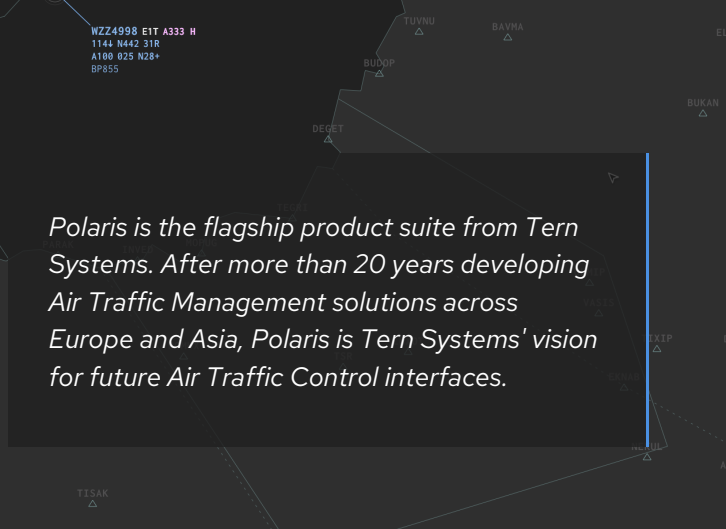# _POLARIS ATM

Polaris is the flagship product suite from Tern Systems. After more than 20 years developing Air Traffic Management solutions across Europe and Asia, Polaris is Tern Systems' vision for future Air Traffic Control interfaces.

POLARIS ASD

Polaris ASD is the foundational version of Polaris. Entering operation in Iceland in 2022, Polaris ASD is one of the newest ATC systems in development. Featuring a fully-redesigned and modern user interface, Polaris is an exciting new entrant into the market. Highlights of the Polaris system include:

◇   Persistent and dismissible system status dialogs

◇   Native 4K resolution and 3D-accelerated Maps

◇   All-new Safety Net Server and Flight Data Processor

◇   A highly-performant User Interface ready for expansion

POLARIS MAG

During the development of Polaris, the project was strengthened when HungaroControl, the ANSP of Hungary, selected Polaris for their next-generation backup system. Working closely with Tern Systems, HungaroControl support Polaris' development with the addition of their extensive experience in operating fully-electronic Air Traffic Control systems.

Polaris MAG [abbr. *Magyarország* "Hungarian"] will add critical features including a range of electronic clearances, flight lists and new Safety Nets.

Partners who select Polaris as their future ATC system benefit from new features developed by other partner ANSPs. Unlike some systems which have been in operation for decades, Polaris is a truly modern system which uses technologies that will support emerging needs over the next decades.

TERN SYSTEMS
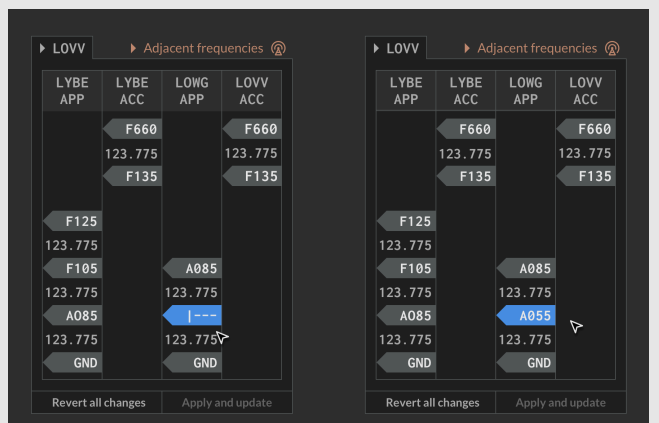
_POLARIS ATM

TECHNICAL INFORMATION

Polaris is modern ATM system built on over 25 years of experience in creating ATC solutions. Utilising components proven in operations for more than a decade, Polaris adds support for advanced capabilities, various architectures and industry-wide future improvements.

The Polaris modular architecture enables easy adaptation and the addition of newer components and capabilities following the latest in operational advancements. The system is designed from inception to accommodate diverse operational scenarios and high-capacity airspaces.

Tern Systems has extensive experience in deploying and supporting ATM systems at more than 15 locations worldwide. The continuous support of Polaris stakeholders, most notably the Icelandic Air Navigation Service Provider (Isavia ANS) ensures the continuity and the operational relevance of our solutions.

SYSTEM CHARACTERISTICS

- Highly-configurable, and intuitive system configuration tools

- User-centred and operations-informed design

- Modularity and support of third-party components

- DATA strategy - Data sharing for operational analytics/investigation
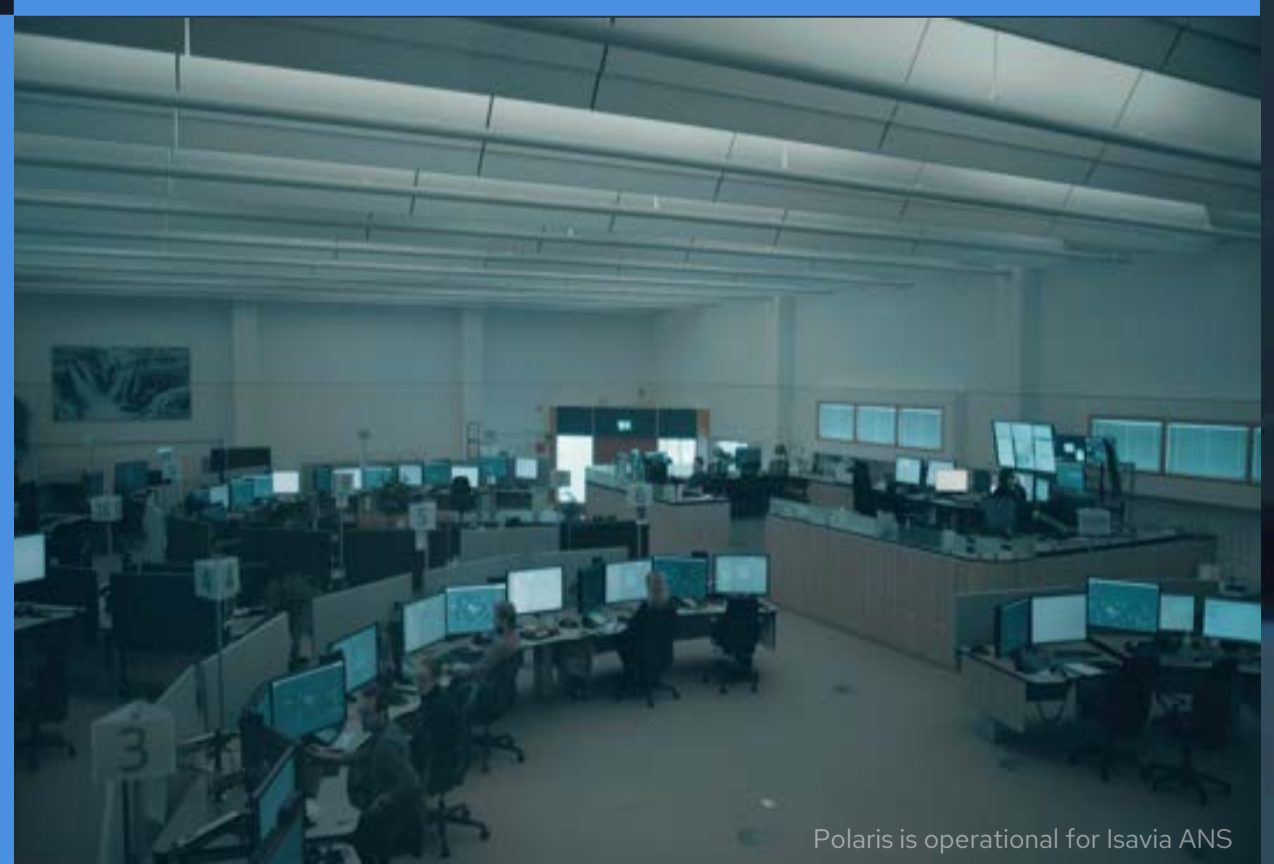
Polaris is operational for Isavia ANS

_POLARIS ATM

Polaris supports Free Route Airspace (FRA), Flexible Use of Airspace (FUA), Dynamic Airspace Management, Virtualisation, Remote ATSUs as well as interfaces with airports through an A-CDM interface and developing standardised interface with U-SPACE.

Interoperability and shareability of data is key in ATM modernisation initiatives. Polaris ATM is already compliant with AIXM 5.1 to offer easy ENV data shareability between AIM and ATM systems and beyond.

TECH SPECIFICATIONS

- Multi-position - TWR*, APP, ACC, OCA, FIS, MIL

- Fully electronic stripless system

- Datalink - ATN B1, B2* - FANS1/A

- Multiple controller tools

- Radar SEP Tool, Flight plan SEP Tool, Probing*, MTCD*, AMAN-inspired sequencer

- Enhanced trajectory prediction - Full 4D trajectory

- Dual standards for electronic coordination supported - OLDI, AIDC

- Safety Nets/Monitoring aids - STCA, MSAW, APW, AIW, RAM, APM, CLAM, DSFL

- Proprietary SDPS with additional support of third party trackers e.g. ARTAS

- Primary, Secondary, Mode-S, MLAT, ADS-B, SAT ADS-B, ADS-C*

- Radar weather support

- SWIM support - Environmental data fully supports AIXM

- On-site/Remote control and monitoring - System Management Console (SMC)

- Remote working positions supported

- Native in 4K Ultra High Definition, Vector fonts, GPU-accelerated

- Support for COTS Hardware

- Developed following ED-153 and ED-109A

- Compliant to relevant ICAO, EUROCONTROL and EUROCAE standards & guidelines

- Following ICAO ASBU Blocks - GANP, European ATM Master Plan

- Technical enabler for Common Pilot Project CP1 - (EU) 2021/116

* Features in development, scheduled to be completed by 2028 Operational deployment will replace the legacy ATM system for Icelandic airspace