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Evaluating the urban landscape regeneration process: aligning policies and realities

Avaliando o Processo de Recuperação da Paisagem Urbana: Alinhando Políticas e Realidades

[1] **Mariane Menezes de Moraes,** [2] **Frederico Meireles Rodrigues**

ABSTRACT

This paper explores the synergy between European urban development programmes, specifically focusing on the Urban Development Strategic Plan (PEDU) within the context of the city of Vila Real, Portugal, with a spotlight on the Avenida Carvalho Araújo (ACA) Project. European policies, exemplified by initiatives like Europe 2020 and the European Structural and Investment Funds, underscore a commitment to sustainable, inclusive urban growth. The ACA Project, as a case study for urban regeneration, underwent an ex-post evaluation, considering aesthetic, social, and ecological values through a trivalent approach. Methodologically, the research incorporates case study analysis, interviews with stakeholders, and overall programme evaluation. Results showcase the alignment of PEDU objectives across various levels demonstrating the project's level of implementation. This paper contributes to understanding the efficacy of urban development programmes emphasizing the need for coherence between overarching policies and local needs. The ACA Project illustrates the potential of strategic urban interventions to elevate the quality of urban spaces and contribute to broader sustainability goals.

Palabras clave
Avenida Carvalho Araújo, Vila Real, PEDU, urban regeneration, European programme

RESUMO

Este artigo explora a sinergia entre as políticas de desenvolvimento urbano, com foco específico no programa governamental Plano Estratégico de Desenvolvimento Urbano (PEDU) de Portugal, no contexto da cidade de Vila Real, destacando o projeto da Avenida Carvalho Araújo (ACA). As políticas europeias, tais como a iniciativa Europa 2020 e o Fundo Estrutural e de Desenvolvimento Europeu, refletem o compromisso com o crescimento urbano sustentável e inclusivo. O projeto ACA, analisado como um caso de regeneração urbana, passa por uma avaliação ex-post, considerando valores estéticos, sociais e ecológicos, através da Abordagem Trivalente. Metodologicamente, este artigo une análises de caso de estudo, entrevistas com partes interessadas e avaliação geral do programa. Os resultados evidenciam a coerência dos objetivos do PEDU em diversos níveis, demonstrando o grau de implementação do projeto ACA. Este trabalho contribui para o entendimento da eficácia dos programas de desenvolvimento urbano, destacando a necessidade de coerência entre políticas abrangentes e necessidades locais. O projeto ACA ilustra o potencial de intervenções urbanas estratégicas para elevar a qualidade dos espaços urbanos e contribuir para objetivos mais amplos de sustentabilidade.

Keywords
Avenida Carvalho Araújo; Vila Real; PEDU; regeneração urbana; programas governamentais Europeus.

[1]Universidade de Trás-os-Montes e Alto Dourado, Portugal.
https://orcid.org/0000-0003-1335-4417
[2]Universidade de Trás-os-Montes e Alto Dourado, Portugal.
https://orcid.org/0000-0001-6426-314X

Autor de correspondencia: Mariane Menezes de Moraes.
Dirección: Quinta de Prados, Vila Real, Vila Real, Portugal 5000-801.
E-mail: mariane.menezes.m@gmail.com

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INTRODUCTION

This article seeks to comprehend the Plano Estratégico de Desenvolvimento Urbano (PEDU or Urban Development Strategic Plan) by dissecting it into levels of intervention. PEDU is a governmental programme aimed at promoting sustainable urban development, territorial cohesion, and addressing urban disparities. Understanding these levels of the process enables researchers and professionals to grasp the structure and objectives of this programme.

But why? Relating the interventions made in ACA to PEDU is crucial for assessing the effectiveness and alignment of implemented actions with the goals defined at each level of the programme. This provides a foundation for evaluating whether interventions are in harmony with the guidelines established by PEDU and if they contribute to the achievement of the programme's overall objectives.

Furthermore, by analysing the levels of PEDU intervention and linking them to specific interventions, it becomes possible to identify gaps, points of success, and opportunities for improvement. This analysis is vital for decision-makers, municipal authorities, and professionals involved in urban planning, providing insights on how to optimize future interventions and ensure more effective implementation aligned with strategic objectives. Moreover, studying the PEDU and its relation to interventions in ACA allows for a more informed and targeted approach to sustainable urban development.

The objective of this paper is to conduct an ex-post evaluation of the ACA Project as part of the urban regeneration plan within the PEDU framework. This evaluation focuses on assessing the effectiveness of the ACA Project in revitalizing urban spaces.

BIBLIOGRAPHIC REVIEW

Portuguese Programmes

In the mid-20th century, European cities faced population and economic declines, impacting national economies. By the end of the century, cities were recognized as drivers of growth, social cohesion, competitiveness, and connectivity. The European Union (EU), over the past three decades, has utilized policies and funding programmes to bring a new urban development paradigm focused on spatial and social equity, sustainability, and economic innovation (Chamusca, 2021).

Under the Europe 2020 framework, Portugal established the Portugal 2020 programme, a partnership agreement between Portugal and the European Commission. This programme strategically identifies priorities in science, technology, and economics, covering national and regional dimensions (Portugal 2020, 2022). Norte 2020, a regional component, focuses on the northern region, implementing initiatives like the POLIS Programme for the environmental regeneration of cities and the Urban Development Strategic Plan (PEDU), with the latter evolving into a more intricate programme than POLIS (CCDR-N, 2015, 2022).

PEDU – Urban Development Strategic Plan

First, it is important to understand what regeneration means in the urban setting. The designation of regeneration in “urban regeneration” can also be seen as “urban rehabilitation” or “urban requalification”, but these names have very similar meaning. Ujang & Zakariya (2015, p.711) address urban regeneration as “the process of remaking places” and this process covers efforts of regeneration planned to improve the environment’s physical conditions, boost economic growth and raise environmental sustainability. The term regeneration can be also referred to a series of strategies to improve or revive local profitability and repopulate areas condemned to population depletion, proposing physical, spatial or material solutions to social and economic problems (Rogers et al., 2013).

Urban regeneration plans comprise three areas of a city: historic centres, abandoned areas and suburbs (Tajani et al., 2023). El-Barmelgy et al. (2021, pp. 6-7) also adds about this definition of urban regeneration that “it can perform an enabling role to achieve sustainability”, explaining how an urban regeneration plan can contribute to the city. For old town centres, the value of historical heritage is important to enhance local identity, this being the main reason for the need to redevelop existing property assets. Thus, the definition of initiatives to improve historic centres, functional reconversion of abandoned areas, and the redevelopment of places with degraded buildings and public spaces is essential. Programmes should aim primarily at guaranteeing quality and safety from both a social and an environmental point of view.

PEDU is a comprehensive Urban Development Strategic Plan designed to advance sustainable urban development approaches, address territorial imbalances, and foster territorial governance and active social engagement. This strategic initiative extends its influence by promoting the evaluation of the city's economy, encouraging the creation and maintenance of socialization environments, equipment, and social intervention services. Additionally, PEDU places a strong emphasis on environmental sustainability through initiatives aimed at enabling soft mobility such as the creation of footpaths, cycling paths, and improvements to public transportation. It also strives to enhance governance systems by establishing connections between governance bodies and inhabitants, encouraging liability sharing, and fostering interdisciplinary stakeholder engagement (Câmara Municipal de Torres Vedras, 2015; Fortunato, 2021).

Under the umbrella of PEDU, three distinct fields of intervention shape its multifaceted approach: Urban Sustainable Mobility Action Plans (PAMUS), Unprivileged Communities Integrated Action Plans (PAICD), and Urban Regeneration Action Plans (PARU). PAMUS prioritizes sustainable and soft mobility across the entire municipality, while PAICD focuses on social-functional critical areas within intra-municipal environments. However, the primary emphasis is on PARU, which directs attention to historical city centres, river corridors, and abandoned industrial areas near Urban Regeneration Areas (CCDR-N, 2015).

PARU, with its six types of interventions, plays a pivotal role in urban regeneration. It addresses housing, commercial, and service buildings by initiating full regeneration for 30 or more-year-old buildings, or when dangerous abnormalities are detected. Furthermore, PARU engages in the comprehensive regeneration of buildings designated for public collective use and contributes to the restoration of public authority buildings with a focus on renewing facades and roof tops. This programme also intervenes in the regeneration of public spaces connected to these buildings and supports the demolition of derelict areas to create new public squares and green spaces. Moreover, PARU applies to the renovation of abandoned environments and buildings emphasizing measures for the management and revitalization of urban areas, business activity promotion, and the valuation of urban environments and local community mobility, according to the Frequently Asked Questions document provided by the Portuguese government about PEDU (CCDR-N, 2015).

Municipality-Specific Objectives (city of Vila Real) and Avenida Carvalho Araújo

While the objectives outlined in the overall programme are general, specific objectives for each municipality have afterwards been released. The PEDU intervention in Vila Real serves as a vehicle for promoting

sustainable urban development strategies, enhancing territorial cohesion, and addressing urban disparities. This involves bolstering the economic vitality of urban areas, stimulating the creation of communal spaces, amenities, and social intervention services, and advancing environmental sustainability through soft mobility initiatives (Fortunato, 2021; CCDR-N, 2015, 2022; Câmara Municipal de Vila Real, 2015).

Within Vila Real, a notable initiative under the PEDU umbrella is the Avenida Carvalho Araújo (ACA) Project. The term "avenida" poses translation challenges, as it has carried various meanings over time. Originally considered an avenue (in this sense a mixed-use promenade), ACA underwent several transformations with the latest being the PEDU intervention, deviating significantly from its initial avenue-like characteristics.

METODOLOGÍA

Document Review

The Document Review involved a comprehensive analysis of ACA, examining its historical context, physical surroundings, and previous urban regeneration initiatives. Key initiatives such as POLIS (2006), PEDU, URBAN I and II, PRU (1997–2003), and ORU were analysed. Particular attention was given to the POLIS programme, serving as a precursor to PEDU, with distinctive intervention spheres: urban regeneration, competitiveness, and regional integration. Notably, ACA played a significant role in urban regeneration during the POLIS era, reinforcing the need to discern disparities between the two programmes. Table 1 shows the expected outcomes of the document review.

Table 1.
Classifications of the Levels of Intervention.

Subject	The Governmental Programme PEDU	PEDU's City Programme for 4 Vila Real municipality	Project Programme (drafted by each municipality's delegate)	Base Programme for ACA (drafted by main architect designer)
Nomenclature	Programme Level 1 (PL1)	Programme Level 2 (PL2)	Programme Level 3 (PL3)	Programme Level 4 (PL4)

Source: *Own elaboration*

To delve deeper into the PEDU programme, a detailed understanding of its overarching intervention areas was required, both generally and with specific reference to Vila Real, creating levels of intervention. This phase aimed to provide a robust foundation for subsequent analysis,

offering insights into the programme's multifaceted dimensions. The examination of these programmes and their implications on ACA's evolution sets the stage for a comprehensive evaluation of the urban regeneration process in Vila Real. From now on, the following terms on Table 1 will be used in this research.

Table 2.
Case Studies (STCAs) and respective Project Programme Objectives (PL3).

STCA1 – Ílhavo Jardim Henriqueta Maia, Ílhavo
- Redesign circulation areas
- Redefine and enlarge green areas and vegetation
- Modernize and improve urban equipment and facilities
- Preserve historical identity
- Redesign environment for cultural activities for leisure and socialization
- Reduce circulation area for automobiles
- Create cycle lane

STCA2 – Torres Novas Terreiro de Santa Maria and surroundings, Torres Novas
- Improve traffic on urban routes
- Sociocultural development
- Return historical significance of route
- Musealization of Terreiro and church ruins
- Accessibility and repaving
- Install urban equipment
- Framing significant buildings
- Light and landscape design
- Infrastructure to support local market
- Changes in automobile circulation and creation of parking lots
- Smart city policies

STCA3 – Aveiro Largo do Rossio and surroundings, Aveiro
- Redesign creating multipurpose culture, leisure and socializing environment
- Decrease area for automobile circulation
- Sidewalk widening
- Creation of cycle paths
- Green areas and vegetation widening

STCA4 – Barcelos Largo Dr. José Novais, Barcelos
- Environment rehabilitation for cultural, leisure and socializing activities
- Improve the environment to support local market and local dynamics
- Conditioned automobile access
- Create green areas

STCA5 – Cartaxo Rua Serpa Pinto and Largo São João Batista, Cartaxo
- Incentivising local market
- Repaving
- New regulation for automobile circulation

STCA6 – Samora Correia Praça da República and Largo João Fernandes de Prata, Samora Correia
- Improve pedestrian and road traffic
- Parking rearrangement
- New automobile circulation regularization
- Environment regeneration creating and socialization areas and socialization areas
- Improve and redesign green areas and vegetation
- Repaving

Source: *Own elaboration*

Case Study and Trivalent Approach

Francis (2003) defines case study methodology as a well-documented and systematic examination of the process, decision-making, and outcomes of a landscape project or issue, informing future practices, policies, theories, and education. This method is well-suited for evaluating outdoor environments and relies on comparative analysis of diverse cases linked by typological, thematic, or locational attributes. It is particularly pertinent for investigating intricate phenomena and addressing context-specific matters in landscape architecture.

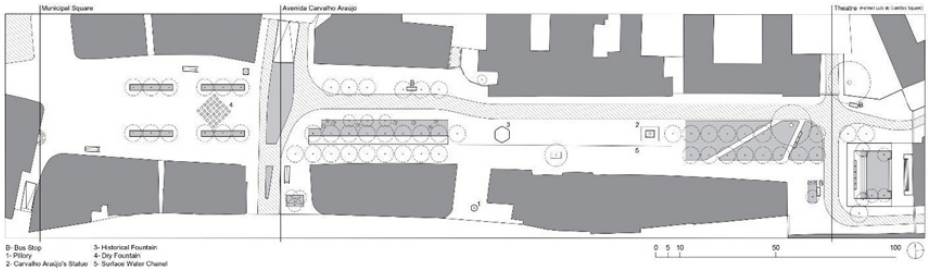
Several Portuguese cities underwent urban interventions financially supported by PEDU. The case study selection aimed to identify urban regeneration projects that could be compared to ACA for detailed examination. The selection process involved the following criteria:

1. The intervention must fall within the ambit of PEDU's PARU.
2. The city in question had to be of a small or medium size.
3. The intervention needed to be located within Historical Zones and marked by a requalification of these historical areas.

Regarding city size, Souza et al. (2007 as cited by Oliveira & Soares, 2014, pp.126-127) defines medium-sized cities with populations ranging from 20,000 to 100,000 inhabitants. Historical centres, as characterized by Sebastião (2010), represent the oldest sections of a city that have evolved into the heart of a modern city. Demarcating historical centres tends to be more straightforward in small cities and more intricate in larger cities which are marked by numerous urban settlements from the 19th century (Cávem, 2007).

Six municipalities were chosen only where all three criteria were identified: Ílhavo, Torres Novas, Aveiro, Barcelos, Cartaxo, and Samora Correia (Table 2). These cities, like ACA, underwent PEDU interventions. However, specific and complete information about each programme was not always available necessitating inquiries through letters to each municipal council. Despite reaching out to several cities, only Maia, Seia, and Benavente (responsible for Samora Correia) responded with the requested documents within the available time frame. Subsequently, the case study project programme was compared with the PEDU PARU general objectives. In understanding the technical decisions in the main designer's master plan, a meticulous analysis included layouts, diagrams, drawings, blue-prints, project descriptions, and sketches. This comprehensive approach facilitated an in-depth exploration of creative processes, enabling meaningful comparisons and integration with other analytical methods.

Figure 1
Illustration of the ACA project objectives by using the General Plan of the ACA Project (plant drawing).



Source: *Own elaboration*

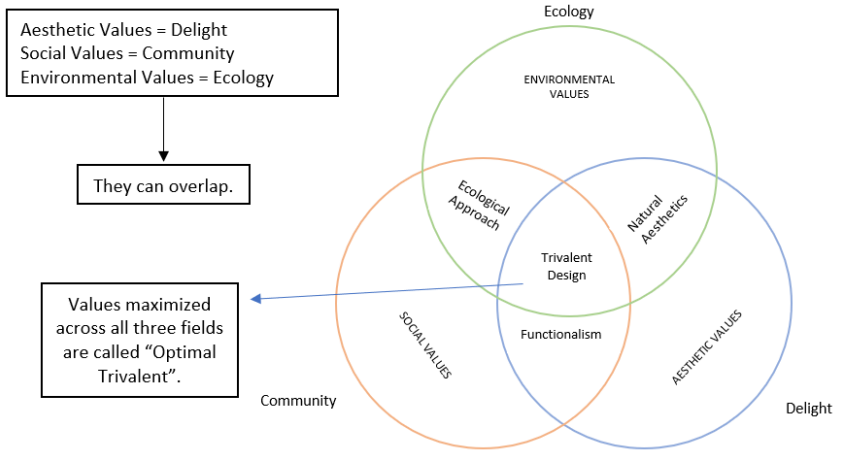
The case studies were analysed with the Trivalent Approach methodology (Figure 1). Ian Thompson (2002) introduced the Trivalent Approach, a comprehensive framework for evaluating outdoor areas.

This approach assesses outdoor spaces along three dimensions: Aesthetic, Social, and Ecological values. The success of an environment or design relies on the optimal presence of these values. Manifestations can be univalent, bivalent, or trivalent designs. Univalent designs represent a single value, which may or may not be optimal (e.g., Aesthetic, Social, or Environmental Models). Bivalent designs combine two values, such as aesthetic-social or environmental-aesthetic. Trivalent designs include uneven trivalent (varying intensities of all three values), even trivalent (balanced expression of values), and optimal trivalent (maximized Aesthetic, Social, and Ecological values) designs (Appendix 4).

In order to analyse alignment across distinct levels, it was essential to understand and assign values to the fulfilment of PEDU objectives. A group of landscape architects received a Table with the objectives in order to give each trivalent approach attribute points from 0 to 5. Afterwards, the landscape architects compared their results to generate a final table with average points. This final table was used to compare the ACA and the case studies regarding the PL3 objectives.

In parallel, another table was used to analyse if ACA and the case study municipalities proposed solutions to attend to PL1 objectives. Based on that information, a star system evaluated the strength of the relationship between the PL1 (PEDU objectives) and PL3 (PEDU municipality objectives), where 1 star meant a very low relationship for that objective and 3 stars meant a meaningful relationship.

Figure 2.
Trivalent Approach.



Source: *Own elaboration*

Finally, a third table was used to analyse which of the ACA municipality objectives (PL3) were also addressed by the other cases and then a radar chart was made using Excel to compare fulfilment across cases (Appendix 4).

Interviews

The interviews involved two key figures from the ACA Project: the chief designer overseeing the urban design plan and the alderman of Vila Real, municipality delegate responsible for presenting the initial programme to the design team. These individuals were chosen for their unique insights and comprehensive perspectives on various intervention phases.

The script comprised five questions, with slight variations based on respondents' initial responses. This inquiry served as a valuable instrument for gaining insights from both interviewees regarding ACA's significance for the city and its residents, the rationale behind the new urban layout—validating its inclusion in the PEDU initiative—its historical evolution, and the reasoning underpinning the project's ultimate design.

Table 3.
Programme Level 1 objectives.

PEDU 8 - Regeneration of public spaces if related to surrounding buildings
PEDU 9 - Demolition of buildings to create public spaces
Demolition of buildings for green recovery and expansion
Regeneration of abandoned buildings and places
Development of actions for urban area management and revival
Development of actions to promote economic activity
Development of actions to enhance the value of urban space
Development of actions to encourage mobilization of local community

Source: *Own elaboration*

RESULTADOS

Document Review

A comprehensive database was established, including a list of Progrmme Level 1 (PL1) objectives for the PEDU programme (Table 3). The table represents a compilation of information from all municipalities providing a list of programme objectives. The table does not encompass all PEDU objectives (PL1), excluding those irrelevant to external environments or the primary focus of this research.

A Case Study and Trivalent Approach

The ACA project falls under the category of draft planning, according to Lourenço's (2003) classification. Unlike territorial plans, draft planning undergoes a conformity evaluation using a criteria checklist which enables assessment from a technical-rationalist perspective.

The analysis of the relationships between the programme objectives (PL3) and various case studies, including ACA, provides a comprehensive understanding of how municipality objectives align with the overarching goals of the PEDU framework (PL1). This evaluation aims to examine the extent to which different projects have achieved PEDU's strategic priorities focusing on urban regeneration, economic development, and environmental sustainability.

The findings indicate that the most widely met objectives across the plans were related to the regeneration of public spaces, urban revitalization, and economic activity enhancement (Appendix 1). Both ACA and the case studies demonstrated a strong commitment to urban requalification prioritizing accessibility improvements, sustainable mobility solutions, and the preservation of cultural heritage. ACA, in particular, focused on enhancing pedestrian and cycling infrastructure, improving urban connectivity, and fostering more inclusive and dynamic public space (Appendix 2).

In contrast, objectives associated with the demolition of buildings to create public spaces and the expansion of green areas were less prominent among the case studies. This suggests that urban regeneration strategies primarily centred on requalification rather than radical physical transformations. Additionally, community engagement varied across the projects, with some interventions demonstrating greater involvement of local populations in the planning and utilization of renewed spaces.

The comparative assessment of case studies further revealed that most projects, including ACA, were more strongly aligned with social and accessibility-related objectives, while ecological considerations played a comparatively secondary role (Appendix 3). This highlights an opportunity for future interventions to place greater emphasis on environmental components, such as increasing green spaces, improving air quality, and implementing sustainable design solutions (Appendix 4).

Regarding project scope, certain case studies addressed a broader range of objectives while others adopted more focused approaches. The ACA displayed significant alignment with PEDU's overarching goals, particularly in accessibility and urban requalification. However, the distribution of efforts indicates that the primary focus remained on mobility and inclusivity rather than high-impact environmental interventions.

In conclusion, this evaluation underscores the effectiveness of ACA and other case studies in meeting programme objectives (PL3), demonstrating a clear commitment to urban revitalization and quality-of-life improvements. Nevertheless, future urban regeneration initiatives could benefit from a more balanced integration of social, aesthetic, and ecological dimensions, ensuring that projects are not only accessible and functional but also environmentally sustainable and resilient over time.

Interviews

During the interviews, many relevant points were made about urban planning and the implementation of ACA plan. Firstly, the alderman confirmed that the PL3 objectives were set by the municipality using the PL1 as guideline but adapting to Vila Real's circumstances. The alderman outlined the urban regeneration plan was a crucial point for the strategic planning, considering the importance of revitalizing public spaces inside consolidated cities, but is still facing universal accessibility issues.

When asked about the main objectives of ACA plan, the alderman clarified that the place's rehabilitation was a necessity due to inability of Avenida Carvalho Araújo (ACA) to attend to the new values of modern cities, e.g. the reduction of automobile traffic, climate change mitigation and the promotion of urban living experience. Thus, the ACA plan aimed to bring people back to the streets and improve the city's quality of life.

Regarding the suitability of PEDU (PL1) and programme (PL3) objectives, the alderman claims that the draft programme was favourable and well-aligned allowing them to shape specific aspects for each urban intervention. Accessibility and sustainability were also mentioned as the plan's priorities within an approach focused on promoting soft means of transportation, e.g. bicycling and walking, whilst ensuring comfort and safety for pedestrians, especially elders.

Another point that was emphasized was the creation of new green areas and a great central plaza with high-quality materials and the addition of more trees, valuable aspects to promote the place's usage according to the chief-designer. They outlined the accessibility and attractiveness of the "new ACA" as a major objective. The chief-designer considered the implementation of the ACA plan successful, insisting it was implemented according to the plan, without significant issues or changes. They expressed personal satisfaction with the results highlighting the ACA plan as a leap forward in the urban quality of the city.

DISCUSION

The research results highlight that ACA as an urban regeneration plan met most objectives from PEDU (PL1) and programme (PL3) levels. The adjustment of PEDU general objectives to the local situation carried out by Vila Real proved effective and shaped a plan that is aligned with the city's specific needs. The base programme (PL4) objectives developed by the main architect designer team have also reflected project programme (PL3) objectives despite some implementation challenges. In addition, the interviews with key-persons reinforce this perspective, highlighting the consistency among the different Project Levels and the results that were obtained.

A cross-analysis of objectives from different PEDU levels of intervention displays a significant coherence between planning and execution. As attested by the interviews the programme objectives (PL3) were formulated to attend to local demands such as accessibility, sustainable mobility and better public spaces, i.e. the municipality's prioritization for revitalizing public areas aiming to improve universal accessibility, a fundamental aspect emphasized by the alderman. In spite of this, some challenges, like the standardization of commercial facades, point to limitations in commitment from local stakeholders. This conjunction was especially effective in the implementation of solutions for mobility and to promote the usage of renewed areas.

The comparisons between ACA and other case studies showed that ACA is a standard case regarding PEDU. The variations of ACA and case study attributes allowed an evaluation of social, aesthetic and ecological values, showing ACA is the fourth case of trivalent balance after case studies 3, 1 and 4 respectively (appendix 4). The Trivalent Approach resulted in higher social values for ACA, reflecting the ACA focus on mobility and accessibility for pedestrians as opposed to other case studies which highlighted a balance among the three values. With this in mind, future ACA interventions should seek stronger integration of ecological values.

The ACA project implementation was evaluated positively, having significant achievements in building more green areas and promoting sustainable mobility. As outlined by Vila Real's alderman, the plan was very successful turning ACA into a more accessible place and more appealing to pedestrians. However, some planned elements like automobile traffic management and the standardization of commercial building facades were not fully implemented. The chief designer mentions that these constraints were connected to issues with engagement and adherence of local merchants. Nevertheless, both key-persons interviewed agreed that the ACA project represented a "leap forward in urban quality" for Vila Real.

Despite the breakthroughs, the challenges that were identified point to the importance of better communication with the local community and stakeholders. Particularly, the difficulty of controlling automobile traffic and standardizing commercial elements suggests future interventions with clearer incentivization and better engagement strategies. Another essential aspect was the need for better detailing of base programme objectives (PL4) for teams to work with clearer and more specific guidelines. This could help minimize gaps between planning and implementation.

These research findings support existing literature about the importance of considering local identity and sustainability in urban regeneration plans. Tajani et al. (2023) outline the importance of requalification of historical areas to strengthen the emotional bond with the local community (an important aspect in ACA). Using the Trivalent Approach (Thompson, 2002) emphasized the importance of balance among the three values in urban planning.

CONCLUSIONES

Finally, to improve prospective interventions, community engagement is recommended, promoting wider enquiries with locals and shopkeepers from the beginning of planning and strategies of encouragement offering financial and tax support to ensure better adhesion from stakeholders. Also, setting mechanisms for monitoring and evaluation after plan implementation to help adjust objectives as needed. This discussion reinforces the role of PEDU to promote urban regeneration and the importance of understanding local dynamics to achieve the success of intervention plans.

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APPENDIX

Appendix 1.

Case Study fulfilment of PEDU Level Objectives (PL1).

		Case Study						
Cod.	Programme Level 1 Objectives	STCA 1	STCA 2	STCA 3	STCA 4	STCA 5	STCA 6	ACA
PL101	Regeneration of public spaces if related with surrounding areas	***	***	*	***	**	**	***
PL102	Demolition of buildings to create public spaces	*	*	*	*	*	*	*
PL103	Demolition of buildings for green recovery and expansion	*	*	*	*	*	*	*
PL104	Regeneration of abandoned buildings and places	***	***	**	***	***	***	*
PL105	Development of actions for urban area's management and revival	***	***	***	***	***	***	***
PL106	Development of actions to promote economic activity	**	***	***	***	***	***	***
PL107	Development of actions to enhance value of urban space	***	***	***	***	***	***	***
PL108	Development of actions to encourage mobilization of local community	**	**	***	***	***	***	***

Source: Author's own elaboration

Appendix 2.

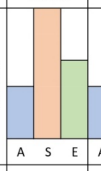
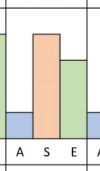
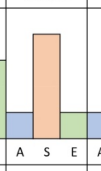
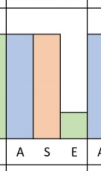
Case Study fulfilment of PEDU Level Objectives (PL1).

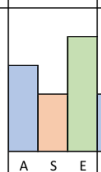
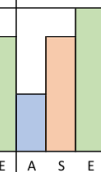
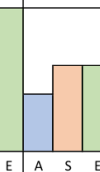
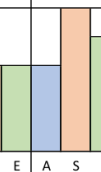
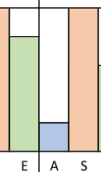
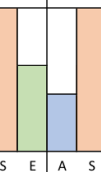
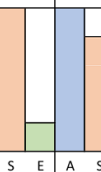
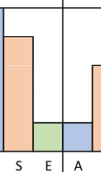
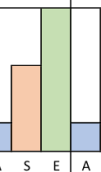
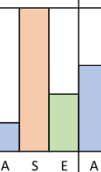
		Case Study						
Cod.	Programme Level 3 Objectives	STCA 1	STCA 2	STCA 3	STCA 4	STCA 5	STCA 6	ACA
PL301	Improve accessibility and urban mobility	x	x					x
PL302	Limit automobile access	x		x	x			x
PL303	Reset road access		x			x	x	
PL304	Improve commerce		x		x	x	x	x
PL305	Create solutions for cycling mobility	x		x			x	x
PL306	Improve urban furniture	x	x					
PL307	Requalify urban elements that contribute to city's historical identity	x	x					
PL308	Improve pedestrian traffic			x		x	x	x
PL309	Place requalification to promote culture, leisure and recreation	x	x	x	x		x	x
PL3010	Create solutions for Parking		x				x	x
PL3011	Redefine existing green areas	x	x				x	
PL3012	Increase green areas and arborisation	x		x	x		x	
PL3013	Noise attenuation							x
PL3014	Smart city policies		x					
PL3015	Quality of life							x
PL3016	Improve user's health conditions							x
PL3017	Improve safety							x
PL3018	Lighting and Landscaping		x					
PL3019	Improve air quality							x
PL3020	Social cohesion							x
PL3021	Promote resettlement							x

Source: Author's own elaboration

Appendix 3.

Trivalent Approach Evaluation of PL3 objectives.

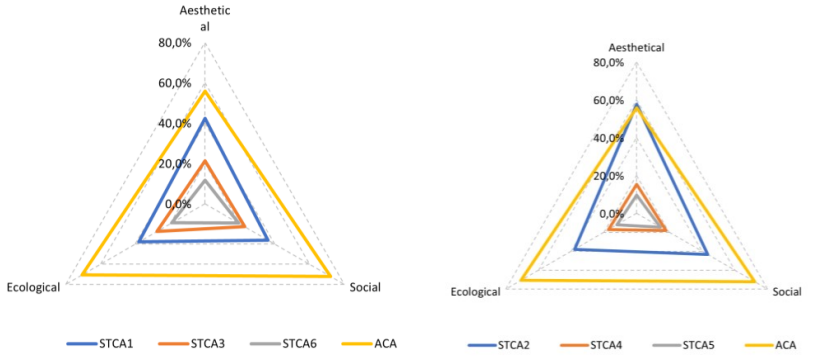
	PL3O1	PL3O2	PL3O3	PL3O4	PL3O5	PL3O6	PL3O7	PL3O8	PL3O9	PL3O10	PL3O11
ALL PL3											
	A S E	A S E	A S E	A S E	A S E	A S E	A S E	A S E	A S E	A S E	A S E
ACA	x	x		x	x			x	x	x	
STCA1	x	x			x	x	x		x		x
STCA2	x		x	x		x	x		x	x	x
STCA3		x			x			x	x		
STCA4		x		x					x		
STCA5			x	x				x			
STCA6			x	x	x			x			

	PL3O12	PL3O13	PL3O14	PL3O15	PL3O16	PL3O17	PL3O18	PL3O19	PL3O20	PL3O21
ALL PL3										
	A S E	A S E	A S E	A S E	A S E	A S E	A S E	A S E	A S E	A S E
ACA		x		x	x	x		x	x	x
STCA1	x									
STCA2			x				x			
STCA3	x									
STCA4	x									
STCA5										
STCA6										

Source: Author's own elaboration

Appendix 4.

Radar chart comparing case studies and ACA.



Source: Author's own elaboration