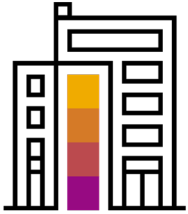




SAP® Innovation Awards 2020 Entry Pitch Deck

Keeping Maintenance Staff Safe at High-Risk Sites with Digital Twin Technology
Quadrica



Company Information

Headquarters	Croissy-Beaubourg, France
Industry	High tech
Web site	www.quadrica.fr

Founded in 2016, startup Quadrica provides easy-to-use tools that quickly exploit 3D scan data to support safe and efficient asset maintenance. The high tech company developed its MySurvey application as part of the SAP Startup Accelerator for Digital Supply Chain program, following extensive consultation with asset management teams at some of France's largest industrial enterprises.

MySurvey combines 3D laser scans with asset data stored in SAP® Asset Intelligence Network and the SAP Predictive Maintenance and Service solution, including documents, high-resolution images, and videos. It can also be used with virtual reality headsets to provide a truly immersive tour of an industrial site.

By accessing all available information in this way, asset managers can make informed decisions about replacing or implementing new equipment. Meanwhile, engineers can prepare fully before commencing maintenance work, improving safety and reducing the number of visits required to potentially hazardous sites.

Exploiting 3D Scan Data for Safer Asset Maintenance



Quadrica



We provide our customers with a comprehensive digital representation of their equipment, increasing asset management efficiency, improving safety, and reducing travel costs.

Bernard Chayla, CEO, Quadrica

Challenge

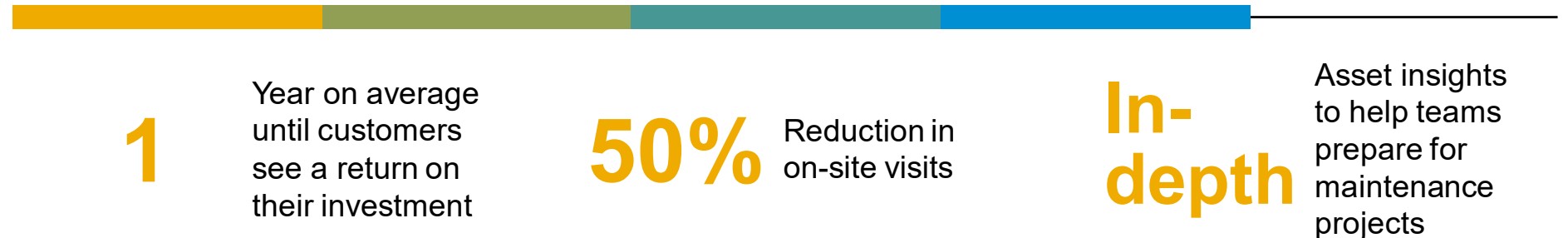
Quadrica wanted to help its customers create a digital twin of industrial sites to give maintenance engineers and asset managers quick access to detailed information about assets and equipment.

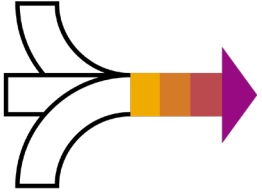
Solution

The easy-to-use MySurvey application combines 3D scanning data and virtual reality technology with information stored in SAP solutions to provide an immersive visualization experience.

Outcome

Easy access to relevant and precise information facilitates asset management decision-making and enables maintenance staff to plan visits effectively to improve efficiency and safety.



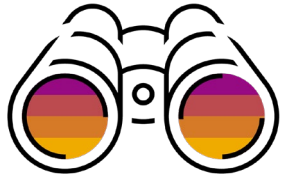


Business Challenges and Objectives

Including everything from nuclear power stations and railways to offshore oil rigs and manufacturing plants, sites owned by Quadrica's customers often comprise geographically distant and potentially hazardous locations. Furthermore, if there are faults with equipment at these sites, the nature of a customer's business can make it imperative that issues be resolved as quickly as possible.

While 3D scans can help visualize sites, they do not provide the rich detail stored in an enterprise's asset management systems. For this reason, engineers were having to make numerous fact-finding visits before carrying out maintenance work, wasting time and costs and exposing themselves to increased health and safety risks.

Quadrica wanted to combine 3D scans with data stored in SAP solutions to offer quick and easy access to all relevant site information, enabling engineers to make in-depth preparations before visits. In addition, Quadrica wanted to provide precise details about industrial complexes to help asset management staff make decisions about ongoing maintenance and new equipment installations.



Project or Use Case Details

To help its customers manage maintenance activities more safely and cost-effectively, Quadrica wanted to create a tool that would help asset management and maintenance staff access site and equipment information quickly and easily. To achieve this, the company developed MySurvey, an application that combines 3D laser scans with other asset management data stored in SAP Asset Intelligence Network and SAP Predictive Maintenance and Service.

Drawing on a wide range of information, including point cloud data provided by Internet of Things (IoT) sensors, 3D models, high-resolution photos, 2D plans, text, and video, nontechnical staff can use intuitive functionality to explore equipment. They can take measurements, annotate photos, open associated images, and link to archived documents. In addition, engineers can use MySurvey with virtual reality headsets to provide an immersive experience, helping them prepare for projects and minimizing the need for site visits. Multiple headsets across several locations are all connected, enabling teamwork and collaboration at a low cost.





Benefits and Outcomes

Business or Social

- Ability to respond faster to resolve urgent maintenance requirements
- More-efficient maintenance operations, thanks to the availability of reliable, live data about assets and equipment
- Cost savings on travel due to reduced need for site visits
- Better support for asset management decision-making, including new equipment installations

IT

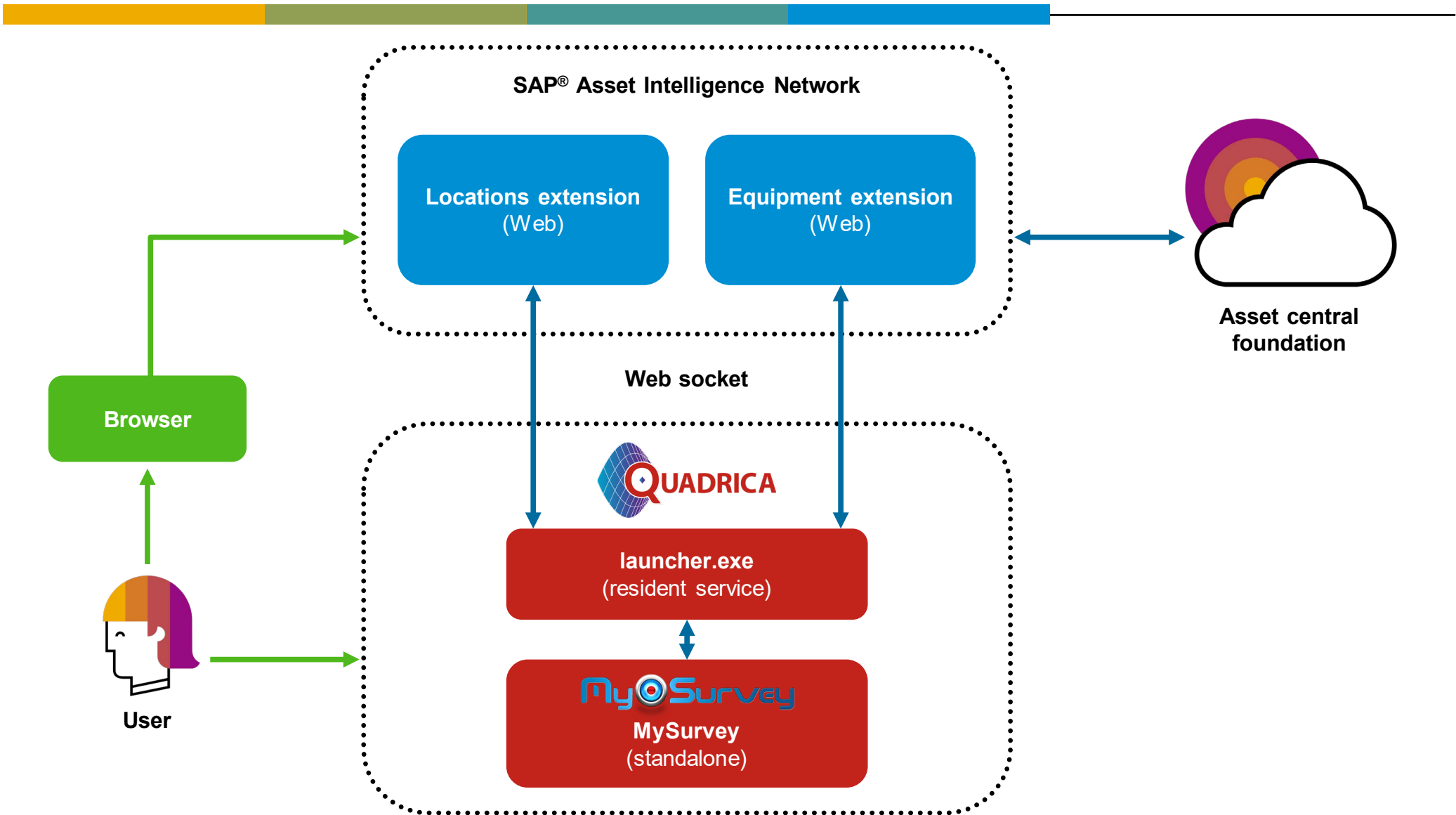
- Automation of links to information stored in SAP solutions, eliminating the need to upload the information again
- Simplified IT infrastructure due to straightforward integration between MySurvey and SAP solutions

Human Empowerment

- Improved quality of life for maintenance engineers as a result of reduced travel requirements
- Reduced exposure to potentially hazardous environments for maintenance staff
- Increased user knowledge and ownership of all assets



Architecture





Deployment



Deployment status Live

Date 2016

Number of users 500

SAP technologies used:

	SAP product	Deployment status (live or proof of concept [POC])	Contribution to project
1	SAP Asset Intelligence Network	Live	Integration with MySurvey as a source of asset management documentation
2	SAP Predictive Maintenance and Service	Live	Integration with MySurvey as a source of asset management documentation
3	Asset central foundation	Live	Availability of application programming interface to enable integration with SAP solutions



Advanced Technologies

The following **advanced technologies** were part of the project.

Technology or use case	Yes or No	Contribution to project
1 3D printing		
2 Blockchain		
3 IoT	Yes	Use of sensor data in MySurvey
4 Machine learning or AI		
5 Conversational AI		
6 Robotic process automation		
7 Data anonymization		
8 Augmented analytics		