

# The Integration of Infrastructures in Europe before the Great War and after the Second World War in comparison - Integration von Infrastrukturen in Europa vor dem Ersten und nach dem Zweiten Weltkrieg im Vergleich

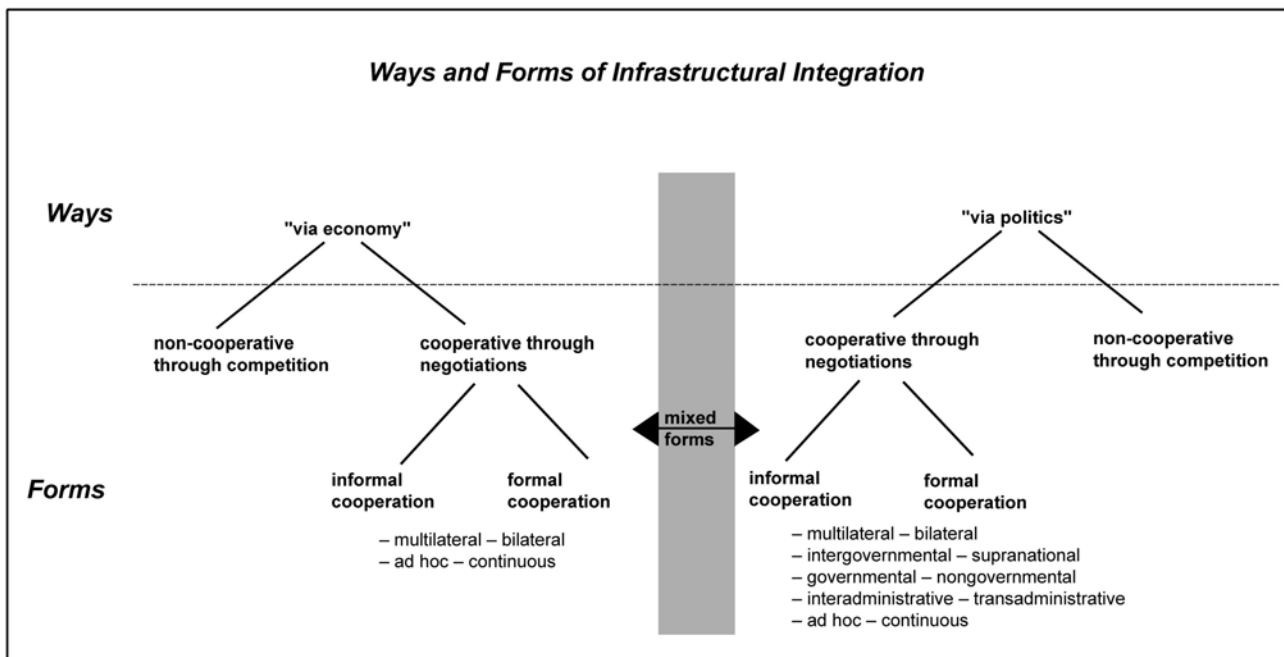
## 1. Short description of the overall project

The project's intention is to illustrate similarities and differences in the integration of infrastructures in (Western) Europe in the transport sector (railway and inland navigation), communications sector (mail, telecommunication and radio) and supply sector (pipelines) before the Great War and after the Second World War (up to the 1970s). A comparative analysis (synchronous and diachronic) will be made of all five infrastructure sectors in order to refine specific typologies of infrastructure integration. Ideally, this will lead to a multi-factor model for the integration of infrastructure. Here, 'infrastructure integration' is defined as the establishment of interconnectivity and interoperability of infrastructure networks and services by the adaptation/assimilation of technical, operational, administrative or juridical standards or tariffs. The project analyses the structures of the international relations (*polity*), the processes of decision-making within these structures (*politics*) and the content of standardisation (*policy*). For the investigation of each infrastructural sector the project will make use of a set scheme of analysis and focus on representative case studies of standard settings.

## 2. Definition of Infrastructure Integration:

How is the integration of infrastructures defined?

There are two identifiable meanings of the integration of infrastructures in the project. Firstly, the creation of interconnectivity and interoperability of infrastructure networks and services through standardisation; secondly, the differentiation between ways and forms used for standardisation. In other words, the integration refers to the structures of the international relations as well.



Graph: ways and forms of infrastructural integration

Standardisation can be either achieved via economy or via politics (see graph). In both cases there is the option to standardise in a non-cooperative way through competition or in a cooperative way through negotiations. In the cooperative form we differentiate between informal or formal cooperation (within an organisational framework). Formal cooperation might have a supranational, a governmental, a non-governmental/private or a mixed governmental-private juridical basis. Infrastructural integration can be considered a process which has no clear finality. An example for limited measure of integration would be the setting of a technical standard upon which one agrees.

### **3. Overall intention/guiding questions:**

#### **a) Intention**

The project has three main goals. We want to

- illustrate similarities and differences in the integration of infrastructures in (Western) Europe in the transport and communications sectors before the Great War and after the Second World War (up to the 1970s),
- filter out specific typologies of infrastructural integration and
- develop a factorial model for the integration of infrastructures.

Please note: This project is about the comparison of case studies of standardisation in the two epochs. Therefore the intention is clearly not to show the chronological history of the integration of infrastructures in Europe. It is important to note that the project takes into account international standard-setting activities across Europe. These standardisations should not necessarily cover all countries of Europe but they have to be representative for standardisation activities in the respective epoch.

#### **b) Guiding questions for the individual projects:**

The processes of integration within each infrastructure sector will be analysed separately in individual projects. Three main questions guide the individual projects:

- In which ways and in which forms did the integration take place?
- Which factors supported the integration in the two epochs and which factors hampered it?
- How were structures, processes and content of the integration tied together?

### **4. Scheme of analysis/categories of comparison:**

#### **a) Polity**

To compare the organisational structures in which cooperative integration (through negotiations) took place, we will take a closer look at the following categories:

- multilateral – bilateral,
- intergovernmental – supranational,
- intergovernmental – transgovernmental  
(Here, we would like to make a difference between national governments as an entity or individual elements of the political system like transport ministries, PTT-ministries or administrations),
- governmental – non-governmental  
(Here, a variety of mixed forms on the formal or on the informal level are of outstanding importance) and
- ad hoc – continuous.

Concerning the fractions cooperating or competing within these structures, we differentiate between the following:

- governments,
- specialized ministries,
- bureaucrats,
- companies,
- associations and
- individual people.

## **b) Politics**

To compare the processes of decision-making, the project employs a simplified version of the policy-cycle. Although the standardisation was often an extremely complex process with many parallel (sub-) processes, the project makes use of a prototypical model. This should be supposed to localise the influence of different fractions or groups in different periods of a standardisation process. In addition, it pinpoints structures of cooperation, communication and interaction. The different phases are:

- Phase of initiative:
  - Formulation of the problem,
  - 'Agenda-setting',
  - Collection of information,
  - Editing of information,
- Phase of negotiations:
  - Regulation of conflicts
  - Building of consensus
- Phase of decision

## **c) Policy**

As the standardisation is placed at the core of the integration of infrastructures, different kinds of standards will be distinguished:

- *technical standardisation*: such as material, gauges, size,
- *operational standardisation*: such as time tables, road signals, licences,
- *administrative standardisation*: such as data processing, clearings, statistics,
- *standardisation of tariffs*: such as tariffs for goods or people;
- *juridical standardisation*: such as insurance or customer protection.

For each infrastructural sector we are trying to analyse case-studies of all five types of standards within both epochs.