

WRITTEN BY



**JAKUB GÓRNIK**  
Partner  
Deloitte Central Europe



**MARTIN MARTINEC**  
Partner  
Deloitte Slovakia



# TECHNOLOGY BEHIND OLYMPIC EXCELLENCE

From athlete preparation to global broadcasting, modern Olympic Games rely on complex digital systems working seamlessly behind the scenes. While spectators focus on sporting moments, technology quietly enables fairness, safety, scale, and connection across one of the world's most demanding live events.

## A DIGITAL FOUNDATION FOR GLOBAL SCALE

Hosting the Olympic and Paralympic Games is one of the most complex operational challenges in the world. Over several weeks, athletes, officials, media representatives, and millions of spectators interact across multiple venues and regions.

Behind this effort sits an integrated technology environment connecting accreditation, scheduling, logistics, communications, and results. Around 200 vendors contribute specialized systems that must function as a single, reliable ecosystem.

## PEOPLE POWERED BY PLATFORMS

Technology enables the human scale of the Games. Approximately 18,000 volunteers support daily operations across competition venues, transport hubs, media centers, and athlete facilities. Coordinating an effort of this magnitude depends on digital platforms that bring structure, clarity, and speed to a highly dynamic environment.

Workforce systems support recruitment, training, scheduling, and real time communication, allowing organizers to match people to roles and adapt quickly as conditions change during live competition. Clear information and timely updates help volunteers

understand where they are needed and how their contribution fits into the wider operation - ensuring that human effort and digital coordination work seamlessly together.

## ACCREDITATION AND ACCESS AT SPEED

Accreditation is one of the most intensively used digital services during the Games. Credentials are scanned approximately 1.5 million times, regulating access to competition venues, operational areas, and restricted zones throughout the event. At this scale, even minor delays can quickly ripple across schedules and operations.

These systems must balance speed, accuracy, and security. Access checks need to be instantaneous, while ensuring that only authorized individuals move through highly controlled environments. Behind each scan sits a network of real-time validation, monitoring, and data synchronization that allows the Games to function smoothly protecting athletes, officials, media, and volunteers without interrupting the rhythm of competition.

## SUPPORTING PERFORMANCE AND FAIRNESS

Long before competition begins, technology supports athlete qualification, entries, scheduling, and rostering. These systems manage multi-year processes

involving eligibility rules and international coordination. During the Games, officials rely on integrated competition management tools that synchronize timing, judging, and scoring, reducing manual intervention and operational risk.



The Games function like a temporary global city, powered by digital coordination.

## RESULTS, INSIGHT, AND STORYTELLING

Results systems are among the most visible yet technically demanding components of the Games. They process and distribute official competition outcomes in real time, feeding data simultaneously to the official website, mobile applications, broadcasters, and venue displays. Accuracy and speed are critical: results must be delivered instantly and consistently across all channels, with no margin for error.

Beyond raw data, technology plays a central

role in shaping how sport is understood and experienced. Dedicated systems support sports commentators with real-time statistics, historical context, and performance insights, allowing them to interpret moments as they unfold. Together, these platforms transform individual performances into shared global narratives - connecting audiences to the precision, effort, and meaning behind every result.

## RESILIENCE UNDER PRESSURE

With global attention focused on every moment, Olympic technology environments operate continuously under intense pressure. Systems must perform reliably across venues, time zones, and peak usage periods, while remaining resilient to unexpected incidents or sudden surges in demand. Even brief disruptions can have visible consequences when events are unfolding live.

To mitigate this risk, technology operations rely on constant monitoring, redundancy, and proactive response mechanisms. Extensive testing and rehearsals simulate peak loads and failure scenarios well ahead of competition, allowing teams to identify weaknesses and refine procedures. This preparation ensures that when the stakes are highest, digital systems remain stable - supporting athletes,

officials, broadcasters, and fans without drawing attention to themselves.



Technology doesn't replace the drama of sport - it amplifies it.

## A LEGACY BEYOND COMPETITION

Digital knowledge platforms capture lessons learned across planning and delivery, enabling future host cities to benefit from accumulated experience. In parallel, technology increasingly supports athletes beyond competition, helping them transition into education, employment, and new opportunities once their sporting careers conclude.

## THE INVISIBLE CHAMPION

When technology succeeds at the Olympics, it does so quietly. Fans remember medals and moments, not systems running in the background. Yet without integrated platforms, real-time data, secure infrastructure, and coordination across hundreds of contributors, the Games as we know them would not be possible.