What's happening at Envirosuite?

SPEAKER: Matthew Barry

envirosuite

FORUM23

Flightpath to the Future: Reconnect & Collaborate

Key challenges

Environmental sustainability	Changed noise exposure expectations Global warming Local environment concerns
Effective engagement	Accuracy Clarity Timeliness
Cyber threats	Protection of systems Control of access Personal Identifiable Information

A new EMU is born

EMU 3700

Built for simplicity, **Shaped for the future.**

Setup as easy as 1, 2, 3
Fully integrated solution combining measurement, remote communication, system monitoring and power supply.

Compliance-grade data accuracy
Achieve environmental compliance with highly accurate data for stakeholders in line with the global standards.

Continuous and uninterrupted
Self-monitoring and auto-restart capabilities for increased uptime and minimal gaps in data.

Simple yet robust build
Permanent and portable monitoring of mining, airports and other industrial activities in harsh weather.

Capture multiple environmental parameters **in a single unit**.

Noise

Interfaced with Outdoor Smart Microphone to provide real-time 1⁄2 s or 1s parameters allow EMUs to fulfill IEC 61672 Class 1 standards.

Vibration

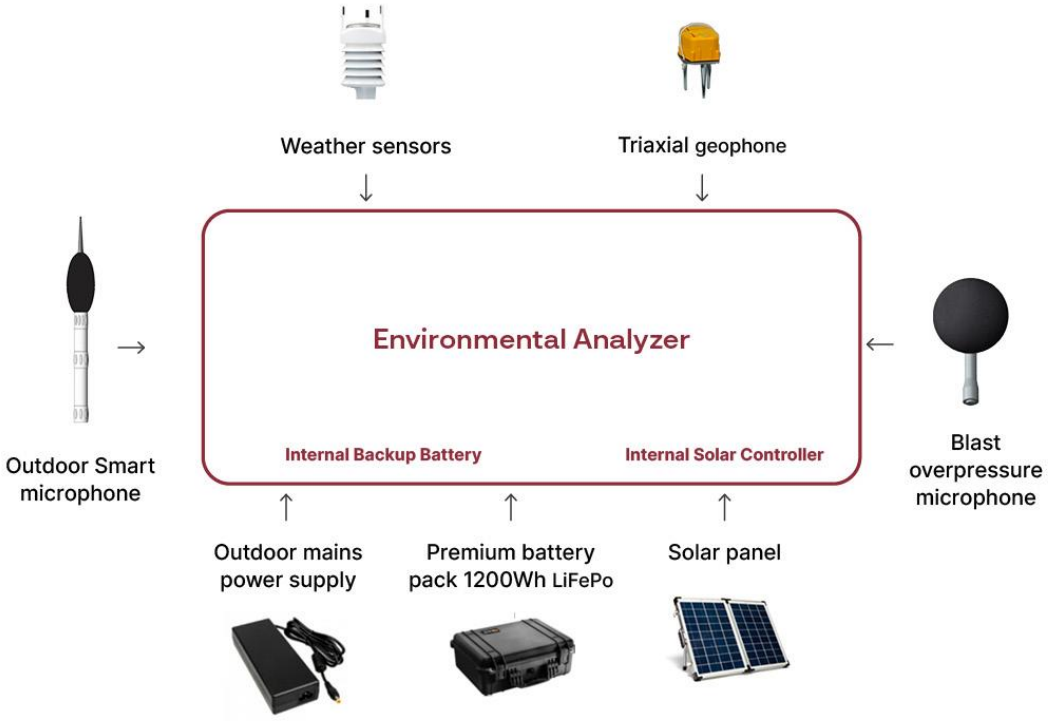
When used with a geophone, the EMU measures ground vibration in three axes, providing metrics for a wide range of applications.

Weather

EMUs can also monitor weather with noise data, ensuring that measurements are not contaminated by meteorological conditions.

Blast Overpressure

Connected with Blast Overpressure microphone, EMUs ensure compliance monitoring of mine blasting while meeting ISEE requirements.



ANOMS Single Sign On

ANOMS Advanced

ANOMS NoiseDesk

ANOMS Advanced

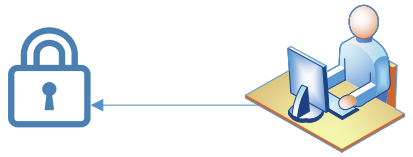
Security – Single-sign-on

- ANOMS 9.10.2 and later support Single-sign-on
- SSO allows federation with your Active Directory
- Efficiency:
  - Use your corporate user name and password
  - Less passwords to remember
- Security:
  - IT account policies (expiry, 2FA, etc.)
  - Simple management of user access
  - Less likely to reuse credentials

ANOMS Advanced

ANOMS NoiseDesk

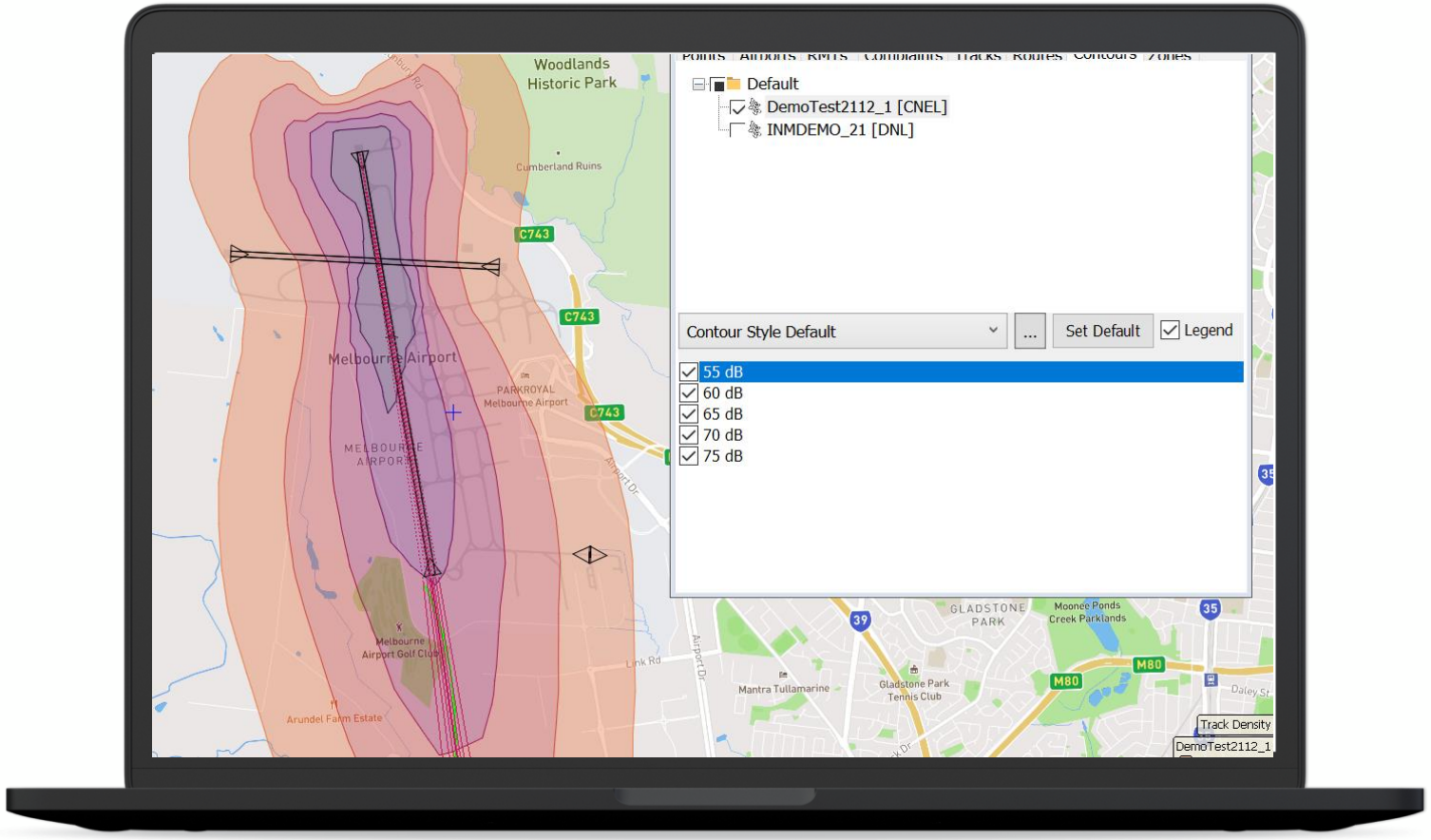
Carbon Emissions



SSO using
Corporate Identity

ANOMS Advanced

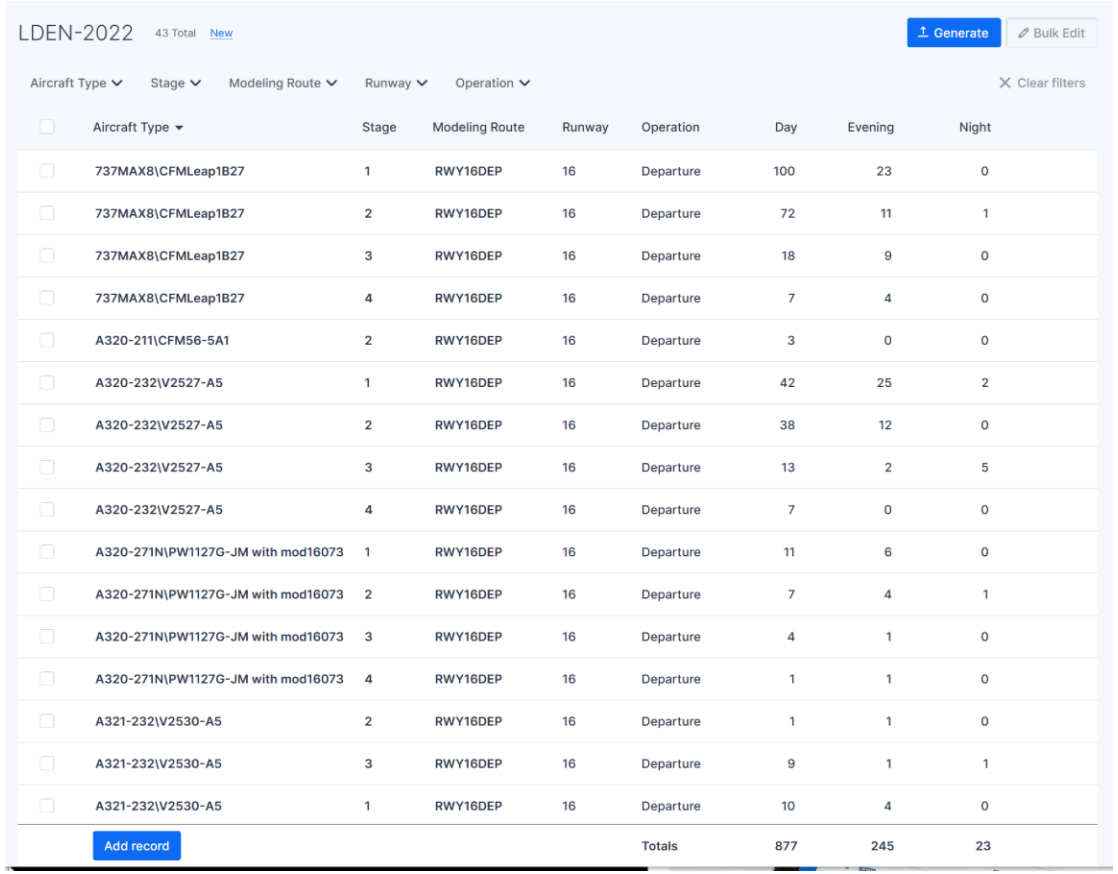
ANOMS Noise Modelling



ANOMS Advanced

What is ANOMS Noise Modelling?

- Use ANOMS data to generate scenario for model
- Clean up the data for noise model
  - Stage length, periods of day, map aircraft types, track dispersion
- Manipulate to correct missing data
- Make alternative scenarios starting from ANOMS data
- Import contour output into ANOMS



LDEN-2022 43 Total New

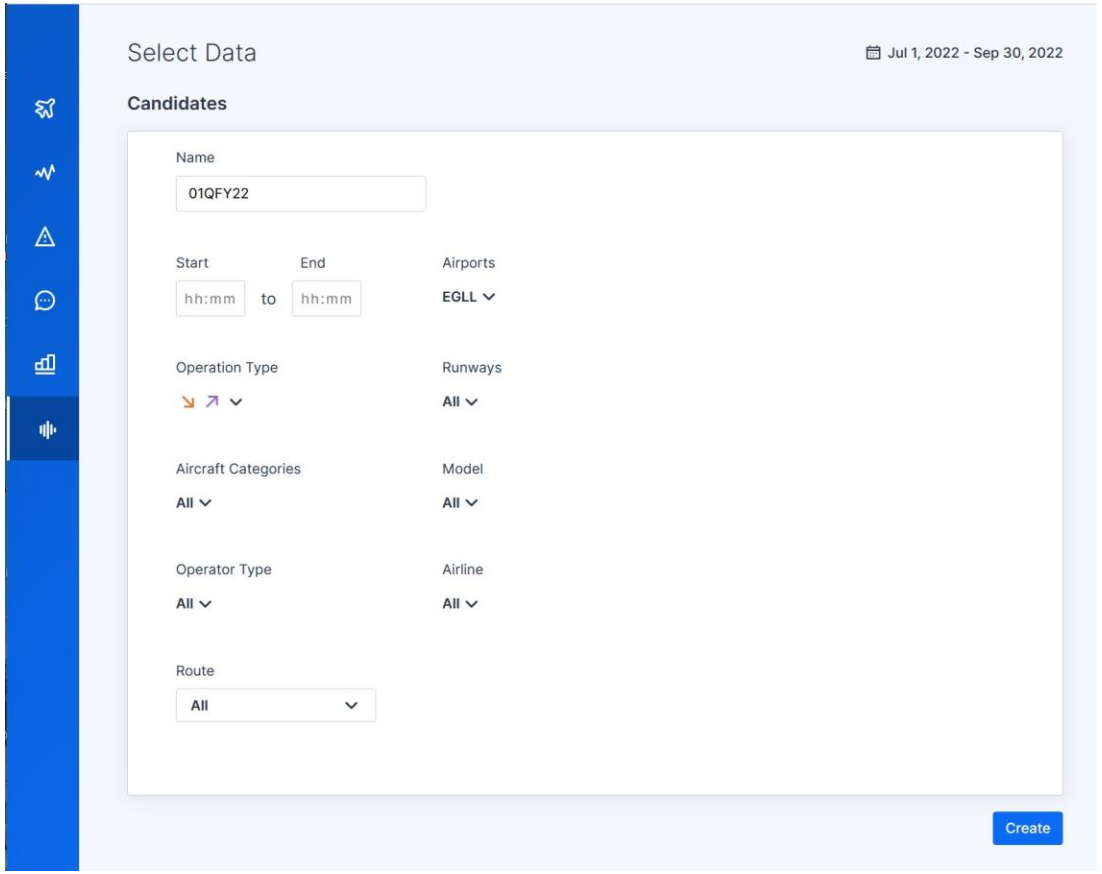
Generate | Bulk Edit

Aircraft Type | Stage | Modeling Route | Runway | Operation | Clear filters

Aircraft Type	Stage	Modeling Route	Runway	Operation	Day	Evening	Night
737MAX8\CFMLeap1B27	1	RWY16DEP	16	Departure	100	23	0
737MAX8\CFMLeap1B27	2	RWY16DEP	16	Departure	72	11	1
737MAX8\CFMLeap1B27	3	RWY16DEP	16	Departure	18	9	0
737MAX8\CFMLeap1B27	4	RWY16DEP	16	Departure	7	4	0
A320-211\CFM56-5A1	2	RWY16DEP	16	Departure	3	0	0
A320-232\V2527-A5	1	RWY16DEP	16	Departure	42	25	2
A320-232\V2527-A5	2	RWY16DEP	16	Departure	38	12	0
A320-232\V2527-A5	3	RWY16DEP	16	Departure	13	2	5
A320-232\V2527-A5	4	RWY16DEP	16	Departure	7	0	0
A320-271N\PW1127G-JM with mod16073	1	RWY16DEP	16	Departure	11	6	0
A320-271N\PW1127G-JM with mod16073	2	RWY16DEP	16	Departure	7	4	1
A320-271N\PW1127G-JM with mod16073	3	RWY16DEP	16	Departure	4	1	0
A320-271N\PW1127G-JM with mod16073	4	RWY16DEP	16	Departure	1	1	0
A321-232\V2530-A5	2	RWY16DEP	16	Departure	1	1	0
A321-232\V2530-A5	3	RWY16DEP	16	Departure	9	1	1
A321-232\V2530-A5	1	RWY16DEP	16	Departure	10	4	0
Add record				Totals	877	245	23

ANOMS Advanced

Demo



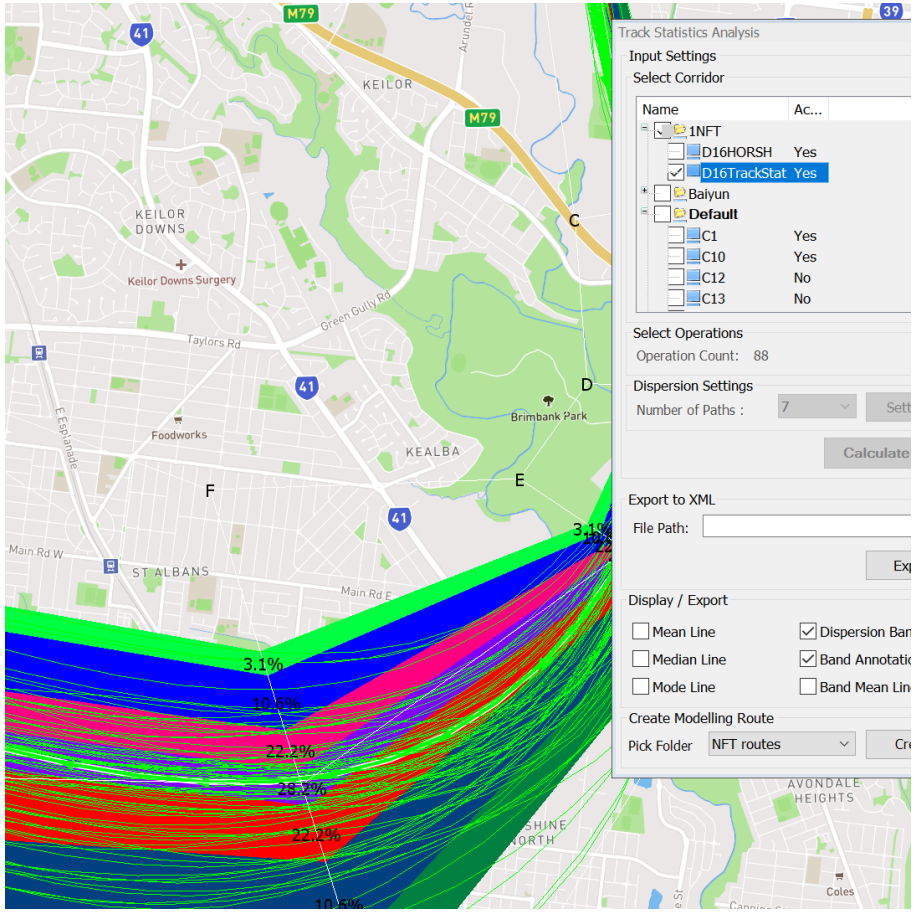
FORUM23

ANOMS Advanced

Noise modelling availability

- ANOMS 9.10.0 or later
- Hosted
- Deployed
  - Possible. Not recommended
  - but not closed systems
  - Complex to set up. Needs additional servers
- ANOMS extension module
  - Users must have an ANOMS seat licence

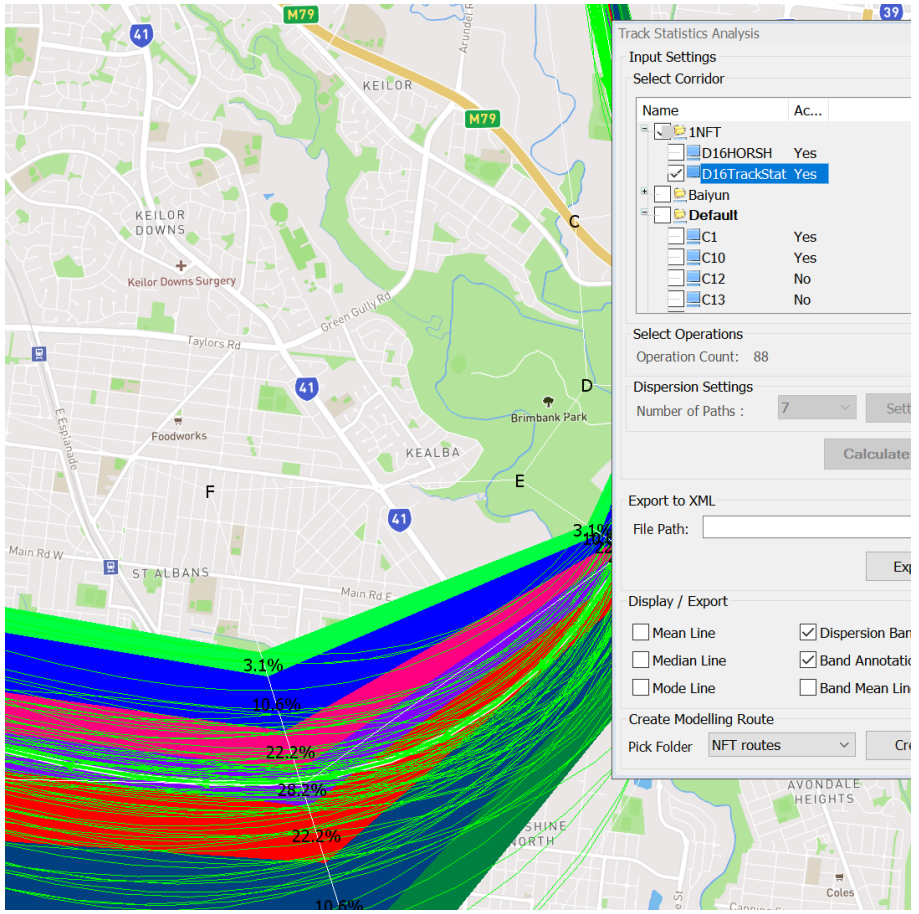
- Supports AEDT 3 or INM 7



FORUM23

Noise modelling advantages

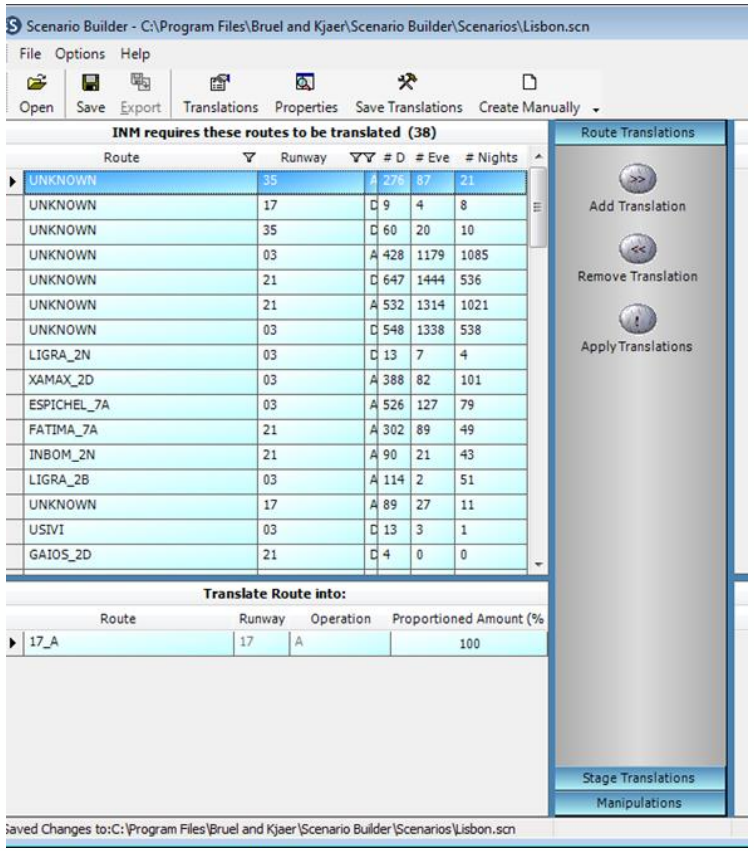
- Accurate and consistent generation of scenarios
- Leverage data grooming work in ANOMS
- Efficient extraction of data for modelling
- Easy to adjust AEDT scenarios
- Using ANOMS data ensures consistency of reporting
- Keeping modelling routes and aircraft mappings in ANOMS ensures consistency between model runs
- Especially important when using different consultants



Scenario Builder replacement

- AEDT support (and INM)
- Global and local mapping database
- Improved contour formatting
- Better security
- Grooming in ANOMS
- No installation on PCs

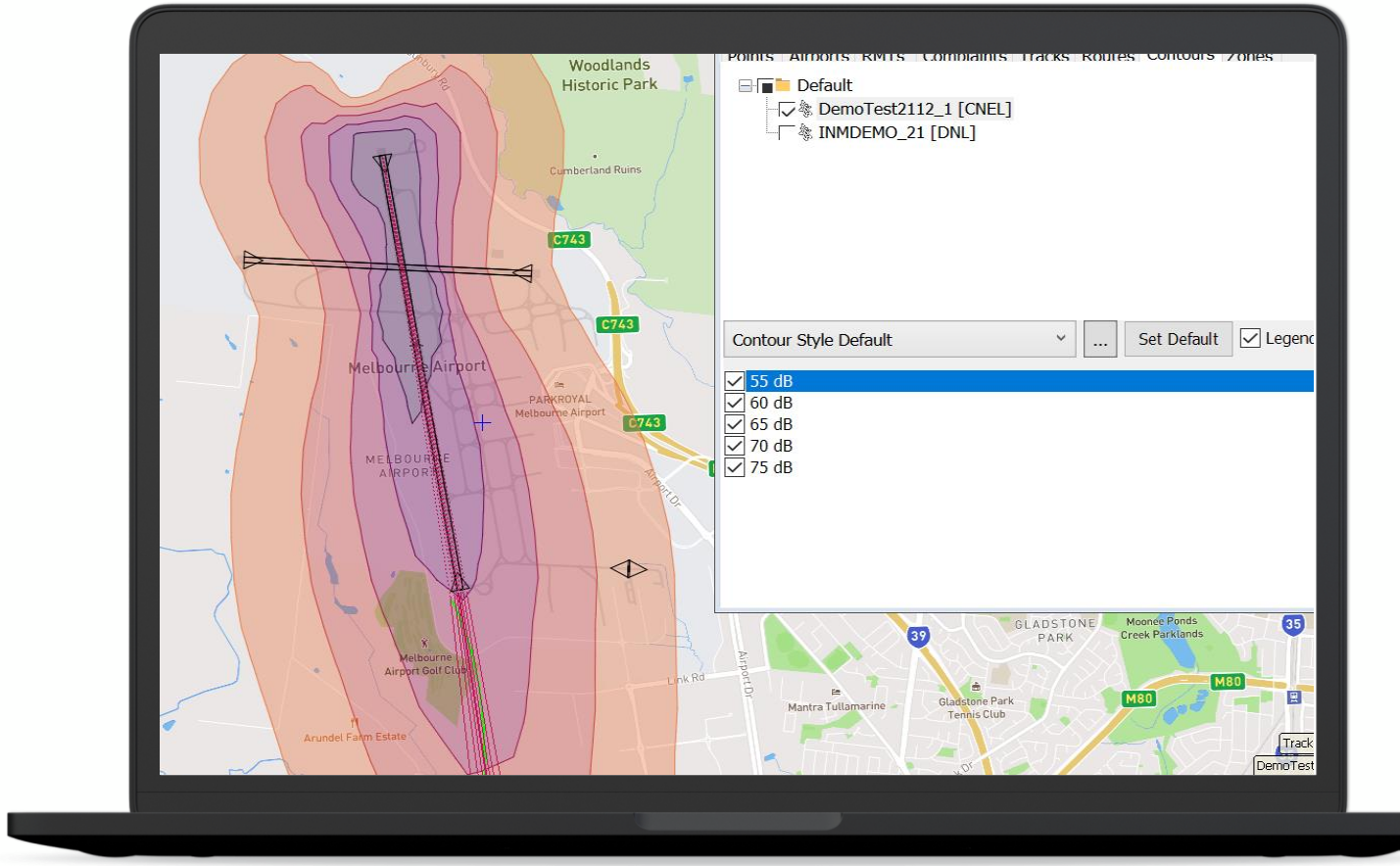
Scenario Builder is now deprecated



ANOMS Advanced

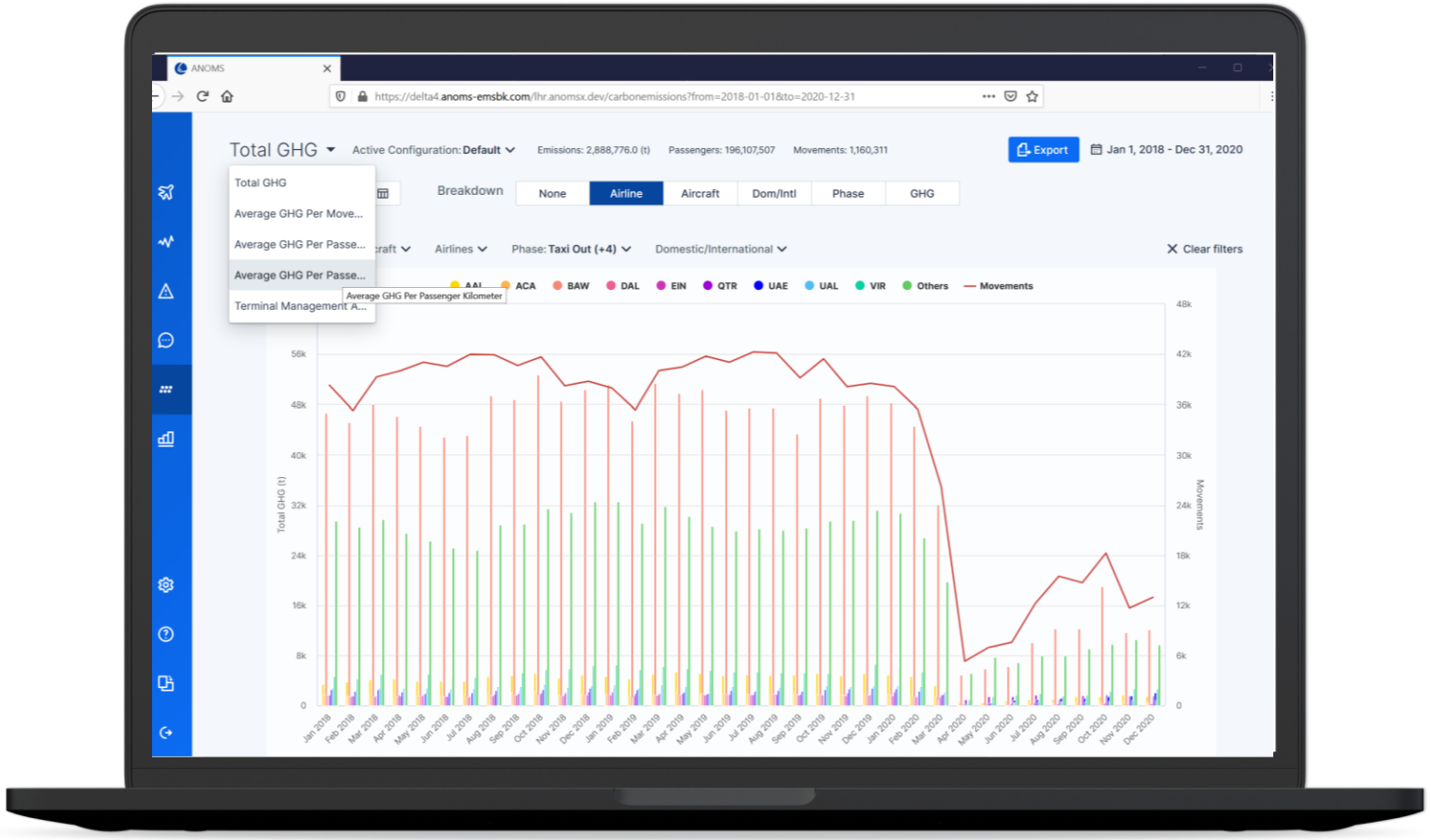
Roadmap

- Export actual track for processing in AEDT
  - Not INM
- Provide AEDT actual track modelling support for NoiseDesk



Carbon Emissions

ANOMS Carbon Emissions

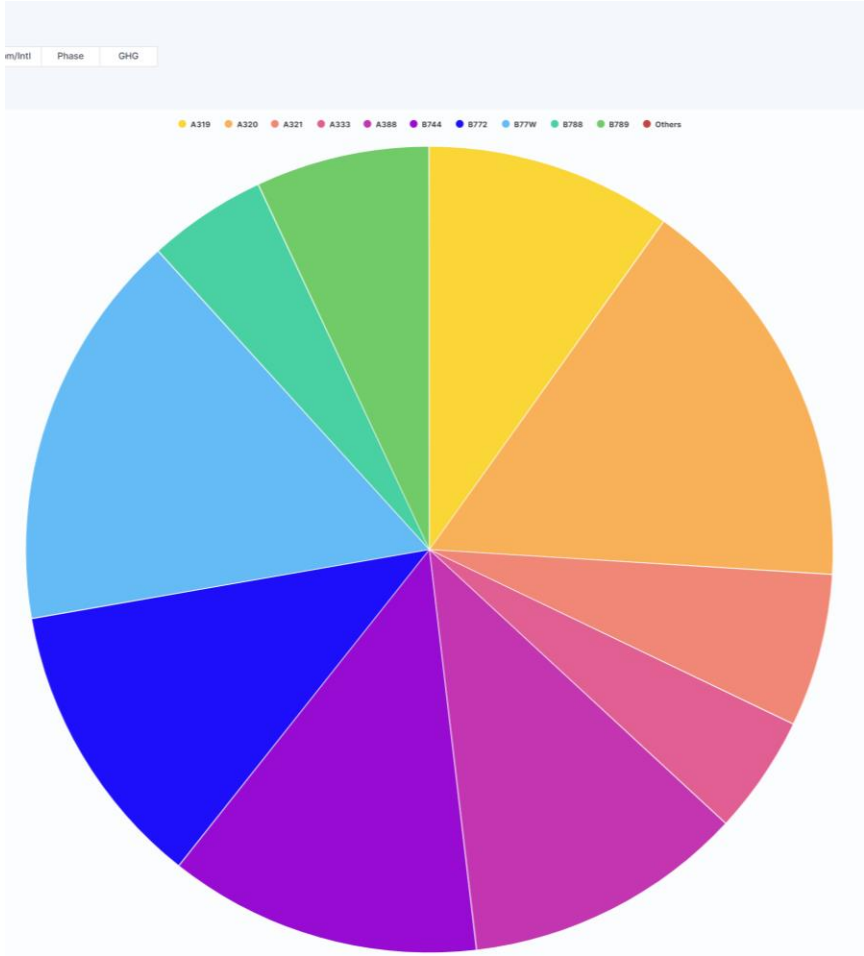


ANOMS Carbon Emissions

- Calculation of Aviation Greenhouse Gas Emissions
  - Scope 3
  - ICAO 9889 and EMEP (Corinair) calculation
- Based on actual track and weather data
- Automatic calculation
- Easy to use Web interface
- Simple scenario capability

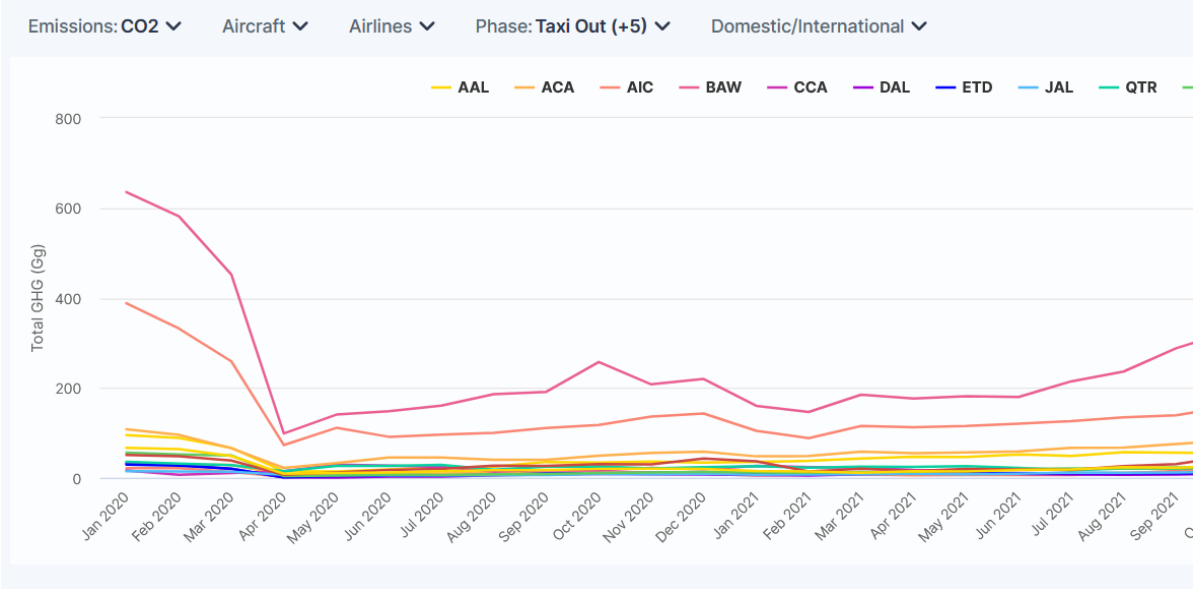
Carbon Emission - Advantages

- Accurate
  - Industry standard calculations
  - Actual track and weather
- Reduced labour/costs
  - Leverage ANOMS data
  - Shared grooming
- Timely and granular
  - Data needed to engage
- Scenarios
  - SAF, aircraft change, factors change

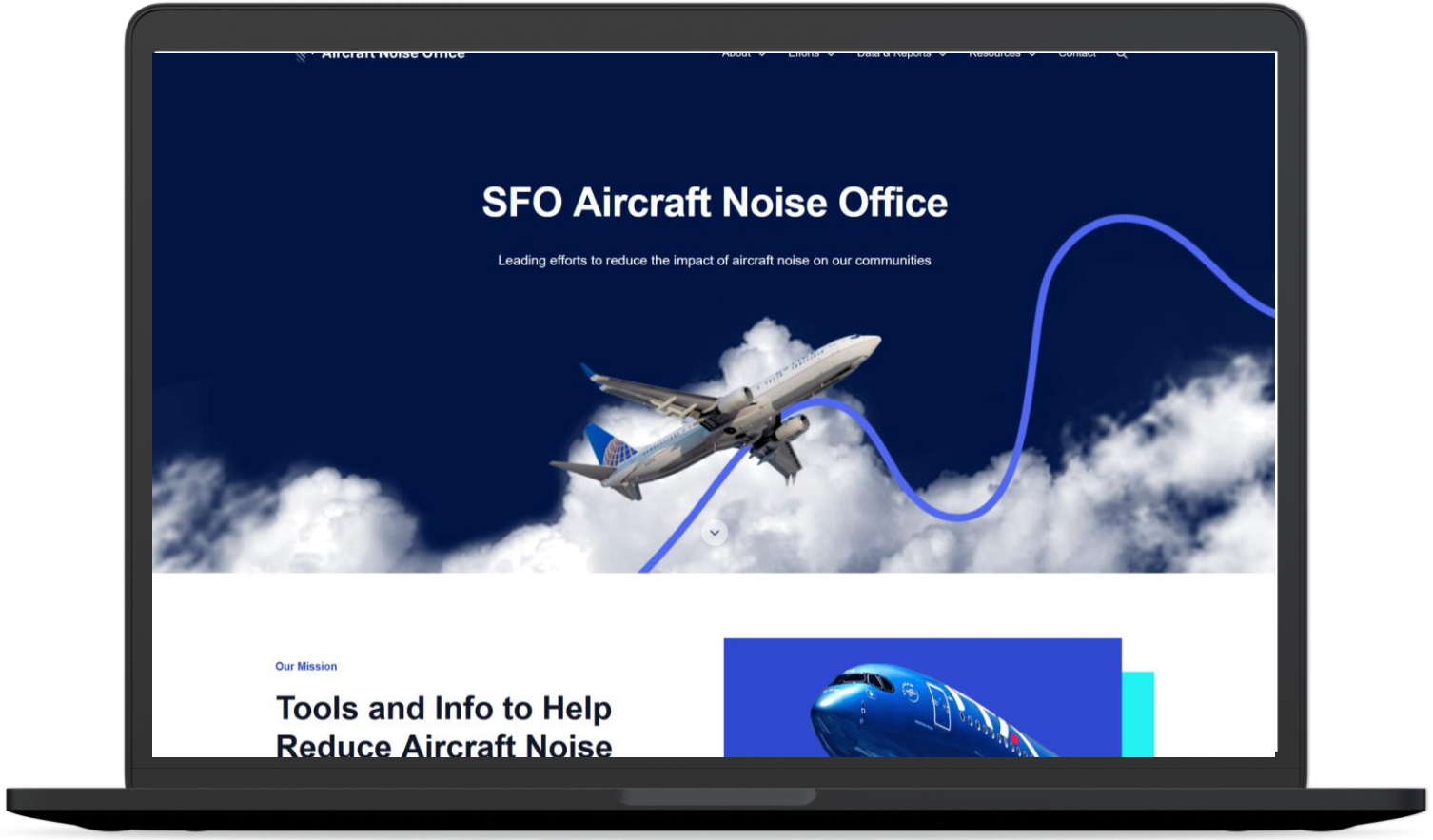


Carbon Emissions - Roadmap

- Additional gases
  - CO2 equivalent (Global Warming Potential)
  - CH4
  - N20



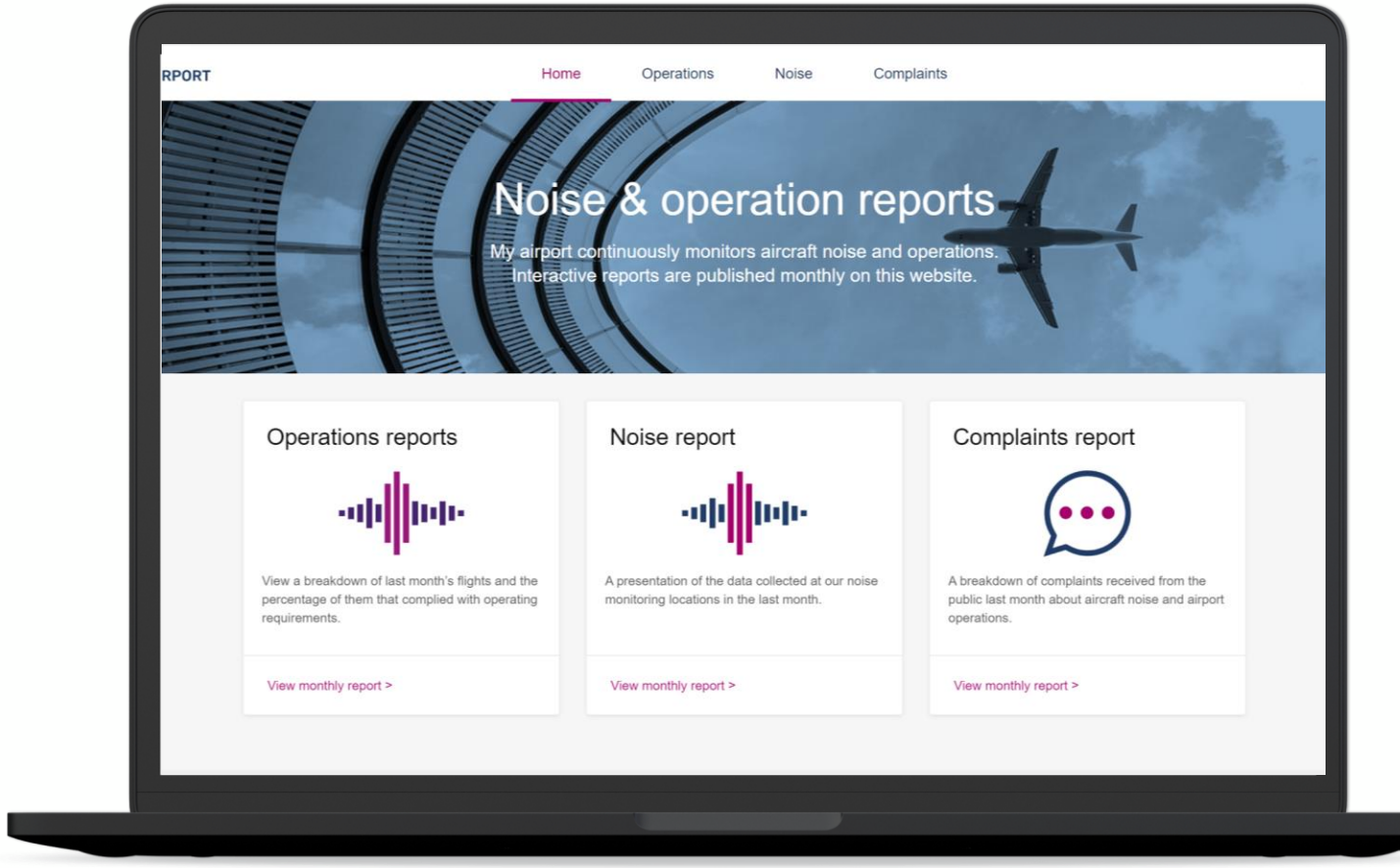
Publishing ANOMS data



Efficiently informing stakeholders

ANOMS Advanced

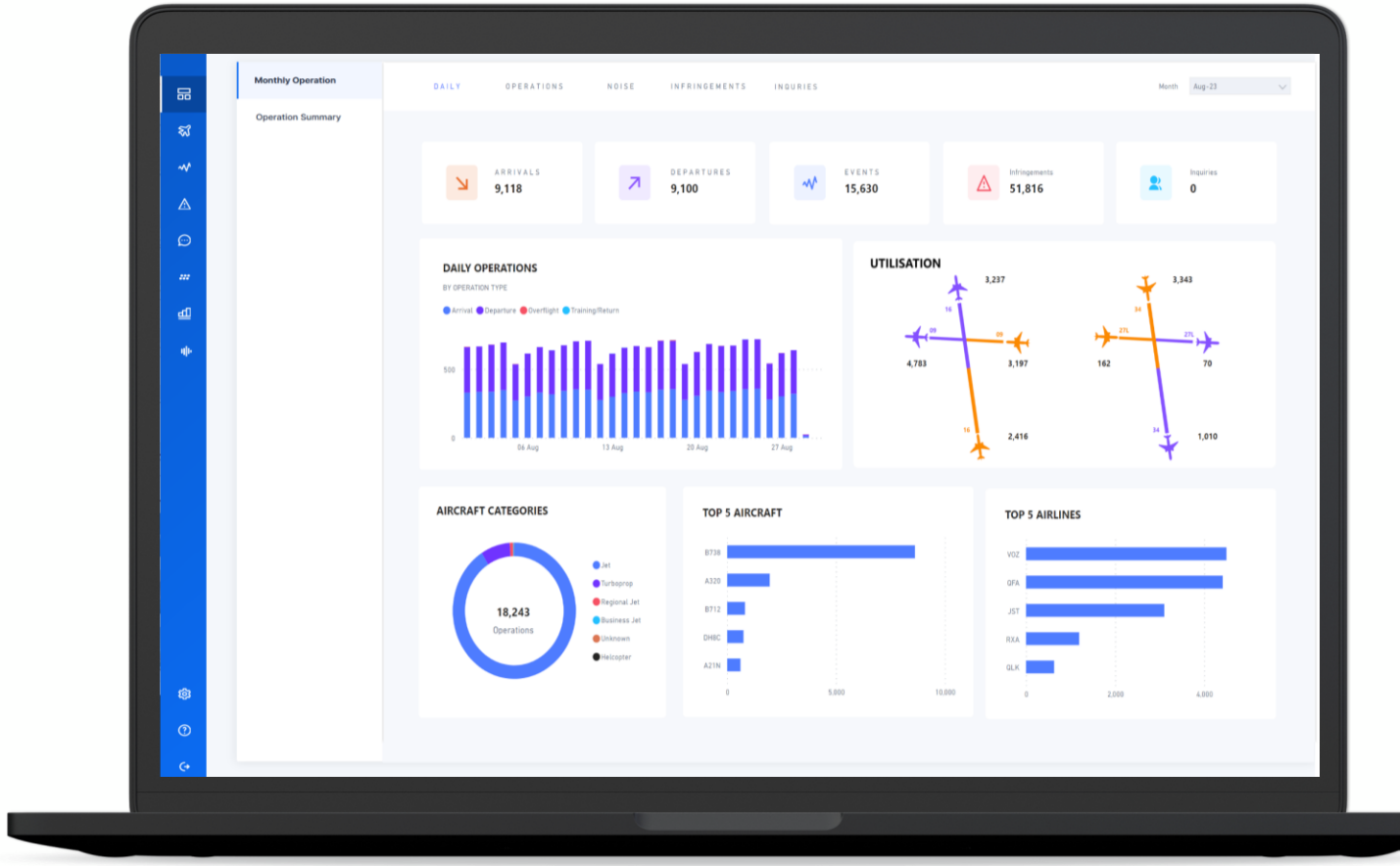
- InsightFull
- Airport Metrics
- Always Ready Reports templates
- Dashboards



Dashboard

ANOMS Advanced

Demo

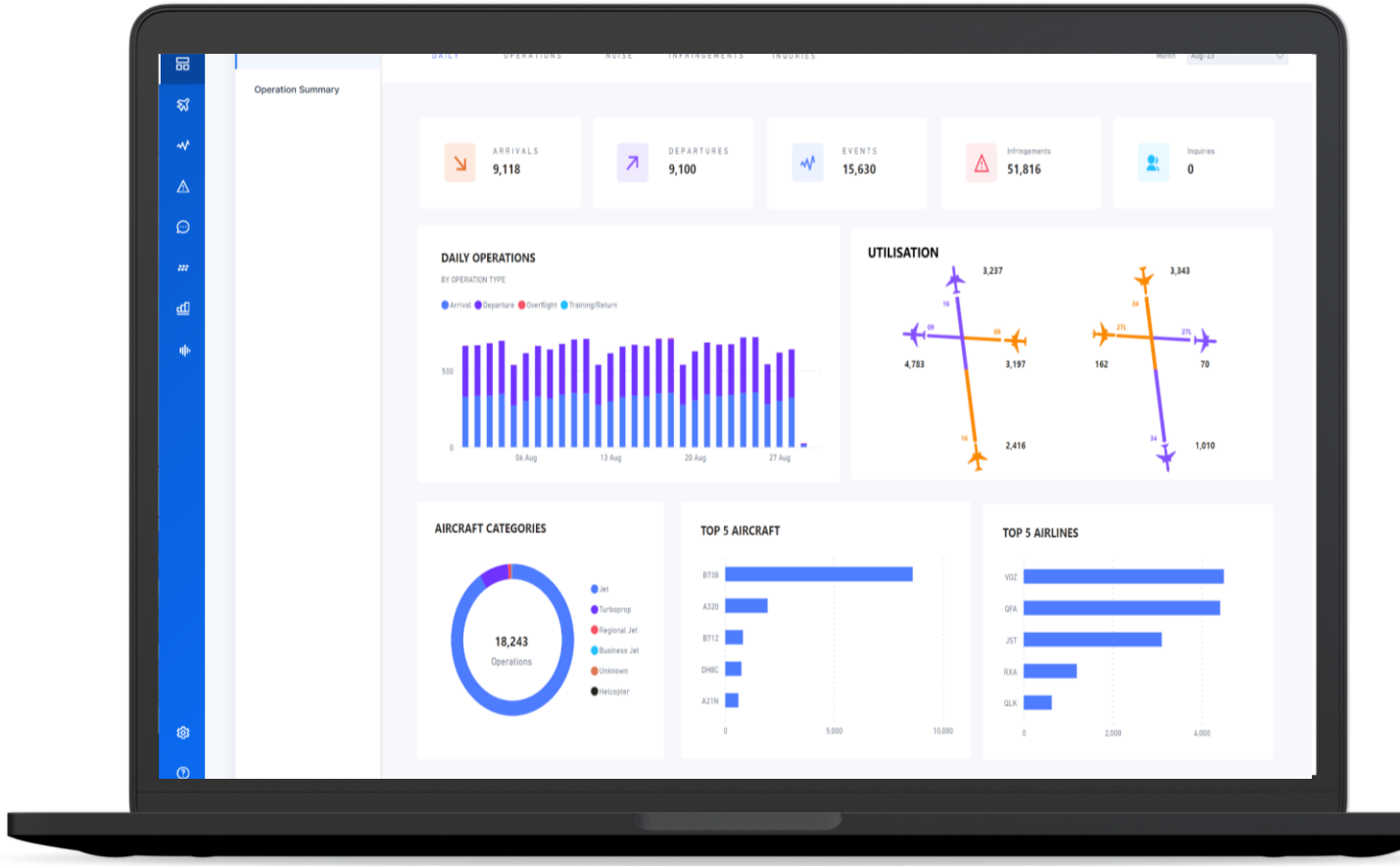


Dashboard roadmap

ANOMS Advanced

ANOMS NoiseDesk

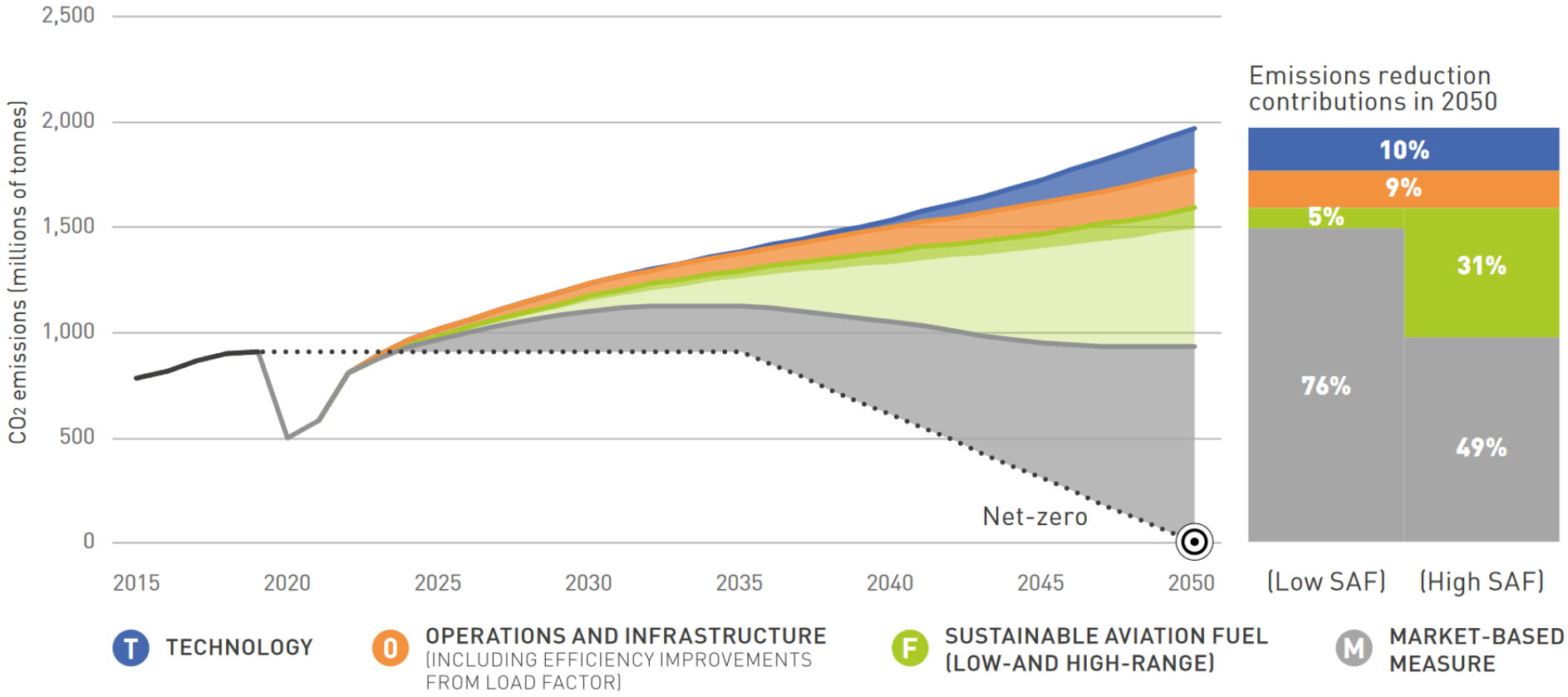
- Set a standard set of dashboards
- Available with ANOMS Advanced and NoiseDesk
- Paginated reports
- Self-service report customization



Net-Zero aviation

ANOMS Advanced

Decarbonisation roadmap

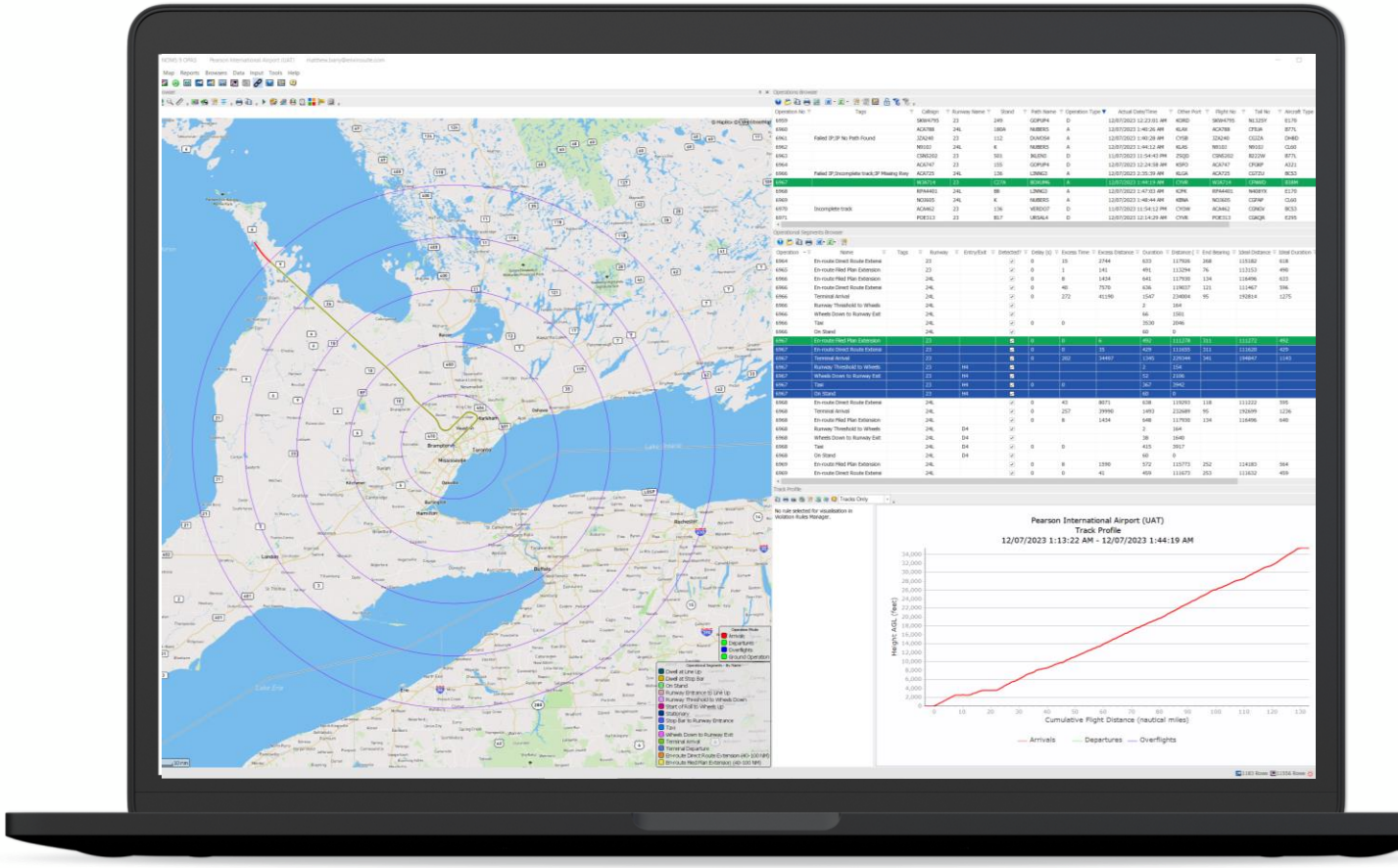


FORUM23

ANOMS Advanced

Roadmap – aviation efficiency monitoring

- Measure airspace efficiency
  - Actual vs ideal/expected
- On the ground efficiency
  - Gate departure delay
  - Taxi delays
  - Runway occupancy
  - Gate arrival delay
- Airborne efficiency
  - Holding patterns
  - Sequencing delays
- Procedural efficiency
  - Measurement of level flight



envirosuite

FORUM23

Flightpath to the Future: Reconnect & Collaborate