

EASA-FAA Conference

Challenge of Digitalisation

Michael J. O'Donnell

Executive Director

Office of Accident Investigation and Prevention



**Federal Aviation
Administration**



Digital Revolution – Advancing Safety



- **Technology has enabled significant roles in improving aviation safety**
 - Modern aircraft design with advanced avionics and safety technologies
 - Equipment on board recording thousands of discrete parameters
 - Modern airspace surveillance systems capturing terabytes of flight trajectory information per hour
 - Proliferation of information sources readily available via electronic devices
 - Enabling the reporting and collection of voluntary safety reports across the aviation spectrum

Opportunities and Challenges



- **Enable the aviation community to evolve from a forensic approach to managing safety towards a prognostic approach**
 - US Aviation Safety Information Analysis and Sharing (ASIAS) system
 - Europe's Data for Safety (D4S)
- **Need to advance analytical methodologies and techniques**
 - Mining large amounts of data to identify trends across multitudes of data sources
 - Techniques to advance data integration and data quality issues
- **Need to provide protections for key safety information sources**
 - Establishment of a non-punitive culture
 - Data is strictly used to advance safety

