

154 Olympic waterfronts

Wasted opportunities and lasting legacies

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ABSTRACT

Mega-events like the Olympic Games are frequently used as platforms for urban development, creating physical, political, social, and economic legacies. With a clear strategy of city-branding, cities, regions, and countries may use these events to reposition themselves in the global market. Globally, waterfront redevelopment has become a primary mechanism for revitalizing urban spaces, especially through brownfield requalification. The Olympics have not been indifferent to this trend, and over the last decades several important Olympic interventions have rehabilitated waterfronts. Yet, these 'Olympic Waterfronts' have emerged in very different urban contexts and resulted in diverse urban, social, and environmental legacies. This paper analyses such waterfronts by evaluating their: economic sustainability; environmental impact; connectivity and accessibility; role in the hosts' urban and marketing strategies; social impact of the event; visibility/perception of these locations. These are framed in the political and social contexts in which each intervention was carried. Results show that the Olympic Waterfront can drastically change the image of the city, greatly contributing to the perceived success of the event's legacy and creating new urban centralities. However, the inadequate management in the planning, the delivery and, especially, the legacy stages of the event can compromise this 'Olympic Effect'.

Keywords: urban waterfronts, urban redevelopment, Olympic Games, mega-event planning.

1. Introduction

Although frequently marred in controversy, the Olympic Games have been seen as a catalyst for urban interventions that otherwise would hardly be implemented, bringing opportunities for rapid development (Gold, & Gold, 2011). They have the power to trigger economic, social, and urban renewal, providing “entrepreneurial cities” the unique branding opportunity to boost their global status (Hiller, 2006). At the same time, they present unquestionable inherent risks as they are associated with demanding schedules and requirements, hardly matching any city’s strategic planning, and often draining public funds (Müller, 2015; Kassens-Noor, 2016; Lauermann, 2016).

Waterfront regeneration has become one of the most important forms of urban intervention, triggered by the relocation of industries, ports, and linear infrastructure. Brownfields, located in central locations within metropolitan areas, on the shores of rivers, lakes, and seas, are often perceived as prime real-estate opportunities within dense urban fabrics. Large urban regeneration projects have become desirable investments, but often lead to unequally balancing of desired outcomes among different stakeholders, fostering land-use conflict and the commodification of public space (Avni, & Teschner, 2019).

Where the two phenomena meet, is at what we call the “Olympic Waterfront”. These are, evidently, waterfront spaces, often brownfields, that were selected as Olympic sites. Throughout time, the host cities adopted different urban strategies to develop these areas. At their best, they could draw from the exceptional character of the Olympics and combine it with the unique character of waterfronts, generating attractive locations with the potential to set-off entire urban renewal processes at the city scale. Despite this enormous potential, some of these sites are quite underwhelming, which begs the question of what actions led to less-than-successful outcomes. Olympic Waterfronts might substantially improve cities but, at the same time, can incur in all problems usually affecting both waterfront and Olympic projects.

2. Methodology



Fig. 1 - “The Wrongs” and respective criteria. Own creation based on (Pinto, & Kondolf, 2020).

In Pinto and Kondolf (2020), we proposed an evaluation tool for the quick assessment and identification of elements of waterfront projects that have failed or are prone to failure. The tool is here adjusted to better reflect the specifics of Olympic sites. It consists of a basic classification system based on five typical “wrongs” often present in waterfront interventions, which are further divided into five criteria each (Fig. 1). A binary classification is used, where -1 indicates that a specific problem is present and 0 indicates it is not.

The methodology was applied to ten case studies, selected through the following criteria: (i) contemporaneity, starting with Barcelona 1992; (ii) location, considering only Olympic interventions in waterfronts (rivers, lakes, or seashores); (iii) coherence, selecting the areas with significant urban interventions. The evaluation of each case study regards the site itself and its post-event evolution, disregarding the Olympic event.

Qualitative evaluation of the case studies resorted to documental analysis (scientific publications and official Olympic files). GoogleEarth’s time-lapse tool was used to observe the sites’ transformation dynamics, and StreetView to further survey their current state. Criteria were evaluated only if supporting data was found, being rated “0” otherwise.

3. Olympic Waterfronts

3.1 Barcelona 1992: Parc de Mar

Following its successful hosting of Expo 1929 and the 1992 Olympic Games, Barcelona is often presented as a role model for mega-event urban planning. The latter have completely renovated the area of Parc de Mar (Fig. 2), a former industrial and illegal settlement seafront area, separated from the remaining urban fabric by a railway (Gold, & Gold, 2011). After the Games, the area became a vital and dynamic centrality of the city, combining residential areas with economic, leisure, and tourism activities.

Barcelona is lauded for framing the interventions in a broader, and long-term, existing planning strategy, that built on Ildefonso Cerdà's plan for the *Eixample* of Barcelona. Hosting the Olympics represented the opportunity and justification for the costly and complex restructuring of the city's waterfront. One of its fundamental aspects was the transformation of the Ronda del Litoral, an urban highway, which was partially converted into a trench-tunnel system. Although very expensive, the intervention allowed unimpeded street-level connection between La Vila Olímpica and adjacent blocks with the seafront.

3.2 Sydney 2000: Sydney Olympic Park

Matching the decision of the International Olympic Committee to make 'environment' one of the three main strands of Olympism, the organizing committee of the 2000 Sydney Olympics committed to deliver "Green Games". As such, a massive sports area was built at Homebush Bay (Fig. 3), bringing the opportunity to remediate heavy pollution problems in the former brownfield, and promote its regeneration (Gold, & Gold, 2011). Together with the adjacent Olympic Village, the intervention resulted in a new suburb of Greater Western Sydney, the Olympic Park.

While adhering to somewhat classic zoning, with clear separation of the sports complex, residential areas, and the large urban park, it nevertheless succeeded in creating a new centrality within Sydney Metro, along the shores of the Harbour. The Olympic Park contains several large green areas, including the Bicentennial Park and Wentworth Commons, and other areas were carefully designed to preserve wetlands (such as the Badu Mangroves). This intervention brings out Sydney Olympic Park as the only case study having no significant problems regarding "the wrong colour", that is, with its system of green spaces and consideration for existing natural values, the site holds up to the "Green Games" commitment. Nevertheless, its location, far from central Sydney, rendered some facilities and public transport routes underutilized, which raised questions over its long-term financial sustainability.

PARC DE MAR – BARCELONA 1992

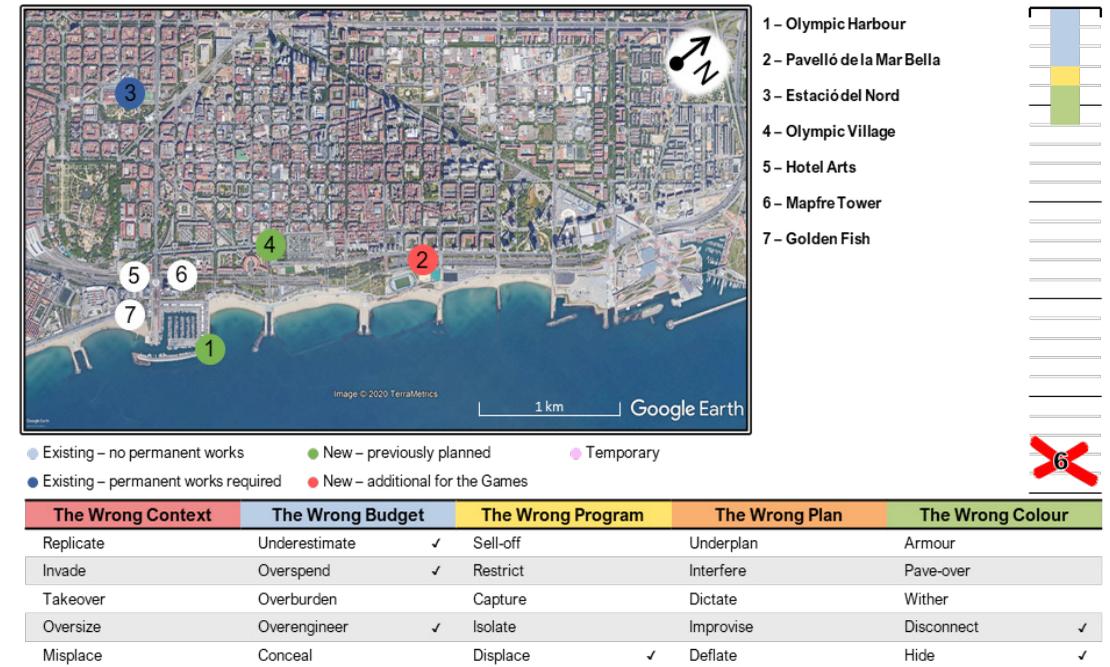


Fig. 2 – Parc de Mar: venues/facilities, and classification. Own creation. Maps Data: Google, ©2020 TerraMetrics.

SYDNEY OLYMPIC PARK – SYDNEY 2000

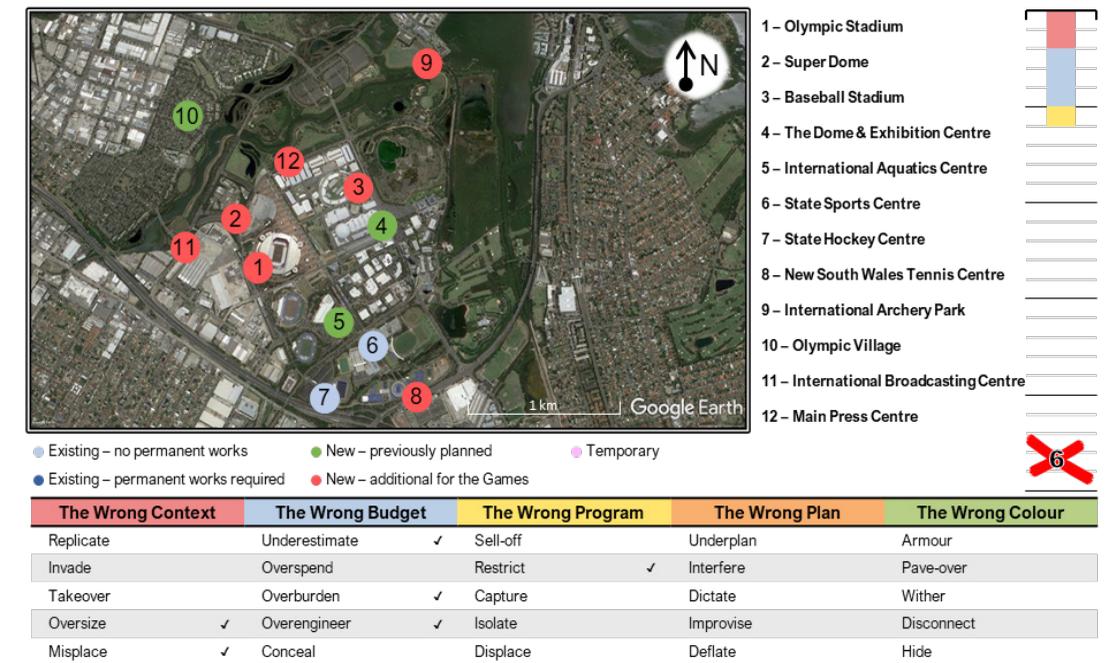


Fig. 3 – Sydney Olympic Park: venues/facilities, and classification. Own creation. Maps Data: Google.

3.3 Athens 2004: Faliro Coastal Zone Olympic Complex, and Hellinikon Olympic Complex

Athens submitted a bid relying heavily on the concept of concentration of Olympic activities in the Faliro coastal area. Following a series of changes, immersed in controversy, the final plans resulted in the spread of venues between the seafront areas of Faliro (Fig. 4) and of the former Hellinikon Airport (Fig. 5) (Gold, & Gold, 2011).

The initial objective of the Faliro Bay project was to break the barrier between the waterfront and the Tzitzifies quarter, by redirecting and burying some sections of the coastal highway and giving access to an ecological leisure area, to be created in the landfills, which would include cultural and sports facilities. However, due to concerns of mass concentration during the Olympics, several of these facilities were moved to Helliniko. After the Games, most of the site remained undeveloped, and the burial of linear infrastructure was postponed. Following 14 years of stagnation, works have recently resumed and the project, with significant revisions, seems headed towards a successful conclusion. The completion of the highway tunnels makes the reconnection of Athens' urban fabric with the seafront finally possible, complementing the pedestrian crossover purposely built for the Games. A newly-built cultural center provides an anchor to the area, improving its attractiveness.

FALIRO COASTAL ZONE OLYMPIC COMPLEX – ATHENS 2004

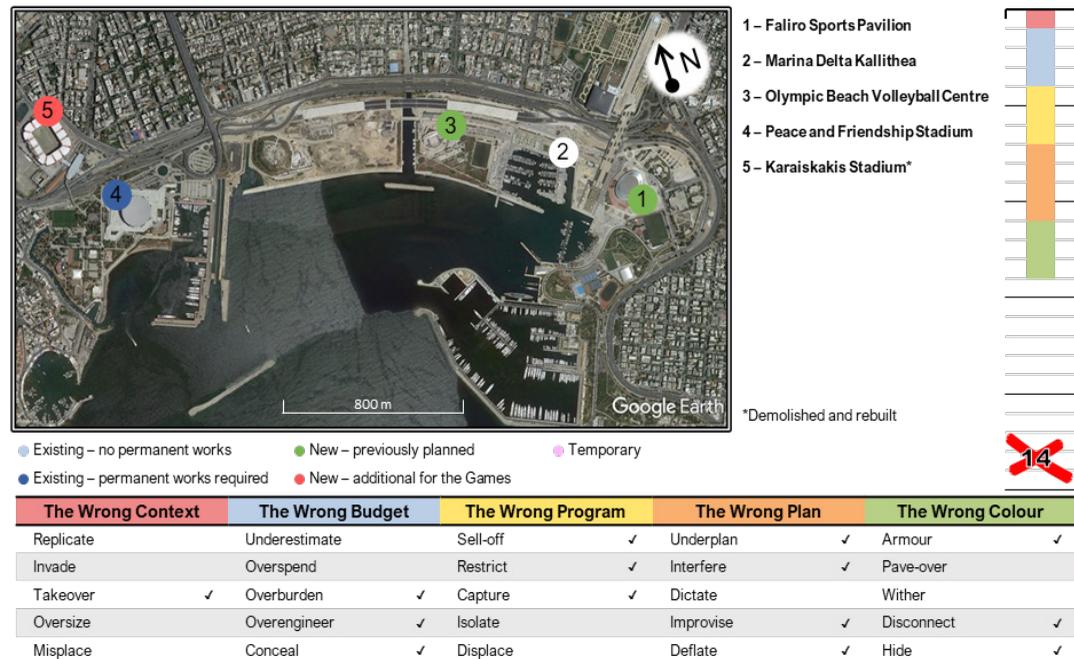


Fig. 4 – Faliro Coastal Zone Olympic Complex: venues/facilities, and classification. Own creation. Maps Data: Google.

The Hellinikon site acted as a depository for the relocated venues, leading to rushed planning and little character and design. While the reuse of the former airport's site and facilities was expected, the mix of uses (or lack thereof) rendered most of the site in a state of disrepair soon after the Games, with most of the venues not having a post-event purpose. The connection with the waterfront was not valued nor improved for the Games or afterwards, and linear barriers have been kept in place. Nevertheless, future projects foresee the development of a large metropolitan park.

Issues of “the wrong plan” affect both case studies. In Faliro, these could be attributed to the late relocation of venues and to stagnant development due to economic issues. Helliniko was the result of an impromptu last-minute solution for venue relocation, lacking a coherent post-event strategy. These cases perfectly illustrate how a lack of resilience to externalities can influence expected urban outcomes, with funds being redirected from an existing sophisticated plan to a rushed and improvised project. This affected the project's redundancy and diversification, as well as its integration within existing urban fabric, thus resulting in a “wrong program” with “the wrong budget”.

HELLINIKON OLYMPIC COMPLEX – ATHENS 2004

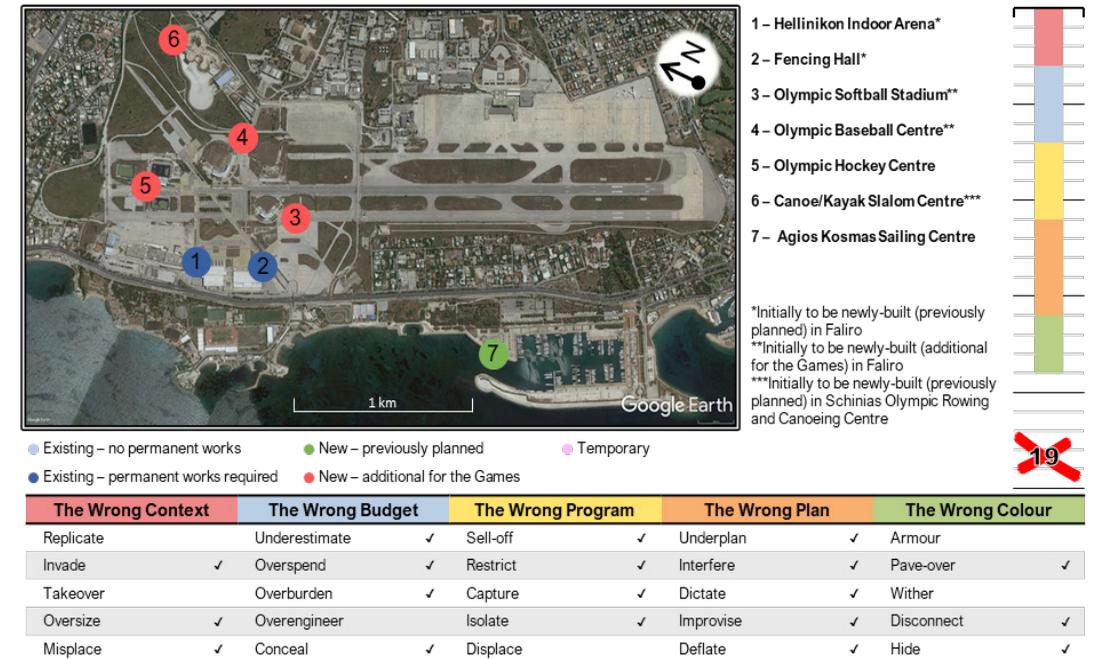


Fig. 5 – Hellinikon Olympic Complex: venues/facilities, and classification. Own creation. Maps Data: Google.

3.4 Beijing 2008: Olympic Green & Forest Park

The “Efficiency Games”, in Beijing, were recognized as so not only because of its majesty and organizing competence, but also because of its ecologically friendly approach: the mitigation of air pollution; the improvement of the sewage and wastewater treatment; the promotion of energy efficiency in Olympic venues and village; or the creation of green areas, as the new Olympic Green and Forest Park (Fig. 6) (Gold, & Gold, 2011). The Games are also seen as an example of city-branding through mega-events, within a broader effort to assert Beijing as a global city. Yet, the construction of the Olympic Park required extensive residential displacement and the direct costs were very high – at the time, second only to Barcelona. The Olympic Park stretches along a canal/reservoir, formed by damming of the headwaters of the Yangshan River. While man-made, this “river” is very successful in bringing the water element to the fore in structuring the new urban centrality. The Forest Park created extensive artificial wetlands, providing much-needed habitat and recreation areas within the dense metropolitan region.

3.5 Vancouver 2010: Vancouver Olympic Village

Vancouver 2010 was committed to deliver the first “Sustainable Games” ever, focusing on topics of social inclusiveness, and post-event legacies for everyone. A significant share of the Olympic Village, at the southeast end of False Creek (Fig. 7), was promised for social housing, in a prime waterfront area of the city. However, the economic crisis of 2008 forced the government to intervene and temporarily assume part of the funding, following the insolvency of the original developer. The share of cost-controlled housing was partially sacrificed so as to render the project economically viable, with the municipality having to sell the blocks at market prices (Gold, & Gold, 2011). Controversy marred the process of removal of homeless people and tenants in the neighboring Downtown Eastside quarter. These actions were to be partially mitigated by the never-delivered affordable housing at the Village. Nowadays, the Olympic Village is evidently a successful neighborhood, though gentrified, comprising attractive commercial, touristic, and leisure areas.

OLYMPIC GREEN AND FOREST PARK – BEIJING 2008

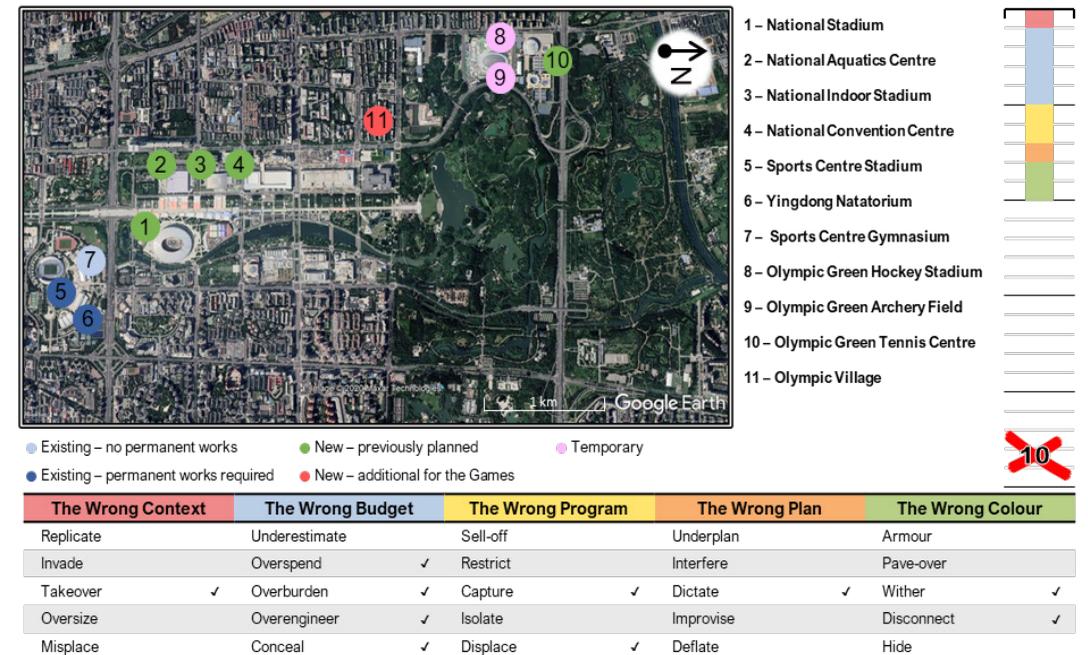


Fig. 6 – Olympic Green & Forest Park: venues/facilities, and classification. Own creation. Maps Data: Google, ©2020 MaxarTechnologies.

VANCOUVER OLYMPIC VILLAGE – VANCOUVER 2010

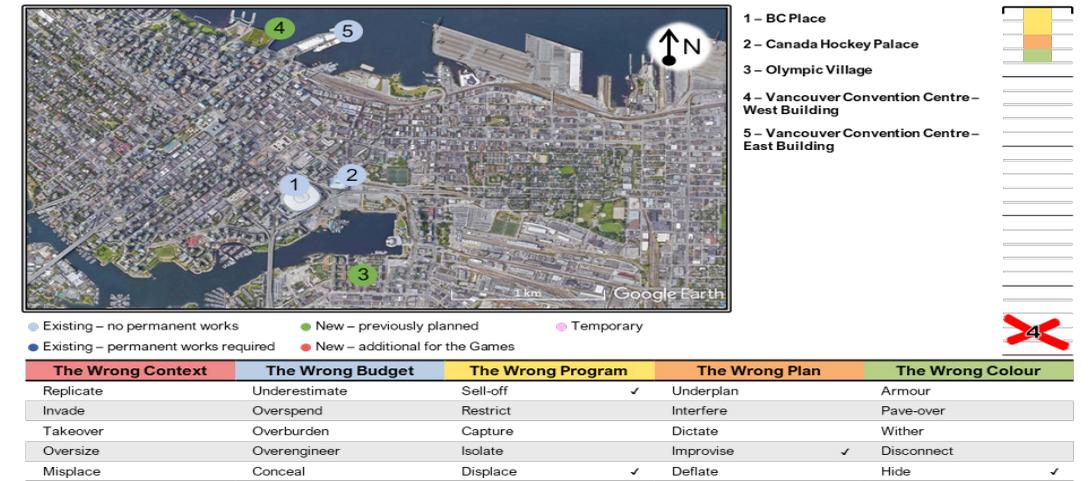


Fig. 7 – Vancouver Olympic Village: venues/facilities, and classification. Own creation. Maps Data: Google.

3.6 London 2012: Queen Elizabeth Olympic Park

The London Olympic Games mark the history of Olympic planning for breaking the record of the number of temporary venues used, and for being the first to have a legacy plan in execution long before the hosting of the event. The “Regeneration Games” have completely transformed the decaying mixture of green and brown-fields resulting mostly from deindustrialization and the closing of the London

Docks, in Stratford, East London (Gold, & Gold, 2011). The new urban centrality, the Queen Elizabeth Olympic Park (Fig. 8), now lies at the valley of the River Lea, providing the cosmopolitan life with leisure and culture green areas rooted within the river's canals.

The project seems to have benefited from earlier experiences (Sydney's Olympic Park) and mistakes (London's own Docklands, Wembley Stadium, or Millennium Dome). The ongoing plan proposes a long-term strategy of urban regeneration, aimed at creating a new centrality for East London, with significant portions of housing and office space to be constructed. Not yet at its full potential, the Olympic Park already provides the area with much-needed quality public spaces while, at the same time, attempting to regenerate the economic tissue of the run-down industrial quarter and promote the ecological improvement of the River Lea's valley.

QUEEN ELIZABETH OLYMPIC PARK – LONDON 2012

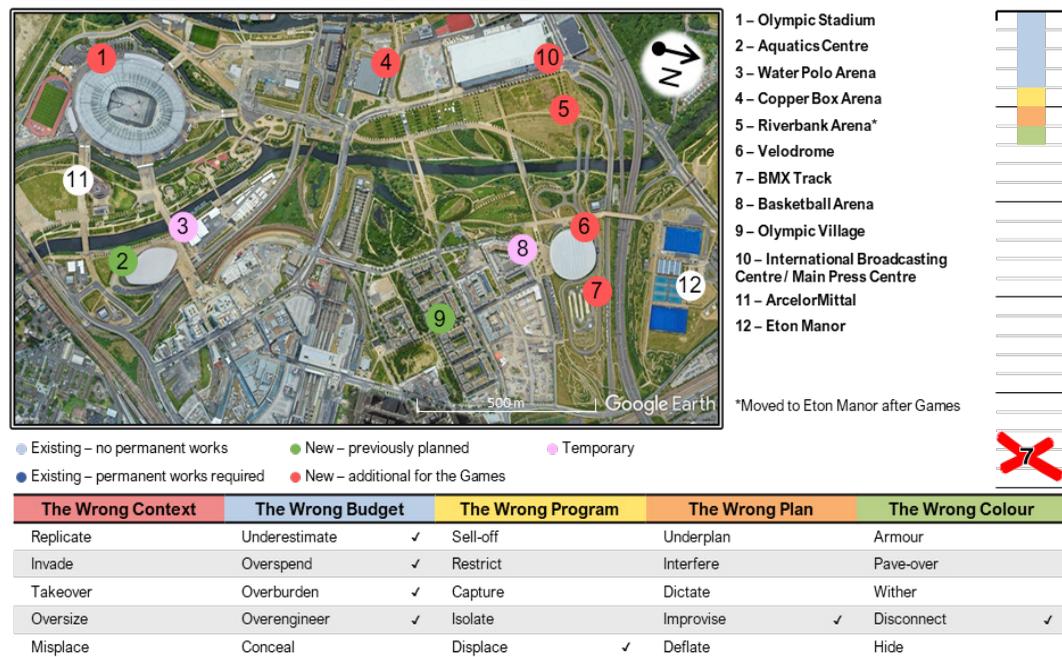


Fig. 8 – Queen Elizabeth Olympic Park: venues/facilities, and classification. Own creation. Maps Data: Google.

3.7 Sochi 2014: Sochi Olympic Park

The 2014 Winter Olympics were part of a strategy to develop and promote Sochi as a summer and winter tourism destination. It was controversial in the context of Russia's aggressive external policy, and for adopting a strictly top-down decision-making process. They have been especially criticized for being the most expensive Olympic Games ever, Winter or Summer, with escalating costs surpassing those of London 2012. The intervention in the waterfront of the Black Sea resulted in a new urban centrality, the Olympic Park (Fig. 9), around 30 kilometers away from the city centre. It comprises a large number of sports and culture facilities,

and a residential seafront area, next to beach tourism destinations and relatively close to mountain attractions (Gold, & Gold, 2011). The reuse and repurpose of the area have been somewhat haphazard. It is now crisscrossed by the Sochi International Street Circuit, which breaks up street-level connectivity between the different sporting venues, and the connection to the waterfront was not significantly improved. The sports complex is centered around the Medals Plaza and is closed onto itself in an inland location, rather than taking advantage of the close proximity to the Black Sea shoreline.

SOCHI OLYMPIC PARK – SOCHI 2014

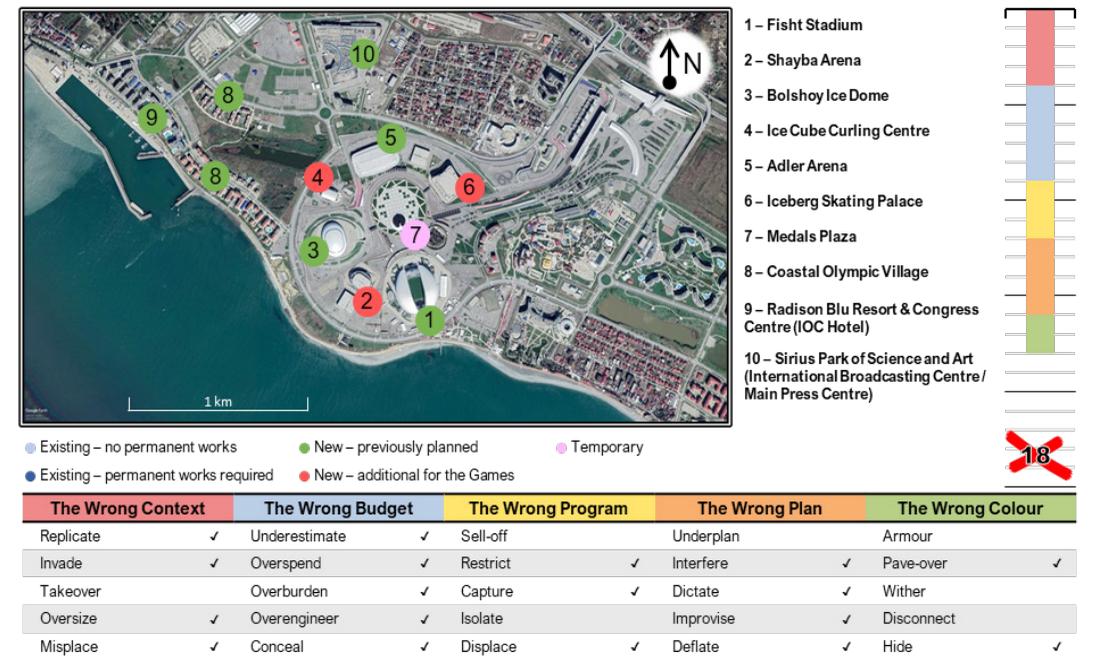


Fig. 9 – Sochi Olympic Park: venues/facilities, and classification. Own creation. Maps Data: Google, ©2020 MaxarTechnologies.

3.8 Rio 2016: Barra Olympic Park

The Olympic Games in Rio were part of a strategy for hosting large-scale events in Brazil, including the 2007 Pan-American Games and the 2014 FIFA World Cup. The objective of strengthening the country's position as a tourism destination (and, in particular, the city of Rio de Janeiro) was clear, with marketing intensively showcasing "the city's natural scenic splendours and cultural heritage" (Gold, & Gold, 2011, p.399). That is reflected in the location of the Barra Olympic Park (Fig. 10), a large sports complex in the waterfront of the Jacarepagua Lagoon.

Works for the redevelopment of the park started for the hosting of the Pan-American Games, in an attempt to take advantage of the prime location along the waterfront and renew the site of the abandoned Nelson Piquet International Race Track. While the Olympic Games effectively managed to advance its redevelopment, the resulting urban area has been marred by post-event funding

issues, incomplete repurposing of several venues, and the abandonment of others. It failed to create a year-round centrality, only seeing spurts of activity related to the hosting of the “Rock In Rio” concerts or sporadic sports events. The project had little ambition in the restoration of the lagoon’s natural ecosystems, and the restoration of the mangrove and coastal plain was extremely limited. Furthermore, the political context and economic crisis in Brazil effectively stalled further development of the project and inhibited the expected synergy with the surrounding urban fabric.

BARRA OLYMPIC PARK – RIO DE JANEIRO 2016

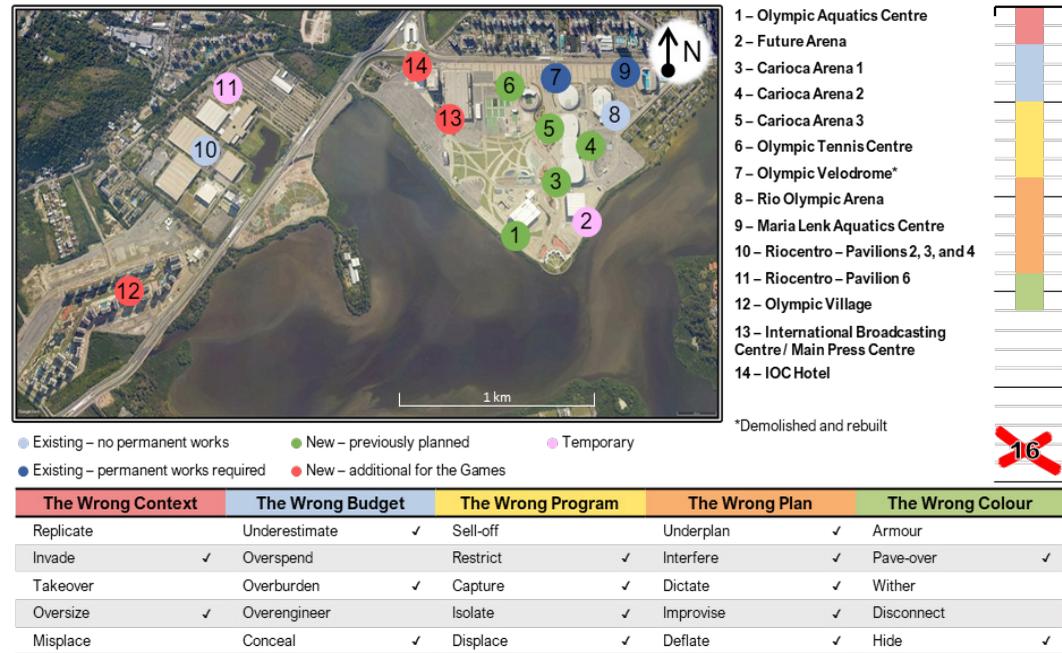


Fig. 10 – Barra Olympic Park: venues/facilities, and classification. Own creation. Maps Data: Google.



TRACK 1: MEGA-EVENTS AND MEGA-PROJECTS

The Wrong Context	The Wrong Budget	The Wrong Program	The Wrong Plan	The Wrong Colour
Replicate	Underestimate	Sell-off	Underplan	Armour ✓
Invade	✓ Overspend	Restrict	✓ Interfere	✓ Pave-over
Takeover	✓ Overburden	Capture	Dictate	Wither
Oversize	Overengineer	✓ Isolate	Improvise	Disconnect
Misplace	Conceal	Displace	Deflate	Hide ✓

Fig. 11 – Ariake & Olympic Village: venues/facilities, and classification. Own creation. Maps Data: Google.

3.9 Tokyo 2020: Ariake & Olympic Village

The edition of the 2020 Tokyo Olympic Games has been subject to several challenges throughout its preparation, including its postponing and adaptation to the Covid-19 pandemic, or the modifications induced by the Olympic Agenda 2020 due to sustainability concerns. Although with a very compact venue masterplan, the urban interventions for the Games did not create a concentrated and distinctive Olympic space, as most locations are scattered around existing urban districts. Nevertheless, a few areas within the Tokyo Bay landfills were redeveloped, including the existing landfills at Ariake and the newly-built Olympic Village (Fig. 11). Due to their proximity and similarity, they are here evaluated together.

We considered the use of landfill on a vulnerable coastal area a problematic solution. Even if the Tokyo Bay neighborhood, with its system of artificial islands, was not specifically created for the Games, some sites promote the first use of new landfill, which requires extensive flood defense works and affects natural ecosystems. As such, Tokyo was marked-down on “the wrong colour” aspects. The fact that the 2020 Games have not yet been delivered makes some criteria for this case study not applicable or difficult to evaluate, especially those related with legacy outcomes.

4. Discussion

Over the last three decades, more than half of the Olympics engaged in the redevelopment of Olympic Waterfronts, though with varying legacy outcomes. Smaller interventions in the Vancouver and Tokyo Olympic Villages have created upscale residential neighborhoods. On a larger scale, the Sydney Olympic Park left a positive legacy of environmental regeneration. Similarly, the lower Lea Valley was completely revived by the Queen Elizabeth Olympic Park, which has catalyzed the urban redevelopment of East London. Like Parc de Mar, the seamless integration of an Olympic Waterfront in the city’s long-term urban regeneration efforts was crucial. Together with the Olympic Green and Forest Park, they combined the potential of waterfronts with the Olympic Effect to completely rebrand the image of their cities. Differently, post-event use of Faliro and Hellinikon Olympic Complexes was severely affected by economic restrictions, compromising their urban legacy, a phenomenon that also affects the Barra Olympic Park. The Sochi Olympic Park

is unique in that it was expensive and failed to create an attractive and cohesive waterfront.

Looking at the final results (Fig. 12), the Vancouver Olympic Village positively stands out, but the limitation in type and size of the intervention makes for an imperfect comparison with the remaining cases. Tokyo is also unique in that legacy-related criteria could not yet be assessed.

The cases in Barcelona, Sydney, and London share some interesting characteristics. While with “the wrong budget”, all had clear long-term urban strategies for their territories, and the Olympic Waterfront acted as a catalyst for its implementation. Furthermore, all interventions preserved and dynamized the waterfronts as valuable assets.

Athens similarly planned to use the Falirio site as a trigger for urban renewal and waterfront regeneration. Yet, changes to the original plan, and especially the rushed relocation of facilities to Helliniko, served the event but not the city (and certainly not the waterfronts), compromising the initial objectives. Beijing’s Olympic Park had a well-developed urban plan and was able to successfully implement it. However, the grandeur of the Games aimed at an ambitious city-branding strategy, presupposing the construction of expensive infrastructure. That included the creation of an artificial “river” and embankments, requiring mass evictions.

The Olympic Parks in Sochi and Rio took full advantage of the popularity of the event to drive tourism promotion, showcasing each region’s natural and cultural assets. Contrary to the other case studies, market-driven mega-event planning ruled over long-term city planning, that is, hosting the Olympics was assumed as the main objective while the associated urban impact was given less consideration. As a consequence, aspects such as access to, and valorization of, the waterfront were neglected, as was the need for long-term planning and reuse. As such, the projects, besides having a “wrong budget”, also rank low in the “wrong plan” and “wrong program” categories.

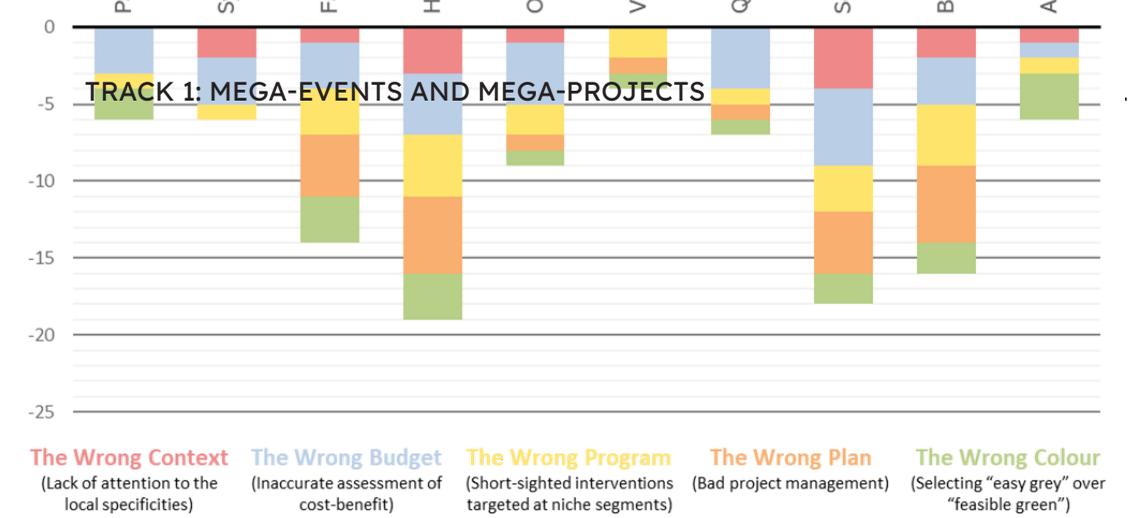


Fig. 12 - Comparative analysis of the case studies. Own creation.

Fig. 13 shows the case studies’ cumulative results by “wrong” and by criteria. “The wrong context” appears as the less prevailing, with significant relevance only for the Sochi Olympic Park and the Hellinikon Olympic Complex. This indicates that typically, and given the visibility of Olympic projects, architects and urban planners are cautious in creating unique buildings and areas (avoiding “replication”) integrated within the waterfronts (no “takeover”) and urban fabric (taking care not to “invade” or “misplace”). However, the event’s demanding requirements often result in exceptionally large areas (“oversize”), very expensive to build (“overspend”) and maintain (“overburden”). As such, problems of “wrong budgets” affect most of the case studies, with its five criteria on the top ten of most common mistakes. Big budgets and tight schedules are prone to cost overruns (“underestimate”) and unchecked expenditures (“conceal”), particularly when associated with the Olympic Games’ high-quality standards (“overengineer”). Interesting to note is Beijing’s case study which, although having overspent, did not underestimate. Contrastingly, large cost overruns seem harder to sell than large but efficiently implemented budgets. Rio, for example, is often criticized for underestimating, even if the final budget for the event is still well within the average for recent decades.

Results for “the wrong program” and “the wrong plan” are balanced. Monotonous single-purpose Olympic Waterfronts (“restrict”) often result from the zoning of Olympic Villages for residential purposes, and of Olympic Parks for cultural and sports activities. To open space for these large areas, the removal of communities is frequent (“displace”). However, it is important to make a distinction between cases affecting large low-class communities, like those in Beijing, Sochi, and Rio, and the cases in Barcelona, Vancouver, and London, where only small groups were relocated. Furthermore, almost all cases involve gentrification, usually with no cost-sharing of betterments (“capture”), which is typical in both Olympic and waterfront projects. When private investment is expected, there seems to be a tendency for no clear strategies on how to attract it (“improvise”). This problem is particularly aggravated when externalities, like event-related interests, take over the project (“interfere”). Finally, “the wrong colour” affects most sites, possibly being related to the intensive use expected for the Olympics, limiting the opportunity

for shoreline ecological restoration (“hide”). Likewise, ecological connectivity of water bodies is not adequately addressed in most interventions (“disconnect”).

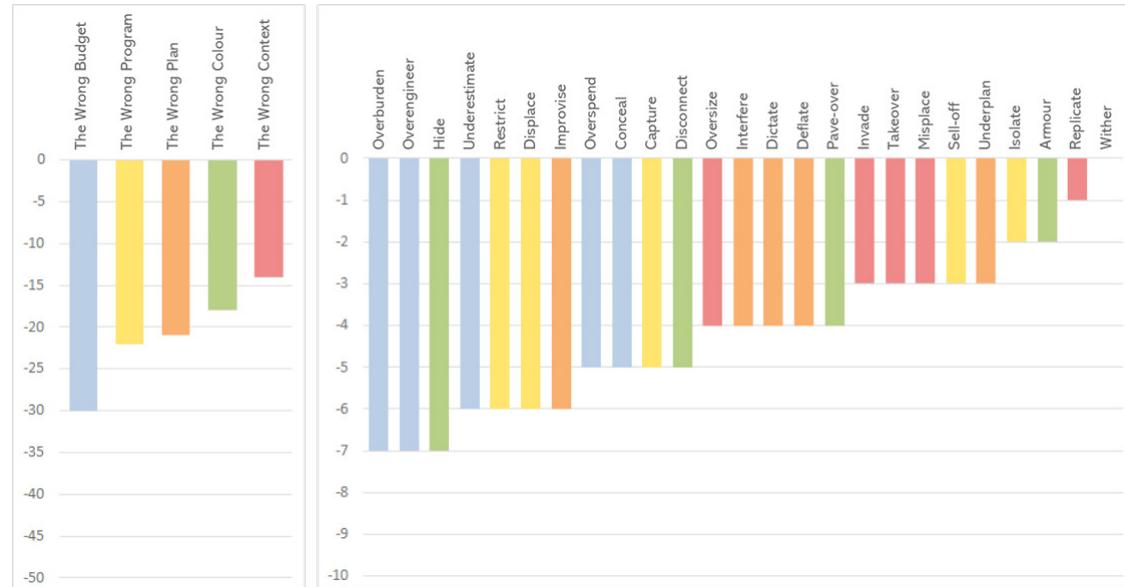


Fig. 13 – Cumulative results for the ten case studies. Own creation.

5. Conclusion

The Olympic Games are perceived as an opportunity to redevelop, reposition, or rebrand the host city. But successful Games have not necessarily resulted in successful urban waterfront interventions. The urban legacy, and specifically the post-event success of waterfront locations, appears to have been an afterthought in some case studies. To us, this is, evidently, a wasted opportunity.

The need to create several venues with limited potential for reuse after the event can limit the flexibility to adequately design the waterfront and reconnect it to the city. Significant changes to the plans during implementation can also compromise the outcome and coherence of the urban project.

The inflexible deadlines of the Olympics lend the projects especially prone to cost overruns, and the responsibility for accommodating added expenses typically falls on the public sector. These heavy investments and typically high maintenance costs, when made in a context of economic retraction, can be used as a scapegoat for larger economic issues and can reinforce the image of “failed project” or “white elephant”. This could hinder further steps in urban redevelopment of the sites.

All urban redevelopment projects have an inherent degree of unpredictability and sensitiveness to external factors. The Olympic Games add exponentially to this

uncertainty, as significant changes to requirements are ubiquitous and can occur in virtually all stages of the Olympic cycle. Projects that were able to integrate Olympic Waterfronts in a broader strategy of urban redevelopment, and adequately planned for it, seem to have been more successful in creating attractive and cohesive urban projects, resulting in lasting legacies of the Olympic Games.

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Urban legacies
of the late 20th century

GRAND PROJECTS

CONFERENCE PROCEEDINGS

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