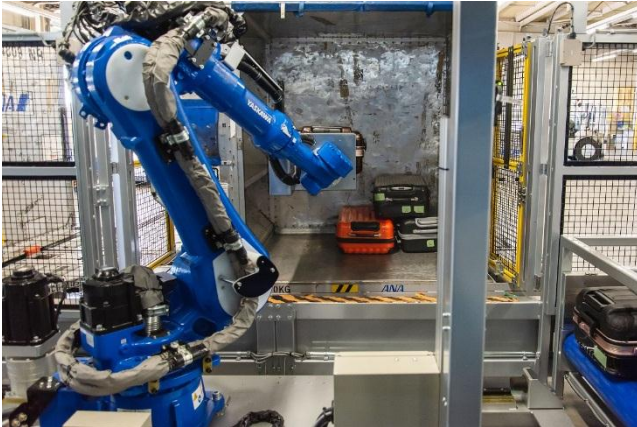


ANA Partners with Toyota Industries to Test Automated Technology at Saga Airport

- The second round of trials for the robotic bag loader and autonomous towing tractor will occur from December 14-18.
- Tests will build upon insights from previous implementation and accelerate the real-world adoption of these innovative technologies.



Robotic bag loader placing baggage in aircraft container



Autonomous towing tractor

TOKYO, December 7, 2020 – All Nippon Airways (ANA), Japan’s largest and 5-Star airline for eight consecutive years has partnered with Toyota Industries to conduct additional tests of the robotic baggage loader and autonomous towing tractor to further develop these innovative technologies to accelerate their adoption. Scheduled for December 14th – 18th, this latest series of tests will demonstrate the gains made by autonomous technology. The tests will take place at Kyushu Saga International Airport (hereinafter referred to as Saga Airport) where [ANA has conducted trials of automated technology](#) since March 2019. The airport has served as the [location for the trials](#) as ANA has partnered with Saga prefecture to transform Saga Airport into one of the world’s smartest, best connected airports.

“ANA prides itself on our history of innovation and embrace of the latest technologies in order to maximize passengers’ comfort and convenience, while improving the overall travel experience,” said Masaki Yokai, Senior Vice President of ANA. “Toyota Industries also has a legacy of innovation and we are proud to partner with an organization that is also dedicated to continually advance consumer needs. Innovation has always been a key component of our approach to offering unrivaled service and the upcoming tests at Saga Airport bring the next generation of smart technology one step closer to reality.”

Capable of operating at a top speed of 15 kilometers per hour without human oversight, the autonomous tractor offers a glimpse of the airport of the future. The trial program for the automated towing tractor will help confirm its record of efficient and safe operation. By driving a preset course without any human input, the tractor will build upon the advances it has already made to validate its labor-saving utility by improving safety and usability. The latest trials will help to demonstrate its ability to function autonomously when connected to the baggage loading robot prototype. Furthermore, insight from these tests will make it easier to plan for the rollout of these autonomous tractors to other airports across Japan.

The baggage loader is also innovative, being the first of its kind in Japan designed for aircraft use. It also boasts a recently developed robot hand and a unique loading process. Capable of loading a piece of

luggage every 25 seconds, the arm effortlessly lifts items weighing up to 35 kg and is even able to accurately stack them according to size for the most efficient storage aboard the aircraft. The advanced loader will streamline the automation of container baggage loading, which is the most time-consuming part of the loading process.

ANA and Toyota Industries are promoting the automatic towing tractor as part of a program to boost innovation in the aviation sector by the Ministry of Land, Infrastructure, Transport and Tourism. The program aims to respond to changes in the domestic work environment, including labor shortages resulting from the decline in the population.

By automating baggage and cargo handling operations, ANA is advancing its initiative to develop "Simple & Smart" airport ground support operations, helping to create a streamlined and comfortable working environment for all while allowing airports to function efficiently with smaller workforces.

ANA is committed to creating the best possible travel experience for its passengers and will continue partnering with leading companies and organizations that share its dedication to excellence. Furthermore, ANA and Toyota Industries will build on their sustained success in developing automated technologies to continue creating solutions that can be adopted across a range of industries.



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About ANA

Following the "Inspiration of Japan" high quality of service, ANA has been awarded the respected 5-Star rating every year since 2013 from SKYTRAX. ANA is the only Japanese airline to win this prestigious designation eight years in a row. Additionally, ANA has been recognized by Air Transport World as "Airline of the Year" three times in the past 10 years - 2007, 2013 and 2018, becoming one of the few airlines winning this prestigious award for multiple times.

ANA was founded in 1952 with two helicopters and has become the largest airline in Japan, as well as one of the most significant airlines in Asia, operating 82 international routes and 118 domestic routes (as of December 2019). ANA offers a unique dual hub model which enables passengers to travel to Tokyo and connect through the two airports in the metropolitan Tokyo, NARITA and HANEDA, to various destinations throughout Japan, and also offers same day connections between various North American, Asian and Chinese cities.

ANA has been a member of Star Alliance since 1999 and has joint venture partnerships with United Airlines, Lufthansa German Airlines, Swiss International Airlines and Austrian Airlines.

In addition to the full service and award-winning record of ANA, the ANA Group's subsidiary Peach Aviation Limited is the leading LCC in Japan, and has expanded following the integration of Vanilla Air Inc. in late 2019. The ANA Group carried 54.4 million passengers in FY2018, has approximately 43,000 employees and a fleet of 260 aircraft. ANA is a proud launch customer and the biggest operator of the Boeing 787 Dreamliner.

For more information, please refer to the following link.

<https://www.ana.co.jp/group/en/>