

**DRONE
TECHNOLOGY**

SYSTRA

**Efficient asset management
& inspection services**



INCREASE YOUR OPERATIONAL EFFICIENCY WITH UNMANNED AIRCRAFT SYSTEMS (UAS)

UAS, commonly known as drones, are sensor rich devices capable of capturing quality data. SYSTRA's UAS program creates insightful data for the engineering, construction and transportation industry to **increase operational efficiency** throughout projects lifecycle.

LOWER RISK

- Increase safety
- Minimize exposure

Increasing safety and minimizing risks onsite is important on all projects. Drones allow for **remote supervision** of work while **minimizing exposure** to construction site safety risks.

By minimizing the time workers need to be onsite, safety risks and travel requirements are greatly reduced, allowing a substantial amount of the inspection work to be done remotely after the drone has landed.

HIGHER ACCURACY

- Accurate 2D & 3D models
- Progress tracking

Drone data and photogrammetry create useful georeferenced information capable of delivering accurate **2D and 3D models** for surveying and progress tracking purposes, at the fraction of the cost of conventional methods.

Accurate maps and Digital Twins can be compared over time to help predict schedule slippage or design issues before they become critical.

- Lower inspection & surveying costs
- Access to quality & timely data

Using drones can **lower inspection and surveying costs** due to their quickness and agility in challenging locations. Data captured and shared from drones can help decision makers at all levels of a project stay informed and communicate with key stakeholders.

Today, in order to **stay competitive with limited budgets and tight schedules**, having access to quality and timely data is key to driving any project to successful execution and completion.

OUR TURNKEY DRONE SOLUTION IMPROVES YOUR RAILWAY INSPECTION

With better data comes better decisions

Our drone program delivers quality data to better inform project stakeholders. From construction monitoring to large infrastructure inspection use cases, drones are an efficient tool to monitor your assets safely and efficiently. SYSTRA will help you harness the power of drones and incorporate this cutting-edge technology on your project.

ADVANTAGES



Reduced equipment downtime with proactive maintenance



Time saved and inspection costs cut



Improved stakeholder communication



High-Quality Data



FLY & CAPTURE DATA

A drone mission is flown to capture location intelligence using various sensors.



MAP & 3D MODELS

Drone data is uploaded to our cloud-hosted software to generate maps and 3D terrain models.



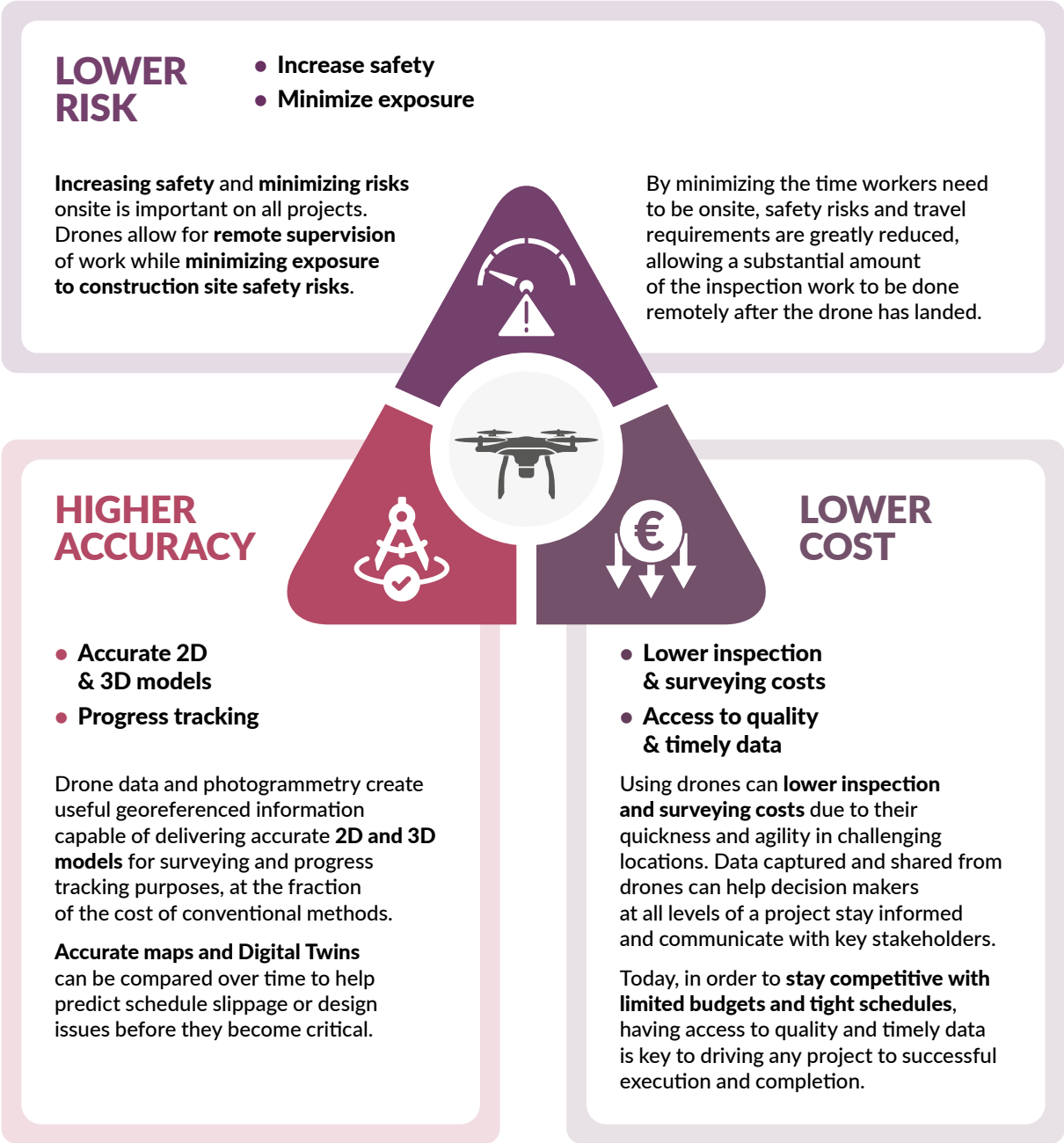
EXPLORE, ANALYZE & SHARE

Maps and models can be analyzed, annotated and shared through our secure cloud platform.



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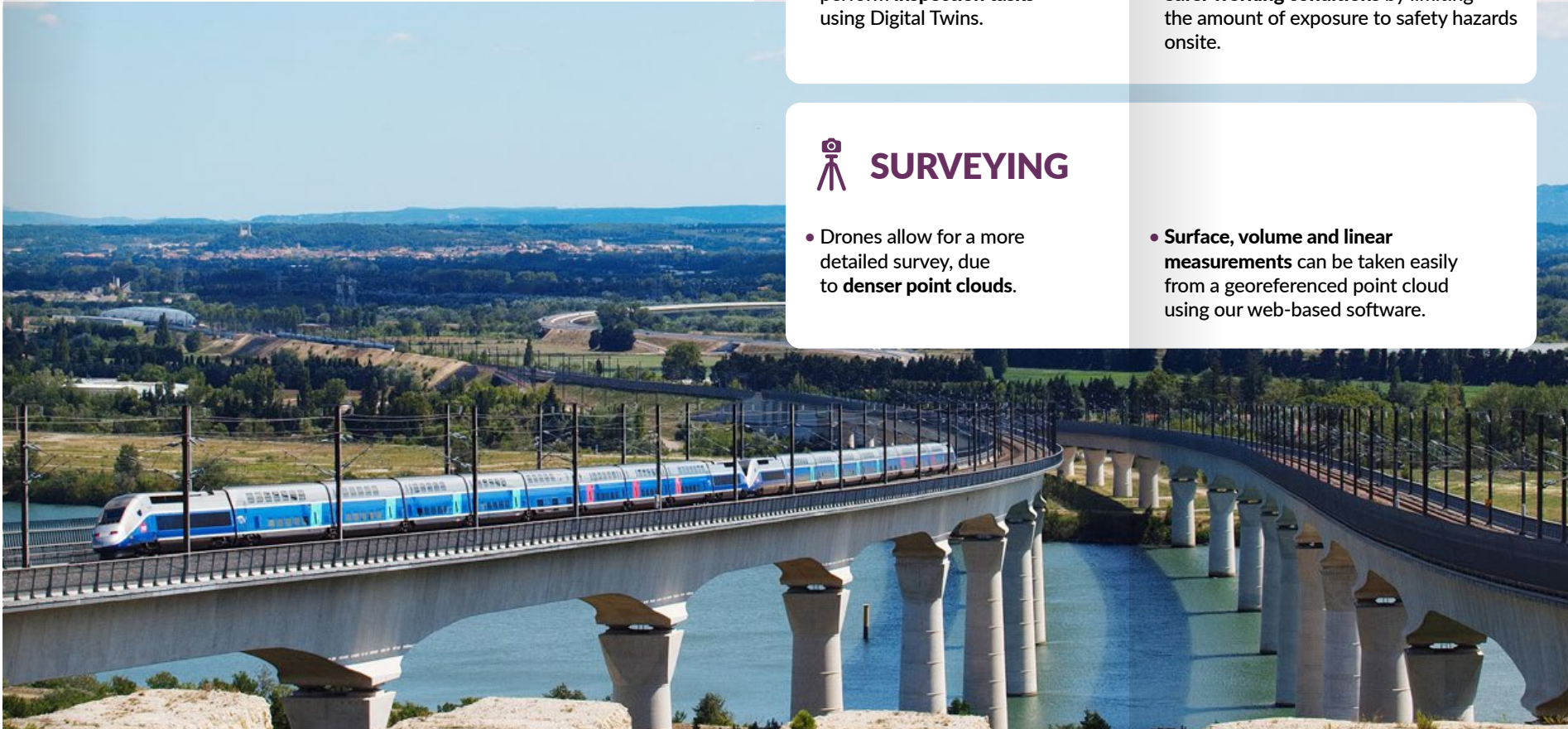
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-  Time saved and inspection costs cut
-  Improved stakeholder communication
-  High-Quality Data



PROJECT REPORTING

- True **survey grade mapping** can be created at a fraction of the cost compared to conventional methods.
- **Safer work environment** by not having to physically be on the ground.
- Sharing data using a **universal platform** allows for a single point of truth.
- Work progress reporting using **real-time data**.
- **Providing valuable data** that previously could not be obtained economically.
- Work site **safety audits**.
- Efficient large Job site planning with **high-resolution maps**.
- **Improving investor engagement** with impressive project visuals.

ASSET MANAGEMENT

- **Digital Twin (3D model)** of assets for virtual inspection using a webbrowser interface.
- Inspection reports include **high-resolution imagery, maps and videos**.
- Fewer labour hours to perform **inspection tasks** using Digital Twins.
- **Real-time asset conditions** and historical data allowing for trend forecasting and **predictive maintenance**.
- Easily shareable data with all project stakeholders, including maintenance personnel using **cloud-based asset management tools**.
- **Safer working conditions** by limiting the amount of exposure to safety hazards onsite.

SURVEYING

- Drones allow for a more detailed survey, due to **denser point clouds**.
- **Surface, volume and linear measurements** can be taken easily from a georeferenced point cloud using our web-based software.

Contact us



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