

Capability Statement

Survey & Civil Construction



Company Overview

Position Partners is Australia's premier provider of positioning and machine control solutions for surveying, civil works and building activities. At Position Partners, we are committed to increasing productivity for our customers and building lasting business relationships around high calibre positioning activities.

A full range of leading instruments and systems is backed by a complementary range of services and application expertise to provide customers the support and advice they need for any project.

Position Partners was formed in 2008 from a merger of five state-based companies to create a national, cohesive business.

With more than 250 people throughout Australia, New Zealand and South East Asia, Position Partners is the largest Australian-owned company that focusses entirely on the implementation and support of positioning and machine control solutions.

Acting local keeps us focussed on individual customer requirements and providing customised solutions.

Thinking regional creates wider initiatives, wiser investment and drives innovation. As an example, we developed a custom-built solution to track construction machinery using satellite communications in remote areas of Western Australia and this is now being deployed regionally.

We are proud to be in partnership with Australia's leading infrastructure companies and together we are forging Australia's future.

Our customers choose Position Partners as their partner for site positioning and machine control solutions because our professional teams have the specialist service expertise to ensure quick project start and maximum uptime. Every challenge is an opportunity to work together to deliver systems that exceed expectations.

Our customers include:

John Holland Bechtel Abigroup
Thiess Australia Baulderstone CPB
Contractors BMD Constructions
Macmahon Holdings Fulton Hogan
Ertech NRW BCG
MacDow Seymour Whyte Brierty
Downer EDI Watpac Clough



Capability Overview

Wherever you find surveyors, engineers, plant operators and contractors, Position Partners is there to complement their work to be efficient, productive and on time.

These days, work sites combine a diverse mix of expertise: IT, machine operation, surveying, design and project management.

Position Partners works across all disciplines, uniquely blending surveying, machine control and IT skills to provide a cohesive network of systems and expertise.

Our customers can rest assured that Position Partners will remain at the forefront of innovation, delivering the latest and most efficient technology on the market.

After a “first” to automate a D11 dozer by integrating machine control to its hydraulics, Position Partners continues to strive for seamless solutions by working with a multitude of GIS, CAD, surveying and site management systems.

Our Solutions

Site Management	Machine Systems	Survey & Spatial Systems
Tokara remote service and site management software	High precision machine control solutions for: <ul style="list-style-type: none"> • Graders • Dozers • Excavators • Pavers • Trenchers • Compactors • Scrapers • Loaders • Drills 	GPS surveying
AllDayRTK Australia's most reliable CORS network		Robotic total stations
Site Hub solutions providing WiFi / 3G / GPS connectivity in remote locations		Positioning infrastructure
MAGNET project workflow solutions		Laser scanning
		Remotely Piloted Aircraft Systems
		3D Mobile Mapping
		3D design, visualisation and post-processing software
	Systems are compatible with all makes and models of machines	

Our Services

- Estimating, data management and mass haulage consulting
- On-site systems support
- Workshop service & repairs
- Campus training
- Large, comprehensive hire fleet
- Remote support for machine systems
- GNSS RTK correction CORS network
- Maintenance programmes



Technology & Systems

Having pioneered the introduction of many technology releases in Australia, Remotely Piloted Aircraft Systems (RPAS) for high resolution imagery and mapping are the most recent. Position Partners continues to search for and monitor the latest developments from around the world to further enhance safety and productivity for the industry.



Earthmoving machine systems

Topcon's cutting-edge GNSS, laser and total station 2D and 3D technology provides optimum performance for all makes of dozers, graders, excavators and other earthmoving machinery. Unique mmGPS solution provides ultimate precision for fine grading and paving applications.

RDS Technology on-board weighing systems for loaders and excavators ensure optimal loading and increased productivity, while automated haul count solutions speed reporting and reduce paperwork.



Remotely Piloted Aircraft Systems (RPAS)

RPAS technology facilitates fast, efficient and safe aerial surveys for a wide range of applications including stockpile volumes, road and pipeline corridor mapping, site progress reporting and environmental monitoring.

Create highly accurate orthophotos and digital terrain maps with ease and stay safe by operating the RPAS away from machinery and hazardous terrain.



Total stations & GNSS

Precision measurement solutions for surveying applications. Total stations with industry-leading tracking and EDM technology for fast, efficient and reliable positioning. The range includes fully robotic, monitoring and reflectorless options.

Topcon's world-leading GNSS technology delivers robust, reliable positioning in challenging environments. Multi-constellation tracking utilises every available satellite for ultimate performance.



Survey Data Collection

A range of durable, field-tested data collectors include compact handheld models or full size tablets. MAGNET survey software provides a complete field-to-office solution with the ability to connect field party work and office data via the Cloud for real-time collaboration.



Design & Visualisation Software

Software solutions for infrastructure, Computer Aided Design (CAD) and Building Information Modelling (BIM) applications and with tools to help plan, and visualise your project in 3D.

Tiny Surveyor Pre-Line Marking Robot

Mark lines from the comfort of your car! Tiny Surveyor is a robotic pre-marker tool that will save you time, increase safety and enable you to mark out road lines, sports fields, car parks and more automatically.

With the ability to interface to a GNSS or robotic total station for precise height measurements, this robot saves time and increases safety.

Scheduling, Mass Haul & Site Management

MAGNET Workflow software provides a solution for mass haul applications, specifically designed for large civil engineering projects. It plans and monitors mass haul by creating a construction schedule and monitoring progress from tender through to completion and audit.

Topcon Sitelink3D gives project managers access to real time earthworks reporting from the office. See where all machines are on site, communicate with operators and survey field parties and keep progress on track.

3D Laser Scanning & Mobile Mapping

High resolution 3D modelling of indoor and outdoor environments enables users to capture reality in minutes. A range of handheld, static or vehicle-mounted scanning solutions is available to scan every asset from small objects and complex structures through to large civil infrastructure.

Machine Guidance

iVolve's Integrated Mining Solution (IMS) combines advanced Fleet Management System (FMS) software with robust, tried and tested high precision machine guidance systems to deliver enhanced operations across your fleet. Innovative stock pile solutions with collision avoidance technology increase safety and enhance productivity.

Carlson solutions are specifically designed to meet the demands of mining, quarrying and unique applications including piling and landfill. A full range of machine guidance options for drilling, dredging, excavating and bulk earthworks, can be fitted to all makes and models of machinery.



In addition to the sale and hire of innovative technology from leading suppliers, Position Partners develops in-house solutions that are tailor-made for the Australian civil construction, surveying, spatial and mining industries.

Designed to help customers save time and work as efficiently and productively as possible, these services extend the possibilities of existing GPS and positioning systems to deliver enhanced site-wide solutions.



tokara
Link

Tokara Link remote access

Our award-winning TokaraLink service is developed locally to suit the evolving needs of our customers in the Australian earthmoving and civil construction industry. In addition to providing the essential connection to GPS networks for your machines, it also enables Position Partners' technicians to connect directly to your machine control system via a small telemetry link to provide fast, hassle-free remote support.



AllDayRTK is our national network service that benefits all industries requiring accurate, reliable GNSS positioning, including surveying, mining, civil construction, GIS and precision farming. By delivering cm-level accuracy anywhere within a network area (within cellular and data coverage areas), AllDayRTK eliminates the need to set-up, initialise and maintain a temporary base station.

Developed, owned and operated by Position Partners, AllDayRTK represents a new capability for Continuously Operating Reference Stations (CORS) in Australia. State and privately owned GNSS infrastructures are co-ordinated into an Australia-wide network to provide a single, seamless national GNSS RTK correction service. Centimetre-level GNSS positions are available for high precision applications across many sectors in most areas of Australia.



MiRTK - Internet enabled corrections for your base station

MiRTK is a service that offers an alternative to UHF radios for use with a base station on site. MiRTK works with all makes and models of GNSS hardware, providing a simple and robust solution without any of the interference, licensing, repeaters and other hassles of UHF radios. MiRTK requires no setup, with a straightforward 12- or 24-month subscription.



Making Safety No.1

Position Partners is committed to achieving minimum Lost Time Injuries and zero damage to the environment at all sites. In addition, we aim to provide a quality service to our customers.

In order to achieve these goals, a series of occupational health and safety (OHS) and environmental objectives have been implemented. These include:

- Provide a safe working environment for all personnel, in offices and on site
- Ensure compliance to regulatory requirements, standards and Position Partners management plans
- Provide regular communication and consultation to all personnel on OHS and environmental issues
- Conduct OHS and environmental risk assessments and verify control measures for work tasks
- Ensure technical competency of all personnel working on site
- Monthly safety record reporting
- Collaborative OHS committee

Position Partners uses a risk management methodology in relation to our quality, safety and environment management plan. This involves assessment of the risks and implementing mitigation activities.

Hazards and safety risks are controlled by a 'Safe Work Method' statement, where field service engineers and other stakeholders are consulted.

Management is accountable for ensuring that only qualified electrical persons perform work on electrical equipment, and for ensuring that qualified electrical persons have the required training and approved equipment and PPE. Similarly, Material Safety Data Sheets (MSDS) may be obtained for all chemical substances prior to use in the workplace.

Our People

Position Partners has formed a unique blend of IT, surveying, engineering, electronic, mechanical and construction machinery expertise. From the Board to executive management and operations, the combination of these skills permeates all aspects of the company's activities. Position Partners' sense of purpose is to earn the respect of customers so a professional approach with high service standards guides our day-to-day actions. On-going investment in our people's training and development sustains this unique capability.

All personnel, including subcontractors working for Position Partners, are trained in our systems and products to ensure the highest professional capability. A training analysis is conducted for employees on an annual basis to ensure on-going training and development in line with evolving technology and changing customer requirements.



Our Services

The Position Partners difference

Systems and data management consulting

Prior to, and during, major projects our advice has contributed to successful project quality and delivery. Technology solutions can provide high productivity gains, but the choice is broad and expert advice is paramount to successful deployment.

- Machine control systems standards, functionality and performance per machine type and model
- Survey data collection methodology, data file format compatibility
- Mass spatial data solutions such as laser scanning, imaging and mobile mapping functionality, file formats and performance
- Remotely piloted aerial and marine systems for map quality data collection
- Digital terrain and 3D modelling formats
- GNSS infrastructure location and performance monitoring
- Wireless, radio, 3G, satellite and other communication systems, site design, standards, functionality and performance
- GPR scanning

On-site service

At Position Partners, we understand that even the most robust equipment needs maintenance every now and then. When it does, trained field service engineers are on-hand to provide corrective action and advice for minimum downtime.

With offices in every state and territory and more than 80 technicians throughout Australia, New Zealand and South East Asia, Position Partners is on hand to help. Regional support hubs at remote locations in Queensland and Western Australia have been established in response to specific projects.

All field service engineers are trained by product manufacturers to give unrivalled technical expertise. We provide flexible Support Level Agreements (SLAs) that cover on-site installation and support, calibration, network interfacing, maintenance and repairs, plus remote diagnostic capabilities with Tokara Link.

When an installation or technical specialist from our team arrives on site, customers can be assured that all on-site safety regulations and procedures will be followed.





Workshop Services

Comprehensive product service, maintenance, repairs and advice are provided via our local service centres. Graders, dozers and other machines can often be accommodated at our workshops for installing and commissioning machine control systems. Remote diagnostic capabilities are available at each office to back the field service engineers and our customers.

We guarantee all our work and can supply calibration certificates to meet QA requirements.

With the latest testing and diagnostic equipment, our workshops can service and repair all brands of lasers and levels, along with a range of total stations, scanners, GPS and machine control systems. Calibration of mobile mapping systems and an EDM calibration baseline are examples of special national capability that have been assigned to specific offices.

Training

Initial “getting started” training is provided on all systems. Subsequently, a comprehensive range of Campus courses are tailored for beginners to advanced users. They can be held in our offices by certified trainers, at our machine systems test and training facility, or on site. Courses include:

- Laser safety use
- Surveying field data collection and processing
- MAGNET surveying and engineering data processing
- Topcon machine control operation
- RPAS operation and image processing
- Scanning and mobile mapping with point cloud processing

Hire or lease options

The full range of systems, from pipe and grade lasers, to world leading Topcon surveying and 3D machine control systems can be hired or leased to suit any application and provide financial flexibility.

- Use or trial new technology without significant up-front investment
- Short-term through to long-term hires
- Systems are tested and calibrated before hire
- Dedicated pick-up and delivery service
- Remote diagnostics enabled for support
- Latest model systems
- Hire then buy opportunities

Our Partners

Industry Associations

Ongoing partnerships with leading associations, such as the Surveying and Spatial Sciences Institute (SSSI) and Civil Contractors Federation (CCF) enable us to stay tuned to, and influence, industry developments.



System manufacturers

Position Partners continues to source leading and innovative solutions for the markets we serve from the best manufacturers worldwide. We are the exclusive distributor in Australia for a range of market-leading brands, including Topcon Positioning Systems. We back industry-leading technology with the knowledge and expertise to support our customers in any project.



Software providers

Position Partners prides itself on delivering end-to-end solutions for our customers, no matter what their application. With advanced software packages available from the world's best developers, we ensure you are equipped with the latest technology to keep your project on track.



CORS infrastructure

Position Partners' AllDayRTK national CORS network collaborates with government-run and privately operated networks to deliver extensive coverage for high precision GNSS positioning.



Strategic Alliance: iSeekplant

iSeekplant is Australia's plant hire search site. It connects plant users (project managers, civil contractors, builders and developers) with plant suppliers and earthmoving contractors Australia-wide, based on their capabilities and availability. Position Partners and iSeekplant have formed a strategic alliance that will create new benefits and enhanced productivity for hire companies, as well as project and mine managers looking to hire machines.



Project & Customer testimonials

Achieving jobs in a 10th of the time using integrated Topcon workflows

PHL Surveyors has been using MAGNET software since the late 80s and first purchased Topcon robotic total stations, about seven years ago from Position Partners. About two years ago, PHL Surveyors decided to fully integrate its system by purchasing the Topcon GNSS equipment.

“We’ve found from when we first purchased the robotic total stations right through to now where we’ve got the GNSS equipment and MAGNET software in a harmonious situation that we’ve achieved great efficiencies by being able to upload and download data to the one system without using a third party product,” said Mr Alan Longhurst, Director, PHL Surveyors .



Topcon 3D-MC^{MAX} takes dozer GPS machine control to the next level of performance

Digwright Pty Ltd had been using Topcon 3D-MC² systems from Position Partners on its dozers since 2009 and had always found the 3D-MC² systems to be more responsive and smoother than other systems on the market, so when the opportunity to implement the Topcon 3D-MC^{MAX} mastless machine control system arose Digwright jumped at it.

“This system saves our business time, fuel and money through making our dozer more efficient in bulking and trimming to grade applications,” said Mr Wright.

“The system works well in all types of materials especially when densities and compacted material change frequently. It reduces the blade ride on harder surfaces and seamlessly reacts to softer material, where the blade would normally bite in, the Topcon 3D-MC^{MAX} from Position Partners will correct the blade lighting fast to leave a smooth level finish.”



RPAS system with PPK provides ease-of-use, consistency of product and reliability

Brent Manuel and his team at BHP are working on site at Mt Arthur, one of the largest producers in the Hunter Valley producing 19mt of product coal each year. The site’s geology is complex with over 120 seams in the mining area which are typically mined in 40 different composites dependent on product requirements.

BHP chose the RPAS system with PPK from Position Partners after Mr Manuel saw them in action at another of BHP’s sites. The team at BHP’s other site had chosen this particular system because of the quality of data that could be mapped and the cost and performance comparative to other systems was superior.

“Mavinci is hard to top because of ease of use, consistency of product and reliability,” said Brent Manuel, Superintendent – Survey, BHP.



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