



TERRITORIAL ATTRACTIVENESS MONITORING PLATFORM: A HANDBOOK FOR POLICY PLANNERS

TERRITORIAL ATTRACTIVENESS MONITORING PLATFORM

A HANDBOOK FOR POLICY PLANNERS

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Handbook for policy planners on applying TAMP

September 2018

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FOREWORD

Territorial attractiveness has been through centuries a powerful incentive to mankind for progress, innovation and development, for setting up new targets and horizons as well as ever more complex networks and connections. Because of the attractiveness of known and unknown territories, new ways were opened, new and priceless resources were discovered, and maybe above all, increased interaction among people and cultures all around the globe took place. Most of the ancient legends and myths are about magical territories and heroes looking for hidden treasures and ready to travel across unknown and dangerous lands and seas to get there. Since Gilgamesh and Enkidu traveling to the Cedar Forest, to Jason and his argonauts in quest for the Golden Fleece to the later Middle Age expeditions of Columbus, Magellan or Cook and to the travels and discoveries made during the last centuries to Southern Hemisphere continents or to the Poles until the 20th centuries flights to the moon and beyond, the attractiveness and desire to reach, search, exploit and develop territories is strongly embedded in the evolution of human civilisation and may be considered as a basis for development of present and future global infrastructure, of the myriads of networks of settlements, of innovative and productive activities, and of valuable contributions to perennial culture.

There is no doubt that a Handbook for planners of how to handle and evaluate the territorial attractiveness is of utmost importance and represents a necessary and useful contribution to the existing set of related studies, reports and documents developed during the last decades by the Council of Europe, by the European Union and by the different Member States of the EU. It represents a good response to most of the territorial challenges mentioned by the TA 2020, such as exposure to globalisation, growing regional interdependences, increased diversity, environmental risks, landscapes vulnerabilities and may become an efficient tool to achieving more integration, cohesiveness, inclusiveness, competitiveness and efficient management of natural and cultural heritage.

Arch. Gabriel Pascariu



**President of the Romanian
Association of Urban Planners**



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Introduction

Against the backdrop of a demographic decline, accentuating within the South-Eastern Europe, current socio-economic policies for consolidating post-crisis cities and regions face difficulties in implementation. A concerted approach is needed to address the cause, not the effect of downward trends, but also to seize the many opportunities of the day: **Why is it “better” elsewhere – or not attractive enough here? How do we define, quantify and strengthen territorial attractiveness at national level?**

Each territory has equity – a set of assets and territorial capital that can make it competitive compared to other destinations, for either living, or investing, or tourism... or all of the above!

Through good governance, policies can create conditions for maximizing endogenous potential for development, thus enhancing the attractiveness of territories for their inhabitants, visitors and businesses. The transnational project **“ATTRACTIVE DANUBE – Improving Capacities for Enhancing Territorial Attractiveness of the Danube Region”** deals with the capitalization of the specific elements of potential that make up this region of Europe.

ATTRACTIVE DANUBE is a project co-funded by European Union funds (ERDF, IPA) through the Danube Transnational Programme, and runs for two years and a half, between 1st of January 2017 and 30 June 2019, having 19 project partners: 12 financing project partners (from Slovenia, Romania, Bulgaria, Croatia, Czech Republic, Hungary, Slovakia, Germany, Bosnia and Herzegovina, Montenegro and Serbia) and 7 associated strategic partners.

In a nutshell, **ATTRACTIVE DANUBE** aims at strengthening multilevel and transnational governance and institutional capacities of policy planners involved in territorial development of the Danube Region, which will result in more harmonised governance system of the area.

The first stepping stones towards this objective have been achieved: the project partners have established a permanent common transnational platform for monitoring territorial attractiveness (**CO-TAMP**), 11 national platforms (**TAMP**), and have published a Territorial Attractiveness Atlas.

In this second project stage, and starting with the Handbook you are reading, we will implement an **intensive capacity building programme** for empowering multilevel public authorities and civil society in 11 countries related to development planning resulting in enhanced skills and knowledge.

Finally, the **policy integration process**, including transnational workshops, development of policy recommendations and of a signed transnational memorandum of understanding, will capitalise the results and assure the long-term impact and leverage effect in the society.

We leverage on the following key pillars to provide assistance to policy makers and public authorities for ensuring quality of life across the Danube Region:

1. Development

Strengthening the influence on territorial development, regional development, business and

tourism by setting up the capacity building activities and participatory processes of relevant stakeholders.

2. Governance

Strengthen multilevel and transnational governance by adopting an evidence based approach via the use of an information platform created for better decision making.

3. Attractiveness

Identifying territorial development potentials and indicators addressing, environmental, economic, governance and social challenges.

4. Participatory Planning

Improving and strengthening the multilevel, cross-sectoral participatory territorial development planning, involving policy planners, civil society, businesses and academia through 2 sets of three workshops in 11 partner countries.

5. Partnership

The project itself benefits from a transnational partnership of 19 project partners, but through Memorandums of Understanding at national and programme-level, it will ensure an expansion of partnership for sustainability purposes.



Picture 1 - ATTRACTION DANUBE principles. Source: CENIA, AD

The HANDBOOK in a nutshell

What is the Handbook about?

By publishing this document, our aim is to assist policy planners and other target groups on how to use and interpret the Territorial Attractiveness data and indicators for better planning of future developments and for **responding to societal challenges in their countries and regions**.

The Handbook encompasses **guidance for the Territorial Attractiveness Monitoring Platform**: how to's on reading, understanding and operating with the platform for various purposes, which will be useful for ensuring a sound basis in the process of Capacity Building which will take place in each of the 11 partner countries.

Our scope is to deliver a publication which is beyond a user manual, providing the contribution of partners towards embedding the term „**Territorial Attractiveness**“ and the outputs of ATTRACTIVE DANUBE in the practices of stakeholders.

As such, the first chapters are dedicated to providing readers with a comprehensive look into the concepts of territorial capital, attractiveness, European development policies and potential for future local, regional and national development under the auspices of the next programming period.

To whom is it addressed?

ATTRACTIVE DANUBE's main result will be to achieve improved capacities of **public institutions and other stakeholders** and their increased involvement in participatory planning processes for balanced territorial development in the Danube Region.

The present Handbook should be useful for assisting a wide number of stakeholders and readers to be better equipped to **plan and implement informed decision-making processes for future territorial development**, addressing environmental, economic and social challenges.

Consequently, we have a long audience list. If you are one of the many specialists below, you may find the contents of the Handbook useful for your daily activity!

- Decision makers and public administration (national, regional, local),
- Micro-regions, associations, metropolitan areas and local action groups,
- Organisations dealing with data management,
- Spatial planners,
- Sectors covering economy, environment, social affairs,
- Civil society and NGOs,
- Academia, researchers, experts,
- Students,
- Businesses with focus on investors and tourism.

What is inside?

The Handbook for Policy Planners on applying TAMP is structured into 6 main chapters. The first chapter, **Territorial Attractiveness**, aims at providing readers with insights into the general concept of attractiveness from a territorial development point of view, at discussing Territorial Capital and operating with the two concepts.

Within the second chapter – **Evidence-based planning**, we discuss the policy planning framework and programming context within the Danube Region, with an outlook on the current and future governance and development challenges and a proposal for defining a roadmap for performance in policy planning.

Managing and Evaluating Territorial Attractiveness will provide readers with information on the TA monitoring frameworks embedded within the partner countries' planning documentations, and with specific insight into the development of the ATTRACTIVE DANUBE Key Performance Indicator (KPI) sets for the transnational and national platforms, through a participatory process.

The fourth chapter is dedicated to the **TAMP Platform**, offering an in-depth look and specific training for operating with the national territorial attractiveness monitoring platforms.

Outlook and Sustainability discusses the future of the ATTRACTIVE DANUBE outputs and results, and lastly, **Policy Recommendations and Conclusions** offer a wrap-up of the Handbook contents.

What will I gain from reading the Handbook?

After you finish reading this publication, you will be able to understand:

- The different facets of Territorial Capital, in literature and in practice, for your country and at Danube Region level;
- The concept of Territorial Attractiveness, its uses, applications, and how to operate with it;
- Your country, regional or local potential strategic positioning at the macro-regional / Danube, national and regional level;
- The advantages of the evidence-based planning process and the process itself;
- The instances in which you will be able to use the Key Performance Indicator for Territorial Attractiveness;
- How the TAMP functions and what advantages it could bring to you.

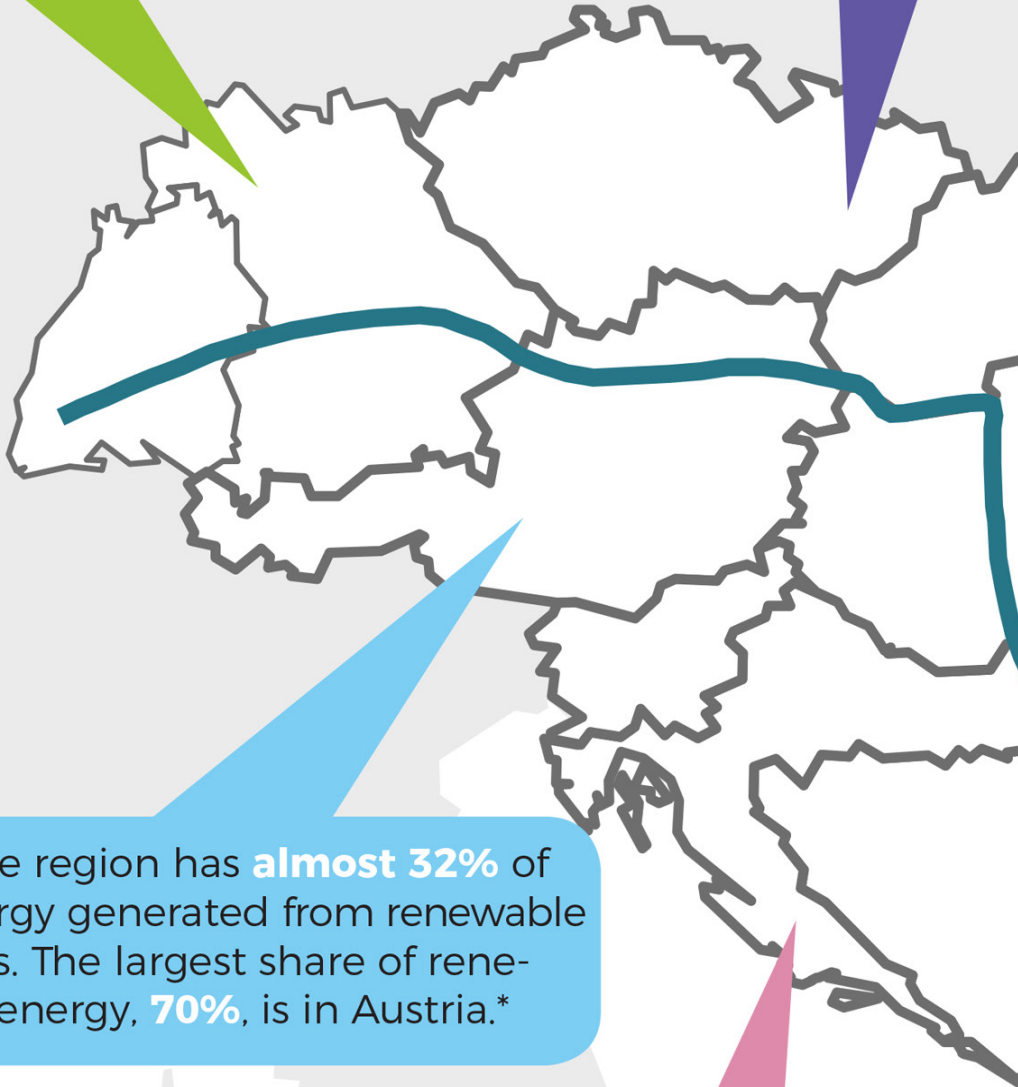
Finally, you will find out how to further get involved, either as a direct beneficiary from the TAMP platform and KPI database, or a contributor, or both!



The largest share of terrestrial area protected in the Danube region is in Germany-Bavaria - **more than 32%**. Which is double the region's average (**almost 16%**).*



6.5 is the average share of European UNESCO World Heritage sites in the Danube region. Croatia has the largest share.



Danube region has **almost 32%** of its energy generated from renewable sources. The largest share of renewable energy, **70%**, is in Austria.*



The average share of tourism related employment is **5.2%** in the Danube region. The largest share in the region, **9.1%**, is in Croatia.*

The average number of
cultural sites on the
UNESCO World Heritage List in the
Danube region. The Czech Republic
has the most sites, **12 in total**,*



24% of Romania's employment is in
agriculture, which is the largest share
in the Danube region. The average
share is **7.3%** in the region.*

PART 1 : TERRITORIAL ATTRACTIVE- NESS



17.8 is the largest average number of
overnight stays of tourists per capita per
year in the Danube region and belongs to
Montenegro. The average number is **6.3**.*

1.1 Territorial Attractiveness: a general concept

1.1.1 A smart approach to sustainable, integrated development and investment

Smart, sustainable and inclusive growth is the mantra of the current programming period. It is, as every mantra, easy to remember and to use for contextualizing political and economic ambitions, but what does it mean in practice?

Everything is, or should be, smart in the contemporaneity, from tangible devise till their intangible potentialities, which have concrete effects of daily life. It is to understand how all potentiality embedded in the dominant rhetoric of smartness, and innovation, could change or support the real regional development and define acceptable form of growth that are not going to compromise already fragile environmental, social and cultural assets of many regions, especially the ones still in transition towards more stable economies, which is the case of the ones situated in the macro-region of the Danube program. It is to focus the attention on the operational meanings of the territorial cohesion, that is to firstly understand how territory matters. In other words, to link development and places and going beyond the mere social and economic dimensions of cohesion. It is not to homogenize territorial diversity, but it is to design policies to valorise it. The harmonization effects of good territorial cohesion policies should reduce the regional differences within the Union and promote, facilitate trans-regional and cross border cooperation. The concept of “place” consents us to easily find territorial collaborations, dimensions, configurations that are trans-administrative and trans-political, they simply respond to “local” capability and development will of communities that recognise themselves as active protagonists of a/in a place.

1.1.1.1 Digitalization

Digitalization, as a highly transformative process, is unequivocally the most significant phenomenon of the present. Digitalization is a driver of technological change. This technological transition affects our everyday lives from economic and social aspects as well. Through cutting edge ICT technologies being implemented, we experience accelerated change that transforms our industries, consumer behaviour and the way we manage and collect data (*Kovács 2017a, Kovács 2017b OECD 2017, Manyika et al. 2016*).

Our economy and society become even more complex and connected on a global level (EC 2017). Digital solutions are becoming more widespread and accepted from industrial and consumer aspects as well, as efficiencies can be enhanced in a cost efficient way (Manyika et al. 2016). The importance of immaterial assets, data flows and participation has become more important in the 21st Century, as these have become the core drivers of growth and development (EC 2017).

In today’s environment, we are connected to smart devices more than ever through the Internet and the ICT infrastructures. We can state that we have a parallel existence in the material and virtual world as well (Schwab 2017, Yoon 2017). We are also highly reliant on these supportive digital solutions that are presented as opportunities of the digital age (Piccinini et al. 2016, WEF 2016a).

This means that there is a huge change that underwent in the last century from many aspects, we

can experience a shift in the general economic and social mindset in developed countries (Table 1).

Period of Globalization		
	⇓	⇓
Aspect	20th Century	21st Century
Main value category	Tangible flows of physical goods	Intangible flows of data and information
Networks	Flows mainly between advanced economies	Greater participation by emerging economies
Flows	Capital- and labour-intensive flows	More knowledge-intensive flows
Infrastructures	Transportation infrastructure is critical for flows	Digital infrastructure becomes equally important
Core actors of innovation	Multinational companies drive flows	Growing role of small enterprises and individuals
Transactions	Flows mainly of monetized transactions	More exchanges of free content and services
Dissemination of Knowledge	Ideas diffuse slowly across borders	Instant global access to information
Technology Transfer	Innovation flows from advanced to emerging economies	Innovation flows in both directions
Global Interactions	Global supply chains	Global value chains

Source: Own construction based on Manyika et al. (2016, p. 5) and EC (2017, p. 10)

Table 1 - The Past and Present of Globalization

As digitalization has become more widespread, the fourth industrial revolution has also commenced. This industrial revolution is defined by technology-dominance in all industries, immense data flows and smart communication networks (Kovács 2017a).

Furthermore, it is fuelled by the phenomenon of digitalization and it directly affects the fundamental frameworks of society and economy (Schmidt et al. 2015, Dujin et al. 2014). It is expected that the fourth industrial revolution will generate enormous impact in a group of technology sectors: Big Data analysis, autonomous machines, robotics, simulations, integration of horizontal and vertical systems, Internet of Things, cyber security, cloud computing, additive manufacturing and augmented reality (Kovács (2017a, p. 825).

There are several experimental definitions that evolved around the fourth industrial revolution.

Based on Pfohl et al. (2015, p. 37): *“Industry 4.0 is the sum of all disruptive innovations derived and implemented in a value chain to address the trends of digitalization, autonomization, transpa-*

rency, mobility, modularization, network-collaboration and socializing of products and processes”.

Based on the research of Schuh et al. (2017, p. 10) the fourth industrial revolution is: *“real-time, high data volume, multilateral communication and interconnectedness between cyber-physical systems and people”.*

Based on the definition of Smit et al. (2016, p. 20): *“Industry 4.0 describes the organisation of production processes based on technology and devices autonomously communicating with each other along the value chain: a model of the ‘smart’ factory of the future where computer-driven systems monitor physical processes, create a virtual copy of the physical world and make decentralised decisions based on self-organisation mechanisms”.*

Constant communication among people, smart devices and machines becomes more and more conventional.

In the next section, we explore the idea of smart cities, territorial units in which technological solutions are embedded in the very core of the city operations.

1.1.1.2 Smart Cities

The term “smart city” is also a buzzword in the context of digitalization and this concept may be vital and inevitable when it comes to the future of urban development (RB 2017).

Smart cities receive focus, as it is widely accepted that cities are the main engines of economic growth and they also act as centres of innovation (Sen – Eggers – Kelkar 2018). The economic role of cities is addressed and stakeholder plan to keep it this way.

The speed of the smart city approach is catalysed by rapid and global urbanization, the shift to sustainable energy planning, economic globalization and the spread of digital technologies. The tackling of these challenges requires strong coordination and a higher level of participation (Dobos et al. 2015).

With the recent urbanizational progress, currently it is estimated that over 50% of the global population lives in cities. This proportion can increase to 75% by the end of the century (Sen – Eggers – Kelkar 2018, Dobos et al. 2015).

At the core of a smart city, there are people. These people are either residents, visitors or owners or employees of businesses. As smart cities are for the people, three objectives are in focus (Sen – Eggers – Kelkar 2018, p. 5.):

- a better quality of life for residents and visitors,
- economic competitiveness to attract industry and talent,
- an environmentally conscious focus on sustainability.

There is currently no global consensus regarding the definition of the smart city, however there are experimental definitions available.

A smart city, defined by Sen, Eggers and Kelkar (2018, p. 1) *“is simply one that uses technology to improve outcomes across every aspect of city operations and enhance the services it offers to its residents. It collects and uses data to drive its decision-making, and creates networks of partners among governments, businesses, non-profits, community groups, universities, and hospitals to expand and improve its ability to serve its residents.”*

Van Dijk (2015, p. 14.) state that *“A city is smart when investments in (i) human and social capital, (ii) traditional infrastructure and (iii) disruptive technologies fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance.”*

We can see that the common themes regarding smart cities revolve around sustainability, technology, the active participation of the citizens and the boosting of operational efficiency by utilizing data. Based on the same Roland Berger (2017, p. 5.) report, the ideal smart city strategy comprises of six crucial elements, which are those described in the following table (Table 2).

Action Field	Example
Smart Government	Digital public administration, Participatory governance, E-services
Smart Health	Telemedicine, Integrated health information systems, Ambient assisted living
Smart Education	Urban education platforms, Digital learning formats, Digital skills
Smart Buildings	Connected facility management, Smart home, Smart construction
Smart Mobility	Intelligent traffic management systems, Smart services for public transport, Smart urban logistics
Smart Energy and Environment	Smart energy, Smart water management, Smart waste management

Source: self-edited based on RB (2017, p. 5.)

Table 2 - Action fields of smart city strategies

Based on this list, it is clearly defined what points need to be taken into account, when the role of the city and city strategy is being re-evaluated. These action fields are crucial in the functioning of a smart city even separately, however through the synergy of these fields, the whole city can be greater as an entity and not simply the sum of the mentioned fields (RB 2017) Similar to this approach, Dobos and co-authors (2015) and CRS (2007) introduce a similar approach. They refer to the elements of a smart city as subsystems, these are the following (table 3):

Smart city subsystem	Monitoring indicators
Smart Mobility	Logistics, Multimodal accessibility
Smart Environment	Smart buildings, Long-term resource-planning, Climate-friendly city
Smart People	Integration, Education, Creativity
Smart Living	Wellbeing, Security, Health
Smart Government	Online processes, Educational and cultural institutions, Healthcare, Public utilities, waste management
Smart Economy	E-Economy, innovation, Productivity, efficiency, Local and global connections

Source: self-edited based on Dobos et al. (2017, p. 11.), CRS (2007, p. 12.)

Table 3 - Smart city subsystems

van Dijk (2015, p. 28) identifies a huge number of stakeholders, who are all embedded, interconnected and act as a vital part of the smart city: start-ups and incubators, research institutions, universities and schools, public housing associations, city government, state/national government, healthcare providers, energy providers, (public) transportation providers, investors, banks and insurance companies, hotels, museums, restaurants, theatres and stadiums, telecom providers, technology vendors, logistics providers, manufacturers and construction companies, retailers, digital agencies.

1.1.1.3 The growing role of trust in this process

Human well-being and economic development have an element that determines the nature of them: trust. Why is trust so important to mention and to detail its definition and concept in a separate chapter?

From the one hand, some achievements of the digital life require a high level of trust. For example, trust is vital to the sharing economy as all of these companies are asking people to put themselves or their possessions in the hands of strangers.

From the other hand, it is shown in empirical and theoretical analysis, that life is more enjoyable and successful provided there is a high existence of trust interpersonally. Helliwell (2001) highlighted that “*trustworthy behaviour in others reduces the costs of dealing with risks and uncertainty.*”

The level of trust is different among people and among societies. Also, measures of trust show different indicators over time. To analyse trust, we need to understand that which circumstances promote trust, and which repress it. On one side, trust can improve interactions among society and policy, on the other side, distrust is necessary on certain level to protect ourselves from any abuse that stems from political and market power.

Several studies have highlighted the relationship between subjective well-being and interpersonal trust. According to Helliwell and Huang (2005 and 2008), trust in the workplace has a strong effect on the improvement of subjective well-being. High level of trust contributes to the improvement of interpersonal relationships network among people. Helliwell and Putnam (2004) found by comparing different surveys, that people, who are feeling trust to others, involving people who live, work among them and the authorities also have higher level of subjective well-being. Psychosocial factors, such as optimism, sociability and trust are focused on as the determinant for subjective well-being according to several researches (Di Tella et al, 2003). Interpersonal trust is taken into consideration as one of the important predictors of higher subjective well-being and at the same time, poor psychological well-being is connected to negative attitudes such as cynicism, mistrust (Helliwell and Huang (2008b)).

1.1.2 Territorial Attractiveness, Territorial Competitiveness: framing today's action

Nowadays as the global competition and the digital revolution is intensifying, concepts like competitiveness and attractiveness can be found more frequently. To properly compare territorial competitiveness and territorial attractiveness, we need to analyse fundamental definitions, theories and background processes which form our everyday life about the subject.

1.1.2.1 Framing Territorial Competitiveness: Theories, literature, definitions

Competitiveness is a key concept of economics, business and economic development. The expression itself reaches back to a long time, a huge amount of research arose in academic focuses, and its analyzation moved plenty of scientific philosophers and experts. Defining competitiveness can be done in various dimensions, plenty of entities exist in economy and in the society. In this chapter, we examine the main definitions and logic of competitiveness, and we discuss the analysis of some decisive competitiveness index.

If we think about the operation of the world, we can see the patterns bending to our present, we can notice an ongoing rivalry in our world. The most common types of rivalry are the following (Lengyel 2010, Batey – Friedrich 2000):

- Rivalry between creatures for claiming living space and nutrition, and the biological sustenance of the species.
- Social groups, as layers, communities, nations, parties compete with each other over political authority, trying to claim political positions.
- Economic units compete with each other claiming economic advantages.

The first two types of competition focus on aspects, which are not economy-oriented, so in those

cases the expression of competition is not practical. The third type is clearly economic, so the concept of competition can be defined (Lengyel 2010). We use this type of competition as a base when we talk further about competition.

The competition between economic units can be divided into three further categories (Lengyel 2010, Siebert 2000):

- Employees, individuals compete on the market for the better workplace.
- Competition of companies for resources, market share and profit.
- Competition of spatial units, where different spatial units, cities, regions, countries compete, where the vision is to rise the prosperity and the standard of living.

In the competition between spatial units' long-term growth of income is a key factor (Lengyel 2010). In this study, we concentrate on the competition between spatial units.

In the most common conception competitiveness connects to the realized success of market competition. In the case of companies this could mean the tendency to rise market share and profitability, and the explanation of the capability to the attachment of competition advantages.

In governmental aspect, this means the growth of export-market shares, and reaching rising emission. In economics, competitiveness means mostly the high level of productivity and its high growth rate (Lengyel 2000).

Though these definitions help us to differentiate between the conception of entities and scientific areas in a very loosely structured framework, but the advantage of generalization is its disadvantage as well. Weakly determined structure gives wide interpretation possibilities. Because of this, debates about competitiveness are intense, the interpretation depends highly on the economic paradigms. The earlier debates sharpened on the basis interpretation of competitiveness. We can differ two main approaches.

One group of experts, academics claim that competitiveness cannot be interpreted spatially, only in companies (Polenske 2004, Dicken 2003, Krugman 1998, Krugman 1994). We can guide this approach back to multiple thoughts. The first is that countries behave differently from companies. If a company performs badly in a competition it gets terminated. In the case of countries this statement cannot be interpreted. Moreover, in companies, commerce is zero, but in countries it is not. While companies influence their market share of their competition in a direct method with their own profile and strategies, countries can be parallel winners in the global competition. With this perception, the theory of comparative advantages has a great role, which says, a nation's welfare depends on the existing factor. Those who support this conception, competitiveness is only interpreted on the microeconomic level. (Lengyel 2010, Martin 2003).

By the other group competitiveness could be interpreted in the case of spatial units and companies as well. The perception gathered ground by the realization due to the globalization processes where companies, countries, cities are competing for resources, talking about raw materials, capital or talented professionals, contractors (Porter 2008, Dahlman 2007, Chesire 2003, Camagni 2002, Malecki 2002, Lengyel-Rechnitzer 2004, Marcuse 1996, Porter 1996). In this aspect, the theory of competitive advantages is determining, which says that a given entity's welfare depends

on their economic policy or its competition strategy (Lengyel 2010). Porter (1996) highlights that talking about regions, competition realizes where the given spatial units, in an optimal case, aims for the creation of a legal-business background structure and the companies work with an appointed strategy on competitiveness which causes a production with improving tendency in the key sectors. Those, who support this conception, competitiveness is interpreted coextensively in micro- and macroeconomics as well (Lengyel 2010, Martin 2003).

Studying competitiveness, we may reveal a duality by its interpretation. Competitiveness itself does not refer to an actual state, rather a projection from a process from the past or from the future. We may conclude our amount of experience in global competition, and we may conclude the pack of activity, which secures the persistence in global competition in the future (Lukovics 2008, Huggins 2003, Camagni 2002, Malecki 2002). The competitiveness of regions is not only their productivity, its measurement cannot be constricted into one dimension (Lengyel – Rechnitzer 2013). According to Camagni (2002), competitiveness can be realized in many ways. Firstly, if utilities, legal infrastructures and economy policies are favorable, then every local business activity will subsist it positively. Secondly if spatial specializations develop, then a strong cluster environment and a supplier structure may establish. Thirdly, if synergies between local factors eventuate, then a complex cooperation over industries may help the development.

According to Porter (2008) business and industrial competitiveness may be interpreted both in micro- and in macroeconomic aspect (Figure 1).

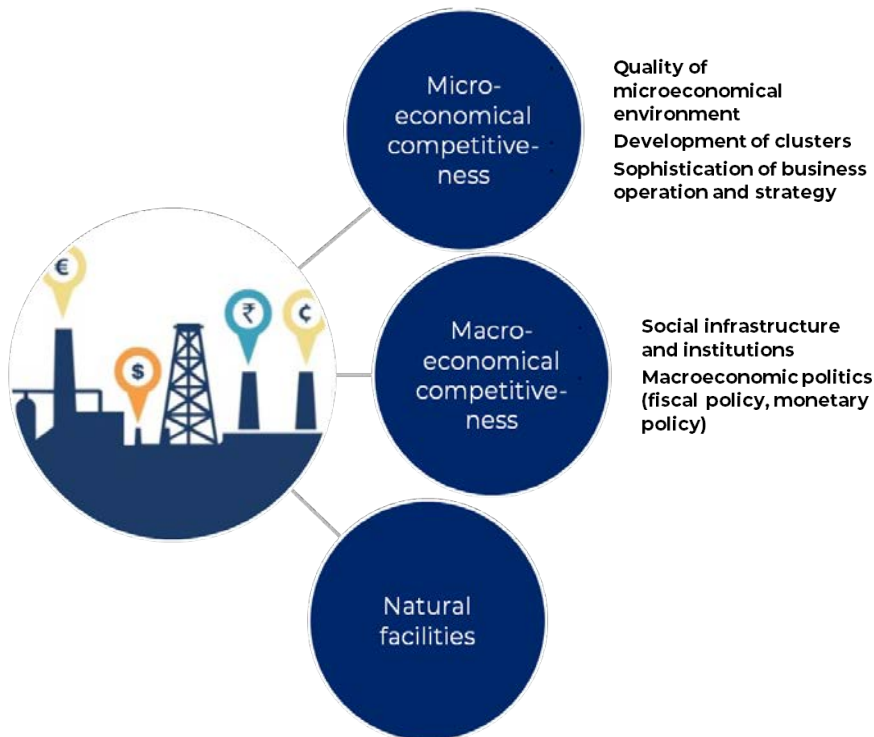


Figure 1 - Components of business and industrial competitiveness

Source: Lengyel – Fenyővári – Nagy (2012, p. 21)

Environmental aspects should not be disregarded, meanwhile it can only affect competitiveness short-term (Lengyel – Fenyővári – Nagy 2012, Porter 2008). Microeconomic competitiveness can be divided into three sub factors. It depends on the aspects of non-corporative local business environment, the development of clusters and the quality of a company's strategy and culture. Competitiveness can be perceived, how companies can maintain their product or services on the curb market (the market for securities trading outside normal exchange hours). The company will drop behind and lose its competitiveness if it is not capable to match the expectations of the market. Companies, who are capable to overachieve the expectations of the market, will be able to gain market shares from their rivals (Lengyel – Fenyővári – Nagy 2012, Martin 2003). Macroeconomic competitiveness can be split into two sub factors. It depends on the condition of the social infrastructure, public institutions, and on budgetary and monetary politics as well (Lengyel – Fenyővári – Nagy 2012, Martin 2003). The last approach which claims that the interpretation of competitiveness in business, industrial, regional and country levels is possible, rises its popularity globally (Lengyel 2000). In this study we consider the perception of spatial competitiveness given. With these statements clarified, without any further ado, we may focus on the definition of competitiveness. For this challenge, a big number of experts and researcher contracted.

By the aspect of Storper (1997, p. 20): a city's capability to attract and retain companies which are stable The definition of Annoni and Dijkstra (2013, p. 4): *“Regional competitiveness is the ability of region to offer an attractive and sustainable environment for firms and residents to live and work”*.

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Atkinson (2013) defined competitiveness briefly: *“The true definition of competitiveness is the ability of a region to export more in value added terms than it imports”*. According to Huggins et al. (2016 p. 28): *“identify regional competitiveness as a dual concept that explains relative differences in rates of economic development across regions, as well as an understanding of the future economic growth trajectories of regions at a similar stage of economic development”* WEF (2016b, p. 4): *“We define competitiveness as the set of institutions, policies, and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can achieve”*.

The standard definition to competitiveness is the following (EC 1999, p. 75): *“the ability of companies, industries, regions, nations and supra-national regions to generate, while being exposed to international competition. relatively high income and employment levels”* This definition highlights two quantitative measured economic categories, income and employment.

It has to be highlighted that IMD (2017, p. 19) tried to form a definition on digital competitiveness: *“Digital Competitiveness is defined as the capacity of an economy to adopt and explore digital technologies leading to the transformation in government practices, business models and society in general. In this way, firms increase the opportunities to strengthen future value creation”*.

Under competitiveness we read a long-term process which aims to reach a future state, vision. In the next two subsection, we examine the frameworks of the Global Competitiveness Index and the IMD World Digital Competitiveness Ranking.

Environmental aspects should not be disregarded, meanwhile it can only affect competitiveness short-term (Lengyel – Fenyővári – Nagy 2012, Porter 2008). Microeconomic competitiveness can be divided into three sub factors. It depends on the aspects of non-corporative local business environment, the development of clusters and the quality of a company’s strategy and culture. Competitiveness can be perceived, how companies can maintain their product or services on the curb market. The company will drop behind and lose its competitiveness if it is not capable to match the expectations of the market. Companies, who are capable to overachieve the expectations of the market, will be able to gain market shares from their rivals (Lengyel – Fenyővári – Nagy 2012, Martin 2003). Macroeconomic competitiveness can be split into two sub factors. It depends on the condition of the social infrastructure, public institutions, and on budgetary and monetary politics as well (Lengyel – Fenyővári – Nagy 2012, Martin 2003). The last approach which claims that the interpretation of competitiveness in business, industrial, regional and country levels is possible, rises its popularity globally (Lengyel 2000). In this study we consider the perception of spatial competitiveness given. With these statements clarified, without any further ado, we may focus on the definition of competitiveness. For this challenge, a big number of experts and researcher contracted.

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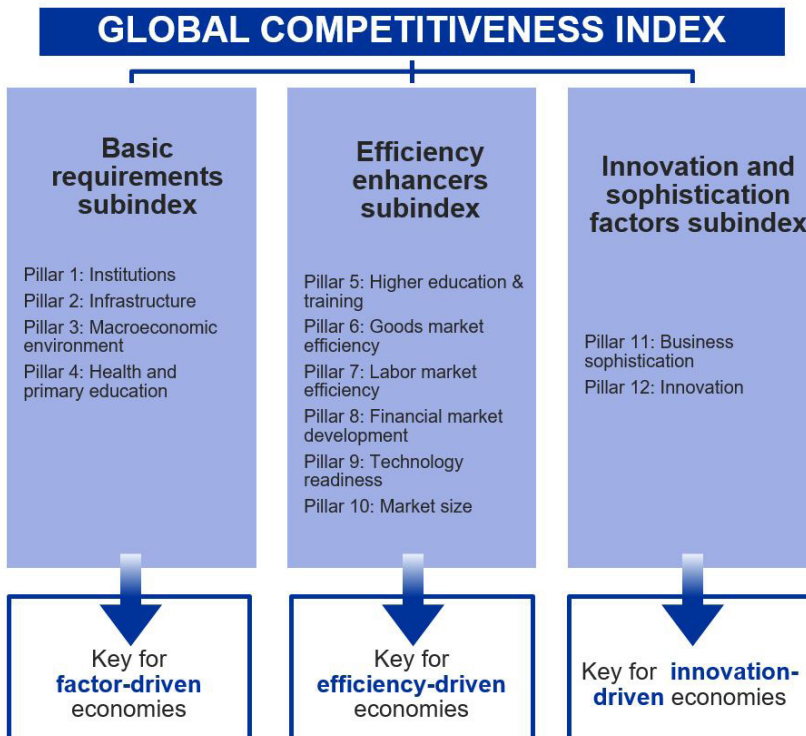


Figure 2 - The framework of Global Competitiveness Index

Source: Redesigned after WED (2016b, p. 5)

The basic requirements sub index is factor-driven, the efficiency enhancers sub index is efficient-driven and the innovation and sophistication sub index are a key element in innovation-driven countries (WEF 2016b, Lengyel 2010).

The perception of the twelve indices are the following (WEF 2016b): The basic requirements sub index is factor-driven, the efficiency enhancers sub index is efficient-driven, and the innovation and sophistication sub index is a key element in innovation-driven countries (WEF 2016b, Lengyel 2010). The perception of the twelve indices are the following (WEF 2016b):

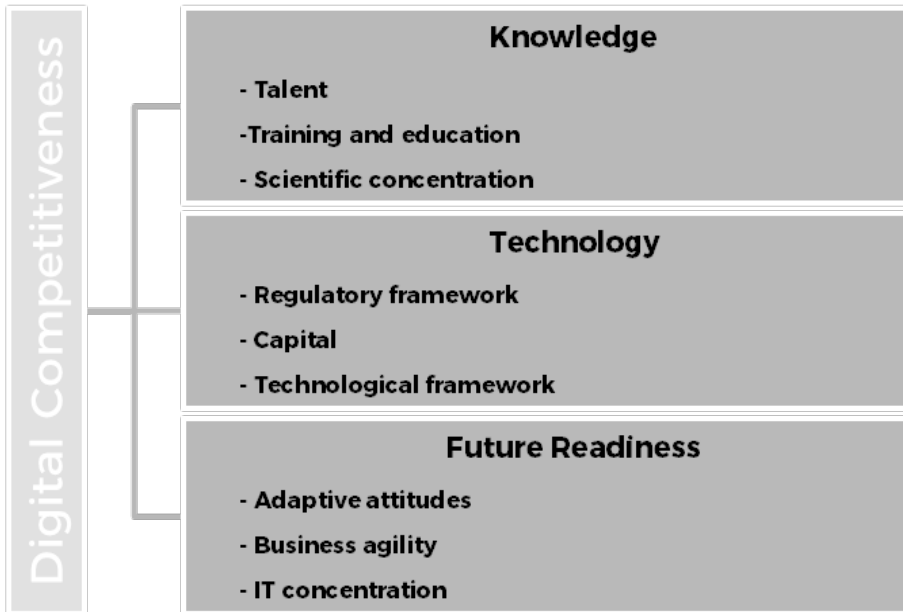
- The institutional environment of a spatial unit depends on the quality of both public and private stakeholders. The legal and administrative environment determines the development, competitiveness and growth of a spatial unit.
- The pillar of infrastructure is critical for ensuring the functioning of the economy. It is important that a developed infrastructure of transportation, utilities, communication and digitalization is constructed in a given spatial unit.
- The stability of the macroeconomic environment is important for business and, therefore, is significant for the overall competitiveness of a country.
- Active workers who have poor health cannot participate effectively to the development of the economy and leads to significant costs to business. In addition to health, this pillar takes into account the quality of the basic education.
- Quality higher education and training is crucial for economies that want to move up the value chain beyond simple production processes and products.
- Countries with efficient goods markets are well positioned to produce the right mix of products and services given their particular supply-and-demand conditions, as well as to ensure that these goods can be most effectively traded in the economy.
- The efficiency and flexibility of the labour market are critical for ensuring that workers are allocated to their most effective use in the economy, remain motivated and adapt to a new environment.
- The development of a financial market shows how the financial sector allocates the resources, savings and capital-investments in a region.
- The technological readiness pillar measures the agility with which an economy adopts existing and new technologies to enhance its productivity.
- The size of the market affects productivity and competitiveness since large markets allow firms to exploit economies of scale.
- Business sophistication measures the quality of a spatial unit's overall business networks and the quality of local firms' operations and long-term strategies.
- The existence of the innovation pillar is unquestionable, because in the economy this generates the most value.

In the next subsection, we analyse the IMD World Digital Competitiveness Index.

The IMD World Competitiveness Ranking (IMD WDCR) is a publication used since 1989. And in order to calculate the index it employs almost 300 variables to explore competitiveness. Despite the fact that we can witness a dynamic change in our world, we need to re-evaluate and update the measurement of competitiveness in order to keep up with the world happenings. In an effort to keep up with the revolution, the authors expanded competitiveness to digital competitiveness

with the introduction of new indicators and framework. This new structure is capable to measure the capability of countries to adapt digital technologies with effectiveness. This is important because of two reasons. Firstly, the goal is to rise productivity, secondly the quality of the services and products for inhabitants and business. This can be raised to a new level by digital technologies (IMD 2017, Loucks et al. 2016).

IMD WDCR organizes its framework by three main factors, knowledge, technology and future readiness factors. These each contain three sub factors, where more than 50 variables can be found (Figure 3).



*Figure 3 - The framework of digital competitiveness
Source: Redesigned after IMD (2017, p. 20).*

The perception of the three factors are the following (IMD 2017):

In **knowledge factor**, for competitiveness, knowledge creation and use is fundamental for absorbing technological transformation. The development of the talent pool and the strategies to emerge digitalization provides the environment of innovation from which innovative trends emerge and from which academic processes, scientific outputs continue (Zahra – George 2002, Hage 1999, Cohen – Levinthal 1990).

In this context, the **Knowledge Factor** refers to the necessary infrastructure, which underlines the process of digital transformation through the discovery, understanding and learning of new technologies. The factor encompasses three sub-factors: Talent, investment in Training and Education and Scientific Concentration. In technology factor, it is important for the control environment to create a social-economic-legal ecosystem which contributes to the spreading of innovative ideas (Hage 1999).

Transformation also needs institutions and organizations that support and are permeable to innovation and technical openness (Cepeda-Carrion – Cegarra-Navarro – Jimenez-Jimenez 2012). The **technological factor** considers the existing regulatory frameworks, the capital which shows what kind of investment possibilities exist for adapting technological solutions and it also considers existing technological frameworks.

Future readiness factor considers different uncertain attitudes, behavior schemes in the environment which affect economy, society, actual technological variations. Countries should overcome in the event of uncertain and risky situations (Mathiassen – Pries-Heje 2006).

Readiness is interconnected with the flexibility, agility and preparedness of an entity (Haeckel 2013). The factor incorporates three components: Adaptive Attitudes, Business Agility, and IT Integration. After the brief instruction of competitiveness, in the next chapter we discuss the concept of attractiveness and we examine its potential interpretations.

1.1.2.3 Framing Territorial Attractiveness: Theories, literature, definitions

Researching attractiveness an interesting phenomenon can be observed. There are plenty of literature in which title contains the word attractiveness, but they describe it remarkably briefly or too tightly, or use it as a synonym for competitiveness, or do not define it, or equalizes attractiveness with touristic value (Popovici 2017, Gavrilova et al. 2016, Ezmale 2012, Connell 2010, Spano 2005).

We can definitely state that there is no professional consensus about attractiveness, which is a huge problem, because we may define attractiveness in other ways. Serrano (2003, p. 70) also discusses the meaning of attractiveness and explains that *“it is extremely related to the competence for direct investment among local authorities. Attractiveness represents an effort to reinvent or redesign cities in terms of its resources and institutions to obtain a better economic level for its citizens”*. Attractiveness is a social, political, economic, environmental mentality.

By van den Berg and Braun (1999) attractiveness is an effort of cities so attractive places can remain, for their citizens, visitors and for the business sphere.

By Götz’s (2015, p. 2) short definition *“attractiveness is usually defined as a set of advantages and disadvantages in the place of investment”*.

By Barboric, Zivkovic and Esposito (2013) *“attractiveness is intended as the interaction of a complex set of characteristics based on the presence/absence of certain forms of Territorial Capital with the attraction of various “audiences”*”. They do not vision attractiveness an absolute everlasting concept, because it may change how they position the territorial unit. Attractiveness is a relative definition.

According to Hamri, Zerouali Ouarti and Sadiqui (2014) attractiveness is the capability of a territorial unit to attract and retain national and foreign companies.

Zivkovic et al. (2015) defined territorial attractiveness as *“capacity of certain Territorial Capitals and Assets to attract and retain target groups (tourists, residents, migrants and companies or*

investments) by already existing or developed advantages”.

A place can be attractive for settling, business and visiting (RSAES 2016). Zivkovic and Barboric (2017) made an experiment to categorize the indicators of attractiveness (Figure 4):

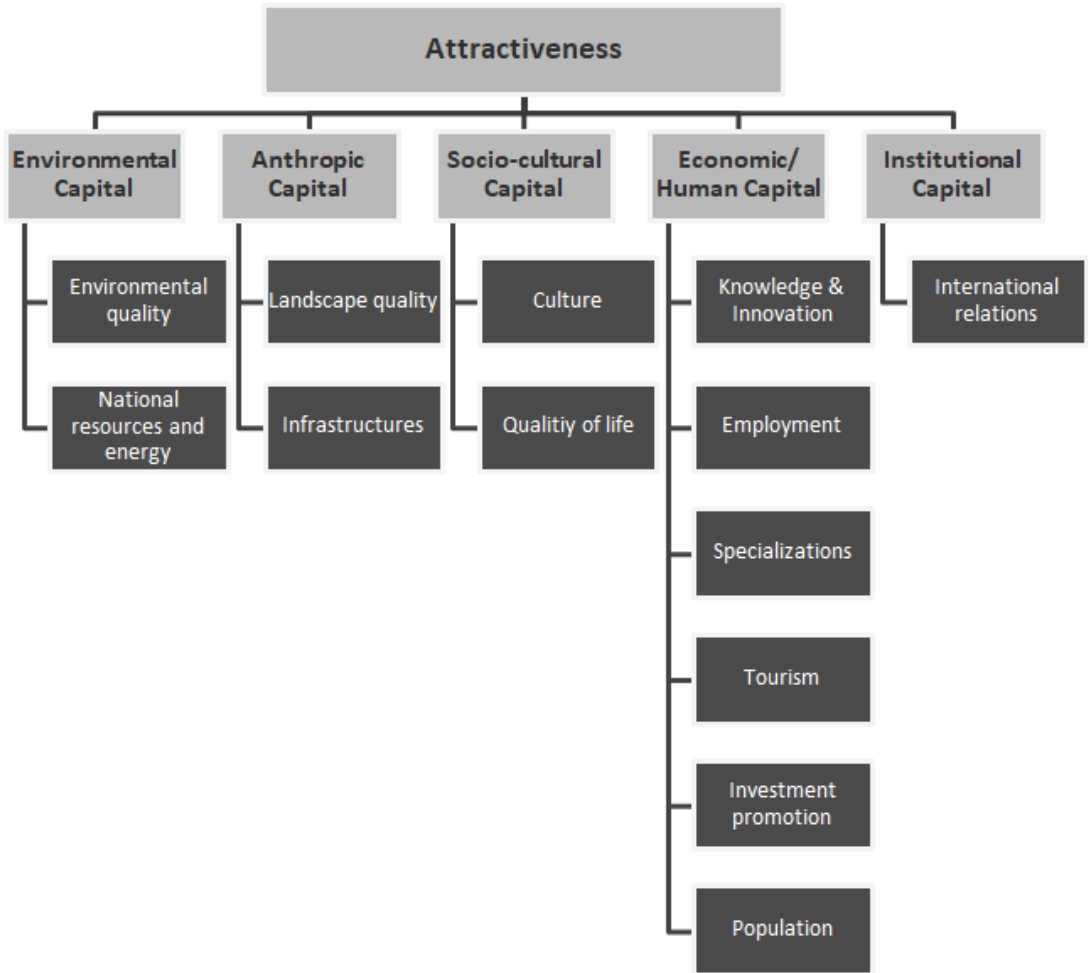


Figure 4 - Possible classification of territorial attractiveness indicators

Source: self-edited based on Zivkovic - Barboric (2017 p. 60)

From the previous concepts, it can be seen that attractiveness is concentrated always around two main factors. On one side human factor, on the other business factor. Furthermore, we can see concepts define attractiveness as they contain the words, attract and retain. According to this we need to think about two time sheets short-term and long-term (table 4).

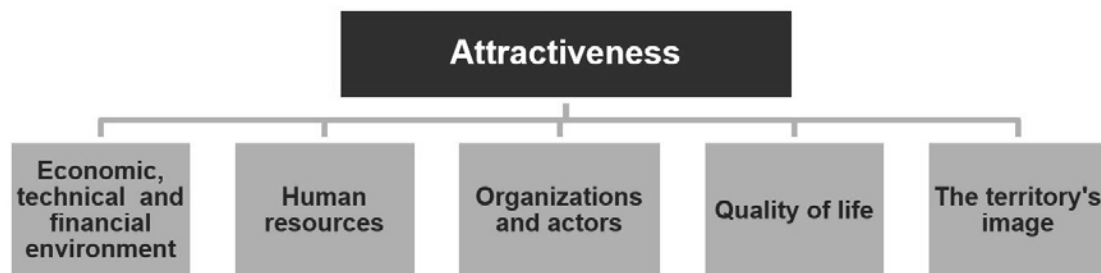
	Short-term	Long-term
Human sphere	Tourism	Settlement

Business sphereBusiness cooperation and
exchange of knowledge

Capital investment

*Source: self-edit based on RSAES (2016)***Table 4 - Interpretation of attractiveness matrix**

Human-business sphere can be perfectly mixed with time factors. Of course, attractiveness does not have only one standardization. According to Hamri, Zerouali Ouarti and Sadiqui (2014) regional attractiveness has five factors (Fig. 5).

**Figure 5 - Factors of attractiveness***Source: self-edited based on Hamri - Zerouali Ouarti - Sadiqui (2014)*

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About human factor, diversity, quality of training, employment levels, productivity and quality of the workforce, trust and respect is important. In organizations and actors' factors like confidence, the ability to work together, to organize, to consult and to interact; the speed of implementation of projects, the capacity for initiative and organization of populations and social innovation is significant. In quality of life the natural and urban environment, the access to group and individual services, the volume of employment and services available, the balance of the territory and the society's security and goods' security is significant. The territory's image is a highlighted factor as well, because the image which gives the attractiveness is presented here. Another approach examines the potential factors of a city's attractiveness (IC 2010).

URBAN ATTRACTIVENESS FEATURES			
Level of cultural activity	Knowledge-based economy	Living & general environment	Business development
<ul style="list-style-type: none"> ▪ Action-packed cities ▪ Infrastructures and cultural services ▪ Showcasing architecture ▪ Diversity and multiculturalism 	<ul style="list-style-type: none"> ▪ Quality of education ▪ Knowledge of languages ▪ Qualification of human capital ▪ Research and innovation 	<ul style="list-style-type: none"> ▪ Quality of healthcare ▪ Nightlife ▪ Living environment ▪ Quality of life ▪ Quality of telecommunications ▪ Internal transport 	<ul style="list-style-type: none"> ▪ Competitiveness of wages ▪ Economic diversity ▪ Cost and flexibility of access to property ▪ Market access ▪ External connectivity

*Source: Redesign after IC (2010, p. 4)***Table 5 - Potential aspects of city attractiveness**

We can see that this standardization relies on the usage of soft factors instead of hard factors and highlights aspects which are not related to economy. By the study it can be seen that attractiveness can be determined more widely than competitiveness and competitiveness can be interpreted dominantly in economic context, attractiveness defined beyond economic context.

In the next chapter, we conclude the differences between competitiveness and attractiveness by the given factors.

1.1.2.4 Comparison and differentiation of Territorial Competitiveness and Territorial Attractiveness

The comparison of competitiveness and attractiveness is a challenging task because of the understanding and interpretation of the two concepts, moreover there is a missing social consensus on attractiveness. Although, after the proper absorption of these concepts, we can identify mutual borderlines between competitiveness and attractiveness (Table 6).

	Territorial Competitiveness	Territorial Attractiveness
Relation	Tool	Aim
Aspect	Objective, quantitative	Objective or subjective, Quantitative and qualitative
Practical projection	The method of resource-use	The result of resource-use
Continuity	Result of decision-sequence	Related to one decision
Orientation	Future-oriented	Present-oriented
Background	Mostly collective decision is related	Individual decision may be related
Interpretability	Only economic aspect	Economic, political, environmental, anthropological aspects
Status	Capability	Status

Source: self-edited

Table 6 - A comparison of territorial competitiveness and territorial attractiveness

The most important, first of all, is to identify the relation between competitiveness and attractiveness. Competitiveness is a tool, the tool for the solution of macro-economic challenges, moreover, the tool of future development and the realization and maintenance of the relatively high productivity and employment. Attractiveness is the overall aim, as the word itself highlights that there are features and characteristics already present in a certain, attractive region.

1.2 Understanding Territorial Capital

1.2.1 The structural components of the territorial capital

In the last 15 years the use of the *territorial capital* concept is becoming frequent, especially in Europe, but it remains ambiguous its definition and the proper way to use it. According to an OECD study (2001), there are several factors such as geographical location, size, factor of production endowment, climate, traditions, natural resources, quality of life or the agglomeration economies provided by cities that define a specific capital of given territorial units. These factors can be synthesized under the expression “territorial capital”.

These factors may include the place’s characteristics but may also include its business incubators and industrial districts or other business networks that reduce transaction costs. Other factors may be “untraded interdependencies” such as understandings, customs and informal rules that enable economic actors to work together under conditions of uncertainty, or the solidarity, mutual assistance and co-opting of ideas that often develop in clusters of small and medium-sized enterprises working in the same sector (social capital). The link between territory and its attractiveness, or competitiveness, is not immediate or even obvious. For instance, Porter (1990) associates the ability to compete with that of producing, but this assumption appears as one transposition of typically business methodologies to territorial analysis. A conception of the competitiveness of an area built thanks to the aggregation of individual behaviours of companies. In fact, however, since the end of the nineteenth century, Marshall emphasized how it is possible to obtain advantages from the point of view of production efficiency not only through large-scale production (and, therefore, with the construction of a few plants large scale), but also through the spatial concentration of companies. This evidence how “place matter” in being competitive. The importance of localization, and the ability to network small industries, as assets for the competitiveness of a specific territory and highlighted by the literature on the singularity of the *distretti industriali* by Becattini, the so called phenomenon of the *Terza Italia* (Bagnasco, 1978). Porter himself later devotes great attention to the activities geographically localized (or clustered), returning to positions in which “territory matters”: in such areas, :

- the high competition between firms,
- the relevance of local demand,
- the presence of a robust fabric of firms located upstream and downstream of the production process and
- the possibility of effectively and efficiently using the main factors of production

are the main elements of success of the *cluster* model. This model gives great importance to intangible factors, such as social capital, relational networks, the institutional environment, assuming them as central to the misunderstanding (and determination) of the competitive level of an area. All those factors that Storper summarizes in the expression: “untraded interdependencies”.

In 2005, fully in the period of the EU enlargement, the European Union build upon this concept of territorial capital. In fact, in the document “Territorial State and Perspective of the European Union” (June 2006), the concept is used to assess the “growth potential” of the new member states: *Each region has a specific ‘territorial capital’ that is distinct from that of other areas and*

generates a higher return for specific kinds of investments than for others, since these are better suited to the area and use its assets and potential more effectively. Territorial development policies (policies with a territorial approach to development) should first and foremost help areas to develop their territorial capital.

Since this document, more often the expression territorial capital is present in many EU policies related documentation and debates, it becomes a new “aggregator” of ideas, actions, programs, policies orientated to frame or promote regional and urban development. Being the notion of territory a broad one, it is necessary to identify the many components, or the many capitals, necessary to frame the concept of territorial capital. Before entering the description of these elements, it is evident how this concept has been used in several ways, at least as:

1. An **assessing concept** (to understand state of play and potential of specific region);
2. A **comparing notion** (to compare the different state of play and the different capability to react to specific policies of different regions);
3. As **catalyser for organizing operational development tools** (designing strategic tools to activate, re-activate, sustainable development processes and make EU territories more competitive);
4. As a **measure to balance the distance between EU regions’** different state of development (in order to take measure to reduce the distance in the socio-cultural, environmental and economic parameters between the European territories).

In the proper use of geographic language and of various human sciences, the concept of territory must be distinguished from those of environment, space and region, as it implies a precise areal delimitation, deriving from a highly determinable pertinence to a subject; this, through its own actions, informs in a typical and recognizable way a portion of geographical space, making it territory, that is process of territorialisation (Treccani,81). What it is interesting, and for this reason indicators are important, it is to monitor the territorial transformation. A monitoring that can interest a very large and different aspects of a territory, such as the cultural, environmental, social, physical and so on. This difficulty to fix the idea of territory into a precise theoretical category made possible to open up to a number of various and sometimes alternative conceptualizations.

In developing its multiple functions, the territorial capital needs to be accompanied by a set of indicators that permit to compare/to describe different regional situations or to design the suitable tools for managing urban and regional transformations. This is a key task faced by ATTRACTIVE DANUBE. The indicators should help in planning for development, but they never have to become a critical step creating inertias to the development planning process. It is to remember that a development process is first of all a collective awareness of certain territorial problems that we want to solve and the ability to compare, *in primis*, the divergent interests of local actors towards shared solutions, also taking into account existing opportunities, even beyond the mere local context of reference. Very often, as even experienced in ATTRACTIVE DANUBE workshops, there is an overgeneration of indicators operated by stakeholders, just very few of them really help to better structure the development pathway. The indicators, to be really useful must be:

- simple and inexpensive to obtain
- significant and relevant to the scope (they must, that is, respond to specific objectives)
- objectively measurable (e.g. a quantity, a count, a percentage, a ratio, etc.)

- easily accessible to those who must perform analyses on them
- simple to interpret
- easily reproducible and representable by means of tables, histograms, diagrams, etc.
- controllable
- comparable
- shareable, that is transparent
- recorded on time
- credible

Clearly, the concept of territorial capital is very broad. This amplitude makes it difficult to use it in an operational sense. A first step is to categorize it considering those aspects related to the social and cultural components of a territory, and the aspects instead related to the physicality of the territory itself. In other words, we could begin to divide it, in order to better understand and implement, in its tangible and intangible components. In this sense we can consider a “Behavioural Capital” and a “Physical Capital”.

BEHAVIOURAL CAPITAL	PHYSICAL CAPITAL
SOCIAL CAPITAL	INFRASTRUCTURAL CAPITAL
HUMAN CAPITAL	ENVIRONMENTAL CAPITAL
COGNITIVE CAPITAL	PRODUCTIVE CAPITAL
RELATIONAL CAPITAL	LIVING IMPACT CAPITAL
POLITICAL CAPITAL	LANDSCAPE CAPITAL

Source: self-edited

Table 7 - Measuring the territorial capital ¹

We must take into account a fundamental aspect of measuring territorial capital, the choice of variables is strongly conditioned by the availability of data at regional / local level and by their updating for all the dimensions of territorial capital. Finally, in a context of Danubian planning, therefore characterized by a strongly centralized territorial governance, it must be considered that many data are collected at national level and there is no well-structured and harmonized governance of data between levels of governance at different scales. In this kind of context, it becomes fundamental, especially at local scales, the ability of cities to collect and classify data but to this must also be added, considering the potential of new technologies, the contribution given by stakeholders through data crowdsourcing. In classifying data for indicators, we never have to lose the key-purpose, that is to set up mechanism for integrated, sustainable and equitable development: Territorial Cohesion is strictly connected to this kind of development mechanisms. Great part of sustainability is generated at local level thanks to a pro-active involvement of resident communities.

¹ The realization of this table has been inspired by the report “Gli indicatori per la misura del capitale territoriale”, edited by Brasili C, Bologna, 2012

1.2.1.1 Measuring behavioral capital

The formation of solid **human capital** is a condition for an economy to establish a process of sustainable development in the context of international competition: An educated and trained workforce in fact favors the consolidation and innovation of the existing economic activities on the territory and the attraction of new ones from the outside (Camagni, 2009).

The variables used to provide a measure of the human capital can be for example:

- School drop-out rate;
- Participation rate in upper secondary education;
- Share of strictly creativity led businesses (e.g. design firms, innovation led enterprises...).

The cognitive capital is measured on the one hand in terms of: propensity to research and innovation of local systems, the result of the integration between training offer (measured in terms of human capital) and production structure (measured in terms of productive capital), and on the other in terms of local systems liveliness and cultural offer.

To measure the cognitive capital is very relevant in terms of understanding the impact of macro strategies leading European development policies, such as the performances connected to *smart growth* (EU 2020 Strategy) or to the *knowledge economy* (as a key asset of the Lisbon Strategy, still structuring many post-2010 EU policies). The variables used to provide a measure of the cognitive capital can be, as an example:

- People working in Research and Development;
- Capacity of producing innovation;
- Patents intensity;
- Share of people who have been visiting museums and exhibitions.

The **social capital**, among all the capitals considered in this exercise, is certainly the most difficult to define as the most treated in the literature. The commonalities of most definitions of social capital are that they focus on social relations that have productive benefits. The variety of definitions identified in the literature stem from the highly context specific nature of social capital and the complexity of its conceptualization and operationalization (Claridge, 2004). One of the most successful definition is the one provided by Putnam (1995): *features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit.*

The variables that can be measured and maybe easily find in administrative and research institution to provide a measure of the social capital can be:

- People involved in voluntary activities;
- Share of public events related to culture and business;
- People travelling for business at regional scale.

Relational capital can be defined as the set of relationships developed by local actors both inside and outside a territory. It is one of the least traditional components of territorial capital and is at the base of the processes of growth, openness and cooperation. The relational capital, although

often associated with the enterprises of a territory, must also be a key reference for the institutions that manage the public administration and organize services for the citizens. In defining relational capital, the fruit of a relational marketing aimed at customers is not the only aspect to be taken into account, but also the degree of satisfaction of the inhabitants of a territory, or of the city / territory users. In fact, we must not only look at the relationships between companies, customers and external stakeholders, but also at the degree of satisfaction of the inhabitants and the users of a given territory. Variables of measuring relational capital could be:

- Degree of citizen satisfaction for services managed and provided by public institutions, or private companies / public-private consortia;
- Ability to export local businesses/products;
- Number of start ups;
- Number of spin-off active for more than 5 years on the market.

The most common usage of **political capital** means the power that popularity confers on a politician. This form of capital is accumulated through experience, seniority, and serving in leadership position (Lopez, E. 2002) Thus, political capital—reputational and representative—is the product of relationships between opinion (public impressions), policy (legislative rewards/penalties), and political judgement (prudent decision-making) (French, R. 2011). At territorial scale, this capital can be extended as the capability of a territory to be politically influent at trans-regional or international scale: Of course, politically influent for all those measure that improve quality of life and promote sustainable development. Hence, political capital refers to the trust, goodwill and influence of local political calls capable to have influence in policy-setting. The variables used to provide a measure of the political capital can be:

- Impact of local political class at regional and national scale, or macro-regional and EU scale;
- Number of locally generated policy that have been exported at national or supra-national level.

1.2.1.2 Measuring the physical capital

Infrastructural capital refers to any physical means of production, delivery or protection of goods, information, people and services, beyond that which can be gathered or found directly in nature. Any physical improvement made to nature that provides a set of services essential for the functioning of the economic system can be considered infrastructure capital. According to the *Encyclopaedia of social sciences "Treccani"*, infrastructures can be:

- Basic infrastructures (structures that are used for the fulfilment of the state's tasks, such as ministerial and government buildings, military airports, prisons etc.);
- Economic infrastructures (production factors that flank directly productive capital, such as road networks, ports, railways, pipelines, dams, technologies etc.);
- Social infrastructures (schools, hospitals, aqueducts and all those structures which concur to determine the living conditions of the community). Furthermore, by acting on people's well-being, social infrastructures indirectly increase the overall productivity of the system.

The variables used to provide a measure of the infrastructural capital can be indicators, such as:

- Length of motorways and e-roads;
- Length of pipelines operated;
- Railway transport, length of lines by number of tracks;
- Number of hospitals (per a thousand habitants);
- Fixed broadband subscriptions (per a hundred persons).

The **Environmental capitals** represent the set of natural elements that make up the stock of natural resources, renewable and non-renewable, available to be used. Elements can be both biotic, as for example all the ecosystems existing in nature, or abiotic, for instance rocks, soil, water and so on. The variables used to provide a measure of the environmental capital can be, for example:

- The value of greenhouse gas emissions in the air;
- The amount of municipal waste;
- Number of protected natural sites

One of the first definitions we have about the term **Productive capital** has been given by K. Marx in his “Kapital” (second volume). When he spoke about monetary capital and commodity capital, which are both involved in the sphere of circulation of goods, he introduced a third component which is, indeed, the productive capital in terms of both the means of production and the labour-power. But this Marxian concept, formulated in anticipation of a capitalist society, has to be adapted to the actual context. Nowadays small and medium-sized enterprises prevail, and the Productive capital has to reflect these changes, focusing on those new industries, industrial parks, business clusters (defined as a geographic concentration of interconnected businesses, suppliers, and associated institutions in a particular field), spin-offs and so on. The variables used to provide a measure of the productive impact capital can be:

- Distance of industrial parks from inhabited areas;
- Time taken to get the finished product related with the technology used;
- Number of employees per enterprise.

Living impact capital can be considered as the tangible result of the pressure that the massive construction of residential buildings and of the infrastructures connected to them have on the territory. . The impact of living is measurable in terms of: loss of fertile agricultural land; lack of limit between urban and rural areas; negative pressures on the surrounding landscape with the risk of losing important natural ecosystems related to them; increasing costs due to the necessity of enlarge infrastructural works to peripheral areas and a relevant contribution to global warming. The variables used to provide a measure of the living impact capital can be:

- Speed of soil loss;
- Quantity of agricultural food resources that must be imported from abroad;
- Number of buildings left unused, abandoned or degraded;
- Number of residential buildings related to the number of resident families;
- Index of Soil Consumption (by percentage).

Landscape capital it is a new concept that cannot be defined easily. This challenge derives from the fact that there are still many doubts about what should be considered landscape and what

not. Starting from the definition given in the European Landscape Convention: “*Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*”, we understand that it isn’t a concept related only to natural areas, but it can include also urban green areas with values that deserve to be preserved. *The landscape has an important public interest role in the cultural, ecological, environmental and social fields, it also constitutes a resource favourable to economic activity and whose protection, management and planning can contribute to job creation* (CoE, European Landscape Convention, 2000).

Therefore, the services that a landscape provides can be:

- Cultural: it represents part of the cultural heritage;
- Ecological: it can give shelter to many different species;
- Environmental: it can contribute to the dimming of air pollution;
- Social: it contributes to human well-being;
- Economical: it can be part of a tourist route;
- Esthetical: it adds esthetical values to a city/country.

The variables that can be used to provide a measure of the landscape capital can be:

- Number of people involved in the protection, management, planning of the landscape.
- Number of tourists per year;
- Percentage of the landscape of an area included in a preserving plan/strategy.

The essential point of the proposed methodology to assess the territorial capital of a region, metropolitan area or a city is that of being flexible in identifying the variables characterizing the considered capitals. The flexibility defines itself in relation to the availability of the data at local level to create these variables. So, the variables can be adapted to the contexts, it is important not to denature the definition of the capitals of reference, including variables that are clearly out of context.. To measure the territorial capital, to have an idea about the territorial capital of a place (region, metropolitan area, city) can tell us a lot about its attractiveness capability.

1.3 Maximising the competitive advantage of territories: Local Action matters

Regional identity is able to emphasize the local cultural and regional characteristics and to contribute to the overall reputation of the region, hence attracting investors, capital and skilled workforce (Raagmaa 2002, Lukovics 2004). People simply like to live in regions with a strong identity, due to the family traditions, common culture and historical heritage. These regions can also serve as potential territories for innovative activities, as basic factors are present that are necessary to foster these activities. Besides the presence of developed infrastructural networks, it is also inevitable that a critical mass of highly-qualified workforce with easily convertible knowledge resides in the given region. In order to carry out innovative activities, the existence of specific factors is crucial beyond the basic factors (Lengyel 2000, Lukovics 2004).

In territories, which provide competitive edge from multiple aspects in the long run, we can identify a self-catalysing process. The continuous and effective transitions in regional framework

can provide a stable, competitive economic structure and the realized level of growth that can be achieved remains sustainable. These circumstances bring forth social and cultural advancement in the region, which further contribute to the image, reputation and attractiveness of the region. The cycle of positive aftereffects continues with the migration of talented workforce into the region, the developing competitiveness of enterprises and the region itself. With the basic infrastructural frameworks present, the risk factors for capital investments start to decrease. Investors prioritize environments with positive spill-overs, the presence of formal and informal networks and clusters as well over simple cost-benefits (Lukovics 2004).

Regions can also have a strong identity in case the economic structure has traditional features instead of innovative ones. These regions have only a few competitive advantages in best cases and are dominated by industries and sectors that generate a low amount of added value. Some of the competitive advantages are the cost-efficient workforce and raw materials, basic infrastructures are necessary to be fully evolved, there are no creative industries or sectors generating high amount of added value, R+D+I activities are scarce. This means that industries that could drive change and make crucial difference, are missing as the qualified workforce and specific factors necessary for initiating innovative activities are missing. (Lukovics 2004) In regions with fragile regional identity, the number of people who would remain in the region in case of constant economic challenges, is low. In these regions the competitive advantage mainly comes from the availability of natural resources (e. g. land) and cheap workforce. Due to this, they can only realize benefits that are derived from being cost efficient, the other differentiation of products is unavailable. The integration of established industries into the economic activities of the region is insufficient in general. The lack of local embeddedness is a cause of missing communities and people without a sense of regional identity (Lukovics 2004).

Regional identity, a mixture of spiritual, psychical, cultural, attitudinal factors should be considered when it comes to economic development. When planning regional economic development strategies, the level and characteristics of regional identity is a crucial and influential factor (Lukovics 2004).

1.4 Operating with the concept of Territorial Attractiveness

Regional identity could be a key definition and an explanatory factor when it comes to analysing territorial attractiveness, hence we will explore this concept in the following subchapters.

Regional identity can be interpreted as harmony and synergy between the specific region and its inhabitants and strongly determines the core characteristics of the given territory. The robust presence of regional identity is a key factor which influences the social and political maturity of the region. However, the precise determination of elements of regional identity and their exact influence are challenging to identity (Lukovics 2004, Keating 2001). It is also a balance of massive globalization. This idea also supports the global-local paradox of Porter (Lukovics 2004). Globality emphasizes the role of local regions, however only those regions can be considered as successful in the changed competitive environment that are able to phrase and execute strategies, which serve as a framework for long-term development (Lukovics, 2002, Amdam 2002).

The concept of regional identity is widely interpreted in scientific literature. Regional identity can mean concepts, cultural characteristics, historical heritage, dialects, artificial constructs, economic success, core-periphery relations, etc (Lukovics 2004, Paasi 2003, Paasi 2000).

1.4.1 The multi-scalarity of attractiveness

For a region to be attractive, it has to have a strong and differentiated regional identity, meaning it should possess distinctive features compared to other regional territories and identities. The distinctive features can be strategic, cultural and functional (Lukovics 2004, van Houtum – Lagendijk 2001).

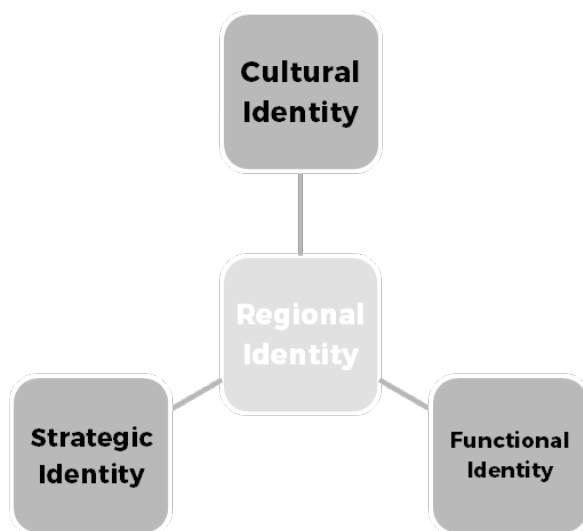


Figure 6 - Regional identity.

Source: own construction based on Lukovics (2004, p. 218)

The cultural identity concept is not a static, but a dynamic development path on which the sense of common belonging to a certain community is manifested. This development path is characterised by crucial elements, like the name, common symbol system of the region which all suggest the unity of the region in some way (Lukovics 2004).

The functional identity concept considers the socio-economic networks, connections and factors of the given regional unit. In this case the focus is on discovering already present connections and identifying the characteristics of these connections. In most cases however, a region cannot be interpreted as fully homogenic. Even in a region there can be differences in the level of development or economic embeddedness (Lukovics 2004).

The strategic identity concept builds on the fact that the inhabitants of the region should have a common long-term plan and goal for the given region. This aim should be future-oriented and driven by the ability to constantly adapt in a competitive world. These goals and aims should be well-documented, as with this, the common preferences can be openly distributed and can be accessed in a transparent way. This is also a source of information for potential investors in the region (Lukovics 2004).

These three dimensions of regional identity are closely connected to each other and each dimension has an effect on the other two (Lukovics 2004, van Houtum – Lagendijk 2001).

1.4.2 Attractiveness related to attractions phenomena

The region itself can be interpreted as a set of cultural connections between certain communities in a certain space (Lukovics 2004, Paasi 2000). The formation of a region takes place in four different steps that do not follow any given order, moreover they can be realized in a parallel manner. The four different steps are the following: the formation of regional structure, the creation of common symbols, the creation of institutions, the creation of regional identity (Paasi 2000, Lukovics 2004).

Through the formation of a regional structure, the framework of the region can become easily distinguishable. The addition of boundaries to a region positively impacts the strength of regional identity, however these cannot be interpreted as strictly determined lines on a map. These only serve as a construct for determining who is a part of the region and who is not based on the place of inhabitation (Lukovics 2004).

Symbols and more precisely, symbols systems are also a part of the regional identity. These can be a flag, a series of events, a song, buildings, and notable people born in the region, like writers, poets, politicians, actors, etc. These can boost the image of the region, hence positively contributing to attractiveness factors (Lukovics 2004).

The creation of institutions means the consideration of all connections that can be realized within the inhabitants of the region. These can mean formal organizations (e. g. Administrative institutions, authorities), informal connections (e. g. friendships, partnerships). Some connections are permanent (companies, educational institutions, local media), while others are temporary (a cultural event) (Lukovics 2004).

The creation of the regional identity is a result of all past and present processes, events within the region (Lukovics 2004). With the sense of belonging somewhere, the person can feel that he or she is a true part of the regional society, hence can find the region more attractive. The consideration of the above four steps may positively affect the attractiveness factor of a region.

1.4.3 The attractiveness related to social characteristics

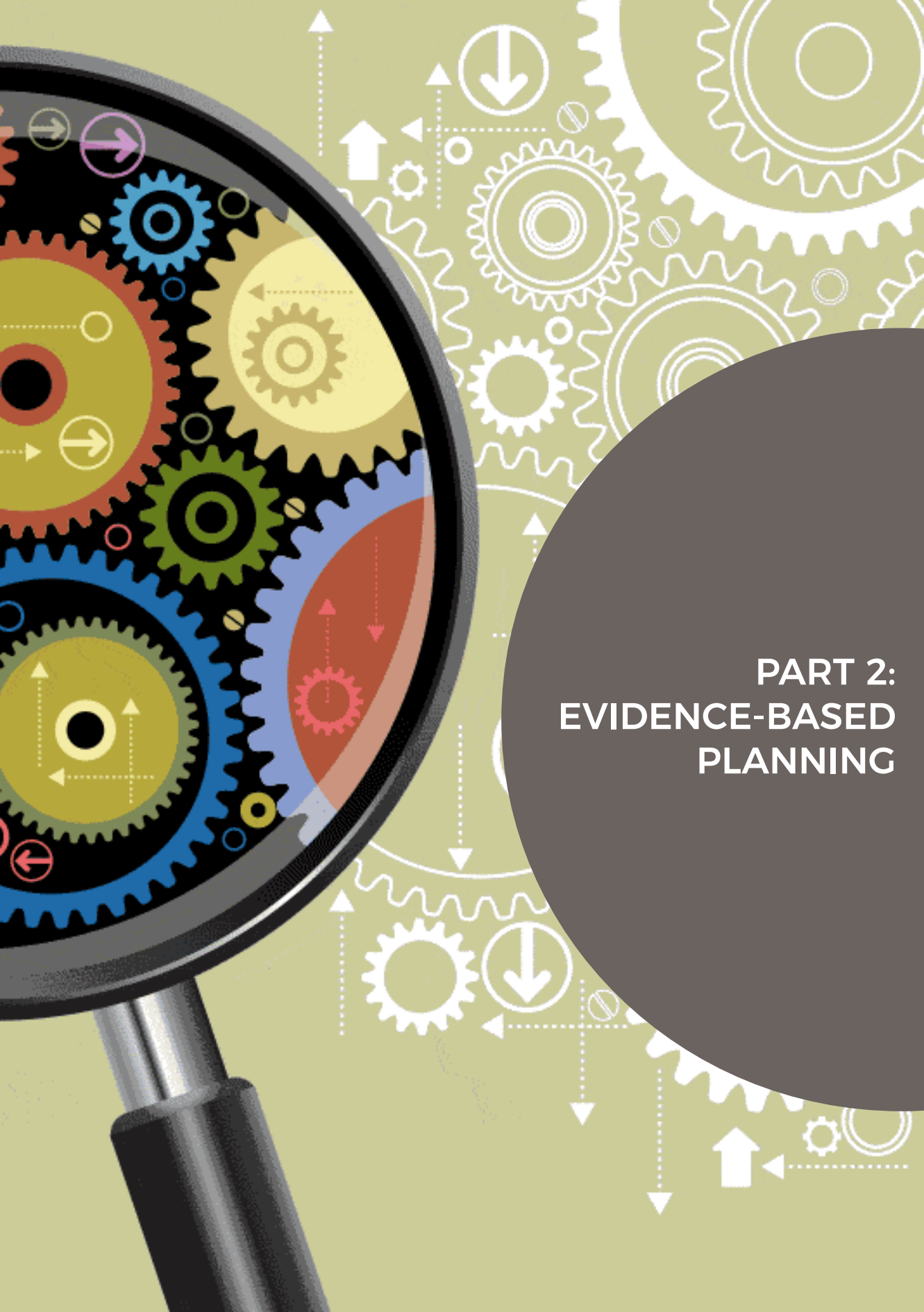
In order to accomplish successful economic development strategies, it is inevitable that regional actors cooperate with each other. Cooperation is an element of strengthening social structures within a region, hence contributing to the social aspect of attractiveness (Lukovics 2004).

Economic development strategies have a crucial element, namely the assumption of successful cooperation between four local actors: local governments, economic & business federations, knowledge transfer institutions and local development agencies (Lukovics 2004).

Cooperation is also necessary among the actors of local business and economy. By cooperating with each other, even small enterprises can form groups which have more potential from a supplier and customer point of view than these same enterprises separately (Lukovics 2004).

We can see that economic development truly requires an advanced level of cooperation and can have an enhancing effect.





**PART 2:
EVIDENCE-BASED
PLANNING**

2.1 Governing the Danube Region: Common Challenges

2.1.1 About the Danube Macroregion

Conceptually speaking, a macro-region represents „an area including territory from a number of different countries or regions associated with one or more common features or challenges” (Sarmeci, 2009), which in the European context has the following three characteristics (EC, 2013):

1. Represents an integrated framework relating to Member States and third countries in the same geographical area;
2. Addresses common challenges;
3. Benefits from strengthened cooperation for economic, social and territorial cohesion.

The need for a macro-regional approach in European governance hinges on the need to integrate the many different existing policy frameworks of the Member States, programmes, and financing instruments. Furthermore, better inter-sectorial and transnational cooperation is possible, through the involvement of policymakers at different levels of governance, including those outside the borders of the European Union.

A Macro-Region is a multi-actor, multi-level and multi-sector approach offering a strategic framework of reference for integration, in the scope of reducing European disparities, enhancing cohesion and local competitiveness, as well as cooperation and participation.

Since 2007, with the institutionalization of the Baltic Sea Region, followed by the Danube, Adriatic-Ionian and later Alpine Regions, macro-regions have been set up as new instruments for territorial cooperation, tackling specific contextual challenges.

The Danube represents the second-sized river in Europe, with a length of approximately 2,859 km, connecting the Black Sea to the Black Forest by crossing ten countries and extending its basin even further, through tributaries, in another four. The navigation on the Danube River represents the core challenge addressed by the Danube Macro-Region.

The specificity of this functional, cultural, historic and territorial connector, but also the many challenges of sustainably managing the blue Danube Corridor grounded the necessity for a framework approach at a new scale of intervention – the Danube Region. In total, the Region comprises of a total number of 14 countries, of which nine are European Union Member States.

The Area encompasses the following countries, of which the partners in the ATTRACTIVE DANUBE project have been highlighted:

No.	Country	Surface (1000 km ²)	Population (2017) - Eurostat
European Union Member States			
1	Austria	83.9	8,772,865

2	Bulgaria	111.0	7,101,859
3	Croatia	56.5	4,154,213
4	Czech Republic	78.9	10,578,820
5	Germany (B-W, Bavaria)	106.2	82,521,653
6	Hungary	93.0	9,797,561
7	Romania	238.4	19,644,350
8	Slovakia	49.0	5,435,343
9	Slovenia	20.3	2,065,895
Accession Countries			
10	Bosnia and Herzegovina	51.1	3,509,728
11	Montenegro	13.8	622,387
12	Serbia	77.5	7,040,272
Neighbourhood Countries			
13	Moldova	33.8	3,550,852
14	Ukraine	603.6	42,414,905
TOTAL		1,617.0	148,499,419
Of which Attractive Danube Area		895.7	93,760,797
<i>Source: self-edited</i>			

Table 8 - The Danube Region in numbers



Picture 2 - Territorial Coverage of the Danube Region. Source: REGIOgis

The **ATTRACTIVE DANUBE Project**, covering 11 of the total 14 Danube Region Countries, covers an area of almost 900,000 square kilometres and aims at achieving a long-term impact for the 93.7 million inhabitants of the partner countries.

The Danube Region, per total, is home to almost 150 million inhabitants (including Neighbouring Countries), and the Member State area represents about one fifth of the total European Union population, encompassing tremendous potential for endogenous growth and integration.

2.1.2 A state of play

The current context of the Danube Region countries, in a post-crisis Europe, is one of many growth perspectives. The economic crisis which swept Europe and the world has made it clear that a growth model centred on GDP-based competitiveness is unsuitable for reaching the desired territorial cohesion and integration aimed for by the Macro-Regional strategies. Furthermore, it has revealed significant weaknesses in the European construct, specifically pertaining to the core-periphery relationships within the Union, which led to a change in discourse and a shift in focus, from growth to re-consolidation: harmonization of policies, institutions, integration of EU policies and a new perspective of economic governance.

Within this context, the Danube Region (Germany, Austria, Hungary, Czech Republic, Slovak Republic, Slovenia, Croatia, Bulgaria and Romania, as well as Serbia, Bosnia and Herzegovina, Montenegro, Ukraine and Moldova) finds itself in a favourable development position.

However, the strategically-positioned region is also **one of the most complex** when it comes to social, economic, environmental and urban challenges- a heterogenous context for policy making which still retains, in many aspects, characteristics of the former overly-centralized governance systems of the Eastern Europe, and which oftentimes lags behind in what concerns economic competitiveness, governance performance, investments in infrastructure and social capital.

Furthermore, the area is facing several challenges directly impacting liveability and attractiveness, for inhabitants, tourists and investors alike: environmental issues and threats, low transport connectivity, insufficient energy connections, challenges pertaining to safety and security, as well as generally a very uneven socio-economic development between the West and the East.

The Danube Region predominantly encompasses states which represent former Eastern Bloc countries, relatively new in their accession to the European Union (2004; 2007; 2013) or still in the accession stage (Bosnia and Herzegovina, Serbia, Montenegro). While countries such as Germany and Austria have benefitted from ample previous experience in implementing integrated, participatory territorial policies under the Union framework, the Eastern part of the EUSDR area is generally less experienced in tackling these challenges, and in many aspects is still trying to „catch up” to the West in what concerns economic and social welfare. In general, as planning will always be tributary to history, as far as traditions go in the Area the countries can be subscribed to the following two different systems:

1. A decentralized planning system, well-versed in participatory approaches and enriched by policies and strategic instruments allowing for better territorial integration and development;
2. A centralist planning system, mostly leveraging rigid normative (and obsolete) plans, still

unaccustomed to devolution of power and involving stakeholders in decision-making planning processes.

Achieving territorial cohesion in the Danube Region relies crucially on assisting the latter countries in transitioning to a new, participatory, performance- and evidence-based planning system.

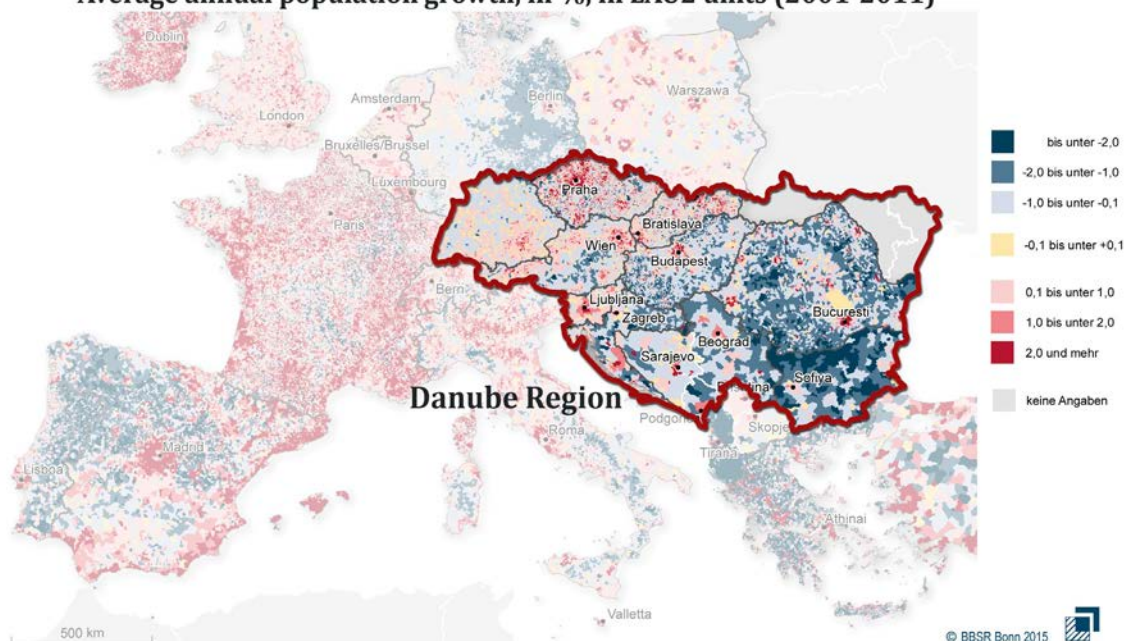
A common approach is needed in the Region, in order to provide not only representatives of government at all national and sub-national territorial levels, but also other stakeholders involved in policy planning, with the necessary instruments and skills for achieving sustainable development: the **ATTRACTIVE DANUBE project, through its instruments and capacity building programme, aims to address specifically that.**

2.1.3 Common Challenges in the Danube Region

One of the biggest challenges in the area is represented by the existence of **very pronounced socio-economic disparities**, as a core characteristic of the Danube Region. Demographically speaking, the Region is faced with a **strong depopulation trend**, accentuating from West to the East, and critical in the lower basin of the river (Romania and Bulgaria, specifically).

There are two immediate determinants for this situation: **falling fertility rates** and a generally ageing population with higher and higher dependency ratios, and **outward migration**, generally of **more** skilled and younger workers („brain drain“). Both challenges are a direct result of **a lack of attractiveness for inhabitants**, and lower liveability as compared to other close-positioned options.

Average annual population growth, in %, in LAU2 units (2001-2011)



Picture 3 - Population dynamics in the Danube Region, 2001-2011

Source: Edited after BBSR Bonn, 2015

Determinants of this challenge are manifold, but the most important ones hinge on governance effectiveness, rule of law, control of corruption, as well as quality of life (income per capita, quality of institutions, services and infrastructure, employment prospects).

Depopulation has a severe impact on **economic competitiveness**, which is not yet fully visible or accurately quantifiable due to the process of „catching up“ in which the area is involved comparatively with the more developed regions. **Economic growth in the DR has surpassed other regions:** 1.8%, compared to the EU-28 average of just 1% for the period 2004-2014 (Center for European Economic Research (ZEW), 2015): this is a greatly positive trend, but it can overshadow negative underlying processes, such as human capital loss. Due to the negative feedback loop of depopulation, this issue stands out as being the most critical in the Danube Region, especially since it can be overlooked by policymakers focused on indicators such as the economic growth.

Still, even within the Danube Region, the **socio-economic disparities** are apparent: the annual gross disposable income differs between Upper and Lower Danube countries with as much as 10,500 EUR – between Germany and Bulgaria, the latter recording an annual gross disposable income equivalent to the difference (ATTRACTIVE DANUBE CO-TAMP Data, 2015).

According to the „*Socio-Economic Assessment of the Danube Region: State of the Region, Challenges and Strategy Development*“ Report (ZEW, 2015) The Danube Region’s GDP per capita reached **less than two-thirds** (62.3%) of the level of the EU-28 member states and 56.7% of the level of the OECD countries in 2013.

The population decline has had a strong influence on the labour market performance in the Danube Region, through a decrease of activity rates; moreover, **labour productivity is generally low** in the Area, which is also confronted with the economic challenges of a **concerningly robust informal economy** and the artifacts of a slow and difficult transition from a centralized to a market economy, which happened in the last three decades. Very important challenges are the ones of low skills and competences and low adaptability to change / resilience of SMEs, with a negative impact on the economic landscape.

While the **regulatory burden for business** is still an outstanding issue in the Danube Region, indicators for market entry show strong improvements in lowering administrative obstacles for businesses: between 2003 and 2014, both the time and the cost of business start-up have been cut roughly by two-thirds (ZEW, 2015). Still, the need for bigger progress – to the point of leapfrogging ahead leveraging on ICT and new technologies – is evident, as **the region has become less attractive for investors over the last few years**. The report „Global Competitiveness Report 2015- 2016“ lists a downgrading for the Danube Region in the global ranking with respect to burden of Government regulation, Protection of property rights, Flexibility of wage determination and Trade barriers (idem).

Moreover, there are **deficiencies in cooperation and institutional coordination** as means to support Danube Region research, innovation, industries and businesses – the research environment lacks attractiveness, clustering and knowledge spills, having weak regional links.

On the **environment side**, the most important challenges of the Danube Region are direct results of **pollution, invasive species and alterations of natural cycles**, most often either worsened or

directly caused by lower socio-economic development and disparities. The bio-geographical areas and natural habitats are most often fragmented and lack a proper management structure, and a policy process which should be oriented towards coordination, joint protection and sustainable valorisation.

Lack of finance for infrastructure leads to severe impacts on the aquatic systems and the environment, including **direct threats on biodiversity** caused by discharge of untreated sewage, fertilizers, soil run-off and hydromorphological change. **Soil degradation and loss** in the area, in lieu of appropriate arable land use management, infrastructure and result-yielding agriculture policies, but also due to **uncontrolled peri-urban sprawling phenomena and soil sealing**, represent other factors to be considered when assessing common Danube Region challenges.

As regards the **region's infrastructure**, there is a **significant intra-regional disparity when it comes to connectivity and accessibility** between the western (Germany, Austria, Slovenia) and Eastern countries (such as Romania and Bulgaria): the road, railroad, port and airport networks are underdeveloped in the latter, which leads to significant loss of opportunity. This aspect holds true as far as Danube River shipping and ports go as well, and the current transport volumes are vastly lower than the potential of the Danube corridor for representing an economic spine of this area. Outside the TEN-T corridors, mobility of people, goods and information is sub-par in most of the Danube Area and lacks the contemporary sustainability-oriented approach of intelligent networking, innovation and multi-modal hubs and networks which have been an investment priority in other parts of Europe.

There is also a **vast natural, cultural (both material and immaterial), and ethnic heritage diversity** in the Danube Region, which represents the key territorial attraction of the area in the view of many stakeholders. An ample number of UNESCO world cultural and natural heritage sites, together with other monuments, protected areas, traditions and local authentic products make of the Danube Region one with the highest potential of attracting tourists and capital. Cultural and natural heritage has the possibility of **supporting sustainable growth and development / specialization of local economies**, provided they are preserved and intelligently valorised, in a participatory or interdisciplinary manner. Yet in this moment, heritage is oftentimes insufficiently capitalized on and preserved. Local and cross-border or even transnational value chains in tourism are either underdeveloped or lack completely.

As shown in the previous chapters, the Region is faced with **strong heterogeneity when it comes to policy and political frameworks**, especially in the context of cooperation between European Member States and Accession Countries and Neighbouring Countries. Different context, national legislations and political cultures, oftentimes disrupted by election cycles, fail to offer continuity to the planning process and to imprint a clear direction towards capitalizing Territorial Capital and Territorial Attractiveness.

2.2 Policy Planning in the Region

2.2.1 The EU Strategy for the Danube Region

Considering the common challenges described in the previous subchapter, a better territorial integration is needed to cope with the change processes, dynamics and problems across borders in Europe. In this sense, the **macro-regions as new functional areas** offer a complementary solution to national policies on territorial management, aimed at implementing European policies and programmes for territorial cohesion, as set out in the Article 174 of the Treaty on the Functioning of the European Union. They bring together Member States and third countries which are faced with a common set of challenges in the aim of **ensuring a coordinated approach to issues best tackled jointly** (European Parliamentary Research Briefing, 2017).

Macro-regional strategies fit into the existing European Union policy frameworks, subscribing to three simple guiding principles:

1. **No new EU funds** (but better alignment of existing funds),
2. **No additional EU structures** (but reliance on existing bodies for implementation),
3. **No new EU legislation** (but better integration of existing policies at EU, national and regional levels).

Specifically, macro-regional strategies can be funded through European Structural and Investment Funds (ESIF), under EU programmes for the 2014-2020 period, such as the INTERREG V Programmes.

The EU Strategy for the Danube Region (EUSDR) is the second macro-regional strategy of the European Commission after the Baltic Sea Region, and was adopted in December 2010, along with the accompanying Action Plan. The Council of the European Union formally adopted the Strategy on 24 June 2011. The Strategy was jointly developed by the Commission, together with the Danube Region countries and stakeholders, in order to address common challenges together, seeking to create synergies and coordination between existing policies and initiatives taking place across the Danube Region.

The EU Strategy for the Danube Region is described in two separate documents: a Communication from the European Commission to the other EU Institutions, and an accompanying Action Plan which complements the Communication and represents one of the outputs of the Strategy approach. Its aim is to go from 'words to actions' by identifying the concrete priorities for the macro-region (EC, 2009).

The EUSDR identified actions which:

- **Address the Macro-region priorities** and are **clearly supported** by the participating countries, stakeholders and Commissions' services;
- **Have an impact** on the macro-region, or a significant part of it, therefore being transnational;
- Are **realistic and feasible**, both technically and financially;
- Are **coherent and mutually-supportive**, creating win-win solutions for the Danube Region.

The EUSDR is constructed on four pillars, addressing 11 Priority Areas.

Pillar 1: Connecting the Danube Region focuses on transport, energy and issues pertaining to culture and tourism, with the overall objective to improve connectivity both within the Danube Region as well as with the rest of Europe, in terms of infrastructures, systems and people.

Pillar 2: Protecting the environment in the Danube Region is dedicated to ensure that progress on environmental actions and projects can be closely monitored, tackling climate change, sustainable development and resource use.

Pillar 3: Building prosperity in the Danube Region focuses on innovation, information society, competitiveness of enterprises, education, labour market and marginalised communities, in the aim of improving the prosperity of the whole region through cooperation, exchange of experiences and implementation of joint projects.

Pillar 4: Strengthening the Danube Region aims at making the region a safer place to live and at strengthening the functioning of democratic institutions, public administrations and central, regional and local level organisations, with special focus on cooperation in the region.



Figure 7 - The 4 key pillars of the EUSDR

2.2.2 Danube Transnational Programme (2014-2020)

European Territorial Cooperation (ETC), known to stakeholders better as INTERREG, is one of the two goals of cohesion policy and provides a framework for the implementation of joint actions and policy exchanges between national, regional and local actors from different Member States. INTERREG is built around three strands of cooperation: cross-border (Interreg A), **transnational (Interreg B)** and interregional (Interreg C). **Transnational cooperation** involves regions from several countries of the EU forming bigger areas and represents the main instrument of delivery for the Macro-Regional strategies, EUSDR included.

The Danube Transnational Programme 2014-2020 (DTP) represents one of the Cooperation Programmes of Interreg B, and is aimed at supporting policy integration in the area within a range of

fields linked to the priorities of the EU Strategy for the Danube Region (EUSDR).

The Danube Region transnational cooperation programme acts as a policy driver and pioneer to tackle common challenges and needs in specific policy fields where transnational cooperation is expected to deliver tangible results. DTP provides a political dimension to transnational cooperation, a difficult challenge especially in this highly heterogeneous area, through embedding mechanisms and instruments for funding in partner countries.

The Danube Transnational Programme finances projects for the **development and practical implementation of policy frameworks, tools and services and concrete small-scale pilot investments** (Interreg Danube, 2013). It focuses on four priorities, in the aims of intensifying cooperation for tackling the 11 Thematic Objectives of the Commission in a transnational, integrated and participatory manner:

1. **Innovative and socially responsible Danube region**
2. **Environment and culture responsible Danube region**
3. **Better connected and energy responsible Danube region**
4. **Well-governed Danube region**

The programme area covers **nine Member States** (Austria, Bulgaria, Croatia, Czech Republic, Hungary, Germany – Baden-Württemberg and Bayern, Romania, Slovakia and Slovenia) and **five non-EU Member States** (Bosnia and Herzegovina, Moldova, Montenegro, Serbia and Ukraine – 4 provinces), being composed of **69 NUTS2 regions**. Geographically, the DTP area overlaps with the territory addressed by the EU Strategy for the Danube Region (EUSDR), comprising also the Danube river basin and the mountainous areas (such as the Carpathians, the Balkans and part of the Alps). (EC, Cooperation Programme, v3.0 C(2017)4091).



Picture 4 - The coverage of the Danube transnational cooperation Region. Source: EC

2.3 Evidence-based planning in decision making, planning and public investment

2.3.1 Evidence-based planning and policymaking

First associated with Sir Adrian Smith and his presidential address to the Royal Statistical Society in the UK, in 1996, the concept of evidence-based policy aims to veer from the ideology-based decision making for policies towards a **more rational, pragmatic evidence-grounded approach based on sound reasoning** (Davoudi, 2006).

Evidence-based policymaking is an approach that *„helps people make well informed decisions about policies, programmes and projects by putting the best available evidence from research at the heart of policy development and implementation”* (Davies, 2004).

In essence, evidence-based policymaking (EBP) represents a more pragmatic approach to decision making, basing developmental – and in this case – territorial attractiveness policies on **sound reasoning and methodologies which are locally rooted and backed by reliable information**. In this sense, evidence-based planning represents an approach which **informs the policy process, rather than aiming to directly affect the policy end goals** (Sutcliffe and Court, 2005).

Oftentimes, the decision-making process relies on a wide spectrum of interests, political factors, intuition, even the importing of developmental models or approaches which have been successful elsewhere, in a different context (**opinion-based policy making**). Evidence-based planning and policy making introduces rational decision-making, rigour and a systematic approach which, due to its nature, is repeatable and scalable.

There is usually a **conflict between theory and practice** in most professional fields, even more so in territorial planning and especially in the Danube Area. Decisions in the region are strongly influenced by context and traditions, political priorities, values and available resources: competences, time and money (especially funding opportunities through ESIF instruments). There is consequently a **need for a more structured and reliable approach, one which can be followed through as a process** from grounding and early stages, throughout implementation (monitoring) and afterwards (assessment). In essence, EBP can help:

- Better understand the territorial attractiveness policy environment, pressures and changes;
- Assess the likely effects of policy changes and subsequently appraise the impacts at territorial level;
- Demonstrate the connection between political and policy decision and the strategic directions at national, regional and local level, including intended outcomes;
- Evaluate the progress towards strategic territorial attractiveness goals and intermediate objectives / milestones;
- Influence and strengthen cooperation by providing a common, objective language so that policymaking objectives are shared among the multi-level governance structures in each country and the wider stakeholder and interest groups;
- Better communicate policymaking decisions through an open governance agenda.

But how can the gap between traditional practice of public policymaking and formal research be bridged, as far as better planning for territorial attractiveness goes?

The evidence-based approach in ATTRACTIVE DANUBE relies on territorial data: a set of transnational, common territorial attractiveness indicators, and sets of national indicators, both of which are collected from official sources on long term (2008-2021) and which are used to **bridge the gap between traditional practice of public policymaking and formal research.**

Indicators represent an accessible, reliable instrument for monitoring and evaluation of progress towards policy objectives in the ATTRACTIVE DANUBE countries with respect to the management of Territorial Capital and the enhancement of Territorial Attractiveness.

As systems, the **indicator frameworks** at transnational (CO-TAMP) and national (TAMP) levels provide an open, transparent and accountable instrument for assisting decision-making at each stage of the territorial attractiveness policy planning process, within and between each key stakeholder involved in the process. They support a shift in paradigm across the multi-level governance systems of all countries in the ATTRACTIVE DANUBE project, towards:

- **Integration** (of information systems, institutions, stakeholder types, resources);
- **Cooperation** (vertical, horizontal and transversal);
- **Continuity** (transcending political mandates);
- **Transparency** (open, public and understandable);
- **Accountability** (visibility of the shared policy process).

Lastly, it is to note though that an evidence-based planning framework should ideally be flexible and open on the longer term: to change, to new indicators and new approaches. As the global and local conditions change, and new evidence is being produced on a daily basis, including „best practice“ approaches, **it is critical that evidence-based policymaking is not viewed as a „magic bullet“ for territorial attractiveness policies and plans**, but rather as a system of assisted decision-making instruments which supports the local expertise and capacity of policy-makers to analyse, plan, implement, monitor and assess more effectively.

2.3.2 An assessment of the current state of art at the Danube Region level. Challenges and needs

As noted before, Danube Region represents one of the most challenging ones to achieve synergy within – the political history and notable differences between planning and policymaking systems, oftentimes rigid and outdated, make cooperation and evidence-based policymaking difficult.

We identify five main challenges, or regional needs, in respect to sustainable territorial attractiveness planning and monitoring:



Governance

Significant gaps or lack of performance management, both internal to governance structures as well as concerning public policies;
Gaps in institutional mechanisms for ensuring the proper delivery of policies for territorial attractiveness;



Capacity

Generally low administrative capacity with respect to evidence-based planning and policymaking, which is oftentimes contracted externally;
Fragmentation of knowledge across government levels and departments;
Digital divide: low capacity in adapting to the new planning instruments;
Low quality of policy delivery, and/or inequal capacities across the planning – implementation – monitoring – assessment cycle;



Political commitment

Low commitment towards long-term policies and plans;
Strong policy dependency on election cycles;
Lack of continuity in the policy and planning process due to the nature of the national planning approach, oftentimes led through on-demand political research and not as an ongoing process



Funding

Lack of financial resources, especially at local level, as the traditional revenue streams (eg. taxes) become insufficient to cope with changes, either good or bad;
Orientation towards external funding without a clear agenda or prioritisation of needs (relevant at local level);




Ownership

Historic excessive centralization which for a long term implied limited interactions with stakeholders and a high degree of formalism;
Lag in capitalization on inter-sectorial partnership advantages;
Insufficient buy-in of other stakeholders, such as research, academia, business sector, investors, NGOs and other interest groups.

Picture 5 - Challenges for sustainable TA attractiveness planning and monitoring



An aerial photograph of a coastal landscape. The top half shows rolling green hills with several small blue ponds. The bottom half shows a rugged coastline with dark, rocky outcrops and a deep blue sea. A large, semi-transparent grey circle is overlaid on the right side of the image, containing the text.

PART 3
MANAGING
AND EVALUATING
TERRITORIAL
ATTRACTIVENESS

3.1 Territorial Attractiveness Monitoring Frameworks in ATTRACTIVE DANUBE

At the end of 2014, the European Commission introduced a new set of rules and legislation in the aim of optimizing and simplifying the use of financial instruments for the 2014-2020 period. As integration measure, this allowed delivery of the five EU financial instruments under the common „**European Structural and Investment Funds**” (ESIF). Effectively changing the way the EU budget is spent, this measure also introduced the concept of **bilateral Partnership Agreements (PA)** between the Member States (MS) and the EC, **strategic investment plans outlining the programming and delivery of funds in the 2014-2020 Multiannual Financial Framework for each country** (EU, Regulation No. 1303/2013). For the Member States, the Partnership Agreements ground the delivery of the Cohesion Policy in **Operational Programmes**, which focus on the EC’s Thematic Objectives and which directly support the sustainable valorisation of Territorial Capital and the enhancement of Territorial Attractiveness. An additional governance framework layer for the MS, they transpose the European-level strategic document – **EU Strategy Europe2020**.

For all the partners involved in ATTRACTIVE DANUBE, a common Strategic Framework 2014-2020 for managing and enhancing Territorial Attractiveness comes in the form of the Macroregional strategies (more specifically, the **EU Strategy for the Danube Region**, 2010).

At national level, most countries in the Danube Region employ complex strategic planning actions at national level transposing the long-term development objectives of the countries at territorial level and guiding the national territorial development process. These documentations are relevant, from a territorial attractiveness standpoint, because of their key scopes to:

- **Facilitate an integrated planning process** on a national scale and to inform the central and local public authorities regarding the general directions and the objectives for the development of the national territory on the long term;
- **Substantiate development policies** from various administrative levels and various sectors such as the economic competitiveness, transport and mobility, housing etc., all key pre-conditions for attractiveness;
- **Capitalize strategically on the development potential and the competitive advantages** of the national territory;
- **Integrate and interrelate various aspects** regarding the current development state, the potential and the opportunities for Territorial Capital exploitation, for the benefit of the countries and the enhancement of Territorial Attractiveness.

All countries have set in place **framework strategies, documentations and institutional systems to implement Territorial Attractiveness policies, programmes and plans**, even though in practice this purpose may not be apparent or specifically pursued, but a direct externality of integrated or sectorial planning for the national, regional or local levels.

3.1.1 Bosnia and Herzegovina

Bosnia and Herzegovina’s spatial planning system is a hierarchical one, from the spatial planning at entity level, cantonal level, to special purpose areas and spatial planning at municipalities, whe-

re detailed urban plans are drafted. In all, currently in Bosnia and Herzegovina and the Federation of Bosnia and Herzegovina there are over 20 strategic development documents, adopted on the basis of special, sectorial laws. Their contents, methodology, level of data processing and further implementation are not uniform. Of the great importance are documents adopted on the basis of the Spatial Plan of Bosnia and Herzegovina 1981- 2000. These documents include clearly defined objectives, priorities and indicators for monitoring and evaluating of the implementation, stakeholder and public participation etc.

3.1.2 Bulgaria

The Bulgarian national spatial development policy guarantees the protection of the territory of the country as a national treasure (art. 1 from the Spatial Planning Act, 2001; last amended in August 2017). Bulgaria's territory is divided into 6 NUTS 2 regions, 3 in the Northern part of the country and 3 in its Southern part, overall comprising 28 districts and 265 municipalities.

3.1.3 Croatia

Spatial planning activities in Croatia are currently regulated by Physical Planning Law no.153/2013 and 65/2017. Spatial (physical) plans in Croatia include the State plan for spatial development, spatial plans of areas with special features, urban development plan of state significance, spatial plan of a county, spatial plan of the City of Zagreb, urban development plan of county significance, spatial development plan of a city or municipality, general urban plan and urban development plan (Physical Planning Act, 2013).

3.1.4 Czech Republic

In the Czech Republic the main responsible ministry for setting strategies regarding the territorial development is the Ministry for Regional Development. However, many other strategies of different ministries made on the state level or strategies for development of regions, set by the particular regions, are in place. It is important to say, that they are directly or indirectly linked by the same goal, or the same area of development. Many strategies directly or not directly linked to the field of spatial planning, urban development or attractiveness of the regions are in place and are relevant for the topic of Territorial Attractiveness, yet only some include the topic of indicators. Moreover, there are special documents on Integrated Territorial Investments (e.g. „Integrated Strategy for ITI Prague Metropolitan Areas (2015)“ 2016-2023), etc.) and Integrated Territorial Development Plans (eg „Integrated Plan for Development of the Czech Budejovice Territory (2015)“ 2015-2023), etc.

3.1.5 Germany

In Germany, a national law (Bundesraumordnungsgesetz) forms a strategic framework to give general orientation and to formulate principles and concepts of the German land use planning. This framework is elaborated jointly by federal and state representatives. Legally binding spatial planning is conducted on the state level, on the regional level and even on a local level within municipalities and cities. The relevant plans are state development plan, regional plan and local land use plan respectively. In the federal state of Baden-Württemberg, the responsibility of spatial planning lies with the Ministry of Economic Affairs, Labour and Housing. On a regional level, 12 re-

gional plans are generated. Spatial planning in Bavaria is conducted on a federal state level by the Ministry of Finances, Land Use Planning and Homeland. The regional plans are based on the state plan. In Bavaria 18 regional plans are developed by the corresponding regional planning unions. Data bases on all level provide statistical data as well information about economic, ecologic and social indicators.

3.1.6 Hungary

There are several national strategies on territorial development in Hungary, which set out the important and relevant concepts pertaining to economic, cultural, social and nature-related strategies, and they determine the development for the next 10-15 years. For the best development quality, Hungarian Government accepted a National Landscape Strategy (2017-2026) in a form of Government Decision. The document was elaborated under the minister responsible for agriculture, environment and rural development in agreement with the minister responsible for cultural heritage protection and in cooperation with the minister responsible for territorial development and spatial planning.

3.1.7 Montenegro

Montenegro has 22 local self-government units and 2 urban municipalities. The Law on Regional Development in 2011, introduced three statistical regions, with no legislative or implementing powers: The Coastal, Central and Northern regions. Correlation between national strategies and documents with TA concept and existence is high in Montenegro; however, strategies per se cannot single-handedly create a structural impact on society, rather successful entrepreneurs, visionaries and individuals are achieving that.

3.1.8 Romania

Romania's territorial development framework consists of several strategic overarching plans and strategies at national level, joined by sectoral strategies and plans, and lower-level spatial planning and strategic development documentations. Romania is divided into 41 counties and 1 special-status city (Bucharest) – NUTS 3 level, and 103 municipalities, 217 cities and 2861 communes – LAU2 Level. Romania has 8 regional divisions constituted in 1998 with statistical purpose, which do not have administrative status, yet can still be involved in Territorial Attractiveness planning through the drafting of the Regional Development Plans for Multiannual Financial Frameworks.

3.1.9 Serbia

In the Republic of Serbia there is a number of strategic development documents. They were adopted on the basis of special, sectorial laws and there are over 60 of them. Their contents, methodology, level of data processing and further implementation are not uniform. Therefore, Republic of Serbia started with preparation of the Law of the planning system of the Republic of Serbia. The law will regulate the planning system, management system of public policy, medium-term planning, the type and content of planning documents, the mutual agreement of the planning documents and others.

3.1.10 Slovakia

In Slovak Republic there are many strategic documents for regional development and spatial planning. From the perspective of regional attractiveness and development.

3.1.11 Slovenia

Slovenia does not have a national urban policy, but the development of the country's urban system is an important feature of the Spatial Development Strategy of Slovenia (SDSS), adopted in 2004 by the National Parliament. The SDSS is based on a polycentric urban system and identifies urban centres of national and regional importance (OECD, 2015).

3.2 The importance of a participatory approach

One of the key outputs of the project is represented by the TAMPs – the 11 national territorial attractiveness monitoring platforms set up in each partner country, with the aim of enabling evidence-based decision-making throughout the whole planning cycle at multiple levels, based on the needs of the stakeholders.

Because this is a project supporting **capacity building for operating with complex concepts, applied in a place-specific way**, such as Territorial Capital and Territorial Attractiveness, ATTRACTIVE DANUBE looks first and foremost at **locally rooting** the practices, methodologies and instruments developed.

Local rooting has a higher degree of sustainability, and it's achieved by participation and bridging the inputs and interests from top-down to bottom-up. Participation in ATTRACTIVE DANUBE has been instrumental for ensuring the usability and applicability of the TAMPs, and for this, **three participatory workshops** have been developed in each country which have been cross-sectoral and multi-level, crystallizing all key groups for the development of the National TAMPs.

For ATTRACTIVE DANUBE, **stakeholders** are individuals, institutions, organisations, or specific groups of people with different concerns and interests in the project, which could also be potentially affected by its delivery or outputs: Public administration at all levels, data providers, public institutions, academia, NGOs, businesses and industry, citizens themselves. They are all providing valuable inputs like their skills, knowledge, expertise and experience to the project.

The ATTRACTIVE DANUBE stakeholders

- **Government levels:** national (Ministries for Development, Environment, Tourism, European integration/funding, etc.), regional (NUTS 2 and/or 3 tiers of government or agencies for statistical regions), local (1- or 2-level, depending on country).
- **Local level public institutions and authorities:** all relevant city hall departments and key representatives, also local decentralized agencies or inspectorates (workforce, social services, health, environment, etc);
- **Research institutes and universities, experts** in policy making, planning, development, young researchers;

- **Economy players**, including Chamber of Commerce, SME associations, hubs, accelerators, incubators, as well as investors;
- **Civil society** – NGOs / thematic associations (tourism, manufacturer's, ...), clubs, activist groups
- **Media and the general public.**

The stakeholder engagement process in ATTRACTIVE DANUBE was conducted through **Work Package 3 of the project – National Attractiveness**, over the course of several months between mid-2017 and spring 2018.

Eleven sets of three National Workshops have been organized by the partners, under the coordination and guidance of the Institute of Architecture and Urban & Spatial Planning of Serbia (IAUS), Belgrade, with the following purposes:

- **Presentation of the project**, concept of Territorial Attractiveness, and overall aim of the stakeholders engagement process and steps in the process,
- **Definition of territorial attractiveness (TA)** at relevant territorial units (state, region or municipality) within the country in Danube Region,
- **Identification of national TA indicators** that support development and monitoring of the public policies (spatial, regional or local development strategies and sectorial policies),
- **Cross-sectorial identification of national TA indicators** and their values that might be of mutual or conflicting interest for achieving better attractiveness through different public policies,
- **Screening of availability and accuracy** of databases for identified national TA indicators that satisfy stakeholders' needs,
- **Understanding significance / relevance of common TA indicators and national TA indicators** for different public policies cycle (planning - implementation - monitoring - evaluation) and for stakeholders,
- **Finalizing and agreeing set of national TA indicators** for establishing the national TAMP,
- **Establishing the TAMP,**
- **Testing the accessibility and usage of the TAMP.**

Through this participatory process, as well as future activities, ATTRACTIVE DANUBE aims at reaching the **primary outcomes** of:

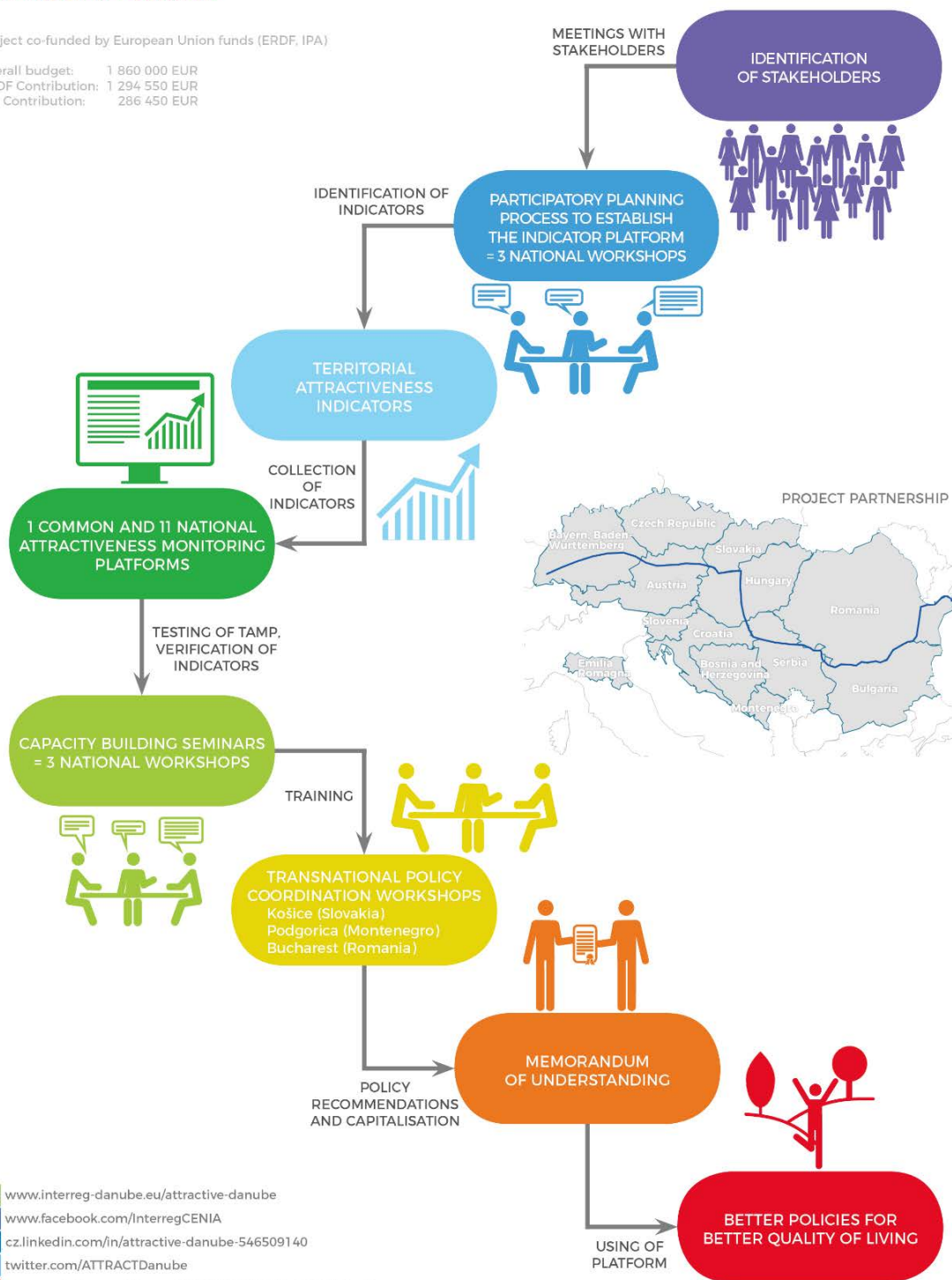
1. Coordinating policy planning processes;
2. Balancing territorial development in the Danube Region;
3. Improving concrete and efficient cooperation between sectors (economic, environmental, social) and levels (local, regional, national, transnational);
4. Developing and integrating different needs from different stakeholders;
5. Sharing knowledge, expertise, good practices on territorial development;
6. Improving the trust of citizens and stakeholders in political authorities.

The whole participatory process of the ATTRACTIVE DANUBE project is summarized in the following project infographic:

IMPROVING CAPACITIES FOR ENHANCING TERRITORIAL ATTRACTIVENESS OF THE DANUBE REGION

Project co-funded by European Union funds (ERDF, IPA)

Overall budget: 1 860 000 EUR
ERDF Contribution: 1 294 550 EUR
IPA Contribution: 286 450 EUR



3.3 How do we measure, monitor and compare Territorial Attractiveness?

ATTRACTIVE DANUBE relies on **factual data, as accurate as possible**, in order to provide policy planners with instruments and capacities necessary to apply the **evidence-based (or evidence-driven) planning methodology** to policy and plan design, implementation, monitoring and assessment. In short, the project's main instruments are **indicators**.

A **statistical indicator** is the representation of statistical data for a specified time, place or any other relevant characteristic, corrected for at least one dimension (usually size) so as to allow for meaningful comparisons (EUROSTAT definition). At territorial level, statistical indicators represent the numerical expression of some territorial, economic or social categories defined according to time, space and organizational structure.

In the context of ATTRACTIVE DANUBE, each national platform indicator set allows:

1. **An approximation of the state of play** regarding the attractiveness of a chosen territory, at the level of national, regional or local units;
2. **The performance of national territories** in terms of the capacity to use their territorial capital to retain inhabitants, investors, tourists;
3. **Comparability of territorial units** in terms of attractiveness through multi-criteria analysis, in order to reveal territorial disparities and distinctive skills;
4. **Monitoring of the evolution of performance** under a selected criteria set, in time, for the period 2008-2021.

From a typology point of view, indicators can be quantitative or qualitative.

Quantitative indicators illustrate a number, index or ratio / percentage, being widely used in planning because they provide a **clear measure of the analysed situation** and are **numerically comparable**. Quantitative indicators are preferred to qualitative ones because they are not biased, requiring only mechanical collection methods that (theoretically) deliver the same results, no matter who they measure.

Qualitative indicators do not present numerical measures as such, but describe the status of a qualitatively analysed issue. Qualitative indicators can be translated into pseudo-qualitative indicators through scoring systems such as the Likert scale- a widely used psychometric scale that uses scalar response questionnaires (eg 1-5, where 1 = strongly disagree and 5 = strongly agree). Although qualitative indicators are rarely used in territorial research, in terms of territorial attractiveness, they can better capture information on quality of life, quality of governance and facilities in a given territory. ATTRACTIVE DANUBE has used the Likert scale approach for the **Happiness and Trust Questionnaire** (partner EMFIE) addressed to the citizens of the 11 project countries.

There is no competition between quantitative and qualitative indicators, meaning a good evaluation and monitoring program should involve both instruments.

The ATTRACTIVE DANUBE project, based on the methodology developed by the previous AT-

TRACT-SEE project, differentiates between:

1. **Pressure, process or control indicators:** These indicators are used to diagnose and measure the process that will influence the state of progress; these are often the factors or forces for substantiating territorial processes (eg population dynamics, consumption, poverty);
2. **Status indicators:** Indicators aiming to provide a simple description of the current state of development resulting from pressures or processes (eg air pollution level, soil degradation, etc.)
3. **Target, response or performance indicators:** they assess the impact of changes brought about by policies.

The definition of Territorial Attractiveness Monitoring Platform indicators has been made taking into account the following characteristics of the indicators:

1. **Indicators must be already existing:** the project provides a framework for monitoring territorial attractiveness, but it does not collect new indicators. TAMP is based on data available from platforms such as INS, EUROSTAT, WORLD BANK, national statistics websites and portals, etc.
2. **Selected and used indicators must be open data / free to redistribute:** as they are part of a freely accessible platform, the consortium could not incorporate information in the TAMP that is the intellectual property of other institutions. This conditioning excludes any database that needs to be purchased –ATTRACTIVE DANUBE can only embed data that is either publicly available on the internet or provided by partner organizations or other interested parties in order to be published freely, non-profit, online.
3. **Indicators must be SMART:** Specific, Measurable, Accepted, Relevant and Time-Bound;
4. **The indicators should be simple:** the concepts conveyed must be simple and easy to understand, and their definition must be widely accepted (a complex obscure indicator raises a wide range of issues of availability, replicability, utility, etc.)
5. **Pilot set of indicators must be compact:** The project runs from 2017 to June 2019 with all its phases and is based on the need to implement the most useful and operational way to compare and monitor territorial attractiveness on many criteria, both at national and Danube Region level. As a rule of thumb, we aimed to obtain a relevant final set of no more than 35 indicators per country.

3.4 How was the AD Key Performance Indicator set developed?

To monitor Territorial Attractiveness, **two sets of indicators** have been developed:

1. **At transnational level**, 22 common indicators were already defined on the basis of the previous project "ATTRACT-SEE",
2. **At national level**, each project partner had to define indicators to measure Territorial Attractiveness according to their own context, through a broad participatory process.

This process of identification, selection, collection and updating is reflected and valorised through the establishment of **web GIS platforms CO-TAMP and N-TAMP**, as tools for the dissemination of geospatial statistics and with the purpose of being established as permanent monitoring platforms (Chapter 4).

3.4.1 Building on experience: The ATTRACT-SEE Project and CO-TAMP indicators

ATTRACTIVE DANUBE is a successor of the South-East Europe Attract-SEE Project, which was implemented between October 2012 and September 2014 by a consortium of 10 financing partners and one Associated Strategic Partner, of which four partners including the lead partner- Geodetic Institute of Slovenia are currently involved in ATTRACTIVE DANUBE.

The aim of the Attract-SEE project was to establish a **territorial monitoring and policy coordination framework**, as well as tools with which policy and decision makers could enhance the quality of their development decisions. (Attract-SEE, 2014). Taking into consideration the limited timeframe of this project, the scope of the project was narrowed to "territorial quality and attractiveness" as the common, relevant cross-sectoral thematic area, with the following outputs and results :

1. A Territorial Monitoring Framework for partner countries;
2. Contributions to shaping the process of territorial cooperation in the region;
3. Commonly accepted indicator set at national level for monitoring Territorial Attractiveness
4. Transnational Attractiveness Report
5. Policy Coordination Process Handbook.

The development of territorial attractiveness indicators has been conducted through a participatory approach. **5 categories of indicators describing territorial attractiveness** were selected: environmental, anthropic, socio-cultural, economic/human and institutional. These categories are further used in ATTRACTIVE DANUBE.

Existing databases were used for developing the territorial KPIs, such as Eurostat, OECD, European Commission, European Environmental Agency, United Nations, UNESCO, World Bank, and ESPON projects. Within the Attract-SEE project, the indicator assessment was split into five steps:

1. **Identification of specific key indicators for each target group** (e.g. residents, migrants, tourists, investors...) that may be assumed as general indications of the TA performance

2. For each “aggregated” Territorial Capital asset, at least a couple of core indicators were identified: one **“state indicator”** (= description of current state) and one **“pressure indicator”** (= diagnosis of the process)
3. Matching the assets with the target group affected
4. Matching the assets with the policy objectives on national level
5. Checking availability of data of proposed indicators.

Out of the initial long lists of indicators (first 41, then 31), a number of 22 have been selected as a compact set, representative for visual transnational assessment and reporting and included in the Attract-SEE ATLAS - Maps of Common territorial attractiveness indicators data at SEE scale.

These are the indicators used further in ATTRACTIVE DANUBE for the Common Transnational Territorial Attractiveness Monitoring Platform: the CO-TAMP.

Most of the selected indicators fell in category of economic-human territorial capitals (11), then come environmental and socio-cultural territorial capitals (with 4 for each of them), followed by anthropic (2) and institutional (1) territorial capitals. Now, within the ATTRACTIVE DANUBE project, the set of 22 transnational indicators has been worked on:

- By partners representing countries also involved in Attract-SEE, which had to update their indicator sets;
- By newly joined partners (Bulgaria, Romania, Slovakia), which collected indicator data for the whole available period to the date of publishing the CO-TAMP platform (2018-2016/2017).

3.4.2 The methodology for developing National Attractiveness Indicators

As outlined in the previous chapters, ATTRACTIVE DANUBE is a project which strongly relies on **co-design**, especially at national levels. For making sure the final Territorial Attractiveness Monitoring Platforms are useful, useable and fit for their purpose (evidence-based planning support at all stages of the policy planning cycle), our methodology revolved around the concept of **step-by-step design with stakeholders**.

As explained in the previous chapter 3.2, the ATTRACTIVE DANUBE process of developing National Attractiveness Indicators was **stakeholder-centric**.

Stakeholders for the national territorial attractiveness monitoring platform (TAMP) are all institutions or organizations that can influence its establishment, are likely to be affected by its results, or are its potential users: the target of this present Handbook.

To increase the capacities of policy planning stakeholders, the focus was put on facilitating participation of policy planners in spatial planning, regional development and thematic fields (environment, economy, demographics, social affairs etc.), business and tourism. These important institutions, representatives and experts have been involved in an **iterative process of defining the Territorial Attractiveness Indicators, through 3 workshops**.

3.4.2.1 Objectives of the National Workshops

The **objectives and purpose** of the National Workshops (NWS) in each of the 11 participating countries have been the following:

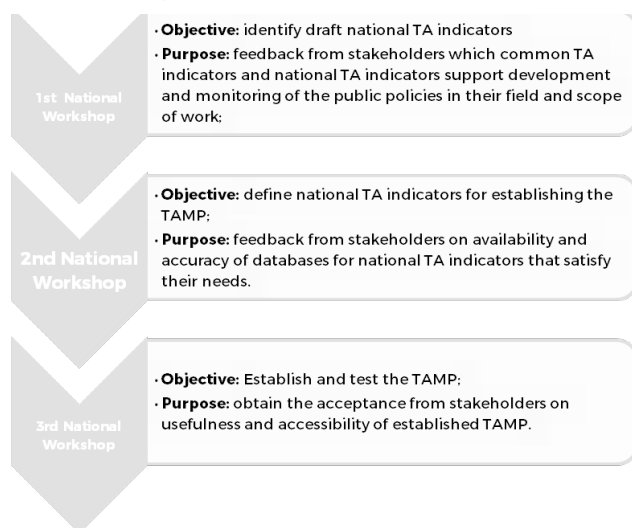


Figure 8 - Objectives and purposes of the three National Workshops in each country

Source: IAUS, Instruction NPP to establish TAMP, 2017

Summary of project national Workshops

11		Number of countries
19		Number of places
33		Number of workshops
765		Number of participants
472		Number of organisations
346		Number of draft TA indicators
51		Environmental capital
69		Anthropic capital
50		Socio-cultural capital
101		Economic/human capital
19		Institutional capital
56		Undefined



Picture 6 - The proceedings of the National Workshops in ATTRACTIVE DANUBE

3.4.2.2 Proceedings of the National Workshops

The first national workshops (NWs) on establishing national territorial attractiveness monitoring platforms (TAMP) were held in 11 countries during the period May 2017- July 2017, with the purpose of establishing a national working group for each country, of informing stakeholders of the project aims and opening the discussion on their needs with respect to Territorial Attractiveness indicators.

The first round of workshops gathered significant attention, interest and participation, with a total number of 264 stakeholders taking part in the events, representing 170 institutions. By far, the most interested stakeholder group was that of NGOs / Interest Groups (77 institutions and 99 attendees).

The meetings have been focused on identifying draft national TA indicators: a total number of **284 indicators**, at project level, have been defined in the first participatory meeting, for further discussion and selection.

Spotlight: 1st National Workshop in Montenegro

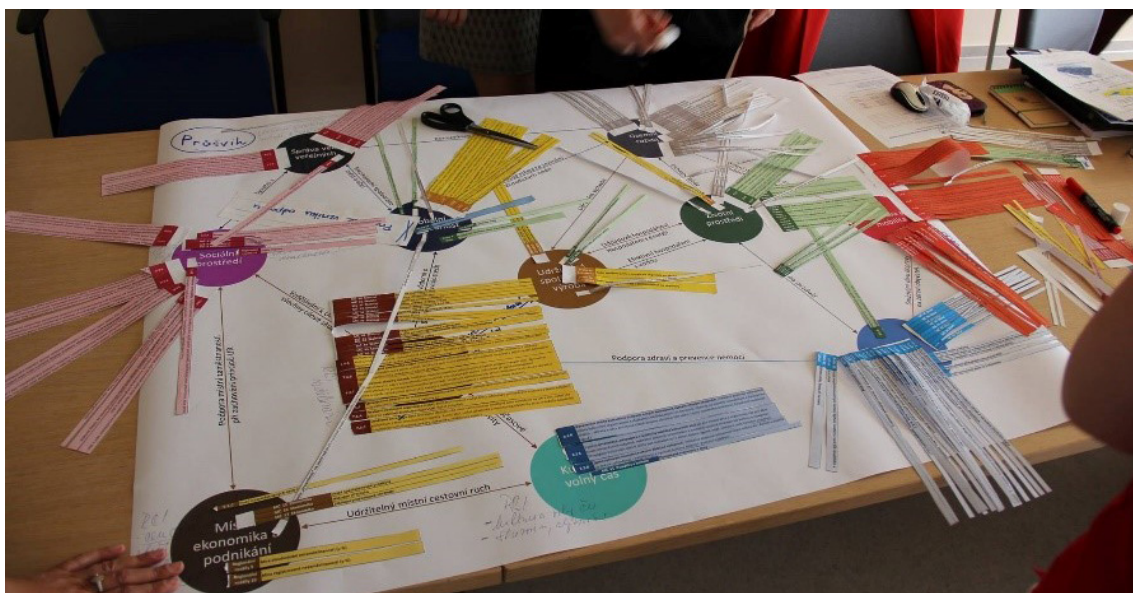
The first national workshop was organized by partner ISSP in Podgorica, on 07.07.2017, with the scope of identifying key segments and topics in the context of monitoring and evaluation of territorial attractiveness of Montenegro for relevant stakeholders, and of analysing and identifying specific topics for Montenegro in the context of TA indicators relevant for future planning and development processes.

The workshop was attended by 14 participants from 10 institutions (public authorities, interest groups – academia, business, tourism, civil society).

Key take-aways:

- *It is difficult to articulate a common set of indicators for the Danube region given the different context of each country, quality of life, strategic goals and documents as well as present and historical differences.*
- *However, aligning different countries in a more or less common framework will allow institutional and territorial competitiveness and role models identification.*
- *Montenegro is rather specific case, but it is important for it to participate in the CO-TAMP and the transnational process as it is possible to learn lessons as well as provide different view regarding institutional, economic, territorial and even educational attractiveness.*
- *Certain areas have been identified as important as in the context of TA indicators as in the context of overall growth and development: (i) national heritage and resources; (ii) cultural heritage; (iii) tourism and related services; (iv) education; (v) financial and capital market services; (vi) sport; (vii) entrepreneurship and entrepreneurial culture; (viii) educated and skilled labour force; (ix) out of curriculum labour force skills and compliance between academia and business community needs.*

The event met the expectations of 90% of participants. From an organisational point of view, the lesson learned revealed the importance of continuous communication in between events as well as before and after NWS. TA indicators and relevant topics need to be delivered to a wider group, as well as focus groups (in workshops) in order to achieve greater results and insights.



Picture 7 - First NWS held by CENIA in Prague, Czech Republic



Picture 8 - First NWS held by IAUS in Serbia

The second NWs for establishing national TAMPs were held between September 2017 – February 2018 and aimed at working together with the stakeholders to define a draft list of national Territorial Attractiveness indicators, further integrating and refining the requirements.

Spotlight: 2nd National Workshop in Romania

The second national workshop was organized by partner Urbasofia in Braşov, on 18.10.2017, with the scope of establishing the national and regional specifics in Romania and the Key Territorial Capital Components, including methods of quantification, finding out the data needs of the group of actors involved in the territorial planning process and outlining the specific sets of indicators of territorial attractiveness, available and concrete in terms of data.

The workshop was attended by 23 participants from 14 institutions (public authorities, interest groups – academia, business, tourism, civil society).

Key take-aways:

- *National and regional specifics in Romania: it has a strategic position at the Union level and should be an integration hub – case study for Bulgaria and Serbia, it is distinguished by a very diverse cultural identity, from the territorial point of view, few of the NUTS2 regions in Romania have specific homogeneity*
- *TAMP and CO-TAMP should be instruments of strategic positioning and rethinking the “offer” that they can make to current and future residents, but also to investors / tourists, vast rural areas(44%) – need to find potential elements in rural areas*
- *The actors implementing strategies and policies at the territorial level are not the same as those who develop them, and there are no performance indicators that allow comparability with earlier planning periods. From this point of view, one of the most important steps to be taken at national level is to ensure process continuity, for any policy of development or capitalization of national / regional / local capital.*
- *Sets of indicators should focus on stimulating investment, highlighting potential assets (eg for industry - connectivity, material resources, human resources, programs and facilities, etc.);*
- *For the intelligent specialization of regions and territories, an important aspect is the achievement of territorial pacts - PPPP cooperation*

Within the meetings, a total number of 332 national TA indicators have been proposed and discussed, most of which falling within the economic and human capital category (119).



Picture 9 - Second NWS held by URBASOFIA in Braşov, Romania



Picture 10 - Second NWS held by FB&H Ministry of Physical Planning in Zenica, BiH

Finally, the **third national workshops** on establishing national territorial attractiveness monitoring platforms were held during the period January 2018 – April 2018. During these participatory events, the Web Platforms (TAMP and CO-TAMP) have been presented to the stakeholders and final feedback has been gathered. The evaluation of the Web platform was conducted within most workshops with the participants, and the average score of the evaluation was 4 or above 4 points (rate 1-5). (Source: IAUS, Participatory planning process report on establishing national territorial attractiveness monitoring platforms, 2018).

Spotlight: 3rd National Workshop in Hungary

The third national workshop was organized by partner Lechner Non-profit Ltd. in Budapest, on 07.03.2018, with the scope of introducing the operation of National TAMP and CO-TAMP to the participants and test it.

The workshop was attended by 24 participants from 11 institutions (public authorities, interest groups – academia, business, tourism, civil society).

Key take-aways:

- *The most successful results concern the visual qualities of TA indicators (4.5 of 5) and the accessibility of TAMP platform (4.2 of 5)*
- *Good but improvable results were obtained in what concerns the TA's support in policy cycle and stakeholders needs (3.8 of 5) and data offer trends and comparison of TA for relevant territorial units (4.1 of 5)*



Picture 11 - Final NWS held by Lechner in Budapest, Hungary

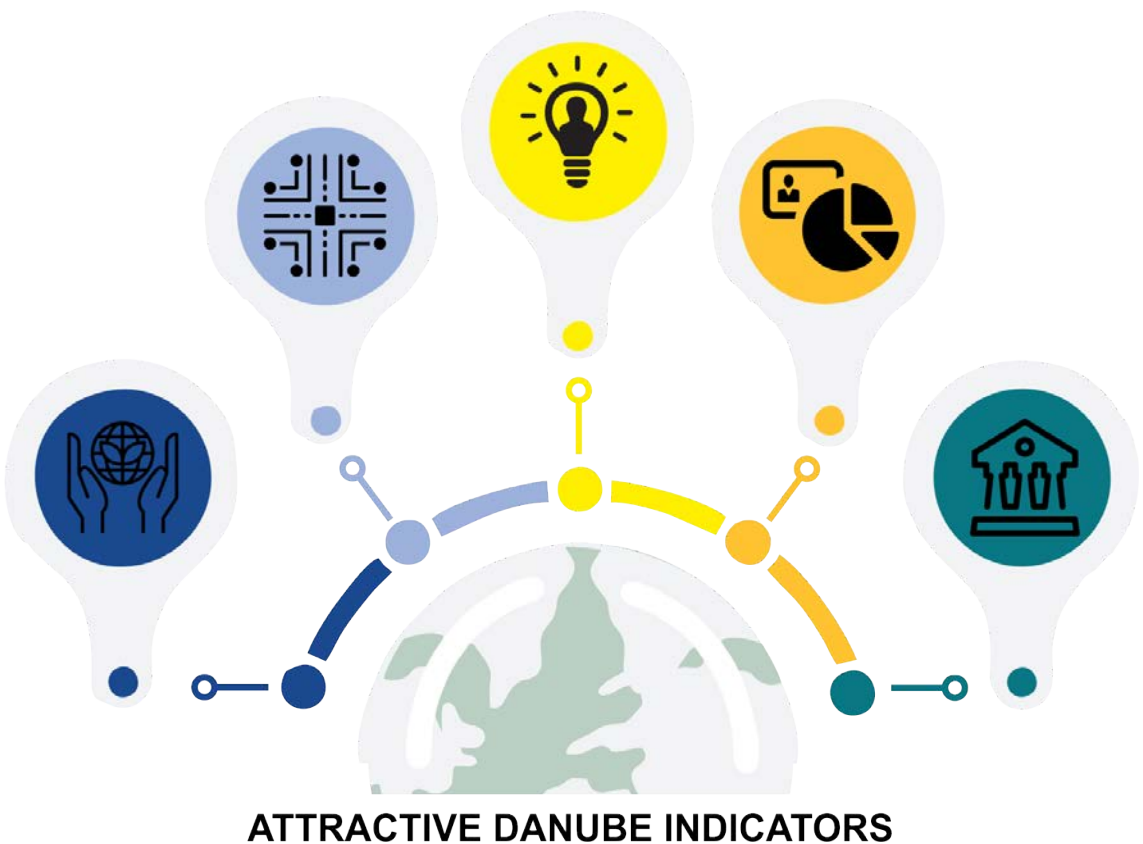


Picture 12 - Final NWS held by aiforia in Freiburg, Germany

3.5 Overview of CO-TAMP and TAMP KPIs

The Common Transnational Territorial Attractiveness (CO-TAMP) and National Territorial Attractiveness (N-TAMP) Indicators have been collected by the ATTRACTIVE DANUBE partners for the period starting with the year 2008 and will be updated with new available data until the year 2021, for a **complete period of 14 years**.

Beside the importance of having a consolidated, yet compact set of indicators relevant for territorial attractiveness, it was equally important to **ensure reliability** not only from a standpoint of data accuracy, but also reliability over time: indicators which would be collected on a yearly basis for an extended period of time, thus ensuring the possibility of accurately monitoring TA and formulating evidence-based development policies.



Picture 13 - ATTRACTIVE DANUBE Indicator Sets

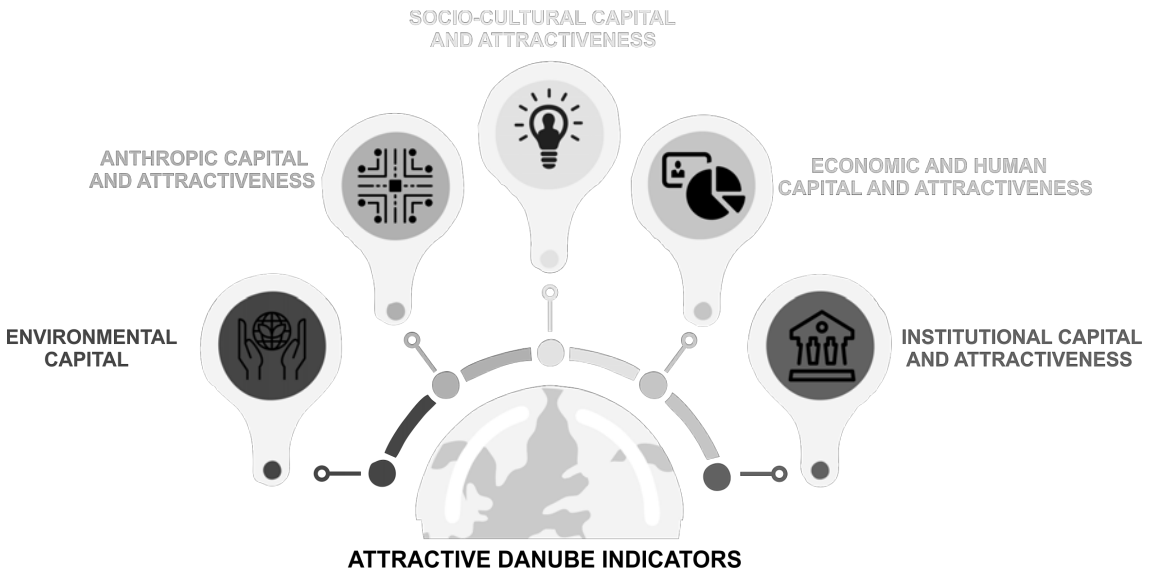
3.5.1 Common Transnational Territorial Attractiveness Monitoring Platform (CO-TAMP) indicators

No	TERRITORIAL ASSET	INDICATOR	TARGET GROUP
ENVIRONMENTAL CAPITAL AND ATTRACTIVENESS			
1	Environmental quality	Number of days with exceeded ground level concentration for ozone	tourists, residents, migrants
2		Population connected to urban waste water treatment with at least secondary treatment	
3	Natural resources and energy	Electricity generated from renewable sources	companies/ investments, residents
4		Consumption of water per capita	
ANTHROPIC CAPITAL AND ATTRACTIVENESS			
5	Landscape quality	Percentage of terrestrial area protected (total and by ecological Region)	tourists, residents
6	Infrastructures	Population (or households) with accessibility to high-speed broadband	companies/ investments, tourists, residents, migrants
SOCIO-CULTURAL CAPITAL AND ATTRACTIVENESS			
7	Culture	European cultural sites on the UNESCO World Heritage List	tourists, residents, migrants
8	Quality of life	Life expectancy at birth by sex (Europe2020 indicator)	companies/ investments, tourists, residents, migrants
9		Gross disposable household income	
10		People at risk of poverty or social exclusion (Europe 2020 indicator)	
ECONOMIC AND HUMAN CAPITAL AND ATTRACTIVENESS			
11	Knowledge &	Population aged 25-64 with tertiary education	companies/
12	Innovation	Research & Experimental Development expenditure as percentage of Gross Domestic Product (Europe 2020 indicator)	investments, residents, migrants
13	Employment	Employment rate 20-64 years by sex (Europe2020 indicator)	companies/ investments, residents, migrants
14		Youth unemployment rate	

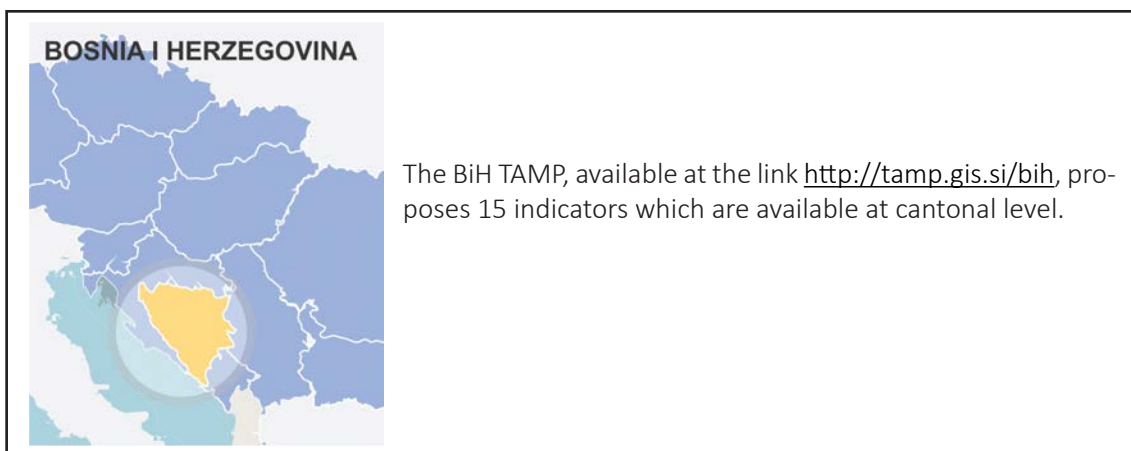
15	Specializations / Key sectors	Share of employment by sector	companies/ investments,
16	Tourism	Number of overnight stays of tourists per capita per year	companies/ investments, residents, migrants
17		Share of tourism related employment in total employment	
18	Investment promotion	Percentage of Gross Domestic Product of foreign direct investment stock	companies/ investments, migrants
19	Population	Population growth rate	Residents, migrants
20		Percentage of population in age 20-64 years	
21		Ageing index	
INSTITUTIONAL CAPITAL AND ATTRACTIVENESS			
22	International relations	Percentage of foreign students	companies/ investments, migrants

Table 9 - List of common territorial attractiveness indicators compiled by the Attract-SEE project partner-countries and used in ATTRACTIVE DANUBE

3.5.2 National Territorial Attractiveness Monitoring Platform (TAMP) indicators



3.5.2.1 TAMP Indicators: Bosnia and Herzegovina



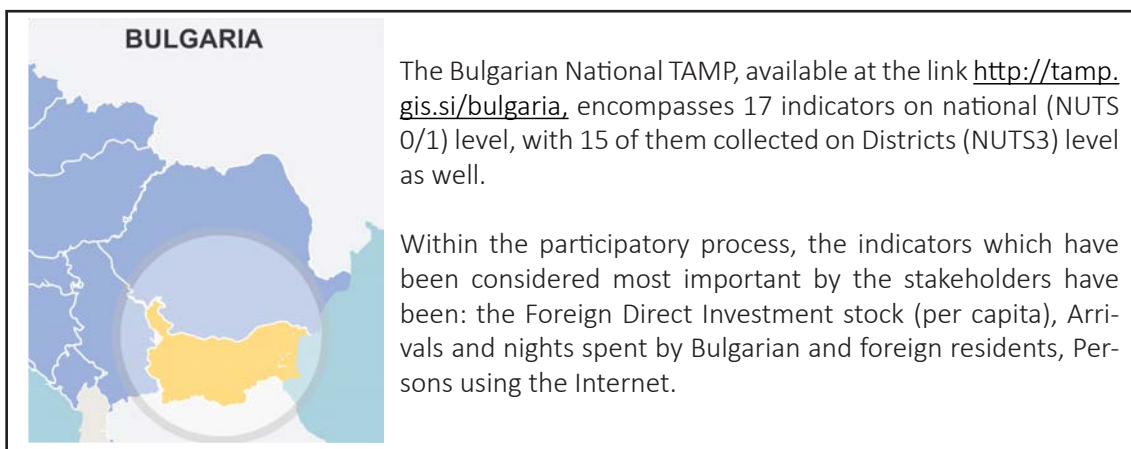
TAMP indicators for the Federal Ministry of Physical Planning

At the beginning of the Project and in organizing the first B&H workshop, we came up with 11 indicators through discussion with our stakeholders, which could represent attractiveness indicators for Federation of Bosnia and Herzegovina, but which were also readily-available. During the project implementation and through involvement of certain institutions, we defined three new indicators of territorial attractiveness .


We are particularly proud of our colleagues from the Federal Ministry of Physical Planning (from our working group for the implementation of the Project), who tried and defined 2 new indicators that have not been processed so far at the territory of B&H.

Presenting these two indicators in the N-TAMP platform was a challenge, which was however overcome by the team. These indicators are presented in a slightly different way in comparison with other indicator with numerical values.

3.5.2.2 TAMP Indicators: Bulgaria




3.5.2.3 TAMP Indicators: Croatia



CROATIA

On the basis of the participatory process at national level and the suggestions of the stakeholders, the N-TAMP of Croatia (<http://tamp.gis.si/croatia>) contains 12 indicators. The Croatian stakeholders considered Environmental quality, Ecological Agriculture (no. of ecological family farms), safety, building dynamics (permits issued) and degree of cooperation (European projects) as some of the most relevant and important indicators to the local attractiveness monitoring.

3.5.2.4 TAMP Indicators: Czech Republic




CZECH REPUBLIC

The Czech Republic National TAMP, available at the link http://tamp.gis.si/czech_republic, contains 21 indicators of Territorial Attractiveness.

The TAMP proposes several very interesting and relevant indicators for assessment, among which the Coefficient of Ecological Stability (CES) (KES_2000-2016_okresy), Regional Price Index for Households, Education, Food and Accommodation, share of ecological agriculture, and criminality.

3.5.2.5 TAMP Indicators: Germany



GERMANY

After finalising the participatory process in Germany, 28 indicators were identified to measure the attractiveness of a region, available here: <http://tamp.gis.si/germany/>

It was crucial for the stakeholder to discuss attractiveness at local or regional level, so the indicators are displayed at TAMP if possible at NUTS 1 and NUTS 3 level.

Attractiveness in Germany is highly linked to sustainability, in an ecological as well as in an economical manner (see e.g. the indicator “organic farming”), so it was not surprising that a major part of indicators is related to sustainabili-

ty, but also with very specific regional focus (e.g. number of user of car-sharing offers or number of cooperative housing projects). Unfortunately public data bases do not provide the broad range of requested data. Therefore out of the set of formerly identified indicators, finally 21 were uploaded to the TAMP. Due to the lack of data, the remaining indicators could not be considered further.

3.5.2.6 TAMP Indicators: Hungary



On the basis of participatory planning process, 29 national indicators were chosen by the stakeholders for Hungarian TAMP (<http://tamp.gis.si/hungary>). The main aspects of indicator grouping were tourism, economy and housing. Stakeholders found it desirable to collect relevant TA indicators at the lowest territorial level as possible, even pilot areas may be designated in the future. The availability of territorial attractiveness indicators at national, county, micro regional and municipal level supports decision-making at both local and regional level, therefore Hungarian TAMP indicators can be visualized and downloaded at NUTS0, NUTS3, LAU1 and LAU2 levels as well

3.5.2.7 TAMP Indicators: Montenegro

Montenegro's National TAMP, available at the link <http://tamp.gis.si/montenegro>, is currently still under construction.

3.5.2.8 TAMP Indicators: Romania



Through the participatory process, organized in 3 regional workshops, the N-TAMP of Romania has been created with a number of 28 indicators, and is available at the following link: <http://tamp.gis.si/romania>

Apart from CO-TAMP indicators considered important by the stakeholders, indicators of relevance for territorial attractiveness quantify urban quality (infrastructures, green space per capita), degree of safety (crime rate, accidents) and social integration, interest in cultural events, nominal earning, but also the degree of cooperation (LAGs) and interaction between the population and government (e-Governance).

3.5.2.9 TAMP Indicators: Serbia



The Serbia National TAMP Platform (<http://tamp.gis.si/serbia>) has been set up based on the participatory approach conducted in WP3 and contains a total number of 25 indicators. A strong accent is put on cultural heritage and tourism, as well as quality of services (such as healthcare) for inhabitants. Indicators accounting for cultural consumption (e.g. Number of visitors of museums), corroborated with data for important natural and built landmarks, represent a good indicator for TA, especially when coupled with data pertaining to the environment, traffic, infrastructures and economic indicators.

3.5.2.10 TAMP Indicators: Slovakia



The Slovakian National TAMP, available at the link <http://tamp.gis.si/slovakia>, encompasses 10 indicators on regional level.

The indicators considered important by the national stakeholders were focused on environment and environmental protection (production of solid and CO2 emissions, recycling rate of municipal waste), infrastructures (i.e. degree of connection to water supply and wastewater collection systems), economy and workforce (employment rate, regional GDP, expenditure on R&I), but also education and social inclusion.

3.5.2.11 TAMP Indicators: Slovenia



The National Territorial Attractiveness Monitoring Platform of Slovenia can be accessed here: <http://tamp.gis.si/slovenia/>

It contains a pilot area (the Municipality of Kranj), for which 13 indicators have been collected. Emphasis is put on quality of life and territorial attractiveness for inhabitants: population indicators, movement and migration, intergenerational education and housing.



1. Environmental Capital > 4. Surface of green space per capita, urban areas



NUTS3

2016

Square meters of green space per capita, for citizens residing in cities and municipalities, displayed at county level.

Green space refers to the area of green arranged in the form of parks, public gardens or public squares, plots of trees and flowers, forests, cemeteries, lands of bases and sports facilities within the building perimeters of localities.

Green spaces as an indicator do not include greenhouses, nurseries, garden gardens, agricultural lands, lakes, etc.



4.1 What is TAMP and how does it work?

TAMP and CO-TAMP are innovative cartographic web applications about territorial attractiveness in the entire Danube Region and in ATTRACTIVE DANUBE Partners countries. **Territorial attractiveness platforms** are built on collected indicators data which can be **analysed, managed, geovisualised, exported and disseminated**.

The aim of the platforms is to **contribute to a better territorial development after the process of spatial planning** in each participating country and **to support multilevel and cross-sectoral governance** for a better attractiveness of the Danube Region. With this tool it is possible to **evaluate the level of attractiveness** in each of the countries, regions and other spatial units, with a focus on different target users, especially **inhabitants, tourists and investors**. It helps us analysing the changing patterns and the impact that policy decisions can have on our daily life.

Web platforms are **freely accessible** to everyone and available on all devices (mobile phones, tablets or computers).

The **key of success** for the platform are rigorous and precise data. Platforms show the territorial attractiveness data in the **environmental, economic and social topics** with data ranges from 2008 onwards (depending on data availability).

To make these platforms useful to all the inhabitants of the Danube Region, the priority language in all TAMP is English together with the country's national language, and for CO-TAMP English language is used only.

When focusing on **spatial management**, platforms can be used for (picture 1):

1. Development of new ideas/ policies/ strategies/ projects and its implementation of indicators data in TAMP. This can be done with a good data preparation and identification of appropriate data.
2. Visualization of gathered data to make it more attractive/ storytelling/ easy to understand, etc.
3. Innovative analysis:
 - a. With different time units (e.g. Years),
 - b. With different spatial units for the chosen area (NUTS classification for territorial levels (e.g. countries- regions- municipalities- settlements)).
4. Implementation of a monitoring system to control new trends in spatial management, assess effectiveness, impact and sustainability evaluation and interpretation of indicators/ making comparisons.
5. Dissemination of data (data or image export through charts, maps, infographics, etc. and sharing the content).
6. Making impact on spatial policies and decision-making processes to help policy planners recognize and understand potentials and trends in a territory to efficiently prioritise territorial development goals.

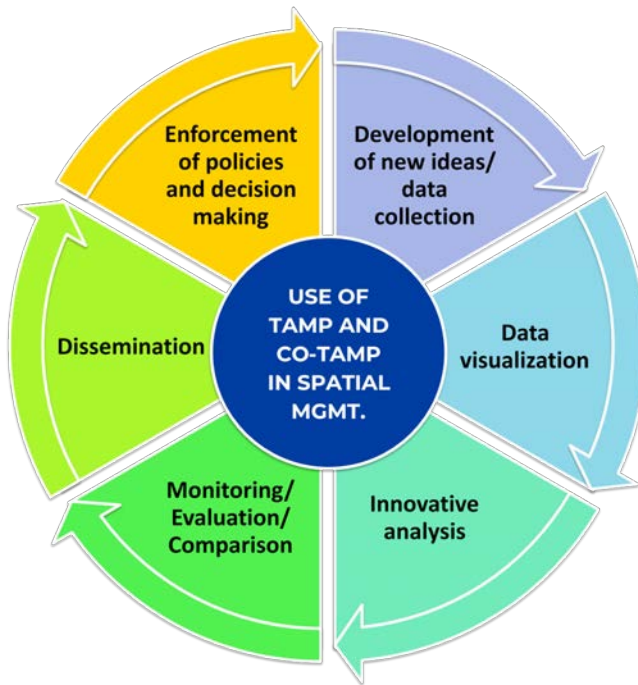


Figure 9 - Use of TAMP and CO-TAMP in spatial management

4.1.1. TAMP

TAMP is a National Territorial Attractiveness Monitoring Platform, focused on each country and its regions, districts, municipalities and settlements. Indicators data for each country has been selected according to the needs of stakeholders and are therefore more nationally or locally relevant, with a purpose of their better decision-making processes. Indicators and datasets were discussed and developed during three National workshops. It took a lot of effort to reach a participatory approach and to ensure that stakeholders are involved through the whole process.

For that reason, each of the national platforms is unique and filled with different national indicators. TAMP has been implemented in 11 countries that are participating in the ATTRACTIVE DANUBE project.

4.1.2. CO-TAMP

Web based tool CO-TAMP (COMmon Transnational Territorial Attractiveness Monitoring Platform) is a similar tool as TAMP but provides data for the entire Danube Region. It provides a permanent support to macro-regional development strategies, supporting multilevel and cross-sectoral governance and policies coordination. CO-TAMP reflects the latest knowledge and trends in data management and information system development and includes relevant EU strategies and standards such as INSPIRE.

The data covers from the year 2008 onwards and is provided by 11 countries and 2 German federal states. In total CO-TAMP contains 2,354 data sets with Metadata descriptions (in May 2018).

Link to the website's application : http://cotamp.gis.si/attractive_danube/

Structure of CO-TAMP and TAMP platform with all functionalities is shown in the picture below.

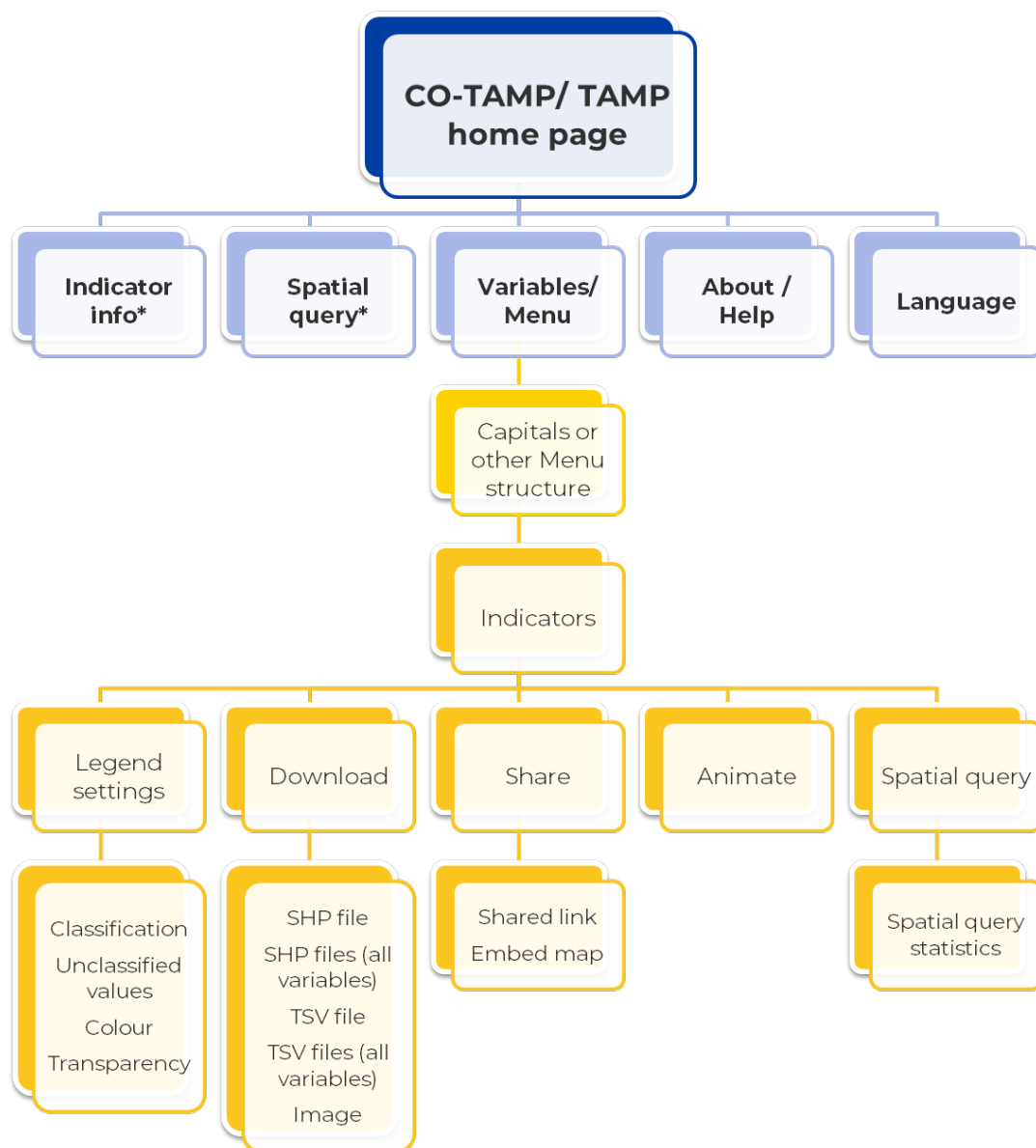


Figure 10 - Structure of CO-TAMP/ TAMP platform

*Icons can be used when one indicator is chosen.

4.2 Who manages the platforms?

Both web platforms were developed on an already existing technological solution by the Geodetic Institute of Slovenia, who is also responsible for hosting and sustaining the platforms. Data on 11 national TAMPs is collected, prepared and uploaded by project partners of each participating country. Data for CO-TAMP is prepared by all participating partners and uploaded by the Geodetic Institute of Slovenia.

The project aims to ensure its sustainability after the project's end in order to become integrated into policies with its sustaining taken over by key drivers of the policy coordination and integration network.

4.2.1 Managing in the future

Geodetic Institute of Slovenia will be responsible for functioning and technical maintenance of the CO-TAMP and TAMP for at least 3 years after the project's end.

Concerning data updates, partners committed themselves to provide data which will feed the CO-TAMP and TAMP information system and maintenance of TA indicators according to their needs for at least 3 years after the project's end (until 2021). Each project partner will be responsible for the communication with the Geodetic Institute of Slovenia regarding technical issues.

Further sustainability of the platforms depends on the sustainability of the institutional and trans-institutional cooperation after the project's end. This means to refresh the territorial attractiveness data in order to provide the target groups with regular updates. This will be defined through the 11 national Memorandums of Understanding that will support the institutional cooperation for good territorial governance.

4.3 What information can I find on it?

TAMP and CO-TAMP represent a tool for different types of data (picture 4):

- **Indicators (statistical) data** which represent national indicators about environmental, social and economic data. Data is/ will be collected for a period 2008 – 2021 if data is available. Together with data also Metadata and indicators description are prepared.
- **Spatial data** which represent different territorial levels.

With these platforms it is possible to display and evaluate statistics in different time and spatial units and also to obtain statistical and spatial data for each indicator that the user sees at a particular moment. This is nevertheless a way to make data available to the public for further use, while also supporting the INSPIRE Directive implementation, focusing on gathering, standardizing and making data available for elaboration into information as support for development planning.

4.3.1 CO-TAMP

CO-TAMP represents reliable and available data for the period 2008 – 2021 and one spatial unit – 11 participating countries in the Danube region/ national level. CO-TAMP represents a great tool to compare indicators between countries and for different target needs.

All indicators have been outlined in *Chapter 3.5.1 - Common Transnational Territorial Attractiveness Monitoring Platform (CO-TAMP) indicators*.

Together with indicators data also **Metadata documents** for attractiveness indicators and indicator database at national level have been prepared, available for each country and for all common indicators. They are available on the link: http://cotamp.gis.si/attractive_danube/admin/node/1

With these pdf documents it is possible to get metadata information about: indicator description, type of indicator, annual range, data source for indicator, key statistical data used, data completeness, policy/goals, contact person if available, conditions of use, interesting facts about a specific indicator.

4.3.2 TAMP

The platform will be available to display and evaluate **available data for the period 2008 – 2021**; however, the project aims for a further sustainability of the platforms. It is important for the stakeholders to know that TAMP presents an important tool for **highlighting specific regional and territorial aspects**.

Each TAMP has its own **Metadata** document with information about specific national attractiveness indicators. It is prepared in the same way as the Metadata documents for CO-TAMP, collecting the same type of information. Metadata is available on each TAMP when selecting one indicator (in the description).

4.4 What can TAMP/ CO-TAMP do for me?

4.4.1 Who is the TAMP/ CO-TAMP meant for?

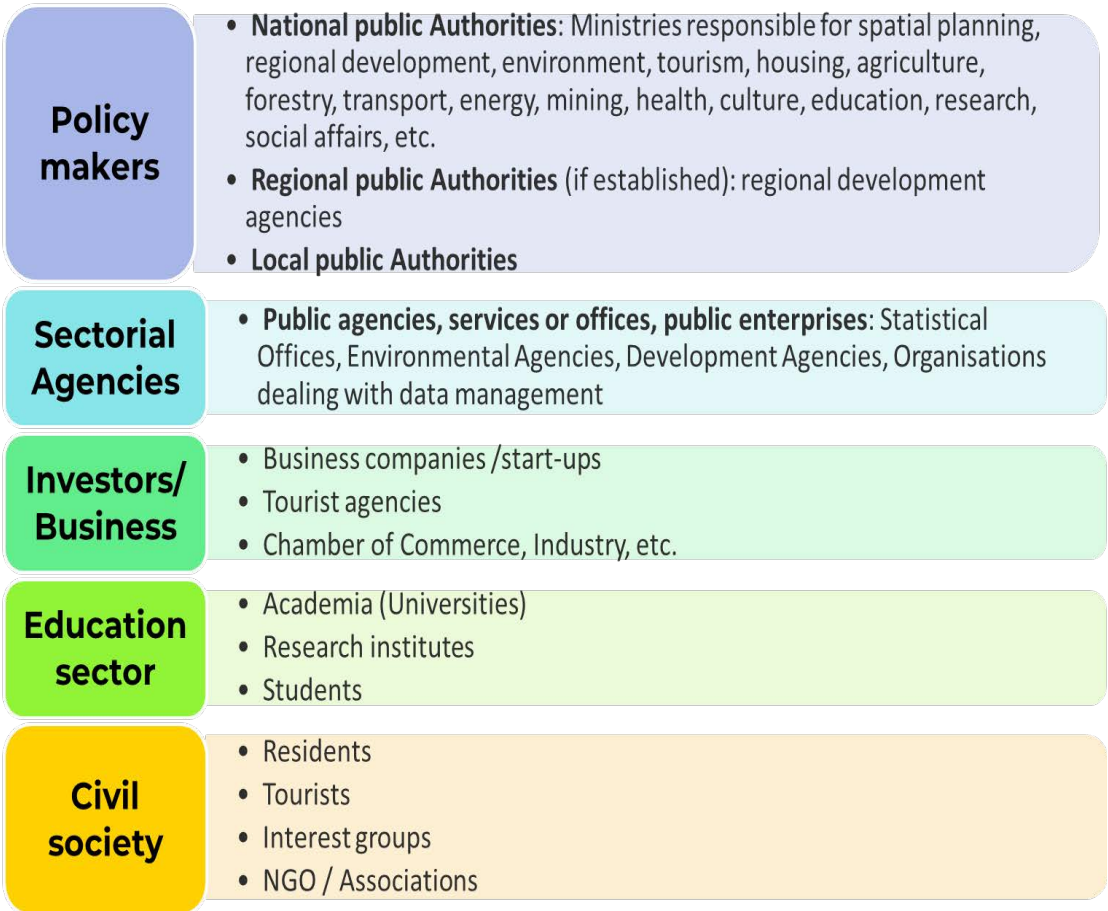


Figure 11 - TAMP and CO-TAMP Target Users

TAMP and CO-TAMP are tools for better development and spatial planning; therefore, they can be useful for different target groups, as shown above.

POLICY MAKERS are stakeholders at the national, regional and local level. They need a close cooperation with different sectors and thematic fields and a reliable data. With that kind of approach, it is possible to use platforms and have an impact on future spatial policies and planning and also to integrate territorial attractiveness approach into all spatial development. Comparing data on different territorial levels means also a better understanding of the environmental, territorial potentials and development priorities.

SECTORIAL AGENCIES need TAMP/ CO-TAMP to prepare qualitative and effective measures for solving problems. They can easily engage other organisations if they need to with a close look at other stakeholder's inputs to enable comparison within the country. With a help of the platforms and a signed Memorandum, different institutions can easily cooperate between themselves.

INVESTORS/ BUSINESSES need very reliable and punctual data to grow their business. It is always important to include different perspectives when seeking new potentials/ solving problems, etc. Platforms can be used for benchmarking and marketing through using different tools for data visualizations and analytics. If business companies are multinational or working on several markets, cross-sectoral analysis and monitoring is crucial too.

EDUCATIONAL SECTOR needs platforms especially for monitoring and analysis for research purposes. Tools can be also extremely helpful for students seeking for new development tools for data visualization and analytics.

CIVIL SOCIETY combines different organisations and individuals focusing on spatial management/ planning/ development, etc. TAMP/ CO-TAMP are free tools and available to everyone, therefore can be very useful for those who do not have many resources and analytical tools to work with.

4.4.2 Usefulness of TAMP/ CO-TAMP

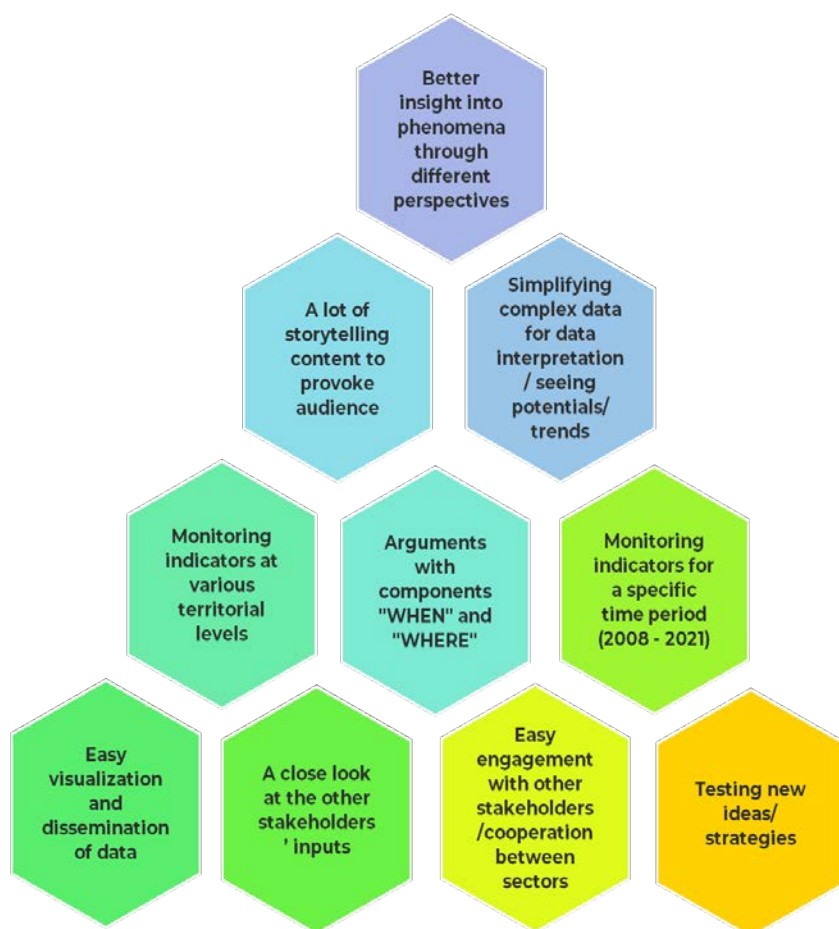
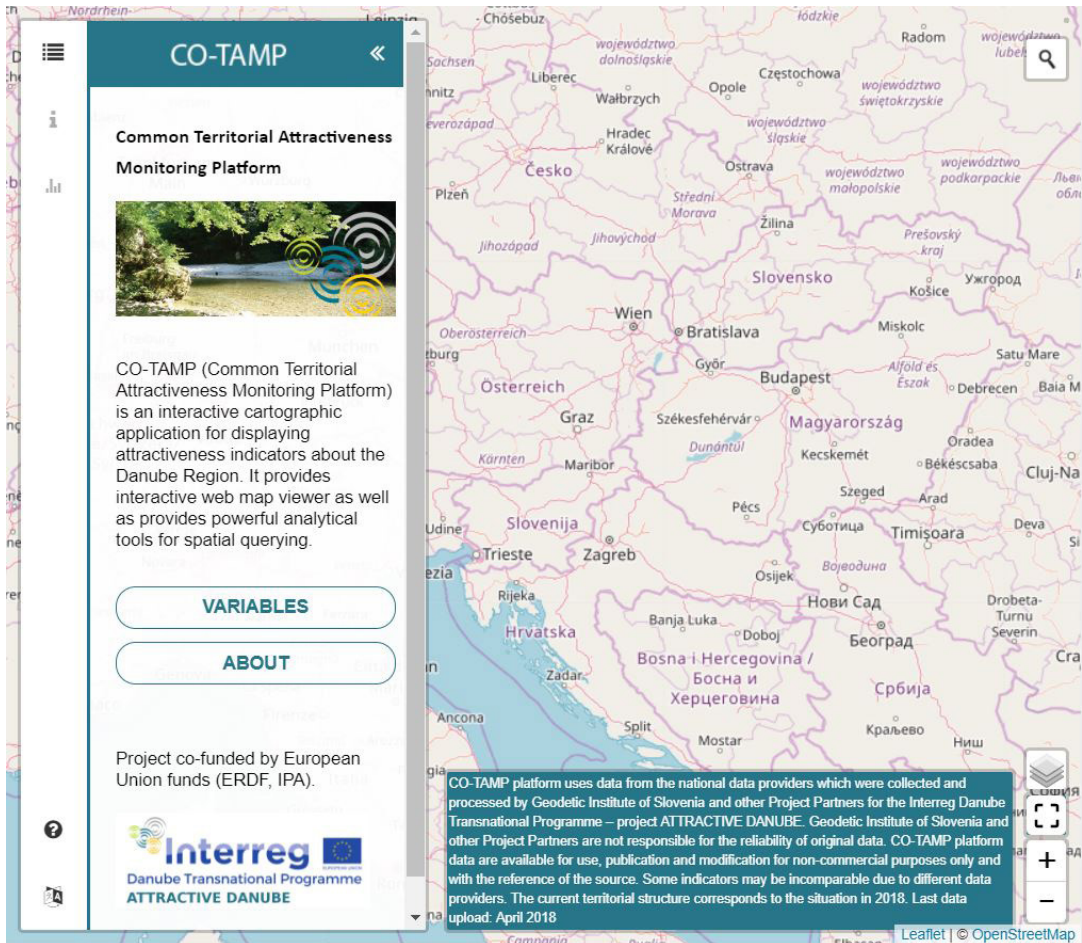


Figure 12 - Why do I need TAMP and CO-TAMP?

4.5 TAMP/ CO-TAMP TRAINING AND TECHNICAL DESCRIPTION

The following screenshots of the TAMP and CO-TAMP functionalities and subpages are taken from the CO-TAMP platform, available on the link: http://cotamp.gis.si/attractive_danube/.

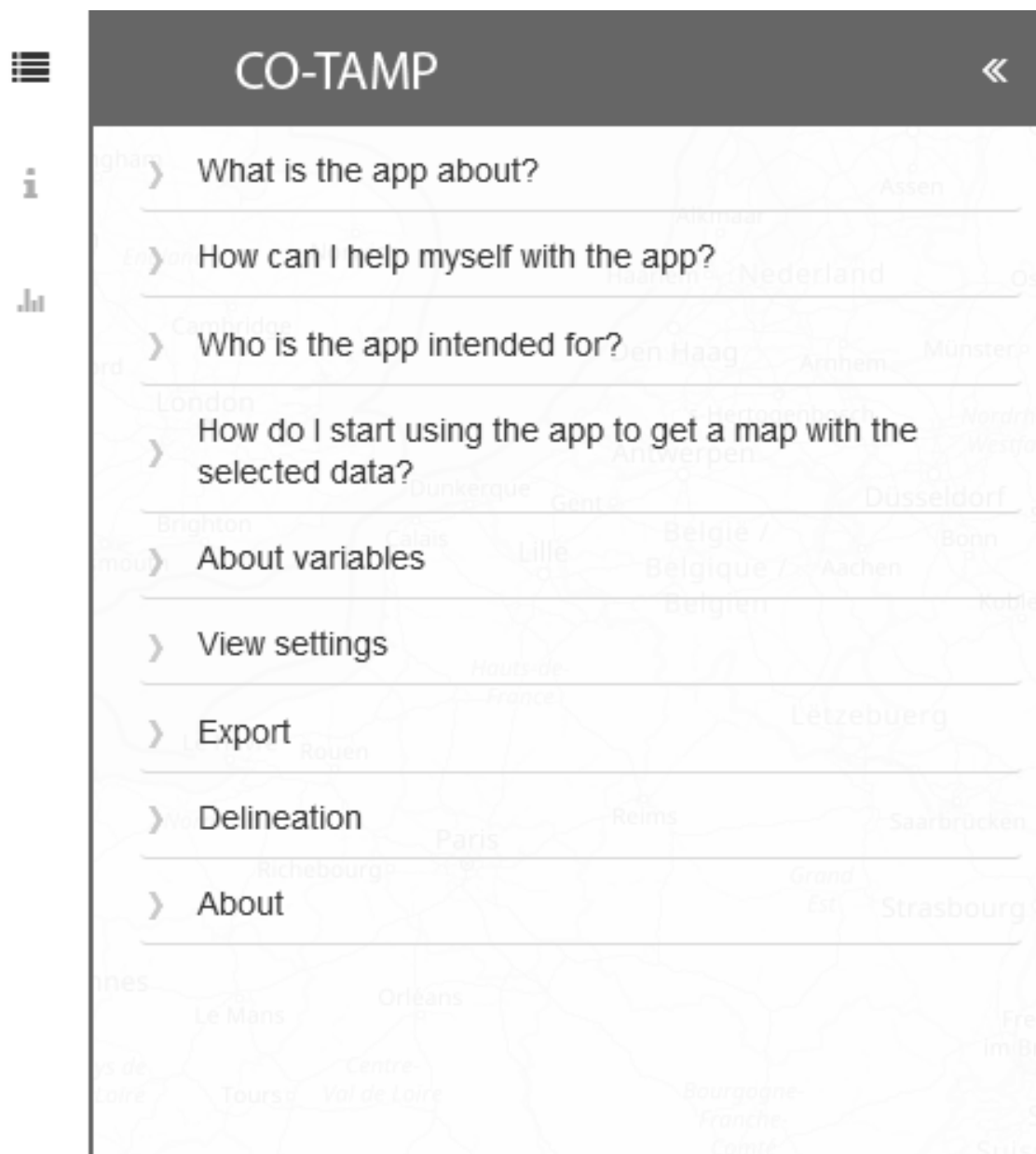
4.5.1 The home page



Picture 14 - CO-TAMP and TAMP Landing Page

The home page is a starting point of the application to **choose indicators**, to **learn more** about the application or to **choose a language** of the application if it is available.

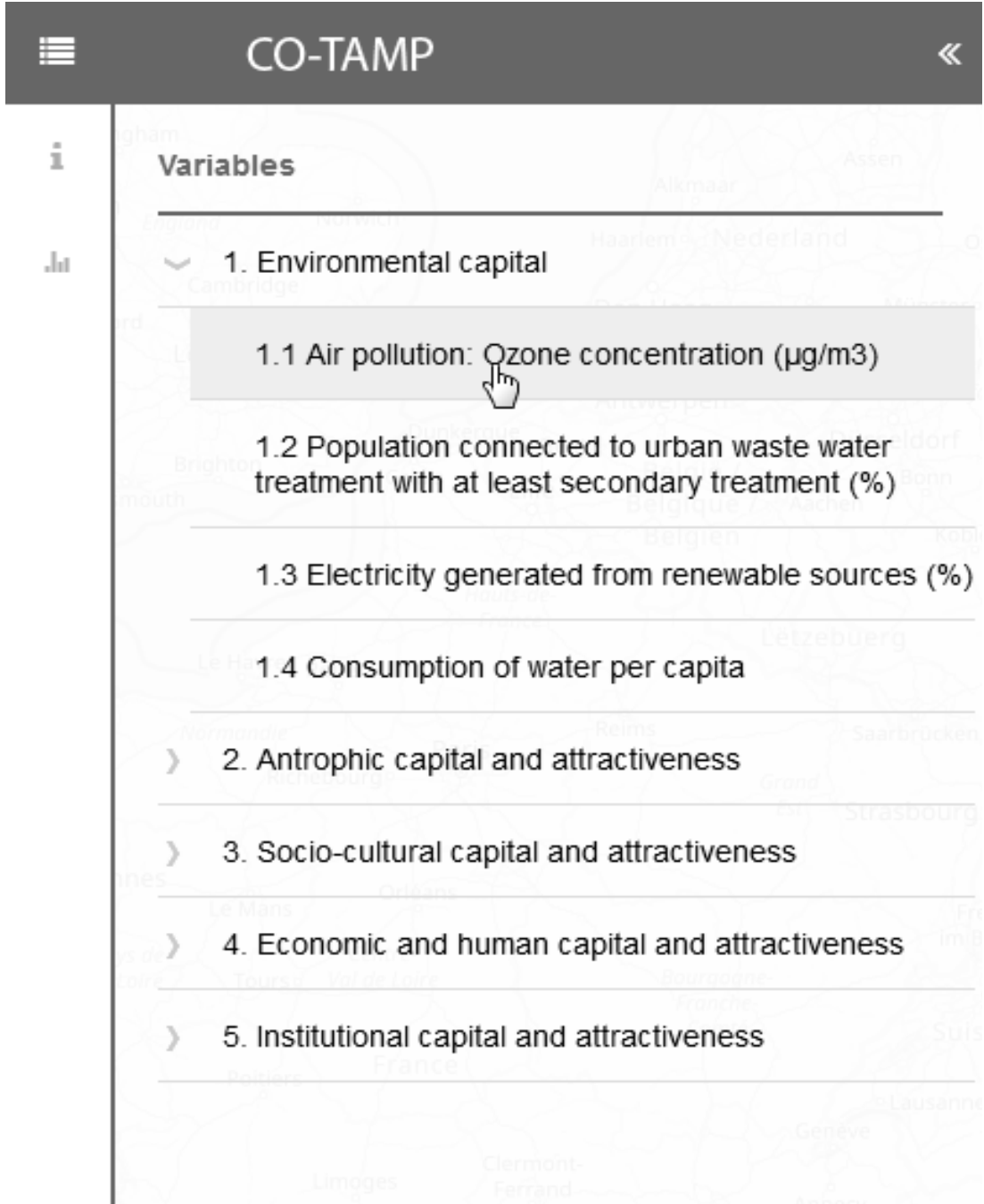
4.5.2 About / Help sections



Picture 15 - About and Help sections of TAMP / CO-TAMP

When selecting “Help” or “About” learn more about the application with a help of already prepared questions.

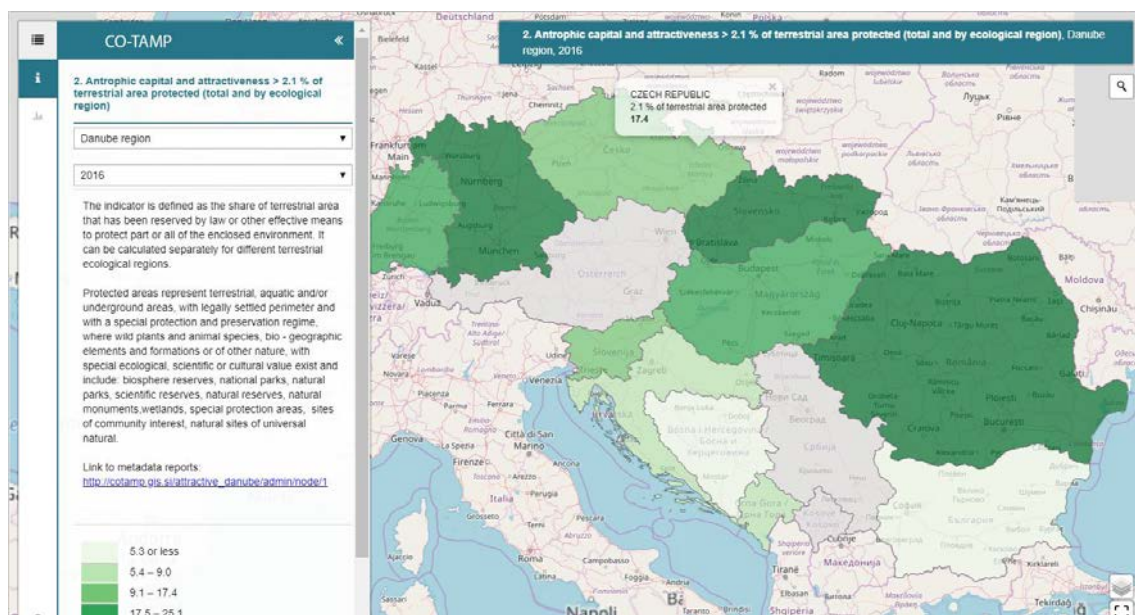
4.5.3 Variables/ Menu structure



Picture 16 - The menu structure. Variables.

Users can select in the menu structure the chosen indicator (when selecting “variables” or “Menu” button).

4.5.4 About the indicators

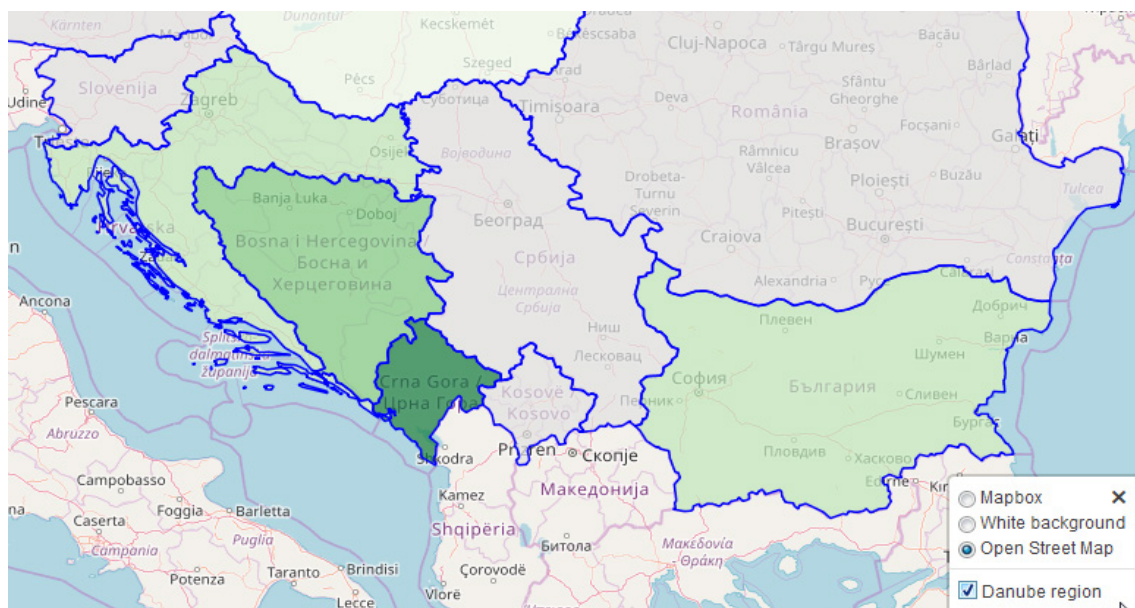


Picture 17 - Displaying indicators on the CO-TAMP and TAMP

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The most essential part of the application is an **interactive map with a chosen cartographic basis** and a **chosen indicator** showing the statistical values on a chosen spatial unit, **indicator description** with a **link to metadata reports** and **legend values**.

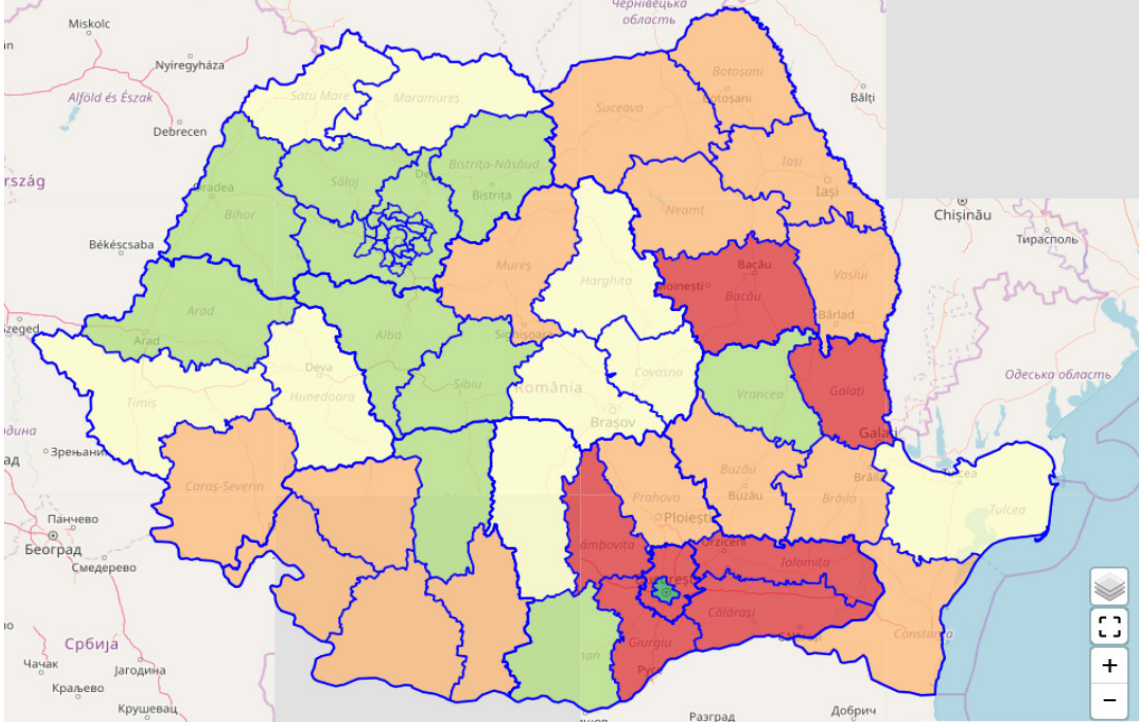
Next to the map is the menu where the user can choose different **spatial units** if available, and different **time units** of the indicator for a time period from 2008 onwards.



Picture 18 - Visibility of administrative borders - spatial units in CO-TAMP

On the right side of the map, the user can choose cartographic basis (Open Street Map, white background or Mapbox) and highlighted borders if needed.

In the national TAMPs, depending on the territorial levels of the spatial data, it is possible to display several NUTS unit borders at once using the same Layer button.



Picture 19 - Visibility of NUTS level borders in TAMP

4.5.5 Legend settings - visualization of data

CO-TAMP

Settings; 1. Environmental capital > 1.1 Air pollution: Ozone concentration (µg/m3)

BACK

Classification

Number of class breaks (excessive number of may corrupt display)

5

Classification method

Jenks (natural breaks)

10.0 or less

10.1 – 17.9

18.0 – 20.0

20.1 – 30.4

30.5 or more

APPLY SETTINGS

RESET SETTINGS

Unclassified values

Colors

CO-TAMP platform uses data from the national data providers which were collected and processed by Geodetic Partners are not responsible for the reliability of original data. CO-TAMP platform data are available for use, but territorial structure corresponds to the situation in 2018. Last data upload: April 2018

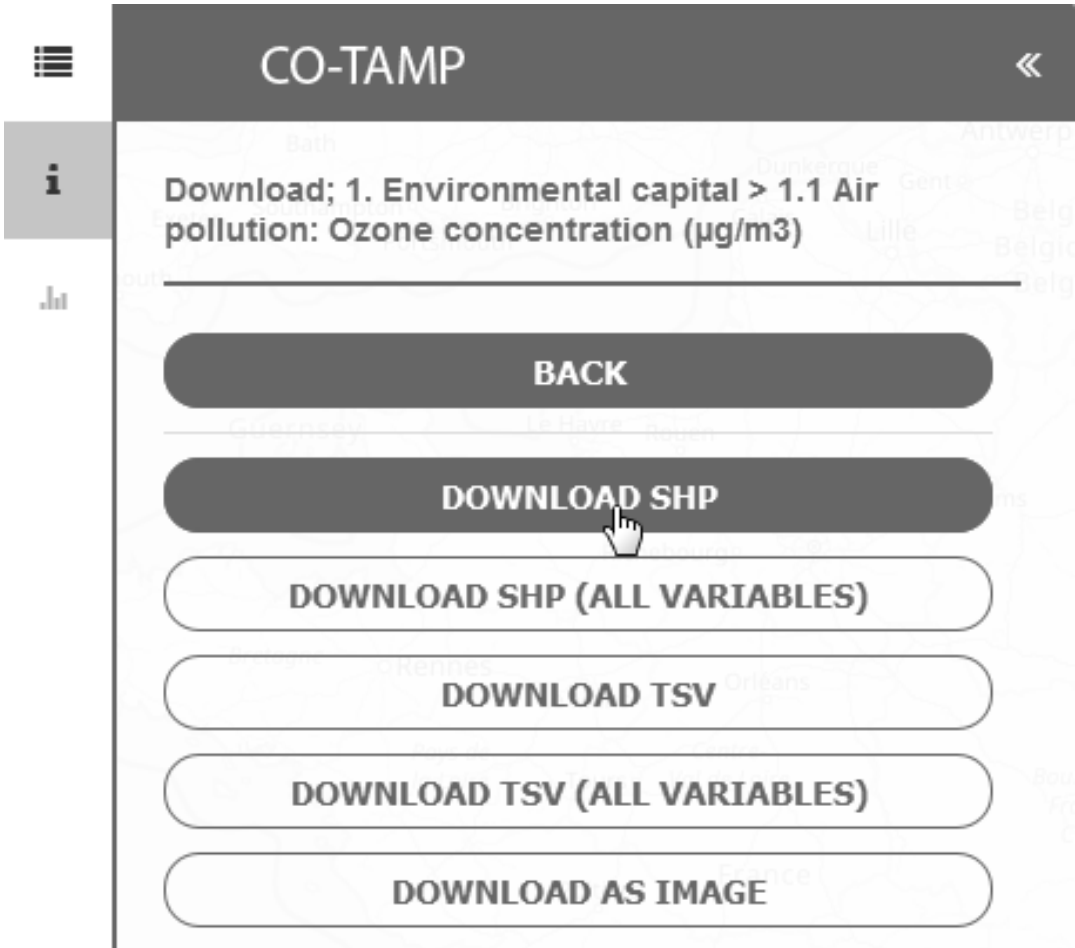
Picture 20 - Legend settings in TAMP and CO-TAMP

In legend settings different data visualisation tools are available: method of classification and number of class breaks, specification of unclassified values, different colour palletes on the map, changing transparency of the map.

Several classification methods are available:

- Quantile divides classes where each class contains an equal number of features.
- Equal interval divides the range of attribute values into equal-sized subranges.
- Natural break divides into classes with major differences between values (for specific data).
- Manual interval is for defining users' own classes where user can manually add class breaks

4.5.6 Download/export and further use of data



Picture 21 - Downloading and exporting data

All files can be exported in ESRI shapefile format (geospatial vector data format) within a ZIP file format. Shapefile contains at least three mandatory files:

- .shp — shape format; geometry itself
- .shx — shape index format; a positional index of the feature geometry
- .dbf — attribute format; columnar attributes for each shape

When exported, files can be used for user's further work: analysis in GIS tools (e.g. QGIS, ArcGIS, etc.), data processing and further data visualization in spreadsheet programs (Microsoft Excel, Libre Office Calc, etc.), etc.

Data licence:

CO-TAMP platform has a licence displayed in the map viewer with an explanation of a data use. All CO-TAMP platform data are available for use, publication and modification for non-commercial

purposes only and with the reference of the source.

The use of data in TAMP depends on each Project Partner, responsible for the national platform.

Download image:

The screenshot displays the CO-TAMP interface for downloading a map image. At the top, the title is "CO-TAMP" with a back arrow. Below it, the text reads "Download as image; 1. Environmental capital > 1.1 Air pollution: Ozone concentration (µg/m3)". A prominent "BACK" button is visible. The main content area features a map of the region with a legend on the left. The legend includes a title "1.1 Air pollution: Ozone concentration", a scale bar, and a color-coded legend with categories: "120 µg/m3", "100-120 µg/m3", "80-100 µg/m3", "60-80 µg/m3", and "40-60 µg/m3". Below the map, there is a "Map title" field containing the text "1.1 Air pollution: Ozone concentration". An "Options" section contains five toggle switches: "Scale", "Level", "Legend", "Description", and "Footer", all of which are currently turned on. At the bottom, a large "DOWNLOAD" button is highlighted with a mouse cursor.

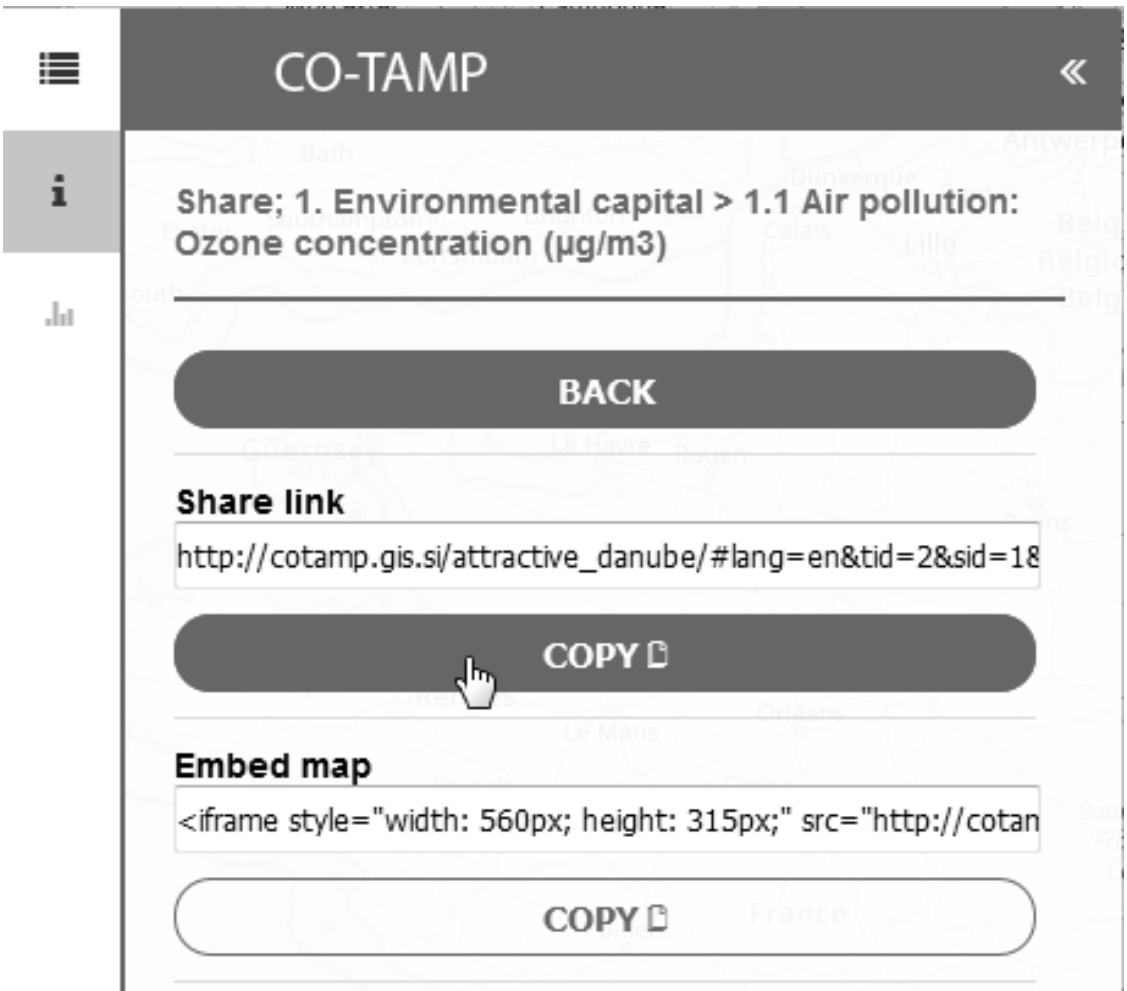
Picture 22 - Downloading files from the platform

When downloading images (maps), the user can decide the following about the Map:

- Scale of the map
- Level (spatial unit)
- Legend values
- Description of the indicator
- Footer (project co-funding sentence)

The image is downloaded in a PNG format.

4.5.7 Sharing content



Picture 23 - The Share function

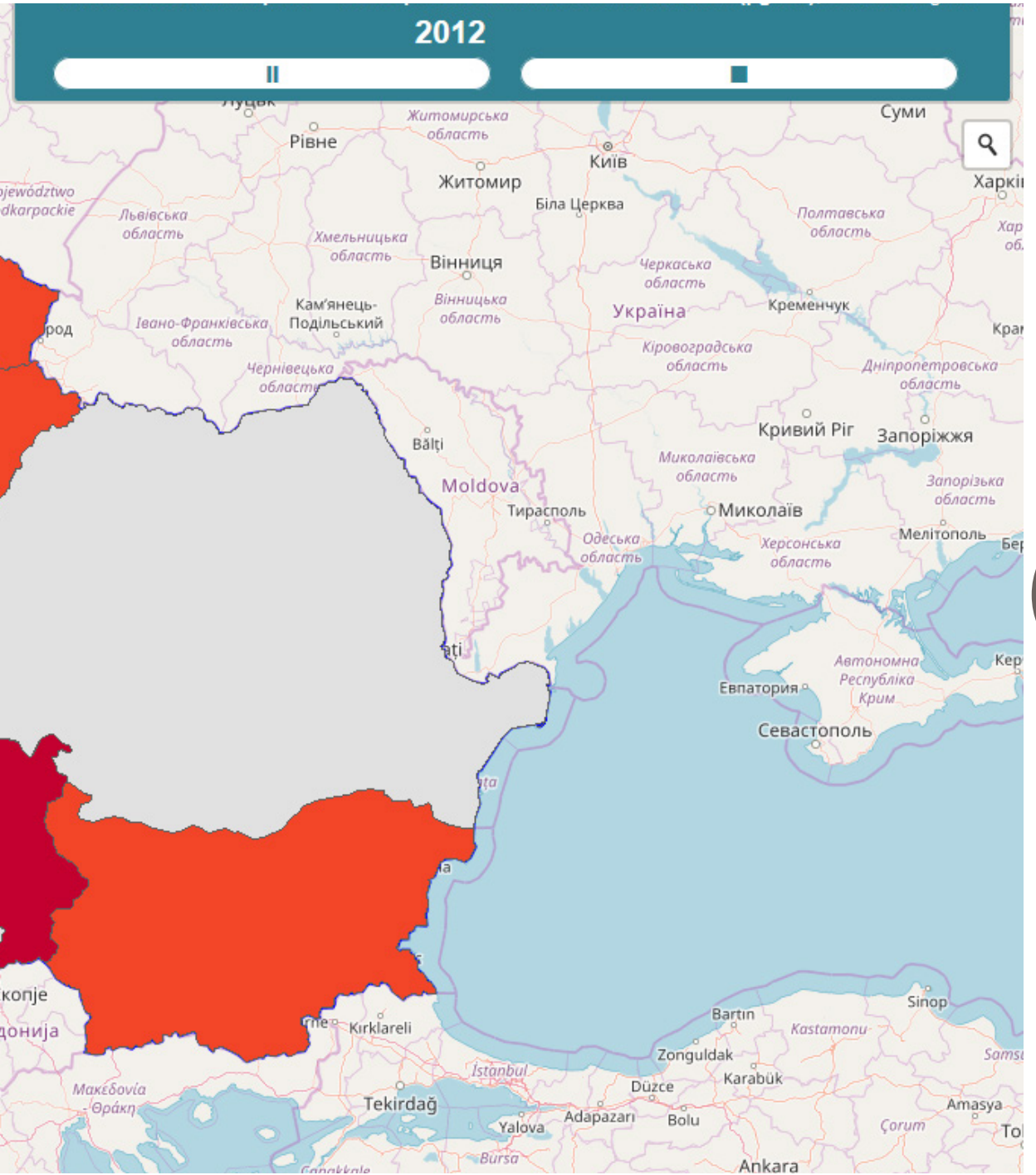
Content (links and maps) can be easily shared with copying links on other websites.

4.5.8 Time animation



Picture 24 - Tir

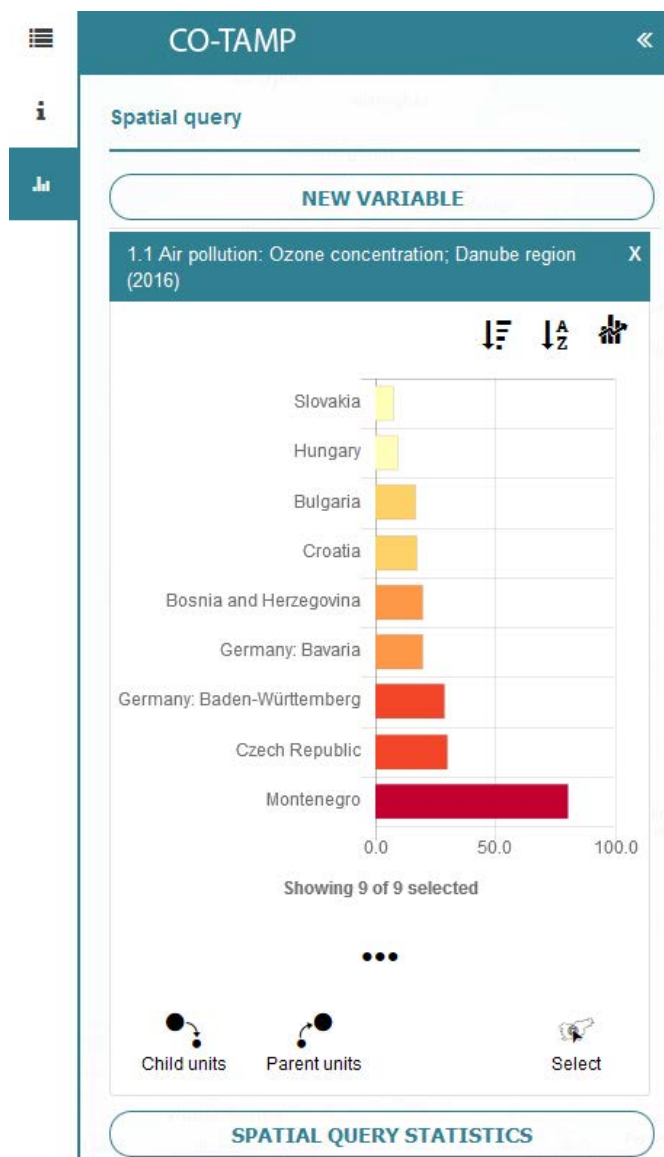
It is possible to have a look at variables with a time animation. Animat



me animations

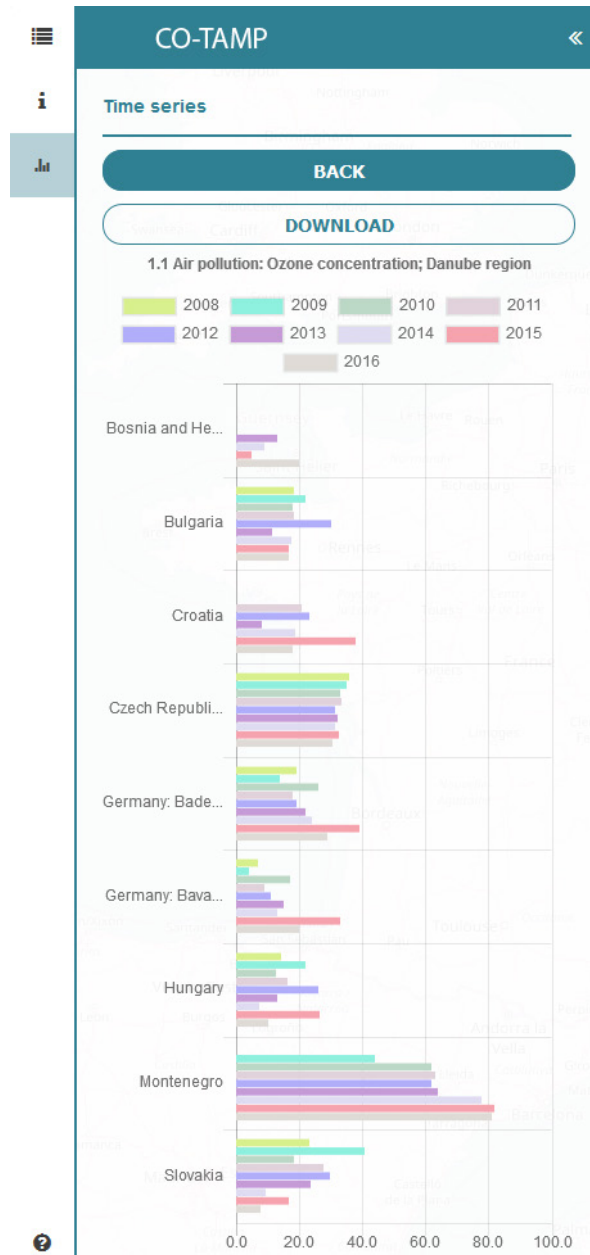
tion is possible for each indicator and time period from 2008 onwards.

4.5.9 Spatial query - analytical tools



Picture 25 - Advanced analytical tools

- With spatial query or delineation, it is possible to make charts with elements of the selected indicator.
- Charts can be sorted numerically or alphabetically.
- To display all elements that are presented on the map or to download the chart, the user needs to select icon (...).
- If more spatial units are available (in TAMP only), the user can choose a child or parent unit to get a new chart with values for the selected area only.
- With the button "Select" the user can filter elements using points, circle or rectangle to make a new chart with random/ needed elements only.



Picture 26 - Advanced analytical tools

With a time series the user can get a chart about each indicator and values for all years that data is available for.

SPATIAL QUERY STATISTICS – comparing data sets

The possibility of comparing two or more data sets is currently under development and will be added at a later stage.





PART 5: BOOSTING POLICY PLANNING CAPACITY



5.1 Planning capacity and Governance

Both platforms developed by ATTRACTIVE DANUBE have a very high potential contribution to supporting evidence-based planning at Danube, national, regional and local levels; however, in order for them to foster the envisioned impact at local level, a strong **capacity building process** will be developed in order to ensure understanding, uptake and commitment to future use.

Capacity Building represents one of the pivotal actions for achieving the project objectives, through improved governance and increased capacities of stakeholders for tackling territorial development challenges in the Danube Region, specifically pertaining to the valorisation of attractiveness and territorial capital.

5.1.1 Capacity building for better policy-making

‘Capacity is the ability of people, organisations and society as a whole to manage their affairs successfully’ (OECD, 2006).

One of the first definitions for Capacity Building emerged at the beginning of the 1990s, within the Agenda 21:

“Specifically, capacity building encompasses the country’s human, scientific, technological, organizational, institutional and resource capabilities. A fundamental goal of capacity building is to enhance the ability to evaluate and address the crucial questions related to policy choices and modes of implementation among development options, based on an understanding of environment potentials and limits and of needs perceived by the people of the country concerned” (UNCED, 1992)

In the ATTRACTIVE DANUBE project, through this Handbook and the subsequent Capacity Building Seminars, we aim at implementing:

1. Capacity Building (CB) that is **efficient and effective**, building on structures and information which are already there and aiming at creating knowledge and skills where they can best be used or transferred.
2. CB as a **means to an end**, and not a goal in itself: generating a measurable impact at the level of AD Countries and Regions.
3. **Multi-dimensional Capacity Building**: not only enhancing the capacities of participating stakeholders, but also those of their representing institutions and the enabling/relational environment of those institutions (including policy, legal, regulatory, economic and social support systems in which they operate).
4. **Direct participation of the stakeholders**, as the main protagonists of the task and its workshops.
5. Lastly, **flexible and adaptable Capacity Building**, in acknowledgement of the different contexts of the ATTRACTIVE DANUBE countries.

5.1.2 Addressing needs and gaps

Throughout the participatory process implemented in ATTRACTIVE DANUBE to date, we have tested, analysed and understood the different needs of our stakeholders pertaining to evidence-based decision making in planning and policy design for territorial attractiveness.

Contextualizing the needs and gaps in what concerns capitalizing territorial attractiveness at the Danube Region level, specifically for the countries involved in the ATTRACTIVE DANUBE project, it is evident that **new models of evidence-based planning and cooperation** need to be put into place, not as a replacement, but as a new, flexible and operational layer complementing the vastly normative existing planning systems.

This is where ATTRACTIVE DANUBE comes in, directly enabling the full planning cycle through TAMP and CO-TAMP, and supporting the stakeholders responsible for its implementation through capacity-building action in the following key stages:

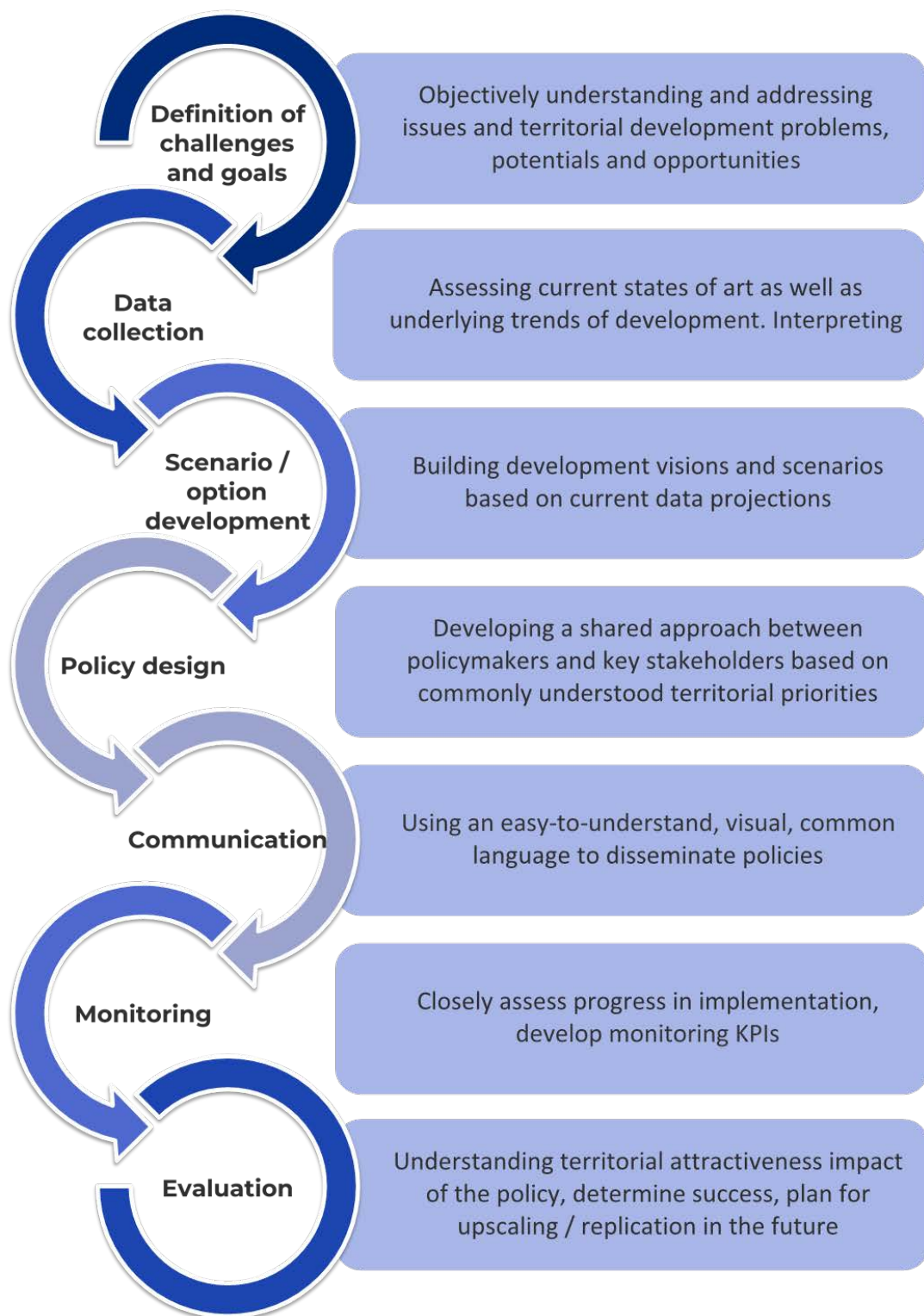


Figure 13 - Key stages of the planning process in which ATTRACTIVE DANUBE Platforms can provide assistance

5.1.3 Objectives and methodology for improving planning capacity in ATTRACTIVE DANUBE countries

Through this Handbook, as well as the Capacity Building actions which will be implemented within the project as a set of 3 seminars in each of the 11 countries, we aim at:

- 1. BUILDING AWARENESS:** Fostering information dissemination, awareness and understanding of the ATTRACTIVE DANUBE CO-TAMP and National TAMPs as key instruments to support evidence-based policy planning for territorial development at the Danube Region level and within each of the 11 AD participating countries.
- 2. BUILDING ANALYTICAL CAPACITY:** Supporting the key stakeholders identified within the project and previously involved in participatory planning to operate with the CO-TAMP and TAMP platforms, throughout the whole process of needs identification, data look-up, use of platform functionalities, territorial attractiveness data interpretation and creation of use-able outputs for policy planning.
- 3. BUILDING DECISION-MAKING CAPACITY:** Fostering widespread adoption and embedding of the ATTRACTIVE DANUBE instruments and tools in decision-making and everyday use for key stakeholders, as well as supporting diffusion of Capacity Building Workshops knowledge within the institutions of the representing stakeholders, through Memorandums of Understanding.

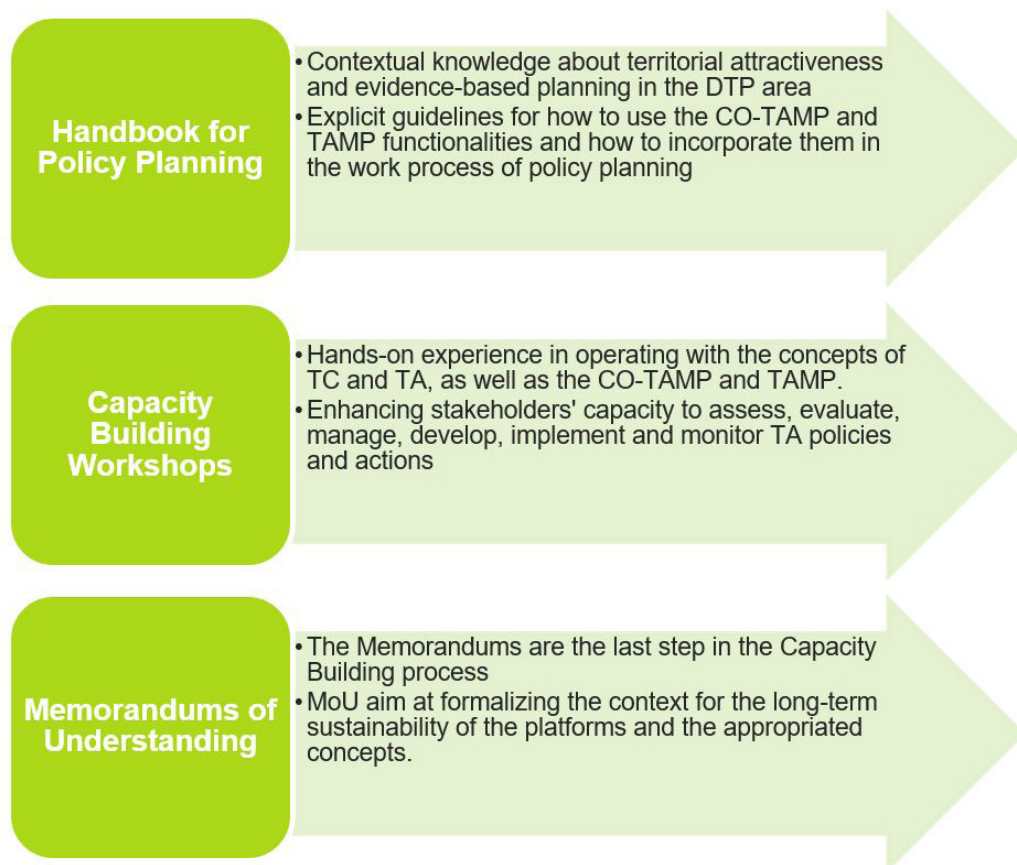


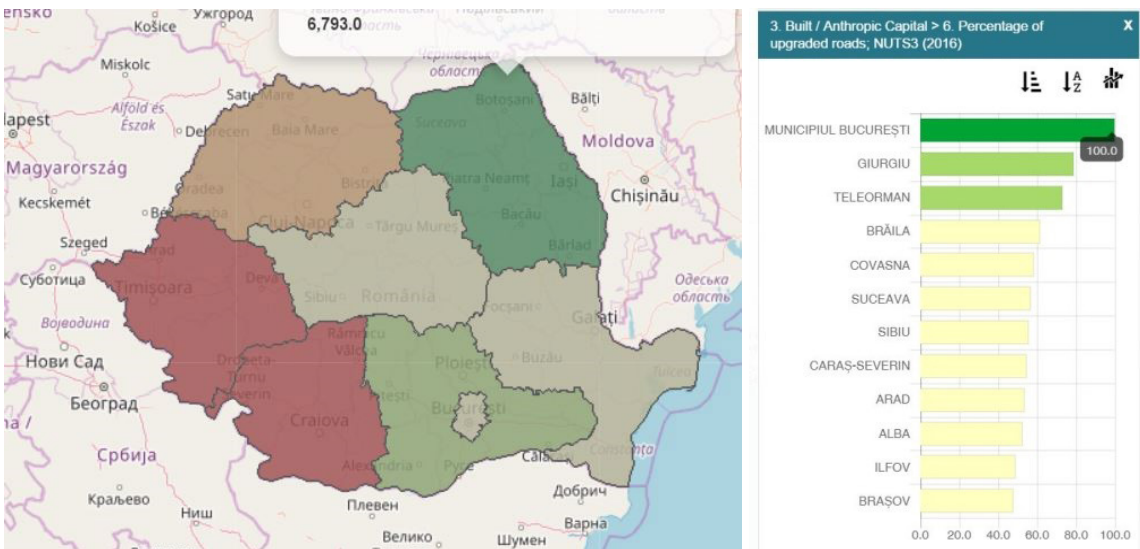
Figure 14 - The three pillars of Capacity Building in ATTRACTIVE DANUBE

5.2 TAMP in practice: USE CASES

5.2.1 Definition of challenges and goals

TAMP platform can be a useful guide in defining the challenges and goals for certain regions of a country. For instance, supposing that the Ministry of Regional Development and Transport in Romania is aware of the big number of victims in road accidents on several public roads, and it decides to ameliorate the problem by proposing new safer ways of transport. Even if there are some well-known dangerous routes, they want to have a global image of the issue, so they can make an effective action plan. In order to prioritise the areas of intervention, the authorities can find on TAMP several helpful maps, in the category called Built/Anthropic Capital.

Information such as number of victims in road accidents, percentage of upgraded roads and public road density are available at county level. Furthermore, the platform offers access to time series for an 8 year evolution of these indicators (2008-2016).



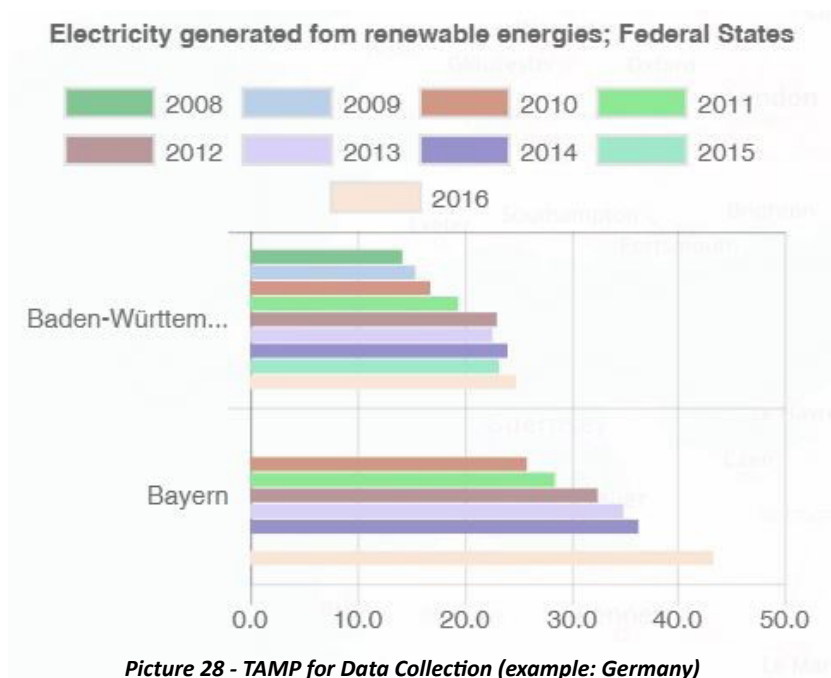
Picture 27 - TAMP for definition of goals and challenges (example: Romania)

5.2.2 Data collection

TAMP is a very useful tool in the process of collecting data on a certain topic. For example, let's say that after a huge investment in alternative ways of procuring energy, Germany's municipalities decide to make a survey on the grade of acceptance and on the actual efficiency of this kind of source of energy.

Thus, they can find on TAMP platform information on renewable energies used by manufacturing industries, and also the percentage of energy generated from renewable energies, by regions.

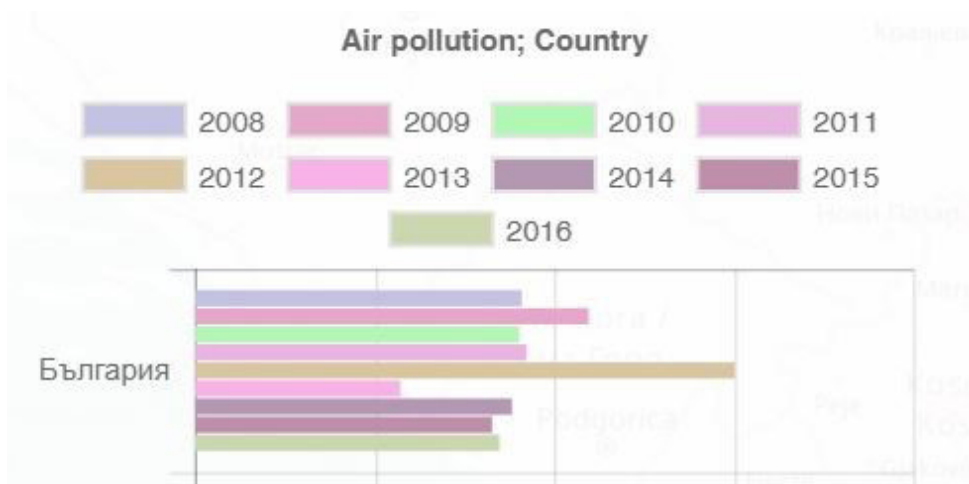
In this way they can see which regions are more inclined/advantaged to making the transition to renewables and afterwards decide if and where to raise the funding in renewable energy.



5.2.3 Communication

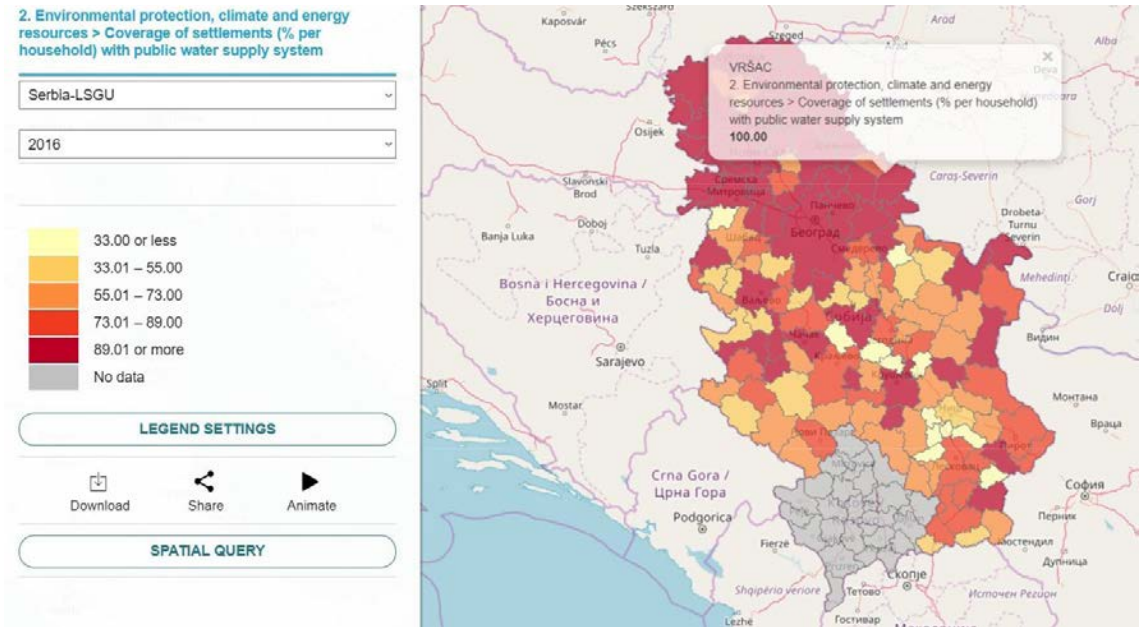
114

TAMP platform can also have a contribution in what concerns public communication of data to third parties. For instance, in Bulgaria the variable Environmental Capital could be useful to environmental NGOs such as Greenpeace or WWF, which are very active and viral in the digital environment. They can publicly prove the situation on the quality of air by showing reports on ozone concentration or emissions of pollutants in the air; what they have to do is accessing the platform and download maps and graphs in order to use them in online articles. These NGO's often complain about the misinformation about environmental indicators and TAMP platform can be a very good support for them.



5.2.4 Monitoring

Lastly, TAMP platform is a very useful tool when it comes to monitoring a certain issue. For example, if the Serbian municipality wants to monitor the degree of endowment of dwellings, they can search for the indicators in the variable 2: Environmental protection, climate and energy resources, where exists data about the coverage of settlements with public water/public sewerage system and also on the number of buildings that have energy passport. Thus, they can make comparisons between different regions and intervene where the situation is critical.



Picture 30 - TAMP for monitoring (example: Serbia)

5.3 Lessons learned so far

From a participatory process point of view, the National Workshops have welcomed a wide array of stakeholder types, each with their motivations, drives, needs and access to data. Involvement was not homogenous, however: some participating institutions were more active than others, and the **heterogeneity of interests** across the 11 countries points towards the many differences in local settings, and the subsequent **need to contextualize, adapt – locally root ATTRACTIVE DANUBE and the Platforms in each national context**.

On a scale from 1 to 5, how involved and interested were the NATIONAL stakeholders in the WP3 workshops?

11 responses

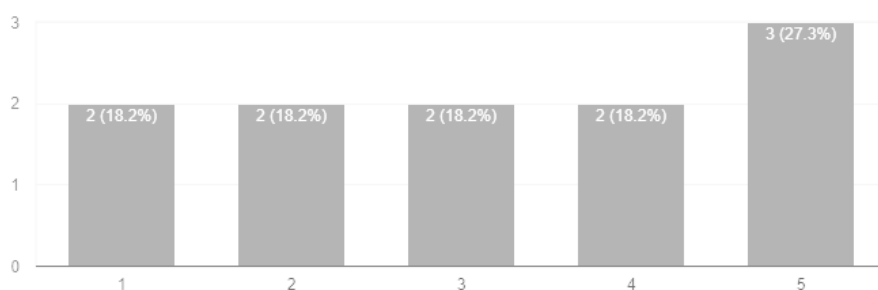


Figure 15 - National interest in stakeholder workshops (Partner Questionnaire)

Perhaps the most obvious difference is the wide distribution of National levels of involvement in the Workshops. The national level is a key actor in the project, and fostering commitment is essential to ensure the long-term sustainability of TAMP and CO-TAMP.

On the other side, the most involved institutions in the participatory process have been the data providers, research centres and academia. This allows, in the future, for the creation of partnerships or formalization of the Memorandum of Understanding.

How involved and interested were the data providers / institutions / research centers and universities?

11 responses

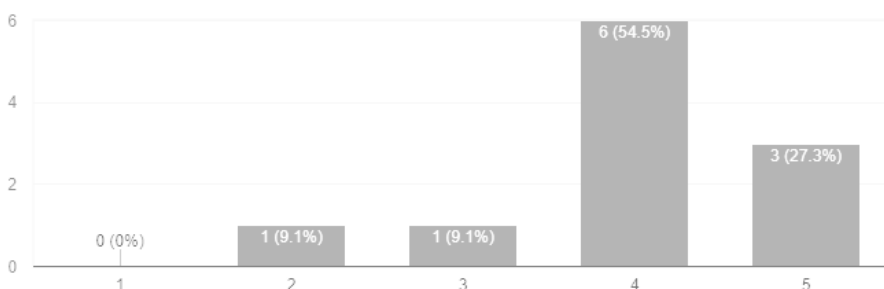


Figure 16 - Involvement of research centres and universities (Partner Questionnaire)

As always, there are „champions“ to the process: representatives who are actively widening the stakeholder group and which can be relied on in the future to promote the project, which tend to be predominantly either local administrations or academia / research and business actors.

In practice, a participatory approach, especially when targeting ambitious goals at policy level, is a long and iterative approach. ATTRACTIVE DANUBE has the difficult task of kick-starting this process, conferring it the momentum it needs to carry on in the future. Some of the partners, especially the ones which opted for a regional approach in their workshop organisation, felt the need for continuing the process with the same stakeholders in order to strengthen cooperation and involvement.

Furthermore, the CO-TAMP and TAMP are instruments for assisted decision making, and as such, can seem complex and technical, and the understanding of their functions by stakeholders at institutional level may be delegated to technical departments. However, the key stakeholders whose understanding is much needed on the topic of planning for territorial attractiveness are decision-makers: those with the power and the ambition to valorise the territorial capitals in the Danube Region, at all administrative levels. It is hence of utmost importance that decision-makers are aware, and involved, in the local processes in each country, and that oftentimes implies employing additional effort to move the discussion to them, rather than the other way around.

There are many differences, as well as disparities, even within the Danube Region. Yet there are also many of the same priorities when it comes to territorial attractiveness development and monitoring. Throughout the first half of the project, in the national processes of each country, a few important foci have come up as common:

1. Tourism and heritage valorisation (both cultural as well as natural)
2. Education, skills and cooperation for local economic growth
3. Environmental quality

Throughout the local participatory processes, these three components have come up as common, shared priorities for enhancing local attractiveness, and can be considered starting points for creating a policy in this regard.

Lastly, the concept of territorial attractiveness is very complex, place-specific, interpretable and evolving in time. Experience in the project so far has demonstrated that a pilot set of indicators, lean enough to be easily manageable, may not feel sufficient for stakeholders – many of the participants in the national workshops generally felt they needed more indicators and data sets, even the possibility of uploading their own data. This points towards the opportunity to further pass on ownership of the TAMP to the stakeholders with real, concrete needs at different territorial levels, but also towards the fact that ATTRACTIVE DANUBE is indeed a first step in what should be a long embedding process of the evidence-based planning methodology which we proposed.

5.4 Policy Recommendations

This chapter presents a series of recommendations for developing, implementing and monitoring sustainable and realistic policies for territorial attractiveness in the Danube Regions, based on the experience in ATTRACTIVE DANUBE so far.

Prioritize goals for territorial attractiveness development

It is not easy identifying the needs and gaps in development for a territory, and shaping a list of responses and actions, but it is even more difficult to prioritize that list in order to make public (and private) investment effective with the limited resources at hand. Selecting and developing those potentials which have the highest return, in other words concentrating on the most pressing and relevant issues in an area, while avoiding the pitfall of implementing „easily funded opportunities“ which often are of secondary importance, is one of the most important challenges. ATTRACTIVE DANUBE can help, through the national platforms, point towards the right directions.

Plan in an integrated manner

Problems and potentials of territorial attractiveness are oftentimes complex, transcending singular topics, departments, election cycles, and do not conform to administrative borders. They can only be solved effectively by having an integrated approach to the whole planning cycle:

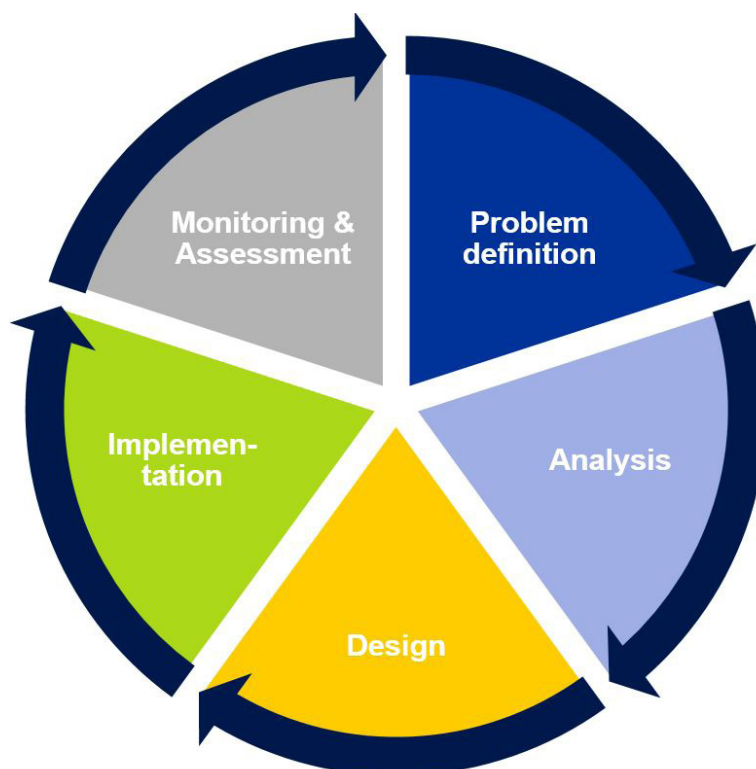


Figure 17 - The cycle of integrated planning. Source: authors

The TAMP has been designed with that in mind and should be used at its full potential: its ability to offer territorial context (for a municipality, the surrounding region; for a country, the whole DTP area), a consistent time-bound set of indicators which are multi-sectorial and will cover a 14-year period and is supported by a multi-stakeholder co-creation and capacity building process, which should further continue.

Think globally... and act locally.

Benchmark performance and strengths within the context, in order to identify the strategic position within the increasingly competitive landscape of cities and regions. Finding and capitalizing on the assets (territorial capitals) that have both the biggest potential locally, as well as a unique occurrence in the Danube Area context represents the key to success in local attractiveness development. Bringing out the local endogenous development capacity, contextualized but truly specific to a region, means working at the local level.

Create local knowledge and value

There are advantages to benefitting from external expertise, but enhancing the capacity to use evidence-based approaches for territorial attractiveness development represents the proverbial „learning how to fish, thus having what to eat for the rest of one’s life“. Focusing first and foremost on the development of capacities is a key issue to ensuring success of any plan and policy. In lieu of that, even the best external strategy cannot be applied successfully. This Handbook and the further Capacity Building workshops of ATTRACTIVE DANUBE contribute to that, but it is a process that needs passing forward, from the immediate stakeholders involved in the project, to the wider concentric groups of actors involved or holding a stake in territorial attractiveness policies.

Raise awareness and interact

Cities and regions are competing now more than ever on the attractiveness topic: attracting and retaining inhabitants, tourists and investors / businesses. Awareness of the capitals and advantages is crucial for this, and ATTRACTIVE DANUBE can help get the message across in a visual, interactive and easy to understand way.



Figure 18 - Where the Danube Meets the Black Sea, NASA Goddard Space Flight Center, 2013



**PART 6:
OUTLOOK &
SUSTAINABILITY**

6 CONCLUSIONS. OUTLOOK & SUSTAINABILITY

The ATTRACTIVE DANUBE project will end in June 2019, but the work of the partners in collecting and updating the indicator databases will carry on until 2022, when the TAMP and CO-TAMP platforms will be updated with data from the year 2021. A total number of 14 years of data will be covered by the platforms, offering a solid base for evidence-based planning in the Danube Region.

But before then, and still during the implementation of the project, several key activities are foreseen in order to foster sustainability of the work carried out:

1. A set of three national capacity building seminars, aimed at transferring the knowledge gained through the project to stakeholders within each of the 11 countries, will be organised in the second half of 2018 and first half of 2019. The capacity building seminars will offer applied, hands-on training on the TAMP and CO-TAMP platforms in order to assist adoption and use for the purpose of territorial attractiveness policymaking.
2. Towards the end of the project, in the first half of 2019, we aim to sign National Memorandums, for each of the ATTRACTIVE DANUBE countries, as key cooperation documents between the project partners and their national stakeholders, outlining an agreement to further cooperate for the sustainability of the platforms.
3. Three international seminars will be organized, with the scope of facilitating policy integration at Danube Region level on the topic of territorial attractiveness, and a transnational cooperation memorandum will be developed and signed by the interested parties.

All of the above have the aim of creating a roadmap for the future use of the ATTRACTIVE DANUBE knowledge, experience, information and instruments. Participation to these events and actions will be free for all interested parties involved in policy making, urban planning and regeneration, territorial attractiveness capitalization and monitoring.

The question of the ATTRACTIVE DANUBE TAMP and CO-TAMP sustainability is one of usefulness. The project methodology has put co-design at its core, thus ensuring that requirements (i.e. relevant indicators) come directly for the target users of the platforms. But we are aware that priorities and requirements can change over time, and also that ATTRACTIVE DANUBE is a first pilot step in an ample process of developing the knowledge infrastructure for evidence-based planning in the region. This is why the Memorandums of Understanding will represent an instrument to share ownership and responsibility in shaping the TAMPs further based on ever-increasing data and information needs.

In closing, capacity and cooperation don't happen overnight – it is clear that an ampler process of locally-rooting the evidence-based planning approach of the project and the national platforms is needed. It is up to each country to take ownership and continue this process.



REFERENCES

References

- Amdam, R. (2002): Sectoral Versus Territorial Regional Planning. *European Planning Studies*, 10, pp. 99-111.
- Annoni, P. – Dijkstra, L. (2013): European Regional Competitiveness Index. Reference Report by the Joint Research Centre of the European Commission. European Commission, Luxembourg.
- Atkinson, R. D. (2013): Competitiveness, Innovation and Productivity: Clearing Up the Confusion. The Information Technology and Innovation Foundation, Washington, DC.
- Bagnasco A. (1977): Tre Italie. La problematica territoriale dello sviluppo italiano. Il Mulino, Bologna.
- Barboric, B. – Zivkovic, L. – Esposito, G. (2013): Attract-SEE – Assessing Territorial Attractiveness in South East Europe. Establishing a Common Territorial Monitoring. ResearchGate Publications.
- Batey, P. – Friedrich, P. (2000): Aspects of Regional Competition. In Batey, P. – Friedrich, P. (edited): Regional Competition. Springer, Berlin, pp. 3-33.
- Becattini G. (1979), "Dal 'settore' industriale al 'distretto' industriale. Alcune considerazioni sull'unità di indagine dell'economia industriale", *Rivista di economia e politica industriale*, Vol. 2, pp. 7-21.
- Belcáková, I. (2004): Strategic Environmental Assessment and spatial planning in Slovakia: Current practices and lessons for practical application of the European Commission SEA Directive http://archive.rec.org/REC/Programs/EnvironmentalAssessment/pdf/seminar2004/Ingrid%20Belchakova_bp.pdf
- Berg, L. van den – Braun, E. (1999): Urban Competitiveness, Marketing and the Need for Organizing Capacity. *Urban Studies*, 36, 5/6, pp. 987-999.
- Blind P. K., (2006), "Building Trust in Government in the Twenty-First Century: Review of Literature and Emerging Issues". Paper presented at the 7th Global Forum on Reinventing Government, Building Trust in Government, June 2007, Vienna.
- Camagni R. (ed.) (1991), *Innovation Networks: Spatial Perspectives*, Belhaven-Pinter;
- Camagni, R. (2002): On the Concept of Territorial Competitiveness: Sound or Misleading? *Urban Studies*, 13, pp. 2395-2411.
- Camagni R. – Traversi C. (2006), *L'insostenibilità dello sprawl urbano: un'analisi dell'impatto della mobilità in Italia*, Franco Angeli;
- Camagni R. (2009): Per un concetto di capitale territoriale, in Borri D., Ferlaino F., (eds), "Crescita e sviluppo regionale: strumenti, sistemi, azioni", Franco Angeli;
- Capgemini (2011): *Digital Transformation Review. The Challenges of the Digital Revolution*. Capgemini Consulting.
- Cepeda-Carrion, G. – Cegarra-Navarro, J. G. – Jimenez-Jimenez, D. (2012): The Effect of Absorptive Capacity on Innovativeness: Context and Information Systems Capability as Catalysts. *British Journal of Management*, 23, pp. 110-129.
- Claridge, T. (2004), *Social Capital and Natural Resource Management: An important role for social capital?* Unpublished Thesis, University of Queensland, Brisbane, Australia.

- Cohen, W. M. – Levinthal, D. A. (1990): Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, 35, pp. 128-152.
- Connell, R. B. (2010): The Attractiveness-Competitiveness Matrix: A Methodology Used to Assist Policy Makers Select Priorities for Industrial Development Initiatives. *International Journal of Business Management*, 5, pp. 3-13.
- Cheshire, P. C. (2003): Territorial Competition: Lessons for (Innovation) Policy. In Bröcker, J. – Dohse, D. – Soltwedel, R. (szerk.): *Innovation Clusters and Interregional Competition*. Springer, Berlin, pp. 331-346.
- CRS (2007): *Smart Cities. Ranking of European Medium-Sized Cities*. Centre of Regional Science, Vienna University of Technology, Vienna.
- Dahlman, C. (2007). *Technology, globalization and international competitiveness: Challenges for developing Countries*. Department of Economic and Social Affairs of United Nations. New York, NY.
- Di Tella R., MacCulloch R. J., Oswald A. J., (2003), “The Macroeconomics of Happiness”, *Review of Economics and Statistics*, Vol. 85, No. 4, pp. 809–827, MIT Press.
- Dicken, P. (2003): *Global Shift. Reshaping the Global Economic Map in the 21st Century*. SAGE Publications, London.
- Dijk, A. van (2015): *Smart Cities. How Rapid Advances in Technology Are Reshaping Our Economy and Society*. Deloitte Netherlands.
- Dobos, K. – Kulcsár, S. – Nagy, P. – Sik, A. – Szemerey, S. – Vasváriné. M. É. (2015): *Smart City tudásplatform*. Metodikai Javaslat. Lechner Nonprofit Kft., Budapest.
- Dujin, A. – Geissler, C. – Horstkötter, D. (2014) (eds.): *Industry 4.0. The New Industrial Revolution. How Europe Will Succeed*. Roland Berger Strategy Consultants, Munich.
- EC (1999): *Sixth Periodic Report on the Social and Economic Situation and Development of Regions in the European Union*. European Commission, Luxembourg.
- EC (2017): *Reflection Paper on Harnessing Globalization*. European Commission, Brussels.
- Ezmales, S. (2012): *Strategies for Enhancing Attractiveness of the Cities in Latgale Region*. *European Integration Studies*, 6, pp. 121-127. Gavrilova, M. A. – Shepelev, V. M. – Kosyakova, I. V. – Belikova, L. F. – Chistik, O. F. (2016): *Assessment of Entrepreneurial Territorial Attractiveness by The Ranking Method*. *International Journal of Environmental & Science Education*, 11, pp. 6866-6875.
- French, R. (2011): “Political capital”. *Representation*. 47 (2): 215–230. doi:10.1080/00344893.2011.581086
- Fukuyama F., (1995), “Social Capital and the Global Economy: A Redrawn Map of the World”, *Foreign Affairs*, Volume 75, No. 4, September/October.
- Gavrilova, M. A. – Shepelev, V. M. – Kosyakova, I. V. – Belikova, L. F. – Chistik, O. F. (2016): *Assessment of Entrepreneurial Territorial Attractiveness by The Ranking Method*. *International Journal of Environmental and Science Education*, 11, pp. 6866-6875.
- Gambetta, D. (2000) “Can We Trust Trust?”, in Gambetta, D., (ed.), *Trust: Making and Breaking Cooperative Relations*, Basil Blackwell, University of Oxford.
- Götz, M. (2015): *Cluster, Competitiveness, Attractiveness, Innovativeness – How Do They Fit Together?* Poznan University

College of Business and Foreign Languages, Poznan.

Granovetter M., (2005), "The Impact of Social Structure on Economic Outcomes", *Journal of Economic Perspectives*, Vol. 19, No. 1, pp 33–50, Winter, American Economic Association.

Haeckel, S. H. (2013): *Adaptive Enterprise: Creating and Leading Sense-and-Respond Organizations*. Harvard Business Press, Boston.

Hage, J. T. (1999). *Organizational Innovation and Organizational Change*. *Annual Review of Sociology*, 25, pp. 597-622.

Hamri, H. M. – Zerouali Ouarti, O. – Sadiqui, A. (2014): *Territory Attractiveness: Case of Souss-Massa-Draa Region*. *International Journal of Research in Management & Business Studies*, 1, pp. 27-31.

Hardin R., (2004), *Trust and Trustworthiness*, Russell Sage Foundation, London.

Helliwell J.F. (ed.), (2001), *The Contribution of Human and Social Capital to Sustained Economic Growth and Well-Being*, OECD and Human Resources Development Canada.

Helliwell, J. F., Huang H., (2008), "Well-Being and Trust in the Workplace." NBER Working Papers No. 145989, NBER, Cambridge, MA.

Huggins, R. (2003): *Creating a UK Competitiveness Index: Regional and Local Benchmarking*. *Regional Studies*, 1, pp. 89-96.

Huggins, R. – Izushi, H. – Prokop, D. – Thompson, P. (2014): *The Global Competitiveness of Regions*. Routledge, London.

Hwang, J. S. (2016): *The Fourth Industrial Revolution (Industry 4.0): Intelligent Manufacturing*. Researchgate Publications.

IC (2010): *What Strategies for Sustainable Employment and Urban Development Planning?* Ineum Consulting, Paris.

IMD (2017): *IMD World Digital Competitiveness Ranking 2017*. International Institute for Management Development World Competitiveness Center, Lausanne.

Kagerman, H. – Wahlster, W. – Helbig J. (2013): *Securing the future of German Manufacturing Industry. Recommendations for Implementing the Strategic Initiative Industrie 4.0*. Final Report of the Industrie 4.0 Working Group. Frankfurt am Main, Germany.

Keating, M. (2001): *Rethinking the Region: Culture, Institutions and Economic Development in Catalonia and Galicia*. *European and Regional Studies*, 8, pp. 217-314.

Kovács, O. (2017a): *Az ipar 4.0 komplexitása – I*. *Közgazdasági Szemle*, 56, p. 823-851.

Kovács, O. (2017b): *Az ipar 4.0 komplexitása – II*. *Közgazdasági Szemle*, 56, p. 970-987.

Krugman, P. (1994): *Competitiveness: A Dangerous Obsession*. *Foreign Affairs*, 2, pp. 28-44.

Krugman, P. (1998): *Pop Internationalism*. MIT Press, Cambridge, MA.

Lengyel I. (2010): *Regionális gazdaságfejlesztés. Versenyképesség, klaszterek és alulról szerveződő stratégiák*. Akadémiai Kiadó, Budapest.

- Lengyel I. – Fenyővári Zs. – Nagy B. (2012): A közelség szerepének újraértelmezése az innovatív üzleti kapcsolatokban. *Vezetéstudomány*, 3, pp. 19-29.
- Lengyel I. – Rechnitzer J. (2004): Regionális gazdaságtan. Dialóg Campus, Budapest-Pécs.
- Lengyel I – Rechnitzer J. (2013): Drivers of Competitiveness in the Central European Countries. *Transition Studies Review*, 20, pp. 421-435.
- Lengyel, I. (2000): Porter-rombusz: a regionális gazdaságfejlesztési stratégiák alapmodellje. *Tér és Társadalom*, 14, pp. 39-86.
- Loucks, J. – Macaulay, J. – Noronha, A. –Wade, M. (2016): *Digital Vortex: How Today's Market Leaders Can Beat Disruptive Competitors at Their Own Game*. DBT Center Press, Lausanne.
- Lopez, E. (2002). "The legislator as political entrepreneur: Investment in political capital". *The Review of Austrian Economics*. 15 (2): 211–228.
- Lukovics M. (2008): *Térségek versenyképességének mérése*. JATEPress, Szeged.
- Lukovics, M. (2004): A regionális identitás szerepe a regionális gazdaságfejlesztésben. In Czagány, L. – Garai, L. (eds.) *A szociális identitás, az információ és a piac*. SZTE Gazdaságtudományi Kar Közleményei. JATEPress, Szeged, pp. 214-228.
- Malecki, E. J. (2002): Hard and Soft Networks for Urban Competitiveness. *Urban Studies*, 5-6, pp. 929-945.
- Manyika, J. – Lund, S. – Bughin, J. – Woetzel, J. – Stamenov, K, – Dhruv D. (2016): *Digital Globalization: The New Era of Global Flows*. McKinsey Global Institute, New York.
- Markusen, A. (1996): Sticky Places in Slippery Spaces: A Typology of Industrial Districts. *Economic Geography*, 72, pp. 293-313.
- Marshall, A. (1890): *Principles of Economics*. London: Macmillan and Co. 8th ed. 1920, republished by the Liberty Fund, Inc., pp. 159-163.
- Martin, R. (2003): *A Study on the Factors of Regional Competitiveness. A Draft Final Report for the European Commission Directorate-General for Regional Policy*. Cambridge Econometrics, Cambridge.
- Mathiassen, L. – Pries-Heje, J. (2006): Business Agility and Diffusion of Information Technology. *European Journal of Information Systems*, 15, pp. 116-119.
- OECD. 2017. *Making Globalization Work: Better Lives for All*. OECD Publishing, Paris.
- OECD – Organisation for Economic Cooperation and Development (2006): *The challenge of capacity development – Working towards good practice*, Paris
- Paasi, A. (2000): Re-Constructing Regions and Regional Identity. <http://gpm.ruhosting.nl/avh/Paasi1.pdf>
- Paasi, A. (2003): Region and Place: Regional Identity in Question. *Progress in Human Geography*, 4, pp. 475-485.
- PAP/RAC (2007): *National Report on Current Policy, Procedures, Legal Basis and Practice of Marine Spatial Planning in Croatia*, <https://www.pap-thecoastcentre.org/pdfs/Croatia%20WEB.pdf>

- Pfohl, H. C. – Yahsi, B. – Kurnaz, T. (2015): The Impact of Industry 4.0 on the Supply Chain. In Kersten, W. – Blecker, T. – Ringle, C. M. (szerk.): Innovations and Strategies for Logistics and Supply Chains. Technologies, Business Models and Risk Management. Proceedings of the Hamburg International Conference of Logistics (HICL).
- Piccinini, E. – Flores, C. K. – Vieira, D. – Kolbe, L. M. (2016): The Future of Personal Urban Mobility – Towards Digital Transformation. Presented at Multikonferenz Wirtschaftsinformatik (MKWI) 2016. Technische Universität Ilmenau, Ilmenau.
- Polenske, K. R. (2004): Competition, Collaboration and Cooperation: An Uneasy Triangle in Networks of Firms and Regions. *Regional Studies*, 9, pp. 1029-1043.
- Popovici, O. C. (2017): International Competitiveness versus Location Attractiveness for FDI. A Theoretical Approach. *Annals of the „Constantin Brâncuși” University of Târgu Jiu, Economy Series*, 1, pp. 199-205.
- Porter, M. E. (1996): Competitive Advantage, Agglomeration Economies and Regional Policy. *International Regional Science Review*, 1-2, pp. 85-94.
- Porter, M. (1990): Competitive Advantage of Nations. *Comp. Int. Rev.*, 1: 14-14. doi:10.1002/cir.3880010112
- Porter, M. E. (2008): On Competition. Updated and Expanded Edition. Harvard Business School Press, Cambridge, MA.
- Putnam, Robert D. (1995): Bowling alone: America's declining social capital. *Journal of Democracy* 6: 65-78.
- Raagmaa, G. (2002): Regional Identity in Regional Development and Planning. *European Planning Studies*, 1, pp. 55-76.
- RB (2017): Smart city, Smart Strategy. Cities Around the World Are Embracing the Digital Revolution. But How Well Are They Really Doing? Roland Berger, Munich.
- Republic of Croatia, Ministry of Environmental Protection, Physical Planning and Construction (2006): Physical Planning System <https://www.slideshare.net/edcallum/physical-planning-system-croatia>
- RSAES (2016): Keys to Greater Attractiveness and Competitiveness. Royal Swedish Academy of Engineering Sciences. Stockholm, Sweden.
- Serageldin I., Dasgupta P., (2001), Social Capital: A Multifaceted Perspective, The World Bank, Washington.
- Servillo, L. – Atkinson, R. – Russo, A. (2012): Territorial attractiveness in EU urban and spatial policy: <https://goo.gl/s5vZoK>
- Schmidt, R. – Möhring, M. – Härting, R. C. – Reichstein, C. – Neumaier, P. – Jozinovic, P. (2015): Industry 4.0- Potentials for Creating Smart Products: Empirical Research Results. In Abramowicz, W. (ed.): Business Information Systems. 18th International Conference, BIS 2015, pp. 16-27. o. Poznan.
- Schuh, G. – Anderl, R. – Gausemeier J. – ten Hompel, M. – Wahlster, W. (2017): Industrie 4.0 Maturity Index. Managing the Digital Transformation of Companies. Acatech Study. Munich.
- Schwab, K. (2017): The Fourth Industrial Revolution. The Crown Publishing Group, New York.
- Sen, R. – Eggers, D. W. – Kelkar, M. (2018): Building a Smart City. Deloitte Center for Government Insights. Deloitte Publication.
- Serrano, A. (2003). City Competitiveness and Attractiveness: A New Approach to Evaluate Economic Development in

- Mexican Cities. University of Glasgow, Glasgow.
- Siebert, H. (2000): The Paradigm of Locational Competition. Discussion Paper 367. University of Kiel, Kiel.
- Smit, J. – Kreutzer, S. – Moeller, C. – Carlberg, M. (2016): Industry 4.0. Study for the ITRE Committee. European Parliament Directorate General for Internal Policies, Brussels.
- Spano, A. (2005): Performance Evaluation as a Tool for Improving Attractiveness and Competitiveness of the Public Sector as an Employer. University of Cagliari, Cagliari.
- Storper, M. (1997): The Regional World. The Guilford Press, New York.
- Storper, M. (1995), The Resurgence of Regional Economies, Ten Years Later: The Region as a Nexus of Untraded Interdependencies, *European Urban and Regional Studies*, Vol 2, Issue 3, pp. 191 – 221
- Treccani, Territorio, www.treccani.it/enciclopedia/territorio/
- UNCED (1992), Capacity Building- Agenda 21's definition, Chapter 37
- Van Houtum, H. – Lagendijk, A. (2001): Contextualising Regional Identity and Imagination in the Construction of Polycentric Urban Regions: The Cases of the Ruhr Area and the Basque Country. *Urban Studies*, 4, pp. 747-767.
- WEF (2016a): Digital Transformation of Industries: Digital Consumption. World Economic Forum, Geneva.
- WEF (2016b): The Global Competitiveness Report 2016-2017. Insight Report. World Economic Forum. Geneva, Switzerland.
- Williamson O.E., (1993), "Calculativeness Trust, and Economic Organization", *Journal of Law and Economics*, Vol. 36, N. 1, pp. 453-86, April, University of Chicago Press.
- Winiwarter, V. – Haidvogel, G. (2015): Danube: Future, White Paper on Integrated Sustainable Development of the Danube River Basin, https://www.danubefuture.eu/sites/default/files/DanubeFuture_WhitePaper.pdf
- Yoon, D. (2017): What We Need to Prepare for the Fourth Industrial Revolution. *Healthcare Informatics Research*, 23, p. 75-76.
- Zahra, S. A. – George, G. (2002). Absorptive Capacity: A Review, Reconceptualization, and Extension. *Academy of Management Review*, 27, pp. 185-203.
- Zivkovic, L. – Barboric, B. (2017): "ATTRACTIVE DANUBE" – Improving Capacities for Enhancing Territorial Attractiveness of the Danube Region. ResearchGate Publications.
- Zivkovic, L. - Marani, S. – Berk, S. – Dezman Kete, V. – Trapani, F. –Esposito, G. – Speh, N. – Milic, D. – Zivanovic, T. – Barboric, B. (2015) Towards a Monitoring InformationSystem for Territorial Attractiveness Policy Management in South East Europe. *Geodetski vestnik*, 59, pp. 752-766.

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The Handbook for Policy Planners aims to provide the contribution of partners towards embedding the concept of „Territorial Attractiveness” and the outputs of the project in the practices of stakeholders. The Handbook encompasses guidance for the **Territorial Attractiveness Monitoring Platforms**.

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