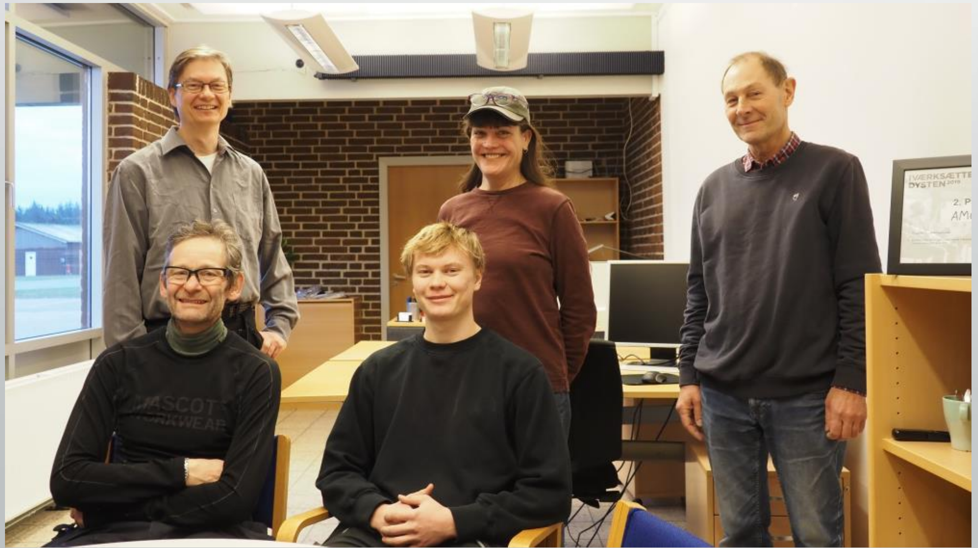
Amonyx

going anywhere

The company

- Danish company founded in early 2019 by Allan Molbech
- State-of-the-art Super-STOL aircraft technology developed
- Contemporary, efficient and economical
- Patent-Pending on our technology
- Scalable
- Numerical and experimentally verified

Amonyx is located at Stauning Airport (STA/EKVJ) in Denmark.

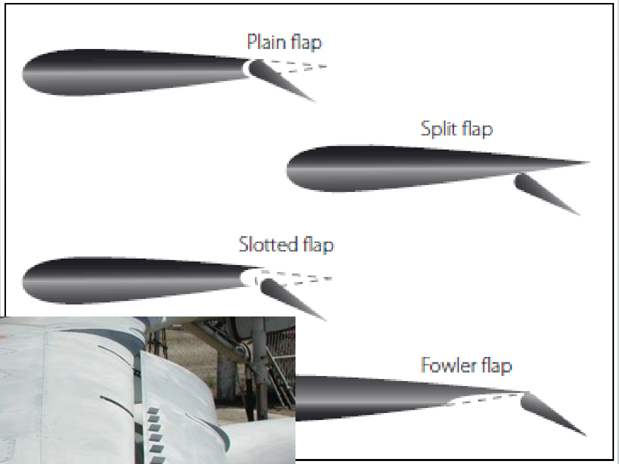


The problem

Amonyx

Short Take Off and Landing (STOL) systems typically work through well-known principles and technologies

- Slats
- Flaps
- Vortex Generators VG’s
- Typically has a rather thick airfoil to:
  - improve the lift generated at slow speeds
  - achieve a safe short take-off or landing



<u>Downsides:</u>

These well-known technologies work well for the STOL situation, but typically compromises desirable on-route capabilities like

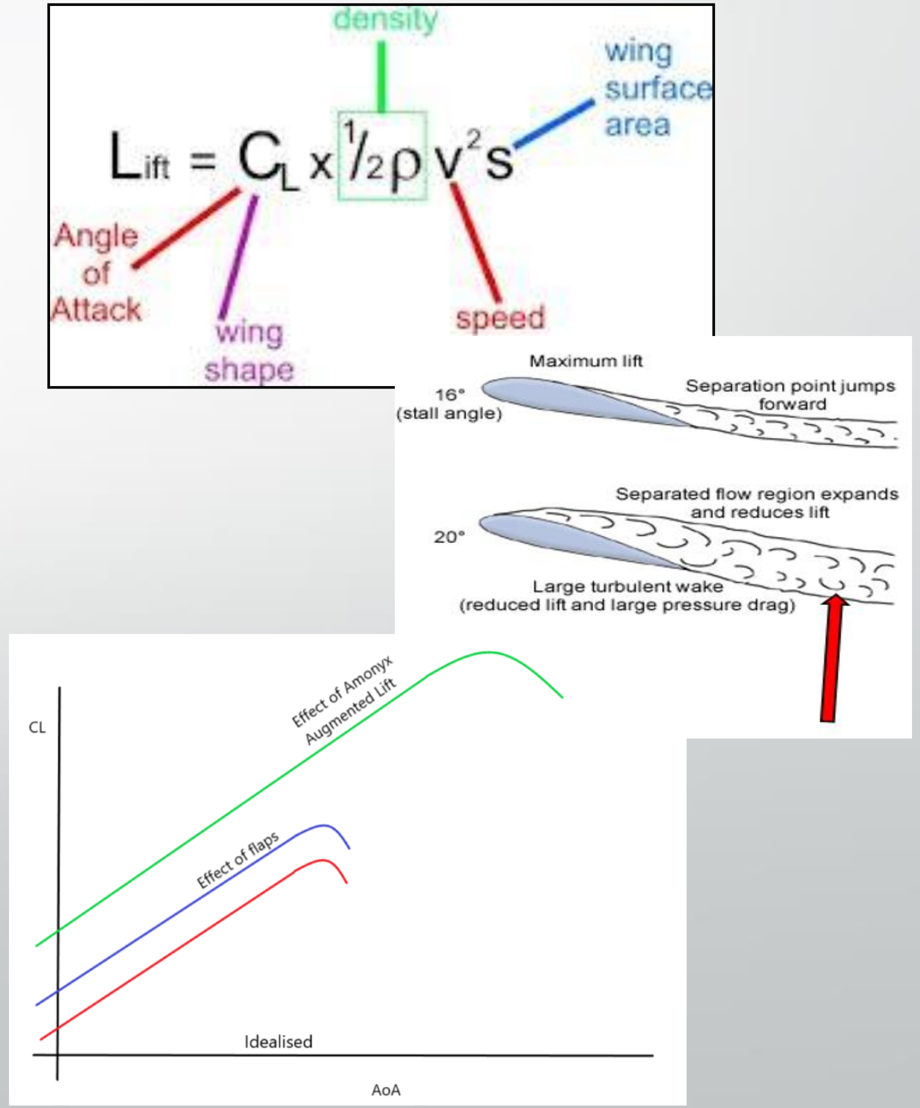
- Speed
- Operational range
- Fuel efficiency.

The solution

Amonyx

Through a fresh approach we have systematically analyzed the forces on an airfoil to invent a wing technology that enables Super-STOL without any of the downsides.

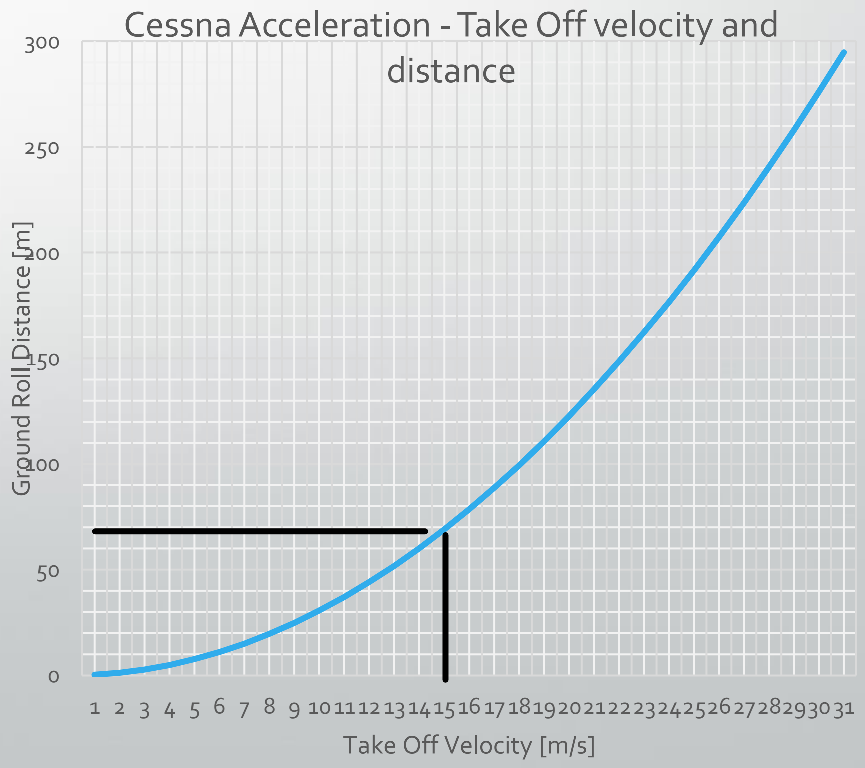
- Verified by major universities and renowned aerodynamicists
- Active Super-STOL technology / Augmented Lift
- 50% reduction of the take-off and landing speed
- 75% reduction of the runway normally needed (ISA SLS)
- Reliable & easy maintainable (R&M)
- No additional aerodynamic or acceleration-imposed stresses to aircraft life limited parts (undercarriage, fuselage, wings etc.)
- During the enroute stage of flight the aircraft will maintain the properties of a non-STOL aircraft ie. speed, operational range, low drag and fuel efficiency



An example

Amonyx

We can review a Cessna 172 Skyhawk aircraft at maximum takeoff weight which requires 293m ground roll for take-off. Using our technology this can be reduced to approximately 70m with a take-off speed of 15 m/s, according to our wind tunnel data.



Advantages

Amonyx

Reliability & Maintainability (R&M):

- Function stability of the Super-STOL system
- Proven sub-systems
- Few moving components

Significant operational advantages:

- Larger aircraft on shorter runways
- Less stress and fatigue on aircraft life limited parts
- Near-stationary loitering capability
- Scalable

Significant safety features:

- Low speed at take off
- Low speed at landing
- Low risk of incident injuries
- Low risk of incident damages
- Normal aerodynamics in case of system failure

Environmental Stress Screening (ESS):

- Reduced CO_2 emission at take off
- Reduced fuel consumption at take off
- Reduced noise emission at take off and landing
- Reduced runway requirement

Conclusion

Amonyx

We have developed and successfully demonstrated a contemporary technology that efficiently prevents boundary layer separation at high angle of attack (AoA) with span wide laminar flow, resulting in ultra high lift at extremely low speed.

Our technology is categorized as STOL (Short Take Off and Landing) in the subcategory Super-STOL since it enables ultra, or Super STOL capabilities.

We have conducted Proof-of-Concept (PoC) through

- Numerical simulations
- Mechanical testing
- Design For Manufacturing DFM tests.
- Wind tunnel testing
    - Aalborg University (semi scale prototype)
    - 2x Danish test facility “Velux” (full-scale prototype)