Runway Incursions by the Numbers

- 50,000,000 Takeoff and Landings
- 300,000 MOR/EORs Reviewed
- 20,000 Runway Safety MORs Reviewed
- 1,600 Runway Incursions
Historical Data

A General Aviation Aircraft was involved in 80% of these incidents.

Over a 10-Year Timespan

- 66% of Runway Incursions were Pilot Deviations (PD)
- 19% Vehicle/Pedestrian Deviations (VPD)
- 15% Operational Incidents (OI) Related to Air Traffic Controllers
Highest Ranking Causal Factors to RI’s

- ATC Cleared Aircraft to Land/Depart on an Occupied Runway
- Pilot Failed to Hold Short of Runway as Instructed
- Driver entered runway without Authorization
  - Driver failed to Hold Short of Runway
Contributing Factors to RI’s

- ATC Misjudge the Rate of Closure
  - Optimistic Expectations

- Pilot Deviation - Communication

- Vehicle/Pedestrian Deviation - Loss Situational Awareness
Manage Risk

Risk is Managed By:

- Collaboratively working with industry partners to develop and deploy runway safety solutions.
- Infrastructure such as multiple parallel runways allowing separate runways for arrivals and departures.
- Proactive SMS process to collect data, assess the data, develop mitigations and then measure the effectiveness.
The Risk is Managed By:

- Procedures for ATC, Pilots, and Vehicle Drivers
- Technology (AMASS, ASDE-X, RWSLs, EMASS, RSA)
- Initial Training / Recurrent Training

The risk of a runway incursion is always present when more than one aircraft is approaching, landing, departing, crossing a runway.
Controller Assummes

- Pilot is Experienced and Proficient
- Pilot Understands the Layout of the Airport
- Accurate and Complete Communication Between Pilot and Controller
A full readback allows the controller to ensure that the pilot received the clearance as intended. Sometimes this is the only opportunity to catch and correct a mistake or misunderstanding.
Safety Works When People Work Together

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