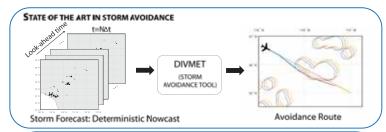


### 9<sup>th</sup> SESAR Innovation Days



## PSA-Met Project Overview





## PROBABILISTIC WEATHER AVOIDANCE ROUTES FOR MEDIUM-TERM STORM AVOIDANCE (MTSA) MTSA will help air traffic controllers by suggesting

MTSA will help air traffic controllers by suggesting unique avoidance routes that take into account the uncertainties present in the storm-avoidance process. The key enabler is DIVMET-P.

**DIVMET-P** is able to generate these routes thanks to two new features:

- The consideration of an ensemble of Nowcasts (a set of M different Nowcasts).
- The consideration of a maximum admissible risk in the avoidance strategy (arisk level value). This is

done through a series of computations: The hazardous weather regions, the risk field, and the risk field isoline

#### (1) HAZARDOUS WEATHER REGIONS

For each nowcast ensemble member, and each nowcast sampling time. the hazardous weather regions are computed by extendingall the storm cells with a safety margin (here, 100M)



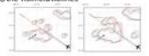
# (2) RISK FIELD For each nowcast sampling time, the risk field is computed as the percentage of ensemble members forecasting a specific location to be

#### (3) RISK FIELD ISOLINES

For each nowcast sampling time, the risk level value defines the risk field isolines: they are taken as no-fly zones. Hence, the risk level value enables to capture the different avoidance strategies.

# AVOIDANCE ROUTES The probabilistic avoidance route is the uniquer sute generated when applying DIVMET to the riskfield itolines.

(4) PROBABILISTIC WEATHER



The risk level has an important effect on the avoidance route (see results for risk level values 90% and 10%).



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covered by a hazardous weather region.

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founding members







