



International
Olympic
Committee

OLYMPIC AI AGENDA



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“Our continued success depends on how we embrace the ever-accelerating development of digital technology, and in particular Artificial Intelligence. This makes our Olympic Agenda 2020 imperative ‘change or be changed’ even more urgent.”

Thomas Bach

IOC President

Olympic Champion – Fencing



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The front cover image is a product of creativity and technology, made with generative Artificial Intelligence (AI) software.

The image on page 2 shows a hologram of IOC President Thomas Bach addressing the opening ceremony of the inaugural Olympic Esports Week in June 2023.

INTRODUCTION

“Together, we can unlock AI’s full potential to promote solidarity, further digitalisation, improve sustainability and resilience, and reinforce the role of sport in society.”

Olympic AI Agenda

Olympic Agenda 2020+5, the strategic roadmap of the IOC and the wider Olympic Movement, highlights digitalisation as one of the key trends influencing modern society.

The digital revolution has only accelerated in the years since Olympic Agenda 2020+5 was adopted in March 2021. Transformative technologies such as Artificial Intelligence (AI) are increasingly offering us the possibility to reshape every facet of our lives.

That includes sport. While there have been stand-alone projects in different sports and different areas, there has been no holistic approach to explore the great potential of AI while mitigating the risks.

Yet the possibilities for the deployment of AI within sport represent a ground-breaking opportunity for the global accessibility of sport, aligning seamlessly with the IOC’s mission for solidarity and inclusivity.

Opportunities and risks

AI has the power to bridge some of the gaps that exist within sport, ensuring that athletes in even the remotest of countries can gain access to advanced resources. AI technology promises to revolutionise athlete training with hyper-personalised programmes; optimise performance through detailed analysis of athletes’ data; transform judging and refereeing with impartial precision; and customise the individual viewing experiences of billions of Olympic fans around the world.

But with every opportunity comes risks. In many ways, the concept of AI stands in stark contrast to the particularly human context of Olympism. The Olympic AI Agenda recognises this concern, as well as other risks and ethical questions raised by AI in relation to data privacy, security, accountability, fairness, job displacement and environmental impact.

INTRODUCTION

It is important to acknowledge that AI is evolving at an unprecedented pace. There are still many unknowns at this stage, and we remain humble in admitting these uncertainties. We are committed to adapting our plans according to future developments and regulations in the AI field, and we recognise the need for ongoing vigilance and responsible implementation.

Given the fast pace of technological change, it is impossible to identify all the risks today, much less to provide all the answers. However, this Olympic AI Agenda sets out a governance and oversight framework to identify and mitigate risk, and it will be a continuous process to leverage the insights and experience of prominent experts to support the deployment of AI for the Olympic Movement.

The IOC AI Working Group

Recognising that the continued success of the Olympic Games and the Olympic Movement will depend heavily on how AI is embraced, the IOC established an AI Working Group in 2023 – a panel of experts from around the world, including AI pioneers, academics, athletes and representatives of technology companies. (For a list of the members of the AI Working Group, see page 17.)

The IOC AI Working Group has undertaken a broad review of the uses for AI in sport, and of high-impact areas where the IOC could inspire the use of AI in its role as leader of the Olympic Movement and owner of the Olympic Games.

The result of those discussions is this Olympic AI Agenda. It aims to guide the IOC's efforts to maximise the opportunities and manage the risks of the transformative power of Artificial Intelligence to support athletes and to drive the development of sport and the Olympic Games.

A transformative journey – together

The Olympic AI Agenda presents the envisioned impact AI can deliver for the Olympic Movement. It establishes our ambition and guiding principles, identifies high-impact areas for AI application, and explores the framework and governance mechanisms used to mitigate risk and promote the responsible use of AI. In addition, it outlines four commitments that the IOC has made as it takes the first steps in integrating AI into the Olympic ecosystem and leveraging the power of AI in its operations, in the Olympic Games and across the Olympic Movement.

The Olympic AI Agenda also recognises that the future of AI in sport is not a solo venture. That is why the IOC is inviting all our stakeholders across the Olympic Movement – athletes, International Federations (IFs), National Olympic Committees (NOCs), Worldwide Olympic Partners, the International Paralympic Committee (IPC) and many other organisations – to embark on this transformative journey, while remaining vigilant to the potential risks. Together, we can unlock the full potential of AI to promote solidarity, further digitalisation, improve sustainability and resilience, and reinforce the role of sport in society – all aligned with our vision to build a better world through sport.

AMBITION AND GUIDING PRINCIPLES: EMBRACING THE POTENTIAL OF AI

“The International Olympic Committee inspires and accelerates change across global sport by embracing the potential of Artificial Intelligence to advance fairness, excellence, solidarity and the Olympic experience.”

IOC Ambition Statement

The IOC’s vision for the deployment of AI is informed by the Olympic values of excellence, respect and friendship, and by our working principles.

Our vision is for the IOC, as the leader of the Olympic Movement, to inspire and accelerate positive change across global sport by embracing the potential of AI to support solidarity and universality, ensure equal access to sport, reflect our unity in diversity, maintain our autonomy and good governance, and promote sustainability.

FIVE GUIDING PRINCIPLES

It is crucial that AI is used responsibly, fostering trust within the Olympic Movement, if we are to harness its full power. The IOC is committed to defining a path for AI that is both ethical and trustworthy.

To this end, the IOC has developed five guiding principles that will steer the creation, implementation, management and assessment of AI initiatives, ensuring they align with the IOC’s vision for the deployment of AI.

Foster an ethos of integrity

We will encourage high standards of transparency, responsibility and safety to maintain trust while harnessing the power of AI.

Improve access and fairness

We will leverage technology and deliver impact that reduces barriers to participation, and ensures equal access to sport and the benefits of AI. This will further improve fairness, and will deliver positive social and environmental change.

Scale creation and distribution of moments that matter

Together with our partners, we will use AI technologies to create memorable and inspiring personalised experiences for fans and stakeholders across the Olympic Movement.

Honour traditions while embracing innovation

We will honour timeless Olympic traditions and values while using AI to create new possibilities for the Olympic Movement.

Collaborate for shared impact

We will work with stakeholders inside and outside of the Olympic Movement to share knowledge of opportunities and risks – and to support a sustainable future impact.

With these guiding principles, the IOC is positioned to explore areas where AI can strengthen solidarity, promote the universality of sport and equal access to new technology, and support sports development for athletes, fans, partners and all Olympic Movement stakeholders.

FIVE FOCUS AREAS: TRANSFORMING SPORT AND THE OLYMPIC GAMES WITH AI

Led by our guiding principles and dedicated to providing benefits to all stakeholders within the Olympic Movement, the IOC has defined a strategic goal to leverage AI effectively across five key focus areas:

- 1. Supporting Athletes, Clean Competition and Safe Sport**
- 2. Ensuring Equal Access to the Benefits of AI**
- 3. Optimising Olympic and Paralympic Games Operations with a Focus on Sustainability**
- 4. Growing Engagement with People**
- 5. Driving Efficiency Across the Management of the IOC and Sport**

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FOCUS AREA 1

SUPPORTING ATHLETES, CLEAN COMPETITION AND SAFE SPORT

Athletes are at the heart of the Olympic Movement. From talent identification to injury recovery, the IOC believes that AI has the potential to transform the lives and careers of athletes around the world.

This includes:

Improving talent identification

AI can significantly boost talent identification in sport by evaluating performance metrics, physical traits, skills and other key data. This will offer new opportunities for individual athletes around the world.

Advancing performance and training

AI analysis of athletes' data has the potential to reshape training and coaching, providing athletes worldwide with personalised coaching and tailor-made training. This will significantly advance performance.

Improving judging and refereeing

AI can help to reduce human bias in judging and refereeing. It can also offer real-time analysis.

Boosting health, wellbeing and clean competition

AI can help to prevent injuries, tailor athletes' recovery plans and support mental health. AI can also support anti-doping organisations to detect doping – and, in this way, it can advance clean sport.

Fostering Safe Sporting environments

AI will help to further strengthen initiatives that focus on the prevention of and appropriate response to harassment and abuse in sport. An example is the use of AI to detect at scale and pace targeted online abuse towards athletes at the Olympic Games and other sports events.

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FOCUS AREA 2

ENSURING EQUAL ACCESS TO THE BENEFITS OF AI

AI has the potential to support the IOC's goals of universality, inclusivity and fair sport: creating new opportunities for athletes, coaches and countries who may not have access to the best facilities and support, while also improving fair competition through improvements to judging and refereeing.

This includes:

Building solidarity through technology

The IOC wants to make the benefits of AI available to all athletes, IFs, NOCs and other members of the Olympic Movement so that they can benefit from this transformative new technology.

Facilitating access to coaching

AI can support coaches and training worldwide by developing and facilitating equal access to data-based training plans customised for each individual athlete.

Advancing AI use by educating the sports movement

Through education and explanation, the IOC will facilitate the application of AI for the Olympic Movement. By doing so, it will break down barriers that may prevent people from using AI for the benefit of sport.

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FOCUS AREA 3

OPTIMISING OLYMPIC AND PARALYMPIC GAMES OPERATIONS WITH A FOCUS ON SUSTAINABILITY

AI can streamline operations for the Olympic Games: improving efficiency, reducing costs and augmenting sustainability at every phase of event delivery, from the Games candidature stage to managing post-Games legacies.

This includes:

Optimising and streamlining Games organisation and operations

AI can increase efficiency, reduce costs and add value across every aspect of every edition of the Olympic Games – from transportation to technology, venue design to results management, recruitment to workforce training, improving both delivery and sustainability.

Maximising AI impact through knowledge transfer

The IOC undertakes to share this knowledge, enabling the Organising Committees for the Olympic Games (OCOGs), the IFs, the NOCs and other sports event organisers to deliver more engaging, cost-effective and sustainable events.

Strengthening the sustainability of venues

AI can be used to optimise sports venue design for energy savings and reduced carbon emissions, contributing to the reduction of sport's climate impact and supporting the United Nations' Sustainable Development Goals.

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FOCUS AREA 4

GROWING ENGAGEMENT WITH PEOPLE

The IOC, together with its commercial and broadcast partners, aims to engage both new and existing fans by leveraging AI to enrich the experience of the Olympic Games and other Olympic events on digital platforms. This includes offering additional value and immersive virtual experiences for spectators and fans.

This includes:

Transforming the Games experience for athletes and fans

AI offers fans the opportunity to engage more closely before, during and after the Olympic Games, including through athlete-centric storytelling, personalised schedules, venue navigation and augmented reality features.

Enriching the Olympic Games experience for fans

AI provides opportunities for much more personalised fan experiences, whether at the Olympic Games or elsewhere, bringing them closer to the action with customised content, real-time statistics and direct links to Olympic merchandise. Fans can also leverage AI technologies to share their own Olympic moments.

Transforming production workflows

AI automation holds the potential to revolutionise workflows, driving efficiencies across production and editing processes – for example, through automatic highlights generation and generative assisted editing. Moreover, AI has the potential to reduce the broadcast footprint through lower power consumption and physical space.

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FOCUS AREA 5

DRIVING EFFICIENCY ACROSS THE MANAGEMENT OF THE IOC AND SPORT

AI can be used to boost the operational efficiency of the IOC administration and across the entire Olympic Movement. By equipping staff with AI tools for better decision-making, knowledge expansion and task automation, we can optimise functional areas and improve the efficiency and working practices of sports organisations.

This includes:

Facilitating collaboration and participation within organisations

AI technology can streamline internal communication by transcribing meeting notes, facilitating multilingual translation, organising contracts and archives, and so on. This boosts collaboration, participation and efficiency within the IOC and among organisations across the Olympic Movement.

Offering financial efficiency and insights

AI can be used to streamline financial tasks, sharpen forecasts and reports, optimise capital management, assess risks and meet regulatory requirements. These applications can boost efficiency and support workforces, improving operations and unlocking new opportunities.

Streamlining talent acquisition and onboarding

AI can streamline recruitment by efficiently matching candidates to roles, deliver onboarding to boost administrative efficiency, support interactive training and development, and accelerate reporting to aid decision-making.

MITIGATING AI RISKS: ROLES, GOVERNANCE AND OVERSIGHT

AI must be developed and used responsibly in order to maximise its benefits and minimise its risks.

As AI technology evolves, the IOC and its stakeholders must ensure its use reflects the Olympic Movement's values. Establishing clear roles, responsibilities and governance at the outset of this journey will enable us to use AI effectively, enhancing our organisation and the Olympic Movement while managing potential risks.

The Role of the IOC

As the Olympic Movement embraces AI, the IOC will lead in guiding its use in sports. While not governing all AI applications, the IOC will lead by example, promoting and supporting trustworthy AI programmes and initiatives that enrich the Olympic Games and promote fairness and sustainability within the Olympic Movement.

The IOC will take three key roles:

The IOC as a Pioneer

The IOC will lead the creation and management of AI assets to accelerate delivery, further improve fairness and facilitate equal access to the benefits of AI across the Olympic Movement.

The IOC as a Catalyst

The IOC will nurture our AI initiatives through resourcing, convening partners and capabilities, and supporting knowledge transfer to and among all members of the Olympic Movement.

The IOC as a Guardian

The IOC will oversee or endorse AI initiatives to ensure accessibility to sport, regardless of background or geography, and encourage the adoption of AI in this context.

Through these clearly defined roles, the IOC will:

- improve the efficiency of the Olympic Games and the IOC;
- accelerate existing initiatives in line with Olympic Agenda 2020+5;
- boost capabilities across the Olympic Movement;
- develop and promote a greater understanding of the benefits and risks of AI;
- support Olympic Movement stakeholders by disseminating information on these benefits and risks;
- offer guidance to maximise benefits and minimise risks; and
- share insights and best practices with the Olympic Movement.

MITIGATING AI RISKS: ROLES, GOVERNANCE AND OVERSIGHT

Governance Framework

Good governance, including transparency and responsibility, is a longstanding priority for the IOC. Developing a strong governance framework will assist in assessing and mitigating AI risks. We have identified important factors for ensuring AI's trustworthiness:

Responsible

The use of AI must align with the principles and values of the Olympic Movement, including supporting equity, sustainability, collaboration and integrity.

Safe and secure

AI must not pose safety risks to people, venues, infrastructure or organisations. The model and underlying data must protect against inappropriate use, disclosure and cybersecurity threats.

Robust and reliable

AI application must be robust – functioning accurately even in the face of unexpected inputs, maintaining the reliability and validity of its outputs.

Accountable

All stakeholders must be aware of their roles and responsibilities. Documented processes and policies must be put in place to clearly articulate accountability for AI outcomes.

Accessible

The potential benefits of AI must be made available to individuals and organisations across the Olympic Movement.

Fair and impartial

AI must be free from latent bias and partiality.

Transparent

Each user must be informed how their data is being collected and how AI decisions or outputs may affect them.

Respect for privacy

Data collection, storage, handling, sharing and destruction must align with public expectations for privacy, such as by limiting which kinds of data are collected and how sensitive information is obscured.

As a pioneer, a catalyst for innovation and a guardian of AI initiatives within the Olympic Movement, the IOC intends to develop governance mechanisms and guidelines for trustworthy and responsible AI use. Effective AI governance will require everyone in the Olympic Movement to work together – ensuring the safe use of AI for the benefit of athletes, fans and the entire Olympic Movement.

OLYMPIC AI AGENDA: THE IOC'S COMMITMENTS

With this Olympic AI Agenda, the IOC is making four commitments to guide the Olympic Movement towards our goal of accelerating positive change across global sport in our five focus areas.

Governance

We will develop and share a trustworthy AI Framework for the Olympic Movement to guide the future application of AI in accordance with the Olympic values.

Strategy

We will develop an IOC AI roadmap, recognising that it will need to be adapted in the future. In this way, the IOC will lead by example and use AI to support meeting the recommendations set out in Olympic Agenda 2020+5.

Partner Engagement

We will establish an AI engagement programme, convening the Worldwide Olympic Partners to support the implementation of our AI ambition, and to address risk identification and mitigation.

Solutions

We will leverage learnings from the Olympic Games Paris 2024 and other Olympic events to identify AI solutions that will improve the operational efficiency and sustainability of future Olympic Games.

The Olympic Movement is still at the beginning of its AI journey, which will continuously evolve with the development of new technology. These initial steps underline our commitment to being the voice of sport in the global AI dialogue. A concerted effort by the entire Olympic Movement will enable us to shape the future of sport.

Together, we will strengthen the uniqueness and universality of the Olympic Games, reinforce solidarity, promote responsibility and sustainability, foster fairness, and ensure that athletes, coaches and organisations across the Olympic Movement benefit from equal access to AI.

As with sport, so too with AI. We will move faster, reach higher, and become stronger – together.

THE IOC AI WORKING GROUP

The IOC set up an AI Working Group in 2023. This panel of experts, drawn from around the world, included AI pioneers, academics, athletes and technology companies. The AI Working Group consisted of:

Christopher G. Brinton

Professor of Electrical and Computer Engineering, Purdue University

Alistair Brownlee

Olympic champion in triathlon
Member, IOC Athletes' Commission

Jesse Davis

Professor, Department of Computer Science, KU Leuven

Randall Davis

Professor of Computer Science and Electrical Engineering, Massachusetts Institute of Technology (MIT)

Soumitra Dutta

Peter Moores Dean and Professor of Management, Saïd Business School at the University of Oxford

Daniel Ferrante

Partner, Deloitte

Todd Harple

Olympics AI Innovation Program Lead, Intel

Amit Joshi

Professor & AI Expert, IMD Business School

Patrick Lucey

Chief Scientist, Stats Perform

Nitin Mittal

US AI Strategic Growth Offering Leader, Deloitte

Agni Orfanoudaki

Associate Professor of Operations Management, Saïd Business School at the University of Oxford

Daniela Rus

Deputy Dean of Research, Massachusetts Institute of Technology (MIT)

Gadi Singer

VP and Director of Emergent AI Research, Intel Labs

Howard van Rooijen

Founder, Endjin, and Microsoft Azure MVP

Pascal Vuilliomonet

Project Manager, EPFL Sportech initiative

Sarah Walker

Olympic silver medallist in BMX
IOC Member
Vice-Chair, IOC Athletes' Commission

Dr Wang Jian

Founder, Alibaba Cloud, Alibaba

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