
**Workshop on „Good Practices and New Tools for Financing Transport Infrastructure
Benchmarking of Transport Infrastructure Construction costs**

September 8th, 2014

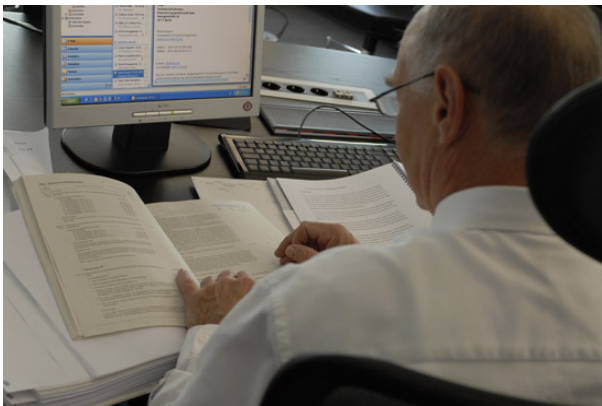
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Overview of the VIFG

Duties of the VIFG and Government Objectives



- The VIFG was founded in 2003 by the German Government at the same time as tolls were introduced in Germany.
- **The Government's Objectives in Founding the VIFG**
 - Emphasizing a link between toll collection and allocation of toll revenue (§ 11 Abs. 1 BFStrMG)
 - Through the end of 2010: Using the same administrative institution for investments in waterways, rail and roads
 - As of 2012: Implementing of the closed finance system for federal trunk roads
 - Competence centre for PPPs: supporting the public authorities
- **Earmarking Toll Revenue (§ 11 BFStrMG*)**
 - The Federal Government is entitled to toll Revenue
 - Toll Revenue are to be used for operation and monitoring of the toll system as well as for compensation payments to the transport industry
 - The remaining toll revenue is allocated to the federal budget and is solely used for investments in the transport infrastructure, such as federal trunk roads
 - Revenue and expenses are itemised in the federal budget

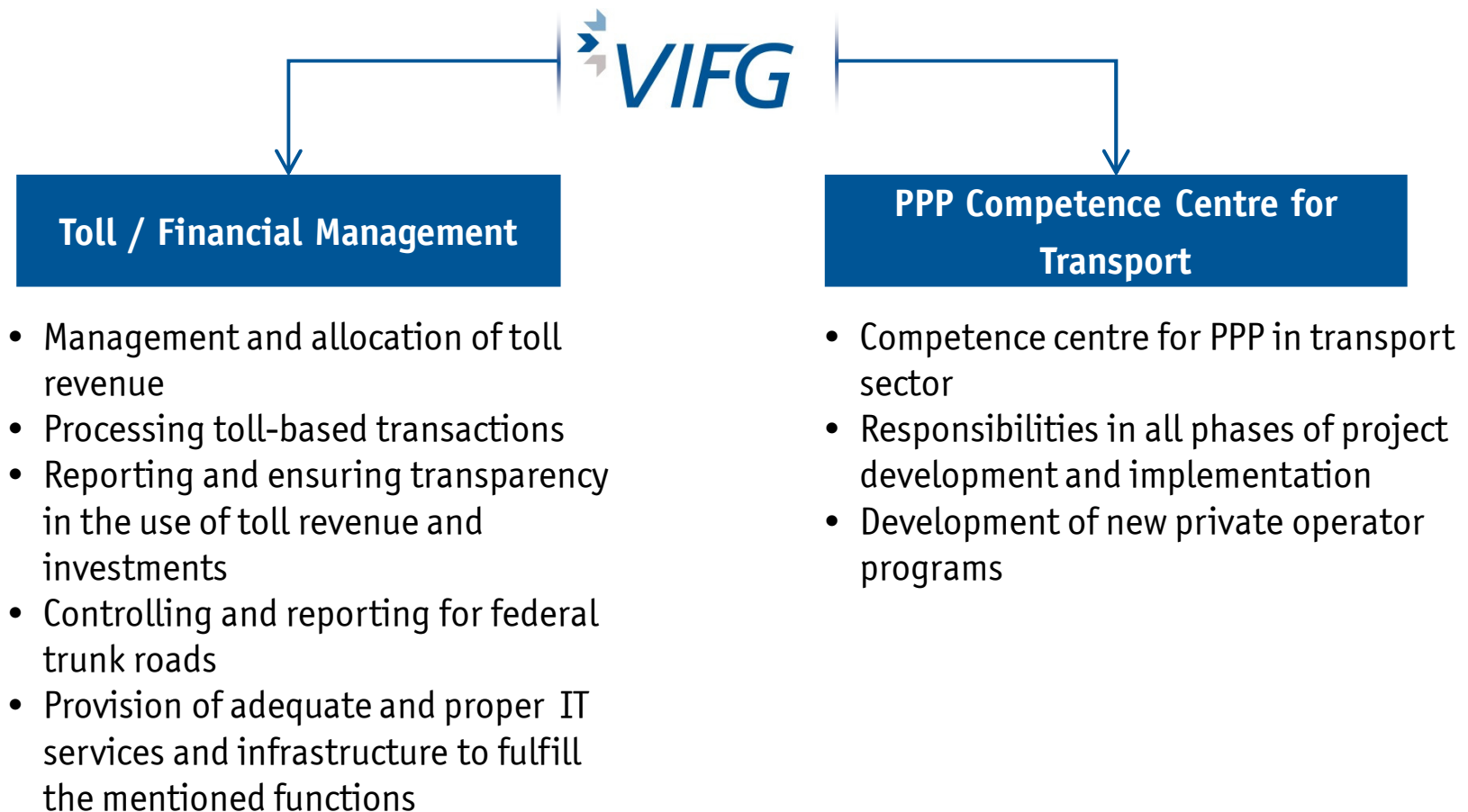
*Bundesfernstraßenmautgesetz (BFStrMG) = Federal Trunk Road Toll Act

HGV Toll on Federal Trunk Roads – Data and Facts



- **12,800 km of federal highways: all subject to toll**
- **39,900 km of federal roads: of which 1,100 km is subject to toll**
- **Total investment need: min. € 8 bn. per annum**

Functions of the VIFG



Duties of the VIFG



- As an institution, VIFG guarantees that the revenue collected from trunk tolls is properly allocated and invested in the Transport Infrastructure.
- In 2013 some 53,000 payments were made totalling a payment volume of approximately 3.4 billion euro.

Financial Management System (FMS)

- **The VIFG via FMS manages all toll-based transactions in Germany.**
- **Each Federal Transport Project is registered in the FMS with related data concerning planned costs and construction schedules.**
- **Thus every amount paid to the contractors (construction companies) is collected in the FMS.**
- **Payment to the contractors can only be granted, if projects are registered in the FMS.**

Financial Management System

- **Based on this system VIFG is able to report on the exact usage of the toll revenue and ensures transparency.**
- **In addition to the toll revenues the federal budget for the road infrastructure includes other state revenues.**
- **Since the FMS is flexible and expandable, VIFG will also be able to process the whole budget which is foreseen for the federal transport infrastructure.**
- **The Financial Management System is based on a Standard SAP-Software which is expandable and offers a variety of accounting and controlling tools for the public sector.**

Financial Management System

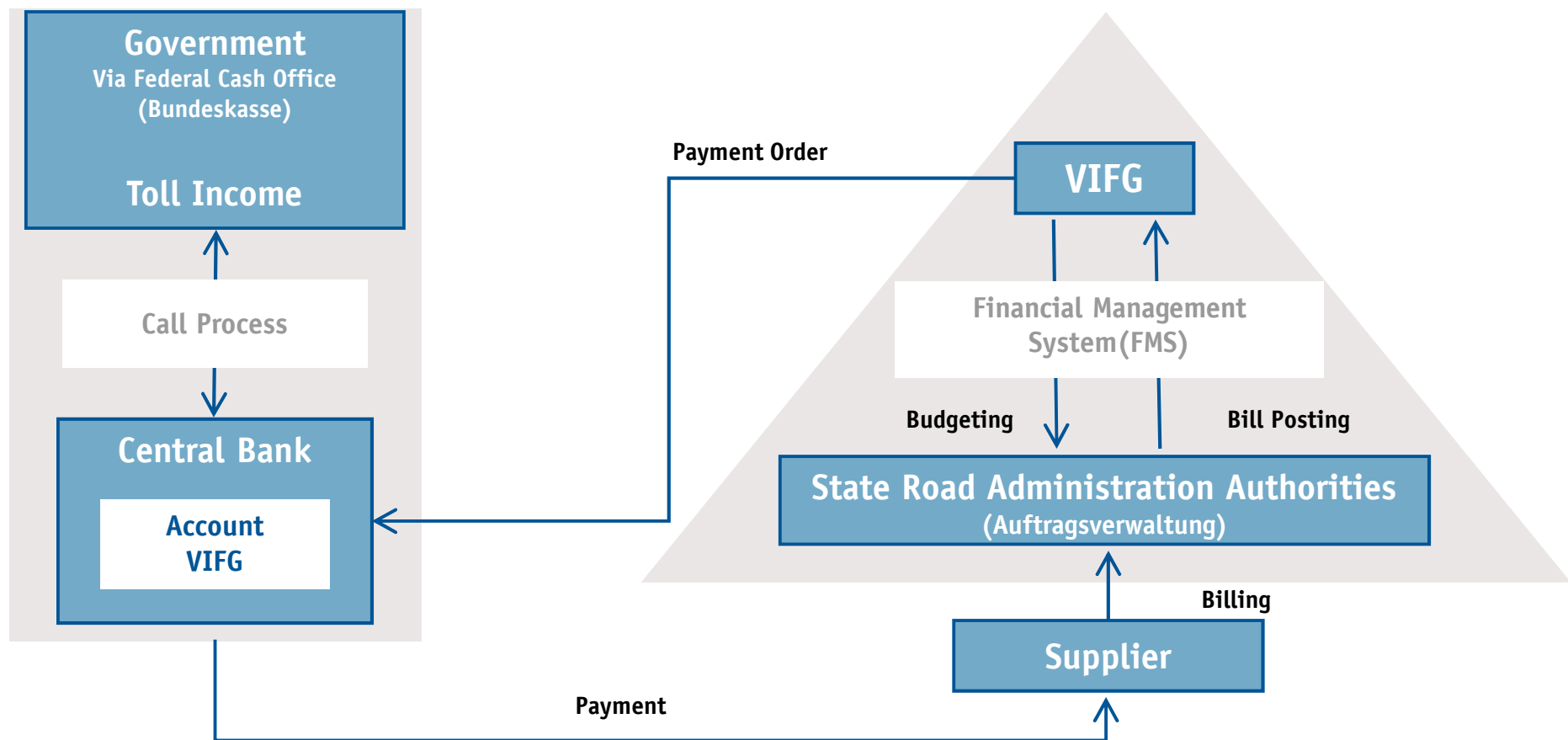
- **Currently the expenditures of all projects which have been financed by toll over several years are captured in the FMS.**
- **This investments are divided in following assets: Construction works, Acquisition of Land, Maintenance, Bridges, noise protection walls, Tunnels, Resting Area, ...**
- **A more detailed costs structure is planned to be integrated into FMS. This allows comparison of the costs of similar projects.**
- **In the long term calculation of Benchmarking Costs for the Transport Sector is realistic.**

Investments from Toll Income Managed by the VIFG

in €m	Federal Trunk Roads	Rail	Waterways	Total
2004	1115	247	271	1633
2005	1755	450	312	2517
2006	1298	683	227	2207
2007	1091	954	265	2311
2008	1312	1059	369	2740
2009	2100	1104	442	3646
2010	2041	1032	380	3453
2011	3312			3312
2012	3485			3485
2013	3371			3371
Total	20879	5530	2266	28675

Desvision Toll / Financial Management

Transaction Process for Payments from Toll Income



Current Situation and Challenges in Germany

Current Situation and Challenges in Germany

- **Germany's Länder (regional governments) play a key role in submitting proposals for infrastructure projects to be funded through the federal government's budget.**
- **This project proposals have a material influence on overall planning.**
- **The substantial weight of regional demands bears the risk of fragmented project planning, which is driven by regional considerations.**

Current Situation and Challenges in Germany

- **The level of investment in the transportation infrastructure is relatively low in Germany. Available funding is not sufficient to meet the growing demand.**
 - **There are also shortcomings regarding the stability of the available funding.**
 - **The annual funding cycle is not aligned with the multi-year (i.e. medium-term) planning horizon anchored in the Federal Transport Infrastructure Plan.**
- **In other words, the system does not provide a stable funding framework which allows for reliable medium-term financial planning for transportation infrastructure projects.**

Current Situation and Challenges in Germany

- **This is a challenge for major infrastructure projects, which are typically characterized by a multi-year planning horizon.**
- **Annual fiscal policy decisions and resulting short-term changes to the available funds can lead to disruptions in the course of construction projects.**
- **Consequently, the allocation of funding on a fiscal year basis tends to drive up project costs.**

Experts Report on Road costs

Experts Report on Road costs



- The legal basis for Toll Charges is the so called “Wegekostengutachten” (Expert Report on Road Costs)
- The Report was created by an expert group mandated by the Ministry of Transport to calculate the costs of the transport infrastructure for the years 2013-2017.
- The Toll Rates are determined according to the calculations of this report.
- The calculations are based on assumptions, estimations and empirical values.

Structure of the Report on Road costs

The costs are divided in to

1. **Cost of Capital (=Road Infrastructure Assets)**
2. **Running costs**

Calculation of the Gross Asset Value

- **Asset are devided into following groups**
 - Land
 - Earth work / Superstrucuture
 - Bridges
 - noise protection walls
 - Tunnels
 - road sign bridges
 - Resting Areas
 - ...

Calculation of the Cost of Capital

Calculation of the Cost of Capitals - steps:

1. **Gross Asset Value of the Road Infrastructure**
(Inventory of Road Assets x Asset Standard Prices)
Prices / Valuation at „Replacement costs“
2. **Depreciation on the Gross Asset Value**
3. **Interest Cost (Opportunity Cost of Capital)**

Calculation of the Cost of Capital

Relevant Prices are based on:

- **empirical values**
- **assumptions**
- **estimations**
- **Various Studies**
- **..**

Experts Report on Road costs

Extract from the Report on Road costs

Asset Groups - Inventory	unit	
Earth Work	million. m ²	465
Superstructure	million. m ²	357
Bridges	million. m ²	20
Tunnels	km	159
Service Area	total number	1,505
...		

Source: Wegekostengutachten 2013-2017 (Experts Report on Road Costs)

Service Area	number	Cost / Service Area* (Million Euros)
Service Areas > 200 Parking Spaces	32	14.200
Service Areas > 100 Parking Spaces	136	7.100
Service Areas < 100 Parking Spaces	137	3.550
...		

Source: Wegekostengutachten 2013-2017 (Experts Report on Road Costs), Planning Costs not included

*Costs depends on quality of the Service Area and Location

Experts Report on Road costs

Extract from the Report on Road costs

Bridges	Brdige Area in m ²	Cost in Euro / m ²
Viaduct	3,388,795	1,390.00
Suspension Brdige	30,647	2,470.00
...		

Source: Wegekostengutachten 2013-2017 (Experts Report on Road Costs), Planning Costs not included

Running Expenses

Running costs in divided into:

- **Maintenance**
- **Operation**
- **Police and Administration**
- **Tolling System**

Relevant Publications

Wegekostengutachten 2013-2017 (Experts Report on Road costs)

https://www.bmvi.de/SharedDocs/DE/Anlage/VerkehrUndMobilitaet/Strasse/wegekostengutachten-2013-2017-endbericht.pdf?__blob=publicationFile

Planning and financing transportation infrastructures in the EU – A best practice study

http://www.rolandberger.com/media/pdf/Roland_Berger_Financing_transportation_infrastructure_in_EU_20131030.pdf

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