



APRON WINTER SERVICE KEFLAVIK AIRPORT

Apron surface condition assessment

September 2022



ISAVIA

DEFINITIONS

/ Surveillance and condition assessment

- Defined condition classes
- The system reflects actual need for classification
- Simple definitions, no measurements needed

/ Assessment results

- Registration, logging
- Distribution / communication

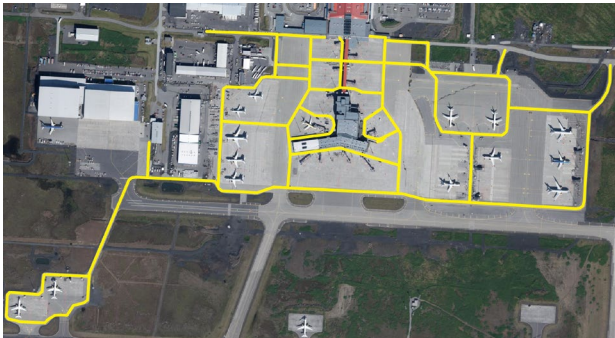
/ Purpose and usage

- Snow team: Prioritisation of efforts
- Users: Real time information, preparedness



APRON SUB-AREAS

1. A/C parking stands
2. Taxilines
3. Service roads
4. BHS hall entrance/exit



WINTER SERVICE TASKS

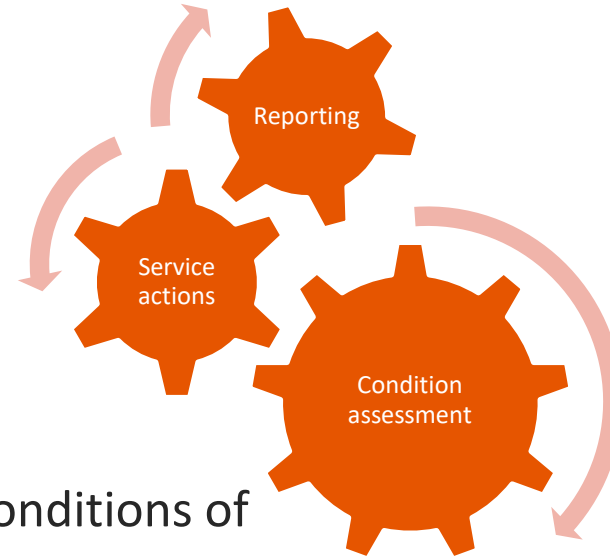
/ Winter service on the apron includes:

1. Conditions assessment
2. Snow clearing and friction improving actions
3. Reporting of the conditions and service actions

/ Isavia snow-team responsibilities:

Airport Operations should assess and report on the conditions of aircraft stands prior to scheduled aircraft handling or movement

- The task may be deligated to other entities

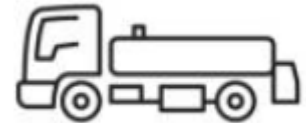
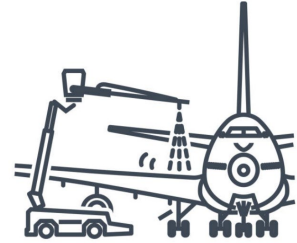


WHO ARE THE USERS AND WHAT ARE
THEIR CAPABILITIES?



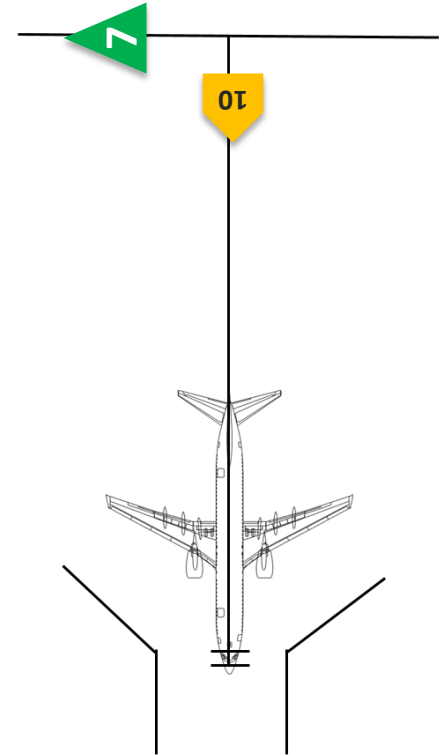
„TRAFFIC“ ON AIRCRAFT STAND

- / Aircraft by own engine
- / Aircraft being tugged/pushed
- / Ground support equipment on wheels
- / Passenger-busses
- / Staff, walking
- / Passengers, walking
- / Passenger boarding bridge

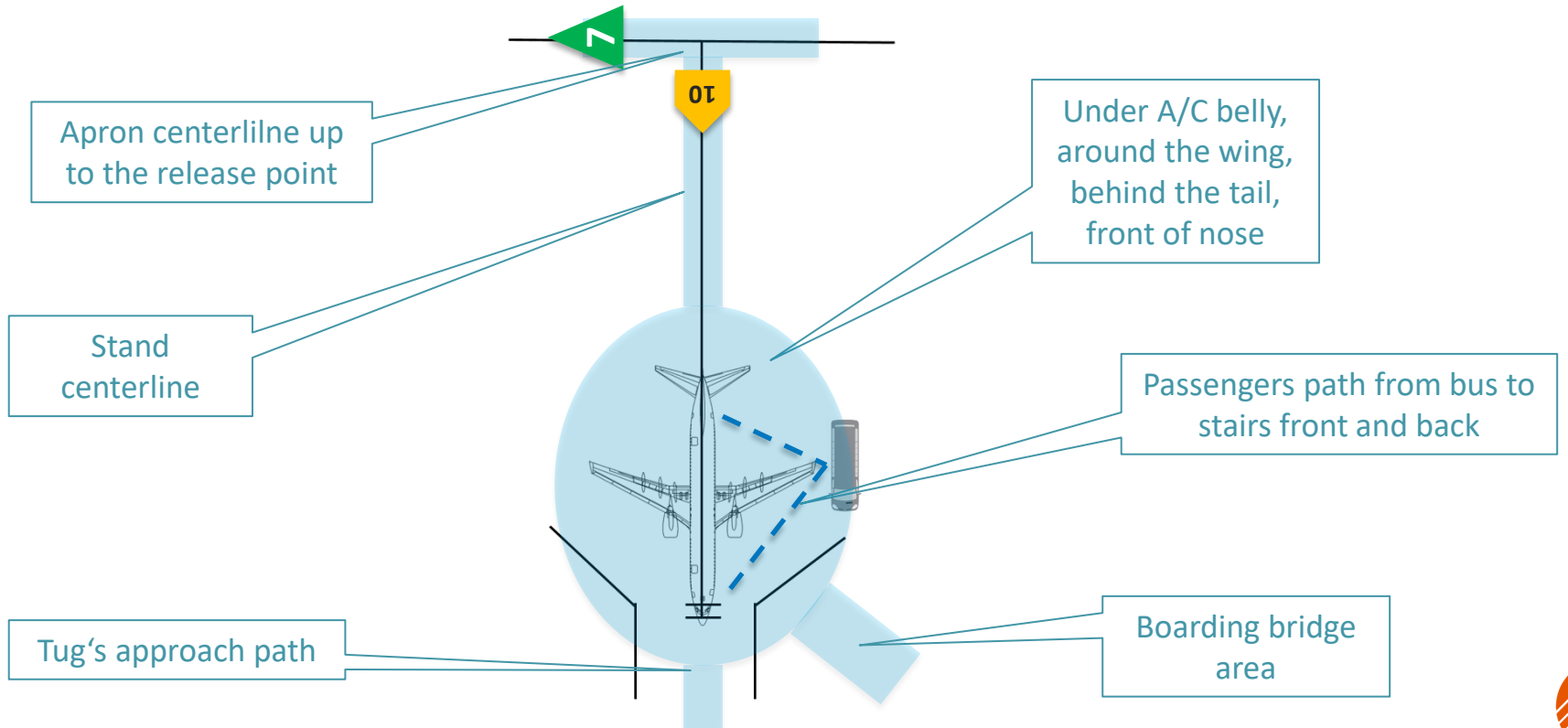


WHERE IS THE TRAFFIC WITHIN THE STAND?

- / Who is where?
- / How much slipperiness is tolerated by different users?
- / How much sanding is needed for whom?
 - Aircraft by own engine
 - Aircraft being tugged/pushed
 - Ground support equipment on wheels
 - Passenger-busses
 - Staff, walking
 - Passengers, walking
 - Passenger boarding bridge



AREAS FOR ASSESSMENT



APRON CONDITIONS CLASSES



DEFINITION OF SURFACE CONDITION

GREEN	Clear	Normal winter operation
YELLOW	Access with caution	
ORANGE	Unreliable	Use stand with great care <ul style="list-style-type: none">• Sanding may improve• Snow clearing/sweepeng may improve
RED	Inoperable	No handling advised



DEFINITION: CLEAR / GREEN

Clear	<ul style="list-style-type: none">• Wet or dry, mostly free of winter contaminant• Wet, chemically treated• Patchy contaminant (up to 25% coverage) only if:<ul style="list-style-type: none">○ Wet snow or slush, thin layer and no compaction○ Dry snow on cold surface, no compaction

Winter
contaminants
may be present
but do not affect
traffic



DEFINITION: INOPERABLE / RED

Inoperable	<ul style="list-style-type: none">• Very slippery for aircraft, equipment and persons• Traffic and handling not possible due to snow amount• Layered contaminant, water or slush on top of ice or compacted snow• Mishaps or accidents are likely due to slipperiness

Inoperable due to snow, or severe slipperiness

Service treatment may help

Weather may prevent any improvements



DEFINITION: ACCESS WITH CAUTION / YELLOW

Access with caution	<ul style="list-style-type: none">• Patchy or thin contaminant, good friction• Surface markings might be covered• Thin layer of frost, does not get slippery due to traffic• Stand might be snow covered, thin layer wet or dry snow, does not get slippery due to compaction by traffic• Old sand underneath snow or slush might be helpful but not necessary• Dry and level ice patches, if visible and air temperature below zero• Slushy chemical mixture from aircraft de-icing

Snow must not hinder traffic

Mishaps may occur if sufficient care is not taken



DEFINITION: UNRELIABLE / ORANGE

Unreliable	<ul style="list-style-type: none">• Covered by a thicker layer of snow or slush that compacts and becomes slippery right away by traffic• Frost accumulation during a longer period that becomes slippery right away by traffic• Compacted snow or ice that becomes moist or wet due to hot weather• Multi-layer contaminant; snow on top of ice or compacted snow• Uneven ice or compacted snow that prohibits easy movement and control of equipment• Wet surface freezes on a significant portion of the area

Use stand only
with great care



SAMANTEKT FÆRÐARFLOKKA- FLUGHLÖÐ

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Inoperable	<ul style="list-style-type: none">• Very slippery for aircraft, equipment and persons• Traffic and handling not possible due to snow amount• Layered contaminant, water or slush on top of ice or compacted snow• Mishaps or accidents are likely due to slipperyness

Normal winter operation

Use stand with high level of caution

No handling advised



CONDITION ASSESSMENT
WEATHER MONITORING



CONDITION ASSESSMENT

- / Assessment shall be fair and show knowledge on the influence of surface condition on aircraft handling
- / Don't expect that visual inspection only can tell if the result is YELLOW or ORANGE
 - Snow cover may result in yellow or orange
- / The most likely effect of the contaminant on aircraft handling is more important than the contaminant name or appearance
 - What's underneath?
 - How's the weather?
 - What is the most likely effect of the cover on the traffic?
 - What is the most likely effect of traffic on the cover?
 - Does the snow compact by traffic?
 - Does it become slippery?



MONITORING THE CHANGES

- / Weather affects the surface condition
 - Snowing / raining
 - Getting colder or warmer
 - Air humidity
 - Surface temperature
 - Wind and drifting snow
 - Sun radiation and cloud cover
- / Traffic affects the surface condition
 - Wheels may compact the snow
 - Jet-blast heats the surface
 - De-icing liquid spill from aircraft body
- / Snow scraping and sweeping, sanding, chemicals
 - Different equipment and materials have different results depending on the conditions

Look into the weather measurements and forecast

Step out of your vehicle for the inspection when needed!



Apron Condition Assessment - App

- Internal view for Isavia staff
 - Conditions on the apron updated
 - Registrations on stands updated
 - Requests from stakeholders processed

Time	Stand	Status	Requester	Priority	Time
11:48, 14.03.22	Stæði 6	Halfráð	HCC	40	→ 3
11:49, 14.03.22	Stæði 6	Í vinnu	HCC	1000	→ 10:30
11:48, 14.03.22		Ný beiðni	HCC		
11:43, 14.03.22	Stæði 1 Gröflet	Ástandamat	HCC		
11:42, 14.03.22	Stæði 1 Öfent	Ástandamat	HCC		
09:43, 14.03.22	Stæði 57 Fært með aðgát	Ástandamat	HCC		
09:43, 14.03.22	Stæði 55 Fært með aðgát	Ástandamat	HCC		

Time	Stand	Status	Requester	Priority	Time
11:37, 14.03.22	Cancelled	TF-FIH	40	→ 3	10:30 - 11:00
11:37, 14.03.22	Cancelled	TF-FIG	42	→ 5	10:00 - 10:30
09:51, 14.03.22	Active	TF-FIG	42	→ 5	10:00 - 10:30
09:51, 14.03.22	Active	TF-FIH	40	→ 3	10:30 - 11:00

- External view for stakeholders
 - View conditions of the apron
 - Registrations on stands visible
 - Requests for Airport Operations submitted

Time	Stand	Status	Requester	Priority	Time
11:48, 14.03.22	Stæði 6	Halfráð	HCC	40	→ 3
13:46, 02.03.22	Rifa undan brúnn st. 1, 3, 5, 7	Algreitt	HCC		
14:54, 17.02.22	Söndun	Algreitt	HCC		
15:27, 15.02.22	best	Söndun	HCC		

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