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**Book Part**

## Spaces and projects of European importance

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*Suggested Citation:* Scholl, Bernd (2019) : Spaces and projects of European importance, In: Scholl, Bernd Perić, Ana Niedermaier, Mathias (Ed.): Spatial and transport infrastructure development in Europe: Example of the Orient/East-Med Corridor, ISBN 978-3-88838-095-2, Verlag der ARL - Akademie für Raumforschung und Landesplanung, Hannover, pp. 14-34, <https://nbn-resolving.de/urn:nbn:de:0156-0952016>

This Version is available at:

<https://hdl.handle.net/10419/213372>

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## **Spaces and Projects of European Importance**

URN: urn:nbn:de:0156-0952016



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S. 14 bis 34

Aus:

Scholl, Bernd; Perić, Ana; Niedermaier, Mathias (Eds.) (2019):  
Spatial and Transport Infrastructure Development in Europe: Example of the  
Orient/East-Med Corridor.  
Hannover. = Forschungsberichte der ARL 12.

Bernd Scholl

# 1 SPACES AND PROJECTS OF EUROPEAN IMPORTANCE

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## Abstract

Europe is facing numerous challenges nowadays. Hence, forces are needed to counteract these challenges and strengthen cohesion in Europe. An easy, but not simple, way to experience the value and meaning of cooperation is through visible, international projects of common European interest in spaces or areas of European importance. Determining such projects and areas is considered a core of the spatial planning approach that sets the priority for taking action in an area according to its specific location or its specific problem. What happens around or alongside such areas is not only important for the respective spatial areas; it is also in the interests of the nation states involved and of the whole of Europe, as well. These spaces and projects can have far-reaching consequences and opportunities that may be exploited or, otherwise, will be lost.

To describe the ‘areas and places of European importance’, we can start from the following: the compilation of regions and projects of national importance creates a sustainable base for a supranational spatial perspective on various nationally significant areas and projects. Moreover, spaces and projects of European importance are major components of large-scale spatial planning. However, European spatial planning does not exist; in addition, there is no European transport strategy either. And, as

there is no European transport strategy, there cannot be an integrated European spatial and transport strategy. Such a strategy would have to set reliable spatial, scheduling and financial priorities. Thus, Europe is left with the task of developing an integrated strategy, which is more than grouping together mutually diversified national visions and plans.

This paper explains the concept of spaces and projects of European importance by using experiences from the INTERREG project entitled CODE 24 (CORridor DEVELOPMENT 24) on the corridor from Rotterdam to Genoa, now known as the Rhine-Alpine Core Network Corridor. Based on the scientific findings from this project, the areas and projects of European importance are identified for the Orient/East-Med Core Network Corridor along with various aspects (such as organizational plans and financial resources) required for integrated spatial and transport development. Finally, this contribution demonstrates that an action-oriented spatial planning approach is needed in order to achieve territorial cohesion in Europe.

### **Keywords**

European cohesion – supranational cooperation – action-oriented spatial planning – integrated spatial and transport development – Orient/East-Med Corridor

## **Räume und Projekte von europäischer Bedeutung**

### **Kurzfassung**

Europa steht heute vor zahlreichen Herausforderungen. Daher sind Anstrengungen erforderlich, diesen Herausforderungen zu begegnen und den Zusammenhalt in Europa zu stärken. Ein naheliegender, aber nicht einfacher Weg, den Wert und die Bedeutung der Zusammenarbeit zu erfassen, sind gut sichtbare internationale Projekte von gemeinsamem europäischen Interesse in Räumen bzw. Gebieten von europäischer Bedeutung. Die Festlegung solcher Projekte und Räume ist Kernstück des planerischen Ansatzes, der die Priorität für Maßnahmen in einem Gebiet entsprechend den spezifischen Standorten oder spezifischen Problemen festlegt. Was in oder im Umfeld dieser Räume passiert, ist nicht nur für die jeweiligen Regionen wichtig, sondern es liegt auch im Interesse der beteiligten Nationalstaaten und ganz Europas. Diese Räume und Projekte können weitreichende Folgen und Chancen haben, die genutzt werden können oder andernfalls verloren gehen.

Um die „Räume und Orte von europäischer Bedeutung“ zu beschreiben, können wir zunächst davon ausgehen, dass die Gesamtschau von Gebieten und Projekten von nationaler Bedeutung eine verlässliche Grundlage für eine supranationale räumliche Perspektive auf diese Räume und Projekte ermöglicht. Darüber hinaus sind Räume und Projekte von europäischer Bedeutung wichtige Bestandteile der grenzüberschreitenden, großräumigen räumlichen Planung. Eine europäische räumliche Planung gibt es jedoch nicht; ebenso wenig wie eine gemeinsame europäische Verkehrsstrategie. Eine integrierte europäische Raum- und Verkehrsstrategie existiert dementsprechend nicht. Eine solche Strategie müsste verlässliche räumliche, zeitliche und finanzielle Prioritäten setzen. Somit steht Europa vor der Aufgabe, eine integrierte Strategie zu entwickeln, die mehr ist als die Bündelung diverser nationaler Visionen und Pläne.

Dieser Beitrag erläutert die Zusammenschau von Gebieten und Projekten von europäischer Bedeutung anhand der Erfahrungen aus dem INTERREG-Projekt CODE 24 (CORridor DEvelopment 24) entlang des Korridors Rotterdam–Genua, dem heutigen Kernnetzkorridor Rhein–Alpen. Basierend auf den wissenschaftlichen Erkenntnissen aus diesem Projekt werden die Räume und Projekte von europäischer Bedeutung für den Orient/East-Med Corridor sowie weitere Aspekte (z. B. Organisationspläne und finanzielle Ressourcen) benannt, die für eine integrierte Raum- und Verkehrsentwicklung erforderlich sind. Schließlich zeigt dieser Beitrag, dass ein handlungsorientierter Raumordnungsansatz erforderlich ist, um einen territorialen Zusammenhalt in Europa zu erreichen.

### **Schlüsselwörter**

Europäischer Zusammenhalt – supranationale Zusammenarbeit – handlungsorientierte Raumordnung – integrierte Raum- und Verkehrsentwicklung – Orient/East-Med Corridor

## **1 Introduction**

In order to realize a gradual integrated spatial and transport strategy, two crucial components are needed: an institutional framework for collaboration at a larger (i. e. transnational) scale as well as across scales, and a more action-oriented approach. This approach focuses on the topics and spaces crucial for the development of the entire corridor – spaces and projects of European importance. A pioneer project in applying such an approach was the creation of the EGTC (European grouping of territorial cooperation), when an Interregional Alliance for the Rhine-Alpine Corridor was established in 2015.<sup>1</sup>

Experiences from this unique case stimulated the author to initiate an international working group for the Orient/East-Med (OEM) Corridor under the umbrella of the ARL (Academy for Spatial Research and Planning). The global economic crisis made European cohesion even more vulnerable, and thus collaboration across borders and institutions is more important than ever. This is particularly true for the field of integrated spatial and transport development. While European transport development has a longer tradition, it is important to understand the genesis of spatial planning and development in this context.

So far spatial planning and development in Europe and within the European Union (EU) has been a national task. This paper does not question such a form of task distri-

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<sup>1</sup> More than four years of collaboration within the framework of the EU INTERREG Project CODE 24 (<https://egtc-rhine-alpine.eu/code24/>) paved the way for such a group.

bution, which is based on the principle of subsidiarity.<sup>2</sup> On the contrary, the paper aims to promote strengthened collaboration between the various governance levels and spatially relevant actors in a European context.

The paper is structured as follows. After introductory remarks, the genesis of the concept of the ‘spaces and projects of European importance’ is provided through an overview of the key documents on European spatial planning and development. This is followed by elucidating the need for an action-oriented approach in spatial planning issues of European importance. Further, different aspects of sustainable and integrated spatial and transport development in spaces and projects of European importance are presented, while the identification of such areas and projects along the OEM Corridor is provided in the next section. The conclusion gives the main remarks necessary for further research in the field of European spatial and transport development.

## 2 European spatial development: from concept to agenda<sup>3</sup>

The global economic crisis triggered by the United States in 2008 affected the countries of Europe to various degrees. In addition to economic disparities, maintaining solidarity and peace in Europe is a priority. Spatial planning has a special responsibility here as planning’s central task is to bring a wise approach to the use of land, which is a limited resource. Strategic spatial planning, in coordination with sectoral planning, aims to achieve integrated sustainable spatial development (Scholl 2016). This is practiced in different European countries in different ways and with various levels of success, because the approach to land, and therefore to spatial planning, is connected to a considerable extent with the language and planning culture of each country (Reimer/Getimis/Blotevogel 2014).

The abovementioned global and contextual challenges, however, should not discourage spatial planning actors. Spatial planning can be particularly strengthened through well-founded initiatives and successful examples practiced across scales. In fact, the initiatives of the various EU presidencies and the ministers responsible for spatial planning have highlighted the topic of balanced spatial development achievable through a dialogue between cities, as first explained in the *European Spatial Development Perspective* (ESDP), the seminal document on European spatial planning of the 1990s. More precisely, with the aim to provide an integrated, multi-sector and indicative

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2 The principle of subsidiarity is defined in article 3b of the Lisbon Treaty: “Under the principle of subsidiarity, in areas which do not fall within its exclusive competence, the Union shall act only if and insofar as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level. The institutions of the Union shall apply the principle of subsidiarity as laid down in the Protocol on the application of the principles of subsidiarity and proportionality. National Parliaments ensure compliance with the principle of subsidiarity in accordance with the procedure set out in that Protocol” (Official Journal of the European Union 2007: 12).

3 This section provides an adapted summary of the history of European spatial planning and development previously presented in detail in the chapter Spatial Planning and Development in a European and Macro-regional Context (Scholl 2016).

strategy for spatial development, the key ideas of ESDP are: 1) to achieve an integrated approach, i.e. not just look at specific sectors of development activity, e.g. environment, economic development, or transport, but to recognize that they all affect each other; 2) to achieve an understanding of spatial development, with the much wider view of sector development vital for an integrative approach; 3) to include strategic actions, which means also to set priorities (CSD 1999).

Further initiatives came from this foundation, which produced the first generation of the transnational INTERREG Cooperation Program, among others, and the establishment of a European Spatial Observation Network (ESPON) (CEC 2008). In 2004, an intensive debate on European spatial development started under the Dutch EU presidency with questions on EU expansion and the contributions of spatial development to the *Lisbon Strategy* (European Council 2000). Its further development led to the *Territorial Agenda 2007* aimed at a competitive sustainable Europe of diverse multi-faceted regions (EU Ministers 2007a).

In order to convey the importance of an expanded Europe and the states' noteworthy contributions to this, the German EU presidency passed the *Leipzig Charter on the Sustainable Cities* (EU Ministers 2007b) in 2007. Under the Hungarian presidency, the Territorial Agenda was finally further developed by the ministers responsible for spatial planning and territorial development and passed in 2011 with the title *Territorial Agenda 2020: For an Integrated, Intelligent and Sustainable Europe of Diverse Regions* (EU Ministers 2011). As stated under point 4, the agenda's main aim is "to provide strategic orientations for territorial development, fostering integration of territorial dimensions within different policies at all governance levels and to ensure implementation of the Europe 2020 Strategy according to territorial cohesion principles" (EU Ministers 2011: 3).

The *Territorial Agenda 2020* mainly follows the goal of assisting European regions potentially capable of economic growth. Large-scale regional cooperation, which is desirable for transit spaces of European importance, has less attention for the moment. The macro-regional strategies of the EU have moved in this direction since 2011, similar to that for the Danube area or the Baltic region. The collaborations along the main east-west railway (Paris–Budapest), which has merged into the TEN-T Core Network, have also provided important experience.

Finally, the *Territorial Agenda 2020* clarified that the approach to land issues should be framed in an action-oriented<sup>4</sup> political setting. One conclusion from this is that spatial planning must also be action-oriented (Scholl 1995). In an action-oriented process, important tasks are revealed through mutual approaches and decisions, and solutions are introduced within the framework of well-considered processes. Given that action-oriented European spatial development should start with the tasks to be jointly solved, a common understanding of what tasks this actually concerns, what sort of time sequence is needed for their solution and how the necessary finance should be

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4 Under point 3, the ministers responsible for spatial planning and territorial development state that: "the TA 2020 is our action oriented policy framework to support territorial cohesion in Europe as a new goal of the European Union (EU) introduced by the Treaty of Lisbon" (EU Ministers 2011: 3).

raised, it is clear that taking steps in this direction is urgent. One could call it: setting priorities. These processes should start with an identification of the problem (see the chapter *Solving Complex Problems: Applying a Problem-Oriented Approach on the Case of the Orient/East-Med Corridor* in this book) and are explained in detail in the next section.

### 3 Need for action- and problem-oriented spatial development

The last decade has seen an intense debate on the basic concepts and programs of European spatial development. Anyone involved in the practice of spatial planning will also discover that spatial planning argumentation in concrete local, regional, or national plans hardly plays a role on the European level. This also relates to the fact that many plans of European importance involve sectors and small spaces as well as areas with fewer problems. In a real sense, action- and problem-oriented European spatial development does not exist (Scholl 2016: 15). This was confirmed by a multi-year exchange among high-ranking European experts from the science and practice of regional spatial development (Scholl 2012). Therefore, attaining sustainable European spatial development requires both action- and problem-oriented approaches.

Action-oriented European spatial development should start with tasks that are concrete, strategically important and in the common European interest. According to the previously explained subsidiarity principle, it is incumbent upon spatial planning and the responsible actors to implement the decisions taken and the appropriate processes. On the regional and national levels, the various tasks bound up with spatial development are already challenging enough, and, without a clear strategy for spatial and transport development that sets authentic priorities and provides planning security through secure financing, they become, in practical terms, nearly unmanageable (Scholl 2016: 16).

However, this deficiency cannot be used as a reason to ignore the European dimension of requiring collaboration across several national boundaries.<sup>5</sup> If the quality level for maintaining connections for entire regions is getting worse, this will also have negative consequences for the economic development of the affected regions. Even the shift of any amount of goods transport from the roads to the rails, as stipulated in the *White Paper on Transport* (CEC 2011) and most of the national planning documents, implies some risks: insufficient rail capacity could displace railway passenger transport, thus once again reducing the quality of public transport connections, which in turn play a central role in the containment of sprawl. The catchment areas of the railway stations and stops are a crystallization point for the philosophy of redeveloping settlements first (Scholl 2016: 16).

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5 When, for example, major investments are made in the harbors of northwest Europe in order to increase their handling capacity, then the transport level in the nearby hinterlands, both inside and outside of the settlement spaces, will need to be adjusted. If in the areas of the transport infrastructures, the corresponding provisions are not made, then increasing traffic jams on the highways and freeways will be the result (Scholl 2016: 16).



Keeping the above in mind, spatial planning and spatial development are all about initiating decisions that will help solve difficult, spatially important tasks under the restraints of working with continually limited resources such as time, personnel, knowledge, finances, etc. (Scholl 2016: 22). In doing so, formal spatial planning procedures and instruments are implemented by default. However, deviations from these spatial development tasks in their usual form are also required. Informal, time-limited, customized processes are more suitable for identifying strategic tasks and appropriate solutions that can be approved and implemented with the usual methods and legislative foundations of the respective countries and institutions (Scholl 2016: 13).<sup>6</sup>

## 4 Integrated spatial and transport development in spaces and projects of European importance

### 4.1 TEN-T: a background for European integration

The Trans-European Transport Network (TEN-T), comprising nine Core Network Corridors (Fig. 1), is the main EU transport policy. The intention behind this policy is to produce high-capacity transport and communication infrastructures for a polycentric European network, as proclaimed in the *Territorial Agenda 2020* (EU Ministers 2011: 6).<sup>7</sup> Hence, the TEN-T provides a suitable framework for exploring an issue of integrated spatial and transport development in Europe.

To eliminate current bottlenecks through co-financing from the TEN-T facilities, the integration of the respective countries and regions in the spatial development and spatial planning domains is urgently required. Many countries stipulate that spatial coordination for projects, such as closing gaps in the infrastructural network, must follow legal and formal processes. However, not only are the public agencies important, so is the inclusion of non-governmental organizations (NGOs) and the citizens, which is usually neglected in large-scale infrastructure plans in the areas of transport and energy transfer (Scholl 2016: 19). As a result, spatial planning can play an important role when its actors manage to make the connection between transport development and spatial development generally understandable, both on a large scale and with European standards, i.e. in everyday language, illustrated and defined for the search for integrated solutions (Scholl 2016: 18).

Briefly put, sustainable spatial development can be achieved by providing a capable, attractive public transport system thus simultaneously increasing the capacity for inward development. This builds upon using the reserves of the settlement's building stock instead of allocating new development on greenfield areas. Such an argument makes it clear that an effective interplay between transport development and spatial

<sup>6</sup> An example of such an informal planning approach is the so-called test planning process (Scholl 2011, 2017; Scholl/Vinzens/Staub 2013), where various kinds of agreements and multi-lateral contracts can be prepared. Informal processes can also be used to find cross-border solutions, which can be brought before the respective national and regional legislatures, as currently practiced in the cross-border area of Germany, France and Switzerland (Scholl 2016: 17).

<sup>7</sup> TEN-T consists of two layers: a core network to be completed by 2030 and a comprehensive network feeding into the core network, to be completed by 2050 (EC 2014).

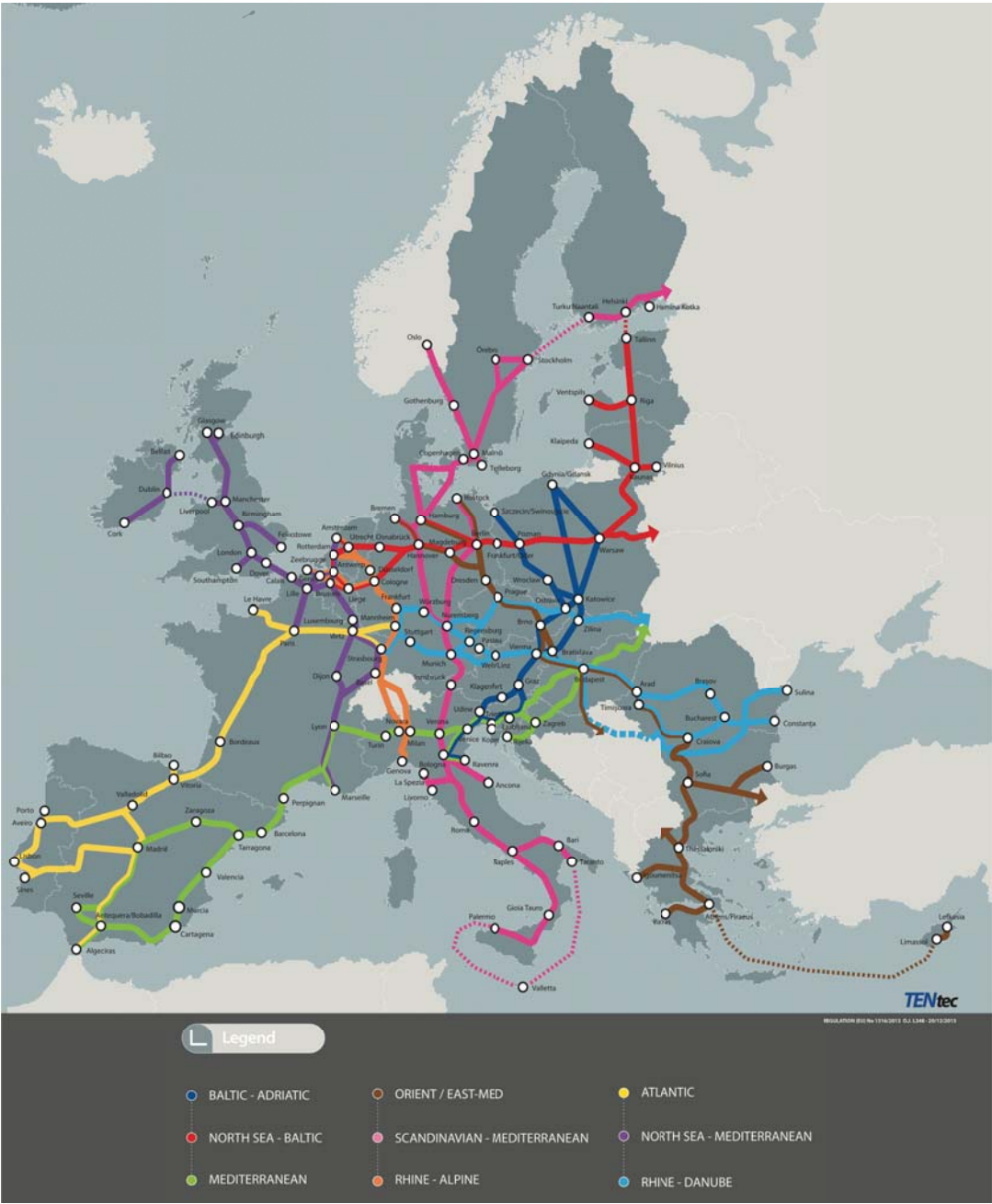


Fig. 1: Core Network Corridors /Source: EC 2013

development on a European scale, namely for the entire European space, is of extraordinary as well as general European interest. Obviously, if value creation declines in strongly performing regions because of uncoordinated and non-sustainable spatial development, then there will necessarily be fewer means available for the economically weaker regions of Europe (Scholl 2016: 16–17). Therefore, the next section presents various aspects of integrated corridor development in order to deliver evidence and arguments relevant to the design of spaces and projects of European importance. More precisely, each subchapter starts with a generic section based on experience in integrated development from different European regions. This is followed by an assessment of the current conditions observed along the OEM Corridor.

## 4.2 Reduction in travel times

Spatial development in Europe can be studied along the historic trade routes of European importance. Accordingly, the outcomes of spatial planning activities will influence the future development of the transport carriers, i.e. rails, roads, water and air, and should be, therefore, coordinated with the concerns and interests of the respective regions and cities in the sense of integrated spatial development (Scholl 2016: 25).<sup>8</sup>

In today's economic point of view, people say: time is money. The reduction of travel and transport time is an important matter – as the development of the travel time between Zurich and Milan clearly shows (Fig. 2). The first private postal service at the end of the 16<sup>th</sup> century required 4 days, the opening of the Gotthard railway in 1882 reduced this to 10 hours and with the start of the operation of the two base tunnels, Gotthard (end of 2016) and Ceneri (end of 2021), it will be just over 2 hours. The space-time ratio has changed dramatically; northern and southern Europe are moving even closer together.

As investigations conducted by the ARL international working group have shown (see the chapter *Long-Distance Passenger Rail Services: Review and Improvement* in this book), a reduction in travel time along the OEM Corridor is eminently desirable. In particular, travel times of less than four hours between important metropolitan regions play a decisive role (Tab. 1). The railway can then compete with planes and motorized individual transport. The factor of travel time reduction has a lot of potential as demonstrated by this comparison of important metropolitan routes before and after the realization of projects already in operation or in preparation.

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8 Transit spaces are areas that have an intensive exchange of goods, services and people. Many of these spaces started ages ago as footpaths that became trade routes and then developed into important sites, regions, and landscapes that are now connected to each other by both land and water routes. Who hasn't heard of the Silk Road, the Salt Road or the Amber Road? Traders had to undertake long and arduous journeys through rough terrain and unknown regions in order to acquire exotic wares and bring them back home. They not only brought tea, coffee, silk and spices with them, but also exciting stories from their travels. Many myths and legends have grown up around these old trade routes that still fascinate us today. And, naturally, such routes also brought with them an intensive cultural exchange. Buildings and cultural artefacts of quite different types bear witness to this along the ancient trade routes. Trade routes have strongly influenced mankind's behavior and, in the best cases, they also brought prosperity (Scholl 2016: 26).

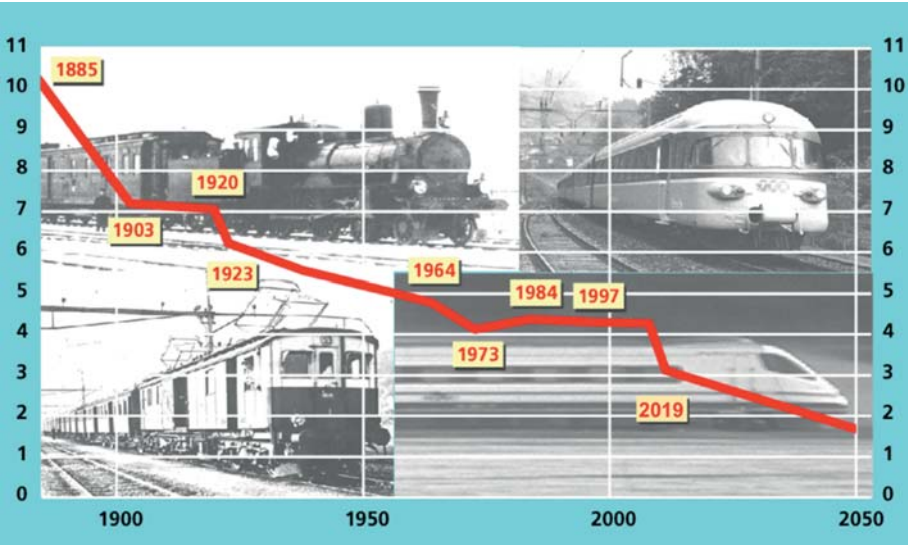


Fig. 2: Reduction of travel time between Zurich and Milan over time /Source: Alp Transit

Relation	Rail distance	Travel Time 2018 / average speed	Travel Time 2030 / average speed
Hamburg–Berlin	300km	01:45 / 170km/h	01:45 / 170km/h
Berlin–Dresden–Prague	375km	04:15 / 90km/h	03:45 / 100km/h
Prague–Vienna	400km	04:00 / 100km/h	03:45 / 110km/h
Prague–Bratislava	400km	04:00 / 100km/h	04:00 / 100km/h
Vienna–Budapest	250km	02:45 / 90km/h	02:30 / 100km/h
Bratislava–Budapest	225km	02:30 / 90km/h	02:30 / 90km/h
Budapest–Belgrade	375km	08:15 / 50km/h	02:45 / 140km/h
Belgrade–Sofia	450km	10:15 / 40km/h	08:00 / 60km/h
Sofia–Thessaloniki	350km	07:30 / 50km/h	07:00 / 50km/h
Thessaloniki–Athens	500km	05:30 / 90km/h	04:00 / 120km/h
Athens–Patras	225km	03:00 / 70km/h	02:30 / 90km/h

Tab. 1: Projected improvement in travel times 2018–2030 /Source: ARL 2019

### 4.3 Importance of the harbors as multimodal hubs

A strong increase in transport in the north-south direction can be expected for 2030 as globalization continues to grow. The world is changing slowly but steadily into one single large market. In particular, economic growth in Asia and the increase of goods exchange within the EU will play a vital role. The Mediterranean Sea has taken over from the North Atlantic as the main shipping route for maritime exchange. In the long term, it will be important to take the opportunity to use the harbor potential situated on the Mediterranean and Adriatic coasts to achieve balanced European goods exchange. Highly productive hinterland connections, in particular those on railway systems, like the northwest European harbors, will, as before, play a decisive role (Scholl 2016: 26).

At present, the main parties dealing with sea transport in Europe are the ZARA harbors (Zeebrugge, Antwerp, Rotterdam, Amsterdam) and the German harbors (Wilhelmshaven, Hamburg, Bremen, Bremerhaven). Antwerp and Rotterdam alone had a turnover of more than 16 million TEU<sup>9</sup> in 2010. By 2020, a redoubling of capacities to over 36 million TEU is expected (UNCTAD 2017).

The preference for northern harbors over Mediterranean harbors is indicated by the financial capacities of these regions and the much larger and more effective cargo handling facilities, as well as better hinterland connections, e.g. waterways, railways and high-capacity roads. The container capacities of Rotterdam are five times larger than those of the Ligurian harbors (Savona, Genoa and la Spezia) put together. The harbors in northern Europe, particularly in Rotterdam, have invested massively in the extension of their harbor infrastructures. Rotterdam will increase its cargo handling capacity with the harbor extension of Maasvlakte from about 450 million tons at present to about 700 million tons in 2035. However, the harbor extension will make it increasingly difficult to guarantee smooth hinterland transport. In the Netherlands, the launch of the Betuwe line was achieved in 2007 under considerable pressure. Starting in 2015, the full use of this line between Oberhausen and Emmerich will require a third track and a block concentration, which will not be available because the German railway network has other priorities. From this point, commissioning and other costs of around 2 billion euros are expected for the year 2023 (Scholl 2016: 32).

The northern harbors of the OEM Corridor (Hamburg, Bremen, Wilhelmshaven) also have considerable handling capacity at their disposal (Fig. 3). In connection with the dynamic development of the population and the expansion of public passenger transportation, bottlenecks are already present in hinterland transport. Various construction projects and new building plans in the triangle Hamburg/Bremen/Hannover are intended to eliminate bottlenecks.

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<sup>9</sup> TEU is the abbreviation for twenty-foot equivalent unit, a measure of the capacity of container ships and harbor cargo handling amounts.

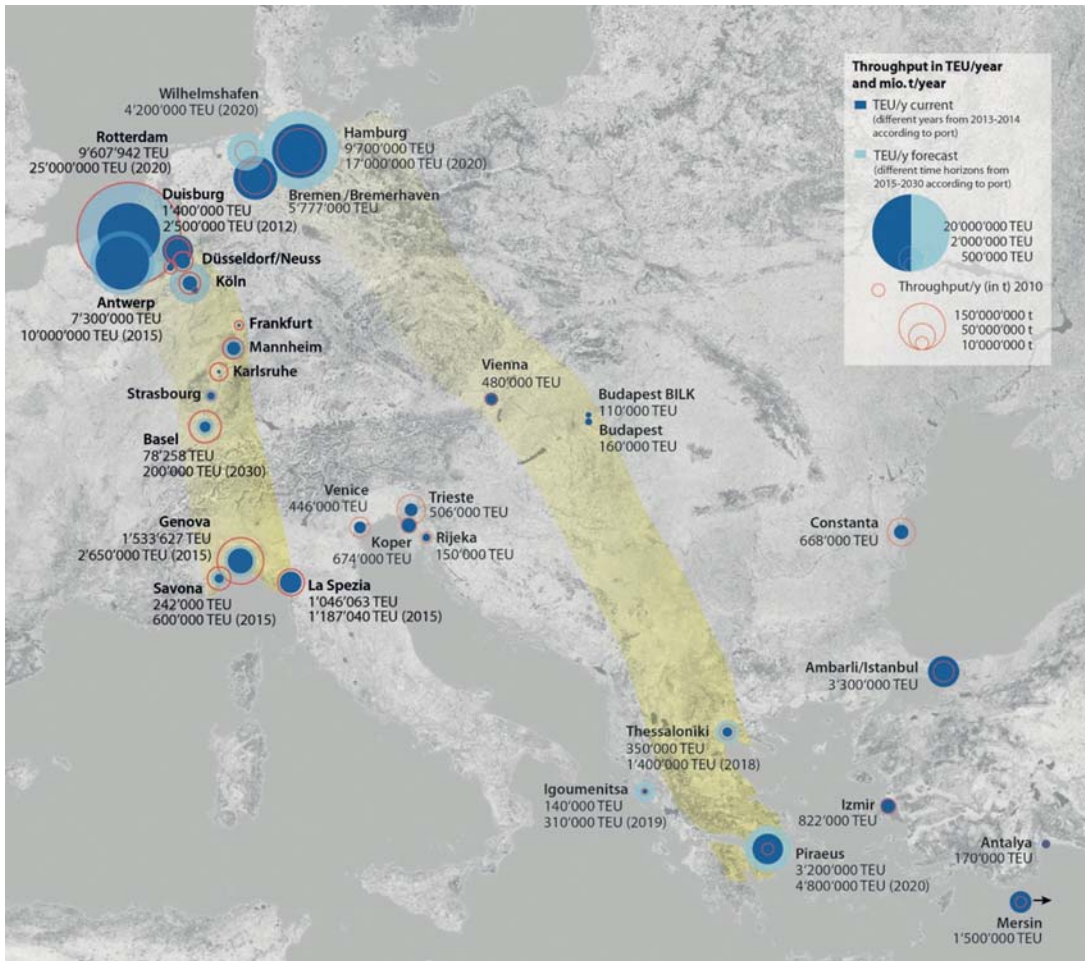


Fig. 3: Harbor development along the Rhine-Alpine Corridor and OEM Corridor /Source: Mathias Niedermaier, ETH/IRL, Chair of Spatial Development

From the southern maritime harbors of the OEM Corridor, Piraeus and Thessaloniki, northwards towards the hinterland, the attainable speeds and level of services at the border checkpoints are insufficient. For all these reasons, it is practical that the investments should benefit both freight and passenger transport. This is also the main reason why the corridor should operate extensively in mixed transport (freight and passengers). The build-up of the corridor should, as a rule, comply with speeds in the range of 160–180 km/h. The projects that result from these requirements are all of European interest. Their realization, therefore, lies in spaces of European importance.



#### 4.4 Separation of freight transport from passenger transport: bypasses

As mentioned, the corridor should operate extensively in mixed transport. Exceptions should be pursued, especially in the densely settled metropolitan areas. There, freight transport should be separated from passenger transport through the use of bypasses. This is mainly because of the noise pollution from freight transport, but also because derailments and accidents with dangerous goods in densely settled areas should definitely be avoided. If that cannot be managed, then freight trains must be comprehensively inspected nationwide for anomalies, e.g. hot boxes, shifting or sliding loads, broken axles, etc., in order to identify problems early – as is practiced in Switzerland. In densely settled areas, the resulting effects are even more serious, therefore, in expanded or new stretches, e.g. the Freiburg area in the Rhine-Alpine Corridor, freight transport will be separated from passenger transport.

From the OEM Corridor perspective, an example of the freight bypass exists in the commercial harbor of Piraeus. This bypass offers appropriate infrastructure for freight traffic and relieves the inhabitants of Athens from the emissions and risks resulting from freight transit through densely settled metropolitan areas.

Further investigations should be provided to explore possible bypasses in other densely populated regions. It is important that route sections along the corridor where the separation of freight and passenger transport could be provided should be investigated in the near future because this involves integrating space for the bypasses in the land-use plans of the various responsible authorities. Without these measures, settlement extensions in relevant areas could undermine these options.

#### 4.5 Problem of missing links

Missing connections between various centers are a major problem limiting the usefulness of earlier one-time investments. The elimination of missing links is a complex issue. Countless different interests must be clarified through practical but sensitive informal processes. In order that investments for the construction of comprehensive infrastructure can be fully effective and that opportunities for sustainable spatial development can be used, actors of the EU should also participate in appropriate processes. Another possibility is that special financial support from the EU would stimulate such processes. Therefore, spaces with missing links are likewise spaces of European importance.

Looking at the OEM Corridor, a distinctive missing link is the still unresolved connection of the city of Patras to the newly built Rio stretching from Athens. Circuitous changing of coaches makes the use of the railway unattractive to passengers. There is a danger that multi-year delays could occur (see the chapter *The Importance of Informal Planning in Greece* in this book). Another example is the to-date unrealized electrified track connection to the passenger harbor of Athens – with approx. 17 million passengers in 2017, it is still the largest passenger harbor in Europe (PPA 2018) – with a direct connection to Thessaloniki or Patras. Better and faster regional connections would allow the potential of the harbor and its future development, e.g. long-distance

trains to Thessaloniki and Patras, to be fulfilled particularly for tourism. Finally, the border-crossing connections from Greece to the north are inadequate and interrupted, for example, from Sofia to Thessaloniki. This means cross-border transport with Bulgaria must be more or less completely undertaken by road. The potential here for a railway for cross-border economic, business and tourist transport is high.

#### **4.6 Connections to the Danube river**

Modernized inland ports function as multimodal platforms for global freight turnover. Therefore, important river catchment areas are considered as spaces and projects of European importance. Waterfronts can also be interesting elements for urban development. However, this can lead to conflicts with the visions provided in the plans for the construction and modernization of harbors. Because of insufficient transport capacity on high performance roads and railways in the corridor, partially due to decades of delays in the planned commissioning of new and upgraded routes, especially in railway transport, waterways could also play an important role as a strategic reserve. For example, the Rhine river has sufficient reserves as a waterway to be able to relieve road transport and, if need be, railway bottlenecks (Braun 2018). In cases of disruption, waterways can also contribute to the robustness of the entire system.<sup>10</sup>

Many Danube harbors exhibit considerable potential in this respect, as confirmed by inspections and surveys in Budapest and Belgrade. A systematic examination of the integrated cooperative effect of harbors on the Danube and the targeted railway system are desirable. Projects resulting from this could be in Europe's interests.

#### **4.7 Integrated development of railway stations and their catchment areas**

It has been mentioned many times that sustainable settlement development should be directed inwards rather than outwards to new land. Railway stations are crystallization points of this transit-oriented development (TOD). In the Rhine-Alpine Corridor, for example, it could be shown that land reserves exist for ca. 5–7 million residents in the catchment areas of the larger railway stations over the entire corridor (Drewello/Scholl 2016; Günther 2016; Tosoni 2015).

Inspections at hot spots, investigations and the evaluation of relevant data indicate that large reserves also exist along the OEM Corridor. Cities such as Hamburg, Berlin and Vienna have consequently in recent years and decades taken advantage of the potential areas in the catchment areas of railway stations. In Berlin and Vienna, new urban districts have grown up around the main railway stations. In Budapest, Belgrade, Athens and Patras, there are large transformation areas for which plans, in

<sup>10</sup> Impressive proof of this was provided when an accident occurred in the tunnel near Rastatt in the Rhine-Alpine Corridor. The stretch was blocked for all freight transport for nearly two months. During this time, the harbors of Basel and Strasbourg took on the additional handling. Moreover, Basel harbor plans to increase its importance through a renovation of the harbor as a tri-modal platform. Through freeing up areas that are no longer needed, urban development is clearly promoted.



part, already exist. As a rule, it is the development of the railway stations – obviously, in relation to the development of the railways – that is the stimulus for urban development. Seldom does it operate in the other direction. Infrastructure development in the railway area is also urban development and promotes economic development.

#### 4.8 New Silk Road: Belt and Road Initiative

The Chinese New Silk Road initiative is intended to contribute to the development and security of the Eurasian continent and to maritime connections. Various projects are connected with the initiative including major commitments, investments and financial assistance. The development of Piraeus harbor into a high-performance container hub has been part of the plan since 2009. The container turnover developed from nearly 900,000 in 2010 with almost a four-fold increase to 3.69 million TEU in 2017 (COSCO 2018). The intention of the operators and a majority of the owners is to develop Piraeus into the ‘Rotterdam of the South’. From Piraeus, feeder ships will serve the Mediterranean harbor cities where the goods will be transferred to the railways, thus fulfilling the Balkan’s goal of using rail over road.

Of special interest are the high-performance rail connections in Hungary that function as a catchment area of Piraeus harbor. Plans to include Thessaloniki are also part of the scheme. Another key project is the construction of the Belgrade-Budapest route, also supported by Chinese know-how and credit. These projects are intended to provide a land-sea express route to central Europe (Bastian 2017). The extension of the broad-gauge railway from its current end point in Košice, Slovakia to Austria (ca. 400km) is also part of this connection. The ultimate goal is to produce a continuous rail connection through the Ukraine and Russia to China.

All of these investments will significantly improve accessibility along the OEM Corridor. Railway stations and logistics turntables and switchyards will be revaluated, which holds new opportunities – as well as challenges – for future settlement development. However, it appears that this plan is not rooted in a European strategy for the spatial and transport development of southeast Europe. In fact, there is still no clear European answer, as emphasized in a remarkable manner at the Munich Security Conference by the former German Federal Minister for Foreign Affairs, Sigmar Gabriel (Gabriel 2018):

*“With China’s ascent, the balance will be shifted massively. The initiative for a new Silk Road is not, well, not what some in Germany might believe, a sentimental memory of Marco Polo. No, it stands for the attempt to establish a comprehensive system for imprinting the world in the interests of China. China appears at present as the only nation in the world with truly global, geo-strategic ideas and it consistently follows this ideal. I am not reproaching China for this idea and this intention. It is China’s right to develop such ideas. However, it is our side; we, as the ‘West’, do not have any strategy available to help us find a new balance in worldwide interests, one that places value on equality and on joint added-value and not just on the zero-sum situation of one-sided interest”.*

To summarize, integrated spatial and transport development at the transnational scale cannot be planned only from a European perspective. Rather, global influences also shape the future development of European space. Therefore, understanding the transcontinental trends, on the one hand, and learning from best European examples in the domain implemented so far, on the other hand, are the steps to follow in order to strengthen territorial integration in Europe.

## **5 Spaces and projects of European importance along the OEM Corridor**

The spaces and projects of European importance focus on areas and spatially important tasks of common European interest. For example, in numerous areas along the OEM Corridor (Fig. 4) intensive cooperation at all state levels, including the European, is necessary in order to attain an integrated and financially viable solution in a manageable timeframe. The projects presented below are divided into four groups according to their territorial background. For the detailed information on these projects see Perić/Niedermaier in this book.

### **5.1 Germany**

In Greater Hamburg, in spite of the stagnating turnover of the port of Hamburg, an increase in the number of bottlenecks in the harbor's hinterland rail network is to be expected. This is also dependent on the dynamic population development, which will also increase passenger transport and lead to competition with rail freight transport. The track connections of Hamburg's harbor are based on a two-axis concept:

- > Via the southern route: Uelzen to Stendal; Hannover
- > Via the eastern route: Wittenberg to Stendal; Berlin

A construction project that is important for Hamburg's harbor is the southern Alpha-E/Y-Route project. The construction of the stretch from Hamburg and Bremen towards Hannover will play a central role.

### **5.2 Central Europe**

The area between Germany and the Czech Republic, more precisely, between Dresden and Usti nad Labem, is gaining importance due to the new tunnel to be constructed in the near future as a result of successful cross-border cooperation. The tunnel can increase the performance of the route and reduce travel times between the centers. The partial storage of freight transport in the long tunnels will contribute considerably to noise reduction in the Elbe valley and thereby enhance its value as a living space (see Heldt in this book).



Fig. 4: Spaces of European importance along the OEM Corridor /Source: Mathias Niedermaier, ETH/IRL, Chair of Spatial Development

In the Vienna area, many TEN-T corridors cross each other. The south railway with the Koralm and Semmering base tunnels contributes to considerable travel-time reductions for freight and passenger transport to the south. The abovementioned possible extension of the broad-gauge railway from the present end point in Košice, Slovakia to Vienna, Austria would help Vienna become a first-class hub for freight transport, along with the harbor establishment and the marshalling yard in Kledering. The launch of a faster connection from Belgrade to Budapest would raise the value of the corresponding railway stations. This could stimulate the development of settlements according to the inward development principle (see Voigt in this book).

### 5.3 Balkans

In Belgrade, the launch of a faster connection to Budapest will lend considerable drive to the new central station. The difficult topographical conditions in the surroundings, which since the mid-1970s have been included in the planning and construction of the new through station, will pose challenges to urban design. The railway station on the Sava river waterfront closed in July 2018, leading to an impressive, although also questionable, development along the Sava waterfront (see Čukić/Perić in this book). Bearing in mind the possibility of Serbia entering the EU by 2025, the opportunities for cooperation in this area should already have been explored in order to make the space of European importance.

Sofia's metropolitan area is a central node in the Bulgarian railway system. For historic reasons, railway transport is oriented in an east-west direction, i.e. from the Black Sea to the Danube river. Numerous upgrades of existing railway lines are planned. Traditionally, improving the attractiveness of the connection to Thessaloniki could contribute to the economic recovery of the space and an intensive integration of interrelationships between Bulgaria and Greece. The new connection via Skopje is also important as it ties together the fastest connection between Thessaloniki and Niš.

### 5.4 Greece

Thessaloniki is the 'turning platform' between Greece and the north for freight as well as passenger transport. The harbor of Thessaloniki needs more effective and urban-compatible hinterland connections for freight transport. After the commissioning of the rapid railway connection to Athens in 2019/20 (just under 4 hours) and the construction of the metro station, the railway station area is set to become a central area for changing public transport. In the catchment area of the railway stations, interesting transformation area units will be opened for settlement development within the urban areas.

Greater Athens is the strategic beachhead to the Mediterranean Sea, which since the rise of China and its stream of goods from Asia is of strategic importance for Europe, just as it was in antiquity. Embedding Chinese investments and engagement, all mainly related to harbor and track projects, is of extraordinary importance. This involves finding the quickest possible implementation of a direct connection from Piraeus to

Thessaloniki and Patras. This development can promote the desired decentralization in Greece through a network of cities and localities, with the tracks as the strategic backbone in both the medium and long term. Numerous, in some cases large, brown-fields can be found in the catchment area of high capacity railway stations, whose transformation should have priority before any further expansion of the settlement areas. With the strengthening of the railway system will also come benefits from sustainable tourism development, e.g. as in classic holiday countries such as Spain and France.

For Patras, the opening of the normal and double-gauge routes to Patras will provide special opportunities, especially if the missing link to Patras can be managed in the next few years (see Frezadou in this book). Cities and localities along the lines could profit from attractive train ticket offers, as tourism has on the Peloponnese. In Patras and along the line are interesting land reserves for inward settlement development. The step-wise activation of the meter-gauge Peloponnese Railway should be considered as an attractive transport system not only for the economic and living spaces but also as an attractive route for tourism.<sup>11</sup> Furthermore, Patras could develop a platform of exchange, particularly to operate with the ferries to and from Italy and cruise liners. One definite challenge is the clarification of how the freight harbor of Patras should be connected in future.

## 6 In conclusion

The OEM Corridor is a highly challenging macro-region in Europe. On the one hand, the interests of the important global 'players' aware of geo-political strategies are interwoven along the axis. On the other hand, the current bottlenecks rooted in different past histories, cultures and identities are considered an impediment to the fast-paced development of the line. Nevertheless, times of crisis are also times of opportunity. Therefore, in addition to economic prosperity as the main trigger for any activity in the macro-region, the political stability and, foremost, protection of peace should be seen as the main guidelines for a sustainable future. These goals can be achieved especially if national and European institutions can inspire the great number of actors to embrace European thinking and motivate them to take up their own initiatives.

Integrated spatial and transport development is seen as a tool for territorial integration in Europe. By its very nature, it revolves around interdisciplinary cooperation. Hence, such a development cannot be pursued based only on quantitative technical parameters, such as those associated with transport infrastructure improvement, or on abstract spatial visions, formal planning instruments and regulatory mechanisms. On the contrary, changes of both the policy-making process and its implementation

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11 At the symposium held at ETH Zurich "Trains, Tourism and Regional Development of Peloponnesian and Rhaetian Railways", the Patras region representatives met with the management of the Swiss Rhaetian Railway and developed some interesting perspectives for the future.

are required. Looking at the current practices along the OEM Corridor, highly cooperative and informal procedures have been applied in several places (e.g. Dresden–Ustinad Labem, Patras). However, these are only sporadic successful examples.

Therefore, further research should be focused on creating the strategy for integrated spatial and transport development along the OEM Corridor. This is a long process and demands many steps to be previously taken. One of these (the main contribution of the ARL international working group) is the creation of the Position Paper 109 (ARL 2019). This succinct document contains both a situational assessment and major recommendations covering three pillars: transport infrastructure, integrated spatial and transport policies, and cooperative planning procedures and know-how. The underlying inductive approach has a clear focus: railways as the backbone for urban development secure sustainable urban growth, further leading to regional prosperity and, finally, European cohesion.

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