

Original Article

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Analysis of the current state of the compositional ensemble of Yerevan's central square: challenges and proposed solutions

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Abstract: This article explores contemporary challenges related to the spatial environment of public squares, focusing specifically on the architectural ensemble of Yerevan's Republic Square. It assesses the square's current state by highlighting critical issues and synthesising approaches developed across various stages of its development. The methodology combines archival research, on-site surveys, and comparative evaluation of historical and recent proposals. The study identifies the square's principal spatial, circulation, and aesthetic problems, analyses their underlying causes, impacts, and risks, and compares them with the solutions previously advanced. Findings reveal that many long-recognised issues remain unaddressed because the project still lacks a clearly formulated set of objectives to guide coordinated redevelopment. Accordingly, the article formulates a hierarchy of priorities and outlines strategic directions for implementation. These recommendations provide a workable framework for multi-level planning in Republic Square and the adjacent "Small Centre" area, while contributing to the broader discourse on designing and managing architectural ensembles of public squares.

Keywords: Yerevan Republic Square, architectural ensemble, compositional unity, visual perception, symbolic significance

1. Introduction

The modern city square, with its unique functional purpose and architectural significance, traces its origins to the ancient period. Early forms of squares included Greek agoras and Roman forums [1,2]. Like all urban public spaces, squares have evolved over time [3], undergoing significant functional and compositional transformations through different historical periods – Ancient Greece and Rome, the Middle Ages, the Renaissance, Baroque,

and Classicism – eventually reaching their present-day forms [4]. Throughout history, squares have played a vital ideological and functional role in urban life, shaping the image of cities and serving as cultural and administrative hubs, centres of public and social life, while also acting as compositional points that influence the city's overall image [3,5-11].

In today's cities, squares, like other major public spaces, face several challenges: globalisation and technological advancements have reshaped some aspects of public life [7,8,12], leading to changes in social interactions and reducing individual and local identity [8,12-16]. As a result, the functional richness of many squares has decreased. In this context, the central square of Yerevan, Republic Square, holds a special place. It was conceived not only as the city's administrative and social hub but also as a significant emblem of the nation's revival and its capital. Over the years, it has set the standard for urban scale and has become a model at all compositional and artistic levels of Yerevan's development. However, in recent decades, the square's original purpose and quality have diminished, primarily due to the prioritisation of private interests over public ones and a general neglect of vital urban issues. Factors such as the privatisation of many buildings, rapid development in adjacent areas, lack of clear urban planning guidelines, and administrative oversights have led to a weakening of the square's role in the city's identity and urban life. It has lost its architectural influence and its traditionally diverse functions, and has been transformed into a public transit hub, reflecting trends seen in many squares worldwide [8,17-19]. This trend is concerning and requires immediate action. Conversely, amid efforts to rejuvenate community, strengthen civil society, address socio-economic challenges, and reinforce the state – particularly relevant in Armenia's current context – restoring Republic Square's symbolic significance, enhancing its diverse attributes, and revitalising its public life are crucial [15,20,21]. In the current situation, it is clear that focused analyses are needed to address these challenges and restore the qualities of the city's and state's iconic space – an endeavour to which this work is dedicated.

The approach to this study was grounded in a review of literature sources on issues related to the topic. These issues were considered along the following dimensions: the history and formation of squares and their development process [1,3]; ideological significance and functional purpose [3,5-9]; challenges facing modern urban squares and other large public spaces [7,8,12]; shifts in social interactions, the diminishing of individual and local identities, and the impoverishment of the square's functional essence [8,12-15]; the square's declining role and functional diversity within city architecture, and its transformation into a transit hub [8,17-19]; issues surrounding the restoration of the symbolic significance of squares and the revival of vibrant activity [15,20,21]; and the history of the formation of Yerevan's main square, the compositional nuances of the complex, the architecture of the buildings, and form changes [22-24]. Among the few studies dedicated to the history of Yerevan's main square, a book by M. Grigoryan, co-author of the architectural complex, stands out for detailing the stages of its emergence and formation [25]. Notably, E. Tigranian's articles address planning and compositional concerns for the square [26-28]. Other references to Yerevan's main square can be found in the works of V. Harutyunyan, M. Hasratyan, A. Melikyan, K. Hovhannisyan, A. Grigoryan, H. Isabekyan, R. Israelyan, M. Mazmanyanyan, L. Dolukhanyan, and E. Papyan, among others [29-38]. G. Rashidyan's analytical study [39] is particularly notable for its detailed examination of the architectural aspects of the complex and its focus on specific issues, emphasising the importance of prioritising development. In certain cases, such as addressing the square's scale, the study proposes scientifically grounded solutions. The compositional and transformative aspects of the square during the Soviet period have been explored by Zh. Sagaryan and H. Dheryan [40], specifically concerning its design and construction. However, especially in recent decades, there has been a noticeable lack of

coordination, analysis, and assessment regarding conceptual proposals for Yerevan's Republic Square. In general, this body of literature does not fully summarise the current problems. In this context, the aim of this paper is to assess the current state of the compositional ensemble of Yerevan's central square by identifying recent challenges and synthesising proposals developed at different times.

While this study emphasises architectural and compositional considerations, these are viewed within the broader framework of the square's symbolic significance, functional structure, and traffic organisation. This work attempts to address the following questions:

- What specific problems have emerged within the square ensemble over time, and what have been their causes?
- What consequences have these issues led to, and what risks have they posed?
- What proposals have been made for the square's development, particularly in addressing these issues?
- What questions remain unanswered, and how feasible are the proposed solutions?

The methodology adopts a structured approach, encompassing the following steps: an examination of the square's historical development and its current state; identification of key issues; coordination of proposals made during various development stages; and the generalisation of findings through discussions, posing questions, and analysis. The study is organised into four sections. Part One provides a historical overview of the square's evolution, detailing its origins, chronology, ideological elements, structures, architectural features, deviations from the original urban planning concept, and environmental changes. This section underscores the need to address specific challenges within the square's compositional ensemble. Part Two explores present-day challenges within the ensemble, grouped into key areas: spatial organisation and formation, traffic organisation, visual perception and aesthetics, and relevance to purpose. A synthesis of these issues highlights the need to review past conceptual proposals for solutions to the square's key issues. Part Three analyses the ideas, proposals, and design developments from different phases of the square's evolution. This includes the reconstruction efforts of 2003, outcomes from reconstruction conceptual tenders, and various proposals such as those concerning the Lenin monument site, the incomplete Government House tower, the House of Culture (now the National Gallery of Armenia), and the central section of the square. Ideas for subterranean urbanisation and creating an underground museum are also discussed. Part Four summarises the study's findings. The analysis reviews the following aspects: problems identified in the square's compositional ensemble and their generalisation; the underlying causes, impacts, consequences, and associated risks. It also examines the issues raised within conceptual proposals and evaluates the practicality and effectiveness of the proposed solutions. The analysis concludes by assessing the entirety of conceptual suggestions and challenges identified in this study. The research confirms that the various problems align with a larger issue: a disruption in the square's compositional cohesion. It is also evident that many questions related to these proposals remain unaddressed, with a common solution lacking due to the absence of a clear, specific objective. The study underscores the importance of prioritising future steps for developing the square's structural integrity.

This paper includes a collection of graphic materials to support its textual content. The authors captured photographs to document the square's current state and challenges. Archival images were sourced from the websites of MediaMax, Armenpress, and Old Yerevan, as well as from architect A. Karapetyan's collection, which includes archival drawings, 3D models, photographs, and sketches. Additional materials were drawn from literature sources [32,38,25] and various issues of *Architecture of the USSR* magazine published during the Soviet era. The 2013 tender proposals were obtained from the websites of MediaMax,

ARCHcoop Architectural Studio, and Mossessian & Partners design office, as well as from the archives of the Tamanyan National Museum-Institute of Architecture. The remaining design proposals were obtained from the archives of A. Zurabyan and S. Kyurkchyan, and from G. Rashidyan's work [39].

2. Results and discussion

2.1. Analysis of the existing situation

Before delving into the current state of the compositional ensemble of Yerevan's central square, it is essential to outline the historical context of its development. This includes examining its formative prerequisites, chronological milestones, ideological influences, architectural features, deviations from the original design, and environmental changes. The analysis is organised thematically, addressing key aspects such as the work of the complex's author, the city's 1924 general plan, transformations during the post-Tamanyan period, the components of the square's ensemble, and developments in the post-Soviet era.

2.1.1. Alexander Tamanyan, Yerevan's 1924 general plan, and the city's compositional changes in the post-Tamanyan period

Alexander Tamanyan is regarded as one of the greatest masters in the history of Armenian architecture. In July 1919, after nearly a quarter of a century of active creative and socio-organisational work in St Petersburg, he arrived in Armenia under harsh wartime conditions, determined to contribute to his homeland, which was in dire straits [41]. However, two years later, following the establishment of Soviet power in Armenia, Tamanyan left the country with his family, moving to Tabriz, and returned to Yerevan only in 1923 [22]. During the 1920s, alongside Tamanyan, architects N. Buniatyan, D. Chisliyeu, N. Bayev, and A. Zakiyev also gained recognition for their work in the Russian Empire [42].

On 3 April 1924, the Council of People's Commissars of Armenia approved the general plan for the capital, devised by Academician Tamanyan [22]. Yerevan aspired to become a truly national city, symbolising a revitalised Armenia. In two significant buildings designed by Tamanyan – the Assembly House (Opera and Ballet House) and the Government House – there is a visible effort to blend elements of ancient Armenian architecture with the surrounding environment and the natural characteristics of the materials [43]. By studying and assimilating the distinctive features and beauty of Armenian architecture, he skilfully laid the foundations of a national Soviet-Armenian architectural style [44]. In 1935, Tamanyan was tasked with developing a second project for the plan of Yerevan, known as “Big Yerevan,” but he did not have the opportunity to complete this work. After his death, the Yerevan City Council assigned the development of the new project to Lengiprogor (Prof. I. Malozemov, N. Zargarian, and S. Klevitsky) [29,45]. As noted by architect E. Tigranyan, Tamanyan's primary historical mission was to advance the continuous development of Armenian architecture and to conceive the idea of establishing the Soviet-Armenian architectural school [27].

Yerevan's 1924 general plan. When Tamanyan first moved to Armenia, he began his work as an urban planner, eventually focusing on planning entire cities and small towns. His most significant urban planning project was the plan for the capital, Yerevan, which he worked on until his final days [30]. Rather than working with a vacant, undeveloped area, he integrated the city's existing rectangular street grid, small neighbourhood developments, and several notable buildings from the old city [39]. Essentially, this was a reconstruction project

[26] (Fig. 3, 3.1). It aimed to radically transform the city centre while preserving the historical alignments of the main streets and architecturally valuable monuments [26]. Tamanyan employed classical planning principles in composition, which is particularly evident in the design of the city's central square [25]. Its structure revolves around a central axis running north to south, which links a sequence of squares, streets, and avenues [46]. Tamanyan's design incorporated three interlocking rings: the outer ring consisted of green hills framing the city; the middle ring featured a "boulevard" nestled within the horseshoe-shaped circular streets; and at the core was the oval-shaped Lenin Square. The layout was further enriched by the classical technique of two intersecting diameters: the longitudinal axis passed through Lenin Square (aligned with its minor oval axis) and connected four key city squares – the city entrance square, Shahumyan Square, Lenin Square, and Theatre Square. The transverse axis, or "Main Avenue," intersected tangentially with the square [34]. Together, these squares and boulevards formed the framework for central Yerevan's urban development [25]. The main plan of Yerevan, conceptualised as a model of an "ideal city," incorporates urban and park planning principles that were popular at the time [23] (Fig. 1).

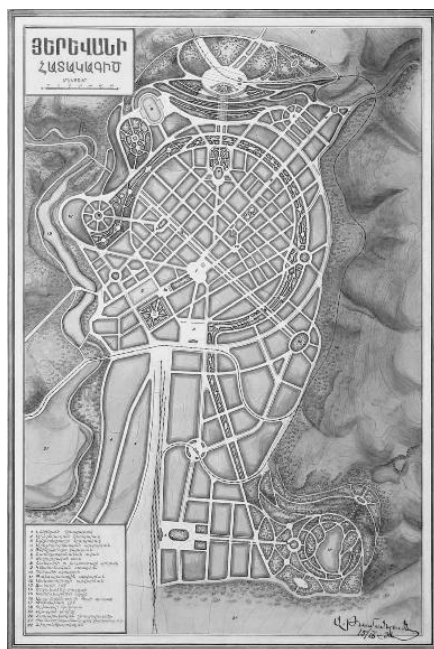


Fig. 1. The 1932 General plan of Yerevan (architect Alexander Tamanyan)

City's Compositional Changes after Tamanyan's Death. Following Tamanyan's death and the arrest of N. Buniatyan, the chief architect of the capital, significant shifts occurred in the ideology of urban planning in Armenia [23]. During the late Stalin period, the language of Armenian architecture and the general plan for Yerevan, while still invoking Tamanyan's name, underwent transformations typical of totalitarian architecture, distorting the national significance of urban planning solutions [24]. The planned central vestibule tower, which was meant to dominate the square and direct the axis of Northern Avenue from the Opera and Ballet House toward Mount Ararat, was excluded from the Government House composition [22] (Fig. 9, 9.2a). As a result, the square lost its importance as a symbol of Armenian statehood [23]. The previously diagonal, asymmetrical composition of the square

was replaced by a symmetrical layout, with the Government House mirrored along the longitudinal axis and the Lenin monument and House of Culture placed along the transverse axis. According to Tamanyan, several visual axes radiated from the square itself, one of which pointed towards Mount Ararat. The two volumes that surrounded it were covered with an arch, reducing the view. However, the view of Ararat was ultimately obstructed by a large building, removing it from the overall structure of the square [22]. The final step in altering Tamanyan's plan was the construction of a new public centre in Yerevan. Far from all Tamanyan structures, on both sides of Baghramyan Avenue, the buildings of the Central Committee of the Communist Party of Armenia (now the National Assembly), the Presidium of the Supreme Soviet (now the presidential residence), and the Academy of Sciences were erected. Following the completion of the new public complex, the role of the central square – the most essential element of Tamanyan's plan – was significantly diminished [22]. The diagonal axis connecting the city's dominant features – the Government House and Assembly House – was also removed. The final alteration to the national features of the layout was the installation of a monument to Stalin on the northern hillside overlooking the city along the axis of Stalin Avenue (now Mashtots Avenue), effectively shifting the urban composition's development perspective in a direction opposite from Ararat. Thus, Tamanyan's general plan for Yerevan, the crowning achievement of modern Armenian urban planning, was transformed from a national to a totalitarian vision [23].

2.1.2. Yerevan's Central Square and components of the complex

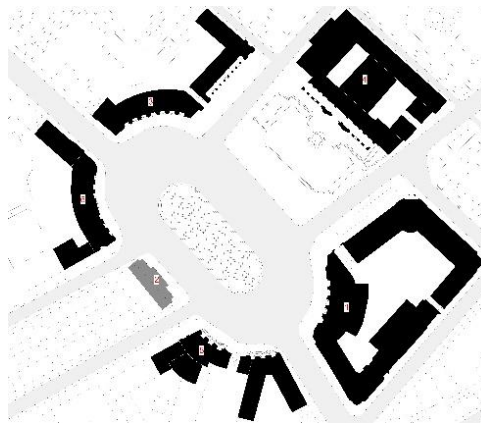


Fig. 2. Yerevan's Main Square Master Plan – 1. Government House; 2. Monument to Lenin; 3. Government House 2; 4. House of Culture (now the National Gallery of Armenia); 5. Communications and Trade Union Building; 6. Armenia Hotel (now Armenia Marriott Hotel).

Yerevan's Main Square (Fig. 2). In the pre-Soviet period, Yerevan had three main commercial squares [25]. The large traditional market square, located between the Fortress and the Blue Mosque, served as Yerevan's business hub and featured a market [47]. Additionally, there were secondary squares, including Panakhan Square (now Sakharov Square) and Damirbulagh Square, where the market and stalls lined the banks of the Getar River [25]. In the city plan designed by Tamanyan, two central squares were envisioned, interconnected by Northern Avenue [48]. At the heart of this design was the main administrative and public square, which was to be named after V. Lenin [49]. The square's compositional structure was based on two intersecting axes. The longitudinal axis of the oval section aligned with Amiryan Street, while the transverse axis ran between Abovyan and

Nalbandyan Streets, coinciding with the axis of Shahumyan Park [39]. The square itself was designed as a combination of two merged oval and table-shaped spaces. Radial streets extended from the southern part of the square, with a central boulevard flanked by streets on either side of the transverse axis and two diagonal streets, one of which faced Mount Ararat [39]. This urban design can be characterised as a “space in architecture,” where the buildings surrounding the square define the area, with no single structure standing out [39] (Fig. 3, 3.7).

Government House (Fig. 2). As Tamanyan outlined the city's layout, he also began designing key structures, including the Zhoghtun and the Government House. The latter influenced the architectural direction of the entire square [33]. In 1926, the foundations for the monumental People's Commissariat for Agriculture (“HoghZhoghKom”) were laid. This building would later be incorporated into the larger Government House of the ArSSR, constructed on Nalbandyan Street [38]. The construction of the Government House itself commenced in 1938 and was completed in 1941 (without the session hall of the Supreme Soviet) [26]. The large session hall – whose construction was completed in 1952 – of the ArSSR Supreme Soviet, located in the southeastern section of the building, defined the neighbourhood's contours [38]. The original design called for a tall circular volume – the central vestibule – at the heart of the Government House, which occupied an entire neighbourhood and was intended to dominate the square and balance the composition of the development [39] (Fig. 9, 9.2a). However, following the author's death in 1938, the project was revised, and the drum design was rejected for technical and economic reasons [50]. Despite its complex composition (due to its location) and varied and intricate architecture, the Government House presents a cohesive design due to the consistent compositional and tectonic principles applied across its façades [51]. The building's seamless integration with adjacent streets and the square, characterised by its volumes and transitions, is also crucial [52] (Fig. 3, 3.2).

Unbuilt Palace of Labor. In 1931, a closed tender was held for the design of the Palace of Labour on Lenin Square, which was to occupy the table-shaped area of the square [25]. The proposal included a monument to Lenin in front of the building, while preserving the House of Culture and interrupting the Main Avenue. Architects participating in the tender included M. Mazmanyanyan, H. Margaryan, S. Safaryan, G. Kochar, N. Buniatyan, and civil engineer B. Arazyan [53]. Despite Tamanyan's initial refusals to participate, he eventually had to agree. G. Kochar's group was awarded first prize, but the idea of constructing a building in the table-shaped part of the square was later abandoned, reaffirming Tamanyan's belief that the square should develop without this structure, prioritising the Government House's dominance.

Monument to Lenin (Fig. 2). In 1938, an All-Union open tender was held for the Lenin monument, recognising the best proposals from architects N. Paremuzova, L. Vardanyan, and sculptor A. Sargsyan, with S. Merkurov's sculpture being awarded as the best representation of Lenin. The monument design, commissioned from the People's Artist of the USSR S. Merkurov, along with architects N. Paremuzova and Vardanyan, was erected in November 1940 to celebrate the 20th anniversary of Soviet power in Armenia (now dismantled) [54]. This architectural and sculptural complex combined two themes: the monument itself and a tribune [55]. The authors addressed the complex architectural and planning challenge through a contrasting layout that integrated the rectangular, horizontally extended volume of the stylobate with the strong verticality of the sculptural pedestal [49] (Fig. 3, 3.3).

Government House 2 (Fig. 2). In the second stage of the square's formation, following the construction of the Government House, the construction of Government House 2 was initiated, positioned symmetrically to the main axis of the square and proportional to the

original Government House [29]. Before the war, architect S. Safaryan was entrusted with the project for the “Ararat” trust, which adjoined the table-shaped part of the square and faced the Government House [39]. Initially, S. Safaryan, M. Grigoryan, and H. Margaryan collaborated on the project. After the war, architect S. Safaryan, along with R. Israyelyan and V. Arevshatyan, designed the House of Industrial Cooperation Administration House, an extension of the Trust House “Ararat,” located in the oval part of the square and symmetrically aligned with the Government House's main façade [25]. The overall mass, proportions, and forms of this building harmonised with the Government House, balancing the two sides of the square [38]. The prominent tower's mass was counterbalanced by the Government House tower, forming the square's vertical accents [56]. The spatial composition choices echoed the Government House's composition [39]. During the construction of Government House 2, the contours of the oval square were reinforced, giving the square a sharply defined symmetrical character that guided future architectural developments [39] (Fig. 3, 3.4).

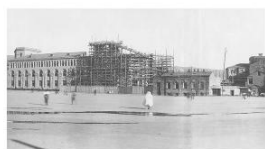
House of Culture (now the National Gallery of Armenia) (Fig. 2). The original two-storey building of the former Men's Gymnasium was located at the intersection of the square's transverse and Main Avenue axes and overlooked the square's table-shaped section with its side façade. This building, occupying a pivotal position in relation to the square, raised crucial questions about its preservation or demolition in future compositional solutions. Ultimately, Tamanyan advocated for its demolition, envisioning an oval square that would spatially engage with the Main Avenue [39]. However, after Tamanyan's death, a decision was made to preserve the building, leading to the reconstruction of its façade (designed by M. Grigoryan and E. Sarapyan) facing the square [26]. A covered arch was constructed in front of the building, with a large pool and fountains located in the table-shaped part of the square. A multi-storey volume now rises from the centre of the building's composition, from the middle of the courtyard, and the long two-storey wing facing Aram Street was extended with a third floor, while the courtyard-facing composition along Nalbandyan Street was enclosed by a new building. This transformation significantly altered the compositional structure of the square, shifting its emphasis from nuanced upper elements to a centred strong axis of symmetry and the Main Building. The House of Culture building, completed in 1974, has received mixed reviews from contemporaries regarding both its architecture and its impact on the square's overall compositional development [39] (Fig. 3, 3.5).

Communications and Trade Union Building, Armenia Hotel (now Armenia Marriott Hotel) (Fig. 2). The construction of the Communications and Trade Union Building began in 1933 within the square. Originally designed in Moscow in a constructivist style, the structure did not align with Tamanyan's vision for the square, leading to plans for modifications (architects: N. Buniatyan, M. Grigoryan). However, the alterations to the façades did not achieve the desired outcome, prompting discussions of a new reconstruction in 1944 [26]. The southeastern section of the square complex was completed in the mid-1950s with the construction of the symmetrically positioned Armenia Hotel and the House of Trade Unions building, designed by M. Grigoryan and E. Sarapyan. These buildings were joined with the Communications and Trade Union Building constructed earlier in the 1930s, whose façade underwent significant reconstruction to strengthen the overall architectural image of the square [29]. In their compositional choices, the architects replicated the volumetric and spatial solutions of the concave sections of Government Houses 1 and 2 [39]. Although the architecture of these buildings parallels that of Government Houses 1 and 2, it presents a distinctly different interpretation, particularly in the sculptural design of the arched openings [39] (Fig. 3, 3.6).

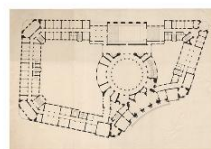
THE YEREVAN'S CENTRAL SQUARE AND COMPONENTS OF THE COMPLEX



3.1 Area of Yerevan's Central Square before the new construction



3.2 Government House



3.3 Monument to Lenin



3.4 Government House 2



3.5 House of Culture



3.6 Communications and Trade Union Building, Armenia Hotel



3.7 Yerevan's Central Square panoramas



Fig. 3. Yerevan's Central Square and components of the complex

2.1.3. Development of the square in the post-Soviet period.

In the post-Soviet period, Yerevan's Republic Square and its surroundings have undergone significant changes, which have diminished both the square's role in urban planning and its social function. The increasing number of cars in Yerevan has transformed the square into an overloaded transport hub and a major parking area. One of the first actions after Armenia gained independence was the removal of Lenin's statue in 1991, followed by the dismantling of its pedestal in 1996. In 2003, the square underwent reconstruction based on a project by architect S. Kurkchyan. Then, in 2012, Government House 2, one of the most prominent buildings on Republic Square, was sold. During this time, several tenders were held, including a major open competition for a conceptual reconstruction of the square. However, the city's rapid construction boom in recent decades has had a profound impact on Yerevan's squares. High-rise buildings have been built – and continue to emerge – around many squares, including the central square [57]. The original concept of Tamanyan's square has been altered, not only by these compositional changes but also by the encroachment of surrounding structures [50]. Buildings that once stood out against the sky are now overshadowed by the surrounding multi-storey developments.

Given the current situation, it is crucial to assess the issues affecting the square's compositional ensemble, which will be addressed in the following section.

2.2. Identification of challenges

The study of the situation in Yerevan's Republic Square compositional ensemble and the analysis of its outcomes have identified several key issues, grouped into five main areas: space, movement, visual perception, aesthetics, and meaning. These are discussed in detail below.

2.2.1. Spatial organization and design

a) Insufficient Organization of Entry Points (Fig. 4, 4.1). *Causes and Circumstances:* the lack of a systematic approach throughout various stages of the square's development, combined with temporary or provisional solutions, has led to disorganised entry points. *Impact:* nearly all entrance points to the square, particularly those on Tigran Mets, Vazgen Sargsyan, and Amiryan Streets, remain incomplete and unresolved. The intersecting sections of the square's structures and the buildings connecting them also lack coherence. For example, building heights are inconsistent, and the architectural image does not align with the square's overall aesthetic. A segment of the original constructivist Communications and Trade Union Building remains open along Tigran Mets Avenue between the Communications and Trade Union Building and the Hayardnakhagits Institute, clashing with neighbouring structures in both horizontal alignment and architectural style (Fig. 4, 4.1a). Furthermore, there are differences in the façades and architectural styles of Government House 2 and the Holiday Inn Hotel on Amiryan Street. The latter consists of three distinct sections: the preserved façade of the former Men's Gymnasium building, a glass-enclosed part, and a stone-clad portion. At the junction of these buildings, Government House 2 features deep-relief architecture, while the Holiday Inn has a flat façade. In contrast, the Armenia Hotel and adjacent residential buildings along Amiryan Street are well-aligned, and their connection is resolved quite effectively (Fig. 4, 4.1b). The Armenia Hotel (now Armenia Marriott), the Hakob Paronyan State Theater of Musical Comedy, the Prosecutor's Office of Armenia, and ministries form a consistent line extending from the section of Vazgen Sargsyan Street featuring the Armenia Hotel to Movses Khorenatsi Street (Fig. 4, 4.1c). The

part of the hotel with plastic architecture and the theatre buildings are linked by the hotel's façade, which features simple, orthogonal openings facing Vazgen Sargsyan Street, maintaining the same height (Fig. 4, 4.1c). From the Communications and Trade Union section of Vazgen Sargsyan Street to Movses Khorenatsi Street, the buildings of the Communications and Trade Union Building, Elite Plaza, the Central Bank of Armenia, and the Kamar Business Centre follow sequentially. The Communications and Trade Union Building and the Elite Plaza Business Centre are separated by Petros Adamyan Street and have different façade heights and architectural characteristics. On the Nalbandyan Street section, the House of Culture (now the National Gallery of Armenia) and adjacent residential buildings, separated by Aram Street, also display architectural harmony. Additionally, the green area along the Main Avenue forms an extension of the Government House (Fig. 4, 4.1d). Consequences and Risks: reduced compositional and aesthetic qualities of the architectural ensemble.

b) Almost Entirely Restricted Use of the Central Sector. Causes and Circumstances: increased circular vehicular traffic over the decades. Impact: approximately 3,300 sq. m of the central space is entirely unused, apart from a small section designated for the New Year tree (Fig. 4, 4.2). Consequences and Risks: restricted accessibility for appreciating the architectural ensemble and inefficient utilisation of urban space.

c) Inefficient Use of Open Spaces Near Buildings, Fountains, and Shahumyan Park. Causes and Circumstances: lack of adequate parking facilities in the city centre, especially near the square. Impact: these spaces have been converted into parking lots for private and public vehicles, taxis, and even a bus station for tourists, particularly in front of Government House 2 (Fig. 4, 4.3). Consequences and Risks: compromised symbolic significance and decreased aesthetic quality of the square, and underutilisation of urban space.

d) Diverse Street Cafes. Causes and Circumstances: lack of regulations and prioritisation of business interests. Impact: in front of the Armenia Hotel (now the Armenia Marriott) and along Shahumyan Park, summer cafés of various appearances and styles have emerged, featuring diverse extensions and canopies. This has reduced sidewalk space in front of the Armenia Hotel, obstructing the panoramic view southwest from the square, which includes Shahumyan Park's greenery and the back of the Stepan Shahumyan monument (Fig. 4, 4.4). Consequences and Risks: distorted panoramas and reduced pedestrian comfort.

d) Poor Condition of Inner Courtyards and Uncertainty. Underlying Circumstances: lack of regulations and uncertainty regarding the intended use of buildings. Impact: the inner courtyard of Government House 2 is poorly maintained, and the courtyard of the former Communications and Trade Union Building has developed unevenly. Gates that do not align with the architectural style of the square block the arched corridors leading to the inner courtyards of both the Government House and Government House 2 (Fig. 4, 4.5). Consequences and Risks: diminished compositional and aesthetic qualities of the architectural ensemble, distorted southern panorama, and inefficient use of urban space.

e) Uncertainty in Landscape Design and Tree Planting. Underlying Circumstances: lack of regulatory guidelines. Impact: the landscaping of the square is neglected, with no clear plan for greenery or tree planting. Tree sizes, heights, and foliage forms vary randomly (Fig. 4, 4.6). Consequences and Risks: reduced aesthetic quality and a lack of shaded areas in open spaces.

SPATIAL ORGANIZATION AND DESIGN



Fig. 4. Spatial organisation and design

2.2.2. Traffic organisation

a) Predominance of Vehicular Traffic. Causes and Circumstances: Consistently increased traffic intensity over the decades, prioritisation of vehicular traffic, a severe lack of parking spaces in the city centre, and insufficient regulation of traffic flow. Impact: The square has evolved into a major transit hub characterised by traffic circles and irregular parking arrangements (Fig. 5, 5.1). Consequences and Risks: Distortion of the symbolic significance of the square, and a decline in the conditions necessary for visual appreciation of the architectural ensemble.

b) Excessive Restriction of Pedestrian Traffic. *Causes and Circumstances:* Consistently increased circular traffic intensity over the decades, prioritisation of vehicular traffic, and insufficient regulation of traffic flow. *Impact:* Pedestrians can only walk around the perimeter of the square, limiting their experience of the architectural ensemble to this narrow outline. The majority of the square remains inaccessible to pedestrians, serving primarily as a right-of-way and parking area. Streets surrounding the square divide pedestrian traffic into six distinct sections, necessitating crossings of traffic lanes to move between them (Fig. 5, 5.2). *Consequences and Risks:* A decline in the conditions necessary for visual appreciation of the architectural ensemble, reduced pedestrian comfort within the square, and a diminished functional role of the square.

c) Difficulties in Traffic Organisation. *Causes and Circumstances:* A consistent rise in traffic intensity over the years, coupled with numerous two-way streets connecting to the square and unclear traffic regulations. *Impact:* Traffic congestion is a frequent occurrence in the square, with jams often reported (Fig. 5, 5.3). *Consequences and Risks:* Decreased traffic safety and diminished sanitary and hygienic quality of the environment.

d) Inefficiency of Combining Transport and Pedestrian Traffic. *Causes and Circumstances:* Ongoing increase in traffic intensity, prioritisation of vehicular traffic, numerous two-way streets connecting to the square, and lack of clear traffic regulations. *Impact:* Intersections where pedestrian and vehicular traffic converge are often chaotic, leading to constant congestion (Fig. 5, 5.4). *Consequences and Risks:* Reduced road safety and increased restrictions on pedestrian movement.

TRAFFIC ORGANIZATION



5.1 Predominance of Vehicular Traffic



5.2 Excessive Restriction of Pedestrian Traffic



5.3 Difficulties in Traffic Organization



5.4 Inefficiency of Combining Transport and Pedestrian Traffic

Fig. 5. Traffic organization

2.2.3. Visual perception and aesthetic quality

a) Extremely Poor Aesthetics of Panoramas. Causes and Circumstances: The addition of localised structures and developments in areas adjacent to the square and across the central and surrounding urban zones – within its main visual field – has significantly altered its visual perception. This issue has been further compounded by a lack of regulatory oversight and a socio-cultural emphasis on private property rights [58]. Impact: The height of several adjacent structures now exceeds that of the square's original design, transforming the intended panoramas. With the exception of the Government House, the background of all other structures has been distorted and fails to integrate harmoniously into the overall setting. **Southern Panorama:** Buildings such as the former Armenia Hotel and the Communications and Trade Union Building no longer stand against the open sky as originally intended. Instead, they are now viewed against a backdrop of various structures, including the Piazza Grande complex on Vazgen Sargsyan Street, the new Armenian Central Bank building, recently constructed ministry buildings, the Kamar business centre, and the Elite Plaza business centre on Khorenatsi Street. Additionally, the architectural image of the multifunctional business centre Erebuni Plaza, visible in the view opening from the Kamar, clashes with the square. The view towards Tigran Mets Avenue has also been altered: the construction of the 33rd district and new high-rises now obscure the view of St Grigor Lusavorich Church from the square. **Northern Panorama:** The square area and its buildings – especially Government House 2 – no longer stand against the open sky as originally intended. Instead, they appear against an increasingly dense mix of irregularly constructed buildings along Abovyan, Teryan, Arami, Byuzandi, and Pushkin Streets, as well as Northern Avenue. For example, the former Central Department Store building at the corner of Abovyan and Arami Streets has been raised with new floors, and a glass pyramid has been installed on its roof corner. At the intersection of Abovyan and Byuzandi Streets, another building within the square complex has been encased in black tuff, with additional floors added in recent years. Apparently, the “Old Yerevan” project – bounded by Abovyan, Arami, and Kohbatsu Streets – will lead to a significant increase in the height of structures, with large open metal frames covered in glazing becoming prominent. Two or three additional glass-covered storeys will be added to existing buildings, and the inner courtyard will be enclosed with a glass canopy. This will further increase the height of developments in the southern panorama along Abovyan Street, which is already heavily compromised, making the glazed metal structures highly visible. In the background of Government House 2, the newly constructed high-rise at 25 Pushkin Street (built on the site of the former State Security Committee building, with only the main façade preserved) is now visible. Also prominent is the new Courtyard by Marriott hotel and residential complex at 5 Teryan Street, located at the Pushkin–Teryan intersection, on the former site of the House of Afrikyans. In the Abovyan Street section of the northern panorama, the multi-storey residential complex, Golden Palace Hotel, and Alexander Hotel are visible near the former Central Department Store building. Behind the House of Culture (now the National Gallery of Armenia), recently constructed multi-storey buildings at 3 Arami and 4 Abovyan Streets rise prominently. One of the greatest challenges to the northern panorama along Nalbandyan Street is the distant, unregulated construction on Nork Hill, which forms part of the city's natural amphitheatre (previously fully forested). This natural landscape was originally intended to alter Yerevan's semi-desert microclimate and mitigate evening dust storms [56] (Fig. 6, 6.1). Consequences and Risks: Distortion of the unity of the architectural ensemble, diminished aesthetic quality, and a weakening of the square's symbolic significance.

b) Intentional Distortion of Visual Connections with Compositional Axes and Centres of the City. Causes and Circumstances: Numerous deviations from the main city plans of 1924, 1939, 1951, and 1971, as well as from the detailed planning concept for the city centre from 1984, and a lack of regulation. Impact: The square was originally intended to provide a view of Mount Ararat, with an avenue planned in place of the Communications and Trade Union Building's arc to frame this view. This idea was ultimately abandoned, leading to the construction of an arched corridor that only partially preserved the view. Subsequent urban development has completely obstructed this limited panorama. The connection between Theatre (Liberty Square) and Administrative (Republic Square) squares via Northern Avenue has been lost due to renovations of the former Men's Gymnasium and the construction of the House of Culture (now the National Gallery of Armenia). The Main Avenue, which should have continued along the northern edge of the square, is no longer present (Fig. 6, 6.2). Consequences and risks: Distortion of the perceived unity of the urban space.

c) Impermissible Interventions on Building Façades. Causes and Circumstances: Lack of regulation, poor installation practices, and a low level of professional training. Impact: Ventilation devices have been mounted on the façades of the Government and Communications and Trade Union Buildings. The façades of the Armenia Hotel and the Communications and Trade Union Building are also disrupted by advertising elements. Recently, numerous holes have appeared in the façades to accommodate holiday lighting (Fig. 6, 6.3). Consequences and Risks: Distorted aesthetics of the architectural ensemble, compromised original façade designs, and irreparable damage to the original stonework.

d) Inconsistency of Roofing Material. Causes and Circumstances: Lack of regulation. Impact: All buildings have metal sheet roofs. The Government Building features a red powder-coated sheet metal roof in good condition, while the roofs of the House of Culture (now the National Gallery of Armenia) and the Armenia Hotel (now Armenia Marriott) are made of grey tin and are well-maintained. In contrast, the roofs of Government House 2 and the Communications and Trade Union Building are in poor condition, consisting of mismatched pieces of sheet metal (Fig. 6, 6.4). Consequences and Risks: Distortion of the unity and aesthetics of the architectural ensemble.

e) Incompleteness of Open Space Furnishings. Causes and Circumstances: Lack of customisation in furnishings design. Impact: Various lamps, benches, and rubbish bins in the area do not coordinate with one another and fail to align with the architectural vision of the square. Additionally, an overabundance of informational signs in Yerevan often disrupts the architectural composition of streets and adjacent buildings. This issue also affects the placement of ATMs, terminals, and billboards, particularly in the arched section of the Gallery (Fig. 6, 6.5). Consequences and Risks: Distortion of the square's symbolic significance and aesthetic quality.

f) Unconcealed Engineering Equipment on Building Roofs. Causes and Circumstances: Lack of regulation. Impact: All structures prominently display engineering equipment on their roofs, most noticeably on the House of Culture (now the National Gallery of Armenia) (Fig. 6, 6.6). Consequences and Risks: Distorted aesthetics of the architectural ensemble.

VISUAL PERCEPTION AND AESTHETIC QUALITY

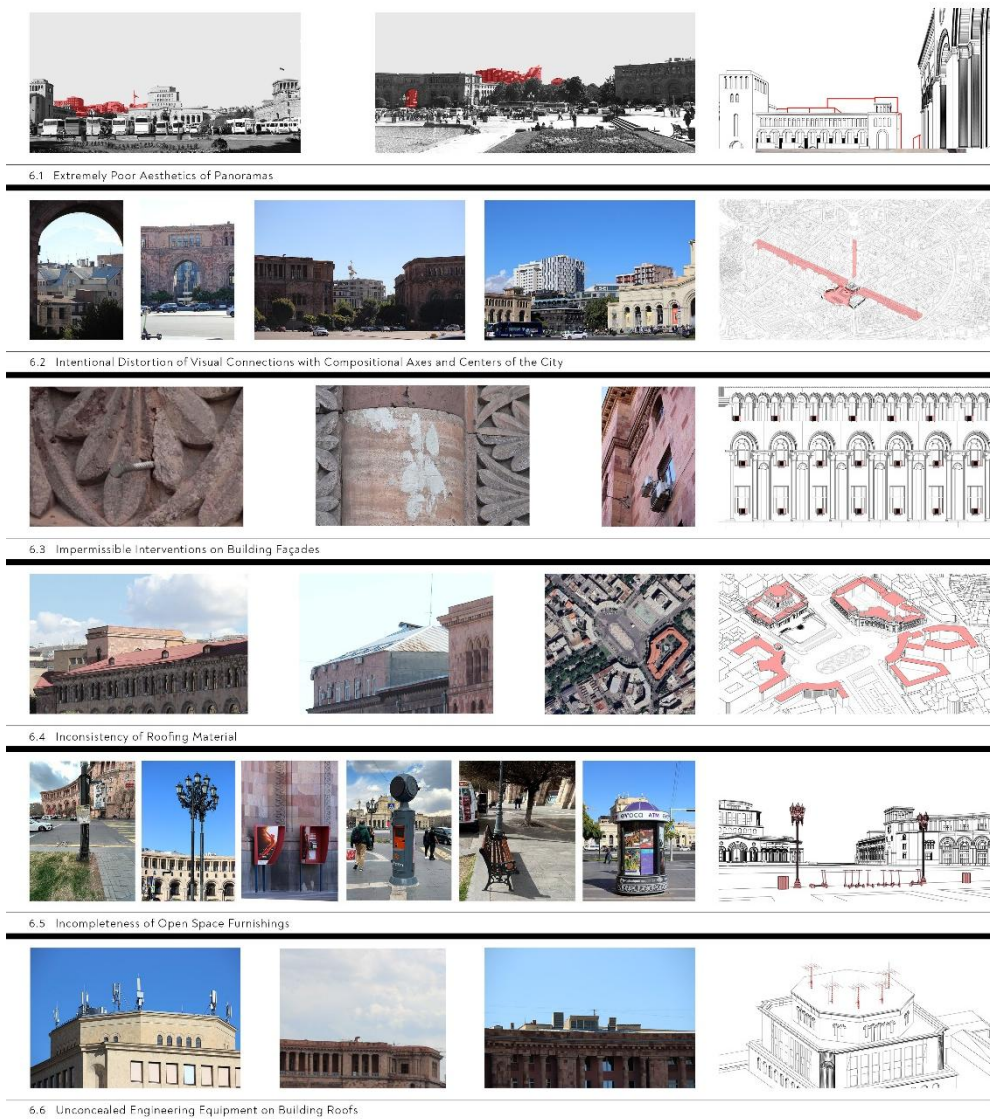


Fig. 6. Visual perception and aesthetic quality

2.2.4. Relevance to purpose

a) Ambiguity in the Functional Purpose of the Square. *Causes and Circumstances:* Increasing traffic intensity and a lack of regulatory oversight. *Impact:* The square has effectively become a transportation hub, functioning primarily as a traffic circle and parking lot (Fig. 7, 7.1). *Consequences and Risks:* Distortion of the square's symbolic significance.

b) Ambiguity in the Functional Purpose of Individual Buildings. *Causes and Circumstances:* Issues related to building ownership regulation and the prioritisation of commercial interests. *Impact:* Government House 2 is now underutilised. During the Soviet

era, it housed the Ararat Restaurant (in the basement), the Ararat Trust Company store (on the first floor), and during the post-Soviet era, the Noyan Tapan bookstore (on the first floor) – all of which contributed significantly to the vitality of this part of the square. Currently, the first floors of Government House 2 along Abovyan and Pavstos Buzandi Streets host a few catering establishments, while the Communications and Trade Union Building serves mixed public purposes (Fig. 7, 7.2). *Consequences and Risks:* Disruption of the square's original symbolic significance.

c) Structural Deficiency in Organising State and Cultural Events. *Causes and Circumstances:* Significant deviations from the original design, uncertainty in state ideology, and insufficient regulation. *Impact:* Temporary structures are frequently erected to accommodate various events (Fig. 7, 7.3). *Consequences and Risks:* Inconvenient spatial arrangements for events, safety concerns, increased costs, inefficient use of resources, and frequent breaches of environmental guidelines.

d) Lack of Regulation Regarding Flag Displays in the Square. *Causes and Circumstances:* Absence of clear regulations. *Impact:* In front of the Armenia Marriott, flags of the European Union and the Kingdom of Belgium are displayed – though the rationale is unclear – and they are larger than the national flag of Armenia atop the Government House tower (Fig. 7, 7.4). *Consequences and Risks:* Misrepresentation of the square's symbolic significance.

After identifying these issues, it is important to review the proposals developed to address the challenges affecting Yerevan's central square.

RELEVANCE TO PURPOSE



7.1 Ambiguity in the Functional Purpose of the Square



7.2 Ambiguity in the Functional Purpose of Individual Buildings



7.3 Structural Deficiency in Organizing State and Cultural Events



7.4 Lack of Regulation Regarding Flag Displays in the Square

Fig. 7. Relevance to purpose

2.3. Overview of recommendations across development periods

Ideas, proposals, and plans aimed at addressing and enhancing the multifaceted challenges of the square have been articulated during both the Soviet and post-Soviet periods. In recent years, several tender procedures have been initiated in this regard. Below, we attempt to consolidate and coordinate these efforts.

2.3.1. *Reconstruction works of 2003*

In 2003, landscaping and construction work was undertaken in Yerevan's Republic Square with funding from the Lins Foundation. During the removal of the asphalt layer, unexpected discoveries revealed underground sections of residential structures. This archaeological investigation was assigned to the Institute of Archaeology and Ethnography at the National Academy of Sciences of Armenia. The authorised team – led by historians Dr G. Karakhanyan, Dr F. Babayan, and Dr A. Zhamkochyan, along with architect A. Hovsepyan – determined that these remains were cellar-like basements of former dwellings, arranged in an enfilade pattern. The excavated structures exhibited several distinctive features, including vaulted roofs supported by pilasters, wide arched windows, tufa-tiled floors, and strategically placed wall openings. These buildings extended eastward, towards the square's clock and fountains, and similar remnants were also found near the entrance of the Armenia Hotel (now the Armenia Marriott). However, further excavation near the hotel was hindered by technical limitations. To complete the reconstruction of the square, the excavated areas were quickly filled with earth and sand, leaving further research for future generations. The reconstruction included asphalt paving for traffic lanes and stone tiling for pedestrian pathways, designed by S. Kyurkchyan. A central mosaic, resembling a carpet, was also created by Kyurkchyan. However, the mosaic serves no functional purpose and is inaccessible to pedestrians, visible only from the upper floors of nearby buildings [39]. One of Kyurkchyan's early designs proposed fully covering the square with mosaic, but anticipated wear on roadways would have quickly diminished its aesthetic appeal. Ultimately, the reconstruction did not address the complex issues facing the square, resulting in only a cosmetic improvement (Fig. 8, 8.1).

2.3.2. *Republican architectural open tender for the conceptual project for Republic Square reconstruction*

In 2013, the Yerevan Municipality organised a tender for the reconstruction of Republic Square. Participants included ARCHcoop Architectural Studio, Mossessian & Partners Design Office, and architects A. Aleksanyan, V. Vermishyan, V. Penesyan, G. Avetisyan, A. Hayrapetyan, and others (Fig. 8, 8.2). The tender aimed to select the best project proposals to modernise and adapt the capital's architectural complex to contemporary urban development processes, taking into account the following realities:

- The square has transformed into an overloaded transport hub, leading to various negative consequences;
- Due to construction in areas directly adjacent to the square, prominent silhouettes have formed around it, significantly disrupting the scale and visual dominance of the complex;
- Certain buildings within the square have been altered for operational purposes;
- The pedestrian Northern Avenue, which connects two key squares, was constructed;

- Republic Square, as a symbol for Armenians and the primary venue for national and citywide events, now faces organisational challenges for certain ceremonies due to the removal of the statue of Lenin and its pedestal.

The national open tender for a conceptual reconstruction project for Republic Square concluded at the National Museum-Institute of Architecture, chaired by Yerevan's chief architect T. Barseghyan. On the first day, the tender commission thoroughly reviewed the submitted design proposals and established evaluation standards, with input from N. Sargsyan, Chairman of the State Architecture Committee under the Government of Armenia. The committee members opted for a closed secret ballot to evaluate the 14 tender proposals based on criteria such as compliance with tender conditions, urban planning analysis, conceptual ideology, planning and functional organisation, architectural composition unity, and evaluation of historical and architectural heritage. During discussions, the committee unanimously decided not to award 1st, 2nd, or 3rd prizes, as the proposals failed to meet all requirements and did not offer comprehensive solutions to the square's issues. Incentive rewards were given to architects A. Aleksanyan, S. Davtyan, V. Penesyan, A. Hayrapetyan, and M. Avetisyan (Yerevan), as well as to architect V. Vermishyan and his professional group (Moscow), for their submitted proposals.

2.3.3. Issues concerning the monument of Lenin or the vacant space in the square (Fig. 9, 9.1)

As previously mentioned, the Lenin statue was dismantled on 13 April 1991, and its pedestal was removed in 1996. In 2001, to commemorate the 1700th anniversary of the adoption of Christianity in Armenia, a large cross was erected in place of the statue, which was later replaced by an advertising screen. Since the 1990s, various tenders have been organised to fill the empty space, yet none have yielded satisfactory results. Proposed solutions have included a triumphal arch, memorial columns dedicated to Armenia's former capitals, an administrative building, and statues of Sahak Partev, Mesrop Mashtots, King Trdat, among other spiritual themes. In 2013, the Armenian Center of PR Development proposed placing a "genealogical tree" of nations at the site of the Lenin monument in Republic Square. The original concept of the tree features the Ark positioned atop Mount Ararat, with inscriptions reading "Armenia" and "Ararat" (Fig. 9, 9.1h).

2.3.4. unfinished tower of the government building (Fig. 9, 9.2)

In the post-Soviet period, two additional design proposals for the Government Building tower were developed – one by architect N. Sargsyan and another by the ARCHcoop Architectural Studio. Sargsyan's design draws on Tamanyan's original vision but introduces several modifications. While Tamanyan's concept featured a dome atop a tall and blind pedestal, Sargsyan's version incorporates arched openings in that section. Additionally, the cylindrical cap crowning the dome is diminished, resulting in a reduced sense of monumentality for the tower (Fig. 9, 9.2b). In 2013, ARCHcoop proposed a new tower design for the Government House to be enveloped in a "fabric" (blinds), creating a light, transparent structure that would not overpower the square. This design contrasts sharply with Tamanyan's vision, which emphasised a massive, mostly windowless volume intended to dominate the layout of the square. The height of the proposed tower corresponds to that of the House of Culture (now the National Gallery of Armenia) (Fig. 9, 9.2c). Under this proposal, a volume of similar height is also planned in the courtyard of Government House 2.

2.3.5. *Proposals for the reconstruction of the building of the House of Culture (now the National Gallery of Armenia) (Fig. 9, 9.3)*

Architects S. Kyurkchyan and A. Zurabyan have developed proposals for the reconstruction of the House of Culture (now the National Gallery of Armenia). Kyurkchyan's façade design aims to emphasise the dominance of the building's tower. These changes, which primarily increase the tower's volume, include projecting walls with arched openings, while the façade of the loggia with arched openings remains unchanged. A new sculpture is also proposed above the pediment of the central section (Fig. 9, 9.3b). Conversely, Zurabyan's project proposes a glazed volume surrounding the entire perimeter of the House of Culture, increasing usable space by approximately 3,000 square metres. An open terrace is positioned a few metres from the gallery's loggia façade, with upper floors gradually receding and topped with a glazed cylindrical dome. The first three floors are intended for gallery use, while the top floor is designed as a restaurant, café, and recreational area, connected by escalators (Fig. 9, 9.3c).

One proposal suggests completely replacing the House of Culture building, preserving only the loggia façade facing the square. The new structure – a glazed parallelepiped volume elevated on columns – would consist of three floors, beginning from the upper level of the retained façade (Fig. 8, 8.2g; Fig. 9, 9.3d). Another design proposes constructing an entirely new building on the site, featuring a cylindrical tower envisioned to become the new visual focal point of the square (Fig. 8, 8.2d; Fig. 9, 9.3e). Additionally, one of the earlier design drafts by the authors of the existing structure, M. Grigoryan and E. Sarapyan, proposes a reconstruction of the House of Culture in a form structurally resembling Tamanyan's Government House tower (Fig. 9, 9.3a).

2.3.6. *Thoughts on underground urbanisation of the square (Fig. 9, 9.4)*

Several design proposals for the underground urbanisation of Republic Square have been developed by architects such as S. Kyurkchyan, the ARCHcoop architectural studio, and the Mossessian & Partners design office. ARCHcoop's concept includes an underground zone with a parking lot, retail stands, shops, service facilities, and an amphitheatre, along with the conversion of historical remains uncovered in 2003 into a museum. Planned transitions would connect this zone with new buildings proposed for the square, including a new Government House tower, a mixed-use structure, and a gallery complex. Multiple access points are planned, including one leading directly to the parking lot (Fig. 8.2a; Fig. 9.4d). Mossessian & Partners, inspired by Kyurkchyan's carpet-like mosaic, proposed an underground room featuring large mosaics with contours symbolising three major diagonals. This space would house museums, exhibition halls, and other cultural venues (Fig. 8.2b; Fig. 9.4c). Kyurkchyan proposed two versions of underground development: one during the Soviet period, which incorporated the Lenin monument, and another in the post-Soviet years, without it. Both include expansive underground zones with cafés, kiosks selling Armenian souvenirs and art, flower stands, a cinema, parking facilities, and museums of architecture and stone culture (Fig. 9.4a).

According to the 2005 General Plan, an underground parking facility was envisioned for Republic Square. Architect N. Sargsyan stressed its importance for easing parking challenges in the city centre and supporting nearby government buildings and the Armenia Hotel (now the Armenia Marriott). In 2020, Armenia's then-Minister of Education, Science, Culture and Sports, A. Harutyunyan, proposed reopening the historical layers beneath the square and converting them into a museum. Though discussed with professionals, this initiative remains unrealised. Architects V. Penesyan, G. Avetisyan, and A. Hayrapetyan also

contributed to a proposal for underground development, envisioning three underground floors following the square's oval outline. Pedestrian access would be provided from green zones in front of buildings. The first floor is designated for trade and services, the second for parking with access from Abovyan, Nalbandyan, and Vazgen Sargsyan Streets, and the third for a museum, cafés, and a water feature mimicking the carpet motif of the square. The project also includes plans to reopen the historical layer discovered during the 2003 reconstruction (Fig. 8, 8.2i; Fig. 9, 9.4e).

2.3.7. The idea of the central element

The concept for a central element in the square was proposed by architect G. Rashidian, although no formal design has yet been presented. His idea is grounded in his research findings [39]. Rashidian identifies a critical shortcoming in the current layout of the square: the absence of a central monument or feature that would provide compositional cohesion, visual focus, and cultural meaning – characteristics that are typically found in classical public squares. To address the perceived "emptiness" of such a vast space, Rashidian refers to the use of "four-dimensional space" in classical square design. This role is typically fulfilled by a combination of architectural, monumental, decorative, and sculptural elements, as well as landscaping components such as lawns and flowerbeds, which together create harmony and unity within the square. According to his research, in classical layouts – especially circular and oval forms – central sculptural elements such as equestrian statues, obelisks, triumphal columns, and arches are often used to anchor the square's centre of gravity. These elements contribute to the compositional integrity and enhance the spatial experience. Rashidian argues that Yerevan's main square should feature a central monument – not merely a memorial – positioned at the geometric centre of the oval. Such a monument would serve as a unifying visual and cultural focal point, helping to regulate spatial relationships, enhance visual balance, and improve the perception of the square from multiple viewing angles and distances. It would also strengthen the square's symbolic and functional identity. Importantly, Rashidian emphasises that this new monument should not imitate traditional forms but rather represent a modern architectural and artistic expression. It should reflect contemporary values while making use of both traditional materials and innovative techniques. He suggests that the form may vary but must serve as a dominant landmark and symbol. To achieve this, the monument should have a vertical composition that visually anchors the square and completes the perspectives of the surrounding streets. Rashidian proposes that the monument be approximately 40 metres high – double the height of the buildings flanking the oval – based on architectural studies and international best practices in square design. It should have a compact, ideally round or polyhedral shape that harmonises with the curved layout of the square and creates a concentric impact zone. By occupying the square's centre of gravity, the monument would become a new focal point, enhancing spatial proportions and ensuring that the entire square remains within the visual and compositional sphere defined by the optimised height and placement of surrounding buildings. Ultimately, Rashidian believes that such a monument would significantly elevate the architectural expressiveness of the square and provide it with a renewed sense of identity, unity, and purpose (Fig. 9, 9.5).

RECOMMENDATIONS ACROSS DEVELOPMENT PERIODS

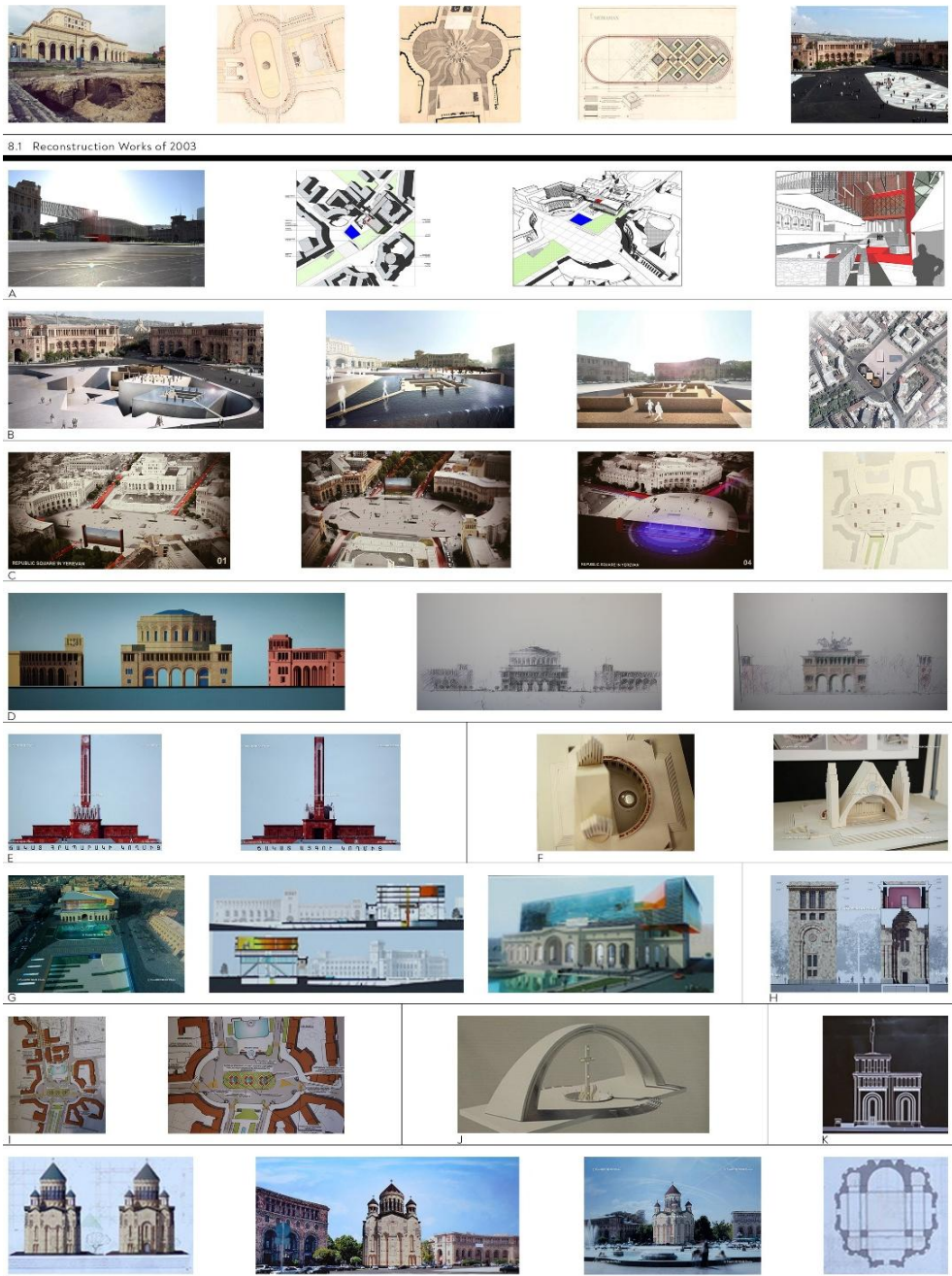
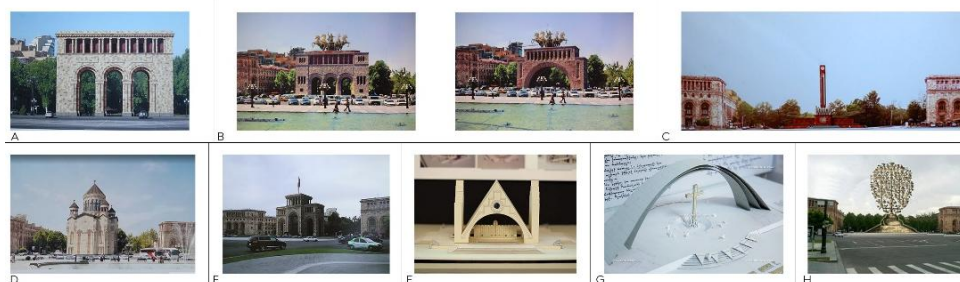
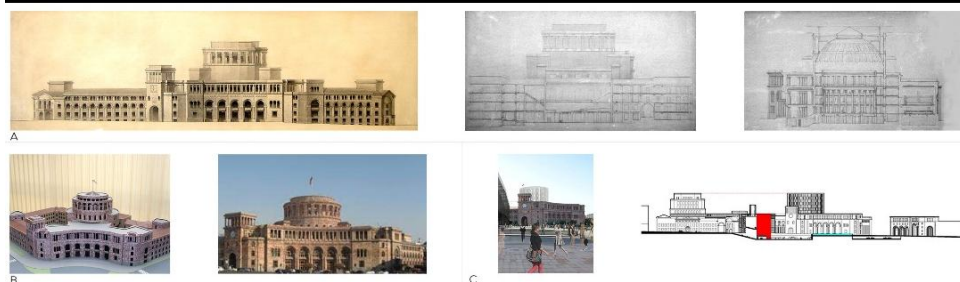


Fig. 8. Recommendations across development periods

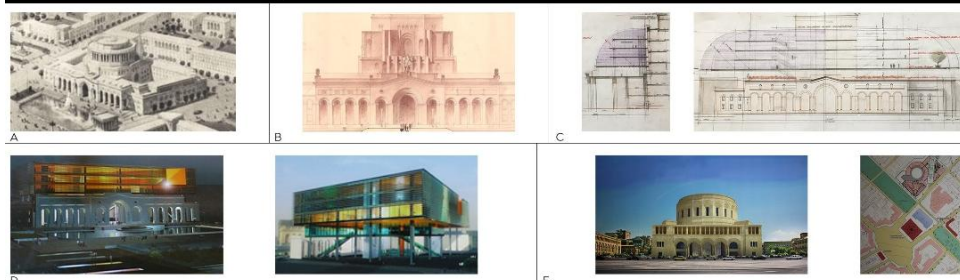
RECOMMENDATIONS ACROSS DEVELOPMENT PERIODS



9.1 Issues Concerning the Monument of Lenin or the Vacant Space in the Square



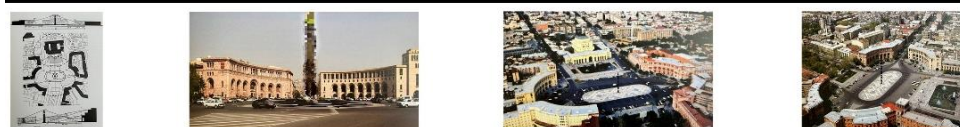
9.2 Unfinished Tower of the Government Building



9.3 Proposals for the Reconstruction of the Building of the House of Culture (now the National Gallery of Armenia)



9.4 Thoughts on Underground Urbanization of the Square



9.5 The Idea of the Central Element

Fig. 9. Recommendations across development periods

2.4. Generalization and analysis

To generalise the findings of this study, a degree of analytical synthesis is required. This section addresses several key questions.

2.4.1. What issues were identified in the compositional ensemble of Yerevan's Republic Square, and how can they be generalised?

As outlined in Section 2.2, the identified problems relate to four primary categories: spatial organisation, traffic, visual perception and aesthetics, and functional relevance. These can be summarised as follows:

- spatial organization and design (poor organisation of entry points; almost completely limited accessibility of the central area; inefficient use of open spaces near buildings, fountains, and Shahumyan Park; varied and unregulated styles of summer cafés; neglected and undefined inner courtyards; unclear landscaping and irregular tree planting);
- traffic organization (dominance of vehicular traffic; severe restrictions on pedestrian movement; difficulty in coordinating vehicular flow; ineffective integration of pedestrian and vehicular traffic);
- visual perception and aesthetics (low aesthetic quality of panoramas; intentional distortion of visual connections with the city's compositional axes and centres; inappropriate modifications to building façades; inconsistencies in roofing materials; insufficient and uncoordinated open space furnishings; lack of concealment for rooftop engineering equipment);
- relevance to functional purpose (uncertainty regarding the square's intended role; ambiguity in the functions of individual buildings; structural limitations for hosting national and cultural events; absence of clear regulations regarding flag displays in the square).

2.4.2. What are the causes of the issues?

The study identifies a range of underlying causes, which can be summarised as follows:

- regulatory gaps.

Causes related to transport traffic:

- increasing traffic intensity and prioritisation of vehicles;
- Prevalence of two-way streets leading to the square;
- unclear traffic regulations;
- insufficient parking spaces in the city centre.

Lack of systematic planning across different stages of the square's development has led to:

- frequent deviations from the city's master plans;
- major alterations to original design concepts;
- neglect of adjustments for temporary solutions;
- implementation of localised, uncoordinated development initiatives.

Economic influences include:

- prioritisation of business interests amid unclear or shifting state ideologies;
- ambiguity in regulations concerning building usage and ownership.

Other reasons include:

- a notably low level of professional expertise within the relevant industries.

2.4.3. What impact did the issues have?

The study reveals significant impacts on the architectural and compositional quality of the square:

- disruption of visual links to key compositional axes and centres of the city;

- distorted backgrounds of the architectural ensemble's structures and altered panoramas;
- incomplete or poorly designed entrance points;
- limited perception of the square's architecture, confined to its perimeter;
- inconsistent roofing colours across buildings;
- unconcealed engineering equipment on rooftops;
- randomly placed equipment and advertisements attached to façades;
- mismatched summer cafés cluttering pedestrian areas;
- presence of various small structures, furnishings, billboards, and foreign flags that clash with the architectural style;
- neglected and poorly maintained landscaping.

The issues related to traffic and functionality also have considerable impact:

- transformation of the square into a congested transport hub and parking area;
- frequent traffic congestion and jams;
- complex and inefficient pedestrian and vehicular crossings;
- disuse or underuse of some buildings;
- continued reliance on temporary structures for hosting events.

Spatial and economic factors further contribute to these impacts:

- central space converted into unused, inaccessible area;
- poorly maintained or inappropriately developed courtyards around certain buildings;
- deteriorating technical condition of several building rooftops.

2.4.4. What were the consequences and risks of the issues?

The study reveals a range of risks and consequences resulting from the identified issues, including:

- Distortion of the square's symbolic significance.

Architectural and compositional consequences include:

- decreased compositional unity and aesthetic quality of the urban space and architectural ensemble;
- reduced and impaired conditions for visual perception;
- distorted panoramic views.

Environmental comfort and safety risks include:

- increased restrictions on pedestrian access, leading to reduced comfort;
- challenges in maintaining road safety;
- diminished sanitary and hygienic quality of the environment;
- limited shaded areas in open spaces.

Socio-economic and functional consequences include:

- inefficient use of urban space;
- diminished functional purpose of the square;
- poor spatial organisation for public events;
- additional costs and inefficient use of resources;
- frequent disruptions to daily activities around the square.

There are also risks and impacts related to the protection of heritage architecture:

- distortion of building façades;
- irreversible damage to the original stonework of the structures.

2.4.5. *What issues were highlighted in the conceptual proposals made?*

The research in Section 2.3 highlights several areas for improvement, including:

- adjusting the scale and compositional harmony of the architectural ensemble, and completing any unfinished sections;
- developing a solution for the vacant space where the Lenin monument once stood;
- creating a direct link between Northern Avenue and Stepan Shaumyan Park;
- improving pedestrian access to the central enclosed area;
- expanding pedestrian zones;
- managing traffic flow and transport issues;
- constructing an underground section.

2.4.6. *To what extent do the proposals address the issues, and how clear, realistic and feasible are they?*

The project proposals studied offer various solutions to the identified issues. Let us assess the realism of these solutions.

The recommendations propose ways to address the scale and compositional structure of the architectural ensemble, yet their effectiveness remains unconvincing. Although creating a central feature in the square might be a practical approach to addressing scale-related challenges, the idea of introducing a new dominant element is less persuasive. For example, new architectural concepts for completing the Government House tower – as well as two proposals based on Tamanyan's original design – disrupt the square's established symmetrical composition. In the first scenario, three structures of equal height would appear in the square: the tower of the House of Culture (now the National Gallery of Armenia), a new tower for the Government House, and a proposed multifunctional building in the courtyard of Government House 2. The latter two differ significantly in their spatial and volumetric composition (Fig. 8, 8.2a; Fig. 9, 9.2c), introducing pronounced asymmetry into the square. The overall impact of such a change remains uncertain. In the second scenario, the square gains a new dominant element – a tower based on Tamanyan's design. However, this would demote the existing tower of the House of Culture (now the National Gallery) to a secondary role and compromise the square's compositional balance (Fig. 9, 9.2b). Some proposals also include multi-storey buildings within the square, but these contribute little to resolving the existing problems. Instead, they risk further disrupting the compositional integrity and exacerbating the already distorted panoramas.

The proposals to address the vacant section of the former Lenin monument site are diverse, but none provide a convincing solution. Some designs feature structures with large arches topped by an equestrian statue (Fig. 9, 9.1b); another replicates the demolished memorial, replacing the statue with a vertical element (Fig. 8, 8.2e; Fig. 9, 9.1c); a further proposal introduces a church set at an angle to the square's longitudinal and transverse axes (Fig. 8, 8.2i; Fig. 9, 9.1d); another envisions a wide screen spanning the width of Shahumyan Park (Fig. 8, 8.2c); and several suggest spiritual architectural monuments (Fig. 8, 8.2f, j; Fig. 9, 9.1f, g). Some concepts include commemorative structures (Fig. 8, 8.2e; Fig. 9, 9.1e, g), while another proposal mirrors the volume and design of Government Houses 1 and 2 (Fig. 8, 8.2d, h, k; Fig. 9, 9.1a, e). In the first instance, two versions are developed – one with a single large arch and another with three smaller arches. It is evident that the author sought to replicate Tamanyan's architecture of the Government House, particularly in the second version. The proposed buildings are designed to match the height of the structure along the oval section of the square (Fig. 9, 9.1b). In the church proposal, the structure becomes the dominant feature of the square but fails to respect the compositional unity. Its scale,

orientation, spatial composition, and architectural style conflict with the square's established axes and visual harmony (Fig. 8, 8.2l; Fig. 9, 9.1d). Another design includes a rotunda reminiscent of the Government House tower (Fig. 8, 8.2k; Fig. 9, 9.1e). In yet another case, the design replicates architectural elements from Government Houses 1 and 2, placing the new volume in the southern part of the square (Fig. 8, 8.2h; Fig. 9, 9.1a), where it harmonises with the surrounding architecture.

A practical solution for connecting Northern Avenue and Stepan Shahumyan Park is an underground passage proposed by ARCHcoop. This plan would link Northern Avenue, Republic Square, and Shahumyan Park, significantly improving pedestrian accessibility in the city centre if implemented (Fig. 8, 8.2a), thereby enabling smoother and more comfortable foot traffic.

Various proposals address the challenge of providing pedestrian access to the enclosed central area of the square. In the Mossessian & Partners plan, the area in front of the House of Culture (now the National Gallery of Armenia), near the fountains, is connected to the central section. G. Rashidyan's proposal suggests linking the fountains to Shahumyan Park. Another option involves converting the entire square into a pedestrian-only zone. In the first scenario, the existing roundabout would be removed, allowing direct pedestrian access to the currently unused central area – though this does not establish a connection with the southern part of the square (Fig. 8, 8.2b). In Rashidyan's plan, the square's road section is split, enabling central pedestrian access and linking the northern and southern parts. The proposal to fully pedestrianise the square by relocating road traffic underground could pose major challenges to Yerevan's central transport network. Nonetheless, this option is arguably the most favourable, as it removes the square from heavy traffic circulation and prioritises pedestrian use (Fig. 8, 8.2c; Fig. 9, 9.4b).

Various methods have been proposed for expanding pedestrian lanes. Some suggestions focus on increasing pedestrian areas – including through underground construction – while others advocate for transforming the entire square into a pedestrian zone. In ARCHcoop Studio's proposal, pedestrian space is expanded by extending the front portion of the House of Culture (now the National Gallery of Armenia) toward the centre and incorporating underground areas (Fig. 8, 8.2a). During the 2003 reconstruction, S. Kyurkchyan added pedestrian pathways to selected areas (Fig. 8, 8.1) and envisioned underground spaces, although these were not realised (Fig. 9, 9.4a). Mossessian & Partners' proposal also seeks to increase pedestrian zones by linking the front and central parts of the House of Culture (now the National Gallery) (Fig. 8, 8.2b). Among all options, complete pedestrianisation of the square stands out as the most ideal approach.

The proposals also address the square's role as a transportation hub and explore traffic regulation solutions, though the feasibility of these solutions remains uncertain. One suggestion involves lowering traffic lanes below the square's current level (Fig. 8, 8.2c; Fig. 9, 9.4b), yet lowering the streets feeding into the square presents considerable challenges. In ARCHcoop's proposal, the carpet-shaped mosaic is removed, and the front section of the House of Culture is extended into the central zone. However, the scheme does not clearly define how traffic would be organised following these changes (Fig. 8, 8.2a). Rashidyan's proposal, which connects the northern and southern parts of the square and eliminates circular traffic while establishing a direct link to Shahumyan Park, appears the most promising for addressing the square's transportation problems. Nonetheless, it raises questions about whether such a solution might create new transport-related challenges in the city centre.

The construction of underground spaces is also addressed in the proposals, with both S. Kyurkchyan and ARCHcoop including plans for underground parking facilities. These aim to alleviate parking shortages in the city centre – but will they impose further strain on the

square and its surroundings? A more compelling proposal for underground development involves dedicating one or more levels to cultural and recreational purposes. Particularly noteworthy is ARCHcoop's suggestion to open and convert the historical layer uncovered during the 2003 construction into a museum. According to the authors, this layer would be made accessible via the underground passages, with several stations of the Athens Metro serving as a design model (Fig. 8, 8.2a; Fig. 9, 9.4d).

2.4.7. Do the issues identified in the research align with the issues addressed in the proposals, and how can their integration be evaluated?

Let us assess the extent to which the issues raised in this study are reflected in the proposals discussed.

Regarding spatial organisation and design, the proposals clearly address the near-total restriction of use in the central area. The issue of inefficient use of open spaces adjacent to the buildings, fountains, and Shahumyan Park is also partially acknowledged. However, other problems remain unaddressed – such as the insufficient organisation of entrance points, the lack of diversity and regulation in open-air cafés, the neglected condition and undefined role of internal courtyards, and the absence of a clear greening strategy.

In relation to traffic organisation, the proposals respond to all the identified issues: the dominance of vehicular traffic, excessive restrictions on pedestrian movement, difficulties in traffic management, and inefficiencies in integrating pedestrian and vehicular systems.

In terms of visual perception and aesthetics, the proposals only partially address the deliberate distortion of visual connections with the city's compositional axes and centres. Other critical issues are entirely overlooked, including the very low aesthetic quality of the panoramas, inconsistencies in roofing materials, incomplete furnishing of open spaces, and the visibility of rooftop engineering equipment.

The proposals fail to address key concerns relating to the square's functional purpose. Crucial issues remain unresolved, such as the ambiguous functional role of the square and its buildings, the lack of appropriate infrastructure for hosting national and cultural events, and the absence of clear regulations for flag displays in the square.

Comparing the project proposals with the problems identified in this study reveals a clear imbalance: while traffic arrangement issues received considerable attention, aspects of spatial organisation, visual perception, and functionality were only partially addressed—or not at all.

Furthermore, although many challenges are acknowledged in the proposals, they fail to respond to all relevant questions. Some suggestions aim to repurpose the underutilised central sector, but they are fragmented and address isolated concerns without offering a cohesive strategy. For example, one proposal recommends converting the square into a pedestrian zone by relocating traffic underground, yet it does not consider the visual and aesthetic implications of such a transformation.

These planning gaps raise questions about the objectives behind the proposals. A review of the aims outlined in the 2013 tender for the square's conceptual reconstruction reveals that only a limited set of problems was considered. In contrast, this analysis highlights a far more complex set of challenges requiring attention. The goals of the tender, and the broader urban realities influencing the square's development, remain poorly defined. These include, for example, the historical layers uncovered during the 2003 reconstruction, which received minimal attention. Also notably absent from the proposals are critical concerns such as the square's transformation into a congested transport hub, the distortion of its scale and compositional dominance by intrusive developments, the change in function of adjacent buildings, and the logistical challenges that followed the removal of the Lenin statue and

tribune – all of which have had profound consequences. As the issues outlined in this section demonstrate, these represent only a subset of the broader and interconnected challenges facing Republic Square and its surroundings. It is therefore unsurprising that many key concerns remain unaddressed, given their omission from the original project requirements. This shortcoming extends beyond the tender submissions to include independent proposals, which also tackle the issues in a narrow and fragmented way. Meaningful progress will require a comprehensive and integrative approach that fully accounts for the square's complex and interdependent problems.

The analysis of both the proposals and this research confirms that no single project currently offers a holistic solution to the challenges within the compositional ensemble of Yerevan's Republic Square. A clearly defined project specification – currently lacking – is essential. Thus, the first step in addressing these issues must be to establish clear priorities for the square's future development.

3. Conclusions

This study aimed to analyse the current state of the compositional ensemble in Yerevan's central square, focusing on identifying key issues and proposing recommendations for their resolution.

The analysis reveals a range of problems within the square's compositional ensemble, including poorly organised entry points, underutilised central spaces, ineffective use of open areas around the buildings, fountains, and Shahumyan Park, scattered street cafés, neglected inner courtyards, ambiguous landscaping, vehicular traffic dominance, difficulty in traffic organisation, limited pedestrian access, ineffective integration of vehicular and pedestrian traffic, extremely poor panorama aesthetics, disrupted visual connections with intended axes and city centres, unauthorised alterations to building façades, inconsistency in roofing materials, exposed engineering equipment, incomplete open-space furnishings, unclear functional roles of the square and certain buildings, inadequate infrastructure for public ceremonies, and unclear regulations regarding the display of flags. These issues can be grouped into categories relating to spatial and traffic organisation, visual perception, aesthetics, and functional relevance. Collectively, they point to a breakdown in the compositional unity of the square. A comprehensive analysis highlights that:

- the primary causes include a lack of regulatory oversight, numerous traffic-related challenges, and the absence of a cohesive, long-term planning approach. Economic factors and varying levels of professional expertise also contribute.
- the impacts are extensive, affecting architectural and compositional aspects, traffic and spatial organisation, functional characteristics, and economic considerations.
- the risks include distortion of the square's symbolic significance, compromised architectural and compositional integrity, reduced environmental comfort and safety, socio-economic and functional inefficiencies, and threats to the preservation of architectural heritage.

The study of proposals developed during various stages of the square's evolution allowed for a partial systematisation of these efforts. The most recent analysis shows that most proposals focus on resolving traffic-related issues. Aspects of spatial organisation, visual perception, and aesthetics are addressed inconsistently, while the square's functional purpose is largely neglected. This analysis reveals that there are no comprehensive proposals for addressing the square's problems – primarily due to the absence of a clearly defined goal.

Without specific objectives or tasks, it is impossible to develop sufficient or coherent design proposals.

Therefore, to ensure the compositional integrity of the square's architectural ensemble, it is essential to define clear priorities to guide its future structural development. This research highlights the following key directions:

- re-assessment of the overall spatial layout and open areas;
- definition of spatial, circulation, visual, aesthetic, functional, and symbolic parameters;
- comprehensive architectural surveying, clarification of existing documentation, and restoration of the ensemble's architectural identity;
- reconstruction of surrounding buildings and regulation of future construction;
- improved traffic management and the removal of surface-level parking.

The work also raises new questions. If the impact of emerging issues largely affects the architectural and compositional structure and has implications for the square's symbolic role, then these matters must be addressed through targeted efforts. Until then, the root cause remains a lack of regulation, resulting in ineffective management. How should these management issues be addressed to ensure meaningful progress? By what principles should priorities be defined to support an integrated response to complex challenges? More broadly, what methodology should guide the establishment of these priorities and overarching objectives? Will these objectives form a unified goal, or is there scope for multiple, varied approaches? These are questions for future research to explore.

We believe the insights gained in this study may serve as a valuable foundation for all levels of work on the future development of Yerevan's Republic Square, as well as for broader research and analysis concerning the architectural ensembles of public squares.

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