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# Governing Green and Heritage-Led Revitalisation: Multi-Scalar Insights from the Nona Project in the Danube Region

*Ana-Maria Dragomir, Miruna Draghia, Alexandra Zlotea*

(PhD Ana-Maria Dragomir, URBASOFIA, Bucharest, Romania, ana.dragomir@urbasofia.eu)
(PhD Miruna Draghia, URBASOFIA, Bucharest, Romania, miruna.draghia@urbasofia.eu)
(MSc Alexandra Zlotea, URBASOFIA, Bucharest, Romania, alexandra.zlotea@urbasofia.eu)

## 1 ABSTRACT

European policy initiatives such as the Green Deal, the New European Bauhaus, and the "No Net Land Take" objective call for sustainable, inclusive, and climate-resilient urban development. Yet many cities, especially small and mid-sized ones, struggle to operationalise these ambitions due to fragmented governance, unclear investment pathways, and limited institutional capacity. Heritage-led regeneration projects face particularly governance challenges: layered approval processes involving multiple heritage authorities, ownership fragmentation across public and private actors, technical uncertainty regarding structural interventions and conservation standards, and persistent institutional silos between heritage protection, urban planning, and economic development mandates.

This paper presents findings from the NONA project (New gOvernance for NewspAces), funded under the Danube Region Programme, which developed and tested a governance framework for green and inclusive regeneration of degraded urban areas. At the centre of this approach is a six-phase investment lifecycle that supports cities in structuring regeneration processes, from initial diagnosis through to implementation and long-term monitoring. The lifecycle model addresses recurrent implementation failures in heritage-led regeneration by making dependencies and prerequisites visible at early stages, introducing staged feasibility checks, and clarifying institutional responsibilities before design lock-in occurs.

Applied across ten pilot cities in the Danube Region, including Stuttgart, Cluj-Napoca, Odessa, Chișinău, Gabrovo, Veszprém, Šabac, Cazin, Ravne naKoroškem, and Virovitica, the model enabled local actors to align diverse objectives (heritage reuse, climate adaptation, and public space inclusion) with actionable steps tailored to their specific governance and resource environments. The lifecycle approach functions as a coordination and risk-reduction mechanism, helping cities to translate strategic goals into feasible project pipelines through feasibility checks, stakeholder engagement routines, and explicit sequencing of regulatory, technical, and financial prerequisites.

The findings demonstrate how a structured, adaptable governance process can bridge the gap between EU policy aspirations and local implementation realities. The paper argues that embedding lifecycle thinking into urban regeneration practice offers a replicable pathway for aligning institutional responsibilities, reducing fragmentation, and mobilising investment across varied urban contexts.

Keywords: governance models, degraded areas, heritage led regeneration, inclusive public space, urban planning

## 2 INTRODUCTION

### 2.1 European policy drivers and the call for holistic local transformation

Across Europe, cities face rising pressure to revitalise degraded and underused areas while addressing climate risk, social needs, and heritage preservation. Policy priorities promote compact development, adaptive reuse, circular approaches, and the reduction of land take and soil sealing, complemented by place-based and people-centred agendas (European Commission, 2019; United Nations, 2016; Decoville and Feltgen, 2023; Marquard et al., 2020). Regeneration is increasingly framed as a cross-sector transformation that requires coordination across planning, heritage, environment, mobility, public services, and social inclusion, and often across multiple jurisdictions.

Degraded and underused areas are commonly addressed through brownfield and adaptive reuse agendas, yet implementation remains shaped by uncertainty, missing or fragmented evidence (e.g., ownership, constraints), and weak coordination between planning and investment preparation (CABERNET, 2006; Barborič et al., 2022; Černič et al., 2022). Heritage-led regeneration intensifies these challenges through layered approvals, more fragmented ownership and stewardship arrangements, and higher technical

uncertainty when reconciling conservation standards with contemporary performance requirements (Tweed and Sutherland, 2007; Pendlebury et al., 2009; Bullen and Love, 2011; Veldpaus and Pereira Roders, 2014).

Against this backdrop, this paper investigates how a structured lifecycle governance model can bridge the gap between strategic regeneration ambitions and operational delivery, particularly in heritage-led and resource-constrained contexts. The central research question is: How and under what conditions does lifecycle governance improve feasibility, coordination, and investment readiness in urban regeneration? Drawing on empirical insights from ten pilot cities in the Danube Region, this study critically assesses the applicability, limitations, and contextual dependencies of the NONA lifecycle approach. In doing so, it contributes to ongoing debates in urban studies and planning around implementation logics, governance innovation, and institutional capacity for place-based transformation.

### 2.2 The implementation gap

While policy frameworks provide direction, many local administrations face recurring obstacles when moving from ambition to delivery. Across the pilots, these obstacles clustered around (i) sequencing failure, where feasibility constraints (ownership, approvals, technical studies) emerge after design or political commitments; (ii) coordination failure, where fragmented mandates and weak interfaces prevent alignment; and (iii) investment-readiness failure, where risk profiles, governance arrangements, and delivery assumptions remain too unclear to mobilise funding or partners (Roberts and Sykes, 2000; Couch et al., 2011; Tallon, 2013).

### 2.3 From ambition to delivery

This paper argues that lifecycle governance offers a pragmatic response to implementation failures by introducing a process logic that aligns strategic ambition with staged feasibility validation. Within the NONA framework, progression through the investment lifecycle is conditional on resolving key prerequisites – such as ownership clarification, regulatory approvals, and technical assessments – and on maintaining structured engagement among public authorities, civil society, and knowledge actors. This sequencing reduces premature design lock-in and improves the planning–finance interface through clearer roles, decision gates, and investor-facing project packaging (Healey, 2006; Ansell and Gash, 2008; Morris, 2013; Weber et al., 2014).

Although iterative governance requires calendar time, addressing regulatory, technical, and ownership uncertainties early increases the durability of outcomes and prevents late-stage project failure. In this sense, lifecycle governance deliberately counters pressures for accelerated planning that often lead to premature commitments and implementation risks (Flyvbjerg, 2009). For similar reasons, investors are engaged later in the lifecycle sequence. Early investor involvement in contexts of unclear land ownership or planning conditions may reinforce speculative land-holding behaviour and distort project objectives (Adams and Tiesdell, 2013). By contrast, sequencing investor engagement after governance conditions and feasibility parameters have been clarified helps ensure that financial actors participate in shaping credible, implementable projects rather than driving premature development pressures.Placing investor engagement later in the lifecycle therefore serves a governance function: it allows public authorities and local stakeholders to stabilise spatial objectives, regulatory conditions, and ownership arrangements before capital commitments shape project trajectories.

## 3 NONA APPROACH

### 3.1 Project overview and objectives

NONA (New Governance for New spAces) is a transnational project funded under the Danube Transnational Programme (2021–2027) that focuses on mainstreaming green investments into the revitalisation of degraded areas through governance innovation and practical tools. The project developed a common structure to support cities in structuring regeneration processes, clarifying responsibilities, improving investment readiness, and strengthening stakeholder coordination.The structure was tested through pilot actions across ten territories, enabling comparative learning across different territorial scales and planning contexts. The ten pilot cities represent diverse governance and regeneration contexts:

Regional scale: Stuttgart (Germany): Metropolitan context with heritage-led regeneration of industrial sites, involving complex multi-level governance and stakeholder coordination. Cluj-Napoca (Romania): Big city addressing heritage reuse in historic neighbourhoods with ownership fragmentation and capacity constraints. Chișinău (Moldova): Capital city testing lifecycle governance under resource-constrained conditions and Odessa (Ukraine).

Mid-sized cities: Gabrovo (Bulgaria): Mid-sized city revitalising industrial heritage sites with limited market appetite and unclear business models. Veszprém (Hungary): Mid-sized city integrating cultural heritage with climate adaptation and public space inclusion, requiring cross-sectoral coordination. Šabac (Serbia): Mid-sized city addressing brownfield reuse with fragmented ownership and regulatory uncertainty. Cazin (Bosnia and Herzegovina): Mid-sized city with limited administrative capacity.

Small sized cities: Ravne naKoroškem (Slovenia): Small municipality addressing industrial heritage reuse in a weak market context and Virovitica (Croatia).

These pilots deliberately cover different territorial scales (metropolitan, mid-sized, micro-municipal), governance conditions (strong/weak institutional capacity, single/multi-level mandates), and regeneration challenges (heritage-led reuse, climate adaptation, industrial brownfields, inclusive public spaces). This diversity enabled comparative assessment of how lifecycle governance performs across contexts and under what conditions it is transferable.

### 3.2 Six-phase investment life cycle

A core component of the NONA methodology is a six-phase investment lifecycle designed as a cyclical process rather than a linear sequence. The lifecycle is inspired by Project Cycle Management frameworks used by the European Commission, World Bank, and OECD (European Commission, 2004; World Bank, 2020), but adapted specifically for urban regeneration contexts characterised by high uncertainty, fragmented governance, and complex stakeholder environments. Unlike standard PCM approaches, which assume relatively stable objectives and clear institutional mandates, the NONA lifecycle emphasises iterative feasibility validation, continuous stakeholder engagement, and staged risk reduction suited to heritage-led and brownfield regeneration challenges.

From an analytical perspective, the six-phase investment lifecycle can be understood as a governance response to recurrent implementation failures observed in urban regeneration processes. Across many European contexts, regeneration initiatives tend to fail not due to a lack of strategic vision, but because of weak sequencing, late identification of feasibility constraints, fragmented institutional mandates, and poorly structured interfaces between planning and investment decision-making (Couch et al., 2011; Tallon, 2013). Lifecycle governance addresses these failures by introducing an explicit process logic that aligns strategic ambition with staged feasibility checks, clarified responsibilities, and iterative decision gates. Rather than assuming linear progression from vision to delivery, the lifecycle framing makes dependencies and prerequisites visible at early stages, thereby reducing the risk of premature design lock-in and late-stage project blockage. In this sense, lifecycle governance operates less as a normative planning model and more as a pragmatic coordination and risk-reduction mechanism that structures how actors, evidence, and investments are progressively aligned over time.

The lifecycle supports cities in moving from identification of needs to planning, land and environmental regulation, implementation, usage, and monitoring and evaluation. Participation is embedded across phases to ensure that the investment logic remains aligned with local needs and that decisions are supported by stakeholder cooperation. The lifecycle is operationalised through structured routines as stakeholder mapping (identifying actors, interests, and mandates at each phase), evidence collection for the degraded area (ownership, contamination, heritage status, infrastructure, market conditions), feasibility checks (staged validation of regulatory, technical, financial, and governance prerequisites), milestone logic (decision gates where progression is conditional on resolving specific constraints), preparation of investor-oriented materials (structured project information packages clarifying constraints, sequencing, and long-term operational assumptions).

For heritage-led regeneration specifically, the lifecycle marks checkpoints: Phase 1 (Identification): Early heritage status assessment, preliminary ownership mapping, and identification of approval layers. Phase 2 (Planning): Structured consultation with heritage authorities, technical conservation assessments, and

alignment of heritage protection with urban planning and economic development objectives. Phase 3 (Land and Environmental Regulation): Resolution of ownership fragmentation, completion of required heritage impact assessments, and clarification of regulatory prerequisites before design lock-in. Phase 4 (Implementation): Staged implementation logic that sequences conservation interventions with contemporary adaptations, allowing for technical adjustments as uncertainties are resolved. Phase 5 (Usage): Long-term stewardship arrangements that clarify maintenance responsibilities under heritage protection regimes. Phase 6 (Monitoring and Evaluation): Feedback loops that assess whether heritage values are maintained and whether governance arrangements remain effective.

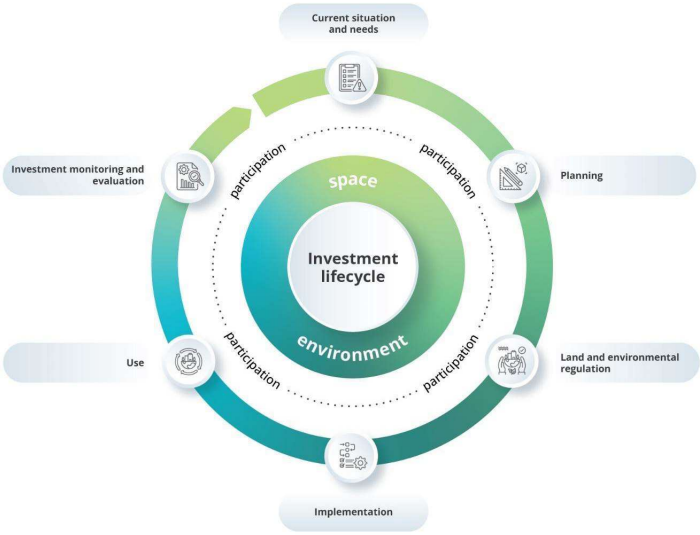


Fig. 1: Investment life cycle in the NONA methodology.

## 4 PILOT APPLICATION AND COMPARATIVE INSIGHTS

### 4.1 Methodology

This paper draws on qualitative, comparative analysis of ten pilot projects conducted under the NONA (New gOvernance for NewspAces) initiative between 2022 and 2025. The research is based on three primary data sources: (1) internal project documentation including feasibility reports, planning diagnostics, and stakeholder mappings; (2) records of participatory events and workshops held during each lifecycle phase; and (3) cross-pilot synthesis outputs produced collaboratively by local and transnational project teams.Analytical insights were generated through structured thematic coding of these materials, focusing on recurring governance challenges (e.g., sequencing failures, stakeholder fragmentation, unclear investment pathways) and lifecycle responses (e.g., feasibility checks, participation routines, decision gating). A matrix was used to compare how the lifecycle performed across different territorial scales (metropolitan, mid-sized, and micro municipalities) and regeneration types (heritage reuse, brownfield transformation, public space revitalisation). While the findings are grounded in real-world pilot implementation, they reflect early to mid-stage progress rather than completed projects. As such, the analysis emphasises process performance rather than long-term outcomes.

### 4.2 Pilot design and scope across territorial scales

The NONA methodology was tested across ten pilots deliberately selected to reflect different territorial scales, governance conditions, and regeneration challenges. This multi-scalar design enabled the project to assess whether a shared lifecycle governance approach can remain applicable across contexts ranging from complex metropolitan and functional urban rural settings to capacity-constrained mid-sized cities and border micro municipalities.

### 4.3 Pilot typologies and thematic alignment

This paper focuses on the pilot typologies that most directly inform the conference theme and the paper's argument, namely the implementation gap between European ambitions and local delivery, and the role of lifecycle governance in structuring green, inclusive, and heritage-sensitive revitalisation. Table 1 synthesises

the relevant pilot typologies by linking territorial scale to the implementation gap and to the specific governance functions supported by the NONA six-phase investment lifecycle. The typology groups are derived from cross-pilot synthesis (NONA, 2025) and reflect recurring patterns in governance challenges and lifecycle responses observed during pilot testing.

Methodological note: The pilots are grouped analytically by scale-related governance characteristics rather than by geographic location alone. Some pilots contribute to multiple typologies depending on the specific regeneration challenge addressed. For example, Stuttgart and Cluj-Napoca are classified under "functional urban and metropolitan contexts" due to multi-level governance complexity but also exhibit heritage-led regeneration characteristics. The grouping serves to highlight scale-sensitive governance patterns.

| **Pilot scale group** | **Pilot typology (theme)** | **Pilots** | **Where the "implementation gap" shows up** | **What the NONA lifecycle supports** |
|---|---|---|---|---|
| Functional urban and metropolitan contexts | Multi-level regeneration and shared assets (water, land) | Stuttgart, Cluj-Napoca, | Fragmented mandates, cross-jurisdiction coordination, and uneven stakeholder urgency | Sequencing responsibilities, cooperation routines, and investor-facing clarity |
| Functional urban and metropolitan contexts | Heritage-led regeneration prerequisites | Cluj-Napoca, Chișinău | Approvals, technical studies, ownership, and financing uncertainty | Early-stage readiness pathway, staged risk reduction, clearer investment narrative |
| Mid-sized cities | Reuse of industrial assets and cultural-social infrastructure | Gabrovo, Šabac,Veszprém, | Weak project pipelines, and community acceptance issues | Structured pipeline building, participatory validation, prioritisation, and staging |
| Mid-sized cities | Inclusive public space revitalisation | Veszprém, Šabac, Cazin | Operational governance unclear, long-term stewardship risks | Roles for maintenance/use, co-creation across phases, monitoring, and iteration |
| Border micro municipalities | Industrial heritage or brownfield reuse in weak markets | Virovitica, Ravne naKoroškem | Business model uncertainty, limited investor visibility, and funding gaps | Decision-gating, phased implementation logic, investment packaging, and communication |

Table 1: Scale-related constraints and added value of lifecycle governance.

### 4.4 Comparative findings from pilot testing

Across pilot typologies, several key insights emerged regarding how lifecycle governance functions in practice and how it addresses implementation failures. These findings are illustrated with short examples from pilot cities.

4.4.1. Integrated Governance and Cross-Sectoral Coordination

Pilot evidence confirms that sector-based planning is insufficient for complex green and heritage projects where responsibilities, externalities, and beneficiaries span administrative and sectoral boundaries. In Stuttgart, water was established as a binding spatial reference, enabling catchment-based planning that linked land use, hydrological interdependencies, and responsibilities across municipalities and institutions; this increased transparency over "impact chains" (retention–infiltration–runoff) and created early coordination points before project definition. In Cazin, a cross-sectoral coordination model between urban planning, municipal utilities, and development administration reframed a conventional public-space upgrade as a multifunctional green system (stormwater management, alternative materials, tree planting), improving feasibility through clearer sequencing and technical documentation aligned with permitting. In Virovitica, internal project teams improved inter-departmental coordination (planning–property management) and exposed the absence of city-wide integrated planning as a shared constraint, illustrating how lifecycle governance can function as a diagnostic device for fragmentation before it becomes a delivery risk.

4.4.1 From consultation to co-creation

Across pilots, the shift from one-off consultation to iterative co-creation emerged as a key mechanism for stabilising expectations and strengthening implementation capacity. In Šabac, the Local Action Group

(LAG) provided a shared governance interface that reduced fragmentation between city departments, public institutions, and external actors; co-creation outputs were progressively translated into implementation narratives through the Regional Investment Forum. In Gabrovo, the NONA Civil Society Bootcamp moved local actors from consultation to co-production and contributed to an integrated roadmap that positioned culture, ecology, and social inclusion as mutually reinforcing drivers of riverfront regeneration. In Veszprém, a stakeholder and population-survey methodology – supported by a redesigned communication strategy to counter rumors and increase willingness to engage – helped re-centre decision-making on residents' needs while keeping strategic flexibility for future investment choices.

### 4.4.2 Investment structuring and readiness

Pilots provide convergent evidence that investment readiness depends on timing: credible investor engagement generally requires early public de-risking, while premature 'capital seeking' without documentation can undermine credibility. In Cluj-Napoca, early involvement of financial actors (e.g., banks and EIB-linked expertise) as mentors – paired with ESG and EU Taxonomy alignments supported clearer bankability criteria and a shared "investment language", although fragmented ownership and lengthy permitting remain binding constraints. In Gabrovo, an operational phased concept (temporary–seasonal–permanent) strengthened municipal readiness by enabling testing and risk management before long-term capital commitments. In Chișinău, the lifecycle process clarified that structural assessments, heritage compliance pathways, and an operational model for phased activation are prerequisites for investor appetite in protected sites. In Veszprém, strong market interest in residential development was tempered by the pending comprehensive spatial plan, demonstrating how regulatory sequencing can delay investable packaging even where demand exists.

## 5 NONA ADDED VALUE AND TRANSFERABILITY

The comparative pilot testing indicates that the main contribution of NONA is not a single thematic intervention, but a repeatable governance routine that helps cities translate regeneration ambitions into implementable pathways. The six-phase investment life cycle provides a shared process logic that connects planning intent with feasibility, delivery, and long-term stewardship, reducing the risk that projects remain atthe concept level or become blocked when constraints emerge too late (NONA, 2025).

A first element of added value lies in clarifying sequencing and decision gates. By structuring regeneration as an investment life cycle, cities are supported in identifying prerequisites early, such as land and regulatory constraints, required studies, institutional roles, and realistic delivery assumptions. This improves the quality of project pipelines by making dependencies visible and by encouraging staged progression rather than one-step conceptual planning. The pilot examples (Stuttgart, Chișinău) demonstrate how this sequencing logic prevented premature design lock-in and late-stage regulatory blockage by making prerequisites explicit early.

A second element lies in strengthening cooperation through embedded co-creation. NONA treats participation as a continuous task across phases, supporting repeated moments of alignment among public actors, civil society, knowledge institutions, and private stakeholders. This helps reduce fragmentation not by institutional redesign alone, but by providing a shared process structure that clarifies when engagement is needed and what decisions it should inform. For projects involving heritage reuse, inclusive public space, and contested urban transformation, this sequencing of engagement is essential for legitimacy and long-term sustainability. The pilot examples (Veszprém, Gabrovo) demonstrate how structured stakeholder engagement across phases reduced late-stage opposition, improved long-term stewardship arrangements, and co-constructed feasible pathways that balanced community aspirations with technical and financial constraints.

A third element concerns investment readiness and risk reduction. Pilots showed that the ability to communicate a project credibly to potential funders, investors, and partners depends on clear information about constraints, governance readiness, sequencing, and long-term operation. The NONA approach supports this through structured investment packages and investor-facing communication, which helps cities present projects as staged, feasible propositions rather than isolated design ideas. Even in weaker markets or capacity-constrained administrations, this improves the basis for funding applications, blended financing, and partnership building.

Transferability, however, is conditional. The pilots also reveal persistent constraints linked to political continuity, administrative capacity, and market appetite. In metropolitan and functional urban contexts, the

main challenge is aligning multiple institutions and interests over time. In mid-sized and micro municipalities, the main challenge is maintaining continuous capacity for feasibility work, stakeholder engagement, and implementation preparation.

## 6 DISCUSSION: LIMITATIONS AND CONDITIONS FOR TRANSFERABILITY

### 6.1 Evidence-based and analytical approach

This paper is based on a qualitative comparative synthesis of NONA pilot applications. The analysis draws on pilot documentation and cross-pilot comparison materials produced during methodology testing, focusing on how governance bottlenecks and investment readiness barriers appear across different territorial scales and pilot typologies.

### 6.2 Interpreting the core contribution: lifecycle governance as a bridge between planning and investment readiness

A key insight emerging from the pilots is that the main barrier to implementation is often not a lack of ideas, but the absence of a shared process logic for moving from ambition to delivery.This is especially relevant in contexts where ownership issues, regulatory steps, required studies, or environmental burdens can halt a project once it is already politically and publicly announced. In such cases, the governance value lies in clarifying what must be resolved first, what evidence is required, and what institutional roles need to be formalised to reduce uncertainty.

For heritage-led regeneration specifically, the lifecycle logic addresses governance challenges that are particularly acute in these contexts layered approval processes (sequencing heritage authority consultations and technical assessments), ownership fragmentation (identifying ownership prerequisites early and staging negotiations), technical uncertainty (requiring conservation expertise and structural assessments at appropriate phases), institutional silos (creating formal coordination routines between heritage, planning, economic development, and environmental actors).

The pilots further suggest that regeneration becomes more credible when participation is embedded across phases. Stakeholder engagement that is sequenced and linked to concrete decisions can reduce fragmentation by stabilising expectations, building legitimacy, and improving coordination among public actors, civil society, knowledge institutions, and private stakeholders. This does not eliminate conflict, but it improves the capacity to negotiate trade-offs and to keep projects progressing through realistic decision gates rather than through ad hoc negotiation or late-stage opposition.

Table 2 provides the typology-oriented framing used to interpret patterns across contexts. Extracting generalisable insights from these patterns clarifies what aspects of the lifecycle approach remain stable across scales and which are more sensitive to administrative capacity or governance complexity.

These patterns suggest that lifecycle governance is transferable across scales, but requires adaptive implementation that respects local capacity, governance complexity, and market conditions. The core logic remains stable, but tools, engagement strategies, and support mechanisms must be tailored.

### 6.3 Critical Reflections and Transferability Conditions

While pilot applications suggest that lifecycle governance offers a promising response to implementation failures, effectiveness is conditional on enabling factors that vary by scale and institutional setting. Political continuity and administrative capacity are preconditions for sustaining feasibility work and decision-gating: in capacity-constrained contexts, early phases can stall when diagnostics, technical documentation, or mandate clarity cannot be produced at the required pace (Pritchett et al., 2013). NONA's contribution was therefore strongest where cities could institutionalise a minimum coordination nucleus (e.g., inter-departmental teams or a LAG) that persisted beyond individual events.

Market conditions and investor behaviour shaped the planning–finance interface across pilots. In stronger markets (e.g., Cluj-Napoca), early dialogue with finance actors supported bankability criteria and ESG-ready packaging, yet investors remained conditional on regulatory de-risking and predictable delivery assumptions. In weaker markets (e.g., Ravne naKoroškem; parts of Gabrovo), the lifecycle improved the credibility of grant applications and partnership building but could not substitute for systemic demand constraints; here,

"investment readiness" took the form of phased, low-regret interventions and capacity-building before larger capital commitments.

| Category | Aspect | Metropolitan Contexts | Mid-sized Cities | Micro Municipalities | Cross-scale Notes |
|---|---|---|---|---|---|
| Stable across scales | Lifecycle logic | Applicable | Applicable | Applicable | Core sequencing, decision gates, feasibility checks, and engagement routines remain consistent. |
| Stable across scales | Prerequisites | High complexity | Moderate complexity | Lower complexity | Ownership, regulatory, technical, and financial prerequisites apply universally; complexity varies by scale and asset type. |
| Scale-sensitive | Coordination complexity | High (multi-level) | Medium | Lower actor number, capacity-intensive | Metropolitan settings need formal cooperation routines; smaller cities need lightweight but persistent coordination. |
| Scale-sensitive | Fragile phases | Phase 3 (land/regulation) | Phases 2–4 (planning→delivery) | Phases 1–2 (diagnosis/planning) | Vulnerability shifts with regulatory layers vs. internal capacity and evidence production. |
| Scale-sensitive | Market conditions | Stronger private appetite | Mixed | Weaker demand | Funding mixes differ: metropolitan areas can test blended finance; smaller cities rely more on public programmes and partnerships. |
| Scale-sensitive | Investment packaging value | High for institutional investors | High for mixed funding | High for grants/partners | Investor-facing clarity improves credibility across contexts, even where private capital is limited. |

Table 2: Patterns of lifecycle governance across scales.

Finally, regulatory and procedural environments often conflicted with iterative regeneration logics. Heritage protection procedures (e.g., Chișinău) and slow plan revision cycles (e.g., Veszprém) illustrate how sequential approvals can delay even well-coordinated processes, shifting fragility to Phase 3 (land and regulation) or creating "dead time" between planning and investment packaging. Transferability therefore depends on adapting tools to local capacity (simplified checklists, external technical support) and on creating lawful pathways for temporary, reversible interventions that enable learning-by-doing without undermining conservation and accountability.

These findings align with broader urban governance literature emphasizing the importance of adaptive capacity, institutional learning, and phased implementation in managing complex urban transformations (Pritchett et al., 2013; Hodgson &Cicmil, 2006). Lifecycle governance is not a panacea, but a structured negotiation device whose success depends on its institutional embedding, technical support, and ability to adapt to local realities.

## 7 CONCLUSION

This paper has presented a comparative, multi-scalar analysis of the NONA project's lifecycle governance framework, designed to support the revitalisation of degraded urban areas through green and heritage-sensitive investments. Situated within the broader context of European policy ambitions – such as the Green Deal, the New European Bauhaus, and the "No Net Land Take" objective (European Commission, 2019; 2021) – the findings reinforce the persistent challenge of operationalising high-level policy objectives within fragmented, resource-constrained, and institutionally complex local governance systems (Couch et al., 2011; Pendlebury, 2013).

Drawing on pilot applications across ten Danube Region cities, the study demonstrates that a structured, iterative investment lifecycle – unlike traditional integrated planning models (Healey, 2006) or project management frameworks assuming linearity and institutional clarity (European Commission, 2004; World Bank, 2020), can serve as a pragmatic bridge between strategic ambition and implementation. Lifecycle governance addresses common failures identified in the literature, including sequencing gaps (Morris, 2013), coordination breakdowns (Ansell & Gash, 2008), and investment readiness constraints (Weber et al., 2014), by embedding decision gates, participatory routines, and feasibility logic into all stages of the process.

In heritage-led regeneration in particular, the NONA lifecycle adds distinct value by sequencing engagement with heritage authorities and technical assessments (Pendlebury et al., 2009), addressing ownership fragmentation (Tweed & Sutherland, 2007), and managing technical uncertainty (Bullen & Love, 2011). These are challenges that are generally under-served by conventional planning frameworks, which often lack mechanisms for continuous cross-sectoral coordination and early feasibility validation (Veldpaus& Pereira Roders, 2014; Hodgson &Cicmil, 2006).

Pilot findings confirm that the approach is applicable across scales, but that transferability depends on adaptive implementation aligned with local capacity and market context. As summarised in Table 2, while the core sequencing logic remains stable, capacity constraints and complexity levels shift vulnerability across phases (Pritchett et al., 2013). The pilots also echo insights from urban regeneration literature that successful delivery hinges less on having visionary plans and more on having structured processes to manage risk, negotiate trade-offs, and progressively align actors over time (Couch et al., 2011; Roberts & Sykes, 2000).

From a practical perspective, the main recommendation is to treat regeneration not as isolated planning exercises but as investment-ready, lifecycle-governed processes, where early outputs include clarified mandates, stakeholder roles, and feasibility evidence, not just design concepts. From a research perspective, further longitudinal studies are needed to track how later lifecycle phases, particularly implementation, usage, and monitoring, contribute to sustained outcomes in heritage conservation, social inclusion, and environmental performance.

Ultimately, the NONA lifecycle framework offers a replicable yet adaptable governance routine that helps cities move from fragmented ambition to feasible delivery, thereby advancing the EU's integrated, green, and inclusive urban agenda (European Commission, 2019; Decoville& Feltgen, 2023). As shown in diverse urban contexts, from Stuttgart to Ravne naKoroškem, the governance innovation lies not only in strategic alignment, but in operationalising complexity through structured decision-making and context-sensitive risk management.

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