DRIP WG IETF#108

Enabling UAS registration/lookup with EPP and RDAP

Managing and Using an Aviation Domain Hierarchy

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et al

Charter References

- “[D]escribes the architecture that address the technical requirements and that will attempt to re-use protocols or architectures already standardized at the IETF.”

- “[P]rimarily leverage Internet standards (including HIP, EPP, RDAP, and DNS) and infrastructure as well as domain name registration business models.”

- “[B]alance public safety authorities’ need to know trustworthy information with UAS operators’ and other involved parties’ privacy.”

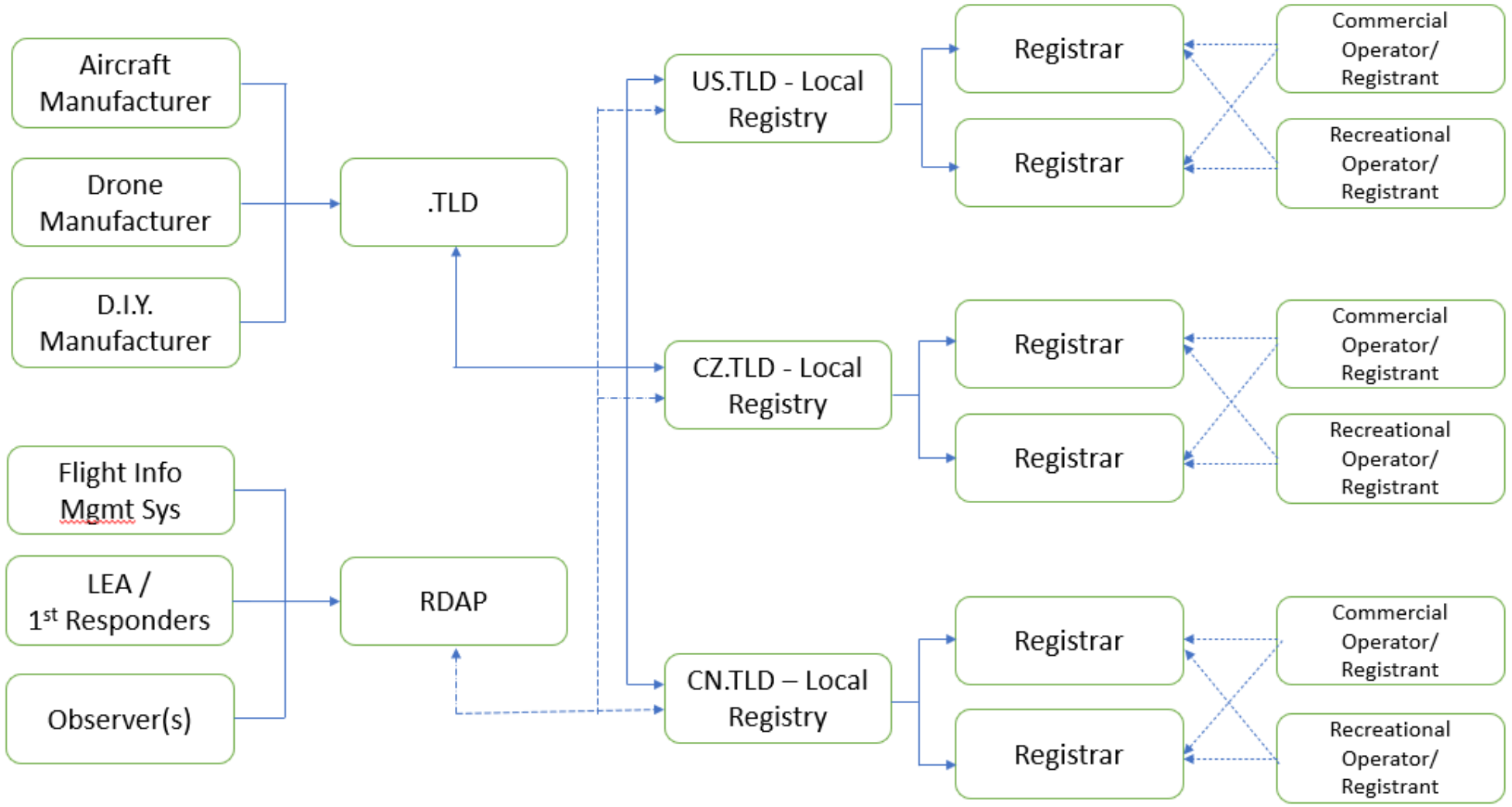
Design Building Blocks

- Leverage existing internet protocols, e.g. EPP, RDAP
- Globally federated Aviation Repository Object Identifier (Aviation ROID) for both man and unmanned aircraft
- A geographic hierarchical taxonomy based on ISO-3166-2
- The processing of Localized Contact ROIDs (owners/operators)
- Differentiated access (automated/manual) to ROID data elements in accordance with relevant data privacy laws

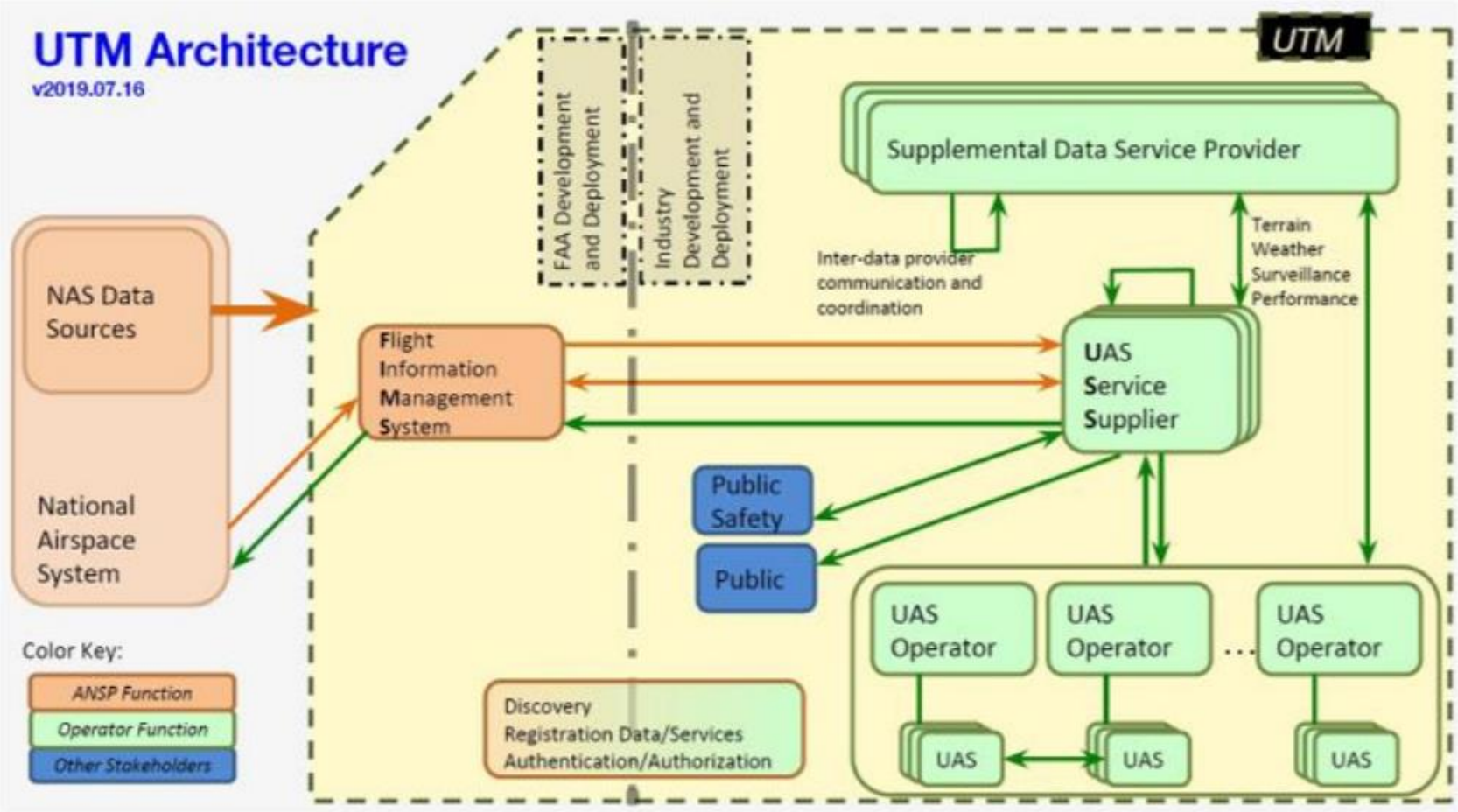
Frame of Reference

Automotive	Aviation	Comments
Vehicle Identification Number (VIN Number)	Global Aviation Repository Object Identifier (Global Aviation ROID)	Similar to auto manufactures imprinting each vehicle with a globally unique identifier, aviation manufactures would label each airframe (manned & unmanned) with a globally unique identifier
License Plate	Local Aviation Repository Object Identifier (Local Aviation ROID)	Similar to each vehicle needing to be registered with the local motor vehicle department, each airframe would need to be registered nationally
Driver's License	Contact Repository Object Identifier (Contact ROID)	Similar to individuals requiring a license from an appropriate authority to operate a motor vehicle, owners/operators of aircraft would need to obtain licensure from the appropriate government agencies

Proposed Eco-System

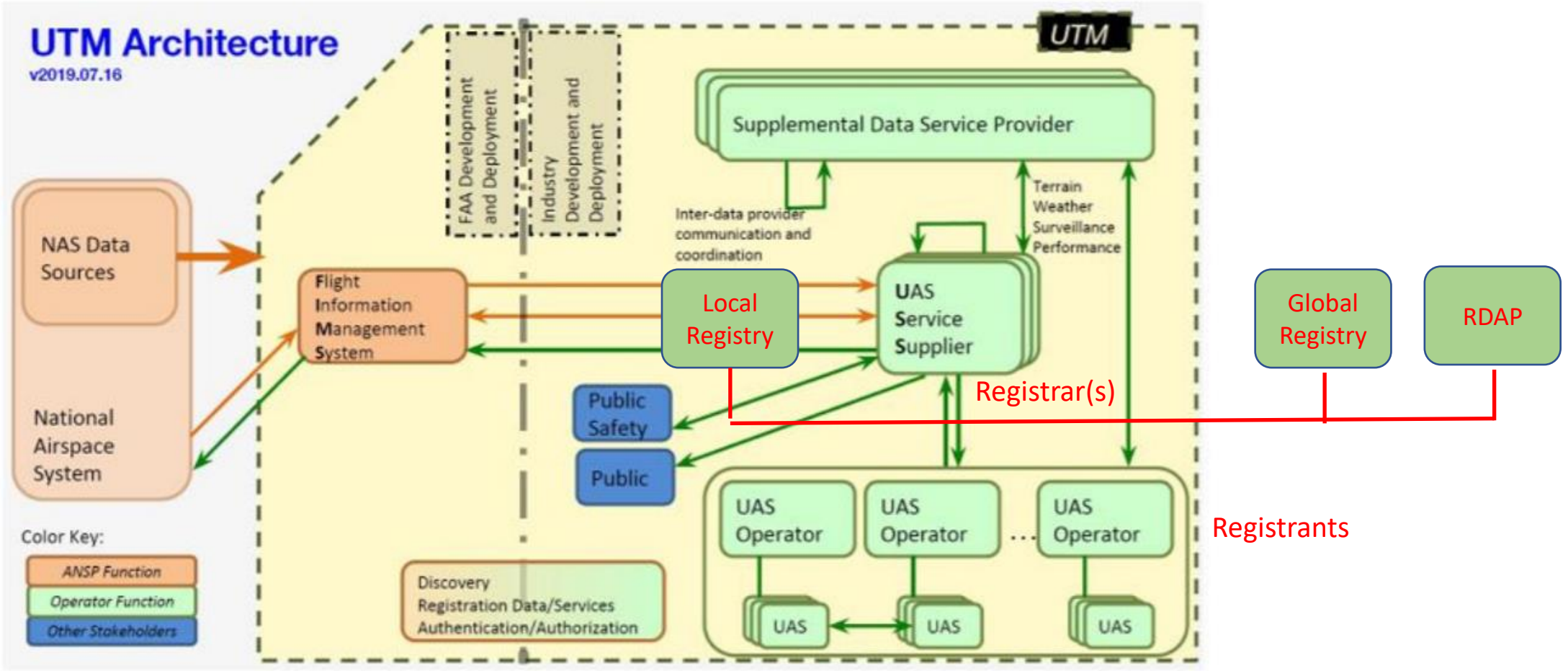


FAA's UTM Pilot Project 2 (UPP2) Architecture



Source: http://regiops.net/wp-content/uploads/2020/06/Stuart-Card-Robert-Moskowitz-ROW9-presentation.pdf

Proposed Enhancement
FAA's UTM Pilot Project 2 (UPP2) Architecture



Proposed Enhancement
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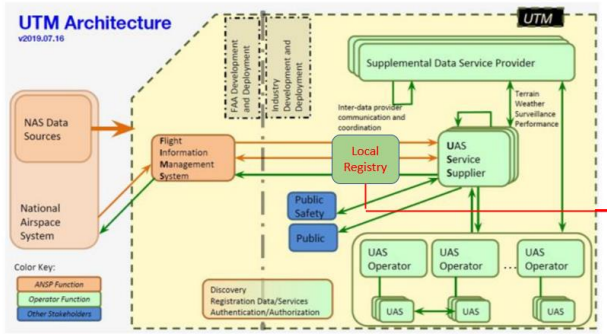

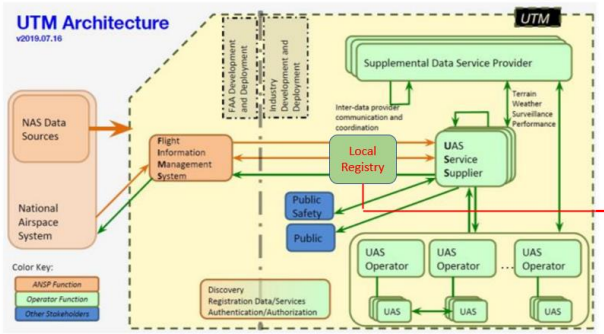

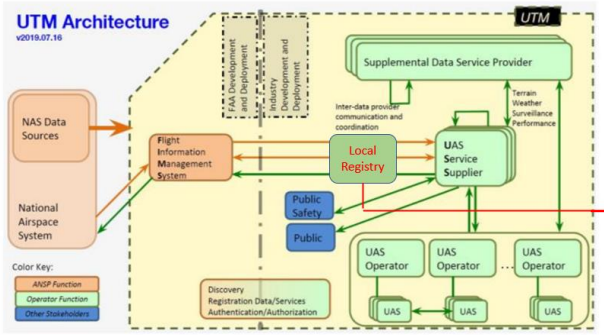

Global Registry

RDAP

Next Steps

- Continue outreach and engagement with global aviation community, specifically in connection with Aviation ROID format.
- Prepare an Internet Draft
- Standup a sandbox for interested parties. Currently using CZ NIC's FRED open-source Registry and Registrar software, https://fred.nic.cz/en/

Thank You

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