

### Sustainable Taxiing at Schiphol Using TaxiBots to taxi aircrafts without their own engines

## SESAR 2020 SHOWCASE

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Our goal is to drastically reduce emissions for aircrafts on the ground - we use an airport-based system (TaxiBot) that can be controlled by the PiC and allow shorter engine-on time



Loading	Pushback / Push-pull	TaxiBotting operations	Unloading	Empty tug movement	
•	Aircraft engines switched APU on while aircraft eng		•		
•	- Tug driver in control of convoi		Tug driver ir	n control of TaxiBot & Pilot of aircraft•	
ound missions					
Empty tu	g movement Loading	g TaxiBotting operations	Unloading		
		Aircraft engine Aircraft engine Aircraft engine	s switched off• aft engines are off•		
•—— Tug drive	er in control of TaxiBot and Pilot of aircraft	t Pilot in control of convoi	Tug driver in control		

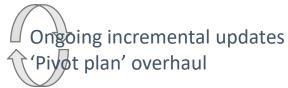
## Our approach is to involve all relevant stakeholders from the get-go to make sure we continuously align all points of view





# Before the TaxiBots could drive around at Schiphol, we already achieved many concrete deliverables and lessons learned

- 200+ hypotheses
- 175+ research questions



- Draft Concept of Operations (CONOPS), pending ATC approval
- 2 updated TaxiBots with tailored modifications
- Updated training material and a train-the-trainer programme with hands-on lessons
- Field checks to verify our airport infrastructure



Operational showcase to restart utilization



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### Working hard to update our plans based on the lessons from ALBATROSS, the findings in AEON and our stakeholders to ramp up HERON









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#### Thank you for listening Feel free to reach out for more



Schiphol





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