

POLICY BRIEF

EUROPEAN TRANSPORT REGULATION OBSERVER

13th Florence Intermodal Forum: Urban Nodes Along the Trans-European Transport Network

As the 2021 EU urban mobility framework states, Europe is one of the most urbanised regions in the world with a huge variety of cities that are important economic and social activity hubs. As main connection points, urban nodes (cities and their surroundings) are key components of the trans-European transport network (TEN-T), the backbone of the Single European Transport Area (SETA), and are essential for a well-functioning single market. Congested rail and road networks, trains, trams, buses and metros can face constraints that hinder not only the flow of traffic within urban nodes but also in the entire TEN-T network. More suitable infrastructure is needed to facilitate traffic flows within, around and through urban nodes. Urban nodes should make the first and last miles of journeys or transit travel smoother for both passengers and freight. Multimodal passenger hubs should serve as main gateways between the urban nodes and the TEN-T network. These should be complemented by an increased sustainable urban mobility offer building on a strong public transport system. This means, for example, multimodal hubs with stations/stops that are effectively interconnected with urban rail, metro, tram, bus, coach, shared mobility services and better and bigger park and ride facilities that are better equipped with appropriate bike parks and publicly accessible recharging and refuelling points for low- and zero-emission vehicles. The TEN-T Regulation has been revised in this regard. It includes an extended list of urban nodes (432), and for the first time sets out new functional requirements for them.

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What are the specific issues to be addressed?

Many stakeholders in these urban nodes are newcomers to the TEN-T world. This means that they will have to be integrated to work in a functioning network. Therefore, urban nodes are a means to establish and reinforce links between key stakeholders and specific transport policy roles: national ministries in charge of long-distance transport, cities, local and regional authorities in charge of urban mobility and transport, public transport operators, rail operators, logistics companies, urban planners and others. The challenge is that work at the level of urban nodes is just about to start. There are no common coordination principles to implement the objectives of the TEN-T policy for urban nodes so far, not to mention the fact that there is often misunderstanding over what urban nodes are: are they entities within cities, cities themselves, so-called 'functional cities,' metropolitan areas or something else? It is therefore vital to facilitate establishment of a local set-up that allows coordination/interaction among these stakeholders, not to mention that the definition of an urban node and its governance are of course closely linked.

This 13th Intermodal Forum discussed the question of coordination of urban nodes (at this point for passenger transport only). What would appropriate, basic and commonly agreed mechanisms be? Who could/should be in charge of coordinating and representing the stakeholders in an urban node? Is there a one-size-fits-all structure or at least some common principles? What options could be envisaged?

A comment by Matthias Finger and Juan Montero, Florence School of Regulation – Transport Area

The revised Regulation on Trans-European Networks – Transport (TEN-T) defines an urban node as “an urban area where elements of the transport infrastructure of the trans-European transport network for passengers and freight, such as ports including passenger terminals, airports, railway stations, bus terminals, logistic platforms and facilities and multimodal freight terminals, located in and around the urban area, are connected with other elements of that infrastructure and with the infrastructure for regional and local traffic, including the one related to infrastructure for active modes.” This definition describes a desirable evolution of the trans-European transport network and marks a significant new step in EU transport policy.

The aim of the TEN-T policy is to integrate national transport networks in a coherent European one. It identifies ‘missing links,’ i.e. infrastructure, usually cross-border, that had been ignored by Member States, which had mostly focused on national traffic even though these missing links are indispensable to interconnect the pre-existing national networks to create a truly European passenger and freight network. Consequently, the TEN-T Regulation defines the main European corridors and identifies missing links along these corridors.

However, the TEN-T Regulation provides more than just a ‘missing links’ approach. Rather, it offers a powerful vision – also called the ‘*Power of the TEN-T map*’ – which aligns not only the Member States but also regional and local authorities with the objective of physically investing in and constructing common seamless transport infrastructure. In parallel with building these missing links, enormous standardisation efforts are effectively transforming the patchwork of national transport infrastructure into a real network.

Urban nodes are the next logical step in the construction of the trans-European transport network. It will formally include more urban nodes (from around 90 to more than 400) with new requirements related to sustainable urban mobility in the revised TEN-T Regulation, which pursues an ambition to go beyond the missing links and corridors and also inte-

grate urban transport infrastructure into a European network. A stronger link with the urban territory will make the corridors even more effective. The value of the network – in other words the *network effects* – and its sustainability will significantly increase if the last miles in urban areas are better integrated.

But this will be no easy task, as transport nodes pose some very fundamental challenges. Not only are they often the most complicated infrastructure to build, as they affect numerous stakeholders in the different transport modes and the citizenry, and require planning of land use. They usually also involve numerous levels of governance, ranging from the local to the (inter-) regional and national levels. Urban nodes are also the most difficult to operate, not only because they are typically the most congested part of the network but also because they are where different types of traffic meet, such as urban, regional, national and international traffic, and passengers and freight. So, how will we ultimately be able to make urban nodes an integral part of the European TEN-T network?

We need to recognise that more than 400 urban nodes in the TEN-T network start from very different points of departure, owing to their size (population), existing infrastructure, level of maturity in transport integration, expertise, financial resources etc. It is therefore important to create a process, or rather a roadmap, towards TEN-T integration with different starting points and rhythms, yet clear targets, milestones and criteria for assessing progress and incentives to meet the targets.

The following four steps must be respected in this process: defining the nodes, identifying the stakeholders, coordinating and defining governance of them. First, as a starting point, the local authorities in an urban node should coordinate the definition and the geographical scope of nodes, which can go beyond the political boundaries of a municipality or a metropolitan area and should instead be defined in functional terms as ‘functional urban areas,’ probably as a combined result of the catchment area and mobility (commuting) behaviour.

Second, it is important to draw up a list of all the actors which can qualify as stakeholders in an urban node. These include transport operators in all the relevant transport modes, infrastructure operators,

public authorities holding at least some decision power over transport matters in the urban node and other societal actors capable of significantly shaping mobility behaviour inside the urban node, be it on the supply or the demand side.

As a third step it is important to designate the chief coordinator in an urban node from all the above qualified actors. Again, coordination should be seen in functional and not in political terms. Coordinators of urban transport nodes should be designated as a result of a bottom-up process following some basic governance principles (see below). Once designated, the coordinator of the urban node must be recognised by the COM as such with corresponding rights and obligations. Quite logically, coordinators will necessarily be very different types of actors yet all will have the same functions and pursue the same objective of adding value to the TEN-T network by optimising mobility and transport solutions within the urban node.

Finally, it is necessary to define the governance of urban nodes or at least the key principles underlying such governance, namely transparency, accountability, (hopefully democratic) legitimacy and others. More technically, it is indispensable to define the key functions that will have to be performed in an urban node, such as planning, finding funding sources, regulating, assessing and attributing these functions to qualified actors, with the coordinator having ultimate responsibility for delivering the benefits of the urban mobility node to transport both inside the urban node and in the entire TEN-T network.

Urban Nodes along the trans-European transport network: how can stakeholders work together?

Main takeaways from the discussion

By Elodie Petrozziello, Florence School of Regulation – Transport Area

Europe is rapidly urbanising, also thanks to the linking of the TEN-T framework to metropolitan transport areas. During the Florence Intermodal Forum on 13 June 2024, stakeholders discussed the newly approved EU regulation for developing the [TEN-T trans-European transport network](#). It comprises specific requirements for urban nodes because there is a need to better integrate the urban dimension and last-mile connectivity in the TEN-T network. In this context, interconnectivity is crucial as urban nodes connect the various segments and the last mile in the urban area. It is important to prevent any bottlenecks occurring in the transport corridor to avoid hindering the EU single market. As a result, specific requirements for urban nodes have been established. A total of 432 urban nodes have been identified by selecting cities with more than 100,000 inhabitants. In cases in which regions did not meet this criterion, the main node in the region was chosen instead. Generally speaking, urban nodes are urban areas that utilise transport infrastructure elements for freight and passenger transport (i.e. ports, airports, railway stations, bus terminals, etc). However, these infrastructure elements are not always well interconnected. This is particularly true for interconnection between active modes of transport, which also aims to enhance the sustainability and efficiency of the whole infrastructure. In the light of these aims, Member States must designate national Sustainable Urban Mobility Plan (SUMP) contact points and have a national SUMP support programme by 2025. However, the European Commission (EC) aims to start work with the Member States sooner than this deadline.

In the next few months the EC will work on the implementing acts on the collection of urban mobility data, which are due by mid-2025. This requires collaboration by the Member States and local and regional authorities to identify data in the fields of sustainability, safety and accessibility, which are to be collected by 2027. By the same year, all urban

nodes and possibly cities will have to ensure they have a SUMP in line with the commission guidelines in Annex V of the revised TEN-T Regulation. This will entail developing a long term strategy for multimodal transport services. The main aim is to differentiate the integration of modes and shift to sustainable mobility while reducing noise and enhancing accessibility. By 2030, the EC must ensure that multimodal passenger hubs are set up and equipped with, for example, charging stations. By 2040, urban nodes will have to develop at least one multimodal freight terminal providing sufficient capacity within or in proximity of the urban node.

Urban nodes have been referred to in other regulations, such as [Regulation \(EU\) 2023/1804 on the Deployment of Alternative Fuels Infrastructure](#). It is mandatory to consider other pieces of legislation as there are other important priorities to take into account, such as promoting low and zero-emission mobility and increasing the modal share of public transport and active modes. The large territorial scope of the TEN-T network means that many stakeholders in the urban environment must be involved in discussions on setting up these urban nodes. However, coordinating all the stakeholders may be challenging. The intermodal forum intended to rise to this challenge by analysing each issue in a separate session. The forum was divided into four sessions to define what urban nodes are, identify stakeholders, find facilitators and coordinators and then explore the institutional models.

Understanding urban nodes: what is an urban node?

The topic of urban nodes has been attracting increasing interest in the last few years, partly thanks to the development of research and innovation projects. These projects help cities and regions clarify the next steps and balance the opportunity and the burden of developing further infrastructure. It is time to bring more perspectives, shift interests and avoid complexity. There are two main issues to consider when talking about urban nodes. First, the definition of territorial needs must be re-evaluated, as the current definition may not fully apply to certain urban areas. For instance, the definition could bridge the gap between urban and rural areas. Second, it is crucial to integrate infrastructure in legislation.

There should be a focus on integrating the different scales and purposes of freight and passenger transport from local to international travel and to highlight the main functions of ports. Energy and digital networks are also essential for the mobility system and the local mobility ecosystem. Last, infrastructure integration should consider both blue and green infrastructure as integral to an integrated urban regional plan. This has been exemplified by the requirement of the Netherlands to consider water when starting any construction project. This affects the functionality of an urban node in the TEN-T network. Various projects have been dedicated to identifying different types of functionalities in the network. For instance, the Vital Nodes project examined the corridor function, the cross-border function, the relationship with the main ports and the complexity of urban nodes. Classifying the typology of the node can provide the corridor with valuable information regarding its functions in the network, and it also has implications for governance.

Urban nodes are not independent entities, and their importance becomes clear when they are interconnected. Some are grouped regionally, with Vienna being a prominent example. Sometimes they are interdependent in terms of economic and transport functions. This is especially important when they receive European and public funding, as transparent and accountable structures need to be in place to manage large projects. Therefore, nodes must be capable of receiving funding in a transparent and accountable manner. In certain situations, the planning authority may lack executive powers over projects, which adds complexity to the situation.

The functionality of an urban node depends on how stakeholders manage the interaction between the broader transport network and local activity in urban areas. Strategic and local functionality are rooted in both the function of the infrastructure and the behaviour of its users. It is important to evaluate whether the infrastructure serves a strategic purpose or a local one, and whether its users derive strategic or local value from it. Long-distance commuting means that the trip may be long but its value is primarily local rather than strategic.

In urban areas, protecting the value of TEN-T infrastructure requires a balance among ensuring safety, efficiency and reliability, and improving the qual-

ity of life. Thus, the challenge lies in balancing the demand to meet the standards for this infrastructure and the need to expand it. Urban nodes also serve as service hubs, which highlights the natural fit of services in urban locations. Historically, these services were located at stagecoach points along longer trips, serving different towns and cities along the way.

Some questioned the ability of SUMP to protect the strategic infrastructure with planning controls. National Transport Plans often dealt with this at the national level, and then the management of this infrastructure was delegated to the local level. This type of approach questions whether there is a gap in governance between the local and national levels, as they might have different governance objectives. Cities want to expand and improve transport capacity to generate economic development, but this can erode the strategic function of the TEN-T infrastructure.

The Spanish Ministry of Transport has set a practical example by completing a large portion of the TEN-T infrastructure in Spain. There is a political and policy focus on sustainable mobility, and the TEN-T Regulation provides an opportunity to pursue this objective while also considering the recommendations, rather than just imposing strict regulations. The Spanish approach involves identifying all the functional areas and nodes in each area. The Ministry characterises these areas by determining how many nodes are part of each one, the type of infrastructure and services present, and the key stakeholders involved in planning, investing, managing and maintaining operational issues. This approach helps Spain identify and develop actions needed for improvement. Spanish urban nodes have vastly different characteristics. For example, major metropolitan areas like Madrid and Barcelona differ significantly from smaller rural cities. As a result, the starting point for each city is unique. However, the Regulation applies uniformly in all areas. These differences may require a flexible definition that can accommodate various urban nodes.

The issue of polycentric functional urban areas has become prominent. This raises concerns as having several large centres of gravity in one functional urban area goes against the aim of the TEN-T Regulation, which is to improve transport infrastructure,

create efficient traffic flows, reduce congestion and provide fast connections. If PTAs define a functional urban area based on a commuter belt, then improving transport infrastructure will lead to an expansion of that commuter belt due to faster connections. This shows the importance of broader spatial planning and strategic metropolitan transport planning.

Public administrations need to consider the potential impact of the TEN-T policy and Regulation on their work, boundaries and responsibilities. It is crucial to approach this with pragmatism. For example, in the Frankfurt region there are five urban nodes with over a million people commuting into the city of Frankfurt every day. The legal definition of an urban node needs to reflect and support the local reality. Urban nodes in rural areas might be promoted by combining park-and-ride areas with general interest services, i.e. post offices and shopping areas. This would represent an added value for the local community.

Governance was mentioned several times during this session as it is key to defining urban nodes. Cities generally define an urban node as a geographical area determined by specific transport infrastructure locations. However, the definition cannot be limited to existing territorial boundaries, such as local, regional and national boundaries. Although the 432 urban nodes share the same classification, they have slightly different geographical scopes. Each urban node consists of different governing institutions and there are varying degrees of formalised collaboration between them. Some have proposed defining an urban node by mapping the actual infrastructure in the area. In addition, there is a need to consider the type of multi-level governance setups required to meet the requirements and incentives for providing transport infrastructure (TEN-T Regulations).

In essence, an urban node is a well-functioning multi-level or multi-actor governance structure. This means that many regions do not have to start from scratch, as existing structures are already in place. They vary from being based on rules and hierarchical governance to partnership-based and network governance. These structures also vary in commitment, with some based on expedient purpose, some mandated by national law, some required for transport infrastructure funding and some linked to

political practices over time. Some of these structures focus more on transport planning or land use planning, while the best structures integrate both perspectives. For example, the Italian model maintains the same governance for functional urban and metropolitan areas as for the city. In contrast, other countries, such as Sweden, Norway and partially Finland, have more complex setups and have negotiated solutions for urban nodes. These negotiated solutions also require strong political participation and endorsement. Urban areas often face challenges in balancing different objectives and require democratic legitimacy at all levels, including in specific corridors. Urban nodes must be represented in their TEN-T corridors. However, it is not feasible for them all to be present at the corridor level. Perhaps by providing guidelines, the EC could assist urban nodes in establishing their governance structures, enabling them to govern, innovate and experiment.

Urban nodes are vital for daily mobility within the TEN-T network. It is important to recognise that urban nodes serve a dual role: they provide mass transit for daily commutes and act as crucial interconnections between different modes of transport and the TEN-T network. The utilisation of high-speed services has demonstrated a growing demand for interconnections. The catchment area of each station is expanded, resulting in enlargement of each urban area. When considering the urban layout from the perspective of a corridor it becomes obvious that there is a need to rethink the current infrastructure, port and cruise terminal alignments. It is increasingly important for coaching stations to be within cities rather than outside, as tourists have an important economic value. Airports also require better integration. The TEN-T Regulation is striving to address these issues in the system. Cities, infrastructure managers, and transport authorities need to collaborate on this, as they possess knowledge of the surfaces and operations. In addition, infrastructure managers must be involved in discussions due to existing commitments and plans that must be considered when analysing the functional urban area. Therefore, the TEN-T Regulation should be the tool that defines who is responsible for what. For example, when it comes to the last mile connection, it should generally be in the competence of the urban nodes. In cases where the infrastructure leads to the gates of a port, the responsibility could

also fall under the competence of the central government to provide the missing infrastructure. Each Member State and especially each municipality is different. Urban nodes are highly diverse and complex mechanisms. Allowing flexibility, coordination and integration is key. Cities should communicate with national bodies, inform long-distance service providers and infrastructure managers to align their plans with those of cities, and vice versa for national authorities and other sectors. Therefore, the key is keeping the definition of them simple, flexible and based on existing realities.

Urban Nodes Unveiled: Who are the main stakeholders that should be involved in an urban node?

The EU TEN-T network is crucial to improve connectivity and accessibility, and to address congestion and accessibility issues. The key players involved in planning and managing infrastructure and transport systems are decision-makers, users, national authorities, ministries, intermediate administrations, local administrations, facility managers, transport operators, and community representatives. It is crucial to understand their interactions and roles in urban nodes. By working together, stakeholders can focus on climate action and energy efficiency and prioritise collective and active transport methods.

Stakeholders can have different roles: they can be responsible, accountable, supportive, consulting or informed. In urban nodes, cooperation between different levels of governance is challenging. Horizontal cooperation has become established, while spatial and intersectoral cooperation is important. Multi-stakeholder involvement in major transport infrastructure development has been essential in the instance of the Antwerp ring road. This led to a shift in stakeholder cooperation, making it deeper and more democratic.

The distribution of stakeholders between intersectoral and spatial issues is important. In the new context of the revised TEN-T Regulation, EU-level stakeholders need to be related to local, regional and national stakeholders. Railway companies play a vital role in overseeing the large transport network and managing road systems, buses and waterways. They focus on planning and managing

the entire transport system while considering the needs of passengers and prioritising sustainability. Integration with various modes of urban transport is crucial for complete accessibility. The involvement of stakeholders and the community in urban transport hubs like railway stations is essential. In some non-metropolitan areas, social services are being integrated in stations to improve the overall quality of these spaces. Therefore, there is a need for urban connections, including infrastructure and integrated planning. The first involves financing connections between stations and various services, while the second requires coherent planning among various bodies. It is important to involve different stakeholders in the decision-making process.

Certain countries, like the Czech Republic, manage large infrastructure projects centrally (transport and planning urban and land use), but the city districts affected may have differing opinions and express concerns. Although cities might invest in stakeholder engagement, most cities and regions cannot always engage all stakeholders. Moreover, reaching a consensus on projects involving multiple stakeholders is challenging. Specific deadlines might help, but they lack efficiency. This suggests a possible compromise for stakeholder engagement, for example empowering existing governance bodies in cities and regions gives them the authority to engage with stakeholders and make decisions.

There is no mandatory involvement of decision-makers in seeking input from stakeholders. Some participants in the forum highlighted a tendency of some decision makers to seek input to validate their decisions rather than considering a range of opinions. However, while it is important to listen to everyone, it is also crucial to exercise common sense and make choices, in particular to find middle ground and reach a consensus. When stakeholders are involved in projects, they must deliver results and invest in meeting capacity needs, not just participate. The ultimate aim is to deliver a service to the people in the area being served, not just build new infrastructure. Assigning roles and responsibilities is important and is linked to the structure in place. Various mechanisms come into play during the design phase, in which a larger group may be needed, but during implementation a smaller task force or selected stakeholders can

be involved, thus minimising the number of people involved in decision-making.

It is not always the responsibility of the central or local government to fund all investments. Private engagement is also necessary to support them. For example, motorway concessions must be as competent as road directorates in maintaining infrastructure. Some cities have seen local companies taking a proactive approach to expanding mobility offerings. Large employers can impact commuting patterns through policies like remote working. Private companies can expedite decision-making, and public-private partnerships in micro-mobility can benefit first- and last-mile solutions. Creating win-win solutions is crucial to demonstrate the value offered to major stakeholders from an economic perspective. The focus is shifting from just operating roads to providing mobility services, including managing stations and clean fuel facilities along motorways. With the development of multimodal passenger hubs, there is a need to involve both the public and private sectors in delivering these stations while considering the urban, climate and resilience dimensions. Recognising the importance of both road and rail infrastructure is crucial for effective stakeholder engagement and management. Some regions have underestimated the impact of the significant increase in demand for long-distance transport. This has led to major challenges in coordinating airport and high-speed rail operations.

Some stakeholders pointed out that the current SUMP process has shortcomings in terms of vertical cooperation. The integration of major players like ports, which have different economic interests to the perspective of an urban node, is not effectively addressed. Ports are often not included in the planning process, which creates a situation in which they function as separate entities in a city. It is important to have good examples of how to involve private and large economic players in these discussions.

The urban landscape has changed dramatically over the years, and it is important to consider potential conflicting interests between urban nodes and other stakeholders. This may require a mediator-like role for someone at the national level or an urban nodes manager. It is crucial to acknowledge the political dimension of stakeholder involve-

ment, as there may be conflicting political agendas. Any entity holding data that can help urban nodes to deliver against the relevant indicators should be considered a key stakeholder. Not every stakeholder needs to be involved at every point in the process, especially during the actual implementation phase. Some entities may have delegated power to represent a group of stakeholders through other democratic processes. The aim is to identify key stakeholders to share data and knowledge about successful transport projects, considering the needs of society and ensuring democratic oversight of decision-making.

Coordinating Urban Nodes: Finding the Right Facilitator

Finding the right coordinator is challenging. There are several existing institutional mechanisms that urban nodes can adopt. The local authority can integrate with urban nodes if necessary or expand their mandate if initial requirements are unmet. Another option is to create new institutional cooperation through agreement with the main cities. Last, urban nodes could establish new institutions to coordinate themselves or assign a metropolitan area to govern on behalf of the city. However, the concept of coordination in urban planning is quite problematic. While there are institutional boundaries, physical boundaries no longer exist.

It is vital to identify who is responsible for what when planning and implementing effective transport policies for future urban development. Another important consideration is the risk of competence clashes, which can occur when obligations imposed at the urban level must be carried out by the Member State. This can be challenging, especially for costly investments and processes that must be completed according to regulations. The Italian approach consists of appointing a new coordinator for mobility in 14 cities. This new coordinator will focus on mobility in metropolitan cities. These metropolitan cities have strong powers related to integrated planning, which are now consolidated in a single strategic plan that includes urban and mobility planning. These cities lack strong decision-making power as the metropolitan mayor is not directly elected by the people, unlike the mayor of the main city. Another weakness is the budget, as these institutions

are too economically weak to function properly. Perhaps the answer lies in identifying the most integrated institution to effectively coordinate metropolitan and urban issues. Addressing these issues and providing adequate local services in the main city and the surrounding municipalities is essential.

The approach taken by Poland includes a SUMP Competence Centre dedicated to supporting regions, cities and stakeholders in the implementation or preparation of SUMPs. This centre collaborates with the Centre for EU-funded transport projects and a SUMP Steering Committee, which includes representatives from various ministries and stakeholders at the regional and municipal levels. These stakeholders include the Association of Polish Cities, the Association of Polish Smaller Cities, the Association of Polish Regions and the Association of Communes. This type of structure guarantees that the voices of all stakeholders are heard. In addition, financial support is provided in two forms: technical assistance, in which experts help cities prepare and draft plans, and continued support under the technical support instrument. Engaging all stakeholders is crucial for an effective distribution of resources. In this process, the ministry plays a strong coordinating role. Sustainable urban mobility indicators are instrumental to measure impacts and report to the commission. The freight and logistic dimension of urban planning is often overlooked in some cities. Last, Poland has a system to assess whether a SUMP is comprehensive and effective. Hence, the Polish example could be replicated by other countries and/or regions under a scheme of international collaboration.

Regarding the regulation of the TEN-T networks, some representatives in the forum expressed a need for mixed responsibility regarding the obligation imposed on Member States to define the networks. The discussion showed that there is still a focus on regional rather than city-level issues. In this context, stakeholders are concerned with all modes and movements, encompassing commuters, goods and tourists. The solution might lie in expanded PTAs. When assessing the pros and cons of PTAs, it is important to note that they already exist and function as transport authorities, and enjoy recognition by other parties. They also generally excel at reaching consensus among different stake-

holders, which is inherent in their nature. However, some PTAs do not take on strategic roles and must change their approach. This close collaboration makes it easier to establish consensus and coordinate efforts.

Financial integration is also a key issue. From the perspective of the PTAs, they are adept and experienced at managing regional, national and European projects and programmes. They also have the capacity to view a node as an ecosystem rather than focus on individual nodes, as they oversee multiple nodes and interchanges, thus expanding their scope of operation. However, some new skills need to be introduced in the PTAs, for instance their capacity to innovate needs to be improved. Therefore, for many, PTAs could be the solution.

Moreover, a well-established national support framework would entail adding an urban node manager. Indeed, it is important to consider additional operational activities and conduct a SWOT analysis for each urban node and major stakeholder. At the same time, it is quite difficult to manage urban nodes that are close to each other but separated by a national border. Some of these urban nodes face the problem that some people from outside the region might use the fundamental resources of their municipalities without contributing to the funding. This could lead to an increase in local taxes. Hence, a next step is to understand urban node requirements and connect them with improved guidance for implementation to address the challenge of expanding transport development plans to a regional level.

The newly revised TEN-T legislation involves more active involvement of urban nodes. Previously, communication was mainly between the EU and national ministries, with urban nodes excluded from the process. The new Regulation emphasises their active role as coordinators. They can receive technical support from the Ministry of Transport, but the specifics may vary by country. In some countries, it may still be the ministry, while in others it could be cities, regions or public transport authorities. For instance, in Prague, which is an urban node and capital of the Czech Republic, coordination could be managed by a department or institution in the city. It is essential to discuss and determine the best coordinating option for urban nodes internally, con-

sidering the city and the entire metropolitan area.

Moreover, it is important to establish a multimodal freight terminal in urban nodes, even though it is a commercial activity not within the competence of Member States or municipalities. Municipalities also require a significant amount of data and resources to make amendments. The importance of connecting airports with railway infrastructure and coordinating activities in urban nodes emphasises the coordinating role of the ministry in developing national infrastructure and the need for a division of competencies among stakeholders.

Hence, in the discussion it emerged that having a facilitator in place is important to ensure neutrality among all modes of transport. The role of the facilitator is not to focus on a specific issue but to maintain neutrality among the stakeholders. Technical assistance has proven to be a valuable instrument. Urban node facilitators should have their responsibilities aligned with the aims of the TEN-T Regulation. This includes addressing multi-modality, intra-modality and a shift in transport methods. It is also important to highlight the involvement of local governments, particularly regarding developments in not just major cities but also in areas such as parking spaces. For instance, in Germany, there is a focus on converting parking spots into multi-purpose facilities like parking garages and parking hubs. Facilitators should focus on infrastructure and consider the broader aspects of these responsibilities. Local, national and regional interests might clash creating constitutional concerns. It is important to consider cross-boundary and cross-regional issues and the challenges faced by multiple Member States. Making decisions on these matters will take time and must be based on a thorough understanding of the functions involved. The TEN-T policy has a strong mandate, and it is crucial to address the funding needs of these initiatives. In order to move forward, the EC has been invited by stakeholders to define the entity authorised to make decisions on behalf of all stakeholders. Ideally, this entity needs to be trusted and empowered by all parties involved. It should act as a neutral arbiter and operate through a steering governing mechanism to ensure the alignment of different needs and responsibilities. PTAs, with their strong regional and metropolitan dimension, can play a crucial role in this process.

How do we do it? Possible institutional models.

A clearer understanding of the purpose of urban nodes will enable the establishment of a functional structure for regional institutionalisation. This structure should encompass a clear set of functions, and ideally it should inspire or facilitate development beyond its initial scope. There are different approaches to this. Either the institutionalised urban node initially covers the entire functional urban area, or there can be a more pragmatic approach and gradually expand it over time. Form follows function. An example of this is the [Regulation of Public Service Obligations](#). This regulation guides the procurement of public transport in Europe, specifying what is allowed and what kind of services can be compensated. This functional description has facilitated harmonisation across Europe by assigning the role of public transport procurement facilitation to various public transport authorities. However, these institutions differ across Europe. Some are regional agencies owned by national ministries, such as in Athens, while others are regional departments, as in Stockholm. There are also limited companies owned by regional governments, such as in Vienna, or local governments, like in Copenhagen. Some city departments loosely collaborate with other municipalities to organise public transport, as in Budapest. Some specialised regional aid agencies have their own boards, regional assemblies and elections, as in Amsterdam. This highlights the importance of defining the required functions and jobs, and setting good examples and ambitious pathways for higher levels of integration to provide public value. By doing this, city and regional authorities and national ministries can come together to decide which functions serve their specific purposes. This approach allows harmonisation from the bottom up, enabling regional institutionalisation based on clear function descriptions while providing inspirational development paths for the future.

Urban areas must understand how they can contribute to and benefit from improving access for citizens and tourists. They should avoid the idea that the TEN-T network only addresses rail corridors or acts solely as a funding source for urban mobility measures. Instead, they should recognise that TEN-T can support passenger and commuter

needs. Capacitation is crucial, and this perspective can be gained through corridor forums and working group meetings. However, this understanding should also be developed at the national level. This learning process should go both ways. Infrastructure managers must also understand how the transport infrastructure meets demand and why they must provide specific infrastructure along certain corridors. Both sides need to be equipped with capacity. While large-scale funding needs to be available, clear boundaries defining what constitutes infrastructure and its content are crucial. This involves multimodal passenger hubs, logistic platforms, rail and road bypasses to avoid congested areas and coach stations, especially in functional urban, peri-urban and rural areas. These facilities are essential to address transport poverty.

Multimodal passenger hubs also present an opportunity for partnerships similar to the concessions seen in ports. There can be mutual benefits when the private sector is involved in multimodal passenger hubs or logistic platforms, for example, by providing road and rail access to these platforms, as some cities already do by installing a certain number of charging points in commercial areas. This can be allowed even in areas that are not commercially interesting. There are ways to address these benefits when it comes to funding and financing urban nodes. There are already mechanisms and instruments in place, such as corridor follow-up meetings, which have played a major role in governing. Dedicated working groups have also shown their relevance through discussions and exchanges of practices. Looking ahead, the national coordinators will play a major role in facilitating and coordinating actions. They will participate in corridor follow-up meetings and represent the national level for every node they are responsible for.

Besides, there is still a need for technical and financial entities that require capacitation to operate effectively. At the national level, it is necessary to start sharing this common knowledge with local areas. At the same time, it is critical to empower these urban nodes with financial resources and qualified staff. However, innovation must be fostered, especially in relation to greening and digital issues. The institutional models should have international public support actions, primarily for the Member States to cre-

ate the conditions for greater private development engagement. By increasing capacity, municipalities can benefit transport at a larger scale. However, in the discussion, many underlined that no specific model can be identified for different urban nodes.

If an urban area is very congested, it could require a complete redesign of infrastructure, including roads and public transport, and integration of digitalisation and automotive mobility. Paris exemplifies this type of restructuring. It was needed to optimise the existing infrastructure. The public authority built mobility hubs to discourage car ownership. Instead, people are encouraged to use carpooling and car sharing, and choose active modes of transport. The French PTA also integrated an electric grid, parking slots, public services, mass public transport and car-sharing connected lanes. This prepares the infrastructure for future transport needs. Therefore, in order to optimise the use of the roads in various environments, it is essential to consider the necessary investment and sustainable financing schemes. Identifying all the stakeholders involved is the first crucial step, which is followed by defining clear criteria to establish a common understanding. This will help coordinate stakeholders and ensure harmonised services, ultimately integrating all European citizens with equal access to services.

Some municipalities brought the example of facing administrative issues related to the subsidiarity principle, particularly when determining leadership between cities of the same size. The decision is clear in cases of a main city and its suburbs, but there are more complex scenarios in which two similarly sized cities have a strong relationship. In these instances, it can be difficult to find the best solution, but it might be useful to gather stakeholders to decide on the best institutional model.

It is important to consider cities, metropolitan areas, extended cities and remote territories when providing equal services. Equity is a key component of this. It was mentioned multiple times that engaging stakeholders is crucial. It is also important to consider the decision-making power of coordinators, as they cannot effectively coordinate without authority. EU funding can aid in creating or defining a coordinating body with clear definitions and guidelines.

One must not forget analytic, digital and data-driv-

en approaches, which are important when making decisions regarding mobility. Using data-based approaches for mobility analysis can be very interesting. It can help stakeholders understand and baseline actual mobility needs by using mobile phone data and automated methods to show improvements in the mobility of people. Data-driven approaches can help make more neutral and transparent decisions, especially in conflict-of-interest situations when developing urban nodes for short or long-distance passenger needs. It is important not to underestimate these opportunities, especially considering the EU's future aims.

In essence, it is important not to overcomplicate things. Urban nodes can work with corridors to create synergies. Discussing urban mobility at the European level is an achievement. Moving forward, stakeholders should differentiate strategic coordination from decision-making on projects and financing. The focus should be on understanding the benefits and synergies of coordinating regional mobility planning and connecting it with long-distance infrastructure managers. Having a national sub-coordinator represent urban nodes in TEN-T discussions is important. Moreover, balancing local and national interests is crucial to address long-distance and local mobility needs. Collaboration and open dialogue are essential to solve common problems that require common assistance. By empowering national contact points, they can bring relevant topics to the TEN-T discussion and make a case for addressing these issues at the EU level. This would draw attention to the coordinators and support the creation of a working group for urban nodes.

Conclusion

European transport infrastructure has evolved over time. Initially, the focus was on identifying and financing missing links, which were mostly cross-border. The focus has now shifted to the final challenge: the urban hub. This includes addressing the challenges associated with railway stations, which are expensive and difficult to manage. This is a more complex and expensive phase in planning and execution. The TEN-T Regulation serves as a conduit, bringing together various pieces of legislation. It encompasses regulations related to passenger rights, designated terminals, energy and climate change.

It is now essential to find the right framework that can accommodate these requirements and any future developments.

From the discussion, it emerged that the best approach is to start from already existing institutional frameworks rather than creating new ones. This gives urban nodes a wide variety of starting points with which to work. However, this process does not happen spontaneously. It requires facilitation and possibly some form of monitoring. Urban nodes should periodically assess their progress and ensure the involvement of all their stakeholders while considering different functions like planning and operations, and connecting their work to other relevant issues such as the environment and freight. This assessment will help urban nodes refine their approach and work towards a more balanced and effective programme.

The aim is to create fora in which leaders/representatives of urban nodes can come together and communicate, as it is better to work together to identify common challenges and solutions. There are also expectations of guidance, support, and minimum requirements. It is important to reflect on how urban nodes can leverage tools to support themselves. Moreover, it is important to understand that there is no one-size-fits-all solution and to consider the different characteristics and maturity levels of each urban node.

Urban nodes finding the right facilitator: challenges and strategies in Poland

A comment by Adrian Mazur, Director of the Department of Transport Strategy in the Polish Ministry of Infrastructure

The SUMP Context

Since 2013, EU Member States have been facing the challenge of implementing Sustainable Urban Mobility Plans (SUMP). In Polish cities and their functional areas, the level of mobility planning varies considerably. This disparity is largely due to the different transport and strategic policies of municipalities, which pose a significant challenge for the implementation of the TEN-T Regulation.

The transition to sustainable urban mobility planning needs to be systematic, efficient and transparent, working both horizontally and vertically. Responsibilities for specific tasks should align with the competences of the respective administrative levels. To address these needs during the initial implementation of SUMPs, we established the Polish National SUMP Support Programme (NSSP), which focuses on technical support, funding and quality control.

The activities of the NSSP are structured around three main units:

- **The SUMP Competence Centre** provides functional urban areas (FUAs) with technical support, knowledge, tools and best practices.
- **The SUMP Plenipotentiary** coordinates SUMP implementation at the national level, monitors progress, resolves issues and promotes SUMP.
- **The SUMP Steering Committee** ensures that the strategic and legislative objectives are met and consists of representatives from various administrative levels, experts, and representatives of FUAs. Official SUMP documents are adopted at their meetings, facilitating vertical integration.

Legislative and financial support

There is currently no specific legislation on SUMPs in Poland, and cities are not required to implement it. However, cities that develop or adopt SUMPs are

eligible for additional financial support. Although the lack of a legal framework is a potential setback, we have successfully introduced SUMPs in 30 FUAs, a year ahead of the schedule set out in the National Recovery Plan.

Cooperation between the state administration and cities and FUAs in implementing SUMP is functioning effectively. However, the addition of obligations imposed by the TEN-T Regulation changes the nature of the NSSP system and raises the question of who will coordinate urban nodes. The implementation of SUMPs in FUAs has highlighted subsidiarity issues, and the coordination of urban nodes and the collection of SUMI data exacerbate these challenges.

The Strategic Role of the National Administration

The national administration should play a strategic role and focus on developing the NSSP and integrating it in a system for monitoring and supporting urban nodes in the TEN-T network, including access points and multimodal passenger hubs, and collecting SUMI in conjunction with the ITS and MMTIS Directives.

Having the implementation, legal framework, coordination, monitoring, reporting and funding at one level of governance leads to organisational overload and is contrary to the principle of subsidiarity. Therefore, the lack of national legislation on SUMP and TEN-T can be advantageous in the initial synchronisation phase. This will allow evaluation of the functioning of both the NSSP and the SUMPs to identify areas for improvement and to develop an appropriate legislative framework that meets the requirements of the TEN-T Regulation.

Future Directions

With the practical experience already gained, we are better positioned to create a legal framework that holistically supports sustainable urban mobility. The question of the appropriate coordinator for urban nodes remains. Their close link with SUMPs suggests the possibility of transferring the well-functioning NSSP model to support urban nodes. To ensure that the solutions implemented work efficiently, Member States need financial and legal support

from the EC. The correct distribution of responsibilities should be supported by guidelines and recommendations at the EU level, which will help to harmonise actions across different administrative levels and speed up implementation in the Member States.

FUAs must focus on creating and implementing plans tailored to local conditions, while regions have the opportunity to become coordinators and monitor both local and regional aims. The national administration should provide technical and financial support, create the conditions for evaluation and set strategic aims.

The future depends on our ability to adapt and cooperate across administrative levels. It is crucial to create a coherent system that enables FUAs to effectively implement SUMP and collect SUMI. An effective legal framework and an appropriate distribution of responsibilities are key to achieving the aims of sustainable urban mobility in line with the TEN-T requirements and the needs of both European and local communities.

The EC, through its guidelines, plays a crucial role in setting the pace and harmonising the implementation of these activities. We need to evaluate the experiences of Member States, regional and local authorities and other stakeholders in order to meet these challenges in a timely manner.

Reflections on the Florence School of Regulation Event on Urban Nodes in the TEN-T

A comment by Ivo Cré, Director Policy & Projects of POLIS

Participating in the Florence School of Regulation event on Urban Nodes in the Trans-European Transport Network (TEN-T) was an enlightening experience. The session was not only timely but also crucial as it followed the recent adoption of the Regulation in April. The various institutional stakeholders were eager to discuss the forthcoming steps in defining the governance of urban nodes – a discussion that is likely to set the stage for future actions.

One of the most striking aspects of the event was the limited bandwidth of the opinions expressed. The options are limited and there is a convergence of ideas. Even with diverse participation, certain principles consistently emerged in the interventions. These included the need to stay close to existing local institutional arrangements for planning mobility, leveraging what is already in place and maintaining a pragmatic approach in describing the spatial reach of the urban node. This consensus shows a shared understanding of the importance of working within the established frameworks and realities of local governance structures.

The approaches presented by Spain and Poland were particularly convincing. Each country, in its unique way, has developed a cooperative process that effectively engages with the local level to implement the aims of the TEN-T Regulation. Both models emphasise integration and coordination among various levels of government, ensuring that local authorities are actively involved in the planning and execution of transport initiatives (as a dry run for Madrid showed). Poland has managed to craft a process that not only addresses local needs but also aligns with national objectives, and links the national and local administrative capacity. This method ensures that local concerns and perspectives are adequately represented in the broader framework of the TEN-T network, leading to more balanced and effective governance.

The event also shed light on various modal concerns, although national road operators were not di-

rectly represented. This gap was notable, and there is a clear need for these operators to participate in future discussions. Their involvement is essential for a comprehensive understanding of the challenges and opportunities associated with the integration of different transport modes in urban nodes – particularly with the SUMP likely to largely focus on road networks of different hierarchy levels.

From the perspective of POLIS, this event marks a significant first step towards providing guidance to Member States. It also sets the foundation for capacity building and the exchange of best practices between Member States and urban nodes. POLIS recognises the importance of these initial discussions in shaping the future of urban node governance within the TEN-T framework. The neutral ground offered by the FSR facilitated dialogue and knowledge-sharing on this complex issue.

In conclusion, the Florence School of Regulation event on Urban Nodes in the TEN-T network was a pivotal moment in the ongoing effort to define and implement effective governance structures for urban nodes. The principles of staying close to local institutional arrangements, leveraging existing frameworks and maintaining a pragmatic approach were clearly articulated and widely supported. The examples of Spain and Poland demonstrated the value of cooperative and inclusive processes, while the need for broader participation was underscored. From the perspective of POLIS, this event is just the beginning of a comprehensive effort to build capacity, share best practices and guide Member States and urban node stakeholders in this critical area. As we stand at the start of this process, the enthusiasm and commitment of all stakeholders provide a solid foundation for the journey ahead. Let's get started.

Urban hubs & stakeholder collaboration along the trans-European transport network

A comment by Dr Isabella Grahsl, DB Regio AG

In June 2024, the Regulation on the Trans-European Transport Network (TEN-T) was finally adopted by the European Parliament and the Council. With this revision of the directive in particular, the TEN-T is increasingly aimed at reducing the environmental and climate impact of transport. Accordingly, sustainable modes of transport should also promote digitalisation and improve multimodality – as a combination of different modes of transport on a single route in the European transport system.

From the perspective of a public transport provider, multimodal mobility in particular is very exciting, both to manage the first/last mile of international routes along the TEN-T corridors and to design attractive mobility offers in local transport – and therefore to create a real alternative to the use of private cars, which are by far the dominant means of transport in Germany, accounting for around 3/4 of the modal split. At the same time, if public transport services are available that meet people's real mobility needs, the population is quite prepared to make the switch to public transport. This also applies to residents of small towns and more rural regions, where we can observe the positive effects of a modal shift in pilots and model regions, provided that relevant incentive factors interact sensibly. This can be seen, for example, in the established 'PlusBus' (Plus Bus) concepts of individual federal states. Particularly relevant factors are suitable synchronisation of transport modes, an intuitively understandable and affordable fare structure – such as the 'Deutschland-Ticket' (Germany Ticket), a flat-rate ticket for local transport valid throughout Germany – simple ideally digital access to mobility, e.g. via app/online ticketing, and good coverage of mobility needs through a combination of a dense network of public transport stations and regular service.

In addition, the TEN-T Regulation also provides interesting impetus for the further development of urban mobility, for example via urban mobility plans to promote emission-free or low-emission mobility. Although the expansion of sustainable mobility ser-

vices such as e-car sharing may be comparatively easier to realise in conurbations than in rural areas (e.g. expansion of electric charging stations) thanks to the narrower geographical radius, covering the additional costs with user fees alone remains challenging even in cities, as consumers have so far only occasionally been willing to pay more for low-emission sharing solutions, for example.

In principle, the lower the local demand in a service area, the more challenging the economic viability of mobility services becomes. This also applies to urban nodes, which – regardless of their population – are part of the TEN-T network solely due to the criterion of representing a 'regional main node.'

The 80 or so TEN-T nodes defined for Germany to date are often characterised by medium-sized cities or municipalities. It is particularly difficult for smaller and medium-sized cities to fulfil multimodality requirements for urban nodes, as such cities are generally both commercially unattractive and strategically insignificant for internationally active, independent providers of micro-mobility – or sharing services.

To nevertheless meet the demand for multimodal services, municipalities could order and finance multimodality alongside traditional public transport services through public tenders, which would put an additional financial burden on usually tight budgets. An interesting source of co-financing, for example, to develop a bike sharing system in a small town could be long-term co-operation with large regional employers in the logic of a public-private partnership. Employers participate indirectly in financing the system, for example by activating their employees for free bike sharing use by means of flat-rate subscriptions. These subscription fees reliably part-finance the sharing service, making it more favourable for the public sector. At the same time, employees receive sustainable mobility as a fringe benefit, which incentivises them to switch to local bike sharing for their everyday mobility needs. Third-party user financing models – which have long been common practice in other European countries – can also contribute to financing.

The ideal mobility option for short distances from an economic point of view – combining health, ecological and economic factors – is active mobility, i.e.

mobility using your own muscle power, on foot or by bike. For longer distances, active mobility in combination with public transport is the best option. At DB Regio we are promoting this topic through our involvement in the 'Bike & Rail' industry initiative, which has set itself the aim of promoting environmentally friendly mobility chains, e.g. for commuting.

In more extensive rural urban nodes, the combination of private car plus public transport is also conceivable – especially if the car acts as a convenient feeder for public transport and there are sufficient parking spaces available for transfer passengers. If bottlenecks are to be expected on typical commuter routes in park-and-ride car parks, these should be combined with a digital reservation option for a 'guaranteed' car parking space, for example in order to increase the predictability and convenience of passengers.

For regions with low car penetration rates per household and/or an increasingly ageing population, intercity buses with direct connections to regional urban nodes or shuttle buses as a feeder to traditional regional transport can offer alternatives to motorised private transport – the latter also gradually becoming (partially) autonomous and cost-saving.

Urban nodes can also be further developed into low-emission, efficient mobility and logistics concepts by combining mobility services at busy transfer points with services of general interest and/or value-added services, from parcel stations to cash, drink and snack vending machines to lockers with additional services such as dry cleaning, many things are possible here. Together with partners, DB is working on good networking of transport infrastructure and mobility – for example at the Berlin 'Südkreuz' hub, where a mobility hub is being operated together with the Jelbi mobility platform of Berliner Verkehrsbetriebe (Berlin's public transport provider) and its mobility partners in order to provide travellers and commuters on long-distance and local transport with attractive and environmentally friendly offers for the first/last mile.

In principle, the greater the range of mobility and additional services offered at urban nodes, the greater the complexity and diversity of the players.

Further differences in the type and number of relevant players result from the specific regional location of the respective node in view of Germany's federal structure and the special features of public transport funding.

When it comes to cooperation between urban node players in the European context, the following considerations in particular should be taken into account. 1) For efficiency and to avoid additional bureaucracy, the most suitable structures and players already in place locally should be used. 2) When making recommendations and requirements for urban nodes as part of the TEN-T corridors, the principle of subsidiarity should be taken to heart, i.e. that the closest unit in terms of subject matter makes the relevant obvious decisions – to ensure that European and regional regulatory efforts harmonise in practice and that the urban nodes function in the context of the TEN-T network.

FSR Transport

The Florence School of Regulation (FSR) is a project within the European University Institute (EUI) focusing on regulatory topics. It works closely with the European Commission, and is a growing point of reference for regulatory theory and practice. It covers four areas: Communications and Media, Energy (Electricity and Gas), Transport, and Water.

The FSR-Transport Area's main activities are the European Transport Regulation Forums, which address policy and regulatory topics in different transport sectors. They bring relevant stakeholders together to analyse and reflect upon the latest developments and important regulatory issues in the European transport sector. These Forums inspire the comments gathered in this European Transport Regulation Observer. Complete information on our activities can be found online at: fsr.eui.eu

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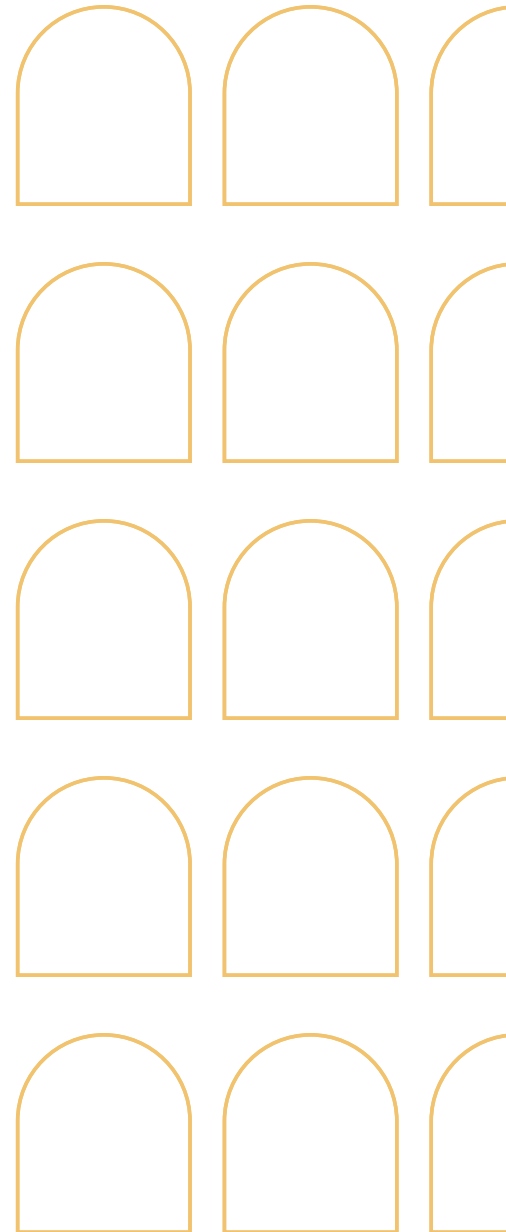
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