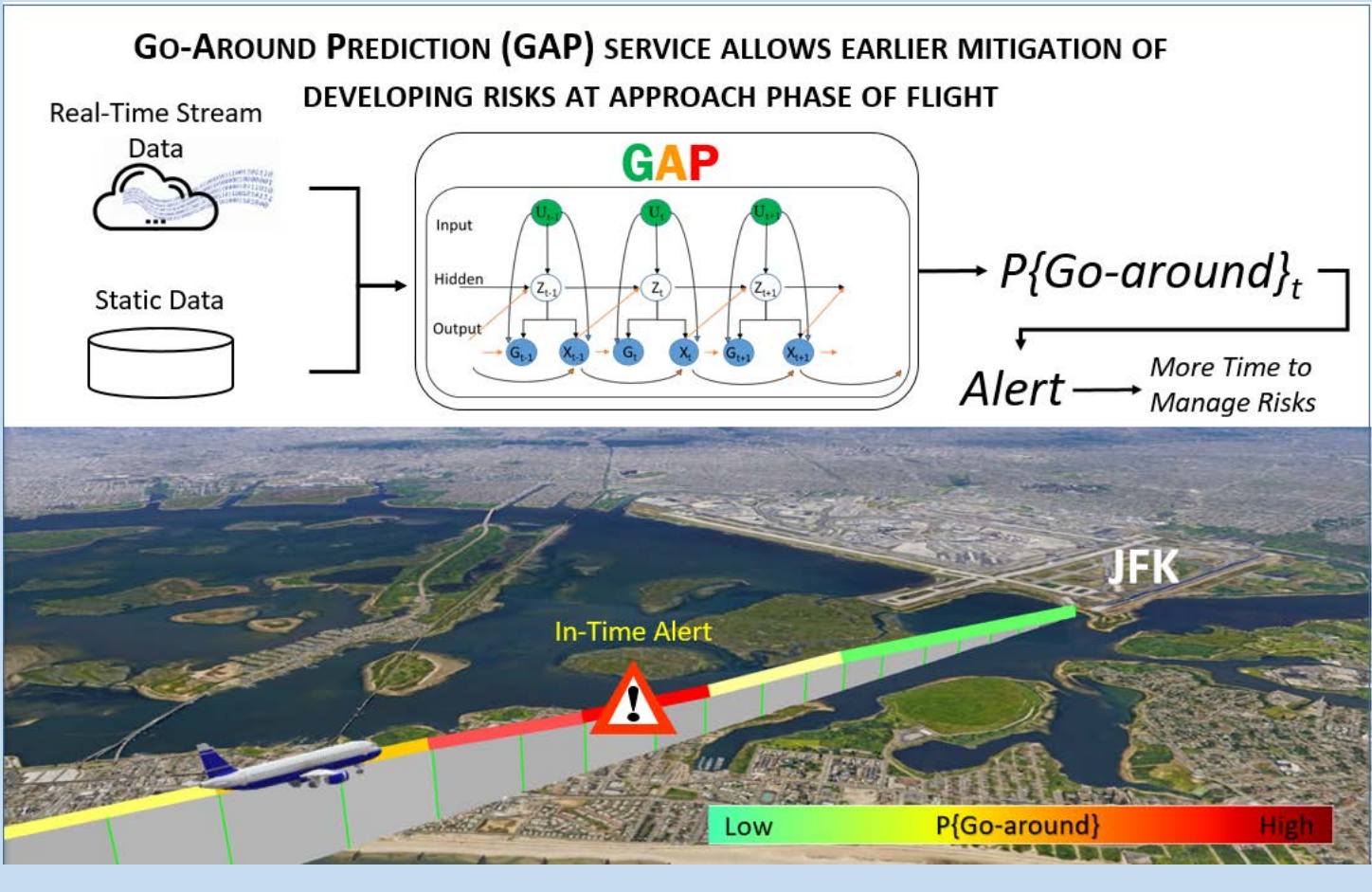


GO-AROUND PREDICTION SERVICE



Go-arounds or missed approaches are a clear risk indicator in NAS arrival operations. Occurring thousands of times per year across major airports, they are the mitigation of last resort for operators, causing disruptions at arrival airports for airlines and air traffic control. They increase the workload for controllers and pilots when workloads are already peaked, causing disorder and loss of predictability.

To address this safety risk, ATAC is developing a real-time **Go-Around Prediction Service (GAPS)**. Our innovation fuses real-time data feeds and applies innovative machine learning to continuously monitor arrival operations and reliably predict probabilities of go-around occurrence and their safety risks. A key innovation is that we go beyond static prediction at a given approach point and provide continuously updated go-around predictions as the flight progresses to touchdown. This capability supports in-time safety assurance to avoid go-arounds or improve their safe and orderly execution by providing more time for operators to act, thus increasing operational safety margins.

- ✓ Recently completed a NASA-funded, 6-month research project and currently executing a 2-year follow-on
- ✓ Advances NASA System Wide Safety research by accelerating risk detection to real-time
- ✓ Integrates with In-Time Aviation Safety Management Systems to assess and identify emerging risks potentially introduced by new operations and/or Decision Support Tools
- ✓ Identifies risks in airport operations much sooner than currently possible, thereby increasing safety margins
- ✓ Provides insight into go-around causes with the intent of reducing their risky and disruptive nature
- ✓ Supports automated Safety Management System (SMS) reporting for ANSPs, airlines, and airports