

SAFIR: drone management in a port and city environment



The future
of unmanned traffic
management,
applied today.



Koen Meuleman
CFO, Co-Founder, Unifly

E: koen.meuleman@unifly.aero
T: +32 3 446 01 00
W: www.unifly.aero

Project SAFIR



- SAFIR

Safe And Flexible Integration of Initial
U-space Services in Real Environment

- An ambitious demonstration project demonstrating several U-space services through the deployment of a multitude of UAS and simultaneous deployment of several U-space service providers covering a complex operational airspace



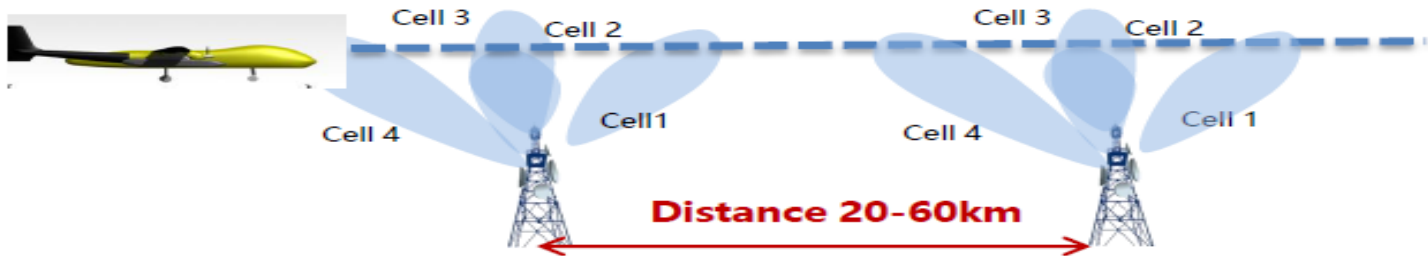


an unique consortium



SAFIR focuses on realistic and viable use cases !

Trail 1	Geographical scope : Port of Antwerp	Operator
1	Harbour inspection	Tekever
2	Parcel delivery profiles	Amazon Prime Air
3	High tension line mapping	C-Astral
4 A	High tension line survey	Explicit
4 B	High tension line incident inspection	Elia
5	Ship emissions monitoring	Explicit
6	Monitoring of critical infrastructure	Aveillant

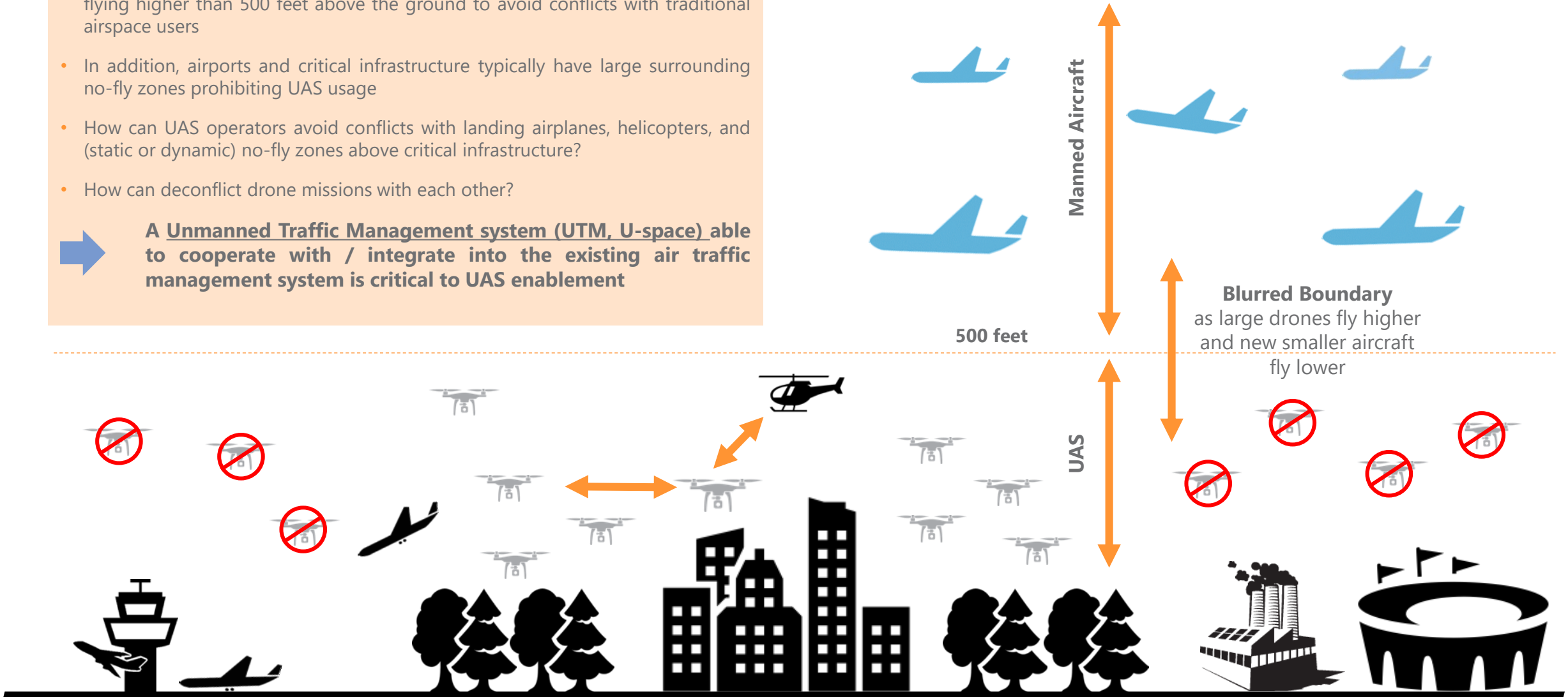
Trail 2	Geographical scope : City of Antwerp	Operator
7		7
8		

Connectivity (!) by Proximus

Drones in Today's Air Traffic Management/Airspace - Challenge

- Today, Unmanned Aerial Systems (UAS, or drones) are typically restricted from flying higher than 500 feet above the ground to avoid conflicts with traditional airspace users
- In addition, airports and critical infrastructure typically have large surrounding no-fly zones prohibiting UAS usage
- How can UAS operators avoid conflicts with landing airplanes, helicopters, and (static or dynamic) no-fly zones above critical infrastructure?
- How can deconflict drone missions with each other?

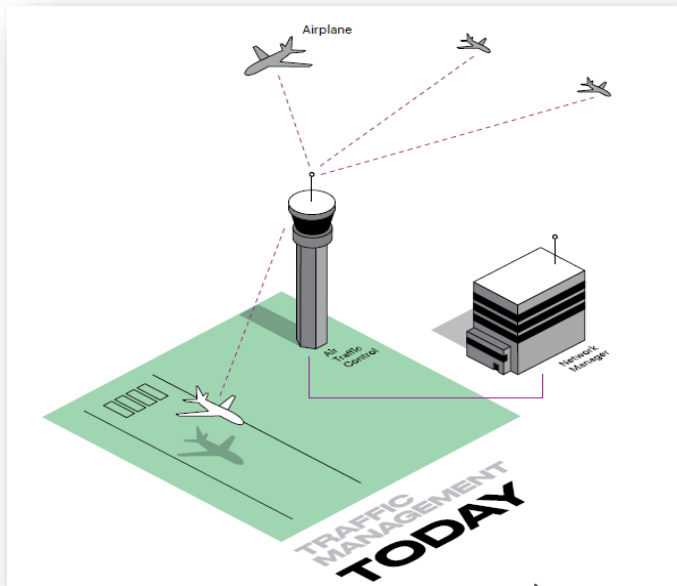
➔ A **Unmanned Traffic Management system (UTM, U-space)** able to cooperate with / integrate into the existing air traffic management system is critical to UAS enablement



AUTOMATION IN AVIATION

Varying speeds of adoption

Manned aviation (ATM)



Unmanned aviation (UTM) *taking a head start*

U-space

DEFINING ROLES IN A NEW ECOSYSTEM

A little recap... 05/09/19

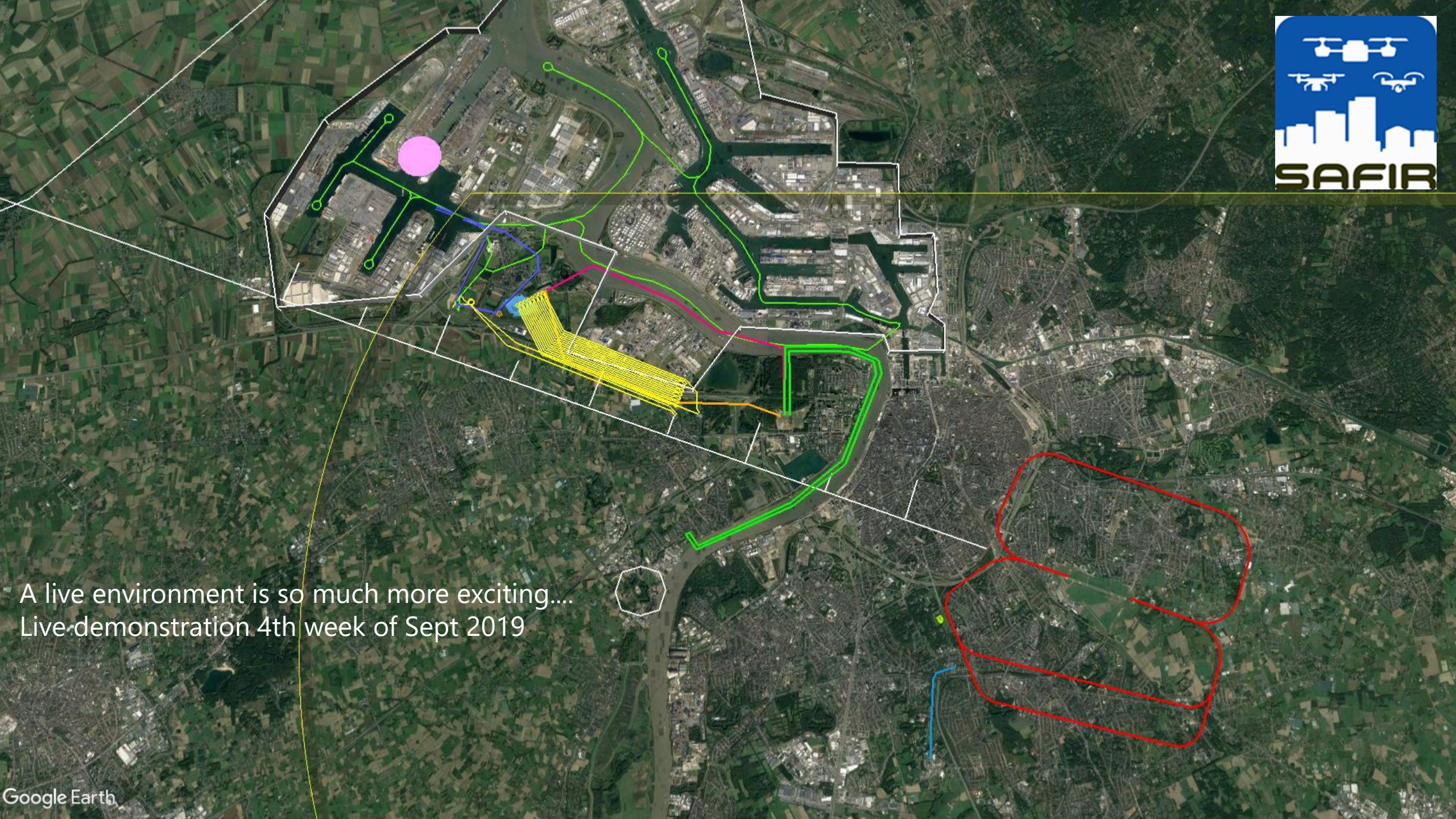


Violeta Bulc ✓
@Bulc_EU

Volgen

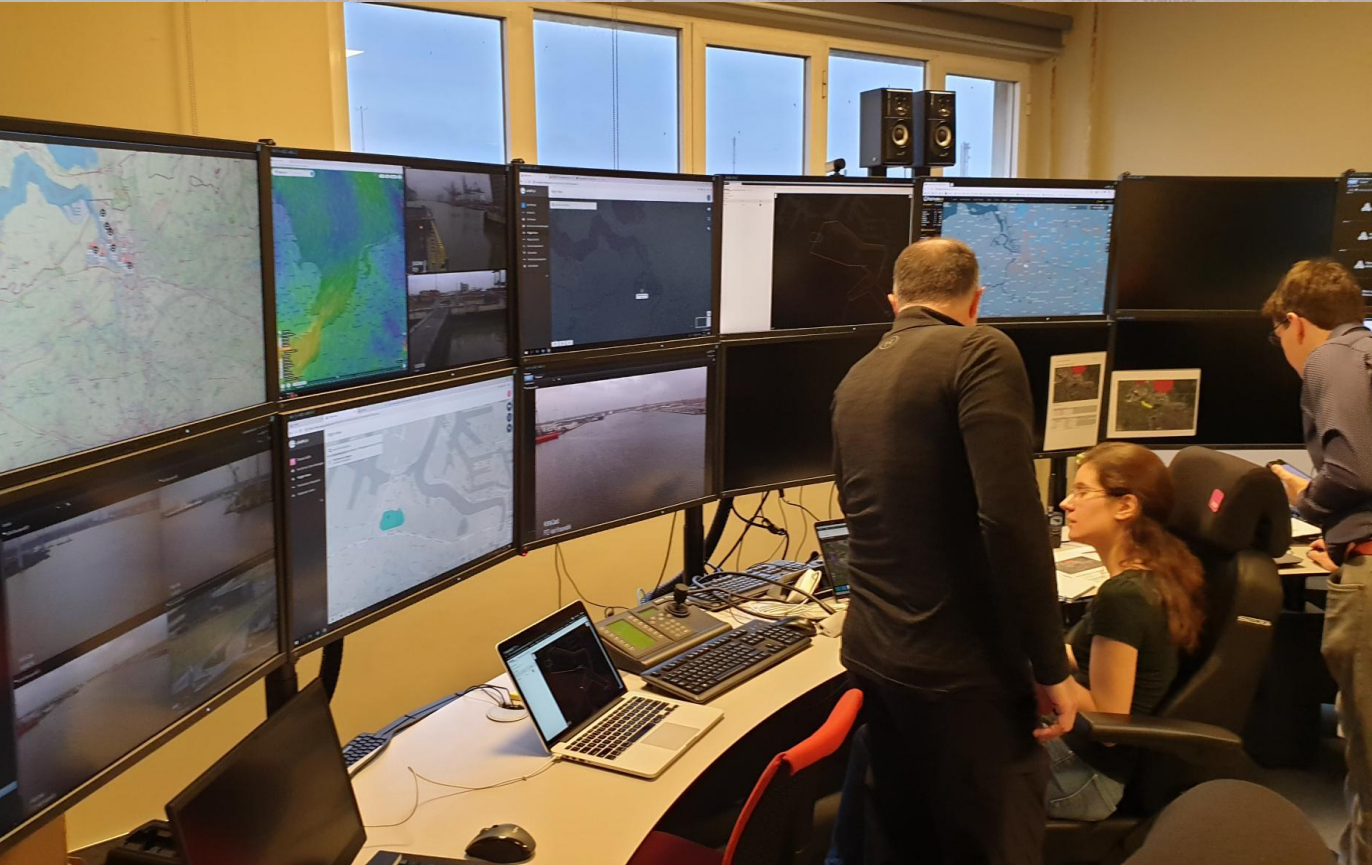
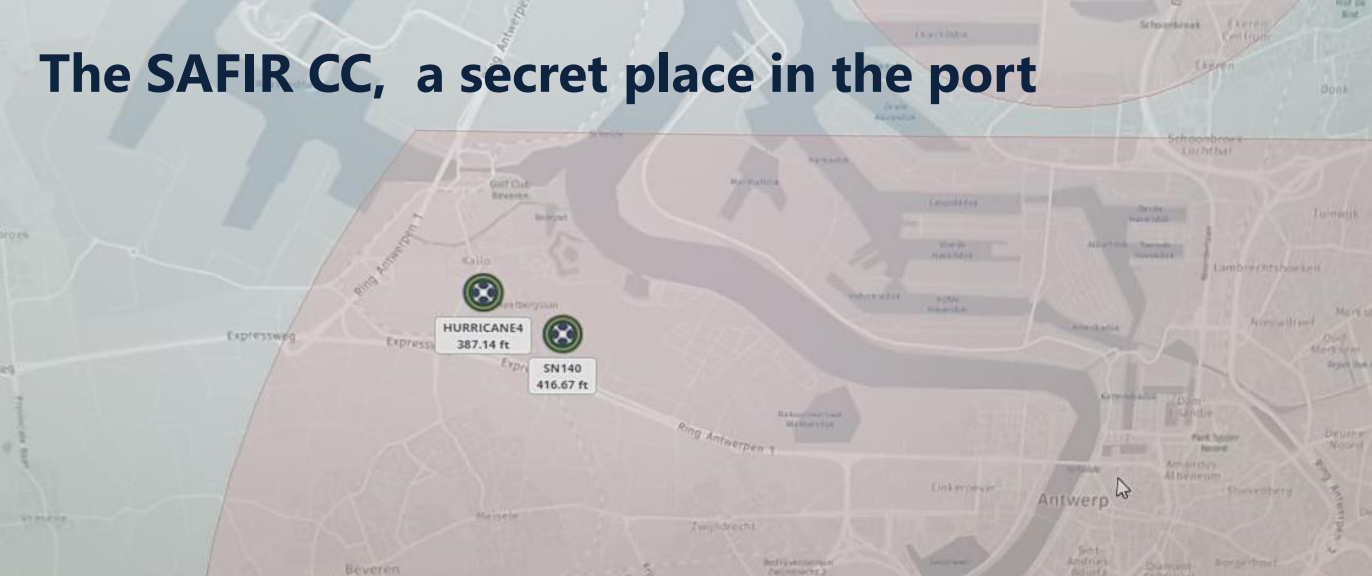
European innovation in the making: Great to witness the first-ever [#Uspace](#) [#drone](#) operations being tested in Belgium 🇧🇪. These EU-wide trials will pave the way for safe, secure and environmentally friendly operations of drones in Europe. 🇪🇺



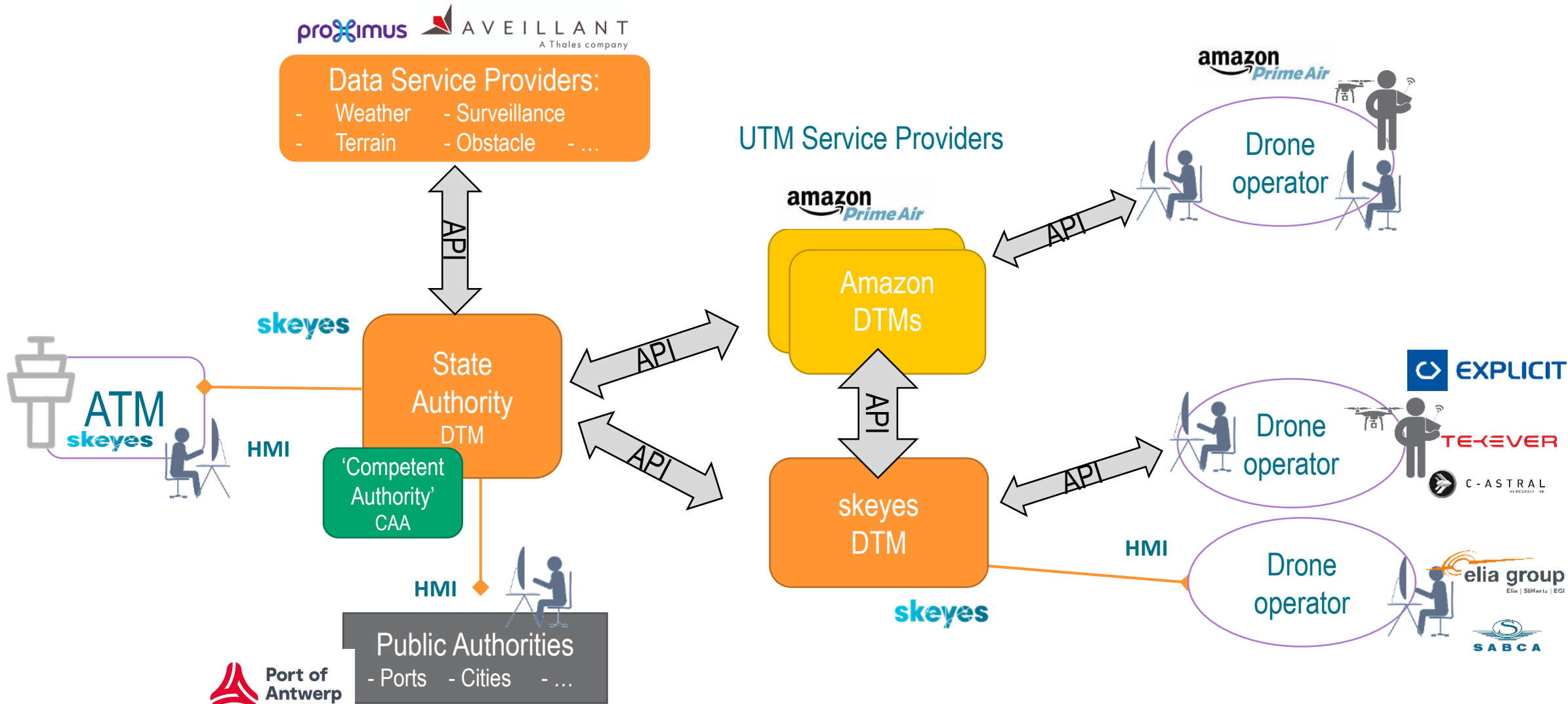


A live environment is so much more exciting....
Live demonstration 4th week of Sept 2019

The SAFIR CC, a secret place in the port



SAFIR: roles, architecture and consortium





The UTM Market will Expand as the Aviation Industry Evolves

UTM is an abbreviation that will change over time:

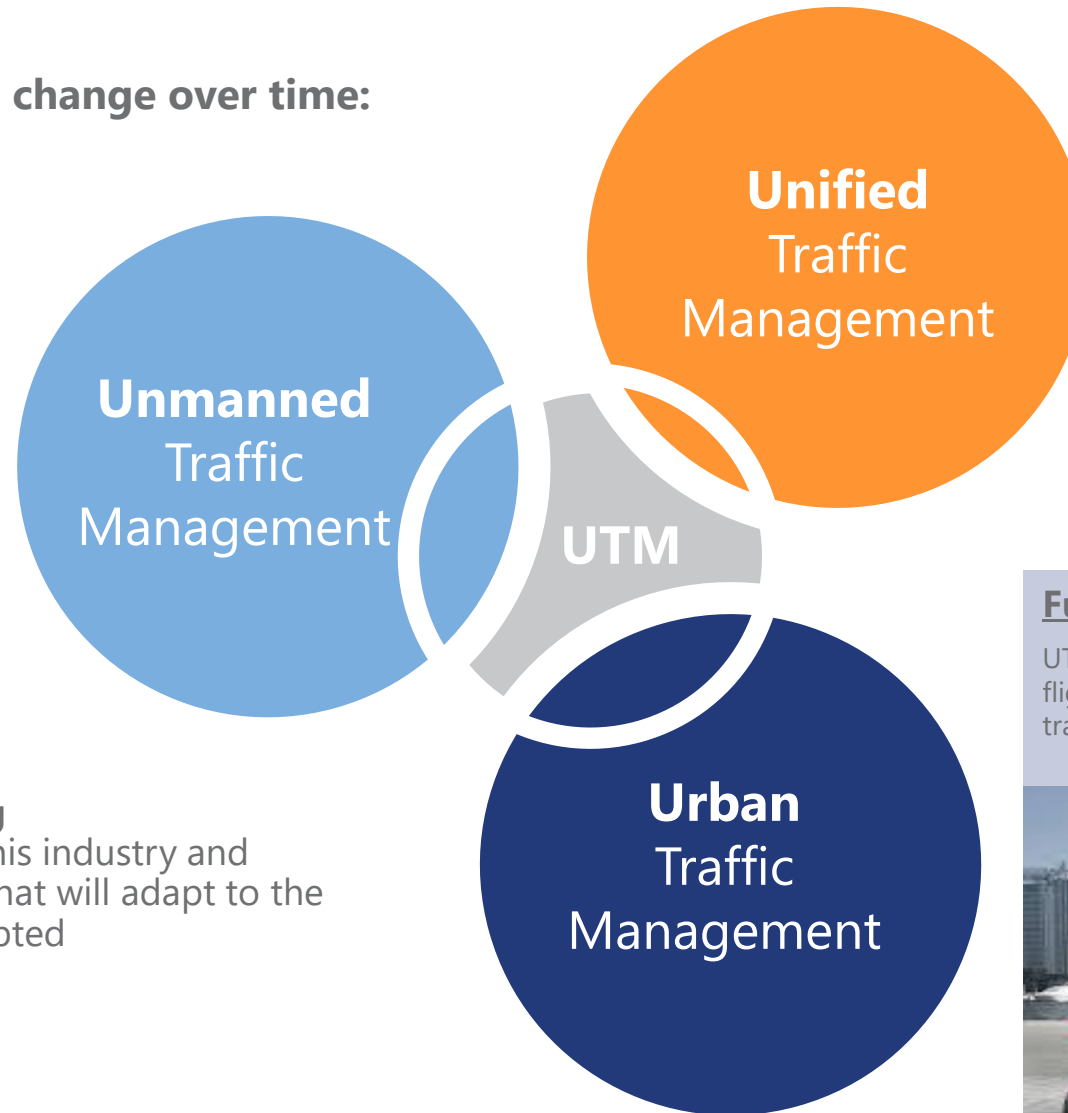
Today

Unmanned traffic management with a high degree of automation and a high level of integration with manned air traffic



The UAS industry is rapidly evolving

Unify is helping to guide and shape this industry and provides a flexible software platform that will adapt to the standards and conventions being adopted



Tomorrow

UTM will replace traditional ATM systems with a unified and automated traffic management system for all users within a common airspace



Future

UTM will enable combined surface travel and flight into single integrated journeys as urban transport becomes multi-modal



Questions ?



The future
of unmanned traffic
management,
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Thank you for you attention

