InNOVA Routing and Guidance automatically provides the air traffic controller with the most operationally optimised taxi route. The automatic ground lighting system guides the aircraft according to the generated route. Any deviations will be detected by the Surface Safety Net, ensuring that the controller is immediately notified.

The result is improved ground safety, efficiency and capacity.
Automated routing

InNOVA Routing proposes taxiway routes for inbound and outbound aircraft, vehicles, and towed aircraft, based on pre-defined criteria such as stand number or allocated runway for an outbound aircraft. The routing function will automatically assign a proposed route to an aircraft when its flight plan is loaded, or at a configurable time before arrival or departure.

If the Surface Safety Nets function is enabled in the system, the label also indicates if an aircraft deviates from its intended route. Since re-routing of movements may occur (e.g. after a route deviation or a change of operational conditions), the system will automatically propose a new valid route. The Routing function continuously monitors the progress of the aircraft on their routes to detect possible conflicts as early as possible. In a conflict situation, the system will suggest which aircraft should stop according to a pre-determined set of criteria.

Automated guidance

InNOVA Automated Guidance, based on a “Follow the Greens” (FtG) concept, automatically directs aircraft based on routes issued by the Routing function, supporting the pilot in situations with low visibility or at large airports.

The Automated Guidance function automatically directs the AGL system to light up a portion of the cleared route by activating the Taxiway Centerline Lights (TCL) in front of the aircraft. At the same time, the lights are immediately turned off behind the aircraft.

Automated Guidance is integrated with the conflict detection functionality of the InNOVA routing function, and will automatically switch off lights to slow down or stop aircraft that have to give way to other aircraft to solve conflicts.

Increased awareness of cleared route and guidance instructions

Reduced risk of misunderstandings

Free up time for more essential tasks

InNOVA Routing and Guidance is a supplement to the InNOVA Ground A-SMGCS and provides the following benefits:

- **Improved Safety**
  Enhanced visual guidance improves prevention of runway incursions and reduces route deviations and holding point overruns. Reduced R/T communications lessens the risk of misunderstandings and misinterpretations between ground controllers and pilots.

- **Enhanced efficiency**
  Fewer speed changes and smoother traffic flow, results in reduced fuel burn and emissions.

- **Increased Capacity**
  Automatically controlled spacing between mobiles increases taxiway throughput, especially at night and in low visibility conditions.

- **Reduced costs**
  Energy consumption for AGL will decrease, since fewer lamps would be illuminated at the same time and increased levels of traffic can be handled with the same number of controllers.