



INTELLIGENT  
AIRFIELD



# Hobart lays the foundation for an intelligent airfield

  
**ADB  
SAFEGATE**

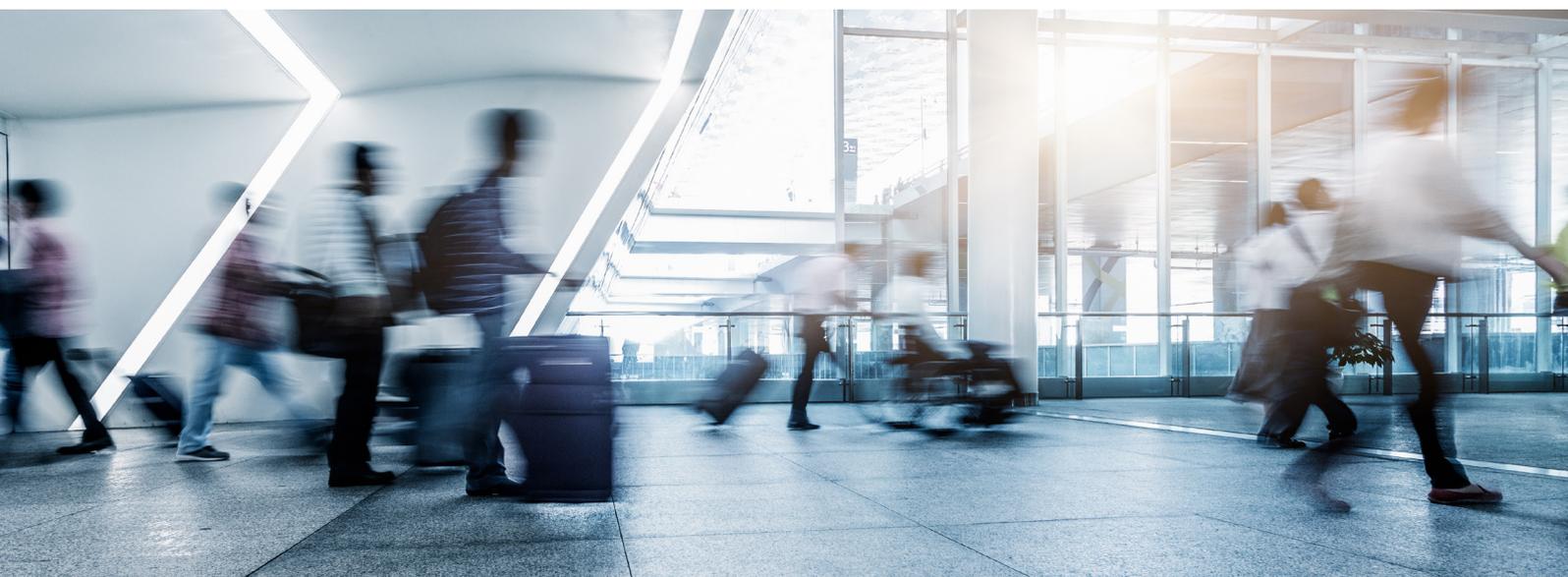
As the gateway to Tasmania, Hobart International Airport installed LED-based intelligent airfield lighting to dramatically reduce its costs and provide the basis for an intelligent airfield to meet its needs far into the future.



Handling more than 2 million passengers per year, Hobart International Airport is Australia's ninth busiest airport. In 2012, Hobart International Airport saw an opportunity to replace its entire airfield lighting system during a major runway and taxiway resurfacing project. Looking to the future, the airport sought to embrace the latest technology, thus laying the foundation for an intelligent airfield that could meet growing demand in the safest and most efficient way possible.

To help, the airport approached ADB SAFEGATE which created a plan that would achieve substantial financial and environmental benefits by deploying a low power airfield lighting system using intelligent LED technology. Hobart International Airport would then have the basis of an intelligent airfield.

Not only has system reduced the airport's maintenance and running costs, it also required only low capital investment to implement.



## Intelligent airfield to meet future demand

The new intelligent airfield lighting system enables the airport to closely control lighting units, monitor them and maintain them with minimal disruption of airport operations. This gives much better situational awareness and control to help improve airfield safety.

The intelligent airfield integrates this flexible control of airfield lighting with Air Traffic Control (ATC), airfield surveillance, aircraft tracking, apron management and gate management systems. This enables automation to be applied to monitor the integrated systems to provide information and suggestions to ATC and control guidance systems to ensure an aircraft is on a safe path to and from the runway. This also achieves optimum aircraft routing to increase airport capacity, solve congestion and meet fast-rising traffic demand.



## A solution that delivers low installation costs

At Hobart International Airport, the taxiway lighting system comprises inset lighting including lead-on / lead-off lights and runway guard lights at each intermediate hold point along multiple taxiways leading from the parking apron to the runway. In a traditional airfield lighting system, the control of these individual lighting segments would rely on the installation of separate discrete circuits powered by dedicated Constant Current Regulators (CCRs).

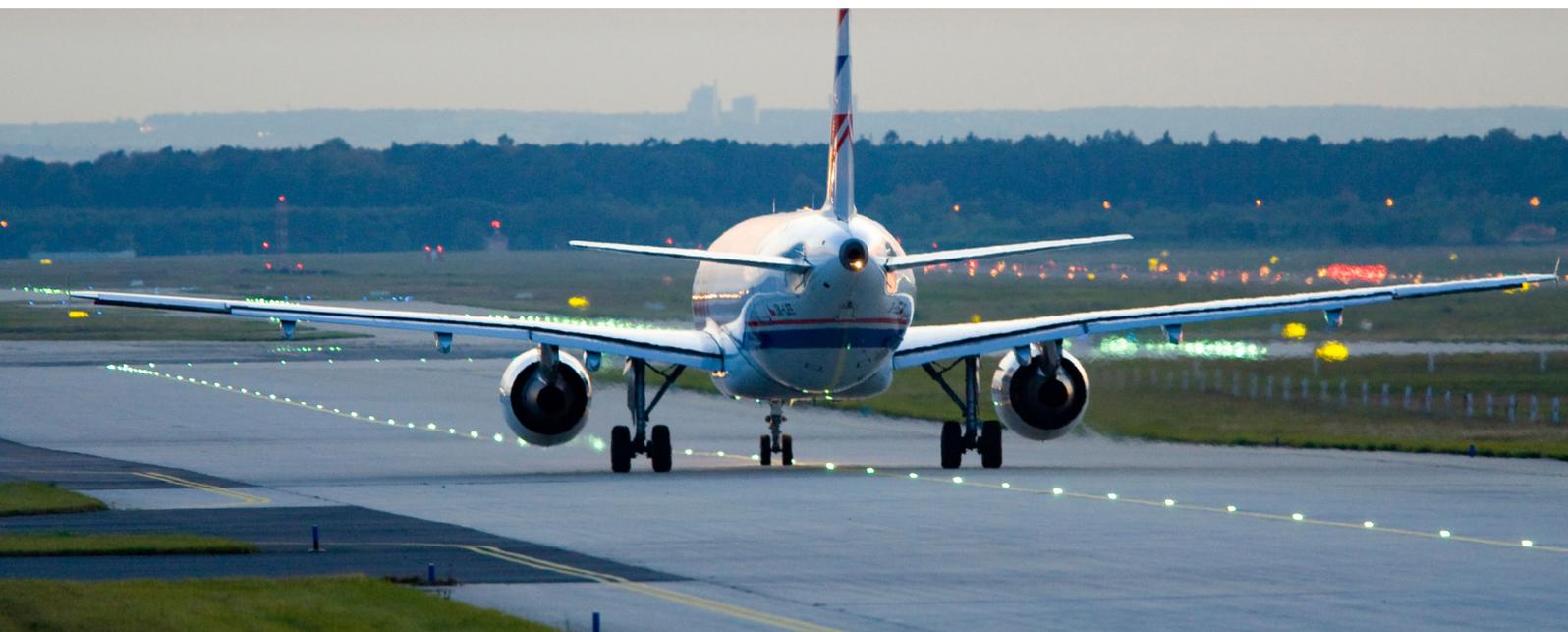
ADB SAFEGATE's plan was to use its IQ lighting to replace all taxiway centreline, runway guard and approach lights. Then, combining intelligent LED IQ lighting with ADB SAFEGATE's Airfield Smart Power (ASP) single lamp control and monitoring system, created "virtual" individually controllable lighting segments. These virtual segments operate on the same circuit, dramatically reducing the amount of primary cable and CCRs required.

The airport was able to create 18 individually controllable virtual segments all installed on only two primary taxiway field circuits. The upfront infrastructure costs were significantly reduced with fewer CCRs required to power fewer primary circuits including associated savings in installation costs.



IQ Inset family

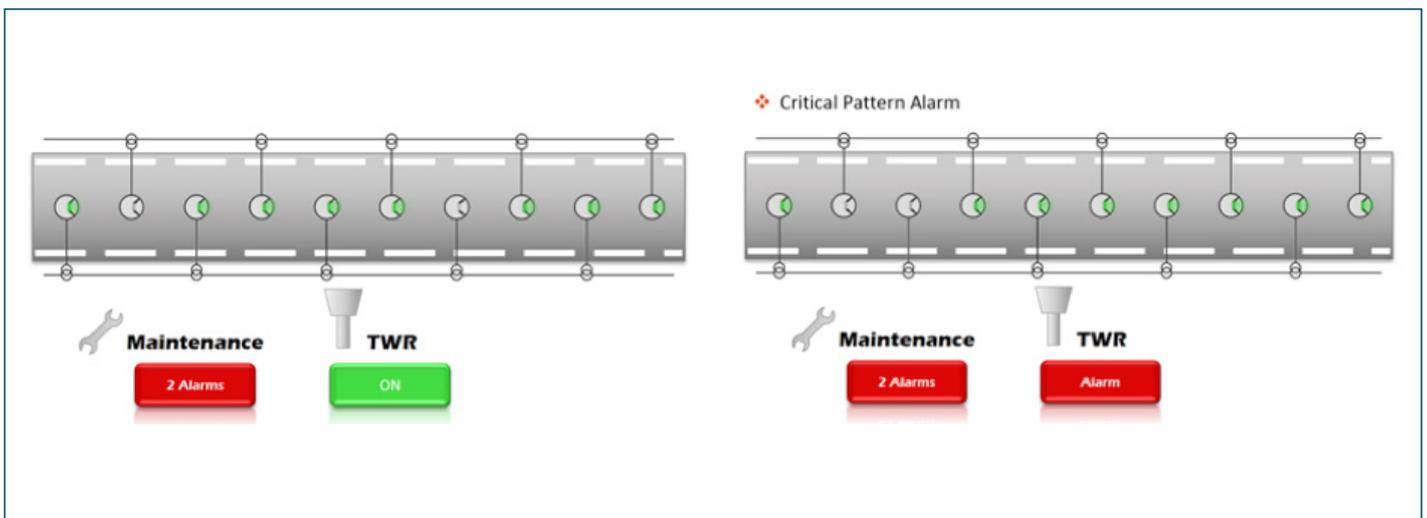
- Taxiway Centre Line or Stop Bar Light
- Runway Threshold/End Light
- Approach light



## Operational costs are also cut dramatically

Moving from conventional halogen technology to LED lighting brings substantially reduced energy and maintenance costs, with approximately 60% lower energy costs simply because each fitting uses less power. The ADB SAFEGATE solution goes further. By implementing a low current system to power the airfield lighting, its overall energy consumption can be further reduced, by up to 33%.

Specifically, the solution powers all the LED taxiway and approach lighting using a constant current of 2A. Running the system at this low current significantly reduces the power losses in the primary and secondary circuits including losses in the series isolating transformers.



Maintenance costs can also be reduced substantially by an LED-based intelligent lighting system that can identify lights that have failed or need maintenance, cutting the effort needed to manually check the lights.

# A forward-looking approach



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By taking the opportunity to install the ABD SAFEGATE IQ lighting systems during its planned runway and taxiway resurfacing project, Hobart International Airport has achieved major energy and maintenance cost savings. Furthermore, the system's capabilities are easily extended to match growing demand and any future needs of the airport that may arise.

The ABD SAFEGATE solution is easily integrated with an air-



port's existing infrastructure. This is a critical factor for busy airports like Hobart International, which typically have few windows of opportunity free of aircraft movements for major infrastructure development.

Leuvensesteenweg 585, B-1930 Zaventem, Belgium  
Phone: +32 2 722 17 11

Djurhagegatan 19, SE-213 76 Malmö, Sweden  
Phone: +46 40 699 17 00

marketing@adbsafegate.com  
www.adbsafegate.com

<https://adbsafegate.com/intelligentairfield>



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