

# IWT wien-New Icing Wind Tunnel Vienna

Hermann Ferschitz  
RTA Rail Tec Arsenal Fahrzeugversuchsanlage  
GmbH  
Wien, 12.11.2025

## Brief description of the consortium partners

- RTA (project coordinator) is an accredited testing facility and has been operating the Vienna Climate Wind Tunnel (KWK) since 2003 and an Icing Wind Tunnel (IWT) since 2013. In the two KWKs, different kind of transport vehicles can be tested, developed and also approved under a wide variety of weather conditions. Main task: potentially future strategic use
- AeroTex has more than 20 years of experience in the engineering and certification of aircraft icing systems. Main task: Status quo assessment of existing large IWTs and support for the concept study for a new energy-efficient IWT.
- ADT is a research and development service provider based in the mobility sector with a focus on sustainable technologies. Main task: Operator concept (governance) and financing.



## Aim of the project / Background of the project

- Evaluation of the need for an additional IWT in Europe from a scientific, economic, and ecological perspective in terms of the minimum technical requirements for a new IWT
  - from the perspective of the relevant aviation industry in Europe
  - from the perspective of certification authorities (EASA, FAA)
  - from the perspective of research institutions
- Taking into account other existing relevant IWTs worldwide to complement available services

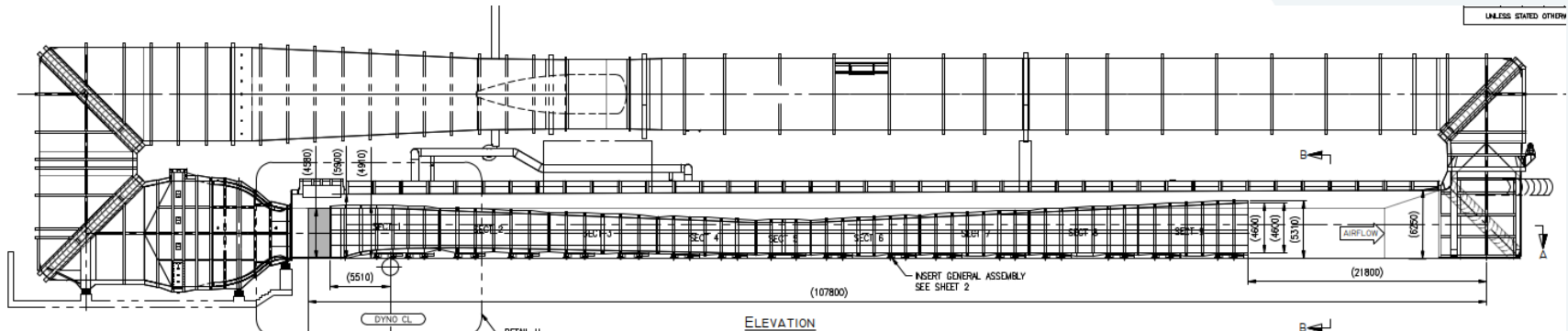
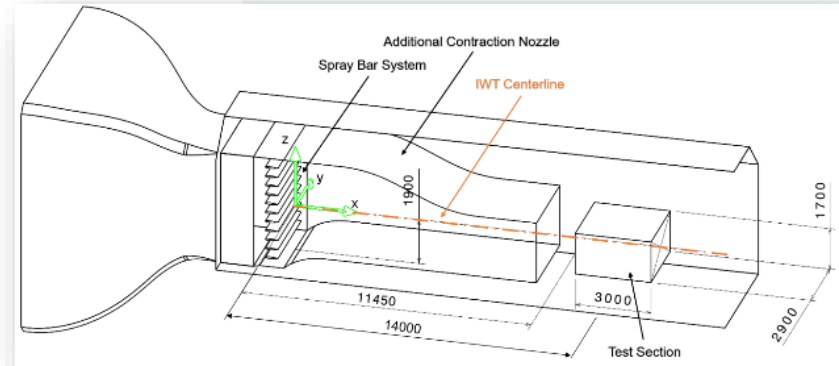
## Project results

- Need for two different IWTs,
  - for engine testing with a focus on EASA CS25 Appendix P (mixed cloud) and Appendix O (freezing rain and freezing drizzle)
  - for commercial aircraft for EASA CS25 Appendix O (freezing rain)
- Commercial considerations have shown that refinancing the construction of a new, large IWT (>100 Mio) would be very difficult
  - Therefore, evaluation to upgrade the existing large IWT at RTA was considered

## Project results

**Upgrade:** Insert for the large IWT at RTA could

- speed up to 135 m/s with
- cross section 1,8 x 2,8m
- appendix C and O (freezing rain)
- investment of ~ 15 Mio (refinanceable with expected utilisation)



## Utilization of the project

- Presentation of IWTinsert concept in front of MICG group including Airbus, Boeing, Embraer, Safran, GE, ATR, Bombardier, Gulfstream, FAA, EASA, etc
- Initiation of initial discussions with Airbus regarding necessary commitment e.g. investment participation
- Inclusion in the RTA's long-term strategy for ensuring long-term capacity utilization
- Initiation of considerations for another small IWT in Vienna (IWTresearch – different objectives but complementary)

## Further steps/(potential) follow-up projects

- Negotiations with Airbus and other stack holders concerning IWTinsert still ongoing
  - would bring another USP to Austria
  - would expand the test infrastructure towards commercial aircraft
- IWTresearch feasibility study of a high-speed, high-altitude aviation icing wind tunnel started 31.3.2025, will run until 31.3.2026 (TU-Wien, RTA, AeroTex, ADT)
  - potential to build this additional facility in the RTA / AIT neighborhood (pooling of expertise, strong collaboration and cross selling possibilities)
  - strengthening Vienna's aviation research eco-system, icing sciences.