

# Automated Parking: is it Time for the Industry to Raise its Game?

• By Colin Barksby

According to a recent industry report, the Automated Parking Systems (APS) Market is expected to grow to US\$ 4.28 billion by 2029.

The APS industry was reportedly started in 1906 when the architect Auguste Perret (1874-1954) was commissioned to create an aerial garage on Rue de Ponthieu. Since then, massive leaps have been made in the adoption of some technologies, however, it's an industry that has also suffered from not learning and keeping pace with other key industries.

**Industry stakeholders have a duty of care to ensure that any construction project is delivered to function efficiently and reliably.**

## It's critical

Power distribution networks, telecommunication infrastructure, water treatment and supply, healthcare systems, data centers and electronic banking are all examples of critical infrastructure.

An APS can be the backbone of a building and could be considered as critical infrastructure supporting the building's designed functionality. Try explaining to 300 condo residents who can't get their cars out of a broken-down parking system that it's not critical.

## System downfalls

Good news doesn't always travel fast, and globally there are numerous APS installations working very reliably. However, at Kingfisher Technical Solutions we have seen an increase in requests to provide Technical Expert reviews and evidence in litigation on parking systems that have not delivered what was promised.

In many cases, it's the lack of initial clarity in specifications and contract documents that has a big impact on the system delivered. Poor documentation management and the lack of a structured approach to system commissioning and testing also contribute to the downfall of many installations. KTS has reviewed several procurement contracts that do not include a basic site acceptance test (SAT) clause or any reference to the definition of practical completion.

It is not just some APS suppliers that could step-up standards, but some developers, general contractors and building owners could also ensure that comprehensive due diligence is part of the procurement process and includes planned preventative maintenance as part of the lifecycle costs.

KTS has worked on projects in which an APS supplier's focus is solely on offering what they believe is the correct technology for building functionality and customer needs, but on others too, where suppliers adopt a short-term view of simply selling a system.

This short-term approach has led to systems being installed that are not adequately designed to service the

building needs, or to deliver the vehicles per hour (VPH) throughput required to create a positive customer experience and prevent a negative impact on surrounding road networks.

Ultimately, this can lead to litigation and/or systems being replaced or upgraded at significant cost to the developer or building owner.

Additionally, KTS has seen cases where APS systems have likely been properly installed and commissioned but have not functioned reliably due to a lack of PPM being carried out.

Maintenance contracts are sometimes awarded to third parties rather than the supplier as a cost-saving exercise by building managers. This often leads to a short-term saving but can have a much longer-term impact on the system performance and its life cycle due to inadequate PPM.

## What standards?

There are few industry standards directly relevant to an APS, and these tend to focus on safety and not on system testing, reliability, or user experience.

So why has the APS industry in general not adopted lessons learned and procedures widely used in other industries delivering critical infrastructure?

KTS has been fortunate to work with and learn from leading commissioning engineers in the data center industry. Mean time between failure (MTBF), mean time between repair (MTTR), system reliability and or system uptime, single point failure analysis, and SATs etc. are not just buzz words in that industry but underpin the design, manufacture, installation commissioning and testing philosophy.

## Failure not an option

KTS firmly believes that the APS industry would significantly benefit from adopting and embracing the engineering best practices, philosophies and structured approaches used in the critical infrastructure world.

Industry stakeholders have a duty of care to ensure that any construction project is delivered to function efficiently and reliably, which is why in modern building developments, specialists are procured to advise on key elements such as vertical transport.

With extra care and a more considered, comprehensive approach taken in the early stage of planning and construction, and an overall focus on long-term value not short-term cost, the quality of automated parking systems will increase, and the risk of failure be mitigated.

If the industry doesn't raise its game and the increase in failed projects continues, developers may consider Automated Parking Systems too risky and return to standard parking solutions.



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