Tirana Traffic:
Designing Regional Mobility for Tirana via Rail Traffic System.

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Introduction

Mobility is a basic condition for a modern society, because without a good public transportation, no city can function. Looking to the mobility costs of society, by far "public transportation" is the most efficient solution. The actual situation of Tirana-Durres is the opposite one, and no alternatives are available for people. As result they are left only to the alternative of private cars, for destinations that go beyond walking distance. The results are bad: high land consumption and uncontrolled growth; bad air and low environmental quality; etc. The aim of such paper is to promote the idea of designing and implementing a powerful regional traffic system. Knowing that territorial planning remains weak in Albania, public infrastructure can be used as a powerful instrument-tool in favor of an integrated planning logic. Tirana region today represent the biggest and most important city/region of the country, despite being a capital. Since the fall of Berlin Wall many people from other regions and peripheries, embargoed in a speculative urbanization process on public land, as authorities had other priorities. No infrastructure was then provided to such sprawl of settlements; while the historic urban centers entered a process of aggressive densification and verticalization, loosing public space and quality of life. Nowadays, Tirana is characterized by very dispersed settlement patterns. Public transportation is mainly depended on buses run by individual businesses. Those that can afford use private cars, as the fastest way going around the capital region, despite growing traffic hours. Biking it is still not safe enough, although dedicated lines are increasing in Tirana center. For those economically limited it makes them more vulnerable. As most of the workplaces are in the main urban centers, it creates a lot of daily commuting volume in the capital region, with a growing traffic bottlenecks especially in the western side of the city. While all cars and busses are stuck in the traffic, no existing railway is functional at present time. The busses and their tickets are not interconnected in a unified system at certain time limit. Sidewalks also are not good at all, and often with dangerous obstacles. Street lighting also remains a problem for security during the night, although improvements are undertaken lately. All these lead to traffic jams and worsening of environmental indicators.

As a conclusion: the dominant model of private cars has been stressed both at urban and regional scale of capital Tirana. Car traffic is present everywhere, including externalities like, bad air, environmental qualities; high levels of noises; and increasing number of deaths because of road insecurities and worsening air quality. The increase of economic level in Albania ad capital region, will push further the increase of the number of cars in the streets, with more hours of traffic blocking. While situation worsens, no (sustainable) alternative is identified yet.

A potential vision

– Tirana city and its wider region should become a highly functioning and well-connected area, where commuters can travel safely and under better environmental conditions, as a means of improving overall quality of life. In this way, public authorities can gradually regain control over the sprawl of investments that has characterized the last two decades, while ensuring that future development takes place in a more focused and coordinated manner. Public transportation should be used not only to improve mobility, but also to guide settlement development. For this, integrated planning is required, together with strong coordination among public authorities at all levels—local, regional, and national—in order to reduce unnecessary land consumption. The current mobility situation should be improved in several ways: first, by giving residents more affordable transport choices; second, by improving conditions for non-motorized individual transport such as walking and cycling; third, by enhancing access and interconnectivity between different public transportation modes; and fourth, by offering better living conditions through the improvement of environmental indicators such as safety, health, and cleanliness. As a result of these mobility improvements, people will have more freedom and flexibility in deciding how, when, and by which means to travel, while also reducing the economic cost of circulation. This is particularly important for marginalized groups, who are often the most affected by limited and unequal mobility systems.

At the same time, congestion can be reduced by introducing a strong and high-capacity public transportation system, such as a metro or tram-train. This would make public transportation more visible and attractive, helping to change existing culture and mentalities by showing people its practical advantages over private car dependency. Such a shift would not only improve circulation, but could also initiate a broader process of public space improvement and urban regeneration. In parallel, this transformation of mobility should be accompanied by a rethinking of the relationship between transport infrastructure and urban form. Better accessibility through public transportation can help structure growth more rationally, encourage development around strategic nodes, and reduce the excessive dependence on private cars for daily movement. In this way, mobility policy becomes not only a means of improving circulation, but also a tool for supporting more compact, inclusive, and sustainable urban development across the Tirana city-region. Moreover, the strengthening of public transportation can contribute to a more balanced social and territorial development within the region. By improving connections between residential areas, employment zones, services, and public facilities, the system can reduce inequalities in access and make the region more inclusive for different social groups. This is particularly important for those who do not have access to private vehicles, as a reliable and affordable transport network increases their opportunities for work, education, healthcare, and social participation, while also reinforcing the overall functionality of the metropolitan area.

Measures to make things happen

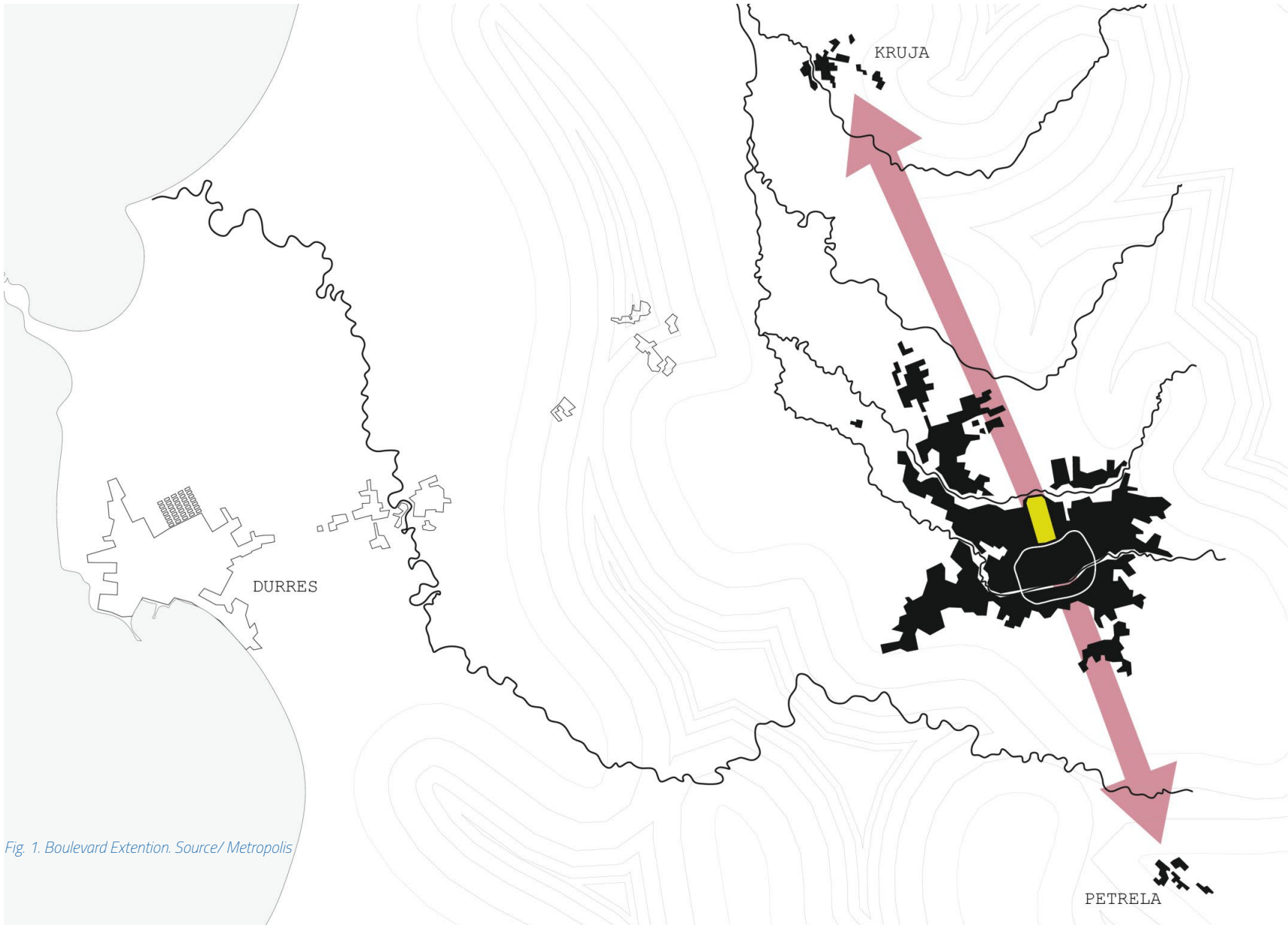
– This includes three main pillars of implementation: i) **Tram-Train or Metro device:** which is enough complex to be explained here in one article, but it is summarized with conceptual diagrams (see references and illustrations). ii) **Cycling:** can be used both at urban and regional scale, aiming at improvement of mobility. Most of capital region is flat, which makes it perfect for biking usage. It can be used especially to get to the public transport stations and back. This needs investments on safer 'biking lines' among settlements, and 'bike racks' in the public transport stations. It is essential to promote an urban-regional network of biking, by connecting main points of interests such as public transportation lines/stations, schools, public administration centers/services, main companies, that bear considerable numbers of people in mobility. The intersection of biking lines with the stations of public transportation is essential. Therefore it is vital to visualize the positioning of bikers, and prioritize them at the junctions, as usually they are main points of accidents and misunderstandings. Legislation about biking is to be introduced, educated and enforced. Bike activism organizations such as "Critical Mass" and specialized NGO-s can be used to attract population (especially bike users) in the participatory planning processes of infrastructure, or the improvement of existing situations. The inclusion of population serves to approve measures, to sensitize and inform the broad public, and contribute to a positive atmosphere of public discourse. iii) and **Walking** – is the main mean of transportation in urban areas, and remains the main form of mobility especially for poor people, and for those aiming at staying fit. Nearly every trip (however long or sophisticated it is) it includes also some distance covered on foot. In the case, the most important strategy is to promote pedestrianism: by improving walking infrastructure and sidewalks (pave the sidewalks, provide ramps, improve accessibility of people with limited abilities, mothers with kids, elders, etc.); remove disturbing objects (such as: all kinds of poles, kiosks, wholes, unnecessary trees especially in narrow sidewalks, etc.); improve safety especially along crossroads and exits (by using lights, sounds, and speed reducing facilities).

The 'Train-Tram' or 'Metro' device

–This is the main focus point in the article with regards measures to be taken. The meaning of "Tram-Train" for people is to get a train or metro in the city center and along the densified urban area, and a 'tram-branch' and/or bus further into the region. The first historic model as such has been implemented in Karlsruhe Germany, and helps penetrating a transportation device of large capacity covering

almost all regional destinations with quality/volume public transportation. Thanks to the combination of urban and regional transportation, there exists no more need for commuters to change vehicle, which in return contributes to reduce total travel time; to best comfort travelling; as well as to reduce traffic for the city/region of Tirana. In this scenario there is no more need for one big central station, rather than the establishment of an extensive network of interconnections facilities between different forms and means of public transportation. This concept is especially relevant for the Tirana-Durres region, where daily commuting flows are intense and strongly concentrated toward a limited number of corridors and destinations. A Tram-Train system offers the possibility to connect the dense urban core with the wider regional territory through one continuous and integrated mobility structure. In practical terms, this would allow residents from surrounding municipalities and sub-centers to access the main urban areas more directly, while also improving the overall efficiency of regional circulation. Such a system can therefore serve not only as a transport solution, but also as a structural element for reorganizing the functional geography of the region. An important advantage of the Tram-Train model is that it reduces fragmentation in public transport services. Instead of forcing users to rely on disconnected bus, train, or informal transport systems, it creates a more seamless journey from origin to destination. This improves reliability, reduces waiting times, and makes public transportation more attractive for a broader range of users, including those who currently depend on private cars due to the lack of convenient alternatives. In this way, the system can contribute to a gradual modal shift, helping to reduce congestion, emissions, and pressure on the existing road network. The absence of a single dominant central station is also an important feature of this model. Rather than concentrating all flows into one overloaded node, the system works through a network of interchange points and intermodal connections distributed across the region. This makes the mobility structure more flexible, more resilient, and better adapted to a polycentric urban system. It also supports the idea that accessibility should be spread across several strategic nodes, allowing different centers to become better connected and more functionally integrated within the wider metropolitan territory. From a planning perspective, the Tram-Train model can also have a significant influence on urban development patterns. If stations and interchange points are carefully located and coordinated with land-use planning, they can become focal areas for more compact, mixed-use, and transit-oriented development. This would not only strengthen public transport ridership, but also help control urban sprawl and encourage more sustainable forms of settlement growth. In this sense, the Tram-Train should be seen as both a mobility investment and a territorial development instrument capable of supporting a more balanced and connected regional future.

A proposal for Tirana-Durres region–This is organized in three main steps to be taken: i) Short Run: Which means a "Train-Tram" (or Metro) device is built between Tirana and Durres, connecting both city centers, as the main spine mobility infrastructure, connected to as much more focal stations in between, and interconnected to other means of public transportations. It will be smarter to (low-voltage) electrify the rail system, and thanks to this to use low voltage both at train and tram systems, in order to use the same driving system and lower costs. The transportation of goods meantime can happen especially during the night, by using existing diesel-type trains in the same rail lines. However the existing railway trucks must be repaired and EU can be a main partner in financing such projects with big social and environmental impact. Using double rail tracks is smarter and more efficient and flexible, than keeping only one track. Other important measures include the smart use of the impact of structures and centers in the whole region, especially in the stations that are to be considered as alternative development areas rather than over congesting Tirana and Durres centers. Therefore new settlements and developments can happen around the new metro/tram stations with higher density around focal stations and gradual decrease density with growing distance from stations. The location positioning of the new stations becomes so a critical factor. Combining pragmatic landmark architecture with investments based on local needs, can create also a win-win situation to increase regional quality of life, and attract more interests from visitors and consumers. ii) Medium Run – considers a train-tram or metro line between Tirana-Vora and Rinas International Airport, and back. To make it fast and low cost it can be best combined with the line connecting Tirana and Durres. Such connections help Airport to become main regional/national/Balkan hub and have a good logistics base for the future. Such measures increases development potentials also for Berxulle and Vora settlements as a core area of the regional triangle: Tirana-Airport-Durres. This to be combined with a circular public transportation system by buss in Tirana, and a linear one in Durres,



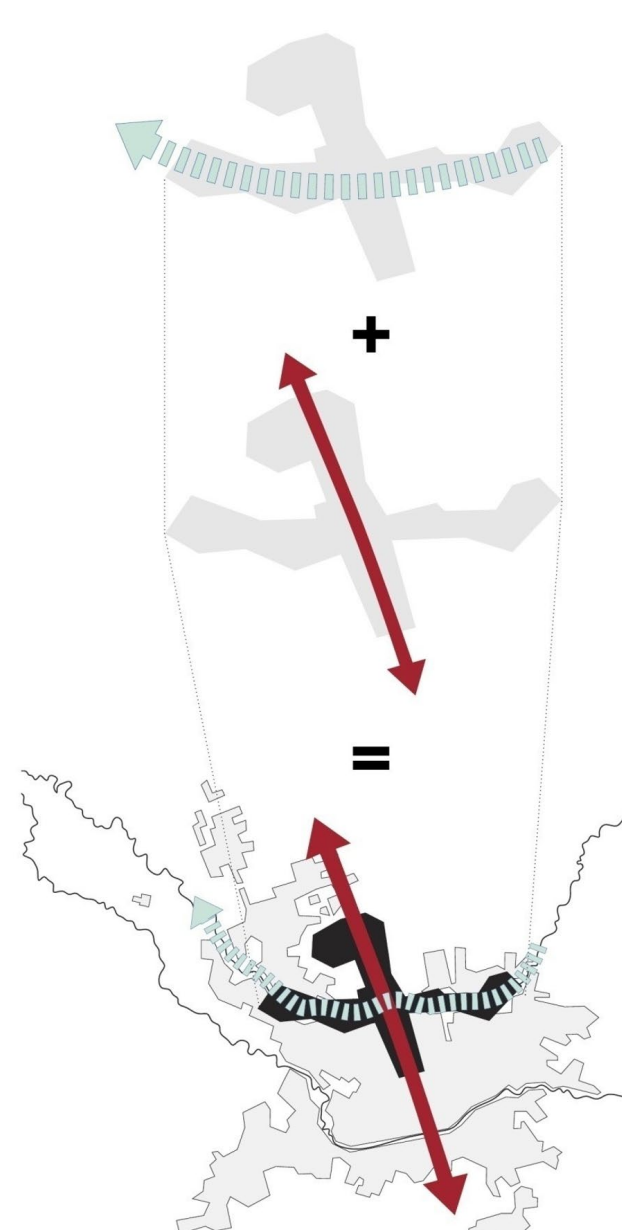


Fig. 1. Boulevard Extention. Source/ Metropolis

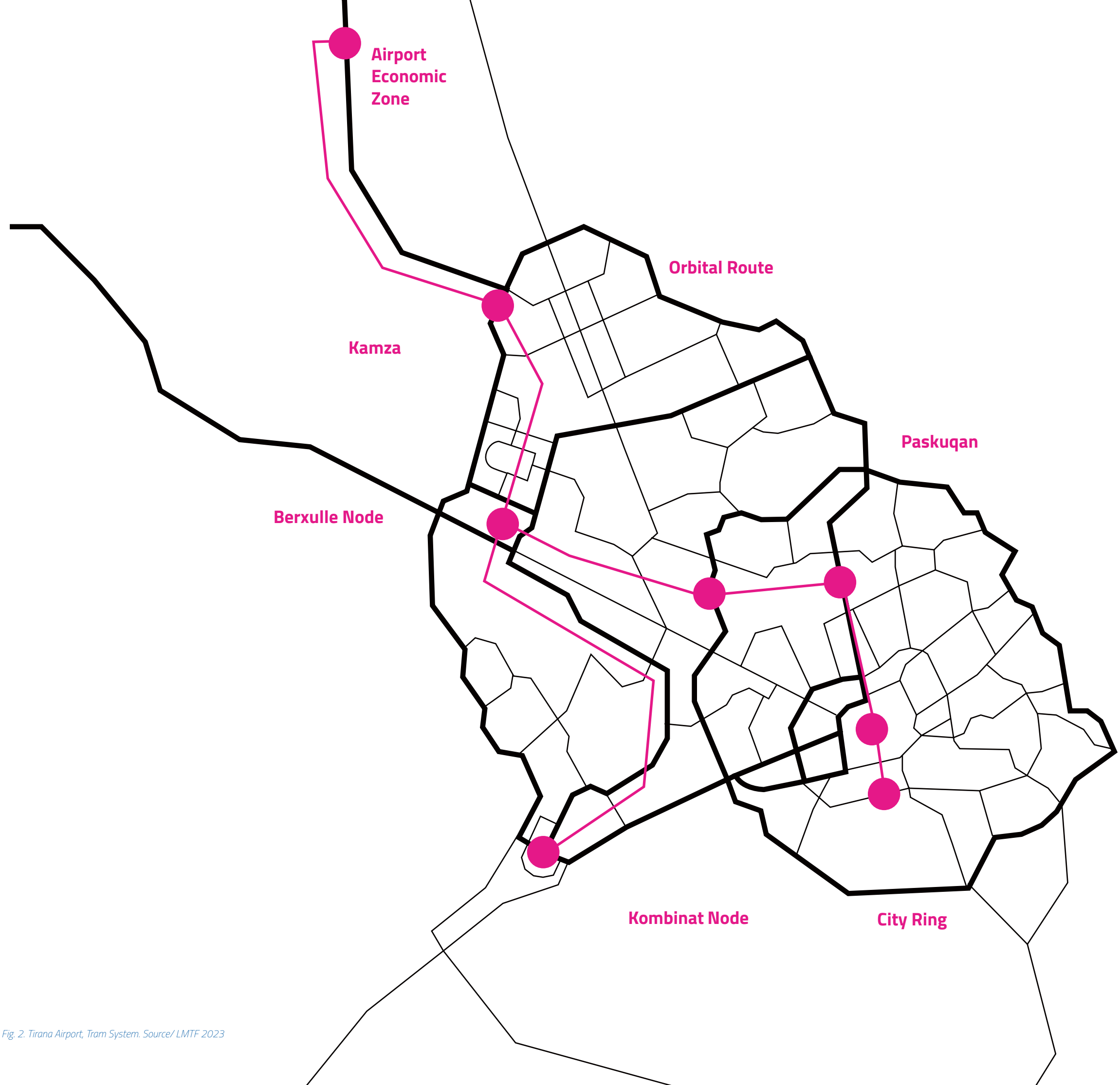


Fig. 2. Tirana Airport, Tram System. Source/ LMTF 2023

Fig. 3. Tram System - Tirana Boulevard. Source/ Polis University & Felix Studio 2016

Fig. 4. Reactivating Durana Railway Connection. Source/ Concept MetroPolis Studio 2010

Fig. 5 Reactivating Durana Railway Connection. Source/ Concept MetroPolis Studio 2010

Fig. 6. Reactivating Durana Railway Connection. Source/ Concept MetroPolis Studio 2010

Fig. 7. Reactivating Durana Railway Connection. Source/ Concept MetroPolis Studio 2010

in order to increase the capture of the system and facilitate residents to travel a broad area of destinations via a combined offer of Train-Tram and Buss transportation with same ticket. iii) Long Run – with same logic can be added another Train-Tram Line or Metro line via norther destination of capital, ensuring a powerful system of public transportation and vehicle towards Kamza and Rinas Airport (and further north via bus services). In return this will not only provide full coverage of the region, but will help relaxing intersections and nodal points that at present time are blocked by traffic. In addition to the above, this three-step proposal should be understood not only as a transport intervention, but as a wider regional development strategy. The Train-Tram or Metro system is conceived as the structural backbone of a more integrated Tirana-Durres region, where mobility infrastructure helps reorganize settlement patterns, reduce uncontrolled urban concentration, and support more balanced growth between the main city and its surrounding sub-centers. In this sense, transportation is not simply a response to traffic problems, but a proactive instrument for shaping a more sustainable metropolitan form. **The short-run** phase is especially important because it can establish the first visible and strategic shift in regional mobility. By creating a strong connection between Tirana and Durres, the region would gain a high-capacity public transport corridor able to compete with private vehicle use and reduce the pressure on existing road infrastructure. At the same time, the development of focal stations along this axis can stimulate new opportunities for investment, services, and mixed-use development outside the already congested urban cores. If supported by appropriate planning regulations, such nodes could gradually become new areas of attraction for housing, employment, and commerce, thereby redistributing growth more efficiently across the region. **The medium-run** phase has an equally strategic role because it introduces the airport into the core mobility system of the region. By connecting Tirana, Vora, and Rinas International Airport through the same integrated line, the proposal strengthens not only passenger mobility, but also the territorial and economic role of the airport as a major national and regional gateway. This would improve accessibility for residents, businesses, and visitors, while also reinforcing the development potential of settlements located within the Tirana-Airport-Durres triangle. In this framework, Vora and Berxulle could evolve from transitional spaces into important urban and logistical nodes within the metropolitan structure. An essential element of the proposal is the integration of rail-based systems with local bus networks and other modes of circulation. A circular bus system in Tirana and a linear one in Durres would help extend the reach of the main Train-Tram or Metro corridor and increase the effectiveness of the whole transport system. The use of one ticket for combined modes would further simplify travel, improve accessibility, and make public transport more attractive for everyday use. Such integration is crucial if the system is to function not as an isolated infrastructure project, but as a coherent regional mobility network serving a wide range of destinations and social groups. **The long-run** phase completes this logic by expanding the system toward the northern destinations of the capital and by strengthening connections with Kamza, Rinas Airport, and areas further north through supporting bus services. This extension would contribute to a fuller territorial coverage of the region and would create a more robust public transport structure capable of reducing dependency on overloaded road intersections and nodal points. In this way, the proposal moves progressively from a linear connection between major poles to a broader network logic, where the region becomes increasingly interconnected through multiple public transport corridors. This proposal suggests that mobility improvement in the Tirana-Durres region should be phased, integrated, and closely linked to spatial planning. The success of such a strategy depends not only on the construction of lines and stations, but also on how well these investments are coordinated with land use regulation, urban design, local development priorities, and institutional cooperation. If implemented gradually and strategically, the proposed system could reduce traffic congestion, improve environmental conditions, support polycentric development, and create the basis for a more functional, competitive, and people-oriented metropolitan region.

Feedback for Comprehensive Planning

As mentioned above territorial planning (especially planning instruments) in Albania remains weak, but still situation evolves and improvements are also happening. Therefore a regulatory plan concerning the allowed densities and the habitable areas, are a great help to steer positive developments into settlements, considering natural resources and a desired settlement structure. This means that an integrated development plan for all municipalities of the region shall be worked out, specifying: a) transportation and public infrastructure; b) and densities of construction, which should be determined and enforced by providing of building permits. Implementation of the plan it is not easy. Albanian/regional/capital authorities must shift in a balanced way from a physical approach, focused mainly on infrastructural projects, towards public transportation and more managerial dimensions. Therefore a metropolitan authority is needed to lead planning, design and implementation of such public transportation strategy. The plan can reformulate the impact of infrastructure over the shape of urban blocks and settlements, and vice-versa. A design team can me established to prepare guidelines and references for design, refereeing also to the international best practices of urban design and morphology. All stakeholders must know not only their needs and priorities but be also aware also what others need or have as a priority. They must also be aware on the costs involved. No actor alone can make this difficult strategy happen, and have tangible results, unless reaching a regional-local consensus, that will make the plan operational and the transportation/traffic situation improve. But all actors at the end of day must be willing to pay a share of the total financial bill, even when part of the costs are covered by private investors. To make investments pay, private investors can be given the right to operate specific segments or functions, but the ownership of land and infrastructure remains public. Otherwise some land can be offered to them for investments near the focal stations to be visible and profitable. All actions in this directions must be transparent and legally contracted out. Therefore a PPP scheme could might be needed to make the project feasible, with a majority of ownership on public side. All this must be regulated by a central development agency with members from all involved stakeholders. The difficulties of financing could be overcame by working with so called two-line (break-down) strategies: i) short/present; and long/future terms. In both scenarios authorities can start with a gradual implementation logic, depending on the availability of financing. When this is lacking, they must at least protect land from developments, which are not foreseen in the plan, and that could block in the future successful implementation, and increase costs unnecessary for the implementation of strategy. In addition to the above, comprehensive planning should not be understood only as a technical land-use exercise, but as a long-term governance framework that links spatial development, mobility, environmental protection, public services, and economic growth into one coordinated vision. Such an approach is especially important in the Tirana-Durres region, where fragmented developments and uncoordinated investments have often produced negative externalities beyond the limits of individual municipalities. Therefore, the planning framework should clearly define not only what kind of development is allowed, but also where, under which conditions, with what infrastructural support, and with what long-term effects on the region as a whole. Another important aspect is that the comprehensive plan should create a stronger relationship between transportation investments and settlement patterns. In many cases, infrastructure has been treated as a response to already existing problems, while in reality it should also act as a guiding instrument for future development. If transportation corridors, intermodal nodes, and high-capacity public transport lines are planned in advance and coordinated with building regulations, they can help channel urban growth in a more concentrated and sustainable manner. This would support more efficient use of land, lower service provision costs, and reduce the need for long daily commuting flows that currently place heavy pressure on the region. The success of such a plan also depends on the availability of reliable data, institutional continuity, and regular monitoring of implementation. For this reason, the responsible metropolitan or regional authority should establish a shared database system and a set of measurable indicators related to population growth, land consumption, traffic generation, environmental quality, housing expansion, and infrastructure capacity. This would make it easier to evaluate whether the plan is being implemented effectively and whether corrective measures are needed over time. Without such monitoring mechanisms, even a well-designed plan may remain weak in practice or become outdated as regional conditions evolve. Public participation and stakeholder engagement should also be treated as an essential component of the planning process, not only as a formal requirement. Local authorities, transport operators, business representatives, civil society, developers, and residents must be involved in order to build trust and promote shared ownership over the strategy. This is particularly necessary in contexts where implementation is likely to face resistance, delays, or conflicting interests. A transparent and negotiated process can increase legitimacy, reduce institutional fragmentation, and create the political and social support required for difficult but necessary decisions. Finally, comprehensive planning in the region should be seen as a phased and adaptable process rather than a fixed blueprint. Some interventions may be achievable in the short term through regulatory protection of land, improvement of public transport services, and stricter development control around key corridors and stations. Other interventions, especially those related to major infrastructure and structural metropolitan transformation, will require a longer time horizon, larger financial commitments, and stronger cooperation between levels of government. In this sense, the value of the plan lies not only in its final vision, but also in its capacity to guide gradual implementation, prevent further planning mistakes, and create the structural conditions for a more connected, efficient, and sustainable regional future.

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Note: This article is developed on basis of several national and international workshops/studios at Master and PhD developed in the framework of the joint international PhD program of Polis University and Ferrara University, coordinated in the framework the project financed by AKKSHI/NASRI Tirana Albania, and managed by Assoc. Prof. Luarasi. S., & Kumaraku. Ll. It also involves the outcomes of urban planning and design studios lead by Prof. Aliaj. B, and Dhamo. S, and a broader team of Polis University academic staff.

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