

CIÊNCIAS SOCIALMENTE APLICÁVEIS E HUMANIDADES:

SABERES, PRÁTICAS E HORIZONTES DE INVESTIGAÇÃO

JESÚS RIVAS GUTIÉRREZ
CHRISTIAN STARLIGHT FRANCO TREJO
(ORGANIZADORES)

VOL VI



**EDITORA
ARTEMIS**

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PRÓLOGO

Las Ciencias Socialmente Aplicadas y las Humanidades constituyen campos privilegiados para la comprensión de las relaciones que se establecen entre sociedades, territorios, instituciones, culturas y sujetos. Al reunir diferentes perspectivas teóricas y metodológicas, permiten observar los fenómenos contemporáneos en múltiples escalas, desde grandes disputas geopolíticas y procesos de desarrollo territorial hasta experiencias particulares de vulnerabilidad, formación humana y producción cultural.

El sexto volumen de ***Ciências Socialmente Aplicáveis e Humanidades: Saberes, Práticas e Horizontes de Investigação*** reúne quince capítulos organizados en cuatro ejes temáticos: **Geopolítica, Territorio y Desarrollo Sostenible; Derechos, Género, Vulnerabilidad y Relaciones Sociales; Formación Humana, Ciencia y Responsabilidad Social; y Cultura, Historia e Interpretación del Conocimiento**. Esta estructura propone un recorrido que parte de cuestiones de alcance internacional y territorial y, progresivamente, dirige la mirada hacia las relaciones sociales, los sujetos y las formas mediante las cuales el conocimiento y la cultura son construidos e interpretados.

El primer eje aborda temas relacionados con la gestión y disputa de recursos estratégicos, la soberanía, el comercio internacional, la sostenibilidad urbana, la seguridad alimentaria, el desarrollo socioeconómico y la participación comunitaria. En diferentes contextos geográficos, los estudios evidencian cómo las cuestiones ambientales, económicas y políticas se articulan con la organización de los territorios y con las posibilidades de desarrollo sostenible.

El segundo eje aproxima el análisis a las relaciones sociales y a los desafíos vinculados con los derechos humanos, las desigualdades de género y las situaciones de vulnerabilidad. La violencia, la discriminación, la maternidad y la paternidad, el acceso a la justicia, la convivencia escolar, son abordados desde perspectivas que ponen de relieve la importancia de las instituciones, las redes de apoyo y las políticas de protección en la construcción de sociedades más equitativas.

En el tercer eje, la atención se dirige hacia la formación humana, la producción científica y la responsabilidad social. Los capítulos discuten la formación de científicos y profesionales, la necesidad de prácticas más reflexivas, sostenibles e inclusivas y la valorización de concepciones educativas capaces de reconocer al sujeto en su integralidad. Más que centrarse exclusivamente en los procesos de enseñanza, los trabajos reflexionan sobre la función social de la formación y sobre las responsabilidades éticas inherentes a la producción y aplicación del conocimiento.

Finalmente, el cuarto eje reúne estudios que exploran las relaciones entre historia, cultura, comunicación e interpretación. La estandarización tipográfica en el contexto

soviético y las controversias arqueológicas relacionadas con los relieves del antiguo Egipto muestran, desde perspectivas distintas, que todo conocimiento se produce a partir de contextos, evidencias y sistemas de interpretación que deben ser analizados críticamente.

Al reunir investigaciones provenientes de diferentes áreas y realidades, este volumen reafirma el carácter plural de las Ciencias Socialmente Aplicadas y las Humanidades. En común, los trabajos aquí presentados demuestran que comprender las transformaciones sociales contemporáneas exige articular escalas, reconocer la complejidad de los fenómenos y mantener abierto el diálogo entre distintos saberes, métodos y perspectivas.

¡Buena lectura!

Jesús Rivas Gutiérrez
Christian Starlight Franco Trejo

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TOWARD A SUSTAINABLE DOWNTOWN AMMAN: A CONCISE LEED-BASED STRATEGIC FRAMEWORK FOR THE AL-MADINA DISTRICT

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ABSTRACT: Major cultural values are located downtown Amman, the historic and administrative center of Al-Madina District, which is currently under growing sustainability stresses, such as the predominance of road cars, flooding hazards in the valley floors, an unregulated informal market and heritage practices set under the pressure of commercial overdevelopment in the district. This paper proposes a short-term strategic plan for sustainable redevelopment of Downtown Amman, tailored to three of LEED for Cities and Communities categories: Transportation and Land Use, Water and

Green Infrastructure, and Quality of Life and Governance, and adapted to challenges found through the site survey and SWOT analysis. Instead of striving for full LEED certification, or trying to undergo a broad multi-sector review, the paper specifically addresses those categories that will affect the problems in the area the most and for which interventions are being discussed: pedestrianizing King Faisal Street, improving drainage at flood prone intersections, formalizing Souq Al-Jum'a, and creating a car free cultural plaza. What is achieved is not a complete sustainability audit but an effective roadmap to a more concise set of actions.

KEYWORDS: Downtown Amman; Al-Madina District; sustainable redevelopment; LEED for Cities and Communities; heritage conservation; urban strategic framework.

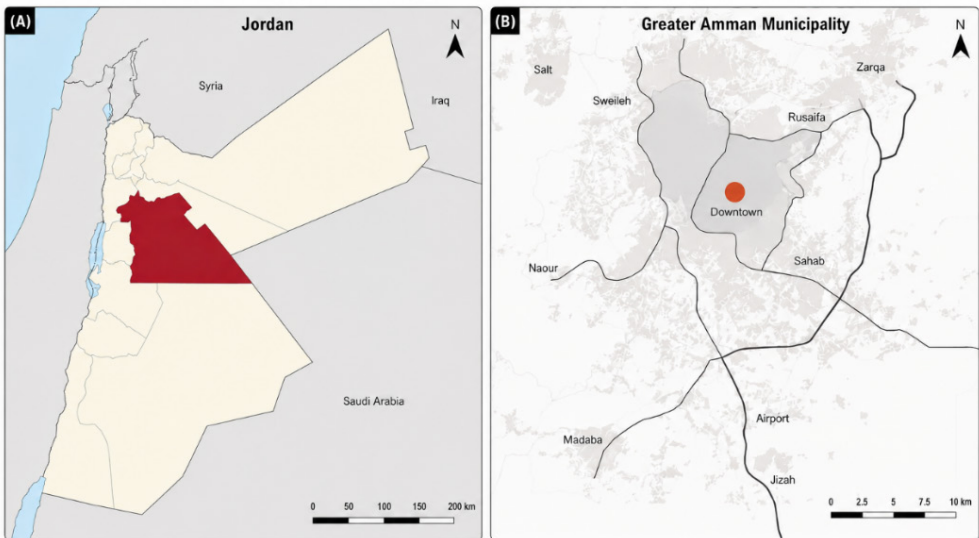
1. INTRODUCTION

Downtown Amman is located on a valley, functioning as the administrative center of the Al-Madina District of Greater Amman Municipality. Figure 1 shows the location of the city center on a map of Jordan and within the Greater Amman Municipality. Along with the Amman Citadel (Jabal Al-Qala'a), the Roman Theater and the Husseini Mosque, there are also an abundance of heritage landmarks

in the district, which also acts as an active commercial hub for the neighboring hillside neighbourhoods. This function as both historic fabric and working town center presents a particular challenge for redevelopment: interventions must contribute to the infrastructure of these complex towns without obscuring the historic character found here and essential for understanding the significance of the district. (Sharaf, 2023).

The site survey of the district has covered land use, building mass, traffic hierarchy, and SWOT assessment, revealing that the main sustainability issues faced by the district are focused on three main challenges: Mobility, Environmental performance and Commercial activity/Heritage protection. The present paper directly answers this question. The report does not provide a comprehensive literature scan on sustainability concepts, but only incorporates with LEED for cities and communities the categories that are relevant to the issues detected on the site and correlate them to interventions that have already been offered in the region. The result is set out with this purpose only in mind: to produce something practical, a strategic framework, not a comprehensive review.

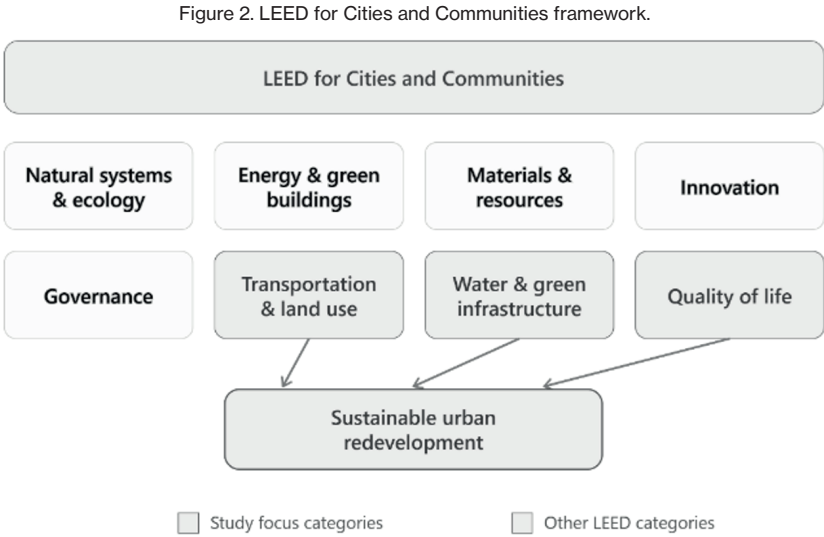
Figure 1. Location of the study area within Jordan and the Greater Amman Municipality.



2. LITERATURE REVIEW

According to the literature, urban sustainability frameworks designed using LEED concepts appear to be more effective when they consider the specific local conditions and not necessarily as a universal technical model. Urban sustainability rating systems increasingly translate abstract principles into measurable criteria (Sharifi and Murayama, 2013). LEED for Cities and Communities extends this logic citywide, spanning nine

domains (Alnsour and Alnsour, 2025). from natural systems and energy to governance and innovation—that together operationalize sustainability at municipal scale (Talen et al., 2013). Applying the full framework indiscriminately dilutes analytical focus, since categories vary in leverage over redevelopment outcomes (Garde, 2009; Smith, 2015). This study narrows attention to Transportation and Land Use, Water and Green Infrastructure, and Quality of Life—domains repeatedly linked to walkability, resource resilience, and equitable participation in urban redevelopment (Benson & Bereitschaft, 2020). Figure 2.



A systematic review of international urban sustainability assessment systems stresses on the need to “context customization of global targets into local actionable measures,” regulatory support and to pay more attention to the socioeconomic dimensions of sustainability (Pedro et al., 2019). In a similar criticism, Boschmann and Gabriel (2013) suggest that LEED can afford too much attention to certain relatively light green answers, and not enough to place-based and climate-responsive strategies, such as adaptive reuse. As a whole, these studies suggest that any LEED-action to improve an entire downtown area in Amman would inevitably have to involve the broader spatial, social and governance arena.

LEED-ND is a link between building certification and urban regeneration at the district level. Shawabkeh (2018) suggests that LEED-ND have “the potential to be a significant instrument in abatement of suburban sprawl and facilitating urban regeneration.” This is particularly relevant to Al-Madina district plans as it ensures sustainability in an urban design context, including walkability, density, mixed usage, quality of public realm and strategic reuse of existing urban fabric.

In Shawabkeh (2018) application of LEED-ND for evaluating the Sustainable Urban Design principles in Amman through a case study on Al-Abdali, the study culminates with “multi-faceted recommendations” for Amman Master Plan. In greater detail, Greater Amman is experiencing “vast urban expansion” (Haija and Potter 2013), as well as strains on urban infrastructure, water provision, agricultural land and urban standards resulting from fragmented territorial growth. According to Ebbini and Al-Assaf (2022), very little interest in LEED has been express among Jordanian developers. Meanwhile, Alawneh et al. (2019) find a positive correlation between LEED 2009 energy credits, the UN Sustainable Development Goals 7–9 and 12–13, thereby demonstrating that LEED – when anchored in local conditions – can play a significant role in national sustainable development. (Alnsour, 2025). In this literature review the most straightforward interpretation is that LEED is beneficial as a structure to inform a sustainable downtown planning approach, however, it is beneficial when viewed as a planning context rather than a checklist. For Downtown Amman, the literature indicates a combination of LEED-ND concepts and a district’s governance capabilities, urban morphology and social and infrastructural needs. This is still an early evidence body and a more focused follow up review would be good to further develop the Amman specific dimension.

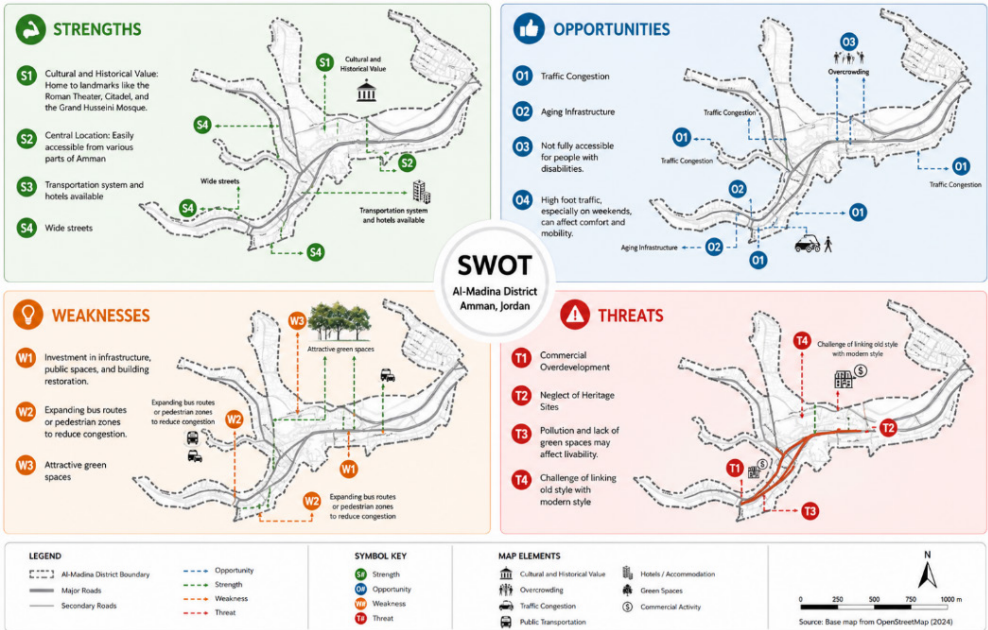
3. BASIS FOR THE FRAMEWORK

3.1. SITE EVIDENCE

The district’s nine constituent neighborhoods-Wadi Al-Suroor, Al-Hashimi Al-Janoubi, Al-Rujoum, Al-Muhajireen, Jabal Al-Joufeh, Al-Mudraj, Al-Adliyah, Wadi Al-Haddadeh, and Jabal Al-Qala’a-occupy hillsides that converge on a narrow valley floor carrying the historic commercial spine of King Faisal, Quraish, King Talal, and Basman streets. The commercial frontage prevails along this central axis while medium- to high-density residential development and public areas are located to the bournes and valleys on the hillsides, with public land around the Citadel and the Roman Theater. Building-condition surveys indicate a mixed spectrum of good, moderate and poor stock, which tends to be the poorest at the fringe of the commercial core. The traffic surveys validate this hierarchical list of one-way and two-way streets that are primarily used by informal coasters, buses and shared taxis, and that the hillside neighborhoods are linked by historic stairways such as Hashemiyah, Saqf Al-Sail and Court stairs, which have remained underutilized as formal mobility infrastructure. The SWOT assessment of the site also identified the same three themes. Traffic and surrounding pressure, ageing infrastructure, poor accessibility for people with disabilities etc. are the weaknesses faced by this, while

high heritage quality, central location, established transport and hospitality infrastructure etc. are its strengths. Its opportunities are in investment in infrastructure and expansion of pedestrian and green space; and its major threat is commercial overdevelopment, which may swamp its heritage resource and diminish its liveability. The rationale behind narrowing the framework to three LEED categories, instead of the entire rating system, lies in the convergence, which points towards the perceived challenges in the district being more related to issues about mobility, water cycles and governance of placemaking and heritage. As shown in **Figure 3**.

Figure 3. Spatial SWOT Analysis of the Study Area.



3.2. WHY A PARTIAL LEED ADAPTATION, NOT THE FULL FRAMEWORK

LEED for Cities and Communities breaks down sustainability performance into the categories: Transportation and Land Use, Water Efficiency, Energy and Greenhouse Gas Emissions, Natural Systems and Ecology, Materials and Resources, and Quality of Life (USGBC, 2021). Complete certification involves whole jurisdiction reporting and the governing body to oversee multi-year monitoring, which is not feasible or necessary for one historic district. Similarly, Diaz-Sarachaga et al. (2018) found that LEED-ND and Envision are problematic frameworks to utilize in developing country contexts; although they can be valid starting points, those frameworks must be intelligently adapted to reflect conditions in that locality. In this paper we have only followed that logic: the Energy and

Materials category was excluded, as it was not supported by evidence collected from the site.

4. PROPOSED STRATEGIC FRAMEWORK

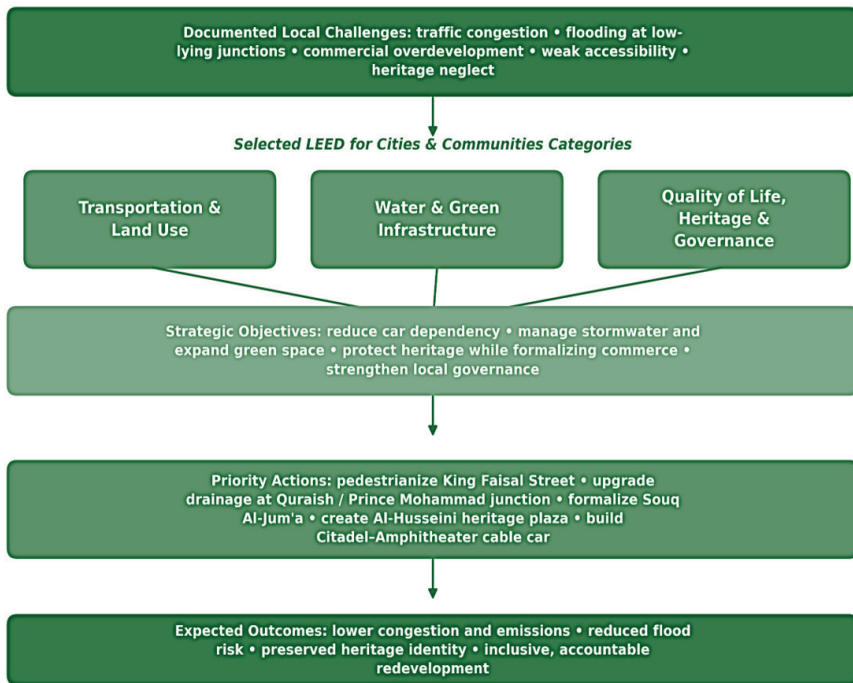
Table 1 cross-references the identified local issues with the LEED category, a potential intervention and what is hoped to be achieved with the investment. Specific strategies proposed within the plan reflect actions already determined for the district, ensuring that the plan and its recommendations remain focused and tangible.

Table 1. Mapping of Downtown Amman's challenges to LEED categories and strategies.

Local Challenge	LEED Category	Proposed Strategy	Expected Outcome
Traffic congestion and car-oriented streets (King Faisal, Quraish, King Talal, Basman) reduce walkability in the historic core	Transportation and Land Use	Pedestrianize King Faisal Street; formalize the existing pedestrian stairway network linking hillside neighborhoods to the valley floor	Lower congestion, safer pedestrian movement, stronger link between hill neighborhoods and the commercial core
Valley topography causes recurrent flooding at low-lying junctions (e.g., Quraish/Prince Mohammad Street)	Water and Green Infrastructure	Upgrade stormwater drainage at flood-prone junctions and introduce shaded green pockets along key corridors	Reduced flood risk, improved thermal comfort, enhanced streetscape quality
Informal weekly market (Souq Al-Jum'a) generates congestion, waste, and lost economic potential outside Fridays	Quality of Life and Governance	Convert Souq Al-Jum'a into a managed, multi-use urban market with zoned stalls and a weekly schedule	Cleaner, safer trading environment; extended economic activity; formalized informal economy
Risk of commercial overdevelopment crowding out heritage sites (Husseini Mosque, Roman Theater, Citadel)	Quality of Life and Governance	Create a car-free heritage plaza in front of Al-Husseini Mosque and connect the Citadel to the Roman Theater via a low-carbon cable car	Protected heritage character, increased cultural tourism, low-emission connectivity between landmarks

As shown in Figure 4, the elements are interconnected, with site-specific challenges driving the three LEED categories that guide the objectives, priority actions and expected outcomes.

Figure 4. Strategic sustainability framework for Downtown Amman (Al-Madina District).



It is suggested that a short phased sequence be implemented. In the short term, governance takes precedence, and particularly in the case of Souq Al-Jum'a, a coordinating body should be established to lead the reorganisation for the square, through cooperation with the municipality, vendors and residents, as projects in physical interventions are unlikely to be successful without this basis. Pedestrianisation of the King Faisal Street and drainage interventions at the flooding junctions are possible to be implemented in the medium term as pilot interventions as both are now in a proposal stage. The longer term prospects associated with the cable way linking the Citadel with the Roman Theatre can be assessed when the pedestrian/drainage pilots demonstrate an ability of the district to handle the greater numbers of visitors without damaging the residential neighbourhoods.

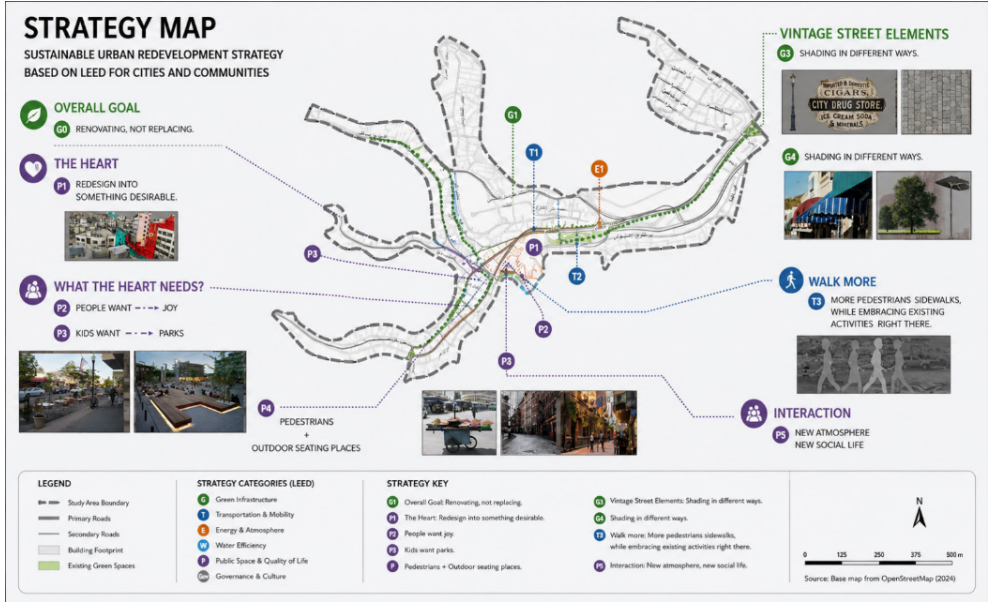
5. DISCUSSION

The restriction to three categories is no simplistic kind of thing, it's intentional. All of the district's identified challenges correspond well to any of the three pillars of Transportation and Land Use, Water and Green Infrastructure, and Quality of Life and Governance. Adding Energy and Materials would make it a very broad, but still not very relevant area, as the evidence at the site does not point to building energy performance as a significant

district concern. Similarly, the way also precludes many of the common pitfalls in heritage redevelopment of seeking physical investment – including plazas, pedestrianisation and new transport connections – without first securing the management – governance – to deal with the commercial pressures that pose a threat to the very same heritage on which the upgrades are to be made. This is a move to minimize that risk; to consider Quality of Life and Governance a core category and not a secondary consideration.

The primary constraint of this system is lack of quantified baselines and instead focuses on descriptive site survey data. Much of the work, such as drainage and traffic, would need survey study at Engineering level prior to implementation to adequately size intervention work. The framework must thus be seen as a strategic point of departure for coordination of interventions that are already proposed for the district and not as an alternative to the technical design work and each intervention still requires. Figure .

Figure 5. LEED-Based Sustainable Urban Redevelopment Strategy Map.



6. CONCLUSION

This paper translated three main categories within the LEED framework for cities and communities - Transportation and Land Use, Water and Green Infrastructure, and Quality of Life and Governance - into a concise strategic framework for Downtown Amman, rather than a wide-ranging sustainability literature search, and directly based on the city's local site survey and SWOT evidence. The drains will be upgraded at the places

where they are more likely to flood, and Souq Al-Jum'a will be formalised; the framework will be a short and action-oriented plan for the citizens to act on, rather than an exhaustive report. Future work should correlate and mark each proposed intervention with data at an engineering level as the intervention moves from strategy to design.

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