Flight Standards Directorate

REPORT

Proposal for a Competency Framework for the Competent Authorities' Inspectors

Working Group established following WP06 of EASA MB 03-2015

Document ref.	Status	Date
Report: Proposal for a Competency Framework for the Competent Authorities' Inspectors	Final	28/11/2016

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Executive Summary

This report illustrates the outcome of the Working Group established by EASA Management Board that developed a competency framework for Civil Aviation Authority Inspectors, who need to be prepared for the upcoming challenges in safety oversight. The framework consists of eleven modern inspector competencies necessary to perform the role effectively:

- Technical expertise
- Role awareness
- Performance-based orientation
- Dealing with complexity
- Self-development
- Interpersonal skills
- Communication
- Analytical thinking
- Oversight and project management
- Decision-making and responsibility
- Teamwork, collaboration and partnership

This report further recommends that Authorities' consider these competencies either to complement their existing frameworks or to use them as a starting point in identifying the competencies they need to meet their specific organisational needs.

Some points for the Agency's and Authorities' consideration are also recommended.

Contents

1. Background (why a competency model for inspectors is needed)

Competent Authorities (CAs) face difficulties in having suitably qualified inspectors who are able to cope with the challenges posed by the increased size, scope and complexity of the regulated industry. Consequently, to respond to these challenges, competencies of inspectors need to evolve.

Inspectors need new skills, beyond the traditional aviation technical skills, to understand the wider safety risk profile, to increasingly direct the focus of oversight resources towards the organisation's safety management capability and to understand how the organisation discharges its safety accountabilities. This has to be done taking into account how the business is structured, how the interfaces and subcontracting with other organisations are managed and how safety risks are mitigated. In this way the inspector should be able to challenge the robustness of the organisation's safety risk management and safety assurance processes and be able to decide on the organisations' ability to effectively comply with regulatory requirements.

1.1 EASA Initiative

In December 2015 the EASA Management Board (MB) endorsed the EASA proposal to establish a working group under the leadership of the Agency and in association with representation from the Competent Authorities to develop a competency Framework for aviation inspectors. Such a framework is considered to be the right solution in the mid to long term and a horizontal approach across all domains is considered suited to the industry needs in defining the key competencies and skills required. The proposed competency model would enable inspectors to act as an essential catalyst for the implementation of safety management and risk/performance-based oversight in the aviation system. Following the KSA model (knowledge, skills and attitude), the competences required by inspectors operating in different technical domains within a performance-based environment can be summarized in the following picture.

Figure 1: The Starting point

In parallel with the development of the competency framework other work took place at EASA touching upon similar subjects:

- The development and finalisation of the Safety Management System Inspector Competence Guidance by the Safety Management International Coordination Group (SMICG);
- The development of Working Paper 92 for the ICAO 39th Session Assembly titled 'Enablers for Risk Based Oversight'. The paper recommended ICAO expedite the development of the guidance material relative to the desired inspectorate competencies framework, and to recognise the need to determine additional inspector competencies, to ensure the effectiveness of related risk-based oversight;
- The development of ICAO's 'Competencies of Civil Aviation Safety Inspectors (CASI)' Manual. The first draft of ICAO 10070 appeared in September 2016.

All such fora unanimously agreed that for 21st century inspectors the importance of knowledge as a pre-requisite for the inspector's job cannot be questioned. However, experience shows that knowledge is not the only driver to good performance, what is important is how knowledge is combined with skills and attitudes in what is known as behaviour. The focus of the working group among the Competent Authorities was put on the expected behaviour of inspectors and on its visibility and measurability.

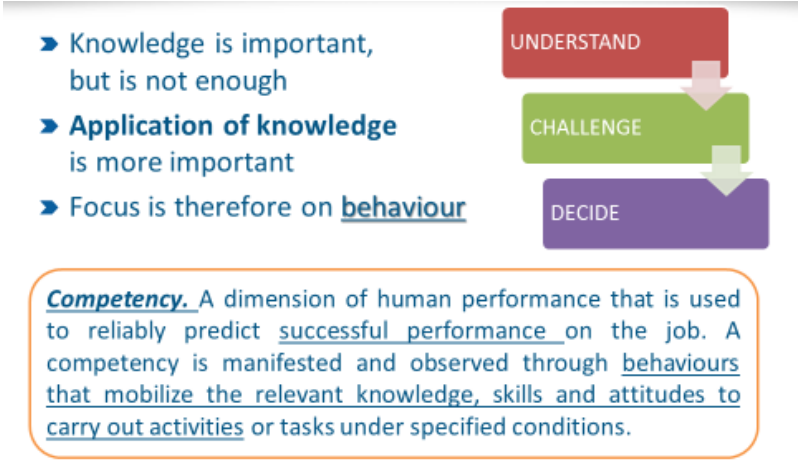

Figure 2: The challenges for the inspectors of 21st century

2. The added-value of a competency framework

In the modern practice of human resources management in organisations, competencies are used to manage the way knowledge, skills and attitudes are used by employees to perform a job effectively.

A competency framework is a reference point which helps align the approach on how people are managed; for example, an organisation hires, trains, evaluates, compensates, and promotes their staff based on the same attributes.

In other words, a job-specific competency framework for Civil Aviation Inspectors ensures the following added value:

- Ensure that inspectors perform according to established standards;
- Selection of new inspectors is targeted for the expected performance and behaviours;
- Performance is evaluated effectively, comparatively and fairly;
- Skills and competencies gaps are identified with a specific measurable focus on behaviours,
- Training and professional development are tailored to the identified behaviours, and
- Succession is planned with a focus on competency gaps.

Figure 3: Use of competencies

2.1 A competency framework for Civil Aviation Inspectors

A competency reflects the knowledge, skills, and attitudes needed to perform a job effectively. A competency framework describes in behavioural terms how these three elements should be best applied. Competencies have a direct impact on how well a jobholder performs.

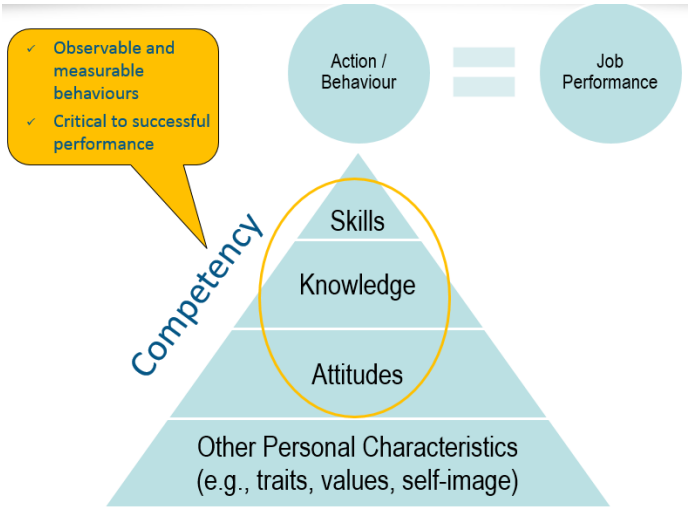

Figure 4: Competencies describe the integrated use of skills, knowledge and attitudes

The competencies identified by the working group can be used either to complement and adjust competency framework already in place or to serve as a starting point in setting the specific competencies needed by the organisation.

A common approach to the use of competencies is helpful because such approach creates a common understanding of how the effective performance in the job of the aviation inspector looks like across all aviation organisations. In addition, competencies help the jobholder understand what is expected from him/her and provide clarity on the contribution necessary to achieve the work objectives set by the managers and the organisation.

3. Working method

A number of European Competent Authorities provided their experts for this project. Their names are listed in Appendix 1. In addition EASA experts from all technical domains within the Flight Standards Directorate were invited to attend the workshops that were jointly delivered by a well-blended team of the EASA Policy and Planning, Human Resources, and International Cooperation departments.

In order to maximize the contributions of the experts from Competent Authorities and to use efficiently the time available, two workshops were organised by EASA to determine the critical competencies necessary to perform successfully as a Civil Aviation Inspector.

Workshop planning began in January with a view to finalising outcomes by September 2016. Two workshops were run, the first on the 25th-26th April and the second on the 22nd June. Experienced cross-domain industry representation from around twelve Member States along with eight EASA technical experts constructively participated as delegates in both sessions resulting in an extremely productive outcome.

The objective of the first workshop was to identify the upcoming challenges for inspectors posed by the introduction of safety management, risk / performance-based oversight and multinational business models across all aviation domains and to define the corresponding competencies by looking at the performance expectations for inspectors in terms of needed knowledge, skills and attitudes with a future perspective. In

addition some preliminary associated behaviours (behavioural anchors) were discussed, which will enable the understanding and the application of the competencies.

The group was asked to use its experience to imagine what were the expected inspector challenges and the relevant possible scenarios could be and to match them with desired outcomes in terms of influence on the overseen organisations.

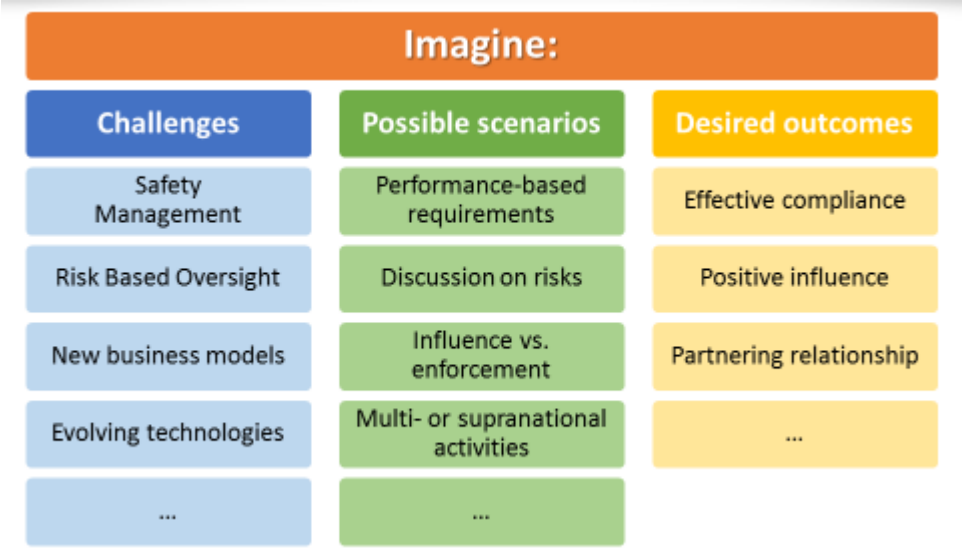

Figure 5: How competencies were derived

3.1 1st Workshop, 25 – 26 April 2016

The workshop aim and objectives were proposed, followed by a discussion on the need to define the necessary skills, behaviours and attitudes that inspectors require to perform their roles effectively. Emphasis was placed on keeping an open mind and the use of imagination, taking into consideration the short (up to 5 years), medium (5-15 years) and long term (15 years and beyond) timescales. Three sub-groups were established to determine the challenges and expectations in future oversight scenarios. This was followed by a session titled 'Expectations from the Regulated Industry' presented by Mr. Giancarlo Buono - IATA, Regional Director Safety and Flight Operations, Europe.

After the workshop, in liaison with the project team, the work continued to make the necessary adjustments to the competencies and the behavioural anchors initially identified.

3.2 2nd Workshop, 22 June 2016

The workshop objective was to consolidate the work performed so far, to discuss and adjust the competencies and behavioural anchors and to validate collectively the competency framework.

During the discussion, the importance of knowledge as a pre-requisite for an inspector was discussed at length and it was agreed to define the elements of the competency of Technical Expertise as a common reference for the minimum technical expertise needed by inspectors. Therefore, a list of 'knowledges" was discussed and added to the competency framework.

A useful practical session on how to use competencies was followed by a realistic interactive 'Agreement on Risk' scenario involving volunteer role players and observers. Time was taken to reflect on the use of the observed competencies and behaviours in a post-scenario role play.

In both workshops all delegates participated with enthusiasm and dedication that were essential to the achievement of the project objectives. Their good preparation before the workshops allowed for efficient use of time and fruitful, targeted discussions, which paved the way to the good delivery of the full group.

4. The competency framework

4.1 Knowledge list

As stated above, the group felt it necessary to make a list of common knowledges that will need to be possessed by the future inspectors, regardless of the domains where they will be active. They will constitute the basis for the recruitment and professional development of the inspector.

The use of the list of knowledges also make it possible to describe the competency "technical expertise" from a behavioural standpoint, without the need to enter to what needs to be known by an inspector.

The knowledges identified by the group are the following:

1. Domain-specific knowledge:
   a. Typical technical issues
   b. Regulatory framework
   c. Operational experience related to the specific duties (e.g. FOI, GOI)
2. Auditing techniques
3. Practical Human Factors experience coming from training and exposure
4. Risk assessment techniques
5. Practical understanding of SMS and its implementation:
   a. SMS assessment tools and techniques
   b. Definition and use of safety performance indicators

4.2 Table of competencies

The competencies identified by the group are presented in the following table. According to the practice each competency is identified by a definition, followed by a short description and further developed in a list of behavioural anchors that are allowing the observation and the assessment of the desired performance.

COMPETENCY	DESCRIPTION	BEHAVIOURAL ANCHORS
TECHNICAL EXPERTISE	**Demonstrates knowledge appropriate to the allocated tasks.**	• Possesses an in-depth knowledge in the specific area of expertise; • Has a broad understanding of related technical fields in order to do the job at a high level of accomplishment; • Utilises skilfully the sets of knowledge defined as an integral part of this competency; • Is able to have a meaningful technical conversation with the key personnel of the overseen organisations; • Picks up new knowledge quickly; • Is committed to continuously improve and proactively update required knowledge.
ROLE AWARENESS	**Understands the implications of the inspector role.**	• Is able to advise and challenge taking relevant responsibility; • Understands and acts in compliance with the rules for conflict of interest; • Is prepared to apply enforcement measures when necessary; • Recognises the limit of his/her own authority when taking decisions and when to escalate to a higher level; • Is open-minded, diplomatic, observant and decisive; • Demonstrates a strong sense of integrity and is ethical; • Is self-driven and able to work independently.
PERFORMANCE-BASED ORIENTATION	**Demonstrates an effective approach to oversight considering the stakeholder's business model, risk profile and organisational setup.**	• Accurately determines and prioritises key points of risk management in different business models; • Is capable of assessing objectively different approaches to manage business risks and demonstrate compliance, without unnecessary preconception; • Applies appropriate assessment techniques to drive effective compliance of the overseen organisations; • Is open to innovation and new ways of working, and is able to meet emerging challenges; • Recognises emerging trends in technical practice and is able to consider new solutions; • Is forward-thinking and cognizant of new upcoming regulatory business models/environments.

COMPETENCY	DESCRIPTION	BEHAVIOURAL ANCHORS
DEALING WITH COMPLEXITY	**Able to navigate complex organisations and systems which operate in a global, interdependent and fast-evolving environment.**	• Deals insightfully with complex technical concepts that are beyond accumulated knowledge; • Pays attention and observes in depth, breadth and detail situations of high complexity, novelty, or chaos; • Exercises judgement when experience is not helping to bring forth the solution, and is able to identify risks or opportunities through intuition and foresight; • Demonstrates a pragmatic approach in unpredictable situations and remains trustworthy; • Recognises new forms of interdependence and acts considering economic influences, conflicting interests and environmental consequences; • Able to think interdisciplinary and involve other disciplines when necessary; can see opportunities for synergy and integration.
SELF-DEVELOPMENT	**Engaged in a life-long learning process and able to operate effectively and flexibly within a change environment.**	• Regularly seeks feedback, uses reflection and analyses both successes and setbacks for continuous self-improvement; • Shows interest and pursues appropriate learning activities that meet self-development/learning needs; • Is aware that different situations need different skills and approaches (e.g. shift from compliance-based to performance-based); • Has an open approach and perceives change as a personal challenge and opportunity to grow; • Is able to think ahead and obtain technical and professional knowledge accordingly.
INTERPERSONAL SKILLS	**Able to develop and maintain a suitable relationship in order to achieve objectives.**	• Is able to lead open and tactful discussions where all parties can state their case; Is diplomatic and settles misunderstandings skilfully; • Is able to understand cultural differences and adapt behaviour to culture-specific expectations; • Can sense the emotional standing of a counterpart in a conversation and is able to react with respect and appreciation; • Is able to build constructive relationships - up, down, and sideways, inside and outside the organisation; Easily finds common ground; • Is able to compromise and accept different views; • Acknowledges the opinions of others even when he/she disagrees.

COMPETENCY	DESCRIPTION	BEHAVIOURAL ANCHORS
COMMUNICATION	**Effective in expressing information both verbally and in writing.**	• Demonstrates openness and honesty while communicating and sharing information; • Adapts communication style to the audience - language, tone, style, content, format, non-verbal elements etc. - and is able to get messages across that have the desired effect; • Is able to summarise complex technical information; • Listens attentively, asks clarifying questions and is able to identify common ground.
ANALYTICAL THINKING	**The process of gathering relevant information and identifying key issues related to this information.**	• Can think holistically and is able to read/interpret data and to draw viable conclusions; • Is able to identify causes and consequences and to anticipate impacts and outcomes; • Can discuss multiple aspects and impacts of issues and project them into the future; • Is comfortable to simplify complex processes; • Can think coherently and follow a reasonable line of thought; • Can identify alternative ways and differentiate acceptable from unacceptable possibilities.
OVERSIGHT AND PROJECT MANAGEMENT	**Makes the best use of available resources to ensure effective oversight and project management.**	• Is aware of own strengths and limitations and those of the team, and is able to prioritise and assign tasks to team members accordingly; • Manages issues by drawing on own experience and knowledge, and plans, organises and calls on other resources as necessary; • Takes personal responsibility for the quality and timeliness of work, and achieves results in good cooperation with others; • Highlights issues and concerns that might lead to enforcement activity; Understands the escalation paths and the full range of available enforcement actions to reach the desired safety outcomes; • In seeking efficient use of resources, shares responsibility with others, sometimes managing tasks from a distance (remotely); • Follows procedures and standards, and follows up issues accordingly; • Reflects on own performance within the team, observes and monitors team members, seeks and gives constructive feedback to others to ensure a standardised oversight approach.

COMPETENCY	DESCRIPTION	BEHAVIOURAL ANCHORS
DECISION-MAKING AND RESPONSIBILITY	**Makes sound decisions based on relevant facts, evidence and safety information as well as using common sense, expert judgement and sometimes "gut feeling".**	• Draws on analysis, experience and consultation to take informed decisions that are perceived as fair, objective and reasonable; • Remains factual, considers options and priorities, as well as any potential consequences and resulting liability, before concluding on a case; • Is able to make decisions under pressure; • Is able to conclude timely on findings; • Takes decisions on regulatory action (enforcement) appropriate to own level of responsibility; • Is able to take on additional responsibility when necessary or deemed appropriate.
TEAMWORK, COLLABORATION AND PARTNERSHIP	**Partnering internally and externally to achieve safety objectives.**	• Collaborates within the team and other domains , as well as with external stakeholders, for gathering information needed to regulate the overseen organisations; • Sustains constructive working relationships both internally and externally characterised by acceptance, cooperation and mutual respect; • Recognises conflict and manages it constructively; • Supports and acts in accordance with final team decisions, even when such decisions may not entirely reflect own position; • Proactively engages others in joint working; • Expresses views in a positive, persuasive manner whilst remaining receptive to the views of others; • Openly shares own experience and knowledge to benefit others and encourages others to do the same.

5. Conclusion

The working group of the Competent Authorities embraced an ambitious goal to look into the future of the inspector's job across all aviation domains. The inputs received and the interactions with the various stakeholders and counterparts, e.g. IATA, ICAO, SMS etc., enabled the group to analyse important trends, expectations and interlinks.

Taking into account that the evolution of aviation is sometimes too fast and unpredictable and technology is not anymore the only driver of change, the group had a wide focus on determining the upcoming challenges for the inspector's job. The proposed competencies capture all the important aspects of the inspector's profile, namely (i) the inspector's capacity to judge the implementation of the regulatory requirements, (ii) to be accordingly knowledgeable, (iii) to apply interpersonal skills in daily business, and (iv) be able to operate in a complex context.

- The working group was exceptionally keen on promoting the competency of "Dealing with Complexity". Complexity is heavily felt by activities that have a global scope in a world in which "the rising geopolitical volatility is the main driver of changes that require industries such as aviation to react and adapt faster than ever before" (cf. World Economic Forum Report on the Future of Jobs, January 2016).

- The group's main effort in identifying the competencies for inspectors has been to produce a valid usable output. All the competencies included in this paper are considered important and relevant, and the behavioural anchors are worded clearly. The measurability of some items, e.g. "in-depth knowledge", was discussed within and outside the group. These are left to common sense and to the specific context of each organisation who chooses to use the framework.

5.1 Recommendations

- The NAAs are invited to consider the proposed framework of inspector competencies as a common reference.

- In order to be proficiently used within the Competent Authorities, the competency framework presented in this report should be adapted to the organisational set-up of each Authority. To that extent, the eleven competencies identified by the working group can be used either to complement a competency framework already in place or to serve as a starting point in identifying the specific competencies governed by the needs of the organisation.

5.2 Intended internal application

- Using the inspector competencies and the EASA competency framework for the definition of EASA-specific inspector qualifications (ref. Art. 51.10.c of new Basic Regulation);

- Discussing the inspector competencies in the Common Training Initiative Group (CTIG) for their applicability in the NAAs in the context of their existing competency framework if any;

- Applying the inspector competencies in the context of the EASA Virtual Academy to enable the transition to competency-based training of the VA training providers;

- Collaborating with the VA training providers in using the inspector competencies in order to identify the training needs of NAAs coherently for their inspectors.

Appendix 1 – Contributors

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    - Manuel Riva Vilas FS4.1
    - Paul Harvey, FS4.1

Appendix 2 – References

- SMICG: Safety Management System Inspector Competence Guidance, May 2016
- Working Paper 92 for the ICAO 39th Assembly 'Enablers for Risk Based Oversight', September 2016
- ICAO Doc. 10070, 'Competencies of Civil Aviation Safety Inspectors (CASI)' Manual, draft dated September 2016
- World Economic Forum, Report 'The future of jobs', January 2016