Problem Space Boundaries

DOMAIN
Low Altitude BVLOS
Low Altitude VLOS
Model/Hobby
Public Use Operations
Full UAS Integration into the NAS
Certification
CNS MOPS
Performance Testing
Spectrum
SW/HW Development, Testing, Cert.
Security
Privacy

TECHNOLOGY
Big Data Management
Collision Avoidance
Cybersecurity
Electronic Signatures and Identification
Spectrum

PERCEPTION
Privacy
Armed drones
Interdiction (unfriendly drones)
Law enforcement use
Noise
Safety and reliability
Understand FAA UAS plans/strategy
Use case/operational concept

REGULATORY/POLICY
Interdiction (cybersecurity?)
Performance Standards
Policy/Inter-agency collaboration
Pre-emption
Privacy
Regulatory enforcement
Regulatory Flexibility
Safety

As expected, the boundaries for this committee's use are very broad and far-reaching

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SURVEY RESULTS

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Member Domain

Question:

In what domain is your business involved (select all that apply)?

Result:

There is a broad range of organizations representing the many facets that UAS operations will impact. This implies reaching a consensus may be challenging.

Member Domain

- NON-ELECTED GOVERNMENT OFFICIAL
- ELECTED GOVERNMENT OFFICIAL
- COMMUNICATIONS, NAVIGATION, SURVEILLANCE
- RESEARCH, ENGINEERING, ACADEMIA
- ORGANIZAED LABOR
- AIRPORTS AND AIRPORT COMMUNITIES
- TRADITIONAL AVIATION
- DROVE AVIONICS MANUFACTURER
- APPLICATION SERVICE PROVIDER
- OPERATOR
- MANUFACTURER

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Expectations

Question:

If you are involved in manufacturing or operating drones, how quickly do you foresee being able to operate in the airspace on a routine basis without waivers?

Result:

There is a fairly even split between members who build or fly UAVs and those who don't. Most of those whose organizations do, are expecting quick access for their products and services

How quickly do you expect access to controlled airspace

- NA
- > 5 YRS
- 3 TO 5 YRS
- 2 TO 3 YRS
- 1 TO 2 YRS
- 6 MOS - 1 YR

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Speed of Integration

Question:

Choose the statement that most accurately reflects your position [on speed of UAS integration]:

Result:

There is a almost an even split of those who feel the integration effort is too slow and those that feel it is appropriately paced. This indicates an area where bridging to reach consensus will be required.

Speed of UAS Integration

APPROPRIATE

TOO FAST

TOO SLOW
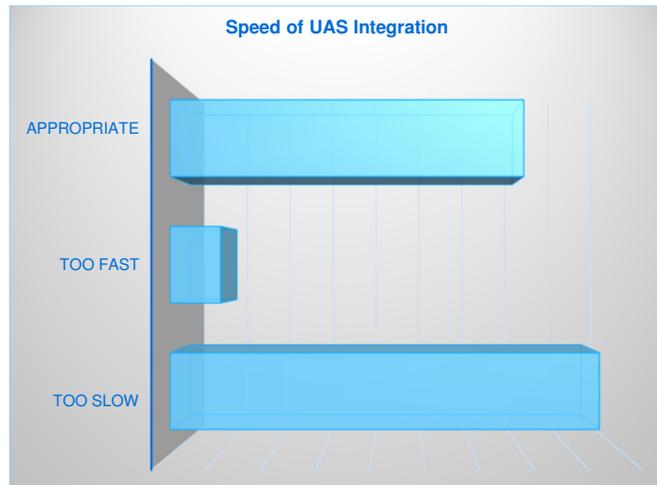
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Intended Use

Question:

If you are involved in manufacturing or operating drones, what is (are) your intended applications?

Result:

Wide range of possible uses implies a good cross-section of industry operators. Determining priorities, though, could be a challenge.

Intended Drone Use

REC/HOBBY

EVENTS COVERAGE

LARGE STRUCTURE INSPECTION

OVERHEAD PHOTO

PUBLIC USE

AGRICULTURE

PACKAGE DELIVERY
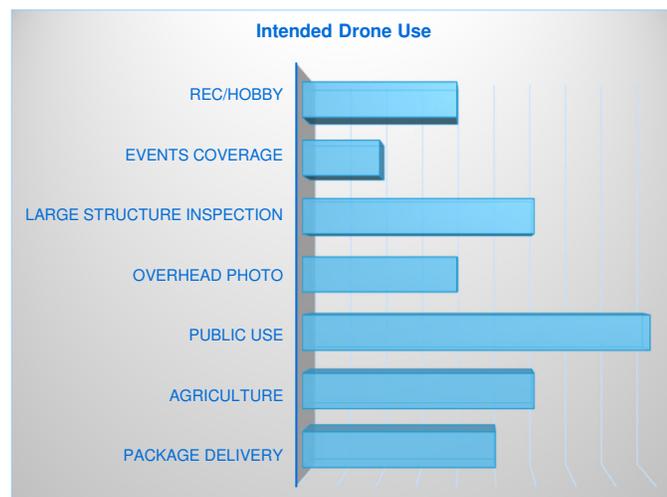
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Operational Priority

Question:

Order the following UAS domain topics in order you think the DAC should address them

Result:

The range of priority interests is broad, but there is a slightly greater interest in BVLOS, low-alltitude VLOS and Full Access to the Airspace operations.

Operations Type Priority Ranking

Full UAS integration in the NAS   Public Use Operations   Low Altitude BVLOS Operations   Low-Altitude VLOS Operations   Model and Hobby
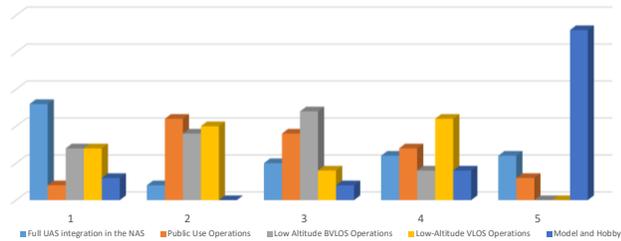
Weighted Average of Operations Type Priority

Model and Hobby
Low-Altitude VLOS Operations
Low Altitude BVLOS Operations
Public Use Operations
Full UAS integration in the NAS

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Public Perception

Question:

What is the biggest public perception issue facing UAS integration?

Result:

Members believe the public is primarily concerned about safety and privacy. The committee is close to consensus in this area.

Public Perception Issue

UNDERSTANDING FAA PLANS
USE CASE/CONOPS
NOISE
SAFETY AND RELIABILITY
INTERDICTION
LAW ENFORCEMENT USE
ARMED DRONES
PRIVACY

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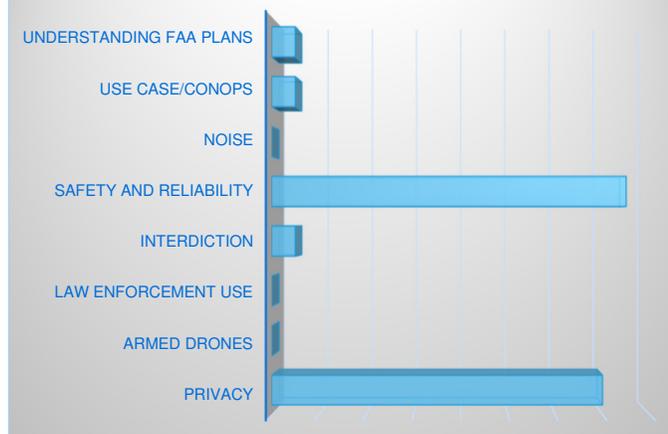
Regulatory Concern

Question:

What is your biggest regulatory / policy concern?

Result:

While there is a broad array of concerns on the regulatory front, safety ranks high by the members. Agreement on regulatory concerns will influence mitigating priorities.

Regulatory Concern

- INTERDICTION
- PRE-EMPTION
- REGULATORY ENFORCEMENT
- POLICY/INTER-AGENCY COLL
- REGULATORY FLEXIBILITY
- PERFORMANCE STANDARDS
- PRIVACY
- SAFETY
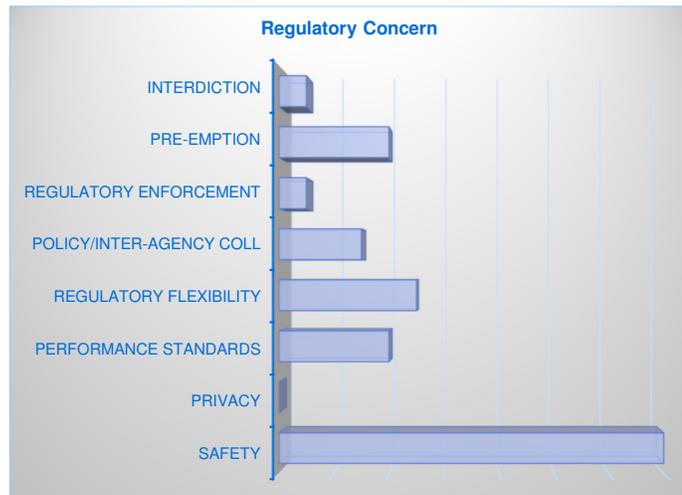
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Technological Concern

Question:

What is your biggest technological concern?

Result:

Collision avoidance is deemed a highly pressing technological concern. Another area where consensus is close, but other opinions must be addressed. Consensus here will also influence priorities

Technological Concern

- ELECTRONIC SIGNATURES
- COLLISION AVOIDANCE
- SPECTRUM
- CYBERSECURITY
- BIG DATA MANAGEMENT
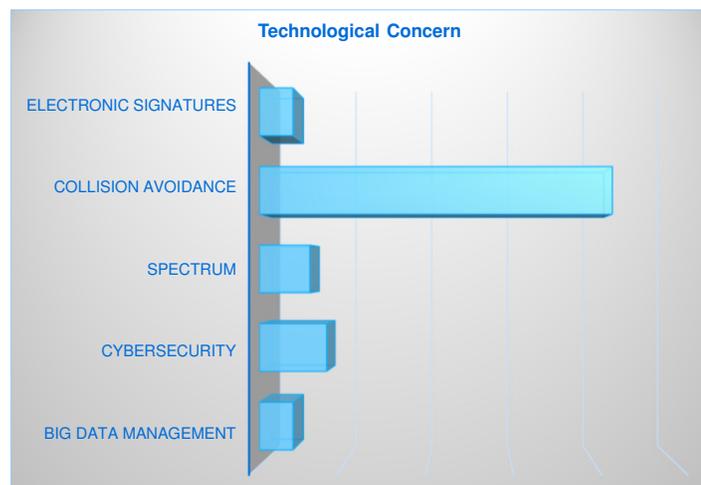
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FAA UAS Integration

Question:

I understand where my interests fit in the FAA's UAS integration strategy.

Result:

Most members believe they understand how their goals can be supported by UAS integration. This aids in focusing consensus building by highlighting the benefits to the organizations of the recommendations they will deliver

Understand where your interests fit in FAA UAS Integration

DISAGREE

AGREE
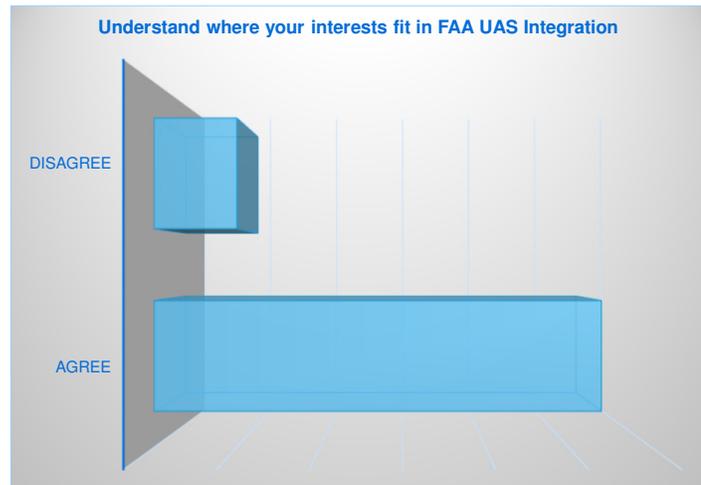
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Top Three Issues

Question:

Select the top three topics you think the DAC should address during its first year.

Result:

A wide array of responses indicates work for the DAC in setting priorities. Broad responses indicate consensus could be a challenge. More data (from sub group work) can assist in refining these results to identify the "must haves".

Top three Issues

PRIVACY

AUTONOMOUS OPS

CONOPS FOR BVLOS

SOFTWARE/HARDWARE

SPECTRUM ALLOCATION

MOPS FOR CNS

PERFORMANCE TESTING/RATING

CERTIFICATION
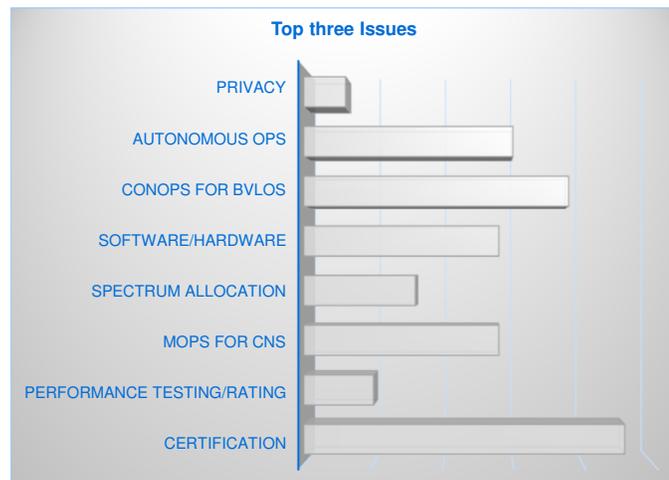
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Top Three Issues

Results:

The analysis indicates a close ranking of the top 5 issues. The ranking does not reveal a mandate on industry's view of what needs to be addressed. Criteria must be developed and agreed upon that can gauge the value gained/cost incurred for each alternative.

Once the criteria are developed, then evaluation by the DAC of the issues against those criteria should drive out the top candidates

Top three Issues

- PRIVACY
- AUTONOMOUS OPS
- CONOPS FOR BVLOS
- SOFTWARE/HARDWARE
- SPECTRUM ALLOCATION
- MOPS FOR CNS
- PERFORMANCE TESTING/RATING
- CERTIFICATION
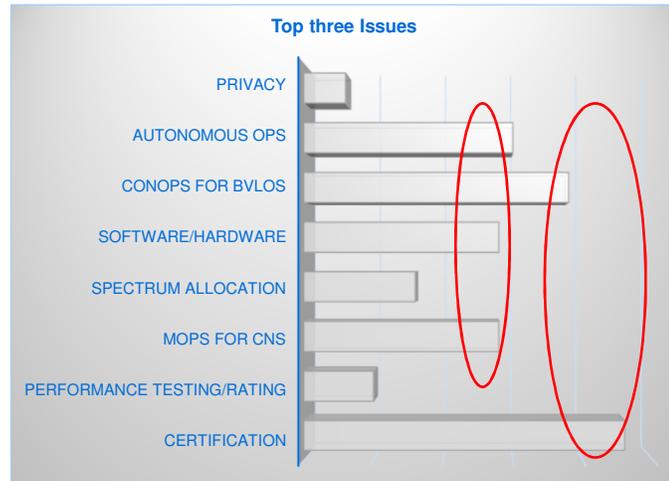
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Summarizing Results

There is near consensus on
- Perceived public concerns
- FAA strategic plan alignment
- Technological concerns for industry

Consensus yet to be reached on
- Pace of integration efforts
- Focus of priorities going forward
- Top three issues facing UAVs in the airspace

The team believes they understand public concerns, what the hardest technical challenge is and how their organizations will benefit from UAS integration: build on this mutual creed to forge consensus on priorities

The wide variety of domains and intended uses for UAVs expressed by the members will naturally lead to a wide variety of priorities. Research, data, and discussion will drive the committee to consensus for priorities on which the FAA should focus.

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