

BUBO

TOW TRACTOR FOR THE ARCTIC AIRPORTS

Darkness. Snow. Ice.

Bubo is designed to deal with these issues and
to be able to handle luggage round the year.

Bubo is ergonomic, efficient and user-friendly.

With Bubo darkness, snow and ice
are no longer problems.

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RESEARCH

During September 2013 Bubo's design team interviewed several baggage handlers in Finland and researched their problems. The aim was to design a more usable vehicle that would be modern, ergonomic and efficient, but would also give cover from the weather and information about the flights.

The research showed problems with the arctic weather and so on the design brief included the need for some sort of cover. The sides should be left open because the handler is constantly entering and exiting the vehicle.

USER

At any environment it is important that the equipment is safe for the user, but at the airport it is also vital that equipment is safe for the airplanes. This is why automation won't work at the airport and the bigger focus needs to be on the driver and his skills. Bubo's design team found this interesting and wanted to improve the vehicles in use.

What the team also found out was that weather is a big problem at the northern airports and vehicles in use now can't really cope with ice and snow. Bubo is so on designed for the arctic airports and specially the baggage handlers working in these unpredictable conditions.

DESIGN

Starting point for the visual look was semantics. The design team worked hard to understand which features signal strong, fast, reliable and safe and how they could be transformed into a successful tow tractor design. From hundreds of sketches the team found a narrative that conveys all these qualities. The inspiration finally came from the eagle owl that is fast, strong, hunts in the dark and fits the avian theme. That is also basis for the name - Bubo bubo stands for eagle owl in Latin.



ERGONOMIC BACKREST

WINDSHIELD

Gives cover from the wind, rain and snow

COVERED WHEEL

Signals strength and stability

BATTERY

REAR LIGHTS

SPACE FOR TWO HANDLERS

OPEN SIDES

Easy access and the handlers wear heavy clothing anyway

COLOUR

Bright and noticable Toyota orange

OWL LIKE FEATURES

HYBRID ENGINE

Summer - Electricity
Winter - Diesel

FOUR WHEELS

For stability
Double front wheel for maneuverability

FRONT LIGHTS

Character and noticability

STEERING AND INFORMATION SCREEN

Telescopic arm - adjustable and supported

HOOK

STORAGE BOX

Big and spacious for all the equipment needed

TIGHTEN GRIP TO START THE ENGINE AND TO START MOVING



LOOSEN GRIP TO BREAK IN CASE OF EMERGENCY, RELEASE HANDS



ERGONOMIC STEERING

In the control panel the driver can control reversing, see relevant flights, his target plane, area map, his speed and the level of energy and fuel. Steering is adjustable and supported. Telescopic arm fits drivers of different heights.

ERGONOMIC DRIVING POSITION

Baggage handlers enter and exit the vehicle constantly – this is why Bubo doesn't have a traditional seat. The driver stands in the vehicle or leans to the cushioned backrest. This way of driving is more ergonomic as the distances are not long.



SWIPE TO SEE IN-COMING FLIGHTS OR AREA MAP



MOVE FINGER TO SCROLL FLIGHT DATA



TOUCH R TO REVERSE



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ARRIVALS

Empty wagons are attached to Bubo

Handlers seek the right airplane from the area map on the information screen

After driving to the plane, handlers exit the vehicle and set the traffic cones in place

When the wagons are loaded with luggage, Bubo returns to the luggage hall



DEPARTURES

Wagons are loaded in the luggage hall and attached to Bubo

Handlers seek the right airplane from the area map on the information screen

Handlers drive to the plane and exit the vehicle

After the plane is loaded, handlers gather the traffic cones and place them in the storage box

Handlers enter the vehicle and drive back to the luggage hall



BUBO IN ACTION

