy must be established for the transport sector. The often criticised, vague discourse of sustainability has to be made specific for transport. A primary goal could be to recall essential insights from transport research that seem to have been lost in the course of the neo-liberal 'backlash' of the last 25 years (cf. Schwedes 2016). These include basic insights that – if they were taken into account – would render implausible a justification of transport policy based on eradicating traffic jams and managing traffic flow. And here too, there is no need to reinvent the wheel. On the contrary, the politicisation of the transport sector, periodically pursued for decades with the model of integrated transport policy, is still on the agenda. Such a project is, of course, diametrically opposed to the current trend in society as a whole towards the economisation of politics, which is particularly evident in the transport sector.

Secondly, after this initial stocktaking by researchers and the resulting self-assurance, a political transport strategy must be developed that is distinct and decisive in form and content. The pivotal task is to aggressively thematise and publicise the social conflicts necessarily associated with such a strategy, preceded by a politically- and economically-informed elucidation of the configuration of social power in the field of transport policy (cf. Schwedes 2013b). For if the goal is to understand

sustainable transport development as a "public, indivisible good", then transport policy, unlike in the past, must be negotiated more publicly and in this way gain a new status in the public awareness. The handling of the emissions scandal in the German automotive industry, which was only possible due to an opaque power structure between politics and business, constitutes a recent acid test in this regard.

Thirdly, at this point at the latest, the question arises as to how to achieve a discursive shift in favour of the sustainable transport development we have in mind here, when the resources of social power, especially in the transport sector, are so unequally distributed in favour of the economic actors. In this context, it should be recalled that economic power was never able to be directly translated into political power. Rather, economic power is always – sometimes more, sometimes less – politically 'broken'. How strong political influence turns out to be ultimately depends on concrete social power relations. Accordingly, after researchers have gone through the process of self-appraisal and have developed a consistent set of objectives in transport policy, thought should be given to strategies for forming social alliances in order to achieve hegemony in transport policy. While the importance of integrated transport policy for sustainable transport development can be substantiated by researchers, it must above all be politically desired.

The analogy of the 'turnarounds" in transport and energy is both instructive and politically encouraging in this regard. After the Grand Coalition under Angela Merkel initially reversed the nuclear phase-out decided by the previous coalition of the Social Democrats and the Greens, the nuclear disaster in Fukushima, Japan, in 2011 brought about another political change of course with the decision to phase out nuclear energy and to consistently support the expansion of renewable energy (cf. Becker 2011). Since then, the four reputedly all-powerful energy companies in Germany have been fighting for their survival by increasingly turning to renewable energy. The parallel with the transport turnaround raises the question of whether the German automotive industry is more capable of reform than the energy industry. If this is answered in the negative because there are no identifiable efforts at reform, the question

arises as to whether a catastrophe of some kind is also required in the case of the transport turnaround in order to motivate politicians to act.