

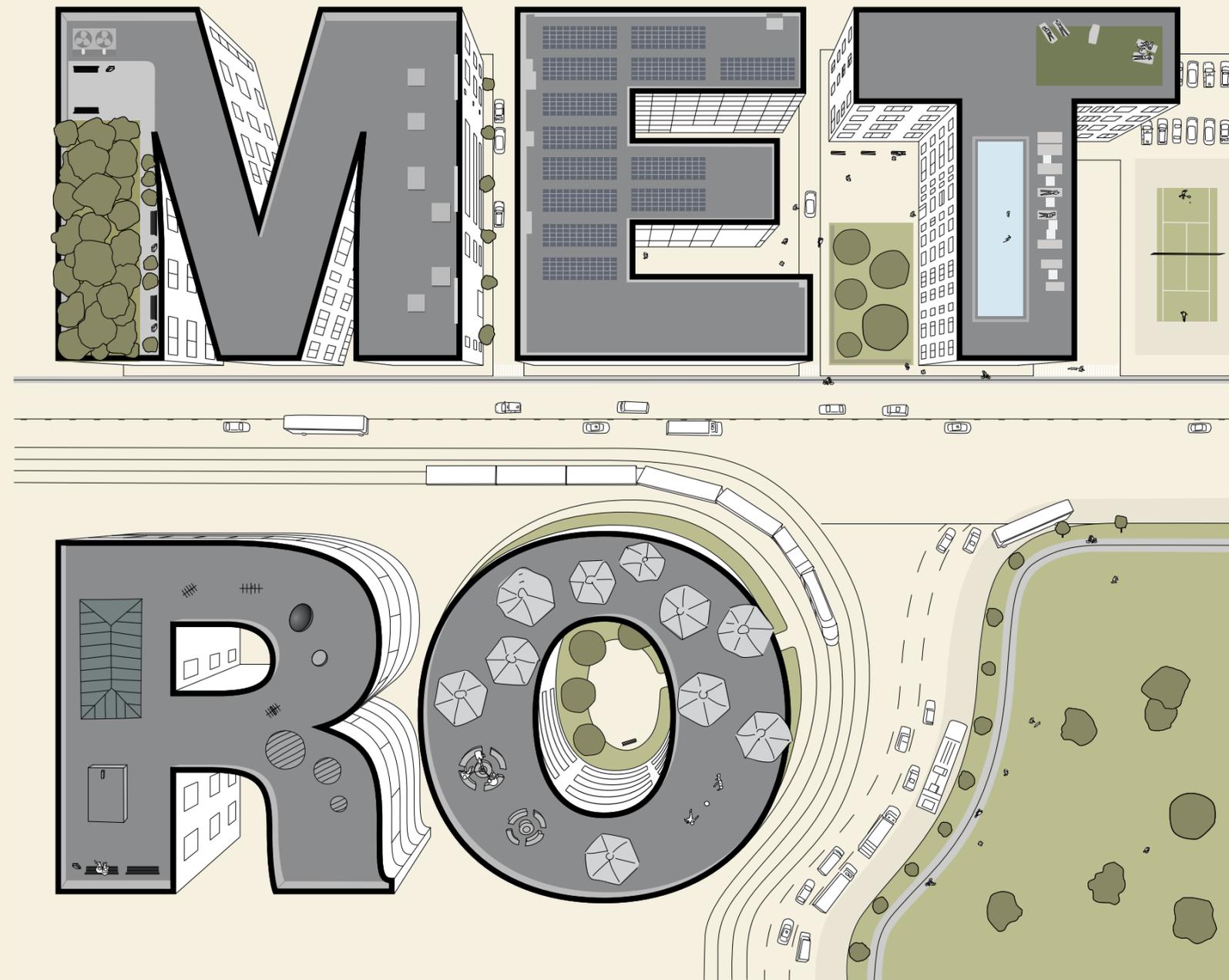
ROMANIA CATCHING-UP REGIONS

Over time, no region or country has ever managed to develop without urbanization. Global economic growth has always been accompanied by some form of urbanization. Cities generate higher growth and productivity, which in turn promote the process of urbanization. Currently, there is no developed country which is not also deeply urbanized. There is a similar situation at regional level. With a few exceptions, the regions with highest GDP per capita in the EU also consist of metropolitan or urban agglomeration areas.

Without a strong metropolitan area or urban agglomeration, a region can never grow efficiently. A country without a network of strong metropolitan areas and agglomerations cannot support long term growth. Moreover, the most dynamic metropolitan areas and urban agglomerations are also most successful in further attracting people and investments.

This report outlines a number of solutions for strengthening the main metropolitan areas and urban agglomerations in Romania. The report targets both decision makers in Romania and the European Commission, as well as citizens and actors interested in the development of the communities they are part of.

October 2019



METROPOLITAN ROMANIA

Marcel Ionescu-Heroiu, Marius Cristea, Andreea China, Adina Vințan, Ioana Irimia, Oana Franț, Bianca Butacu, Grațian Mihăilescu, Ciprian Moldovan, Bogdan Dolean, Viorela Sfârlea



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ABBREVIATIONS AND ACRONYMS

AACOR	Romanian Commune Association
AMR	Romanian Municipalities Association
ANL	National Housing Agency
CERN	European Organization for Nuclear Research / European Laboratory for Elementary Particle Physics
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ERDF	European Regional Development Fund
EU	European Union
FZMAUR	Federation of Metropolitan Areas and Urban Agglomerations
FUA	Functional Urban Area
GDP	Gross Domestic Product
GTMP	General Transport Master Plan
IDA	Intercommunity Development Association
IPTANA	The Design Institute for Road, Maritime and Air Transport
ISUD	Integrated Strategy for Urban Development
IT	Information technology
ITI	Integrated Territorial Investments
MRDPA	Ministry of Regional Development and Public Administration
OECD	Organization for Economic Co-operation and Development
PA	Priority Axis
PATZM	Land Use Plan for the Regional Metropolitan Area
PIAROM	Romanian Investment Employers' Association
PNDI	National Program for Infrastructure Development
PNDL	National Program for Local Development
PNDM	National Program for Metropolitan Development
PPP	Public-Private Partnership
PUG	General Urban Plan
RLU	Local Urban Planning Regulation
ROP	Regional Operational Programme
SUMP	Sustainable Urban Mobility Plan
TAU	Territorial Administrative Unit
UNCJR	National Union of Romanian County Councils
USA	United States of America

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The Catching-up Regions Initiative

The mandate of the EU Cohesion's Policy is to narrow development gaps and reduce disparities between member countries and regions whilst supporting the European Union's growth agenda more generally. Around €454 billion of European Structural and Investment (ESI) Funds have been allocated to help EU regions become more competitive in the 2014-2020 Programming Period, with a focus on less developed regions (with a GDP per capita (PPS) of less than 75% of the EU average) and transitions regions (with a GDP per capita (PPS) between 75% and 90% of the EU average). However, not all EU regions have been able to fully take advantage of the benefits, due inter alia to the effects of the 2008 economic crisis and structural problems.

Consequently, Ms. Corina Crețu, the Commissioner for Regional Policy, with the Task Force for Better Implementation, initiated the **Lagging Regions Initiative** to identify growth constraints in less developed regions, and provide targeted assistance and programs to foster growth. Thus, lagging regions development support is offered to a broad range of stakeholders (regional and local administrations, educational institutions, business support institutions, small-and medium-sized enterprises (SMEs), entrepreneurs, investors, non-governmental organizations, international financing institutions). It is meant to maximize the impact of regional investments. Two types of lagging regions were identified in the EU:

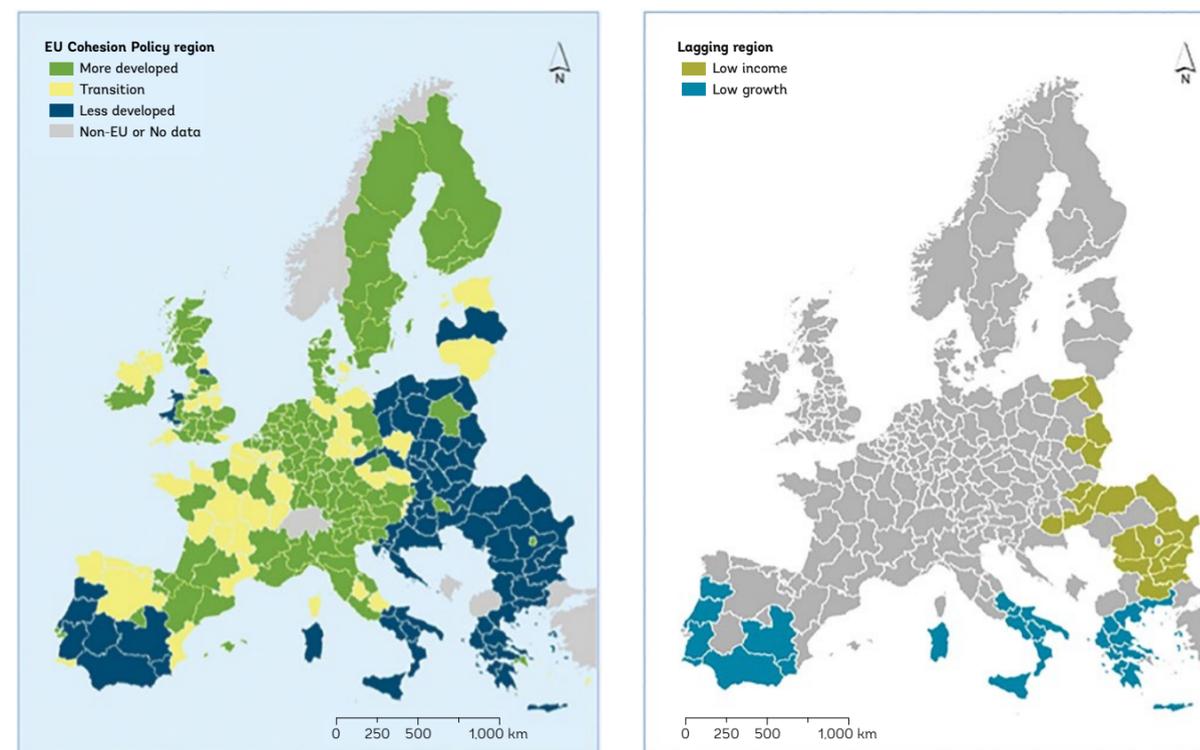
- **LOW GROWTH REGIONS:** cover less developed and transition regions that did not converge to the EU average between the years 2000 and 2013 in member states with a GDP per capita (PPS) below the EU average in 2013. These include almost all the less developed and transition regions of Greece, Italy, Spain, and Portugal.
- **LOW INCOME REGIONS:** cover all the regions with a GDP per capita (PPS) below 50% of the EU average in 2013. This group covers the less developed regions of Bulgaria, Hungary, Poland and Romania.

Poland and Romania were the first countries to pilot this initiative, with two regions each – Świętokrzyskie and Podkarpackie in Poland, and Northwest and Northeast in Romania. Since these first pilot projects, the work has been extended both thematically and geographically (e.g. Slovakia was included in the initiative), with a focus on determining how regions can become more competitive and inclusive.

Analytical work undertaken in recent years¹, indicates that the performance of regions in the EU is clearly linked to the performance of urban areas within the region. The most dynamic EU regions either have one or more metropolitan areas or urban agglomerations within their boundaries, or they are close to one in another region. Without strong urban areas, one cannot have strong regions. Cities function as pulse beacons, diffusing development to the areas around them.

¹ See for example: Farole, Thomas, Soraya Goga, and Marcel Ionescu-Heroiu. 2018. Rethinking Lagging Regions: Using Cohesion Policy to Deliver on the Potential of Europe's Regions. World Bank Publications.

NUTS 2 regions classified by Cohesion Policy category (left) and Lagging Region category (right)



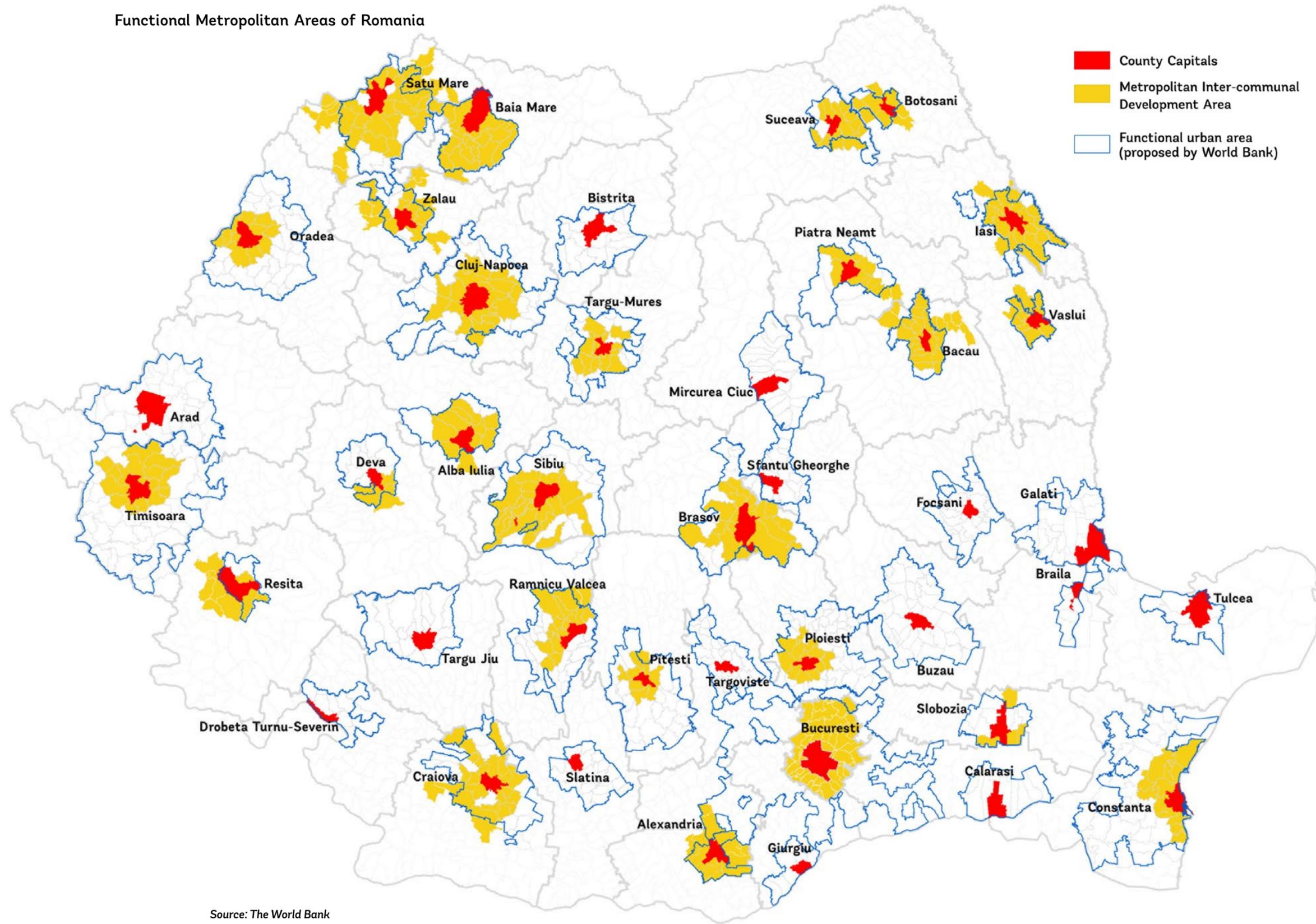
Strong cities are not enough though. To ensure that the benefits of city development also spill over to the urban hinterland, it is critical to devise and encourage inter-jurisdictional cooperation and development. Few urban investments nowadays have impact only on one administrative unit, so provisions should be in place for inter-jurisdictional planning and implementation. For example, the suburban and peri-urban areas of Bucharest and the 40 county capitals generate 20% of firm revenues in the country, have attracted 31% of migrants, and have received 32% of new housing units after 1990. However, little has been done to foster inter-jurisdictional dynamics between core cities and their suburban and peri-urban areas (e.g. metropolitan mobility, cross-jurisdictional investments, sharing of services).

For the 2021-2027 Programming Period, the European Commission proposed that the European Regional Development Fund (ERDF) will have a stronger focus on sustainable urban development (SUD) activities, with Member States having to allocate least 6% of ERDF funds for integrated development in urban areas (Sustainable Urban Development), either through a dedicated operational programme, a dedicated priority axis, within an operational programme, or with the help of tools such as Integrated Territorial Investments (ITI) or Community-Led Local Development (CLLD). The European Commission also wants to offer "more incentives for a more effective governance based on partnership, multi-level governance and an integrated place-based approach in its programmes"².

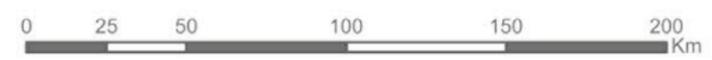
Thus, all EU Member Countries, Romania included, have to have a stronger focus on cross-sectoral and inter-jurisdictional approaches (e.g. metropolitan approaches), and they have to better respond to the needs of territories that may not be defined by one clear administrative boundary.

² European Commission. 2018. Policy Objective 5 – Europe Closer to Citizens and Tools for Integrated Territorial Development [Policy Paper].

Functional Metropolitan Areas of Romania



Source: The World Bank



THE IMPORTANCE OF METROPOLITAN DEVELOPMENT

And the whole earth was of one language, and of one speech.

And it came to pass, as they journeyed from the East, that they found a plain in the land of Shinar; and they dwelt there.

And they said to one another: „Go to, vo, let us make brick, and burn them thoroughly.” And they had brick for stone, and slime had they for mortar.

And they said: „Go to! let us build us a city and a tower, whose top may reach unto heaven; and let us make us a name, lest we be scattered abroad upon the face of the whole earth!”

And the Lord came down to see the city and the tower, which the children of men built.

And the Lord said: „Behold, the people is one, and they have all one language; and this they begin to do. And now nothing will be restrained from them, which they have imagined to do.

Go to! Let Us go down, and there confound their language, that they may not understand one another’s speech.”

So the Lord scattered them abroad from thence upon the face of all the earth: and they left off to build the city.

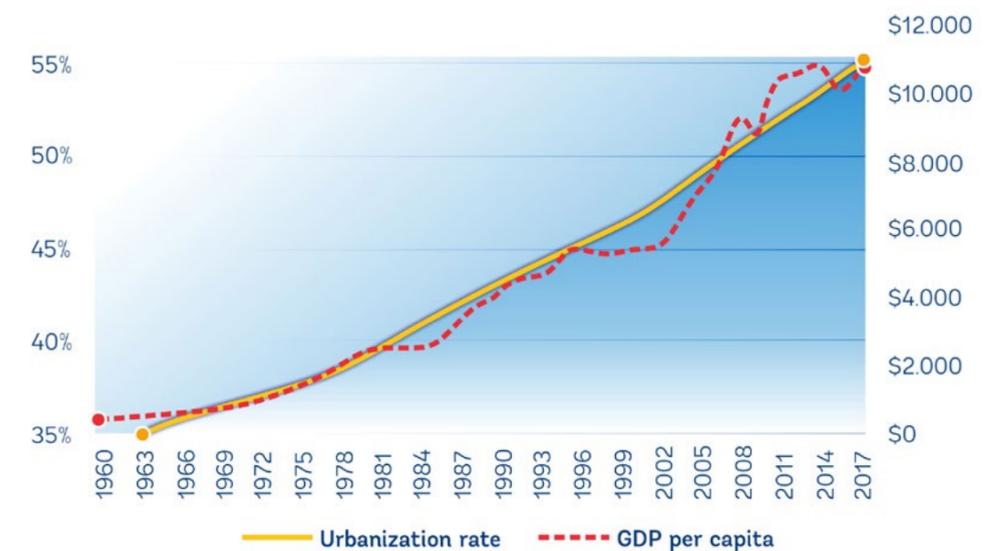
Therefore is the name of it called Babel; because the Lord did there confound the language of all the earth: and from thence did the Lord scatter them abroad upon the face of all the earth.

Why are metropolitan areas and urban agglomerations significant

Over time, no region or country has ever managed to develop without urbanization. Global economic growth has always been accompanied by some form of urbanization.

Cities generate higher growth and productivity, which in turn promote the process of urbanization. Currently, there is no developed country which is not also deeply urbanized. There is a similar situation at regional level.

Figure 1. Globally, economic growth has always gone hand in hand with urbanization.



Source: The World Bank

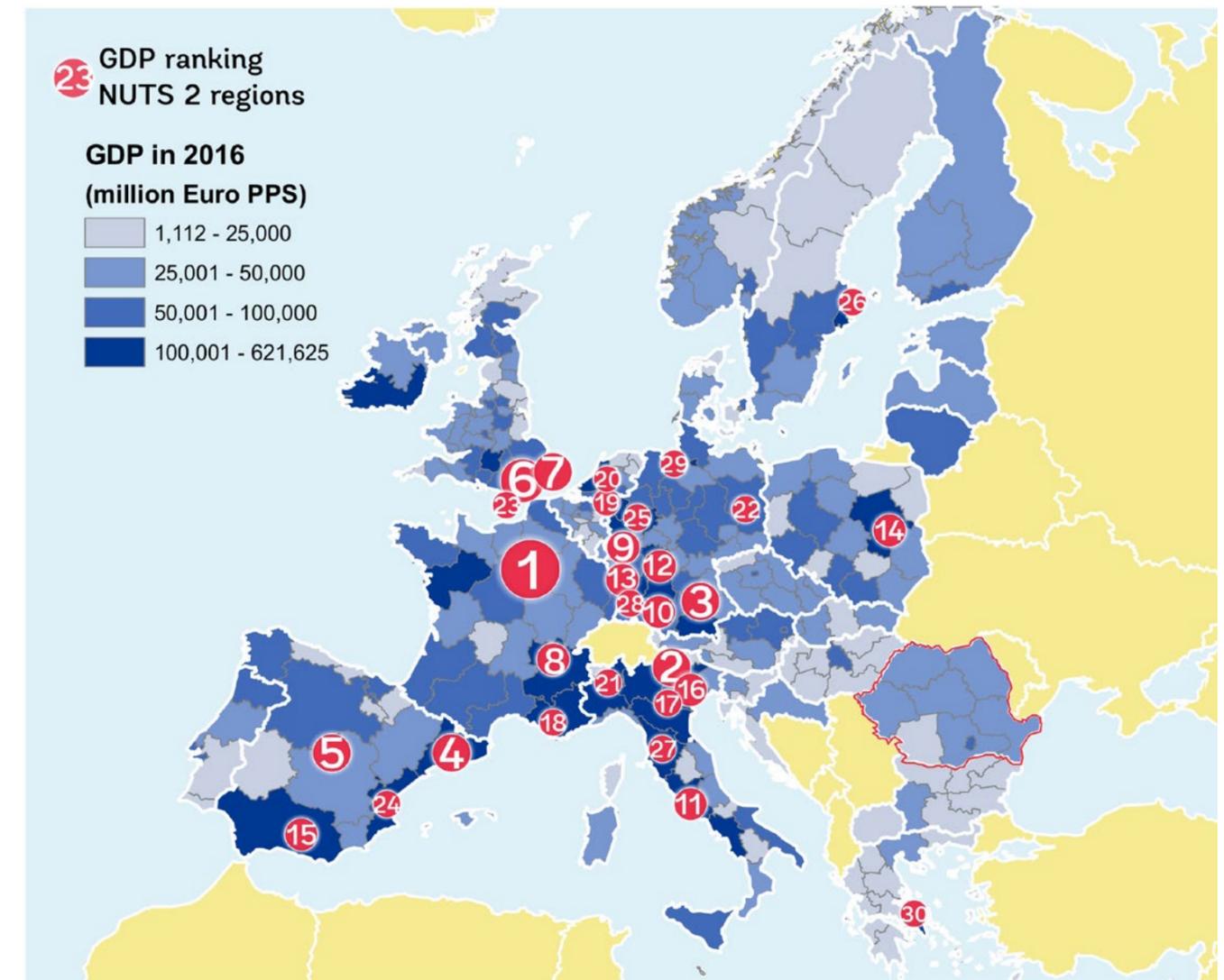
A World Bank Report¹ shows that the most performing regions of the EU are either densely populated or neighboring such densely populated regions. As far as the densely populated regions are concerned, two large types can be identified: 1) regions with at least one major metropolitan area; 2) regions with at least one major urban agglomeration. According to the table below, all the most economically developed EU regions include at least one major metropolitan area or large urban agglomeration. Those 30 regions generate 36% of the European Union GDP.

Table 1. The richest NUTS 2 regions in the EU

NUTS 2 region	GDP (adjusted for purchasing power) in M Euro in 2016	Main Metropolitan Area/Urban Agglomeration in the region
1 Île de France	€ 621,625	Paris
2 Lombardia	€ 373,430	Milan-Como-Bergamo
Romania	€ 334,236	
3 Oberbayern	€ 237,296	Munich-Ingolstadt-Garmisch-Partenkirchen
4 Cataluña	€ 237,373	Barcelona
5 Comunidad de Madrid	€ 234,888	Madrid
6 Southern and Eastern London	€ 219,223	London
7 Inner London - West	€ 205,995	London
8 Rhône-Alpes	€ 197,708	Lyon-Grenoble-Clermont-Ferrand
9 Düsseldorf	€ 197,620	Dusseldorf-Duisburg-Essen-Wuppertal
10 Stuttgart	€ 192,957	Stuttgart
11 Lazio	€ 189,430	Rome
12 Darmstadt	€ 183,336	Frankfurt-Darmstadt-Wiesbaden
13 Köln	€ 172,775	Cologne
14 Małopolska	€ 169,806	Warsaw
15 Andalucía	€ 166,027	Sevilla-Málaga-Granada
16 Veneto	€ 158,438	Venice-Padua-Verona
17 Emilia-Romagna	€ 156,892	Bologna-Parma-Modena-Rimini
18 Provence-Alpes-Côte d'Azur	€ 141,692	Marseilles-Nice-Cannes
19 Zuid-Holland	€ 135,837	Rotterdam-the Hague-Delft
20 Noord-Holland	€ 133,645	Amsterdam-Haarlem
21 Piemonte	€ 131,753	Turin-Novara
22 Berlin	€ 122,578	Berlin
23 Inner London - East	€ 115,595	London
24 Comunidad Valenciana	€ 116,187	Valencia-Alicante
25 Arnsberg	€ 113,697	Dortmund- Ruhr Area
26 Stockholm	€ 113,494	Stockholm
27 Toscana	€ 114,349	Florence-Livorno-Pisa
28 Karlsruhe	€ 110,530	Karlsruhe-Ettlingen-Bruchsal
29 Hamburg	€ 104,796	Hamburg
30 Attiki	€ 101,711	Athens

Sursa: Banca Mondială

Figure 2. GDP ranking across NUTS 2 regions



Source: EuroStat

The regions with metropolitan areas and urban agglomerations are not merely economic powerhouses of the European Union, but they are on average significantly more productive than other regions.

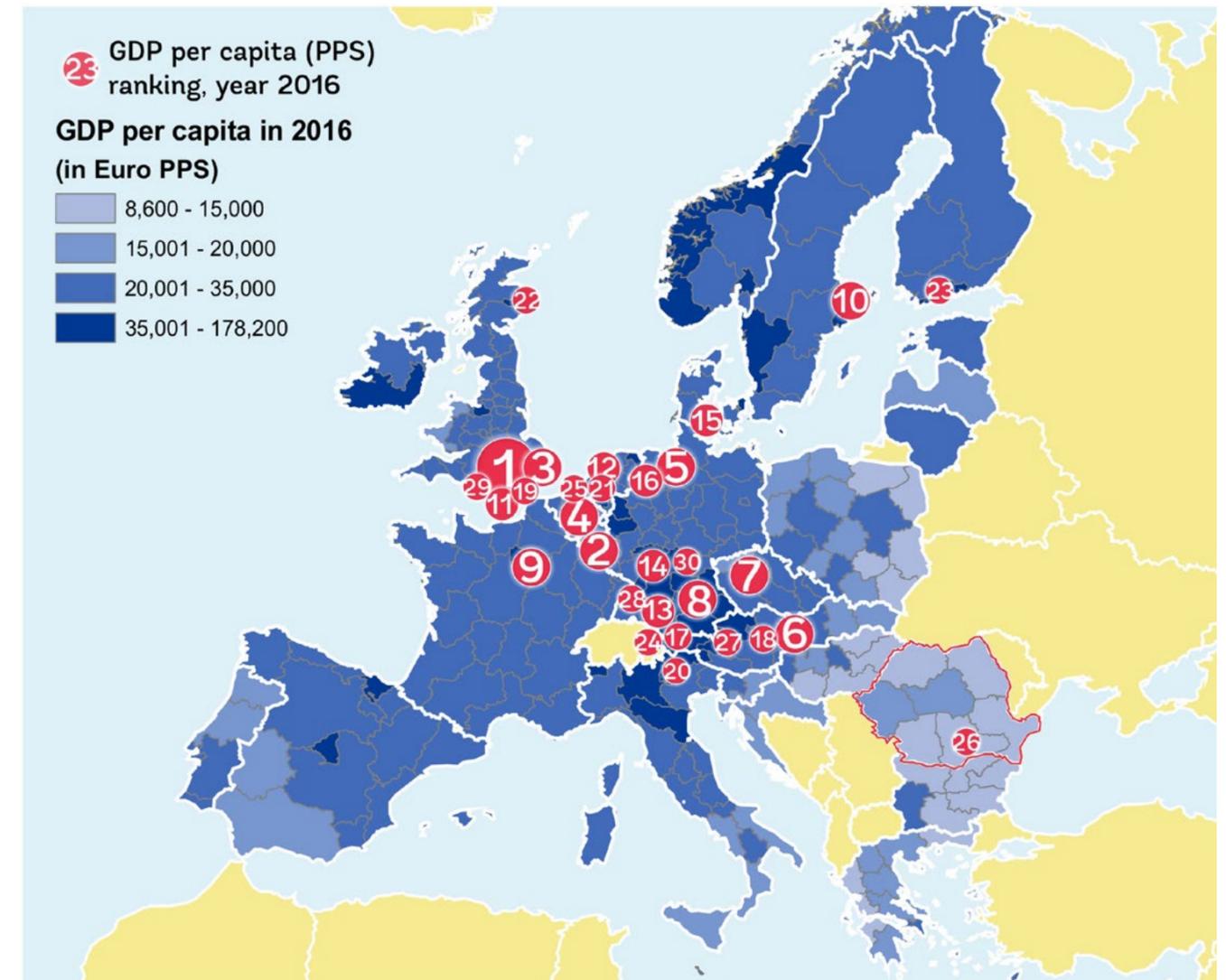
With a few exceptions (e.g. the oil-rich North-East region of Scotland), the regions with highest GDP per capita in the EU also consist of metropolitan or urban agglomeration areas.

Table 2. Most productive EU NUTS 2 regions - GDP per capita (adjusted for purchasing power)

NUTS 2 region	GDP per capita (adjusted for purchasing power) in 2016	Main Metropolitan Area/Urban Agglomeration in/close to the region	
1	Inner London - West	€ 178,200	London
2	Luxembourg	€ 75,100	Luxembourg
3	Southern and Eastern	€ 63,400	London
4	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest	€ 58,400	Brussels
5	Hamburg	€ 58,300	Hamburg
6	Bratislavský kraj	€ 53,700	Bratislava
7	Praha	€ 53,100	Prague
8	Oberbayern	€ 51,500	Munich-Ingolstadt-Garmisch-Partenkirchen
9	Île de France	€ 51,100	Paris
10	Stockholm	€ 50,400	Stockholm
11	Inner London - East	€ 48,700	London
12	Noord-Holland	€ 47,800	Amsterdam-Haarlem
13	Stuttgart	€ 47,200	Stuttgart
14	Darmstadt	€ 46,600	Frankfurt-Darmstadt-Wiesbaden
15	Hovedstaden	€ 46,300	Copenhagen
16	Bremen	€ 45,200	Bremen
17	Salzburg	€ 44,800	Salzburg
18	Wien	€ 44,700	Vienna
19	Berkshire, Buckinghamshire and Oxfordshire	€ 43,900	London
20	Provincia Autonoma di Bolzano/Bozen	€ 43,400	Bolzano
21	Utrecht	€ 43,300	Utrecht
22	North Eastern Scotland	€ 42,000	Aberdeen
23	Helsinki-Uusimaa	€ 41,900	Helsinki
24	Vorarlberg	€ 41,100	Liechtenstein
25	Prov. Antwerpen	€ 40,500	Antwerp
26	Bucuresti - Ilfov	€ 40,400	Bucharest
27	Tirol	€ 40,200	Innsbruck
28	Karlsruhe	€ 39,900	Karlsruhe-Ettingen-Bruchsal
29	Outer London - West and North West	€ 39,300	London
30	Mittelfranken	€ 39,100	Nuremberg

Source: The World Bank

Figure 3. GDP per capita, djusted for purchasing power



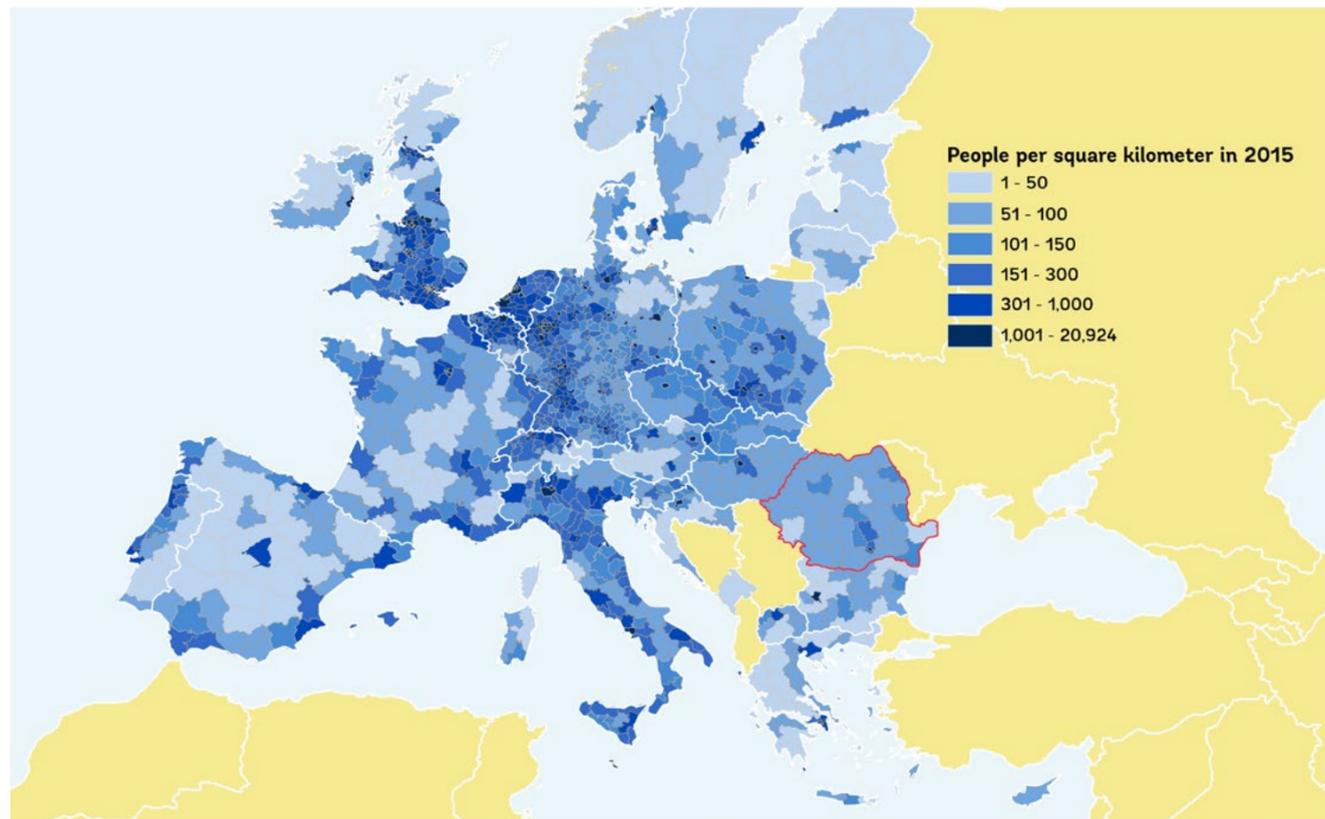
Source: EuroStat

Without a strong metropolitan area or urban agglomeration, a region can never grow efficiently. A country without a network of strong metropolitan areas and agglomerations cannot support long term growth. Moreover, the most dynamic metropolitan areas and urban agglomerations are also most successful in further attracting people and investments.

The following two maps illustrate how the most densely populated regions are more productive on average than others. Moreover, regions closer to the European growth axis (an area encompassing England, the Netherlands, Belgium, West Germany, Switzerland, Austria, Northern Italy) are on average more developed than more distant ones.

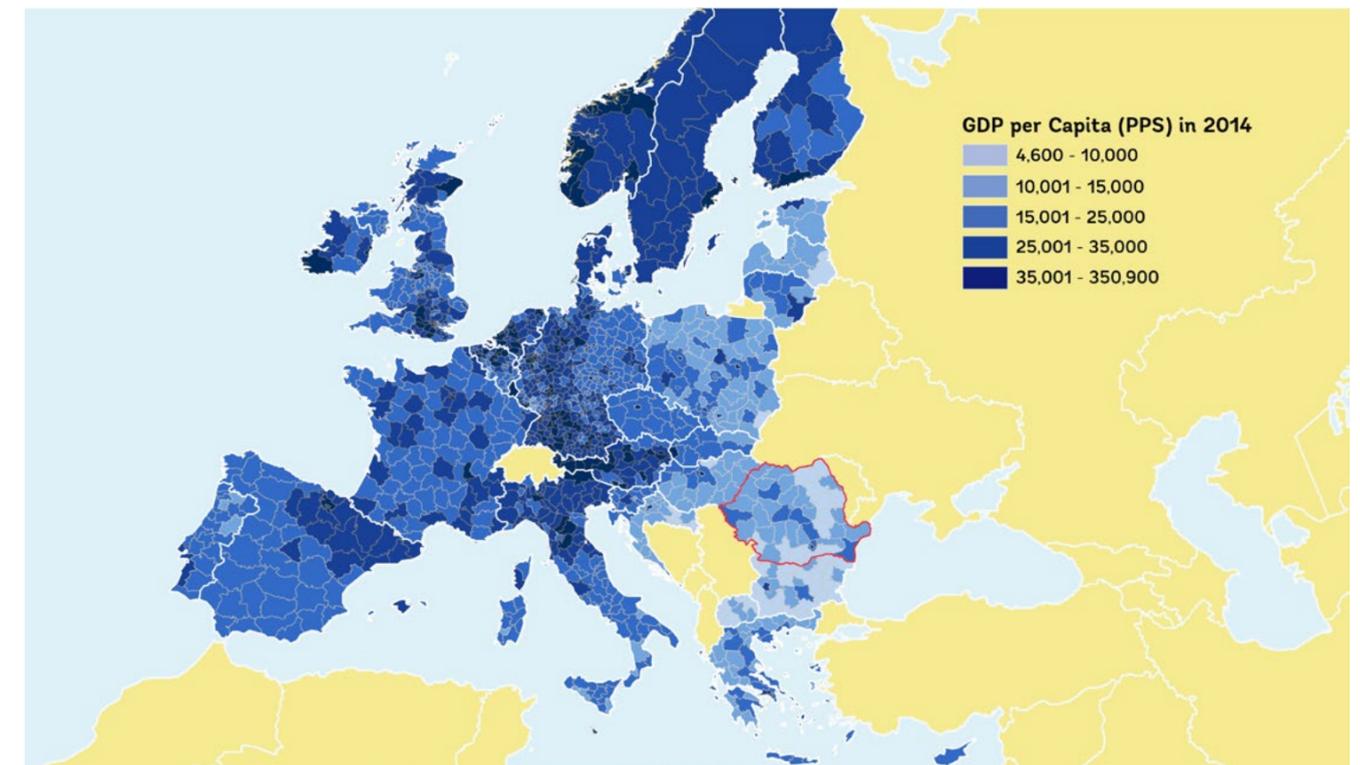
The farther a region from this European growth axis, the more dependent their economic performance on the presence of a metropolitan area or a major urban agglomeration. The implications for Romania and its regions are clear.

Figure 4. EU population density at county level (NUTS 3) in 2015



Source: EuroStat

Figure 5. GDP per capita (adjusted for purchasing power) at county level (NUTS 3) in 2014



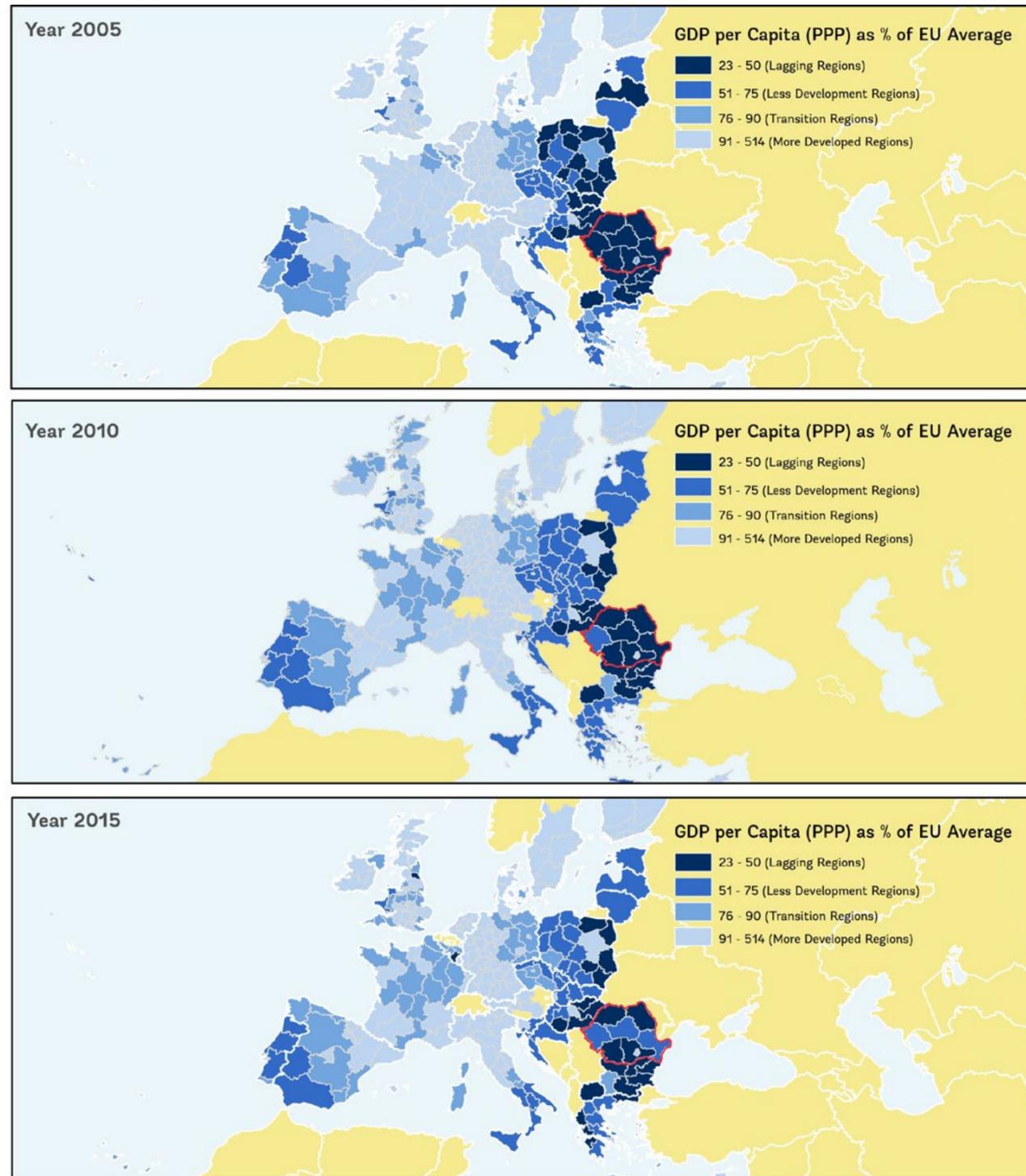
Source: EuroStat

Development dynamics in the European Union

Against the background of population decline, the EU economy performed relatively poor over the recent years, however with significant differences across regions. Thus, regions from the new Member States saw an accelerated growth, while regions from the old Member States stagnated or even declined. Particularly the regions most remote from the European development axis and/or regions without a major metropolitan area or urban agglomeration suffered the most.

The most urbanized regions in Romania (Bucharest-Ilfov, West, Centre) even managed to perform better than regions in Greece, Portugal, southern Italy or southern Spain over the past years.

Figure 6. EU NUTS 2 regions performance in 2005, 2010 and 2015

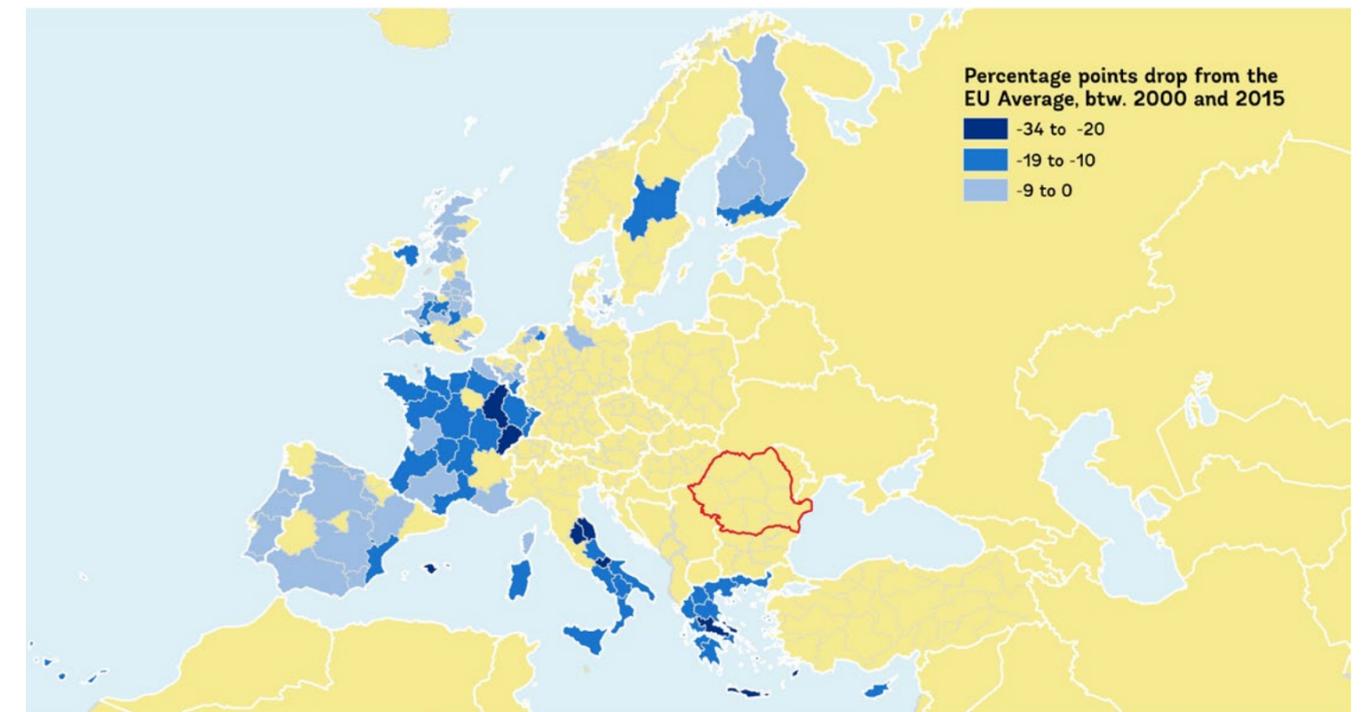


Source: EuroStat

Similar trend can also be noticed in regions from Poland, the Czech Republic, Slovakia or Hungary, where the regions which are most urbanized and/or closest to the European development axis also registered the best economic performance.

What is worrying, however, is that while the Easter periphery of the European Union saw a spectacular growth, the southern, western and northern peripheries witnessed economic decline. Some regions have even declined more than 30% of the European average between 2000 and 2015. Such trends will inherently impact Easter-European regions of the EU as well.

Figure 7. EU regions which declined as compared to the EU average between 2000 and 2015.



Source: EuroStat

The main cause behind the modest performance of the European economy lies in the population decline – particularly the population decline of the European middle class, with a dramatic loss of fertility rates among affluent people.

At no other time in human history has global economic growth outpaced population growth – the increase was limited to several more performing areas. Specifically, a few regions such as Western Europe, USA or East Asia saw higher economic growth than other areas. On average, the consumption of regular people remained quite stable, although people from better-off areas consume more than the ones from poorer areas.

This trend has deep implications on both developed and developing countries. A population decrease would also mean a shrinking of the markets. Since the population decline in developed countries mostly affects the middle class, markets are suffering an even more serious contraction. An average global citizen spent approximately USD 4,800/year in 2015; an EU citizen spent approximately USD 27,000 in the same year, while an average American citizen spent around USD 43,000. Thus, a population drop of around 1 million in the EU is tantamount with a loss of consumption of nearly EUR 27 billion (more than the GDP of 94 countries in 2016).

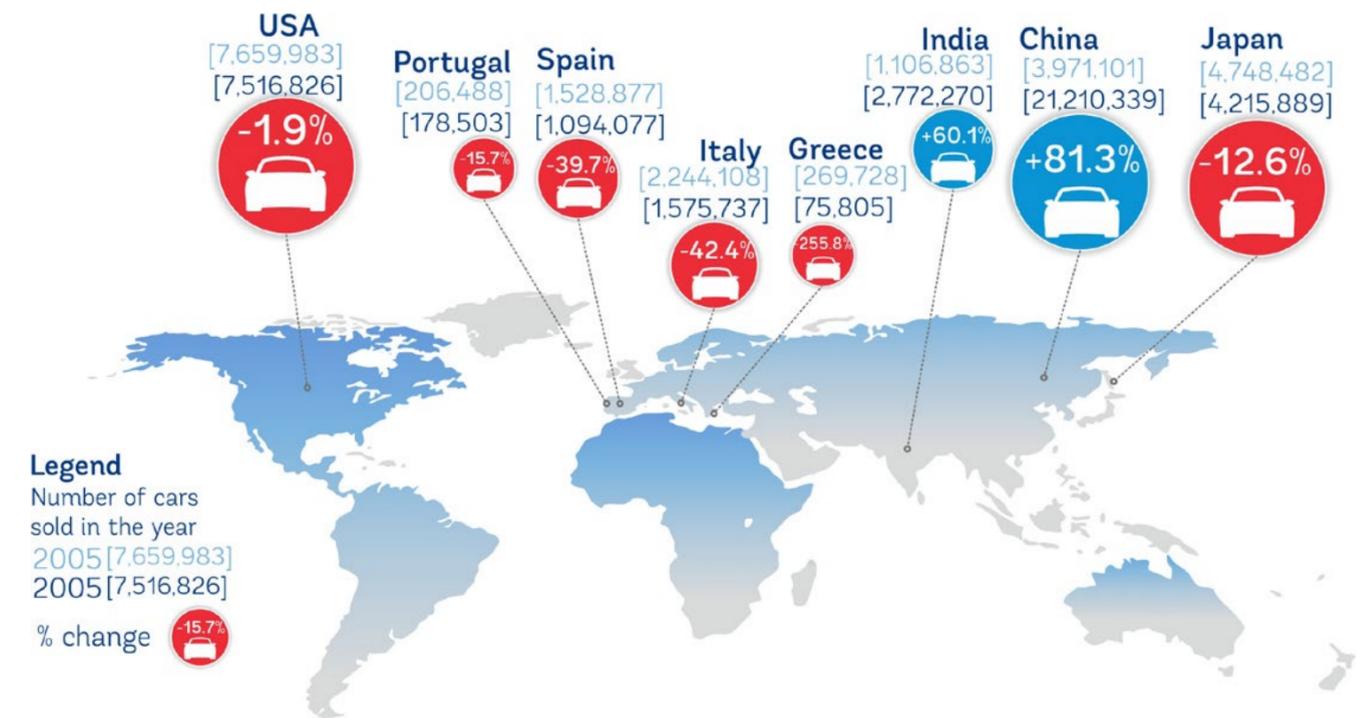
However, in reality, the population aged 20 to 35 years old, the lifeblood of each economy, fell by 15 million people between 2000 and 2016, a trend which will severely impact the entire EU economy.

The EU population decline, mainly the decrease of the employed middle class, will be the main obstacle hindering the future economic growth of the European Union. A smaller middle class means smaller markets, and an economy will have hardly grow when its markets are shrinking. It makes no difference how many cars, TVs, computers or espresso machines one buys, as they will eventually become saturated.

Decreasing markets in the developed world are already a reality. For instance, when it comes to buying motor vehicles, one of the main products of the EU economy, the market fell dramatically over the past years.

As one may see in the figure below, the number of cars sold in southern Europe dropped significantly. The little markets which grew in the past years are those from developing countries – mainly China and India.

Figure 8. Number of cars sold in selected countries

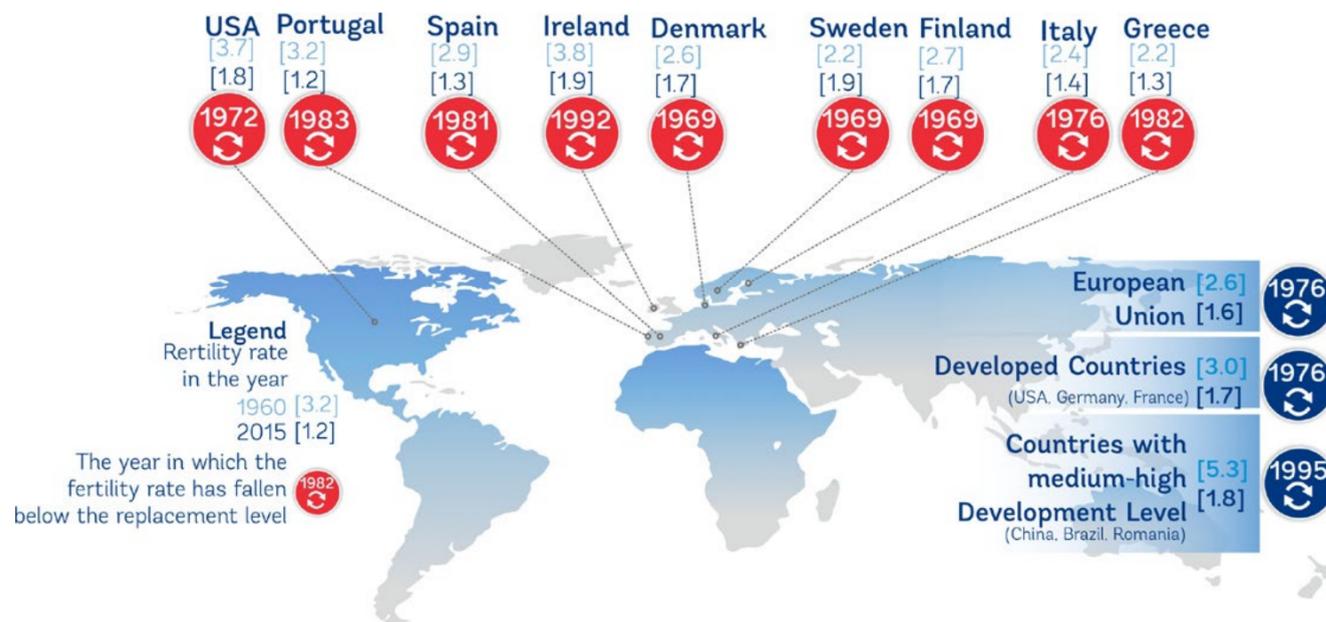


Source: International Organization of Motor Vehicle Manufacturers

The negative aspects of the population decline and market shrinking will be probably felt in the next years. The figure below outlines how fertility rates in southern European countries plunged at alarming rates and remained below the replacement level for more than three decades.

Furthermore, some of the developed countries which witnessed relatively high growth over the recent years had higher fertility rates – albeit under the replacement level.

Figure 9. Fertility rates in selected countries



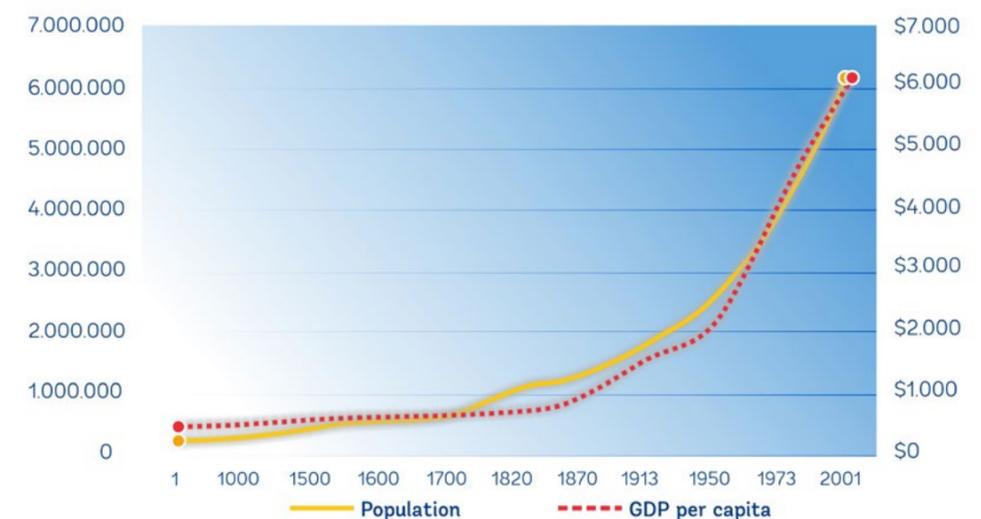
Source: The World Bank

The importance of magnet metropolises

Historically, economic growth has been closely related to population growth.

Even if some countries had a faster productivity growth than others, overall, global productivity went hand in hand with population growth. However, some regions (mainly metropolises and urban agglomerations) produced a disproportionate share of the goods and services bought by the rest of the world.

Figure 10. Economic growth has always relied on population growth.



Source: Silva, Dan. 2017. *Das Book on Growth and Development*

Note: Population represented in 1,000 people.

The GDP per capita data is in million dollars at a fixed exchange rate for 1990, as per the Geary-Khamis method

Developed countries only account for 16% of the world population, but produce 68% of all products consumed in the world.

In turn, developed countries are driven by several metropolitan areas and urban agglomerations. The table below shows how 45 of the 100 most developed world economies are in fact metropolitan areas. Urban agglomerations are not included here due to lack of relevant data collected.

Table 3. The largest economies in the world

#	Country / metropolis	GDP in bln. USD	#	Country / metropolis	GDP in bln. USD	#	Country / metropolis	GDP in bln. USD
0	Europa	18495	34	Washington DC (SUA)	433	68	Seattle (SUA)	235
1	SUA	15094	35	Houston (SUA)	420	69	Chile	234
2	China	7298	36	Osaka (Japonia)	471	70	Shanghai (China)	233
3	Japonia	5869	37	Austria	417	71	Egipt	230
4	Germania	3569	38	Africa de Sud	408	72	Filipine	224
5	Franța	2774	39	Dallas - F Worth (SUA)	401	73	Frankfurt (Germania)	221
6	Brazilia	2476	40	Mexico City (Mexic)	390	74	Irlanda	217
7	Marea Britanie	2416	41	Sao Paulo (Brazilia)	390	75	Algeria	217
8	Italia	2198	42	Philadelphia (SUA)	388	76	Cehia	215
9	India	1897	43	Emiratele Arabe Unite	371	77	Sydney (Australia)	213
10	Rusia	1857	44	Boston (SUA)	363	78	Mumbai (India)	209
11	Canada	1739	45	Buenos Aires (Argentina)	362	79	Pakistan	209
12	Spania	1492	46	Tailanda	345	80	Rio de Janeiro (Brazilia)	208
13	Australia	1483	47	Dallas (SUA)	338	81	Phoenix (SUA)	200
14	Tokyo (Japonia)	1479	48	Danemarca	333	82	Irak	195
15	New York (SUA)	1406	49	Columbia	333	83	Minneapolis (SUA)	194
16	Mexic	1154	50	Moscova (Rusia)	321	84	San Diego (SUA)	191
17	Coreea de Sud	1116	51	Hong Kong (China)	320	85	România	189
18	Indonegia	846	52	Venezuela	317	86	Kazakhstan	186
19	Olanda	837	53	Madrid (Spania)	308	87	Istanbul (Turcia)	182
20	Los Angeles (SUA)	792	54	Atlanta (SUA)	304	88	Barcelona (Spania)	177
21	Turcia	773	55	San Francisco (SUA)	301	89	Peru	176
22	Elveția	637	56	Grecia	299	90	Melbourne (Australia)	173
23	Arabia Saudită	576	57	Houston (SUA)	297	91	Qatar	173
24	Chicago (SUA)	574	58	Miami (SUA)	292	92	New Delhi (India)	167
25	Londra (Marea Britanie)	565	59	Seoul (Coreea de Sud)	291	93	Beijing (China)	166
26	Paris (Franța)	564	60	Malaiegia	278	94	Denver (SUA)	165
27	Suedia	537	61	Nigeria	272	95	Ucraina	165
28	Polonia	514	62	Finlanda	266	96	Noua Zeelandă	161
29	Belgia	512	63	Singapore	259	97	Kuweit	156
30	Iran	499	64	Toronto (Canada)	253	98	Manila (Filipine)	149
31	Norvegia	485	65	Detroit (SUA)	253	99	Montreal (Canada)	148
32	Taiwan	467	66	Israel	243	100	Cairo (Egipt)	145
33	Argentina	446	67	Portugalia	237			

Source: www.pedroortiz.com

Metropolitan areas and urban agglomerations may remain growth engines for their regions and countries provided they gain access to larger or developing markets.

The alternative is for them to ensure their own growth.

A city is like a living organism, and the normal cycle of each body is to grow, reach maturity, then decline. A city which stopped growing can only have one fate.

In the decades to come, cities will be competing more fiercely for people.

Where the urbanization process is not yet completed, the competition will be targeted at people who do not already live in a metropolitan area or urban agglomeration. On the other hand, countries with mature cities will compete for immigrants. This competition will become more heated as the average global fertility rate dropped from nearly 5 in 1960 to 2.4 in 2016.

Immigration is obviously a topic of great social and political relevance, and few countries have an active policy to support immigration. Interestingly, in history,

The developed countries more open towards immigration performed better economically than countries closed to immigration.

Table 4. Economic Complexity Index per countries

ȚARA	2010	2011	2012	2013	2014	2015
1 Japan	2.11934	2.31329	2.32408	2.37352	2.31842	2.34767
2 Switzerland	1.91575	1.95964	2.01041	2.05181	1.99456	2.12416
3 South Korea	1.57505	1.70696	1.64658	1.82762	1.90646	1.97403
4 Germany	1.88894	1.9408	1.87347	1.84608	1.81367	1.91906
5 Singapore	1.58854	1.68651	1.70347	1.71717	1.71171	1.72081
6 Austria	1.68617	1.7891	1.71686	1.72767	1.64981	1.66445
7 Sweden	1.75419	1.80518	1.75179	1.75214	1.6459	1.61477
8 Czech Republic	1.55689	1.69489	1.68896	1.53381	1.52129	1.56023
9 Finland	1.67979	1.71439	1.61173	1.57477	1.49895	1.45829
10 Hungary	1.39419	1.53397	1.52192	1.43941	1.38229	1.40749
11 Slovenia	1.38479	1.46906	1.43073	1.4359	1.41088	1.39199
12 Hong Kong	0.50893	0.80165	1.09895	1.26313	1.35236	1.35536
13 United Kingdom	1.57193	1.54878	1.49378	1.45544	1.40296	1.34514
14 United States	1.49428	1.49138	1.45359	1.43702	1.30167	1.32592
15 Ireland	1.33093	1.1731	1.24971	1.28901	1.22044	1.31565
16 Slovakia	1.35695	1.37252	1.3272	1.21794	1.20436	1.27947
17 Italy	1.34589	1.33488	1.31024	1.21525	1.24155	1.24787
18 France	1.45099	1.43611	1.36854	1.24155	1.15748	1.20672
19 China	0.77490	0.90990	1.00792	1.04036	1.16379	1.17107
20 Israel	1.09395	1.21174	1.27127	1.22703	1.14081	1.16926
21 Thailand	0.73691	0.87084	0.964292	0.87724	0.955651	1.05247
22 Malaysia	0.58805	0.79172	0.91952	0.810485	0.828817	0.971262
23 Mexico	1.00189	1.00796	0.954246	0.846744	0.953003	0.959052
24 Belgium	1.1659	1.13515	1.04707	0.951062	0.90581	0.9484
25 Denmark	1.29129	1.2369	1.13685	0.995356	0.95349	0.885645
26 Netherlands	1.09691	0.952353	0.885129	0.818227	0.756212	0.860275
27 Poland	1.03324	1.07468	0.960828	0.817343	0.839266	0.832384
28 Romania	0.698277	0.73466	0.70694	0.751166	0.787654	0.82995
29 Croatia	0.926024	0.91927	0.92595	0.822129	0.837178	0.745808
30 Estonia	0.704934	0.746338	0.76017	0.68394	0.752262	0.738564
31 Belarus	0.675162	0.918398	0.82272	0.689295	0.731427	0.702788
32 Norway	0.635977	0.535507	0.571734	0.614676	0.667969	0.682789
33 Spain	1.01742	0.980784	0.842403	0.700457	0.701443	0.656088
34 Lithuania	0.549397	0.64032	0.722513	0.673455	0.63807	0.561721
35 Bosnia and Herzegovina	0.574773	0.592368	0.545884	0.562599	0.578374	0.486929
36 Portugal	0.706405	0.650139	0.6184	0.433862	0.4937	0.480985
37 Canada	0.703779	0.526191	0.534847	0.421886	0.411362	0.3821
38 Philippines	0.209171	0.331523	0.394726	0.341858	0.477815	0.381438
39 Latvia	0.626987	0.600318	0.571625	0.478137	0.431584	0.373305
40 Turkey	0.432695	0.42938	0.450234	0.287393	0.378481	0.364792
41 Bulgaria	0.467999	0.447953	0.497365	0.278113	0.290812	0.318417
42 Serbia	0.621737	0.590053	0.562507	0.361921	0.366673	0.316878
43 Ukraine	0.51783	0.480965	0.469842	0.28954	0.268345	0.2257
44 Tunisia	0.073213	0.233429	0.291069	0.16411	0.214778	0.163278
45 Lebanon	0.253783	0.293449	0.281872	0.107992	0.177455	0.151603
46 India	0.111379	0.091946	0.144541	-0.13459	-0.0147	0.016682
47 Costa Rica	0.10939	0.024263	0.247592	0.158575	0.093993	0.005485
48 Jordan	0.244437	0.161675	0.216056	-0.14042	-0.01002	-0.00442
49 Russia	0.153215	0.009965	0.077047	0.048022	0.008439	-0.02679
50 Vietnam	-0.3501	-0.21599	-0.10449	-0.23146	-0.12996	-0.06973
51 Brazil	0.248326	0.190826	0.161553	0.032264	-0.15123	-0.07908
52 Indonesia	-0.12726	-0.1432	-0.08712	-0.16023	-0.10201	-0.08812
53 El Salvador	-0.04982	-0.11734	-0.00723	-0.14517	-0.07068	-0.13322
54 Greece	0.243817	0.052732	-0.02161	-0.21038	-0.16786	-0.15753
55 South Africa	0.119045	0.016592	-0.0238	-0.19208	-0.20497	-0.18886
56 New Zealand	0.14369	0.064004	0.166665	-0.096978	-0.119421	-0.206663
...						
82 Australia	-0.397884	-0.516626	-0.528256	-0.816851	-0.846322	-0.763708

Source: MIT Observatory of Economic Complexity

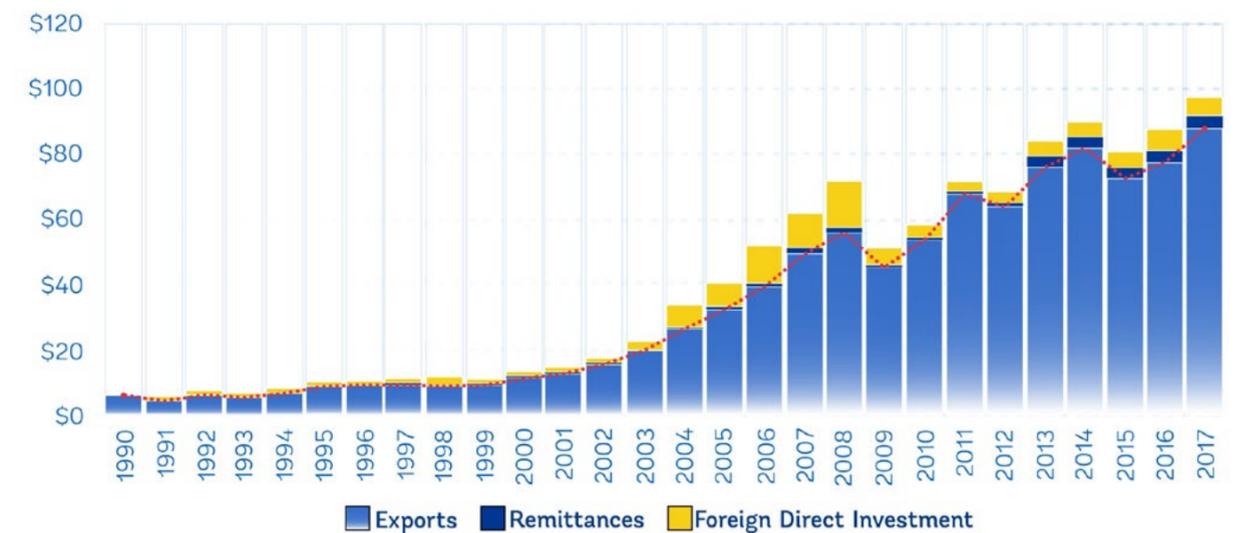
JAPAN

A telling example is that of Japan. In 2015, according to MIT Observatory of Economic Complexity data, Japan had the most complex economy in the world. However, for approximately two decades, the Japanese economy seems to be in recession.

At the end of the 90's, Japan had a GDP per capita above that of the United States, Canada, Australia and New Zealand. However, in the meanwhile, Japan was overtaken by all these countries – including by New Zealand, whose main exports are concentrated milk, butter, sheep meat and goat meat.

The poor performance of Japan is mainly owed to its population decline and ageing. While in the USA, Canada, Australia and New Zealand, approximately 25% of the population is born in other countries, just 1.5% of the Japanese population is born outside of the Land of the Rising Sun.

Figure 11. Gross income per capita (Atlas method) in selected countries between 1980 and 2017



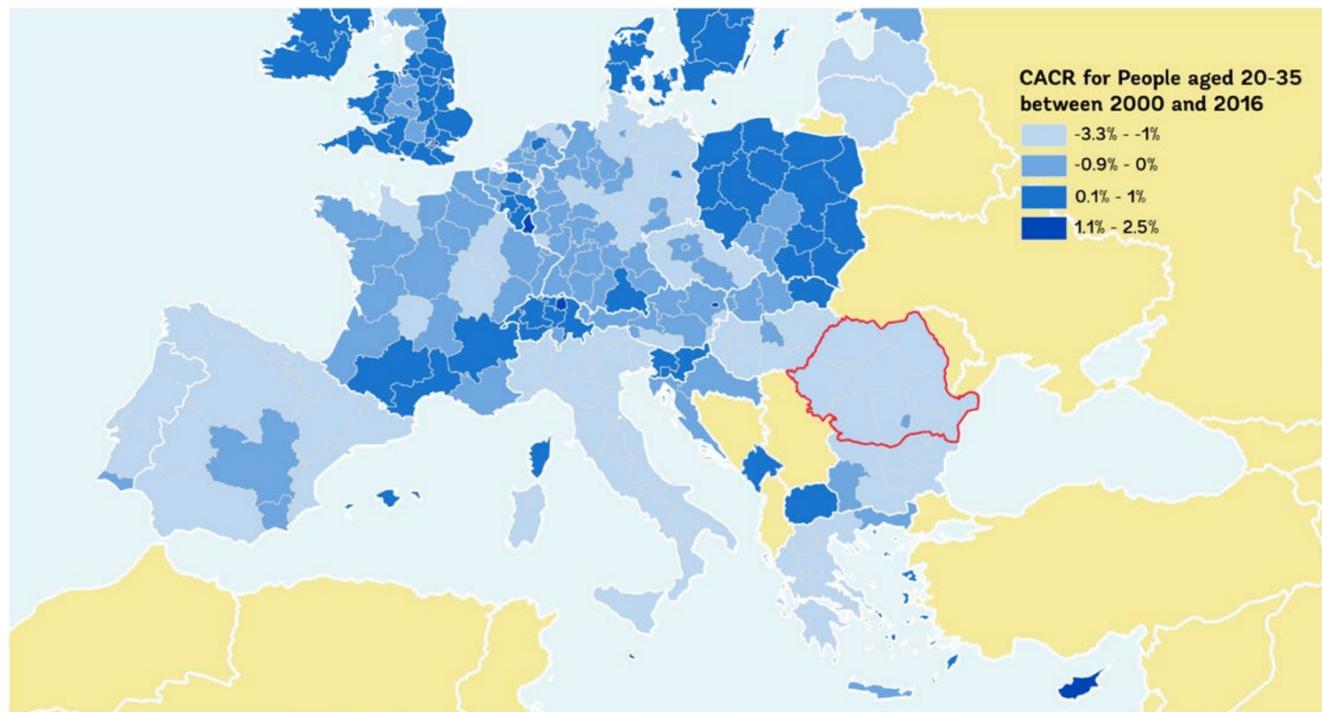
Source: The World Bank

EUROPEAN UNION

In the European Union, the share of out-of-EU births is around 10%, which, combined with the population decline and ageing, explains the relatively poor economic performance of the past years.

In spite of a large part of EU countries managing to achieve population growth thanks to an increase of life expectancy and of immigration, they did suffer losses as a whole. The young population, aged 20 to 35, decreased in almost all EU regions and was not offset by immigration.

Figure 12. The EU lost more than 15 million young people (aged between 20 to 35) between 2000 and 2016



Source: EuroStat

Without a pro-active immigration policy, the European Union will not be able to maintain its medium-term competitiveness, a fact which will undoubtedly impact the Romanian economy as well, since the EU accounts for approximately 75% of all Romanian exports.

The social and economic performance of Romania over the past years will depend on the extent to which local administrations will become more competitive. In order to be more competitive, Romanian cities have to become magnet cities – more specifically, they have find tools and incentives to attract as many investors and people as possible. Some of these tools and incentives are discussed below.

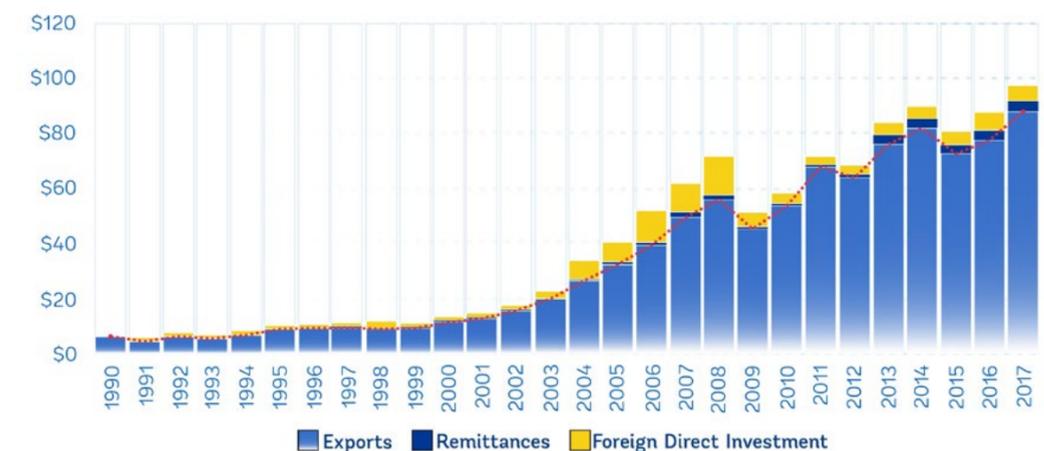
Towards more competitive metropolises in Romania

Romania, like any developing country, depends on external markets to support its growth, and more particularly on markets of developed countries.

Without exports, a country can barely support growth if it relies solely on its own markets.

This economic reality does not need much explaining. A simple mathematical calculation suffices to understand that if a country's population consumed X0 goods and services at a time T0, it cannot consume more goods at the moment T1 without having close commercial relationships with other countries. The main three avenues to attract additional resources from abroad are the following: **exports, direct foreign investments and currency remittances of migrant workers.** Out of these, exports are by far the most significant for the economic performance of a developing country.

Figure 13. Main revenue sources of Romania (in bln. USD).



Source: The World Bank

GREAT BRITAIN

Great Britain, the first truly capitalist economy, supported its growth by exploiting available resources from its vast empire. With a relatively small population, it managed to use and trade spices from India, sugar from the Caribbean or animal skins from North America, and in time built a strong middle class, which in turn built democratic institutions to defend the interests of the middle class. In their turn, the United States of America took advantage of the preferential access to European markets (in the first half of the 19th century, more than 80% of US exports were bound for Europe) and the access to vast resources to build its economy. So did Japan, which enjoyed preferential access to the US market after the Second World War.

SOUTH KOREA

One of the most widely known examples of spectacular economic transformation is that of South Korea, particularly when viewed against the underdeveloped North Korea. During the 1950 - 1953 war, Korea was an underdeveloped country. The city of Seoul, for instance, had none of the characteristics of a dynamic metropolis (see the picture below).

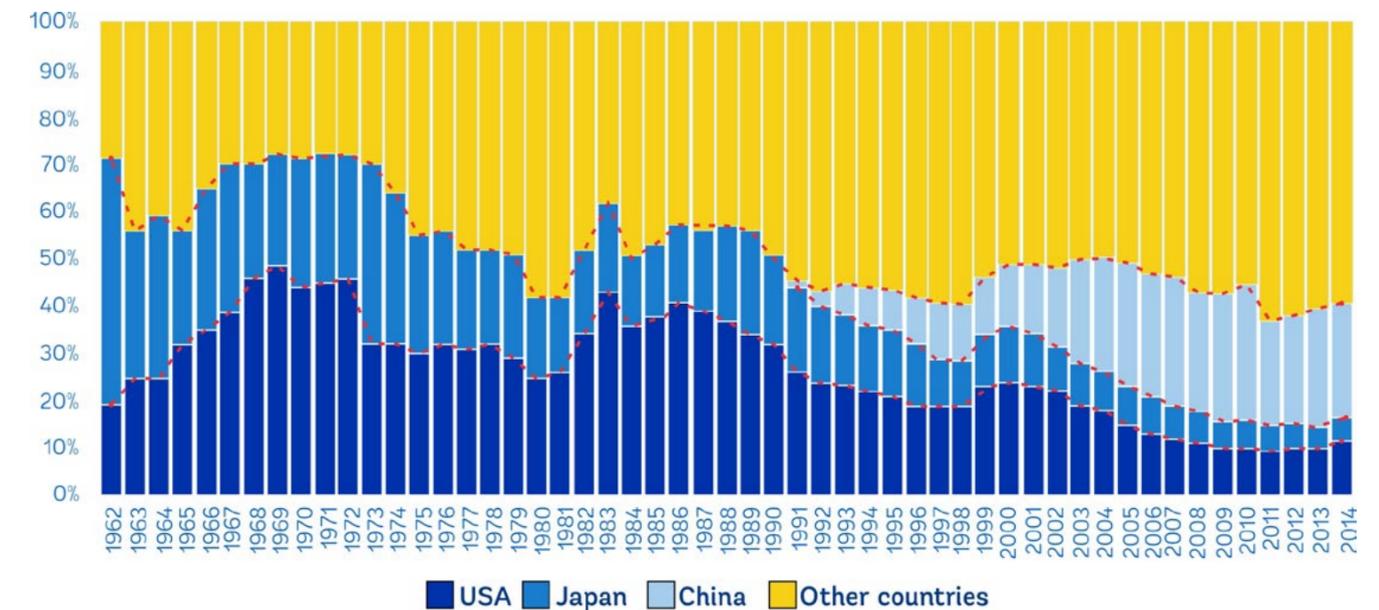
Figure 14. How Seoul changed over the course of a few years



Source: The Seoul History Museum

However, after the Korean War, South Korea enjoyed a privileged relationship with the United States and Japan (one of the most important US allies after the Second World War). Therefore, the exports to the US and Japanese markets were instrumental in setting the Korean economy in motion, with more than 70% of its exports going to these two countries alone during the economic boom years.

Figure 15. Main export markets of South Korea from 1962 to 2014



Source: MIT Observatory of Economic Complexity

The South Korean economic growth was supported by its main cities. In 1960, South Korea had an urbanization degree of merely 27%, and a GDP per capita of just \$150. In 2017, the urbanization degree reached 82% and a GDP per capita of \$30,000. Seoul, with a population in excess of 25 million at metropolitan level, became one of the largest world economies. In 1960, North Korea was more urbanized (urbanization degree of 40%) and more developed. While South Korea enjoyed access to the large and growing markets of US and Japan, North Korea had access only to the less dynamic markets of the Communist bloc (China, USSR, etc.). There is no need to debate which economic model prevailed. In the meantime, North Korea became a closed country, with little trading relations and a weakened economy.

For Romania, and for any other developing country for that matter, the lessons of the two Koreas are as clear as they can be.

Without easy access to large markets, Romania will not be able to support growth by itself. At the same time,

without strong metropolitan areas and urban agglomerations, the access to these markets will not materialize into development for Romania.

Below is a presentation of what Romanian local administrations can do to better connect to global markets.

How can Romanian metropolises ACCESS LARGE AND GROWING MARKETS

It goes without saying that Romania's accession to the European Union is probably one of the greatest political, social and economic achievements of the entire Romanian history. The effects of Romania's EU integration are manifold and we simply do not have the space to list them here. Economically, the period around and after the EU accession is one of the most fortunate in Romanian history.

The spectacular economic performance after the EU accession is owed to the access to EU markets, which now absorb more than 75% of the country's exports.

During this period, Romania managed to achieve one of the fastest economic growths in the world, and even surpassed economies such as Mexico, Brazil or Columbia in terms of GDP per capita.

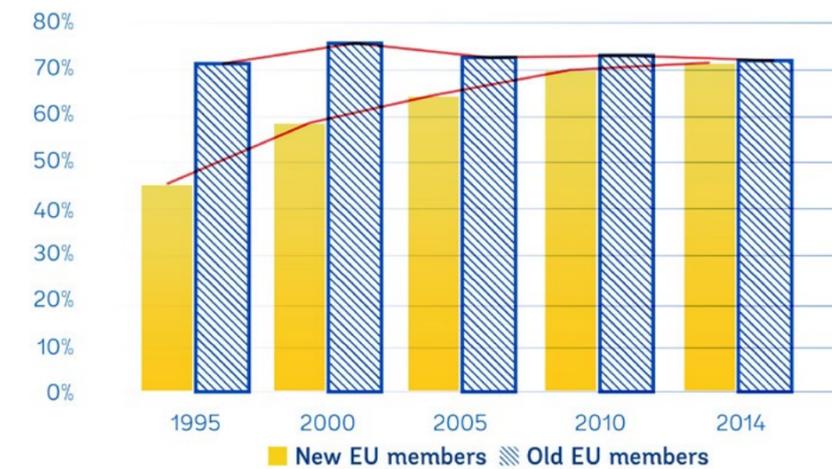
Romanian exports value increased by more than 20 times from 1990 to 2016 – being one of the biggest drivers of prosperity in Romania during those years.

The integration of the Romanian economy into that of the EU also meant a quick transformation of national economy along the EU economic model. If the main Romanian exports were in 1990 "lube oils", "furniture", "sheet metal" and "textiles", Romania now mainly exports defining products of the EU economy – "cars and car parts", "electrical and engineering equipment" or "electrical circuits and cables".

Moreover, a look at all the new EU member countries reveals the same thing – their economies are increasingly resembling the EU economy.

Three large sectors dominate the EU economy: 1) **transports** (manufacturing of cars, trains, planes, buses, ships, trams, etc.); 2) **electrical and engineering equipment** (washing machines, TVs, toasters, coffee makers, vacuum cleaners, stoves, etc.); and 3) **chemicals** (detergents, chemical fertilizers, pharmaceuticals, soaps, etc.).

Figure 16. Transformation of the new EU Member States' economies



Source: MIT Observatory of Economic Complexity

Note: The data refers to exports (in US dollars) in the following three sectors: machinery, transport and chemicals. The new EU Member States included here are the following: Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia. The old EU Member States included here are the following: Belgium, Denmark, Finland, Germany, France, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, Great Britain.

This dynamics offers a first clue on what options Romanian local administrations have to increase economic performance.

Obviously, a mayor will have a hard time convincing others to buy the products manufactured in his or her locality, but may build a team to try to proactively attract firms which already have access to these markets.

The advantages of a foreign investor are not merely the capital, the experience and the expertise they bring, but also the well-developed logistics and distribution networks, and, most importantly, access to a global network of customers (i.e. markets). Let's take the example of the Dacia plant of Mioveni, which sold just 60,000 cars when it was bought by Renault Group, the same as in 1989. Today, it sells more than 300,000 units, out of which 85% are exported.

Ideally, mayors should attract large companies, with global distribution networks and from highly paid industries. The companies with access to large markets can positively impact local economies by bringing major resources at local level. The companies which operate in highly paid industries will make their localities more attractive for well-trained employees.

In a famous article, Vernon Henderson held that cities are unable to drive growth if they fail to attract private investments in high added-value industries. As a city develops, living costs will also rise, and the only way to offset this growth is to increase wages in that city.

In which industries should companies be attracted? What kind of companies should ‘mayors’ look for?

We will try to answer this question below. Obviously, local administrations should take into account their comparative advantage. An industrial city cannot become an IT hub – not overnight at least. However, it can proactively attract companies with easy access to current large and developing markets.

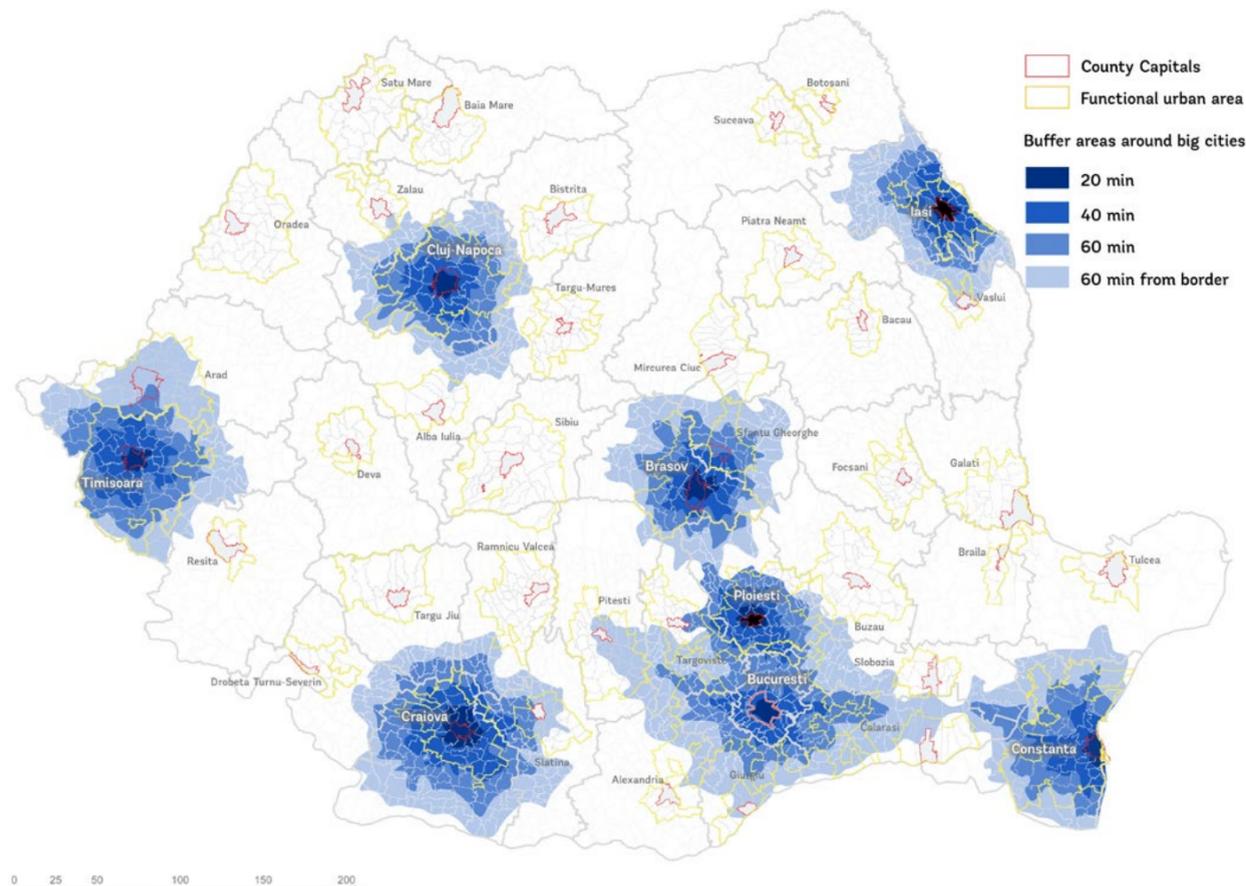
In practical terms, this requires companies with access to markets from:

1. **EU** - the most important market for Romania
2. **USA** - the largest market in the world, which absorbs 25% of the global manufacturing
3. **East Asia** - the quickest growing market in the past years

Attracting companies with easy access to EU markets

The foreign companies which serve EU markets were the main economic engine of Romania during the recent years, and the metropolitan areas which managed to attract such companies achieved the best performance in the past years. It goes without saying the most of these companies settled in Bucharest and its area of influence. The companies registered in the surrounding area of Bucharest (one hour drive, see the map below) generate 50% of the income of all Romanian-registered companies. This area is the economic heart of the country.

Figure 17. One-hour drive access area of growth poles

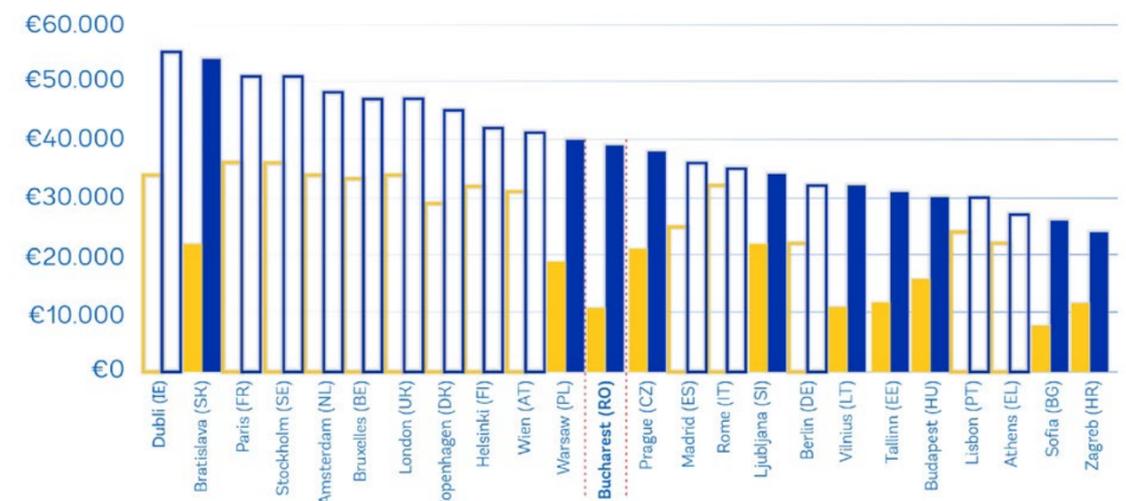


Source: The World Bank. 2013. Growth Poles

The economic success of Bucharest owes to its attractiveness for foreign investors. Between 2000 and 2015, the GDP per capita of Bucharest increased more than 4 times, Bucharest currently being, for all intents and purposes, one of the EU growth engines, closely competing with other EU capitals.

Obviously, a city of 300,000 inhabitants will find it hard to replicate the success of a 2 million people metropolis with an influence area of over 4 million inhabitants, but not impossible. What it will need to have, however, is a proactive attitude and the availability to maintain a direct and permanent dialogue with the private sector. Mayors should begin to proactively approach investors, to learn how to entice companies which could positively impact the local economy, instead of merely waiting for such companies to come to them.

Figure 18. GDP per capita (PPS) in EU capitals



Source: EuroStat

The table below includes the largest exporters of Bucharest and of the counties which include the seven growth poles of Romania. What is immediately obvious is that among them there are several known brands, but little of these firms are among the top European companies. Out of the Fortune 500 largest global companies, the following have a Romanian presence: Honeywell, OMV, Continental, Emerson, Lukoil, Michelin, Ford, Renault, British American Tobacco, Philip Morris, Arcelor Mital, Siemens, Daimler.

Table 5. Top exporters per county

County	Rank in county	Company	County	Rank in county	Company
Bucharest	1	Honeywell Technologies Sarl - Fiscal representative: Honeywell Garrett Srl	BRAȘOV	1	SC Autoliv Romania Srl
	2	SC Omv Petrom Sa		2	SC Continental Powertrain Romania Srl
	3	Dis Draxlmaier Industrial Solutions Gmbh		3	SC Schaeffler Romania Srl
	4	SC Nidera Romania Srl		4	SC Stabilus Romania Srl
	5	SC Adm Romania Trading Srl		5	SC Preh Romania Srl
	6	Kagmunaygas Trading A.G. - Fiscal representative: Kmg Rompetrol Srl		6	SC Premium Aerotec Srl
	7	Robert Bosch Gmbh		7	SC Kronospan Romania Srl
	8	SC Cargill Agricultura Srl		8	SC Hutchinson Srl
	9	SC Holzindustrie Schweighofer Srl		9	SC Quin Romania Srl
	10	Adient Ltd. & Co.Kg		10	SC Sit Romania Srl
TIMIȘ	1	Flextronics Manufacturing Europe Bv - Fiscal representative: De Flextronics Romania Srl	ILFOV	1	SC Michelin Romania Sa
	2	SC Continental Automotive Romania Srl		2	Philip Morris Italia Srl - Fiscal representative: Philip Morris Romania Srl
	3	SC Continental Automotive Products Srl		3	SC Makita Eu Srl
	4	SC Hella Romania Srl		4	Philip Morris International Management Sa - Fiscal representative: Philip Morris Romania Srl
	5	SC Delphi Packard Romania Srl		5	SC Monsanto Romania Srl
	6	SC Trw Automotive Safety Systems Srl		6	SC Global Leather Supplier Srl
	7	SC Kathrein Romania Srl		7	SC Monbat Recycling Srl
	8	SC Valeo Lighting Injection Sa		8	SC Porsche Romania Srl
	9	SC Zoppas Industries Romania Srl		9	Va Intertrading Aktiengesellschaft
	10	SC Contitech Romania Srl		10	SC Chipita Romania Srl
CONSTANȚA	1	SC ROMPETROL RAFINARE SA	CLUJ	1	SC De'longhi Romania Srl
	2	SC DAEWOO-MANGALIA HEAVY INDUSTRIES SA		2	SC Emerson Srl
	3	SC AMEROPA GRAINS SA		3	SC Ecolor Srl
	4	SC ALNASER SRL		4	SC Trelleborg Automotive Dej Srl
	5	SC MARIA TRADING SRL		5	Xindao B.V.
	6	SC AL KASTAL CHARTERING SRL		6	SC Inter Cars Romania Srl
	7	SILOTRANS SRL CONSTANTA - TAX REPRESENTATIVE FOR CHS EUROPE SA		7	SC Eckerle Automotive Srl
	8	SC ȘANTIERUL NAVAL CONSTANȚA SA		8	SC Mmm Autoparts Srl
	9	SC ROJEN COMMERCE SRL		9	SC Pehart Tec Tissue Sa
	10	SC TOLIL COMPANY SRL		10	SC Sortilemn Sa
PRAHOVA	1	SC Petrotel - Lukoil Sa	IAȘI	1	SC Delphi Diesel Systems Romania Srl
	2	SC Yazaki Romania Srl		2	SC Arcelormittal Tubular Products Iasi Sa
	3	British American Tobacco Western Europe Commercial Trading Limited - Fiscal representative: British - American Tobacco Romania In		3	SC Olimpias Mfg. Romania Srl
	4	SC Cameron Romania Srl		4	SC Ig Watteuw Romania Srl
	5	SC Ducati Energia Romania Sa		5	SC Antibiotice Sa
	6	SC Timken Romania Sa		6	SC TOLIL COMPANY SRL
	7	Swiss Caps Ag		7	SC Omco Romania Srl
	8	SC Calsonic Kansei Romania Srl		8	SC Te-Rox Prod Srl
	9	Unilever Supply Chain Company Ag - Fiscal representative: Unilever South Central Europe Sa		9	Motexco Srl - Fiscal representative: Al Seyntex Nv (Belgium)
	10	SC Oğtasar Srl		10	SC Fondal International Srl
			DOLJ	1	SC Ford Romania Sa
				2	SC Cerealcom Dolj Srl
				3	SC Cummins Generator Technologies Romania Sa
				4	SC Casa Noastra Sa
				5	SC Italian Knitwear Srl
				6	SC Maglierie Cristian Impex Srl
				7	SC Kautex Craiova Srl
				8	SC Popeci Utilaj Greu Sa
				9	SC E.M.W. SRL
				10	SC Vitall Srl

Source: INS

The following table includes the largest European companies – more precisely, the companies from the **Global Fortune 500** list. Romanian local administrations should proactively attract companies from this list, but certainly not these companies exclusively. However, these companies have access to the largest markets and may generate a significant positive momentum for Romanian local administrations.

Some of these companies (e.g., E.ON, ING, Allianz, Carrefour, Enel, Societe Generale, Metro, Auchan, UniCredit, Heineken, Unilever, Holcim, Lafarge, Veolia, Anheuser-Busch InBev, Alstom, Accenture, Delhaize, Danone) are already present on the Romanian market, but to serve a local growing market firstly, and not external markets.

Table 6. The largest companies in Europe in 2015

Rank in Europe	Global rank	Company	City	Country	Revenue (mil. \$)	Industry
1	5	Royal Dutch Shell	Haga	Olanda	\$311.870	Petroleum refining
2	7	Volkswagen	Wolfsburg	Germania	\$260.028	Cars and car parts
3	8	BP	Londra	Marea Britanie	\$244.582	Petroleum refining
4	14	Glencore	Baar	Elveția	\$205.476	Mining, oil processing
5	16	Daimler	Stuttgart	Germania	\$185.235	Cars and car parts
6	19	EXOR Group	Amsterdam	Olanda	\$161.677	Various financial services
7	27	AXA	Paris	Franța	\$149.461	Insurance: life, health (stock)
8	28	Total	Courbevoie	Franța	\$149.099	Petroleum refining
9	38	Allianz	Munchen	Germania	\$123.532	Insurance: life, health (stock)
10	44	BNP Paribas	Paris	Franța	\$117.375	Banking services
11	49	Gazprom	Moscova	Rusia	\$111.983	Energy
12	50	Prudential	Londra	Marea Britanie	\$111.458	Insurance: life, health (stock)
13	51	BMW	Munchen	Germania	\$111.231	Cars and car parts
14	59	Assicurazioni Generali	Trieste	Italia	\$100.552	Insurance: life, health (stock)
15	63	Lukoil	Moscova	Rusia	\$93.897	Petroleum refining
16	66	Siemens	Munchen	Germania	\$91.585	Industrial machinery
17	68	Carrefour	Boulogne-Billancourt	Franța	\$91.276	Retail
18	69	Nestlé	Vevey	Elveția	\$91.222	Consumer foods
19	75	Bosch Group	Stuttgart	Germania	\$87.997	Cars and car parts
20	77	Banco Santander	Madrid	Spania	\$87.401	Banking services
21	81	Deutsche Telekom	Bonn	Germania	\$84.481	Telecommunications
22	82	Crédit Agricole	Paris	Franța	\$84.222	Banking services
23	83	Enel	Roma	Italia	\$84.134	Utilities
24	88	Uniper	Düsseldorf	Germania	\$81.428	Energy
25	89	ENI	Roma	Italia	\$80.006	Petroleum refining
26	90	HSBC Holdings	Londra	Marea Britanie	\$79.637	Banking services
27	94	Electricité de France	Paris	Franța	\$78.490	Utilities
28	102	Tesco	Welwyn Garden City	Marea Britanie	\$75.405	Retail
29	104	Engie	Courbevoie	Franța	\$75.279	Energy

Rank in Europe	Global rank	Company	City	Country	Revenue (mil. \$)	Industry
30	105	Airbus Group	Leiden	Olanda	\$75.261	Aerospace and defense
31	108	Peugeot	Rueil-Malmaison	Franța	\$73.506	Cars and car parts
32	112	BASF	Ludwigshafen	Germania	\$72.677	Chemicals
33	115	Rosneft Oil	Moscova	Rusia	\$72.028	Petroleum refining
34	118	Royal Ahold Delhaize	Zaandam	Olanda	\$70.891	Retail
35	119	Deutsche Post DHL Group	Bonn	Germania	\$70.545	Postal services
36	120	Munich Re	Munchen	Germania	\$70.143	Insurance: life, health (stock)
37	121	Société Générale	Paris	Franța	\$69.948	Banking services
38	127	ArcelorMittal	Luxemburg	Luxemburg	\$68.679	Metals
39	134	Renault	Boulogne-Billancourt	Franța	\$66.247	Cars and car parts
40	139	Aegon	Haga	Olanda	\$65.437	Insurance: life, health (stock)
41	142	Zurich Insurance Group	Zurich	Elveția	\$63.961	Insurance: property and serious accidents (stock)
42	143	Aviva	Londra	Marea Britanie	\$63.934	Insurance: life, health (stock)
43	150	Equinor	Stavanger	Norvegia	\$61.187	Petroleum refining
44	151	Groupe BPCE	Paris	Franța	\$61.128	Banking services
45	156	Auchan Holding	Croix	Franța	\$60.028	Retail
46	158	Vodafone Group	Newbury	Marea Britanie	\$59.838	Telecommunications
47	164	Telefónica	Madrid	Spania	\$58.624	Telecommunications
48	169	Roche Group	Basel	Elveția	\$56.634	Pharmaceutical products
49	170	Anheuser-Busch InBev	Leuven	Belgia	\$56.444	Beverages
50	171	ING Group	Amsterdam	Olanda	\$56.347	Banking services
51	172	Legal & General Group	Londra	Marea Britanie	\$55.999	Insurance: life, health (stock)
52	173	Louis Dreyfus	Rotterdam	Olanda	\$55.440	Food production
53	189	Lloyds Banking Group	Londra	Marea Britanie	\$52.422	Banking services
54	193	Bayer	Leverkusen	Germania	\$51.933	Pharmaceutical products
55	196	Finatis	Paris	Franța	\$51.578	Retail
56	201	CNP Assurances	Paris	Franța	\$50.737	Insurance: life, health (stock)
57	203	Novartis	Basel	Elveția	\$50.135	Pharmaceutical products
58	205	Sberbank	Moscova	Rusia	\$49.698	Banking services
59	206	Continental	Hanovra	Germania	\$49.608	Cars and car parts
60	208	Dior (Christian)	Paris	Franța	\$49.221	Textiles
61	211	Deutsche Bahn	Berlin	Germania	\$48.124	Rail transport services
62	214	RWE	Essen	Germania	\$47.832	Utilities
63	218	ThyssenKrupp	Essen	Germania	\$47.389	Metals
64	223	Deutsche Bank	Frankfurt	Germania	\$46.511	Banking services
65	224	Banco Bilbao Vizcaya Argentaria	Bilbao	Spania	\$46.508	Banking services
66	225	Orange	Paris	Franța	\$46.324	Telecommunications
67	226	Vinci	Rueil-Malmaison	Franța	\$46.302	Engineering, constructions

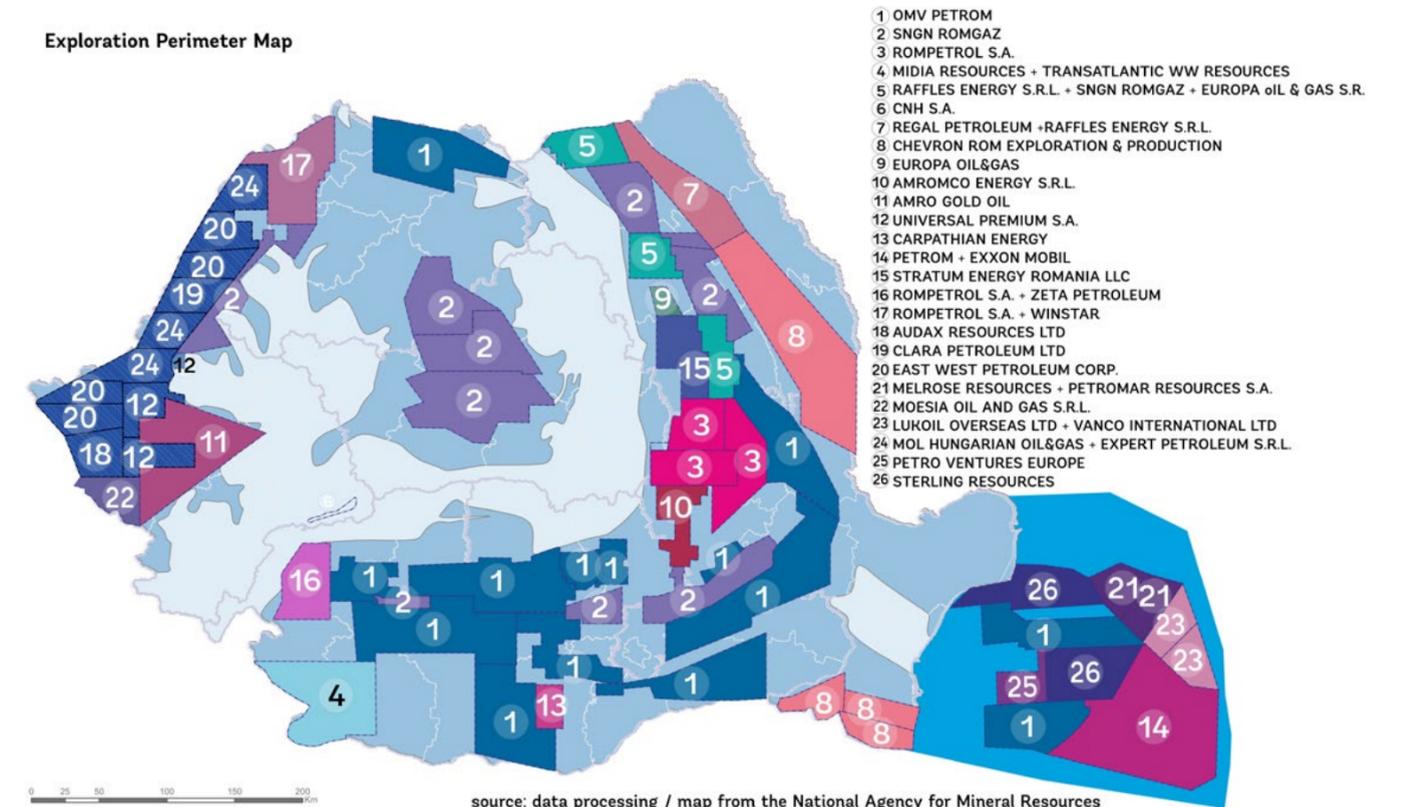
Rank in Europe	Global rank	Company	City	Country	Revenue (mil. \$)	Industry
68	231	Saint-Gobain	Courbevoie	Franța	\$46.002	Construction materials, glass
69	254	E.ON	Essen	Germania	\$42.795	Energy
70	257	Swiss Re	Zurich	Elveția	\$42.487	Insurance: property and serious accidents (stock)
71	262	Repsol	Madrid	Spania	\$41.863	Petroleum refining
72	265	SSE	Perth	Marea Britanie	\$41.383	Utilities
73	268	ZF Friedrichshafen	Friedrichshafen	Germania	\$41.080	Cars and car parts
74	269	Metro	Düsseldorf	Germania	\$40.957	Retail
75	271	Sanofi	Paris	Franța	\$40.810	Pharmaceutical products
76	277	Lufthansa Group	Koln	Germania	\$40.105	Air transport
77	278	Rio Tinto Group	Londra	Marea Britanie	\$40.030	Mining, oil processing
78	284	ACS	Madrid	Spania	\$39.338	Engineering, constructions
79	286	Volvo	Göteborg	Suedia	\$39.172	Cars and car parts
80	290	GlaxoSmithKline	Brentford	Marea Britanie	\$38.868	Pharmaceutical products
81	291	Talanx	Hanovra	Germania	\$38.603	Insurance: property and serious accidents (stock)
82	298	Fresenius	Bad Homburg	Germania	\$38.197	Healthcare: Medical equipment
83	303	Sainsbury (J.)	Londra	Marea Britanie	\$37.711	Retail
84	304	Poste Italiane	Roma	Italia	\$37.695	Insurance: life, health (stock)
85	305	Maersk Group	Copenhaga	Danemarca	\$37.500	Maritime shipping
86	306	UBS Group	Zurich	Elveția	\$37.317	Banking services
87	307	Bouygues	Paris	Franța	\$37.259	Engineering, constructions
88	310	Edeka Zentrale	Hamburg	Germania	\$37.125	Wholesalers: Food and groceries
89	316	Accenture	Dublin	Irlanda	\$36.766	IT services
90	318	Centrica	Windsor	Marea Britanie	\$36.083	Utilities
91	320	SNCF	St Denis	Franța	\$35.880	Rail transport services
92	324	Intesa Sanpaolo	Torino	Italia	\$35.752	Banking services
93	330	Iberdrola	Bilbao	Spania	\$35.240	Utilities
94	336	Barclays	Londra	Marea Britanie	\$34.507	Banking services
95	338	LyondellBasell Industries	Rotterdam	Olanda	\$34.484	Chemicals
96	341	ABB	Zurich	Elveția	\$34.312	Industrial machinery
97	355	DZ Bank	Frankfurt	Germania	\$33.563	Banking services
98	366	Chubb	Zurich	Elveția	\$32.243	Insurance: property and serious accidents (stock)
99	373	Credit Suisse Group	Zurich	Elveția	\$31.900	Banking services
100	377	BT Group	Londra	Marea Britanie	\$31.439	Telecommunications
101	382	CRH	Dublin	Irlanda	\$31.069	Construction materials, glass
102	389	Johnson Controls International	Plută	Irlanda	\$30.172	Industrial machinery
103	392	L'Oréal	Clichy	Franța	\$29.926	Home appliances
104	396	Medtronic	Dublin	Irlanda	\$29.710	Medical products and equipment
105	402	UniCredit Group	Milano	Italia	\$29.257	Banking services

Rank in Europe	Global rank	Company	City	Country	Revenue (mil. \$)	Industry
106	406	Air France-KLM Group	Paris	Franța	\$29.064	Air transport
107	408	Inditex	Arteixo	Spania	\$28.887	Specialized traders
108	412	Coop Group	Basel	Elveția	\$28.601	Retail
109	413	Compass Group	Chertsey	Marea Britanie	\$28.578	Miscellaneous
110	415	Migros Group	Zurich	Elveția	\$28.518	Retail
111	417	Phoenix Pharma	Mannheim	Germania	\$28.401	Wholesalers: Healthcare
112	419	Veolia Environnement	Paris	Franța	\$28.321	Utilities
113	423	Royal Philips	Amsterdam	Olanda	\$28.071	Medical products and equipment
114	424	Schneider Electric	Rueil-Malmaison	Franța	\$27.891	Electronics and electrical equipment
115	426	Danone	Paris	Franța	\$27.816	Consumer foods
116	429	Gas Natural Fenosa	Madrid	Spania	\$27.653	Utilities
117	434	La Poste	Paris	Franța	\$27.177	Postal services
118	435	Koç Holding	Istambul	Turcia	\$27.108	Energy
119	439	Mapfre Group	Madrid	Spania	\$26.817	Insurance: property and serious accidents (stock)
120	441	Adecco Group	Zurich	Elveția	\$26.670	Human resources and employment
121	444	LafargeHolcim	Jona	Elveția	\$26.545	Construction materials, glass
122	445	Altice	Amsterdam	Olanda	\$26.489	Telecommunications
123	446	SAP	Walldorf	Germania	\$26.446	Software
124	449	Anglo American	Londra	Marea Britanie	\$26.243	Mining, oil processing
125	450	Randstad Holding	Diemen	Olanda	\$26.234	Human resources and employment
126	453	British American Tobacco	Londra	Marea Britanie	\$26.128	Tobacco
127	460	International Airlines Group	Harmondsworth	Marea Britanie	\$25.894	Air transport
128	469	PKN ORLEN Group	Plock	Polonia	\$25.256	Petroleum refining
129	472	Achmea	Zeist	Olanda	\$24.872	Insurance: life, health (mutual)
130	475	Heineken Holding	Amsterdam	Olanda	\$24.831	Beverages
131	477	Energie Baden-Württemberg	Karlsruhe	Germania	\$24.769	Utilities
132	478	Michelin	Clermont-Ferrand	Franța	\$24.754	Cars and car parts
133	480	Adidas	Herzogenaurach	Germania	\$24.669	Textiles
134	482	Heraeus Holding	Hanau	Germania	\$24.622	Metals
135	486	Ceconomy	Düsseldorf	Germania	\$24.432	Specialized traders
136	491	Boehringer Ingelheim	Ingelheim	Germania	\$23.888	Pharmaceutical products
137	492	Rabobank	Utrecht	Olanda	\$23.812	Banking services
138	498	BAE Systems	Londra	Marea Britanie	\$23.592	Aerospace and defense
139	500	Ericsson	Stockholm	Suedia	\$23.556	Other network and communications equipment

Source: Fortune Global 500

The companies focusing on resource exploitation invest where they find available resources to exploit. The map below includes the resource exploitation sites and the companies which were leased those exploitation sites. The Black Sea area is currently of particular interest, as significant resources of natural gas have been found in that area, and exploitations sites have been leased to Exxon Mobil, OMV or Lukoil. These new investments may prove beneficial for both the Constanța Metropolitan Area and the entire country as a whole, although greater attention has to be paid to high added-value sectors.

Figure 19. Exploitation sites and operators in Romania



Source: data processing / map from the National Agency for Mneral resorces

The Romanian local administrations should start a dialogue with major European companies which are already present on the domestic market (such as Bosch or Daimler) or which have not yet established a local presence.

Among these are a few companies which if present in Romania, would mainly address export markets:

Volkswagen	Glencore	BASF
BMW	Thyssen Krupp	Bayer
Peugeot	Volvo	GlaxoSmithKline
ABB	Christian Dior	Schneider Electric
TUI	Adidas	Fresenius
Lyondell Basell Industries	Phoenix Pharma	Royal Philips
Boehringer Ingelheim	BAE Systems	

It suffices to take a look at the car production in various EU countries to see whether Romania still has room for growth and it is worthwhile to attract large European companies from key EU industrial sectors.

According to the International Organization of Motor Vehicle Manufacturers, Romania produced approximately 360,000 motor vehicles in 2017. In the same year, the Czech Republic manufactured more than 1,400,000 motor vehicles, Slovakia more than 1,000,000, Poland and Hungary more than 500,000. As such, in this sector alone, which is essential for the EU economy, Romania still has potential for growth.

To support growth, Romanian metropolitan areas should connect to as many large external markets as possible.

The easiest way to connect to such markets is by means of multinational companies, with global distribution networks and access to customers in multiple countries.

The large European companies are the easiest to attract and were the main investors in past years, and those which Romanian local administrations should try harder to engage. How to initiate and sustain such a dialogue is a matter for discussion in a separate chapter.

Attracting companies with easy access to US markets

The United States is the largest global market, but also a market which Romania did not easily access in the past years.

In 2016, just approximately 2.9% of Romania's exports (around \$1.89 billion) were bound for the US – a relatively modest share when considering the global scale of the American market.

However, the exports of goods have been mainly generated in high added-value sectors such as: "phones", "electrical panels", "gas turbines", "video monitors", or "tyres".

American companies have a rather low presence in Romania. Even if companies such as Microsoft, Google, Oracle or Amazon have a local presence, they are not significantly represented and are here rather to serve the national or regional market. Companies such as Ford, Honeywell, Philip Morris or Emerson are among the largest Romanian exporters, but there are many more global American companies without a presence in Romania, or which maintain no more than sales points in our country. Attracting American companies to Romania requires more effort than for European companies, since the American companies research investment opportunities at global level and pay attention to a multitude of criteria.

It is very important for Romanian local administrations to have teams that are specialised in attracting investors. A particular attention should be paid to companies such as:

General Electric	Hewlett-Packard	Apple
Procter & Gamble	Boeing	Dell
Intel	Merck	Disney
Pfizer	General Motors	Walt Disney
3M	Time Warner	Northrop Grumman
Raytheon	Halliburton	Xerox
Lockheed Martin		

Table 7. The largest US companies in 2018

Rank in Europe	Global rank	Company	City	State	Revenue (mil. \$)	Industry
1	1	Walmart	Bentonville	Arkansas	\$500.343	Retail
2	9	Exxon Mobil	Irving	Texas	\$244.363	Petroleum refining
3	10	Berkshire Hathaway	Omaha	Nebraska	\$242.137	Insurance: property and serious accidents (stock)
4	11	Apple	Cupertino	California	\$229.234	Computers, peripherals
5	13	McKesson	San Francisco	California	\$208.357	Wholesalers: Healthcare
6	15	UnitedHealth Group	Minnetonka	Minnesota	\$201.159	Healthcare: Insurance and healthcare
7	17	CVS Health	Woonsocket	Rhode Island	\$184.765	Healthcare: Pharmacy and other services
8	18	Amazon.com	Seattle	Washington	\$177.866	Internet services and retail
9	20	AT&T	Dallas	Texas	\$160.546	Telecommunications
10	21	General Motors	Detroit	Michigan	\$157.311	Cars and car parts
11	22	Ford Motor	Dearborn	Michigan	\$156.776	Cars and car parts
12	25	AmerisourceBergen	Chesterbrook	Pennsylvania	\$153.144	Wholesalers: Healthcare
13	33	Chevron	San Ramon	California	\$134.533	Petroleum refining
14	34	Cardinal Health	Dublin	Ohio	\$129.976	Wholesalers: Healthcare
15	35	Costco Wholesale	Issaquah	Washington	\$129.025	Retail
16	37	Verizon Communications	New York	New York	\$126.034	Telecommunications
17	39	Kroger	Cincinnati	Ohio	\$122.662	Pharmacy
18	41	General Electric	Boston	Massachusetts	\$122.274	Industrial machinery
19	43	Walgreens Boots Alliance	Deerfield	Illinois	\$118.214	Pharmacy
20	47	JPMorgan Chase & Co.	New York	New York	\$113.899	Banking services
21	48	Fannie Mae	Washington	District of Columbia	\$112.394	Various financial services
22	52	Alphabet	Mountain View	California	\$110.855	Internet services and retail
23	57	Home Depot	Atlanta	Georgia	\$100.904	Specialized traders

Rank in Europe	Global rank	Company	City	State	Revenue (mil. \$)	Industry
24	60	Bank of America Corp.	Charlotte	North Carolina	\$100.264	Banking services
25	61	Express Scripts Holding	St Louis	Missouri	\$100.065	Healthcare: Pharmacy and other services
26	62	Wells Fargo	San Francisco	California	\$97.741	Banking services
27	64	Boeing	Chicago	Illinois	\$93.392	Aerospace and defense
28	67	Phillips 66	Houston	Texas	\$91.568	Petroleum refining
29	70	Anthem	Indianapolis	Indiana	\$90.039	Healthcare: Insurance and healthcare
30	71	Microsoft	Redmond	Washington	\$89.950	Software
31	74	Valero Energy	San Antonio	Texas	\$88.407	Petroleum refining
32	76	Citigroup	New York	New York	\$87.966	Banking services
33	80	Comcast	Philadelphia	Pennsylvania	\$84.526	Telecommunications
34	92	International Business Machines	Armonk	New York	\$79.139	IT services
35	93	Dell Technologies	Round Rock	Texas	\$78.660	Computers, peripherals
36	95	State Farm Insurance Cos.	Bloomington	Illinois	\$78.331	Insurance: property and serious accidents (mutual)
37	100	Johnson & Johnson	New Brunswick	New Jersey	\$76.450	Pharmaceutical products
38	106	Freddie Mac	McLean	Virginia	\$74.676	Various financial services
39	116	Target	Minneapolis	Minnesota	\$71.879	Retail
40	123	U.S. Postal Service	Washington	District of Columbia	\$69.636	Postal services
41	128	Lowe's	Mooresville	North Carolina	\$68.619	Specialized traders
42	131	Marathon Petroleum	Findlay	Ohio	\$67.610	Petroleum refining
43	136	MetLife	New York	New York	\$66.153	Insurance: life, health (stock)
44	138	United Parcel Service	Atlanta	Georgia	\$65.872	Postal services
45	144	PepsiCo	Purchase	New York	\$63.525	Consumer foods
46	146	Intel	Santa Clara	California	\$62.761	Semiconductors and other electronic parts
47	147	DowDuPont	Midland	Delaware	\$62.683	Chemicals
48	152	Archer Daniels Midland	Chicago	Illinois	\$60.828	Food production
49	154	Aetna	Hartford	Connecticut	\$60.535	Healthcare: Insurance and healthcare
50	155	FedEx	Memphis	Tennessee	\$60.319	Postal services
51	157	Albertsons Cos.	Boise	Idaho	\$59.925	Retail
52	159	United Technologies	Farmington	Connecticut	\$59.837	Aerospace and defence
53	160	Prudential Financial	Newark	New Jersey	\$59.689	Insurance: life, health (stock)
54	174	Sysco	Houston	Texas	\$55.371	Wholesalers: Food and groceries
55	176	Disney (Walt)	Burbank	California	\$55.137	Entertainment
56	183	Humana	Louisville	Kentucky	\$53.767	Healthcare: Insurance and healthcare
57	187	Pfizer	New York	New York	\$52.546	Pharmaceutical products
58	190	HP	Palo Alto	California	\$52.056	Computers, peripherals
59	200	Lockheed Martin	Bethesda	Maryland	\$51.048	Aerospace and defense
60	207	American International Group	New York	New York	\$49.520	Insurance: property and serious accidents (stock)
61	210	Centene	St Louis	Missouri	\$48.572	Healthcare: Insurance and healthcare
62	212	Cisco Systems	San Jose	California	\$48.005	Other network and communications equipment

Rank in Europe	Global rank	Company	City	State	Revenue (mil. \$)	Industry
63	215	HCA Healthcare	Nashville	Tennessee	\$47.653	Healthcare: Medical equipment
64	217	Energy Transfer Equity	Dallas	Texas	\$47.487	Pipeline transport
65	233	Bunge	White Plains	New York	\$45.794	Food production
66	238	Caterpillar	Deerfield	Illinois	\$45.462	Construction and farming machinery
67	247	Nationwide	Columbus	Ohio	\$43.940	Insurance: property and serious accidents (mutual)
68	249	Morgan Stanley	New York	New York	\$43.642	Banking services
69	255	Liberty Mutual Insurance Group	Boston	Massachusetts	\$42.687	Insurance: property and serious accidents (stock)
70	258	New York Life Insurance	New York	New York	\$42.296	Insurance: life, health (mutual)
71	259	Goldman Sachs Group	New York	New York	\$42.254	Banking services
72	260	American Airlines Group	Fort Worth	Texas	\$42.207	Air transport
73	263	Cigna	Bloomfield	Connecticut	\$41.616	Healthcare: Insurance and healthcare
74	264	Charter Communications	Stamford	Connecticut	\$41.581	Telecommunications
75	266	Delta Air Lines	Atlanta	Georgia	\$41.244	Air transport
76	274	Facebook	Menlo Park	California	\$40.653	Internet services and retail
77	275	Honeywell International	Morris Plains	New Jersey	\$40.534	Electronics and electrical equipment
78	276	Merck	Kenilworth	New Jersey	\$40.122	Pharmaceutical products
79	293	Allstate	Northbrook	Illinois	\$38.524	Insurance: property and serious accidents (stock)
80	297	Tyson Foods	Springdale	Arkansas	\$38.260	Food production
81	301	United Continental Holdings	Chicago	Illinois	\$37.736	Air transport
82	302	Oracle	Redwood City	California	\$37.728	Software
83	319	TIAA	New York	New York	\$36.025	Insurance: life, health (mutual)
84	321	TJX	Framingham	Massachusetts	\$35.865	Specialized traders
85	327	American Express	New York	New York	\$35.583	Various financial services
86	328	Coca-Cola	Atlanta	Georgia	\$35.410	Beverages
87	334	Publix Super Markets	lakeland	Florida	\$34.837	Retail
88	340	Nike	Beaverton	Oregon	\$34.350	Textiles
89	344	Andeavor	San Antonio	Texas	\$34.204	Petroleum refining
90	351	World Fuel Services	Miami	Florida	\$33.696	Energy
91	356	Exelon	Chicago	Illinois	\$33.531	Utilities
92	357	Massachusetts Mutual Life	Springfield	Massachusetts	\$33.495	Insurance: life, health (mutual)
93	363	ConocoPhillips	Houston	Texas	\$32.584	Mining, oil processing
94	372	CHS	Inver Grove Heights	Minnesota	\$31.935	Food production
95	376	3M	Sfântul Paul	Minnesota	\$31.657	Miscellaneous
96	379	Time Warner	New York	New York	\$31.271	Entertainment
97	383	General Dynamics	Falls Church	Virginia	\$30.973	Aerospace and defense
98	386	Schlumberger	Houston	Texas	\$30.440	Miscellaneous
99	387	Rite Aid	Camp Hill	Pennsylvania	\$30.215	Retail
100	390	United Services Auto. Assn.	San Antonio	Texas	\$30.016	Insurance: property and serious accidents (stock)
101	391	Capital One Financial	McLean	Virginia	\$29.999	Banking services
102	394	Deere	Moline	Illinois	\$29.738	Construction and farming machinery

Rank in Europe	Global rank	Company	City	State	Revenue (mil. \$)	Industry
103	400	INTL Fcstone	New York	New York	\$29.424	Various financial services
104	401	Northwestern Mutual	Milwaukee	Wisconsin	\$29.331	Insurance: life, health (mutual)
105	403	Enterprise Products	Houston	Texas	\$29.242	Pipeline transport
106	407	Travelers Cos.	New York	New York	\$28.902	Insurance: property and serious accidents (stock)
107	409	Hewlett Packard Enterprise	Palo Alto	California	\$28.871	Computers, peripherals
108	411	Philip Morris International	New York	New York	\$28.748	Tobacco
109	416	Twenty-First Century Fox	New York	New York	\$28.500	Entertainment
110	422	AbbVie	North Chicago	Illinois	\$28.216	Pharmaceutical products
111	433	Abbott Laboratories	Abbott Park	Illinois	\$27.390	Medical products and equipment
112	437	Progressive	Mayfield Village	Ohio	\$26.839	Insurance: property and serious accidents (stock)
113	451	Kraft Heing	Pittsburgh	Pennsylvania	\$26.232	Consumer foods
114	452	Plains GP Holdings	Houston	Texas	\$26.223	Pipeline transport
115	455	Gilead Sciences	Foster City	California	\$26.107	Pharmaceutical products
116	459	Mondelez International	Deerfield	Illinois	\$25.896	Consumer foods
117	461	Northrop Grumman	Falls Church	Virginia	\$25.803	Aerospace and defense
118	467	Raytheon	Waltham	Massachusetts	\$25.348	Aerospace and defense
119	473	Macy's	Cincinnati	Ohio	\$24.837	Retail
120	484	DXC Technology	Tysons	Virginia	\$24.556	IT services
121	488	US Foods Holding	Rosemont	Illinois	\$24.147	Wholesalers: Food and groceries
122	490	U.S. Bancorp	Minneapolis	Minnesota	\$23.996	Banking services

Source: Fortune Global 500

IRELAND

A good example to follow for Romania is that of Ireland. In 1973, at the time when it joined the EU, Ireland was one of the poorest countries in the Union, with a GDP per capita at merely 75% of the EU average. Meanwhile, Ireland became one of the highest performing countries in the world and the second most productive EU economy after Luxembourg. Ireland's GDP per capita is now twice higher than the EU average. Ireland's performance stands somehow in contrast with the more modest performance of countries such as Greece, Portugal, Spain or Italy, which meanwhile reached GDPs per capita below the EU average.

To a large extent, Ireland's owes its chance to the country's welcoming of foreign investors and to its large and active Irish community in the US. Over the past years, companies such as Microsoft, Intel, Apple, Facebook or Oracle chose Ireland to expand their EU presence. These five companies together produce double the Romania's GDP in Ireland. It does not require too much effort to imagine what the presence of companies such as Microsoft, Intel, Apple, Facebook and Oracle would mean to Romania if it were at the same level as in Ireland. Of course, we would have to consider what Ireland has to offer to such companies (e.g. highly educated, English-speaking population) versus what Romania could offer. To that extent, we will also discuss about the advantages and drawbacks of metropolitan areas in Romania.

The connection to the US market is important not only in view of its size, but particularly of the fact the US generate the highest share of disruptive innovations that determine the overall direction of the global economy.

No other country manage to emulate the success of the US in bringing disruptive innovations, and there are little chances others will in the near future. For this reason, a presence of innovative American companies in Romania can set the stage for a quicker and more efficient adaptation of these innovations to the Romanian market.

As shown in the table below, Europe specializes in industries with medium research and development intensity, while the US is specialized in high research and development intensive industries. Europe generates marginal innovations (a more effective engine, for instance), in fields in which it already holds a competitive advantage (such as the automotive industry), while the US bring disruptive innovations in new fields (such as software).

Table 8. Relative technological advance (RTA) ratios per industry, 2007

	Europa	SUA
Aerospace and defense	1,5	1,13
Cars and car parts	1,26	0,58
Biotechnology	0,32	2,2
Products of the chemical industry	1,31	0,64
Commercial vehicles and trucks	1,3	1,06
Hardware and IT services	0,08	1,39
Electrical components and equipment	1,56	0,18
Electronic and electronic office equipment	0,18	0,37
Fixed and mobile telecommunications	1,53	0,2
Food, beverages and tobacco	0,92	0,74
General industrial equipment	0,61	1,49
Healthcare equipment and services	0,7	1,86
Home appliances	0,84	1,6
Industrial machinery	1,84	0,24
Industrial metals	1	0,3
Internet	0	2,54
Petroleum products	1	0,85
Personal care goods	1,44	0,69
Pharmaceutical products	1,27	1,16
Semiconductors	0,5	1,72
Software	0,51	2,05
Support services	0,78	1,19
Telecommunications equipment	1,38	1,09

Source: World Bank. 2012. Golden Growth: Restoring the lustre of the European economic model

Note: The relative technological advance is calculated as the ratio between the research and development activities in a specific industry and the research and development activities as a whole in the respective country or region. A relative technological advantage ratio below 1 means the respective region/country is technologically specialized in the respective industry. Japan and the rest of the world are not included due to the insufficient observations regarding the breakdown across different industries.

The innovation-based growth industries are emphasized with bold and italic characters.

The advantage of the US versus Europe is that it has a homogeneous market and a common language and culture. Thus, an innovation originating in California can be easily tested in any American university. On the other hand, an innovation originating in Spain cannot be as easily tested in a Finnish university – the language, culture, and patent registration differences would make this quite difficult.

Moreover, if Spain were to generate an innovation as disruptive as the iPhone, the type of innovation which nearly wiped Nokia off the mobile phone market, this would lead to political and social tensions quite difficult to overcome. The fact that the California-based iPhone almost bankrupted the Illinois-based Motorola is easier to accept in the US, since the added value remained within the same borders. On the other hand, if an innovation in an EU country caused a recession in another EU country, the arising tensions would be much higher.

Presently, the US is best placed to bring disruptive innovations. To keep the pace with such innovations, Romanian cities need to be better connected to American markets and have to use all the comparative advantages (for instance, the performance in the IT sector) to secure the strongest connections possible.

Attracting companies with easy access to East Asia markets

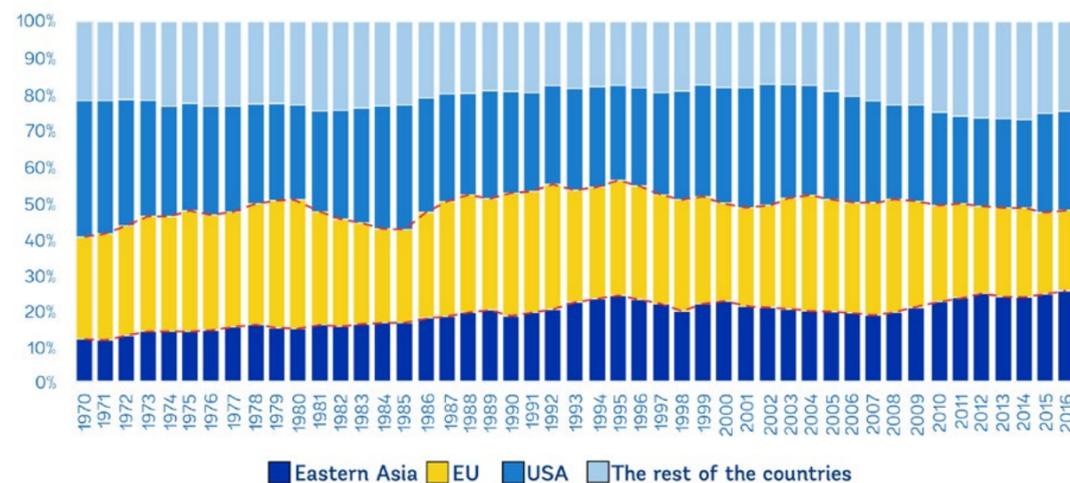
The US and the EU together account for approximately half of the global consumption. The access to these two markets is vital for Romanian metropolises. The recent development of Romanian cities was made possible by the very access to EU markets and the massive investments of European companies in Romania. The access to the US market, particularly in terms of connecting to companies which bring disruptive innovation and set the stage for tomorrow's evolution, is also critically important for sustaining the performance of the Romanian economy. However, it will be increasingly important for Romania to connect with the East Asian market.

In 1970, East Asia's share in the global consumption was just 11%. In 2016, this share reached 25%, particularly against the background of the fast growing Chinese economy, and is currently above the EU's share at global level.

Today, East Asia is the region with the highest increase in consumption at world level.

It is paramount for metropolitan areas to assess the potential opportunities created by such markets.

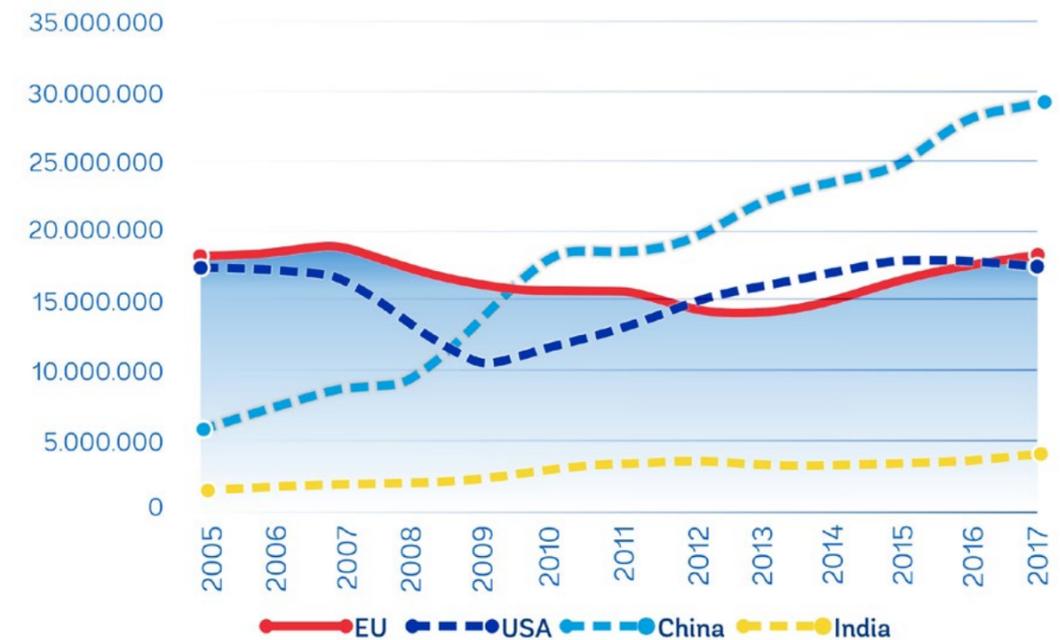
Figure 20. Share in the global consumption per regions



Source: The World Bank

If we examined, for instance, the global sales of cars, we would see the EU and US markets did not grow in the past years. On the other hand, the sales of motor vehicles in China grew from around 5.75 million units in 2005 to nearly 30 million units in 2017. Currently, China is the largest market for motor vehicles in the world, outranking the US and the EU in this respect. Obviously, the fact that many motor vehicles are bought in China does not mean that Romanian car manufacturers will easily enter this market – particularly since many other car manufacturers are already present with own production facilities on the Chinese market. However, these figures show the Chinese market is growing at a quick pace, a fact that Romanian authorities should be aware of.

Figure 21. Motor vehicle sales in various countries / regions



Source: International Organization of Motor Vehicle Manufacturers

Besides the Chinese market, other multinational companies of East Asia should also be taken into account, notably from Japan and South Korea, which currently serve global markets. The table below includes the largest East Asia companies. Some of the companies which would be worth attracting locally in Romania, particularly with production facilities, include the following:

Samsung	Hitachi	Nissan
Panasonic	Sony	Toshiba
Mitsubishi	Hyundai	Fujitsu
Marubeni	Itoku	LG
Kia	Suzuki	Huawei
Sharp	Lenovo	Magda
Komatsu		

A large share of the companies with access to global markets are from Japan and South Korea. Since both Japan and South Korea have very active embassies in Romania and are proactively seeking to enable dialogue with Japanese and Korean companies, it is essential for Romanian local administrations to have close relations with such embassies.

Table 9. Largest East-Asian companies, 2018

Rank in Europe	Global rank	Company	City	Country	Revenue (mil. \$)	Industry
1	2	State Grid	Beijing	China	\$348.903	Utilities
2	3	Sinopec Group	Beijing	China	\$326.953	Petroleum refining
3	4	China National Petroleum	Beijing	China	\$326.008	Petroleum refining
4	6	Toyota Motor	Toyota	Japonia	\$265.172	Cars and car parts
5	12	Samsung Electronics	Suwon	Coreea de Sud	\$211.940	Electronics and electrical equipment
6	23	China State Construction Engineering	Beijing	China	\$156.071	Engineering, constructions
7	24	Hon Hai Precision Industry	New Taipei City	Taiwan	\$154.699	Electronics and electrical equipment
8	26	Industrial & Commercial Bank of China	Beijing	China	\$153.021	Banking services
9	29	Ping An Insurance	Shenzhen	China	\$144.197	Insurance: life, health (stock)
10	30	Honda Motor	Tokyo	Japonia	\$138.646	Cars and car parts
11	31	China Construction Bank	Beijing	China	\$138.594	Banking services
12	32	Trafigura Group	Singapore	Singapore	\$136.421	Retail
13	36	SAIC Motor	Shanghai	China	\$128.819	Cars and car parts
14	40	Agricultural Bank of China	Beijing	China	\$122.366	Banking services
15	42	China Life Insurance	Beijing	China	\$120.224	Insurance: life, health (stock)
16	45	Japan Post Holdings	Tokyo	Japonia	\$116.616	Insurance: life, health (stock)
17	46	Bank of China	Beijing	China	\$115.423	Banking services
18	53	China Mobile Communications	Beijing	China	\$110.159	Telecommunications
19	54	Nissan Motor	Yokohama	Japonia	\$107.868	Cars and car parts
20	55	Nippon Tel. & Tel.	Tokyo	Japonia	\$106.500	Telecommunications
21	56	China Railway Engineering	Beijing	China	\$102.767	Engineering, constructions
22	58	China Railway Construction	Beijing	China	\$100.855	Engineering, constructions
23	65	Dongfeng Motor	Wuhan	China	\$93.294	Cars and car parts
24	72	Huawei Investment & Holding	Shenzhen	China	\$89.311	Other network and communications equipment
25	78	Hyundai Motor	Seul	Coreea de Sud	\$85.259	Cars and car parts
26	79	Hitachi	Tokyo	Japonia	\$84.559	Electronics and electrical equipment
27	84	SK Holdings	Seul	Coreea de Sud	\$83.544	Petroleum refining
28	85	SoftBank Group	Tokyo	Japonia	\$82.665	Telecommunications
29	86	China Resources	Hong Kong	China	\$82.184	Pharmaceutical products
30	87	China National Offshore Oil	Beijing	China	\$81.482	Mining, oil processing
31	91	China Communications Construction	Beijing	China	\$79.417	Inginerie, Constructii
32	96	Pacific Construction Group	Urumqi	China	\$77.205	Inginerie, Constructii
33	97	Sony	Tokyo	Japonia	\$77.116	Electronice și Echipamente electrice
34	98	Sinochem	Beijing	China	\$76.765	Retail
35	99	JXTG Holdings	Tokyo	Japonia	\$76.629	Rafinarea petrolului
36	101	China Energy Investment	Beijing	China	\$75.522	Minerit, Procesarea țițeiului
37	103	AEON	Chiba	Japonia	\$75.339	Retail
38	109	China Minmetals	Beijing	China	\$72.997	Metale
39	110	China Southern Power Grid	Guangzhou	China	\$72.787	Utilități

Rank in Europe	Global rank	Company	City	Country	Revenue (mil. \$)	Industry
40	111	Amer International Group	Shenzhen	China	\$72.766	Metals
41	113	China Post Group	Beijing	China	\$72.197	Postal services
42	114	Panasonic	Osaka	Japonia	\$72.045	Electronics and electrical equipment
43	117	People's Insurance Co. of China	Beijing	China	\$71.579	Insurance: property and serious accidents (stock)
44	122	COFCO	Beijing	China	\$69.669	Retail
45	124	Beijing Automotive Group	Beijing	China	\$69.591	Cars and car parts
46	125	China FAW Group	Changchun	China	\$69.524	Cars and car parts
47	126	Nippon Life Insurance	Osaka	Japonia	\$68.684	Insurance: life, health (mutual)
48	129	Mitsubishi	Tokyo	Japonia	\$68.301	Retail
49	130	Marubeni	Tokyo	Japonia	\$68.057	Retail
50	132	Tewoo Group	Tianjin	China	\$66.577	Retail
51	140	China North Industries	Beijing	China	\$64.646	Aerospace and defense
52	141	China Telecommunications	Beijing	China	\$63.974	Telecommunications
53	145	Dai-ichi Life	Tokyo	Japonia	\$63.522	Insurance: life, health (stock)
54	149	CITIC Group	Beijing	China	\$61.316	Various financial services
55	161	Aviation Industry Corp. of China	Beijing	China	\$59.263	Aerospace and defense
56	162	China Baowu Steel Group	Shanghai	China	\$59.255	Metals
57	165	Toyota Tsusho	Nagoya	Japonia	\$58.586	Retail
58	167	ChemChina	Beijing	China	\$57.989	Chemicals
59	168	Bank of Communications	Shanghai	China	\$57.711	Banking services
60	177	Mitsubishi UFJ Financial Group	Tokyo	Japonia	\$54.769	Banking services
61	178	LG Electronics	Seul	Coreea de Sud	\$54.314	Electronics and electrical equipment
62	179	Seven & I Holdings	Tokyo	Japonia	\$54.217	Retail
63	181	JD.com	Beijing	China	\$53.965	Internet services and retail
64	182	PowerChina	Beijing	China	\$53.870	Engineering, constructions
65	184	POSCO	Seul	Coreea de Sud	\$53.244	Metals
66	185	Shandong Weiqiao Pioneering	Shandong	China	\$53.203	Textiles
67	186	Tokyo Electric Power	Tokyo	Japonia	\$52.809	Utilities
68	188	Korea Electric Power	Jeollanam-do	Coreea de Sud	\$52.492	Utilities
69	191	Petronas	Kuala Lumpur	Malaezia	\$52.028	Petroleum refining
70	192	Sumitomo Mitsui Financial Group	Tokyo	Japonia	\$52.026	Banking services
71	194	Sinopharm	Beijing	China	\$51.844	Pharmaceutical products
72	198	Nippon Steel & Sumitomo Metal	Tokyo	Japonia	\$51.164	Metals
73	202	Guangzhou Automobile Industry Group	Guangzhou	China	\$50.323	Cars and car parts
74	204	Itochu	Osaka	Japonia	\$49.732	Retail
75	209	Tokio Marine Holdings	Tokyo	Japonia	\$48.731	Insurance: property and serious accidents (stock)
76	213	China Merchants Bank	Shenzhen	China	\$47.951	Banking services
77	219	Kia Motors	Seul	Coreea de Sud	\$47.360	Cars and car parts

Rank in Europe	Global rank	Company	City	Country	Revenue (mil. \$)	Industry
78	220	China Pacific Insurance	Shanghai	China	\$47.319	Insurance: life, health (stock)
79	221	MS&AD Insurance	Tokyo	Japonia	\$47.095	Insurance: property and serious accidents (stock)
80	222	Aluminum Corp. of China	Beijing	China	\$46.684	Metals
81	227	Shanghai Pudong Devel. Bank	Shanghai	China	\$46.295	Banking services
82	229	Denso	Kariya	Japonia	\$46.106	Cars and car parts
83	230	China Evergrande Group	Shenzhen	China	\$46.019	Real estate services
84	234	Shandong Energy Group	Jinan	China	\$45.650	Mining, oil processing
85	235	Hengli Group	Suzhou City	China	\$45.563	Textiles
86	236	KDDI	Tokyo	Japonia	\$45.508	Telecommunications
87	237	Industrial Bank	Fuzhou	China	\$45.491	Banking services
88	239	HBIS Group	Shijiazhuang	China	\$45.390	Metals
89	240	Lenovo Group	Hong Kong	China	\$45.350	Computers, peripherals
90	242	China South Industries Group	Beijing	China	\$44.785	Aerospace and defense
91	243	China National Bldg. Material Group	Beijing	China	\$44.701	Construction materials, glass
92	244	Hanwha	Seul	Coreea de Sud	\$44.590	Insurance: life, health (stock)
93	245	China Shipbuilding Industry	Beijing	China	\$44.431	Maritime shipping
94	246	Mitsui	Tokyo	Japonia	\$44.155	Retail
95	248	Wilmar International	Singapore	Singapore	\$43.846	Food production
96	250	Sumitomo	Tokyo	Japonia	\$43.570	Retail
97	251	China Minsheng Banking	Beijing	China	\$43.298	Banking services
98	252	Greenland Holding Group	Shanghai	China	\$42.970	Real estate services
99	256	Sinomach	Beijing	China	\$42.638	Industrial machinery
100	267	Zhejiang Geely Holding Group	Hangzhou	China	\$41.172	Cars and car parts
101	270	Wuchan Zhongda Group	Hangzhou	China	\$40.929	Retail
102	273	China United Network Communications	Beijing	China	\$40.664	Telecommunications
103	279	Mitsubishi Electric	Tokyo	Japonia	\$39.995	Electronics and electrical equipment
104	280	China Merchants Group	Hong Kong	China	\$39.971	Postal services
105	283	Jardine Matheson	Hong Kong	China	\$39.456	Cars and car parts
106	285	Pegatron	Taipei	Taiwan	\$39.238	Electronics and electrical equipment
107	288	Shaanxi Yanchang Petroleum	Xi'an	China	\$38.898	Mining, oil processing
108	289	China Huaneng Group	Beijing	China	\$38.872	Energy
109	294	Shaanxi Coal & Chemical Industry	Xi'an	China	\$38.483	Mining, oil processing
110	295	AIA Group	Hong Kong	China	\$38.330	Insurance: life, health (stock)
111	300	Alibaba Group Holding	Hangzhou	China	\$37.771	Internet services and retail
112	309	Meiji Yasuda Life Insurance	Tokyo	Japonia	\$37.160	Insurance: life, health (mutual)
113	311	Mitsubishi Heavy Industries	Tokyo	Japonia	\$37.103	Industrial machinery
114	312	China Poly Group	Beijing	China	\$37.002	Real estate services
115	313	Fujitsu	Tokyo	Japonia	\$36.991	IT services
116	317	Canon	Tokyo	Japonia	\$36.388	Computers, peripherals

Rank in Europe	Global rank	Company	City	Country	Revenue (mil. \$)	Industry
117	322	China Everbright Group	Beijing	China	\$35.840	Banking services
118	323	Midea Group	Foshan	China	\$35.794	Electronics and electrical equipment
119	326	Toshiba	Tokyo	Japonia	\$35.630	Electronics and electrical equipment
120	329	Aisin Seiki	Kariya	Japonia	\$35.281	Cars and car parts
121	331	Tencent Holdings	Shenzhen	China	\$35.179	Internet services and retail
122	332	China Vanke	Shenzhen	China	\$35.117	Real estate services
123	333	China Energy Engineering	Beijing	China	\$35.048	Engineering, constructions
124	335	China COSCO Shipping	Shanghai	China	\$34.668	Maritime shipping
125	339	Noble Group	Hong Kong	China	\$34.421	Retail
126	342	Daiwa House Industry	Osaka	Japonia	\$34.262	Engineering, constructions
127	343	China Aerospace Science & Technology	Beijing	China	\$34.254	Aerospace and defense
128	346	China Aerospace Science & Industry	Beijing	China	\$34.073	Aerospace and defense
129	347	Sompo Holdings	Tokyo	Japonia	\$34.028	Insurance: property and serious accidents (stock)
130	348	Suzuki Motor	Hamamatsu	Japonia	\$33.912	Cars and car parts
131	350	Sumitomo Life Insurance	Osaka	Japonia	\$33.821	Insurance: life, health (mutual)
132	352	Mitsubishi Chemical Holdings	Tokyo	Japonia	\$33.616	Chemicals
133	353	Country Garden Holdings	Foshan	China	\$33.572	Real estate services
134	354	Quanta Computer	Taoyuan	Taiwan	\$33.564	Computers, peripherals
135	358	JFE Holdings	Tokyo	Japonia	\$33.202	Metals
136	359	Jizhong Energy Group	Xingtai	China	\$33.188	Mining, oil processing
137	360	Xiamen ITG Holding Group	Xiamen	China	\$32.902	Retail
138	361	Cedar Holdings Group	Guangzhou	China	\$32.712	Retail
139	362	Xiamen C&D	Xiamen	China	\$32.588	Retail
140	364	Jiangsu Shagang Group	Zhangjiagang	China	\$32.561	Metals
141	365	Bridgestone	Tokyo	Japonia	\$32.495	Cars and car parts
142	367	Mizuho Financial Group	Tokyo	Japonia	\$32.142	Banking services
143	368	Taiwan Semiconductor	Hsinchu	Taiwan	\$32.126	Semiconductors and other electronic parts
144	369	China Electronics	Beijing	China	\$31.990	Electronics and electrical equipment
145	370	Jiangxi Copper	Guixi	China	\$31.964	Mining, oil processing
146	371	China National Aviation Fuel Group	Beijing	China	\$31.942	Retail
147	374	CK Hutchison Holdings	Hong Kong	China	\$31.892	Specialized traders
148	375	Xiamen Xiangyu Group	Xiamen City	China	\$31.676	Retail
149	378	Mazda Motor	Hiroshima	Japonia	\$31.356	Cars and car parts
150	380	Hyundai Mobis	Seul	Coreea de Sud	\$31.091	Cars and car parts
151	381	Xinxing Cathay International	Beijing	China	\$31.078	Metals
152	384	Subaru	Tokyo	Japonia	\$30.735	Cars and car parts
153	385	CRRC	Beijing	China	\$30.634	Industrial machinery
154	388	China Electronics Technology Group	Beijing	China	\$30.176	Aerospace and defence

Rank in Europe	Global rank	Company	City	Country	Revenue (mil. \$)	Industry
155	393	China State Shipbuilding	Beijing	China	\$29.797	Maritime shipping
156	395	State Power Investment	Beijing	China	\$29.727	Energy
157	397	China Huadian	Beijing	China	\$29.612	Utilities
158	398	Idemitsu Kosan	Tokyo	Japonia	\$29.606	Petroleum refining
159	399	Yankuang Group	Shandong	China	\$29.474	Mining, oil processing
160	404	Compal Electronics	Taipei	Taiwan	\$29.175	Computers, peripherals
161	410	Cathay Life Insurance	Taipei	Taiwan	\$28.805	Insurance: life, health (stock)
162	418	Medipal Holdings	Tokyo	Japonia	\$28.398	Wholesalers: Healthcare
163	420	Kansai Electric Power	Osaka	Japonia	\$28.283	Utilities
164	421	Samsung Life Insurance	Seul	Coreea de Sud	\$28.273	Insurance: life, health (stock)
165	425	Sumitomo Electric Industries	Osaka	Japonia	\$27.820	Cars and car parts
166	427	Suning.com Group	Nanjing	China	\$27.806	Specialized traders
167	428	Ansteel Group	Anshan	China	\$27.792	Metals
168	431	Shougang Group	Beijing	China	\$27.489	Metals
169	432	Wistron	Taipei	Taiwan	\$27.480	Computers, peripherals
170	436	CPC	Kaohsiung	Taiwan	\$27.106	Petroleum refining
171	438	GS Caltex	Seul	Coreea de Sud	\$26.821	Petroleum refining
172	442	SK Hynix	Gyeonggi	Coreea de Sud	\$26.636	Semiconductors and other electronic parts
173	443	East Japan Railway	Tokyo	Japonia	\$26.627	Rail transport services
174	456	Xinjiang Guanghui Industry	Urumqi	China	\$26.106	Retail
175	458	Samsung C&T	Seul	Coreea de Sud	\$25.902	Retail
176	462	Chubu Electric Power	Nagoya	Japonia	\$25.753	Utilities
177	463	NEC	Tokyo	Japonia	\$25.673	IT services
178	464	Yango Longking Group	Fuzhou	China	\$25.605	Various financial services
179	465	China Taiping Insurance Group	Hong Kong	China	\$25.598	Insurance: life, health (mutual)
180	466	Flex	Singapore	Singapore	\$25.441	Semiconductors and other electronic parts
181	468	China Datang	Beijing	China	\$25.299	Energy
182	471	KB Financial Group	Seul	Coreea de Sud	\$25.052	Banking services
183	479	Fubon Financial Holding	Taipei	Taiwan	\$24.688	Insurance: life, health (stock)
184	481	Shanxi Jincheng Anthracite Coal Mining	Jincheng	China	\$24.659	Mining, oil processing
185	483	LG Display	Seul	Coreea de Sud	\$24.585	Electronics and electrical equipment
186	489	Taikang Insurance Group	Beijing	China	\$24.058	Insurance: life, health (mutual)
187	493	CJ Corp.	Seul	Coreea de Sud	\$23.796	Specialized traders
188	494	Yangquan Coal Industry Group	Yangquan	China	\$23.793	Mining, oil processing
189	495	Shanxi LuAn Mining Group	Changzhi	China	\$23.785	Mining, oil processing
190	496	Henan Energy & Chemical	Zhengzhou	China	\$23.699	Mining, oil processing
191	497	Datong Coal Mine Group	Datong	China	\$23.698	Mining, oil processing
192	499	Qingdao Haier	Qingdao	China	\$23.563	Electronics and electrical equipment

Source: Fortune Global 500

When looking at the large companies in Europe, US and East Asia, it is clear that Asian companies are the least represented at local levels in Romania.

The presence of East Asian companies in Romania is particularly important for small industrial urban centres, since they are manufacturers of consumer goods on the global market.

How can Romanian metropolises **ATTRACT MORE PEOPLE**

The fact that a metropolitan area generates more exports does not necessarily mean it is more developed, although it could not develop without exports. At the same time, an investment by a multinational company with access to global markets does not automatically materialize into wealth for the local population unless that multinational company offers generous wages.

In its report "Magnet Cities", the World Bank held that the development level of an urban area can be assessed by measuring the attractiveness of that area – i.e. by measuring how many people moved, would move, commute and would commute to that area.

A metropolitan area which attracts people clearly has some important benefits to offer. For instance, it provides citizens with many career opportunities, better quality of life, access to quality education, access to specialized health services, or better connectivity.

According to the migration data from the 2011 census, the functional urban areas which managed to attract most migrants per one thousand inhabitants were: Cluj-Napoca, Timișoara, Iași, Bucharest, Sibiu and Alba Iulia. The functional urban areas which managed to attract the most commuters per one thousand inhabitants were: Pitești, Deva, Târgoviște, Ploiești, Alba Iulia and Bucharest.

The World Bank also carried out a national survey to identify the areas that Romanians find most attractive. The following table outlines the results of that survey.

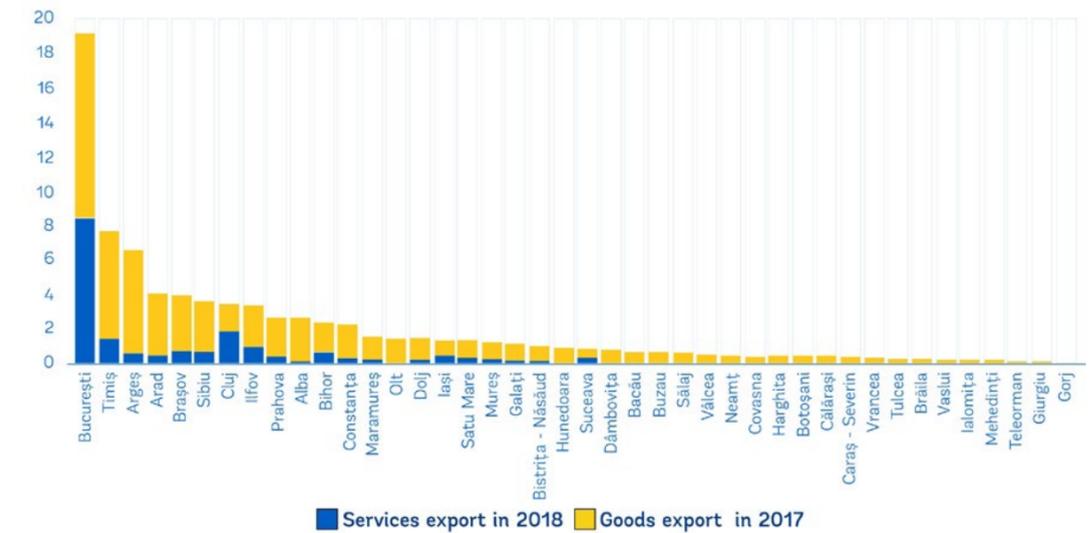
Table 10. The cities in Romania people would most like to live in

FUAs	Which city would you most like to live in?	Which city, different than the one you live in now, would you most like to live in?	Share of FUA in total national population	Why do you prefer this city?				
				Job	Quality of Life	Educational Services	Specialized Healthcare	Other Reason
Bucharest	15.23%	14.46%	13.43%	4,24	4,18	4,04	4,13	3,08
Cluj-Napoca	11.37%	15.32%	2.34%	4,22	4,27	3,71	4,11	3,5
Timișoara	9.14%	11.88%	2.52%	4,29	4,49	4,11	3,94	2,32
Brașov	8.53%	11.53%	2.27%	3,8	4,42	3,56	3,74	4,25
Constanța	5.18%	3.96%	2.72%	3,37	4,22	2,82	3,39	4,71
Sibiu	4.06%	5.16%	1.34%	4	4,33	3,51	3,59	3,86
Iași	3.76%	4.30%	2.06%	4,09	4,53	3,97	3,46	2,75
Oradea	2.64%	2.24%	1.67%	4,35	4,92	3,79	4,3	3
Suceava	2.23%	1.89%	0.91%	2,89	3,71	2,83	3,17	3
Târgu Mureș	2.13%	1.56%	1.25%	3,8	3,3	3,3	2,85	3,78
Pitești	1.93%	2.41%	1.73%	3,68	3,83	3,05	3,37	2,5
Piatra Neamț	1.93%	1.72%	0.74%	3,63	4,28	3,19	3,7	3,75
Râmnicu Vâlcea	1.73%	1.90%	1.16%	2,88	4,06	3,24	3,24	4,4
Arad	1.62%	1.20%	1.48%	3,38	4	3,56	3,5	3,7
Galați	1.52%	0.34%	1.69%	2	3,73	2,87	3,33	X
Ploiești	1.52%	0.52%	2.52%	3,13	4,4	3,67	3,4	4
Baia Mare	1.32%	1.03%	1.07%	3,63	4,38	3,25	4,25	3,5
Craiova	1.32%	1.38%	1.89%	4	4,54	3	4,08	4,33
Miercurea Ciuc	1.02%	0.17%	0.49%	2,9	4	3,3	3,7	3,6
Târgu Jiu	1.02%	0.00%	0.72%	4,4	4	4,1	4,1	2,75
Târgoviște	0.91%	0.52%	1.05%	3,44	3,78	3,56	3,56	2,67
Bacău	0.91%	1.20%	1.14%	3,22	3,89	3,11	3,22	5
Alexandria	0.81%	0.34%	0.35%	3,75	3,88	3,13	3,88	2,75
Bužău	0.81%	0.69%	1.28%	4,2	4,8	3,8	3,8	5
Deva	0.81%	0.34%	0.79%	4,67	4,5	3,63	4,38	X
Reșița	0.81%	0.69%	0.40%	4	4,43	2,43	4,25	X
Brăila	0.81%	0.34%	0.98%	3,25	3,75	2,5	3,25	3
Focșani	0.71%	0.00%	0.86%	2,5	4,14	3,43	2,67	3
Giurgiu	0.71%	1.03%	0.40%	3,43	4,29	2,57	3,71	2
Slatina	0.71%	0.00%	0.66%	4,8	4,8	4,8	4,4	2
Botoșani	0.71%	0.34%	0.64%	3,29	4,14	2,71	4	4
Vaslui	0.61%	0.34%	0.40%	4,5	4,5	3,25	4,75	2
Alba Iulia	0.51%	0.17%	0.56%	2,25	3,5	3,4	2,5	3
Bistrița	0.51%	0.52%	0.63%	2,8	4,4	3,4	3,4	4,67
Satu Mare	0.51%	0.52%	0.97%	4,4	4	3,6	3,8	3,67
Sfântu Gheorghe	0.51%	0.86%	0.42%	3,2	4,8	2	3,2	X
Slobozia	0.41%	0.69%	0.40%	3,5	5	3	5	X
Zalău	0.41%	0.34%	0.45%	1,5	3	1,5	1,5	1
Drobeta-Turnu Severin	0.30%	0.00%	0.60%	3,33	4	3,67	3	X
Călărași	0.20%	0.00%	0.52%	2	2,5	2,5	1,5	4
Tulcea	0.20%	0.34%	0.47%	5	5	3	3	5

Source: 2017. Magnet Cities: Migration and commuting in Romania, Washington D.C.: The World Bank

It is important to note that the highest exporting areas are not necessarily the most attractive for people. For instance, the Argeș and Arad counties are among the highest exporting counties, but not among the most attractive areas in the country. They attract large numbers of commuters, but not of definitive migrants. On the other hand, Cluj county takes just seventh place in terms of exports, but ranks first in terms of the relative number of migrants attracted and the share of those who would move to Cluj.

Figure 22. Volume of external trade per counties, 2016



Source: INS - TEMPO On-line

A city or metropolitan area is like a living organism. The natural cycle of a living organism is to grow, mature, and then fade out to clear the way for another living organism. Therefore, a metropolitan area which is unable to grow sustainably does not have a very bright future. Obviously, a city cannot grow indefinitely, but should neither remain stuck in a conservative mindset.

Sadly, few local Romanian administrations have a clear vision for growth. The most developed and dynamic cities in the country deplore the lack of labor, but few have a clear strategy to attract more people.

Next, we will discuss what local administrations can do to attract more people.

The need for a growth vision

CHICAGO

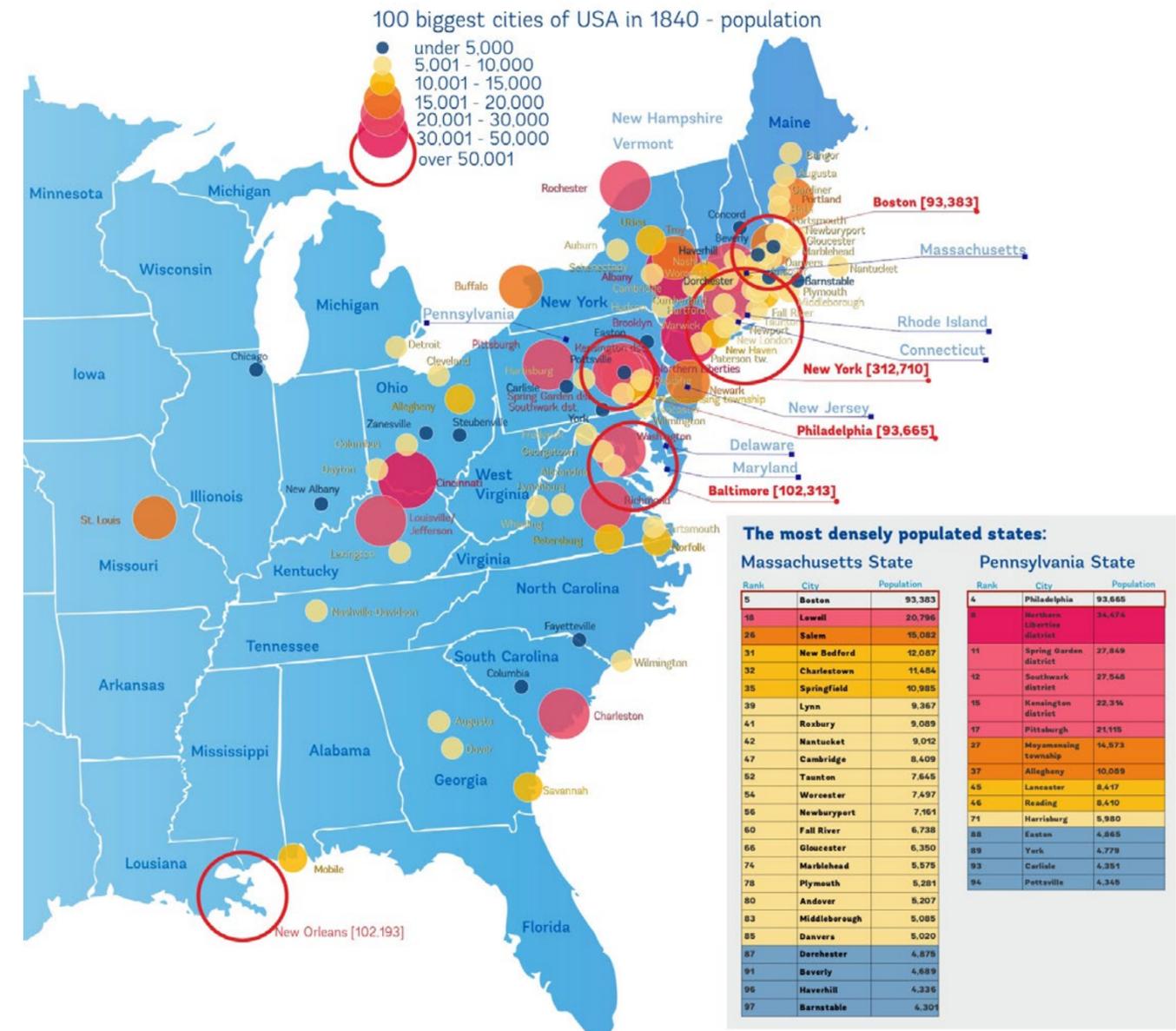
Daniel Burnham, author of Chicago's urban design, encouraged urban planners to refrain from "small plans", as small plans "do not inspire the imagination of people". A plan should be grand and ambitious, because such a plan, even if it takes years to implement, "will live in our minds forever", a seed only waiting for water to grow. Daniel Burnham lived and thought in a period when Chicago was booming, and required some guidelines for its expansion.

In itself, the story of the city of Chicago is important for any mayor, as it outlines a few prerequisites for urban development. In his Pulitzer-winning "Nature's Metropolis", William Cronon offers a detailed description of how Chicago grew from a small settlement in a marshy area to the second metropolis of the United States. In 1840, Chicago only had around 4,000 inhabitants and ranked just 92nd among US cities (see the table below). By 1870, the city population grew to approximately 300,000 inhabitants (i.e. the entire population of the largest Romanian secondary cities), and Chicago became the fifth biggest US city. In 1900, i.e. 30 years later, Chicago reached approximately 1.7 million inhabitants and ranked second in the top US cities. By 1930, the city population grew to 3.4 million inhabitants.

Each generation brought an exponential growth of the city of Chicago, which managed to grow nearly 850 times in less than 100 years. William Cronon believes that one factor which contributed most to the city's growth were the **boosters** – a kind of real estate agents who worked for land owners in the region. They were competing with other **boosters** who operated in similar cities in the area, such as St. Louis, Milwaukee, or Green Bay. Chicago was neither ideally placed (it lied in the far south of Michigan Lake, which significantly delayed water transport on the Great Lakes, which was of great importance at the time), nor did it provide best conditions for future investments (the area consisted of marshland, with poor quality soil and frequent floods). Cities such as Milwaukee or Green Bay had better conditions for a rapid development. However, Chicago had better promoters and supporters, and even became a preferred destination for the migratory waves of the time.

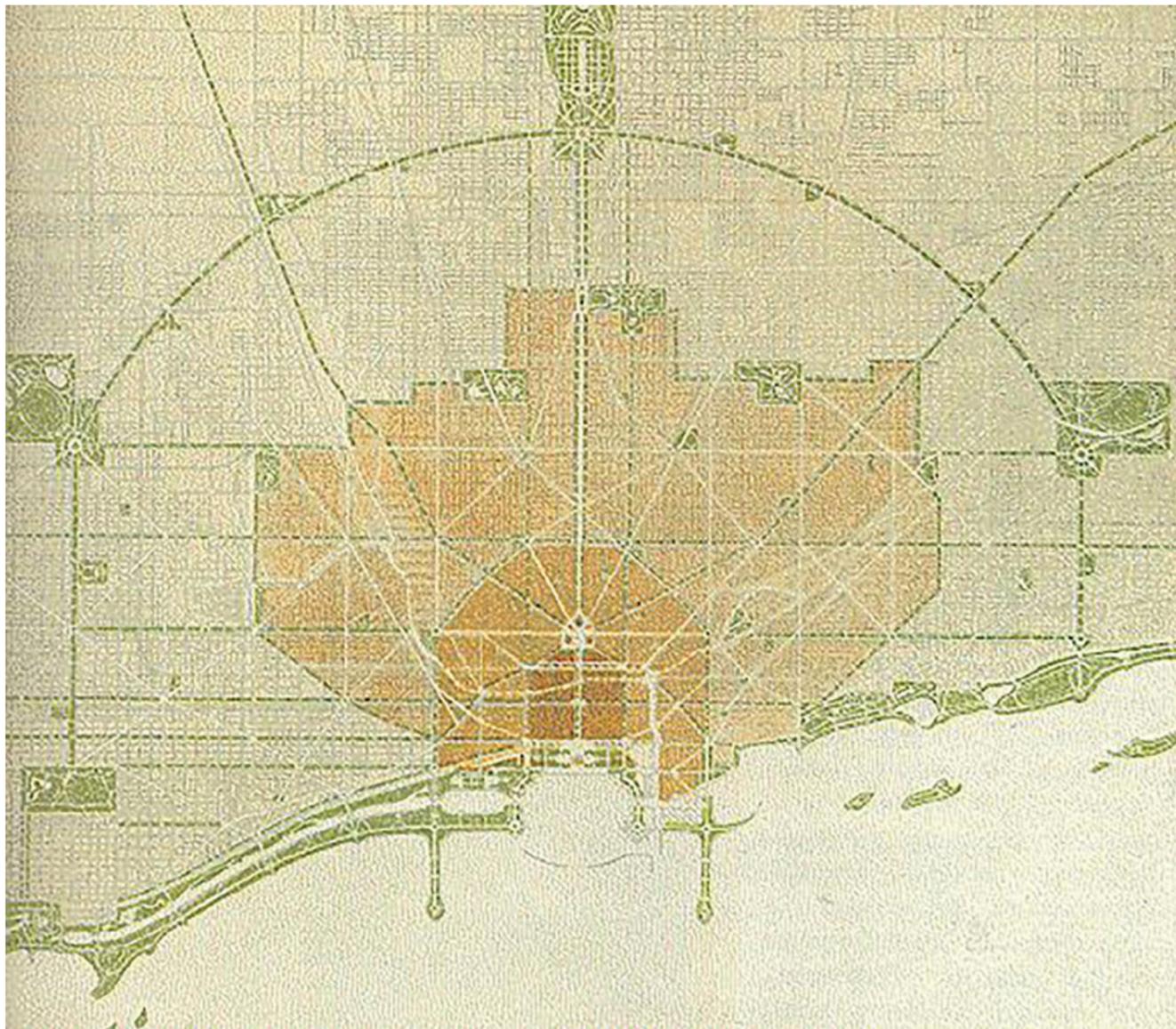
Another factor which advanced the expansion of the city was precisely the growth vision Daniel Burnham had in mind. The city had its share of visionaries who envisaged it on a greater scale. Burnham's plan, also, covered an area which expanded significantly outside of the effectively inhabited area of the time. And even if Burnham's plan was not followed to the letter (as were the urban designs of New York or Barcelona, among others), it did set the stage for the future expansion of the city.

Figure 23. Biggest US cities, 1840



Source: www.biggestUScities.com

Figure 24. Daniel Burnham's urban design of the city of Chicago (1909)



Source: Wikipedia

There are two things a city needs to embark on a developing trend. They will be discussed below:

- 1) the presence of **promoters** of the city in sufficient numbers;
- 2) an **ambitious plan**

The need for urban promoters

A city can hardly support its growth if even its own inhabitants have second thoughts about living there.

A city cannot become a "magnet city" if it is promoted merely by the mayor or a handful of people – this requires a critical mass. First, a large share of a city's inhabitants have to be proud of living there. Local pride is a key element, since the residents become city promoters. Of course, the larger a city, the more promoters it has, and its chances to attract even more people increase accordingly. Major decisions, such as where to invest, what to visit, where to move, are taken based on interpersonal relations and the feelings a place generates.

For people to feel attached to a place, some conditions have to be necessarily met. First and foremost, the city should have a well-developed urban infrastructure – just as we hate to live in a dirty apartment with peeling paint, we would not want to live in a city that feels like falling on itself. To that extent, **quality urbanism and architecture are paramount**. Sadly, urban planning is a dying profession in Romania. Few mayors invested in quality urban planning and urban planners in the past years. Few design contests have been organized to redesign some key public areas over the past 30 years of market economy. Quality urban planning is not a whim – it became an absolute necessity, and mayors oblivious to investments in quality urban planning are at risk of turning their own citizens into enemies rather than allies.

However, a beautiful city is not enough to boost local pride. People want to feel they play a part in developing the city they live in. If all the major decisions on city development were taken by a handful of people, common citizens would not be shaping the future of that city. When people are involved in the urban planning process, they turn from passive citizens to **active citizens**.

Another factor which weighs significantly in the locals' bond with the city is the **competition with other cities**, and the effective or relative position of the city in the competitive ranking. A football team well placed in the national or regional ranking will strengthen people's attachment to that place. A city considered as the "smartest", "coolest" or "best managed" could also generate local pride and mobilize citizens to promote it. Cities perform well in various fields – they just need to know how to promote such performance.

The need for an ambitious plan

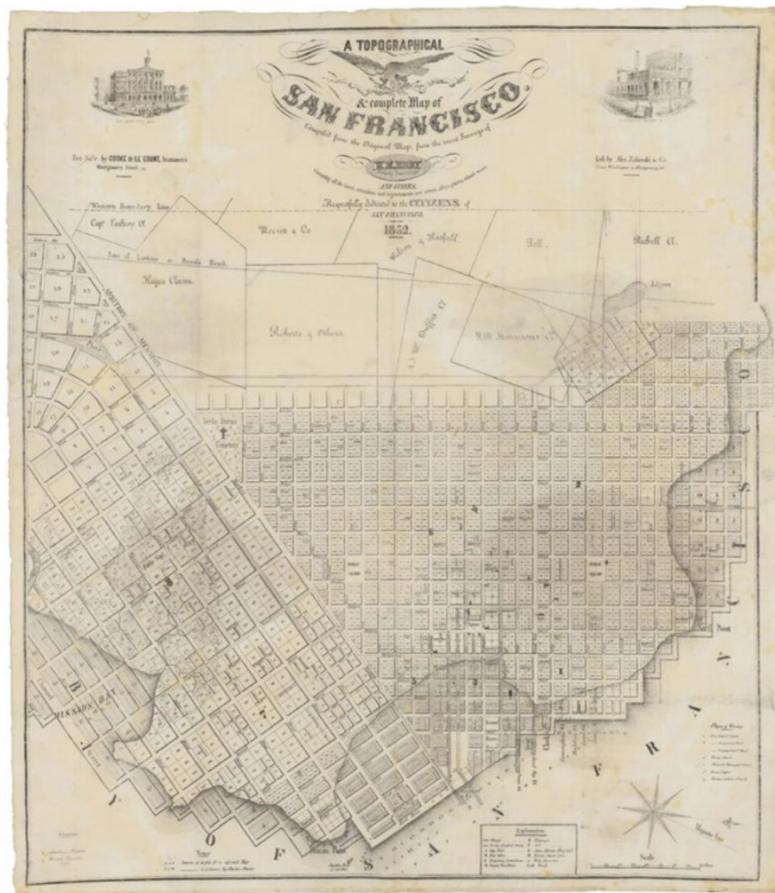
As Daniel Burnham said, people will never rally around a small plan or a modest vision. People want to be inspired and need great ideas to achieve this. For instance, Romania's General Transport Master Plan managed to concentrate energy and excitement around some major projects – the Moldova motorway, the Pitești-Sibiu motorway or the Transylvania motorway. Identically, at local level, people need a higher growth vision – they need an ambitious plan to stimulate their imagination.

Burdened by the heritage of centralized urban planning from the times of Communism, urban and regional planning lost some of their gloss. Romanian specialists stopped planning because this was wrongly deemed as tool dating back from Communism. Therefore, the plans and strategies prepared during the transition years rarely involve ambitious interventions. Most of the PUGs drafted over the past years fail to propose anything more ambitious than a new ring road. No efforts are made to lay the groundwork for developing metropolitan areas in the next hundred years.

SAN FRANCISCO

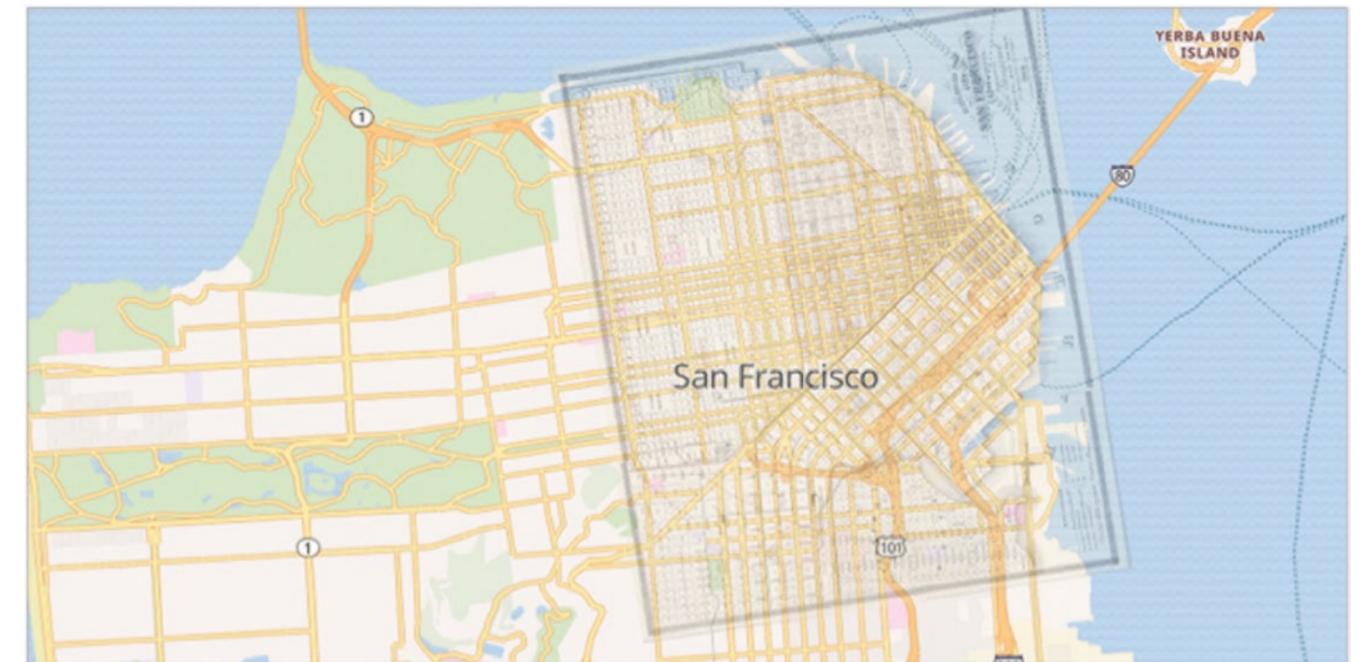
One main reason this kind of ambitious planning does no longer happen is the multitude of factors that have to be considered nowadays, the many stakeholders that have to be involved in the planning process and the multiple analyses which are now deemed essential. For instance, the planned extension of San Francisco (see the image below) was prepared by people who did not even paid a visit in the area they planned. Therefore, they proposed a grid of blocks without having any idea of the quite diverse topography of the area. Thus, the street layout climbs directly on the hills in some areas, at an angle sometimes as high as 31.5%.

Figure 25. San Francisco urban plan, 1852



Source: davidrumsey.georeferencer.com

Figure 26. The 1852 urban plan of San Francisco superposed on the current city map



Source: davidrumsey.georeferencer.com

Figure 27. San Francisco's sloping streets, built based on the city's old urban plan



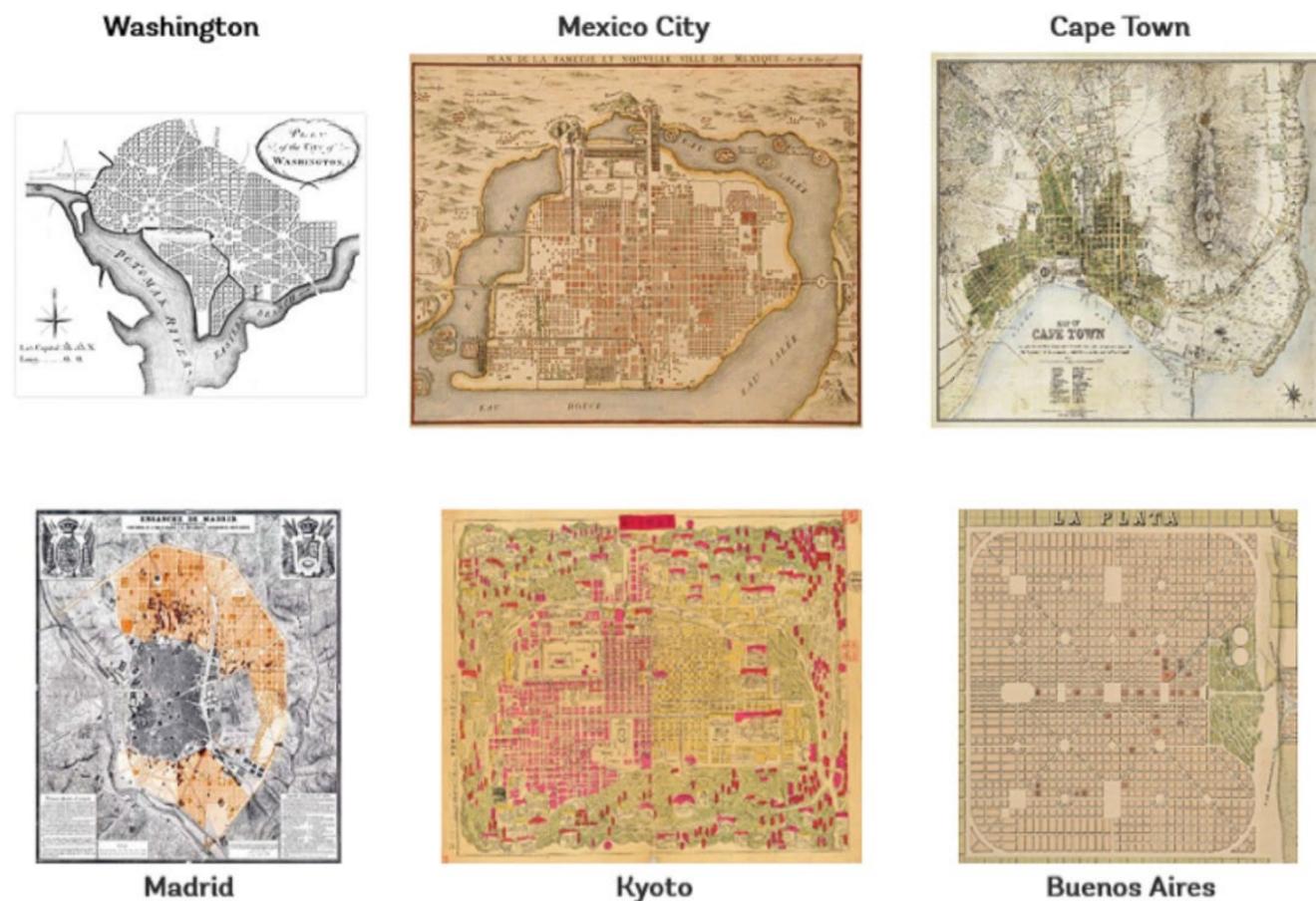
Source: Wikipedia

Today, these San Francisco streets perched on top of the hills are part of the city's charm. But they would not be possible in the digital era, when each patch of land can be studied from the comfort of one's office.

Designing an ambitious street layout, and possibly a rail network providing the foundation for the future growth of a metropolitan area, is a must for a dynamic city. There is almost no plan to expand the street layout which was not implemented over time. Plans are not always fully implemented, but a development idea, once laid on paper, will turn to life.

The image below shows a few historic urban designs in some of the best known metropolises of the world. Look for images of the street layouts in those metropolises, and you will see that they largely follow the initial street grid. The beauty of an ambitious plan is that it is almost always put into practice – maybe not in its first form, and even if it takes longer to fill the foundation.

Figure 28. Historic urban designs which laid the foundation of major cities



NEW YORK

One of the most famous designs is the 1807 urban plan of New York City (as shown in Figure 29). The first streets of New York City were built by Dutch migrants, at the lower tip of the Island of Manhattan, in a location known as New Amsterdam at the time. When the British took over the Island of Manhattan from the Dutch, they renamed the city as New York, extended the street layout (the red area in the lower right figure), and during 1807-1811 prepared a plan covering the entire island.

The plan completed in 1811 (named the 1811 Commissioners' Plan) continues to guide New York's expansion to this day. With a few exceptions (such as introducing Central Park in the middle of the Island of Manhattan), the plan was followed closely throughout the years.

The leaders of the 1807 New York had the vision to imagine and propose a plan which guided the city's expansion two centuries later.

Another trait of the 1811 Commissioners' Plan was the resilience of the street layout once it was built. Broadway, the only thoroughfare which does not follow the grid street plan of New York (shown in red in the lower right figure), was the road used by Indians before Europeans settled on the island. The irregular path of the Broadway avenue owes to the diverse land features of the island at the time of planning. Back then, Manhattan had more hills, which were flattened after the 1811 Commissioners' Plan, and the excavated earth and rocks were used to fill the marshes and expand the liveable area of the island. Broadway endured and also survived the systematization proposed under the 1811 Commissioners' Plan. It is now a defining New York street which adds further to the city's charm. It is also living proof that one drawn, a street could hardly be relocated.

Issues arise when the streets are built to solve specific situation, or local accessibility problems, without considering the local/metropolitan transport system as a whole. This is how most Romanian cities expanded after 1989.

For instance, even if Bucharest was systematized during the Communist period and large thoroughfares and ring roads were built, it developed inconsistently in the past years (see the example in the image below). The ends of the major thoroughfares were supplemented with grids of minor streets, which lead to traffic obstruction. Given the lack of major additional thoroughfares, all the traffic from these lesser streets converges onto the existing avenues and slows traffic down for the better part of the day. Bucharest thus became the most traffic-congested city in Europe, ahead of metropolises like Moscow, Paris, Rome, Brussels or Athens.

Figure 29. The street layout of New Amsterdam (left) and the New York Commissioner's Map (right)

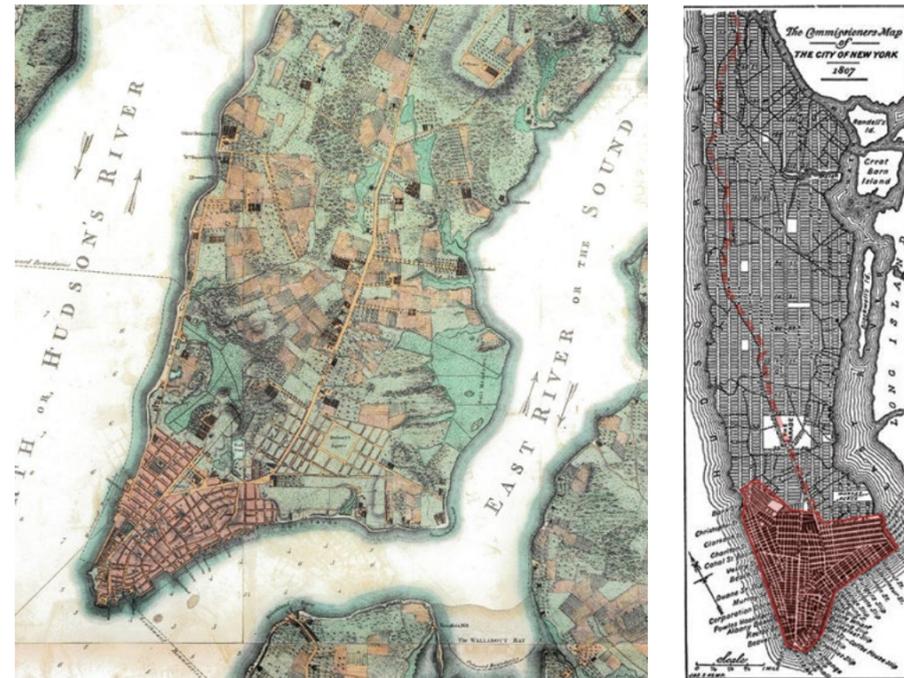
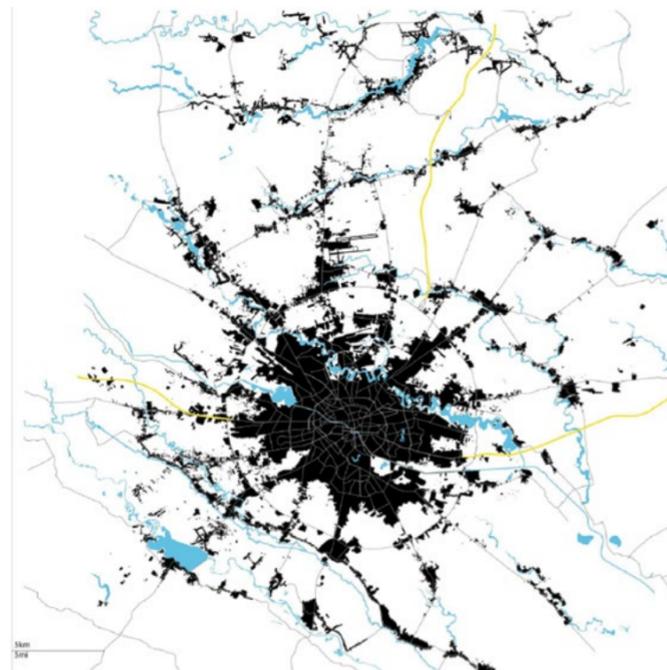


Figure 30. Bucharest's compact structure and post-1989 unplanned additions



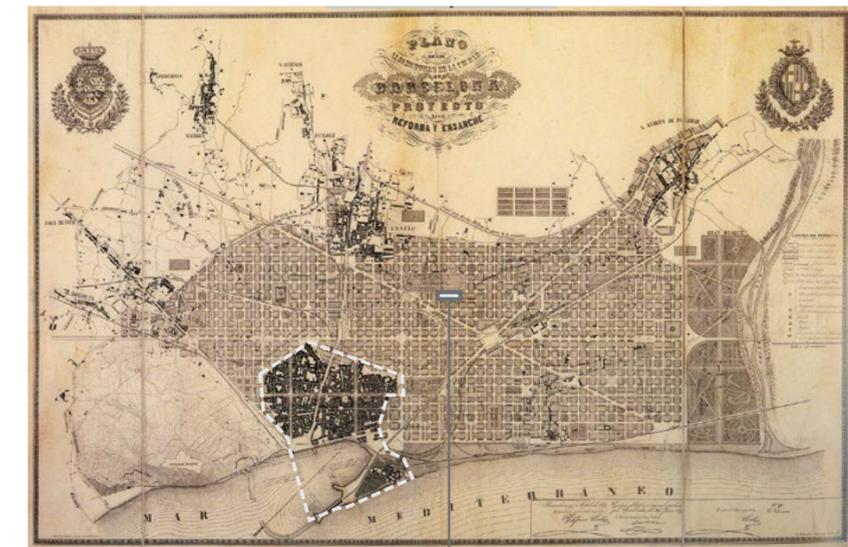
Source: The World Bank. 2013. Enhanced spatial planning as a precondition for sustainable urban development. [Report prepared for the Ministry of Regional Development and Tourism]

BARCELONA

By comparison, Barcelona, with its 3.9 million of metropolitan residents and in excess of 20 million tourists per year (6.5 times more than Bucharest), has much lower traffic problems than Bucharest. Barcelona has the advantage that the urban development of the city and of the metropolitan area is guided by the urban plan laid out by Ildefons Cerdà in 1859. The plan, included in the image below, proposed a systematization of the street layout around the old town and extensions in the metropolitan area, reaching as far as the neighboring localities.

With a few exceptions, Ildefons Cerdà's plan was followed to this day, and Barcelona benefits from a street layout that facilitates inner traffic and has allowed an effective extension of utilities and of the public transport network. The strength of this plan becomes obvious if we take into account one of Barcelona's showcase buildings – the Sagrada Familia Cathedral.

Figure 31. Ildefons Cerdà's design of 1859



Source: <https://upload.wikimedia.org/wikipedia/commons/8/89/PlaCerdà1859b.jpg>

Figure 32. Historic image: The area around the Sagrada Familia Cathedral at the time of its inception



Source: <https://ro.pinterest.com/explore/sagrada-familia-history-915626176895/?lp=true>

The building of the cathedral began in 1882, in a non-developed area in the metropolitan part of Barcelona. With its foundation paid from the private wealth of Josep Maria Bocabella, the cathedral was located in a cheap area at the city limits. Even if the construction began in a barren field, the cathedral's location was very precise – in a block from Ildefons Cerda's urban design.

The cathedral is not yet completed (the completion is expected to take place in 2026, to mark 100 years from the death of its architect, Antoni Gaudi), but the urban space around the cathedral has already been filled by many years. Moreover, this urban space was neatly filled, with an efficient and easy extension of the urban infrastructure in order to make the area functional. Practically, after 150 years from its preparation, Ildefons Cerda's design continues to prove beneficial for Barcelona.

Figure 33. Barcelona today



Source: Google Earth

Figure 34. The area around the Sagrada Família

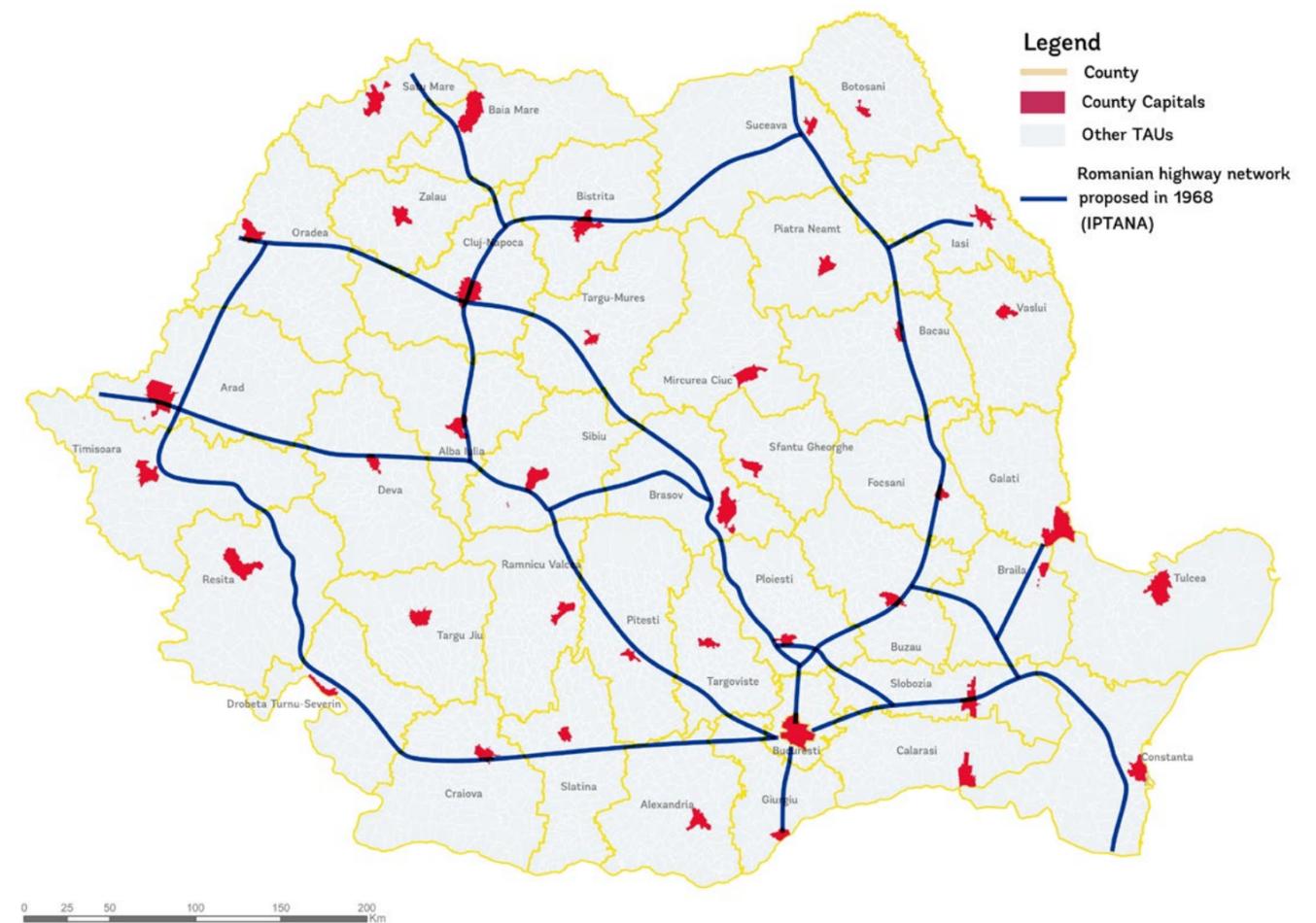


Source: <http://www.archdaily.com/639498/12-stunning-aerial-photos-taken-with-a-drone/556f0fdae58ecec91000273-12-stunning-aerial-photos-taken-with-a-drone-photo>

This type of ambitious vision would also be welcome in the main urban areas of Romania.

A street layout extending the metropolitan area does not necessarily have to be established by a legal document. A mere metropolitan masterplan to guide the preparation of individual PUGs would be enough. For instance, the motorway network proposed in the Transport Master Plan largely follows a proposal of IPTANA (The Design Institute for Road, Maritime and Air Transport) from 1968-1969 (see the map below).

Figure 35. The motorway network of Romania as proposed in 1968



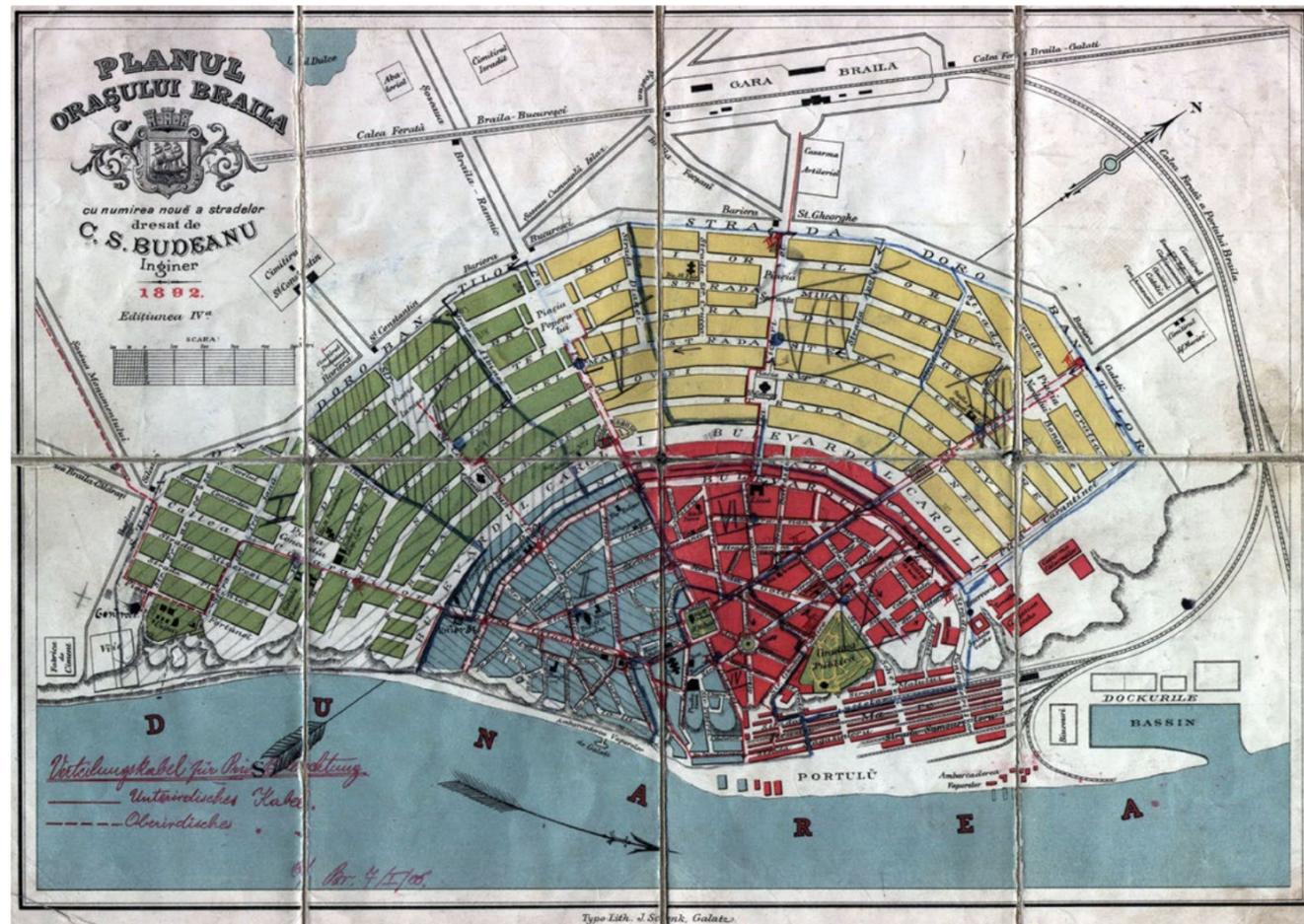
Source: IPTANA

Romania, in spite of its forced and belated urbanization, still has a history of urban design.

The General Pavel Kiseleff, the namesake of several streets in Romania (including one of the major Bucharest thoroughfares, which he helped design), was a plenipotentiary (a de facto governor) of Wallachia and Moldavia between 1829 and 1834, during the Russian military administration. It was one of the greatest Russian reformers and one of the decisive enablers of reform in Wallachia and Moldavia, playing a crucial role in the administrative reorganization of the two Principalities and the drafting of the Organic regulation – the first Constitutions in the history of the two Romanian Principalities.

Less known is the fact that Kiseleff ordered the drafting of urban designs for several cities along the Danube – more specifically “a complete guideline for sound city organization in all respects”. Thus, plans were prepared for the systematization of cities “with a regular streets and markets layout and setting port sites”. The most famous systematization plan was that of Brăila, prepared in 1834 by Barron Borroczyn, at the orders of Kiseleff. That plan guided the development of Brăila throughout the years, up to this day.

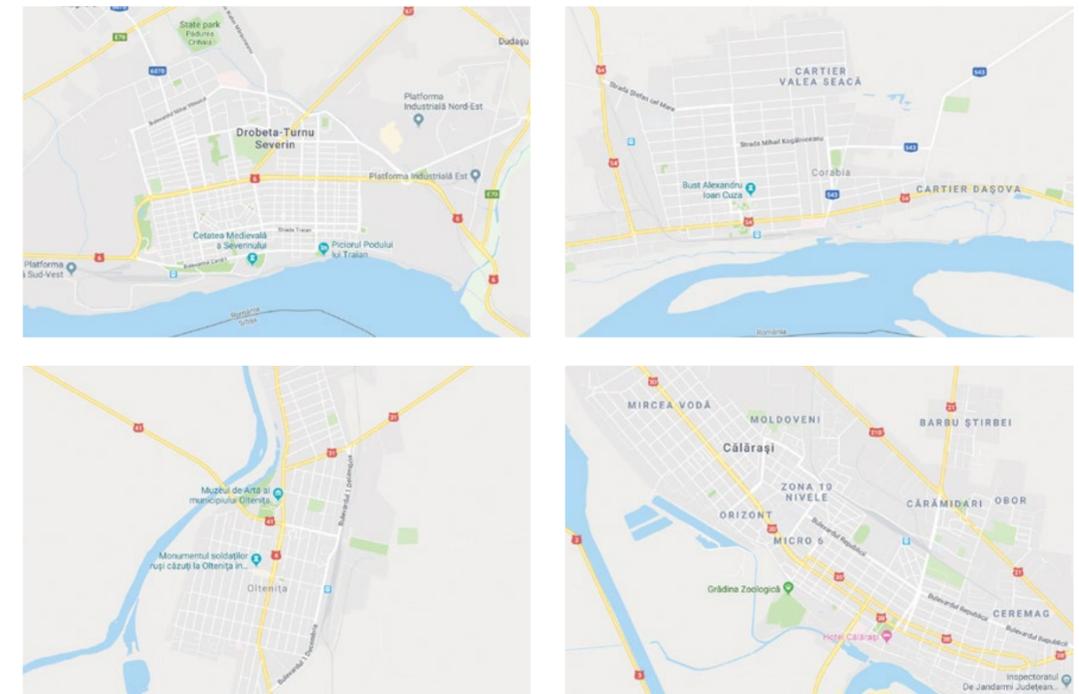
Figure 36. Brăila's 1892 urban design, based on Kiseleff's model



Source: Wikipedia

Some more Danube cities bear the hallmarks of Kiseleff's model. This fact is illustrated by the maps below. A planning effort at such a scale is as easy to implement nowadays, but it is not impossible either – all that has to be done is to find the right planning tools and open a dialogue with the relevant stakeholders.

Figure 37. Danube cities with systematization plans drafted during Kiseleff's period



Source: Google Maps

Moreover, the benefits of a systematization plan should be clearly explained. For instance, the value of the land concerned by such a plan would automatically rise. In addition, local authorities may choose not to issue building permits for areas not covered by a systematization plan, or more precisely a Zonal Urban Plan (PUZ).

A separate chapter will present a few ideas on how a metropolitan street layout could be designed/implemented.

Where can Romanian metropolises ATTRACT PEOPLE FROM

A far-reaching plan and many promoters does not necessarily mean a metropolitan area will actually attract more people. Cities like Chicago grew at a time when fertility was very high (a woman in the US would give birth to approximately 7 children on average in mid-19th century) and infant mortality was decreasing. Moreover, millions of migrants reached and are still reaching the US each year. Now, Romania's development occurs in a context of very low fertility, negative natural growth and massive external migration.

Normally, the population of an urban area should be viewed at this level, not strictly according to the county's administrative borders. Someone who lives in a surrounding locality but works, studies or receives services/utilities from the neighboring city is part of that functional urban area. Considering this criterion, the table below shows the effective population of the municipality (measured at the 2011 census) and the population in the functional urban area. By this measure, one can see these urban areas have 4.5 million more inhabitants than the cities themselves – more precisely, 11.6 million versus 7.1 million.

Table 12. Population for a selection of Romanian functional urban areas

Municipality	FUAs
Bucharest	2,703,015
Constanța	546,900
Timișoara	508,037
Ploiești	506,213
Cluj-Napoca	470,939
Brașov	455,830
Iași	414,869
Craiova	380,641
Pitești	348,981
Galați	339,408
Oradea	336,538
Arad	296,981
Sibiu	270,064
Bužău	258,137
Târgu Mureș	251,523
Râmnicu Vâlcea	233,497
Bacău	228,656
Baia Mare	215,129
Târgoviște	210,410
Brăila	196,818
Satu Mare	195,584
Suceava	182,955
Focșani	172,530
Deva	158,650
Piatra Neamț	148,011
Târgu Jiu	144,618
Slatina	132,789
Botoșani	129,276
Bistrița	126,860
Drobeta Turnu Severin	120,762
Alba Iulia	113,461
Călărași	104,323
Miercurea Ciuc	97,627
Tulcea	94,092
Zalău	90,073
Sfântu Gheorghe	84,341
Reșița	81,091
Giurgiu	80,932
Vaslui	80,861
Slobozia	80,570
Alexandria	70,409

Source: 2017. Magnet Cities: Migration and commuting in Romania, Washington D.C.: The World Bank

The mere fact that at least

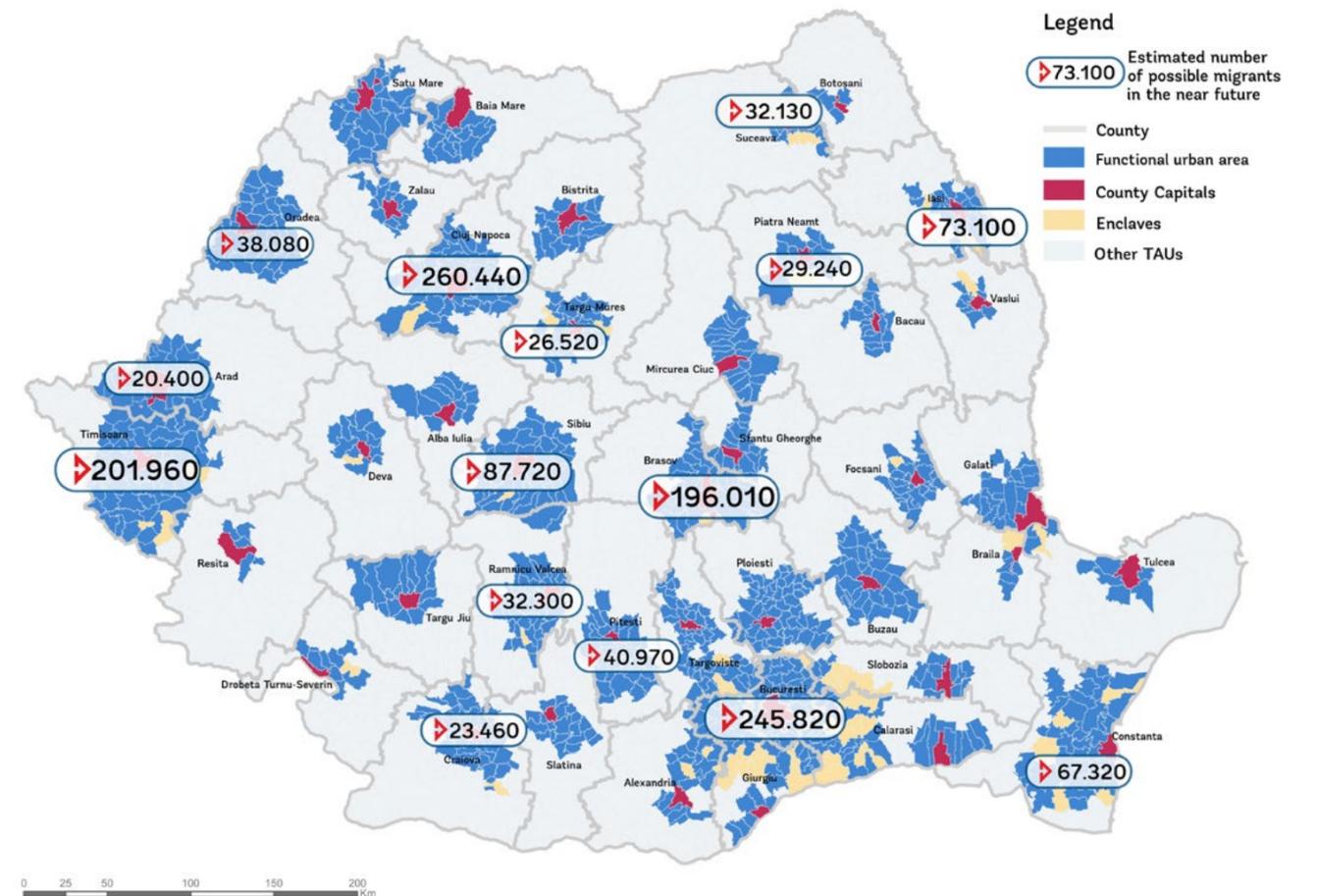
22.5% of the country's population lives in a suburban or periurban area is enough to justify a clear metropolitan development policy.

Moreover, the World Bank carried out a national survey to assess people's willingness to migrate to one of the most dynamic cities in the country (a similar survey was subsequently performed by the Sinteza Magazine, with almost similar results).

3.6 million Romanians said they were considering a move in the next 5 years.

Dintre aceștia, 2,4 milioane consideră o mutare în România, iar **1,71 milioane ar dori să se mute într-un oraș din România**. Tabelul de mai jos include principalele orașe unde acești 1,71 milioane ar dori să se mute. Măsura în care aceste orașe vor reuși să atragă acești oameni ține atât de administrația locală, cât și de multitudinea de actori locali și de cetățenii din aceste orașe. Întărirea magnetismului unui oraș este inerent o muncă de echipă.

Figure 39. An estimation of the potential number of migrants in the near future



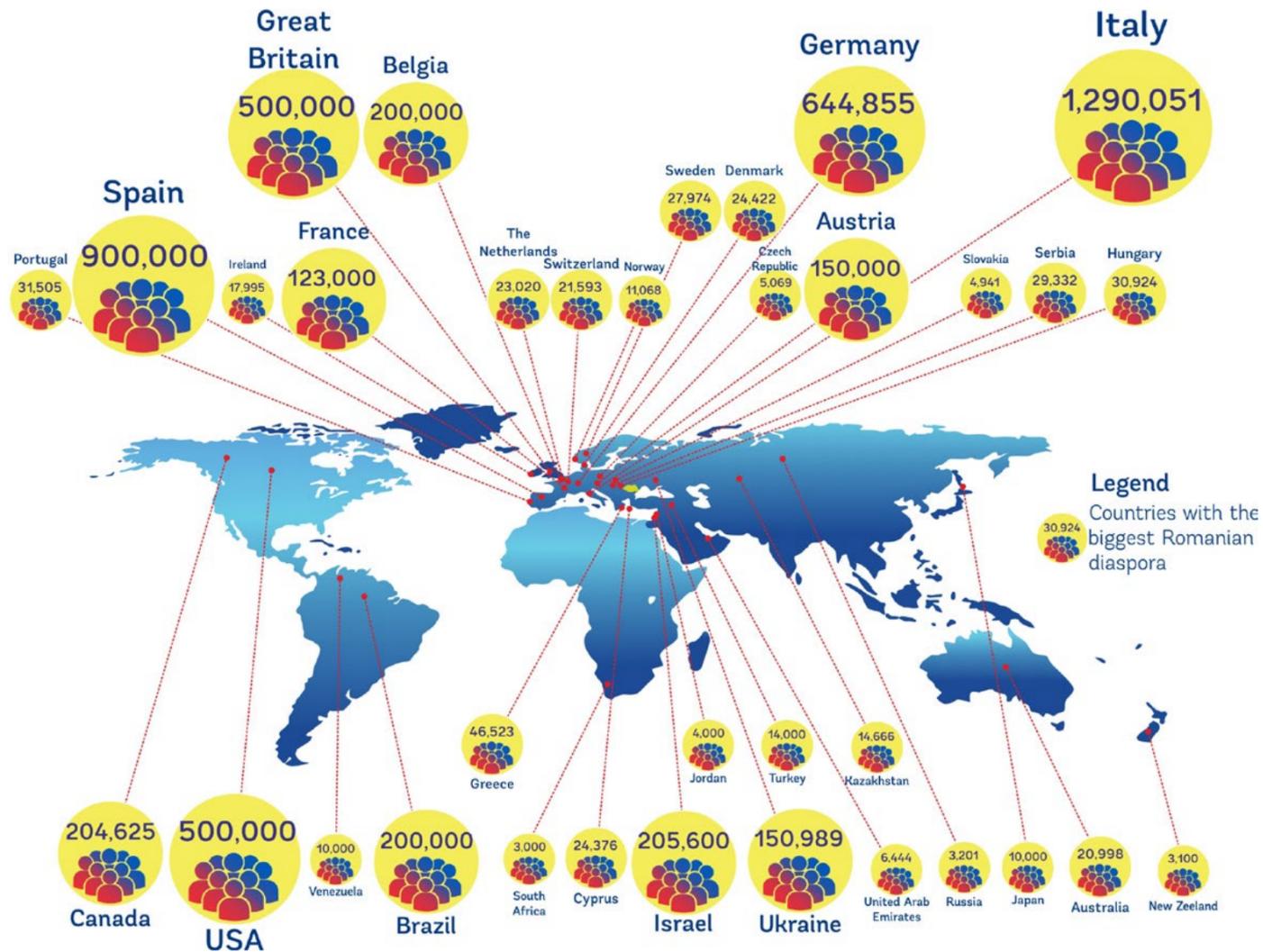
Source: The World Bank

Besides the potential migrants to be attracted nation-wide, local authorities should also take into account two additional sources of migration: 1) the Romanian diaspora; 2) immigrants from other countries.

According to the Ministry of Foreign Affairs estimates, more than **5 millions** Romanians live outside their country – a very high number of people. These people are mostly well trained, have gained wealth and built connections in their adoptive countries.

Most of these people will be hardly willing to return home absent a living standard that at least comes close to what they were used in the West. The League of Romanian Students Abroad carried out several surveys among Romanian students studying abroad, to determine what would it take for them to return home. The results of these surveys are surprising – most of the respondents would be willing to return to Romania for lower wages than in their adoptive countries as long as they found a similar living standard in Romania to that of the West, and rules that do not change from one day to another.

Figure 40. Countries with the biggest Romanian communities



Source: MAE and Wikipedia

Provided Romania continues to grow at the same pace as in the past years, the most developed cities in the country may become return destinations for immigrants from the diaspora.

In anticipation of such a move, large Romanian cities should attempt to establish consulates of the countries hosting large numbers of Romanians. At least each growth pole should have one consulate from the following countries:

- Italy
- Spain
- Germany
- USA
- Great Britain

Romania will become attractive for other citizens as well. Many companies already bring workforce from countries such as Vietnam or China to compensate for the local labor shortages. The table below shows the place of origin of most immigrants to Romania. These countries will most likely become a source for future immigrants in the years to follow. One should also see where our more developed neighbors attract migrants from. For instance, Poland and the Czech Republic attracted large numbers of Ukrainians, thanks to cultural affinities and the similar language. Hungary attracted large numbers of Serbians. Poland attracted many Belarussians and Lithuanians, again thanks to cultural affinities and a common history. The Czech Republic attracted many Vietnamese and Russians.

Table 13. Where Eastern European countries attract migrants from

	Romania	Poland	Czech Republic	Hungary	Slovakia
Total population	19,644,350	38,135,876	10,578,820	9,797,561	5,435,343
Population born abroad	421,801	453,248	465,056	513,649	186,217
... out of which, in:					
Moldavia	161,846	386	8,254	250	152
Italy	56,515	8,958	4,006	5,585	3,379
Spain	42,165	3,136	1,147	2,250	1,101
Ukraine	16,729	134,228	110,337	55,836	10,738
Great Britain	15,346	16,254	5,327	11,157	7,160
Germany	15,121	62,873	16,827	32,410	5,387
France	12,589	25,024	3,219	4,422	2,996
Bulgaria	10,646	2,621	11,204	1,402	2,453
Hungary	8,184	1,204	1,393	-	16,585
Turkey	7,986	571	2,193	2,513	365
Greece	6,494	2,406	898	1,310	557
Russia	6,063	9,913	36,218	4,061	2,925
China	5,068	472	5,404	17,460	1,187
USA	4,428	9,032	7,650	8,358	2,376
Syria	3,492	670	1,235	2,015	263
Israel	2,936	341	670	1,669	218
Belarus	101	35,315	4,502	215	234
Lithuania	82	33,604	662	232	173
Vietnam	225	2,780	46,631	3,563	2,228
Kazakhstan	234	3,400	7,798	641	268
Serbia	2,296	228	2,038	41,978	2,170
Austria	1,934	2,684	2,738	10,339	4,014

Source: EuroStat

What stands out in the case of Romania is the relatively large numbers of migrants from developed EU countries such as Italy, Spain, Germany or France. However, it is not clear how many of these migrants are Romanians who became citizens of their adoptive countries, then returned home.

Need for opportunities to make Romanian metropolises more attractive

No matter how visionary, ambitious and proactive a local administration were, it would never attract people unless it offers them a good reason to move. In most cases, this reason is a well-paid workplace.

As the World Bank's "Magnet Cities" analysis has already shown,

Traditional university cities such as Bucharest, Cluj-Napoca, Timișoara and Iași enjoy a special advantage.

On the one hand, they manage to attract young and well-trained people (a key comparative advantage given the demographic decline and population ageing), and, on the other, they successfully attract companies with high-added value which seek to employ university graduates from the area. Provided such companies are in sufficient number and create sufficient well-paid workplaces, the university graduates may be kept in those cities, and people from other cities could be attracted there as well.

The table below includes counties with the highest share of employees earning high wages, nation-wide (more than 700 EUR net/month). These are the counties which will probably exert the highest pull in the future, as they are also the most attractive for those seeking a future workplace.

Table 14. Share of employees with high wages (more than 700 EUR net/month) in 2016

County/City	% employees earning more than 700 Euro	% employees earning more than 1000 Euro
Bucharest	11.9	16.2
Cluj	10.9	11.2
Ilfov	9.7	11.1
Timis	9.3	9.6
Sibiu	10.1	8.0
Brasov	9.2	7.1
Iași	8.6	6.1
Prahova	7.1	5.2
Mures	8.6	4.8
Constanta	7.7	4.7
Arad	6.3	4.5
Arges	10.5	3.8

County/City	% employees earning more than 700 Euro	% employees earning more than 1000 Euro
Giurgiu	6.0	3.8
Dolj	9.5	3.7
Galati	7.3	3.5
Botosani	6.8	3.4
Alba	6.4	3.3
Tulcea	9.0	3.3
Bihor	6.5	3.2
Satu Mare	6.1	3.2
Bacau	6.4	3.1
Mehedinti	7.7	3.1
Salaj	6.4	3.1
Buzau	6.0	3.0
Teleorman	6.5	3.0
Covasna	6.4	3.0
Olt	7.2	2.8
Calarasi	6.4	2.8
Dambovita	6.0	2.7
Neamt	6.2	2.7
Ialomita	5.9	2.7
Valcea	6.1	2.6
Braila	5.9	2.6
Caras-Severin	5.4	2.6
Vaslui	6.0	2.6
Bistrita-Nasaud	5.7	2.5
Maramures	4.9	2.4
Harghita	5.4	2.4
Vrancea	5.6	2.4
Suceava	5.5	2.3
Hunedoara	5.6	2.2
Gorj	6.4	2.1

Sursa: PIAROM

A 2018 PIAROM study revealed that

the share of employees earning more than 1000 EUR net/month is 16.2% in Bucharest, 11.2% in Cluj, 11.1% in Ilfov, 9.6% in Timiș, 8% in Sibiu, and 7.1% in Brașov.

Need for dynamic land and real estate markets

Assuming that an urban area provides sufficient opportunities to attract more people, the first issue which arises is where to "host" those newcomers.

Absent functional land and real estate markets, the cities will no longer be able to attract as many people as they would like to

Therefore, it is important to see the relation between the number of newly built homes and their average prices. The table below enables such a comparison. It becomes immediately obvious that the cities with the most building activity are, for the most part, also the cities with the most expensive real estate market. This is enough to suggest the supply of new homes fails to meet the demand.

Table 16. Newly built homes between 1990 and 2015 and average price per square meter

	Core City	Functional Urban Area (FUA)	% in Outer FUA	Average price (EUR) per square meter
Bucharest	68.435	154.631	55,74%	1.014
Constanța	20.181	43.531	53,64%	915
Cluj-Napoca	18.068	42.753	57,74%	1.099
Iași	12.772	26.598	51,98%	903
Timișoara	9.831	26.482	62,88%	942
Pitești	7.517	22.801	67,03%	773
Brașov	11.845	20.146	41,20%	866
Sibiu	11.309	19.962	43,35%	765
Craiova	11.118	17.335	35,86%	806
Ploiești	4.964	17.101	70,97%	737
Arad	13.750	16.827	18,29%	670
Oradea	10.038	15.975	37,16%	697
Suceava	5.647	15.915	64,52%	701
Bacău	5.245	14.639	64,17%	687
Galați	8.146	14.585	44,15%	667
Focșani	3.964	13.406	70,43%	586
Râmnicu Vâlcea	5.807	12.827	54,73%	657
Târgoviște	4.006	11.723	65,83%	548
Târgu Mureș	3.973	10.490	62,13%	745
Brăila	7.935	9.480	16,30%	561
Bistrița	6.392	9.063	29,47%	582
Piatra Neamț	3.219	8.717	63,07%	625

	Core City	Functional Urban Area (FUA)	% in Outer FUA	Average price (EUR) per square meter
Baia Mare	4.048	8.174	50,48%	630
Satu Mare	4.387	8.049	45,50%	525
Buzău	3.646	6.957	47,59%	612
Botoșani	3.569	5.956	40,08%	600
Slobozia	2.925	5.717	48,84%	600
Slatina	2.720	5.686	52,16%	620
Târgu Jiu	2.784	4.955	43,81%	716
Călărași	3.056	4.784	36,12%	470
Deva	2.563	4.764	46,20%	599
Zalău	2.898	4.724	38,65%	492
Alba Iulia	3.487	4.624	24,59%	667
Vaslui	2.697	4.328	37,68%	591
Tulcea	2.748	3.440	20,12%	780
Drobeta-Turnu Severin	2.306	3.400	32,18%	500
Sfântu Gheorghe	1.655	2.821	41,33%	491
Alexandria	1.839	2.668	31,07%	555
Giurgiu	2.212	2.491	11,20%	481
Miercurea Ciuc	1.412	2.480	43,06%	521
Reșița	1.291	1.565	17,51%	448

Source: INS and ANEVAR

Overall, 982,000 new homes have been built between 1990 and 2015. Out of these, 64% have been built within the functional urban areas of Bucharest and of the 40 county capitals, while 52% of them have been built outside of urban centres, a fact which reveals a strong trend towards suburbanization.

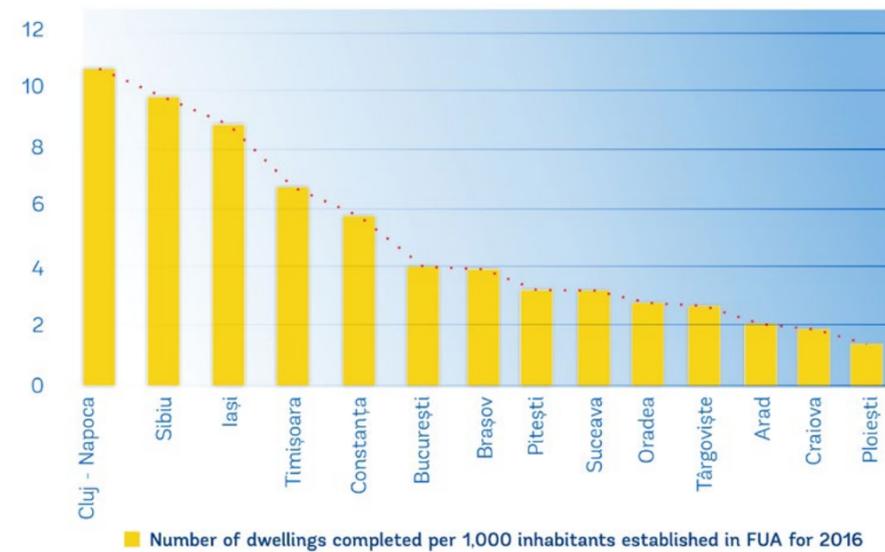
In 2016, **52,200** new homes have been built in Romania, and merely **2,4%** of these were paid from public funds (more specifically, built by the ANL). Out of the homes built with public funds, not even one was built in high demand markets with ever-rising prices, such as **Bucharest, Cluj-Napoca, Timișoara** or **Iași**

However, ANL homes have been built in places such as Alexandria or Huși, where the free market price of a 2-room apartment is around 15,000 EUR.

When the supply and demand on the land and real estate markets become manifestly disconnected, public authorities should step in.

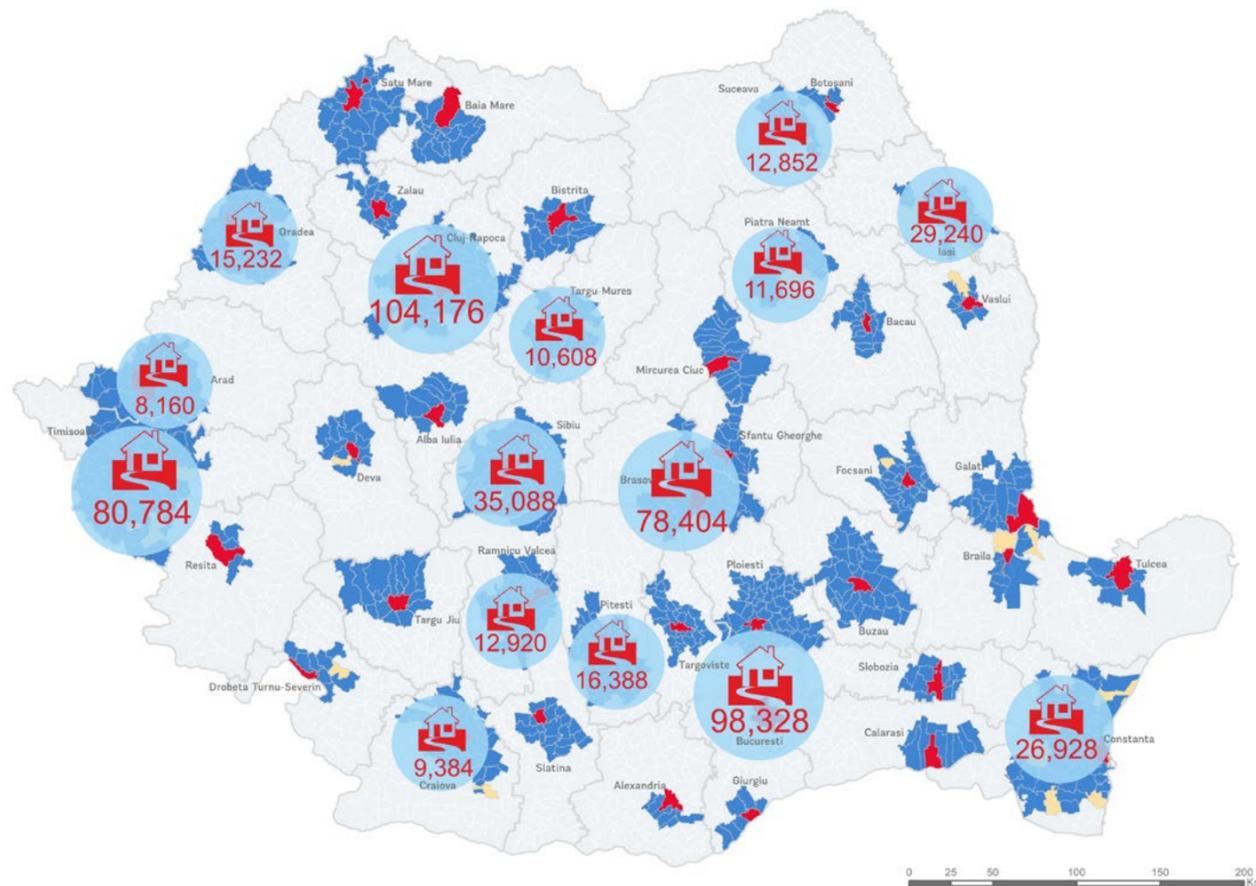
On the one hand, ANL should target places with the highest increase of real estate prices. On the other hand, the relevant local authorities should be more proactively involved in those markets. Not only could they promote private investments by implementing some appropriate spatial planning tools and by quickly and efficiently issuing building permits, but also by strategically developing new public homes. The figure below shows the localities with the most active real estate markets, where public authorities should involve the most.

Figure 42. Number of completed homes per 1,000 stable inhabitants from the functional urban areas of main Romanian cities, 2016



Source: <https://blog.cluj.info/analize/piata-imobiliara-sta-sa-dea-in-clocot-sunt-nesecare-politici-in-domeniul-locuirii-atat-la-nivel-central-cat-si-local/>

Figure 43. Home needed in the most dynamic cities in Romania



Source: The World Bank

To assess the need of new homes in the most dynamic Romanian cities, we divided the number of Romanians who indicated they would move to that city to the average size of an urban household in Romania (2.5 people).

The figure below estimates the need for new homes in the most dynamic Romanian cities. It is important that local public authorities follow the delivery pace of new homes to see whether they come near this number. Depending on whether the private sector delivers more or less, the public authorities should find the appropriate tools to curb or to boost the private market.

The need for investments in sustainable urban mobility

Besides dwelling problems, the most attractive Romanian cities are also faced with the issue of the highly congested traffic.

The demographic and economic growth of Bucharest, Cluj-Napoca or Timișoara is impacted by the fact that people spend daily many hours stuck in traffic. These are the cities where most Romanians would like to move to (according to the World Bank survey).

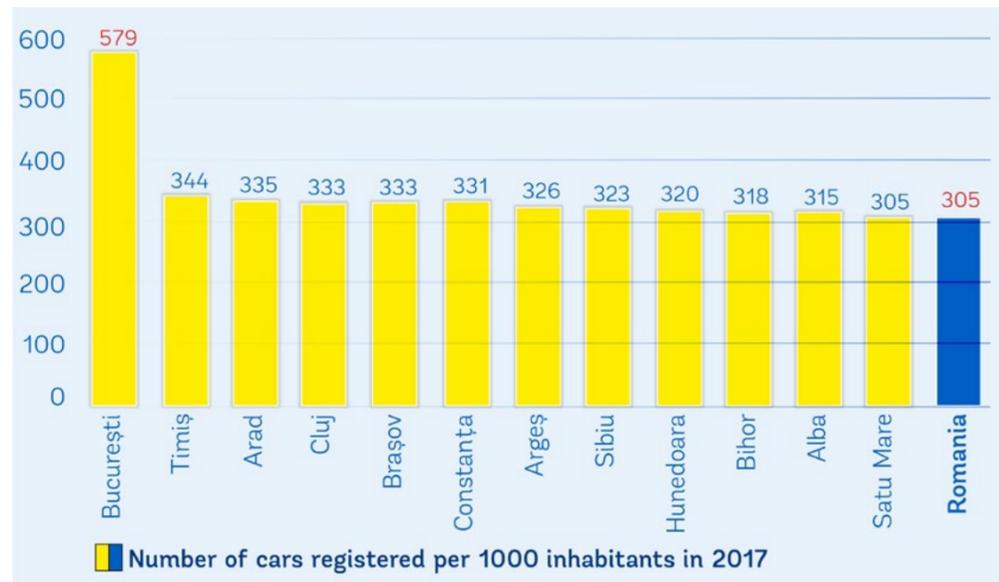
The street network of these cities was designed at a time when cars were in much lower numbers than in the present, when a personal motor vehicle, besides its practical usefulness, is also a status symbol that Romanians would hardly part with. In addition, the taxation of used car imports made the number of cars increase exponentially after the EU accession, while their age is the highest on the continent. Thus, besides the crowding, the level of NOx emitted by cars reached alarming levels, with the cities of Bucharest, Brașov and Iași being already subject to infringement procedures by the European Commission.

Obviously, the solution to overcome this problem is that adopted by large Western European cities since as early as the '70s or the '80s, namely to take measures to curb motor traffic and promote public transport use, biking, and walking.

Progressively, people gave up driving in favor of public transport, which is quicker, more efficient and less expensive. The city halls of all Romanian county capitals, with the support of the European Commission, EBRD and MDRAP, prepared sustainable urban mobility plans for the 2030 horizon, which should address most of the traffic issues.

Sadly, the European funds allocated for their implementation are insufficient, as they are not complemented with governmental funds. Thus, when left to authorities with generally modest revenues, these large scale investments (from ring roads and parking lots to pedestrian areas, shared spaces, dedicated bus lanes and bus stations with information screens or new tram lines) are at risk of remaining only on paper. The situation is even more complicated as far as the metropolitan public transport is concerned, which is functional just in few cities, and even then solely in the localities attached to the respective urban centre.

Figure 44. Number of registered cars per 1,000 inhabitants in 2017



Source: <http://www.analizeeconomice.ro/2018/02/topul-judetelor-dupa-numarul-de.html>

Another problem that is easier to fix and mostly within the reach of mayors is that of parking lots. Few city halls in the country have had the courage to implement consistent policies in this field, by measures such as setting parking areas and progressive parking fees, enforcing towing rules, removing garages around blocks of flats, building park&ride facilities, implementing easy payment solutions for drivers, etc. However, in most cases, these measures were delayed due to fears of disapproval among the population.

Not least, in order to secure robust growth, Romanian magnet cities should extend their functional urban areas. In many cases, approximately one million people live on a 50-100 km radius around them, but only a small part of them commute to the city mainly due to accessibility problems. In the cultural European context, unlike the American one, people generally commute on distances that does not usually require more than 60 minutes of travelling to the workplace. In case of many metropolitan areas, traffic jams limit this travelling to no more than 10-15 km from the city centre, as compared to the more usual 30 or 40 km.

Therefore, there is a need for investments in the infrastructure connecting these dynamic cities to their mainly rural hinterland, which would ensure the required workforce, particularly in low-skilled industries. Otherwise, the population from those isolated rural areas would rather emigrate abroad if deprived of a robust professional anchor at local level.

Need for infrastructure and public service investments to enhance the quality of life

The World Bank survey on the Romanians' willingness to emigrate reflected an essential prerequisite for the attractiveness of magnet cities: people value quality of life more than material gain. Concretely, they would rather move to another city where they are paid the same or less in their native city provided they had a better quality of life, which means anything from attractive public spaces to hospitals, schools or leisure opportunities.

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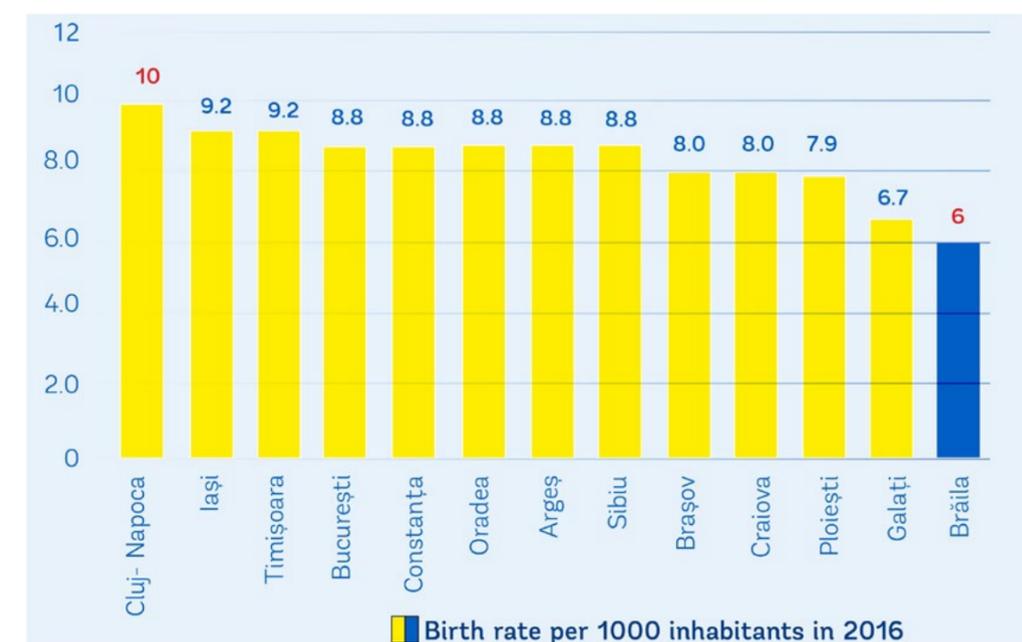
This aspect is particularly essential for attracting residents from either the Romanian diaspora or other Romanians, who are already used to a certain standard of living. Furthermore, over the past years, many Romanians went abroad as they were unhappy less with their job and more with the negative prospects afforded to their families by the medical, educational or administrative systems.

Thus, in the field of education, attracting new inhabitants will also mean increased demand for places in nurseries, kindergartens and schools on short and medium term. In large cities, these are already significantly undersized in relation to the number of children, as parents are required to employ all kinds of tricks to get a place in such an institution.

The private sector partially filled this gap, but at sizeable costs (whether it is private kindergartens or baby-sitters), which are not affordable to all residents. The situation is even more dramatic in the dormitory towns around large cities, where most of the congested traffic is caused by the parents driving their children, in their privately owned cars, to the local schools. The government-funded investments in educational infrastructure failed to consistently approach this aspect, since funds are often earmarked for areas in demographic decline, instead of metropolitan areas with soaring birth rates. Then, public transport systems for children and students have been piloted in only a few cities nation-wide.

Therefore, equal access to education for children should become a very urgent priority for local authorities.

Figure 45. Birth rate per 1,000 inhabitants in 2016

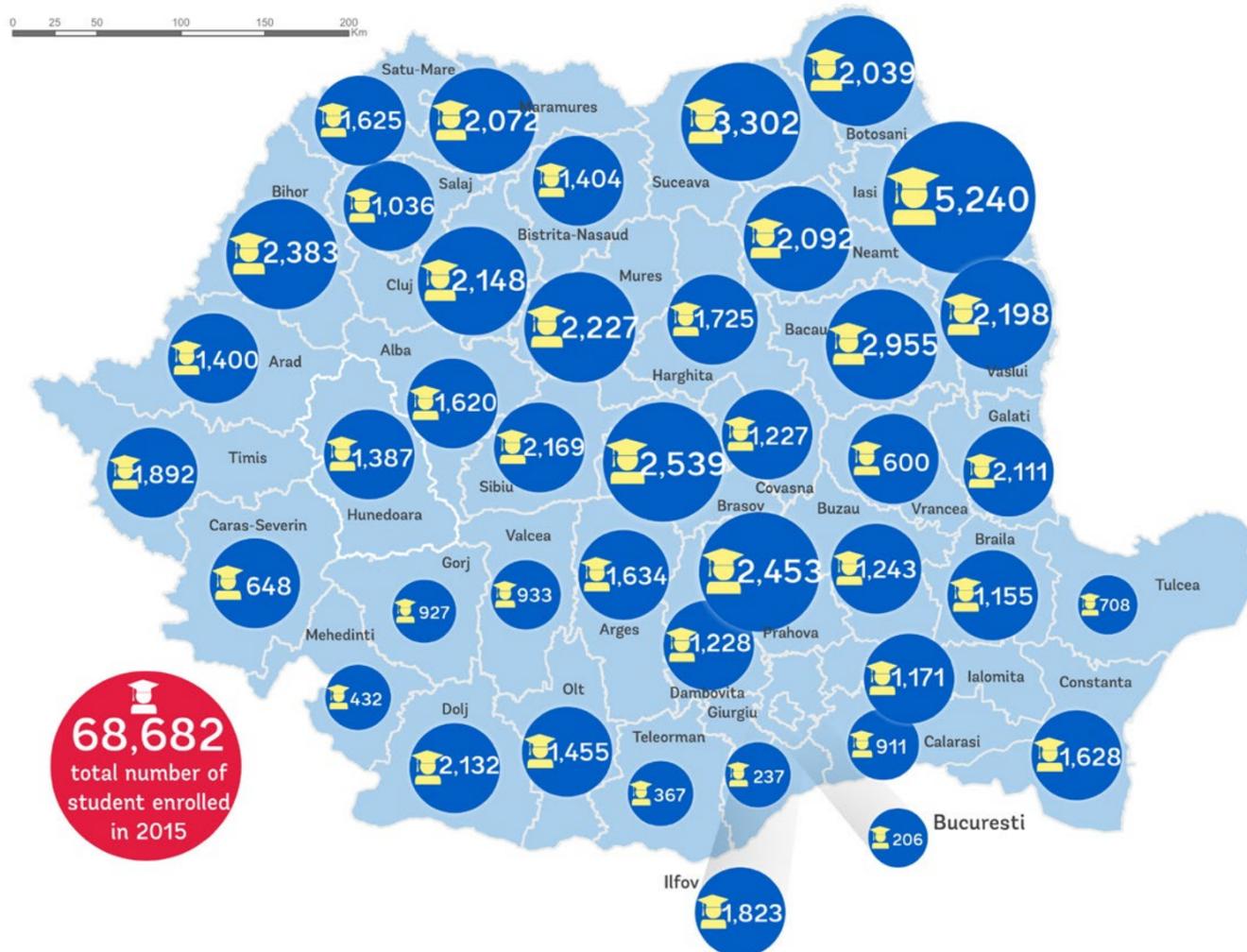


Sursa: INS. Tempo Online

To continue to grow, Romanian cities will need to attract workers from other countries, as its demographic context is growingly unfavorable.

Particularly in the case of would-be migrants to Romania who are aged over 30 and already have a family, one of the aspects they will take into account will be the studying opportunities for their children. Few Romanian cities have international schools with curricula suitable for expats, a fact which weighs decisively in their option for one city or another. Therefore, local administrations should take active measures to attract such private institutions if they want their city to become an attractive and cosmopolitan one.

Figure 46. Students in vocational schools in 2015



Source: Ziarul Financiar (www.zf.ro)

Even if Romanian cities will ultimately attract powerful investors in high-tech fields, the population growth will also drive up demand for various services, from shopping to restaurants, transport, cleaning, sports, beauty, various repairs, etc. These fields usually require average-skilled labor, which is increasingly hard to find in large cities. On the one hand, these workers are relatively low paid and often cannot afford living in large cities. This problem could be solved, to a great extent, by training the unemployed labor from rural areas or surrounding small towns, and by investments in connectivity and the mobility of workers.

However, the second major problem is about education. Mainly in major Romanian cities, vocational schools in fields such as trade, catering, building or personal services, which used to attract students primarily from neighboring rural areas, have been shut down and turned into theoretical high schools, which fail to provide realistic prospects for employment. Those remaining struggle to attract sufficient students due to multiple reasons, whether it is the mentality of parents and children or obsolete teaching methods. Therefore, local public authorities and the business environment should cooperate and reform vocational training, the most effective method at European level being the German dual model already successfully implemented in some Romanian cities (for instance, the Kronstadt Vocational School of Braşov).

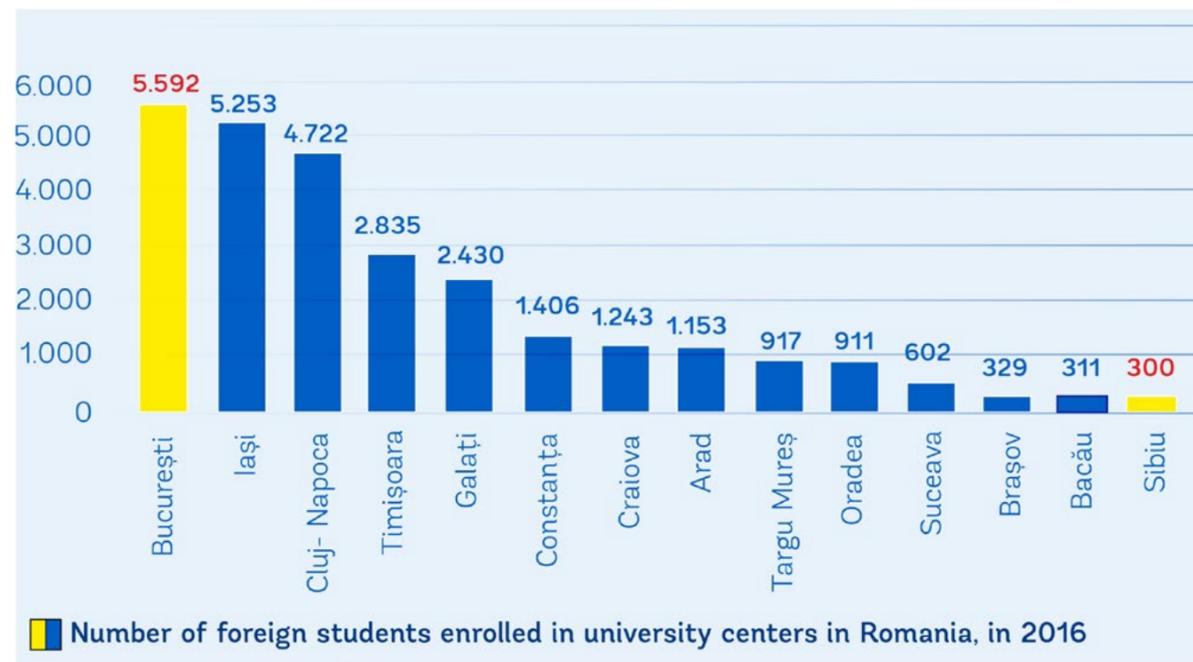
At university level, Romania's competitiveness is low when set against the European context, apart from a few specific cases. Romanian universities rely on ever shrinking generations of high school graduates in the country, while the numbers of foreign students remain low even when compared to neighboring countries. Besides, private sector continues to criticize the non-alignment between its expectations regarding graduates and what the universities have to offer.

Some domestic universities showed openness to this dialogue, and thus there are educational programs carried out in partnership with local companies, internship programs, practical training programs or scholarships provided to students by entrepreneurs. However, these efforts need to be stepped up, including with assistance from local authorities and the business environment, and universities need to adopt an aggressive internationalization policy to prevent further declines in student numbers.

The issue of accommodation for students is another hindrance in case of many major university centres in the country. Student dorms have been sized to accommodate student populations during the Communist period, which were several times lower than they are now. Therefore, many students without a place in a dorm have to rent apartments in cities, which led to an escalation of the cost of rents and negatively impacted other social groups as well. Not all high school graduates afford to pay market rent, and many even end up abandoning university studies.

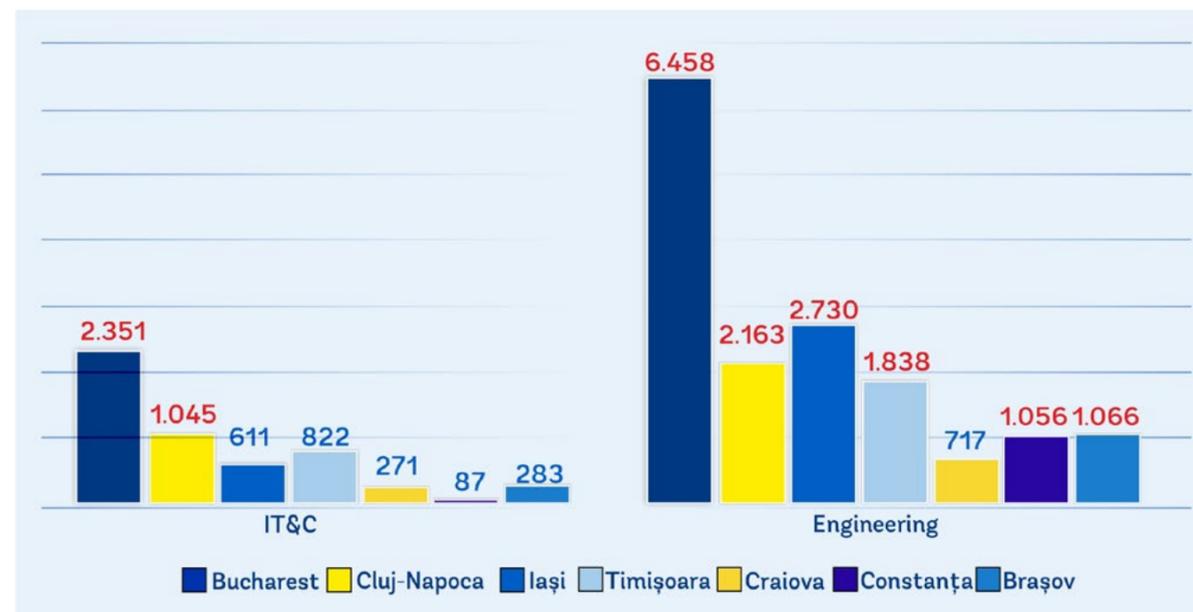
Where justified by the number of students, university campuses should be extended to allow as many young people as possible to access university education.

Figure 47. Foreign students enrolled in Romanian universities in 2016



Source: INS. Tempo Online

Figure 48. Graduates of informatics and engineering universities in 2016



Source: INS. Tempo Online

Romanian magnet cities should take concrete steps to attract talented young people and future entrepreneurs.

Most of those cities are already facing stark deficits of skilled labor, such as the IT field, where there is fierce competition between cities and companies to attract and retain IT specialists. Local authorities may step in to address such situations, for instance by granting scholarships for students from informatics high schools or by subsidizing student dorm accommodation and board expenses for informatics high school graduates from other cities or countries who are studying in local universities.

In the medical field, the infrastructure of large Romanian cities is entirely obsolete and outdated.

The existing public hospitals operate in different locations spread around the cities and are unable to cope with the increasing numbers of patients, a trend which rises with the growth and ageing of the population. Moreover, many of these hospitals ended up serving the population of entire regions where only basis services are provided.

On a positive side, the health service market was quick to react and grew faster than in other European countries, and took over some of the demand, except for emergency cases, where demand far exceeds the supply.

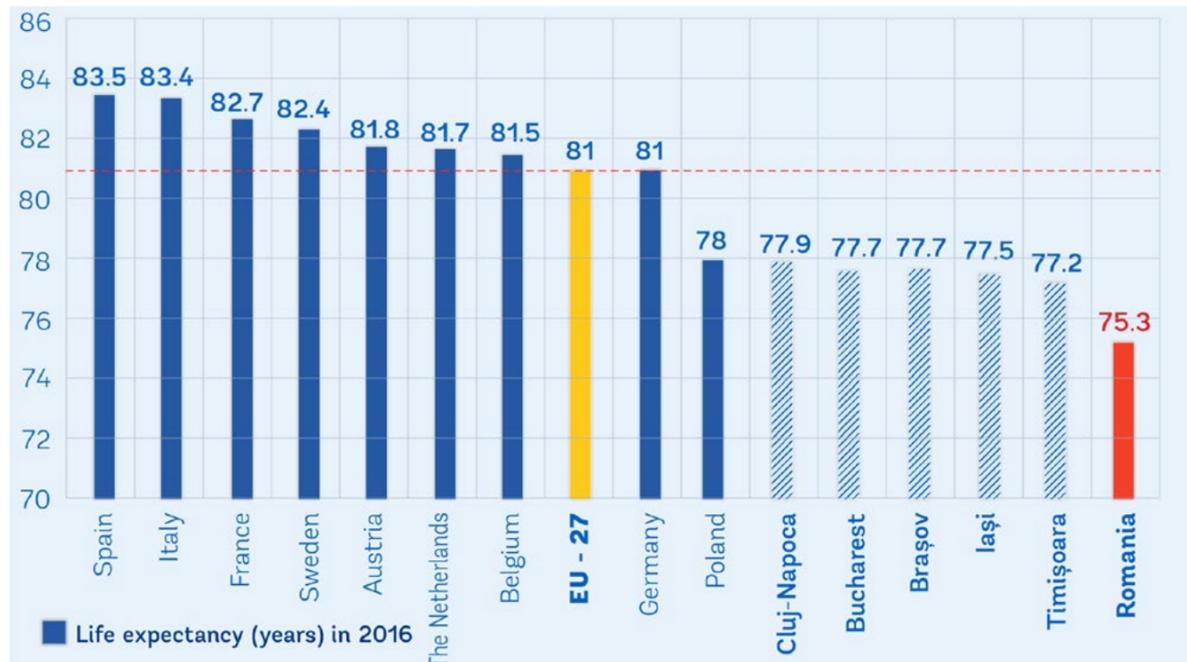
In spite of that, life expectancy in large Romanian cities does not exceed

78 years, three years less than the EU average.

In this context, it is vital that local authorities become actively involved and pressure the Government to develop a network of regional emergency hospitals, for which a strategy is already in place. Only a small portion of this investment will be paid for with European funds, while the balance will have to be secured from state funds, local budgets or PPPs.

The cultural and sports infrastructure often ranks low in the prioritization of public investments, but plays an essential role in defining the attractiveness of magnet-cities for the young population.

Figure 49. Life expectancy (years) in 2016



Source: EuroStat

Young people are the most important consumers of sports and cultural events, and their abundance and quality is a major factor in their moving decision. In many major Romanian cities, cultural and sports events are performed in inadequate premises built during the Communist period, which did not receive significant improvement and remain entirely unappealing for young audiences.

This is again a case when state budget funding for the building of cultural centres, multi-purpose halls or stadiums failed to consider a strategic dimension, and instead were oriented towards areas with a declining and ageing population, and hence have remained unused most of the time and became a burden for local administrations.

Not least, as shown by the World Bank survey, Romanians (and all the more, foreigners and the Romanian diaspora) would prefer to move to good looking cities, which most often means a good quality of street pavement, the aspect of building fronts in the historic centres, the looks of markets, squares and parks.

Most of the large Romanian cities maintain historic areas which escaped more or less mutilated from the Communist onslaught. Sadly, in many cases, such areas are unattractive, with dilapidated buildings and unkempt public areas. However, some cities successfully implemented programs to rebuild the façades of public and private buildings and to remodel historic centres into areas for pedestrian access, restaurants, open air terraces and event venues, which became actual agoras for citizens and tourists. As far as the so-called civic centres are concerned, which were built mainly during the Communist period, and the interstitial spaces between the blocks of flats, the situation is even more serious. They remain shabby-looking and are often used as parking lots or plagued by unsightly constructions (stalls, garages, etc.), and are not perceived as central areas (relaxation or socializing places) by citizens. Similarly, most green areas from the polarizing urban centres have been set by the authorities, but the building solutions prevent their full use by citizens (for instance, some are surrounded with metallic or hedge fencing, which work as a barrier for residents).

In such a case, local authorities need to have access to best expertise in the field of public space development, which often is only available abroad.

International competitions for the redevelopment of public areas should become customary in local administrations. They should imply an external judging and consultations with the population.

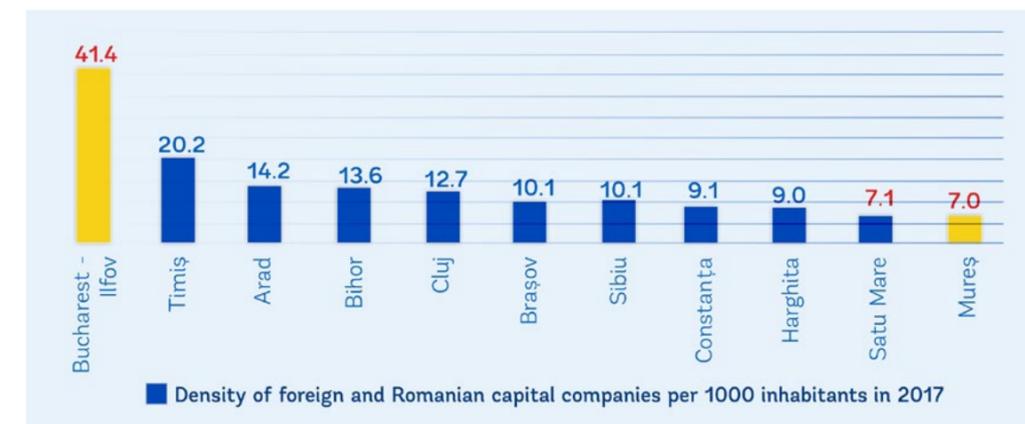
The need for infrastructure investments and business and innovation services

In the previous chapters, we said that

the first priority of local administrations from large Romanian cities should be to attract investments, and particularly foreign investments. Foreign investors can offer high wages and opportunities for horizontal and vertical development.

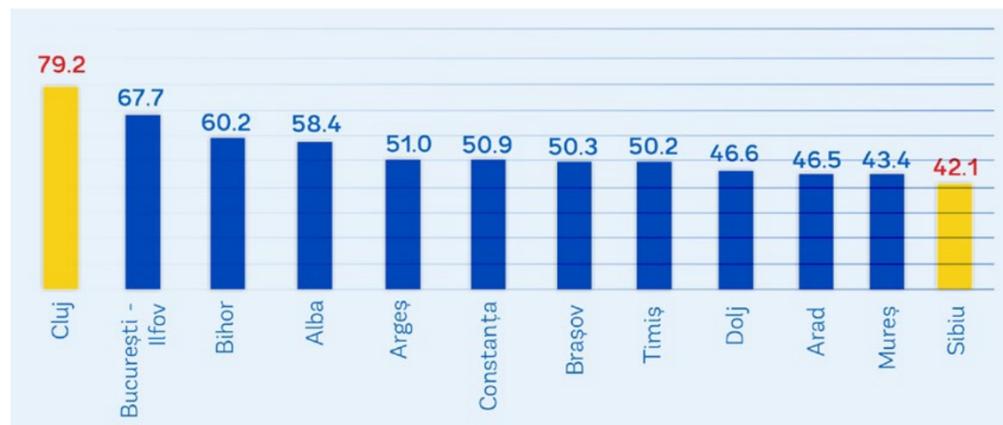
The data collected by the World Bank reveals that foreign investments do not rule out domestic entrepreneurship, on the contrary. The areas which attracted most foreign investments are also those with the highest prevalence of Romanian-owned companies. Practically, the presence of foreign investments create a fertile environment for the horizontal and vertical development of local businesses (for instance, the take-over of the Dacia Plant of Pitești by the Renault Group led to new business opportunities for local entrepreneurs providing road transport services or for manufacturers of car parts serving that global scale customer).

Figure 50. Prevalence of foreign-owned companies per 1,000 inhabitants in 2017



Source: Own calculations based on ONRC and INS data.

Figure 51. Prevalence of Romanian-owned companies per 1,000 inhabitants in 2017



Source: Own calculations based on ONRC and INS data.

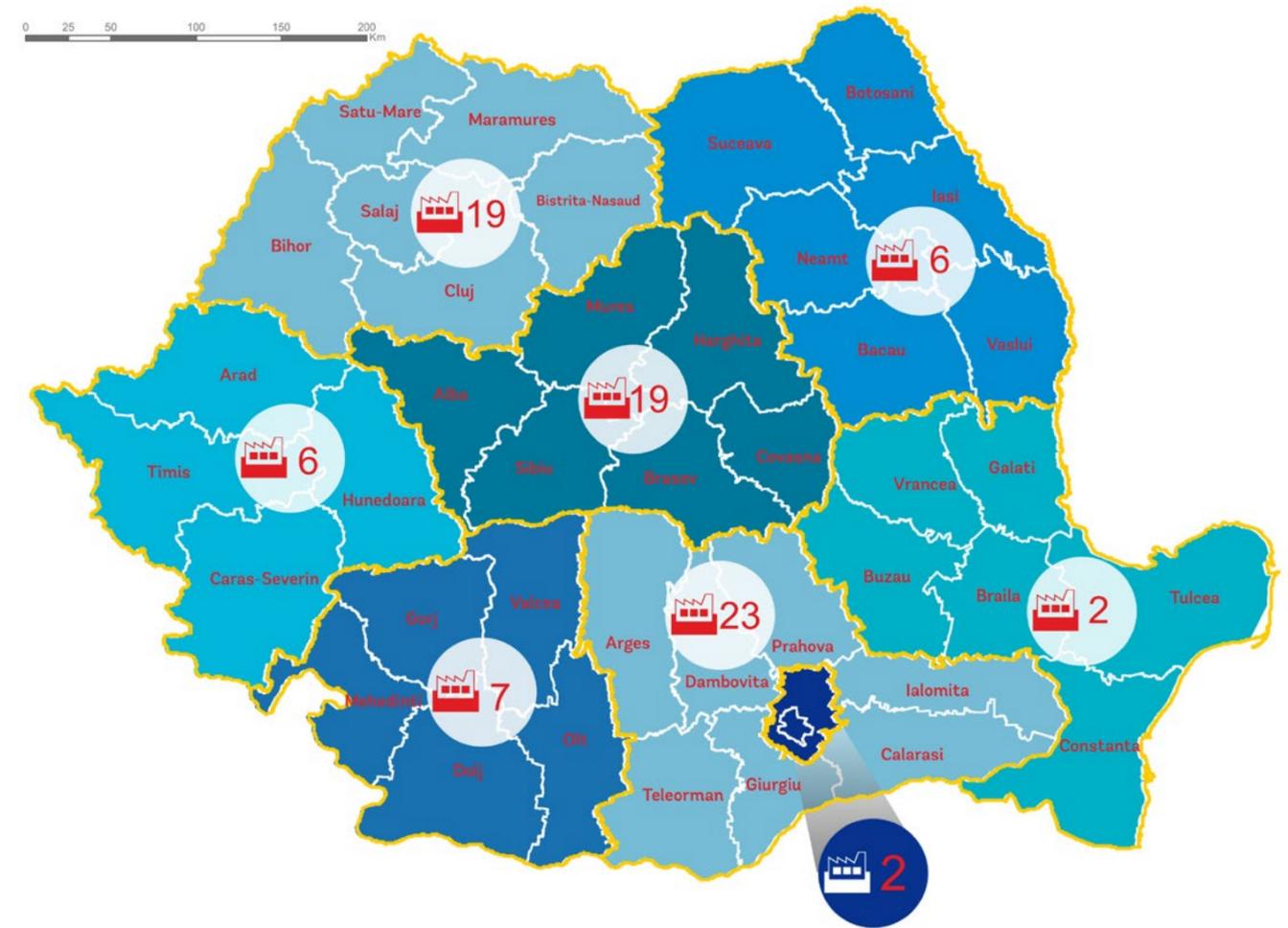
Even if the “mayors” of such cities will take proactive measures to attract global scale investors from top industries, and even if they will succeed to attract and train the required labor locally, there remains the issue of available locations to pursue those investments.

In the case of industry or logistics, these investors will need large lots of land, which often cannot be obtained by reconverting brownfield areas in cities (for reasons such as environment protection or heavy traffic restrictions) and are not owned by the city hall to be later provided to investors. In some situations, they are found in some periurban localities, which however have shrinking land reserves due to the recent major pressures from the real estate sector. Therefore, what remains is to resort to privately-owned land, where local administrations have relatively little leverage: the shifting of the respective areas towards economic use or the overtaxation of unused or underused industrial land. Other than that, any decision to sell remains only at the discretion of the private owner, who will obviously try to take advantage and maximize the price sought from investors. This could jeopardize the prospects of the investments, particularly when other countries in the region make low-priced land available for foreign investors.

The solution to overcome this situation would be for the local authorities to develop industrial or logistics parks, with large lots of land and full utilities, which also have the advantage to provide tax incentives for the hosted companies. Obviously, in some cases, this will involve the purchasing of private land by the local authorities or its transfer from the ownership of central institutions (such as former military units).

The current global context makes large cities, particularly Romanian cities without a transport infrastructure suitable for industrial use, more attractive for foreign investors from the service industry (such as IT, financial, advisory, outsourcing, etc. companies). Moreover, they also bring the most added value into a community, being employers of highly-skilled labor, pay above-average wages, do not pollute, do not take much physical space, etc. Unlike the industry companies, investors of this kind require class-A office buildings in easily accessible areas, preferably central, where multiple facilities are available (such as restaurants, public transport stations, nurseries, kindergartens, parking lots, etc.). Currently, the Romanian market for such spaces is underdeveloped and monopolized by 4 or 5 cities, while the supply of class-A office buildings in other large cities is virtually non-existent. Therefore, local authorities should encourage the private development of such areas via tax incentives and urban rules, among others.

Figure 52. Map of industrial parks in Romania in 2018



Source: MRDPA

Returning to local entrepreneurs, their support is vital particularly in large university centres with many business-savvy young graduates who would not want to work for a foreign company, but start a business of their own. As fresh university or even high-school graduates, they are faced with the same difficulties as any new beginners: they have no idea how to set up a company, have no money to rent business premises, have no business contacts, are unaware of how to secure funding for their ideas, etc. Support services are absolutely essential for them, the most widespread being business incubators and accelerators, preferably operated via public-private partnerships. Thus, local authorities could make available and develop those spaces, but they should be preferably operated by private entities which can attract other stakeholders as well, such as business angels or seed capital investment funds.

Another rapidly growing market niche is that of work delocalization. Mainly in large Romanian cities experiencing traffic congestion and high suburbanization, service industry employees do not wish to travel daily to an office which is usually one hour away from home, obviously when the job profile allows it (e.g., IT programmers). On the other hand, there is a growing number of entrepreneurs who do not need business incubator services, but merely some flexible working space to work on a temporary basis or to meet customers, without having to pay hundreds of euros to rent a dedicated office. This led to a rapid development of a co-working space market, where these people

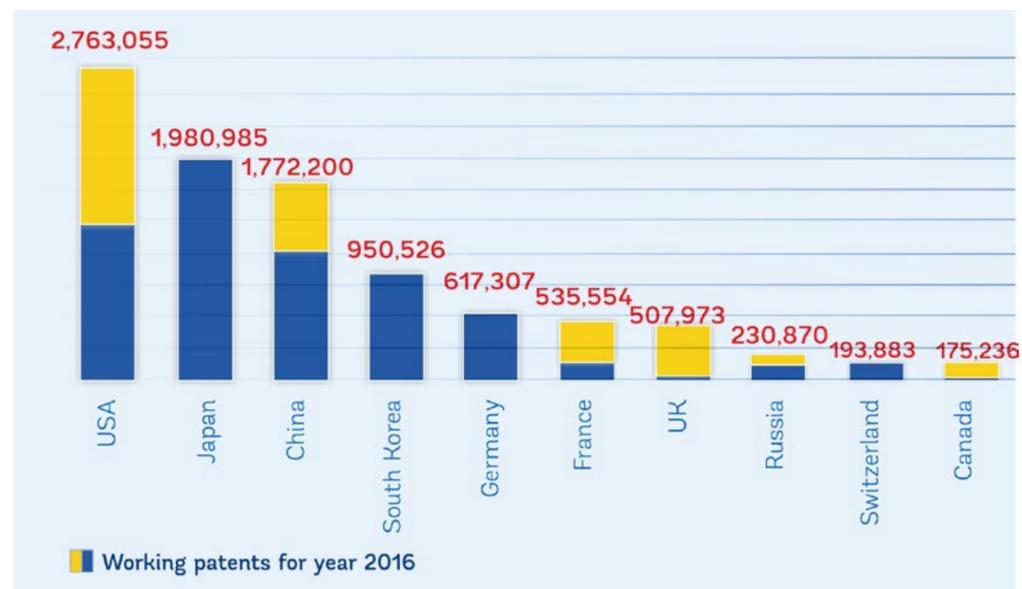
could rent, on a temporary or subscription basis, a working and/or a conference/meeting space, as close as possible to home or another preferred area. Such private initiatives should be supported by authorities, either by making available privately-operated co-working locations or by providing tax incentives.

How can Romanian metropolises BECOME MORE INNOVATIVE

SILICON VALLEY

National, regional and local authorities across the globe are trying to reinvent Silicon Valley-type areas at home. Silicon Valley is the epitome of an innovative area, and many public administrations are trying to emulate its example. Although one cannot really say they are innovators when in fact they emulate others, stimulating an innovating area is actually a good thing in itself. An innovating city or area can set the tone for the rest of the world instead of trying to catch up with others. Silicon Valley now concentrates companies which define the future of mankind.

Figure 53. Ongoing patents in 2016



Source: WIPO

Let's be realistic - the chances that a Romanian region produced disruptive innovations in the medium term are quite limited. When much more developed Western-European and East-Asian regions experience limitations in generating disruptive innovations, it is important to have a sense of reality. This does not mean however that Romania should not innovate - it already does.

What we have to understand is what innovations are possible. A disruptive innovation need a large market for testing and promotion. The USA currently has the largest market of this kind - i.e. a sufficiently numerous population with extra resources and appetite for novelty. Besides, the USA has the advantage of global domination on the media market, and American movies, series or music are the ideal means to promote and spread American-made innovations globally.

The EU market for ideas has the downside of being very fragmented due to cultural and language barriers. More so, the EU failed to develop a media industry as dynamic as the American one. Thus, before attempting to bring innovative disruptions, Romanian authorities should take steps to create a framework conducive to such innovations. Some of these steps include:

- Using English as a business and research language. It is essential that EU innovators speak the same language. A patent or an article in Finnish will hardly reach other innovators from Europe or globally. English should normally be the second language of each EU citizen.
- A common and coherent system of protecting intellectual property and innovations.
- Programs to promote experience sharing among researchers.
- Easy access for researchers to the EU university infrastructure, including the system for promoting investments via university campuses.
- Promoting the media industry, and particularly of channels serving the entire Union instead of individual countries.

As far as innovations generated in Romania are concerned, it is important to have a sense of reality, but excessive modesty will not help either. For instance, the concept of the 5,000 EUR Dacia is a technological and promotion innovation originating in Romania. This innovation allowed Dacia to become one of the fastest growing automotive producers in Europe. Currently, Dacia has a bigger market share abroad than domestically, and the cars manufactured at Mioveni are the most successful export of Romania.

DACIA

The example of Dacia and the type of EU-generated innovations could be indicative for industries where Romania can innovate the most in the years to come. As shown above, the EU economy is dominated by three key industries, which soon will also dominate the Romanian economy - transport; chemistry; electronics. Many of the EU-generated innovations are marginal innovations from these three industries - for instance, a more powerful engine, a better detergent or a more energy-efficient refrigerator. Obviously, the EU generates innovations in other industries as well (for instance, the Internet was invented at CERN in Switzerland, but reached maturity in the US, and from there spread to the rest of the world), but the bulk consists in marginal innovations from these three industries.

ȘCOALA KRONSTADT

This has several clear implications for Romanian public administrations. The first is that a Romanian innovation stands better chances to originate from the dual learning system and vocational schools than from universities. This does not mean universities will not innovate, but that the chances to generate innovations useful for private companies will increase when education institutions have direct relationships with such private companies. A telling example in Romania is that of the Kronstadt vocational school, founded at the initiative of private companies from Brașov, with the support of the Brașov City Hall, where students learn how to respond to the needs of a private company.

Adequately trained people are essential for companies in the transport industry (road, rail, air, etc.), or the chemical and electronic industries. Most of the times, the labor needed by the companies in these industries is educated in the dual learning system instead of the tertiary education system. This requires an appropriate approach at local level, and city halls play an essential role in reinforcing the dual educational system and facilitating the connections between private companies and schools. In 2016, European companies with the most patent applications submitted were Bosch, Siemens, Daimler, Schaeffler, Philips, Ericsson, Basf, BMW, the first three having own manufacturing capacities in Romania. Therefore, Romanian workers already have access to major innovation distribution channels in Europe.

As far as the tertiary education and research-development systems are concerned, connections with US universities and research-development centres will prove vital. The USA leads by far the world in the fields of applied and theoretical research, and it is very important to have strong connections across the ocean. Provided they have something to offer, Romanian local administrations could try to persuade US universities and research-development centres to set up branches in our country. For instance, Constanța could host a research and development branch in sea studies, navigation, oil and gas extraction or tourism. Bucharest and the Ilfov County Council could promote the setting up of branches around the Măgurele project, which is fitted with unrivalled laser research infrastructure.

Table 17. Top US research universities

Rank	University	Score
1.	Harvard	98.5
2.	California Institute of Technology	97.5
3.	Stanford	96.7
4.	Princeton	93.9
5.	Massachusetts Institute of Technology	91.9
6.	University of Chicago	90.1
7.	University of Pennsylvania	90.1
8.	University of California, Los Angeles	88.1
9.	Johns Hopkins University	88.1
10.	Yale University	87.0

Source: The Times Higher Education World University Rankings 2018

Recommendations

Below are reviewed some ideas on how to support Romanian functional urban areas to become true engines for growth at county, regional, national and even European level.

EUROPEAN COMMISSION LEVEL

Already in 2018, the European Commission set out guidelines on the new cohesion policy for the 2021-2027 programming period. The urban dimension of this policy grew when compared with the 2014-2020 period, so that cities will benefit of 6% of the total ERDF budget for sustainable urban development, will be encouraged to network via a dedicated programme, and will be assisted in strengthening the administrative urban authorities already set up during the current financial cycle. Everything under the umbrella of the so-called European Urban Initiative.

Thus, although the 6% share of the ERDF could have been more generous considering that primary and secondary cities alone contribute more than 60% to the Community GDP, the Commission followed through its commitment to continue massive investments in cities. However, the Commission could play an even more active role in designing a consistent policy in the field of urban and metropolitan development in Romania, whose main funder currently is, given the lack of dedicated governmental programmes in this field. For instance, the ITI financial tool, designed at Commission level mainly for urban areas, has been used by Romania for the Danube Delta during the 2014-2020 programming period. This is indeed a natural area of great global significance, but is mainly rural, with a very low population density and a very limited potential to generate economic development (its share into the national GDP is less than 0.5%). Therefore, it would not have a significant effect of multiplying public investments. Even if Romania will ultimately decide whether to include these territories into the next financial cycle, the European Commission could take a more robust stand regarding the expected results from the application of this tool.

The European Commission could continue its dialogue with local public authorities and their associations in order to establish the most effective institutional framework required for implementing the urban and metropolitan development funds during the 2021-2027 programming period.

It is a known fact that the authorities would like those programmes to more specifically address regional and local needs, and to be less centralized, via the central administrations.

AT CENTRAL ADMINISTRATION LEVEL IN ROMANIA (GOVERNMENTAL)

Romanian functional urban areas which generate more than 90% of national GDP urgently need an integrated public policy to continue to develop. Without these dynamic urban areas, Romania would be unable to develop and to accumulate sufficient resources to more effectively support poorer areas and social groups, for a longer period. This policy will have to be aimed at different sectors:

An effective and flexible legal framework is required for the organization and functioning of metropolitan and functional urban areas in Romania.

Currently, this framework is rather vague, as the cooperation tool connecting the component TAUs selected by the lawmaker consists in the intercommunity development associations. They have the advantage of a higher flexibility than the administrative-territorial units (for instance, as regards bureaucratic procedures related to the implementation of projects, the recruitment of qualified staff and its adequate remuneration, etc.), but are also subject to certain limitations which hamper investments of common interest. This framework should obviously be more flexible to enable each metropolitan area choose the administrative model most suited to its needs. Some of those needs are met by the establishment of IDAs, other would want the law to allow component TAUs to submit to the metropolitan coordination structure a wider range of public services for which they lack sufficient skills or resources. For instance, the municipality could take over and modernize certain major channels of communication, in order to develop transport corridors in neighboring localities that lack the required resources.

Moreover, there is a need for a more accurate regulation of how two TAUs could decide to merge administratively, obviously after consulting the population from the two communities, since the current legal avenues are too crippled by bureaucracy to encourage such initiatives. A solution to that extent would be the rapid deployment of an inter-ministerial working group, which would discuss a body of laws for Romanian metropolitan areas and include representatives of the central administration, as well as from the FZMAUR, AMR, ACOR, UNCJR, etc

Promotion of land use (master)plans for regional metropolitan areas.

These plans (prepared for just a few Romanian metropolitan areas), can serve as guidelines (should not necessarily have a regulatory character), but it is important they be discussed with all relevant stakeholders at metropolitan level in order to reach a consensus on the interventions proposed under such masterplans. Most mayors in metropolitan areas issue urban planning certificates or building permits only taking into account the PUG regulations, without consideration for metropolitan priorities. Such plans should be prepared by either the County Councils, or by the IDA set up at metropolitan area level

The involvement of FZMAUR as a dialogue partner of all initiators of legislative initiatives aimed at Romanian urban and metropolitan areas, in cooperation with AMR.

So far, FZMAUR has been rarely requested to be involved in central decision-making regarding topics of interest for urban agglomerations, such as public transport legislation, local public finances, the funding of local development programmes, etc.

The design and implementation of a state budget funding programme aimed at the preparation of (master)plans for the development of regional metropolitan areas

This could be developed by the MRDPA along the model of the Programme for the funding of PUGs and RLUs. The eligible beneficiaries could be county councils and metropolitan area IDAs.

Implementation of the ITI tool for the 2021-2027 programming period in Romanian functional urban areas.

Romania will have to allocate at least 6% of its ERDF total national budget for sustainable urban development, i.e. nearly 2 billion EUR. However, it could, and should, allocate a percentage well above that, as Romania is the least urbanized country in the EU. Usually, around 25%-30% of the European funds allocated for the 2021-2027 programming period should be aimed at the country's economic growth engines, i.e. county capitals and their functional urban areas, along the lines of the Polish model from the 2014-2020 programming period. In the case of Romania, given the large number of county capitals and in order to prevent the waste of funds and its effects in many locations, there is an option to continue the growth pole policies from the 2007-2013 programming period (either the 7 proper growth poles, or supplemented with the 13 development poles), or to design other solutions (for instance, funding certain existing associations of those cities, such as the Braşov-Bucharest-Constanţa Axis (BBC), the Western Alliance (AVE), Moldavia Develops (MDD), the Northern Transylvania Association (ATN), etc.). The interventions should be aimed the following major areas:

1. **CONNECTIVE INFRASTRUCTURE** (public transport systems, roads, overpasses, metropolitan bridges, park&ride facilities, bike&ride, footpaths, etc.) – many already included in the Sustainable Urban Mobility Plans prepared for the 2030 horizon;
2. **THE BUSINESS INFRASTRUCTURE** (industrial, scientific and technological parks, business incubators and accelerators, exhibition centres, wholesale markets, etc.);
3. **THE ESTABLISHMENT, EXPANSION AND STRENGTHENING OF METROPOLITAN PUBLIC TRANSPORT SYSTEM** (bus, metropolitan trains, trams, etc.);
4. **INVESTMENTS IN THE QUALITY OF LIFE** (education – nurseries, kindergartens, campuses for high school and dual vocational education; health – outpatient facilities, regional hospitals, etc.; public spaces and green areas – urban regeneration in the old and new districts, historic centres, playgrounds, leisure areas, etc).

Ideally, the connective infrastructure and metropolitan public transport systems should receive the bulk of the funds, since they address the most severe problem in most of the major cities and their functional urban areas.

The ROP decentralization at regional level during the 2021-2027 financial cycle.

Currently, an increasing number of local authorities claim that the national priorities do not necessarily reflect regional or local ones (for instance, all the development areas in the country receive the same percentage share from ROP 2014-2020 for investments in technological transfer, although some have 2 or 3 state universities, and others more than 10), and that the brokering by the central management authorities makes absorption more difficult. On the one hand, there already are intermediate bodies at regional level (Regional Development Agencies) with sufficient experience in all stages (from programming to help-desk, assessment, contracting, implementation, monitoring, reporting, etc.), and even sufficient capacity (they have, on average, more than 100 employees, county offices, etc.) to become management authorities for programmes amounting to a few hundred million EUR/region. Therefore, the decision is rather political and, if taken in due time, does not involve any major risks of reduced absorption. It

has to be reminded that regional ROP will fund, via the axis dedicated to urban development (corresponding to PA4 from ROP 2014-2020), interventions in small towns and in functional urban areas which have not been selected for ITI funding.

The design and implementation of a programme (supplementing the ROP and ITI) funded by the state budget, aimed at developing metropolitan areas (PNDM).

This would be the first state-funded post-1989 financial tool aimed at the development of Romanian metropolitan areas, as the MRDPA investment programmes in the past 10-15 years were mainly aimed at rural areas and small towns (see PNDI, PNDL), under the umbrella of a so-called internal territorial cohesion policy. The programme should benefit from a multi-annual allocation, which could increase progressively according to the available resources. If the state budget were unable to accommodate such amounts from own resources (given the large commitment appropriations for PNDL), loans could be used instead. The World Bank, the European Bank for Reconstruction and Development or the European Investment Bank could grant loans for such investments, provided they are subject to sovereign guarantees provided by the Ministry of Public Finance. In terms of eligibility, this programme should only fund projects covering at least two administrative-territorial units in the same functional urban area (to define these, the World Bank already issued a proposal based on the OCDE criteria, as Romania currently seeks to join this organization), in order to avoid the concentration of investments solely to urban centres (one of the objections against PA1 under the ROP 2007-2013). The County Councils and metropolitan IDAs from functional urban areas should also be eligible, provided they comply with the same territorial principle. Moreover, the proposed projects should be mandatorily included within a strategic and/or territorial planning document at the level of the functional urban area (e.g., Sustainable Urban Mobility Plan, PATZM, etc.). The types of eligible projects should be proposed for the ITI, provided they be supplemented by interventions which are not generally eligible for European funding. In this case, most of the funds should be oriented to the connective infrastructure as well, particularly to those strategic projects which have not been funded from European funds.

The "Magnet Cities" report recommends the setting up of a National Metropolitan Investments Programme, funding the following major axes:

1. **METROPOLITAN CONNECTIVE INFRASTRUCTURE.** Nearly every large Romanian city needs additional connective infrastructure – both in order to facilitate better circulation of people, goods and ideas within a metropolitan area, and improve connections between the metropolitan area and the rest of the world (markets, business partners, holiday locations, etc.).
2. **METROPOLITAN BUSINESS INFRASTRUCTURE.** Most new industrial facilities are nowadays built outside the administrative territory of urban centres. The localities where these business facilities are located, usually cannot afford to pay for such infrastructure.

- 3. PUBLIC TRANSPORT VEHICLES, AND PUBLIC TRANSPORT INFRASTRUCTURE, SERVICING THE METROPOLITAN AREA** (e.g. buses, trams, minibuses). There are few operational metropolitan transport systems in Romania right now, although commuter data indicates that such systems are needed in most large cities. Financing metropolitan public transport infrastructure (e.g. transit stops, park-and-ride facilities) and vehicles, could encourage more localities to develop such systems – for the benefit of all people living in the metropolitan area.
- 4. REHABILITATION/MODERNIZATION/EXTENSION OF DISTRICT HEATING SYSTEMS.** District heating systems represent a sustainable way of providing heating and electricity (if co-generation systems are available) to a community. Unfortunately, such systems are expensive to maintain and operate, and most cities have had difficulties with them. In some cities, district heating systems have disappeared completely; in others they have shrunk considerably, being replaced by individual heating units; while in other cities they are maintained at a significant expense for the local authority, and usually require very high subsidies. Obviously, investments in district heating systems should be avoided where they do not make economic sense anymore. But in areas where such a system could be run efficiently, it is important to consider assistance from the central level.
- 5. URBAN REGENERATION OF BLOCKS OF FLATS DISTRICTS.** Despite the fact that 73% of the inhabitants of Romanian cities live in blocks of flats, there is no clear urban regeneration programme aimed at blocks of flats districts. An investment programme of the Ministry of Regional Development and Tourism, targeting the thermal-insulation of apartment blocks, has subsequently triggered investments (from public, EU, and private sources) all over Romania. Thermal insulation investments are now financed by the Regional Operational Programme 2014-2020, and in many cities investments are financed, to a large extent, from private sources. Similar to the thermal insulation program, the Government could provide financing for an urban regeneration programme, which would focus not only on the apartment blocks themselves, but also on the interior and exterior communal spaces (e.g. green areas, playgrounds, parking lots, alleyways, bike paths).
- 6. REHABILITATION OF HISTORIC BUILDINGS AND HISTORIC CITY CENTRES.** Many of the historic cities in Romania are relatively small and have small budgets. As such, they are often incapable of taking proper care of their historic and cultural heritage, and thus deprive themselves of potential tourism revenues, while also missing the chance of making themselves more attractive to people and firms.
- 7. HOUSING DEVELOPMENT.** A lack of access to affordable housing can hamper migration to dynamic cities and price-out some people living in those cities. The Ministry of Regional Development, Public Administration, and European Funds finances a number of housing development programs (from social housing, to housing for the Roma

population, or housing for young people), but these programs are haphazard, sporadic, and not always strategic. The World Bank has provided a number of recommendations for the development of a unitary housing development program, which could respond to clear needs in Romanian FUAs. It is also important to note that 52% of investments in new housing units in the FUAs of the 40 county residences, have been done in outer areas, not in the core city. More often than not, the localities in these outer areas lack the budgetary means for investments in housing, and national assistance is often necessary – particularly housing for less wealthy people.

- 8. REHABILITATION OF PUBLIC SPACES.** Quality of life is identified as one of the key factors that draws people to cities, and the better quality of life cities offer, the more attractive they are to people. Investments in the rehabilitation of public spaces, the extension/rehabilitation/modernization of parks and green spaces, the development of pedestrian and bike paths, go a long way in making cities more attractive. Many of the cities in Romania lack the necessary resources to raise the quality of life as fast as some migrants would require
- 9. CREATION OF METROPOLITAN PARKS.** The majority of urban areas in Romania have a significant dearth of properly maintained green spaces. EU indicates that every urban centre should provide its citizens with at least 26 square meters of green space per capita. Most of the large cities in Romania failed to reach this threshold. Ensuring that as many people as possible will have access to green areas will require in many cases the development of parks at the metropolitan level – particularly in cases where the core cities lack reserves of land that could be converted to green areas.

Focusing of EU and state-funded investments in functional urban areas.

This is relatively simple and can be done by including a score bonus into the evaluation grids of funding applications. For instance, an application for the rehabilitation of a rural school under the PNDR will receive an additional X points if it is part of a strategic or territorial planning document at the level of a functional urban area. This is also important for increasing the effectiveness of public investments, being known that the only areas with demographic growth in Romania are those around large cities. Therefore, they are in greatest need of public investments, and public funds will be best spent there.

AT THE LEVEL OF LOCAL ADMINISTRATION STRUCTURES IN ROMANIA (city halls, county councils and their associations)

Setting up offices to attract foreign and domestic private investments

As shown above, the first priority of Romanian local public administrations should be the strengthening of the private sector by attracting investments in sectors with high added value and wages. This will retain the local workforce, attract new inhabitants from the country and abroad, but also additional funds from local budgets for public investments (very important, considering that some regions could stop receiving the same amount of European funds after 2027, given the alignment with the average EU GDP and the loss of eligibility for investments under the cohesion policy). These offices should provide integrated services to investors by appointing project managers for each company, and assist them throughout each investment cycle, from the identification and visiting of potential sites to staff recruitment or involvement in the community life after they became settled at local level. IDAs set up in functional urban areas could be the most suitable vector to establish such offices, since they have metropolitan coverage, and much of the land eligible for investments is actually located outside of the administrative area of municipalities.

One should mention that many Romanian municipalities already have a well-developed hinterland, with periurban areas very attractive for investors. In its "Magnet Cities" report, the World Bank set out the budget that could be allocated for capital investments, both in county capitals and in the localities making up the functional urban area (see below).

Table 18. Budget for capital investments in a selection of functional urban areas in Romania, from 2014 to 2023

FUAs	Core City	Outer FUA
Alba Iulia	79.335.483 €	31.894.242 €
Alexandria	46.260.643 €	12.340.221 €
Arad	232.769.605 €	108.216.628 €
Bacău	188.467.721 €	46.380.921 €
Baia Mare	121.925.796 €	52.188.515 €
Bistrița	82.485.241 €	33.131.758 €
Botoșani	81.888.934 €	11.699.039 €
Brăila	149.224.205 €	17.180.585 €
Brașov	351.355.206 €	205.220.303 €
Bucharest	5.654.747.305 €	925.833.873 €
Bușău	137.931.058 €	62.100.824 €
Călărași	59.315.472 €	19.173.525 €
Cluj-Napoca	419.765.525 €	127.378.156 €
Constanța	347.545.474 €	271.325.926 €
Craiova	274.330.186 €	78.357.190 €
Deva	79.753.116 €	86.630.505 €
Drobeta-Turnu Severin	87.125.205 €	20.908.405 €
Focșani	80.345.981 €	50.574.338 €
Galați	265.953.658 €	53.513.589 €
Giurgiu	52.048.111 €	7.804.176 €
Iași	293.573.282 €	57.279.668 €
Miercurea Ciuc	48.510.742 €	33.226.739 €
Oradea	225.901.162 €	96.949.924 €
Piatra Neamț	101.196.775 €	33.233.086 €
Pitești	175.617.591 €	182.660.557 €
Ploiești	271.826.657 €	206.769.858 €
Râmnicu Vâlcea	118.712.548 €	90.120.590 €
Reșița	72.168.216 €	4.697.643 €
Satu Mare	106.628.016 €	51.081.570 €
Sfântu Gheorghe	53.413.468 €	17.736.645 €
Sibiu	213.315.669 €	116.573.688 €
Slatina	96.011.879 €	30.411.915 €
Slobozia	48.660.441 €	21.521.552 €
Suceava	123.734.102 €	39.814.303 €
Târgoviște	98.853.981 €	56.294.072 €
Târgu Jiu	84.787.696 €	37.480.986 €
Târgu Mureș	184.351.885 €	70.009.762 €
Timișoara	417.469.040 €	211.906.432 €
Tulcea	82.633.476 €	16.334.304 €
Vaslui	48.104.724 €	13.324.763 €
Zalău	56.798.556 €	20.510.019 €
TOTAL	11.714.843.831 €	3.629.790.795 €

Source: 2017. Magnet Cities: Migration and commuting in Romania, Washington D.C.: The World Bank

Development of dual vocational education.

Besides its infrastructure problems, Romania is beginning to lose ground in terms of attracting investments, due to a deficit of trained labor. Some areas in the country, such as Braşov, have shown that viable solutions do exist in this case. Braşov is the seat of a German-inspired vocational dual-system school ("Kronstadt"), with an absolutely remarkable graduate promotion and retention rates at local level. It was the result of a combined effort by the local administration (by providing some excess educational infrastructure, which is available in many Romanian cities due to the demographic decline) and the private sector, which became actively involved in fitting out the school and mentoring the students. Such models should be implemented in all Romanian urban agglomerations, based on the specifics of the local economies.

Stimulation of local entrepreneurship, particularly in sectors such as IT&C or the creative industries.

Many young people leave Romania due to their inability to pursue their business ideas, alleging the difficult access to loans or the lack of effective support from the authorities. For them, the local authorities could design support packages within the legal means at their disposal. These can consist in either co-working spaces, PPP development of business incubators and accelerators, providing competition-based financial grants, tax incentives, etc.

Strengthening of universities as development vectors in large Romanian cities.

The most attractive Romanian cities in the last decade have been and continue to be the large university centres (Bucharest, Cluj-Napoca, Iaşi, Timişoara). They permanently attracted thousands of talents from ever-growing areas, which in turn attracted private investments in top industries and set the local economy in motion. Moreover, the universities also attracted a growing number of foreign students, which also boosted the purchasing power of those cities and brought a cosmopolitan feeling similar to that of large Western European cities. However, Romanian universities failed to reach their growth potential, considering their modest positions in European rankings. In addition, the demographic decline compels them to exit their comfort zone and contemplate attracting foreign students, and consider niche offerings. Local administrations and universities should cooperate more to that purpose. Thus, the administrations may act as a link between the private and academic sectors, but may also become involved in ensuring the supporting infrastructure, from the extension of university campuses to providing state aid to attract more airlines, or providing incentives and scholarships for out-of-region students who cannot afford to study at local level.

A clear list of priority investments to increase quality of life.

The survey carried out in the framework of the report "Magnet Cities. Migration and commuting in Romania" showed, on the one hand, that Romanians are more tempted to move in good-looking cities, and, on the other hand, that they would accept moving to another city where they earned the same or less, as long as that city provided a better quality of life. Currently, most Romanian cities have development strategies with hundreds of pages of project ideas, which exceed several times the available resources, but fail to clearly prioritize, and thus remain stuck on paper or in early stages of implementation. Although long ignored in favor of investments in paving roads and public utility networks, public and green spaces became a major determining factor for residents, and make a difference between cities. Therefore, besides the EU and state funds, municipalities should also invest public funds in international competitions for the remodeling of heritage public spaces (such as historic centres, civic centres, squares, etc.), of former Communist districts of blocks of flats, as well as new peripheral residential areas which most often are poorly built.

Strengthening training capacities and the implementation of investment projects.

As shown above, most project ideas from the strategies of Romanian local public administrations remain on paper or are implemented with long delays. In some cases, it is not even a matter of money (many cities already recorded a surplus of their development budgets after several consecutive years, thus they invested less than planned), but of limited administrative capability. With a few notable exceptions, city halls across the country lack "task force"-type implementation units for investments, which require large teams of multidisciplinary specialists able to manage significant investment funds. Thus, the fruition of a project idea from a strategy could involve a few months of documents travelling within an institution, then several other months in the tendering stage, ending up with an aggregate implementation period of 2 to 3 years. The World Bank suggested a staffing scheme for such implementation units in every local administration, contingent upon a realistic operational budget and simple, easy-to-implement monitoring and performance assessment tools (a "dashboard"-like system for the institution's management).

Sharing of best practices and the association of local public authorities.

All major Romanian cities excel in one field or another, but the management or executive teams fail to adequately promote such strengths. If they exchanged best practices, probably half of the specific problems faced by Romanian local administrations would find an easy fix. Therefore, such formal and informal exchanges should be encouraged.

One solution would be for AMR and FZMAUR to prepare best practices guidelines for local and metropolitan administrations. Moreover, the civil society could become involved to facilitate events where mayors and city managers discussed solutions to specific problems. However, the personnel exchanges on specific topics at executive level (for instance, urban regeneration of historic centres, metropolitan transport systems, the administrative interface with citizens, IT applications for the use of citizens, etc.) remain the most effective.

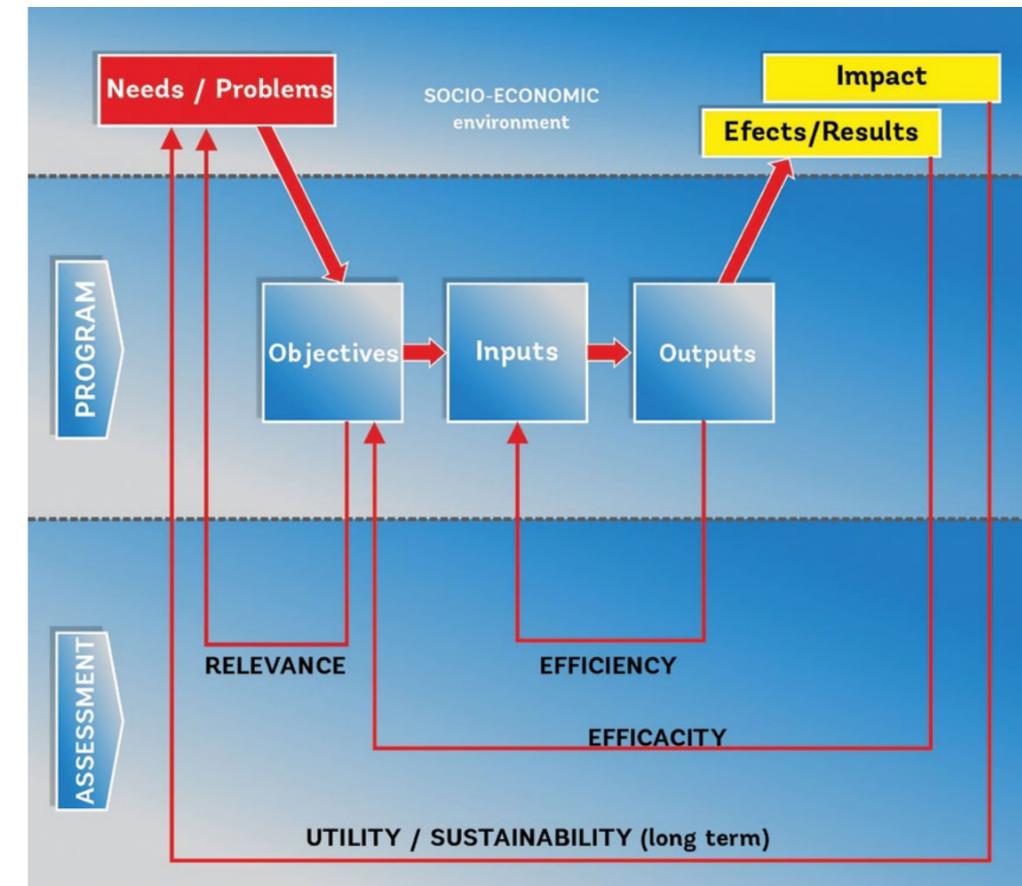
Active involvement of citizens and of the business environment in decision making and tapping into civic creativity.

The local administrations of many Romanian cities continue to have a defensive and rigid stance against citizens and even the business environment. Most of the latter do not have any confidence in the administrations and permanently criticize them, and administration in turn refrain from genuinely consulting them before making decisions. A much more effective solution would be to overcome this gap and capitalize on the creativity of the civil society in order to improve quality of life at local level. The participative budgeting projects proved very valuable to that extent, by channeling the frustrations and dissatisfaction of citizens into ideas for projects for the administration. Moreover, the implementation of tools enabling citizens to submit real-time complaints regarding public spaces or the activity of the administration, together with the operation of civic councils which debate projects of public interest, constitute steps towards a long term cooperation between the public sector and the civil society. It is precisely this type of environment that Romanian cities need to keep developing.

Preparation of an ambitious and realistic development vision.

As shown in this report, people are hardly moved by small or trivial ideas. A community will be hard pressed to embrace a project to pave a street – what it needs is a project that would stir imagination. Local pride and attachment to a certain city are not solely about the achievements of the past (such as beautiful buildings, a winning football team), but also about plans for the future. People want to be involved in ambitious plans and want to feel they also play a part in such a plan. Therefore, it is essential that local administrations develop, in close cooperation with citizens and local stakeholders, a far-reaching vision for development in the long run. It is also essential that such a vision for long term development include intermediate performance milestones which, on the one hand, would allow local administrations see whether they are on the right track (the scheme below, prepared by the European Commission, shows how an effective monitoring and assessment project should look like), and, on the other hand, provide citizens with concrete gains that could turn them from mere spectators into agents of change. A citizen who feels is a part of a blooming community and is instrumental in that development vision will be a citizen actively fighting for his or her community. The more stakeholders a metropolitan area has that are actively involved in its development, the more chances it will have to grow.

Figure 54. An effective monitoring and evaluation system



Source: European Commission. 2006. "Indicative Guidelines on Evaluation Method"

Without strong metropolitan areas, Romania will be unable to support its long term growth. The time to begin strengthening metropolitan areas in Romania is now!

**THE “PRIORITIES
OF YOUR CITY”
CAMPAIGN**

THE "PRIORITIES OF YOUR CITY" CAMPAIGN

The World Bank, in partnership with the Romanian Federation of Metropolitan Areas and Urban Agglomerations (FZMAUR) and with the support of subnational public authorities, established a set of projects with metropolitan relevance for Bucharest and the 40 Romanian county capitals. Subsequently, citizens have been invited to rank those projects based on their significance for the local community, within the framework of the largest domestic public consultation campaign on the topic of urban and metropolitan development.



The mission of the "Priorities of Your City" Campaign consisted in supporting the cooperation between public authorities and citizens to develop the first metropolitan development vision for Romania.

Objectives

The main objectives of this initiative were:

1. Identifying a first set of major projects to enable and promote the development of the main functional and metropolitan areas in Romania, agreed by both the subnational public authorities and the local communities;
2. Prompting a debate on the urban priorities in these areas, inviting and encouraging citizens to be informed, dialogue and become civically involved in the future of their cities.

Figure 55. Campaign image



Source: Image created by the authors

Duration

The preparation of the "Priorities of Your City" public consultation campaign lasted for approximately 8 months. During this period, the team collected the current strategic documents for the functional urban areas of Romania and carried out consultations with subnational public authorities, thus completing the final lists of projects of metropolitan relevance.

The public consultation was performed online during January 22 – March 22, 2019, and consisted in inviting citizens to rank the strategic projects selected for each functional urban area of the 40 county capitals in Romania, respectively the Bucharest-Ilfov metropolitan area.

The campaign results have been made public on April 3, 2019, after validation of all answers.

Methodology

Selection of metropolitan development projects

A major step before the launching of the public consultation campaign was the collection of projects from all the urban development strategic projects relevant for each Romanian county capital and for Bucharest-Ilfov. Thus, the projects for each of the 41 functional urban areas contained under the General Urban Plans (PUG), Sustainable Urban Mobility Plans (SUMP), Integrated Strategies for Urban Development (ISUD) and the General Transport Master Plan (GTMP) have been selected and included in a database. Also included in the database were the project name, funding source, estimated budget and implementing period for each specific project. The result consisted in a first set of major strategic projects impacting each functional urban area of the county capital and of Bucharest.

The final set of up to ten hand-picked strategic projects for each of the 41 functional urban areas was established following consultations with the Romanian public subnational authorities tasked with implementing such projects. The consultations began with a series of letters sent to all the mayors of county capitals, presidents of county councils, prefects, the heads of Regional Development Agencies and the coordinators of Romanian Metropolitan Areas. These letters explained the scope of the World Bank's ongoing exercise and requested the authorities to take part in selecting no more than ten projects of metropolitan relevance which could promote the development of the region they represent. Moreover, the letters also mentioned the selected projects had to meet the following criteria:

1. Be part of an existing strategic or programmatic document (ISUD, IUDP, PUG, GTMP).
2. Have a minimum value, adjusted according to the budgetary capacity of each county capital.
3. Not have funding ensured from other sources.

Within this first consultation process, the public authorities submitted to the team the selected projects for each county capital and the Bucharest-Ilfov metropolitan area.

Survey for project ranking

All the projects have been included in an online survey, created and customized for the "Priorities of Your City" citizens' consultation campaign. The online platform used was selected for the easiness in asking the different types of questions and the easiness of use, and because it does not require the input of personal data for survey purposes. These criteria have been designed to facilitate and encourage the use of the platform by as many citizens as possible.

The survey has been based on two questions regarding: (1) the selection of the city, and (2) the ranking of projects for the city selected at the first question. Filling-out instructions and information on the consultation campaign have been made available to the users on both the hosting platform's webpage and via a video (<https://www.facebook.com/prioritatile.orasului.tau/videos/2091168897607694/>) promoted on the campaign's official social media page (Facebook platform).

Campaign launch and performance

The public consultation campaign took place between **January 22 – March 22, 2019**. During this period, the citizens have been invited to access the online survey, select their city and rank the projects generated for the respective city (most important project first, least important project last), according to the importance and impact on the local community and metropolitan area.

The campaign communication was mainly performed on the dedicated social media page (www.facebook.com/Prioritatile.Orasului.Tau) and on the projects' web page (www.prioritatileorasuluitau.ro).

Figure 56. The campaign's Facebook page



Source: www.facebook.com/Prioritatile.Orasului.Tau

During the two campaign months, the Facebook page "Priorities of Your City" received likes from more than 2,200 users. Dozens of promotion actions have been ran on the social media platform, with messages customized for each specific city, and inviting citizens to fill out the survey and hence become involved in their city's development. Via messages published on a regular basis, the citizens received updates on the number of answers for each city and were asked if they agreed with the first ranked projects.

The campaign's web page was a very useful tool, which allowed the submission of a large volume of information about this exercise, such as details from the sections "About the campaign", "FAQs" or "How to fill-out the survey". Another important section was the one inviting the reader to have a say in the campaign and become its ambassador, by filling-out the survey and naming or inviting at least three other people to do the same. Thus, it was possible to mobilize public persons, but also less known citizens eager to bring positive change to their city.

Figure 57. The campaign's web platform



Source: www.prioritatileorasuluitau.ro

On this web platform, there were also published **41 maps** which graphically outline the urban and metropolitan development strategic projects that were included in the public consultation process. At the end of the campaign, the maps have been changed according to the preference of most of the citizens and moved to the "Results" section.

A major role in the campaign was that of the public subnational authorities involved in the project selection. To that extent, the prepared survey was sent to the representatives of each county capital, for distribution to relevant stakeholders in the respective urban area, namely: citizens, non-governmental organizations, the media, chambers of commerce, private companies, and other local public institutions. To sound out what citizens think about the projects to be ranked, the authorities used all the promotion channels available to them: websites of institutions, official or personal social media pages, the local media, local events, posters, etc

Figura 58. Exemplu de mesaj de promovare din partea autorităților publice subnaționale



Sursa: Pagina de Facebook a Primăriei Municipiului Zalău

The media representatives also proved very valuable partners in involving as many citizens as possible in the project ranking process. More than **100** local newsrooms supported the campaign on TV, radio and social media, with customized messages for each county capital, while the national media covered the topic consistently and also mobilized the diaspora.

Figure 59. Campaign article published by the local newspaper Ziaua Constanța



Source: www.facebook.com/Prioritatile.Orasului.Tau

Figure 60. Campaign article published by the national magazine Republica



Source: www.facebook.com/Prioritatile.Orasului.Tau

The main partners of the "Priorities of Your City" public consultation campaign were UrbanizeHub, the founders of a collaborative platform for ideas, opinions, projects and news about smart cities and sustainable urban development. From the very beginning of the campaign, our partners proved very effective in promoting public consultation on their own communication platforms, as well as on the local and national media, by taking part in dedicated broadcasts and writing customized articles..

Figure 61. Promotion message on the UrbanizeHub social media platform



Source: www.facebook.com/UHubRomania

Figure 62. Promotion message on the UrbanizeHub web and social media platform



Source: www.facebook.com/UHubRomania

Results

The campaign managed to reach more than **150,000** citizens who accessed the survey and gathered more than **100,000** responses at national level.

The priority projects ranked first by the citizens in each urban area consisted mainly in **road infrastructure projects**, such as the construction of motorways or expressways (59%), followed by **health infrastructure projects**, such as the building or refurbishment of county and regional hospitals (20%).

The campaign concluded with a **final list** of major priority projects for urban development for both Bucharest and each of the 40 Romanian county capitals. Since they were, for the first time, agreed by both the public administration and the local communities, these lists of projects will inform future decisions for public investments based on a **common vision**.

As sought by this public consultation process, the citizens became involved not only by ranking projects, but also by initiating debates on such projects and on their relevance for the community. The debates resulted in greater awareness among the communities of the priorities underpinning metropolitan development, and new projects have been proposed, and even new local consultation initiatives have been opened up.

The campaign results have been communicated via the two official online platforms, namely the "Priorities of Your City" Facebook page and the "Results" section of the webpage. They are still available for consultation by the general public.

Figure 63. Example of promoting the final results (Top 3 projects selected in Baia Mare)



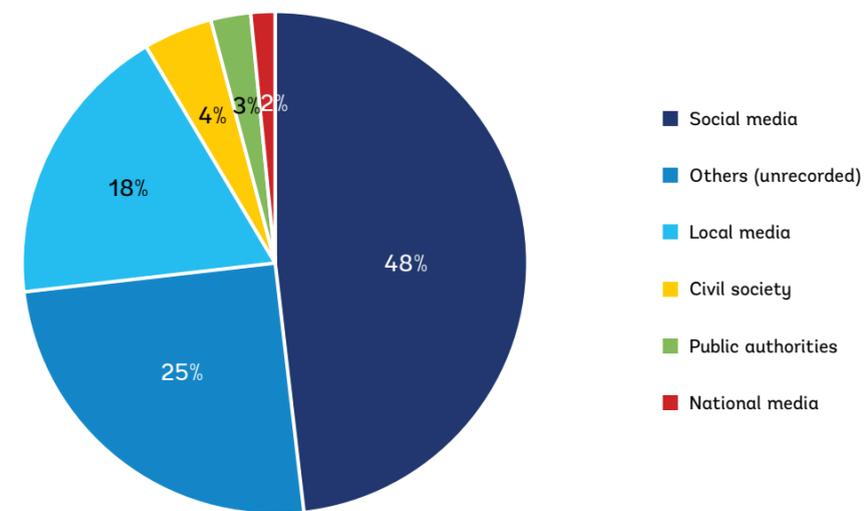
Source: www.facebook.com/Prioritatile.Orasului.Tau

At the end of the campaign, the promotion messages published on the "Priorities of Your City" Facebook page recorded more than **400,000 views**, reached more than **300,000** single visitors of the platform, out of which more than **33,000** interacted with the campaign page by either publishing a comment, viewing a campaign video, liking a message or photo, or by sharing the page content with other users.

From a demographic standpoint, the persons most eager to become involved in the campaign via the "Priorities of Your City" Facebook page were those aged **55 to 64** and **45 to 54** years, followed by the 35 to 44 and 65+ year groups, mainly men, particularly in cities with projects mostly in the transport infrastructure sector. The promotion content published on the Instagram channel via Facebook was most successful among users in the 18 to 24 and 25 to 34 year group.

The campaign received more than **1,200** mentions in the local and national media, reaching more than **240,000** unique views on the web platforms of Romanian media outlets. More than **300** unique fields of reference have been registered, including, besides the local and national press, the web platforms of public authorities and of the civil society, as well as social media platforms. The chart below outlines the percentage of answers recorded in different fields of reference, noting that not all the fields were registered due to the individual confidentiality settings of the users.

Figure 64. Percentage of answers per field of reference

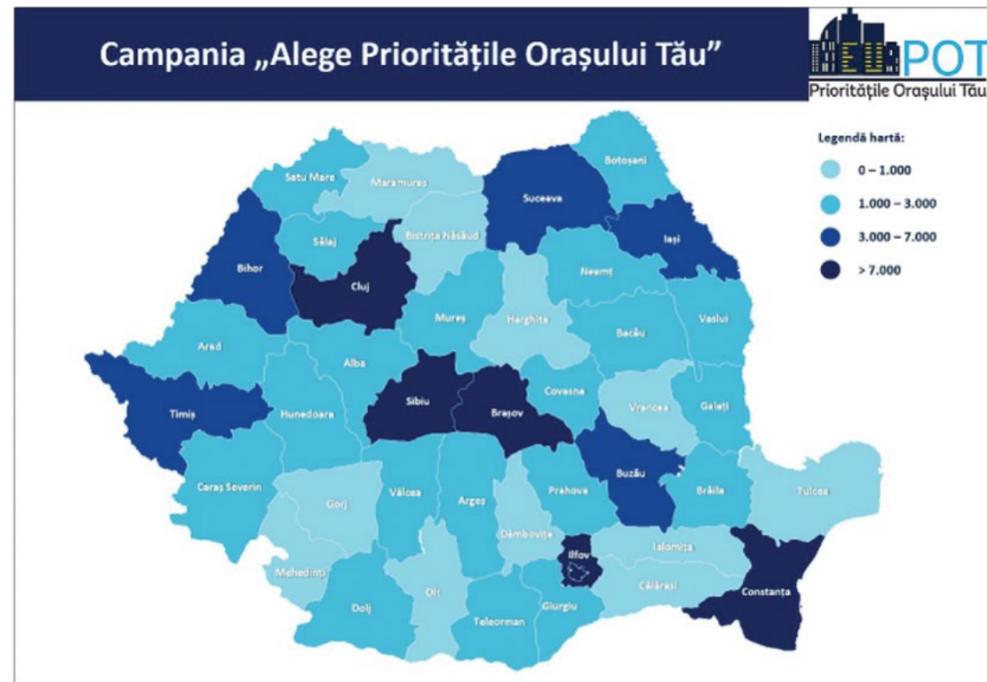


Source: Data processed by the authors

Out of the more than 100,000 answers for the ranking of priority projects, five cities recorded between **7,000** and **10,000** answers each, while 30 cities received more than **1,000** votes from citizens.

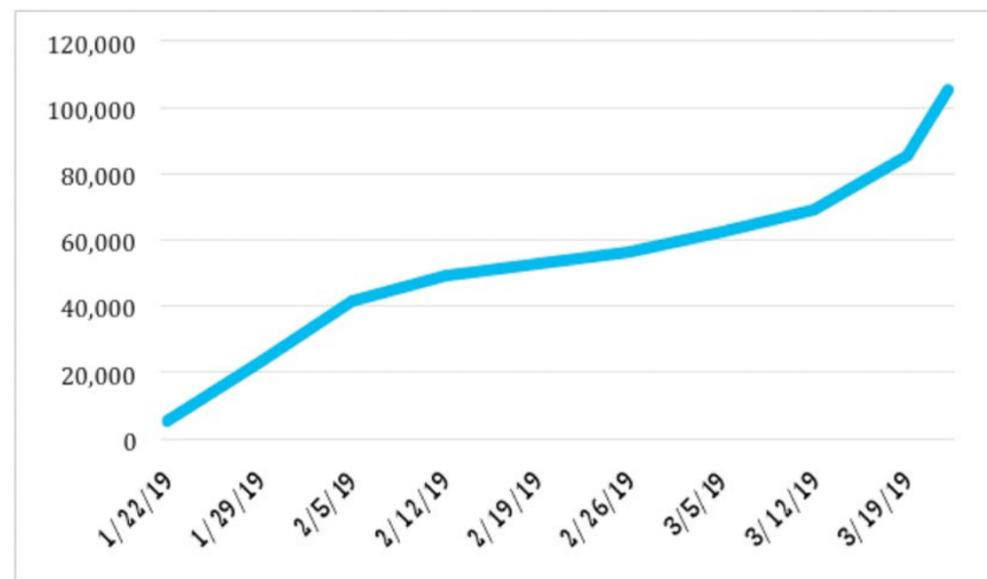
The number of answers from citizens grew constantly during the two months of public consultations, as shown in the chart below, for each week of the campaign.

Figure 65. Number of answers by cities



Source: Data processed by the authors

Figure 66. Number of answers during the campaign period



Source: Data processed by the authors

The results of the public consultations campaign have been submitted to each subnational institution involved in this process (city halls of county capitals, county councils, and prefectures), to the national and local media, to national and local non-governmental organizations, and also published on the own platforms of the campaign (the web platform and social media). The results have been communicated via interactive means and by various promotion materials intended to disseminate these results to as many citizens as possible. The maps outlining the priority projects for each functional urban area are included in Annex 1 of this document.

Figure 67. Campaign image “100,000 involved people voted for their towns”



Source: Image created by the authors

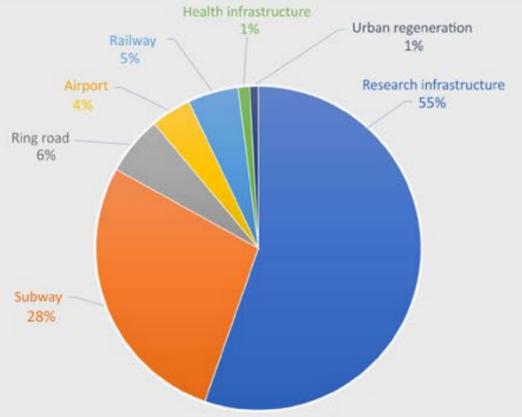
ANNEX 1

**Graphic representations of the priority projects
resulting from the public consultation campaign
“CHOOSE THE PRIORITIES OF YOUR CITY”**

Metropolitan area/ Urban agglomeration **BUCHAREST** - **ILFOV**

estimated value of the projects:
€ 27.117 mil. euro

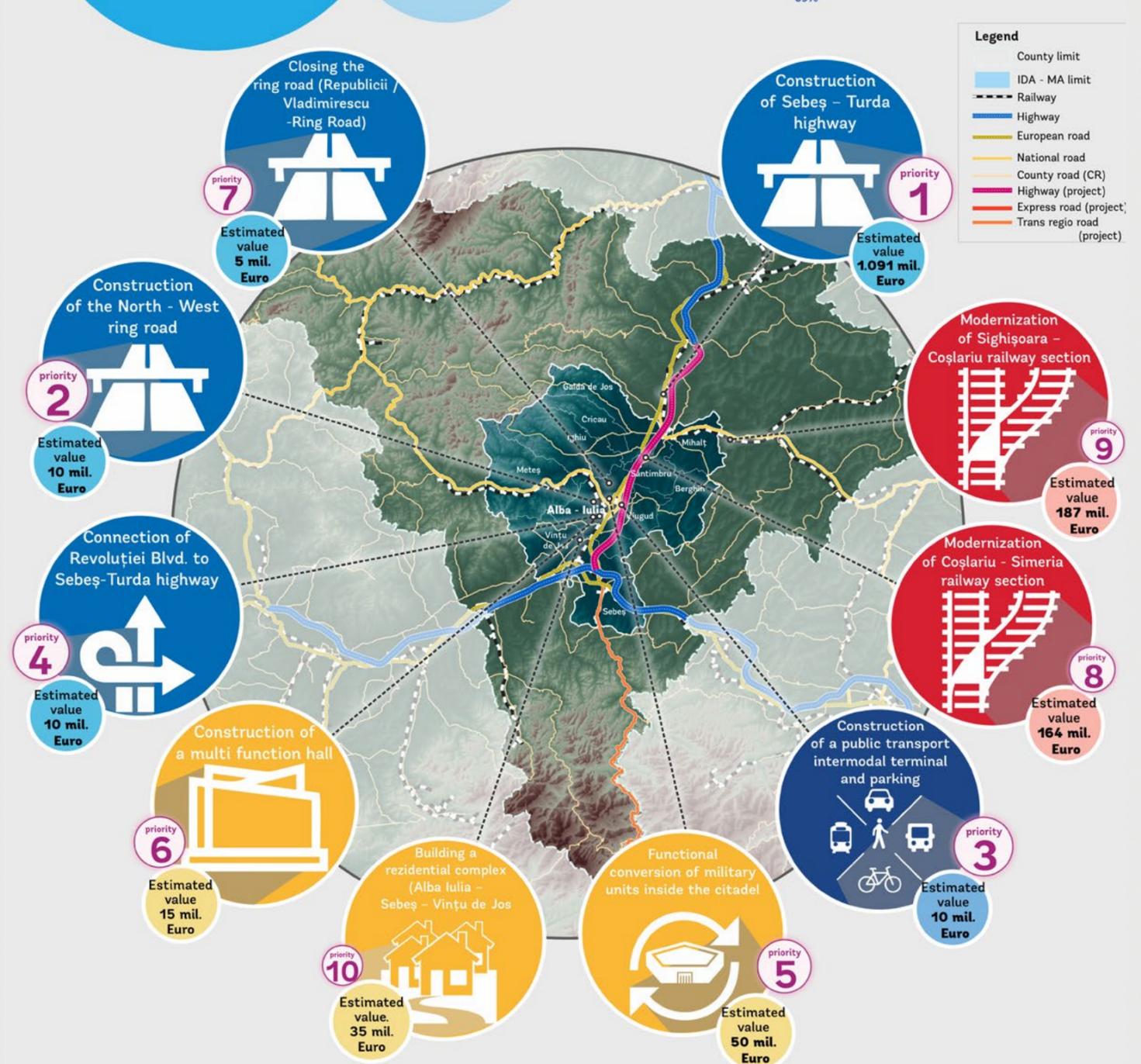
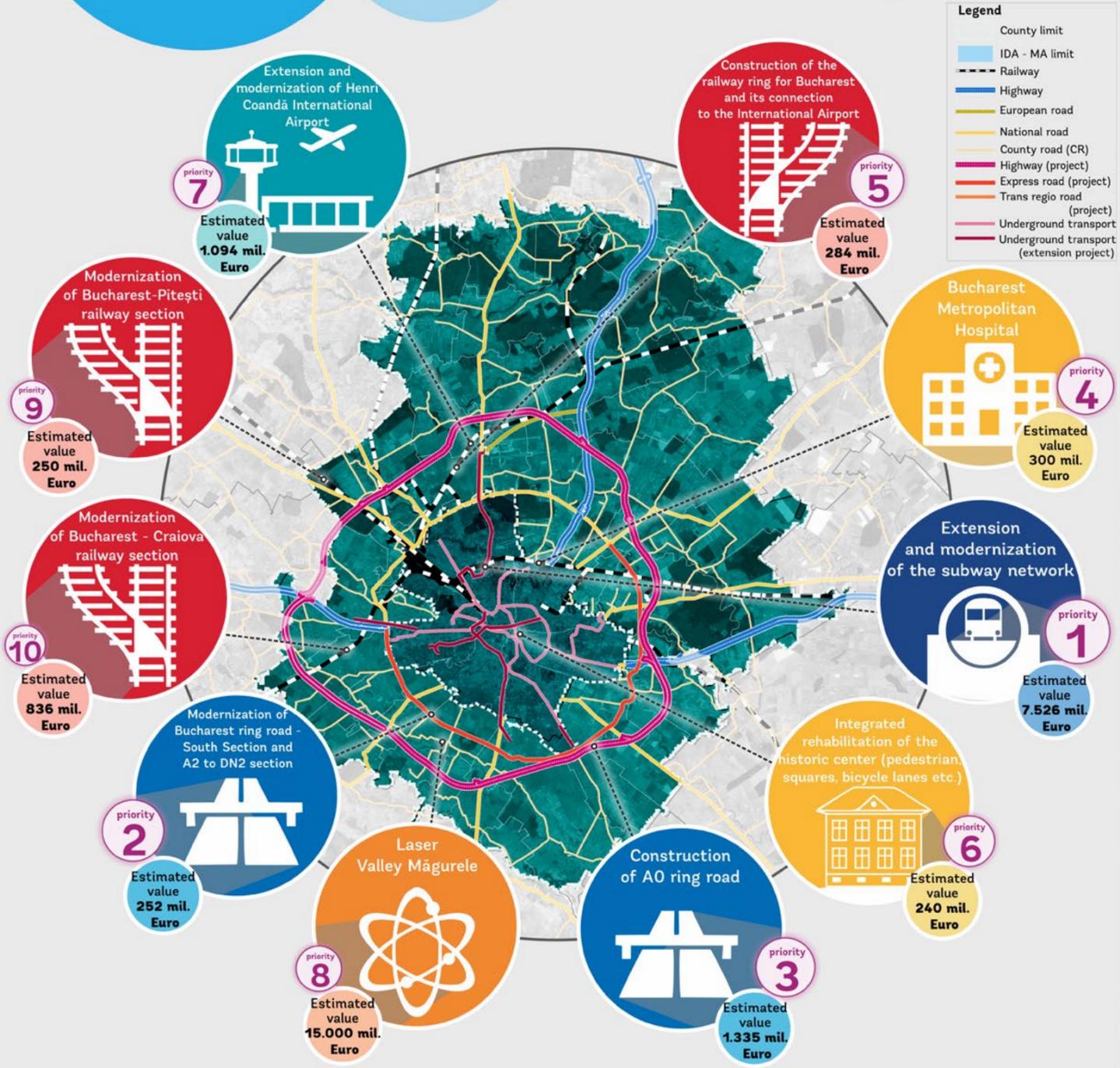
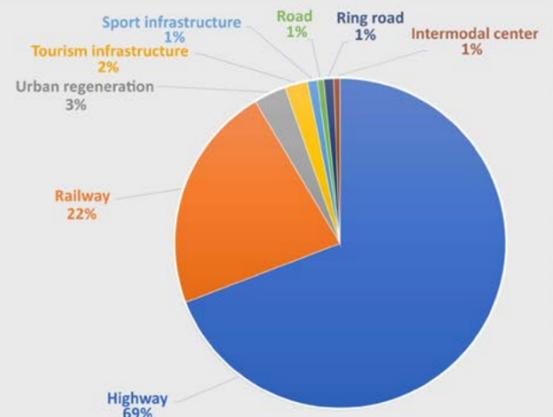
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **ALBA-IULIA**

estimated value of the projects:
1.542 mil. euro

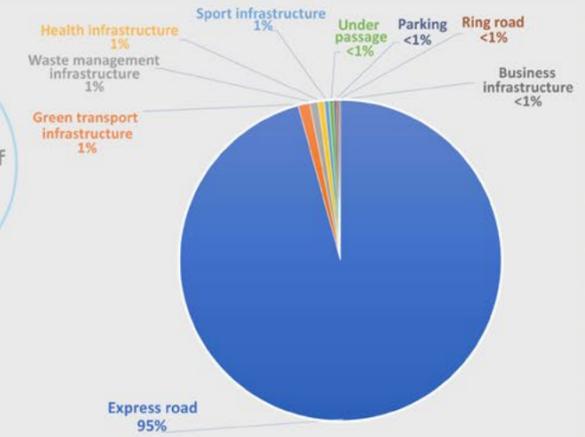
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **ALEXANDRIA**

estimated value
of the projects:
€ 2.111 mil. euro

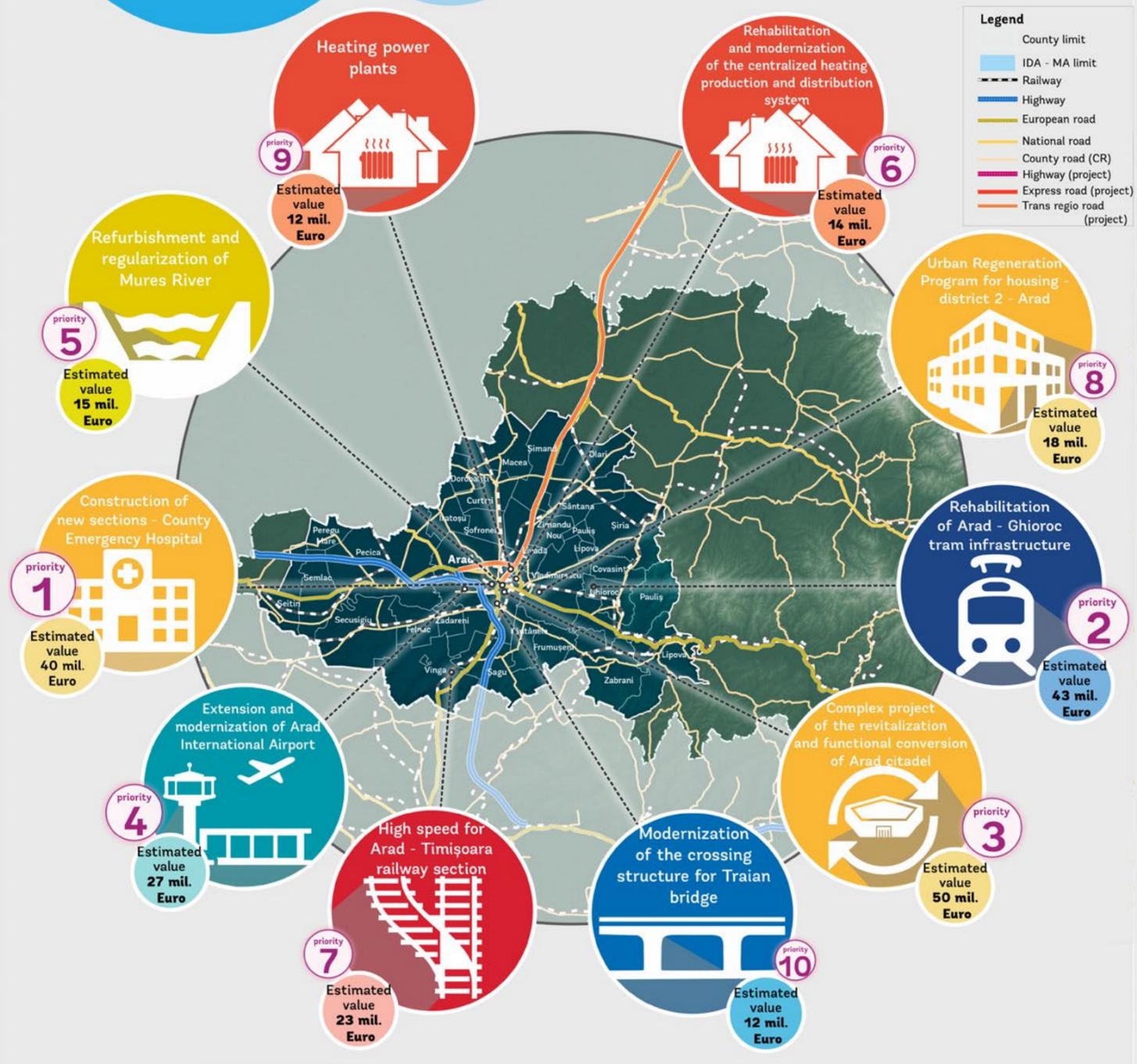
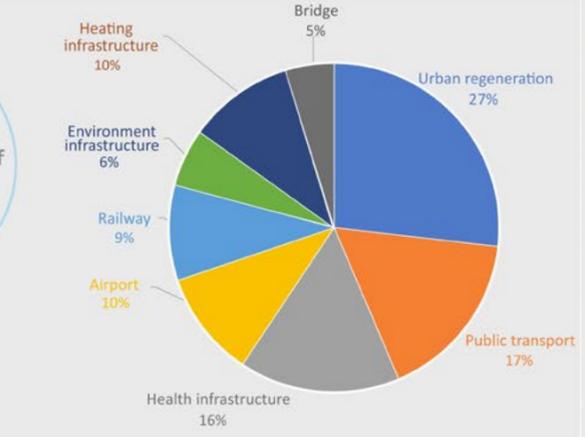
distribution of
the amounts by type of
programs / projects:



Metropolitan area/ Urban agglomeration **ARAD**

estimated value
of the projects:
€ 254 mil. euro

distribution of
the amounts by type of
programs / projects:

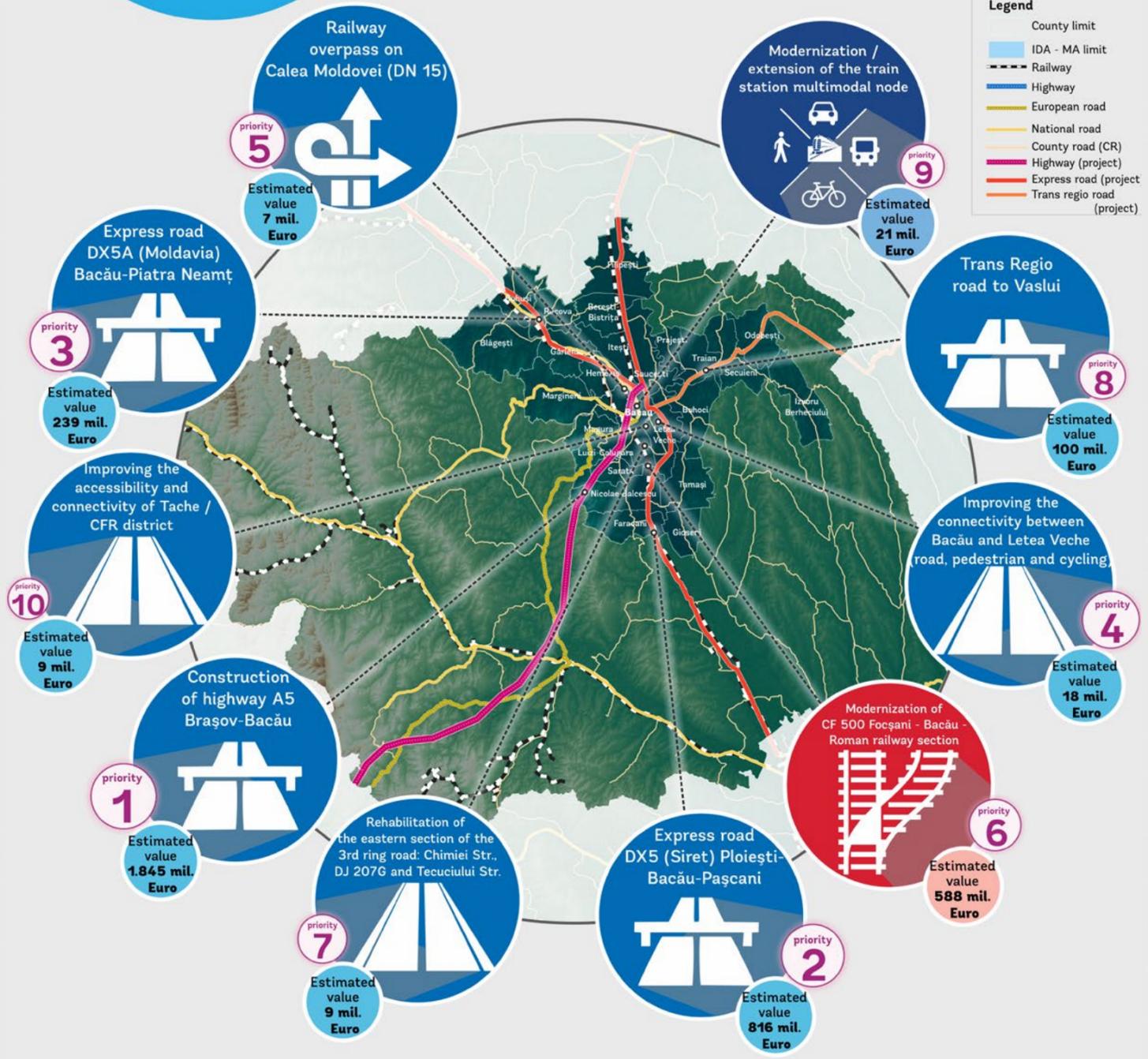
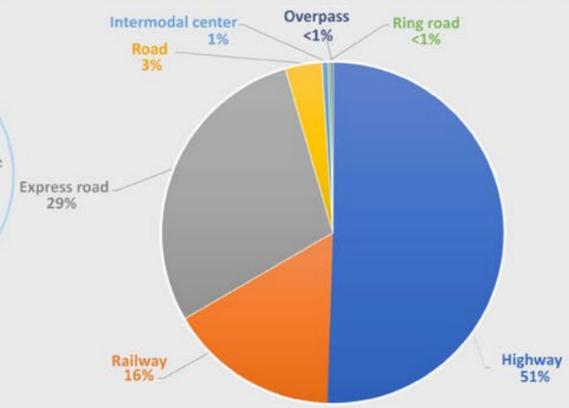


Metropolitan area / Urban agglomeration

BACĂU

estimated value of the projects:
€ 3.561 mil. euro

distribution of the amounts by type of programs / projects:

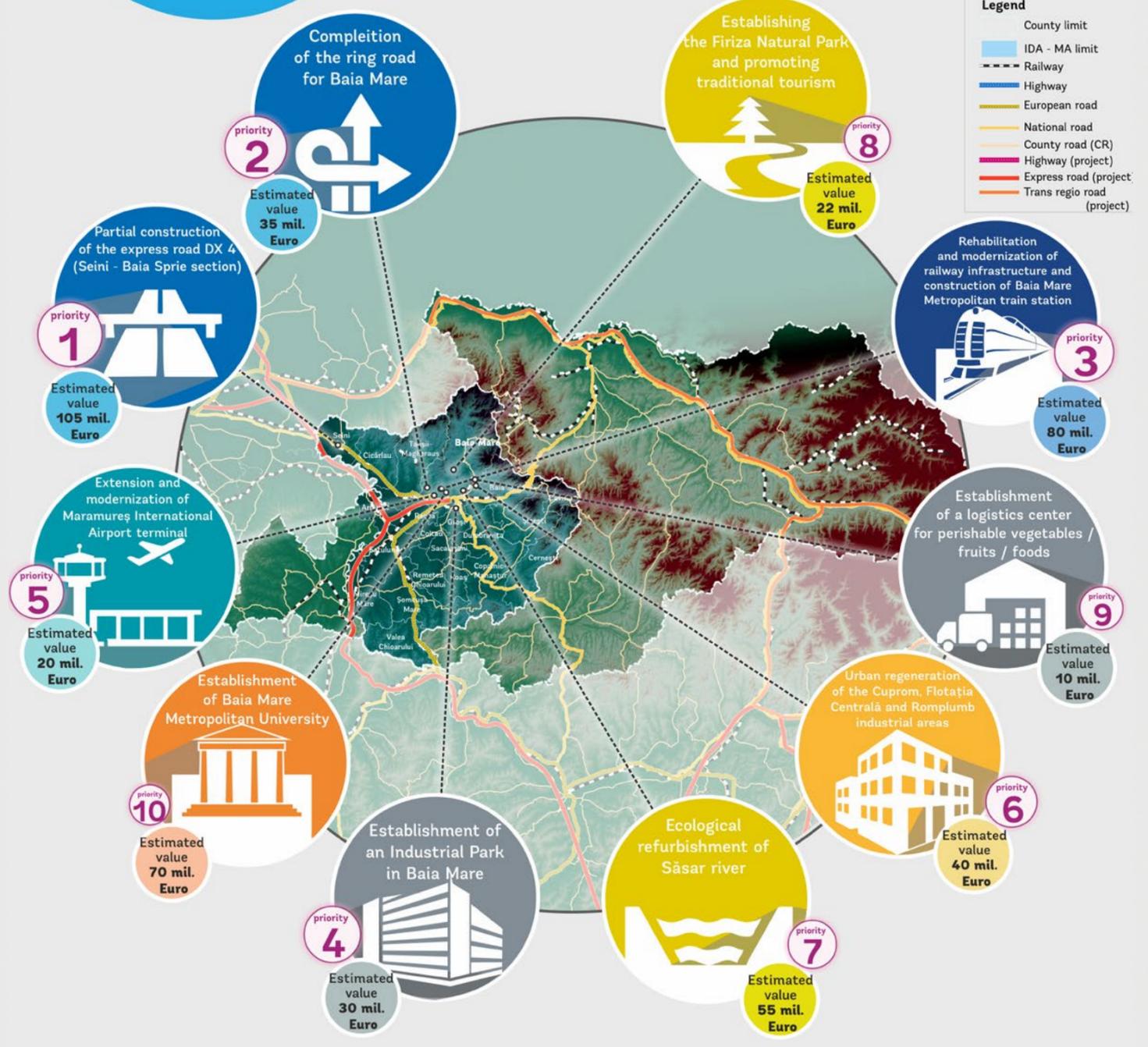
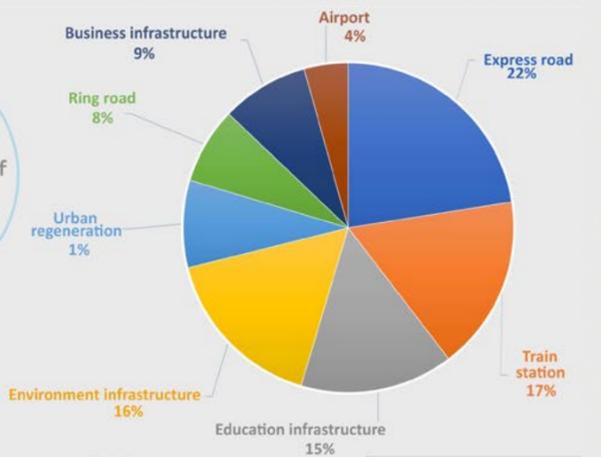


Metropolitan area / Urban agglomeration

BAIA MARE

estimated value of the projects:
€ 467 mil. euro

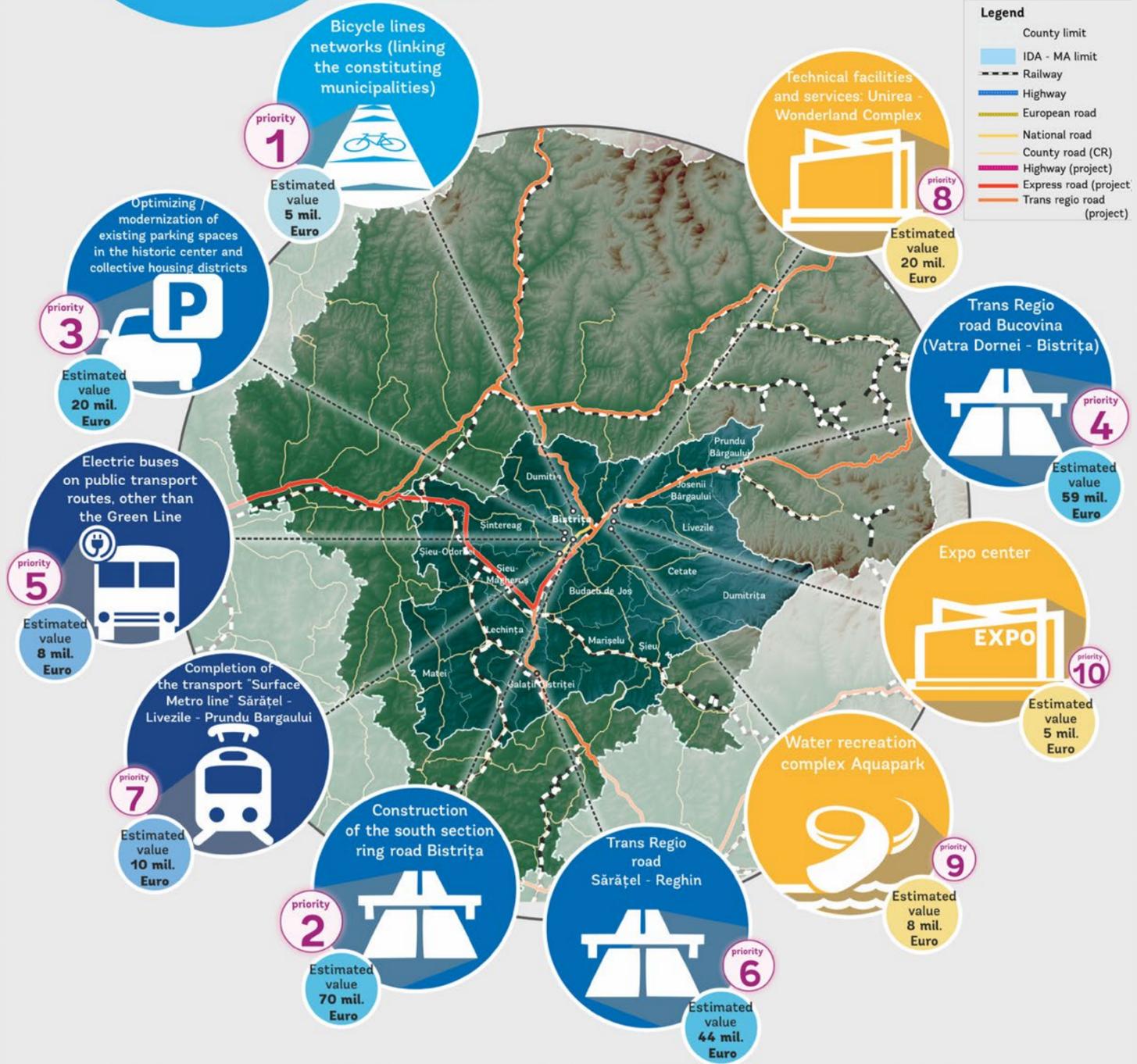
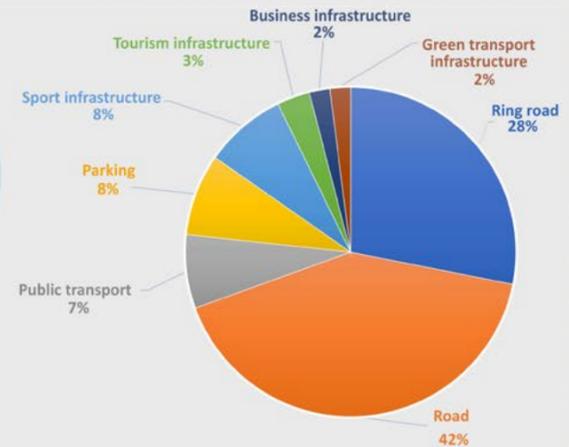
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **BISTRIȚA**

estimated value of the projects:
€ 249 mil. euro

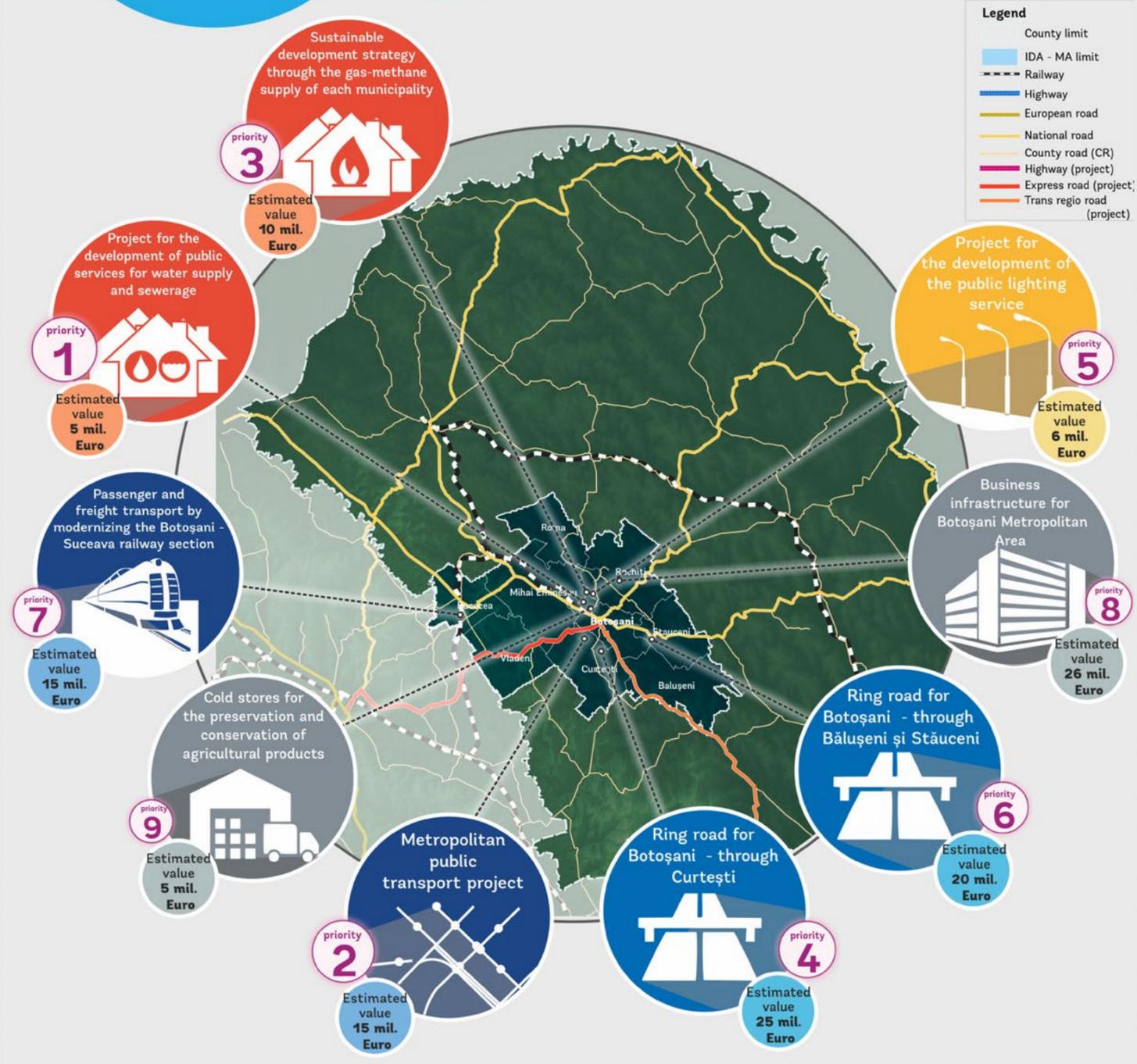
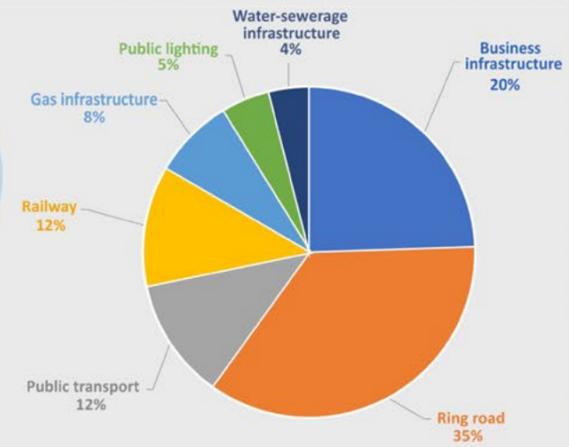
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **BOTOȘANI**

estimated value of the projects:
€ 122 mil. euro

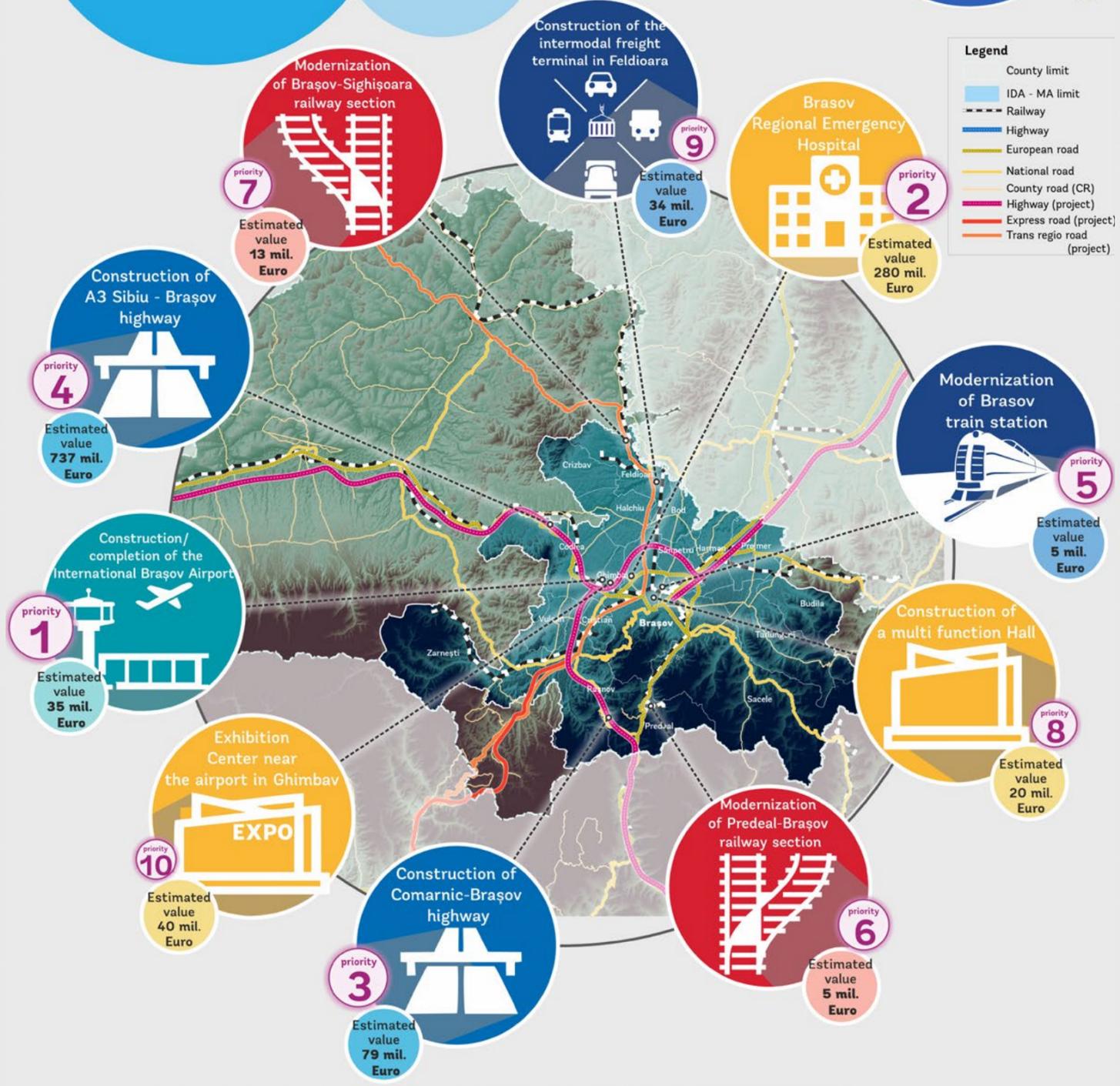
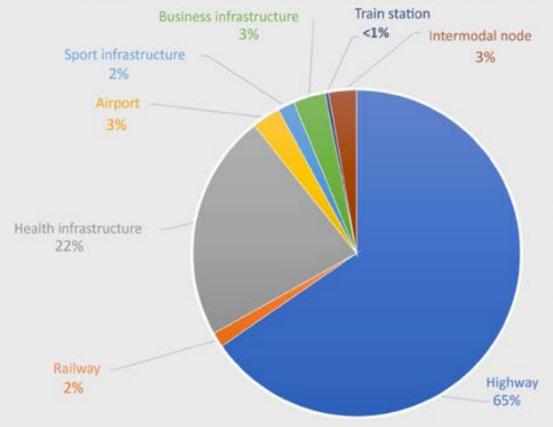
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **BRAȘOV**

estimated value of the projects:
€ 1.248 mil. euro

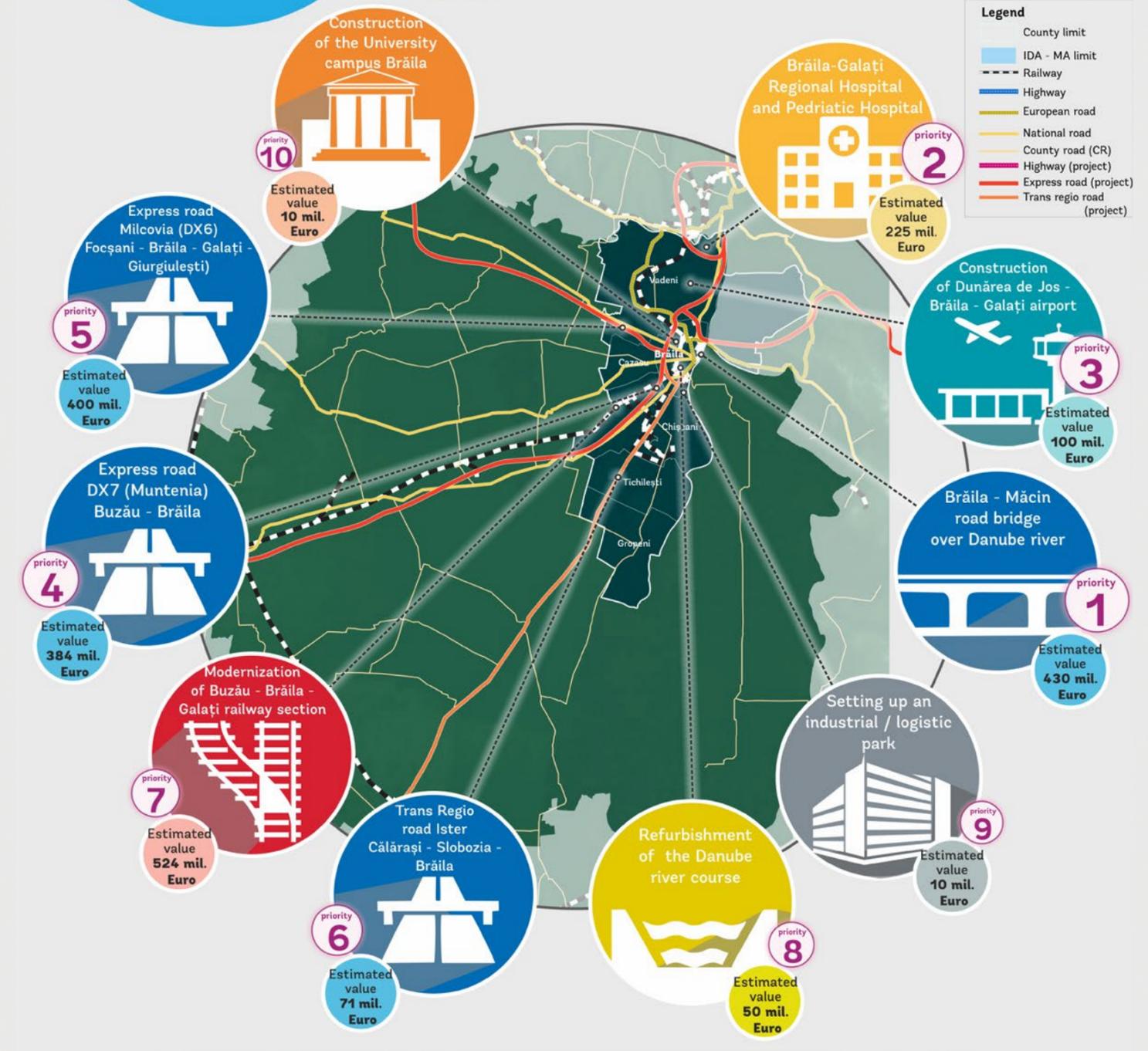
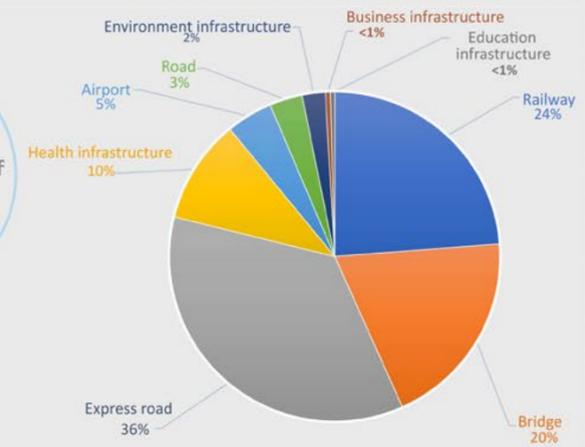
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **BRĂILA**

estimated value of the projects:
€ 2.204 mil. euro

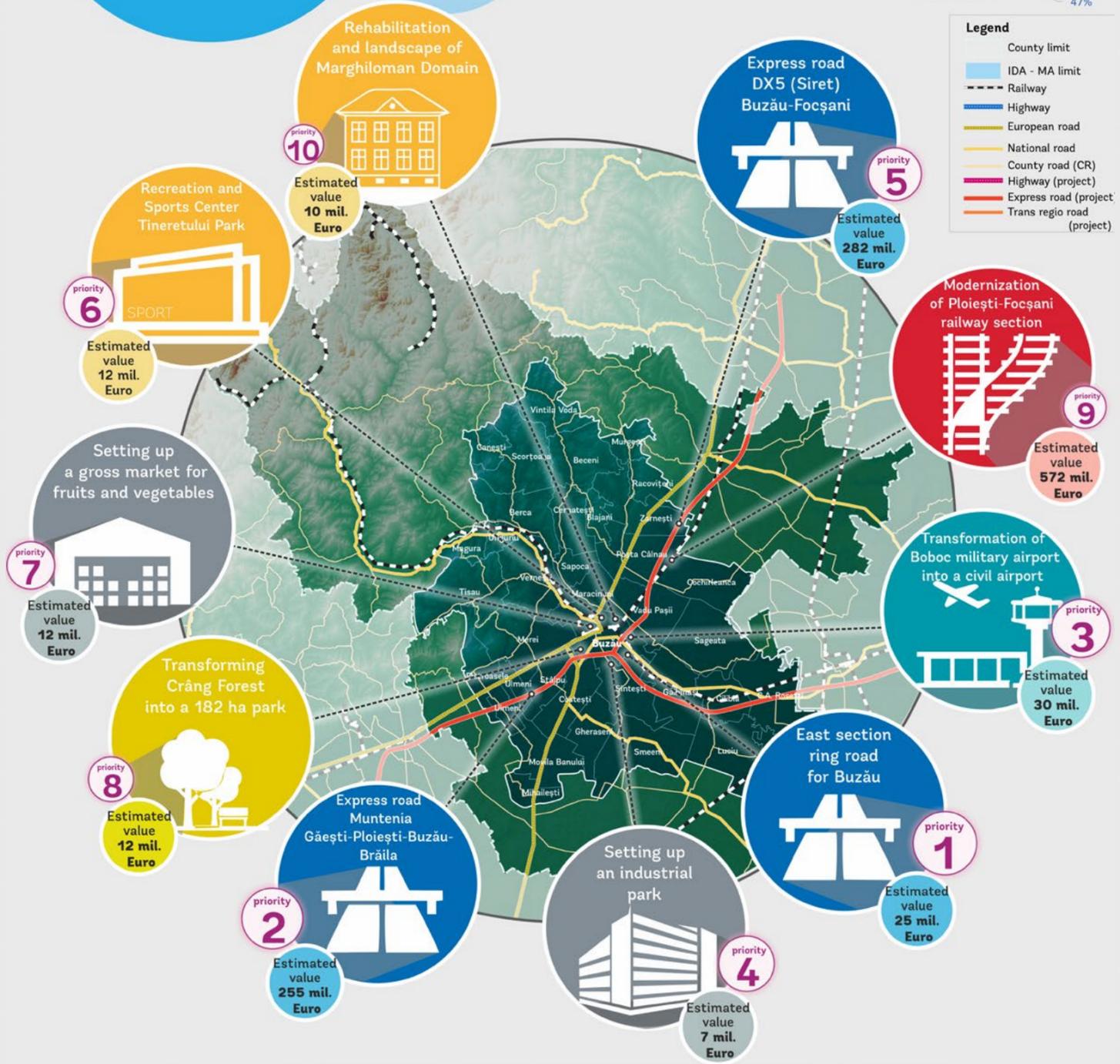
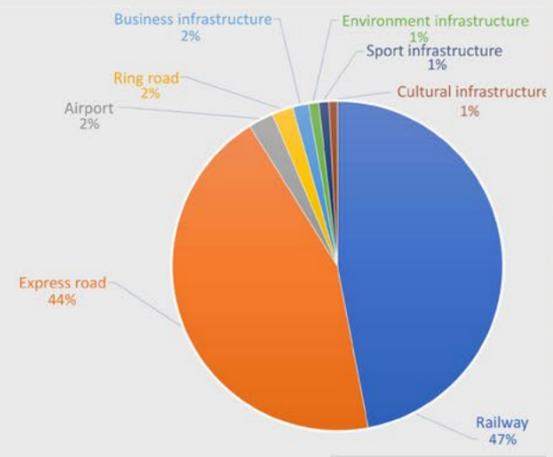
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **BUZĂU**

estimated value of the projects:
€ 1.217 mil. euro

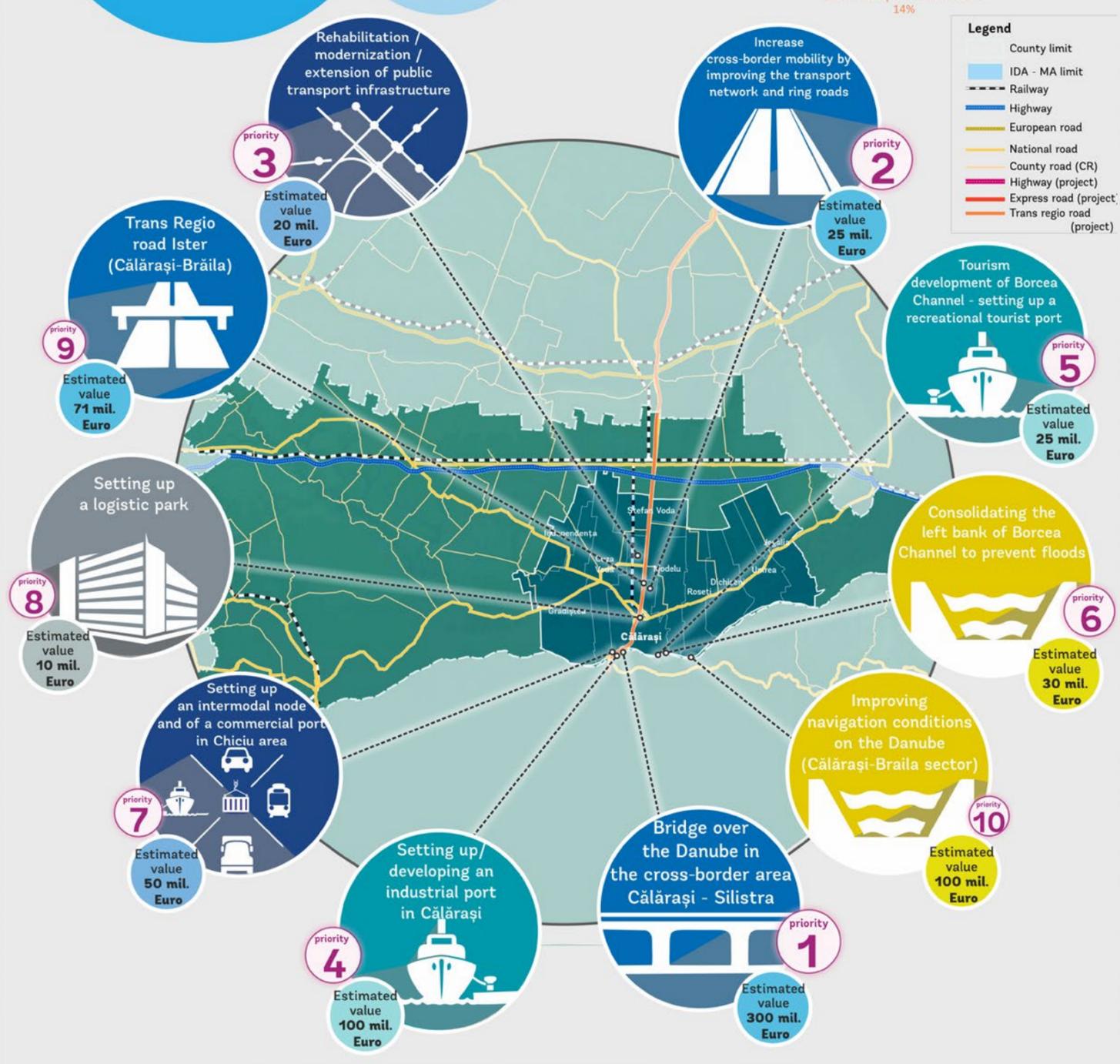
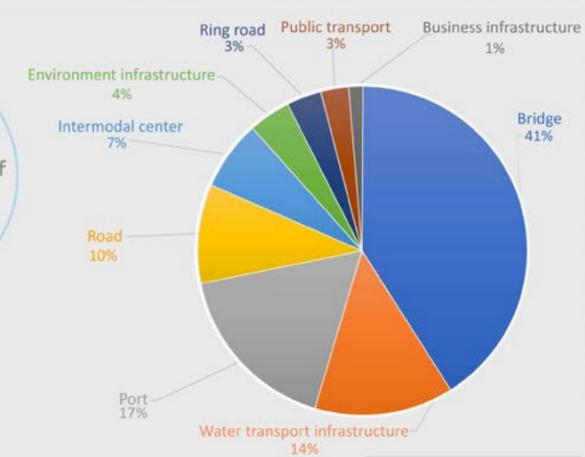
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **CĂLĂRAȘI**

estimated value of the projects:
€ 731 mil. euro

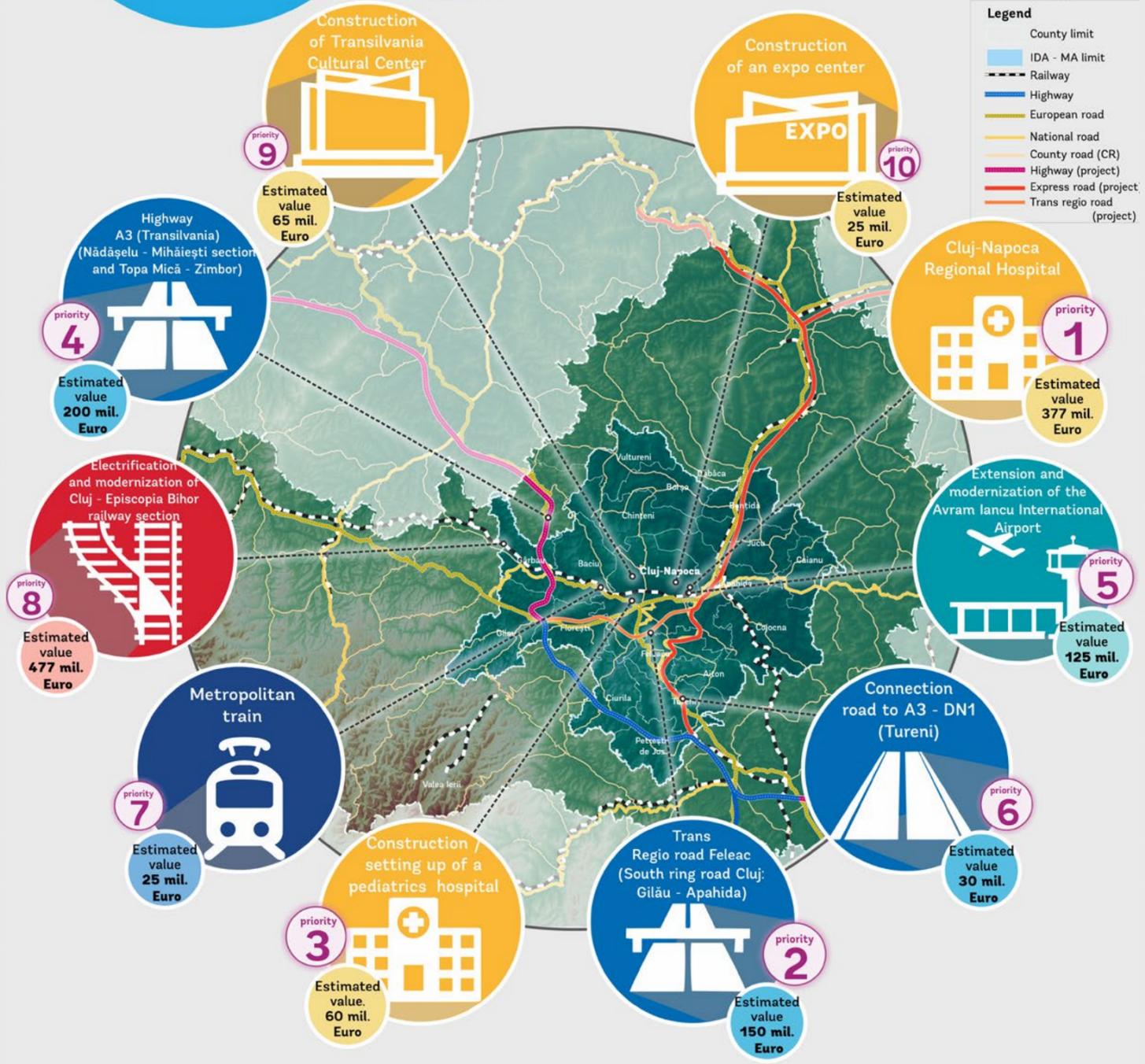
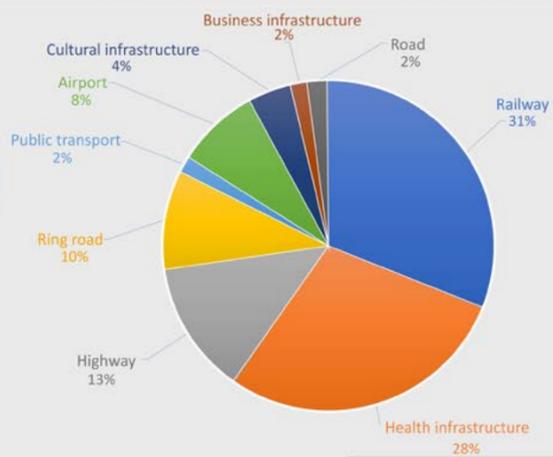
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **CLUJ** - **NAPOCA**

estimated value of the projects:
€ 1.534 mil. euro

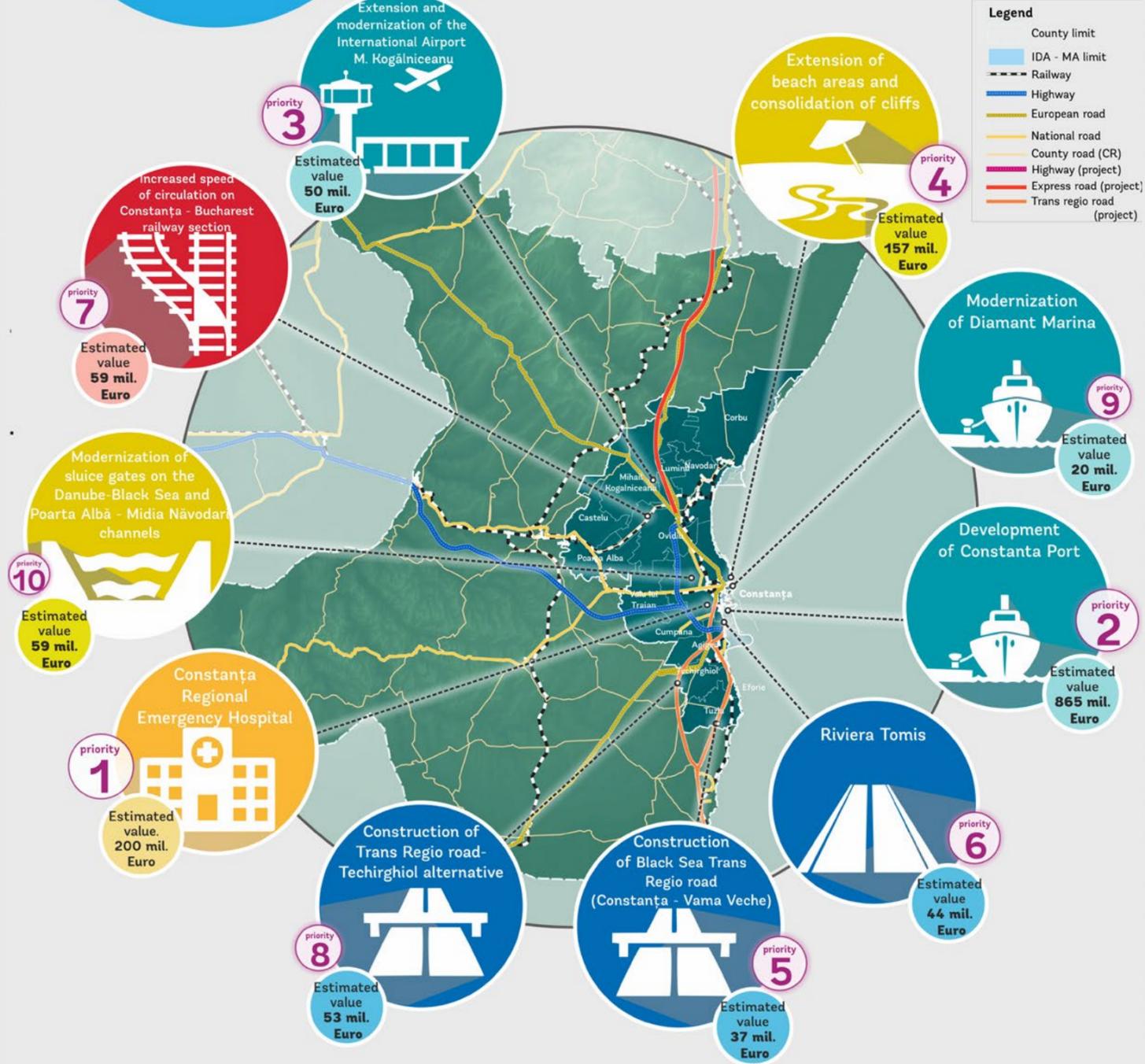
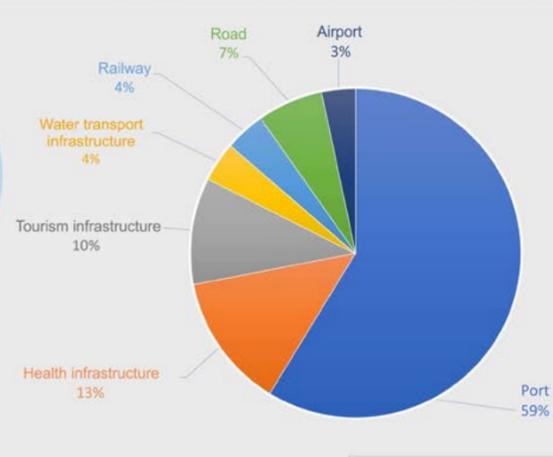
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **CONSTANȚA**

estimated value of the projects:
€ 1.544 mil. euro

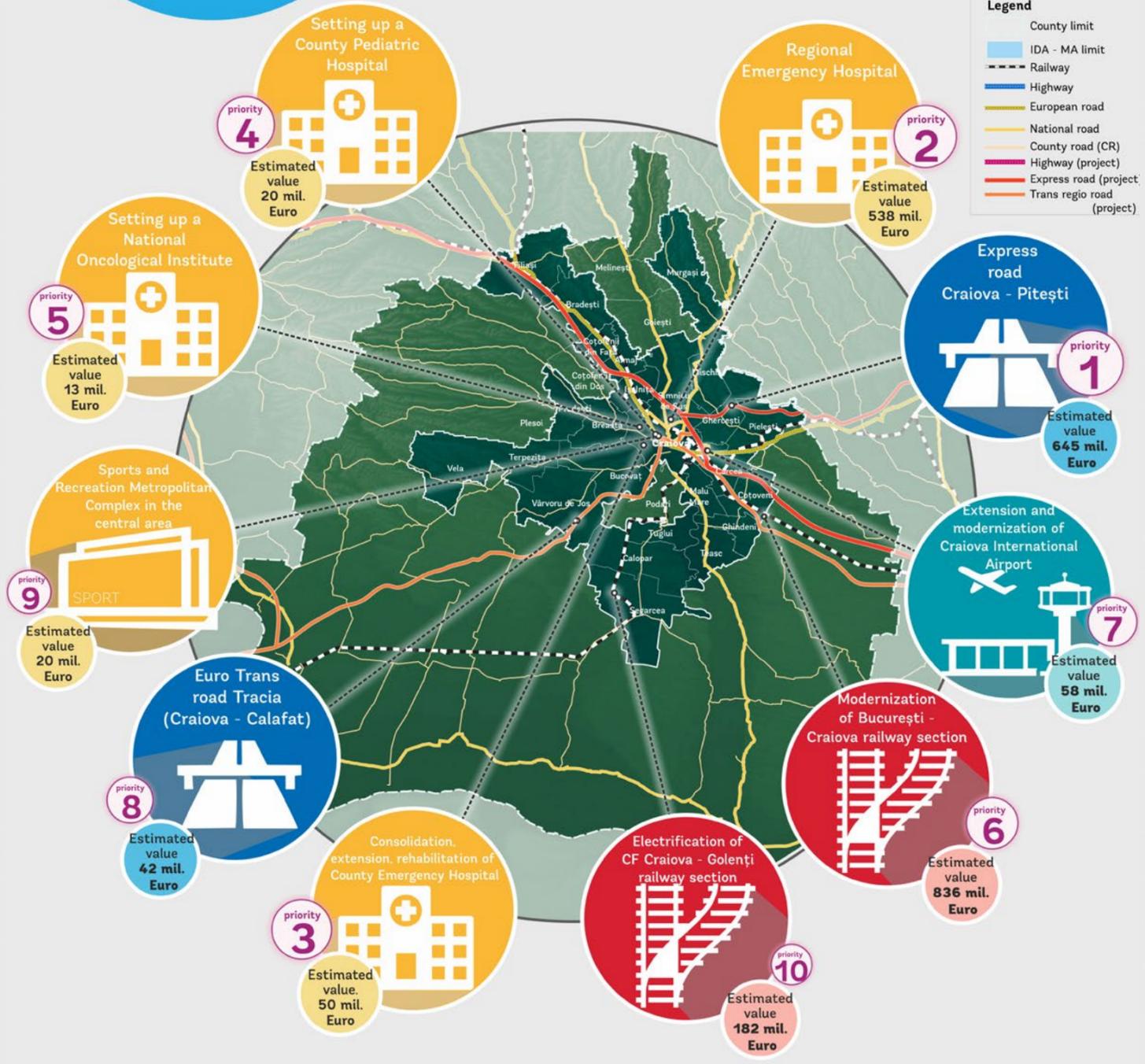
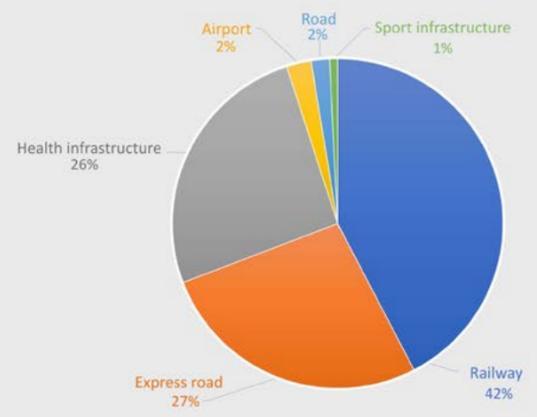
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **CRAIOVA**

estimated value of the projects:
€ 2.404 mil. euro

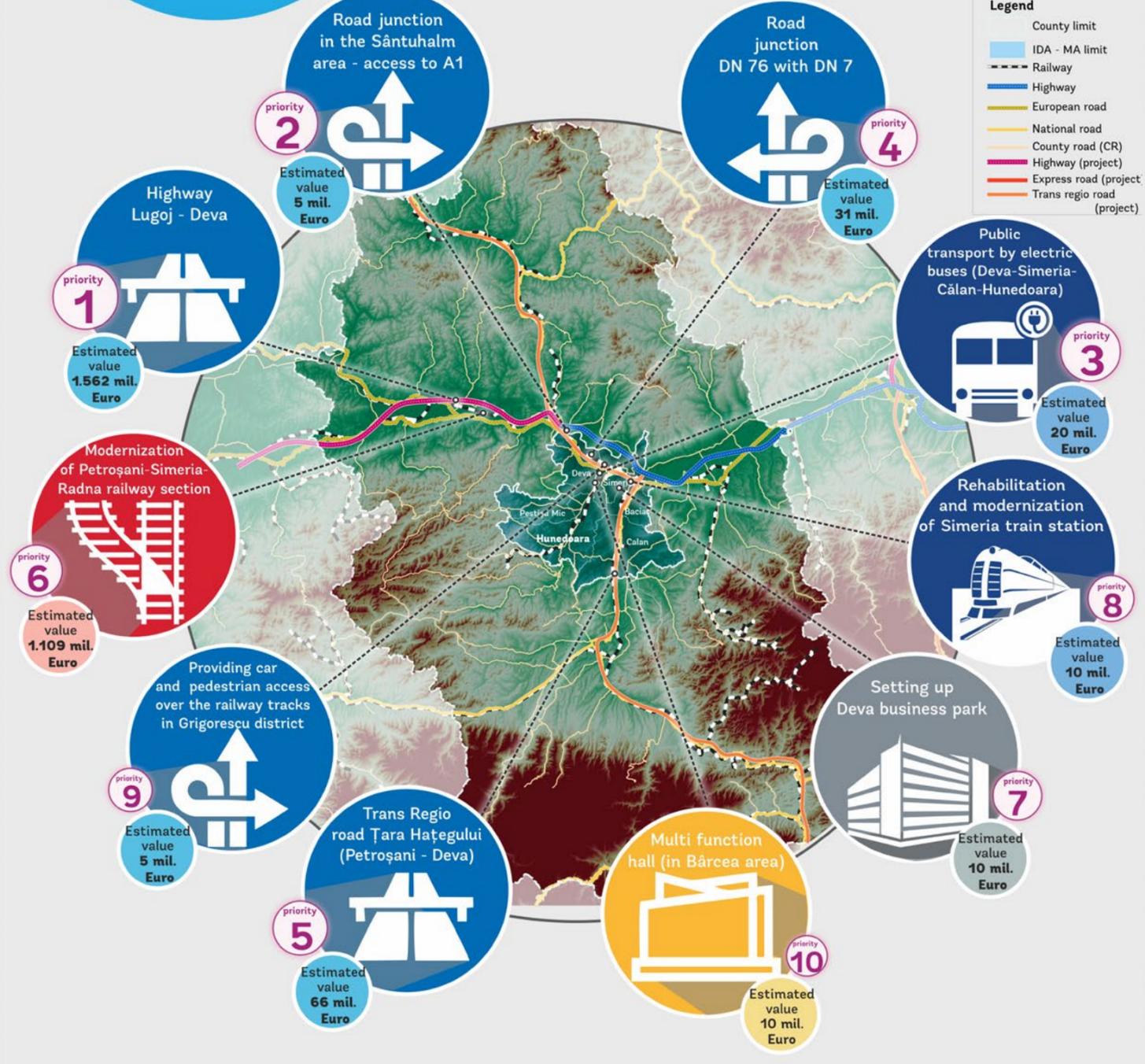
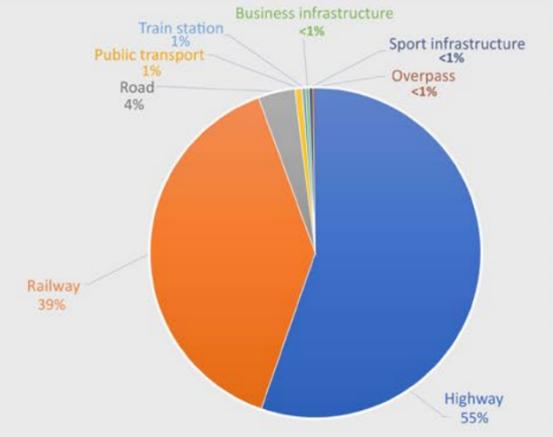
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **DEVA-HUNEDOARA-SIMERIA**

estimated value of the projects:
€ 2.828 mil. euro

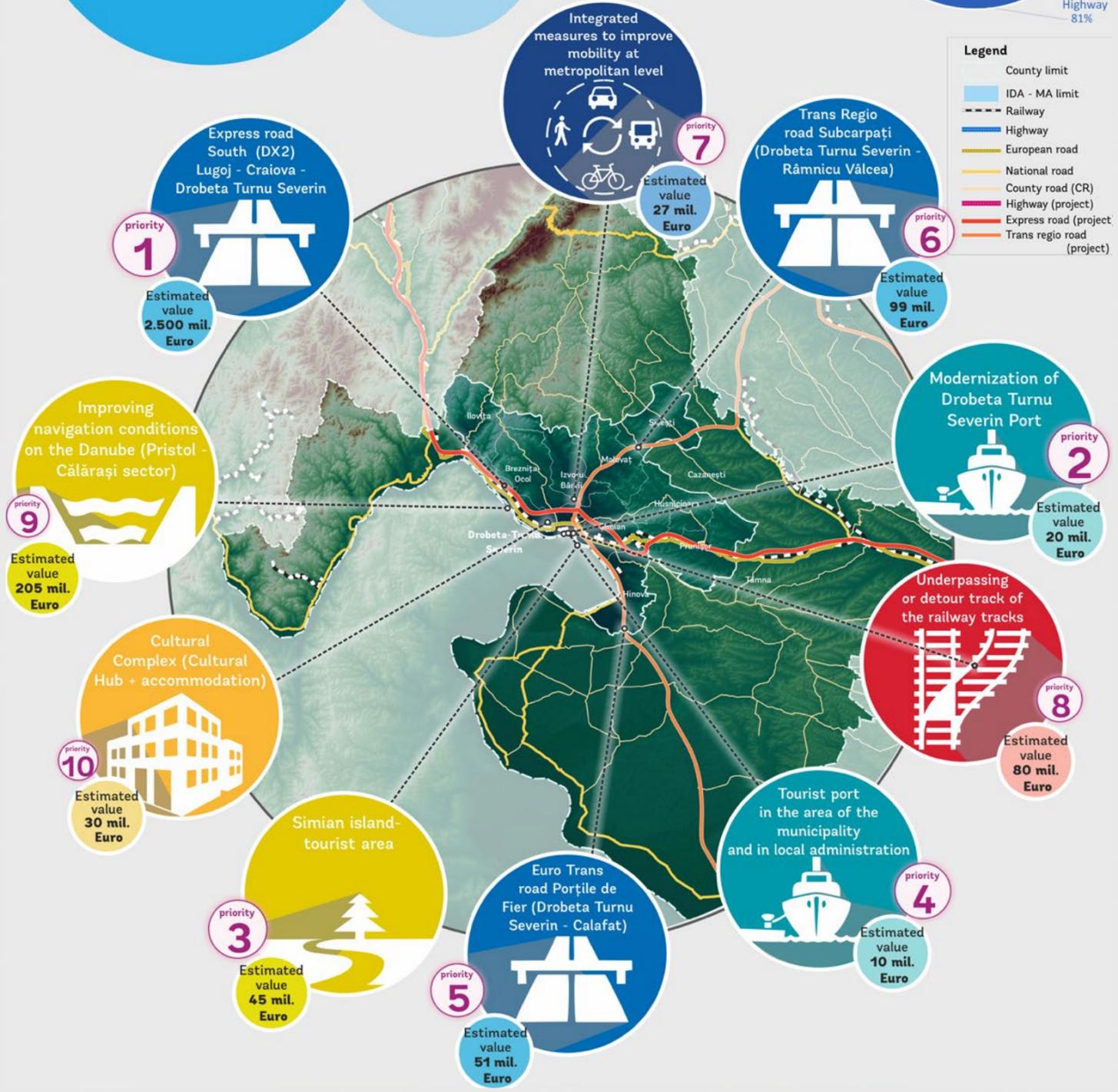
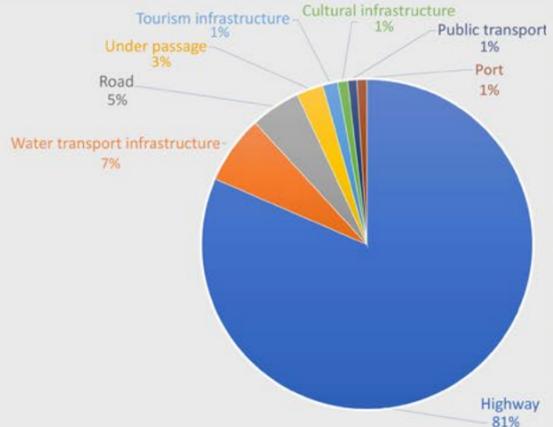
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **DROBETA- TURNU- SEVERIN**

estimated value
of the projects:
€ 3.067 mil. euro

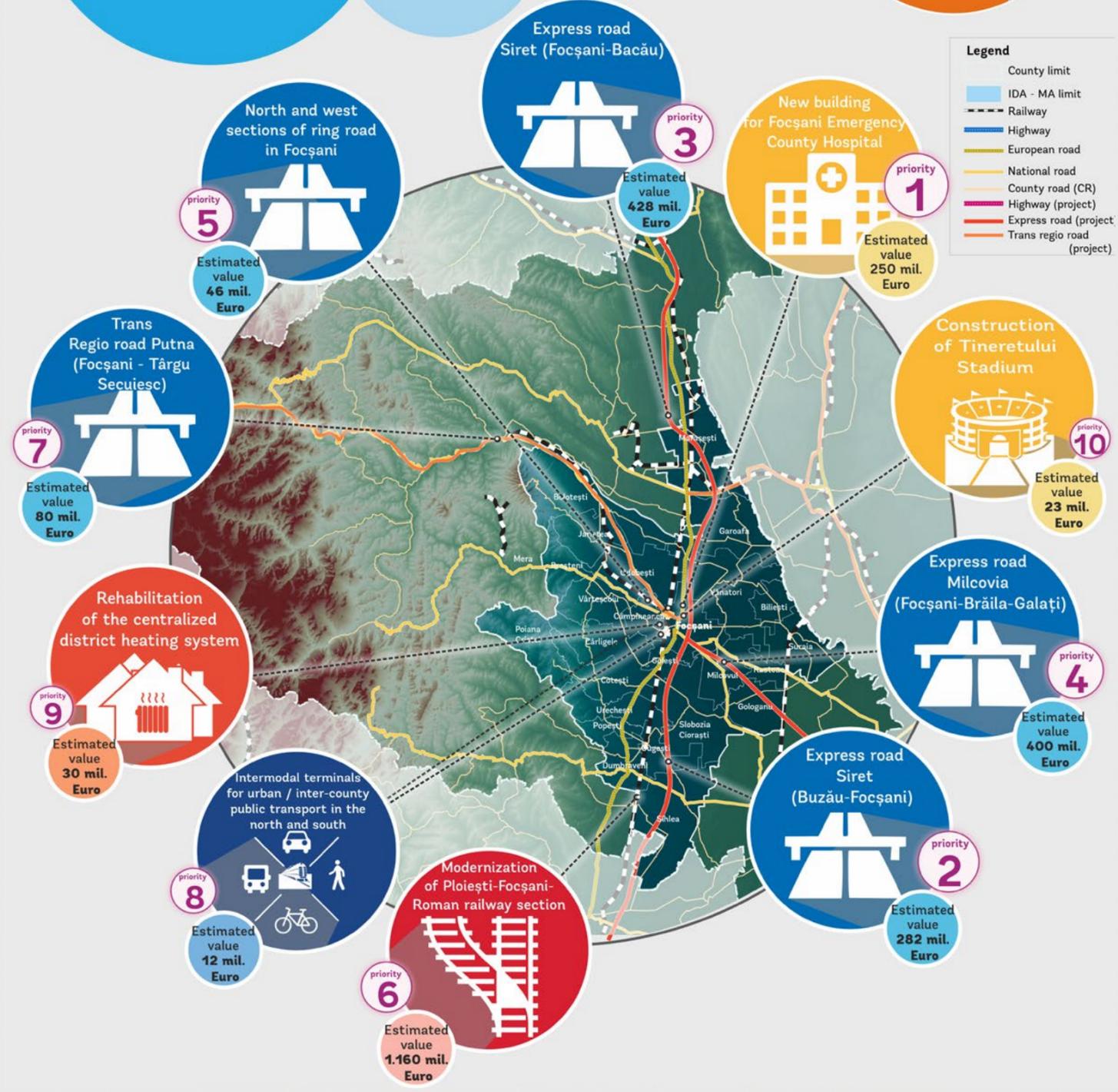
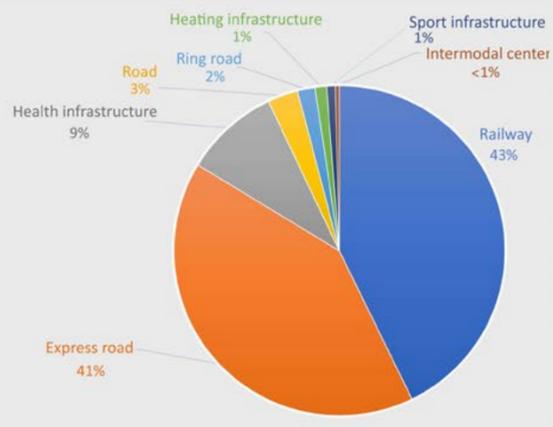
distribution of
the amounts by type of
programs / projects:



Metropolitan area/ Urban agglomeration **FOCȘANI**

estimated value
of the projects:
€ 2.711 mil. euro

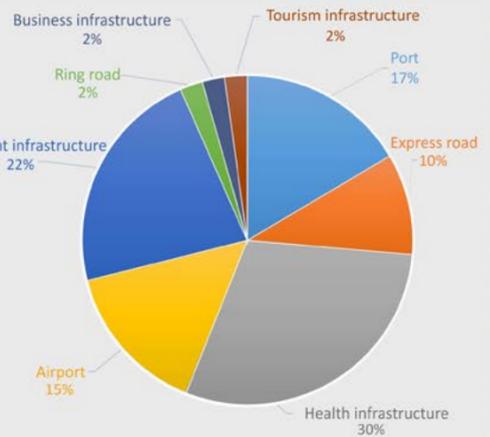
distribution of
the amounts by type of
programs / projects:



Metropolitan area/ Urban agglomeration **GALAȚI**

estimated value of the projects:
€ 673 mil. euro

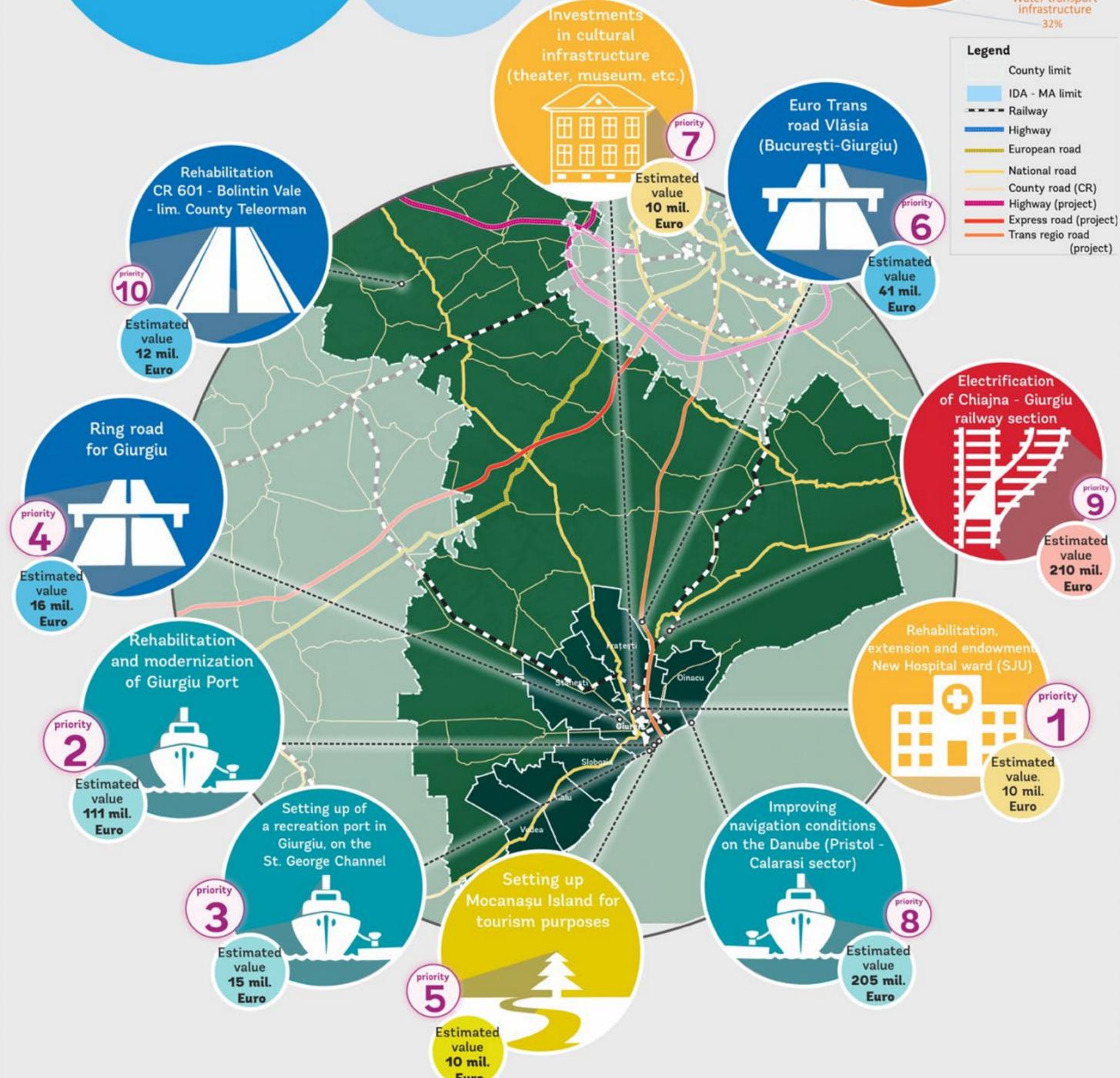
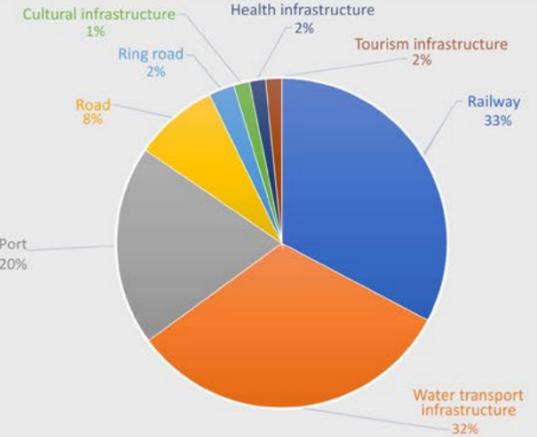
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **GIURGIU**

estimated value of the projects:
€ 640 mil. euro

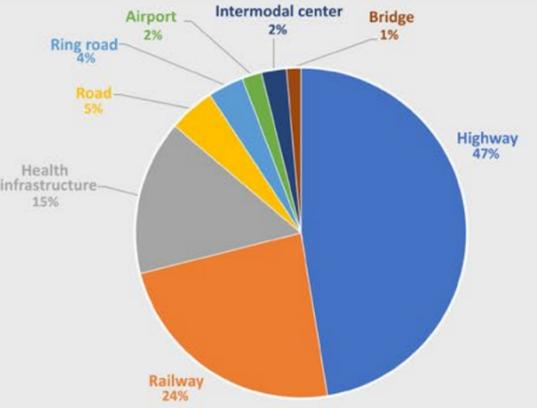
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **IAȘI**

estimated value of the projects:
€ 2.235 mil. euro

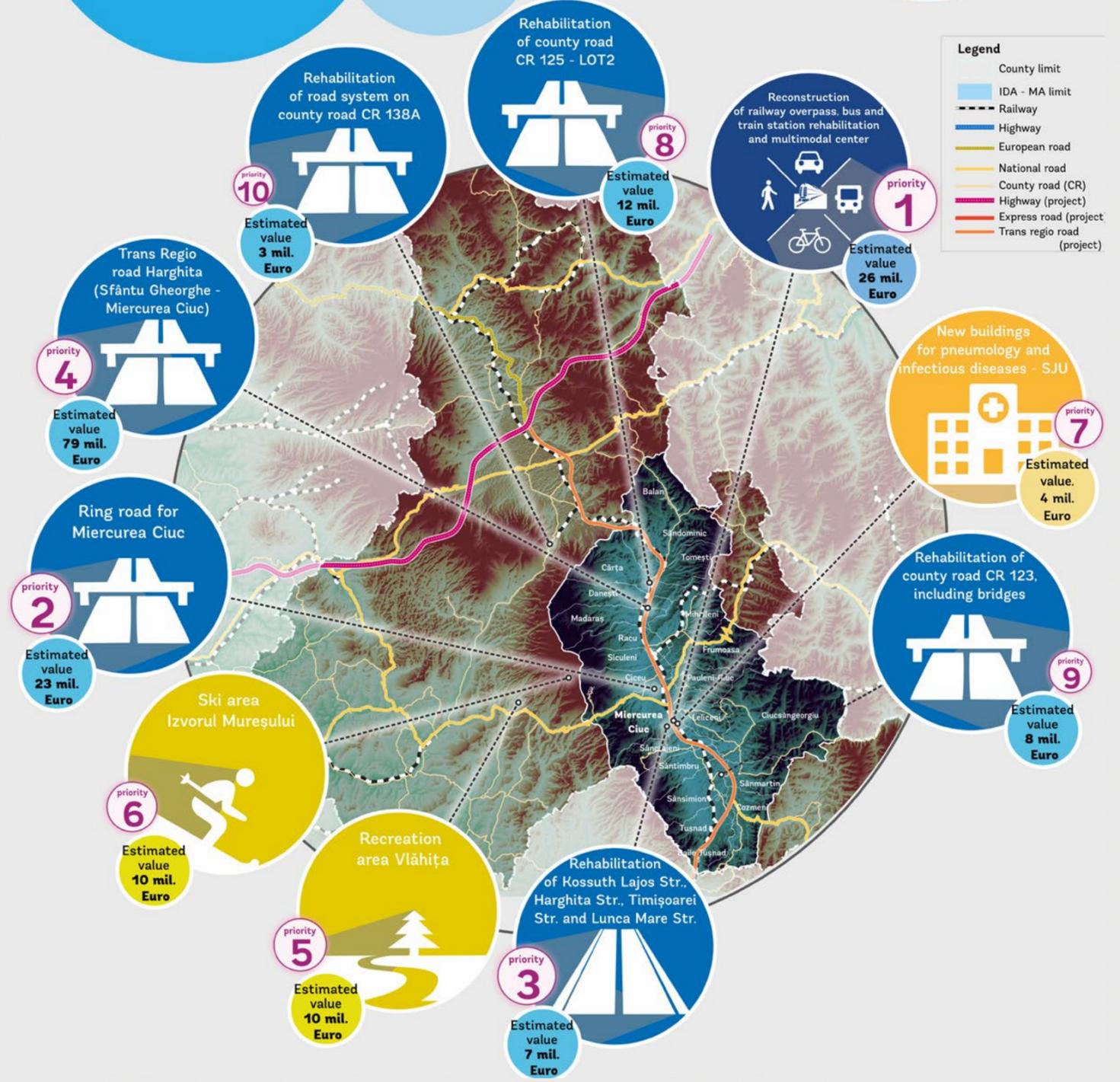
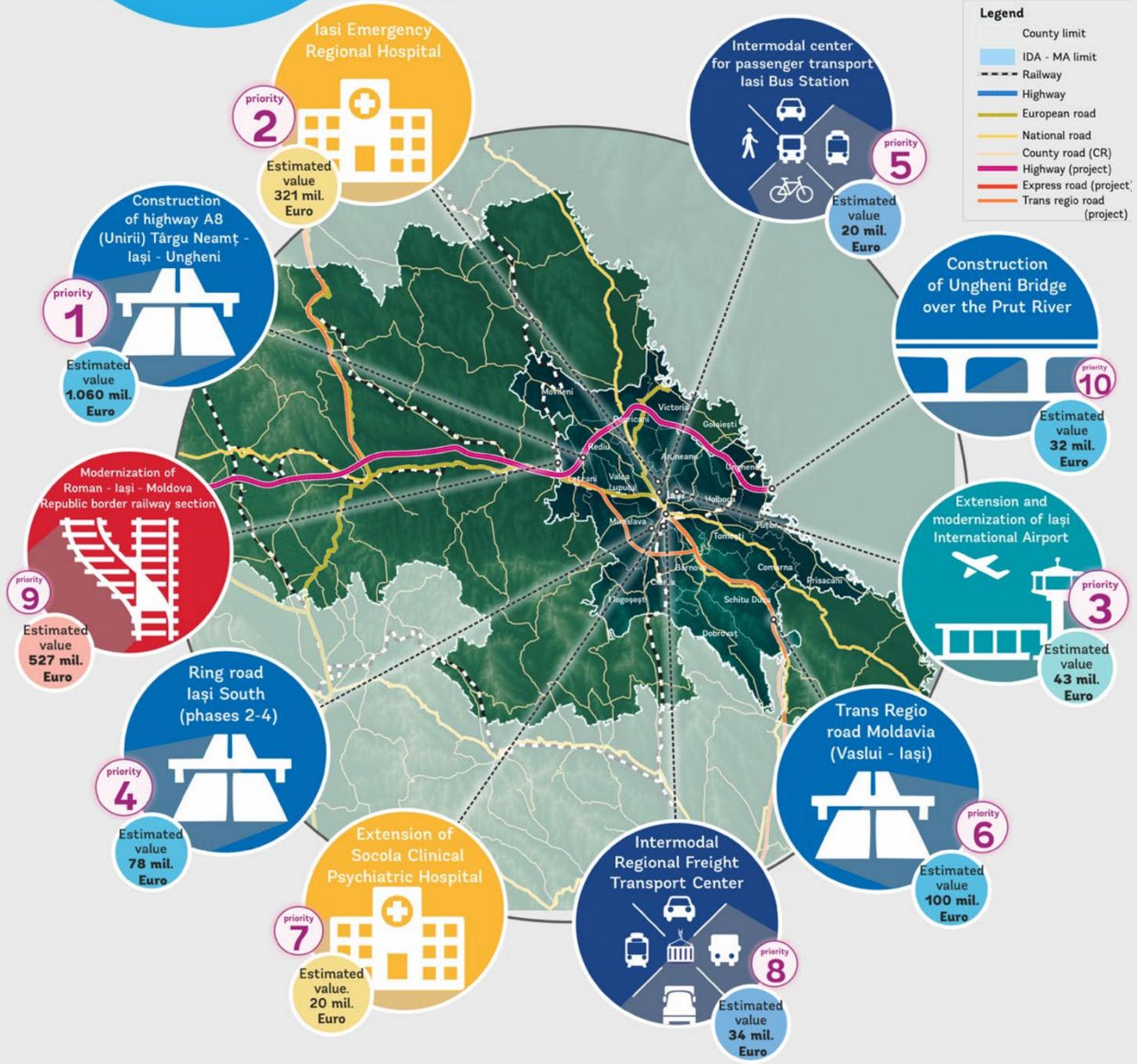
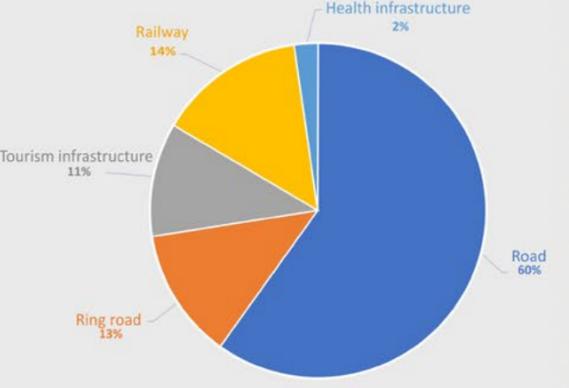
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **MIERCUREA - CIUC**

estimated value of the projects:
€ 182 mil. euro

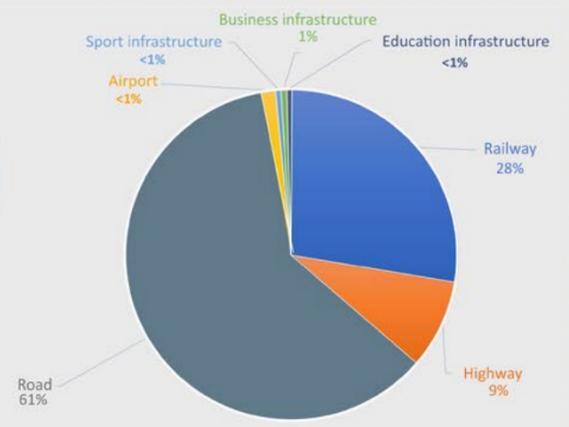
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **ORADEA**

estimated value
of the projects:
€ 2.511 mil. euro

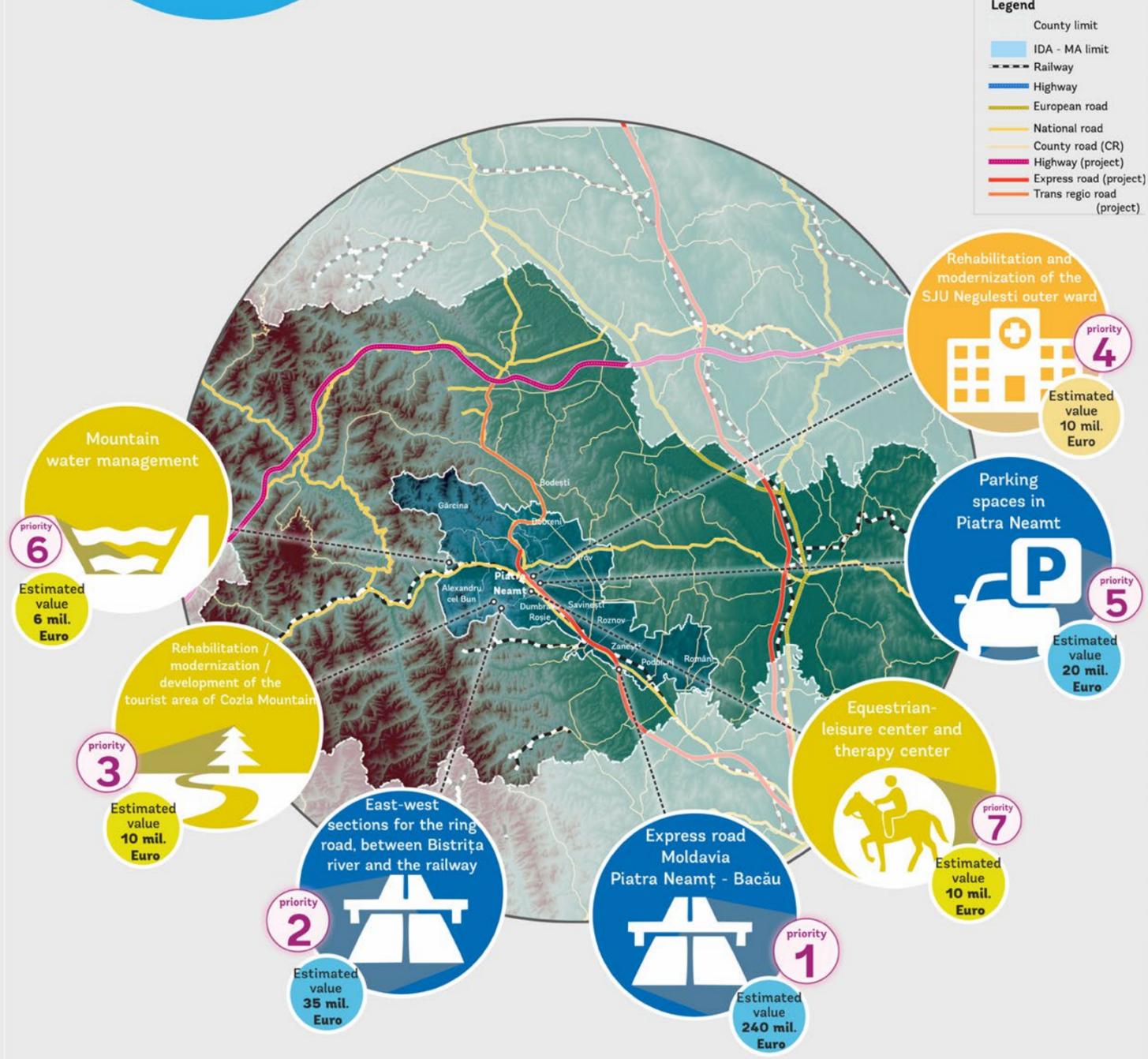
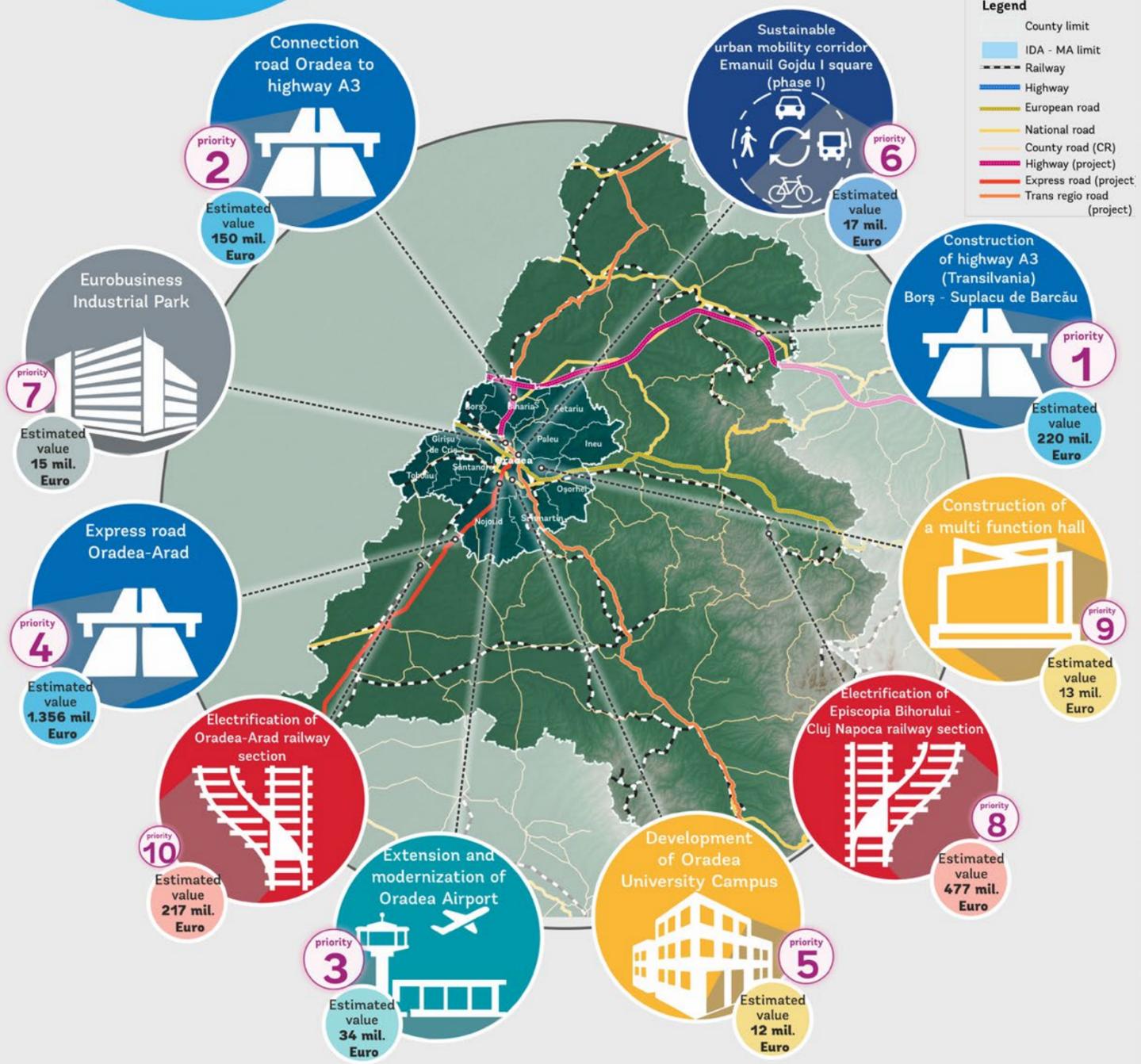
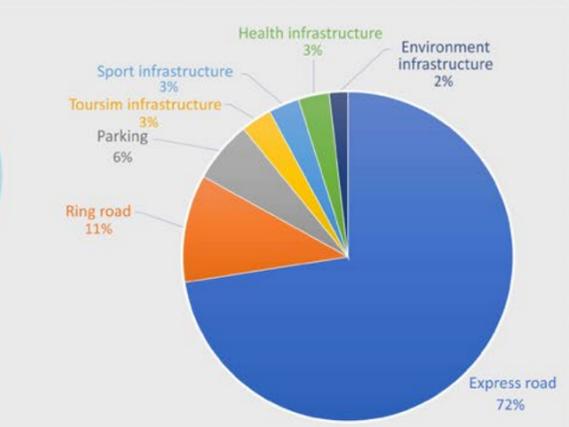
distribution of
the amounts by type of
programs / projects:



Metropolitan area/ Urban agglomeration **PIATRA - NEAMȚ**

estimated value
of the projects:
€ 331 mil. euro

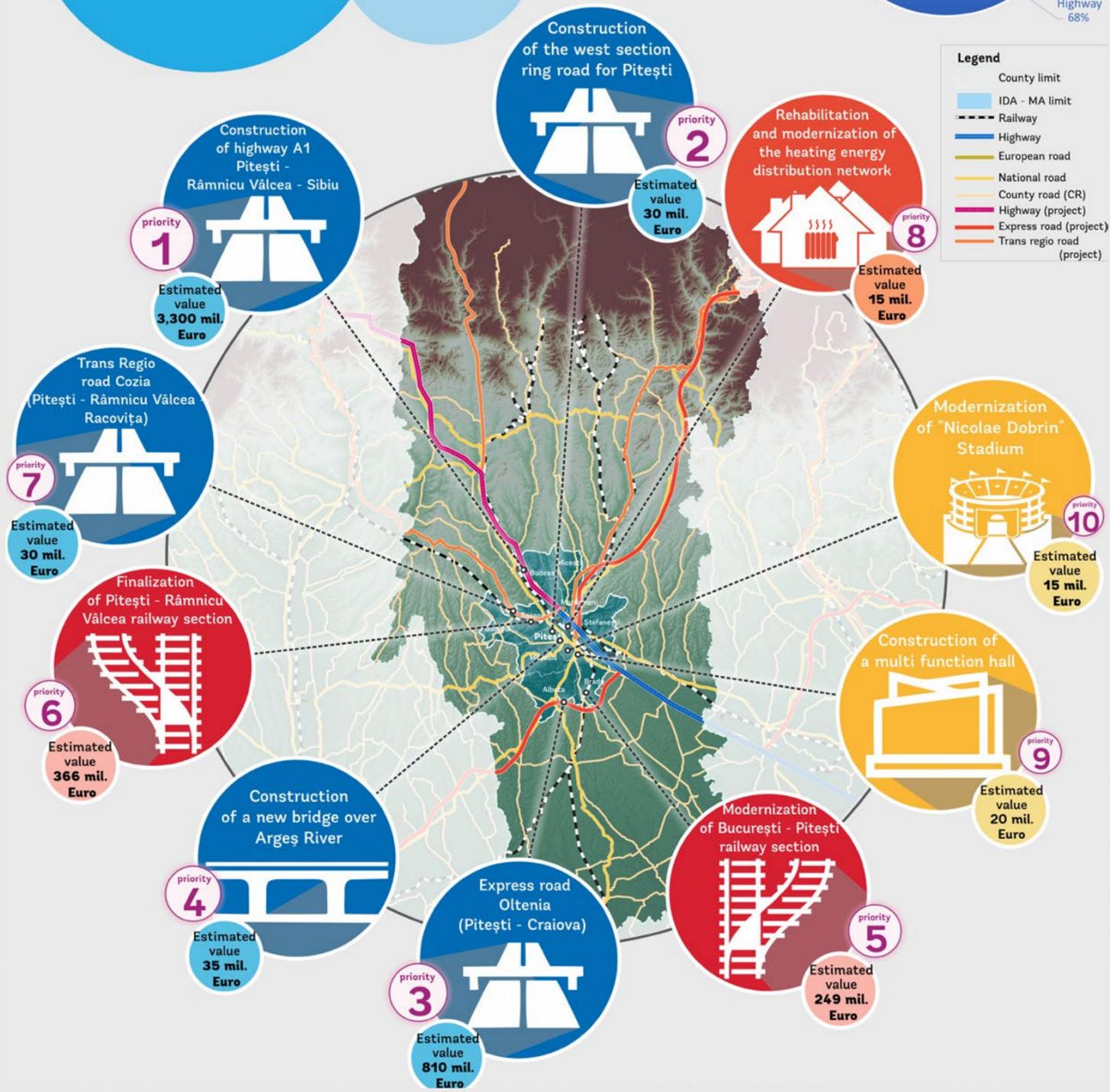
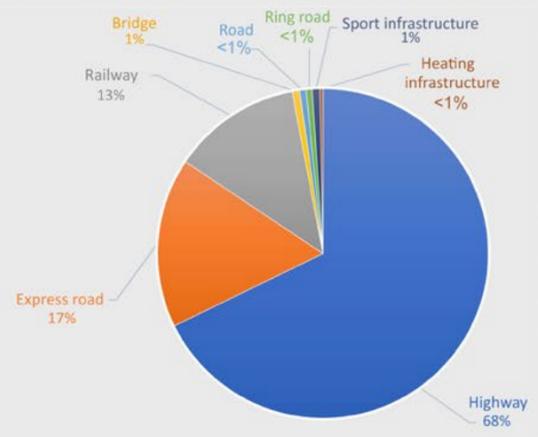
distribution of
the amounts by type of
programs / projects:



Metropolitan area/ Urban agglomeration **PITEȘTI**

estimated value of the projects:
€ 4.870 mil. euro

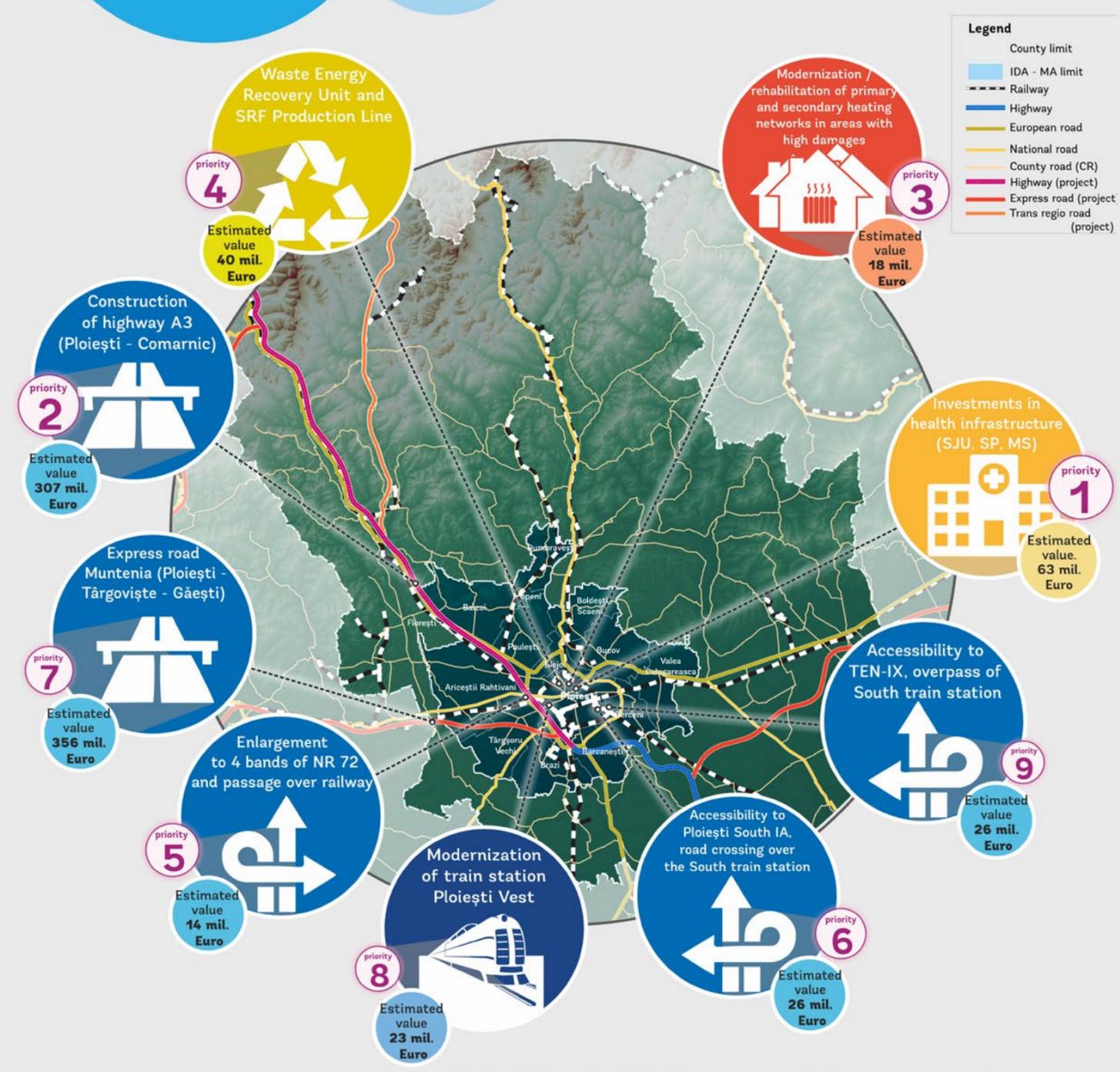
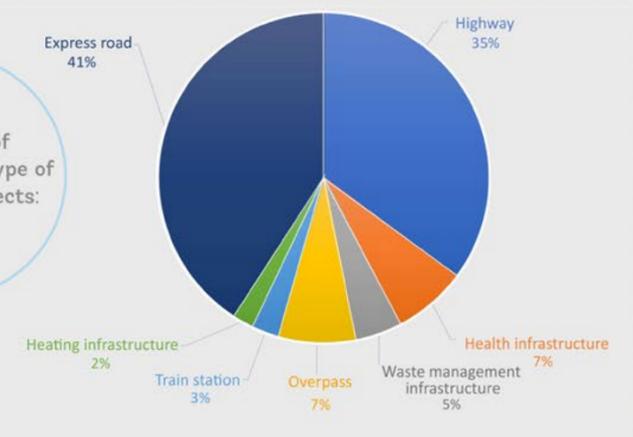
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **PLOIEȘTI**

estimated value of the projects:
€ 517 mil. euro

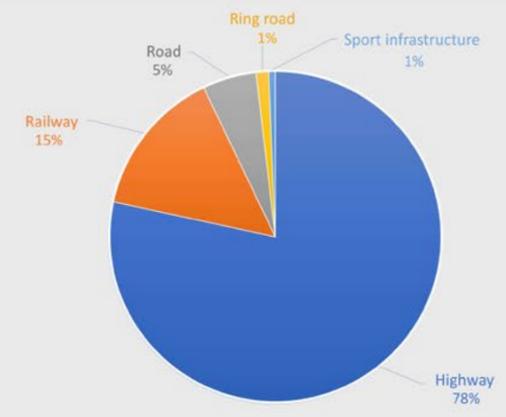
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **RÂMNICU VÂLCEA**

estimated value
of the projects:
€ 4.209 mil. euro

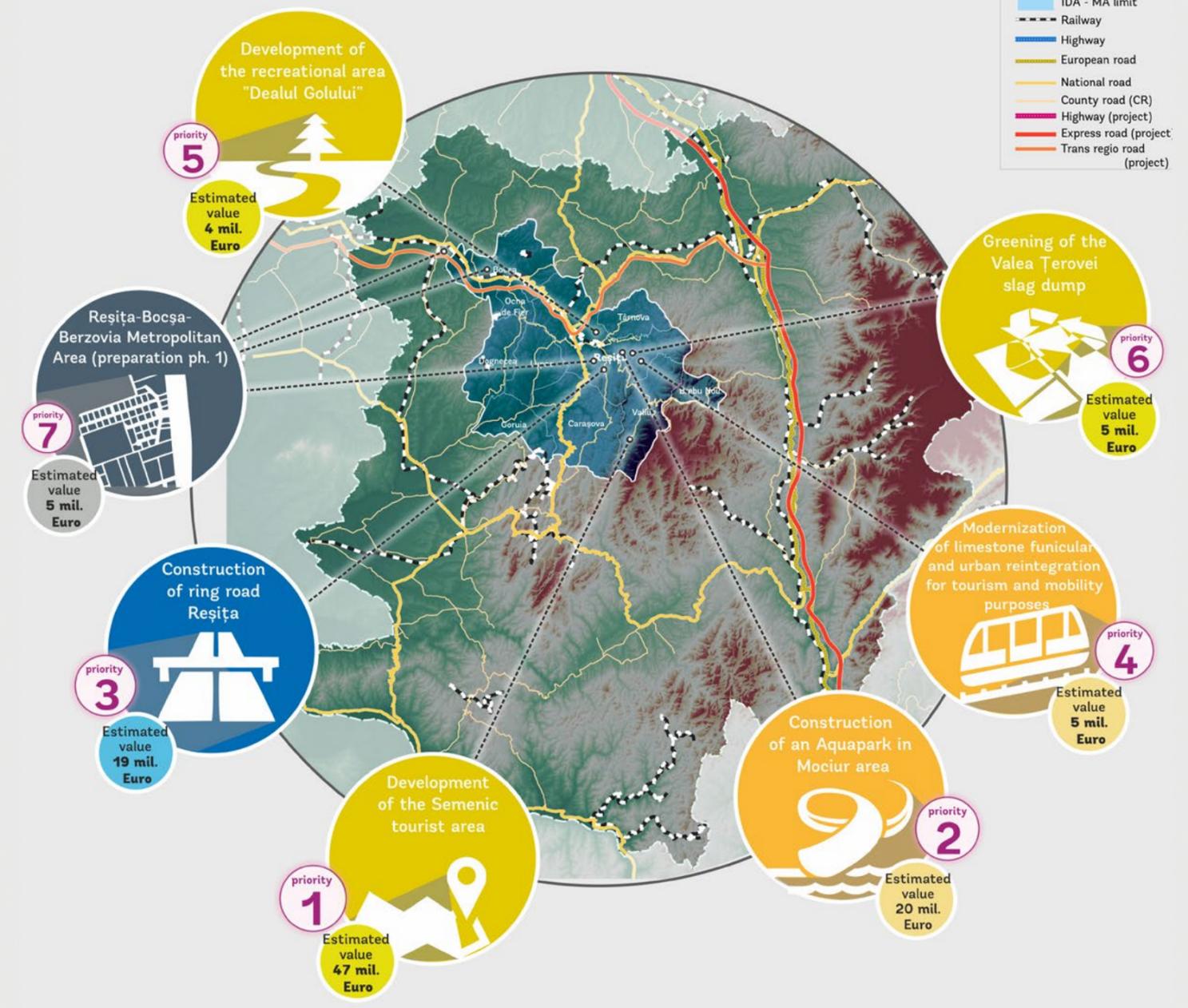
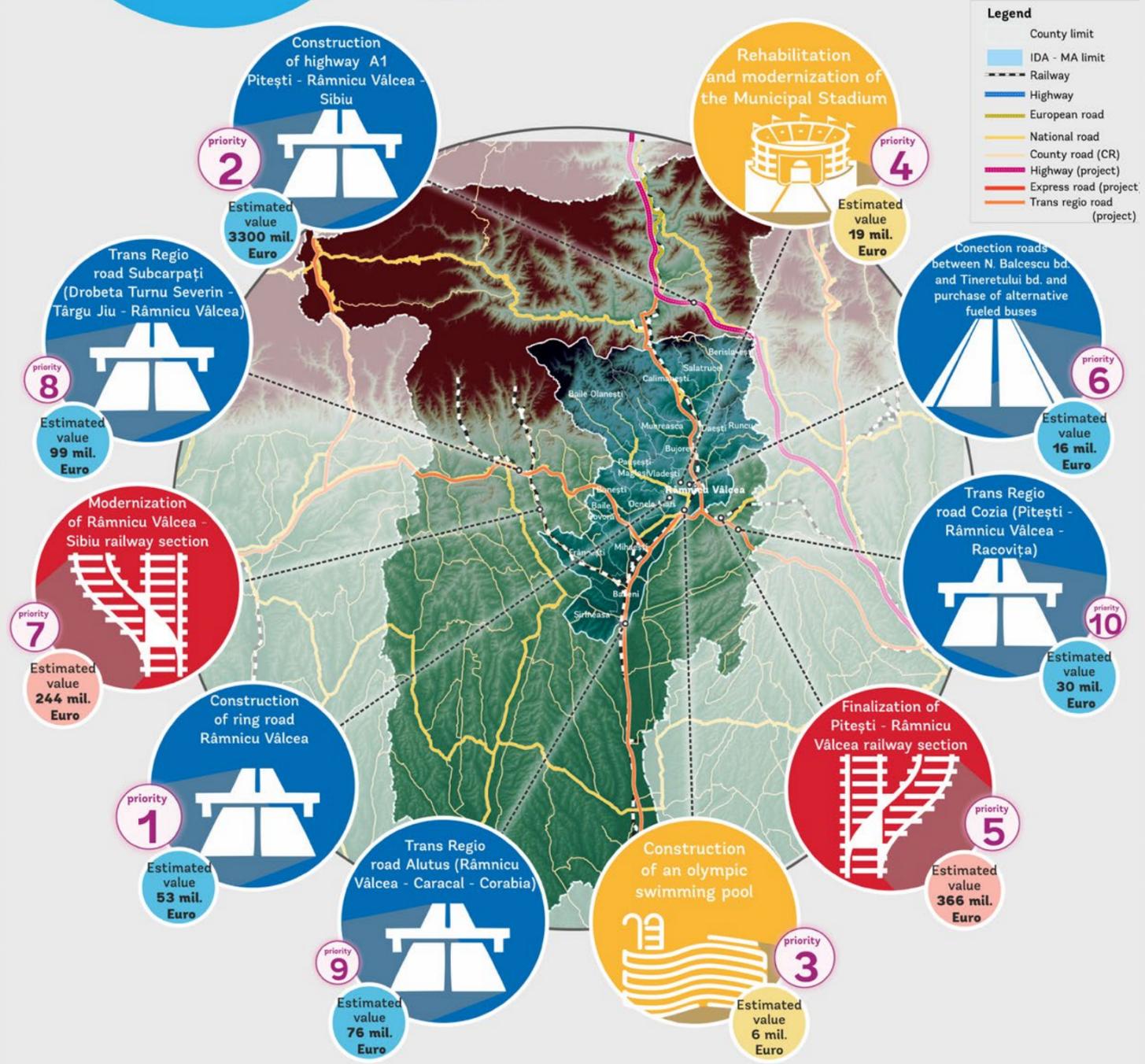
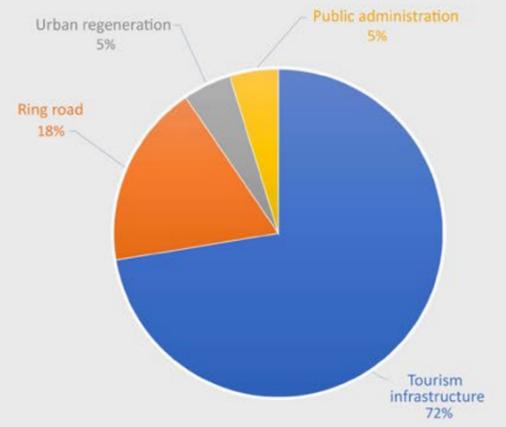
distribution of
the amounts by type of
programs / projects:



Metropolitan area/ Urban agglomeration **REȘIȚA**

estimated value
of the projects:
€ 105 mil. euro

distribution of
the amounts by type of
programs / projects:

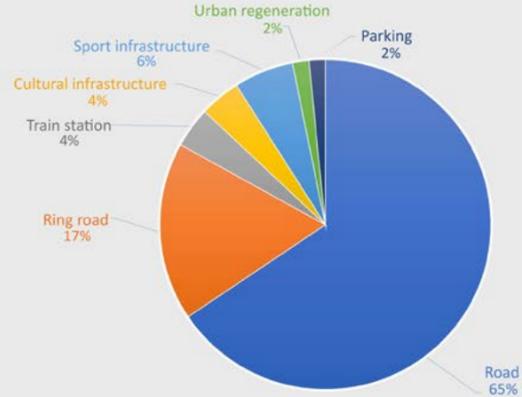


SATU MARE

Metropolitan area/
Urban agglomeration

estimated value
of the projects:
€ 377 mil. euro

distribution of
the amounts by type of
programs / projects:

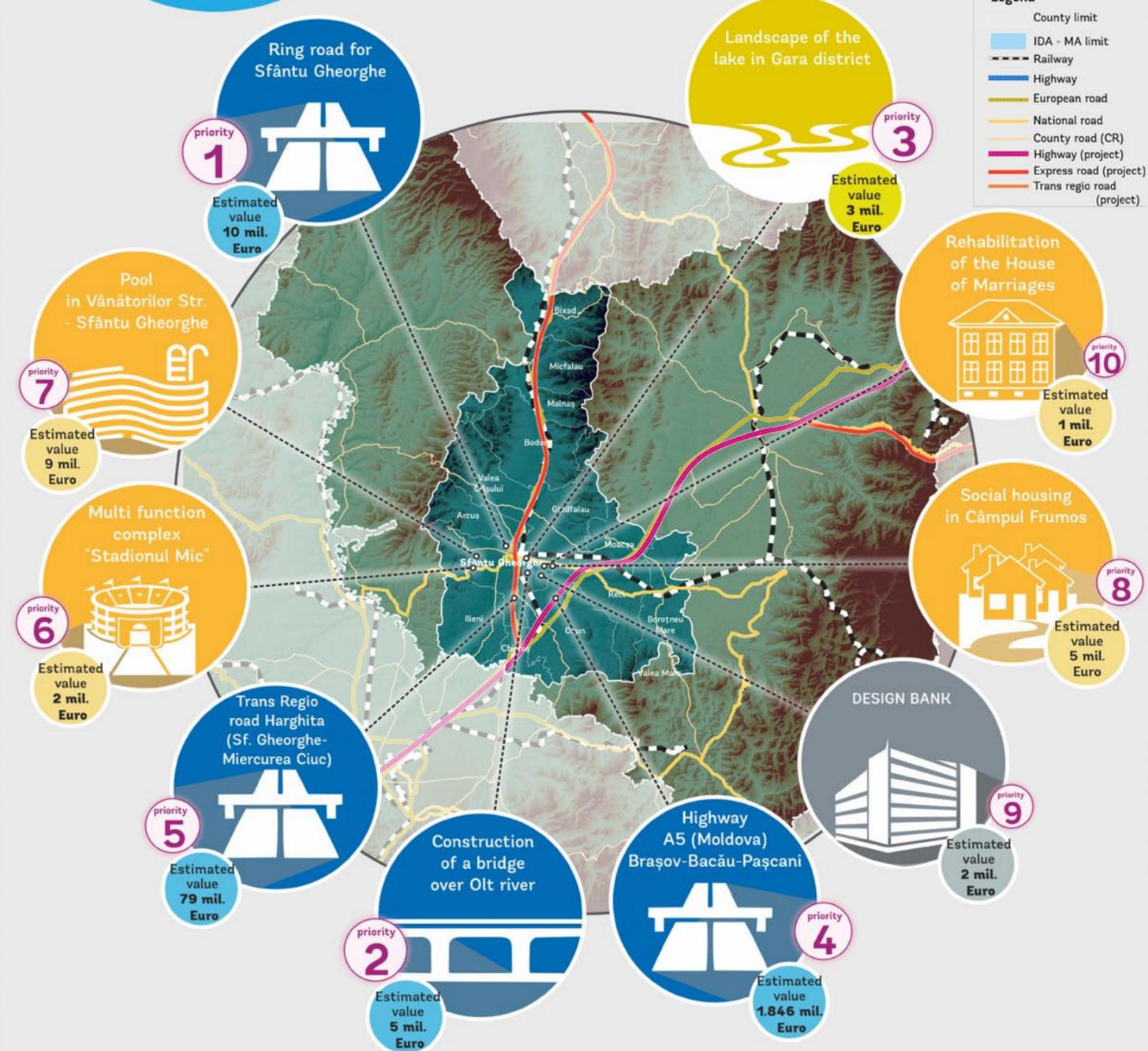
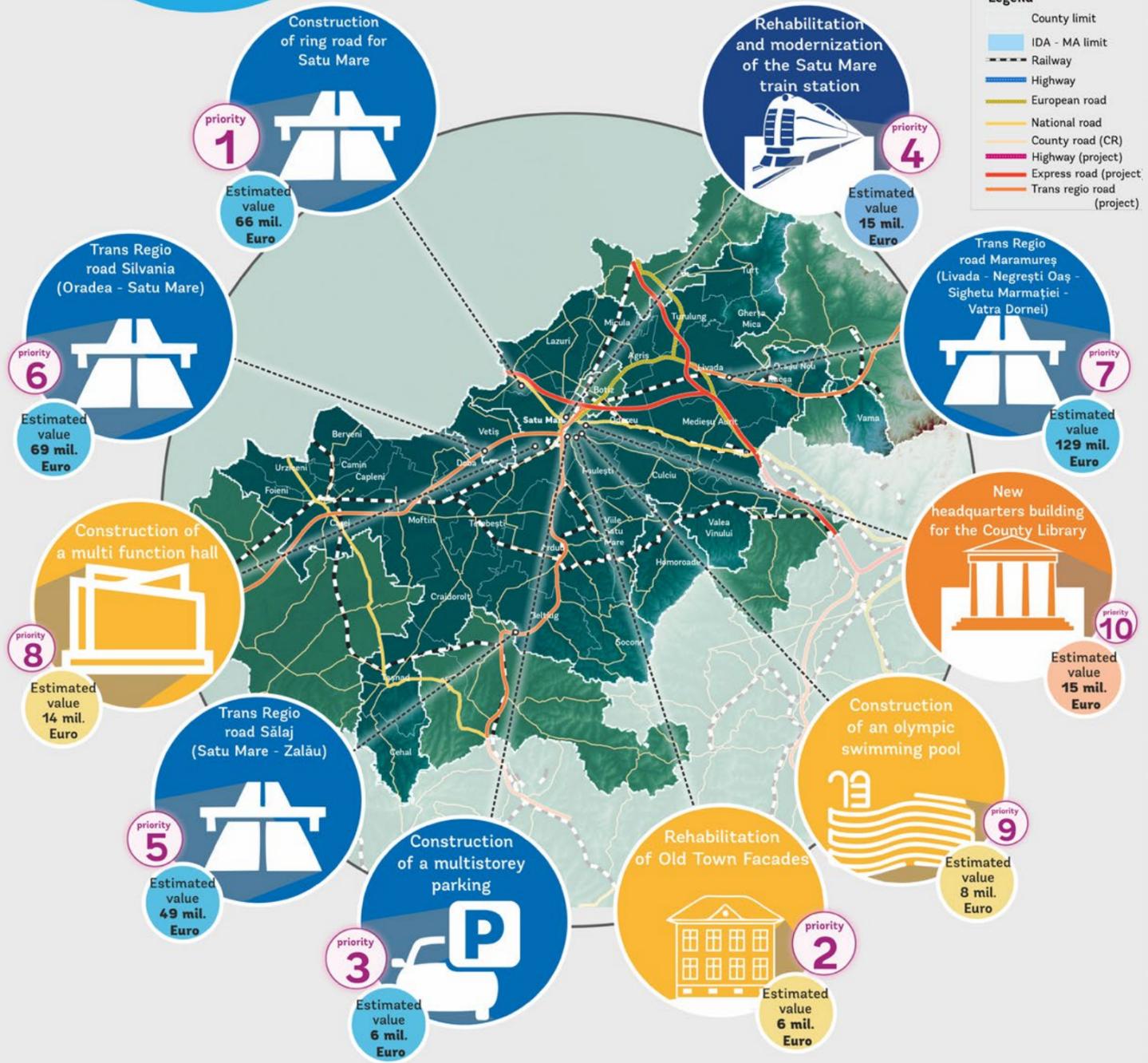
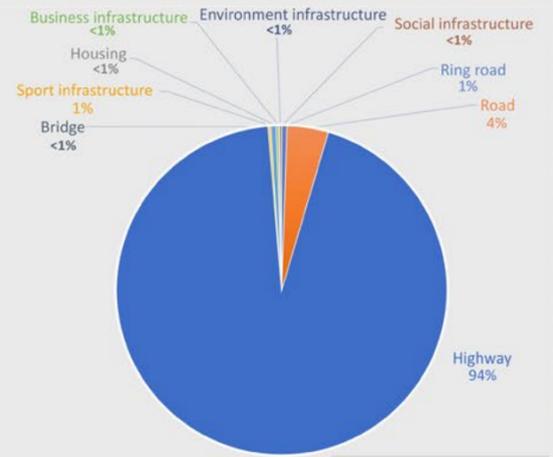


SFÂNTU-GHEORGHE

Metropolitan area/
Urban agglomeration

estimated value
of the projects:
€ 1.962 mil. euro

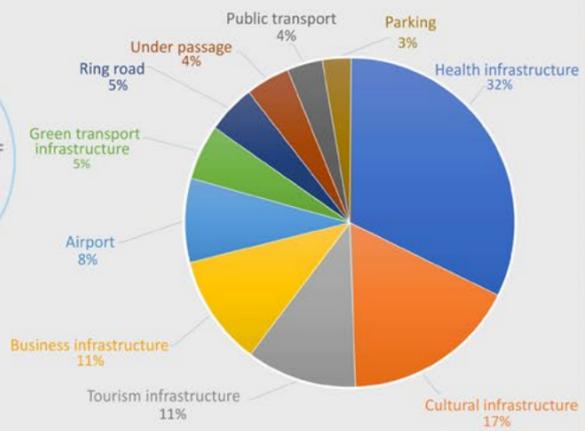
distribution of
the amounts by type of
programs / projects:



Metropolitan area/ Urban agglomeration **SIBIU**

estimated value of the projects:
€ 464 mil. euro

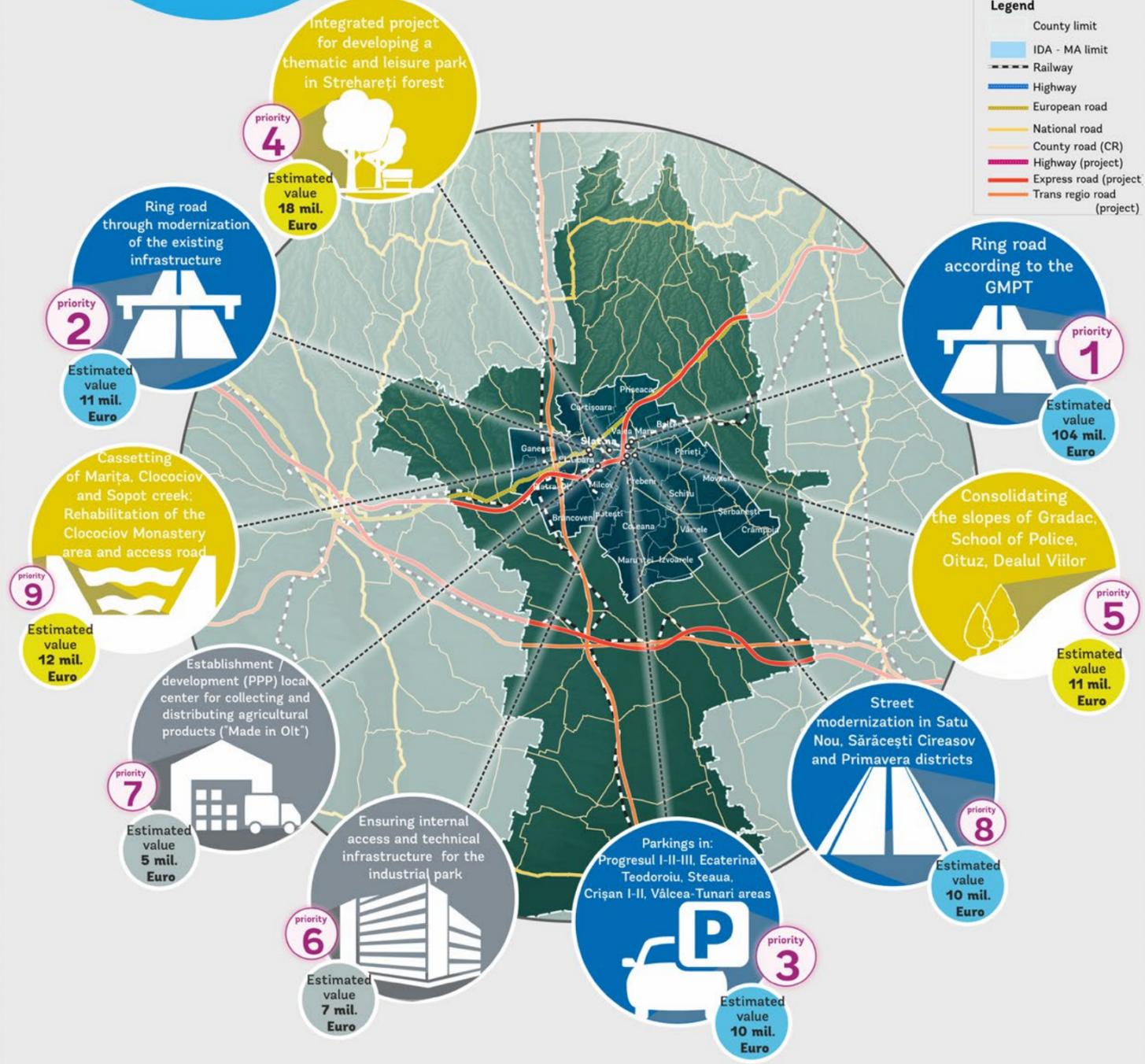
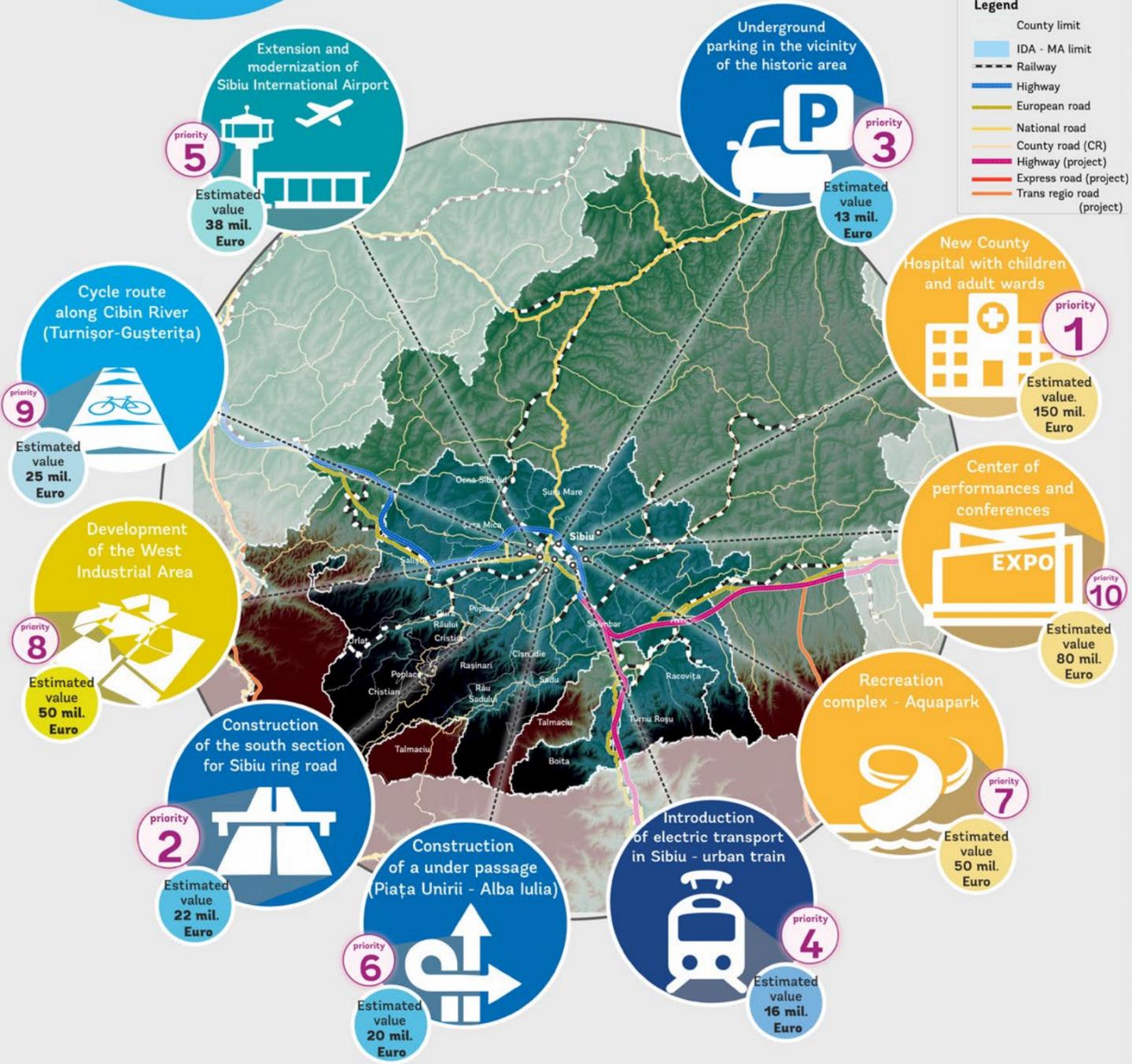
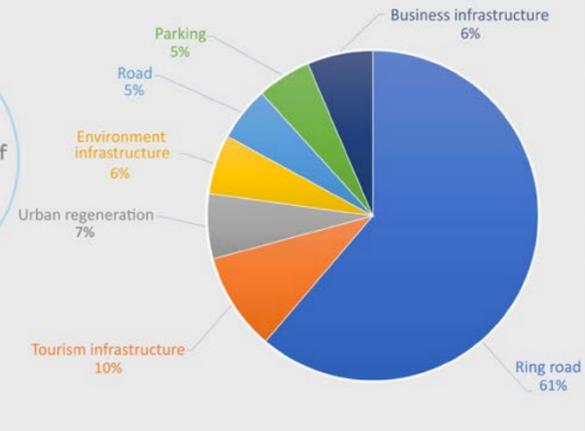
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **SLATINA**

estimated value of the projects:
€ 188 mil. euro

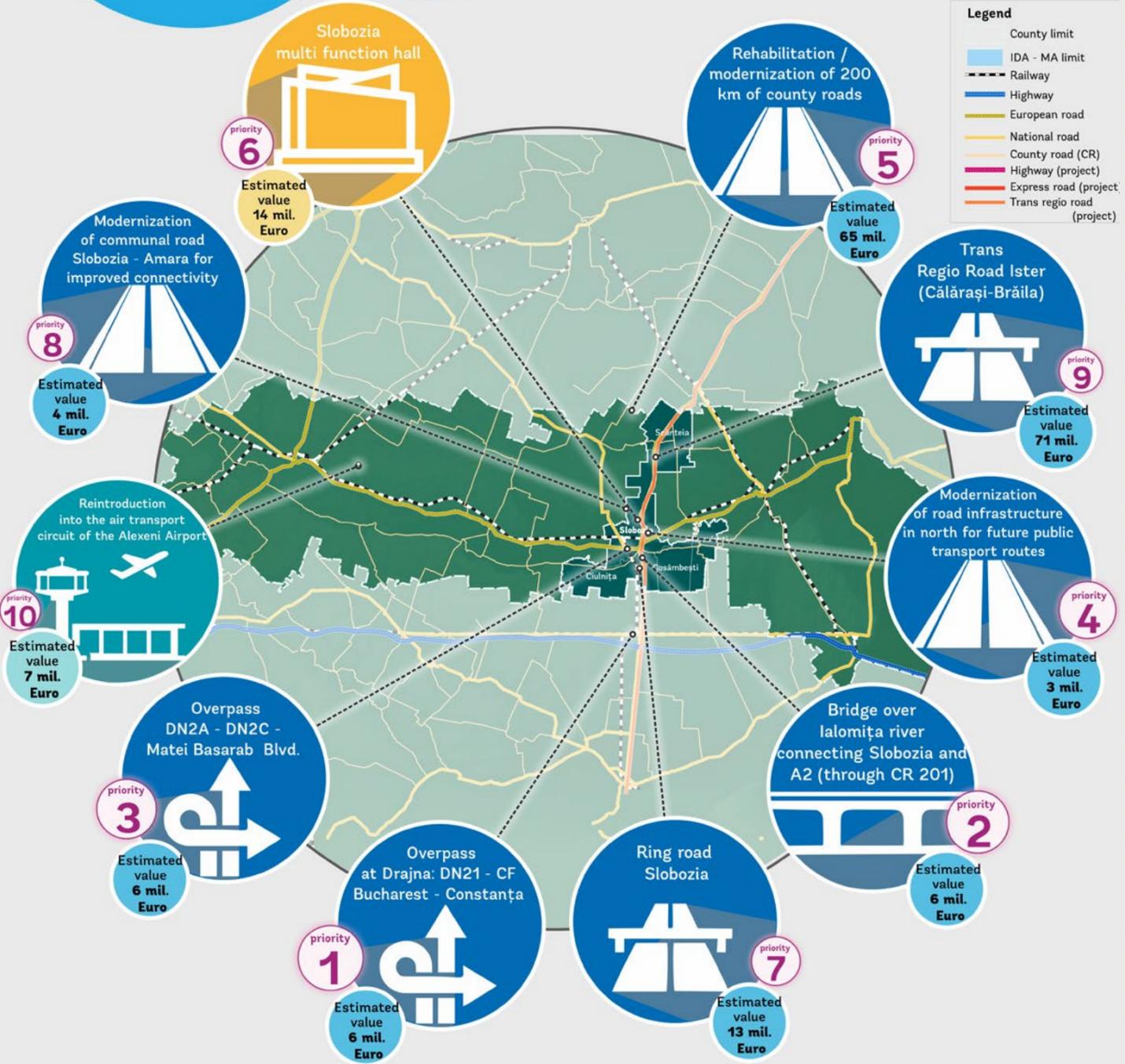
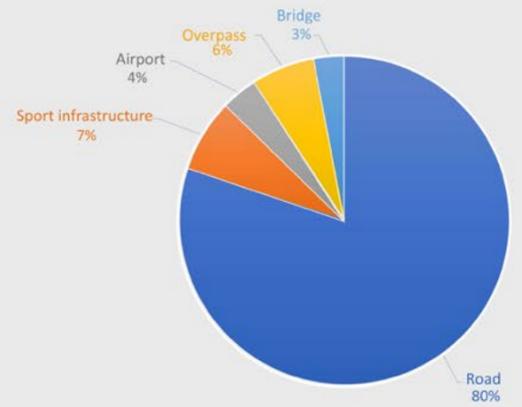
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **SLOBOZIA**

estimated value of the projects:
€ 195 mil. euro

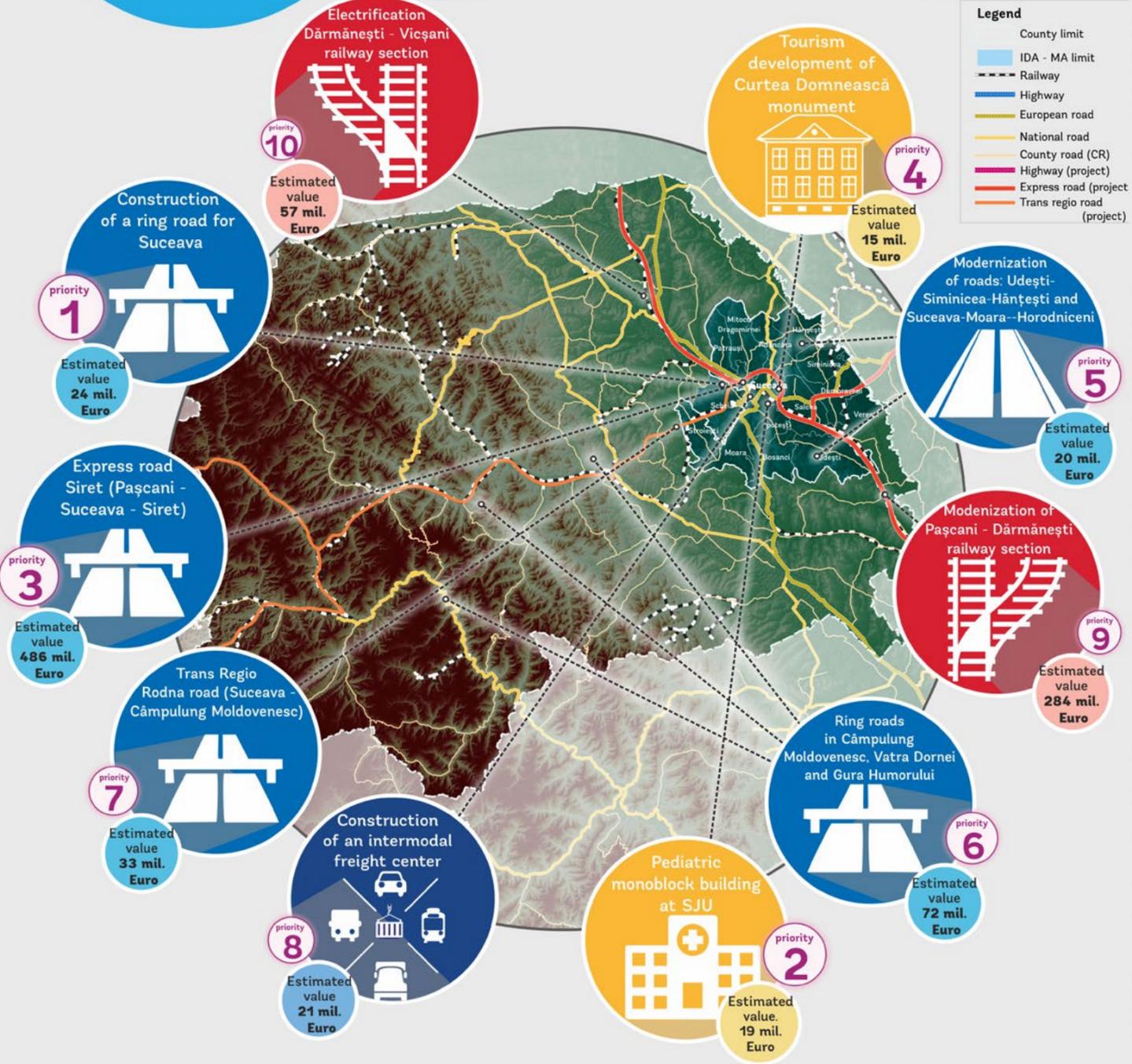
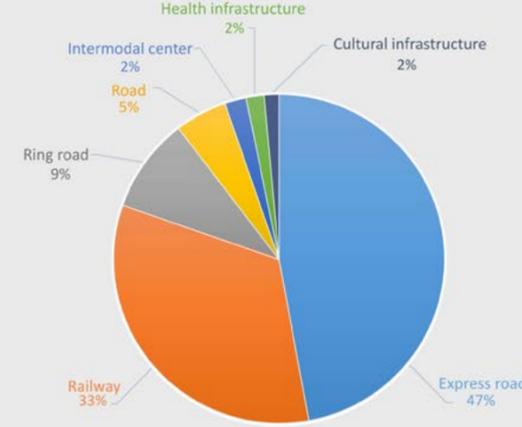
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration **SUCEAVA**

estimated value of the projects:
€ 1.031 mil. euro

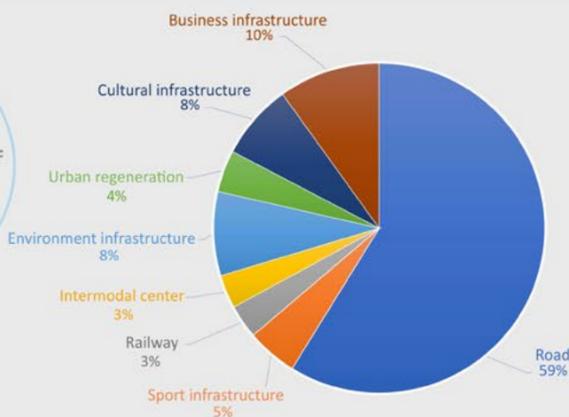
distribution of the amounts by type of programs / projects:



Metropolitan area/ Urban agglomeration TÂRGOVIȘTE

estimated value
of the projects:
€ 606 mil. euro

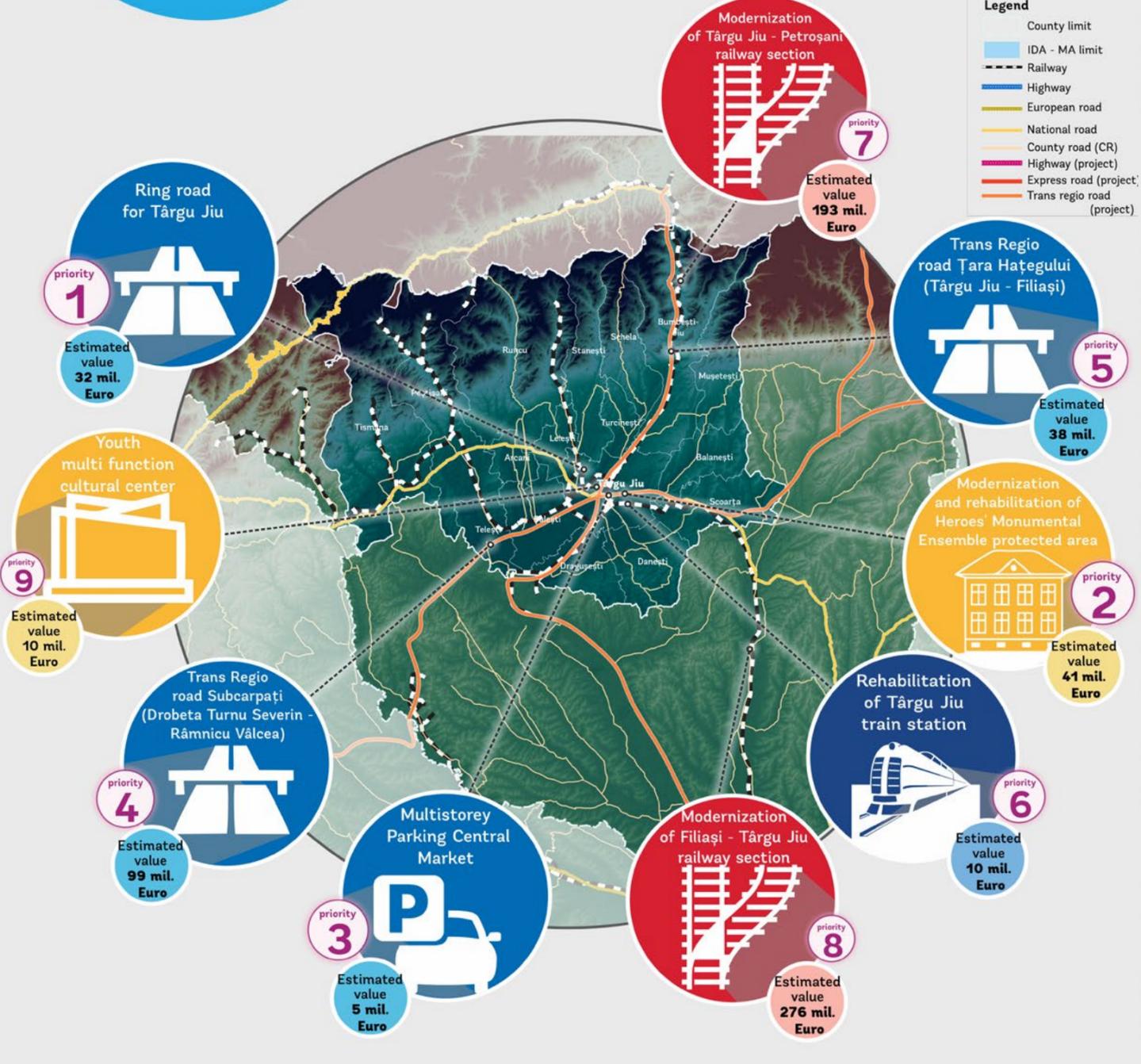
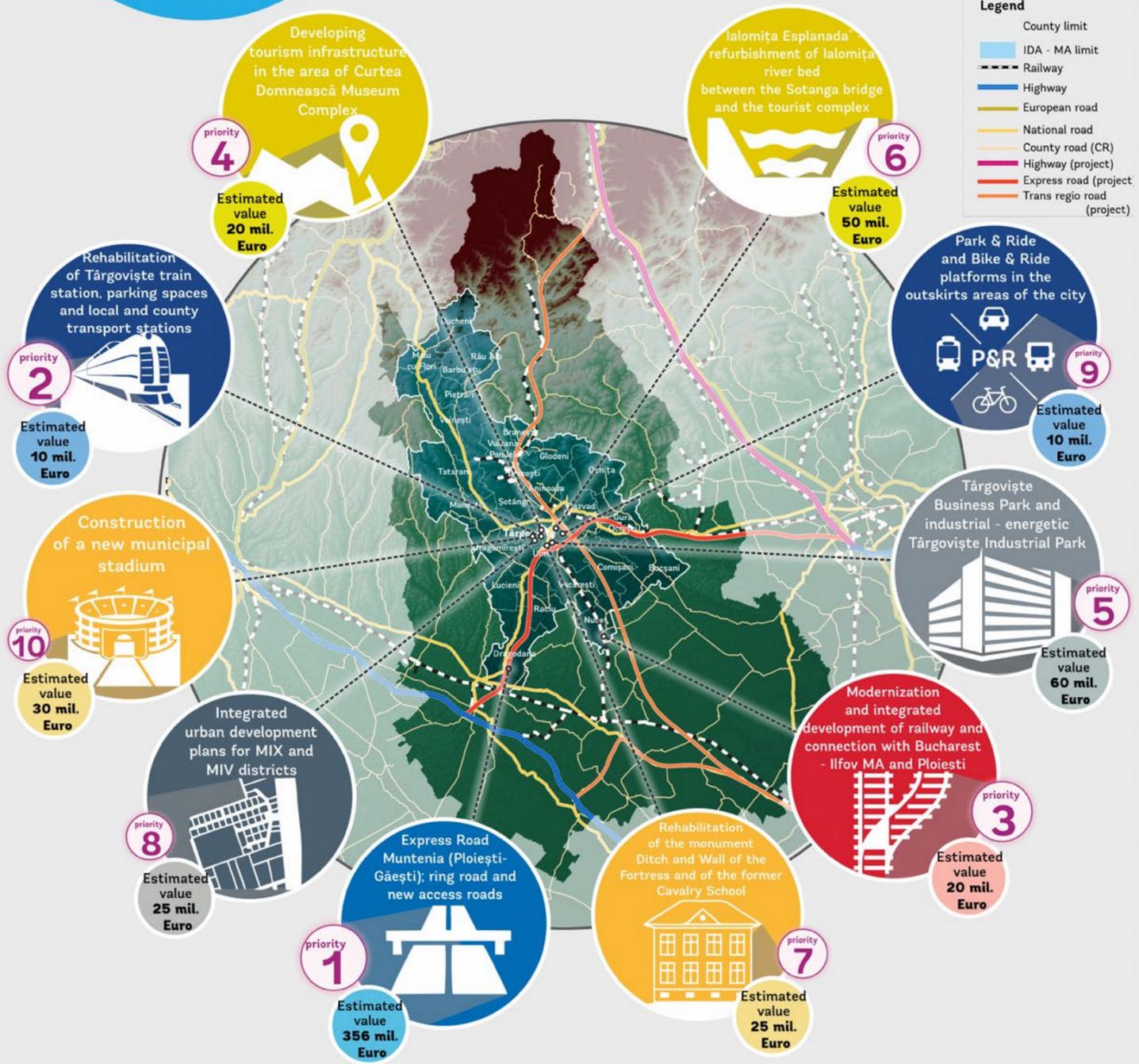
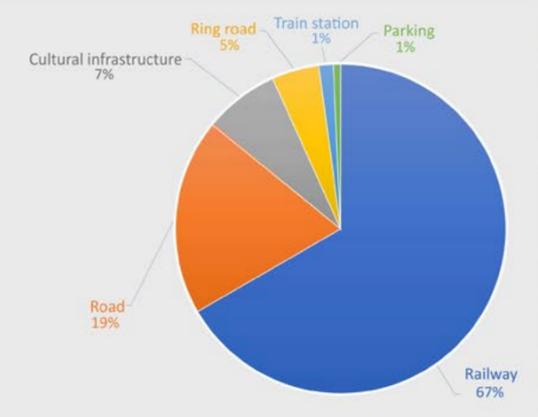
distribution of
the amounts by type of
programs / projects:



Metropolitan area/ Urban agglomeration TÂRGU - JIU

estimated value
of the projects:
€ 704 mil. euro

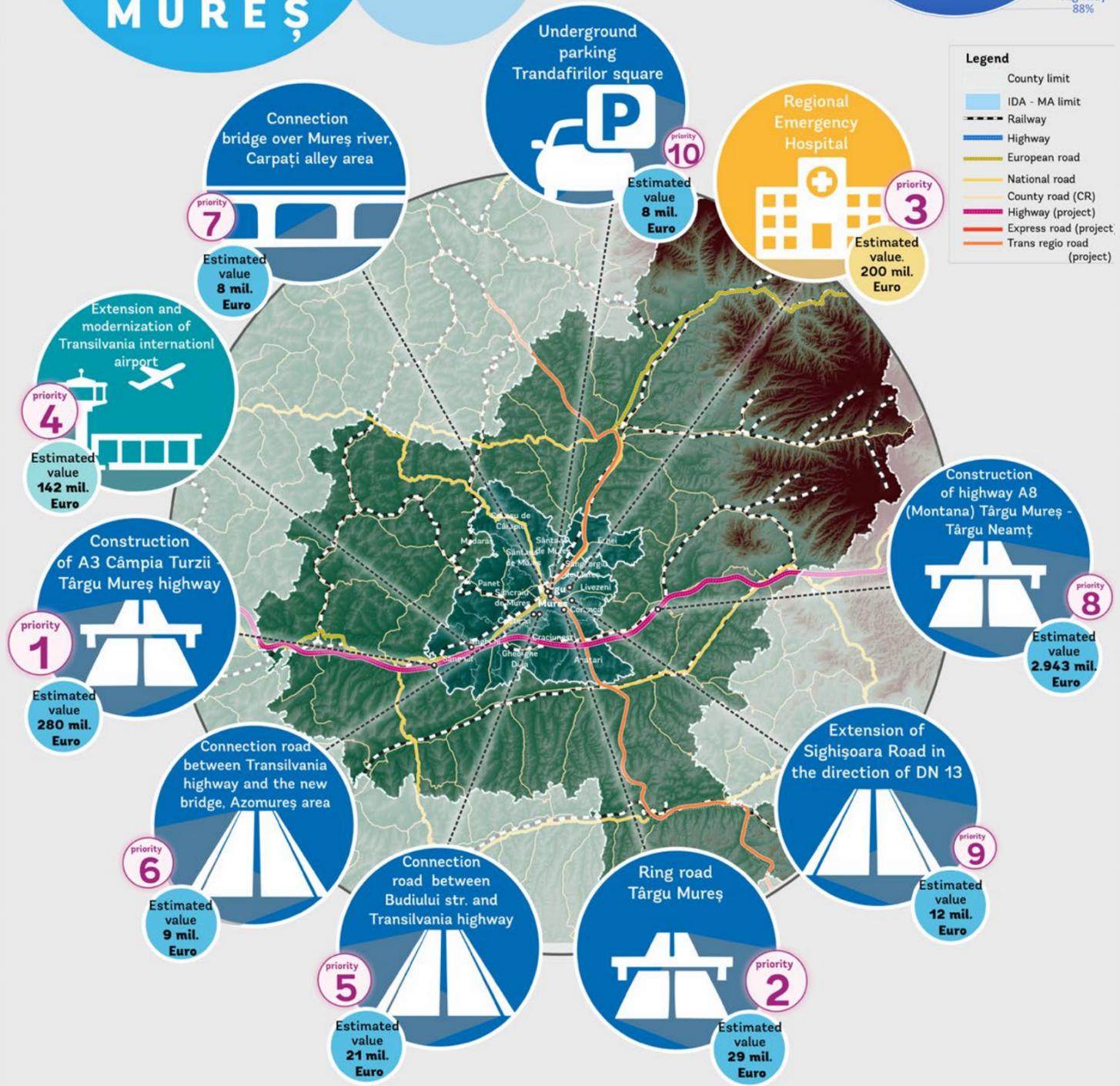
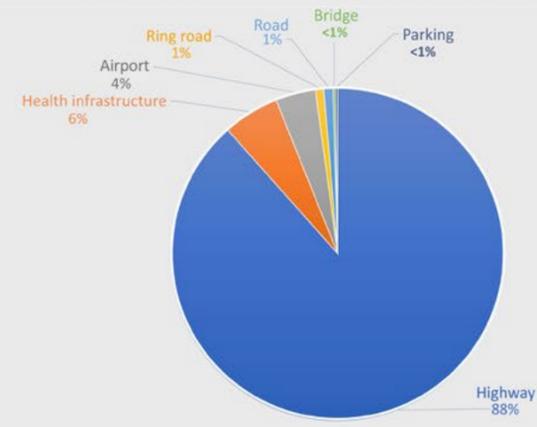
distribution of
the amounts by type of
programs / projects:



Metropolitan area/ Urban agglomeration **TÂRGU - MUREȘ**

estimated value
of the projects:
€ 3.652 mil. euro

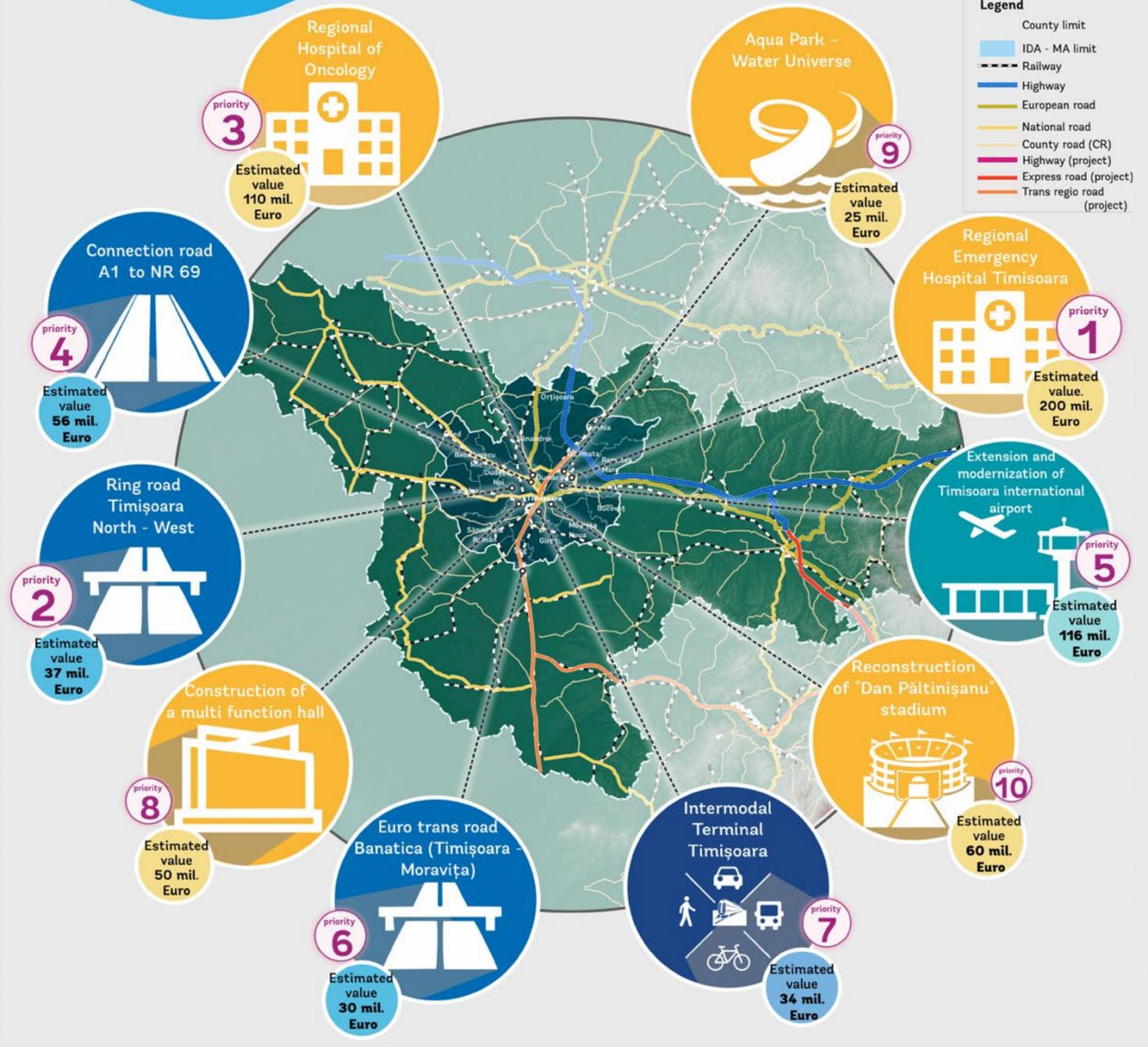
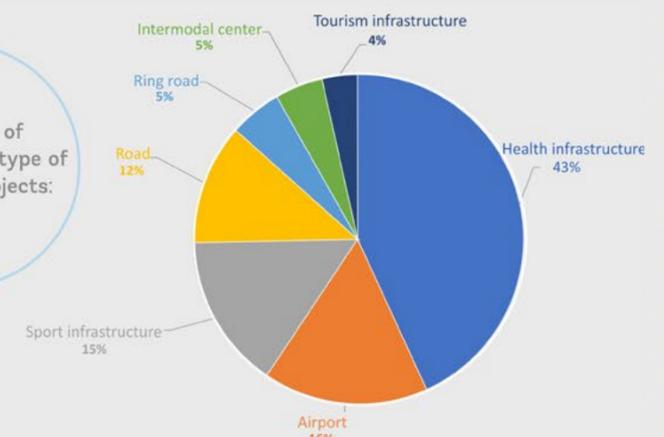
distribution of
the amounts by type of
programs / projects:



Metropolitan area/ Urban agglomeration **TIMIȘOARA**

estimated value
of the projects:
€ 718 mil. euro

distribution of
the amounts by type of
programs / projects:

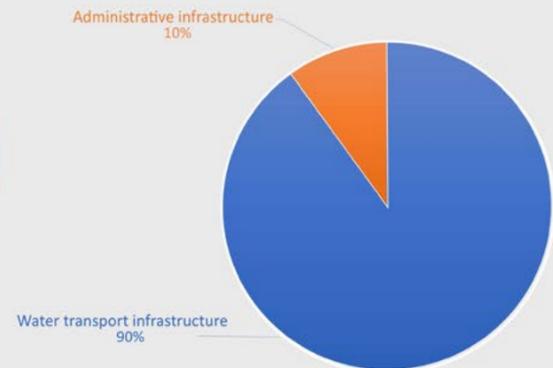


Metropolitan area/
Urban agglomeration

TULCEA

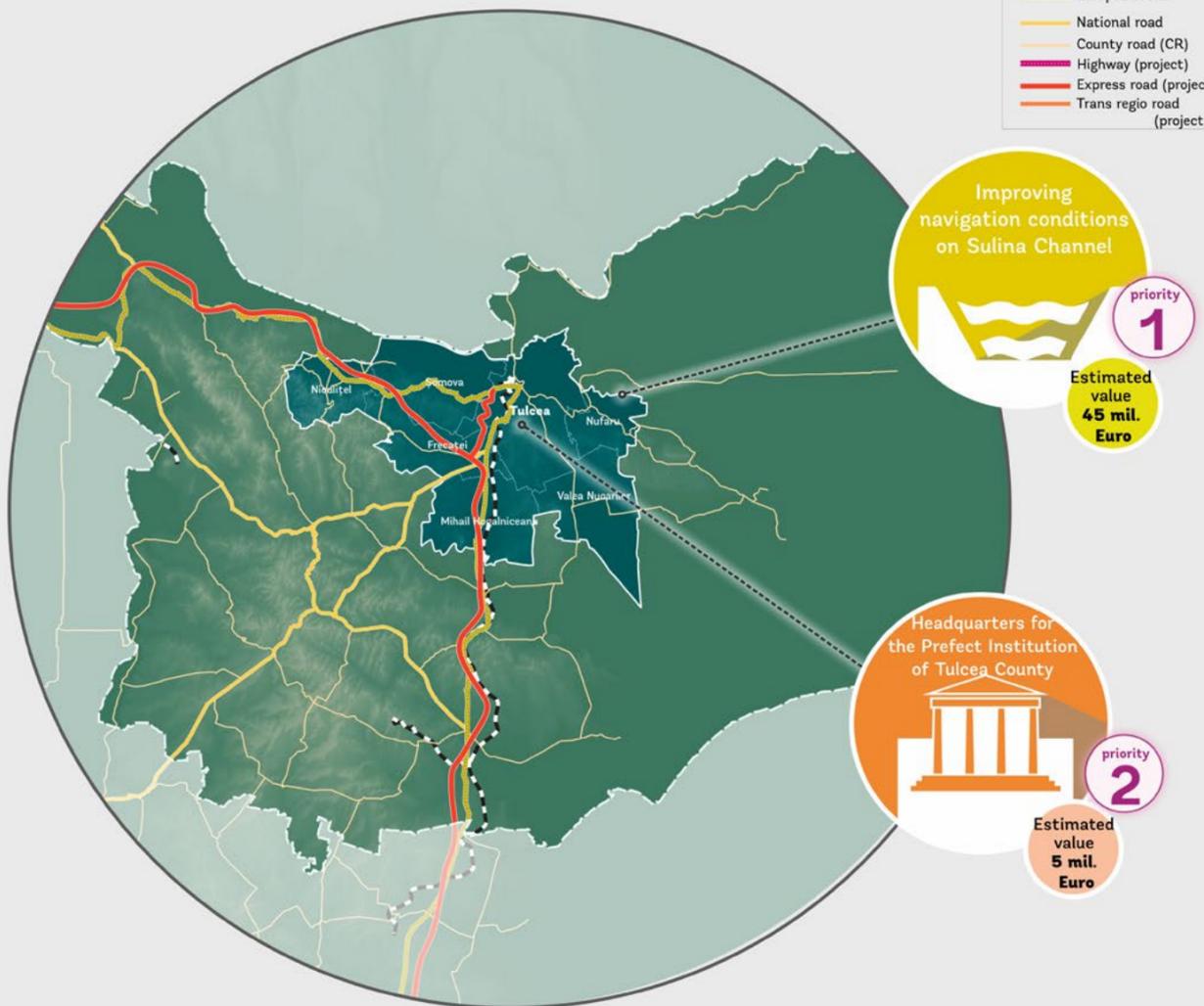
estimated value
of the projects:
€ 50 mil. euro

distribution of
the amounts by type of
programs / projects:



Legend

- County limit
- IDA - MA limit
- Railway
- Highway
- European road
- National road
- County road (CR)
- Highway (project)
- Express road (project)
- Trans regio road (project)

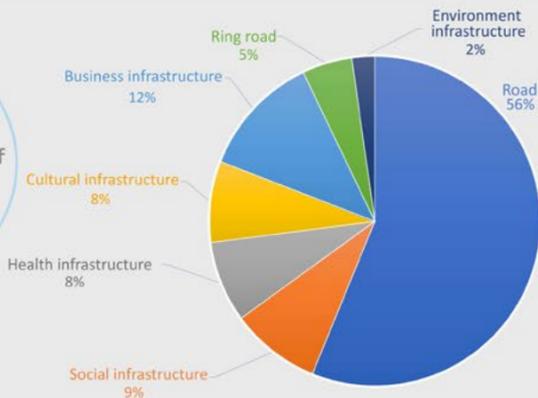


Metropolitan area/
Urban agglomeration

VASLUI

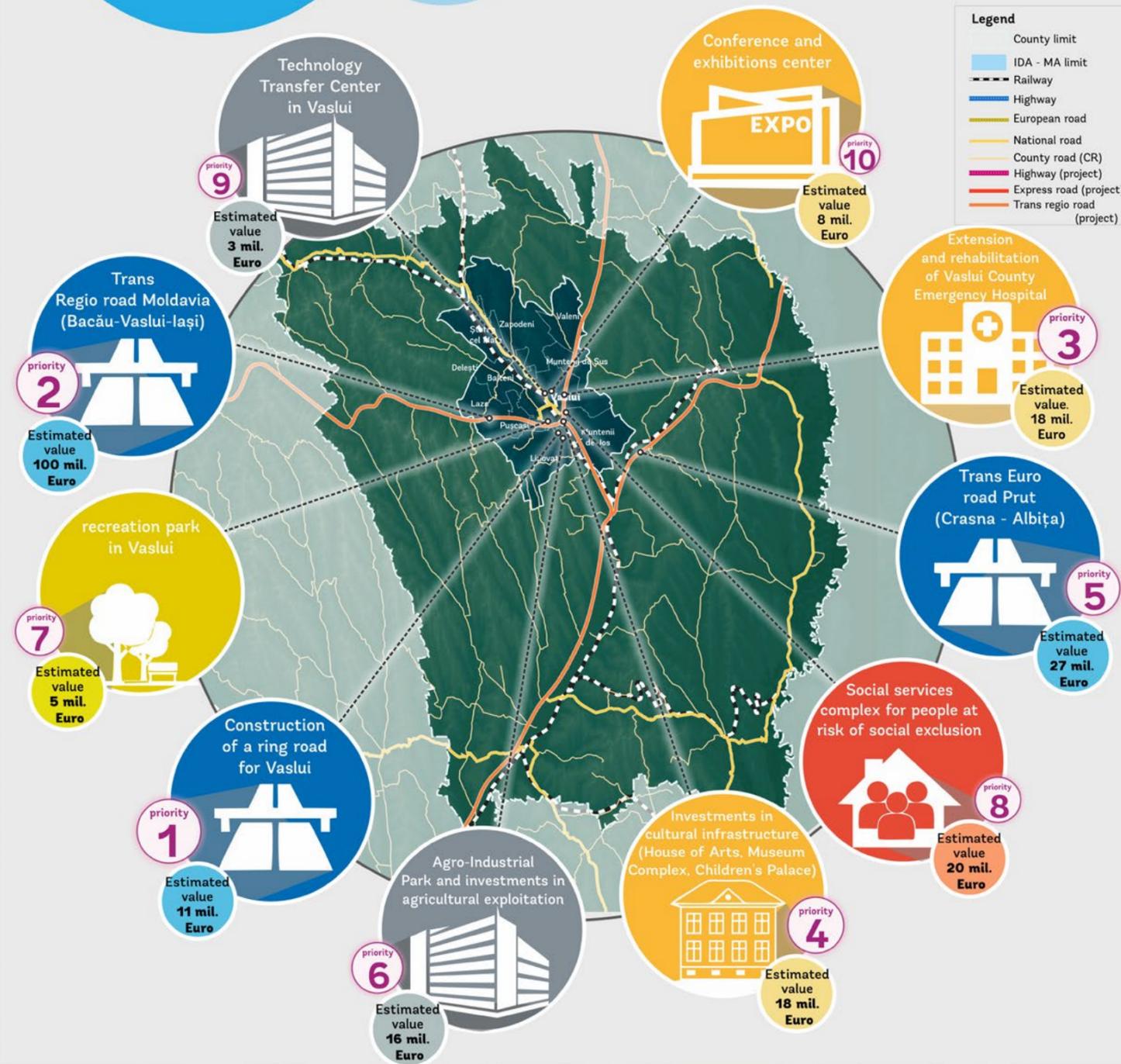
estimated value
of the projects:
€ 226 mil. euro

distribution of
the amounts by type of
programs / projects:



Legend

- County limit
- IDA - MA limit
- Railway
- Highway
- European road
- National road
- County road (CR)
- Highway (project)
- Express road (project)
- Trans regio road (project)

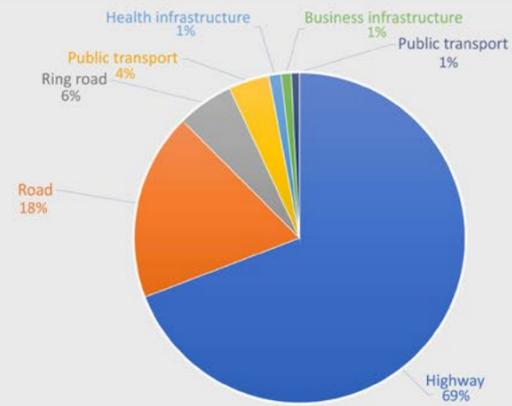


Metropolitan area/
Urban agglomeration

ZALĂU

estimated value
of the projects:
€ 1.000 mil. euro

distribution of
the amounts by type of
programs / projects:



Legend

- County limit
- IDA - MA limit
- Railway
- Highway
- European road
- National road
- County road (CR)
- Highway (project)
- Express road (project)
- Trans regio road (project)

