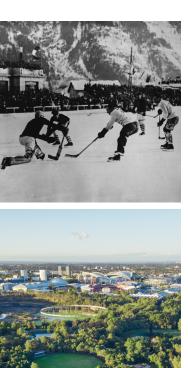


## **OVER 125 YEARS OF OLYMPIC VENUES: POST-GAMES USE**

## **EXECUTIVE SUMMARY**

























# INTRODUCTION

# THIS REPORT SHARES THE RESULTS OF THE FIRST EVER INVENTORY OF THE POST-GAMES USE OF OLYMPIC VENUES.

For over 125 years, the Olympic Games have served as a celebration of humanity and helped to build a better world through sport. For the hosting communities, they can increase the opportunities for people to enjoy sport and physical activity, create jobs and contribute to the regeneration of cities and regions. Upgraded or new sports venues are one of the many ways the Olympic Games create a legacy for their host.

What happens to the venues when the Olympic Games come to an end? How many of them are still in use and serving their local communities? What are the best practices? How can we maximise chances of success?

Learning from past experiences can help us shape a better future. By looking at the post-Games use of venues that hosted the Olympic Games in the past, we wanted to understand better the likelihood of continued use beyond the Olympic Games. We identified best practices, such as combining multiple uses (sport and non-sport) to derive the maximum benefit for users over a long period of time.

With Olympic Agenda 2020, we have reimagined how the Olympic Games are organised. We provided more flexibility in designing the Games to meet the long-term development plans of a host city/region. The changes include ensuring that hosting territories make the most of existing venues and only build new ones when there is a proven long-term need. The results can be seen for the editions elected after Olympic Agenda 2020. At Paris 2024, for example, 95 per cent of the venues will be existing or temporary, while the newly built athletes' and media villages will be at the heart of a long-term regional renewal project.

This report was assured by KPMG, which is a third party, according to the audit standard ISAE 3000. The assurance report from KPMG is available here.



### **MORE THAN 125 YEARS OF OLYMPIC GAMES**

Berlin 1936 St. Moritz 1948 London 1948

Helsinki 1952

Garmisch-Partenkirchen 1936

### **EARLY 20TH CENTURY** 1896-1936

London 1908

Stockholm 1912 Antwerp 1920 Chamonix 1924 St. Moritz 1928 smsterdam 1928 Lake Placid 1932 Los Angeles 1932

Saint Louis 1904

1948-1972

**LATE 20TH CENTURY** 1976-1998

Calgary 1988

Seoul 1988 Albertville 1992 Barcelona 1992

Montreal 1976

Lake Placid 1980 Moscow 1980 Sarajevo 1984 Los Angeles 1984

**Munich 1972** Innsbruck 1976 **21ST CENTURY** 2000-2018

Vancouver 2010

Beijing

London 2012

2014

Sochi

Rio de Janeiro 2016

PyeongChang

2004

**Turin** 2006 Athens

Sydney 2000

Nagano 1998

Atlanta 1996

Lillehammer 1994

Salt Lake City 2002

**Paris 2024** 

Milano Cortina 2026 Los Angeles 2028

**MID-20TH CENTURY** 

Cortina d'Ampezzo 1956

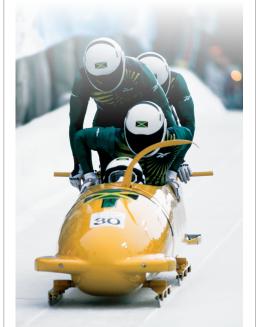
Innsbruck 1964

Tokyo 1964 Grenoble 1968 Mexico City 1968 Sapporo 1972

Melbourne 1956

VIII Olympic Winter Games\* **1960** 







Images left to right Olympiaschanze Olympic Winter Games St. Moritz 1928 and 1948: Olympic Stadium. Olympic Games Munich 1972; Spiral track, Olympic Winter Games Nagano 1998; Olympic Stadium, Olympic Games Rio 2016.

\*The VIII Olympic Winter Games were hosted in the Lake Tahoe region, USA.

### **KEY CONCEPTS**

In the context of the Olympic Games, a venue is any major Games site that hosts competition or other primary Games events and activities. For the purposes of this inventory, we included all competition venues that have hosted an Olympic Games medal event, the Opening/ Closing Ceremony venues and the Olympic Villages.

### **VENUE CLASSIFICATION**

### Permanent - Existing

The venue already existed when the host city/territory was selected to host the Games. The venue required no major changes or construction ahead of the Games.

### Permanent - New

The venue did not exist before the host was selected to stage the Games. The venue was intended to be a permanent venue, which means that its construction was initiated/accelerated by the Games, and the venue was intended to remain operational after the Games.

### **Temporary**

The venue was constructed for the Games and returned to its original state after the Games ended.

## CURRENT USE STATUS (POST-GAMES)

### In Use

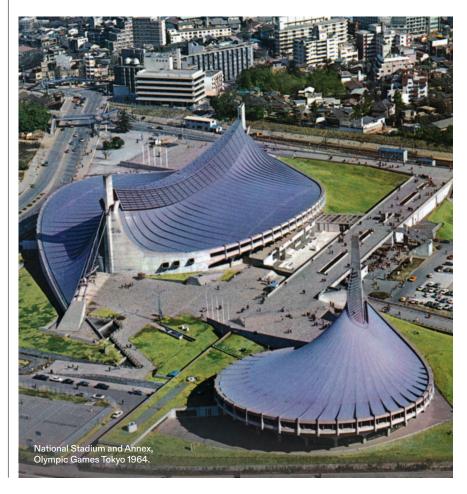
The venue is regularly used for both sport (practice, training and competition) and/ or non-sport activities (culture, leisure, entertainment, community or business).

### Not In Use

The venue is not used regularly either for sport (practice, training and competition) or non-sport activities (culture, leisure, entertainment, community or business).

Please scan the QR code for further information on the post-Games use of venues covering 51 Olympic Games (28 Summer and 23 Winter). The link goes to our full report, which was published by the Olympic Studies Centre. Additional information on the legacies for people, cities and sport can be found in the "Living Legacies" stories on our website here.





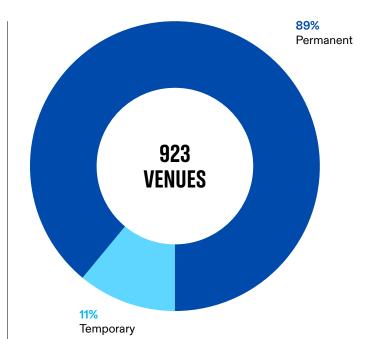
### 923 OLYMPIC VENUES WERE TRACKED

We looked at all the venues that staged medal events in all sports and disciplines, and at all 51 editions of the Games of the Olympiad and Olympic Winter Games of the modern era, from Athens 1896 to PyeongChang 2018.

We also included the venues that hosted Opening/Closing Ceremonies and the Olympic Villages that provided accommodation to the athletes.

This analysis does not include demonstration/exhibition sports venues, or those used exclusively for the Paralympic Games. Youth Olympic Games venues are not included.

The reference period used for the "current use status" assessment is the two years before the COVID-19 pandemic, i.e. 2018, 2019 and early 2020 (before the COVID-19 lockdown).







Right: Deodoro Stadium, Olympic Games Rio 2016. Left: Hamar Olympic Hall, Olympic Winter Games Lillehammer 1994.

Left to right: Olympic Stadium, Olympic Games Seoul 1988; Makomanai Speed Skating Rink, Olympic Winter Games Sapporo 1972; Velo Sports Center, Olympic Games Los Angeles 1984; Penrith Whitewater Stadium, Olympic Games Sydney 2000.

### Total Number of Summer and Winter Olympic Venues

**EARLY 20TH CENTURY 14 EDITIONS** 

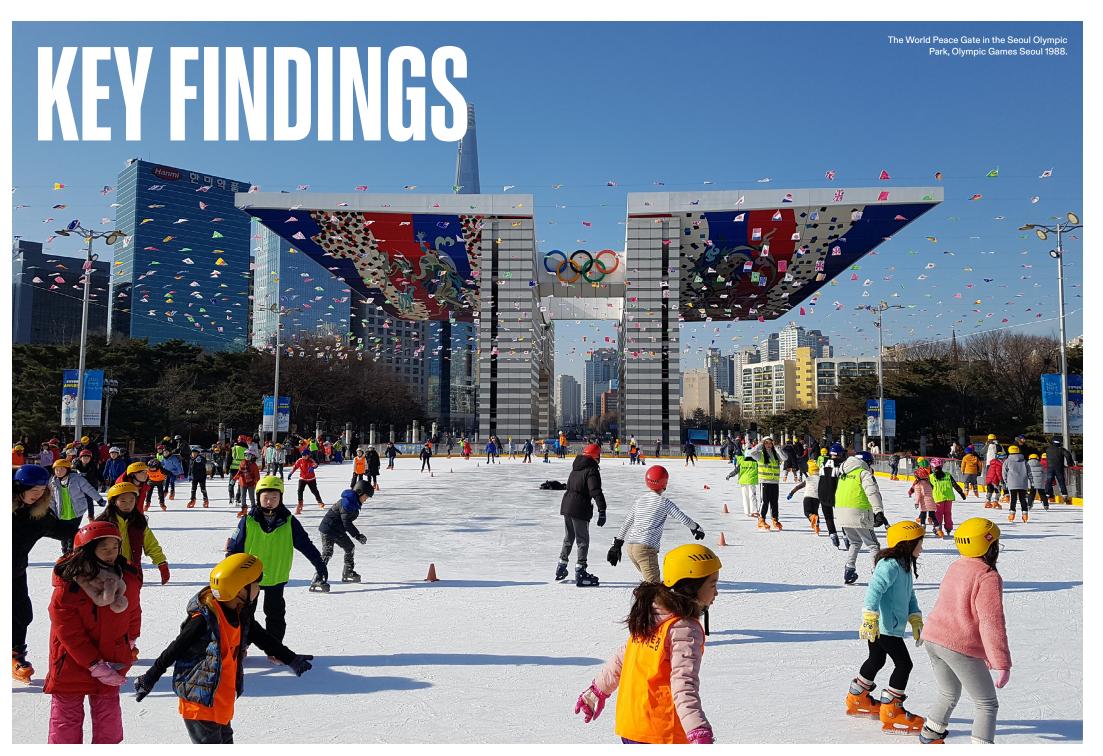
**167 VENUES** 

**MID-20TH CENTURY** 14 EDITIONS **255 VENUES** 

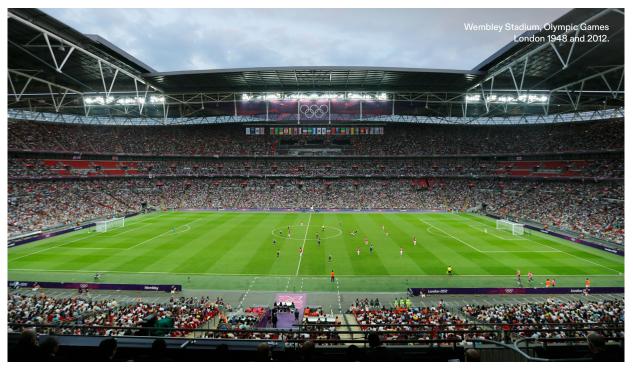
**LATE 20TH CENTURY 13 EDITIONS 261 VENUES** 

21ST CENTURY **10 EDITIONS 240 VENUES** 

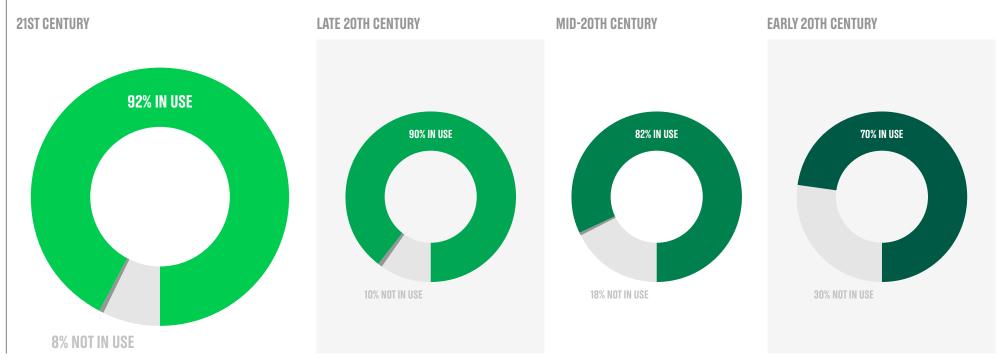




# 92 PER CENT OF PERMANENT VENUES FROM THE 21ST CENTURY ARE IN USE



Current Use Status of Summer and Winter Olympic Venues



Over 125 years of Olympic venues: post-Games use - Executive Summary

**KEY FINDING #** 

2

# 85 PER CENT OF ALL THE PERMANENT VENUES FROM THE 1896 TO THE 2018 OLYMPIC GAMES ARE STILL IN USE

817

permanent venues

**85**%

still in use

**15**%

not in use

There are multiple potential uses of Olympic venues. For the purposes of this inventory, we considered both sports (practice, training and competition) and non-sports uses (culture, leisure, entertainment, community or business).

Of the 15 per cent of permanent venues not in use (124 venues), 88 venues were unbuilt or demolished for a variety of reasons: some had reached the end of their life, some experienced operational or financial challenges, some were destroyed during war periods or in accidents, while others were replaced by new urban development projects.

The remaining 36 venues not in use are closed or abandoned.



# THE PERCENTAGE OF PERMANENT VENUES STILL IN USE, WHETHER NEW OR EXISTING, IS SIMILAR

Below left: The Rice Eccles Olympic Stadium, Olympic Winter Games Salt Lake City 2002. Below right: Richmond Olympic Oval, Olympic Winter Games Vancouver 2010.

### **Existing Venues Current Use Status**

EXISTING VENUES IN USE



New Venues Current Use Status

87%
NEW VENUES
IN USE



17% not in use

13% not in use

# 87 PER CENT OF COMPLEX VENUES ARE STILL IN USE

### Complex/Large Venues Current Use Status\*



Complex/large venues include the Olympic Stadiums, Olympic Villages, swimming pools, velodromes, ski jumping hills, sliding centres and ice hockey stadiums. They represent the most iconic venues of the Games, which are often the most expensive to build and operate.

There are 247 complex and large venues, 87 per cent of which are still in use and 13 per cent of which are no longer in use.

\*Does not include temporary venues

### **KEY FINDING #**

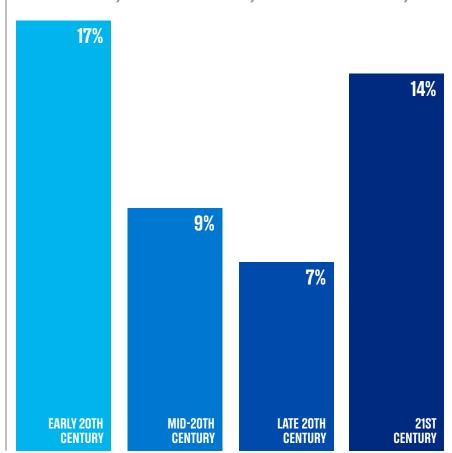
### THE PROPORTION OF TEMPORARY **VENUES HAS EVOLVED OVER TIME**

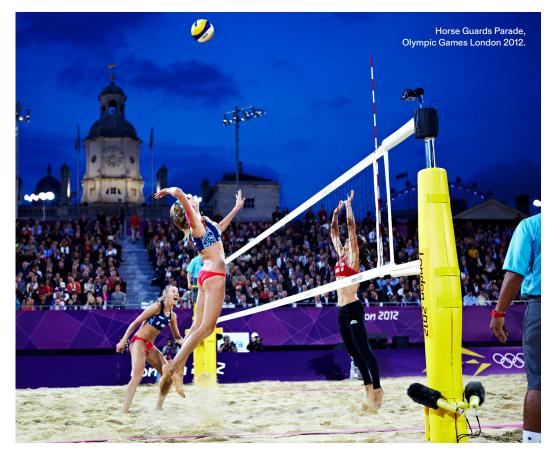
Temporary venues were used in the early editions of the Olympic Games in the early 20th century - for a variety of reasons. At the time, the technical requirements of competitions allowed for simpler configurations of the fields of play. The number of athletes and spectators was also smaller, thus requiring less complex structures.

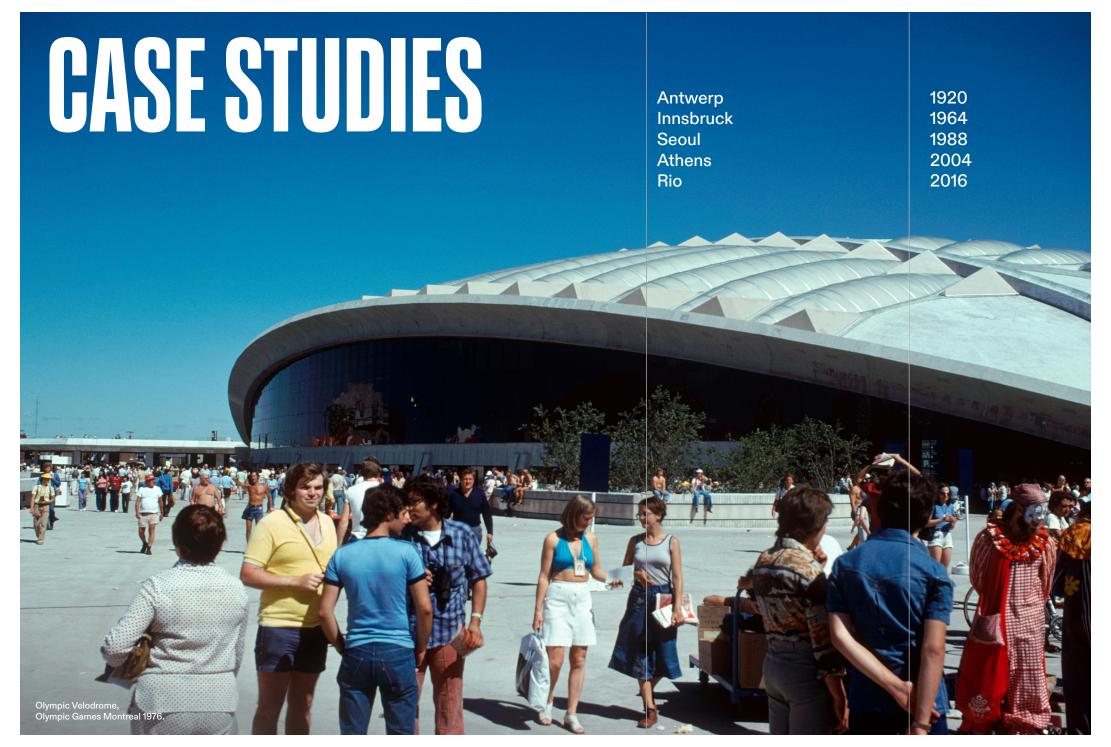
With technological advances and new materials, temporary structures can now fulfill more complex technical requirements for both field of play and spectator stands. Olympic Games hosts of the 21st century have taken the opportunity to use temporary venues when there was no long-term need for new permanent ones.

Since 2015, and the adoption of Olympic Agenda 2020, the IOC has actively encouraged hosts to use temporary facilities. We therefore expect the number of temporary venues to continue to grow in the future.

Temporary Venues From Early 20th Century to 21st Century







# ANTWERP 1920

Sixty per cent of the 17 permanent venues from the Olympic Games Antwerp 1920 remain in use more than a century after the event. The venues continue to be used for sport, culture, leisure and entertainment. Some have become historic landmarks and tourist attractions.



Bottom left & above: Olympic Stadium, Olympic Games Antwerp 1920. Right: Royal Zoological Society, Olympic Games Antwerp 1920.



**60%** 



Antwerp 1920 used 17 permanent venues, of which 15 already existed before the Games. In addition, two temporary venues were used. Antwerp 1920 had no official Olympic Village.

Antwerp's Beerschot Stadium was adapted to host nine Olympic events. Now home to local football club FC Beerschot, it still serves the community but bears little resemblance to the Olympisch Stadion from a hundred years ago.

The zoology hall of Antwerp Zoo hosted boxing and wrestling events. A popular venue during the Games, it remains a standout attraction in Antwerp, welcoming more than one million visitors per year.

Beyond the sports infrastructure, the Antwerp 1920 Games carry enormous symbolic importance. Being the first to be organised after World War I, they stood and still stand as a message of peace, unity and strength. The emergence of several enduring Olympic symbols (Olympic flag raised during the Opening Ceremony, taking of the Olympic oath and doves released as a symbol of peace), expressing a strong message of hope, clearly fits with this sentiment.



# INNSBRUCK 196

All ten permanent venues from the Olympic Winter Games Innsbruck 1964 and Innsbruck 1976 are still in use. They help to make the town and surrounding Tyrol region one of Austria's major sporting and cultural hubs.

Four competition venues already existed before the Innsbruck 1964 Games, and five were new. All venues were reused for the Olympic Winter Games Innsbruck 1976.

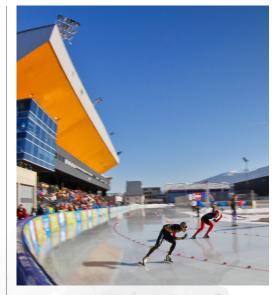
Together, the Olympiahalle (formerly the Olympic Ice Stadium), the Eisschnellaufbahn/Outdoor Ice Rink and the Olympic Ice Track cater for a total of 20 sports. Open to elite and amateur athletes alike, the three venues stage dozens of events every year. They hosted events of the 2005 Winter World University Games and the 2020 Winter World Masters Games, as well as world championships in climbing, handball, volleyball, ice hockey, bobsleigh and skeleton.

The iconic Bergiselschanze is still a world famous ski jump venue and popular tourist attraction. The host of the 1964, 1976 and 2012 (Winter YOG) Opening Ceremonies, it attracts sell-out crowds of 28,000 at the annual Four Hills Tournament too.

The Toni-Seelos-Olympiaschanze hosted cross-country skiing, Nordic combined and biathlon events in 1964, 1976 and 2012. The two jumping hills and more than 250km of skiing trails continue to attract Nordic sport athletes of all ages and levels.

An Olympic Village, the O-Dorf, was also built for the Games and expanded for 1976. It is currently home to around 7,000 people.

Six of the nine venues of the Innsbruck 1964 and 1976 Olympic Games went on to host Olympic events for a third time at the Winter Youth Olympic Games Innsbruck 2012.



Above: Olympic Speed Skating Oval,
Olympic Winter Games Innsbruck 1964 and 1976.
Bottom: Toni-Seelos Olympic Ski Jump,
Olympic Winter Games Innsbruck 1964 and 1976.



10
permanent venues

100%

# **SEOUL 1988**

Ninety-three per cent of the 28 permanent venues used for the Olympic Games Seoul 1988 remain in use and cater for a range of sports, cultural, educational, leisure and entertainment activities.

Fourteen of the permanent venues already existed and 14 were new. Two of the permanent venues have been demolished.

The venues were located in three different areas: the Olympic Park, Jamsil and the Han River.

The Olympic Park remains one of Seoul's main tourist attractions, visited by 14,000 people a day on average. It offers a wide variety of sports, education, culture and leisure activities. It is also an arts and cultural hub. Its Sculpture Garden has a rich and diverse collection of modern sculptures by artists from 66 countries.



28

permanent venues

93%

still in use



The Jamsil area, where most of the Olympic facilities were located, received major infrastructure upgrades. Indeed, the Olympic Games also accelerated Seoul's transformation, over and above the sports infrastructure. The Olympic Stadium, first used for the 1986 Asian Games, regularly hosts the national football team. It has been the home ground of football club Seoul E-Land since 2015 and stages the finish of the Seoul International Marathon. The Olympic Stadium will be refurbished as part of a redevelopment project due for completion in 2025.

The Han River area was also improved by new green areas and better transport infrastructure.



Left: Seoul Olympic Park, Olympic Games Seoul 1988.

Top right: Olympic Stadium, Olympic Games Seoul 1988.

Bottom right: Sculpture Garden in the Seoul Olympic Park, Olympic Games Seoul 1988. Seventy-five per cent of the 32 permanent venues used in Athens 2004 remain in use today for diverse purposes. Eight permanent venues are no longer in use.

As well as sport events, the Galatsi
Olympic Hall, for example, also hosts
art classes, music concerts, television
studios and government offices. The
Agios Kosmas sailing centre has become
a private marina, while the International
Broadcasting Centre has been transformed
into a popular shopping mall.

At the Helliniko Olympic Complex five venues remain closed and in a state of disrepair. They have faced political, economic and administrative problems and several changes in ownership.

The Olympic and media villages are used as private accommodation, and the Phaleron Sports Pavilion has become a multi-use convention centre.

Finally, the Karaiskakis Stadium is home to Greece's most successful football club, Olympiacos.





Left: Peace and Friendship Stadium and Karaiskakis Stadium, Olympic Games Athens 2004.

Above: Olympic Stadium, Olympic Games Athens 2004. 32
ermanent

permanent venues

**75%** 

Ninety-three per cent of the 28 permanent venues used in Rio 2016 remain in use. Of the seven temporary venues, two are yet to be fully dismantled.



Left: Olympic Golf Course, Olympic Games Rio 2016. Bottom left: Carioca Arena 2, Olympic Games Rio 2016.



Located in the Olympic Park, the Rio Olympic Arena has been in continuous use since the Games, staging concerts, sporting events and esports competitions. The Maria Lenk Aquatics Centre is used by clubs and sports organisations across a number of sports and disciplines, including judo, swimming, diving and athletics. The velodrome is the main training hub for the Brazilian Cycling Federation and also offers induction sessions for youngsters and adults.

The Olympic Golf Course earned GEO Certified® Development status in August 2016. Through the transplantation of native vegetation, wild fauna management, and the removal of exotic species, a 159 per cent increase of biodiversity in the area was achieved and fauna species numbers more than doubled.

Situated in Barra da Tijuca in the south west of the city, the Olympic Village is made up of 31 buildings with 922 apartments. Though the post-Games plan was to sell the apartments as luxury condominiums and welcome 2,400 families, this has not come to fruition, due to economic and political instability and a surfeit of properties on the market. As of 2020, the majority of the Village's buildings were vacant.

Though management and governance issues have emerged and for some venues, it took over two years before they were put to use, Rio 2016's venues host competitions and training for athletes, professional teams and local clubs, and provide residents with opportunities to engage in recreational sports. Some also stage concerts and other events.

28

permanent venues

93%

still in use



# **LOOKING TO THE FUTURE**

### **USE OF EXISTING/TEMPORARY VENUES FOR UPCOMING OLYMPIC GAMES**

The venue master plans for upcoming Olympic Games are fully aligned with Olympic Agenda 2020.

### **Paris 2024**



**95**%

With 95 per cent of the venues either existing or temporary, Paris 2024 has reduced new construction and provided for certain venues to be shared, which saves money and reduces environmental impact while retaining Paris 2024's spectacular visuals and strong local character.

Milano Cortina 2026



93%

With 93 per cent of its venues either existing or temporary, Milano Cortina 2026's selection of venues is aligned with northern Italy's ambition to become a world-class hub of excellence for winter sports, while preserving the traditional character of the venue locations.

Los Angeles 2028



100%

With a wealth of world-class assets at its disposal, Los Angeles can host the 2028 Olympic and Paralympic Games without building a single new permanent venue. The "radical reuse" concept also applies to the training facilities and the Athletes' Village.

Brisbane 2032



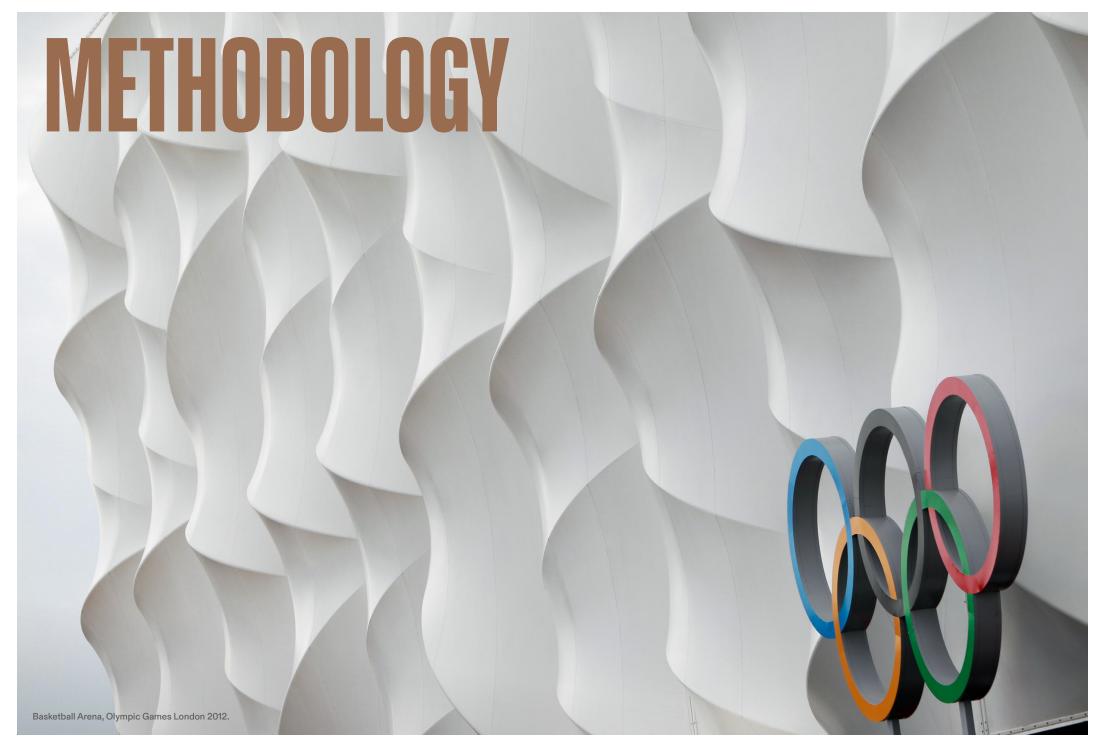
84%

Brisbane, located in South-East Queensland, is one of Australia's fastest-growing regions. The new venues planned for the 2032 Games are part of a long-term legacy that will help the region meet the demands of a rapidly growing population with a passion for sport.

Since 2015, Olympic Agenda 2020 has reshaped the IOC's approach to upcoming editions of the Games by requiring that all projects align with the host's long-term plans.

- The IOC works with potential hosts on developing projects that fit with the local reality: "The Games adapt to the city/region, the city/region does not adapt to the Games."
- To ensure long-lasting benefits for local populations, potential hosts are invited to discuss projects that align with existing long-term plans.
- Potential hosts are encouraged to use a maximum of existing and temporary facilities and to present a robust legacy plan for any new construction.
- If no proven legacy value for permanent construction can be presented, hosts are encouraged to use temporary venues.
- No minimum capacity is required to ensure efficient legacy use of venues.
- Sharing venues across disciplines is encouraged to avoid building new structures.

Images top to bottom: Place du Trocadéro, Paris, France; Cortina d'Ampezzo, Belluno, Italy; Santa Monica, Los Angeles, USA; Brisbane, Queensland, Australia.



# METHODOLOGY

The inventory involved a mixed-methods approach for data collection (desk research combined with in-situ observation) and stakeholder consultations.

### Scope of the inventory

For the purposes of this inventory, we included all competition venues that have hosted an Olympic Games medal event, the Opening/Closing Ceremony venues and the Olympic Villages.

We looked at all the venues staging medal events in all sports and disciplines, at all the Games of the Olympiad and Olympic Winter Games of the modern era, from Athens 1896 to PyeongChang 2018.

The reference period for "current use status" was the two years before the COVID-19 pandemic, i.e. 2018, 2019 and early 2020 (before COVID-19 lockdown).

### Data collection

Data collection covered a large number of venues, spread across four continents, in over 20 countries.

Desk research was initially conducted in English and French. Where necessary, additional desk research was conducted in the native language of the host country for the following languages: German, Italian, Portuguese, Spanish and Swedish.

For each set of data captured on current use status, we assessed the reliability of the source and cross-checked data from multiple sources.

In-situ data collection (direct observation) was carried out for a sample of 244 venues (a statistically significant sample for categorical data), representing 26 per cent of the venues studied. More venues were visited when desk research was not possible in the relevant native language – Japan, China, Korea, Russia, Greece, Bosnia and Herzegovina, and Norway.

### Stakeholder consultations

- The inventory results were reviewed by local stakeholders (legacy entities, city/region governments, National Olympic Committees) for their respective editions. Local stakeholders were also given the opportunity to review the full report and the summary report.
- Additional stakeholder consultations were carried out with industry professionals and experts.

### Sources

- The Official Reports of the Olympic Games
- Olympedia.org
- Official web pages of venue owners and venue operators
- Official social media channels of venue owners and venue operators
- Annual reports from venue owners
- International Academy Of Sport Science and Technology (AITS).
   Olympic Games Legacy Capture database covering social, cultural, economic, urban, environmental, and sporting aspects.
- Academic literature
- journals, books, articles, theses and research reports referenced by Scheu, Anja and Preuss, Holger. The Legacy of the Olympic Games from 1896-2016: A Systematic Review of Academic Publications. Working Paper Series, Mainzer Papers on Sport Economics & Management no. 14. 2017
- journals, books, articles, theses, research reports
   referenced at the Olympic World Library
- Satellite imagery, aerial photography, street maps and panoramic views of streets available in Google Maps.

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