Bundesministerium
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Forschungsprojekt

Zürich Prozess - Gründliche Analyse des Konzepts TOLL+

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Erstellt durch:

INFRAS AG und Herry Consult GmbH

Mit den Partnern Université de Fribourg, TCI Röhling – Transport Consulting International und Prime Consulting Services e.U.

DECLARATION OF ZURICH

TENDER SPECIFICATIONS
ATTACHED TO THE INVITATION TO TENDER

Invitation to tender

concerning

"In-depth analysis of the TOLL+ concept with focus on questions regarding an optimal design and a practical implementation of the TOLL+ concept in order to maximize benefits and prevent unwanted effects"

Final version, 31 May 2016

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I. SPECIFICATIONS OF THE CONTENT

I.1. Introduction

I.1.1. Declaration of Zurich concerning the improvement of road safety, in particular in the tunnels in the Alpine zone

On 30 November 2001, in the presence of representatives of the European Commission and on the initiative of Switzerland, the Ministers of Transport of Germany, Austria, France, Italy, Switzerland and Liechtenstein adopted the "Declaration of Zurich concerning the improvement of road safety, in particular in tunnels in the Alpine zone", in the light of serious accidents in the Alpine tunnels. Since then, meetings of Ministers have taken place in order to consider the progress of the work and to adjust priorities in Regensberg on 11 May 2004, in Sedrun on 14 November 2005, in Lyon on 20 October 2006, when Slovenia joined the group as a member, in Vienna on 7 May 2009, in Leipzig in May 2012 when Liechtenstein joined the group, and again in Leipzig in May 2014.

Having taken road safety issues as its starting point, the implementation of the declaration has proceeded to the stage of identifying measures that may be coordinated between the concluding Alpine countries for influencing road traffic and encouraging a shift to alternative modes of transport, with four main areas of work. One of these areas is

- **The management and regulation of transalpine road freight transport.**

Following an initial study entitled "Best Research on Traffic Management systems for Transalpine Road Freight" (final report 2008), that represented a first step of a comprehensive approach, three further studies that analysed possible traffic management instruments in greater detail, have been carried out:

- **ALBATRAS:** Alignment of the heavy traffic management instruments ACE, AETS and TOLL+ on a comparable scientific, technical and operational level taking into account the introduction of different thresholds in order to analyze transport flow impacts on Alpine routes (Ecoplan Consortium), Final report, January 7 2011

- **EFFINALP:** Analysis of economic effects of establishing traffic management instruments in Alpine corridors (INFRAS Consortium), Final report, January 13 2012

- **LEGALP:** Legal consistency of ACE, AETS and TOLL+ with 1) European Union Law 2) Agreement between the European Community and the Swiss Confederation on the Carriage of Goods and Passengers by Rail and Road 3) Other EU-Agreements and international multilateral and bilateral treaties and agreements on trade and transport 4) National Law of Austria, Italy, Germany, Slovenia, France and Switzerland and possible adjustments in case of discrepancies (Waldegg Rechtsanwälte and Bignon Lebray Avocats, Santa Maria Studio Legale Associato, Professor Stefan Storr, Univerza v Mariboru, Wenger Plattner)

The following paragraphs present a brief overview of the ALBATRAS, EFFINALP and LEGALP studies. For more details, refer to the report “Further development of the TOLL+ concept”, which in chapter 1 provides a synopsis of the work done and the main findings derived so far, as well as to the final reports of the respective studies (refer to Annex 1:).

During the period of the Swiss presidency in the “Suivi de Zurich”, the working group on heavy goods traffic management systems carried out three studies: a basic in-depth study named *ALBATRAS* on traffic impacts of the three main traffic management instruments *Alpine Crossing Exchange (ACE)*, *Alpine Emission Trading System (AETS)* and *TOLL+*, involving different levels of thresholds for transalpine traffic. In the various scenarios analyzed in *ALBATRAS*, the traffic impacts in terms of either reduction or detour of road traffic as well as modal shift effects from road to rail have been demonstrated over the whole Alpine Arch B+ for the different systems. The study established clearly that the higher the level of the fee for an Alpine crossing is, the more road traffic is reduced (or detoured) and the higher a modal shift to rail can be observed, independently of the type of instrument.

The analysis of economic effects at national and regional level including logistical and social impacts with specific focus on the road transport sector (so called *EFFINALP* study) illustrated the specific impacts on regions, transport modes as well as transport-intensive sectors. The final results showed that the overall impact on the regions would be relatively low. However, some Alpine regions, specifically on the southern side of the Alps, as well as other regions would be significantly affected in terms of economic output and employment, and the road haulage and logistics sector in some specific regions would bear a disproportionate share of the burden. These negative effects can be mitigated by introducing compensation mechanisms for short distance and local transport or specific relief and flanking measures (e.g. promotion of combined transport). Another outcome of the study is that some long- and medium-distance transports can also be significantly affected.

Finally, *LEGALP*, a comparative legal analysis of the three instruments in the different countries assessed the legal compatibility or incompatibility of the different traffic management instruments (with national and European legislation, bilateral / multilateral agreements) and possible alternatives or ways of “problem solving”. Among the instruments analysed in this study, *TOLL+* turned out to be the most compatible with existing legislations among the analysed states, whereas the application of *ACE* and *AETS* would require major modifications of existing legislation.

I.1.2. Existing transport policy framework and objectives

EU transport policy has for a long time concentrated on providing mobility for the economy, businesses and people in an efficient and sustainable way. Creating an internal European transport market has been a target, focusing also on sustainable development and solving the environmental problems related to increasing transport demand. Rising levels of congestion, pollution and CO_2 emissions and improvement of safety, notably in road transport, have been the main issues addressed in recent years.

Future EU transport policy needs therefore to provide the mobility for economic growth and social welfare while, in parallel, tackling the negative effects that the growing volume of traffic causes. The same objective was also addressed by the European Commission in its 2001 Transport White Paper, and in this context the term “sustainable mobility” was coined.

Next to actions foreseen in the 2001 White Paper, such as boosting rail and maritime connections for long distance freight transport, additional instruments are needed to achieve these objectives. They include a freight logistics action plan; intelligent transport systems to make mobility greener and more efficient; a debate on how to change mobility of people in urban areas; an action plan to boost inland waterways; and an ambitious programme for green power in trucks and cars.

In June 2006, the European Commission adopted a mid-term review of the European Commission's 2001 Transport White Paper (Keep Europe moving - Sustainable mobility for our continent) as an orientation for the future EU transport policy. In its review, the European Commission stated that the main goals of the White Papers of 1992 und 2001 are still valid.

This mid-term review therefore served as a possible guideline for policies in the Alpine countries without prejudicing national legislation. For example, in point 6.3 of the mid-term review reference is made to smart charging: "[I]n addition, where an increase in infrastructure capacity is not possible charging can help to optimise traffic. Fees may be modulated to take environmental impact or congestion risks into account, in particular in environmentally sensitive and urban areas. In such areas, other forms of capacity allocation could be used such as market exchanges of transit rights.

Furthermore, possible guidelines for policies in the Alpine countries must be in conformity with the EU legal framework, such as Treaty principles (such as non-discrimination, free movement of goods, proportionality), Directives/Regulations (e.g. Road charging Directive, Tunnel safety Directive, project and strategic impact assessment, noise, air and so on,) and judgements of the European Court of Justice, combining different approaches and priorities at the European level.

In the 2011 white paper ("Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system"), the European Commission adopted a roadmap of 40 concrete initiatives for the next decade to build a competitive transport system that will increase mobility, remove major barriers in key areas and fuel growth and employment. At the same time, the proposals will dramatically reduce Europe's dependence on imported oil and cut carbon emissions in transport by 60% by 2050. By 2050, key goals will include: no more conventionally-fuelled cars in cities, 40% use of sustainable low carbon fuels in aviation; at least 40% cut in shipping emissions as well as a 50% shift of medium distance intercity passenger and freight journeys from road to rail and waterborne transport. All of which will contribute to a 60% cut in transport emissions by the middle of the century.

Facing these transport policy goals, effective measures aiming at shifting road transport to rail are needed. As described in the above mentioned studies, the TOLL+ concept could be an efficient measure to contribute to this transport policy.

Existing transport policy framework and objectives at the national level

The Alpine countries (Germany, France, Italy, Slovenia, Liechtenstein, Austria and Switzerland) and the European Union signed the Alpine Convention on the protection of the Alps on 7 November 1991 and have reacted to the specific situation in the Alpine countries by adopting a wide variety of programmes and measures:

In **Austria** in the year 2011 a national climate protection law (Klimaschutzgesetz) was launched. To this law action plans were elaborated (seehttps://www.bmlfuw.gv.at/en/fields/environment/Climateprotect.html). In research and development programs financed by the climate and energy funds (https://www.klimafonds.gv.at/home-en-US/) which is financed by Ministry for Transport, Innovation and Technology and the Ministry for Environment, many projects to reduce greenhouse gas emissions from transport. Also in the program Klima aktiv Mobil of the Ministry for Environment a lot of "decarbonisation" measures are supported (see http://www.klimaaktiv.at/english/mobility/Mobility.html). For the Transport-Health- Environment Pan-European Program (THE-PEP), the Austrian ministries for transport, for environment and for health elaborated a common report on actions in the field of environment protection and transport, according to the objectives of the THE PEP (see https://www.bmlfuw.gv.at/umwelt/luft-laerm-verkehr/verkehr-laermschutz/internat_koop/thepep.html). Moreover it has to be pointed out that the Austrian toll system for HGV and busses provides a road toll reduction for less pollutant HGV according to the EURO classes (see http://www.asfinag.at/toll/toll-for-hgv-and-bus) and will internalize external costs for air pollution and noise as of 1st January 2017. A main pillar of the Austrian policy to reduce greenhouse gas emissions of transport is shifting cargo and transport from road to rail and on the inland waterway Danube. A lot of measures to do so have been elaborated, as for example the promotion of combined transport. More information can be found on http://www.bmvit.gv.at/en/verkehr/transportation/combinedtransport/index.html.

In **France**, following a large national public debate (starting in 2007 and called " Grenelle de l'Environnement "), the Law of August 3, 2009 relating to the implementation of the Grenelle Environment and the Law of July 12, 2010 on national commitment for the environment, set goals in the field of transport, reducing greenhouse gas emissions by 20% by 2020 to bring them back to 1990 level. Numerous devices, regulatory, incentive or informative were set up or developed to contribute to the changes. However, five years later, in 2012, the context of the necessary energy transition led to a new large public debate. Following it, the Law of August 17 th, 2015 relative to the energy transition for the green growth was adopted, setting goals to strengthen the ways to fight against the air and environmental pollution. This new legislation contains numerous measures relative to transport in its title number III called "Développer les transports propres pour améliorer la qualité de l'air et protéger la santé " ("Developing clean transport to improve air quality and health preservation"). These measures aim in particular to reduce the dependence to hydrocarbons, by accelerating the retirement of car fleet, HGV, coaches and buses and their replacement by low emissions vehicles, to have 7 million points of load for electric vehicles in 2030 and to favor the public transportation as also carpooling and cycling. France sets notably the goal that 10 % of its energy consumed in all modes of transport comes from renewable sources by 2020 and 15 % by 2030. Planning (transport schemes, mobility plans, restricted circulation areas) and taxation (bonuses for conversion, travel expenses, tax credits) are the main levers to achieve it.

Germany completed its national strategy for sustainable development and adopted the Federal Transport Infrastructure Plan in 2003. This Federal Transport Infrastructure Plan aims, among other, at ensuring sustainable mobility compatible with the imperatives of the environment, and at reducing the negative effects on the environment. All projects, i.e. also those relevant to transalpine traffic, are, before their inclusion in the Federal Transport Infrastructure Plan, subject to a uniform evaluation according to the criteria relating to cost-benefit analyses, environmental protection and nature conservation and regional planning (including urban development).

In **Italy**, the national strategies are organized as a general transport and logistics plan (PGTL), which was adopted in 2001 and which favours transalpine and intra-alpine mobility. The PGTL is accompanied by transport plans at various local levels, preferably linked to local mobility. It aims at limiting the exponential growth of road traffic and its concentration to major routes. In March 2006 the Italian government's CIPE (Interministerial Committee for Economic Planning) also adopted a logistics plan prepared in January by "Consulta Generale dell' Autotrasporto e della Logistica". The II National Plan of Logistic was adopted by above mentioned Consulta in July 2012. In July 2013 the Ministry of Infrastructure and Transport adopted also the National Infrastructure Plan for charging vehicles powered by electricity.

In **Slovenia**, the Resolution on the Transport Policy of the Republic of Slovenia (Intermodality, Time for Synergy), which was adopted by the National Assembly at the beginning of 2006, defines – in terms of the starting points, vision, objectives and measures – the basic trends of a transport policy for the future. The main indicators of this transport policy originate in mobility, accessibility, the environment, safety, economic development, and optimal exploitation of resources, intermodality/interoperability and a balance among transport systems.

In **Switzerland**, transport policy in the Alpine region focuses on a shift of freight from road to rail. The Swiss population has approved this policy in several referendums. By building two new transalpine railway base tunnels and by introducing a heavy-vehicle fee (HVF), Switzerland has taken important steps to move freight transport to rail in the past few years, including a set of measures promoting combined transport and as well as a programe for completing the 4m corridor on the access routes to the Gotthard axis (transport of 4m high trailers in combined transport) . In order to improve road safety after the fire in the St. Gotthard road tunnel, Switzerland has also developed the “Tropfenzählersystem” (drop feeder system) and launched several studies on future traffic management systems (reservation systems, Alpine Crossing Exchange).

The **Liechtenstein** transport policy is influenced by numerous conditions within Liechtenstein, the region and at a European level. The transport policy is based on the spatial structure and influenced by the economic-, environmental- and territorial policies. The Liechtenstein transport system, resulting from the attractive location and the small size of the country, is strongly linked in the region. Regional, cross border transport infrastructure affects the transport system in Liechtenstein as well. Spatial planning in particular plays a central role, since mobility and energy use are closely linked. In 2015 the government decided that the country-wide greenhouse gas emissions should be reduced by 2030 by 40% compared to 1990 levels. Reaching the emission reduction targets are primarily by domestic measures, in particular by energy, transportation, environmental and economic policy measures pursued. Traffic at approximately 37% is the largest polluter of greenhouse gases, followed by industry buildings with 20% and households with 14%. The greatest potential for reducing the total emissions is made in the areas of energy efficiency, renewable energy and transport. The Liechtenstein Energy Strategy 2020 is, amongst others, based on frame conditions of the European political environment. The European directives and targets for climate package and energy (the so-called 20-20-20 targets) are setting ambitious targets which Liechtenstein will follow. The Energy 2020 strategy identifies the greatest potential by a rearrangement of the individual motorized transport to public transport and active transport (walking and cycling) and by the overall reduction of fuel consumption of the vehicle fleet.

I.1.3. Synopsis of ALBATRAS and EFFINALP with a view to TOLL+

In brief, *ALBATRAS* describes *TOLL+* as a concept of differentiated toll systems, based on two principles:

- the internalisation of the external effects of road freight transport in terms of air pollution (e.g. differentiation by Euro classes), noise and congestion, by implementing the “polluter pays” principle as described in Directive 1999/62/EC as amended by Directive 2011/76/EU on charging of heavy goods vehicles for the use of infrastructure (so called Eurovignette), and,

- the optimisation of the use of the road network with differentiated toll rates according to the time of day.

In the *TOLL+* concept, the more important characteristic of these two principles is the principle of the internalisation of external costs.

As the two other possible traffic management instruments ACE and AETS, TOLL+ aim on the one hand at optimizing road use in minimizing congestions and on the other at internalizing external costs (such as accidents, pollution, noise and congestion) of road transport, leading at the same time to a modal shift towards rail transport.

Similar to the *ACE* and *AETS* concepts, the *TOLL+* concept requires a right to cross the Alpine passage. Whereas the "currency" for the *ACE* and *AETS* have been ACP or emission certificates, in the *TOLL+* concept, the price of the "passage permit" is the charged toll rate. Within this concept, the toll may be charged as one (modulated) rate or in addition to the already existing toll schemes in the member states of the Zurich Process for the passage over or through the Alps. The passage over the Alps is defined by the section which needs to be crossed and its length.

ALBTRAS and EFFINALP moreover show that certain exemptions or special regulations for the local traffic or short distance travel might be necessary. This is an aspect that has to be analysed more deeply. As another accompanying measure, an extended offer of Rolling Motorways or amended rail freight subsidies are mentioned.

In the *TOLL+* scheme, a differentiated tariff regime may be applied for every Alpine crossing, which could vary between days and daytimes according to the available capacities. In addition, the operator may levy an environmental toll surcharge depending to the possibilities given by the Eurovignette Directive. Anyhow the tariffs must be announced in advance so that the haulier may choose his route knowing the cost of a journey. It is expected that this is going to lead to a certain competition among / between Alpine crossings. On the other hand, detour traffic might be limited, if its additional costs reach the toll difference between the lower and the higher priced Alpine crossing.

The toll will be charged at the specific Alpine passage. The acquisition of the passage rights is very easy, as it is paid at the toll plaza or charging point of the Alpine passage, either manually or electronically if the user has an On Board Unit (OBU) which can handle such payments. In this context, the European Electronic Toll Service (EETS) was supposed to enable road users to easily pay tolls throughout the whole European Union and should have been mandatory to offer the service in all EU Member States[1]. Due to problems such as economic feasibility, cross border enforcement and data exchange this system could not be implemented. There will be a surcharge to the regular toll covering the external costs as described above, and due to the toll modulation, the tariff varies according to the demand, i.e. it is higher during peak hours and lower during calm hours. A modulation may be applied during the day, but also include only specific days such as Sundays or holiday seasons.

Bearing in mind the most important aims of *TOLL+* (being the internalizing of some external costs of road freight transport, covering over-average costs of Alpine road infrastructure cost as well as supporting a modal shift towards rail), a mileage dependent toll along the transalpine corridors would have to be introduced. In order to do so, basically for every transalpine road corridor a calculation of the specific external costs and the additional alpine-specific infrastructure costs would be needed. For the purpose of the calculations of the different scenarios in *ALBATRAS*, it was necessary to differentiate the *TOLL+* charges from the *ACE* and *AETS* prices calculated in the transport model as otherwise the effects would be more or less the same. The approach of the study was to calculate the *ACE* and *AETS* scenarios first, followed by a definition of a *TOLL+* scenario

[1] according to the EU Directive 2004/52/EC from October 2012

with prices in between the restrictive *ACE* and *AETS* scenarios and calculate this scenario with the help of the Transalpine Multimodal Model (TAMM).[2]

Two forms of pricing were considered, both of them allowing to produce impacts in terms of route switching, mode switching and traffic suppression:

- Charges per trip (with or without associated traffic caps)
- Charges per unit of distance (with or without associated traffic caps)

In *ALBATRAS*, in total 21 scenarios were calculated. The model set a common fixed price per km for all Alpine Crossings within Alpine Arch B+ in order to calculate the *TOLL+* scenarios (in contrast to *ACE* and *AETS*). The TOLL+ price per km thereby corresponds to the average price per km of the respective ACE restrictive and AETS restrictive (A+CH+F) scenarios. In order to produce one single price for the three groups of transalpine crossings (A – /SLO, CH – I and F – I), the average ACE price per km is weighted by the transported volumes per corridor and divided by the average distance of each of the three groups of corridors and the average *AETS* price per km is weighted by the transported volumes and the average *AETS* price per trip for each of the three groups of corridors. The results for the two analysed *TOLL+* scenarios can be summarized as follows:[3]

For 2020 a restrictive *TOLL+* scenario was modelled: In general, the introduction of a *TOLL+* system with a common fixed price per km for all crossings in 2020 leads to an overall shift of transalpine freight transport from road to rail. This shift is higher than in the *AETS*-models and slightly lower than in the *ACE* approach. The fixed *TOLL+* price was assumed with € 0.29/km. Alpine road freight transport would decrease on the whole range by 15 % compared to Business as usual (BAU) scenario 2020 but shows big differences in the different sections: -13 % in the relations from Austria to Italy and Slovenia, -23 % on Alpine crossings from Switzerland to Italy and -16 % between France and Italy. Especially for the Austrian Alpine crossings a certain deviation effect is registered as on the eastern crossings 14 % more lorries are predicted whereas on the western Austrian corridors their number decreases by -29 %. Overall, total transalpine freight volume (road and rail) is shifted to the Swiss/Italian corridors (+7.7 %), whereas the Austrian/Italian or Slovenian corridors will lose -1.8% and between France and Italy the volume decreases by 3,4 %. Overall modal split of road will be reduced from 62 % to 53 %. The number of total transalpine heavy goods vehicles will decrease from 12.4 to 10.6 million.

For 2030, the scenarios with a high and low growth are described to be very similar, so only the high growth scenario is described in more detail. The fixed *TOLL+* price is € 0.80/km. Compared to the BAU 2030 high, this scenario leads to decrease in road freight transport of 32 %. Again reductions vary between the different corridors, being topped by the CH/I corridors with -52 %, followed by the French / Italian corridors with -41 % whereas the Austrian Alpine crossings show -26 %. Among the latter, the eastern Alpine crossings not covered by this instrument show in contrary an increase of approx. 34 % whilst on the other Austrian crossings a decree of 62 % is calculated. The modal split of road will drop from 62 % to 43 %. Again there is an overall shift (road and rail) towards Swiss/Italian crossings (of 12.4 %) whilst French-Italian crossings lose 6.8 %, the Austrian/Italian or Slovenian 2.0 %.

[2] see model description in ALBATRAS p. 130 ff.

[3] see overview of scenarios in ALBATRAS p. 13

The operating costs of the *TOLL+* concept are estimated to be around € 17 Mio. per year, implementations costs to be at about € 33 Mio. Revenues are calculated with € 682 Mio. in 2020 respectively in 2030 € 1,010 Mio. for the low and € 1.292 Mio. for the high scenario.

The EFFINALP study referred especially to the regional and sectoral burdens the *TOLL+* concept of the *ALBATRAS* study would implicate: The tolerant-scenario in 2020 would bring negligible impacts only, however the restrictive scenario in 2030 may turn out more serious. Smaller regions and companies are affected more, especially in the inner-alpine and southern regions. The scenario *TOLL+* restrictive was selected to be the scenario forming the basis for the restrictive scenario and its impacts analysed in this study. Altogether, the *TOLL+* concept offers the strongest potential of shifting the additional financial burden from the transport sector to the shippers due to its easily anticipated price design. This leads to bigger effects in the transport-intensive sectors as in the transport-sector itself. In general, it could be considered to refund the revenues of *TOLL+* to the consumers (e.g. via reduction of direct or indirect taxes), which would have a positive impact according to the results of the *EFFINALP* study. A major conclusion of *EFFINALP* is that the regional and the sectoral distribution of economic impacts is more critical than the overall level of impacts. Therefore, special attention has to be paid to the issue of hardship cases and corresponding flanking measures. Whereas the degree of economic impacts on the one hand depends on the level of restriction (i.e. the toll rate in case of *TOLL+*), on the other hand there are design parameters that are able to minimise unwanted effects and to maximise benefits. Regarding this, there are some factors to consider, the most important of them being:

- Quality of the rail alternative
- Introduction of specific relief and flanking measures
- Use of revenues

The findings and legal necessities of the LEGALP study also have to be taken into consideration.

I.1.4. Relevant definitions, studies and data

Geographical definitions of the Alpine Region

- Alpine Region “B+”: The region between Ventimiglia and the Tauern-axis (“Alpine Arc B+”).
- Alpine Region “C”: The whole Alpine Region covered by Alpine Arc C between Ventimiglia and Wechsel

(Definitions as used by the CAFT and ALPINFO databases;
see http://www.zurich-process.org/en/statistics/faq/ or
https://www.bav.admin.ch/bav/de/home/themen/alphabetische-themenliste/verlagerung/berichte-und-zahlen.html

Existing studies and reference data

As a basis for elaborating the study it is recommended to take into account the studies and reference data listed in Annex 1:.

Additional studies or data relevant for carrying out the tasks of this contract shall be investigated by the contractor and taken into consideration. All available information has to be considered in a way that ensures that the tasks of the contract can be fulfilled in the most efficient way.

The way the data are treated and the specific input for the work extracted form the different sources have to be documented in order to enable a reproduction of the data input according to scientific rules.

I.2. Purpose of the contract

Considering the results of the previous studies (see chapter I.1.1 and I.1.3), the Ministerial Conclusions of Leipzig (May 21 2014) provided the following mandates:

- The findings concerning the TOLL+ traffic management system, which were obtained during the German presidency, could be explored in order to understand how the system can work and could be converted into performance specifications. The report “Further development of the TOLL+ concept” (refer to Annex 1:), in particular the third pillar of this report identifying elements for further in-depth analysis and implementation questions, shall be used as the basis for these performance specifications.

In order to achieve these objectives, the following study, which is subject to the present invitation to tender, has to be carried out:

"In-depth analysis of the TOLL+ concept with focus on questions regarding an optimal design and a possible practical implementation of this concept in order to maximize benefits and prevent unwanted effects”

Among other sources, reports/studies elaborated by external bodies and organizations, the contractor shall in particular consider the relevant findings elaborated in ALBATRAS, EFFINALP and LEGALP. The results of the study are expected to contribute to the basis for decisions for political options in this context in the Ministerial Conference at the end of the presidency under Italian Chairmanship, possibly in May 2018.

Considering the current situation in road pricing for HGV in the various Alpine countries, possible evolution scenarios, corresponding to different degrees of TOLL + concept, will be studied by the consultant in order to inform policymakers. These scenarios should take into account more or less advanced levels of coordination and integration of pricing policies of the countries concerned applying to the HGV in the Alpine area. The conditions regarding technical and legal feasibility for these scenarios will be analysed, as well as financial conditions, taking into account the impacts on traffic, which should be studied. Additionally, the tenderer is invited to contact highway companies to know their point of view on the project TOLL+.

The following chapters I.2.1 to I.2.9 define the tasks that have to be performed by the contractor. Building on the description of these tasks, the tenderer has to provide a reasonable division of the necessary working steps into suitable work packages. In this context, the proposed structures of the study as well as the proposed methodical approaches have to be explained in detail.

I.2.1. Task 1: General aspects regarding the TOLL+ concept

In ALBATRAS, in order to allow for calculations, specific toll rates had to be assumed. In contrast, although the in-depth study should consider the ALBATRAS scenarios (with specific toll rates) and results, the general TOLL+ concept (independent of specific toll rates) has to be analysed. The study should put a focus on the real, practical circumstances and take, among others, especially the following issues into account:

- Inclusion of external costs and mark-up in order to promote modal shift and use of revenues for benefiting the transport sector and promote sustainable mobility in general and also other transportation modes
- Differentiation of tariffs by time of day in order to reduce negative interference of transit HGV traffic and commuter traffic to a minimum
- A comparison between the scenarios from ALBATRAS and other assumptions, either with lower levels or without concrete toll levels, in order to show differences/gaps between different levels applied. At least one scenario of the study shall take into account toll levels that are consistent with the Eurovignette directive in force.

I.2.2. Task 2: Technical and legal compliance with national and European realities

In order to promote the common goals (see chapter I.1.2), first there has to be a detailed discussion of legal aspects. Subsequently, issues regarding the concrete technical design have to be analysed. The present study should have a special focus on interoperability as well as on possible ways to harmonize existing tolling systems in member states with TOLL+. Particular attention has to be paid to compliance with:

- Existing national toll systems:
  - If the level of the fee should be higher than the existing Swiss HVF, substantial changes in the national legal framework and in the Land Transport Agreement (LTA) would be necessary.
  - The harmonisation of a technical system could be a step-by-step approach, whereas the existing Swiss system has reached already a relatively high price level and will probably remain the same.
  - The technical design related to interoperability of the systems has to be considered in a cost/benefit analysis.
  - Taking into account also infrastructure costs and non-covered external costs.
- Eurovignette directive (which provides a methodology and a maximum toll rate that can be applied)
  - The Eurovignette Directive (2011/76/EU) has to be considered with respect to the maximum weighted average external cost charges, presented in Table 1 and 2 in Annex IIIb of the current directive. In addition, the variation of the maximum charge in urban areas (factor 2 on maximum values) and the revenue neutral variation of the charge to prevent congestion have to be considered;
  - any possible future revisions of the current Eurovignette-Directive and any new characteristics might be taken into account.
- EETS (within art. 7 lit. j, par. 2 and 4, Directive 1999/62/EU, as modified by Directive 2011/76/EU).

I.2.3. Task 3: Spatial application of a TOLL+ system and spatial differentiation of toll rates

The question if a TOLL+ system should be applied only for trips that actually cross the Alps (from north to south or vice versa) or for all trips within the Alpine area should be thoroughly analysed in a future study.

- Clarify, how a possible limitation only to Alpine-crossing trips and an exclusion of other trips within the Alpine area could be well-founded justified, considering that ecological effects could be quite the same in both cases
- Take into account that external costs might be applied in the whole alpine region due to ecological reasons, whereas a mark-up is applied on particular stretches/alpine crossings
- Should a toll rate for certain alpine crossings take into account the length of the segment of the Alpine crossing used (inside the defined Alpine area)? In that case, it will be difficult to define a common toll rate for all crossings. The study shall address this issue in detail.

Furthermore, a focus has to be on the question if there could be one toll rate for all Alpine crossings/routes or different rates for different crossings/routes or different countries (the entire rate, consisting of infrastructure + external cost factors, should be taken into account for comparability, if it is possible). It should be analysed in which way (one rate vs. differentiated rates) unwanted negative effects (especially detouring) can be reduced to a minimum.

Regarding traffic diversion/detouring, the following aspects have to be considered:

- The ALBATRAS and EFFINALP studies demonstrated the potential of traffic diversion / detour by different cost levels of traffic management measures, especially in the eastern part of the Alps. For that reason, one of the conclusions of ALBATRAS was to extend the scope of the application of TMS to the entire Alpine arch C.
- As Switzerland is located in the center of the Alpine arch, for many origin-destination relationships the shortest way in transalpine traffic runs through Switzerland. For this reason, it should be studied whether a slight difference between Swiss and Austro-Italian or French-Italian price level of transalpine crossing (e.g. Swiss level a little bit higher than others) could be applied without leading to traffic diversion.
- On the contrary, the existing proportions between high price of costs at French-Italian crossings compared to Swiss level might induce traffic diversion of certain flows from French-Italian to Swiss crossings (refer to ALBATRAS).

Moreover, different initial situations in different countries have to be considered, e.g.:

- In the Alpine countries toll systems with single road concessions on axes have already been applied (e. g. Austria).
- Switzerland already applies a Heavy Vehicle Fee (HVF) in form of an area tolling system (entire Swiss territory) since 2001, based on average uncovered infrastructure and external costs. It has to be analysed, how different levels of taxation would influence possible detour traffic.
- Consider the legal differences between highways and the other road network (e.g. in Italy the system could only be applied on highways, otherwise it would be a tax).

I.2.4. Task 4: Possible implementation costs of a TOLL+ system

- An in-depth analysis is required regarding the possible implementation costs of a TOLL+ system (in addition to the first findings presented within the ALBATRAS study).
- For Switzerland, the existing HVF-system (LSVA) represents a comparable system to a possible TOLL + system. As this system will not be changed, the

(re)consideration of implementation costs is – at least for Switzerland – not relevant because it is already implemented.

I.2.5. Task 5: Possible flanking measures, relief measures and exemptions

- Analyse in detail possible flanking measures, relief measures and exemptions to avoid undesirable negative economic impacts in certain regions and/or branches including the employment situation (as presented in the results of EFFINALP) as well as to avoid an over proportional burden for transalpine short distance trips
- Consider the fact that flanking measures that are of economic nature could fall within the system of state aids
- The Eurovignette Directive expressly sets the only cases for which it is possible to provide for exemptions or toll rate reductions.
- Special attention needs to be paid to short-distance trips that also cause environmental damages and may be regulated in a discriminatory way.
- Consider a possible step-by-step approach in order to avoid excessive socioeconomic effects
- The target should be to have only as many flanking measures / relief measures / exemptions as absolutely necessary but as little as possible.
- Regarding the concrete design of possible flanking measures, relief measures or exemptions, the following aspects (amongst others) have to be taken into account:
  - Partial reimbursement or exclusion from the toll of hauliers for certain O-D trips?
  - Traffic restrictions in defined day-times?
  - Traffic restrictions for certain vehicles (emission classes)?
  - Possibility for sectoral prohibition for certain categories of products?
  - Particular attention should be paid to the legal feasibility of such measures.

I.2.6. Task 6: Sufficient capacities in rail freight and combined transport

- In-depth analysis regarding the necessity of sufficient and attractive offers in rail freight and combined transport and how this can ensure the necessary transportation capacities across the Alps (which is a substantial prerequisite)
- E.g. in Switzerland, new attractive rail infrastructure is already in operation or under construction, such as the new railway base tunnels at the Loetschberg opened in 2007 and St. Gotthard (opening in 2016), at the same time as the Gotthard rail axis is being refurbished to offer a 4m corridor for combined transport and will be realised until 2020. Most of the relevant elements which can be influenced by the public authority related to a successful modal shift policy are already in place or launched. The market conditions are being analysed with a view to start operation of the Gotthard base tunnel under optimal conditions for hauliers and the relevant stakeholders in the rail sector.

I.2.7. Task 7: Focus on positive effects and chances of TOLL+

- Special focus on the potential chances / positive effects of TOLL+: As the methods used in the EFFINALP study are not able to entirely cover all the possible benefits of a traffic management instrument, a further in-depth analysis should look at such aspects in detail (e.g. chances for the rail and combined transport sector, better accessibility of Alpine regions for passenger transport due to reduced freight traffic, environmental improvements as well as the reduction of greenhouse gases and noise (only in the context of the Eurovignette Directive), quality of life, safety issues, road wear and tear etc.[but without quantitative analysis or impact assessment]).
- The modal shift analyses and economic analyses conducted in ALBATRAS and EFFINALP have to be considered.

I.2.8. Task 8: Allocation and use of revenues

- Question of allocation of revenues between participating countries/regions/sectors according to certain criteria (e.g. modal shift capacity, earmarked revenues to be reinvested etc.) → Shared revenues vs. “each member state gets ‘its own’ revenues”.
- Question of use of revenues including different possibilities of refunding to customers
- Possibilities of earmarking of revenues to the transport sector (as partially already in place) according to Eurovignette directive (otherwise tolls could become “dressed up taxes”).
- Consider the aspects linked to the use of a possible TOLL+ in the same corridor where surcharge has already been applied.
- Consider the fact that in the existing Swiss Heavy Vehicle Fee (HVF) system, the allocation of revenues is already fixed and earmarked, and therefore hard to modify under the current law. In case of a higher total price and thus higher revenues for transalpine crossing than the existing one, different forms of flanking measures should be taken into account.

I.2.9. Task 9: Communication and information policy

- Elaborate a practicable concept regarding an adequate communication and information of stakeholders in advance, during deployment as well as during a possible implementing phase (which is absolutely needed in order to allow everyone to be prepared for measures to come as well as to avoid misunderstandings and delays).

I.3. Reports and documents to produce - Timetable to observe

The signature of the contract represents official kick-off. The contract enters into force the first working day of the month following the signature, as it will be provided in the contract.

Execution of the tasks begins after the date on which the contract enters into force.

For deadlines and working steps see chapter II.1.5.

The contractor starts working upon the study in close collaboration with the Advisory Board.

- 1st meeting, discussing the methodology chosen by the contractor, at the latest 3 weeks following the date the contract entered into force.
- 2nd meeting, discussing the results of the interim report, at the latest 22 weeks following the date the contract entered into force.
- 3rd meeting discussing the results of the draft final report, at the latest 43 weeks following the date the contract entered into force.

Furthermore, the contractor has to be at the awarding authority's disposal for the discussion of any methodical or technical questions that may occur.

I.3.1. Interim report

The **interim report** showing progress of the work shall be submitted to the awarding authority at the latest 18 weeks after the contract entered into force. The interim report has to contain in particular a synthesis of the main findings of previous studies that are relevant for the further work (particularly ALBATRAS, EFFINALP, LEGALP, and other findings of different updates studies founded by the contractor) a clear documentation and description of the methodology and the structure of the study as well as (at least) substantial results regarding the Tasks 1 to 3 (as described in chapter I.2.1 to I.2.3).

The interim report to be agreed with the awarding authority shall be written in English.

- The awarding authority will ask for additional information within 6 weeks after reception.
- Within 3 weeks after receiving the awarding authority's observations on the draft interim report, the contractor will have to submit additional information or a revised report.
- Within 2 weeks after reception of additional information or a revised interim report, the awarding authority will approve or reject the revised draft interim report.

I.3.2. Final report

The Contractor will submit a draft final report to the awarding authority at the latest 39 weeks after the contract entered into force.

The final report has to contain an executive summary of the main findings of the study.

The awarding authority will approve, ask for additional information or reject the draft final report within 6 weeks after reception. The contractor will have to submit additional information or a revised final report by 31 January 2018 at the latest.

I.3.3. Report format and publication

Seven copies of the reports in English shall be supplied in paper form and one copy in electronic form on a data storage medium, either in MS Word or in HTML format and in pdf format. The results and data used and calculated shall be delivered in a mutually agreed electronic form.

The awarding authority may publish the results of the study. For this purpose, the tenderer must ensure that there are no restrictions based on confidentiality and/or intellectual property rights. Should the use of data be intended that cannot be published, within the scope of the study, this must be explicitly mentioned in the offer.

The awarding authority envisages using the results, data and methods derived from this study. Please specify what kind of data (and maybe what kind of tools) can be provided apart from the written reports and how you envisage the handover and further use after fulfilment of the mandate.

I.4. Duration of the tasks

The (possibly revised) final report has to be submitted by 31 January 2018. The awarding authority will approve or reject the final report by 28 February 2018 at the latest, resulting in the end of the contract.

I.5. Place of performance

The main tasks will be performed on the contractor's premises. However, meetings between the contractor and the awarding authority may be held on premises in Zurich/Vienna, or on premises of rotating Presidency, or, upon agreement among the parties, in another place. The contractor will perform contractual tasks working together with the representatives of the 7 countries of the Advisory Board of the Follow-up Zurich process as well as the European Commission in its function as observer to the Zurich process.

In case of specific questions the contractor may contact the responsible institutions in the relevant country. Contact details will be provided for via the chair of the Advisory Board.

I.6. Estimate of the amount of work involved

The expected maximum value of the contract has been estimated at 230'000 CHF (= 209'000 €).[4]

[4] the amount in € is based on an exchange rate CHF / € of 1.10 CHF (budget rate) for 1 € rounded down.

II. REQUIREMENTS SPECIFICATION

II.1. Administrative and Formal Requirements

II.1.1. Mandator

The mandator is the Steering Committee “Transport Safety and Mobility in the Alpine Region” in the framework of the Common Declaration of Zurich (hereinafter referred to as “Steering Committee”), represented by the secretary,

The Federal Office of Transport (FOT) of the Swiss Confederation.

Contact Address:

Invitation to tender: Follow-up Zurich Process – TOLL+ study
DO NOT OPEN, PLEASE

Federal Office of Transport (FOT) / Bundesamt für Verkehr (BAV)
International Affairs
Invitation to tender: Follow-up Zurich Process – TOLL+ study
DO NOT OPEN, PLEASE
3003 Berne
Switzerland

Section International Affairs

Mr. Matthias Rinderknecht
Coordinator for tenders of the Steering Committee
Phone: 0041 58 462 58 24
Fax: 0041 58 462 58 11
mailto: matthias.rinderknecht@bav.admin.ch

Further requests can be submitted to the contact address.

The offer has to be submitted to the above address by 22 September 2016 at the latest. The date of the post mark is decisive.

The offers have to be submitted electronically on a data storage medium (either in MS Word or in HTML format and in PDF format) as well as in seven copies in hardcopy form. Submitting offers by e-mail is not allowed.

According to the directives of the general secretariat of the DETEC, two people not implicated in elaborating the tender specifications and selecting the successful tenderer will open the envelopes and document the following in writing:

- Names of people present at the opening procedure
- Names of all tenderers
- Per tenderer, the date of each offer submitted
- Total price of each offer submitted

II.1.2. General Conditions

The award procedure is, if not especially regulated according to the Federal Law on Public Procurement from 16 December 1994 (BöB, SR 172.056.1) and the Act on Public Procurement from 11 December 1995 (VöB, SR 172.056.11), the Act on the organization of public procurement in the Swiss administration from 24 October 2012 (Org-VöB, SR 172.056.15) and the Act of the Federal Department of Science, Education and Research on adjustments of thresholds in public procurement for the years 2016 and 2017 (SR 172.056 12).

The contract is awarded through an invitation to tender procedure according to article 35 VöB.

The submitted information and documents of the tenderers will be treated confidentially and used exclusively for the awarding procedure. The offer documents will not be returned to the contenders after the selection of the executing company, exempt submitted work samples. The tenderer legitimates the mandator to verify all declarations made in the offer documents.

The tenderers have to comply with the core conventions of the International Labour Organisation (ILO) (see Annex 2:).

The General Conditions of the Swiss Confederation apply for all points not treated separately in BöB and this document (see Annex 3:).

Contracts are concluded in writing.

II.1.3. Awarding procedure

The principles of the awarding procedure are as follows:

- Transparent conduct of the procedure
- Strengthen competition
- Encourage economic spending of public finances
- Equal treatment of all tenderers is guaranteed
- Tenderers are invited to submit their offers
- The tenders are evaluated by predefined criteria
- The tender accepted is the offer best in class according to the evaluation of the awarding criteria

II.1.4. Documents to submit

The offer has to consist of the following contents in order to allow the mandator to evaluate it according to the specified criteria.

<u>Part 1:</u>
Presentation in writing of the tenderer: Description of the company, CV of the deployed employees with detailed information about their language skills. Information about a deputy: Declaration in writing and name of the deputy.

Part 2:
Submit reference studies and work samples, which are comparable with the topic and tasks required in this mandate. The offer has to contain an executive summary of each reference study, with the year of elaboration, a description of the content and the mandator at that time with contact address and phone number.

Part 3:
Analysis of the mandate.
This part will also contain explanations about the methodology chosen by the tenderer and why they are appropriate for the study. Moreover, the tenderer has to explain what kind of data (and maybe what kind of tools) can be provided apart from the written reports and how he envisages the handover and the possibilities of usage by the mandator for further works.

Part 4:
Information about availability in hours per week and % of working hours per employee deployed as well as details about the reaction time and the implementation of modifications according to the project duration. The tenderer has to submit a detailed time schedule with resource planning.

Part 5:
Price in € including a cap of costs including all expenditures for the total mandate as well as declaration of the remuneration per hour per employee deployed as well as his function within the project according to accredited recommendations. A discount has to be specified.

Part 6:
Confirmation about compliance comply with the core conventions of the International Labour Organisation (ILO) (see Annex 2:)
Declaration in writing that states compliance with the General Conditions of the Swiss Confederation (see Annex 3:).

II.1.5. Deadlines and Schedule

All offers have to be filed in writing, complete and in due time to the mandator. Offers with substantial errors in form will be excluded from the further procedure.

The timeframe for the tender procedure, the signing of the contract and the submission of the reports requested is envisaged as follows (see also chapter I.3.):

Working step	**Indicative Timeframe**
Invitation to tender	15 July 2016 (at the latest)
Submission of questions by the tenderers	by 26 August 2016 at the latest
Answering of questions to all tenderers	by 8 September 2016 at the latest
Submission of offers by the tenderers	22 September 2016 (at the latest)
Award of the mandate	November/December 2016
Signature of the contract	December 2016
Entering into force of the contract	by 1 January 2017
Submission of draft interim report	8 May 2017(at the latest)

Submission of additional information/new interim report	10 July 2017 (at the latest)
Submission of draft final report	1 October 2017
Submission of revised final report	by 31 January 2018
Acceptance or rejection by the awarding authority, end of contract	by 28 February 2018

Questions to be answered in an anonymous way will be submitted between 18 July 2016 and 26 August 2016 in writing to the mandator by mail or e-mail will be answered towards all tenderers by 8 September 2016.

Dates for meetings have to be complied with according to the time schedule foreseen in chapter I.3.).

II.1.6. Subcontracting

Should mandates be subcontracted, tenderers demand from the subcontractors a written confirmation that they are bound to the general conditions of this invitation procedure.

II.1.7. Bidding consortium

A bidding consortium is allowed.

II.1.8. Language of the Offers and the Project

Offers must be written in English. The project is conducted in English.

The executive summary of the final report must be translated in French, German, Italian and Slovenian.

II.1.9. Negotiations

The right to conduct negotiations by the Steering Committee according to article 20 BöB is reserved (for instance in case of impossibility of establishing the economically most advantageous offer).

II.1.10. Duration of the Commitment of the Offer

The commitment of the offer is to be maintained for six months after submission.

II.1.11. Currency and Conditions of Payment

The currency is Swiss Franc (CHF) or Euro (€).

Payment is made from the awarding authority to the Contractor usually by 30 days after reception of the bill.

On principle, there are no payments in advance.

Payments will be made in two portions. A first payment will be operated after fulfilling the requirements for the intermediary report, the second payment after fulfilling all requirements for the final report as a closing act. Otherwise, an agreement upon partial payments against proven and accepted progress of work is possible.

III. AWARD OF THE CONTRACT

III.1. Schedule

- The mandator evaluates the filed offers regarding the timely deposit and completeness.
- The mandator evaluates the tenderers regarding their qualifications concerning the completion of the task (qualification criteria). Only offers of the tenderers fulfilling all qualification criteria will be evaluated in the next step.
- Evaluation of the offers: All offers are graded according to the fulfilment of the award criteria.
- The offer with the highest grade obtains the mandate.

III.2. Exclusion criteria

Reasons leading to exclusion from the contest:

- Incomplete or altered offer documents/information
- Inaccurate or incomplete disclosure
- Effective hindrance of the contest
- Submitted documentation after the deadline

III.3. Qualification criteria for tenderers

The following criteria are cumulatively to be fulfilled by the tenderers. All criteria have to be answered by “yes” in order to possibly obtain award of the contract.

1. Excerpt from the commercial register or equivalent – not older than three months
2. Enforced payment collection register records or equivalent (not older than three months)
3. University diplomas and further evidence concerning the professional capacity of the employees of the company and its managers, especially regarding the people which are envisaged to be responsible for fulfilling the mandate to be awarded
4. Declaration about the responsibility to comply with working conditions according to the core agreements of the ILO (see Annex 2)
5. List of the most important services during the preceding five years of this invitation to tender procedure
6. References, at which the mandator can verify the proper provision of those services and especially obtain the following information: Value of the service, time and place of the provision of service, statement (of the mandator at that time), if the service met state-of-the-art technology and if it was provided properly.
7. Evidence about an accredited quality management system
8. Balance sheets or excerpts of balance sheets of the company for the preceding three years of this invitation to tender procedure
9. Bank declarations guaranteeing the grant of the respective credits in the case of awarding of the contract
10. Bank guarantee
11. Last report of the auditing agency for legal entities

12. Provide evidence that there is no debt enforcement against the company especially concerning taxes or social charges.

III.4. Award Criteria

In this section, only the offers are evaluated from those tenderers having successfully fulfilled all qualification criteria in the previous chapter.

Any offer receives for each award criterion a specific grade. This grade will be multiplied by the corresponding weight per criterion. The sum of all weighted grades equals the final grade. The offer with the highest final grade obtains the mandate.

No.	Award Criteria	Grade	Weighting
1	**Efficiency and Adequacy of Methodology**		30 %
2	**Practicability and Quality**		20 %
3	**Professional competence and experience of the Study Team**		15 %
4	**Client Orientation**		15 %
5	**Total Price**		20 %
Total number of points			**100 %**

1 Efficiency and Adequacy of Methodology

Is the tenderer able to effectively meet the terms of reference?

Are the proposed outputs meeting all required criteria specified in the tender documents?

It will be evaluated whether the proposed methodology is efficient, suitable, coherent and sufficiently detailed for meeting the requirements in this tender, especially regarding:

- Analysing the general TOLL+ concept in detail
- Taking into account possible differentiations of tariffs by time of day
- Comparing different scenarios and assumptions regarding toll rates
- Considering the technical, institutional and legal framework at national, European and international level.
- Analysing possible spatial application and spatial differentiation of toll rates
- Focussing on questions regarding traffic diversion/detouring
- Considering different initial situations in different countries
- Elaborating possible implementation costs in detail
- Analysing possible flanking measures, relief measures and exemptions
- Answering questions concerning sufficient capacities in rail freight and combined transport
- Evaluating positive and negative effects and chances of TOLL+
- Developing and assessing suitable concepts for allocation and use of revenues
- Elaborating concepts regarding communication and information policy

2 Practicability and Quality:

- Is the offer submitted clear, accurate, plausible and transparent?
- Are the objectives in the tender specifications fully covered by the proposed methods and instruments for analysis?
- Are the proposed approaches plausible, comprehensible and are they suitable to develop further the aims and purposes of the Follow-up Zurich Process?

3 Professional experience of the Study Team

- Does the study team have experience in the use of the methods and tools proposed to achieve the requirements of the tender?

4 Client Orientation (see chapter II.1.5.)

- Does the proposed time schedule for resource planning correspond to the requirements in the tender specifications and grant sufficient flexibility to answer specific requests of the mandator? It will be evaluated whether the quality assurance measures proposed in the tender meet the terms of reference and can ensure the adherence of the tight schedule (i.e. provision of interim reports, availability for meetings, willingness to respond to requirements of the Advisory Board etc.)
- Does the offer provide any possibility for the mandator to use the method and tools foreseen to be applied in the study for further works?

5 Total Price:

- The offer with the lowest price receives the highest grade.
- Grades for offers exceeding the lowest price will be distributed in a linear way.

The tender will be evaluated according to the tender specifications with the following method:

Degree of performance	Grade	The requirements of the project are	Evaluation
Fulfilled	2	… covered entirely	Maximum score
Scarcely fulfilled	1	… barely covered.	Half score
Not fulfilled	0	… not covered.	No score

Half grades (i.e. 0.5 and 1.5) may be applied as well.

IV. ANNEXES

Annex 1: Existing studies and reference data

- ALBATRAS: Alignment of the heavy traffic management instruments ACE, AETS and TOLL+ on a comparable scientific, technical and operational level taking into account the introduction of different thresholds in order to analyze transport flow impacts on Alpine routes (Ecoplan Consortium), Final report, January 7 2011
- EFFINALP: Analysis of economic effects of establishing traffic management instruments in Alpine corridors (INFRAS Consortium), Final report, January 13 2012
- LEGALP**:** Legal consistency of ACE, AETS and TOLL+ with 1) European Union Law 2) Agreement between the European Community and the Swiss Confederation on the Carriage of Goods and Passengers by Rail and Road 3) Other EU-Agreements and international multilateral and bilateral treaties and agreements on trade and transport 4) National Law of Austria, Italy, Germany, Slovenia, France and Switzerland and possible adjustments in case of discrepancies
- Suivi de Zurich – Working Group Heavy Goods Traffic Management Systems in the Alpine Area: Further development of the TOLL+ concept, May 2014
- Suivi de Zurich – Working Group Heavy Goods Traffic Management Systems in the Alpine Area: Review on Combined Transport in Alpine countries, May 2014:
  → http://www.zuerich-prozess.org/fileadmin/data/webcontent/Webcontent/Sonstige_Dateien/compined_transport_review.pdf
- The final report of the study "Best Research on Traffic Management systems for Transalpine Road Freight" (TNO consortium, 2008)
- The study analysing the practicability of the traffic management instrument "Alpine Crossing Exchange (ACE)" in Switzerland (2007)
- The reference data base describing transport demand of Alpine crossing freight transport is the CAFT-Database (CD-ROM will be provided). CAFT data form the basic quantity structure for assessing transport impacts (e.g. amount of traffic carried, modal shifts) and the impacts directly related to transport quantities (e.g. environmental impact). They reflect the spatial interaction of road and rail traffic flows for every Alpine crossing in 1999 and 2004.
- ALPINFO:
  https://www.bav.admin.ch/dam/bav/de/dokumente/themen/verlagerung/alpinfo_2013.pdf.download.pdf/alpinfo_2013.pdf
  (describing the development of Alpine crossing transport)
- The "Report on the State of the Alps 2006", coordinated by the permanent secretary of the Alpine Convention, giving among other a comprehensive picture on the situation of the environment and its affection by transport:
  http://www.alpconv.org/en/AlpineKnowledge/RSA/transportandmobility/Documents/RSA_eng_20071128_low.pdf
- Information provided by the final report, called "Traffic management systems for transalpine road freight" from 12 September 2006 in the framework of the implementation of Zurich Declaration

- Information provided by the EU-Swiss transport observatory:

  2014:https://www.bav.admin.ch/dam/bav/de/dokumente/themen/verlagerung/alpenobservatorium-2014.pdf.download.pdf/alpenobservatorium-2014.pdf

  2013:https://www.bav.admin.ch/dam/bav/de/dokumente/themen/verlagerung/alpenobservatoriumch-eujahresbericht2013.pdf.download.pdf/alpenobservatoriumch-eujahresbericht2013.pdf

  2012:https://www.bav.admin.ch/dam/bav/de/dokumente/themen/verlagerung/alpenobservatoriumch-eujahresbericht2012.pdf.download.pdf/alpenobservatoriumch-eujahresbericht2012.pdf

  2011:https://www.bav.admin.ch/dam/bav/de/dokumente/themen/verlagerung/alpifret_jahresbericht2011.pdf.download.pdf/alpifret_jahresbericht2011.pdf

  2010:https://www.bav.admin.ch/dam/bav/de/dokumente/themen/verlagerung/alpifret_rapportannuel2010.pdf.download.pdf/alpifret_rapportannuel2010.pdf

  Alpenquerender Güterverkehr 2014, Schlussbericht Haupterhebung:

  https://www.bav.admin.ch/dam/bav/de/dokumente/themen/verlagerung/alpenquerender_gueterverkehr2014.pdf.download.pdf/alpenquerender_gueterverkehr2014.pdf

- Already available and adequate results of the MONITRAF-Project in the framework of INTERREG III/B/Alpine Space programme (http://www.monitraf.org) could be used as an input, Factsheet Toll plus:

  - http://www.imonitraf.org/DesktopModules/ViewDocument.aspx?DocumentID=9gIfphHL5hE=

- Toll plus system: iMonitraf Annual Report 2015: a Proposal on Toll plus and the future of iMonitraf, Infras, Climonomics, Zürich/Tübingen 2016: http://www.imonitraf.org/DesktopModules/ViewDocument.aspx?DocumentID=HR13wpIRZwc=

- An assessment of future exhaust emissions arising from the projected volumes of transport should be made by the Contractor. Emission factors should be taken from the Emission Factors Manual which is based on the results of the EU project ARTEMIS taking into account the development of the structure of the vehicle fleet: → http://www.trl.co.uk/ARTEMIS

- Metron, 2009, Verlagerungswirkung des Gotthard-Basistunnels im Güterverkehr. Schlussbericht

- Monitraf, 2008, Synthesebericht. Monitraf Aktivitäten und Ergebnisse

- CE DELFT, 2008, Handbook on estimation of external costs in the transport sector. Produced within the study Internalisation Measures and Policies for All External Costs of Transport (IMPACT) (Commissioned by: European Commission DG TREN, 2008)

- Ecoplan, Rapp Trans, 2004, The Alpine Crossing Exchange. Abschätzung der Machbarkeit einer Alpentransitbörse für den Schwerverkehr

- Ecoplan / NEA, 2009, Auswirkungen verschiedener Varianten der Alpentransitbörse. Entwurf Schlussbericht

- Ecoplan / NEA, 2010, Alpentransitbörse: Plausibilisierung der Ergebnisse und Annahmen. Input für den Workshop vom 18.01.2010
- Technische Universität Graz, 2006, Emissionsgesteuerter Verkehr über die Alpen – EmiV. Schwerpunkt Güterverkehr. Anlagerechtliche Innovationen und Emissionsrechthandel zur Steuerung des Verkehrs in ökologisch sensiblen Räumen. Endbericht des theoretisch wissenschaftilchen Teils
- D-Studie über „Aktualisierung der Wegekostenrechnung für die Bundesfernstraßen in Deutschland „ 2007 (IWW und Progtrans)

  http://www.bmvbs.de/Anlage/original_1061021/Wegekostengutachten-2007.pdf
- D-Studie über „Anforderungen an eine umweltorientierte Schwerverkehrsabgabe für den Straßengüterverkehr“ aus dem Jahr 2001
- European Environment Agency, 2008, Application of the Emission Trading Directive in by EU Member States
- INFRAS, 2000, Variabilisation and Differentiation Strategies in Road Taxation. Theoretical and Empirical Analysis. Final Report
- INERIS, 2008, Analyse des coûts et effets d’instruments politiques visant le secteur du transport. Etude dans le cadre de la révision du programme national de réduction des émissions de polluants atmosphériques
- Liaison Lyon-Turin/Collegamento Torino – Lione, soumission N° 46/consegna N° 46, prévisions de trafic fret/previsione di traffico merci (Indice E/26.11.2007)
- Examinations of the Toll Systems in Germany, Studies of the EC regarding external costs
- Analysis of external transport costs, Ljubljana 2004
- Analysis of the ITS introduction/implementation in the Republic of Slovenia
- Technical, operational and logistical parameters, influencing emissions of heavy duty vehicles, JRC, Ispra, IT (real-world emissions measurements of HDV along the extended Trans-European transport Corridor V (Maribor-Barcelona)
- Action plan on introduction of electronic toll system in the Republic of Slovenia, Ljubljana 2009
- Possible further up-to-date studies or data?

Annex 2: Core Conventions of the ILO

The following list includes the core conventions of the International Labour Organisation (ILO) according to article 7 paragraph 2 VöB:

1. Forced Labour Convention, number 29, from 28 July 1930
2. Freedom of Association and Protection of the Right to Organise Convention, number 87, from 9 July 1948
3. Right to Organise and Collective Bargaining Convention, number 89, from 1 July 1949
4. Equal Remuneration Convention, number 100, 29 June 1951
5. Abolition of Forced Labour Convention, number 105, from 25 June 1957
6. Discrimination (Employment and Occupation) Convention, number 111 from 25 June 1958
7. Minimum Age Convention, number 138, from 26 June 1973
8. Worst Forms of Child Labour Convention, number 182, from 17 June 1999

Annex 3: General Terms and Conditions for Service Contracts

https://www.bkb.admin.ch/dam/bkb/de/dokumente/Hilfsmittel/AGB/AGB_Dienstleistungsauftraege_e.pdf.download.pdf/General%20Terms%20and%20Conditions%20for%20Service%20Contracts.pdf

1. Scope of application

1.1 These general terms and conditions govern the conclusion, content and performance of service contracts (with the exception of construction services).
1.2 When the bidder submits the offer, he/she is deemed to have accepted these general terms and conditions.
1.3 Changes or amendments must be confirmed in writing by the procurement office.

2 Offers

2.1 The offer including any demonstrations is free of charge to the procurement office unless stated otherwise in the tender.
2.2 The bidder submits the offer based on the tender. He/she is free to submit additional alternatives.
2.3 The offer remains binding for three months after it is submitted.

3. Pricing

3.1 The bidder performs his/her obligations for a fixed price or in accordance with costs with an upper price (cost ceiling). In the latter case the bidder discloses the types of costs and the corresponding rates in his offer.
3.2 The price covers all work performed by the bidder which is necessary for the proper performance of the contract. In particular, the price covers any and all additional expenses such as petty cash and secretarial services, all social insurance payments and other compensation payments for illness, disability or death as well as all taxes or other public fees. Inflation shall be taken into account only if the parties specifically agree to it in writing.
3.3 The payments shall be made in accordance with the payment schedule. It depends upon the work progress and the actual expenses. When due, the bidder submits the corresponding invoice. The procurement office makes the payments within 30 days after receipt of the invoice.

4. Performance

4.1 The bidder is obligated to fulfil the contract expertly and with care.
4.2 Changes or amendments to the contract must be made in writing.
4.3 The bidder shall regularly inform the procurement office about the work progress and shall inform it immediately in writing about circumstances which may hinder the proper performance of the contract. The procurement office is entitled to inspect and control all aspects of the contract at any time.
4.4 Generally, the bidder shall perform his/her obligations personally and is not authorized to obligate the procurement office to third parties.
4.5 For the performance of the obligations, the bidder shall carefully select well trained employees. In particular, he/she shall take into account the procurement office's interest in continuity. Upon request by the procurement office the bidder shall replace employees who do not have the necessary know-how or otherwise hinder the proper performance of the contract in a timely manner.

5. Intellectual property rights

5.1 All intellectual property rights which arise from the performance of the contract (rendering services) are the property of the procurement office.

5.2 The bidder is obligated to immediately reject any claims from third parties with respect to the infringement of intellectual property rights, and to bear all resulting costs incurred by the procurement office, including payment of damages.
5.3 The procurement office is obligated to immediately inform the bidder about such claims and to provide all documents necessary for rejecting such claims, unless prevented by reasons of confidentiality.

6. Confidentiality
6.1 The contractual parties shall keep confidential all information which is not generally known or in the public domain. Confidentiality has to be maintained even before signing the contract ant the confidentiality requirement remains valid after the fulfilment of the contractual relationship. Legal disclosure obligations remain reserved.
6.2 If the bidder wants to advertise the contractual relationship or make it public otherwise, prior written approval of the procurement office is required.

7. Delinquency
7.1 The bidder is immediately considered delinquent if he/she does not comply with the deadlines agreed upon by the parties, and in all other cases upon receiving a reminder setting another deadline or extension.
7.2 If the bidder does not perform by the end of the extended deadline, the procurement office may terminate the contract in writing. The services performed until termination must be compensated.
7.3 If a bidder is delinquent, a penalty in the amount of 1 ‰ of the purchase price per day of delay is assessed, but not more than 10 % of the total purchase price. The payment of the penalty does not exempt the bidder from performing the contractual obligations. In cases of force majeur, no penalty shall be imposed.

8. Guarantee
8.1 The bidder is liable for faithful a careful performance and guarantees that his/her performance will conform to the contractual conditions and specifications as well as that it will correspond to the current state of the art.
8.2 The bidder is liable for damages that his/her employees cause in the course of performing the contractual obligations.

9. Termination
9.1 The contract may be revoked or terminated in writing by either party at any time. The work performed until the termination of the contract shall be compensated.
9.2 Claims for damages due to untimely termination of the contract remain reserved. Claims for compensation for lost profits are excluded.

10. Assignment
The supplier’s claims arising from the contract may not be assigned without the procurement office’s prior written consent.

11. Principles
11.1 For the work performed in Switzerland, the supplier shall comply with the labour protection laws and working conditions for the supplier’s employees applicable at the place of performance. The supplier guarantees equal treatment of men and women, particularly with respect to equal pay for equal work. Union contracts and standard employment contracts serve as the basis for the working conditions. If such contracts do not exist, the local and standard working conditions at the place of performance apply.

The supplier is obligated to legally bind all subcontractors to abide by the above principles.
11.2 Suppliers who do not adhere to the principles stated in Clause 11.1 shall be liable for a penalty amounting to 10% of the value of the contractual amount but not less than CH 3’000 and not more than CHF 100’000.

12 Applicable law and place of jurisdiction

12.1 These general terms and conditions apply. Conditions not covered herein are governed by the Swiss Code of Obligations (Swiss Federal Procurement legislation).
12.2 Place of jurisdiction is Bern, unless otherwise specified by contractual agreement.