

11. 12. 2025

**Local RWY Safety Team
Prague Airport
2000-2025**



Prague / Ruzyně airport



11 km distance from the downtown
17,8 million PAX in 2019 (pre-covid + RU/UA war)
155 k MVTs in 2019 (pre-covid + RU/UA war)

46 MVT/hour of declared capacity

RWY 06/24: 3715x45 m

RWY 12/30: 3250x45 m

Terminal 1: Schengen

Terminal 2: Non-Schengen

Terminal 3: General Aviation

Terminal 4: Military

2 cargo terminals

5 APRONS

90 aircraft parking stands

A380 compatible



300 600 900 1200 1500 m



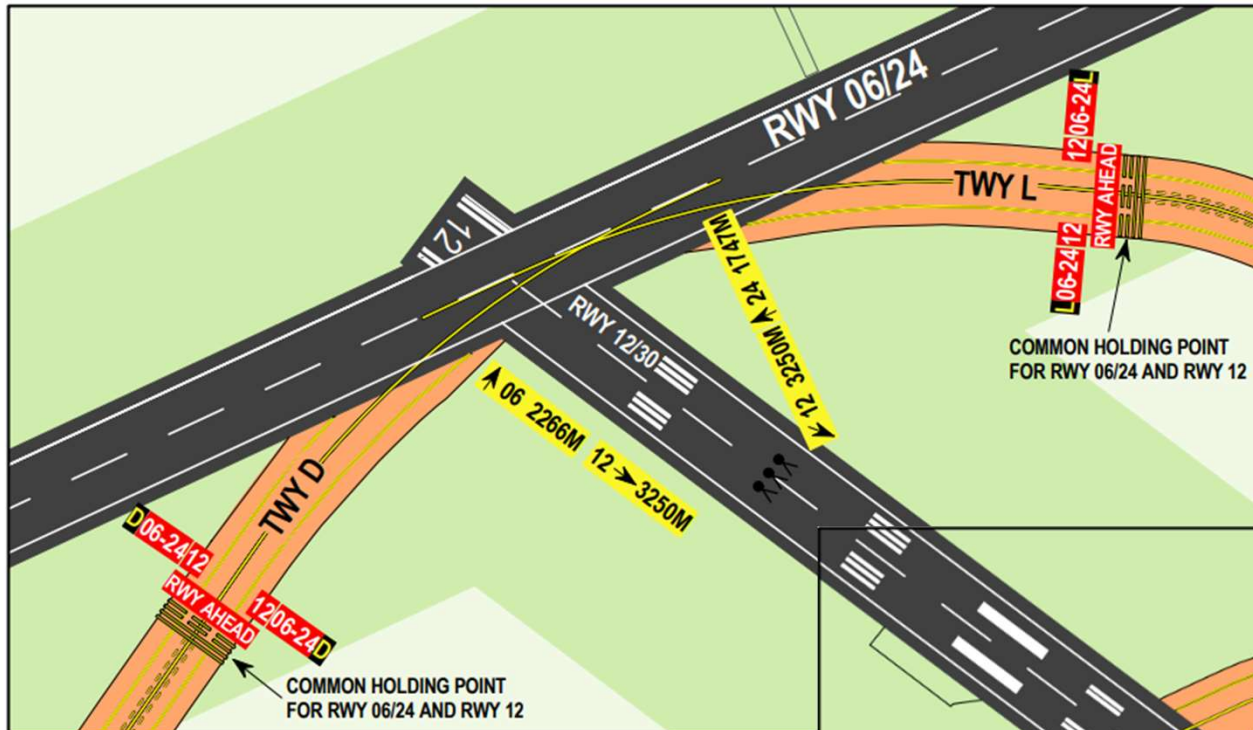
Layout and infrastructure

RWY 06/24 IN USE

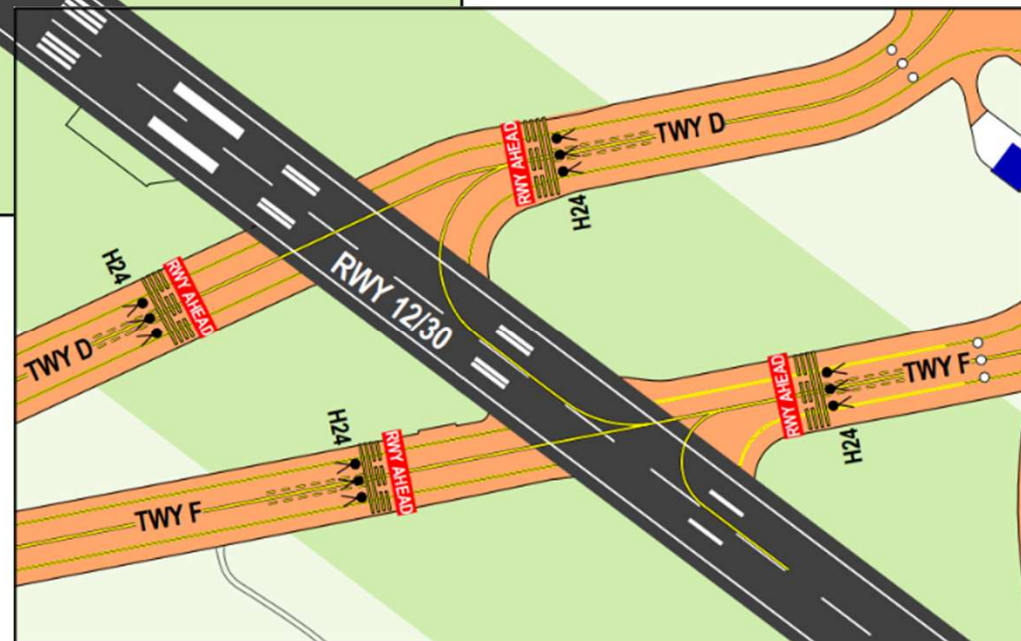
Possible misidentification of TWY D, RWY 12 AND TWY L.

After landing on RWY 06/24 do not vacate via RWY 12 unless explicitly instructed by ATC to do so.

HS1



HS2



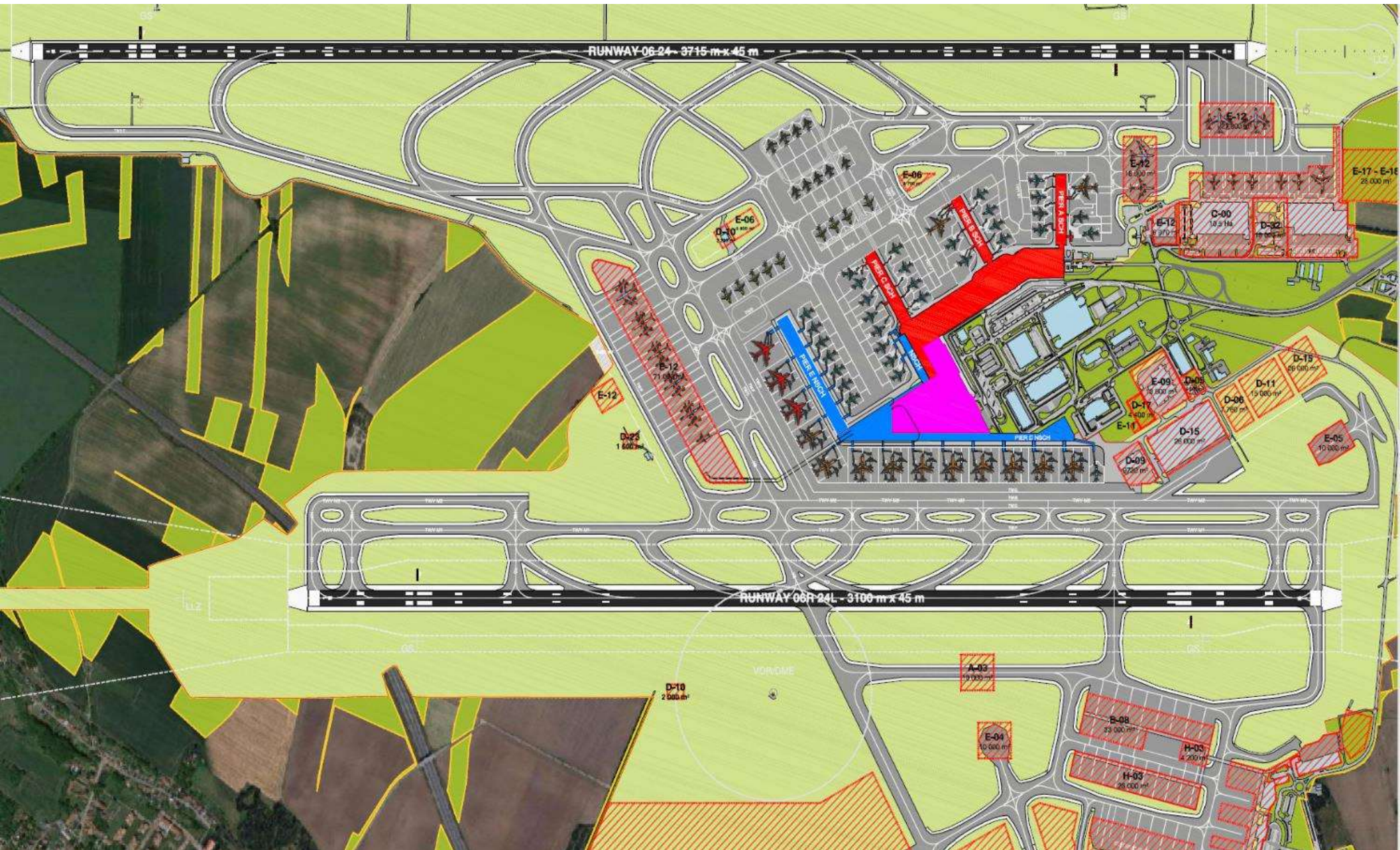
TWYs D and F cross the active RWY 12/30

The Stop Bars on TWYs D and F are controlled automatically. Pilots must expect a short delay between the clearance to cross the active RWY and the consequent Stop Bar switch-off.

Apron North



Airport Masterplan 2045



Safety Teams @LKPR



LRST: **Local RWY Safety Team**

Working group for RWY Safety related issues; Prevention of RWY Incursions, Excursions, Confusions, Bird strikes, Laser attacks, hotspots, Improving situational awareness, Phraseology, Development.

AST: **APRON Safety Team**

Working group for APRON Safety related issues; Damages to aircraft, Ground handling procedures, fuelling, Development.

New: AST reports to AOC, the Airline Operators Committee



Microsoft Teams



Safety is everyone's business



Safety Bus

Annual Safety Conference



Making airport safe together



Safety Teams



Runway
FOD walk

LRST milestones



2000

LRST LKPR established and chaired by the CAA

2010

Chairmanship took over by the Aerodrome operator

2020

LRST kept active, online meetings, online working platform in Teams

2022

LRST back to normal



Local RWY Safety Team



4 organizations, 29 members, meeting once per month

4 onside meetings (3 together with AST), 8 online meetings (placeholders when necessary)

Extended meetings:

APR: to debrief RWY Safety of winter season and prepare for summer season

SEP: to debrief summer, prepare for winter

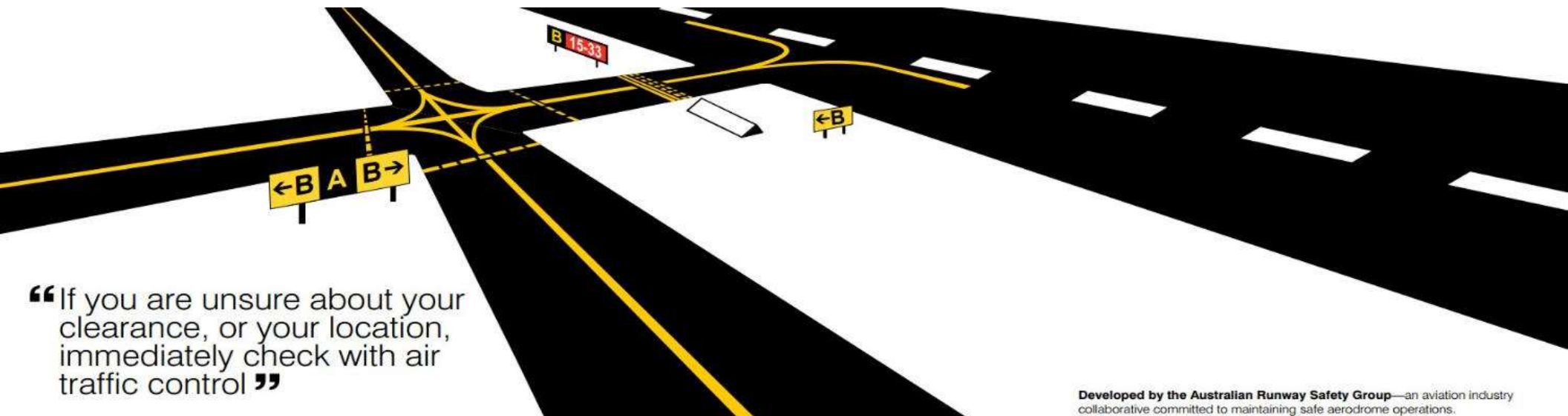
Extraordinary immediate meetings:

When 2 RWY incursions happen in same week, or, whenever RWY safety need us!



LRST tasks 1/2: collaborative management of RWY safety

- **Identifying potential runway safety issues** by reviewing infrastructure procedures, rules and phraseology regularly / on demand
- **Managing safety of changes** analyzing development projects, common identification of Safety risks, providing inputs to Safety studies
- **Analyzing Safety occurrences**, common identification of causes, issuing Safety recommendations
- **Monitoring trends**, types and severity of runway incursions;
- **Reviewing runway safety awareness campaigns** and briefings proposed by Prague Airport (Safety briefs)



“If you are unsure about your clearance, or your location, immediately check with air traffic control”



RWY AHEAD

LRST tasks 2/2: collaborative management of RWY safety

- **Advising management** of companies on runway safety issues and recommending mitigation measures
- **Coordinating the local Safety program** „Prevention of RWY Incursions and Excursion“ and „FOD prevention“
- **Considering recommendations** contained in the European action plans for the prevention of runway incursions and runway excursions
- **Monitoring the compliance** with ICAO and EASA standards and recommendations
- **Studying best practices**, occurrences and measures from other airports
- **Performing outdoor activities:** Detailed runway inspections when under maintenance



LRST resources

[ICAO Annex 19](#)

[ICAO Doc 9870 Manual on the Prevention of Runway Incursions](#)

[ICAO Runway Safety Toolkit](#)

[European Action Plan for the Prevention of Runway Incursions \(EAPPRI\)](#)

[European Action Plan for the Prevention of Runway Excursions \(EAPPRE\)](#)

[Global Action Plan for the Prevention of Runway Incursions \(GAPPRI\)](#)

[Global Action Plan for the Prevention of Runway Excursions \(GAPPRE\)](#)

[European Runway Safety Initiative](#)

[Local Runway Safety Teams \(LRST\)](#)

[Runway Incursion Severity Definitions](#)

[Runway Incursion Severity Risk Calculator](#)



Typical meeting agenda of LRST

1. Actual safety performance (SPI + events)
2. Actual crew experience with RWYs
3. Safety occurrences and investigations
4. Management of Change - Planned activities, developments, common identification of hazards
5. RI/RE prevention programme
6. FOD
7. Any other business



Safety Indicators

Key Safety Performance Indicators FIXED

For the period from January to March in 2022 and 2023

6 most important Lagging SPIs out of total 35 are monitored by the Safety review Board. Operations returned back to "normal".

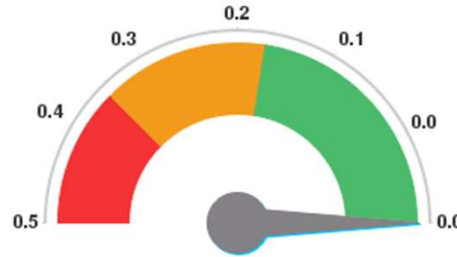
RUNWAY SAFETY



RWY Incursion

Total 1 in 2023 (1 x in 2022)

1x A/C on DEP, lit STOPBAR was crossed.



RWY Excursion

Total 0 in 2023 (0 x in 2022)

No occurrences. Terrain modelling of the strip 06/24 + treatment of buried surfaces finished.

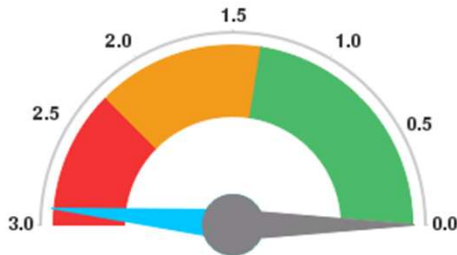


Wildlife

Total 3 in 2023 (4 x in 2022)

Target performance achieved. Continuous monitoring.

APRON SAFETY



Aircraft damages

Total 0 in 2023 (0 x in 2022)

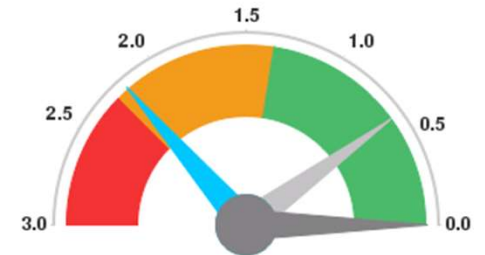
Target performance achieved. Continuous monitoring.



Pavement damages

Total 34 in 2023 (6 x in 2022)

More preventive measures due to favourable climatic conditions (RWY 12/30). Alkaline reaction of aggregates (APN C3).



Near Miss A/C x GSE

Total 0 in 2023 (1 x in 2022)

Target performance achieved. Continuous monitoring.

Occurrences / 10 000 MVT



2022



2023



EU 2023

SAFR = Safety recommendation



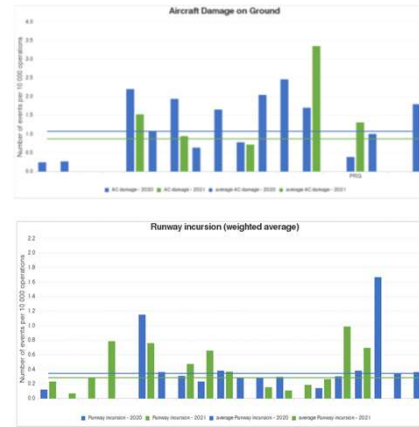
LRST uses Safety performance data



Safety Benchmarking Group

Voluntary group promoting aviation safety at 18 EU member airports through

1. **benchmarking** on SPIs: harmonized Safety Performance Indicators
2. **openly sharing** information on SPIs
3. **openly discussing** corrective/preventive actions and lessons learnt from incidents.



- Aircraft fuel spills
- Damage to aircraft
- Wildlife strikes
- FOD on runway
- Near misses
- Runway incursions
- Runway excursions

Data4Safety
Partnership for Data Driven Aviation Safety Analysis

Supported by EASA



New programme: Data4Safety

Voluntary partnership for the sharing and analysis of Safety data.
Outputs: blind benchmarking, studies, vulnerability discovery.
Prague Airport applied in 2022.
All EU Aviation stakeholders are encouraged to join.

Way we go now: Systematic approach to innovations



Systematic evaluation of new technologies and procedures for prevention of RI/RE

Technology for assessment of RWY contamination

Inspections by drone / autonomous vehicle

Follow the Greens

RWY Status Lights

Stopbars with reduced spacing of lights 1.5 m (standard is 3 m)

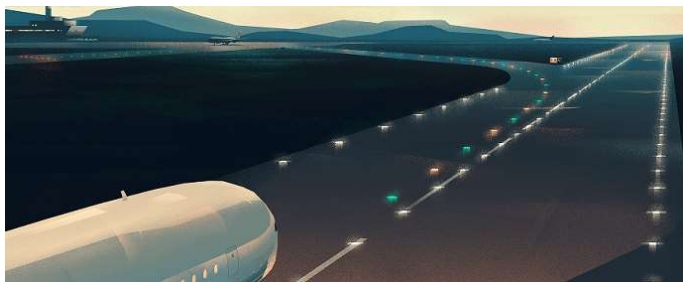
Stopbars CAT II/III H24

New Stopbars CAT I

Stopbars in LED

RWY Closure Marker

+ solutions from ANSP and AOs



The LRST will gradually discuss each solution, create a solution card that summarizes the basic facts, pros and cons, costs, alternative solutions and LRST recommendation: whether the solution should be followed and eventually implemented, or whether to leave and not consider further.

Way we go now: Safety II and Safety III

Safety is usually defined as a state where **as few things as possible go wrong**. Humans are viewed predominantly as a liability or hazard.“ (Safety – I).

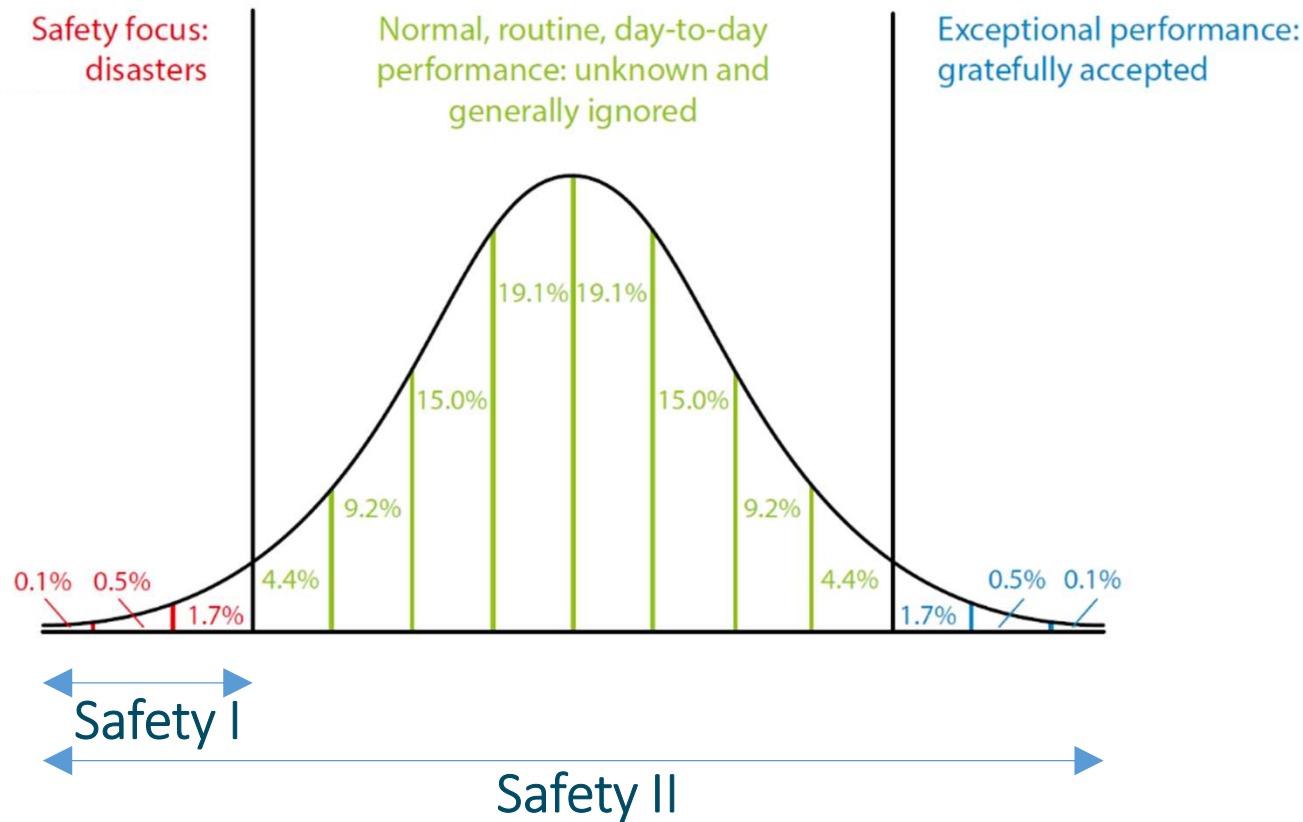
Safety-II aims at ‘as many things as possible go right’ and relates to the system’s ability to succeed under varying conditions.

Humans are consequently seen as a resource.

Safety-III system thinking – system must be designed to allow humans to be flexible and resilient and to handle unexpected event.

The goal is to eliminate, mitigate or control hazards, which can lead to the losses.

CAST and STPA analysis.



„By combining both ways of thinking, we move SMS of PRG toward Safety II and make the airport Safety more resilient.“

Safety II in use



Airside inspection data analysis – in collaboration with university students

Nálezů



17.11.2024 26.6.2025

Seznam nálezů Heatmapa Mapa

Kontrol 2 509	Nálezů 400	Okamžitě napraveno 122	Nevyřešeno 6	Průměrný čas řešení 1d 14h 44m
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- Běžná kontrola
- Mimořádná kontrola
- Canceled
- Closed
- OPRAVENO HNED**
- No
- Yes

- PRIORITA**
- 1
 - 2

TYP KONTROLY

Vše

SECTION

Vše

CONDITION

Více výběrů

DISPEČER

Vše

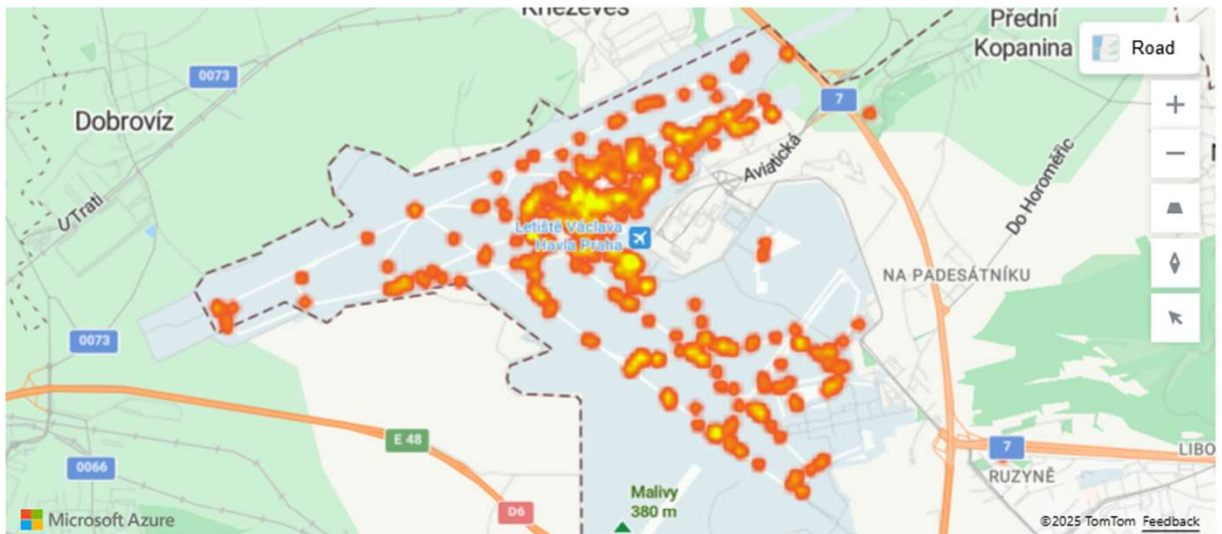
OPRAVENO KÝM

Vše

ID NÁLEZU

Vše

X	Y	kontrol	nálezů
14,261	50,109	1 953	7
14,266	50,105	278	7
14,256	50,108	1 660	6
14,262	50,108	2 030	6
14,263	50,108	2 213	6
14,266	50,111	1 645	6
14,260	50,107	1 678	5
14,261	50,108	1 686	5
14,262	50,107	1 560	5
14,262	50,109	2 104	5
14,265	50,105	1 416	5
14,267	50,103	1 559	5
14,271	50,112	1 614	5
14,274	50,094	992	5
14,256	50,106	1 212	4
14,257	50,103	751	4
14,258	50,106	1 711	4
14,262	50,105	1 309	4
14,262	50,110	1 592	4
14,264	50,105	1 925	4
14,265	50,109	375	4
14,266	50,104	1 859	4
14,267	50,099	993	4
14,272	50,099	1 486	4
14,273	50,113	1 743	4
14,276	50,113	1 577	4
14,282	50,100	1 306	4
14,257	50,105	1 409	3
14,257	50,109	1 652	3
14,259	50,107	1 883	3
14,261	50,105	1 359	3
14,264	50,111	1 606	3
14,265	50,104	1 738	3
14,266	50,098	993	3
14,266	50,108	1 209	3
14,267	50,109	1 817	3
14,267	50,110	1 462	3
Celkem		2 505	400



Section	Condition
<input type="checkbox"/> Kontrola dočasných opatření	
<input type="checkbox"/> Letištní a navigační zařízení	
<input type="checkbox"/> Neporadek LKPR	
<input type="checkbox"/> Povrch zpevněných ploch	
<input type="checkbox"/> Prilehlé pozemní plochy	
<input type="checkbox"/> Security	
<input type="checkbox"/> Svetelná zabezpečovací zařízení	
	APRON
	Naváděcí rady pomoci A

Nález okamžitě napraven

No	Yes
278	122



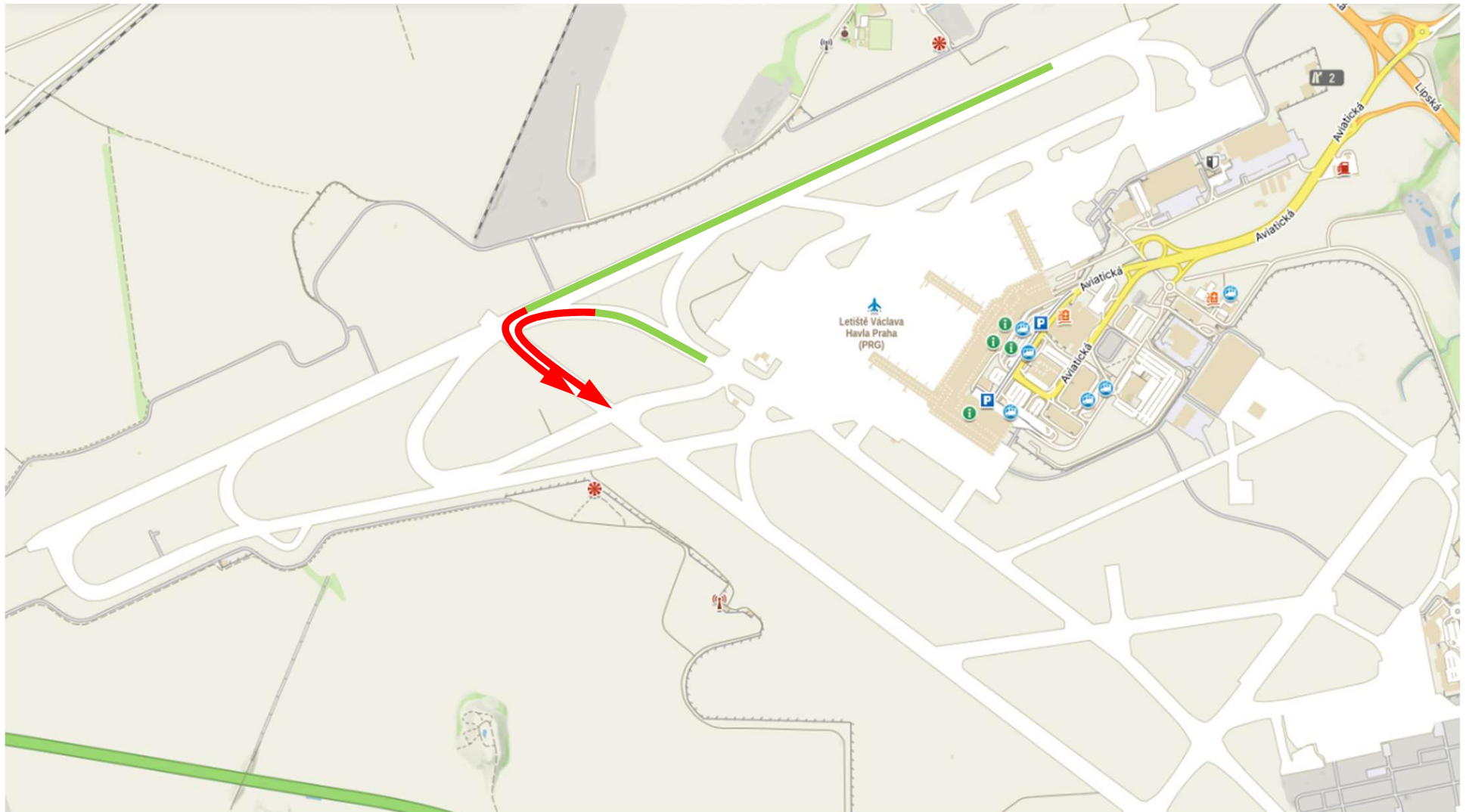
TOP stories in LRST's history



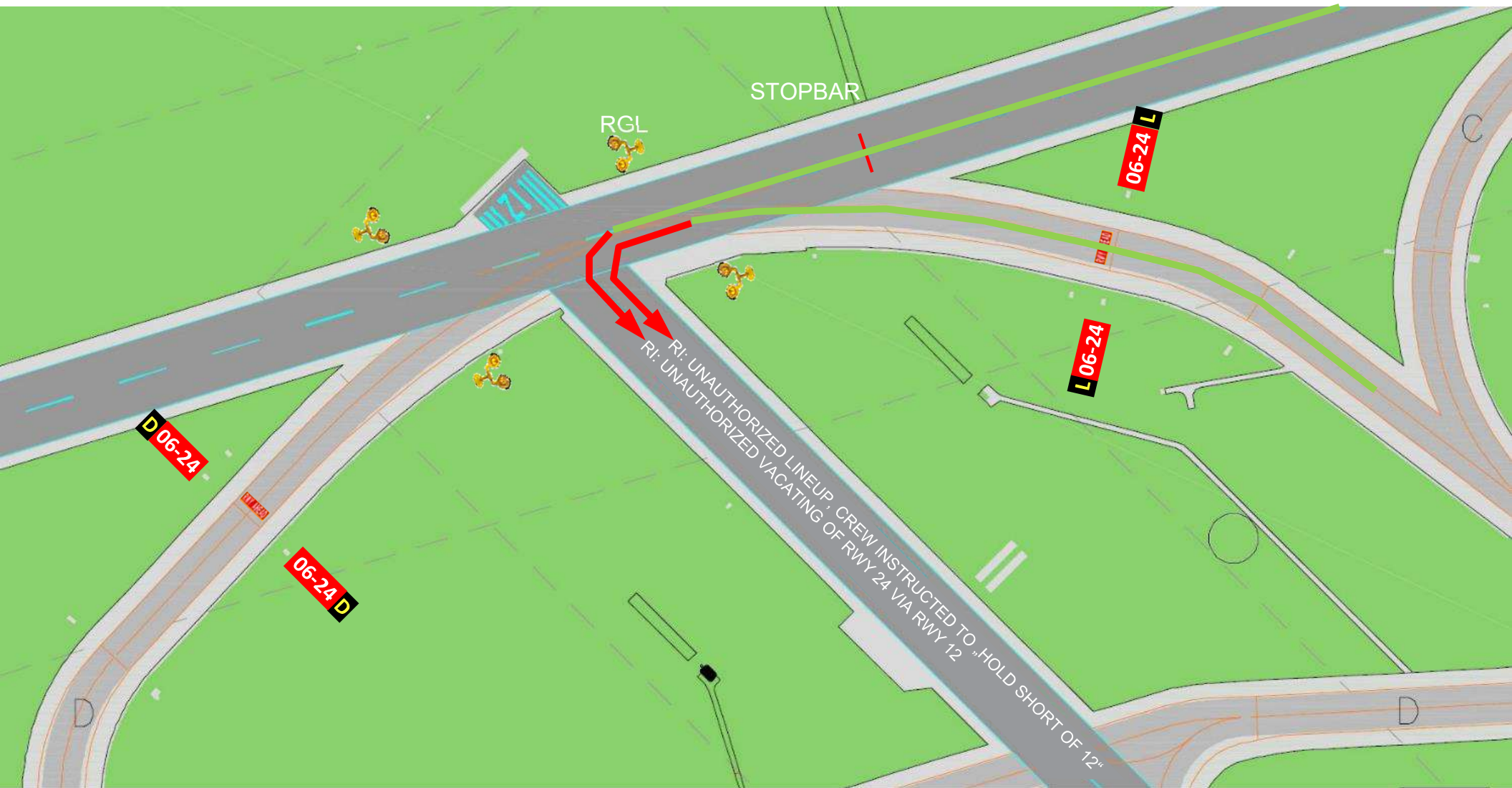
Hottest issues in LRST's history

1: Runway incursions: vacating RWY 24 via RWY 12

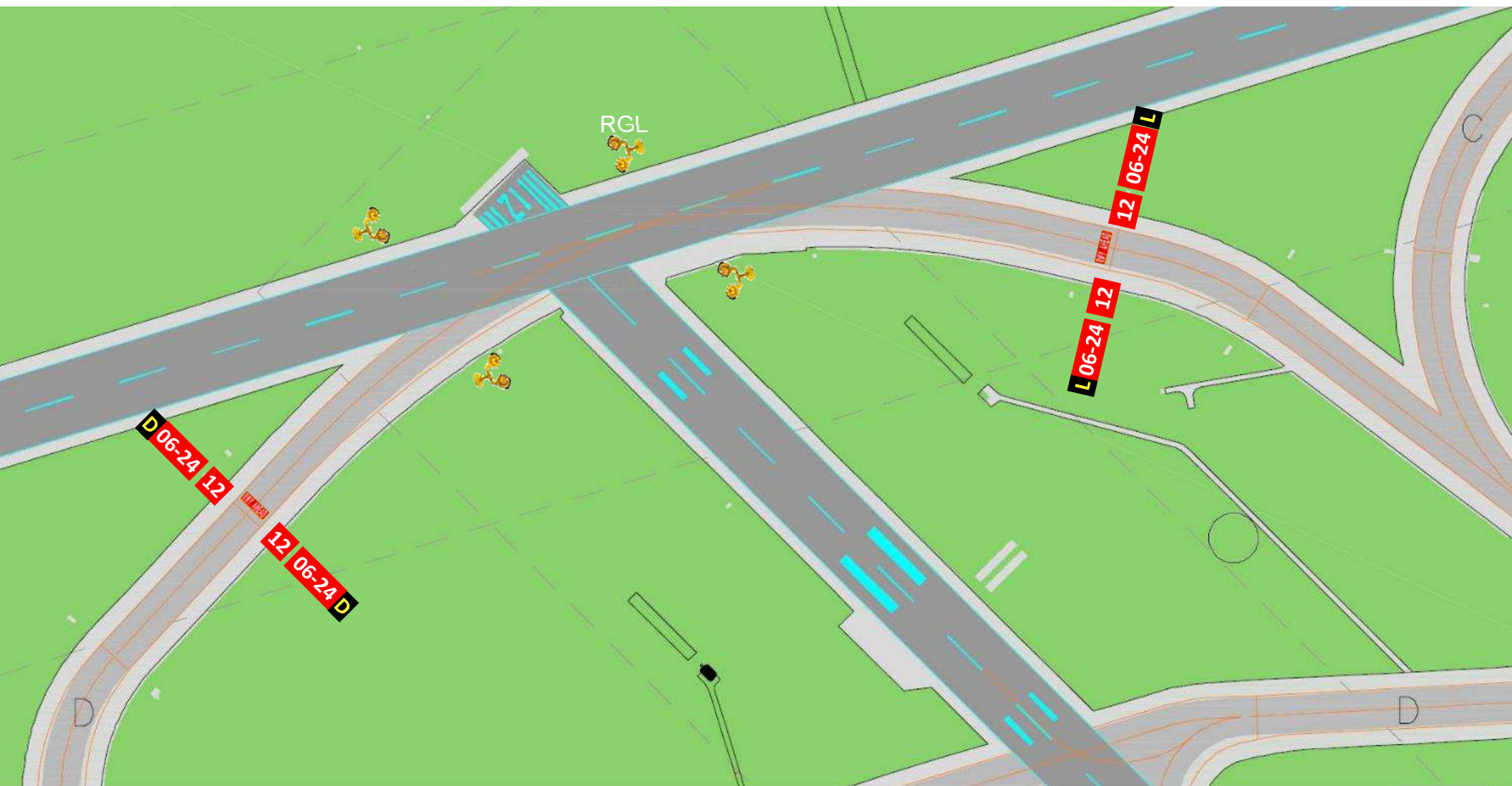
2: Runway incursions: lineup RWY 12



RWY crossing BEFORE 2013



RWY crossing AFTER 2013

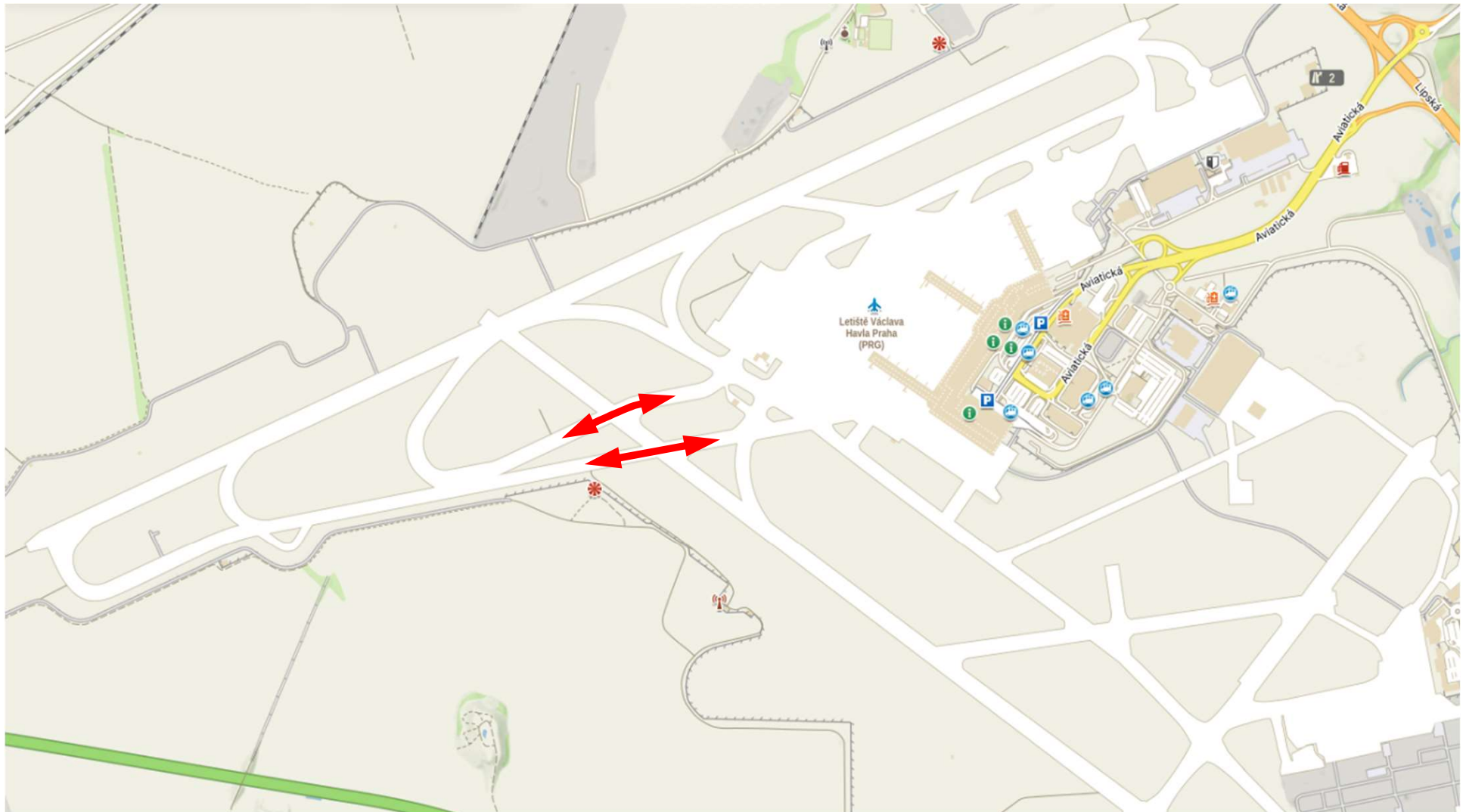


RWY ~~crossing~~ PLANNED



Hottest issues in LRST's history

3: Runway incursions: crossings of RWY 12/30 on TWYs F and D.



Pilots: When approaching a holding point with intention to enter a runway, **verify mutually, if you are authorized... both 100% sure?** In case any crew member expresses uncertainty, ask the TWR again.

Airlines: Safety dept. highly recommends to add the STOP AND HOLD procedure to the **recurrent training**.



Issued: February 2017
Target audience: pilots

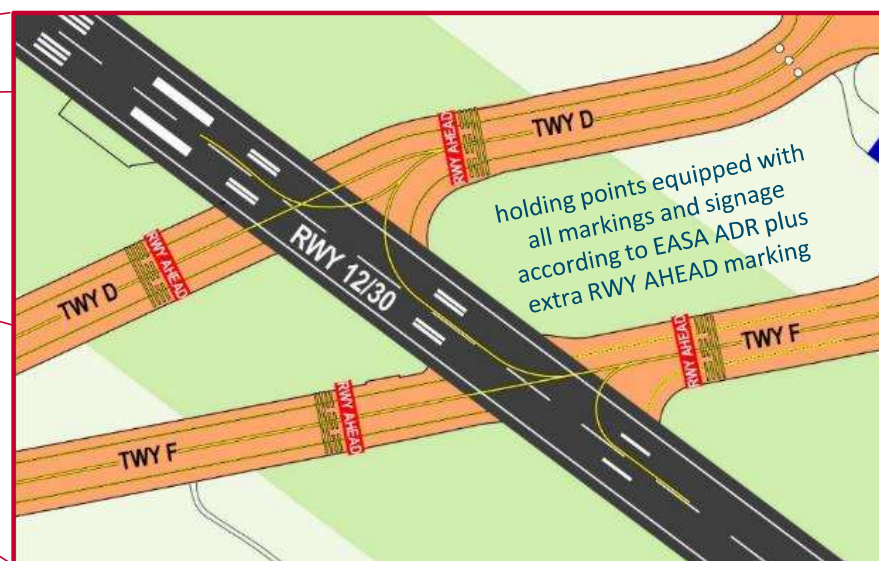
Safety briefs 48

**Instructed to „HOLD SHORT OF 12/30“?
Be so kind and STOP AND HOLD!**

ARRIVALS 24
When taxiing via
D/E/F to gate

DEPARTURES 06
When taxiing via
D/F to RWY 06

focus on instruction
to **CROSS/HOLD SHORT OF RWY 12/30**.



Compliance with „Hold short of...“ procedure is unsatisfactory. Six Safety occurrences of crossing RWY 12/30 without authorization recorded in 2016/2017. What happened?

1. **CREW INSTRUCTED TO TAXI AND HOLD SHORT OF 12/30**
2. **CORRECT READBACK FROM THE COCKPIT**
3. **UNAUTHORIZED CROSSING WITHOUT STOPPING. CAVOK.**

New issue: crossing a lit stop bar



4 out of the total 5 RIs of 2022 were accompanied by crossing the illuminated STOPBAR and the nature of RI in 2023 was of this kind. In all cases the cloudbase LVP was in force, recorded on ATIS and instructed by ATCOs, but the crews crossed CAT II/III anyway. In our investigations they reported that the visibility on the ground was ok and they did not expected the LVP and STOPBARS to be on.

Measures taken:

- Infrastructure check: ok*
- Safety Brief 81 saying that The LVP does not mean just fog; also a low cloud base can be the reason.*
- LRST and workshops with aircraft operators*

It is proposed to focus more on the topics of STOPBARS and LVP in the crew training.

Safety briefs 35

Issued:
April 2016

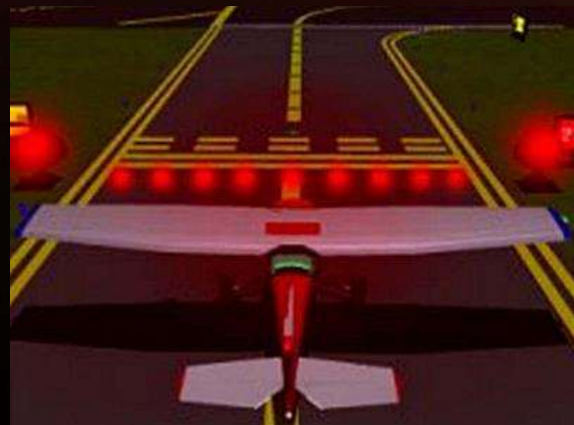
ČERVENÁ znamená STŮJ

Stop příčka je řada červených zapuštěných návěstidel na vyčkávacím místě. Pokud stop příčka svítí, znamená to, že v prostoru za ní je jiný provoz a vy musíte vyčkat.

RED means STOP

Stop Bar is a row of red inset lights at a holding point. When the stop bar is lit, it indicates there is a traffic in the area behind the Stop Bar and you have to wait.

Piloti a řidiči vozidel,
Nikdy nepokračujte přes rozsvícenou stop příčku. Křižovat ji smíte teprve tehdy, když TWR vydá povolení pokračovat a stop příčku ZHASNE.



Pilots and drivers,
Never cross an illuminated Stop Bar. You are allowed to proceed past a Stop Bar when ATC provides the clearance AND switches the Stop Bar OFF.

Summary



Issues solved and risks mitigated

Runway incursions: vacating RWY 24 via RWY 12

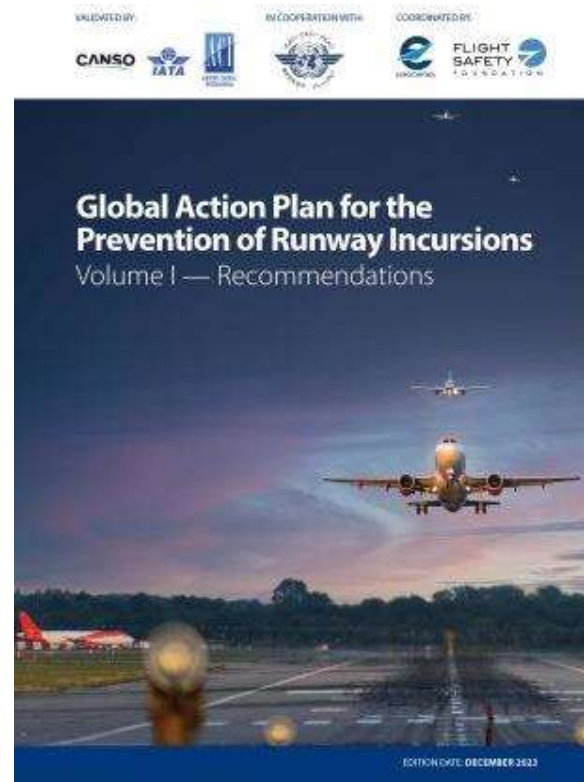
Runway incursions: lineup RWY 12 via RWY 06/24

Runway incursions: crossings of RWY 12/30 on TWYs F and D.

Issues under investigation

Runway incursions: failure to stop at a holding point on taxi-outcrossing a red stop bar

GAPPRI: Global Action Plan for the Prevention of Runway Incursions (GAPPRI)



Links

[Global Action Plan for the Prevention of Runway Incursions \(GAPPRI\)](#)

[Global Action Plan for the Prevention of Runway Excursions \(GAPPRE\)](#)

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