



Ministerie van Infrastructuur
en Waterstaat

Is CIS paving the way towards airspace integration?

ADW Industry update
September 5th, 2023

Drone Ecosystem





The Future ahead

- › Large scale drone operations and UAM
- › U-space as the digital traffic management system organizing the traffic in designated airspaces
- › High economic value to be created
- › Multiple economic domains have embraced drones in their businesses (Agriculture, Care, Transport, Engineering, Infrastructure, ...)

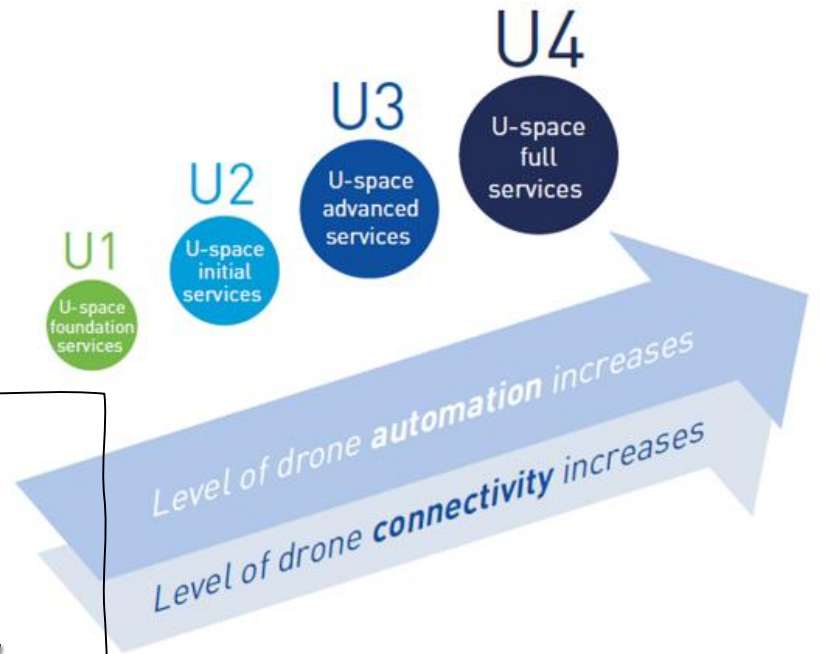


Challenges in the evolution of the Ecosystem

- > Increasing need of solutions adding social value with help of drone operations
 - Medical transport networks;
 - Incident Management network Road/Rail/Waterways/Firebrigades
 - With more and more needs voor long(er) range BVLOS operations
 - Common approach: al starting over sparsley populated area's
- > However
 - Not yet so intensive that U-space would be requirered
 - Many (Manned) GA exemptions on SERA
 - i.e. News Helicopter is by default allowed to fly < 500ft. (Basic Regulation)
- > So... How can we fit this all in classic un- and –controlled airspace



Dutch Vision



"Step by step, U-space will be the system to be applied in the Netherlands that allows unmanned aviation with added social value to be a safe, efficient and manageable part of the national airspace infrastructure."



Our Approach

National embedding framework:

- > Governance
- > Finance
- > Airspace change proces
 - U-space airspace assignment
- > Assignment Competent Authority
- > Descisions on CIS and it's provision

> And it needs to be:

- Flexible
- Adaptive
- Structured
- Exchangeable
- Harmonisable



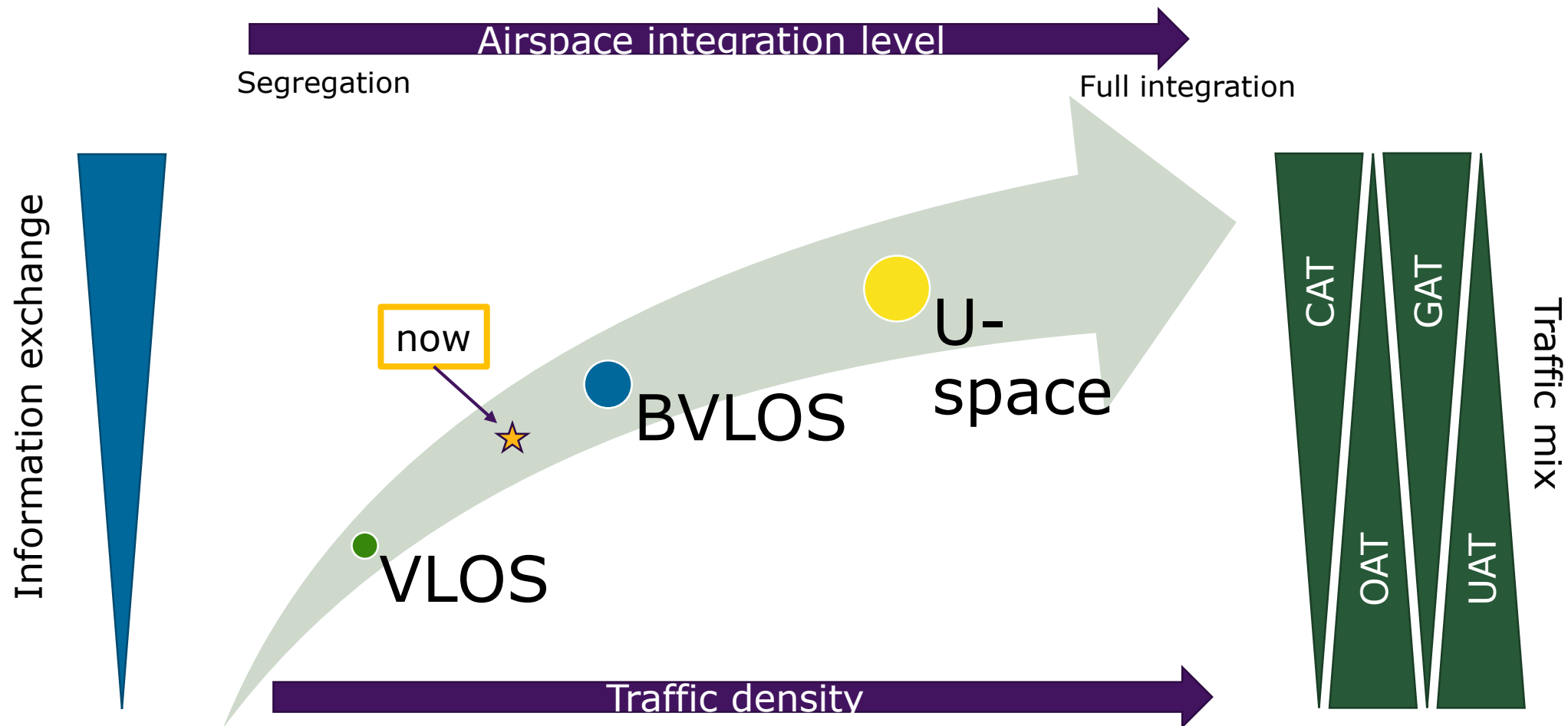


Observations / issues

- › SORA doesn't take (enough) care of multiple drone ops in vicinity (air risk)
- › Multiple exemptions on SERA Min flight alt
 - Sail/Deltaplane, paramotors, Police, HEMS, Military, Media, etc...
- › NL has densely organised and used airspace
- › Testcentres for TRL4-7 developments
- › Not able to organise airspace segregation for larger scale BVLOS operational validation tests (TRL8-9)
- › Situational awareness of **all** airspace users is paramount to safety
- › Uniform level of information provision is essential
 - 947/2018 mentions D-AIM, 664/2021 article 5



Airspace integration





Considerations for defining CIS function

- › Seeking for path that:
 - Embraces all airspace users
 - Enables all airspace users to operate safely
 - Supports the BVLOS needs to operate without segregation of airspace
 - Provides stepping stones towards U-space implementation(s)
 - Supports gradual (incremental) development of CIS platform



Our view on CIS in NL

- > CIS function should take care of uniform (digital) information provision:
 - In scope with 664/2021 to support U-space airspace(s) operations and;
 - Outside U-space airspace to support UAS operators in their needs for a safe operation.
- > CIS providing information outside U-space airspace *could* consist of:
 - GEOzone data (ED-269 compliant)
 - Static Airspace data and actual airspace status (AUP/UUP and pre-tactical)
 - Traffic information (Uniform Situational Awareness)
 - ...



Role of CIS

- › CIS in NL, providing a platform for support of:
 - safe operations,
 - datadriven policy development,
 - enabling BVLOS network solutions,
 - UAS services development,
 - Criteria development for U-space implementations,
 - Social embracement (show people what is done).



Thank you for your attention



U-space: The **fundament** for the future of aviation