

## Unmanned Aircraft System (UAS) Operator Questionnaire

The following questionnaire is intended to capture baseline data on a UAS operator's experience, ability and proficiency with collecting data from flight operations in the field. Participants will be asked to answer a series of questions, which are designed to help the FAA better understand the challenges to collecting data in the field. All information provided by participants will remain completely anonymous and participation in this survey is entirely voluntary. Any information provided will not be used to inform FAA decision making on existing waivers, partnerships or policy. Again, all information provided herein will be anonymous and is only intended to capture the opinion of UAS Operators.

Please select the best response or fill in the fields below:

1) In the past 2 years, what role(s) have you typically performed during a UAS operation?

|                         |                  |                     |                         |
|-------------------------|------------------|---------------------|-------------------------|
| Remote Pilot In Command | Payload Operator | "Mission Commander" | Other (Please Specify): |
|-------------------------|------------------|---------------------|-------------------------|

2) In the past 2 years, what type of operation(s) have you normally flown?

|                               |                                    |  |                         |
|-------------------------------|------------------------------------|--|-------------------------|
| Part 107 Compliant Operations | Part 107 'BVLOS' Waived Operations | Part 107 'Ops-Over-People' Waived Operations | Other (Please Specify): |
|-------------------------------|------------------------------------|--|-------------------------|

3) In the past 2 years, have you routinely (i.e. for a substantial majority) collected data during UAS flight operations?

|     |    |
|-----|----|
| YES | NO |
|-----|----|

3a) When data is collected, when do you normally perform collection?

|                   |               |                    |                             |     |
|-------------------|---------------|--------------------|-----------------------------|-----|
| During Pre-Flight | During Flight | During Post-Flight | During All Phases of flight | N/A |
|-------------------|---------------|--------------------|-----------------------------|-----|

3b) When data is collected, is it operations data (e.g. single-entry logbook data on the flight operation), systems data (e.g. data automatically and incrementally recorded from UAS systems or instruments) or both?

|                 |              |  |                                       |              |     |
|-----------------|--------------|--|---------------------------------------|--------------|-----|
| Operations Data | Systems Data | Both, but more weight to Operations Data | Both, but more weight to Systems Data | Both Equally | N/A |
|-----------------|--------------|--|---------------------------------------|--------------|-----|

3c) Rate your proficiency with collecting data during a flight operation?

|      |                     |            |                 |        |
|------|---------------------|------------|-----------------|--------|
| None | Somewhat Proficient | Proficient | Very Proficient | Expert |
|------|---------------------|------------|-----------------|--------|

3d) How difficult is data collection in the field?

|                |                    |                            |               |           |     |
|----------------|--------------------|----------------------------|---------------|-----------|-----|
| Very Difficult | Somewhat Difficult | Neither Difficult Nor Easy | Somewhat Easy | Very Easy | N/A |
|----------------|--------------------|----------------------------|---------------|-----------|-----|

3e) Is data collection in the field manual, automated or both?

|        |           |      |     |
|--------|-----------|------|-----|
| Manual | Automated | Both | N/A |
|--------|-----------|------|-----|

3f) Do you have a standard operating procedure (SOP) for collecting data during UAS flight operations?

|     |    |
|-----|----|
| YES | NO |
|-----|----|

3g) If there is a data collection SOP, how often do you deviate from that SOP for any reason (e.g. a circumstance arises that the SOP does not address)?

|               |                           |                                  |                                |                               |                  |
|---------------|---------------------------|----------------------------------|--------------------------------|-------------------------------|------------------|
| Never<br>(0%) | Rarely<br>(> 0% & <= 25%) | Occasionally<br>(> 25% & <= 50%) | Frequently<br>(> 50% & <= 75%) | Regularly<br>(> 75% & < 100%) | Always<br>(100%) |
|---------------|---------------------------|----------------------------------|--------------------------------|-------------------------------|------------------|

3h) If there is a data collection SOP, for which phases of flight does it provide guidance?

|            |               |             |     |
|------------|---------------|-------------|-----|
| Pre-flight | During Flight | Post-flight | N/A |
|------------|---------------|-------------|-----|

3i) Please provide any other information you feel is relevant to Question 3 and its subparts?

4) In your experience, how many major sub-systems are critical to the safe operation of the UAS?

|   |   |   |   |   |   |   |   |   |    |     |
|---|---|---|---|---|---|---|---|---|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ |
|---|---|---|---|---|---|---|---|---|----|-----|

4a) Please list some of these major subsystems?

4b) When data is collected, approximately how many of those subsystems are sampled (i.e. how many subsystems are participating in data collection)?

|   |   |   |   |   |   |   |   |   |   |    |     |
|---|---|---|---|---|---|---|---|---|---|----|-----|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ |
|---|---|---|---|---|---|---|---|---|---|----|-----|

i) Do all sampled subsystems collect and report the same type of data?

|     |          |    |     |
|-----|----------|----|-----|
| YES | SOMEWHAT | NO | N/A |
|-----|----------|----|-----|

ii) Is the data collected from each sampled subsystem the same format and frequency as the others?

|     |          |    |     |
|-----|----------|----|-----|
| YES | SOMEWHAT | NO | N/A |
|-----|----------|----|-----|

iii) Are the sampled subsystems communicating with each other (i.e. are they non-isolated systems)?

|     |          |    |     |
|-----|----------|----|-----|
| YES | SOMEWHAT | NO | N/A |
|-----|----------|----|-----|

iv) Are the sampled subsystems time-synchronized?

|     |          |    |     |
|-----|----------|----|-----|
| YES | SOMEWHAT | NO | N/A |
|-----|----------|----|-----|

v) How many distinct data recorders (e.g. automated device, manual logbook or sensor) are involved in the collection of data?

|   |   |   |   |   |   |   |   |   |   |    |     |
|---|---|---|---|---|---|---|---|---|---|----|-----|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ |
|---|---|---|---|---|---|---|---|---|---|----|-----|

vi) Given all of the data recorders involved, approximately how many distinct data-packages (e.g. files) are generated for a single flight?

|   |   |   |   |   |   |   |   |   |   |    |     |
|---|---|---|---|---|---|---|---|---|---|----|-----|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 10+ |
|---|---|---|---|---|---|---|---|---|---|----|-----|

vii) Is there a standardized 'naming convention' and/or format for each data-package that is generated?

|     |          |    |     |
|-----|----------|----|-----|
| YES | SOMEWHAT | NO | N/A |
|-----|----------|----|-----|

viii) Is collected data consolidated into centralized storage or stored separately?

|              |                   |     |
|--------------|-------------------|-----|
| Consolidated | Stored Separately | N/A |
|--------------|-------------------|-----|

4c) Please provide any other information you feel is relevant to Question 4 and its subparts?

5) When you report data to the FAA (e.g. for a waiver application), do you have a sure understanding of what data should be reported?

|        |                 |                         |               |                 |
|--------|-----------------|-------------------------|---------------|-----------------|
| Unsure | Somewhat Unsure | Neither Unsure Nor Sure | Somewhat Sure | Completely Sure |
|--------|-----------------|-------------------------|---------------|-----------------|

5a) Do you agree that the data collection should be defined by target-measures (i.e. metrics)?

|                   |                   |                            |                |                |
|-------------------|-------------------|----------------------------|----------------|----------------|
| Strongly Disagree | Somewhat Disagree | Neither Agree nor Disagree | Somewhat Agree | Strongly Agree |
|-------------------|-------------------|----------------------------|----------------|----------------|

5b) Do you have a sure understanding of safety risk management and safety assurance in the context of aviation operations?

|        |                 |                         |               |                 |
|--------|-----------------|-------------------------|---------------|-----------------|
| Unsure | Somewhat Unsure | Neither Unsure Nor Sure | Somewhat Sure | Completely Sure |
|--------|-----------------|-------------------------|---------------|-----------------|

5c) In your experience, what is the biggest issue with providing data to the FAA?

5d) Please provide any other information you feel is relevant to Question 5 and its subparts?

6) In context of your own organizational and operational needs (irrespective of the FAA), do you see value in routinely collecting data?

|     |    |          |
|-----|----|----------|
| Yes | No | Somewhat |
|-----|----|----------|

6a) What difficulties do you typically encounter when collecting data?

6b) What metrics do you find to be most informative or useful to your needs?

6c) Given the opportunity, what data would you like to collect that you currently are not?

