

Urbanism as operation: contrasting reproductive and project-based approaches in PUZ and ZAC contexts

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Abstract. This study aims to analyze the evolution of urban planning from a regulatory-based approach to one centered on urban projects, through a comparative analysis of current urban modeling tools: the Zone d'Aménagement Concerté (ZAC) in the French context and the Planul Urbanistic Zonal (PUZ) in the Romanian context. The research will examine the capacity and effectiveness of these tools to intervene in the urban fabric and to address contemporary challenges of urban development, particularly in terms of balancing global and local elements, long-term sustainability, and flexibility in adapting to the changing needs of the city. This analysis will be conducted using several analytical criteria that will structure the article.

Key words: operational urbanism, project-based urbanism, reproductive urbanism, PUZ, ZAC

1. Introduction

1.1. Definition of terms and concepts

Contemporary urbanism evolves between two main paradigms: reproductive urbanism and project-based urbanism¹. These two paradigms are not antagonistic; rather, they reflect two ways of approaching urban development: one that regulates what exists and another that imagines what could become.

Reproductive urbanism involves the application of general rules and urban codes, favoring a predictable and coherent development focused on regulating and conserving existing land, as well as maintaining urban identity.² In contrast, project-based urbanism marks the shift from applying standards to formulating strategic visions tailored to the context, encouraging interventions aimed at urban regeneration and the creation of new structures. It supports the transformation of cities through integrated and innovative solutions³.

1.2. Operational urbanism: a synthesis between the two paradigms

In this transition between reproductive urbanism and project-based urbanism, operational urbanism emerges as a bridge between regulation and vision. Retaining the normative components of reproductive urbanism (rules, plans, documentation), operational urbanism integrates the flexibility and strategic logic of project-based urbanism. Thus, it not only regulates urban space but also proposes concrete interventions, adapted to urban needs and challenges, ensuring coherence and continuity in development. It focuses on restructuring, redeveloping, or expanding the existing, addressing urban dysfunctions. Operational urbanism represents a continuous adjustment of urban development, combining regulation with creativity and future vision⁴.

¹Lefèvre 1998

²Ascher 2001

³Hall 2014

⁴Bourdin 1999; Fauconnet 2005; Ingallina 2016

1.3. The role of ZAC and PUZ in this context

Within operational urbanism, the key tools for implementing urban operations will be, in the case of France, ZAC (Zone d'Aménagement Concerté), and in the case of Romania, PUZ (Plan Urbanistic Zonal).

ZAC represents a concept in which public authorities and private developers collaborate to create integrated projects that include public infrastructure and housing.

PUZ allows for deviations from general regulations, offering flexibility in the development of specific areas, adapting to local needs and context.

2. Materials and research methods

The research approach proposed in this article is based on contextualization and comparative analysis, applied to the ZAC and PUZ urban planning documents. The investigation is structured around a set of analytical criteria aimed at highlighting the legal foundations, the decision-making framework, and the relation to general urban planning strategies. Aspects such as historical evolution, institutional stability, the capacity for interinstitutional coordination, the degree of decentralization, and the involvement of relevant actors are addressed. The validity period, practical applicability, and influence on territorial configuration complete the analysis. The technical dimension focuses on the functional and spatial correlation of interventions. The methodology is supported by references to case studies, examination of the legislative framework in dynamic context, consultation of specialized literature, and analysis of relevant statistical data, ensuring a well-founded and integrated approach.

3. Results and discussions

3.1. Legal and normative framework

3.1.1. ZAC

Regulated by the Urban Planning Code (articles L.311-1 – L.311-8 and R.311-1 – R.311-12), ZACs allow public authorities to initiate and directly manage the development of strategic areas, in accordance with territorial planning policies.⁵

ZAC (Zone d'Aménagement Concerté) is an implementation tool for complex urban projects in France. It is based on the regulations established in PLU (Plan Local d'Urbanisme).

PLU translates the general orientations formulated in PADD (Projet d'Aménagement et de Développement Durable). In turn, PLU derives from SCOT (Schéma de Cohérence Territoriale), with PADD (Projet d'Aménagement et de Développement Durable) as its strategic foundation. Thus, ZAC is an operational tool that puts into practice the territorial planning vision expressed at the PADD level, through PLU (Fig. 1).

⁵ Cerema 2022

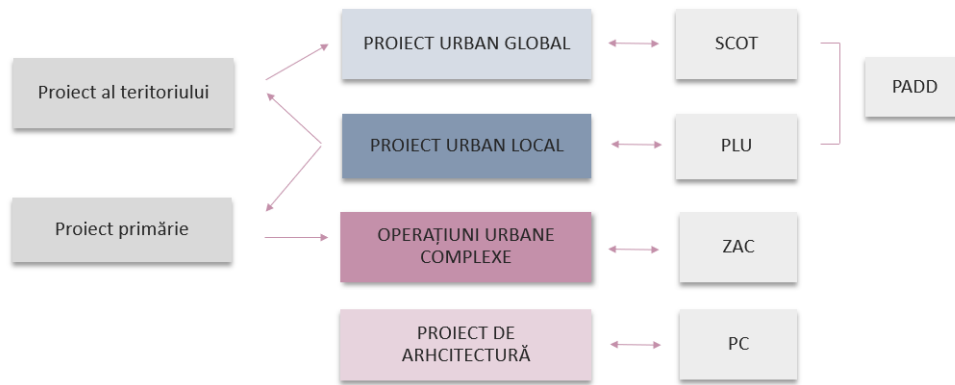


Fig. 1. France - Interface between territorial and local-level projects. Their relationship with urban planning documentation⁶.

ZAC operates in a complementary relationship with the Local Urban Planning Plan (PLU): while PLU sets the general urban regulation framework, ZAC enables the concrete implementation of urban projects through specific exemptions, tailored to the public interest⁷. Thus, it presents an effective interface mechanism between the strategic territorial vision and its local implementation.

3.1.2. PUZ

The Plan Urbanistic Zonal (PUZ) is regulated by Law No. 350/2001 on territorial planning and urbanism, and is detailed in the MDRT Order No. 233/2016. It allows local authorities or private investors to propose and manage the development of designated areas, in accordance with the provisions of the General Urban Planning Plan (PUG) and local urban development policies.

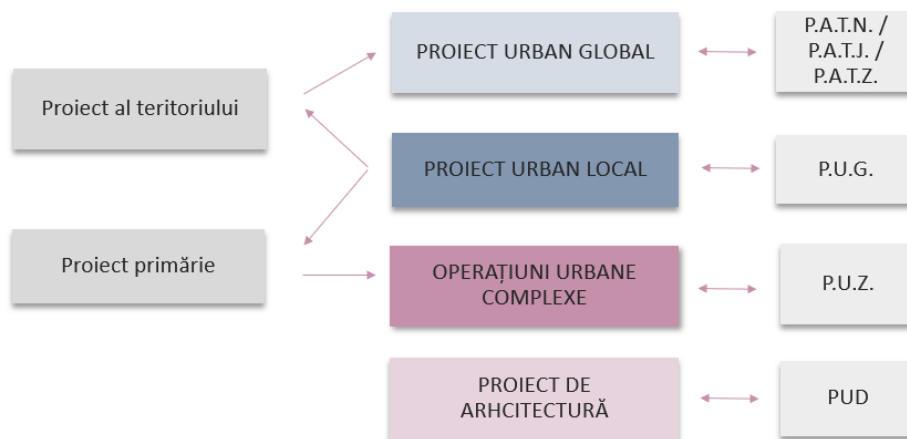


Fig. 2. Romania - Interface between territorial and local-level projects. Their relationship with urban planning documentation.

⁶ Cerema 2022

⁷ Couton 2012

PUZ (Plan Urbanistic Zonal) is an implementation tool for complex urban projects in Romania. It is based on the regulations established in PUG (Plan Urbanistic General). PUG, in turn, translates the strategic directions defined in P.A.T.N., P.A.T.J., or P.A.T.Z. to the local level. Thus, PUZ adapts the global vision of territorial development to the specific realities and needs of an urban area (Fig. 2).

PUZ operates in a subordinated and detailed relationship to the General Urban Planning Plan (PUG): both documents have a normative character, but PUZ adapts the general rules of PUG to the specifics of a designated area, without contradicting its fundamental provisions, except under justified conditions.

3.1.3. Comparative observations

Urban planning documents in Romania suffer from a lack of a transversal component capable of ensuring the sustainability of interventions over time and space, like PADD in the case of France system. The relationships between the territorial level (PUG, PAT) and the local level (PUZ) often remain fragmented, without an effective integration between strategy and implementation.

3.2. Historical evolution

3.2.1. ZAC

The introduction of the Zone d'Aménagement Concerté (ZAC) in France at the end of the 1960s, through the Land Planning Orientation Law No. 67-1253/1967, marked a key moment in the modernization of urban planning. ZAC was conceived as a strategic tool for coordinating urban expansion during a period known as Les Trente Glorieuses – decades of rapid economic growth and accelerated urbanization.

The main objective of ZAC was to facilitate coordination between public authorities and private actors, within a clear and unified regulatory framework. Over the years, this tool underwent an important process of institutional maturation, becoming a central mechanism for the implementation of large-scale urban projects and for integrating territorial, social, and economic policies.

Today, ZACs reflect a stable model of urban planning, well integrated into the French legislative system, capable of evolving according to society's needs and the principles of sustainable development. Legislative changes are frequent, but predictable and coherent, allowing for continuous adaptation without dissolving the institutional framework.

3.2.2. PUZ

In Romania, the Plan Urbanistic Zonal (PUZ) became a central urban planning tool after 1990, in a post-communist context marked by institutional, economic, and political transition⁸. PUZ

⁸Militaru 2024

was legislatively established in Law No. 350/2001 on territorial planning and urbanism, becoming the primary tool for regulating urban development at the local level. Unlike ZAC, PUZ was not created to implement projects directly, but to adapt the general rules of PUG to local realities and interests. Its evolution was profoundly influenced by frequent legislative changes and the contractualization of urban planning⁹, a phenomenon that emerged after 1989, when the principle "what is not forbidden is allowed" encouraged private interventions under minimal regulation.

These aspects led PUZ to become not only a planning tool but also one of negotiation and adaptation, with multiple forms of interpretation and application, sometimes at the expense of territorial coherence.

3.2.3. Comparative observations

The comparison between the evolution of ZACs and PUZs highlights structural differences and institutional maturity: ZACs operate within a stable legislative system, where urban planning tools are periodically adjusted to respond to new social and environmental realities. This framework allows for institutional learning, the refinement of decision-making processes, and a clear interface between strategy and implementation. In contrast, PUZ remains marked by legislative instability and a lack of institutional continuity.

3.3. Administrative divergences between France and Romania

3.3.1. France – central public responsibility

In France, the decision to create a ZAC belongs exclusively to public legal entities, such as municipalities, intermunicipal structures, or the state¹⁰. This model reflects administrative concentration and direct public responsibility for urban planning projects¹¹. Decisions regarding the creation of a ZAC are made depending on the level of initiative: by local councils, intermunicipal structures (EPCI), or, in special cases, by the prefecture, within national interest operations (OIN).

French urban planning is based on an integrated and coherent legislative framework, where building permits are strictly linked to higher-level strategic documents, such as the territorial coherence scheme (SCoT). Any intervention in a ZAC may require changes to the local urban planning plan (PLU), which highlights a dynamic but controlled relationship between regulation and project¹². This institutional approach is accompanied by an active public debate about the balance between public intervention and market logic, reflecting the maturity of the urban decision-making process. Constant evaluation of collective benefits versus public costs supports responsible and equitable urban governance¹³.

⁹Dutu 2014

¹⁰Goujon 2021

¹¹Casalta Nabais, 2014

¹²IGEDD 2020

¹³Paris 2003

3.3.2. Romania – decentralization

Unlike France, in Romania, the initiative to create PUZs often belongs to private actors, while public authorities are limited to advisory or contracting roles. This contractual model, in which investors directly finance the preparation of the documents, fosters an imbalanced relationship between public and private interests.

Romanian urban legislation remains affected by fragmentation, instability, and the lack of a unified vision¹⁴. Although administrative decentralization was initiated in the 1990s, maintaining urban decisions at the central level limits local autonomy, especially in disadvantaged areas, leading to project stagnation, dependency on centralized funds, and a deficit of dialogue between authorities and communities.

The political context significantly influences the processes for approving PUZs, and changes in government affect the continuity of urban strategies. Furthermore, the lack of transparency and professionalism in the decision-making process contributes to a climate of instability and inefficiency in urban development.

3.3.3. Comparative observations

The French model of operational urban planning is based on public responsibility, strategic coherence, and institutionalized partnerships, allowing for exemptions in the public interest. In contrast, the Romanian model is characterized by private initiative, fragmented regulations, and limited public-private cooperation, highlighting the need for administrative consolidation, professionalization, and legislative stability.

3.4. *Validity period, area of extension, and applicability of urban planning documents*

3.4.1. ZAC

A ZAC is a geographically defined area where a public authority (usually a municipality) decides to intervene directly to develop and equip land for coordinated construction and urban development. It is an operational planning tool that combines public initiative with private developer involvement, having an integrative character. ZAC projects are long-term oriented, with implementation periods often exceeding 10–15 years, in a phased urban transformation process that includes infrastructure, housing, and mixed functions¹⁵.

3.4.2. PUZ

PUZ is a local urban planning tool used to detail and adapt the regulations from the PUG to the specific realities and intentions of a particular area. According to Law 350/2001, its

¹⁴ Horeczki et al. 2023; Ianoș et al. 2017; Kapraras 2024

¹⁵ Cerema 2023; Cerema 2020

validity is determined by local authorities' decisions, often varying between 5 and 10 years¹⁶. In the absence of a fixed legal duration, the implementation of PUZs often depends on the economic and financial dynamics of the private initiators¹⁷. The minimum regulated area is 10,000 m², and its applicability reflects a flexible operational logic, adapted to the development requirements.

3.4.3. Comparative observations

ZACs integrate public policies and long-term planning, while PUZs align with a logic focused on specific interventions conditioned by economic factors.

A critical aspect is the difference in pace and duration: while ZACs involve a gradual and phased evolution, PUZs are often subordinated to an accelerated timeline, aligned with investment interests.

Another observation pertains to the lack of a stable institutional infrastructure in Romania, where administrative fragmentation and the absence of long-term coordination affect the coherence of territorial development¹⁸.

3.5. Impact on urban and territorial structures

3.5.1. ZAC – Integrated tool

In France, ZAC is defined as a flexible planning tool capable of managing both territorial expansion and urban renewal. Interventions within a ZAC may include land acquisitions, expropriations, the creation of public facilities, construction, functional conversions, and urban space development. Examples¹⁹ such as ZAC Moulon²⁰ or ZAC Rive Gauche²¹ demonstrate the capacity of this tool to transform vast territories, whether agricultural or industrial, into modern, sustainable, and multifunctional urban neighborhoods. The emphasis on public spaces, mobility, and biodiversity reflects balanced planning between urban needs and environmental concerns.

3.5.2. PUZ – Fragmentary tool

In most cases, the initiative belongs to private investors, who negotiate directly with local authorities, resulting in a form of contractualized planning. This model significantly influences the distribution of benefits and obligations among urban actors (mechanisms like urban péréquation), with direct effects on development priorities, territorial balance, and urban structure shaping²². Contractual procedures can thus contribute to greater technical

¹⁶ URBANPROIECT 2000

¹⁷ Casalta Nabais 2014

¹⁸ Rufat 2011; Sârbu 2004

¹⁹ Ville de Paris n.d.

²⁰ Établissement Public d'Aménagement Paris-Saclay n.d.

²¹ APUR 1990; APUR 1989

²² Casalta Nabais 2014; Dutu 2014

flexibility, but the lack of transparency and fair competition remains a major obstacle²³. Cases²⁴ like PUZ Ștefăneștii de Jos²⁵ highlight how these documents often serve market interests rather than a metropolitan strategy. Excessive flexibility²⁶, lack of integration into major plans like the PUG, and local political influences generate fragmented developments, with negative effects on mobility, technical infrastructure, and the quality of public spaces.

3.5.3. Comparative observations

ZAC allows for integrated, coherent, and financially supported planning coordinated at the metropolitan level, generating sustainable and functional developments. In contrast, PUZ, while flexible, often leads to fragmented developments influenced by the market and local interests, lacking a unified vision, with a limited and often unbalanced urban impact.

3.6. Comparative references at the technical level

3.6.1. ZAC – Integrated spatial and functional modeling

ZAC is therefore a complex mechanism that shapes the functionality of the urban territory in parallel with its physical structure²⁷. The interventions carried out within a ZAC are not limited to defining urban planning regulations, but also involve the actual implementation of projects, which allows for both the redefinition of urban morphology and the optimization of city activities through the coherent integration of urban functions. It represents an operational tool through which public authorities intervene directly in the organization and development of urban territory, fully coordinating the planning, execution, and delivery processes. Through this, new neighborhoods can be created or existing areas reconfigured by building infrastructure, public facilities, constructions, and landscaping.

3.6.2. PUZ – Flexibility vs. fragmentation

PUZ is an urban planning document that sets detailed rules for the development of an urban area, correlating with the General Urban Plan (PUG). It establishes urban indicators (POT, CUT, building height regulations, setbacks from alignments and side and rear boundaries, etc.), functional zoning, street network organization, and other specific rules for land use and construction compliance. PUZ does not have an operational character because, after its approval, there is no public entity obliged to carry out the infrastructure works or ensure the actual implementation of the planned projects. It remains a normative framework, and the actual realization depends on the initiative and resources of private or public investors.

3.6.3. Comparative observations

Spatial-functional cohesion depends not only on the choice of the urban planning tool but also on how it is technically implemented, legally regulated, and interinstitutionally

²³ Dutu 2014

²⁴ Asociația de Dezvoltare Intercomunitară Zona Metropolitană București n.d.

²⁵ Primăria Ștefănești n.d.

²⁶ Cîrnu 2013

²⁷ Goujon 2021

managed. France stands out for its strong public coordination and clear integration between the functional dimension (economic, social programs) and the spatial dimension (urban configurations, infrastructure).

4. Conclusions

4.1. Conceptual and operational divergences

ZAC constitutes a model of project-based urbanism, with a high degree of control and strategic integration, while PUZ remains an instrument more oriented towards reproduction urbanism, with sectorial applicability.

In this sense, PUZ cannot be considered an operational tool compared to ZAC. One of the main challenges and areas for improvement in Romania is the revision of the relationship between urban planning documents, their flexibility, and their limits. Romania needs an operational tool for the coherent and effective integration of project-based urbanism.

4.2. Impact on urban development

In France, the application of ZACs has led to coherent and sustainable urban development, due to a centralized and well-defined legislative framework. This approach has allowed for better integration of urban functions and strategic development of the territory, with a positive impact on spatial and functional cohesion. In contrast, Romania faces fluctuating and incoherent application of PUZs, leading to fragmented urban planning decisions and a lack of a unified vision. Urbanism implementation is affected by legislative instability and the decentralization process, limiting the effectiveness of urban development.

4.3. Final conclusion

A reform of urban planning tools, emphasizing transparency, cooperation, and effective implementation, is essential to ensure sustainable urban development in the future.

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