Competency Based Approach and Licensing Authority

20 September 2017
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① Role of the Licensing Authority

② The Hard questions

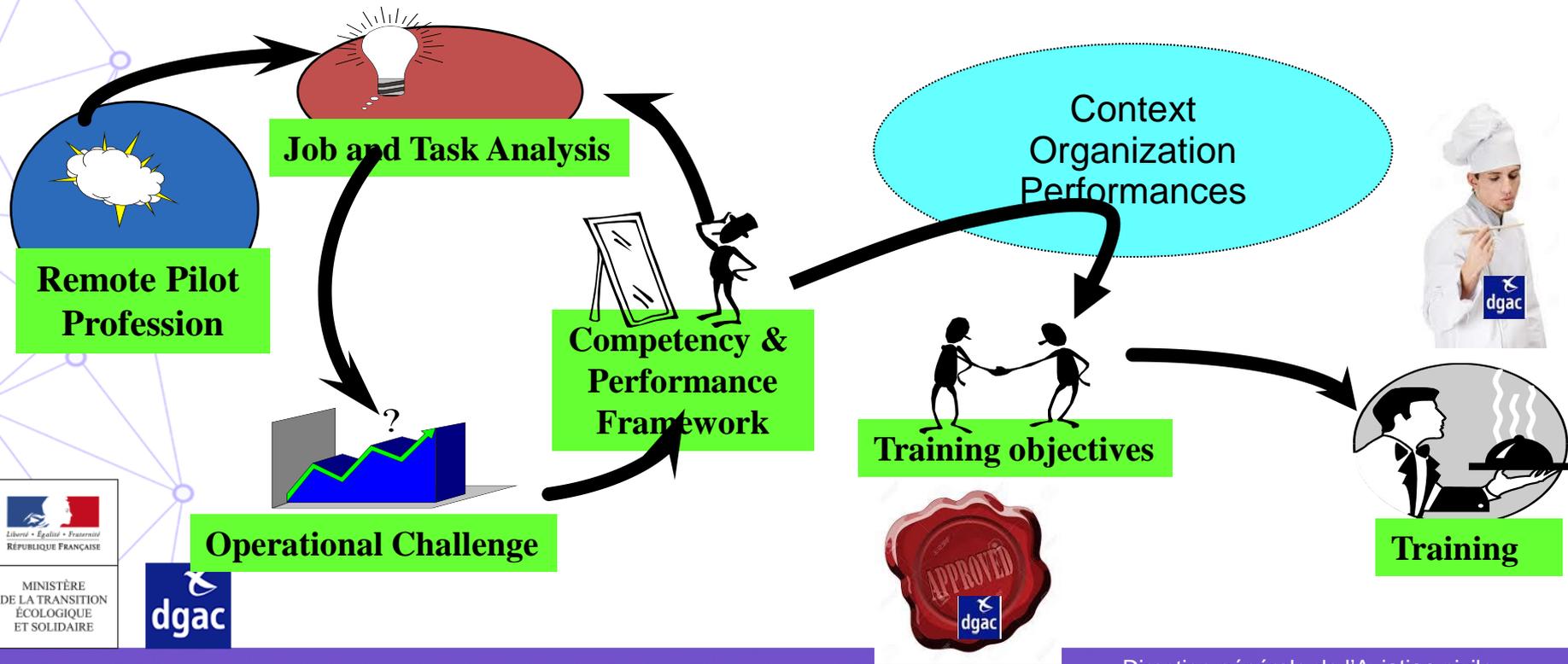③ The Scenario Approach

The Licensing Authority

Cf ICAO Annex 1

- ❑ **Assessment of an applicant's qualifications to hold a license or rating;**

- ❑ **Issue and endorsement of licenses and ratings;**

Unchanged as long as Training Programme is approved

- ❑ **Designation and authorization of approved persons;**

- ❑ **Approval of training courses;**

Challenging

- ❑ **Approval of training facilities; and**

- ❑ **Validation of licenses issued by other Contracting States.**

Need a Common Framework

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Job and Task Analysis

Remote Pilot Profession

Operational Challenge

?

Competency & Performance Framework

Context Organization Performances

Training objectives

Training

Hard questions

Defining Competencies for Remote Pilots

Our challenge:

Structure the Competency-Based Framework to express all the competencies without describing the variety of contexts and technological conditions.
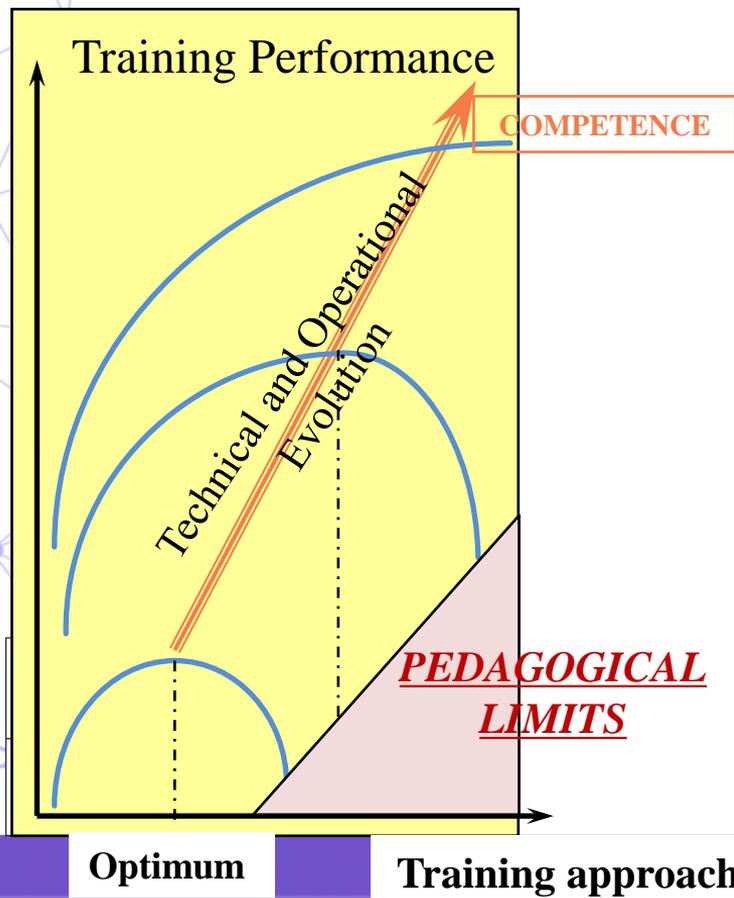
The next challenge:

Assess the performances attached to these Competency-Based Frameworks.

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Flexibility versus Stability

❑ **The competency and licensing scheme shall adapt to the variety of operational situations**

  ❖ A common set of expected behaviors and observable performance

  ❖ Some flexibility in the level of taxonomy

❑ **Necessity to appreciate the context and challenges of operational environment to approve the training scheme**

  ❖ Basic competencies

  ❖ Specific to the operation: RPA, mission…

❑ **Do not over regulate to be able to follow the evolution**

  ❖ Preventive regulation

  ❖ Reactive regulation or "smart" regulation

❑ **A robust Return of Operational Experience process shall be put in place to ensure efficiency of the training scheme**

❑ **Harmonization through best practices sharing**

Training Performance

COMPETENCE

Technical and Operational Evolution

PEDAGOGICAL LIMITS

Optimum

Training approach

❑ **Situation Awareness**

❑ **Non-Usual Situations, C2 link**

❑ **Airspace, Traffic environment simulation or emulation**

❑ **Professional Instructor abilities**

❑ **Approved Training Organization oversight / Operator's oversight**

❑ **Return of experience process**

The scenario Approach

French regulatory framework for civil unmanned aircraft includes **two national orders** (initially published in 2012 and reviewed in 2015)**:**

Order « Airspace »

Order of 17th december 2015 relating to airspace use

Order « Aircraft »

Order of 17th december 2015 relating to unmanned aircraft design, conditions for their use and skills required

Training requirements

Objectives of regulation :

☐ To preserve safety and security
☐ To foster the development of UA activity
☐ To guarantee fair access to airspace and aerodromes to all users (HEMS, military traffic, aerial work, general aviation …)

French regulation built around three **types of use** :

Model aircraft

Use of an unmanned aircraft for **leisure and competitions** ("model aircraft")

Experimentation

Use of an unmanned aircraft (other than a "model aircraft") for **testing or controlling**

Specialized operation

Use of an unmanned aircraft for **other operations** (other than model aircraft and experimentation) whether or not there is a commercial transaction

VLOS

SCENARIO 1

Non-populated area

- Distance ≤ 200m
- Height < 150 m
- Safety perimeter

SCENARIO 3

Populated area

- Distance ≤ 100 m
- Height < 150 m
- Mass ≤ 8 kg
(unless tethered aircraft)
- Safety perimeter

BVLOS

SCENARIO 2

Non-populated area

- Distance ≤ 1 km
- Height < 50 m
(height< 150 m
if mass ≤ 2 kg)
- Clear of clouds
- Safety perimeter

SCENARIO 4

Non-populated area

- Distance (no limit)
- Height< 150 m
- Mass ≤ 2 kg
- Clear of clouds
- Overflight of uninvolved persons

Rmk: Specific authorization on a case by case basis for flight not covered by a scenario

		Training	
		Theory	**Practical**
SCENARIO	S1	**Manned aviation theoretical certificate** (Microlight, PPL(A)/(H), sailplane licence …)	Initial and periodic **training provided and decided by operator** (issuance by operator of a declaration of competence)
	S2		
	S3		
	S4	Hold or have held a PPL(A)/(H)/sailplane + 100 hours as PIC + training on UA + recency	

Context

- ❑ Since February 2014 **request from profession** to have a specific theoretical exam fitting more professional remote pilot expectations

- ❑ DGAC launched in February 2015 (before the bill) a **review of the competency framework for remote pilot operating under specialized operations** framework

Main principles

- ❑ **Learning objectives** (LOs) published to enable training providers to propose theoretical/practical training and to develop training material

- ❑ **A common and specific UA theoretical examination** covering all scenarios (questions and syllabus established in cooperation between DGAC, Industry, French army …)

- ❑ **Non certified training providers** (operator declaration)
- ❑ **No Self-training**: Training Organization shall attest success in the agreed training objectives

SCENARIO		Theory	Practical		Conditions to act as remote pilot
			Common training	**Additional training**	
	S1			None	- 16 years old - UA theoretical certificate - Practical training (training attestation and individual training record filled in by the training operator)
	S2			Training to additional basic skills	
	S3			ills	
	S4			ills	Prerequisite : - 18 years old - hold or have held at min. LAPL - 50h as PIC Conditions : - UA theoretical certificate - Practical training S4

One common theoretical exam relevant for all operational scenarios

Training syllabus identifying competency objectives focusing on mission preparation and safety of third parties (ground and air)

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