Transforming urban design education through international competitions: a 20-year perspective

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ABSTRACT: Over the past two decades, international urban design competitions have transformed architectural education by fostering creativity and interdisciplinary learning. This article provides a 20-year perspective by focusing on five of the most prominent competitions: Europan, UIA Student Competitions, ULI Hines Student Competitions, Arturbain.fr and the Global Schindler Award. Through a comparative analysis of these competitions, the research examines their thematic focus, participation levels, educational engagement and impact on urban design education. The results show that these competitions emphasise sustainability, ecological change and shared learning among participants. An analysis of selected editions illustrates their evolution in addressing urban challenges, such as regional connectivity, public space accessibility and environmental resilience. This study highlights that participation in these competitions prepares future urban designers to address complex challenges by encouraging innovative and sustainable solutions. It also underscores the transformative role of competitions in shaping and advancing urban design education.

INTRODUCTION

Urban design education has significantly transformed over the past two decades in response to advancements in technological tools and the growing complexity of urban challenges, such as sustainability, ecological resilience, the threats of climate change and rapid urbanisation [1-4]. International urban design competitions have emerged as one of the major tools for addressing these challenges by fostering interdisciplinary learning, promoting creativity, and encouraging real-world problem solving among future architects and urban planners [5][6]. These competitions are seen as bridging the gap between academic theory and practical application, allowing participants to engage directly with pressing global issues.

As the educational landscape continues to evolve, it becomes increasingly important for future architects and planners to gain not only technical proficiency but also a comprehensive understanding of both global and local contexts [7][8]. For students and professionals, the design competitions provide a valuable platform to develop creative thinking, collaborate across cultural and disciplinary boundaries, and confront real urban challenges [9][10].

Urban design competitions serve a dual purpose: they act as both a learning tool and a professional development resource. By focusing on contemporary issues, such as sustainability, climate change adaptation, equitable development and responsible resource management, these competitions have become one of the key tools contributing to the development of forward-thinking and interdisciplinary approaches. For students and early-career professionals, these experiences foster collaboration, often involving teams from architecture, engineering, environmental science and sociology to create integrated responses to complex urban problems [11].

This article provides a 20-year perspective on the role of the competitions in shaping urban design education. By comparing five prominent international competitions - Europan, UIA (International Union of Architects) Student Competitions, the ULI (Urban Land Institute) Hines Student Competitions, Arturbain.fr and the Global Schindler Award, the study examines differences in thematic focus, participation levels and educational outcomes. Through case studies from various editions of these competitions, the research highlights their contribution to promoting interdisciplinary learning, fostering innovation, and advancing sustainable urbanism in architectural education worldwide.

METHODOLOGICAL FRAMEWORK

This study employs a qualitative research approach aimed at evaluating the educational impact of international urban design competitions. The methodology integrates three core components: comparative analysis, case study examination and document review [12][13]. Each method was selected to provide in-depth insights into how competitions influence architectural education by fostering creativity and interdisciplinary learning in response to global urban challenges.

The comparative analysis explores differences and similarities in thematic focus, participation levels and educational outcomes across five major international urban design competitions chosen for their global reach and relevance. This analysis assesses themes like sustainability and urban resilience, while evaluating the diversity and scope of participants and the involvement of educational institutions. It examines how each competition impacts professional development by promoting interdisciplinary engagement and thematic exploration. Complementing the comparative analysis, the case study examination provides detailed insights into specific competition editions, focusing on themes, such as regional connectivity, public space accessibility and environmental resilience. Selected editions were chosen based on data availability, including competition briefs, winning entries and participant feedback, allowing for a thorough analysis. These case studies reveal how competitions shape participants' educational experiences, developing skills, knowledge and professional networks essential for addressing complex built environment challenges [13][14].

The final component of the methodological framework is a comprehensive document review that examines literature, competition guidelines and institutional reports to provide a base for the analysis in established knowledge and to incorporate different perspectives [13]. This method highlights the integration of competitions into educational frameworks and evaluates the innovative approaches encouraged by these events through a review of competition briefs and winning entries. Taken together, these methods provide a comprehensive understanding of the ways in which international urban design competitions are shaping educational practice, encouraging innovative thinking and preparing urban designers to meet complex global challenges [12][15].

COMPARATIVE ANALYSIS OF INTERNATIONAL URBAN DESIGN COMPETITIONS

To understand the transformative role of international urban design competitions in shaping urban design education over the past two decades, this study compares five prominent competitions: Europan, UIA Student Competitions, ULI Hines Student Competitions, Arturbain.fr and the Global Schindler Award. Each competition is evaluated based on key factors, such as thematic focus, team composition, location selection and distinctive features. This comparative analysis highlights their unique contributions to the professional and educational development of future urban designers.

Table 1: Comparative analysis of five international urban competitions.

Competition/ organiser	Date of creation	Thematic focus	Team composition	Location selection	Distinctive features
Europan/ Europan Europe	1989	Urban regeneration, adaptive reuse	Young professionals and students	Pre-selected by participating European cities	- Focus on real-world urban transformation and regeneration, giving participants practical experience through implementation in European cities; - Winning projects often implemented by participating cities.
UIA Student Competitions/ International Union of Architects (UIA)	2000	Climate resilience, equitable public spaces	Students (advisors optional)	Pre-selected global cities	- Aligned with UNESCO's global urban development goals, addressing global urban challenges: focuses on climate resilience and social equity in public spaces; - Conceptual solutions aimed at informing urban policy; - Honorary recognition, visibility in UNESCO.
ULI Hines Student Competitions/ Urban Land Institute (ULI)	2002	Urban development, real estate, finance and sustainability	Graduate students from design, finance, real estate and urban planning programmes	Pre-selected cities in North America	- Practical real estate development and financial feasibility focus, with interdisciplinary teams working on large-scale urban development proposals simulates real-world urban development processes, offers strong networking opportunities with industry professionals; - Project is conceptual, but often reviewed by industry professionals.
Arturbain.fr/ L'Art Urbain dans les Territoires	2003	Sustainability, public space, climate resilience	Students and teachers collaborate in inter-disciplinary teams	Chosen by participants	- Emphasises interdisciplinary, context-sensitive solutions, aligns with the Sustainable Development Goals (SDGs), encourages cross-cultural engagement; - Project is primarily conceptual, though adaptable to local contexts.

Global Schindler Award/ Schindler Group	2003/ 2015*	Urban mobility, public space	Students (advisors optional)	Pre-selected global cities	- Focus on urban mobility, transit-oriented design, aligns with urban infrastructure and accessibility solutions; - Project is conceptual, but often referenced by professionals for mobility solutions.

Note: *The Global Schindler Award originated as the Schindler Award for Architecture in 2003, focusing on European students. It became a global competition in 2015.

The comparative analysis, as shown in Table 1, highlights their unique contributions to urban design education and practice. Each competition presents a distinct scope, participant focus and approach to addressing urban challenges, offering diverse learning opportunities across thematic areas. This analysis not only underscores the unique attributes of each competition but also provides insight into their role in shaping the professional and educational development of future urban designers.

Founded in 1989, Europan emphasises urban regeneration and adaptive reuse, targeting young professionals and students. In collaboration with European cities, it offers participants opportunities to work on practical urban transformation projects, with many winning proposals ultimately implemented. This real-world experience provides participants with valuable professional exposure. Europan's emphasis on transforming existing urban spaces aligns with the growing need for cities to adapt to evolving social, economic and environmental conditions.

The UIA Student Competitions, organised by the International Union of Architects since 2000, focus on global issues, such as climate resilience and equitable public spaces. Open to students worldwide, these competitions encourage the development of designs aligned with UNESCO's global urban development goals. By emphasising large-scale challenges like climate change and urban inequality, UIA competitions operate within a broader international framework, promoting conceptual solutions that aim to inform and influence urban policy.

Since 2002, the ULI Hines Student Competitions have integrated urban design with real estate, finance and sustainability. They engage graduate students from architecture, finance and urban planning programmes, working on pre-selected urban sites in North America. The competitions simulate real-world urban development processes, requiring interdisciplinary teams to develop financially viable and sustainable proposals. This focus on financial feasibility prepares participants for the complexities of professional practice, where solutions must meet both creative and economic criteria.

Arturbain.fr, launched in 2003, is notable for its emphasis on sustainability, public space and climate resilience. Its interdisciplinary approach engages both students and educators in collaborative projects, promoting a deeper understanding of urban challenges. Distinct from other competitions, Arturbain.fr allows participants to choose their own project sites, fostering flexibility and sensitivity to local contexts. This approach enables participants to address issues aligned with the needs of their communities, effectively bridging theoretical knowledge with practical, culturally relevant applications.

Established in 2003 by the Schindler Group, the Global Schindler Award focuses on urban mobility and public space integration. It challenges students to develop solutions that address the growing demand for accessible and sustainable transportation in rapidly urbanising cities. By emphasising transit-oriented development and accessibility, the competition encourages critical thinking about the role of mobility infrastructures in shaping future urban environments.

The comparative analysis reveals the distinctive educational value each competition offers. For instance, both Arturbain.fr and ULI Hines emphasise interdisciplinary collaboration, albeit in different contexts. Arturbain.fr involves students and educators in teams that focus on sustainability and local contexts, while ULI Hines brings together students from design, finance and planning disciplines to tackle real estate development and financial feasibility. Arturbain.fr explores a broad range of urban sustainability issues, whereas the Global Schindler Award's specialised focus on mobility and accessibility offers expertise in a specific area of urban design. Both competitions share a commitment to innovation and interdisciplinary thinking, requiring participants to integrate environmental sustainability, transportation planning and social inclusivity into their designs. Furthermore, Europan distinguishes itself with its real-world impact, as many winning projects are implemented by partner cities, providing participants with hands-on experience that bridges academic learning and professional practice.

The UIA Student Competitions and the Global Schindler Award focus on global urban challenges. As mentioned above, the UIA aligns with UNESCO's goals, addressing climate resilience and social equity, while the Global Schindler Award emphasises urban mobility and infrastructure. Both aim to influence urban policy and professional practices through conceptual design solutions. By offering diverse learning opportunities across various thematic areas, these competitions collectively enrich urban design education, providing invaluable experiences that prepare participants to tackle complex issues in the built environment, fostering innovation and adaptability in response to global urban challenges.

CASE STUDY EXAMINATION: THEMATIC EVOLUTION, PARTICIPATION AND EDUCATIONAL IMPACT

The evolution of the international competitions over the past two decades reflects their proactive response to emerging urban challenges, such as regional connectivity, accessibility of public space and environmental resilience. It can be noticed, that they have played a transformative role in shaping education in architecture and urban planning during this period. This section explores competitions examined as case studies to analyse their thematic evolution, participation levels and educational impact. By examining these competitions in detail, it can be understood how they have collectively influenced urban design education and practice worldwide.

Thematic Evolution

Based on significant shifts in global urban design trends, the timeline is divided into 2003-2010, 2011-2016 and 2017-2023, as shown in Table 2.

Table 2: Overview of the international competitions' thematic development (2003-2023).

Time period	Europan	UIA Student Competitions	ULI Hines Student Competitions	Arturbain.fr	Global Schindler Award
2003-2010	Urban regeneration, adaptive reuse	Public space development, housing issues	Transit-oriented development, public transport	Public spaces and mobility	Basic mobility infrastructure, transport technology
2011-2016	Climate adaptation, sustainable housing	Resilience strategies, social inclusion	Mixed-use developments, environmental sustainability	Sustainable territories, urban renewal	Sustainable transport solutions, integration of public transport
2017-2023	Green and blue infrastructure, ecological urbanism	Smart cities, advanced urban technologies	Resilient communities, technology integration	Ecological transition, smart mobility	Smart and green mobility systems, urban transport innovation

On the basis of the conducted research, it can be seen that over the last 20 years, the focus areas of international urban design competitions have shifted significantly in response to global urban challenges. In general, the period from 2003-2010 marks a foundational phase where competitions began incorporating basic sustainability concepts, addressing urban mobility, accessibility and public space improvement. The years 2011-2016 reflect the rise of climate adaptation and sustainable urban development, driven by growing awareness of climate change and solidified by the 2015 Paris Agreement. The final phase, 2017-2023, saw the integration of advanced technology alongside continued climate resilience efforts, with smart cities and green infrastructure becoming central themes.

Closer examination reveals, that during the early 2000s, competitions like Arturbain.fr and Europan laid the groundwork for future sustainability practices, focusing on transit-oriented development and adaptive reuse. Arturbain.fr initially focused on practical urban solutions specific to the French context, such as addressing urban mobility and accessibility concerns. Europan, meanwhile, laid the groundwork for adaptive reuse and urban regeneration, setting the stage for sustainable practices in European architectural education. From 2010 onwards, as the urgency around sustainability and climate adaptation grew, these themes began to take centre stage. During this period, competitions evolved to emphasise resilience, sustainability and social inclusion. For example, Europan expanded its focus to include green infrastructure and sustainable housing solutions, reflecting a broader shift towards integrating ecological principles into urban planning. Arturbain.fr integrated sustainable territories. The Global Schindler Award honed in on mobility solutions, particularly the technological integration of transportation systems into city planning, while the UIA Student Competitions explored resilience and social inclusion as core themes.

In the latest period (2017-2023), competitions like Arturbain.fr and Europan emphasised ecological transitions and smart mobility solutions and technology integration, reinforcing its role in adapting urban planning education to contemporary issues. At the same time the UIA and ULI Hines emphasised resilient communities and sustainable growth models, illustrating the evolution of educational priorities in urban design. This reflects the shift from traditional sustainability to technology-driven urban solutions.

Participation and Engagement Trends

Participation levels and international engagement serve as important indicators of the impact these competitions have on urban design education. Analysing the number of editions, countries involved and the diversity of participants provides insights into the competitions' reach and influence. Table 3 outlines these metrics for the examined competitions between 2003 and 2023, showing the extent of their engagement with young architects, multidisciplinary teams and educational institutions on a global scale.

Table 3: Overview of competition participation metrics (2003-2023).

Competition	Editions	Countries involved	Students/teachers involved
Europan	17	12-20 European countries	Typically over 800 participants per edition, including young architects and multidisciplinary teams
UIA Student Competitions	10	35-40	Up to 600+ students and teachers globally, involving diverse teams of students in architecture and urban planning
ULI Hines Student Competitions	21	5-10 (primarily North America)	Approximately 100-150 students per edition, typically in interdisciplinary teams
Arturbain.fr	20	5-19	Up to 400+ multidisciplinary students and teachers
Global Schindler Award	4	15-25	150-300 students per edition, focusing on mobility and urban development solutions

The overview of competition participation metrics highlights the diverse scales and focuses of each competition. Arturbain.fr, primarily focused on French contexts, has gradually increased its international reach, now including participants from up to 19 countries per edition. Europan, which is now in its 17th edition (as of 2023), has consistently attracted participants from 10 to 20 European countries, reinforcing its status as a leader in fostering innovative urban and architectural solutions and attracting over 800 participants per edition, predominantly young architects and multidisciplinary teams.

The UIA Student Competition, held biennially, engages an international audience from 35 to 40 countries, making it one of the most globally inclusive competitions.

Meanwhile, the ULI Hines Student Competition, an annual event focusing primarily on North America, maintains high levels of engagement with up to 150 students per edition, representing various architecture and urban planning schools, involving interdisciplinary teams, often combining architecture, planning and real estate disciplines. This competition's specialised approach aims to address practical, real-world urban development scenarios. On the other hand, the Global Schindler Award, held every two to three years, attracts participation from 15 to 25 countries, focusing on innovative mobility and urban development solutions that engage hundreds of students per edition. Together, these observations reveal the varying scales, geographical focuses and disciplinary integration across competitions, offering insights into their evolving roles in global urban design education.

Educational Impact

The educational impact of these competitions goes beyond mere academic exercises. These competitions provide invaluable opportunities for students and young professionals to engage with urban design challenges, offering a blend of conceptual and practical experiences across various urban contexts. As the data in Table 4 show, each competition not only contributes to urban design education, but also provides insights into real-world applications and future urban development possibilities.

Table 4: Educational and real-world impact.

Competition	Educational impact	Real-world implementation
Europan	Curriculum integration across European architecture schools	Built projects implemented in several European cities, with a focus on urban regeneration
UIA Student Competitions	Global collaboration, influencing educational and professional standards	Influences urban planning and architectural standards, often shaping international policies
ULI Hines Student Competitions	Development of interdisciplinary skills in urban development	Impacts real estate projects, particularly mixed-use developments across North America
Arturbain.fr	Integrated into local curricula, engaging multidisciplinary teams	Urban renewal and mobility projects in French cities, such as sustainable transport solutions
Global Schindler Award	Advances smart mobility education, emphasising transportation innovation	Mobility solutions tested in urban pilot programmes, particularly focused on sustainable transport systems

Research shows that international urban design competitions significantly influence architectural education and urban planning. Europan is central to European education, with many projects realised in cities, bridging academia and practice. Arturbain.fr integrates competition results into local urban projects, giving students hands-on experience. The UIA Student Competitions foster international collaboration, impacting global curricula. ULI Hines combines architecture, planning and

business education, preparing students for real-world urban development. The Global Schindler Award focuses on mobility solutions, linking education with industry through pilot projects. In terms of real-world impact, Arturbain.fr projects often stay academic, while Europan frequently sees implementation. Global Schindler promotes practical mobility solutions, and the UIA influences urban design trends globally. ULI Hines excels in creating financially viable projects ready for implementation, emphasising practical applicability.

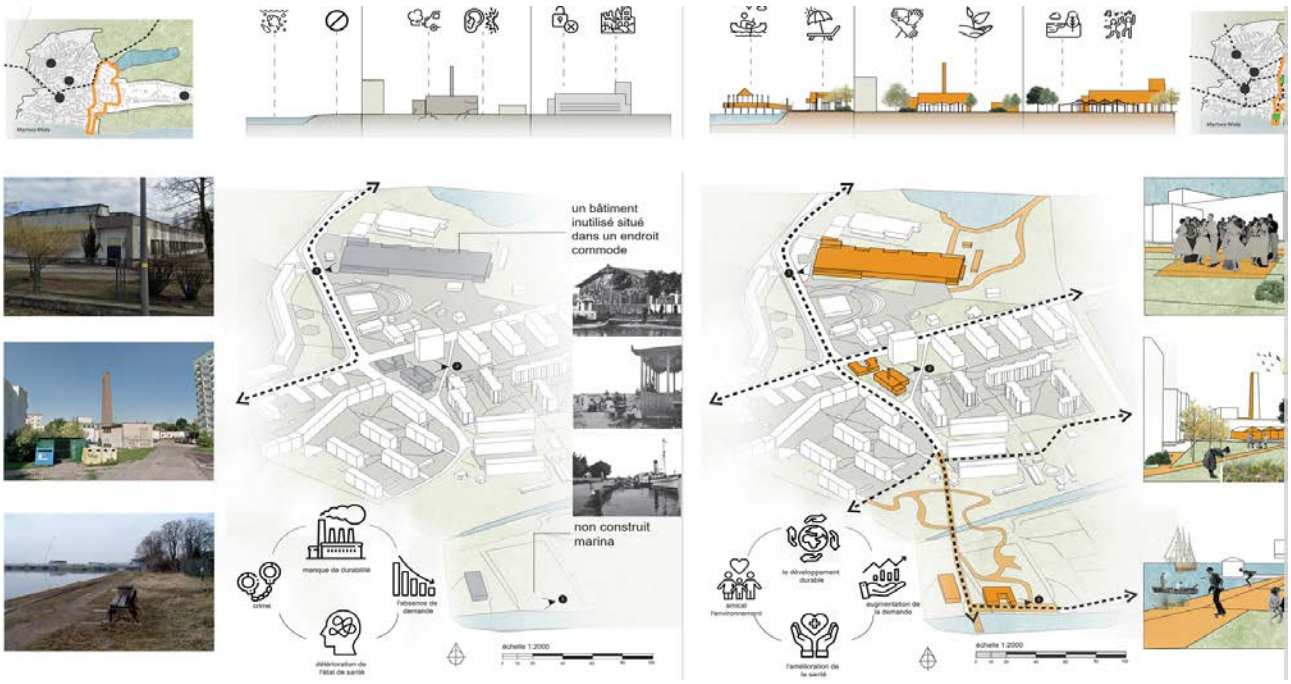

Figure 1: Project that received the Quality of Architecture mention in the 2023 edition, titled *Impact of the Past*. Study area overview (l), with transformation strategy outline (r) (authors: group of Justyna Wesołowska and Michał Boczoń led by architect Izabela Burda; source: resources of the Faculty of Architecture at Gdańsk University of Technology, Poland).

Following the discussion of the influence and real-world impact of international urban design competitions, a specific example from the 2023 edition of Arturbain.fr provides further insight into the practical application of these educational competitions. The theme of the 2023 edition, *Ecological Transition*, focused on integrating climate resilience into urban design. Participants were tasked with developing strategies that incorporated renewable energy, water conservation and green infrastructure, highlighting the global need to address climate change in urban planning. The project, titled: *Impact of the Past*, exemplifies how these competitions connect academic theory with real-world challenges. Led by Justyna Wesołowska and Michał Boczoń, under the guidance of architect Izabela Burda from Gdańsk University of Technology, Poland, the project received the Quality of Architecture mention.

This project explored an urban site's historical context and aimed to transform it by integrating sustainable solutions. The left side of the project's overview map illustrates existing conditions, such as crime and environmental degradation, while the right side presents a transformation strategy, focusing on green pathways, public spaces and the adaptive reuse of historical buildings (Figure 1).

Discussions with students participating in this competition confirmed that the focus on ecological transition remains highly relevant. This example demonstrates how the competition maintains its commitment to sustainability, offering students hands-on, practical opportunities to propose innovative urban solutions that align with contemporary global priorities in climate resilience and sustainable development.

CONCLUSIONS

The analysis of international urban design competitions over the past two decades shows their transformative impact on architectural education and urban planning. By addressing challenges like sustainability, mobility and resilience, these competitions bridge the gap between academic theory and practical implementation, providing essential skills to prepare future architects for creating sustainable, resilient urban environments. Each competition has a distinct focus. Arturbain.fr emphasises sustainability and ecological transition, Europan prioritises urban regeneration with high implementation rates across European cities, and the Global Schindler Award targets urban mobility.

The UIA Student Competitions tackle broader themes aligned with SDGs, while ULI Hines combines urban design with real estate development, focusing on financial viability and practical application. These competitions increasingly integrate sustainability and foster cross-cultural collaboration, emphasising local adaptation, while aligning with global frameworks

like the SDGs. Arturbain.fr stands out for its flexibility and interdisciplinary engagement, while competitions like Europan and ULI Hines excel in real-world application. Overall, these competitions are vital tools connecting education, theory and practice, equipping future urban designers with the skills needed to shape resilient cities.

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