sixense

2019

Foreword

Please note that the content of this Annual Report was created prior to March 2020.

At the time of publication, it is impossible for us to determine the precise consequences of the COVID-19 crisis.

Nevertheless, the pandemic is likely to have a significant impact on SIXENSE's activities, and we anticipate a sharp but temporary decline in sales in 2020.

We are doing everything to bounce back quickly as soon as the health crisis has been brought under control.

Rueil-Malmaison, April 6, 2020

At SIXENSE, our mission is to monitor the condition and behaviour of structures and infrastructures, to secure their construction and operation, and to optimise maintenance.

2019 revenue
84 M€

Employees
705

Main contracts won in 2019

- → **Digitalisation of jobsite processes at VINCI Construction using the DigitalSite software,** international locations
- → **Structural monitoring on the project for the construction of the 3rd runway at Hong Kong's international airport,** China
- → **Defect investigation on bridges within the Bordeaux city area,** France
- → **Contract with EDF for lasergrammetry surveying and 360° photos of the Paluel nuclear site, including data processing,** France
- → **InSAR Satellite Monitoring of the Thames Tideway tunnel in London,** United Kingdom

On cover

Mobility

Grand Paris projects under close scrutiny

SIXENSE is consolidating its role as a major player in the Greater Paris development project by taking on responsibility for investigating defects as well as performing the acoustic and vibration monitoring of a large number of jobsites for future metro lines or stations. SIXENSE also provides associated consultancy services with controlled management of acoustic and vibration impacts, and carries out geophysical surveying campaigns with precise subsoil 3D imaging using the SISSTERRA® solution, as well as in-situ monitoring of jet-grouting columns.

Monitoring/Engineering

#makingyourdayeasier

Message from the CEO

Pascal Berger

In 2019 we brought to market many innovative services and solutions for our construction and infrastructure customers, in key areas such as safety, quality, risk prevention and operations optimisation. By combining our legacy know-how in engineering and monitoring with major investments in digital solutions, digitisation and modelling, we at SIXENSE have strengthened our leadership in 2019 to support our customers in their digital journey towards better control over their operations.

SIXENSE carries out projects and partnerships with other companies of the VINCI Group as well as with many other companies that rely on our expertise to help them address their day-to-day technical challenges and boost their performance. We have proven able to anticipate the build-up of a strong market trend driven by the challenges our clients face in so many areas (environmental, regulatory, safety, financial...), and that are reflected in the impact of climate risks, ageing infrastructure, urban concentration and increased mobility. For SIXENSE, they represent significant international growth opportunities, particularly in Europe, North America, the Middle East and Australia/New Zealand. In 2019, these opportunities came to fruition with the incorporation of SIXENSE's solutions into a number of projects in France (Grand Paris Express) and internationally, such as the expansion of Hong Kong airport and the construction of tunnels in Australia (Melbourne subway) and Canada (Highway 401 in Toronto).

SIXENSE's solutions and services cover the entire infrastructure life cycle, from design to construction and operation. Thanks to a platform dedicated to the life cycle of infrastructure called Beyond, we can now perform faster roll-out of these services. Beyond enables us to manage all stages in the data management process (capture, storage, visualisation, analysis, interpretation and traceability) from a single, secure location, whatever the source of the data and the context in which our customers use it. The platform was made available to a number of customers in 2019 and is currently being deployed on a large scale, thanks to which SIXENSE is now positioned as a technological leader in the construction, operation, management and maintenance of infrastructure.

"SIXENSE launched several innovative solutions in 2019, reinforcing thus its reference position helping clients improving their performance."

Governance

From left to right:

Michel Aroichane
Innovation Director

Jean-Ghislain la Fonta
Deputy managing Director and International Director

Richard Loudin
Marketing and communication Director

Emilie Chamla
Legal affairs Director (SIXENSE & NUVIA)

Stéphane Aubert
Commercial development Director

Christophe Bourlart
Mapping department Director

Pascal Berger
Chief Executive Officer

Fabrice del Aguila
Deputy managing Director and Platform Solutions department Director

Vincent le Quellec
Chief financial and administrative Director

Pascale Dumez
Deputy managing Director and Engineering department Director

Franck Martin
Human Resources Director

Urban development

SIXENSE keeps an eye on pedestrian footbridges

In the heart of the La Défense business district on the outskirts of Paris, SIXENSE carried out detailed inspection of 5 pedestrian footbridges used daily by hundreds of thousands of people. Each footbridge was entirely digitised and the data collected analysed, thus enabling predictive maintenance operations that will contribute to the long-term viability of the structures.

Digital inspection

#careforall

Stadiums

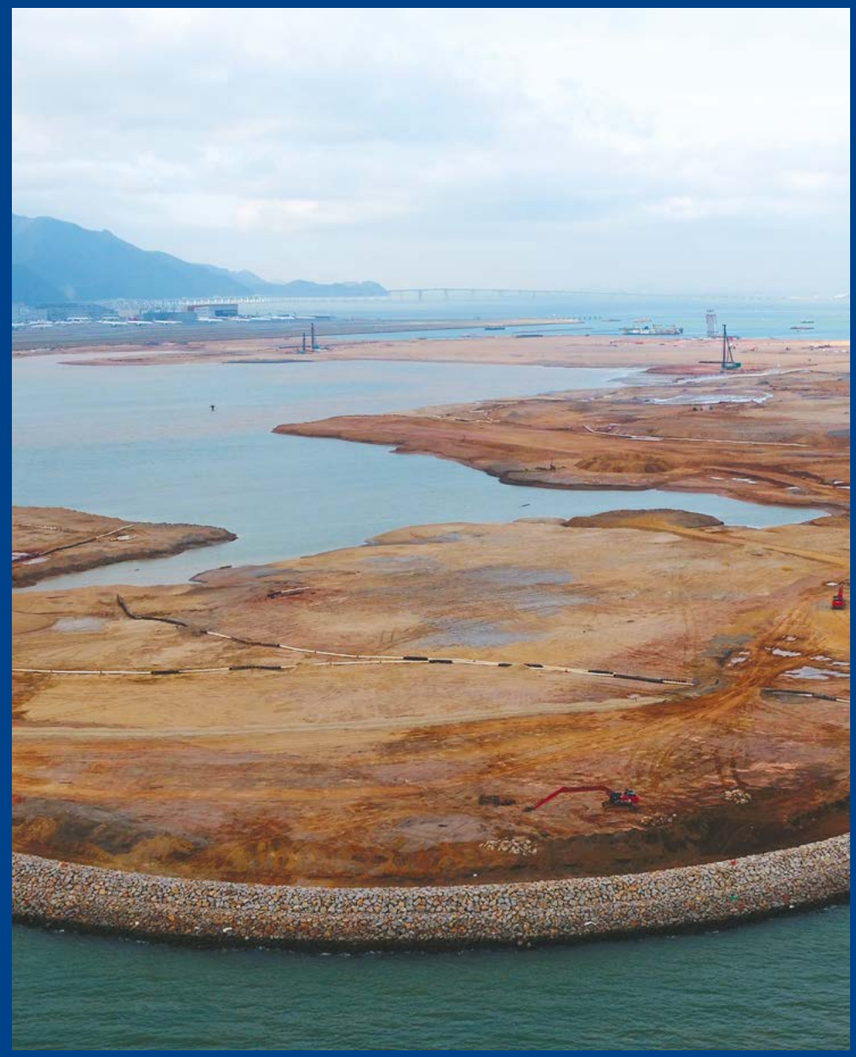
SIXENSE pushes it over the goal line in Nevada

In the United States, SIXENSE is taking part in a project of gigantic proportions: the building of a new US football stadium. Thanks to the DigitalSite tool and using a bespoke application, SIXENSE has built a 3D model of the structure's cabled roof which allows components of the structure to be controlled in real time.

Digitalisation

#fostergrowth

Airports



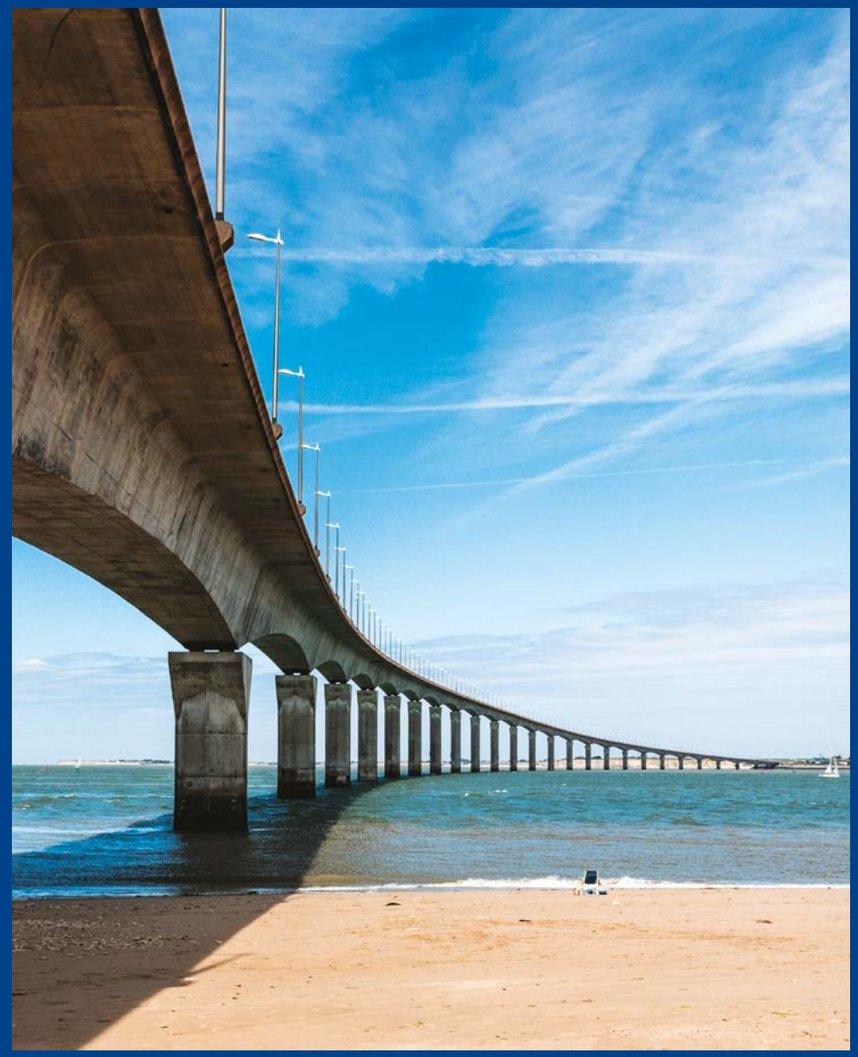
SIXENSE ready for take-off at Hong Kong airport

Hong Kong's authorities are faced with the challenge of maximising the airport's capacity in order to serve an ever-increasing number of travellers. SIXENSE is providing support by implementing a large-scale geotechnical monitoring system across this project. Over 1,500 automatic sensors and instruments have been installed to monitor the backfill and surface of the runway throughout the 4-year duration of the construction project.

Monitoring

#makingyourdayeasier

Bridges



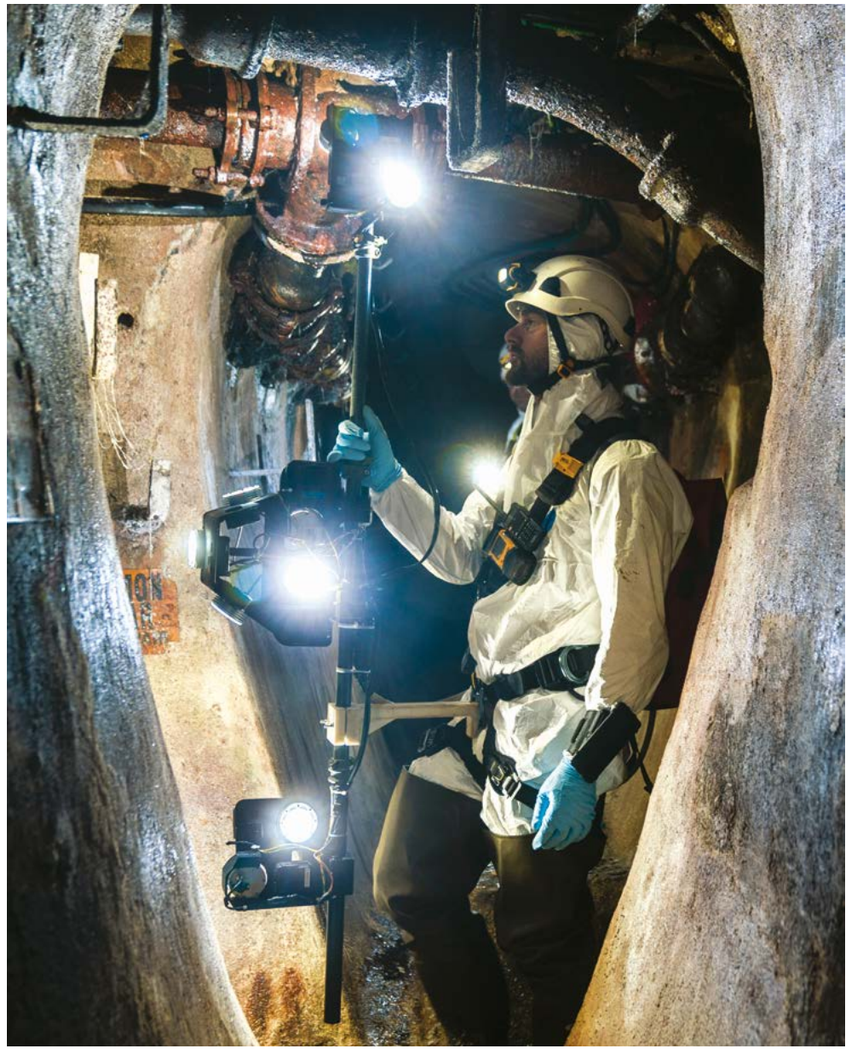
Bridge to the Île de Ré: defect investigation and monitoring of external post-tensioning tendons (France)

Thorough defect investigation of anchors using the UScan method and implementation of an acoustic monitoring system were part of the "shock treatment" applied by SIXENSE to the Île de Ré bridge as part of operations aimed at safely replacing a damaged post-tensioning cable.

Monitoring

#makeyourdayeasier

Sanitation



3D sewer mapping to facilitate management of a sanitation system (France)

SIXENSE completed an experimental project to develop a novel technology for data acquisition in a large-scale sewer system. This complex environment requires innovative processes and technologies for data capture and georeferencing. The aim is to provide sewer network managers with high-precision 3D mapping capabilities, thus contributing to optimised infrastructure management.

Digitalisation

#makingyourdayeasier

Bridges

SIXENSE is keeping watch over the Dardanelles bridge

In Turkey, the Dardanelles strait will soon be spanned by the Çanakkale 1915 bridge, a suspension bridge with a main span of 2,023 metres.
A close watch will be kept on the project, with SIXENSE providing 32 corrosion sensors, 16 load sensors and 88 fibre optic strain gauges to monitor the behaviour of the bridge upon construction, as well as after commissioning.

Monitoring

#makingyourdayeasier

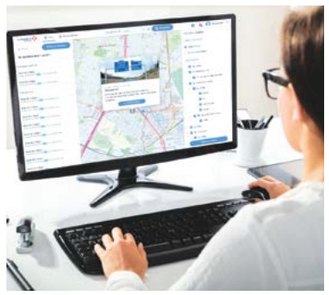
Railways

Data capture for the future London–Birmingham high-speed railway line

In Britain, as part of the construction of the HS2 high-speed railway line between London and Birmingham, SIXENSE provided data capture services using a combination of LiDAR technology (laser remote sensing) and heliborne photography. Once the data was compiled and processed, the construction consortium had all the topographical information it needed to begin the engineering design phase of the project.

Digitalisation

#makingyourdayeasier



Highways

Digital convergence for VINCI Autoroutes (France)

To help VINCI Autoroutes digitise, harmonise and optimise its processes, SIXENSE has collaborated with IBM to design a central database and a range of business tools that are intended to interact with each other. This modern system, used daily by more than 4,000 highway employees, should provide a cross-functional view of asset management.

Digitalisation

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Find out more
www.sixense-group.com

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