TRAINING COMPETENCE

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ICAO RPAS Symposium

20th September 2017

Introduction

- Company Overview

- Aircraft Used

- Training Pipeline
  Competencies – Basic Training
  Competencies – Post Graduate Training

- Training – Challenges

- Training – Next Steps

CYBER**HAWK**

Cyberhawk - Company Profile

Founded 2008
50 Employees
Edinburgh – Scotland

Provide Aerial Survey and Inspection Services using
small (<7kg) RPAS
Operate in over 25 different countries
Completed over 21,000 flights
National Qualified Entity (NQE)

Key Industries
➢Oil & Gas
➢Renewable Energy
➢Utilities
➢Rail
➢Land Survey

Aircraft

Intel Falcon 8 Trinity (Inspection / Survey)

Flyability Elios (Internal / Confined Space)

MAVinci Sirius Pro (Survey)

DJI Inspire 2 (Video)

DJI Mavic Pro (Video)

CYBER**HAWK**

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CYBERHAWK

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CYBER**HAWK**

Pilot Experience

Variety of backgrounds
➢ Manned Fixed Wing
➢ Manned Rotary Wing
➢ Oil & Gas Industry
➢ Qualified engineers / inspectors
➢ Rope access
➢ Ex-military

Flying experience
0-500 hours on small RPAS

Range of Applications
Basic survey to complex offshore
platforms

CYBER**HAWK**

Basic Pilot Training

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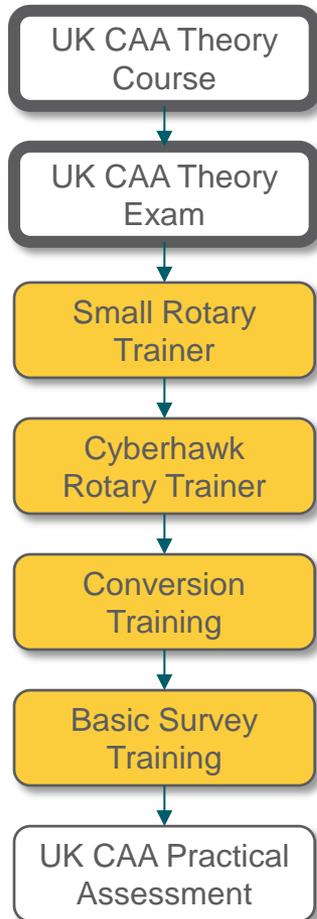
- ➤ Air Law / Responsibilities
- ➤ Airspace Operating Principles
- ➤ Airmanship & Aviation Safety
- ➤ Human Factors
- ➤ Meteorology
- ➤ Navigation
- ➤ Aircraft Knowledge & Principles of Flight
- ➤ Operating & Emergency Procedures
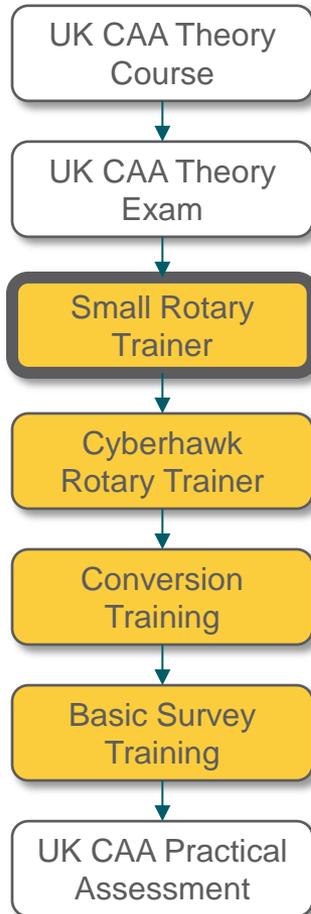
CYBER**HAWK**

Basic Pilot Training

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Manual flying skills
- ➢ Hover (all orientations)
- ➢ Figure of 8
- ➢ Use of checklists

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Basic Pilot Training

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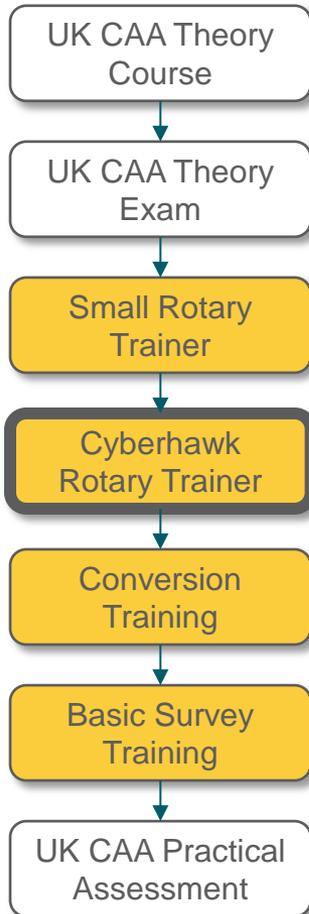
Manual flying skills

➢ Hover (all orientations)

➢ Figure of 8

➢ Use of checklists

➢ **Inspection Profiles**

Basic Pilot Training

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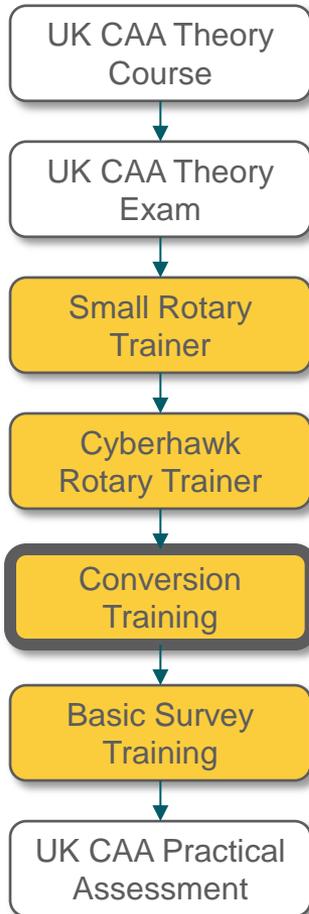
Conversion training to Falcon 8

➢ Manual flying
➢ Inspection Profiles
➢ Use of checklists
➢ **GPS / Flight System Modes**
➢ **Pre-flight planning**
➢ **Risk assessments**

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Basic Pilot Training

UK CAA Theory Course

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UK CAA Theory Exam

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Small Rotary Trainer

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Cyberhawk Rotary Trainer

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Conversion Training

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Basic Survey Training

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UK CAA Practical Assessment
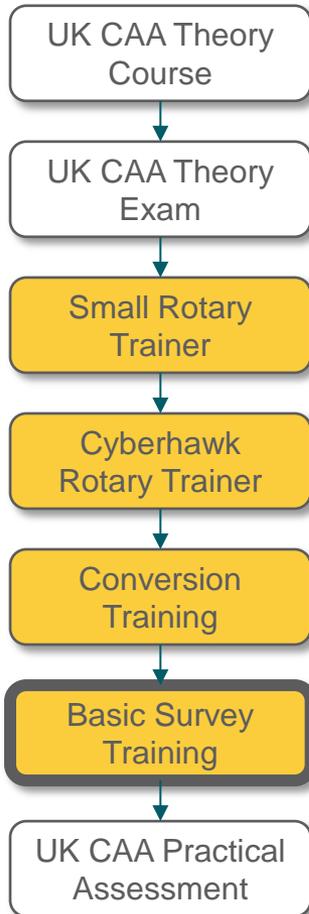
Basic Survey Training

➢ Data capture and handling

➢ Selection of payload

➢ Survey Profiles (Collection Plan)

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Basic Pilot Training

UK CAA Theory Course

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UK CAA Theory Exam

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Small Rotary Trainer

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Cyberhawk Rotary Trainer

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Conversion Training

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Basic Survey Training

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UK CAA Practical Assessment

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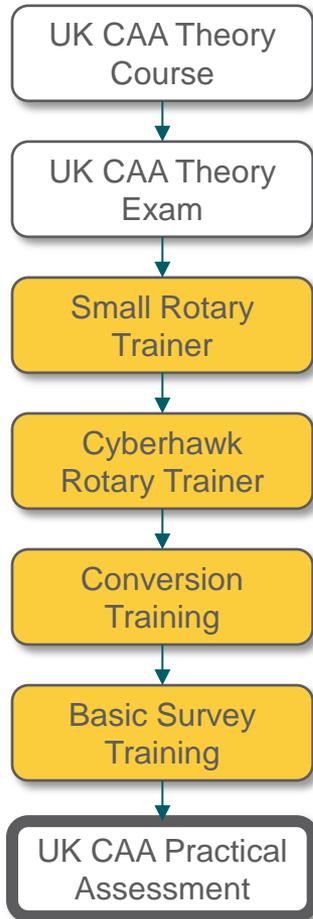
Postgraduate Pilot Training

On-the-job experience

- Survey Advanced (Fixed Wing)
- Utility Basic
- Industrial Basic

On-the-job experience (under Survey Advanced)

On-the-job experience (under Utility Basic)
- Utility Advanced

On-the-job experience (under Industrial Basic)
- Industrial Advanced

As Required

- Congested Areas
- Internal Inspection
- FAA Part 107 Exam
- IAA Theory & Practical
- ENAC Theory & Practical
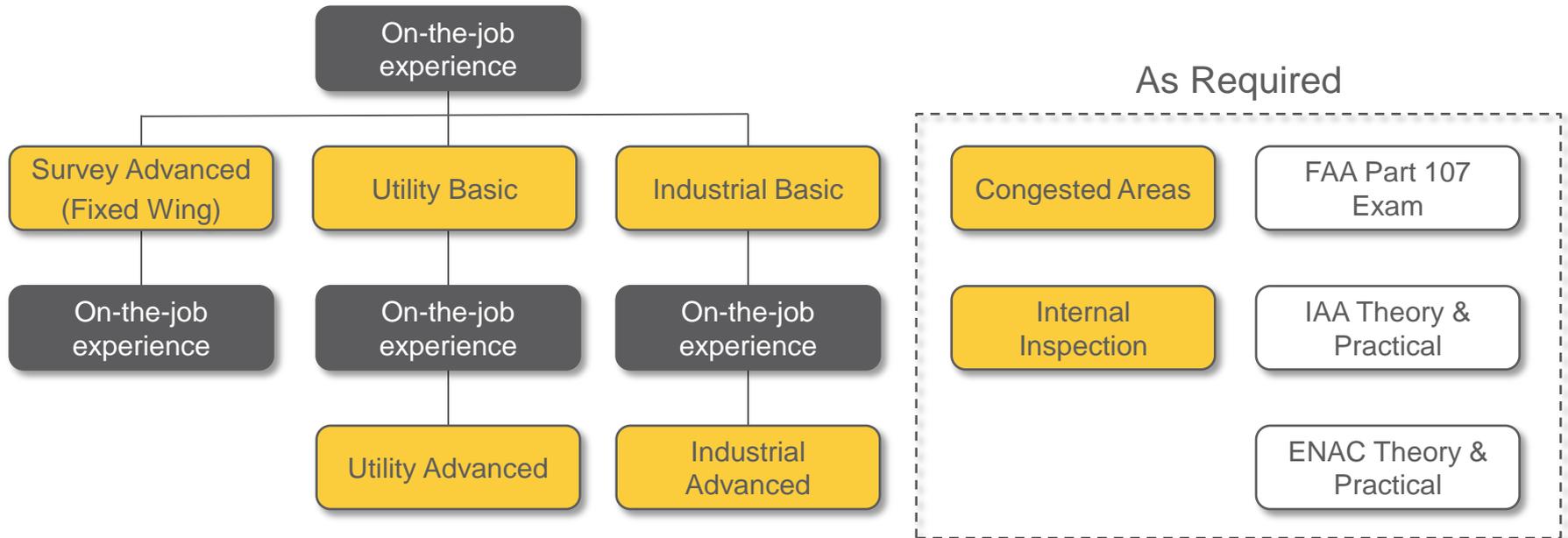
CYBERHAWK

Application of procedures
      Client safe system of work
      Standard Operating Procedures – distance and
      position around the flare

Communication / Teamwork
      Offshore brief to Cyberhawk team and client
      personnel
      Interaction with platform Radio Operator /
      Helicopter Control

Problem Solving / Situational Awareness
      Identifying Hazards
      Mitigating Hazards
      Adaptable to changing environment
      Aircraft Telemetry

Workload Management
      Distraction

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Competence Challenges – Identifying and Mitigating Hazards

Sea Spray
High Flaring
Cold Vents
Microwave Dishes
Spark Risk
Confined Space
Wind Turbulence
Exhausts
GPS Signal Strength
Water Drop Down
Deluge Systems

CYBER**HAWK**

Competence Challenges – Manual Flying

Reliance on GPS and automated flight control systems

Lack of basic manual flying skills

Recovery if GPS signal is degraded or denied

Maintaining currency

CYBERHAWK
Aerial Inspection and Surveying Specialists

Cyberhawk Training

Cyberhawk use a competency based approach to training

Focus on specific skill sets during both basic and post-graduate training

Flexibility to tailor training to individual pilot skills and knowledge

Challenges:

Develop awareness and knowledge required to identify and mitigate all hazards as much as possible

Maintain manual flying skills

Next steps:

Development of industry specific competencies

CYBERHAWK

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