

Institution: University College London
Unit of Assessment: 16 – Architecture, Built Environment and Planning
Title of case study: <i>Kunsthau, Graz: innovative museum design, cultural and urban regeneration</i>
1. Summary of the impact <p>The Kunsthau in Graz, Austria, which emerged from UCL research by Cook and Fournier, and opened in 2003, has had a substantial and sustained impact on the city. Indeed, it has become a key symbol in Graz and a major contributor to tourism and increased visitor figures due to its innovative and iconic design. It has led the regeneration of the once-depressed district it is located in – a fact the city then acknowledged in its successful application to become an UNESCO ‘City of Design’ in 2011. The dramatic external form and spaces within the building have inspired groundbreaking new curatorial practices that have since been applied by its curators elsewhere.</p>
2. Underpinning research <p>Since the early-1990s, the UCL Bartlett Faculty of the Built Environment’s School of Architecture has been a world-leader in transforming innovative ‘paper’ architecture into realised building designs. This has helped define its international reputation for design research. A leading example of this is when Sir Peter Cook (Bartlett Professor of Architecture, and Chair of the Bartlett School of Architecture from 1990–2006) and Colin Fournier (Professor of Architecture and Urbanism at the Bartlett since 1998) won a global competition in 2000 to design a major new art museum for the city of Graz, Austria [a]. Over a four-year period, they designed and implemented the construction of the Kunsthau, working with Frankfurt-based structural engineers Bollinger+Grohmann. The resulting building, which opened in 2003, is widely regarded as a seminal contribution to the development of iconic modern art museums in Europe, especially in terms of its ‘biomorphic’ building typology (overall design) and use of interactive building technology (media façade).</p> <p>This dramatic new art museum relates also to Graz’s Baroque artistic, architectural and urban heritage/context (including the mid-20th century ‘Grazer Schule’ tradition of architecture and urban design, especially Gunther Domenig’s work) as well as to the lineage of international art museums that challenge the modernist ‘white cube’ conventions (e.g. the Georges Pompidou Centre, Paris, and the Guggenheim Museum, Bilbao). [b] The Kunsthau Graz hence uses contemporary curatorial methodologies, which reflect the building’s typological uniqueness and interactive elements, to display artistic practices that are site-specific, performative and decidedly avant-garde.</p> <p>The research for the Kunsthau also employed technical design innovations that resulted in a building which is formally original and has an interactive exterior envelope that is integral to the building’s design, function, and ‘performativity’. Its external skin provides a unique interface for displaying contemporary art directly onto the street. [c, d] This integration of contemporary art displays into the innovative design and fabrication of the building was achieved by various means:</p> <ul style="list-style-type: none"> (i) Creating a design for a complex double-curved exterior envelope that required specially pre-fabricated 3D modelled panels as part of the design team’s vision for non-standard geometric design processes based on advanced digital techniques. (ii) Employing CAD-CAM construction processes and design-to-production tool-chain methods which – working in collaboration with the local building industry – enabled cost-effective manufacturing techniques for the structural elements and double-curved outer skin. As such, the Kunsthau was the first permanent building structure to have an overall envelope made out of translucent, individually formed double-curved elements. This technology for the skin also enabled the development of a system of mechanical fixing points that adjust to the high thermal expansion coefficient and structural properties of thermoplastic materials. (iii) Researching, along with Realities United in Berlin, into different concepts of electronic visual displays to design and the construct the interactive, ‘performative’ media façade as part of the building’s external skin; this was achieved as it was seen as better than using a whole series of discrete screens to make up the skin. It also enabled the cost-effective integration of large-scale

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'pixels' into a double-curved façade, the novel use of tuneable fluorescent lighting with fast response time so they could be used for display purposes, and the development of specific user interfaces to increase public interaction.

(iv) Integrating the building's heating and air-conditioning system into the thermal performance of the external skin by designing an energy-exchange mechanism which uses water from the adjacent Mur River to help to cool the interior of the Kunsthaus. The permeable, layered structure of the building envelope is therefore also an active element in the heating, ventilating and cooling system, and this was only achieved in practice by a thoroughgoing pre-testing of thermal effects on the translucent thermoplastic panels that constitute the top layer of its rear-vented façade.

3. References to the research

[a] Kunsthaus, Graz (completed in Oct 2003).

This award-winning building consists of three major exhibition galleries plus associated office spaces, meeting spaces, and communication and entertainment facilities. The latter include a Media-Art-Laboratory, reading and media lounge, gallery shop, restaurant/café, two 'travelators' that enable the visitors to move through the building and exhibition decks, including access to the 'needle', which is a cantilevered glass viewing structure at roof level. Location: Südtirolerplatz 2, Lendkai 1, A-8020 Graz, Austria. [Portfolio submitted to RAE 2008; PDF available on request]

[b] Fournier, C. (2003) 'A friendly alien. The Graz Kunsthaus', in Tschumi, B. & Cheng, I. (eds.), *The State of Architecture At The Beginning of The 21st Century*, New York: Monacelli Press/Columbia Books of Architecture, pp. 84-85 (with 2 illustrations). [ISBN 978-1-58093-134-2]

[c] Fournier, C. (2003) 'Urban Transgression and Metamorphosis and A Friendly Alien: Kunsthaus Graz', in Feireiss, K. (ed.), *Curves and Spikes*, Berlin: Aedes, pp. 2-7, 8-13. [Available on request]

[d] Fournier C, & Cook, P. (2003) 'Kunsthaus Graz', exhibit in *Nouvelle presentation des collection contemporaines du musee national d'art moderne* (group show). curated by Frederic Migayrou, Centre Pompidou, Paris. Plans and renders, models, material samples and full-scale details, audio-visual presentations, original competition plans (70cm x 100cm); original 1/500 scale competition model (60cm x 60cm x 45cm); 1/50 scale detailed sectional model (35cm x 100cm x 70cm); 1:1 scale skin material sample (100cm x 120cm); 1:1 scale fixing clamp prototype (30cm x 20cm x 15cm).

The quality of the underpinning research is demonstrated by the widespread recognition and prizes that have been awarded to the Kunsthaus Graz:

- Winner of the initial design competition in 2000, competing against leading architects like Zaha Hadid, Thom Mayne (Morphosis), Hans Hollein and Coop Himmelb(l)au.
- RIBA Year Award, UK, 2004. Other winners of the prize have included Frank Gehry, Daniel Libeskind, and Foster + Partners.
- Shortlisted as one of six contenders for the RIBA Stirling Prize, 2004.
- Nominated for the Mies Van Der Rohe Prize, 2005.
- Selected for exhibition in many places, notably the 8th Venice Architectural Biennale (2002) and the Centre Pompidou (2003).

4. Details of the impact

Graz is Austria's second largest city, and the federal capital of the Styria region. The Kunsthaus opened in 2003, the year in which the city was awarded the status of 'European Capital of Culture'. Since then, the Kunsthaus Graz has contributed to regenerating the city's cultural and economic esteem in Austria, Europe and globally. These major impacts have continued and indeed increased since 2008, both in terms of economic influence by establishing Graz as an international arts capital for specialist and non-specialist visitors, and terms of in providing the city, and the country, with a unique and powerful architectural emblem for the 21st century.

The 'biomorphic' design of the Kunsthaus has therefore raised the cultural value of architecture in Graz and its region, contributing to its international reputation as a locus for new architecture.

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Within the history of iconic cultural buildings, it can be situated between the Guggenheim Museum in Bilbao (Frank Gehry, 1997) and the MAXXI National Museum of Modern Art in Rome (Zaha Hadid, 2010). Its role as a world-class architectural exemplar was central to Graz's selection in 2011 as an UNESCO 'City of Design', the testimonial for which cited the Kunsthaus as '*among the city's most prominent pieces of architecture and is considered internationally to be one of the most discussed contemporary exhibition buildings*' [1; pp. 23–24].

The success of the building's innovative design in achieving a complex double-curved geometry has undoubtedly contributed to its worldwide fame. Its façade, which is skilfully integrated into the outer skin of the building, has been used as a key 'performative' medium through which to display the museum's curatorial programme directly into the streets around, thereby turning this quarter of the city into a living capital of culture [3, 4, 5].

Thanks to this innovative and recognisable design, since 2008 the museum has been used, almost exclusively, as the iconic image of Graz in international tourist literature, the broadsheet press and media, and even crossing over to publications in building technology, computer science, arts, museology, urbanism, conservation and popular culture. This includes a 50-minute documentary film by coop99 and Wien Film in 2012 – titled *Kunsthaus Graz – A Friendly Alien* – which contains interviews with two leading Austrian architects, Günther Domenig and Volker Gienke, and the Kunsthaus's former Director, Peter Pakesch. The Kunsthaus, as the synonymous image of Graz, and of Austria more generally, has been celebrated in many ways: for instance, a standard-letter postage stamp issued in 2011; the front-page banner image for the Graz Municipality's website; the opening credits for daily news programme on Graz TV; and reviews broadcast by CNN on 9 October 2008 ('10 of the World's 'Bloggiest' Buildings') and by Graz TV on 6 August 2013. For Graz's umbrella organisation for cultural heritage, called the *Johanneum*, the museum continues to provide significant ongoing value as its leading public 'brand image' [10]. The Johanneum has even developed a mobile phone app, the 'Kunsthaus App', which includes an illustrated guide to the building with a German/English architectural tour for adults and a German-language-only guide for children [4].



The local tourist board, Graz Tourismus, has stated that the city's museum visitor numbers increased dramatically to reach 70–80,000 per annum by 2008 [6]. More recently, the organisation notes that total visitor numbers to the city has continued to rise steadily, reaching a high-point of 800,000 'overnight stays' in 2011 [9, 10]. The central role of the Kunsthaus in this sudden increase is demonstrated by the fact that the building receives a much higher percentage of the city's cultural tourists than do comparable museums in other renowned 'cultural' cities, such as Barcelona [6 – see also 4, 5]. Between 2008 and 2011, the Kunsthaus Graz received an average of 69,826 visitors per annum, equal to an astonishing 87.2% of the total cultural tourism in the city. The museum's own market research, conducted in 2008, has shown that the building's bold design is key to its economic and cultural success, with 79.1% of visitors considering the tours of the architecture itself to be either 'very important' or 'important' [2; p. 13].

Furthermore, the Kunsthaus was purposely located in a historically deprived part of Graz, but through its performative façade it has become consciously integrated into the lived life around it. The building has hence since been instrumental in the economic and social regeneration of this previously rundown district. During the REF impact period, some 21 new businesses have opened locally – these include 3 offices/creative studios; 5 cafes/restaurants; 11 fashion/retail outlets, and 2 galleries. In addition, in 2008 the House of Architecture, a major local cultural institution, relocated next door into the renovated Palais Thienfeld [7 – see also 5, 9]. Duly, the city's successful application to become an UNESCO 'City of Design' stated: '*It is not a coincidence that more and more creative businesses have settled in the area around the Kunsthaus Graz ... having profited from the revival of this area that had until just recently been considered by the general public as rather underprivileged*' [1; p. 23].

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Market research into the cultural value of the Kunsthaus has also demonstrated the success of the site-specific interaction between the building and its exhibition programmes [2, 10]. The building itself has impacted on the visual arts, and on museum and curatorial working practices. It has enabled new approaches by its curatorial team in terms of design, display and operation, gaining international recognition for site-specific curation within contemporary art museums [3, 4, 10]. The building's 'anti-white-box' design has continuously underpinned curatorial strategies for exhibiting post-1960 avant-garde art and design (e.g. *Life: Biomorph Form in Sculpture*, 2009; *Capital + Code*, 2009; *Human Condition: Empathy and Emancipation in Precarious Times*, 2010; *Robot Dreams*, 2010). Its former lead curator, Adam Budak, highlighted its catalytic role for 'anti-modern' curatorial methods [3] in the press release that accompanied the 2011 exhibition on 'Anti/Form', by noting that 'this building [is] triggering new ways of thinking', and adding 'we quite consciously selected this particular group of sculptures for the Kunsthaus Graz, a building designed ... in the spirit of the Archigram group' [8].

Also notable is that these innovations at the Kunsthaus Graz in architecturally responsive curatorial practice have been applied to other projects elsewhere, especially by its former Director, Peter Pakesch (who is now the overall Director for all of Graz's museums) and by Adam Budak, who has since been awarded international appointments for *Manifesta 2008* and for a period was a curator at The Smithsonian Hirschhorn Museum in Washington, DC. Each of these figures, plus other colleagues, have been able to use the groundbreaking curatorial techniques developed in the Kunsthaus Graz in their subsequent careers [3, 4].

5. Sources to corroborate the impact

- [1] Successful application to UNESCO for 'City of Design' status in 2011, indicating both the centrality of the Kunsthaus in the application and its contribution to urban regeneration [Available on request]
- [2] Market research report indicating importance attributed by visitors to tours of the Kunsthaus: *Besucherstromanalyse 2007/8: Im Kunsthaus Graz* [Available on request]
- [3] Interview with the former Kunsthaus Chief Curator, demonstrating the catalytic role of the building for informing new curatorial practices [Available on request]
- [4] Interview with the former PR Manager for Kunsthaus, outlining the value of the Kunsthaus to Graz's cultural and regional tourism [Available on request]
- [5] Interview with City Councillor at the Graz City Hall, Rathaus Graz, indicating the building's catalytic role in regenerating the city's urbanism and economy [Available on request]
- [6] Interview with the Managing Director of Media Relations, Graz Tourismus, with details of the increase in tourists to the city and to the Kunsthaus Graz [Available on request]
- [7] Specially commissioned report in 2012 on urban and cultural regeneration in Graz conducted by a freelance architectural researcher on behalf of the Bartlett School of Architecture, UCL [Available on request]
- [8] Press Release for the 2011 'Anti/Form' exhibition, highlighting the 'anti-modern' inspiration of the building for curatorial practices [<http://www.mutualart.com/OpenExternalArticle/Kunsthaus-Graz/9A7BE98404841101>]
- [9] Correspondence with the former Dean of the Graz School of Architecture and Digital Design, Graz University of Technology, underpinning the architectural, cultural, urban and economic regeneration resulting from the Kunsthaus Graz [Available on request]
- [10] *Graz Tourismus 2011: Facts, Figures, Analysis*, giving details of increasing tourist numbers to the city, and value of the Kunsthaus to the city's museums, known collectively as The Johanneum [Available on request]