

Maxwell GeoSystems - AWS

PropTech Day



data you can build on.

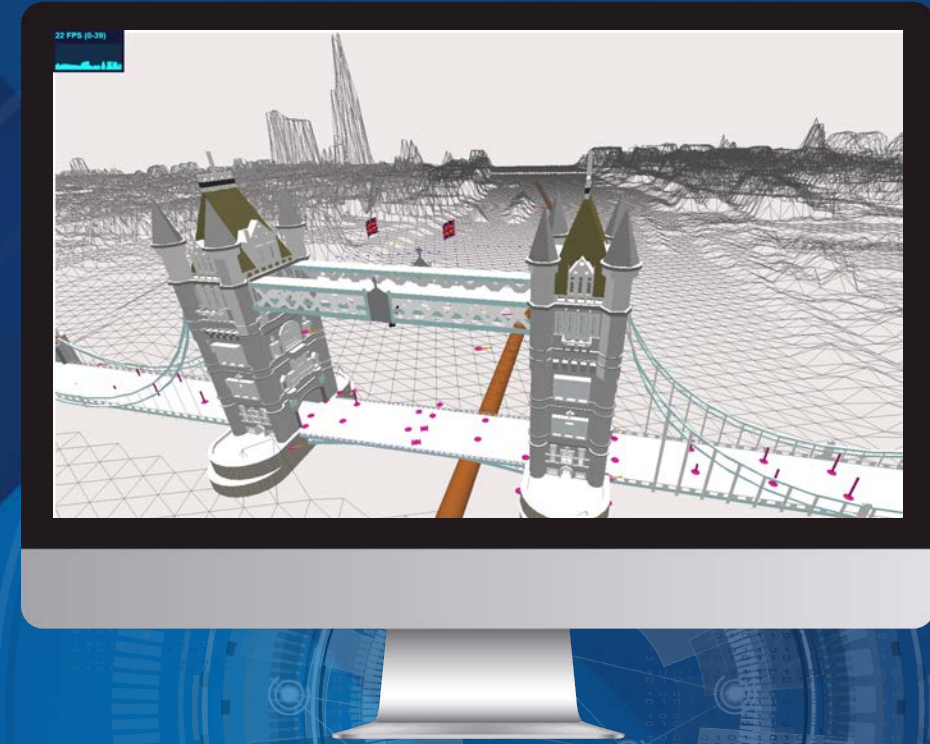
About Maxwell GeoSystems



- Hong Kong based SME company, founded in 2004 by Dr. Angus Maxwell
- Data Management Specialists, dynamically connecting & monitoring data through a SaaS based platform
- Actively involved in ConTech & PropTech industry sectors for construction & infrastructure projects globally
- Leading in the field of digital transformation & common data environment
- Wide capabilities ranging from Earthworks, Reclamation, Mining, Tunnelling, Bridges, Slopes, Excavation, Dams & Asset Management

What is MissionOS?

- ✦ Cloud-based data management system
- ✦ Utilises robust, configurable, back-office Database to process construction data
- ✦ Integrator and super connector, breaking down silos within project organisations
- ✦ Data-driven decisions and reduces business risk, becoming a proven pedigree in the marketplace
- ✦ Providing a single source of truth
- ✦ Fully-configurable, programmable platform



Global Projects

DC Water
Washington - US
Tunnels
USD\$ 0.6 Billion

LA Metro
Los Angeles - US
Urban Metro
USD\$ 1.6 Billion

Hinkley Point C
Hinkley Point - UK
Nuclear Power Station
USD\$ 0.25 Billion

Thames Tideway
London - UK
Super Sewer, Tunnels
USD\$ 1.0 Billion

HS-2 S1/S2
England - UK
High Speed Railway
USD\$ 20.0 Billion

Landmark 81
Ho Chi Min, VIE
Building Monitoring

MTRC /XRL
Hong Kong SAR - HK
Express Rail Link
USD\$ 10.0 Billion

Bangkok Metro
Bangkok-THA
Urban Metro
USD\$ 0.65 Billion

KVMRT-1&2
Kuala Lumpur - MAL
Urban Railway
USD\$ 6.0 Billion

Forrestfield
Perth - AUS
Airport Link
USD\$ 1.3 Billion

Melbourne Metro
Melbourne - AUS
Urban Metro, Excavations
USD\$ 4.2 Billion

Shatin Central Link
Hong Kong SAR - HK
Tunnels
USD\$ 10.6 Billion

PUB DTSS-2
Singapore - SGP
Urban Sewer, Tunnels
USD\$ 4.9 Billion

SPPA
Singapore - SGP
Cable Tunnels
USD\$ 2.0 Billion

Gateway Motorway
Brisbane - AUS
Soft Ground Construction
USD\$ 3.4 Billion

Sydney Central
Sydney - AUS
Urban Metro, Excavations
USD\$ 0.7 Billion

Crown Resort
Sydney, AUS
Building Monitoring

PropTech Use Case

Image courtesy of Crown Resorts

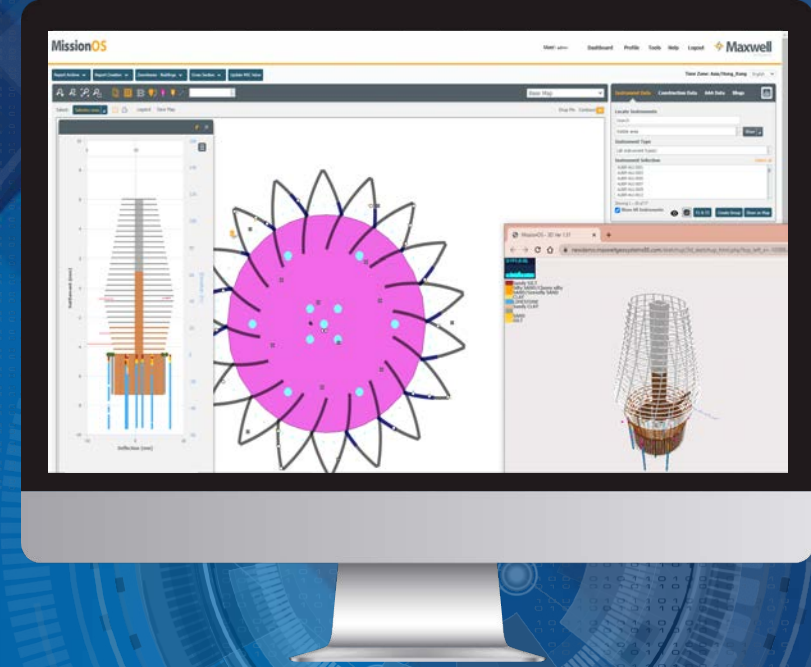


Crown Resort - Sydney, Australia



Landmark 81 - Ho Chi Min, Vietnam

- Cloud-based SCADA mimic screens
- Energy Efficiency
- Building Safety & Security
- Facilities Management
- Equipment Performance
- 3D structural health monitoring
- BIM capabilities
- Digital Works Supervision System (DWSS)



Scalability



- ✦ With large amounts of data, comes even larger storage requirements
- ✦ Easy to scale-up and provide real-time coverage to global project clients
- ✦ AWS services available in almost all regions, allowing for easy local hosting application
- ✦ Responsiveness of AWS provides optimal functionality



DTSS2 Project, Singapore

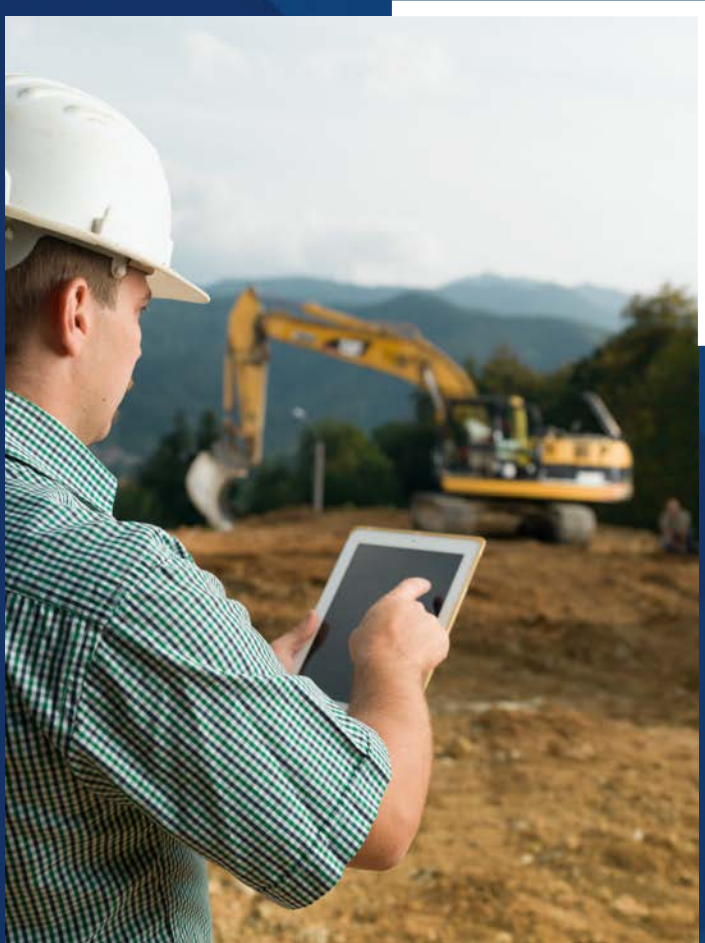


Server Up-time & Availability

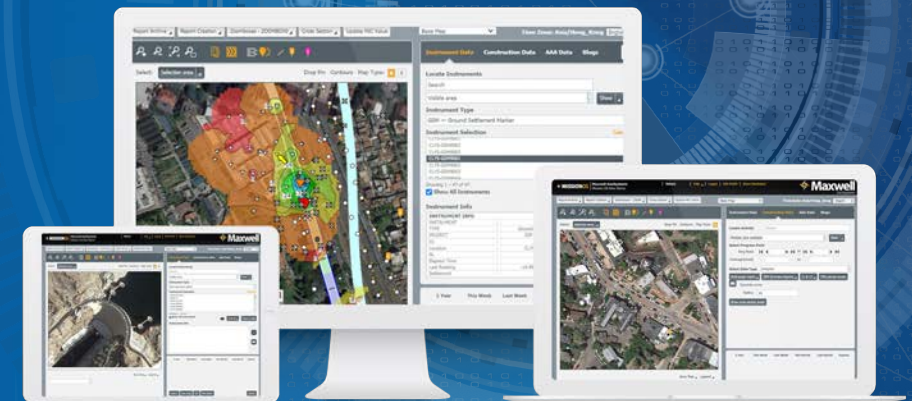


- AWS Server Up-Time is mission critical
- High availability of services and support from AWS
- Highly elastic, easy to manage and implement changes
- Robust security in a cloud-based environment

Security Perspective



- Covers and provides all security parameters
- AWS provides MGS with a high level of system integrity
- Utilising AWS Firewall, VPC, Inspector services
- Custodians of data post project



Development Perspective

- ✦ AWS enables MGS to optimise the development process
- ✦ MGS > AWS User Interface is easy to integrate, manage & use
- ✦ Highly accessible platform with minimal additional coding
- ✦ Cost-base optimised, reduces errors and reduces time



AWS for MissionOS

- ✦ Expansive MissionOS application deals with massive amounts of data from thousands of monitoring instruments
- ✦ Relies on AWS ES2 & RDS (Relational Data Service) for database
- ✦ MGS optimises the use of AWS instances for client data based on demands
- ✦ Utilises services such as Elastic Cache /Search, Read Replicas, Proxy Services for the smooth running of MissionOS
- ✦ Current R&D includes video and image analysis through AWS Recognition for easy deployment (A.I / Machine Learning)



Summary

- ✦ MGS benefits greatly from leveraging AWS services
- ✦ Actively involved in ConTech & PropTech industries
- ✦ BIM capabilities, energy efficiency & DWSS
- ✦ AWS is highly scalable, secure, easy to deploy & mission critical
- ✦ Large volumes of data easily stored and managed through AWS services
- ✦ MGS - AWS synergies

