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Digital Twin

Applus+ is developing new services that focus on collecting, modelling and utilising high-quality digital twins for assets inspections. 'Digital twin' refers to a virtual reality model capable of tracking the degradation of physical assets.

Using photogrammetry software, our specialist team can develop virtual models to suit a variety of requirements. Digital twins can be used to view scanned assets via a web browser or for the inspection of assets in a virtual reality environment. Our team offers custom reporting that allows direct interfacing into a client's database, further improving efficiency in the delivery of results. This digital solution allows the end-user to make informed decisions about real-world data through the use of virtual models.

THE Applus+ SOLUTION

Tailor-made solution developed by our specialist team to offer customised data solutions to suit the client's specific requirements.

- On-site Capture: Ground and aerial LIDAR; 3D scanner; Ground and Aerial Photography; Spherical Photographs.
- Presentation: Point Clouds; Spherical Photographs; Orthomosaic Models; Meshed Low Resolution Models; Meshed High Resolution Models; Intelligent CAD Models; Derived/Simplified

APPLICATIONS AND RELATED SERVICES:

- UAV Drone Services
- Facility Integrity Assessment
- Asset Life Management
- Materials Testing and Analysis
- Reporting

Key customer benefits

- Immersion: Quality of experience provides competitive advantage.
- Safety: Digital twins reduce the requirement for people to spend time in hazardous areas / on-site.
- Accessibility: UAV drone inspections can capture data efficiently eliminating the need for the use of elevated work platforms, scaffolding or rope access.
- Comparability: Models can be compared over time at set intervals to regularly track degradation.
- Availability: Access to information anywhere in the world 24-hours per day.
- Customised data solutions: We offer custom reporting to allow information to be integrated directly into the client's data-bases in a secure and efficient method.
- Long-term solutions: Use of a digital twin increases the ability to repeat inspections and assessments over longer periods of time.
- Cost reductions:
    - Elevated work platform, scaffolding and rope access are no longer required for the visual inspection.
    - Majority of the inspection personnel relocated from on-site to the office.
    - Fewer people required on-site, increasing bed-space availability.
    - Visual inspection activities can become faster, more efficient and higher quality.