EGNOS WORKSHOP

24-25 September 2019

Rome

The experience of the European Business Jet Operator with the largest fleet approved for EGNOS approaches

VISTA JET

We make flying private simple

VistaJet offers global aircraft services unlike any other company in business aviation. With unparalleled experience flying into and out of the hardest to reach destinations, VistaJet has arranged for heads of state, corporate leaders, entrepreneurs and private individuals to fly to 187 countries worldwide.

Every flight is tailored to ensure seamless travel with maximum efficiency so customers can be in more meetings or locations within the shortest period of time. VistaJet's fleet of over 70 private jets is available to customers – with guaranteed availability and no positioning costs for Program Members.

VistaJet connects enterprises to growth markets with a unique product, offering global access on Challenger and Global jets, all suited to flight duration, trip and passenger requirements.

SIMPLE, EFFICIENT, RELIABLE, GLOBAL.
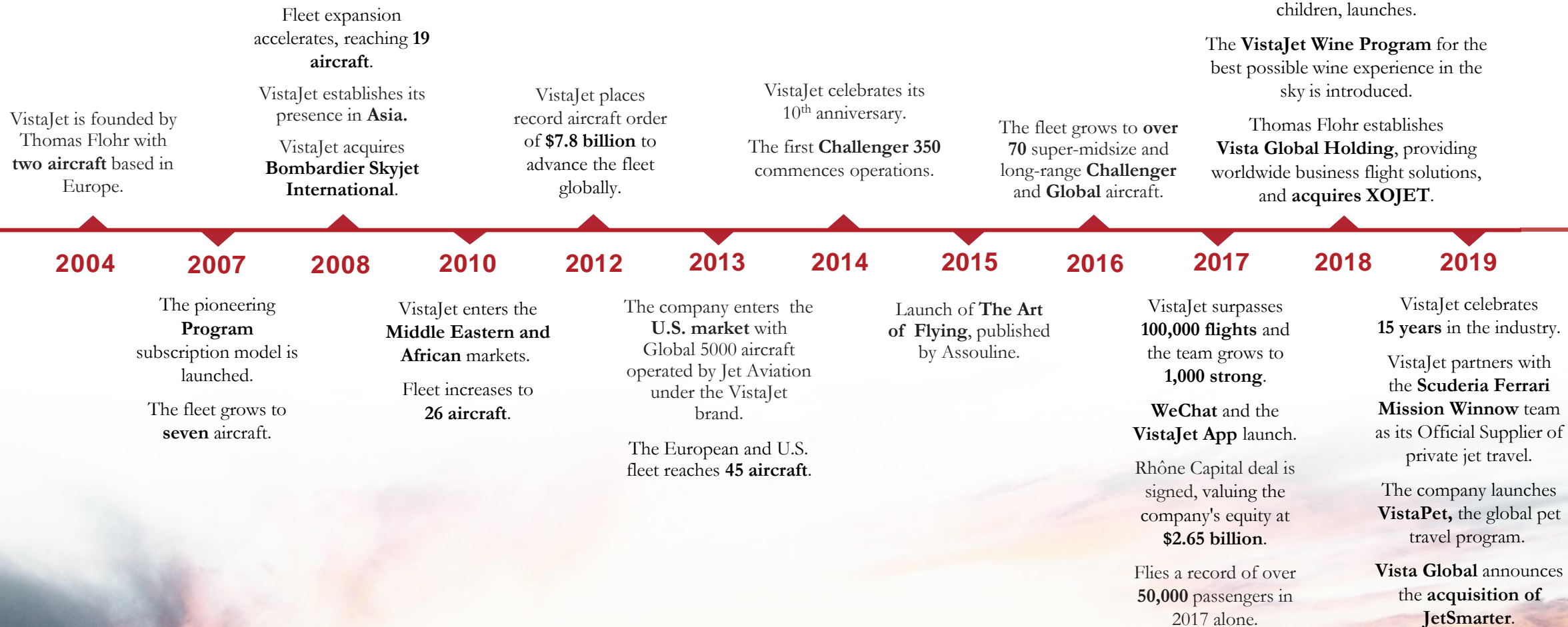*This is what we stand for, and what we do best.*

THOMAS FLOHR, FOUNDER & CHAIRMAN

Milestones

Partners with **Christie's** for the most significant philanthropic auction ever presented.

The Jet Traveler Report is launched, the global perspective on who flies privately and why.

Adventures in the Sky, the most extensive travelers program for children, launches.

The **VistaJet Wine Program** for the best possible wine experience in the sky is introduced.

Fleet expansion accelerates, reaching **19 aircraft**.

VistaJet establishes its presence in **Asia.**

VistaJet acquires **Bombardier Skyjet International**.

VistaJet places record aircraft order of **$7.8 billion** to advance the fleet globally.

VistaJet celebrates its 10th anniversary.

The first **Challenger 350** commences operations.

The fleet grows to **over 70** super-midsize and long-range **Challenger** and **Global** aircraft.

Thomas Flohr establishes **Vista Global Holding**, providing worldwide business flight solutions, and **acquires XOJET**.

VistaJet is founded by Thomas Flohr with **two aircraft** based in Europe.

2004   **2007**   **2008**   **2010**   **2012**   **2013**   **2014**   **2015**   **2016**   **2017**   **2018**   **2019**

The pioneering **Program** subscription model is launched.

The fleet grows to **seven** aircraft.

VistaJet enters the **Middle Eastern and African** markets.

Fleet increases to **26 aircraft**.

The company enters the **U.S. market** with Global 5000 aircraft operated by Jet Aviation under the VistaJet brand.

The European and U.S. fleet reaches **45 aircraft**.

Launch of **The Art of Flying**, published by Assouline.

VistaJet surpasses **100,000 flights** and the team grows to **1,000 strong**.

WeChat and the **VistaJet App** launch.

Rhône Capital deal is signed, valuing the company's equity at **$2.65 billion**.

Flies a record of over **50,000** passengers in 2017 alone.

VistaJet celebrates **15 years** in the industry.

VistaJet partners with the **Scuderia Ferrari Mission Winnow** team as its Official Supplier of private jet travel.

The company launches **VistaPet,** the global pet travel program.

Vista Global announces the **acquisition of JetSmarter**.

Our global presence

187 COUNTRIES VISITED

7 COUNTRIES NOT VISITED

- Ushuaia-Malvinas Argentinas Airport in Argentina is the furthest south a VistaJet aircraft has flown. The furthest north is Svalbard in Norway

- The highest airport VistaJet has operated out of   was Inca Manco Capac in Peru at 12,552 feet (3,862 meters)

- The farthest flight was 6,386 nmi (11,819 km), whilst the longest was Singapore to Nice in 13 hours 43 min

- VistaJet fleet flies the equivalent of three return trips to the moon every month

A73 aircraft fleet

GLOBAL 6000

In fleet: 29
Flying hours: 13:00
Passenger capacity: up to
14 Sleeping positions: 7
RNP: LPV,
LNAV/VNAV, LNAV

GLOBAL 5000

In fleet: 7
Flying hours: 11:00
Passenger capacity: up to
13 Sleeping positions: 7
RNP: LPV,
LNAV/VNAV, LNAV

CHALLENGER 850

In fleet: 6
Flying hours: 6:30
Passenger capacity: up to
14 Sleeping positions: 7
RNP: LNAV

CHALLENGER 605

In fleet: 10
Flying hours:
8:00 Passenger capacity:
up to 12 Sleeping
positions: 5
RNP: LNAV/VNAV,
LNAV

CHALLENGER 350

In fleet: 21
Flying hours: 7:15
Passenger capacity: up to 8
Sleeping positions: 3
RNP: LPV,
LNAV/VNAV, LNAV

A flier's perspective

Our insights from flying over 400,000 passengers

1
MAXIMIZING TIME

Most private flights are made for business reasons, and maximizing time is crucial. This means that schedule, location and efficiency of the airport process are prioritized. The key reason for flying privately is that people are buying time. Maximizing time when flying for leisure remains a priority, but the tone of this shifts: it is not about meeting schedules and getting somewhere quickly, but getting through security in a relaxed fashion and being able to travel easily with children or pets.

2
CONTROL

UHNWIs and business leaders want to feel that everything is under control and within their influence. Dealing with the unexpected is uncomfortable and can have implications, both emotionally and practically. Flexibility for the passenger is also key, especially when, as often happens, meetings overrun. For business travelers, flights become much less about luxury when the priority is efficiency. When UHNWIs travel for leisure, a desire for greater emotional warmth on board is also apparent; more personalization of the space and menus, for example, ensure that comfort is an essential feature.

3
PERCEPTIONS OF SAFETY

Safety is, of course, crucial but it is often judged on the surface with many of the underlying details taken for granted. Perceptions of safety are a hygiene factor but may, on occasion, be compromised for efficiency and cost.

When the wealthy travel for leisure, the flying experience is often part of the journey. Leisure travel typically involves additional family members and this dials up the need for safety.

4
MITIGATING RISK

Business leaders and the wealthy face many risks to their personal safety, reputation, wealth and – in the case of business – critical information. Managing and mitigating against risks and feeling truly secure are only possible when trust is part of the equation; while many things can help build this trust, consistent experiences are the main way that the wealthy come to feel protected against those risks.

5
PERCEIVED VALUE

Finally, there is the perceived value of a private flight. Flying privately is not always the most economical choice when looking at headline figures alone. The cost of each flight and ongoing commitments varies considerably by method and the jet in question. But given the needs that people have for each individual flight, the fees are largely considered in the round, with clients assessing fees against elements such as on-board facilities, ease of reaching the destination, ongoing maintenance etc.

ILS in mountainous terrain – an example

Without radar vectors, the aircraft has to fly a long track to loose altitude and intercept the ILS for landing:

- More fuel consumption;

- More CO_2;

- Reduced flow of aircraft,

- Multiple ground equipment required (VOR, NDB, Radar).
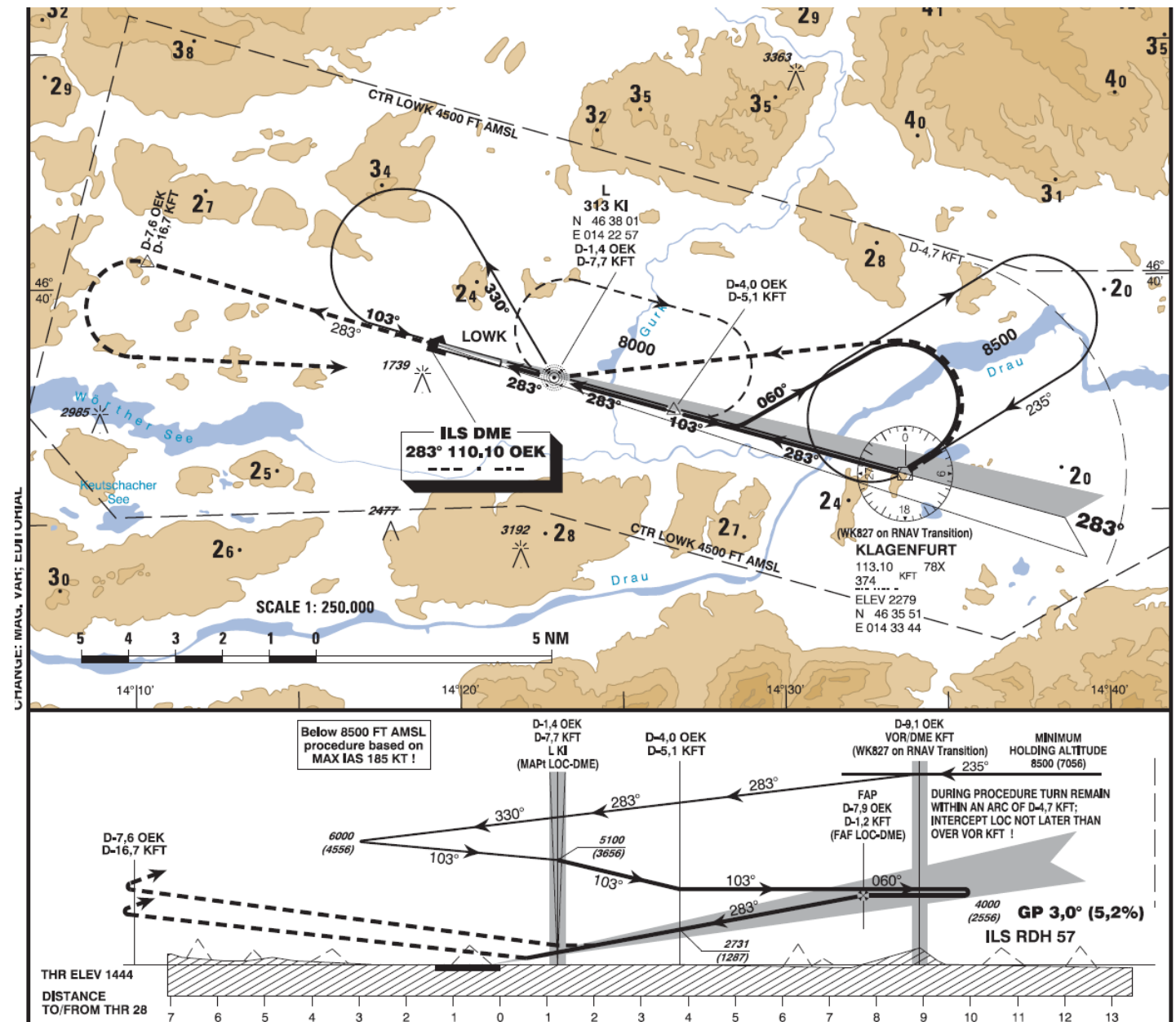
Aircraft approach for landing – Visual

- Good visibility required;

- High cloud base to navigate in the valley with aircraft forward speed of more than 250 km/h;

- Visual Flight Rules or visual approaches rely heavily on pilots skills and experience;

- Higher risk compared to instruments approaches.

Accessibility to airports – the challenge

Possible solution – European Geostationary Navigation Overlay Service (EGNOS)

Provides:

- Weather minima as for the ILS – Decision Height 200ft;

- Does not require installation of ground equipment for each landing runway as the ILS;

- More flexibility in designing the approach to join the funnel for landing taking into account surrounding terrain, obstacles, noise sensitive areas;

- Reduced ground track, less fuel consumption, less CO_2.

Possible solution – European Geostationary Navigation Overlay Service (EGNOS)

Provides:

- Vertical (glide) and Lateral (localizer) Navigation in a similar fashion as the ILS;

- Visualization on board of the aircraft is very similar for LPV and ILS approaches.
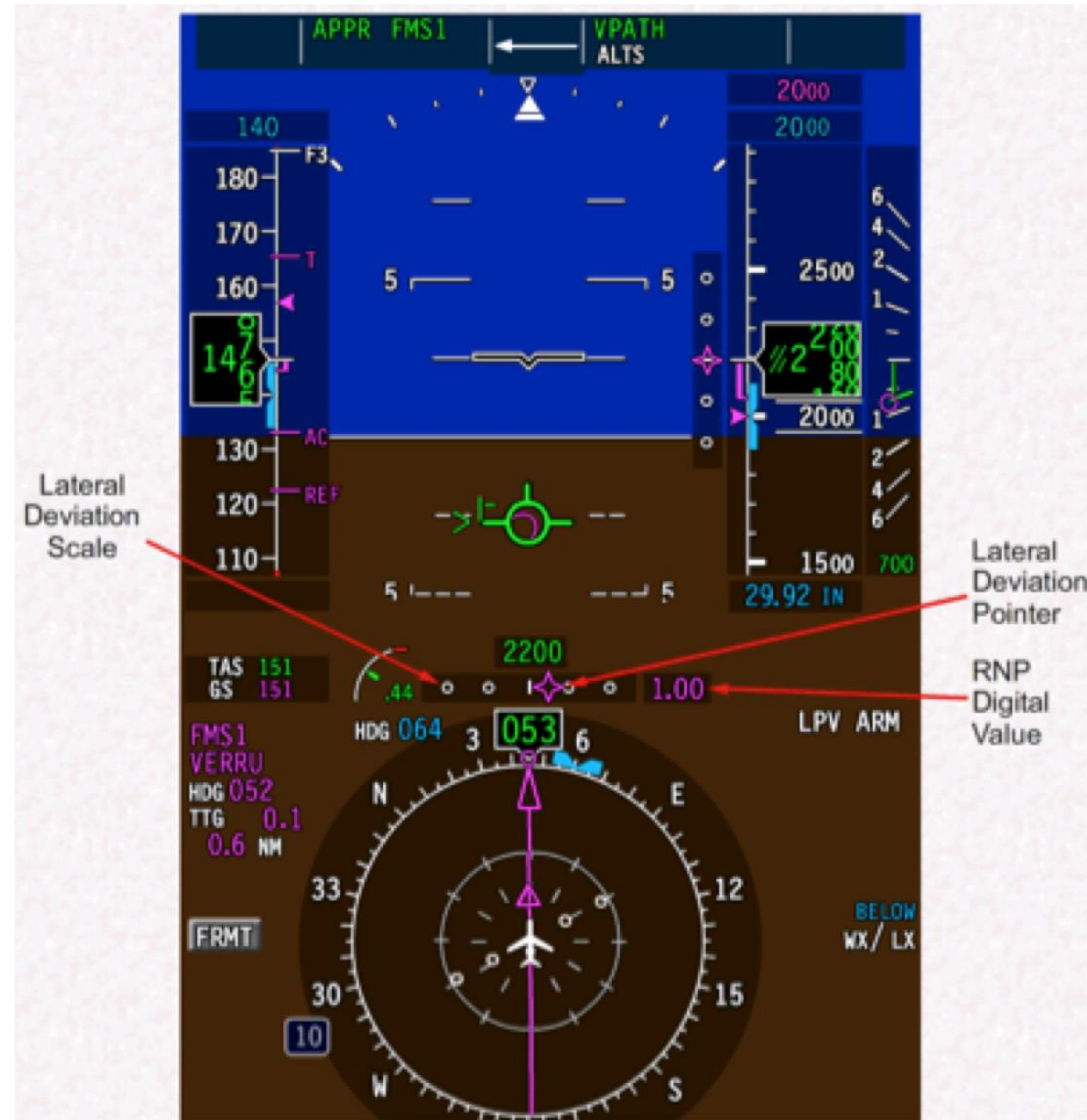
LSMD - ILS Vs LPV
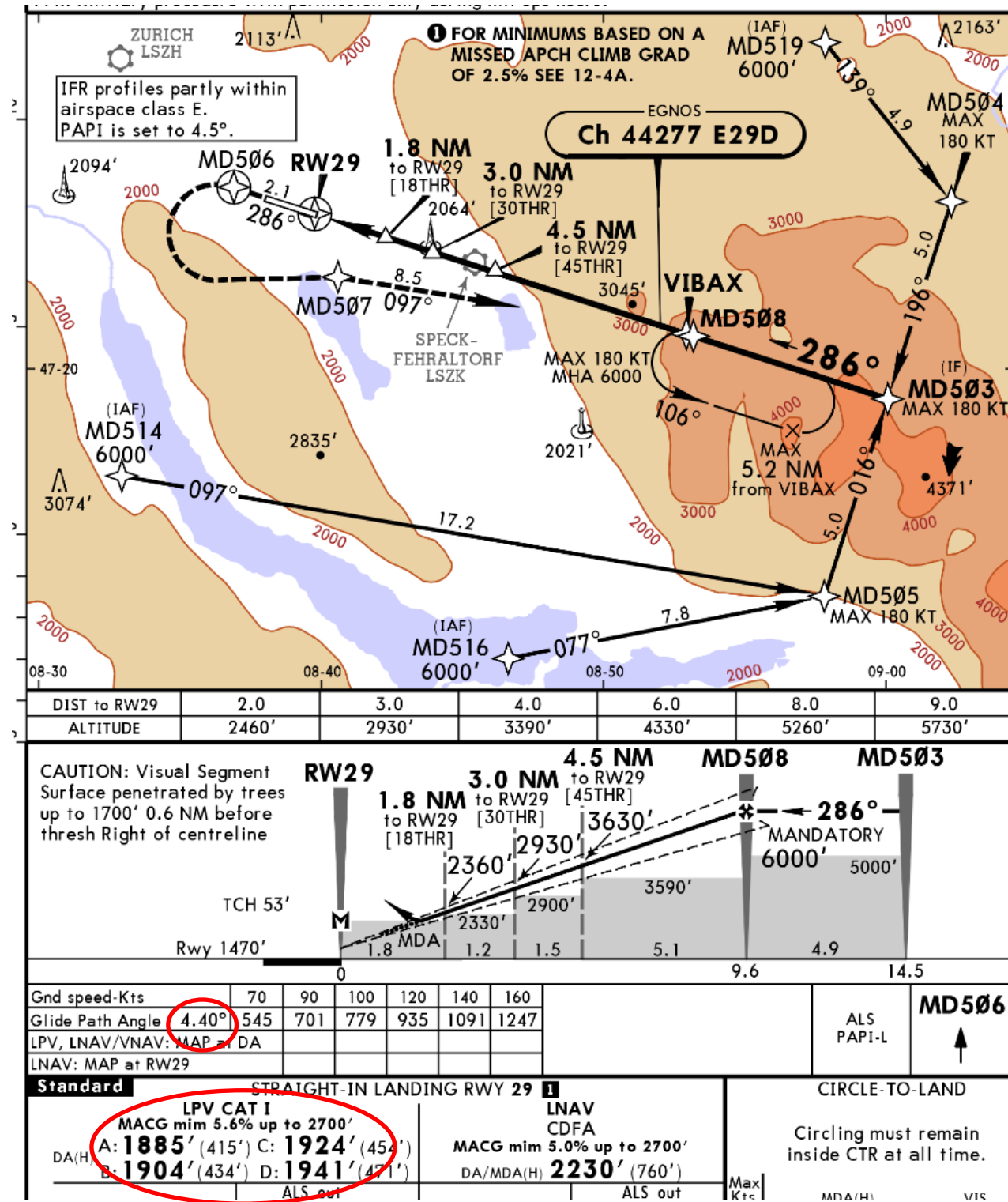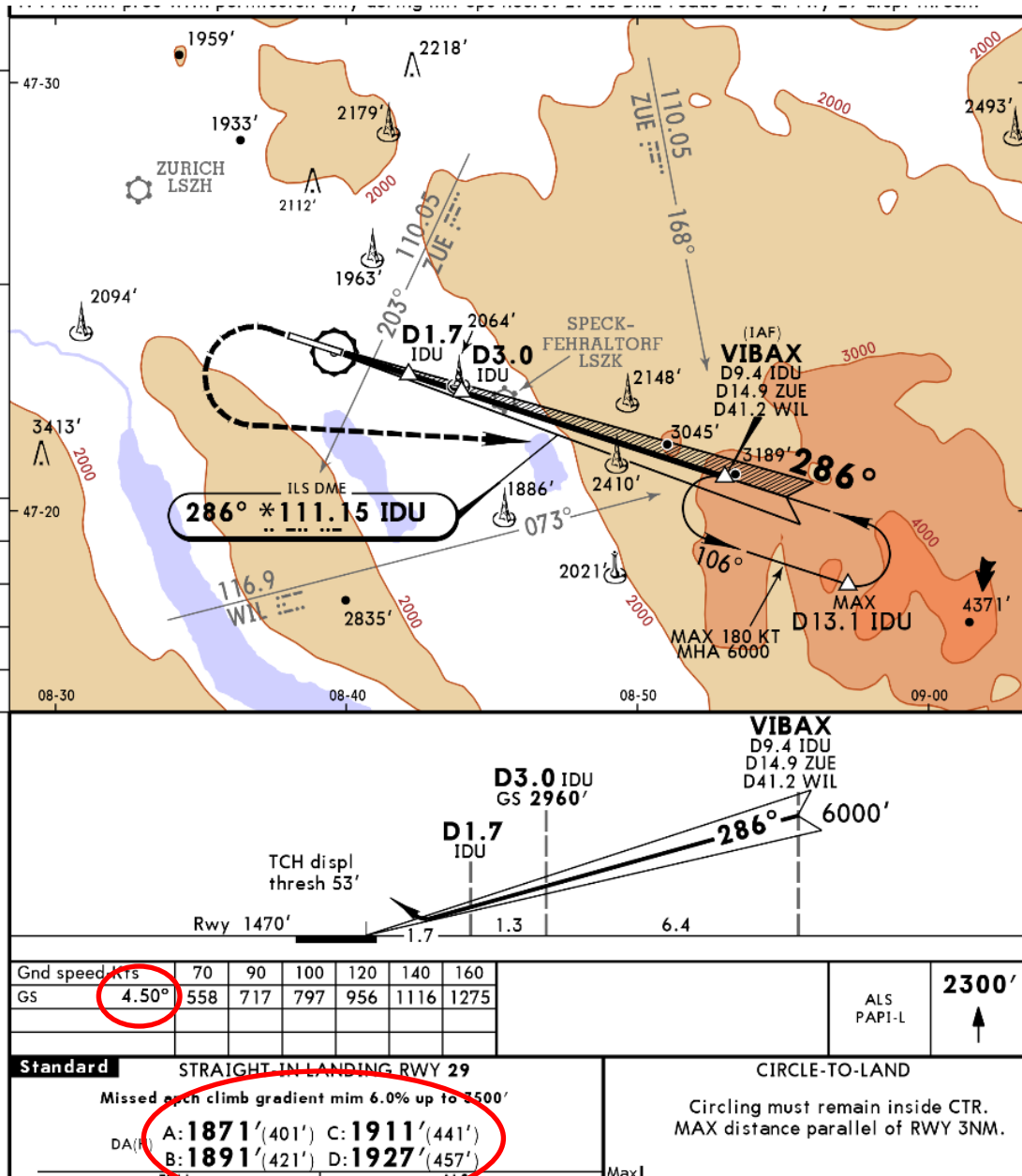
LOWK - ILS Vs LPV
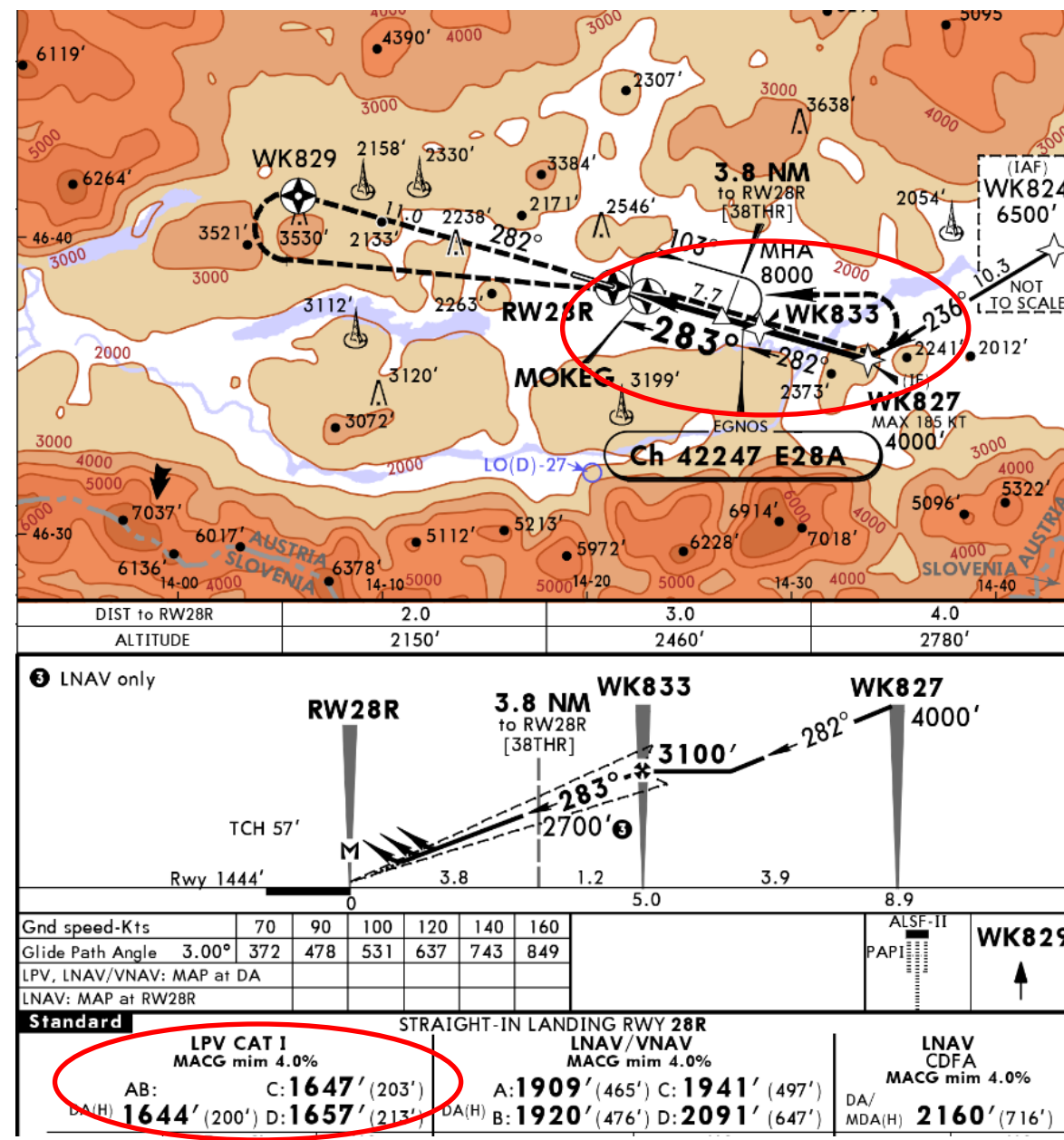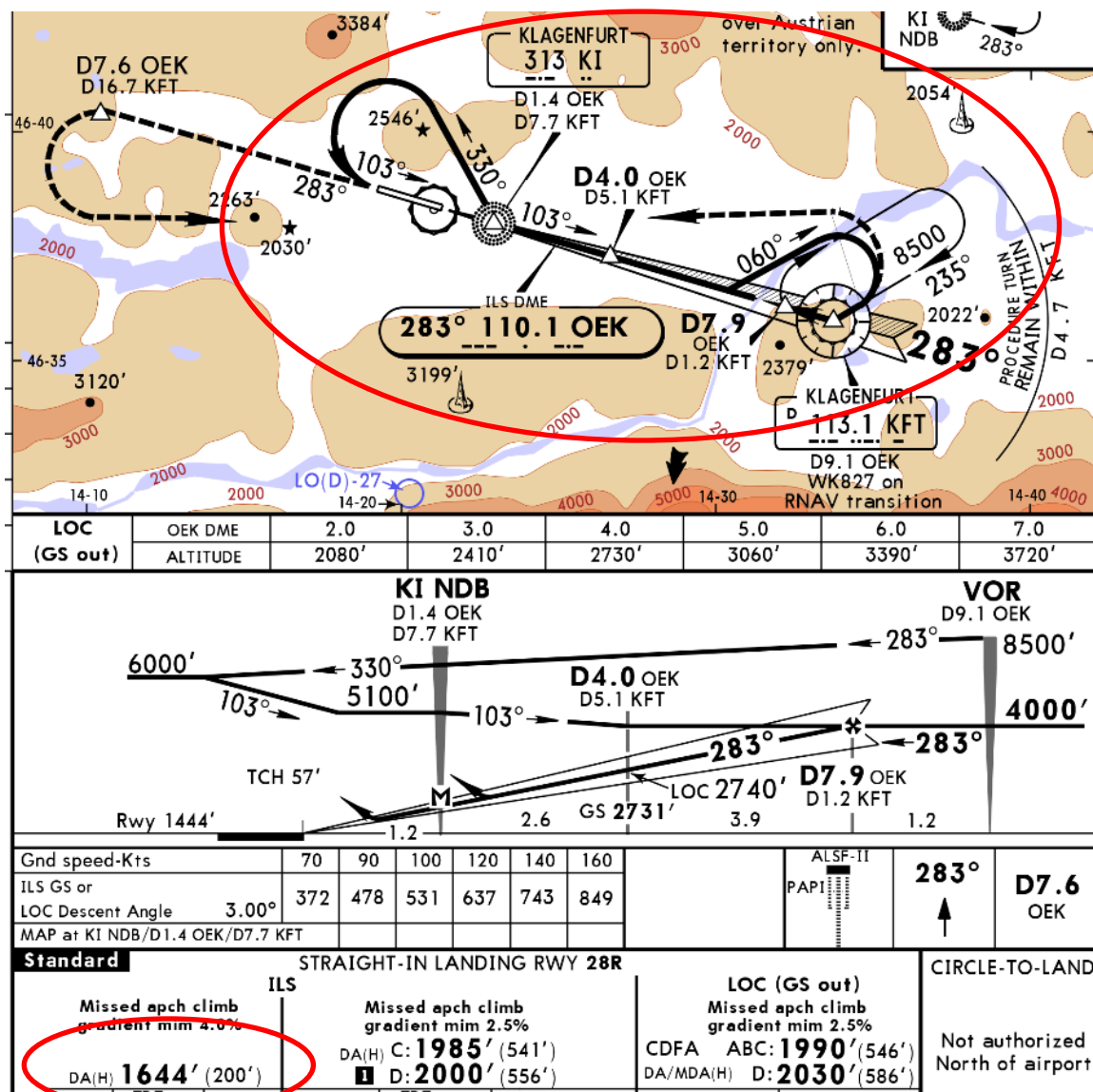
LOWI - ILS Vs LPV
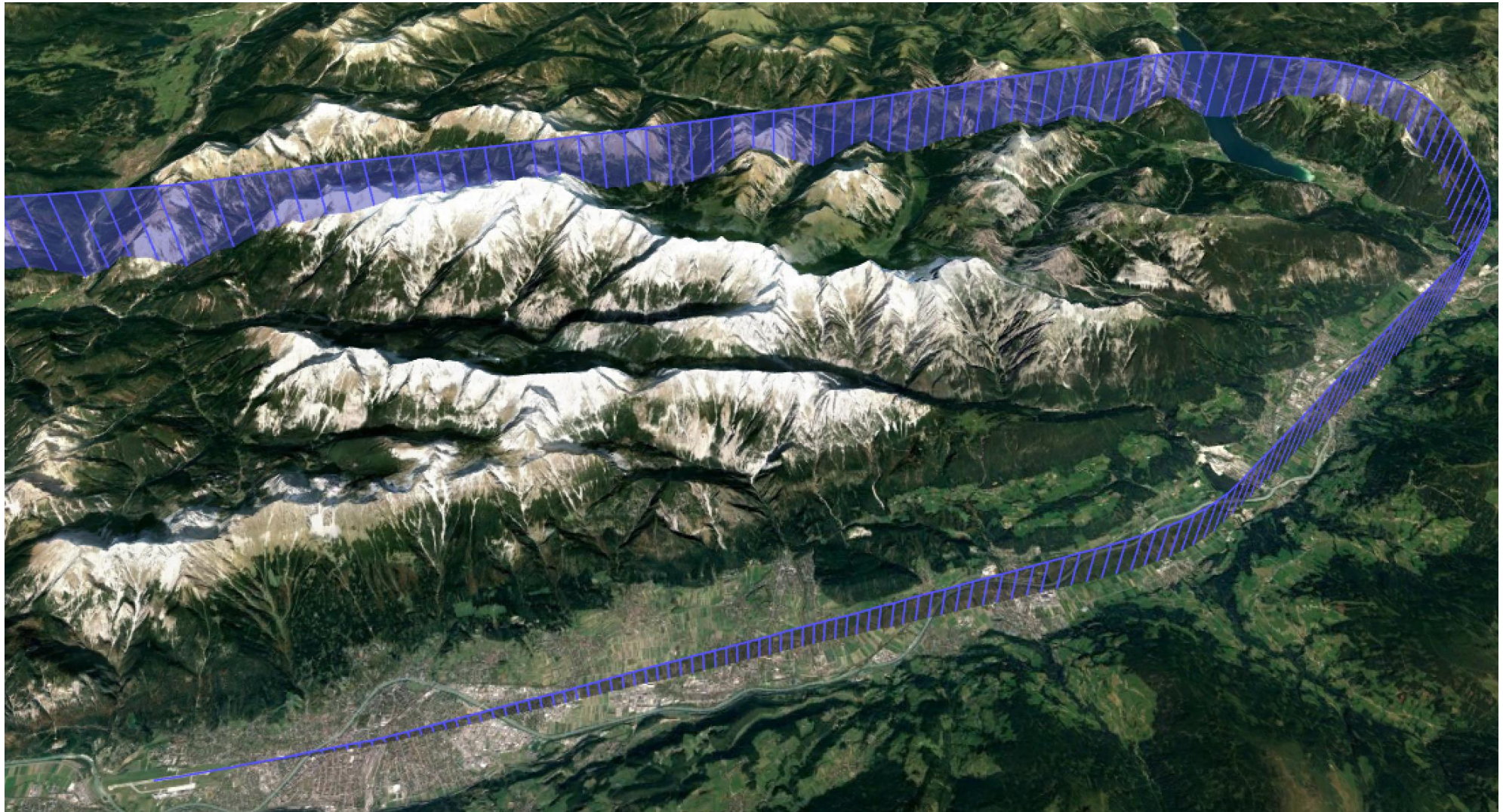
# LOWI - ILS Vs LPV
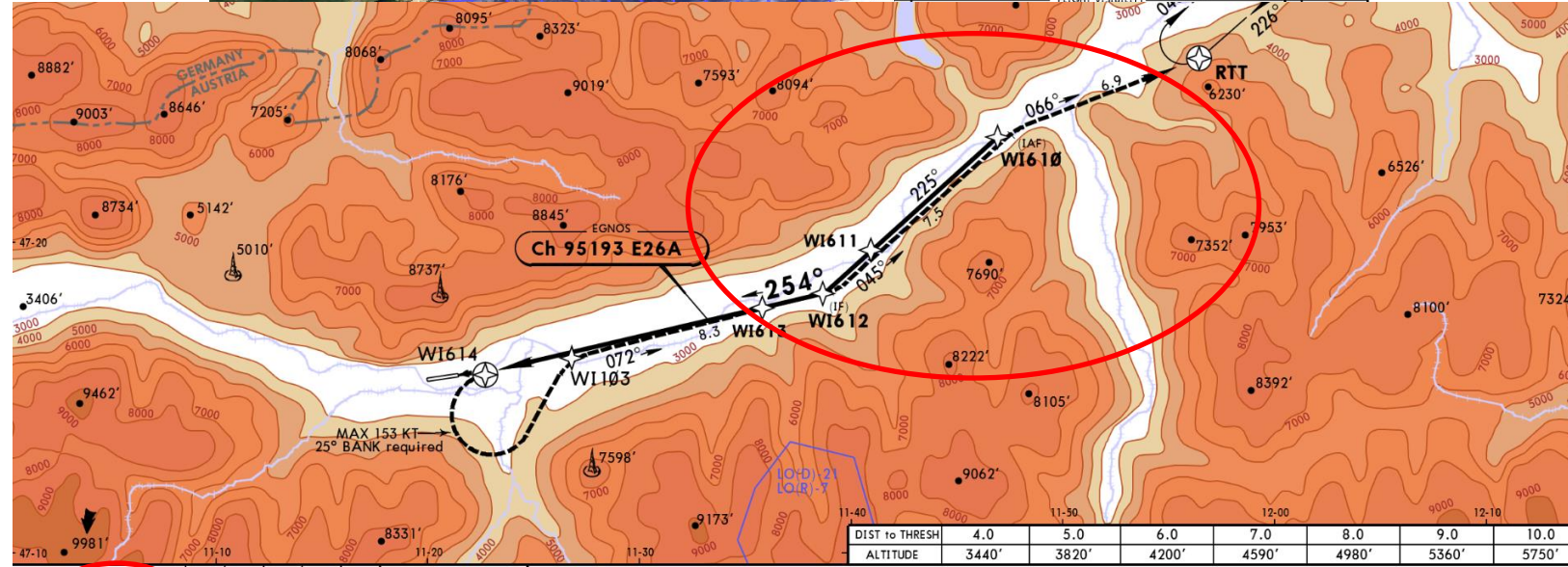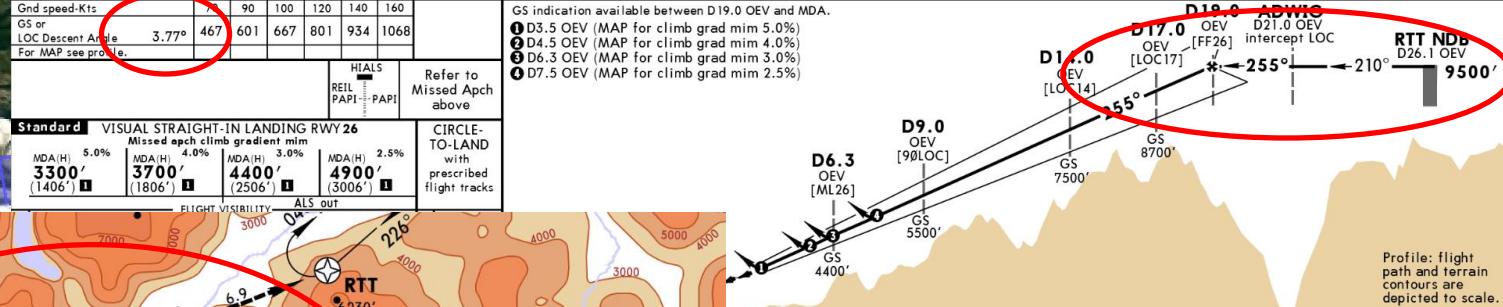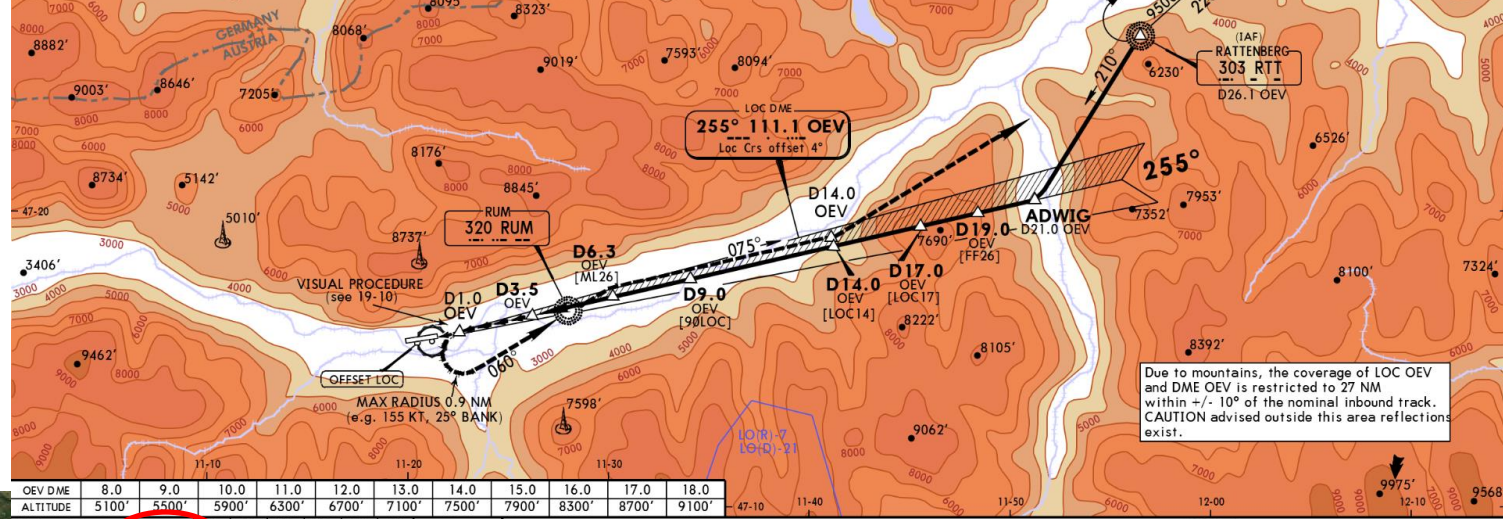
What is required for the operator

- Aircraft capability to perform RNP APCH (LPV, LNAV/VNAV, LNAV);

- Approved documentation by the local Civil Aviation Authority;

- Flight deck crew training;

- Management of Change to identify the risks for each fleet.
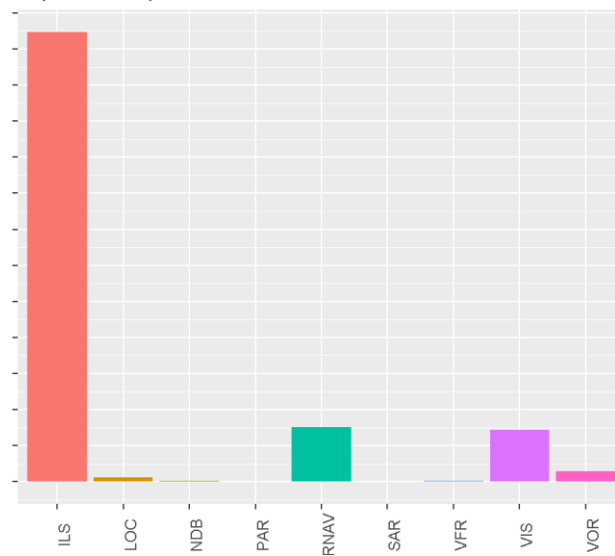
VistaJet operational experience

Count of Approaches flown by Type - Challenger 350 Fleet
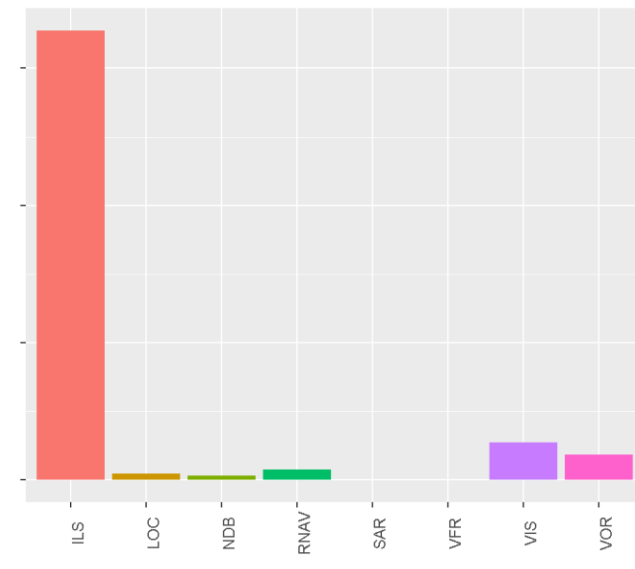Sept 2017 - Sept 2019
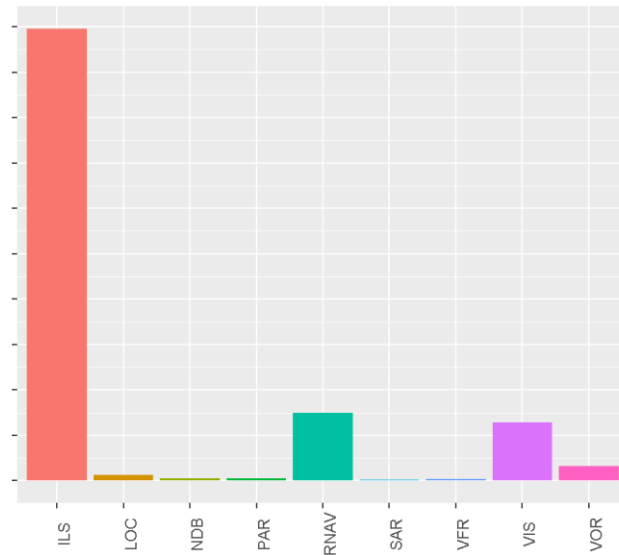
Count of Approaches flown by Type - Challenger 605 Fleet
Sept 2017 - Sept 2019
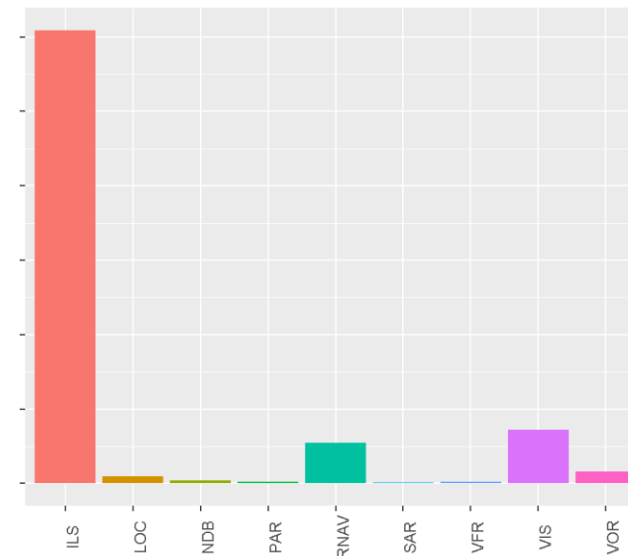
Count of Approaches flown by Type - Global Fleet
Sept 2017 - Sept 2019

Count of Approaches flown by Type - Challenger 850 Fleet
Sept 2017 - Sept 2019

VistaJet operational experience

1. Very few cases of wrong automation set-up by flight crews – Included in the risks during the Management of Change;

2. Few cases of errors in the coding of the Navigation Databases for the Flight Management Systems related to Altitude over waypoints – Included in the risks during the Management of Change;

3. Names and definitions available on charts not always clear with difference between countries - Included in the risks during the Management of Change;

4. Cases of GPS Jamming especially in certain airports close to war zones, especially Tel Aviv (LNAV/VNAV and LNAV) – EGNOS extension ENP East.
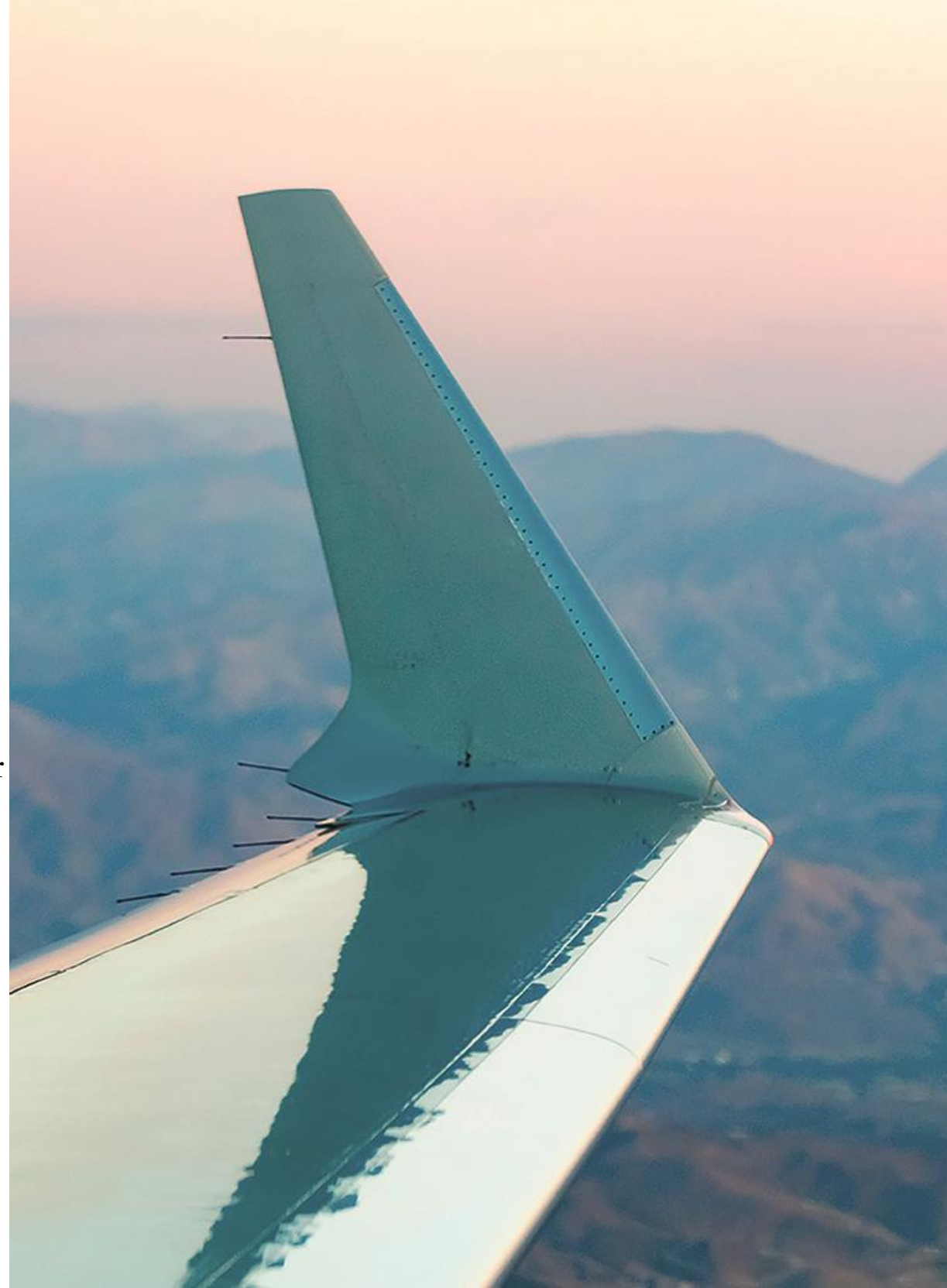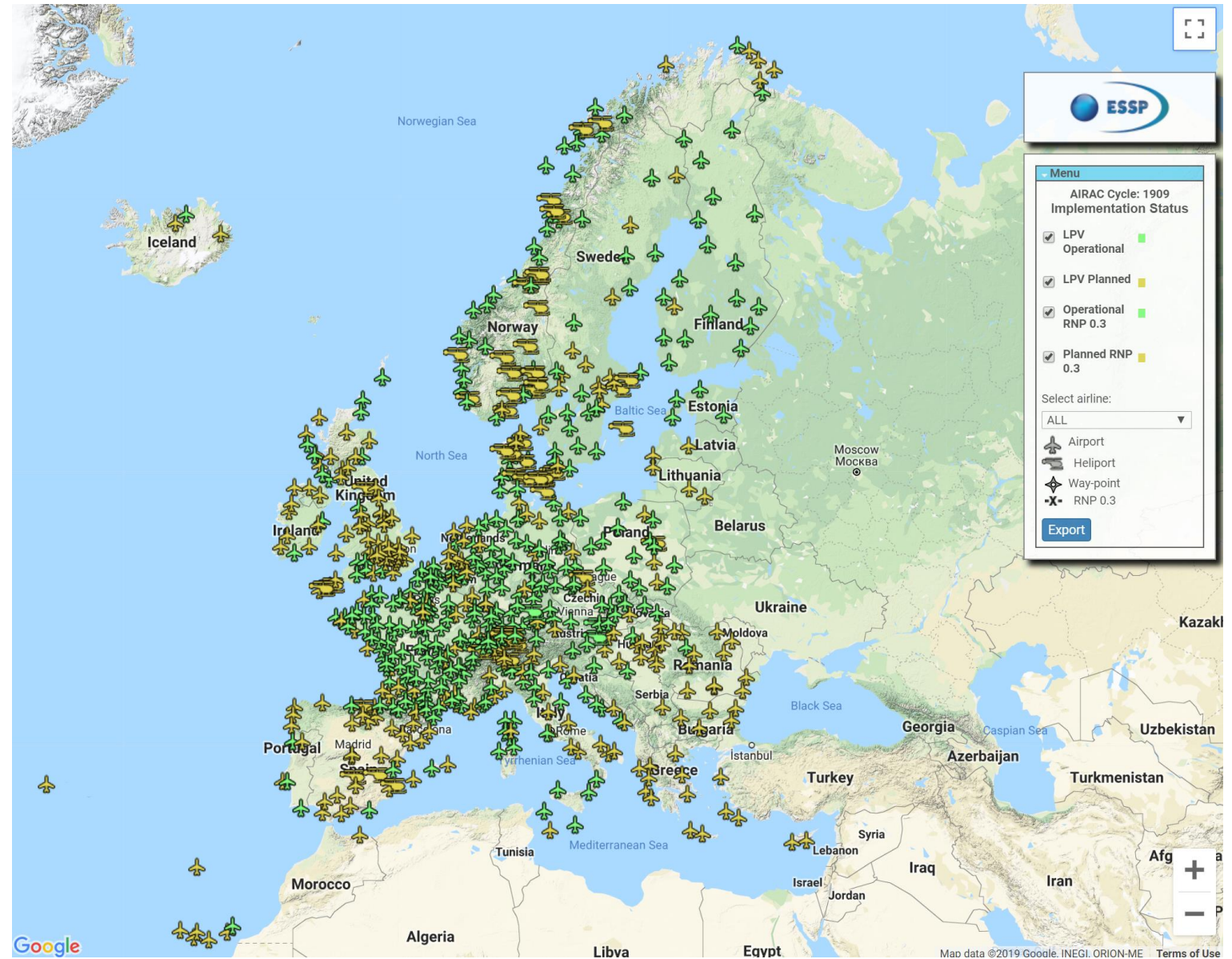
The way forward

EU Regulation (EU) 2018/1048 that mandates a timeline for certain aerodromes on performance-based navigation, hopefully more and more airports will implement such procedures.

EU Regulation (EU) 2016/539 amending pilot training, testing and periodic checking for performance-based navigation.

THANK YOU

Stefano Oprandi

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