

# Delivering a secure by design technology solution to the Tour de France

## Client profile

Amaury Sport Organisation (A.S.O.) are the owners and operators of the Tour de France, LaVuelta, Paris Roubaix and Paris Nice as well as other top international sporting events including the Dakar Rally, the Paris marathon and the ladies French Open golf. They organize 240 days of competition per year, with 90 events in 25 countries.

## Which services?

- Managed Services
- Consulting Services
- Technology Infrastructure Services
- Managed Security Services



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The Tour de France is an extremely high profile event. Because of this, we need to ensure that the technology powering the event is highly secure.

**Yann Le Moenner**, CEO, Amaury Sport Organisation

## Summary

Securing the world's greatest cycling race is of critical importance to A.S.O. As their Official Technology Partner for the past eight years, we're continually evolving the approach to securing the race.

Taking a secure by design approach security is a constant consideration, from initial design phases through to advanced vulnerability scanning and real-time threat monitoring.

With new threats always emerging and the scope of the solution expanding security has remained a top priority, ensuring that the race was protected through all 21 stages and all year long.

## Business need

### Ensuring the security of the world's greatest cycling race

The Tour de France is one of the most high-profile sporting events in the world. Every year millions of fans line the roads of France, and billions tune in to watch some of the world's best cyclists battle it out for the most prestigious prize in world cycling, the Maillot Jaune.

For race organizers, A.S.O., technology plays a critical role in realizing their goals of creating a revolutionary experience for fans wherever they are and digitally optimizing race operations.

For the past eight years, we've partnered with A.S.O. to guide their digital transformation journey, leveraging technology to meet their business objectives.

Their technology solution stretches from the edge of the network, with sensors on each bicycle and race vehicles, to their data analytics platform in the cloud.

With multiple networks, platforms and endpoints, security is critical. Not only could a cyberattack disrupt race operations but they also have to comply with European data privacy regulations.

To achieve this, they needed to leverage a multi-layered approach to security, working with our teams to ensure that all aspects of the environment were secure.

## Solution

### A process of continual evolution

The technology solution powering the Tour de France isn't static. Each year we work together to evolve the solution, continuously adapting to meet the changing needs of the fans and A.S.O.

Adopting a secure by design approach, security is built into every stage of the process starting with the architecture underlying all aspects of the solution.

There are three key components to the Tour de France solution, the network fabric enabling the sensors on the bicycles to communicate with the rest of the world in some of the most remote parts of France; the cloud infrastructure powering the data analytics solution; and remote edge computing devices used by race organizers and our team.

Fundamental to our approach is the integration of all our teams under a DevSecOps model. With all teams working together all code is scanned for vulnerabilities leveraging the capabilities of NTT Application Security. This ensures that before any code is put into production it's been thoroughly screened for any vulnerabilities.

At the same time, we adopted an approach of hardening all aspects of the solution, limiting any external access to only what is necessary. This process saw us reduce the external footprint of the solution by 25x in 2021.

With additional edge computing devices in use, in 2021, steps were taken to ensure that they didn't offer any opportunities to cybercriminals, with all connections secured and access severely restricted.

Leveraging advanced threat analysis, the support teams are constantly on the watch for any suspicious activity, leveraging our global security operations centers to ensure that any new vulnerabilities were identified and remedied before they could be exploited and have an impact on race operations.

## Outcomes

### Protecting the Tour de France, together

Our long-standing partnership has enabled us to gain a clear understanding of A.S.O.'s priorities and the security requirements of the Tour de France. Leveraging our global security capabilities, we're able to ensure that security issues don't derail the operations of the world's greatest cycling race.

### Unified approach

The NTT and A.S.O. teams collaborate closely together on all aspects of the Tour de France technology solution and security is no exception. Security isn't treated as an end state but rather as a continuous process, ensuring that no component of the solution exposes the race to unnecessary risk.

### Visibility

Leveraging our security expertise all aspects of the solution are continuously monitored to ensure that actions can be taken to head off any criminal activities. In addition to realtime monitoring, A.S.O. also have access to comprehensive reports to provide them with insight into the state of this critical technology platform.

### Continuous evolution

Just as our co-innovation relationship delivers new functionality to the Tour de France every year, so too does the security. With the threat landscape constantly evolving our team is continually looking at how to ensure it remains secure, protecting the operations and the reputation of the Tour de France.



Working with NTT we're confident that our operations and data are secure allowing us to focus on delivering a truly great event for the fans.

**Pascal Queirel**, Chief Information Officer,  
Amaury Sport Organisation

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