transforming
IT to meet tomorrow's
Olympic Games challenges

The Olympic Movement's new IT transformation will meet the same challenges and opportunities faced by businesses everywhere – with cloud, Big Data and cyber security

Some business projects are large, complex, and critical to the continued success of an organization. Then there is the Olympic Games and its underpinning technology. Most athletes, visitors, TV viewers, and digital consumers have little idea how important the underlying digital technology is to the Olympic Games. It is not only massive, incredibly complex and vital to the success of the event; it also has a fixed deadline and the event must be beamed to the world within half a second. No pressure, then.

The role of IT at the Olympic Games is changing significantly: reflecting new expectations about its organization and delivery, and many of the innovations in technology that will help to meet them.

In the years ahead, cloud services will drive greater efficiency and organizational agility. Big Data will spawn new insights into the needs and expectations of athletes and the public. Online and mobile video services will break down geographical barriers and encourage sharing of information across the world. Cyber security will be even more tightly controlled by best-in-class industrial practices.

Atos is at the center of a digital transformation for the Olympic Games: providing integration and systems management services, core hosting services, and key Games applications for the upcoming five Games. Atos innovation, coupled to its proven 22 year delivery record, will meet the International Olympic Committee (IOC) expectations across every Games event.

The Olympic Games sets a towering standard to compare with any other critical business project – in scale and complexity, number and diversity of stake-holders, global visibility, and delivery deadlines. It tells a remarkable story about the challenges associated with a major global project, and the potential for using IT to achieve its goals.

Atos
Worldwide IT Partner

Springboard to the future

Information Technology has played an increasingly important role in the public enjoyment and successful operation of the Olympic Games for many years. The IOC and Atos now expect step changes in how digital and new technologies will address emerging challenges, and make a major impact on the client expectations.

Cloud makes it into the squad for the Olympic Games

The pressing IT challenges facing the IOC and the Organizers of each Olympic Games are to further secure operations, contain costs, and leverage experience and investment across multiple Games. To meet those challenges, IOC is committed to continuous improvement and innovation, and delivering greater benefits than ever from the evolution of technologies and emergence of new services.

A major issue – growing ever more important as volumes of data increase in future –is how to manage cost-effectively the enormous variation in data peaks and flexibility in IT infrastructure that occur in the run-up to the Games, and at the event itself.
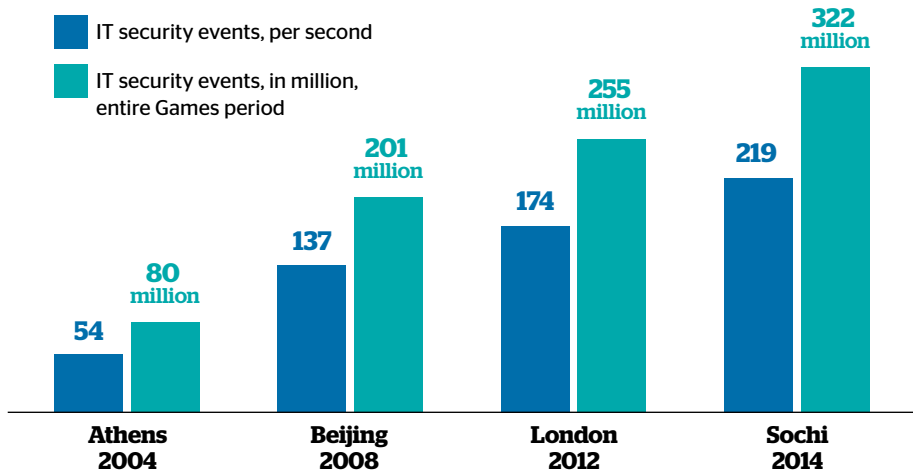
That variation in data peaks makes the Olympic Games a perfect fit for cloud computing. However, a comprehensive cloud solution must satisfy the unique, specialized, and demanding operational and security risks associated with the Games.

Those risks mean that the Olympic Games cannot rely on a standard shared cloud solution. The scale and intensity of its operations make a secure, dedicated, agile cloud infrastructure essential. Atos will use its affiliate Canopy, with EMC serving as the delivery partner, for scalable cloud-based services and Infrastructure as a Service to transition all IT services into the cloud by 2018.

The Games can expect a range of benefits:

► Cost efficiency and tight cost control, while maintaining excellence with a scalable cloud infrastructure
► Opportunity to react fast to change, quickly scaling resources up or down
► Duplication removed, and impressive operational efficiencies and productivity improvements achieved with standardized processes
► Cybersecurity maintained and enhanced
► Responsiveness and resilience built in
► Business continuity.

Chart

Legend:
- IT security events, per second (dark blue)
- IT security events, in million, entire Games period (teal)

	Athens 2004	Beijing 2008	London 2012	Sochi 2014
IT security events, per second	54	137	174	219
IT security events, in million, entire Games period	80 million	201 million	255 million	322 million

The more connected each Games become, the more structured and unstructured data will be generated.

Driving business excellence using a new central delivery model

Every two years, in a new part of the world, IT for the Olympic Games must be ready for the Games. That means preparation time of more than four years to effectively establish a new 'company'. It is a model designed for global consumption, but not for optimal efficiency.

As part of the IT transformation, the new delivery model is a paradigm shift from a 'build each time' to a 'build once' model delivering services over the cloud that creates significant efficiencies and operating flexibilities.

Where we used to have all the major IT facilities in the host city, we will transition functions to a central location, resulting in more consistency, efficiency and effectiveness in delivery across all programs.

Understanding the Big Data picture

The more connected each Games become, the more structured and unstructured data will be generated.

These huge volumes of data offer a great opportunity to capture and understand trends and behaviour, and to use this actionable intelligence to benefit athletes, journalists, visitors, viewers, and online content users with predictive and personalized services. Using Big Data analysis techniques also helps with cybersecurity – for identifying suspicious activities, imminent threats, and unexpected holes in real or digital worlds that attackers could exploit.

Getting real value from that data requires a new approach to business analysis and intelligence: new tools and competencies, and new innovative technologies that will manage the volume and variety of Big Data, real-time.

Safe-keeping the Olympic Games

As more and more personal information about athletes, press and the public is turned into digital form on open and globally interconnected technology platforms, the risks from cyber-attacks will rise.

For the Olympic Games, combatting cyber threats is even more challenging as business technologists work to an immovable deadline, under a media spotlight that makes attacks more appealing, in a temporary environment that is hard to secure, where large numbers of stakeholders have access to vast amounts of data – some of which is highly sensitive.

The Olympic Movement has been very successful in choking off cyber threats. From Salt Lake City 2002 to Sochi 2014, IT services have been successfully secured, with zero impact on the Games. The challenge is to maintain that success record into the future.

Enriching the consumer experience

Sports fans everywhere have an insatiable thirst for information and rich media content. With the use of new media and digital technologies, the Olympic Games are superbly positioned to reach a global audience and provide fans with engaging and comprehensive information that will enhance their viewing experience, wherever they are, whatever device they use.

Tested successfully at Sochi, the Olympic Video Player developed by Atos for OBS (Olympic Broadcast Service) is an exciting multiplatform video player (a white label solution for the broadcasters) that provides an immersive and collaborative user experience, harnessing convergence of four major trends: social networking, mobility, cloud, and Big Data.

The Olympic Video Player uses innovative technology that gives viewers of live sporting events real-time results, statistics, biographies and social media conversations, plus a ticker of relevant upcoming events – all in one integrated screen. Content that was never shown is now at the fingertips of the fans, giving sports fans the ultimate choice and control over what, how, where and when they watch.

The Olympic Video Player allows for the Olympic Games to be broadcasted and presented in full i.e. enabling users to access each and every moment of the Olympic Games through digital platforms including in territories that didn't have similar experience in the past for the Olympic Winter Games, including territories such as Sub-Saharan Africa, the Caribbean, and the Arab world. It will continue to reduce geographic limitations, encouraging people around the globe to engage and share their information and ideas.

Working with partners

Digital transformation requires integration of technologies and human capabilities of many different providers. Ensuring that partners work together successfully to the same objectives, in the same timeframes, is crucial to the success of the Games.

Each Olympic Games requires integration of multiple national and global stakeholders and providers – working without contractual relationships. This does not happen by accident. Proven processes and methodologies create the right framework for collaboration. A unique Service Integration and Management (SIAM) methodology is designed to maintain a high-performance partner and supplier network at every stage of planning and implementation.

Our methodology:

▶ Establish clear governance structures with precise roles and responsibilities for each part of an IT program set-up and delivery lifecycle

▶ Create unambiguous definitions of project activities for all suppliers

▶ Implement a well-defined project organization and processes that include all suppliers

▶ Institutes an ongoing program of partnership and supplier risk assessment.

"Technology is critical to the success of each Olympic Games. We are delighted that we will be able to continue to rely on Atos and their vast experience to deliver flawless, innovative IT services."

Thomas Bach, IOC President

Proven change management

While digital innovation will create big headlines in the years ahead, there are management areas where safe and trusted processes and experience will continue to be vital to the success of the Olympic Movement.

Every new Olympic Games must manage:

▶ 200,000 employees
▶ 4 billion worldwide viewers
▶ 24/7 operations.

For Rio 2016, for example, the IT infrastructure will link together:

▶ 80+ competition and non-competition venues
▶ 500+ servers
▶ 9,000 PCs
▶ 1000s of network and security devices
▶ more than 200,000 hours of testing
▶ 300,000 accreditations of athletes, media, volunteers and support staff.

About Atos

Atos SE (Societas Europaea) is a leader in digital services with 2013 pro forma annual revenue of €10 billion and 86,000 employees in 66 countries. Serving a global client base, the Group provides Consulting & Systems Integration services, Managed Services & BPO, Cloud operations, Big Data & Security solutions, as well as transactional services through Worldline, the European leader in the payments and transactional services industry. With its deep technology expertise and industry knowledge, the Group works with clients across different business sectors: Defence, Health, Manufacturing, Media & Utilities, Public Sector, Retail, Telecommunications, Transportation.

Atos is focused on business technology that powers progress and helps organizations to create their firm of the future. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and is listed on the Euronext Paris market. Atos operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, and Worldline.

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