



**digital**  
empowerment  
for the Olympic Games





The IOC and Atos embrace digital transformation and see step changes in how disruptive technologies address emerging challenges and make a major impact.



Some business projects are large, complex, and critical to the continued success of an organization. Then there are the Olympic Games and their 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.

But we go beyond.....

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# Turning the Games into a fully connected global experience

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

In the years ahead, cloud services will drive greater efficiency and organizational agility. complex 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. Cyber security will be even more tightly controlled by best-in-class industrial practices.

“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



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# Cloud makes it into the squad for the Olympic Games

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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, the IOC is committed to continuous improvement and innovation, and delivering greater benefits than ever from the evolution of technologies and emergence of new services.

Every two years, in a new part of the world, the Games are happening and the IT must be ready. That means preparation time of more than four years to effectively establish a new 'company'.

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A paradigm shift from a 'build each time' to a 'build once' model

As part of the transformation, there is a new delivery model. A paradigm shift from a 'build each time' to a 'build once' model delivering some critical 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 even more consistency, efficiency and effectiveness in delivery across all programs.

Another major issue - growing ever more important as volumes of data increase - 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.

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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 their delivery partner, for scalable cloud-based services and Infrastructure as a Service to transition most of the critical IT services provided by Atos today into the cloud for the Pyeongchang 2018 Olympic Winter Games.

# Digital empowerment for the Olympic Games

As the Worldwide IT Partner, Atos is at the heart of this digital transformation for the Olympic Games: providing integration and systems management services IT security and key Games applications. And core hosting services

will be provided for the Games period 2018-2024. Atos innovation, coupled to its proven 22 year delivery record, will meet IOC expectations for smooth and efficient operations across every Games event.

And we will continue to push our limits and enjoy the challenges that come our way, so that every event can be a new personal best for many years to come.

## A step change for the Games

What's different	The impact and benefits
<b>New centralized delivery:</b> <ul style="list-style-type: none"> <li>▶ 'Build once' core Games environment</li> <li>▶ New centers of excellence in integration, implementation, testing and support</li> </ul>	<ul style="list-style-type: none"> <li>▶ Rich knowledge and experience re-used</li> <li>▶ More consistency</li> <li>▶ More efficiency</li> <li>▶ More effectiveness</li> </ul>
<b>Secure, dedicated cloud infrastructure</b>	<ul style="list-style-type: none"> <li>▶ For the first time all the benefits of the cloud</li> <li>▶ Sufficient cyber security maintained</li> <li>▶ Responsiveness and resilience built in</li> <li>▶ Business continuity</li> <li>▶ Cost-efficiency</li> </ul>
<b>New collaborative platform for project members from the different stakeholders</b>	<ul style="list-style-type: none"> <li>▶ Major advances in Knowledge Management</li> </ul>
<b>New Sustainability initiatives</b> <ul style="list-style-type: none"> <li>▶ Carbon neutral solution</li> </ul>	<ul style="list-style-type: none"> <li>▶ Carbon neutral hosting at our data centers</li> <li>▶ Contribution to a more measurable and sustainable Summer and Winter Games</li> </ul>
<b>New media and digital technologies</b>	<ul style="list-style-type: none"> <li>▶ Content that was never shown is now at the fingertips of the fans</li> <li>▶ Anywhere, any device, real-time</li> </ul>

As the Worldwide IT Partner, Atos is at the heart of this digital transformation

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# IT Security: Real-time data analytics for safe-keeping the Games

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The more connected each Games become, the more complex and unique data will be generated.

For sure these huge volumes of data can offer a great opportunity to capture and understand trends and behavior, and to use this actionable intelligence to benefit athletes, journalists, visitors, viewers, and online content users with predictive and personalized services.

But there is another critical business area where using real-time data analysis techniques help: fighting cyber security. The Games are an iconic security target. At peak, Games systems hold the most critical personal data in the world. And with more information becoming freely available to users via the internet and on their own device, the increase in IT security events is daunting.

Based on experience from recent Games, we expect to see over 200 IT security events per second(!) in Rio, most of them irrelevant warnings... This is not manageable: screens would be flickering all day long. So these need to be reduced to 10 to 50 that are real. Using real-time data analysis tools and a set of rules search through the millions of security logs generated every day. They are tracking nearly every hint of digital activity within the Olympic Games network, ensuring zero impact on the Games.

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 data, real-time.

Benefit athletes, journalists, visitors, viewers, and online content users with predictive and personalized services.

Fighting cyber security by using real-time data analysis techniques



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# Enriching the consumer experience

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Sports fans everywhere have an insatiable thirst for information. As an illustration: Real-time results are processed and transmitted to 8 billion multiple devices worldwide. With the use of new media and digital technologies, the Olympic Games are superbly positioned to go a step further, reaching a global audience and provide fans with even more engaging and comprehensive content, wherever they are, whatever device they use.

We are using innovative technologies that gives viewers of live sporting events real-time results, statistics, biographies and social media conversations. Content that was never shown is now at the fingertips of the fans.

Real-time results are processed and transmitted to 8 billion multiple devices worldwide.

Reaching a global audience and provide fans with even more engaging and comprehensive content, wherever they are, whatever device they use.

Content that was never shown is now at the fingertips of the fans.

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# About Atos

Atos SE (Societas Europaea) is a leader in digital services with 2014 pro forma annual revenue of circa € 11 billion and 93,000 employees in 72 countries. Serving a global client base, the Group provides Consulting & Systems Integration services, Managed Services & BPO, Cloud operations, Big Data & Cyber-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: Defense, Financial Services, Health, Manufacturing, Media, Utilities, Public sector, Retail, Telecommunications, and 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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