Are You Prepared to Be an Aviation Organization?

How does a drone department fit within your company?

What training or partnerships do you need to define the business model?

What are the risks?

What is your perceived timeline and budget to get started?
What We Will Cover

- An overview on everything required to run a successful drone program
- How to prove drone value and win over leadership
- Case Studies
- An overview of the tools and techniques used to develop low risk, high reward drone operations
Who Are We?
DataWing helps companies integrate drones into routine operations

FIELD SERVICES
On Demand Aerial Data Collection

DRONE DATA PROCESSING
Maps, Point Clouds, Data Visualization, and Storage

DRONE TRAINING AND SUPPORT
Part 107 Training, Advanced Training, and Holistic Drone Program Management

SMARTSKY
Operations & Data Management Software
Starting a UAS Program
Its More Than Just Owning a Drone

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<th>Training</th>
<th>Documentation</th>
<th>Asset Procurement and Management</th>
<th>Regulatory Compliance &amp; Insurance Coverage</th>
<th>Operations</th>
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<td>Sourcing / buildout</td>
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<td>Advanced training</td>
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<td>Flight logs</td>
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Proof of Value
Gaining corporate approval in 6 steps

“Save time”

“Better data quality”

“Cut costs”

“Reduce safety risk”

1. Find a champion
2. Educate on applicable drone use cases
3. Demonstrate the value of drones to the company
4. Model a return on investment
5. Prove how the program will remain compliant and mitigate risks
6. Show how you can scale
Case Studies

MAJOR OIL AND GAS E&P COMPANY

Developed internal drone program
- Trained 23 employees on rotary-style drones
- Current use cases
  - Graphics / media
  - GIS support and mapping applications
  - Offshore rig inspections
  - Optical gas imaging

Company hired drone consulting group to assist in a year long trial to prove drone value to the company. The project leaders safely accomplished 65 missions saving the company over $1.1M in costs over traditional inspection methods. The program continues to grow.

Key takeaway – Do not reinvent the wheel. Identify key internal stakeholders to initiate the program and then find experts to lead and accelerate the program development.

MID SIZE MIDSTREAM COMPANY

Outsourced all drone services
- Current use cases
  - GIS support and mapping applications
  - New construction support
  - Facility inspection
  - Environmental support

Company interested in drone applications, but recognized it was not equipped to use the technology internally. They learned the rules and hired outside drone services providers achieving 60% faster data turn-around times on inspections over traditional methods.

Key takeaway – Do not be resistant to change. Once you develop a list of drone-related vendor requirements then you can focus on the value of the end product.
Tools for Success

OPERATIONAL MANAGEMENT
VISUALIZATION / PROCESSING
ORGANIZATION
How to work with the data

Visualize, measure, record, and export data for use in your own software programs

Export file types:
- Point Cloud: LAS, LAZ, PLY, XYZ
- 3D Mesh: PLY, FBX, DXF, OBJ, 3D PDF
- DSM, DTM: TIF
- Contours: SHP, PDF, DXF
- Orthomosaic: TIF, TIF tiles, KML Tiles (Google Earth)
How to organize visual-based information

COMBINE STRUCTURED AND UNSTRUCTURED DATA INTO ONE VISUAL-BASED PLATFORM

Cameron Measurement Systems
Linco LACT Sampler

Volume Regulator / LACT Sampler
The Cameron “flow unit” sampling technique consists of different components. These are commonly used on LACT units.

1. A 304 or 316L stainless steel or “Sample Regulator”
2. An electric actuated valve
3. A wellhead or manifold with a 3/4” suction valve mounted upstream to utilize the flow rate to assist in flooding the sample.

Port Configuration
Port 1 – normally closed/vent and connects to the sample header
Port 2 – common port connected to the valve regulator
Port 3 – relief port connected to the sample line going to the sample jet
Questions?