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WORKING PAPER

DANGEROUS GOODS PANEL (DGP) WORKING GROUP MEETING (DGP-WG/19)

Montréal, 1 to 5 April 2019

Agenda Item 2: Managing air-specific safety risks and identifying anomalies
2.2: Develop proposals, if necessary, for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) for incorporation in the 2021-2022 Edition

REVISION AND REFINEMENT OF PROPOSED CHANGES TO IMPLEMENT COMPETENCY-BASED TRAINING

(Presented by D. Brennan)

SUMMARY

The working paper proposes a revision to the draft changes to Part 1;4 shown in Attachment 4 and the associated guidance material to implement competency-based training for dangerous goods.

Action by the DGP-WG: The DGP-WG is invited to consider revising Part 1; 4 and the associated guidance material as shown in the Appendix to this working paper.

1. INTRODUCTION

1.1 At the last meeting of the Dangerous Goods Panel (DGP/26), the Panel agreed to adopt, with a 2-year transition period, the provisions for the implementation of competency-based training into the 2019-2020 edition of the Technical Instructions.

1.2 However, due to the lack of agreement by the Air Navigation Commission (ANC) to the changes agreed to dangerous goods training in Annex 18, the ANC deferred recommending adoption of competency-based training into the 2019-2020 Technical Instructions and instead the new Part 1;4 and the associated guidance material are included as Attachment 4.

1.3 While the delay in implementation of competency-based training for dangerous goods is somewhat frustrating, the additional time has allowed International Air Transport Association (IATA) to

continue consultation with industry and with regulatory authorities to identify potential improvements to the provisions of Part 1;4 and in the associated guidance material.

1.4 IATA has worked with member airlines, ground service providers and training schools through the IATA Dangerous Goods Training Working Group (DGTWG) and with many regulatory authorities to review the proposed Part 1;4 and the guidance material to understand the potential issues and challenges to implement and adopt the provisions for competency-based training.

1.5 In looking at Part 1;4.1.1 and 4.1.2 as shown in Attachment 4 there is concern that the text does not properly address all those functions for which dangerous goods training applies. The text in 1;4.1.1 requires dangerous goods training for personnel performing any function described in the Technical Instructions.

1.6 The issue here is that there are many functions where the current provisions of the Technical Instructions require dangerous goods training and yet the function is not explicitly addressed in the Technical Instructions. Examples of these are freight forwarder personnel, load planners, loadmasters, flight dispatchers and cabin crew.

1.7 While the provisions in Part 1;4.1.2 in Attachment 4 aim to address this gap, there is still debate as to whether this is “should” or “must and the text in 1;4.1.2 is still shown in square brackets.

1.8 Associated with this is the lack of a direct link between Part 1;4 and the guidance material. There is currently nothing in Part 1;4 that refers to the guidance and here it is believed that there must be a specific link to the guidance to support industry and regulatory authorities to understand the provisions of competency-based training and to support implementation of competency-based training.

1.9 To address these particular issues, it is proposed to revise Part 1;4.1.1 and 4.1.2 to make specific reference in 4.1.1 to the high level functions for which dangerous goods applies and at the same to directly refer to the guidance material. In 4.1.2 it is proposed to make this a “should” on the basis that this now refers to other functions that do not have a direct responsibility with the preparation, acceptance, processing, handling or loading of cargo, mail and baggage.

1.10 Looking at the guidance material, there were a number of common themes that came from the IATA discussions through the DGTWG and with regulatory authorities. The first was the ongoing concern that the deletion of Tables 1-4 and 1-5 would remove a benchmark that is being used to evaluate the completeness of a dangerous goods course for a particular job function and to measure a course offered for example by a ground service provider against the equivalent course of the operator.

1.11 While it is recognised that it was never intended that these tables should be used in this way, in the absence of other tools or information, the tables are being used as a means of evaluating course content for the identified functions. With the development of guidance material to support competency-based training there is the opportunity to develop more granular recommendations on the knowledge and competencies that should apply for well-defined job functions.

1.12 In considering revisions to the guidance material IATA has drawn on the content of the ICAO TRAINAIR *PLUS Training Development Guide, Competency-based Training Methodology* (Doc 9941) and The *Procedures for Air Navigation Services — Training* (PANS-TRG, Doc 9868).

1.13 In the TRAINAIR *PLUS* document and in PANS – Training the required level of proficiency is a key consideration in the analysis of the job or function. In the revisions to the guidance

for competency-based training this has been identified within each well-defined function as part of the training needs analysis.

1.14 In this way the knowledge and competencies for each of the well-defined job functions in the guidance material have been expanded to provide a level of granularity that should support the evaluation of course material and assessments by regulatory authorities as well as for operators or other entities that wish to determine if the courses and assessments for a specific job function meet the required standard.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to consider revision of Part 1;4 and the associated guidance material for competency-based training as shown in the Appendix to this working paper.

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APPENDIX A

PROPOSED AMENDMENT TO ATTACHMENT 4 OF THE TECHNICAL INSTRUCTIONS

Attachment 4

PROPOSED NEW TRAINING PROVISIONS

INTRODUCTORY CHAPTER

PROPOSED REVISIONS TO THE TRAINING PROVISIONS

The proposed revisions to the training provisions provided in Attachment 4 to the 2017-2018 Edition of the Technical Instructions were further revised in response to feedback from States and industry and are included in this attachment for information purposes. They are being further reviewed by ICAO in conjunction with the training provisions in Annex 18. Final provisions will be included in Part 1;4 of the Instructions and as guidance material following formal consultation with States and appropriate international organizations.

Chapter 1 of this attachment provides the proposed new training provisions which are intended to replace current Part 1;4. Chapter 2 of this attachment contains the draft Chapters 1 to 6 of the guidance material on implementing a competency-based approach to training and assessment specific to dangerous goods. This guidance material will be published as a separate document.

Chapter 1

PROPOSED NEW PART 1, CHAPTER 4 — DANGEROUS GOODS TRAINING

Chapter 4

DANGEROUS GOODS TRAINING

Parts of this Chapter are affected by State Variations AE 2, BR 7, CA 11, HK 1; see Table A-1

4.1 ESTABLISHMENT OF DANGEROUS GOODS TRAINING PROGRAMMES

Note.— A training programme includes elements such as design methodology, assessment, initial and recurrent training, instructor qualifications and competencies, training records and evaluation of the effectiveness of training.

4.1.1 The employer must establish and maintain a dangerous goods training programme for personnel performing any of the following high level functions: ~~described in these Instructions.~~

- Classifying dangerous goods;
- Preparing a dangerous goods shipment;
- Processing/accepting cargo or mail;
- Managing cargo or mail pre-loading;
- Accepting passenger and crew baggage;

- Transporting cargo / mail / baggage; and
- Collecting safety data

For further details refer to the guidance material on a competency-based approach to dangerous goods training and assessment

~~The following provision will be further reviewed in conjunction with a review of the training provisions in Annex 18~~

[4.1.2 The employer [~~should/must~~] establish and maintain a dangerous goods training programme for personnel who may not perform any of the high level functions ~~described in these Instructions~~ listed in 4.1.1 but do perform functions that may indirectly be related to the movement of cargo, baggage, passengers, or mail. The aim of the programme is to ensure personnel are competent to perform functions aimed at preventing undeclared dangerous goods or dangerous goods not permitted from being carried on an aircraft.]

Note.— Security personnel who are involved with the screening of passengers and crew and their baggage and cargo or mail are required to be trained irrespective of whether the operator on which the passenger or cargo is to be transported carries dangerous goods as cargo.

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Chapter 2

DRAFT GUIDANCE MATERIAL ON A COMPETENCY-BASED APPROACH TO DANGEROUS GOODS TRAINING AND ASSESSMENT

Chapter 1

GENERAL

1.1 INTRODUCTION

1.1.1 A safe and efficient air transport system is dependent on a competent workforce. ICAO has recognized that this can be achieved through the implementation of a competency-based approach to training and assessment. The *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284, "Technical Instructions") require that employers ensure personnel are competent to perform any function for which they are responsible prior to performing them. A competency-based approach to training and assessment is an effective way to ensure this requirement is met.

1.1.2 This document provides guidance in implementing a competency-based approach to dangerous goods training and assessment for personnel involved in the transport of cargo, mail, passengers and baggage by air. The *Procedures for Air Navigation Services — Training* (PANS-TRG, Doc 9868) contains greater detail on competency-based training and assessment.

1.2 COMPETENCY-BASED TRAINING AND ASSESSMENT

1.2.1 The goal of competency-based training and assessment is to produce a competent workforce by providing focused training. It does so by identifying key competencies and the level of proficiency ~~that need~~ to be achieved, determining the most effective way of achieving them and establishing valid and reliable assessment tools to evaluate their achievement.

1.2.2 The Technical Instructions state that personnel must be trained commensurate with the functions for which they are responsible. These responsibilities are determined by the specific function's personnel perform and not by their job titles. Concentrating on functions and responsibilities rather than a job title or description ensures that a person is competent to perform the function in compliance with the Technical Instructions. For example, entities such as ground service providers and freight forwarders may need personnel to perform some functions that are typically performed by shippers or operators. The ground service and freight forwarder personnel need to be trained to perform these functions competently regardless of their job title.

1.2.3 In smaller operations, personnel may perform many functions such as accepting dangerous goods and loading and securing dangerous goods on board an aircraft. They would need to be trained to perform all of these functions competently. In larger operations, personnel may only perform a small number of functions. They would only need to be trained to perform those specific functions competently.

1.2.~~2~~4 A competency is defined by the PANS-TRG as a dimension of human performance that is used to reliably predict successful performance on the job. It is manifested and observed through behaviours that mobilize the ~~relevant~~four competency factors: knowledge, skills, experience and attitudes to carry out ~~activities or~~ tasks and activities under specified conditions to achieve a particular level of proficiency/competency. A competency framework with associated performance criteria provides a means of assessing whether trainees achieve the desired performance. A competency framework and associated task list for dangerous goods personnel is described in paragraph 1.~~7~~5.

1.2.4.1 The four competency factors are defined as follows:

- Knowledge: is the theoretical or practical understanding of a subject. Means to understand and know the principles.
- Skills: are developed through training or on the job application. Something that has been learned and put into practice.
- Attitude: is the key differentiator on a competency approach. One may have knowledge, skills and experience, however what is the overall approach when doing so? Speaks more to the commitment to the quality, the outcome, the profession. What is your benchmark compared to others in the same environment?

- Experience: is related to the applied knowledge and skills: How often? Where? When? And in which context is the combination of the rest of the elements applied to.

1.2.4.2 The criteria to determine the level of proficiency/competency must take into account the complexity of activities, the range of work (routine, predictability, and dependencies) and the complexity of the context and the level of autonomy in performing the tasks. The basic consideration to determine the right level of proficiency should then be considered as follows:

- Introductory (★): simple work activities, most of it routine and predictable. Guidance required. Final product highly supervised.
- Basic (★★): various work activities, various contexts. Some individual responsibility or autonomy. Limited guidance needed. Result reviewed for quality not in detail (spot checks).
- Intermediate (★★★): broad range of activities, complex and non-routine context. High confidence in results, work tested against broader business context. Significant personal autonomy. Team authority in some areas (e.g. supervisor).
- Advanced (★★★★): broad range of work. Complex technical and professional activities in a wide variety of contexts. From substantial to wide scope for personal autonomy. Regional and divisional authority in some areas. Regarded as a consultant in some areas.

1.2.3~~4~~5 A critical feature of competency-based training is assessment to ensure training is efficient and effective in developing the ~~skills, knowledge and attitudes~~ level of proficiency/competency required to perform the function competently.

Note.— Competency-based training and assessment is described in more detail in the PANS-TRG, Part I, Chapter 2.

1.3 BENEFITS OF COMPETENCY-BASED TRAINING AND ASSESSMENT FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR

1.3.1 The main benefit of a competency-based approach to training and assessment is its potential to encourage and enable personnel to reach their highest level of capability while ensuring a basic level of competence as a minimum standard. It does this by:

a) targeting function specific training needs;

b) supporting continuous learning and performance improvement;

c) gearing towards learning rather than simply passing a test;

d) ensuring the integration of knowledge, skills, ~~and~~ attitudes and experience needed to perform a job at a particular level of proficiency/competency effectively;

e) supports the implementation of Safety Management systems (SMS); and

~~e~~f) establishing sufficient, well-trained and competent instructors.

1.3.2 Ensuring personnel are able to perform their functions competently is critical to any organization. A competent workforce reduces cost caused by poor performance or miscommunication of job expectations. An incompetent dangerous goods workforce could result in costs and delays in shipment. Even more critically, it could result in the introduction of safety risks. As an example, identifying, classifying, packing, marking, labelling and documenting dangerous goods for transport are critical to the safe transport of dangerous goods by air. The operator depends on these functions being performed competently by those preparing and offering a consignment for transport so that they are aware of the hazards posed and the required measures to mitigate them. If personnel performing these functions are not trained to competently perform them, unknown risks may be introduced into air transport. As another example, accepting dangerous goods for air transport requires an operator to verify that dangerous goods are properly prepared for transport through use of a checklist. If personnel accepting dangerous goods are not trained to competently perform this function, they may unnecessarily reject properly prepared shipments thereby delaying shipments and increasing costs to the shipper and the operator. Alternatively, personnel not trained to competently perform this function may accept improperly prepared shipments of dangerous goods into air transport thereby introducing risks to the aircraft and its occupants.

1.3.3 A competency-based approach to training and assessment ensures trainees know what they are expected to competently perform and [~~evaluators~~ instructors] know what performance to assess.

~~**1.4 RELATIONSHIP BETWEEN COMPETENCY-BASED TRAINING AND ASSESSMENT AND SAFETY MANAGEMENT**~~

~~1.4.1 Safety is ICAO's guiding and most fundamental strategic objective. Annex 19 to the Convention on International Civil Aviation — *Safety Management* contains Standards and Recommended Practices (SARPs) intended to assist States in managing aviation safety risks. The foundation of safety management is the implementation of a State safety programme (SSP) by States and safety management systems (SMS) by service providers. An operator's SMS addresses the aviation activities that are related to the safe operation of the aircraft in accordance with Annex 6, Part I or Part III. These aviation activities include the carriage of dangerous goods. Other entities in the dangerous goods transport chain should be encouraged to implement a similar safety system.~~

~~1.4.2 Implementing SMS requires that all personnel understand the safety philosophy and embrace a disciplined and standardized approach for SMS. Personnel need to know their roles and responsibilities with respect to dangerous goods and have the requisite competencies to perform their functions within the SMS. To ensure that personnel have the knowledge, skills and abilities to support SMS, training activities should follow the competency based approach.~~

~~1.4.3 The "Swiss Cheese" Model of accident causation proposes that complex aviation systems are extremely well defended by layers of defences making single point failures rarely consequential in such systems (see paragraph 2.2 of the *Safety Management Manual (SMM)* (Doc 9859)). The model illustrates that accidents involve successive breaches of multiple system defences and that all accidents include a combination of both active conditions (actions or inactions that have an immediate adverse effect) and latent conditions (conditions that exist in the aviation system well before a damaging outcome is experienced). Doc 9859 identifies training as one of the three main groups of defences in aviation and identifies deficiencies in training as a latent condition.~~

~~**1.5 FUNCTION-SPECIFIC TRAINING**~~

~~1.5.1 The Technical Instructions state that personnel must be trained commensurate with the functions for which they are responsible. These responsibilities are determined by the specific functions personnel perform and not by their job titles. Concentrating on functions and responsibilities rather than a job title or description ensures that a person is competent to perform the function in compliance with the Technical Instructions. For example, entities such as ground handling companies and freight forwarders may need personnel to perform some functions that are typically performed by shippers or operators. The ground handling and freight forwarder personnel would need to be trained to perform these functions competently regardless of their job title.~~

~~1.5.2 In smaller operations, personnel may perform many functions such as accepting dangerous goods and loading and securing dangerous goods on board an aircraft. They would need to be trained to perform all of these functions competently. In larger operations, personnel may only perform a small number of functions. They would only need to be trained to perform those specific functions competently.~~

~~1.5.3 The depth of training each person receives should be appropriate to the functions performed. This could range from a familiarization level to an expert level for certain personnel.~~

1.6~~4~~ ROLES AND RESPONSIBILITIES IN A COMPETENCY-BASED APPROACH TO TRAINING

1.6~~4~~.1 Employer

1.6~~4~~.1.1 A training programme includes elements such as design methodology, initial and recurrent training, assessment, instructor qualifications and competencies, training records and evaluation of its effectiveness. Employers need to determine the purpose and objective of the competency-based training programme based on the functions for which their personnel are responsible. Employers should ensure that training is designed and developed to establish clear links among the competencies to be achieved, learning objectives, assessment methods, and course materials.

1.6~~4~~.1.2 The employer must study the target population (future trainees) with a view to identifying the knowledge, skills and attitudes that they already possess, to collect information on preferred learning styles, and on the social and linguistic environments of prospective trainees. The target population may be a mixture of experienced and newly recruited personnel, groups differing in age, etc. All these components could have an impact on the design of the training. Employers must also consider the domestic and international regulatory requirements that apply to their operations.

1.6~~4~~.1.3 Some employers may utilize third parties for assistance. This approach may be the most suitable for employers who do not have the resources to train their personnel in house. While utilizing third parties may be cost effective, whether or not the training needs are being addressed needs to be the deciding factor in selecting a third party and not costs alone. The potential for third parties to cater to the training needs of multiple employers and not address all required competencies needs to be taken into account. Employers remain responsible for ensuring its personnel are competent to perform their functions prior to performing them even if certain aspects of the training programme have been delegated to third parties.

1.6~~4~~.1.4 Employers should liaise directly with the regulator to ensure that the latter's requirements are taken into account prior to proceeding with the development of competency-based training,

1.6~~4~~.2 Instructor

In competency-based training, the instructor facilitates the trainee's progression towards the achievement of competencies. Instructors also collect information about the effectiveness of the training materials which supports continuous improvement. Examples of instructor competencies can be found in Part I, Chapter 3 of the PANS-TRG.

1.6~~4~~.3 Trainee

In competency-based training, trainees are active participants in their learning process and the achievement of competencies as opposed to passive recipients of knowledge. The competency-based training programme provides them with a clear idea of their learning path towards competency through the training programme and beyond. The competency-based training should directly contribute to improving their performance on the job. Trainees' feedback is essential in ensuring that competency-based training is effective.

1.6~~4~~.4 Regulator

1.6~~4~~.4.1 There are important differences between the ways the regulator would oversee a traditional training programme versus a competency-based training programme. In a traditional training programme, the regulator may assess the course components and final test against knowledge elements and not on the competencies that need to be acquired. The fact that all knowledge components are addressed or appear to be included in a course and all trainees have passed the required test does not necessarily mean that they can competently perform their assigned functions.

1.6~~4~~.4.2 Where competency-based training has been implemented, regulators should oversee the training programme to ensure that it actually produces personnel who can perform the functions for which they are responsible in a specific operational setting and in compliance with the national regulatory framework. The *Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284SU) provides guidance on overseeing dangerous goods training programmes.

1.7~~5~~ ~~DEVELOPING~~ FRAMEWORK TO IMPLEMENT COMPETENCY-BASED TRAINING AND ASSESSMENT PROGRAMMES FOR DANGEROUS GOODS

~~1.7.1 ICAO framework and adapted competency model~~

~~The purpose of competency based training and assessment is to train and assess the capacity of an individual to perform at the standard expected in an organizational workplace. Therefore, organizations electing to implement competency based training and assessment should adapt the corresponding generic ICAO competency framework for dangerous goods personnel (Chapter 2, Table 2-1) to suit their context by developing an adapted competency model (Chapter 2, Table 2-2). The framework consists of competencies and their associated descriptions and observable behaviours and forms the basis from which an adapted competency model is derived. Employers implementing competency based training and assessment should adapt this framework to reflect their specific requirements. An adapted competency model is an effective tool for defining successful job performance and provides a means of assessing whether trainees achieve the desired performance. The adapted competency model will include the final competency standards and conditions that need to be assessed in addition to the adapted competencies and their associated descriptions and observable behaviours.~~

~~1.7.2 Relationship between competencies and tasks~~

~~1.7.2.1 Traditional approaches to training development involve the decomposition of jobs into tasks. For each task there is a related objective, an assessment and associated elements in a training plan. A limitation of this approach is that each task must be taught and assessed. In complex systems or when jobs evolve rapidly, it may not be possible to teach and assess each task. Moreover, learners may demonstrate the ability to perform tasks in isolation without being competent in their job.~~

~~1.7.2.2 Competency based training and assessment is based on the concept that competencies are transferable. In the design of a competency based training and assessment programme, a limited number of competencies are defined. Typically, an activity will involve several competencies and competencies may apply across a variety of activities and contexts. In the design of training and assessments, tasks and activities are incorporated because they are good candidates for facilitating, developing or assessing a competency or competencies. Specific tasks may be used to develop specific competencies. Lack of specific competencies may be identified as root causes for the failure of a task.~~

~~1.7.2.3 A generic list of tasks typically performed by dangerous goods personnel is provided in Chapter 3. It consists of dangerous goods tasks and sub-tasks. A complementary flowchart is provided in Chapter 4. It illustrates the typical processes of performing these tasks. The employer should adapt this task list to reflect the specific tasks performed by its personnel.~~

~~1.7.3 Development and implementation of competency-based training and assessment programmes~~

~~1.7.3.1~~1.5.1 *Phase 1 — ~~Training needs a~~Analysis*

The main objectives of this important phase are:

a) to define the problem to be addressed and determine if there is a need for a training programme,

b) to establish the job function requiring the training program, the employer's competencies and the level of proficiency/competency required, and

c) to determine the target population.

1.5.1.1 Dangerous goods training is a regulatory requirement mandated by Part 1, Chapter 4, of the Technical Instructions. Therefore, determining the need for training is covered by this requirement.

1.5.1.2 The following step on this first phase is to perform a training needs analysis (TNA) to establish the competencies ~~in the development and implementation of a competency-based training programme~~ specific to an employer's function, environment and requirements~~ is to conduct a training needs analysis~~. An employer conducts a training needs analysis to determine the results that the training needs to achieve and what resources exist to achieve these results. This critical step will ensure that the training fits the employer's purpose and is effective. ~~A training specification is developed during this phase of development that details the requirements that need to be fulfilled when designing the training.~~ This should include the purpose of the training along with its requirements, including operational, technical, regulatory and organizational. ~~This phase also involves the development of the task list (see paragraph 1.7.2).~~ To perform a proper TNA there should be a job analysis and various inputs considered in advance. Some of these inputs have already been created by subject matter experts and are offered in these guidelines:

1.5.1.2.1 The identification of the specific job function and the different tasks, activities is the start of the process. The identification of general high-level functions has already been done and is reflected in Chapter 2 – Dangerous goods functions – Process Flowchart. This flow chart represents major areas that are clustered into high level functions. Based on that flow chart these guidelines provide a list of well-established functions involved in the flow of cargo and passengers where dangerous goods training is required. This list is not exhaustive, but it provides the main functions found in the supply chain. It is important to remember that a function is not a job tittle but one that describes the core responsibility of an employee in their role. Additionally, a job function may include various activities and activities may be common to different job functions, see examples in Chapter 5.

1.5.1.2.2 Establishing a list of tasks, activities and performance criteria is next in the analysis phase. This is done by breaking down the job to facilitate the output of a task matrix. This input part of the TNA is also been provided in these guidelines in Chapter 3. By using this tool, the employer or training programme developer can customize the training needs per function relevant for a particular job.

a) Tasks: establishing the tasks to be performed by the employee. Based on the flowchart in Chapter 2, the following high-level major tasks apply:

0 – Understanding the basics of dangerous goods;

1 – Classifying dangerous goods;

2 – Preparing a dangerous goods shipment;

3 – Processing/accepting cargo;

4 – Managing cargo pre-loading;

5 – Accepting passenger and crew baggage;

6 – Transporting cargo/baggage; and

7 – Collecting safety data.

It is important to notice that a particular function may include various major tasks that an employee needs to fulfil to be competent when performing their function.

b) Activities: once the employee function(s) and tasks have been identified the next step is to determine the activities suitable for that specific function(s). This step is important in setting the scope of the knowledge, skills and experience required of the person performing the function. An activity is considered to be an action to be performed when completing a task, the action should be measured by predefined performance criteria;

c) Performance criteria (PC): refers to smaller actions and behaviour that will help measuring whether the knowledge and the skills have been acquired to the required level. The PC are helpful in defining key performance indicators to evaluate against, see 1.5.6. Identifying the performance criteria (PC) will directly provide information on the observable behaviours that the trainee should be able to demonstrate.

1.5.1.2.3 Identifying the level of proficiency is an essential part of the process as it will directly provide information to the training designer and developer as well as the employee on the level of performance to be expected at completion of the course. In other words, this step of the analysis must respond to the question: what do we need the employee to be able to do?

Table 2-1 illustrates the relationship between the different elements of competency (knowledge, skills, experience and attitude) and the level of proficiency. For easy understanding a "stars" coding system has been used to identify that the higher the level of proficiency, the higher the level competency applies to each element and therefore the assigned number of stars.

Table 2.1 Level of proficiency in terms of competency elements

Competency Factor	Level of proficiency			
	Introductory	Basic	Intermediate	Advanced
Knowledge	1	2	3	4
Skills	1	2	3	4
Experience	0	1	2	3
Attitude	3	4	4	4
Coding	*	**	***	****

1.5.1.2.4 With this basic understanding of the interrelation between the four competency factors, the level of proficiency and the clear breakdown of function, tasks, activities and performance criteria, the tool illustrated in Chapter 3 can be used to provide a standardised way to establish the TNA.

1.5.1.2.5 A full benchmarked TNA is provided for industry guidance under Chapter 5 where both the TNA and the level of competency has already been considered.

1.5.1.3 Taking into consideration various characteristics of the target population provides valuable details for designers and developers on assigning the appropriate resources, e.g. method of delivery, assigning the right instructor or instructional method, choosing the appropriate training aids, sizing the level of difficulty of the assessment, etc. to be used in the training programme.

1.5.1.3.1 The first consideration is whether the trainees will be a primary population, which means they will be primarily using the training to perform their job. In other words, the training programme or part of it is their core activity. This can also be reflected in the designation of the level of proficiency/competency during the TNA. For trainees that follow under the description of TI, Part 1, Chapter 4, 4.1, 4.1.1 and 4.7 dangerous goods training is a primary requirement, therefore the considerations in 1.6.1.3.3 apply.

Otherwise the trainees fit into a secondary population type which consists of trainees have an indirect input in the system performance but will not be actually performing the tasks and activities related to a particular function e.g. sales teams, booking teams, management, SMS team members.

These guidance materials concentrate on the primary target population.

1.5.1.3.2 Frequency of training – Obtaining and Maintaining Training Competency

In terms of the frequency and the specific circumstances, these may be determined by regulatory requirements whether international or national and by business and corporate needs. These characteristics have a direct impact in the considerations of the target population and their level of competency, contents, method of delivery and other aspects highly important in the design and development phases.

Dangerous goods initial and recurrent training are required by the regulations:

a. **Initial training** must be provided prior to a person performing their responsibilities related to the transport of cargo or managing passenger and baggage. Effectively and unless otherwise required by the national authorities, it refers to the first time a trainee receives dangerous goods instructions according to their function or a new function if gaps have been identified.

b. **Recurrent training** must be provided within 24 months of previous training to ensure knowledge is current. However, if recurrent training is completed within the final 3 months of validity of previous training, the period of validity extends from the month on which the recurrent training was completed until 24 months from the expiry month of that previous training.

However, there are situations in which there are irregularities in the job continuity of an employee. In this case, an intervention is needed to ensure the competency of the employee and any potential gaps to be covered before restarting their job function. The following table is a proposal of actions to be taken into consideration:

Period of Absence	**Suggested action**
Up to 3 months	Provide the employee with regulatory or business requirements changes for to ensure understanding of these changes.
3 to 12 months	Undergo one practical assessment, for example "on the job session" or simulation. Provide a brief observation report to the employee to identify with any gaps to be addressed to achieve the required level of competence.
More than 1 year	Recurrent training.

When choosing the method of training delivery, the type of assessment must be considered. The assessment plan must be fit for purpose considering how the knowledge and practice the skill have been delivered during the training. Ultimately the assessment must demonstrate that the employee can perform the job function competently, and that the objectives of the training programme have been achieved.

In determining the assessment, it is important to take into account what resources exist to achieve these results or what resources need to be found to accomplish the desired result. The following phase in these guidelines covers assessment in more detail.

1.5.1.3.3 Language has a big impact in the performance and the pace of the training. Additionally, it could be a good reason for choosing one or another method of delivery in the design phase. For example, digital learning or self-paced solutions benefits trainees where the language of delivery is not their mother tongue.

1.5.1.3.4 Other characteristics:

– entry level in terms of education, previous vocational/operational training, work experience;

– learning styles (age, education level, pace, experience, delivery method, etc)

1.~~7.3~~5.2 *Phase 2 — Design ~~local~~ competency-based training and assessment*

The second phase in the ~~development and~~ implementation of a competency-based training and assessment programme is its design. This is done taking into account the training specifications identified in Phase 1 (see paragraph 1.~~7~~5.3.1) and will involve:

~~a) designing an adapted competency model that addresses the training specification identified in Phase 1 (see 1.7.3.1);~~

~~b~~a) designing an assessment plan that will be used to assess the competence of trainees;

~~c~~b) designing a training plan that will enable the development and delivery of the training course.

~~1.7.3.2.1 *Designing the adapted competency model*~~

~~The competency model for dangerous goods should be adapted from the generic ICAO competency framework provided in Chapter 2. This generic framework provides a set of competencies that are typically needed to perform the dangerous goods tasks identified in the generic task list provided in Chapter 3. The vast majority of adapted competency models will contain similar lists of competencies, but there may be a need to add or remove a competency depending on the employers' own operational and organizational environments. The generic framework also provides a comprehensive list of observable behaviours associated with each of the competencies. The appropriate observable behaviours should be selected from it and, if necessary, adapted.~~

1.~~7.3.2~~5.2.1 *Designing an assessment plan*

1.~~7.3.2~~5.2.1.1 The purpose of the assessment plan is to detail how ~~competence~~ the performance criteria is going to be ~~determined~~measured. A training program without a solid, defined assessment plan could be ineffective and costly to an organization. A well-defined and constructed assessment plan allows:

- For the employer to prove the level of competency of their employees and justify it for regulatory purposes, operational and technical requirements.
- For the instructor to have a status of the knowledge transfer and the skills application of the learners.
- For the employee to gain the confidence of their competency and to focus on the areas of knowledge that may require reinforcement and the skills that must be further developed.

In basic terms, the assessment plan describes how competency is measured.

1.5.2.1.2 The assessment plan details the:

a) the final competency standard associated with the final milestone;

b) the interim competency standard associated with each milestone (if required);

c) the list of assessments (formative and summative assessments, examinations, oral assessments, etc.) required for each of the milestone(s) that have been defined;

d) when assessments should take place;

e) the tools to be used to collect evidence during practical assessment.

f) the pass marks for projects, examinations or oral assessments;

g) if required, the minimum number of formative assessments to be undertaken prior to starting summative assessments; and

h) the number of observations required to assess performance for the interim and final competency standards.

~~1.7.3.2.2.2 Additional administrative procedures may be necessary in the implementation of the assessment plan in relation to: who is authorized to perform a specific task or assessment, record keeping, actions to be taken if a trainee fails a competency assessment, etc.~~

~~1.7.3.2.2.3~~1.5.2.1.3 Competency-based training requires assessment of the trainees' progress until they are competent to perform their assigned function. ~~A trainee's assessment may be completed using a variety of tools including observation of job performance, tests or other practical exercises.~~ In order for assessment tools to be effective, they must be valid and reliable both in terms of being an appropriate measure of the competency being assessed and of obtaining consistent results when administered by different ~~raters and ratings~~ people.

~~1.7.3.2.2.4~~1.5.2.1.4 ~~The assessment of personnel can be accomplished in a variety of ways. Some common examples to accomplish an assessment would be to utilize a written test, online test, oral test, observed practical exercises, online practical exercises and observation of on the job performance by fully trained personnel. An employer might choose to utilize one assessment method or a combination of multiple assessment methods, as long as the assessment confirms that personnel have acquired the necessary competencies to perform the assigned functions.~~ CBTA encourages the use of different types of assessment, as each trainee is different and learns in different ways. The key is to accurately determine if the transfer of knowledge was completed and the competency has been achieved by the trainee. Common examples are:

a) Written or online test;

b) Oral test;

c) Observation of task;

d) Practice questions or "group answered" questions;

e) Simulated exercises.

The employer therefore establishes the assessment plan with all the specific details that would need to be accomplished to determine whether competence has been achieved by the trainee.

~~1.7.3.2.2.5~~1.5.2.1.5 Employers electing to send personnel to third-party training providers also need to establish an assessment plan for ensuring that competence has been achieved by the trainee. The employer may incorporate the third-party provider's assessment into their established assessment plan but it's up to the employer to determine how they measure the effectiveness of the training and competency of the employee. Even if the employer does not deliver any of the

training themselves, they can still choose to assess the trainee in the workplace to ensure ~~they~~ that the employee can perform their assigned tasks competently and incorporate that process into their assessment plan.

1.5.2.1.6 Additional administrative procedures may be necessary in the implementation of the assessment plan in relation to: who is authorized to perform a specific task or assessment, record keeping, actions to be taken if a trainee fails a competency assessment, etc.

~~1.7.3.2.3~~1.5.2.2 *Designing a training plan*

~~1.7.3.2.3.1~~1.5.2.2.1 The training plan is to detail the:

a) composition and structure of the ~~course~~programme;

b) modules, training events and their delivery sequence;

c) delivery format (type of training, media, etc) (To add H.2.2.3.2);

~~b~~d) syllabus;

~~c~~e) milestones (if required); and

~~d) modules, training events and their delivery sequence; and~~

~~e~~f) course schedule.

~~1.7.3.2.3.2~~1.5.2.2.2 The training plan will be used by the training ~~designer~~developer(s) to create the training and assessment materials.

~~1.7.3.2.4~~1.5.2.3 *Relationship between the ~~adapted competency model~~ TNA and the assessment and training plans*

~~1.7.3.2.4.1 The training specification developed in Phase 1 (see paragraph 1.7.3.1) serves as the common basis for the development of the adapted competency model and the training and assessment plans. The task list is generally used to aid the selection of the observable behaviours from the generic competency framework provided in Chapter 2. The operational, technical, regulatory and organizational requirements aid the development of the conditions and standards that will apply to the competencies and observable behaviours.~~

~~1.7.3.2.4.2~~1.5.2.3.1 The same task list and requirements are used to develop the training plan. The training plan is used to prepare the trainee to undertake assessment to determine if they are competent in accordance with the ~~adapted competency model~~performance criteria. ~~The adapted competency model and the training plan are used to develop the assessment plan.~~

~~1.7.3.2.4.3~~1.5.2.3.2 The syllabus in the training plan is composed of training objectives derived from tasks and ~~sub-tasks~~activities as well as the underlying knowledge, skills, ~~and~~ attitudes and experience necessary to perform them. The knowledge, skills, ~~and~~ attitudes and experience are determined on the basis of the task list in conjunction with operational, technical, regulatory and organizational requirements. Chapter 5 provides a generic task/knowledge matrix tool that can be used as a tool to map out the knowledge that is necessary to perform specific tasks. Tasks corresponding to the list provided in Chapter 3 are listed across the columns of the table and subject matter (knowledge) is listed down the rows. The employer should indicate what knowledge is needed for a particular task within the organization with a check mark at the point at which the task element and the knowledge element intersect. To facilitate this process, some knowledge components have been blacked out if they are considered to be completely irrelevant to specific tasks. The level of knowledge and/or skills necessary will differ depending on the task. For example, the person accepting dangerous goods will not require the same level of knowledge and/or skills related to classification as someone who is classifying dangerous goods.

~~1.7.3.2.4.4~~1.5.2.3.3 When assessing whether competence has been achieved, the ~~adapted competency model~~TNA, not the syllabus, is referenced. Consequently, the performance criteria are used to assess if competence has been achieved and the tasks/~~sub-tasks~~activities that are carried out by the trainee are the "vehicle" for enabling the assessment to be conducted.

~~1.7.3.3~~1.5.3 *Phase 3 — Develop the training and assessment materials*

The third phase in the development and implementation of a competency-based training and assessment programme is the development of the training and assessment materials. Development is based on the adapted competency model and the training and assessment plans. Training and assessment materials include but are not limited to training notes, exercise briefings, practical exercises, case studies, presentations, video clips, self-test quizzes, examinations, assessments and assessment tools.

~~1.7.3.4~~ 1.5.4 Phase 4 — ~~*Conduct the course in accordance with the training and assessment plans*~~ *Establish trainer/instructor qualifications and competencies*

~~The fourth phase in the development and implementation of a competency based training and assessment programme is conducting the course in accordance with the training and assessment plans. This involves delivering the training; monitoring the progress of the trainees; providing timely and continuous feedback on their performance; diagnosing deficiencies in the training and addressing them in a timely manner; and carrying out assessments according to the assessment plan. The goal of this phase is a competent employee.~~

1.5.4.1 When an employer or a training organization decides on the person transmitting and accompanying the acquisition of the knowledge and developing of skills two areas must be considered: the regulatory requirements and the desirable level of proficiency of the person(s) delivering the training programme.

1.5.4.2 From the regulatory perspective the regulations on dangerous goods must be observed. These require, unless otherwise provided for by the appropriate national authority, that instructors of initial and recurrent dangerous goods training:

(a) must demonstrate or be assessed as competent in instruction and in the function(s) that they will instruct prior to delivering such dangerous goods training;

(b) instructors delivering initial and recurrent dangerous goods training must at least every 24 months deliver such a course, or in the absence of this attend recurrent training;

(c) instructors must receive and understand updates to dangerous goods information and be made familiar with those changes by attending training or other means on an annual basis or as the Regulations are modified,

(d) organisations must ensure that the instructor receives updates to the regulations and training material any time there are changes in the regulations or at least on a biennial basis with the issuance of each edition of the Technical Instructions.

1.5.4.3 For a desirable level of proficiency it is strongly recommended that in addition to the requirements listed above, the instructor of dangerous goods courses should have as a minimum the following qualifications:

a) instructors should demonstrate “advance” proficiency level related to the functions they are dealing with according to Table 2.1–Level of Proficiency in Terms of Competency Elements;

b) where applicable, an instructor must also have current knowledge of local State civil aviation dangerous goods regulations, and proof of approval as dangerous goods instructor by the State of the operator if required.

c) it is recommended that instructors have three (3) years working knowledge and experience in dangerous goods and safety operations or experience in cargo operations, including performing the function they are training on;

d) an alternative to this working experience is a dedicated training program for instructors, which would supplement the requirements. Proof from the employer that the instructor has undergone such a programme, or a programme approved by the State of the operator is required;

e) instructors should also undertake a “hands-on”/“on the job” experience program (i.e. job shadowing) in a variety of functions requiring dangerous goods training. Undergoing this practical activity at least every 2 to 3 years is highly recommended. This is particularly important if the item above applies, but even with experience from time to time it is best if instructors spend time in the operation to observe the trainee behaviour in the workplace.

1.5.4.4 New instructors of dangerous goods, where possible, should design and co-facilitate dangerous goods courses together with an established training designer/instructor. In this particular case and in addition to soft skills courses required, the approach known as “oil” (Observe. Interact. Lead) is a very effective way of building instructional competency:

a) observe: attend course (intended to hold) as observer;

b) interact: by preparing a course and co-facilitate together with an established training designer/instructor; and

c) lead: individually take on the delivery of a full course and ideally lead or establish a full training programme.

1.5.4.5 For instructors, feedback is recommended to measure their performance using for example checklists, (i.e. experienced instructor sits-in on 1-2 courses where new instructor instructing alone), capturing the information helps to provide feedback on performance which then should lead to recommendations to implement changes.

1.5.4.6 When the employer or the training organization uses methods of training delivery without an instructor, such as e-learning or distance learning, it is equally important to consider the adequacy of such methods in the following two areas: the regulatory requirements and the desirable level of proficiency of the chosen method.

1.5.4.7 In practical terms evaluation of non-instructor lead training is highly recommended:

1. From the regulatory perspective the regulations on dangerous goods must be observed, and the method must be approved or recognized by the appropriate national authority of the State in which the trainee's work place is located.

2. Consider all the above requirements for the content developers and those individuals involved in the development of the tools.

3. Satisfactory answers to the following considerations are important: is there a clearly defined process for the design and development of the training? Is the provider of the method well recognized by the local stakeholders?

4. Establishing a service level agreement in terms of evaluation of the program and content update is a key consideration.

1.5.5 Training and Assessment Records

1.5.5.1 Training records are necessary for the following stakeholders:

a) employee: to enable proof of acquired competency in certain functions and their respective tasks and therefore support job mobility and avoid unnecessary training duplication;

b) employer: to manage work force and ensure employees are competent to perform the tasks they are required in a specific function; it can be used to make critical operational decisions for the organization based on the skill set available;

c) auditors/inspectors: to inspect that the employee is competent to perform the job function; and

d) training providers: to provide proof that training has been followed and assessment has been completed.

1.5.5.2 The assessment records serve as formal information of several aspects important to all the parties mentioned above:

- when training was provided
- who attended the training
- training provider
- most recent training session
- when there was an assessment
- to prove which tasks are covered by the training/assessment
- achieved proficiency level

1.5.5.3 In a competency-based training approach it is possible to separate the training from the assessment, for example an employer can make use of a training provider for the instruction but perform the assessment internally. Therefore, it is important that the training records are clear on what is being covered.

1.5.5.4 The following is the minimum data to be kept in the training records:

a) Name of employee/learner;

b) Unique identifier of the employee (if applicable);

c) Function(s) and/or tasks from the task list that have been covered by the training programme;

d) Month of completion (training and assessment if done in different dates);

e) Validity;

f) Type of training, i.e. initial, recurrent;

g) Type of assessment;

h) Training provider name and address.

1.5.5.5 The following is also recommendable data that should be kept in a training record or trainees' files to be provided upon request:

a) Name of the instructor (if applicable) or training provider;

b) Unique facilitator identifier (if applicable);

c) Unique course/session identifier;

d) Employer (optional, normally used when the employer provides their own training programmes);

e) Location (if applicable);

f) Language (optional);

g) Task list (TNA) and proficiency level that were assessed;
h) Competency level achieved (this could be expressed in terms of proficiency level as explained under Table H.2.1 "Level of Proficiency in Terms of Competency Elements".

1.5.5.6 Training records must be kept in a secure manner by training providers and employers for a minimum of 36 months. They should be kept digitally and in such a manner that data can be easily assessed and reports easily generated.

1.5.5.7 Training records must be made available upon request to the participant or appropriate national authority. However, when providing/reproducing training records, privacy law requirements must be considered, therefore certain information fields should not be shown (e.g. facilitator name) and treated with the appropriate confidentiality standards.

~~1.7.3.5~~1.5.6 *Phase 5 — Evaluate the course including the training and assessment plans*

The employer is responsible for ensuring the effectiveness of the training programme. At the end of a period of training, feedback on performance on the job from trainees, instructors, assessors and employers should be gathered to determine the effectiveness of the training and assessment in supporting the progression of learning towards competence in the workplace. Evaluation of the training should be based on valid and reliable evidence such as course results, trainee feedback, instructor feedback, audit reports, and occurrence reports. This evaluation may lead to changes or improvements being made to the competency-based training and assessment design.

1.5.6.1 There are three main purposes for evaluating training programme effectiveness:

a) improve training program – Continuous improvement is desirable in any area, but in the context of dangerous goods training programmes is particularly relevant, since training is not one single event, but repeats throughout the trainee's career. Therefore, improving the training programme brings benefits not only for future participants, but also improves the experience of those already following it;

(b) confirm training effectiveness – Prove that the right competencies and at the right level of proficiency are being achieved, in other words that the program meets the expectations of the employer and the employee. However, if the training is not being effective, unexpected negative results can be due to an issue in the training programme, rather than individual differences.

(c) provide evidence of the added value – Training programme evaluation helps to explain how training is supporting the business. Considering the investment necessary in training, a link should be made between the resources and costs involved versus the actual added value. It must justify how were specific issues solved and further avoided, it must demonstrate shared best practices, new business implemented, etc. Additionally, since business evolves, the training needs assessment should not be a one-time event but reviewed systematically to ensure that employers keep providing the right training for the current business and/or prepare for potential business growth.

1.5.6.2 In this context, the evaluation of the training program, benefits:

- the training providers by allowing them to offer products of higher quality and adjusted to the business needs;
- the employer by providing assurance that the training programme is delivering the expected–competent work force–and that is linked to the business needs (adds value);
- the employee by taking into consideration their experience and addressing their real/on the job needs;
- the appropriate national authority by providing assurance that the training needs are in line with the regulations and the employer needs, which is a basic principle of competency-based training and assessment.

Responsibility of Training Program Evaluation

1.5.6.3 In order to fulfil the above-mentioned objectives, both the employer and training providers should conduct Training Program Assessments. When these are one and the same organization (in-house training), the responsibility should lie with the Training Program Designer and all three purposes of training programme evaluation can be pursued. This is also the situation that allows for a largest variety of evaluation tools and makes it easier to apply to all four competency factors.

If the training is provided by a third party, then the training provider should use the training contract to clearly describe the objectives that must be measured against. Third party training providers should focus on purposes (a) and (b) of training programme evaluation. Training providers have at their disposition a number of classical tools for achieving this (e.g. surveys, interviews with instructors), but under a competency-based training approach a much closer dialogue should be built with the employer in order to ensure that the expected service is being effectively delivered. This supports employers benefiting of their services to achieve purpose (c) of the evaluation. This dialogue output should be included in the training contract; the results measured against it and the tools used will largely depend on this.

1.5.6.4 Even if training is provided externally, it is still in the best interest of the employer to evaluate the program effectiveness but focusing mainly on points (b) and (c).

Examples: Training provider is contracted to train and assess the knowledge factor of acceptance checks. But the skills and attitude part training and assessment are the responsibility of the employer, then the training programme knowledge evaluation should sit with the training provider, and the employer should cover all the four competence factors.

1.5.6.5 Examples of possible tools for training program assessment:

Training program evaluation can sound like a daunting enterprise. However, several different tools with different levels of sophistication can be used, depending on the type of organization (employer, training provider, etc.) and size. Below are a few evaluation tools and use examples of how they can be used in this context:

1.5.6.5.1 Survey/Evaluation forms–these are the easiest tools to use and therefore can be used by any type of organization. Post-training surveys should be directed to both trainers and trainee's alike. For trainees, questions like: "Was the training relevant to your job?", or "Was the training level of difficulty adequate?", "Was the material interesting and engaging?", "Was the trainer knowledgeable and helpful?" can be used to determine the perceived level of relevancy and adequacy of the training program.

For trainers, questions like: "Were the training objectives clear?", "Were you aware of the training contract?", "Was the material helpful and adequate for the training goals?", "Was there sufficient variety of methods used to make the training engaging?", "Did trainees follow easily and without struggling?".

The issue with many of these evaluation forms is that many people don't take the time to answer it or tend to provide overly positive answers. Training programme evaluations should have this in consideration and:

1. ensure that surveys are anonymous; and
2. the necessary attention is provided to lower results, even when these are provided by small numbers of respondents.

Even if the surveys should be anonymous by default, a question can be included to ask if the person is willing to provide contact details for further information.

Another variation that trainees might prefer is the "before and after quiz". Trainees might be more willing to participate in a quiz at the beginning of the training module/session and then repeat it at the end. Although this quiz can be used to measure individual progress, it can focus on the actual effectiveness of the training, particularly when applied to Attitude: Did changes occur due to training?

Example 1: if trainees respond that the content is not relevant for the trainee's job, then this should trigger a review of the training needs assessment versus training content. Extra content might be justified from a cost/benefits point of view, but training program designer and evaluator must be aware of the impact.

Example 2: if trainees respond before training they would not know how to react to a dangerous goods label, and if after training they respond: "I would call my dangerous goods colleague", then we can conclude that not only those individuals reached the training goals, but also the training program is being effective.

1.5.6.5.2 Interviews–these can be complementary to the above surveys/forms and provide a deeper insight. For example, when a specific area is showing lower results, a number of calls/specific emails can be set in order to request more information to both trainees and trainers alike. Interviews are a good way to receive feedback from trainers, since they have a better overview on what is working well and/or the needs improvement in the training program because they usually receive direct feedback from the trainees and have a better overview on the wider audience. Training providers should also consider arranging interviews with the Employers, specifically the direct managers of the people who underwent training.

Example 1: if some trainees respond that the level of difficulty is too high, then some participants can be chosen to be called and asked them: which parts did they struggle with? How to better support them?, and how they expect this support to impact on their job?

Example 2: if a trainer reports difficulty during the training, then it is useful to understand if the materials are not sufficient, if there should be more time, more repetition or a different method may work better.

1.5.6.5.3 Training assessment results and analysis–As mentioned before, if a less than good result is obtained by one individual, this is probably due to that individual's particular situation. However, training assessment results should be analysed for trends on what particularly works well and what can be an indicator that the training objectives, materials or methods are not meeting the actual objectives. Training assessment results should therefore be bundled and analysed, preferably on the same modular way that the training is designed.

Example 1: if a standard knowledge classical test shows that a relevant percentage of trainees fail to answer a particular question, this must trigger a review of the training design on that specific area.

Example 2: If on the job observations shows that employees struggle with a task or an activity, or recurrent questions are asked of colleagues on how to deal with a specific situation, it should be captured in the observation checklists and analysed if this is necessary to be covered by the training programme or to be tackled differently.

1.5.6.5.4 Incident trends–unlike the previous three tools, this tool is only available for employers (not for training providers). However, this a useful source of information for the training programme improvement. Implementing a safety management system implies that an organization is able to determine the root cause of incidents and correct both process, procedures and training thereof. Incident analysis determines if the failures were due to process issues, procedures gaps, willingly ignorance of processes and procedures, lack of competence (knowledge, skills, and information), etc. If the conclusion is lack of competence, then this information must be actioned to the training designer and training programme evaluator, so that the necessary adjustments can be conducted.

1.5.6.5.5 On the job observations–although on the job observations have been mentioned mainly from a perspective of trainee assessment, they can also be used to evaluate the training programme. This is desirable after implementation of a new training program and at repeated intervals. Does the training program design match the goals, i.e. is the TNA still holding true? These observations should not focus on the individual, but on the programme design and TNA. Preferably by observing teams working. On the job observations also provide an opportunity for interviews (both open questions and directive): aiming to hear the team's point of view in terms of training requirements and assessment.

1.5.6.6 The training programme assessment should not be limited to one of the competency factors, instead it should cover all four levels: Knowledge; Skills; Attitude; Experience.

1.5.6.6.1 Knowledge

- Specific learning objectives: what is the percentage of passing/failure rate in post training evaluations? Analysis of the knowledge gap, i.e. the expected knowledge to be obtained for a particular level of proficiency and the knowledge demonstrated by the individual performing the job, is this difference an individual gap or a training program gap (e.g. evaluation contains several questions on lithium battery shipment preparation, but a significant percentage of students is unable to correctly answer these can demonstrate that training is not focusing enough or effectively on that topic). Possible tool: Training Assessments Results Analysis

- How participants react to the training. Do they find the training engaging and relevant to their job function? It is important to measure reactions as it helps to understand how well the training is received by the participants. Possible tools: Surveys and Interviews

- Is the knowledge that is expected matching the job function description? (e.g. was there a comparison made between the function analysis and the knowledge components in the training program?) Possible tools: Training Assessments Results Analysis, Incident Analysis and "On the Job" observations.

- Is the training program built in such a way that allows further progression in the level of knowledge? Is there a differentiation between the mastery levels? (e.g. the same training program can have different level of exercises and allow for students to choose themselves, within an adequate range for their function). Possible tools: Surveys and Interviews

1.5.6.6.2 Skills. Evaluation of the training programme will allow verification of:

- Does the training programme allow for increased autonomous application of the knowledge?

- Are trainees able to transfer the knowledge to real life situations?

- How much has their skill increased?

Possible tools: before and after quizzes, interviews, training assessments results analysis if these are conducted on a practical manner rather than on a classical test method.

1.5.6.6.3 Attitude

- Does the training (either classic, blended, or on the job) focus on expected attitudes, in particular on how to react/what to do in exceptional situations (e.g. damaged shipments; unsure on how to respond to a particular difficult situation or shipment; to whom to reach out to in case of help needed)

Possible tools: Incidents analysis, interviews to employers/direct managers; "on the job" observations.

1.5.6.6.4 Experience

- Performance evaluations of employees should focus on the aspect of competency to perform the job and provide feedback to the training developers.

- Is the training programme supporting the further development of the employees, if necessary or desirable?

Possible tools: Interviews to employers/direct managers and trainers.

DRAFT Chapter 2

GENERIC COMPETENCY FRAMEWORK FOR DANGEROUS GOODS PERSONNEL AND TEMPLATE FOR ADAPTED COMPETENCY MODEL

This chapter contains a generic ICAO competency framework for dangerous goods personnel (Table 2-1) and a template for an adapted competency model (Table 2-2). These are described in Chapter 1, paragraph 1.7. Employers implementing competency based training and assessment should adapt the framework in Table 2-1 into a competency model based on their specific requirements. The adapted competency model should include the elements shown in Table 2-2.

Table 2-1. Generic ICAO competency framework for dangerous goods personnel

Generic competency	*Description*	*Observable behaviour*
Application of procedures and compliance with regulations	Identifies and applies appropriate procedures in accordance with published operating instructions and in compliance with applicable regulations	Identifies where to find procedures and regulations
		Follows relevant procedures in a timely manner
		Complies with applicable regulations
		Applies relevant procedural knowledge
Communication	Communicates through appropriate means in the work environment, in both normal and non-normal situations	Ensures the recipient is ready and able to receive information
		Selects appropriately what, when, how and with whom to communicate
		Conveys messages clearly, accurately and concisely
		Confirms that the recipient correctly understands important information
		Listens actively and demonstrates understanding when receiving information
		Asks relevant and effective questions
		Completes accurate reports as required by operating procedures
		Announces deviations from normal or intended conditions
		Correctly uses and interprets non-verbal communication
Leadership, teamwork and self-management	Demonstrates effective leadership, team working and self-management	Encourages team participation and open communication
		Demonstrates initiative and provides direction when required
		Engages others in planning
		Considers inputs from others
		Gives and receives feedback constructively
		Addresses and resolves conflicts and disagreements in a constructive manner
		Exercises decisive leadership
		Admits mistakes and takes responsibility for own performance, detecting and resolving own errors
		Carries out instructions when directed and applies effective intervention strategies when necessary
		Confidently intervenes when important for safety
		Self-evaluates the effectiveness of actions

Generic competency	*Description*	*Observable behaviour*
Problem solving and decision making	Identifies problem precursors and resolves actual problems using decision making techniques, in a timely manner	Seeks accurate and adequate information from appropriate sources
		Identifies and verifies what and why things have gone wrong
		Employ(s) proper problem solving strategies
		Perseveres in working through problems while prioritizing safety
		Uses appropriate and timely decision making techniques
		Sets priorities appropriately
		Identifies and considers options as appropriate
		Monitors, reviews, and adapts decisions as required
		Identifies, assesses and manages risks and threats to safety effectively
		Adapts when faced with situations where no guidance or procedure exists
		When an event conducive to startle is encountered, recognizes and manages the situation
Workload Management	Maintain available workload capacity by prioritizing and distributing tasks using appropriate resources	Exercises self control in all situations
		Plans, prioritizes and schedules tasks effectively
		Manages time efficiently when carrying out tasks
		Offers and gives assistance, delegates when necessary
		Seeks and accepts assistance, when appropriate
		Monitors, reviews and cross checks actions conscientiously
		Verifies that tasks are completed to the expected outcome
		Manages and recovers from interruptions, distractions, variations and failures effectively while performing tasks

~~Table 2-2. Template for an adapted competency model~~

		~~Performance criteria~~		
~~Adapted competency~~	*~~Description~~*	*~~Observable behaviour~~*	*~~Competency assessment~~*	
~~Adapted competency 1~~	~~Description 1~~	~~OB 1~~	~~Final competency standard~~	~~Conditions~~
		~~OB 2~~		
		~~OB n~~		
~~Adapted competency 2~~	~~Description 2~~	~~OB 1~~	~~Final competency standard~~	~~Conditions~~
		~~OB 2~~		
		~~OB n~~		
~~Adapted competency 3~~	~~Description 3~~	~~OB 1~~	~~Final competency standard~~	~~Conditions~~
		~~OB 2~~		
		~~OB n~~		

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DRAFT Chapter ~~3~~2

DANGEROUS GOODS TASK LIST

This chapter contains a generic list of tasks typically performed by dangerous goods personnel (Table 3-1) as described in Chapter 1, paragraph ~~1.7~~1.5. The employer should adapt this task list to reflect the specific tasks performed by its personnel.

Table 2-1 - DANGEROUS GOODS TASK LIST

		Function: *[Here the job/function muss be described in terms of what are the responsibilities, see descriptions in Chapter 5]*	Knowledge Base	Classifying dangerous goods	Preparing dangerous goods shipment	Processing/ accepting cargo	Managing cargo pre-loading	Accepting passenger and crew baggage	Transporting cargo/baggage	Collecting safety data
0	**Understanding the basics of dangerous goods**									
	0.1	Recognizing dangerous goods								
		0.1.1 Understand the definition								
		0.1.2 Recognize the legal framework (global, local, training legal requirements)								
		0.1.3 Identify the application scope								
	0.2	Identifying the general limitations								
		0.2.1 Develop a sense of potential hidden dangerous goods								
		0.2.2 Recognize the difference between hidden vs undeclared dangerous goods								
		0.2.3 Familiarized with passenger provisions vs cargo provisions in various situation (examples)								
	0.3	Positioning different roles and responsibilities								
		0.3.1 Clarify the individual and collective role of the supply chain stakeholders								
		0.3.2 Understand the passengers responsibilities								
		0.3.3 Recognized the role and impact of State & operators variations								
	0.4	Understanding the criticality of classification & packaging								
		0.4.1 Differentiate between hazard vs risk								
		0.4.2 Identify the general information about classes, divisions								

		0.4.3	Understand general principles of Packing Groups
		0.4.4	Consider multiple hazards
	0.5		Interpreting the hazard communication
		0.5.1	Recognize the different marking basic requirements
		0.5.2	Recognize the variety of labeling and their meaning
		0.5.3	Identify the required documentation for DG shipments and their role in the process.
	0.6		Familiarizing with basic Emergency Response
		0.6.1	Create awareness about general emergency procedures
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals
		0.6.3	Apply the employer emergency response requirements
1	**Classifying dangerous goods**		
	1.1		Evaluate substance or article against classification criteria
		1.1.1	Determine if it is dangerous goods
		1.1.2	Determine if it is forbidden under any circumstances
	1.2		Determine dangerous goods description
		1.2.1	Determine class or division
		1.2.2	Determine packing group
		1.2.3	Determine proper shipping name and UN number
		1.2.4	Determine if it is forbidden unless approval or exemption is granted
	1.3		Review special provisions
		1.3.1	Assess if special provision(s) is applicable
		1.3.2	Apply special provision(s)
2	**Preparing dangerous goods shipment**		
	2.1		Assess packing options including quantity limitations
		2.1.1	Consider limitations (de minimis quantities, excepted quantities, limited quantities, passenger aircraft, cargo aircraft only, special provisions, dangerous goods in the mail)
		2.1.2	Consider State and operator variations
		2.1.3	Determine if all-packed-in-one can be used
		2.1.4	Select how dangerous goods will be shipped based on limitations and variations
	2.2		Apply packing requirements
		2.2.1	Consider constraints of packing instructions

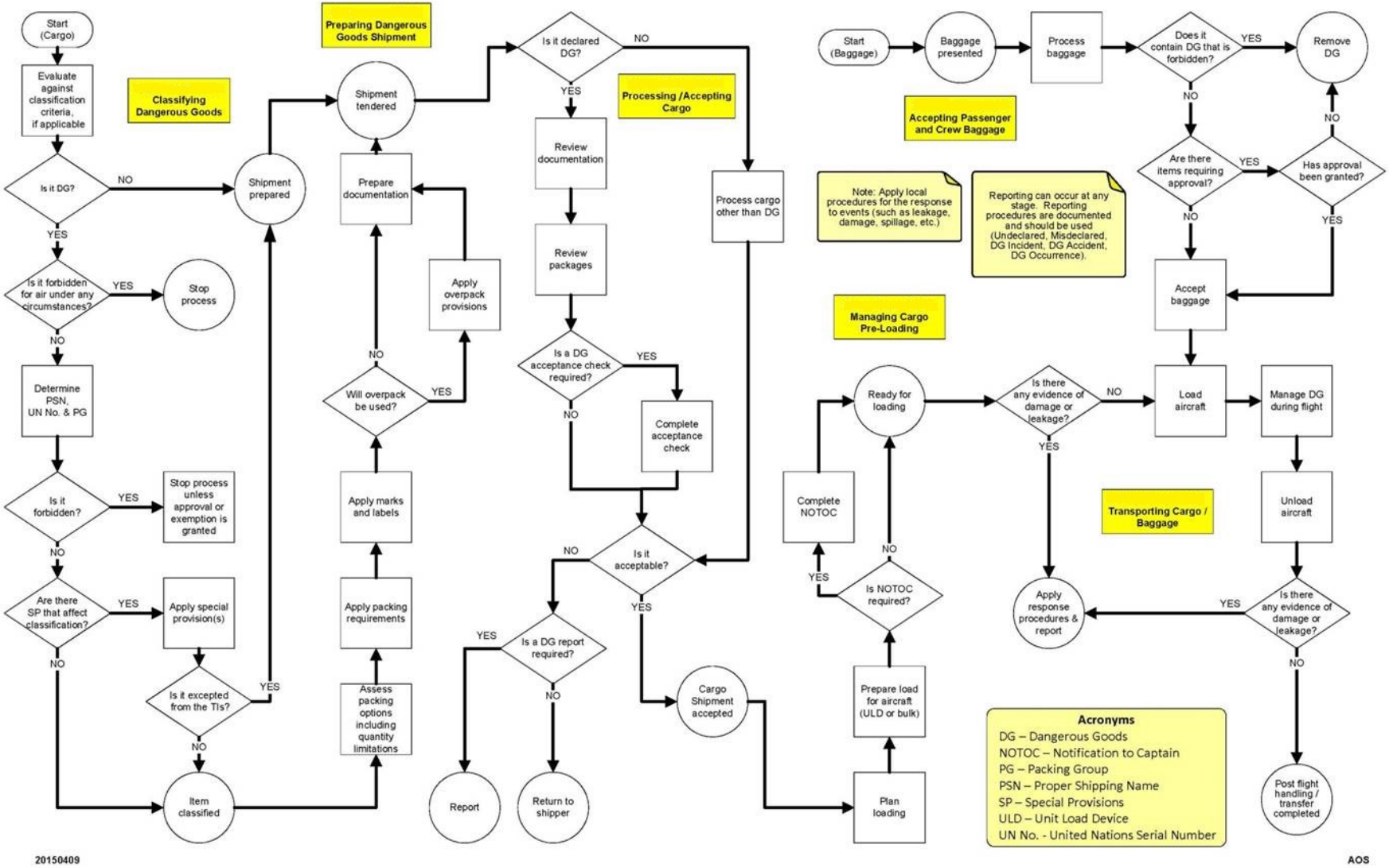
	2.2.2	Select appropriate packaging materials (absorbent, cushioning, etc.)								
	2.2.3	Assemble package								
	2.2.4	Comply with the packaging test report when UN specification packaging is required								
2.3	Apply marks and labels									
	2.3.1	Determine applicable marks								
	2.3.2	Apply marks								
	2.3.3	Determine applicable labels								
	2.3.4	Apply labels								
2.4	Assess use of overpack									
	2.4.1	Determine if overpack can be used								
	2.4.2	Apply marks if necessary								
	2.4.3	Apply labels if necessary								
2.5	Prepare documentation									
	2.5.1	Complete the dangerous goods transport document								
	2.5.2	Complete other transport documents (e.g. air waybill)								
	2.5.3	Include other required documentation (approvals/exemptions, etc.)								
	2.5.4	Retain copies of documents as required								
3	**Processing/accepting cargo**									
3.1	Review documentation									
	3.1.1	Verify dangerous goods transport document								
	3.1.2	Verify other transport documents (e.g. air waybill)								
	3.1.3	Verify other documents (exemptions, approvals, etc.)								
	3.1.4	Verify State/operator variations								
3.2	Review package(s)									
	3.2.1	Verify marks								
	3.2.2	Verify labels								
	3.2.3	Verify package type								
	3.2.4	Verify package conditions								
	3.2.5	Verify State/operator variations								
3.3	Complete acceptance procedures									

3.3.1 Complete acceptance checklist
3.3.2 Provide shipment information for load planning
3.3.3 Retain documents as required
3.4 Process/accept cargo other than dangerous goods
3.4.1 Check documentation for indications of undeclared dangerous goods
3.4.2 Check packages for indications of undeclared dangerous goods
4 Managing cargo pre-loading
4.1 Plan loading
4.1.1 Determine stowage requirements
4.1.2 Determine segregation, separation, aircraft/compartment limitations
4.2 Prepare load for aircraft
4.2.1 Check packages for indications of undeclared dangerous goods
4.2.2 Check for damage and/or leakage
4.2.3 Apply stowage requirements (e.g. segregation, separation, orientation)
4.2.4 Apply ULD tags when applicable
4.2.5 Transport cargo to aircraft
4.3 Issue NOTOC
4.3.1 Enter required information
4.3.2 Verify conformance with load plan
4.3.3 Transmit to loading personnel
5 Accepting passenger and crew baggage
5.1 Process baggage
5.1.1 Identify forbidden dangerous goods
5.1.2 Apply approval requirements
5.2 Accept baggage
5.2.1 Apply operator requirements
5.2.2 Verify passenger baggage requirements
5.2.3 Advise pilot-in-command
6 Transporting cargo/baggage
6.1 Load aircraft
6.1.1 Transport cargo/baggage to aircraft

	6.1.2	Check packages for indications of undeclared dangerous goods													
	6.1.3	Check for damage and/or leakage													
	6.1.4	Apply stowage requirements (e.g. segregation, separation, orientation, securing and protecting from damage)													
	6.1.5	Verify that NOTOC reflects against aircraft load													
	6.1.6	Verify passenger baggage requirements													
	6.1.7	Inform pilot-in-command and flight operations officer/flight dispatcher													
6.2	Manage dangerous goods pre and during flight														
	6.2.1	Detect presence of dangerous goods not permitted in baggage													
	6.2.2	Interpret NOTOC													
	6.2.3	Apply procedures in the event of an emergency													
	6.2.4	Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency													
	6.2.5	Inform emergency services of the dangerous goods on board in the event of an emergency													
6.3	Unload aircraft														
	6.3.1	Apply specific unloading considerations													
	6.3.2	Check packages for indications of undeclared dangerous goods													
	6.3.3	Check for damage and/or leakage													
	6.3.4	Transport cargo/baggage to facility/terminal													
7	**Collecting safety data**														
7.1	Report dangerous goods accidents														
7.2	Report dangerous goods incidents														
7.3	Report undeclared / mis-declared dangerous goods														
7.4	Report dangerous goods occurrences														

DRAFT Chapter 43

DANGEROUS GOODS FUNCTIONS — PROCESS FLOWCHART


Start (Cargo)
Evaluate against classification criteria, if applicable
Classifying Dangerous Goods
Is it DG?
NO
YES
Shipment prepared
Is it forbidden for air under any circumstances?
YES
Stop process
NO
Determine PSN, UN No. & PG
Is it forbidden?
YES
Stop process unless approval or exemption is granted
NO
Are there SP that affect classification?
YES
Apply special provision(s)
NO
Is it excepted from the TIs?
YES
NO
Item classified
Preparing Dangerous Goods Shipment
Shipment tendered
Prepare documentation
Apply overpack provisions
Will overpack be used?
NO
YES
Apply marks and labels
Apply packing requirements
Assess packing options including quantity limitations
Is it declared DG?
NO
YES
Processing /Accepting Cargo
Review documentation
Review packages
Process cargo other than DG
Is a DG acceptance check required?
YES
NO
Complete acceptance check
Is it acceptable?
NO
YES
Is a DG report required?
YES
NO
Report
Return to shipper
Cargo Shipment accepted
Start (Baggage)
Baggage presented
Process baggage
Does it contain DG that is forbidden?
YES
Remove DG
NO
Accepting Passenger and Crew Baggage
Are there items requiring approval?
YES
Has approval been granted?
NO
YES
NO
Note: Apply local procedures for the response to events (such as leakage, damage, spillage, etc.)
Reporting can occur at any stage. Reporting procedures are documented and should be used (Undeclared, Misdeclared, DG Incident, DG Accident, DG Occurrence).
Accept baggage
Managing Cargo Pre-Loading
Ready for loading
Is there any evidence of damage or leakage?
NO
YES
Load aircraft
Manage DG during flight
Complete NOTOC
Is NOTOC required?
NO
YES
Transporting Cargo / Baggage
Unload aircraft
Apply response procedures & report
YES
Is there any evidence of damage or leakage?
NO
Prepare load for aircraft (ULD or bulk)
Plan loading
Post flight handling / transfer completed
Acronyms
DG – Dangerous Goods
NOTOC – Notification to Captain
PG – Packing Group
PSN – Proper Shipping Name
SP – Special Provisions
ULD – Unit Load Device
UN No. - United Nations Serial Number
20150409
AOS

DRAFT Chapter ~~5~~4

TASK/KNOWLEDGE MATRIX TOOL

This chapter contains a generic task/knowledge matrix table that can be used as a tool to map out the knowledge that is necessary to perform specific tasks. Tasks corresponding to the task list provided in Table 3-1 are listed across the columns of the table and knowledge elements are listed down the rows. The employer should indicate what knowledge is needed for a particular task within the organization with a check mark at the point at which the task element and the knowledge element intersect. To facilitate this process, some cells in the table have been shaded. These shaded cells identify knowledge elements that would normally be irrelevant to the corresponding task and for which a checkmark would not normally be necessary.

Template for determining the knowledge that should be maintained by personnel performing specific tasks

Note.— The numbers under "Dangerous goods tasks" refer to tasks and ~~sub-tasks~~activities from Table 3-1. The titles of the tasks are replicated in a legend below the following table.

	Dangerous goods tasks																							
	1. Classifying dangerous goods			2. Preparing dangerous goods shipment					3. Processing/ accepting cargo				4. Managing cargo pre-loading			5. Accept-ing passenger and crew baggage		6. Transporting cargo/baggage			7. Collecting safety data			
Dangerous goods knowledge	1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	6.1	6.2	6.3	7.1	7.2	7.3	7.4
Scope and applicability																								
Limitation of dangerous goods on aircraft																								
Definitions																								
Training																								
Dangerous goods security																								
General provisions concerning radioactive material																								
Reporting of dangerous goods accidents, incidents and other occurrences																								
Classification — General																								
Classification — Class 1																								
Classification — Class 2																								
Classification — Class 3																								
Classification — Class 4																								
Classification — Class 5																								
Classification — Class 6																								
Classification — Class 7																								
Classification — Class 8																								
Classification — Class 9																								
Dangerous goods list — General																								
Dangerous goods list — Arrangement																								

	Dangerous goods tasks																							
	1. Classifying dangerous goods			2. Preparing dangerous goods shipment					3. Processing/ accepting cargo				4. Managing cargo pre-loading			5. Accept-ing passenger and crew baggage		6. Transporting cargo/baggage			7. Collecting safety data			
Dangerous goods knowledge	1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	6.1	6.2	6.3	7.1	7.2	7.3	7.4
Special provisions							■						■	■	■			■	■	■				
Dangerous goods in limited quantities	■	■										■	■	■	■	■	■	■	■	■				
Dangerous goods packed in excepted quantities	■	■								■	■	■	■	■	■	■	■	■	■	■				
Packing Instructions — General	■											■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 1												■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 2	■	■										■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 3	■		■									■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 4	■		■									■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 5	■											■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 6	■											■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 7												■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 8	■											■	■	■	■			■	■	■				
Packing Instructions — Class 9	■											■	■	■	■	■	■	■	■	■				
Preparing dangerous goods shipment — general												■	■	■	■	■	■	■	■	■				
Package markings	■	■																						
Labelling	■	■		■																				
Documentation	■	■	■	■	■	■	■						■	■		■	■	■	■	■				
Packaging applicability, nomenclature and codes	■	■	■			■	■					■	■	■	■	■	■	■	■	■				
Marking of packagings other than inner packagings	■	■		■	■							■	■		■	■	■		■					
Requirements for packagings	■	■										■	■	■	■	■	■	■	■	■				
Packaging performance tests	■	■				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
Requirements for the construction and testing of cylinders and closed cryogenic receptacles, aerosol dispensers and small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas	■					■	■					■	■	■	■	■	■	■	■	■				
Packagings for infectious substances of Category A	■	■	■			■	■					■	■	■	■	■	■	■	■	■				
Requirements for the construction, testing and approval of packages for radioactive material and for the approval of such material							■					■	■	■	■	■	■	■	■	■				
Acceptance procedures	■	■	■	■	■	■	■	■				■	■		■	■	■	■		■				
Storage and loading	■	■	■	■	■	■	■	■	■			■					■							

	Dangerous goods tasks																							
	1. Classifying dangerous goods			2. Preparing dangerous goods shipment					3. Processing/ accepting cargo				4. Managing cargo pre-loading			5. Accept-ing passenger and crew baggage		6. Transporting cargo/baggage			7. Collecting safety data			
Dangerous goods knowledge	1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	6.1	6.2	6.3	7.1	7.2	7.3	7.4
Inspection and decontamination	■	■	■	■	■	■	■	■	■			■	■				■							
Provision of information	■	■	■	■	■	■	■	■	■	■	■	■		■		■	■			■				
Provisions concerning passengers and crew																								
Provisions to aid recognition of undeclared dangerous goods	■																							
Helicopter operations	■	■	■	■	■	■	■	■	■	■	■	■				■	■							
~~Provisions for dangerous goods carried by passengers or crew~~																								

Tasks

1. Classifying dangerous goods
   - 1.1 — Evaluate substance or article against classification criteria
   - 1.2 — Determine dangerous goods description
   - 1.3 — Review special provisions

2. Preparing dangerous goods shipment
   - 2.1 — Assess packing options including quantity limitations
   - 2.2 — Apply packing requirements
   - 2.3 — Apply marks and labels
   - 2.4 — Assess use of overpack
   - 2.5 — Prepare documentation

3. Processing/accepting cargo
   - 3.1 — Review documentation
   - 3.2 — Review package(s)
   - 3.3 — Complete acceptance procedures
   - 3.4 — Process/accept cargo other than dangerous goods

4. Managing cargo pre-loading
   - 4.1 — Plan loading
   - 4.2 — Prepare load for aircraft
   - 4.3 — Issue NOTOC

5. Accepting passenger and crew baggage
   - 5.1 — Process baggage
   - 5.2 — Accept baggage

6. Transporting cargo/baggage
   - 6.1 — Load aircraft
   - 6.2 — Manage dangerous goods pre and during flight
   - 6.3 — Unload aircraft

7. Collecting safety data
   - 7.1 — Report dangerous goods accidents
   - 7.2 — Report dangerous goods incidents
   - 7.3 — Report undeclared/misdeclared dangerous goods
   - 7.4 — Report dangerous goods occurrences

DRAFT Chapter ~~6~~5

ADAPTED TASK LISTS FOR CERTAIN WELL-DEFINED ROLES

~~A~~5.1. INTRODUCTION

The examples below indicate the tasks from the task list provided in Chapter 3 that personnel responsible for certain well-defined functions would typically perform and for which training and assessment would therefore be required. Personnel would need to have relevant knowledge to competently perform these tasks. The task/knowledge matrix tool provided in Chapter 5 may be used as a guide for determining what knowledge is needed for a given task. The examples in this chapter and the task/knowledge tool provided in Chapter ~~5~~4 may be used for designing training programmes. However, they should not be considered as mandatory. Additional training and assessment may be required for personnel assigned additional responsibilities and less training and assessment may be required for personnel assigned less responsibilities to those presented in these lists. The employer is responsible for ensuring employees are competent to perform the functions for which they are responsible and must therefore ensure that training programmes are designed to accomplish this. Dangerous goods training programmes are subject to State approval in accordance with national regulations, policies and procedures.

~~B~~5.2. PERSONNEL RESPONSIBLE FOR ~~PREPARATION~~ PREPARING~~OF~~ DANGEROUS GOODS CONSIGNMENTS

Training and assessment for personnel preparing dangerous goods consignments for transport may be tailored to address only those classes, divisions or even UN numbers that they prepare for transport. Training and assessment may also be limited to address only the specific tasks personnel perform. For example, where personnel are only responsible for the packing, marking and labelling of packages and overpacks, training and assessment may be tailored to address just those tasks. Personnel would need to have relevant knowledge to competently perform these functions. The task/knowledge matrix tool provided in Chapter 5 may be used as a guide for determining what knowledge is needed. The following are tasks personnel responsible for preparation of dangerous goods consignments typically perform and for which training and assessment would therefore be required:

~~**1 Classifying dangerous goods**~~

~~1.1 Evaluate substance or article against classification criteria~~
~~1.1.1 Determine if it is dangerous goods~~
~~1.1.2 Determine if it is forbidden under any circumstances~~

~~1.2 Determine dangerous goods description~~
~~1.2.1 Determine class or division~~
~~1.2.2 Determine packing group~~
~~1.2.3 Determine proper shipping name and UN number~~
~~1.2.4 Determine if it is forbidden unless approval or exemption is granted~~

~~1.3 Review special provisions~~
~~1.3.1 Assess if special provision(s) is applicable~~
~~1.3.2 Apply special provision(s)~~

~~**2 Preparing dangerous goods shipment**~~

~~2.1 Assess packing options including quantity limitations~~
~~2.1.1 Consider limitations (de minimis quantities, excepted quantities, limited quantities, passenger aircraft, cargo aircraft only, special provisions, dangerous goods in the mail)~~
~~2.1.2 Consider State and operator variations~~
~~2.1.3 Determine if all packed in one can be used~~
~~2.1.4 Select how dangerous goods will be shipped based on limitations and variations~~

~~2.2 Apply packing requirements~~
~~2.2.1 Consider constraints of packing instructions~~
~~2.2.2 Select appropriate packaging materials (absorbent, cushioning, etc.)~~
~~2.2.3 Assemble package~~
~~2.2.4 Comply with the packaging test report when UN specification packaging is required~~

~~2.3 Apply marks and labels~~
~~2.3.1 Determine applicable marks~~
~~2.3.2 Apply marks~~
~~2.3.3 Determine applicable labels~~
~~2.3.4 Apply labels~~

~~2.4 Assess use of overpack~~
~~2.4.1 Determine if overpack can be used~~
~~2.4.2 Apply marks if necessary~~
~~2.4.3 Apply labels if necessary~~

~~2.5 Prepare documentation~~
~~2.5.1 Complete the dangerous goods transport document~~
~~2.5.2 Complete other transport documents (e.g. air waybill)~~
~~2.5.3 Include other required documentation (approvals/exemptions, etc.)~~
~~2.5.4 Retain copies of documents as required~~

~~**7 Collecting safety data**~~

~~7.1 Report dangerous goods accidents~~
~~7.2 Report dangerous goods incidents~~
~~7.3 Report undeclared/misdeclared dangerous goods~~
~~7.4 Report dangerous goods occurrences~~

Function: Personnel preparing dangerous goods consignments for transport (Personnel classifying dangerous goods for transport is provided simultaneously)				**Classifying dangerous goods**	**Preparing dangerous goods shipment**
0	Understanding the basics of dangerous goods			✸	✸
	0.1	Recognizing dangerous goods		✸	✸
		0.1.1	Understand the definition		
		0.1.2	Recognize the legal frame- work (global, local, training legal requirements)		
		0.1.3	Identify the application scope		
	0.2	Identifying the general limitations		✸	✸
		0.2.1	Develop a sense of potential hidden dangerous goods		
		0.2.2	Recognize the difference between hidden vs undeclared dangerous goods		
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)		
	0.3	Positioning different roles and responsibilities		✸	✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders		
		0.3.2	Understand the passengers responsibilities		
		0.3.3	Recognized the role and impact of State & operator variations		
	0.4	Understanding the criticality of classification & packaging		✸	✸
		0.4.1	Differentiate between hazard vs risk		
		0.4.2	Identify the general information about classes, divisions		
		0.4.3	Understand general principles of Packing Groups		
		0.4.4	Consider multiple hazards		

Function: Personnel preparing dangerous goods consignments for transport (Personnel classifying dangerous goods for transport is provided simultaneously)				**Classifying dangerous goods**	**Preparing dangerous goods shipment**
	0.5	Interpreting the hazard communication		*	*
		0.5.1	Recognize the different marking basic requirements		
		0.5.2	Recognize the variety of labeling and their meaning		
		0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.		
	0.6	Familiarizing with basic Emergency Response		*	*
		0.6.1	Create awareness about general emergency procedures		
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals		
		0.6.3	Apply the employer emergency response requirements		
1	Classifying dangerous goods			***	**
	1.1	Evaluate substance or article against classification criteria		***	**
		1.1.1	Determine if it is dangerous goods		
		1.1.2	Determine if it is forbidden under any circumstances		
	1.2	Determine dangerous goods description		***	**
		1.2.1	Determine class or division		
		1.2.2	Determine packing group		
		1.2.3	Determine proper shipping name and UN number		
		1.2.4	Determine if it is forbidden unless approval or exemption is granted		
	1.3	Review special provisions		***	**
		1.3.1	Assess if special provision(s) is applicable		
		1.3.2	Apply special provision(s)		
2	Preparing dangerous goods shipment				***
	2.1	Assess packing options including quantity limitations			***
		2.1.1	Consider limitations (de minimis quantities, excepted quantities, limited quantities, passenger aircraft, cargo aircraft only, special provisions, dangerous goods in the mail)		
		2.1.2	Consider State and operator variations		
		2.1.3	Determine if all-packed-in- one can be used		

Function: Personnel preparing dangerous goods consignments for transport (Personnel classifying dangerous goods for transport is provided simultaneously)				**Classifying dangerous goods**	**Preparing dangerous goods shipment**
		2.1.4	Select how dangerous goods will be shipped based on limitations and variations		
	2.2		Apply packing requirements		***
		2.2.1	Consider constraints of packing instructions		
		2.2.2	Select appropriate packaging materials (absorbent, cushioning, etc.)		
		2.2.3	Assemble package		
		2.2.4	Comply with the packaging test report when UN specification packaging is required		
	2.3		Apply marks and labels		***
		2.3.1	Determine applicable marks		
		2.3.2	Apply marks		
		2.3.3	Determine applicable labels		
		2.3.4	Apply labels		
	2.4		Assess use of overpack		***
		2.4.1	Determine if overpack can be used		
		2.4.2	Apply marks if necessary		
		2.4.3	Apply labels if necessary		
	2.5		Prepare documentation		***
		2.5.1	Complete the dangerous goods transport document		
		2.5.2	Complete other transport documents (e.g. air waybill)		
		2.5.3	Include other required documentation (approvals/exemptions, etc.)		
		2.5.4	Retain copies of documents as required		
7			Collecting safety data	*	**
	7.1		Report dangerous goods accidents	*	**
	7.2		Report dangerous goods incidents	*	**
	7.3		Report undeclared/mis-declared dangerous goods	N/A	N/A
	7.4		Report dangerous goods occurrences	*	**

~~C~~5.3. PERSONS RESPONSIBLE FOR PROCESSING OR ACCEPTING GOODS PRESENTED AS GENERAL CARGO

Personnel responsible for processing goods presented as general cargo [should/must] be competent to perform tasks aimed at preventing undeclared dangerous goods from being loaded on an aircraft. They may work for freight forwarders, ground handling agents or operators. Personnel would need to have relevant knowledge to competently perform these tasks. The task/knowledge matrix tool provided in Chapter 5 may be used as a guide for determining what knowledge is needed. They may need additional knowledge and be capable of performing at a more advanced skill level depending on the actual responsibilities assigned. The following are tasks aimed at preventing undeclared dangerous goods from being loaded on aircraft such personnel would typically perform and for which training and assessment may be required.

~~**3 Processing/accepting cargo**~~

~~3.4 Process/accept cargo other than dangerous goods~~
~~3.4.1 Check documentation for indications of undeclared dangerous goods~~
~~3.4.2 Check packages for indications of undeclared dangerous goods~~

~~**7 Collecting safety data**~~

~~7.1 Report dangerous goods accidents~~
~~7.2 Report dangerous goods incidents~~
~~7.3 Report undeclared/misdeclared dangerous goods~~
~~7.4 Report dangerous goods occurrences~~

Function: Personnel responsible for processing or accepting goods presented as general cargo				**Processing/ accepting cargo**
9	Understanding the basics of dangerous goods			
	0.1	Recognizing dangerous goods		
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference between hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4	Understanding the criticality of classification & packaging		
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of packing groups	
		0.4.4	Consider multiple hazards	

	0.5	Interpreting the hazard communication		*
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labels and their meaning	
		0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.	
	0.6	Familiarizing with basic emergency response		*
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
3	Processing/accepting cargo			***
	3.4	Process/accept cargo other than dangerous goods		***
		3.4.1	Check documentation for indications of undeclared dangerous goods	
		3.4.2	Check packages for indications of undeclared dangerous goods	
7	Collecting safety data			**
	7.1	Report dangerous goods accidents		N/A
	7.2	Report dangerous goods incidents		**
	7.3	Report undeclared/mis-declared dangerous goods		**
	7.4	Report dangerous goods occurrences		N/A

~~D~~5.4. PERSONNEL RESPONSIBLE FOR PROCESSING OR ACCEPTING DANGEROUS GOODS CONSIGNMENTS

The following are tasks personnel responsible for processing or accepting dangerous goods consignments typically perform and for which training and assessment would therefore be required:

~~**3 Processing/accepting cargo**~~

~~3.1 Review documentation~~
~~3.1.1 Verify air waybill~~
~~3.1.2 Verify dangerous goods transport document~~
~~3.1.3 Verify other documents (exemptions, approvals, etc.)~~
~~3.1.4 Verify State/operator variations~~

~~3.2 Review package(s)~~
~~3.2.1 Verify marks~~
~~3.2.2 Verify labels~~
~~3.2.3 Verify package type~~
~~3.2.4 Verify package conditions~~
~~3.2.5 Verify State/operator variations~~

~~3.3 Complete acceptance procedures~~
~~3.3.1 Complete acceptance checklist~~
~~3.3.2 Provide shipment information for load planning~~
~~3.3.3 Retain documents as required~~

~~**7 Collecting safety data**~~

~~7.1 Report dangerous goods accidents~~
~~7.2 Report dangerous goods incidents~~
~~7.3 Report undeclared/misdeclared dangerous goods~~
~~7.4 Report dangerous goods occurrences~~

Function: Personnel responsible for processing or accepting dangerous goods consignments				**Processing/ accepting cargo**
0	Understanding the basics of dangerous goods			
	0.1	Recognizing dangerous goods		*
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		*
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		*
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4	Understanding the criticality of classification & packaging		*
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of Packing Groups	
		0.4.4	Consider multiple hazards	
	0.5	Interpreting the hazard communication		*
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labeling and their meaning	
		0.5.3	Identify the required documentation for DG shipments and their role in the process.	
	0.6	Familiarizing with basic Emergency Response		*
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	

Function: Personnel responsible for processing or accepting dangerous goods consignments			**Processing/ accepting cargo**
3	Processing/accepting cargo		
	3.1	Review documentation	✱✱✱
		3.1.1 Verify dangerous goods transport document	
		3.1.2 Verify other transport documents (e.g. air waybill)	
		3.1.3 Verify other documents (exemptions, approvals, etc.)	
		3.1.4 Verify State/operator variations	
	3.2	Review package(s)	✱✱✱
		3.2.1 Verify marks	
		3.2.2 Verify labels	
		3.2.3 Verify package type	
		3.2.4 Verify package conditions	
		3.2.5 Verify State/operator variations	
	3.3	Complete acceptance procedures	✱✱✱
		3.3.1 Complete acceptance checklist	
		3.3.2 Provide shipment information for load planning	
		3.3.3 Retain documents as required	
	3.4	Process/accept cargo other than dangerous goods	N/A
		3.4.1 Check documentation for indications of undeclared dangerous goods	
		3.4.2 Check packages for indications of undeclared dangerous goods	
7	Collecting safety data		✱✱
	7.1	Report dangerous goods accidents	✱✱
	7.2	Report dangerous goods incidents	✱✱
	7.3	Report undeclared/mis-declared dangerous goods	✱✱
	7.4	Report dangerous goods occurrences	✱✱

~~E~~5.5. PERSONS RESPONSIBLE FOR HANDLING CARGO IN A WAREHOUSE, LOADING AND UNLOADING UNIT LOAD DEVICES AND LOADING AND UNLOADING AIRCRAFT CARGO COMPARTMENTS

The following are tasks personnel responsible for handling cargo in a warehouse, loading and unloading unit load devices and loading and unloading passenger baggage and aircraft cargo compartments typically perform and for which training and assessment would therefore be required:

~~**4 Managing cargo pre-loading**~~

~~4.2 Prepare load for aircraft~~
~~4.2.1 Check packages for indications of undeclared dangerous goods~~
~~4.2.2 Check for damage and/or leakage~~
~~4.2.3 Apply stowage requirements (e.g. segregation, separation, orientation)~~
~~4.2.4 Apply ULD tags when applicable~~

~~4.2.5 Transport cargo to aircraft~~

~~**6 Transporting cargo/baggage**~~

~~6.1 Load aircraft~~
~~6.1.1 Transport cargo/baggage to aircraft~~
~~6.1.2 Check packages for indications of undeclared dangerous goods~~
~~6.1.3 Check for damage and/or leakage~~
~~6.1.4 Apply stowage requirements (e.g. segregation, separation, orientation, securing and protecting from damage)~~
~~6.1.5 Verify that NOTOC reflects against aircraft load~~
~~6.1.6 Verify passenger baggage requirements~~
~~6.1.7 Inform pilot-in-command and flight operations officer/flight dispatcher~~
~~6.3 Unload aircraft~~
~~6.3.1 Apply specific unloading considerations~~
~~6.3.2 Check packages for indications of undeclared dangerous goods~~
~~6.3.3 Check for damage and/or leakage~~

~~**7 Collecting safety data**~~

~~7.1 Report dangerous goods accidents~~
~~7.2 Report dangerous goods incidents~~
~~7.3 Report undeclared/misdeclared dangerous goods~~
~~7.4 Report dangerous goods occurrences~~

Function: Personnel responsible for handling cargo in a warehouse, loading and unloading ULD and loading and unloading aircraft cargo compartments.				**Managing cargo pre-loading**
0	Understanding the basics of dangerous goods			*
	0.1	Recognizing dangerous goods		*
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		*
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		*
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4	Understanding the criticality of classification & packaging		*
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of Packing Groups	
		0.4.4	Consider multiple hazards	

Function: Personnel responsible for handling cargo in a warehouse, loading and unloading ULD and loading and unloading aircraft cargo compartments.				**Managing cargo pre-loading**
	0.5		Interpreting the hazard communication	*
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labeling and their meaning	
		0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.	
	0.6		Familiarizing with basic emergency response	*
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
4	Managing cargo pre-loading			***
	4.1		Plan loading	
		4.1.1	Determine stowage requirements	
		4.1.2	Determine segregation, separation, aircraft/compartment limitations	
	4.2		Prepare load for aircraft	***
		4.2.1	Check packages for indications of undeclared dangerous goods	
		4.2.2	Check for damage and/or leakage	
		4.2.3	Apply stowage requirements (e.g. segregation, separation, orientation)	
		4.2.4	Apply ULD tags when applicable	
		4.2.5	Transport cargo to aircraft	
	4.3		Issue written information to pilot-in-command	***
		4.3.1	Enter required information	
		4.3.2	Verify conformance with load plan	
		4.3.3	Transmit to loading personnel	
6	Transporting cargo/baggage			
	6.1		Load aircraft	***
		6.1.1	Transport cargo/baggage to aircraft	
		6.1.2	Check packages for indications of undeclared dangerous goods	
		6.1.3	Check for damage and/or leak- age	
		6.1.4	Apply stowage requirements (e.g. segregation, separation, orientation, securing and protecting from damage)	

Function: Personnel responsible for handling cargo in a warehouse, loading and unloading ULD and loading and unloading aircraft cargo compartments.				Managing cargo pre-loading
		6.1.5	Verify that NOTOC reflects against aircraft load	
		6.1.6	Verify passenger baggage requirements	
		6.1.7	Inform pilot-in-command and flight operations officer/flight dispatcher	
	6.2	Manage dangerous goods pre and during flight		N/A
		6.2.1	Detect presence of dangerous goods not permitted in baggage	N/A
		6.2.2	Interpret NOTOC	N/A
		6.2.3	Apply procedures in the event of an emergency	N/A
		6.2.4	Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency	N/A
		6.2.5	Inform emergency services of the dangerous goods on board in the event of an emergency	N/A
	6.3	Unload aircraft		***
		6.3.1	Apply specific unloading considerations	
		6.3.2	Check packages for indications of undeclared dangerous goods	
		6.3.3	Check for damage and/or leakage	
		6.3.4	Transport cargo/baggage to facility/terminal	
7	Collecting safety data			**
	7.1	Report dangerous goods accidents		**
	7.2	Report dangerous goods incidents		**
	7.3	Report undeclared/mis-declared dangerous goods		**
	7.4	Report dangerous goods occurrences		**

~~F~~5.6. PERSONS RESPONSIBLE FOR ACCEPTING PASSENGER AND CREW BAGGAGE, MANAGING AIRCRAFT BOARDING AREAS AND OTHER TASKS INVOLVING DIRECT PASSENGER CONTACT AT AN AIRPORT

The following are tasks personnel responsible for accepting passenger and crew baggage, managing aircraft boarding areas and other functions involving direct passenger contact at an airport typically perform and for which training and assessment would therefore be required.

~~**5 Accepting passenger and crew baggage**~~

~~5.1 Process baggage~~
~~5.1.1 Identify forbidden dangerous goods~~
~~5.1.2 Apply approval requirements~~

~~5.2 Accept baggage~~
~~5.2.1 Apply operator requirements~~
~~5.2.2 Verify passenger baggage requirements~~
~~5.2.3 Advise pilot-in-command~~

~~**7 Collecting safety data**~~

~~7.1 Report dangerous goods accidents~~
~~7.2 Report dangerous goods incidents~~
~~7.3 Report undeclared/misdeclared dangerous goods~~
~~7.4 Report dangerous goods occurrences~~

			Function: Personnel responsible for accepting passenger and crew baggage, managing aircraft boarding areas and other tasks involving direct passenger contact at an airport.	**Accepting passenger and crew baggage**
0			Understanding the basics of dangerous goods	✸
	0.1		Recognizing dangerous goods	✸
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2		Identifying the general limitations	✸
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3		Positioning different roles and responsibilities	✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4		Understanding the criticality of classification & packaging	✸
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of Packing Groups	
		0.4.4	Consider multiple hazards	
	0.5		Interpreting the hazard communication	✸
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labeling and their meaning	
		0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.	
	0.6		Familiarizing with basic emergency response	✸
		0.6.1	Create awareness about general emergency procedures	

Function: Personnel responsible for accepting passenger and crew baggage, managing aircraft boarding areas and other tasks involving direct passenger contact at an airport.				Accepting passenger and crew baggage
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
5	Accepting passenger and crew baggage			✱✱✱
	5.1	Process baggage		✱✱✱
		5.1.1	Identify forbidden dangerous goods	
		5.1.2	Apply approval requirements	
	5.2	Accept baggage		✱✱✱
		5.2.1	Apply operator requirements	
		5.2.2	Verify passenger baggage requirements	
		5.2.3	Advise pilot-in-command	
7	Collecting safety data			✱
	7.1	Report dangerous goods accidents		
		7.2	Report dangerous goods incidents	✱
		7.3	Report undeclared/mis-declared dangerous goods	✱
		7.4	Report dangerous goods occurrences	

~~C~~5.7. PERSONNEL RESPONSIBLE FOR THE PLANNING OF AIRCRAFT LOADING

The following are tasks personnel responsible for planning of aircraft loading (passengers, baggage, mail and cargo) would typically perform and for which training and assessment would therefore be required:

~~**4 Managing cargo pre-loading**~~

~~4.1 Plan loading~~
~~4.1.1 Determine stowage requirements~~
~~4.1.2 Determine segregation, separation, aircraft/compartment limitations~~

~~4.3 Issue NOTOC~~
~~4.3.1 Enter required information~~
~~4.3.2 Verify conformance with load plan~~
~~4.3.3 Transmit to loading personnel~~

Function: Personnel responsible for planning of aircraft loading				Managing cargo pre-loading
0	Understanding the basics of dangerous goods			✱
	0.1	Recognizing dangerous goods		✱
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		✱
		0.2.1	Develop a sense of potential hidden dangerous goods	

		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3		Positioning different roles and responsibilities	*
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
0.4			Understanding the criticality of classification & packaging	*
	0.4.1		Differentiate between hazard vs risk	
	0.4.2		Identify the general information about classes, divisions	
	0.4.3		Understand general principles of packing groups	
	0.4.4		Consider multiple hazards	
0.5			Interpreting the hazard communication	*
	0.5.1		Recognize the different marking basic requirements	
	0.5.2		Recognize the variety of labels and their meaning	
	0.5.3		Identify the required documentation for dangerous goods shipments and their role in the process.	
0.6			Familiarizing with basic emergency response	*
	0.6.1		Create awareness about general emergency procedures	
	0.6.2		Recognize country specific emergency procedures including exemptions and approvals	
	0.6.3		Apply the employer emergency response requirements	
Managing cargo pre-loading				***
4.1			Plan loading	***
	4.1.1		Determine stowage requirements	
	4.1.2		Determine segregation, separation, aircraft/compartment limitations	
4.3			Issue written information to pilot-in-command	***
	4.3.1		Enter required information	
	4.3.2		Verify conformance with load plan	
	4.3.3		Transmit to loading personnel	

~~H~~5.8. FLIGHT CREW

The following are tasks the flight crew would typically perform and for which training and assessment would therefore be required:

~~**6 Transporting cargo/baggage**~~

~~6.2 Manage dangerous goods pre and during flight~~
~~6.2.1 Detect presence of dangerous goods not permitted in baggage~~
~~6.2.2 Interpret NOTOC~~
~~6.2.3 Apply procedures in the event of an emergency~~

~~6.2.4 Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency~~
~~6.2.5 Inform emergency services of the dangerous goods on board in the event of an emergency~~

~~**7 Collecting safety data**~~

~~7.1 Report dangerous goods accidents~~
~~7.2 Report dangerous goods incidents~~
~~7.3 Report undeclared/misdeclared dangerous goods~~
~~7.4 Report dangerous goods occurrences~~

Function: Flight Crew				**Transporting cargo / baggage**
0	Understanding the basics of dangerous goods			*
	0.1	Recognizing dangerous goods		*
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		*
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		*
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4	Understanding the criticality of classification & packaging		*
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of packing groups	
		0.4.4	Consider multiple hazards	
	0.5	Interpreting the hazard communication		*
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labels and their meaning	
		0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.	

Function: Flight Crew				Transporting cargo / baggage
	0.6	Familiarizing with basic emergency response		*
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
6	Transporting cargo/baggage			
	6.2	Manage dangerous goods pre and during flight		***
		6.2.1	Detect presence of dangerous goods not permitted in baggage	
		6.2.2	Interpret NOTOC	
		6.2.3	Apply procedures in the event of an emergency	
		6.2.4	Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency	
		6.2.5	Inform emergency services of the dangerous goods on board in the event of an emergency	
7	Collecting safety data			**
	7.1	Report dangerous goods accidents		**
	7.2	Report dangerous goods incidents		**
	7.3	Report undeclared/mis-declared dangerous goods		**
	7.4	Report dangerous goods occurrences		**

~~I~~5.9. FLIGHT OPERATIONS OFFICERS AND FLIGHT DISPATCHERS

The following are tasks flight operations officers and flight dispatchers would typically perform and for which training and assessment would therefore be required:

~~**6 Transporting cargo/baggage**~~

~~6.2 Manage dangerous goods during and flight~~
~~6.2.1 Detect presence of dangerous goods not permitted in baggage~~
~~6.2.2 Interpret NOTOC~~
~~6.2.3 Apply procedures in the event of an emergency~~
~~6.2.4 Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency~~
~~6.2.5 Inform emergency services of the dangerous goods on board in the event of an emergency~~

Function: Personnel responsible for flight operations and flight dispatchers				Transporting cargo / baggage
0	Understanding the basics of dangerous goods			*
	0.1	Recognizing dangerous goods		*
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	

				Transporting cargo / baggage
Function: Personnel responsible for flight operations and flight dispatchers				
	0.2	Identifying the general limitations		*
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		*
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4	Understanding the criticality of classification & packaging		*
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of packing groups	
		0.4.4	Consider multiple hazards	
	0.5	Interpreting the hazard communication		*
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labels and their meaning	
		0.5.3	Identify the required documentation for DG shipments and their role in the process.	
	0.6	Familiarizing with basic emergency response		*
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
6	Transporting cargo/baggage			
	6.2	Manage dangerous goods pre and during flight		***
		6.2.1	Detect presence of dangerous goods not permitted in baggage	N/A
		6.2.2	Interpret NOTOC	
		6.2.3	Apply procedures in the event of an emergency	
		6.2.4	Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency	N/A
		6.2.5	Inform emergency services of the dangerous goods on board in the event of an emergency	

~~J~~5.10. CABIN CREW

The following are tasks the cabin crew would typically perform and for which training and assessment would therefore be required:

~~**5 Accepting passenger and crew baggage**~~

~~5.2 Accept baggage~~
~~5.2.1 Apply operator requirements~~
~~5.2.2 Verify passenger baggage requirements~~
~~5.2.3 Advise pilot in command~~

~~**6. Transporting cargo/baggage**~~

~~6.2 Manage dangerous goods pre and flight~~
~~6.2.1 Detect presence of dangerous goods not permitted in baggage~~
~~6.2.2 Interpret NOTOC~~
~~6.2.3 Apply procedures in the event of an emergency~~
~~6.2.4 Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency~~
~~6.2.5 Inform emergency services of the dangerous goods on board in the event of an emergency~~

~~**7 Collecting safety data**~~

~~7.1 Report dangerous goods accidents~~
~~7.2 Report dangerous goods incidents~~
~~7.3 Report undeclared/misdeclared dangerous goods~~
~~7.4 Report dangerous goods occurrences~~

Function: Cabin Crew				**Transporting cargo/ baggage**
0	Understanding the basics of dangerous goods			*
	0.1	Recognizing dangerous goods		*
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		*
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		*
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4	Understanding the criticality of classification & packaging		*
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
Function: Cabin Crew				**Transporting cargo/ baggage**

		0.4.3	Understand general principles of packing groups	
		0.4.4	Consider multiple hazards	
	0.5		Interpreting the hazard communication	*
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labels and their meaning	
		0.5.3	Identify the required documentation for DG shipments and their role in the process.	
	0.6		Familiarizing with basic emergency response	*
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
5			Accepting passenger and crew baggage	***
	5.2		Accept baggage	***
		5.2.1	Apply operator requirements	
		5.2.2	Verify passenger baggage requirements	
6			Transporting cargo/baggage	***
	6.2		Manage dangerous goods pre and during flight	***
		6.2.1	Detect presence of dangerous goods not permitted in baggage	
		6.2.3	Apply procedures in the event of an emergency	
7			Collecting safety data	*
	7.1		Report dangerous goods accidents	N/A
	7.2		Report dangerous goods incidents	*
	7.3		Report undeclared/mis-declared dangerous goods	*
	7.4		Report dangerous goods occurrences	N/A

~~K~~5.11. PERSONNEL RESPONSIBLE FOR THE SCREENING PASSENGERS AND CREW AND THEIR BAGGAGE, CARGO AND MAIL

The following are tasks that personnel responsible for the screening passengers and crew and their baggage, cargo and mail would typically perform and for which training and assessment would therefore be required:

~~**3 Processing/accepting cargo**~~

~~3.4 Process/accept cargo other than dangerous goods~~
~~3.4.2 Check packages for indications of undeclared dangerous goods~~

~~**5 Accepting passenger and crew baggage**~~

~~5.1 Process baggage~~
~~5.1.1 Identify forbidden dangerous goods~~

				Function: Personnel responsible for security screening (Passenger and crew, baggage, cargo and mail)	**Processing / accepting cargo / Processing passenger and crew baggage**
0				Understanding the basics of dangerous goods	*
	0.1			Recognizing dangerous goods	*
		0.1.1		Understand the definition	
		0.1.2		Recognize the legal frame- work (global, local, training legal requirements)	
		0.1.3		Identify the application scope	
	0.2			Identifying the general limitations	
		0.2.1		Develop a sense of potential hidden dangerous goods	
		0.2.2		Recognize the difference between hidden vs undeclared dangerous goods	
		0.2.3		Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3			Positioning different roles and responsibilities	*
		0.3.1		Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2		Understand the passengers responsibilities	
		0.3.3		Recognized the role and impact of State & operator variations	
	0.4			Understanding the criticality of classification & packaging	*
		0.4.1		Differentiate between hazard vs risk	
		0.4.2		Identify the general information about classes, divisions	
		0.4.3		Understand general principles of packing groups	
		0.4.4		Consider multiple hazards	
	0.5			Interpreting the hazard communication	*
		0.5.1		Recognize the different marking basic requirements	
		0.5.2		Recognize the variety of labeling and their meaning	
		0.5.3		Identify the required documentation for DG shipments and their role in the process.	

Function: Personnel responsible for security screening (Passenger and crew, baggage, cargo and mail)				**Processing / accepting cargo / Processing passenger and crew baggage**
	0.6		Familiarizing with basic emergency response	*
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
3			Processing/accepting cargo / mail	***
	3.4		Process/accept cargo other than dangerous goods	
		3.4.1	Check documentation for indications of undeclared dangerous goods	
		3.4.2	Check packages for indications of undeclared dangerous goods	
5			Accepting passenger and crew baggage	***
	5.1		Process baggage	
		5.1.1	Identify forbidden dangerous goods	
		5.1.2	Apply approval requirements	
7			Collecting safety data	**
	7.1		Report dangerous goods accidents	
	7.2		Report dangerous goods incidents	**
	7.3		Report undeclared/mis-declared dangerous goods	**
	7.4		Report dangerous goods occurrences	

APPENDIX B

CLEAN VERSION DRAFT GUIDANCE MATERIAL ON A COMPETENCY-BASED APPROACH TO DANGEROUS GOODS TRAINING AND ASSESSMENT

Chapter 2

DRAFT GUIDANCE MATERIAL ON A COMPETENCY-BASED APPROACH TO DANGEROUS GOODS TRAINING AND ASSESSMENT

Chapter 1

GENERAL

1.1 INTRODUCTION

1.1.1 A safe and efficient air transport system is dependent on a competent workforce. ICAO has recognized that this can be achieved through the implementation of a competency-based approach to training and assessment. The *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284, "Technical Instructions") require that employers ensure personnel are competent to perform any function for which they are responsible prior to performing them. A competency-based approach to training and assessment is an effective way to ensure this requirement is met.

1.1.2 This document provides guidance in implementing a competency-based approach to dangerous goods training and assessment for personnel involved in the transport of cargo, mail, passengers and baggage by air. The *Procedures for Air Navigation Services — Training* (PANS-TRG, Doc 9868) contains greater detail on competency-based training and assessment.

1.2 COMPETENCY-BASED TRAINING AND ASSESSMENT

1.2.1 The goal of competency-based training and assessment is to produce a competent workforce by providing focused training. It does so by identifying key competencies and the level of proficiency to be achieved, determining the most effective way of achieving them and establishing valid and reliable assessment tools to evaluate their achievement.

1.2.2 The Technical Instructions state that personnel must be trained commensurate with the functions for which they are responsible. These responsibilities are determined by the specific function's personnel perform and not by their job titles. Concentrating on functions and responsibilities rather than a job title or description ensures that a person is competent to perform the function in compliance with the Technical Instructions. For example, entities such as ground service providers and freight forwarders may need personnel to perform some functions that are typically performed by shippers or operators. The ground service and freight forwarder personnel need to be trained to perform these functions competently regardless of their job title.

1.2.3 In smaller operations, personnel may perform many functions such as accepting dangerous goods and loading and securing dangerous goods on board an aircraft. They would need to be trained to perform all of these functions competently. In larger operations, personnel may only perform a small number of functions. They would only need to be trained to perform those specific functions competently.

1.2.4 A competency is defined by the PANS-TRG as a dimension of human performance that is used to reliably predict successful performance on the job. It is manifested and observed through behaviours that mobilize the four competency factors: knowledge, skills, experience and attitudes to carry out tasks and activities under specified conditions to achieve a particular level of proficiency/competency. A competency framework with associated performance criteria provides a means of assessing whether trainees achieve the desired performance. A competency framework and associated task list for dangerous goods personnel is described in paragraph 1.5.

1.2.4.1 The four competency factors are defined as follows:

- Knowledge: is the theoretical or practical understanding of a subject. Means to understand and know the principles.

- Skills: are developed through training or on the job application. Something that has been learned and put into practice.

- Attitude: is the key differentiator on a competency approach. One may have knowledge, skills and experience, however what is the overall approach when doing so? Speaks more to the commitment to the quality, the outcome, the profession. What is your benchmark compared to others in the same environment?

- Experience: is related to the applied knowledge and skills: How often? Where? When? And in which context is the combination of the rest of the elements applied to.

1.2.4.2 The criteria to determine the level of proficiency/competency must take into account the complexity of activities, the range of work (routine, predictability, and dependencies) and the complexity of the context and the level of autonomy in performing the tasks. The basic consideration to determine the right level of proficiency should then be considered as follows:

- Introductory (★): simple work activities, most of it routine and predictable. Guidance required. Final product highly supervised.

- Basic (★★): various work activities, various contexts. Some individual responsibility or autonomy. Limited guidance needed. Result reviewed for quality not in detail (spot checks).

- Intermediate (★★★): broad range of activities, complex and non-routine context. High confidence in results, work tested against broader business context. Significant personal autonomy. Team authority in some areas (e.g. supervisor).

- Advanced (★★★★): broad range of work. Complex technical and professional activities in a wide variety of contexts. From substantial to wide scope for personal autonomy. Regional and divisional authority in some areas. Regarded as a consultant in some areas.

1.2.5 A critical feature of competency-based training is assessment to ensure training is efficient and effective in developing the level of proficiency/competency required to perform the function competently.

Note.— Competency-based training and assessment is described in more detail in the PANS-TRG, Part I, Chapter 2.

1.3 BENEFITS OF COMPETENCY-BASED TRAINING AND ASSESSMENT FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR

1.3.1 The main benefit of a competency-based approach to training and assessment is its potential to encourage and enable personnel to reach their highest level of capability while ensuring a basic level of competence as a minimum standard. It does this by:

a) targeting function specific training needs;

b) supporting continuous learning and performance improvement;

c) gearing towards learning rather than simply passing a test;

d) ensuring the integration of knowledge, skills, attitudes and experience needed to perform a job at a particular level of proficiency/competency effectively;

e) supports the implementation of Safety Management systems (SMS); and

f) establishing sufficient, well-trained and competent instructors.

1.3.2 Ensuring personnel are able to perform their functions competently is critical to any organization. A competent workforce reduces cost caused by poor performance or miscommunication of job expectations. An incompetent dangerous goods workforce could result in costs and delays in shipment. Even more critically, it could result in the introduction of safety risks. As an example, identifying, classifying, packing, marking, labelling and documenting dangerous goods for transport are critical to the safe transport of dangerous goods by air. The operator depends on these functions being performed competently by those preparing and offering a consignment for transport so that they are aware of the hazards posed and the required measures to mitigate them. If personnel performing these functions are not trained to competently perform them, unknown risks may be introduced into air transport. As another example, accepting dangerous goods for air transport requires an operator to verify that dangerous goods are properly prepared for transport through use of a checklist. If personnel accepting dangerous goods are not trained to competently perform this function, they may unnecessarily reject properly prepared shipments thereby delaying shipments and increasing costs to the shipper and the operator. Alternatively, personnel not trained to competently perform this function may accept improperly prepared shipments of dangerous goods into air transport thereby introducing risks to the aircraft and its occupants.

1.3.3 A competency-based approach to training and assessment ensures trainees know what they are expected to competently perform and [instructors] know what performance to assess.

1.4 ROLES AND RESPONSIBILITIES IN A COMPETENCY-BASED APPROACH TO TRAINING

1.4.1 Employer

1.4.1.1 A training programme includes elements such as design methodology, initial and recurrent training, assessment, instructor qualifications and competencies, training records and evaluation of its effectiveness. Employers need to determine the purpose and objective of the competency-based training programme based on the functions for which their personnel are responsible. Employers should ensure that training is designed and developed to establish clear links among the competencies to be achieved, learning objectives, assessment methods, and course materials.

1.4.1.2 The employer must study the target population (future trainees) with a view to identifying the knowledge, skills and attitudes that they already possess, to collect information on preferred learning styles, and on the social and linguistic environments of prospective trainees. The target population may be a mixture of experienced and newly recruited personnel, groups differing in age, etc. All these components could have an impact on the design of the training. Employers must also consider the domestic and international regulatory requirements that apply to their operations.

1.4.1.3 Some employers may utilize third parties for assistance. This approach may be the most suitable for employers who do not have the resources to train their personnel in house. While utilizing third parties may be cost effective, whether or not the training needs are being addressed needs to be the deciding factor in selecting a third party and not costs alone. The potential for third parties to cater to the training needs of multiple employers and not address all required competencies needs to be taken into account. Employers remain responsible for ensuring its personnel are competent to perform their functions prior to performing them even if certain aspects of the training programme have been delegated to third parties.

1.4.1.4 Employers should liaise directly with the regulator to ensure that the latter's requirements are taken into account prior to proceeding with the development of competency-based training,

1.4.2 Instructor

In competency-based training, the instructor facilitates the trainee's progression towards the achievement of competencies. Instructors also collect information about the effectiveness of the training materials which supports continuous improvement. Examples of instructor competencies can be found in Part I, Chapter 3 of the PANS-TRG.

1.4.3 Trainee

In competency-based training, trainees are active participants in their learning process and the achievement of competencies as opposed to passive recipients of knowledge. The competency-based training programme provides them with a clear idea of their learning path towards competency through the training programme and beyond. The competency-based training should directly contribute to improving their performance on the job. Trainees' feedback is essential in ensuring that competency-based training is effective.

1.4.4 Regulator

1.4.4.1 There are important differences between the ways the regulator would oversee a traditional training programme versus a competency-based training programme. In a traditional training programme, the regulator may assess the course components and final test against knowledge elements and not on the competencies that need to be acquired. The fact that all knowledge components are addressed or appear to be included in a course and all trainees have passed the required test does not necessarily mean that they can competently perform their assigned functions.

1.4.4.2 Where competency-based training has been implemented, regulators should oversee the training programme to ensure that it actually produces personnel who can perform the functions for which they are responsible in a specific operational setting and in compliance with the national regulatory framework. The *Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284SU) provides guidance on overseeing dangerous goods training programmes.

1.5 FRAMEWORK TO IMPLEMENT COMPETENCY-BASED TRAINING AND ASSESSMENT PROGRAMMES FOR DANGEROUS GOODS

1.5.1 *Phase 1 — Analysis*

The main objectives of this important phase are:

a) to define the problem to be addressed and determine if there is a need for a training programme,

b) to establish the job function requiring the training program, the employer's competencies and the level of proficiency/competency required, and

c) to determine the target population.

1.5.1.1 Dangerous goods training is a regulatory requirement mandated by Part 1, Chapter 4, of the Technical Instructions. Therefore, determining the need for training is covered by this requirement.

1.5.1.2 The following step on this first phase is to perform a training needs analysis (TNA) to establish the competencies specific to an employer's function, environment and requirements. An employer conducts a training needs analysis to determine the results that the training needs to achieve and what resources exist to achieve these results. This critical step will ensure that the training fits the employer's purpose and is effective. This should include the purpose of the training along with its requirements, including operational, technical, regulatory and organizational. To perform a proper TNA there should be a job analysis and various inputs considered in advance. Some of these inputs have already been created by subject matter experts and are offered in these guidelines:

1.5.1.2.1 The identification of the specific job function and the different tasks, activities is the start of the process. The identification of general high-level functions has already been done and is reflected in Chapter 2 – Dangerous goods functions – Process Flowchart. This flow chart represents major areas that are clustered into high level functions. Based on that flow chart these guidelines provide a list of well-established functions involved in the flow of cargo and passengers where dangerous goods training is required. This list is not exhaustive, but it provides the main functions found in the supply chain. It is important to remember that a function is not a job tittle but one that describes the core responsibility of an employee in their role. Additionally, a job function may include various activities and activities may be common to different job functions, see examples in Chapter 5.

1.5.1.2.2 Establishing a list of tasks, activities and performance criteria is next in the analysis phase. This is done by breaking down the job to facilitate the output of a task matrix. This input part of the TNA is also been provided in these guidelines in Chapter 3. By using this tool, the employer or training programme developer can customize the training needs per function relevant for a particular job.

a) Tasks: establishing the tasks to be performed by the employee. Based on the flowchart in Chapter 2, the following high-level major tasks apply:

0 – Understanding the basics of dangerous goods;

1 – Classifying dangerous goods;

2 – Preparing a dangerous goods shipment;

3 – Processing/accepting cargo;

4 – Managing cargo pre-loading;

5 – Accepting passenger and crew baggage;

6 – Transporting cargo/baggage; and

7 – Collecting safety data.

It is important to notice that a particular function may include various major tasks that an employee needs to fulfil to be competent when performing their function.

b) Activities: once the employee function(s) and tasks have been identified the next step is to determine the activities suitable for that specific function(s). This step is important in setting the scope of the knowledge, skills and experience required of the person performing the function. An activity is considered to be an action to be performed when completing a task, the action should be measured by predefined performance criteria;

c) Performance criteria (PC): refers to smaller actions and behaviour that will help measuring whether the knowledge and the skills have been acquired to the required level. The PC are helpful in defining key performance indicators to evaluate against, see 1.5.6. Identifying the performance criteria (PC) will directly provide information on the observable behaviours that the trainee should be able to demonstrate.

1.5.1.2.3 Identifying the level of proficiency is an essential part of the process as it will directly provide information to the training designer and developer as well as the employee on the level of performance to be expected at completion of the course. In other words, this step of the analysis must respond to the question: what do we need the employee to be able to do?

Table 2-1 illustrates the relationship between the different elements of competency (knowledge, skills, experience and attitude) and the level of proficiency. For easy understanding a "stars" coding system has been used to identify that the higher the level of proficiency, the higher the level competency applies to each element and therefore the assigned number of stars.

Table 2.1 Level of proficiency in terms of competency elements

Competency Factor	Level of proficiency			
	Introductory	**Basic**	**Intermediate**	**Advanced**
Knowledge	1	2	3	4
Skills	1	2	3	4
Experience	0	1	2	3
Attitude	3	4	4	4
Coding	*	**	***	****

1.5.1.2.4 With this basic understanding of the interrelation between the four competency factors, the level of proficiency and the clear breakdown of function, tasks, activities and performance criteria, the tool illustrated in Chapter 3 can be used to provide a standardised way to establish the TNA.

1.5.1.2.5 A full benchmarked TNA is provided for industry guidance under Chapter 5 where both the TNA and the level of competency has already been considered.

1.5.1.3 Taking into consideration various characteristics of the target population provides valuable details for designers and developers on assigning the appropriate resources, e.g. method of delivery, assigning the right instructor or instructional method, choosing the appropriate training aids, sizing the level of difficulty of the assessment, etc. to be used in the training programme.

1.5.1.3.1 The first consideration is whether the trainees will be a primary population, which means they will be primarily using the training to perform their job. In other words, the training programme or part of it is their core activity. This can also be reflected in the designation of the level of proficiency/competency during the TNA. For trainees that follow under the description of TI, Part 1, Chapter 4, 4.1, 4.1.1 and 4.7 dangerous goods training is a primary requirement, therefore the considerations in 1.6.1.3.3 apply.

Otherwise the trainees fit into a secondary population type which consists of trainees have an indirect input in the system performance but will not be actually performing the tasks and activities related to a particular function e.g. sales teams, booking teams, management, SMS team members.

These guidance materials concentrate on the primary target population.

1.5.1.3.2 Frequency of training – Obtaining and Maintaining Training Competency

In terms of the frequency and the specific circumstances, these may be determined by regulatory requirements whether international or national and by business and corporate needs. These characteristics have a direct impact in the considerations of the target population and their level of competency, contents, method of delivery and other aspects highly important in the design and development phases.

Dangerous goods initial and recurrent training are required by the regulations:

a) **Initial training** must be provided prior to a person performing their responsibilities related to the transport of cargo or managing passenger and baggage. Effectively and unless otherwise required by the national authorities, it refers to the first time a trainee receives dangerous goods instructions according to their function or a new function if gaps have been identified.

b) **Recurrent training** must be provided within 24 months of previous training to ensure knowledge is current. However, if recurrent training is completed within the final 3 months of validity of previous training, the period of validity extends from the month on which the recurrent training was completed until 24 months from the expiry month of that previous training.

However, there are situations in which there are irregularities in the job continuity of an employee. In this case, an intervention is needed to ensure the competency of the employee and any potential gaps to be covered before restarting their job function. The following table is a proposal of actions to be taken into consideration:

Period of Absence	Suggested action
Up to 3 months	Provide the employee with regulatory or business requirements changes for to ensure understanding of these changes.
3 to 12 months	Undergo one practical assessment, for example "on the job session" or simulation. Provide a brief observation report to the employee to identify with any gaps to be addressed to achieve the required level of competence.
More than 1 year	Recurrent training.

When choosing the method of training delivery, the type of assessment must be considered. The assessment plan must be fit for purpose considering how the knowledge and practice the skill have been delivered during the training. Ultimately the assessment must demonstrate that the employee can perform the job function competently, and that the objectives of the training programme have been achieved.

In determining the assessment, it is important to take into account what resources exist to achieve these results or what resources need to be found to accomplish the desired result. The following phase in these guidelines covers assessment in more detail.

1.5.1.3.3 Language has a big impact in the performance and the pace of the training. Additionally, it could be a good reason for choosing one or another method of delivery in the design phase. For example, digital learning or self-paced solutions benefits trainees where the language of delivery is not their mother tongue.

1.5.1.3.4 Other characteristics:

- entry level in terms of education, previous vocational/operational training, work experience;
- learning styles (age, education level, pace, experience, delivery method, etc)

1.5.2 *Phase 2 — Design competency-based training and assessment*

The second phase in the implementation of a competency-based training and assessment programme is its design. This is done taking into account the training specifications identified in Phase 1 (see paragraph 1.5.3.1) and will involve:

a) designing an assessment plan that will be used to assess the competence of trainees;

b) designing a training plan that will enable the development and delivery of the training course.

1.5.2.1 *Designing an assessment plan*

1.5.2.1.1 The purpose of the assessment plan is to detail how the performance criteria is going to be measured. A training program without a solid, defined assessment plan could be ineffective and costly to an organization. A well-defined and constructed assessment plan allows:

- For the employer to prove the level of competency of their employees and justify it for regulatory purposes, operational and technical requirements.
- For the instructor to have a status of the knowledge transfer and the skills application of the learners.
- For the employee to gain the confidence of their competency and to focus on the areas of knowledge that may require reinforcement and the skills that must be further developed.

In basic terms, the assessment plan describes how competency is measured.

1.5.2.1.2 The assessment plan details the:

a) the final competency standard associated with the final milestone;

b) the interim competency standard associated with each milestone (if required);

c) the list of assessments (formative and summative assessments, examinations, oral assessments, etc.) required for each of the milestone(s) that have been defined;

d) when assessments should take place;

e) the tools to be used to collect evidence during practical assessment.

f) the pass marks for projects, examinations or oral assessments;

g) if required, the minimum number of formative assessments to be undertaken prior to starting summative assessments; and

h) the number of observations required to assess performance for the interim and final competency standards.

1.5.2.1.3 Competency-based training requires assessment of the trainees' progress until they are competent to perform their assigned function. In order for assessment tools to be effective, they must be valid and reliable both in terms of being an appropriate measure of the competency being assessed and of obtaining consistent results when administered by different people.

1.5.2.1.4 CBTA encourages the use of different types of assessment, as each trainee is different and learns in different ways. The key is to accurately determine if the transfer of knowledge was completed and the competency has been achieved by the trainee. Common examples are:

a) Written or online test;

b) Oral test;

c) Observation of task;

d) Practice questions or "group answered" questions;

e) Simulated exercises.

The employer therefore establishes the assessment plan with all the specific details that would need to be accomplished to determine whether competence has been achieved by the trainee.

1.5.2.1.5 Employers electing to send personnel to third-party training providers also need to establish an assessment plan for ensuring that competence has been achieved by the trainee. The employer may incorporate the third-party provider's assessment into their established assessment plan but it's up to the employer to determine how they measure the effectiveness of the training and competency of the employee. Even if the employer does not deliver any of the training themselves, they can still choose to assess the trainee in the workplace to ensure that the employee can perform their assigned tasks competently and incorporate that process into their assessment plan.

1.5.2.1.6 Additional administrative procedures may be necessary in the implementation of the assessment plan in relation to: who is authorized to perform a specific task or assessment, record keeping, actions to be taken if a trainee fails a competency assessment, etc.

1.5.2.2 *Designing a training plan*

1.5.2.2.1 The training plan is to detail the:

a) composition and structure of the programme;

b) modules, training events and their delivery sequence;

c) delivery format (type of training, media, etc) (To add H.2.2.3.2);

d) syllabus;

e) milestones (if required); and

f) course schedule.

1.5.2.2.2 The training plan will be used by the training developer(s) to create the training and assessment materials.

1.5.2.3 *Relationship between the TNA and the assessment and training plans*

1.5.2.3.1 The same task list and requirements are used to develop the training plan. The training plan is used to prepare the trainee to undertake assessment to determine if they are competent in accordance with the performance criteria.

1.5.2.3.2 The syllabus in the training plan is composed of training objectives derived from tasks and activities as well as the underlying knowledge, skills, attitudes and experience necessary to perform them. The knowledge, skills, attitudes and experience are determined on the basis of the task list in conjunction with operational, technical, regulatory and organizational requirements. Chapter 5 provides a generic task/knowledge matrix tool that can be used as a tool to map out the knowledge that is necessary to perform specific tasks. Tasks corresponding to the list provided in Chapter 3 are listed across the columns of the table and subject matter (knowledge) is listed down the rows. The employer should indicate what knowledge is needed for a particular task within the organization with a check mark at the point at which the task element

and the knowledge element intersect. To facilitate this process, some knowledge components have been blacked out if they are considered to be completely irrelevant to specific tasks. The level of knowledge and/or skills necessary will differ depending on the task. For example, the person accepting dangerous goods will not require the same level of knowledge and/or skills related to classification as someone who is classifying dangerous goods.

1.5.2.3.3 When assessing whether competence has been achieved, the TNA, not the syllabus, is referenced. Consequently, the performance criteria are used to assess if competence has been achieved and the tasks/activities that are carried out by the trainee are the "vehicle" for enabling the assessment to be conducted.

1.5.3 *Phase 3 — Develop the training and assessment materials*

The third phase in the development and implementation of a competency-based training and assessment programme is the development of the training and assessment materials. Development is based on the adapted competency model and the training and assessment plans. Training and assessment materials include but are not limited to training notes, exercise briefings, practical exercises, case studies, presentations, video clips, self-test quizzes, examinations, assessments and assessment tools.

1.5.4 Phase 4 — *Establish trainer/instructor qualifications and competencies*

1.5.4.1 When an employer or a training organization decides on the person transmitting and accompanying the acquisition of the knowledge and developing of skills two areas must be considered: the regulatory requirements and the desirable level of proficiency of the person(s) delivering the training programme.

1.5.4.2 From the regulatory perspective the regulations on dangerous goods must be observed. These require, unless otherwise provided for by the appropriate national authority, that instructors of initial and recurrent dangerous goods training:

(a) must demonstrate or be assessed as competent in instruction and in the function(s) that they will instruct prior to delivering such dangerous goods training;

(b) instructors delivering initial and recurrent dangerous goods training must at least every 24 months deliver such a course, or in the absence of this attend recurrent training;

(c) instructors must receive and understand updates to dangerous goods information and be made familiar with those changes by attending training or other means on an annual basis or as the Regulations are modified,

(d) organisations must ensure that the instructor receives updates to the regulations and training material any time there are changes in the regulations or at least on a biennial basis with the issuance of each edition of the Technical Instructions.

1.5.4.3 For a desirable level of proficiency it is strongly recommended that in addition to the requirements listed above, the instructor of dangerous goods courses should have as a minimum the following qualifications:

a) instructors should demonstrate "advance" proficiency level related to the functions they are dealing with according to Table 2.1–Level of Proficiency in Terms of Competency Elements;

b) where applicable, an instructor must also have current knowledge of local State civil aviation dangerous goods regulations, and proof of approval as dangerous goods instructor by the State of the operator if required.

c) it is recommended that instructors have three (3) years working knowledge and experience in dangerous goods and safety operations or experience in cargo operations, including performing the function they are training on;

d) an alternative to this working experience is a dedicated training program for instructors, which would supplement the requirements. Proof from the employer that the instructor has undergone such a programme, or a programme approved by the State of the operator is required;

e) instructors should also undertake a "hands-on"/"on the job" experience program (i.e. job shadowing) in a variety of functions requiring dangerous goods training. Undergoing this practical activity at least every 2 to 3 years is highly recommended. This is particularly important if the item above applies, but even with experience from time to time it is best if instructors spend time in the operation to observe the trainee behaviour in the workplace.

1.5.4.4 New instructors of dangerous goods, where possible, should design and co-facilitate dangerous goods courses together with an established training designer/instructor. In this particular case and in addition to soft skills courses required, the approach known as "oil" (Observe. Interact. Lead) is a very effective way of building instructional competency:

a) observe: attend course (intended to hold) as observer;

b) interact: by preparing a course and co-facilitate together with an established training designer/instructor; and

c) lead: individually take on the delivery of a full course and ideally lead or establish a full training programme.

1.5.4.5 For instructors, feedback is recommended to measure their performance using for example checklists, (i.e. experienced instructor sits-in on 1-2 courses where new instructor instructing alone), capturing the information helps to provide feedback on performance which then should lead to recommendations to implement changes.

1.5.4.6 When the employer or the training organization uses methods of training delivery without an instructor, such as e-learning or distance learning, it is equally important to consider the adequacy of such methods in the following two areas: the regulatory requirements and the desirable level of proficiency of the chosen method.

1.5.4.7 In practical terms evaluation of non-instructor lead training is highly recommended:

1. From the regulatory perspective the regulations on dangerous goods must be observed, and the method must be approved or recognized by the appropriate national authority of the State in which the trainee's work place is located.

2. Consider all the above requirements for the content developers and those individuals involved in the development of the tools.

3. Satisfactory answers to the following considerations are important: is there a clearly defined process for the design and development of the training? Is the provider of the method well recognized by the local stakeholders?

4. Establishing a service level agreement in terms of evaluation of the program and content update is a key consideration.

1.5.5 Training and Assessment Records

1.5.5.1 Training records are necessary for the following stakeholders:

a) employee: to enable proof of acquired competency in certain functions and their respective tasks and therefore support job mobility and avoid unnecessary training duplication;

b) employer: to manage work force and ensure employees are competent to perform the tasks they are required in a specific function; it can be used to make critical operational decisions for the organization based on the skill set available;

c) auditors/inspectors: to inspect that the employee is competent to perform the job function; and

d) training providers: to provide proof that training has been followed and assessment has been completed.

1.5.5.2 The assessment records serve as formal information of several aspects important to all the parties mentioned above:

- when training was provided
- who attended the training
- training provider
- most recent training session
- when there was an assessment
- to prove which tasks are covered by the training/assessment
- achieved proficiency level

1.5.5.3 In a competency-based training approach it is possible to separate the training from the assessment, for example an employer can make use of a training provider for the instruction but perform the assessment internally. Therefore, it is important that the training records are clear on what is being covered.

1.5.5.4 The following is the minimum data to be kept in the training records:

a) Name of employee/learner;

b) Unique identifier of the employee (if applicable);

c) Function(s) and/or tasks from the task list that have been covered by the training programme;

d) Month of completion (training and assessment if done in different dates);

e) Validity;

f) Type of training, i.e. initial, recurrent;

g) Type of assessment;

h) Training provider name and address.

1.5.5.5 The following is also recommendable data that should be kept in a training record or trainees' files to be provided upon request:

a) Name of the instructor (if applicable) or training provider;

b) Unique facilitator identifier (if applicable);

c) Unique course/session identifier;

d) Employer (optional, normally used when the employer provides their own training programmes);

e) Location (if applicable);

f) Language (optional);

g) Task list (TNA) and proficiency level that were assessed;

h) Competency level achieved (this could be expressed in terms of proficiency level as explained under Table 2-1 "Level of Proficiency in Terms of Competency Elements".

1.5.5.6 Training records must be kept in a secure manner by training providers and employers for a minimum of 36 months. They should be kept digitally and in such a manner that data can be easily assessed and reports easily generated.

1.5.5.7 Training records must be made available upon request to the participant or appropriate national authority. However, when providing/reproducing training records, privacy law requirements must be considered, therefore certain information fields should not be shown (e.g. facilitator name) and treated with the appropriate confidentiality standards.

1.5.6 *Phase 5 — Evaluate the course including the training and assessment plans*

The employer is responsible for ensuring the effectiveness of the training programme. At the end of a period of training, feedback on performance on the job from trainees, instructors, assessors and employers should be gathered to determine the effectiveness of the training and assessment in supporting the progression of learning towards competence in the workplace. Evaluation of the training should be based on valid and reliable evidence such as course results, trainee feedback, instructor feedback, audit reports, and occurrence reports. This evaluation may lead to changes or improvements being made to the competency-based training and assessment design.

1.5.6.1 There are three main purposes for evaluating training programme effectiveness:

a) improve training program – Continuous improvement is desirable in any area, but in the context of dangerous goods training programmes is particularly relevant, since training is not one single event, but repeats throughout the trainee's career. Therefore, improving the training programme brings benefits not only for future participants, but also improves the experience of those already following it;

(b) confirm training effectiveness – Prove that the right competencies and at the right level of proficiency are being achieved, in other words that the program meets the expectations of the employer and the employee. However, if the training is not being effective, unexpected negative results can be due to an issue in the training programme, rather than individual differences.

(c) provide evidence of the added value – Training programme evaluation helps to explain how training is supporting the business. Considering the investment necessary in training, a link should be made between the resources and costs involved versus the actual added value. It must justify how were specific issues solved and further avoided, it must demonstrate shared best practices, new business implemented, etc. Additionally, since business evolves, the training needs assessment should not be a one-time event but reviewed systematically to ensure that employers keep providing the right training for the current business and/or prepare for potential business growth.

1.5.6.2 In this context, the evaluation of the training program, benefits:

- the training providers by allowing them to offer products of higher quality and adjusted to the business needs;

- the employer by providing assurance that the training programme is delivering the expected–competent work force–and that is linked to the business needs (adds value);

- the employee by taking into consideration their experience and addressing their real/on the job needs;
- the appropriate national authority by providing assurance that the training needs are in line with the regulations and the employer needs, which is a basic principle of competency-based training and assessment.

Responsibility of Training Program Evaluation

1.5.6.3 In order to fulfil the above-mentioned objectives, both the employer and training providers should conduct Training Program Assessments. When these are one and the same organization (in-house training), the responsibility should lie with the Training Program Designer and all three purposes of training programme evaluation can be pursued. This is also the situation that allows for a largest variety of evaluation tools and makes it easier to apply to all four competency factors.

If the training is provided by a third party, then the training provider should use the training contract to clearly describe the objectives that must be measured against. Third party training providers should focus on purposes (a) and (b) of training programme evaluation. Training providers have at their disposition a number of classical tools for achieving this (e.g. surveys, interviews with instructors), but under a competency-based training approach a much closer dialogue should be built with the employer in order to ensure that the expected service is being effectively delivered. This supports employers benefiting of their services to achieve purpose (c) of the evaluation. This dialogue output should be included in the training contract; the results measured against it and the tools used will largely depend on this.

1.5.6.4 Even if training is provided externally, it is still in the best interest of the employer to evaluate the program effectiveness but focusing mainly on points (b) and (c).

Examples: Training provider is contracted to train and assess the knowledge factor of acceptance checks. But the skills and attitude part training and assessment are the responsibility of the employer, then the training programme knowledge evaluation should sit with the training provider, and the employer should cover all the four competence factors.

1.5.6.5 Examples of possible tools for training program assessment:

Training program evaluation can sound like a daunting enterprise. However, several different tools with different levels of sophistication can be used, depending on the type of organization (employer, training provider, etc.) and size. Below are a few evaluation tools and use examples of how they can be used in this context:

1.5.6.5.1 Survey/Evaluation forms–these are the easiest tools to use and therefore can be used by any type of organization. Post-training surveys should be directed to both trainers and trainee's alike. For trainees, questions like: "Was the training relevant to your job?", or "Was the training level of difficulty adequate?", "Was the material interesting and engaging?", "Was the trainer knowledgeable and helpful?" can be used to determine the perceived level of relevancy and adequacy of the training program.

For trainers, questions like: "Were the training objectives clear?", "Were you aware of the training contract?", "Was the material helpful and adequate for the training goals?", "Was there sufficient variety of methods used to make the training engaging?", "Did trainees follow easily and without struggling?".

The issue with many of these evaluation forms is that many people don't take the time to answer it or tend to provide overly positive answers. Training programme evaluations should have this in consideration and:

1. ensure that surveys are anonymous; and
2 the necessary attention is provided to lower results, even when these are provided by small numbers of respondents.

Even if the surveys should be anonymous by default, a question can be included to ask if the person is willing to provide contact details for further information.

Another variation that trainees might prefer is the "before and after quiz". Trainees might be more willing to participate in a quiz at the beginning of the training module/session and then repeat it at the end. Although this quiz can be used to measure individual progress, it can focus on the actual effectiveness of the training, particularly when applied to Attitude: Did changes occur due to training?

Example 1: if trainees respond that the content is not relevant for the trainee's job, then this should trigger a review of the training needs assessment versus training content. Extra content might be justified from a cost/benefits point of view, but training program designer and evaluator must be aware of the impact.

Example 2: if trainees respond before training they would not know how to react to a dangerous goods label, and if after training they respond: "I would call my dangerous goods colleague", then we can conclude that not only those individuals reached the training goals, but also the training program is being effective.

1.5.6.5.2 Interviews–these can be complementary to the above surveys/forms and provide a deeper insight. For example, when a specific area is showing lower results, a number of calls/specific emails can be set in order to request more information to both trainees and trainers alike. Interviews are a good way to receive feedback from trainers, since they

have a better overview on what is working well and/or the needs improvement in the training program because they usually receive direct feedback from the trainees and have a better overview on the wider audience. Training providers should also consider arranging interviews with the Employers, specifically the direct managers of the people who underwent training.

Example 1: if some trainees respond that the level of difficulty is too high, then some participants can be chosen to be called and asked them: which parts did they struggle with? How to better support them?, and how they expect this support to impact on their job?

Example 2: if a trainer reports difficulty during the training, then it is useful to understand if the materials are not sufficient, if there should be more time, more repetition or a different method may work better.

1.5.6.5.3 Training assessment results and analysis–As mentioned before, if a less than good result is obtained by one individual, this is probably due to that individual's particular situation. However, training assessment results should be analysed for trends on what particularly works well and what can be an indicator that the training objectives, materials or methods are not meeting the actual objectives. Training assessment results should therefore be bundled and analysed, preferably on the same modular way that the training is designed.

Example 1: if a standard knowledge classical test shows that a relevant percentage of trainees fail to answer a particular question, this must trigger a review of the training design on that specific area.

Example 2: If on the job observations shows that employees struggle with a task or an activity, or recurrent questions are asked of colleagues on how to deal with a specific situation, it should be captured in the observation checklists and analysed if this is necessary to be covered by the training programme or to be tackled differently.

1.5.6.5.4 Incident trends–unlike the previous three tools, this tool is only available for employers (not for training providers). However, this a useful source of information for the training programme improvement. Implementing a safety management system implies that an organization is able to determine the root cause of incidents and correct both process, procedures and training thereof. Incident analysis determines if the failures were due to process issues, procedures gaps, willingly ignorance of processes and procedures, lack of competence (knowledge, skills, and information), etc. If the conclusion is lack of competence, then this information must be actioned to the training designer and training programme evaluator, so that the necessary adjustments can be conducted.

1.5.6.5.5 On the job observations–although on the job observations have been mentioned mainly from a perspective of trainee assessment, they can also be used to evaluate the training programme. This is desirable after implementation of a new training program and at repeated intervals. Does the training program design match the goals, i.e. is the TNA still holding true? These observations should not focus on the individual, but on the programme design and TNA. Preferably by observing teams working. On the job observations also provide an opportunity for interviews (both open questions and directive): aiming to hear the team's point of view in terms of training requirements and assessment.

1.5.6.6 The training programme assessment should not be limited to one of the competency factors, instead it should cover all four levels: Knowledge; Skills; Attitude; Experience.

1.5.6.6.1 Knowledge

- Specific learning objectives: what is the percentage of passing/failure rate in post training evaluations? Analysis of the knowledge gap, i.e. the expected knowledge to be obtained for a particular level of proficiency and the knowledge demonstrated by the individual performing the job, is this difference an individual gap or a training program gap (e.g. evaluation contains several questions on lithium battery shipment preparation, but a significant percentage of students is unable to correctly answer these can demonstrate that training is not focusing enough or effectively on that topic). Possible tool: Training Assessments Results Analysis

- How participants react to the training. Do they find the training engaging and relevant to their job function? It is important to measure reactions as it helps to understand how well the training is received by the participants. Possible tools: Surveys and Interviews

- Is the knowledge that is expected matching the job function description? (e.g. was there a comparison made between the function analysis and the knowledge components in the training program?) Possible tools: Training Assessments Results Analysis, Incident Analysis and "On the Job" observations.

- Is the training program built in such a way that allows further progression in the level of knowledge? Is there a differentiation between the mastery levels? (e.g. the same training program can have different level of exercises and allow for students to choose themselves, within an adequate range for their function). Possible tools: Surveys and Interviews

1.5.6.6.2 Skills. Evaluation of the training programme will allow verification of:

- Does the training programme allow for increased autonomous application of the knowledge?

- Are trainees able to transfer the knowledge to real life situations?

- How much has their skill increased?

Possible tools: before and after quizzes, interviews, training assessments results analysis if these are conducted on a practical manner rather than on a classical test method.

1.5.6.6.3 Attitude

- Does the training (either classic, blended, or on the job) focus on expected attitudes, in particular on how to react/what to do in exceptional situations (e.g. damaged shipments; unsure on how to respond to a particular difficult situation or shipment; to whom to reach out to in case of help needed)

Possible tools: Incidents analysis, interviews to employers/direct managers; "on the job" observations.

1.5.6.6.4 Experience

- Performance evaluations of employees should focus on the aspect of competency to perform the job and provide feedback to the training developers.

- Is the training programme supporting the further development of the employees, if necessary or desirable?

Possible tools: Interviews to employers/direct managers and trainers.

DRAFT Chapter 2

DANGEROUS GOODS TASK LIST

This chapter contains a generic list of tasks typically performed by dangerous goods personnel (Table 3-1) as described in Chapter 1, paragraph 1.5. The employer should adapt this task list to reflect the specific tasks performed by its personnel.

Table 2-1 - DANGEROUS GOODS TASK LIST

Function: *[Here the job/function muss be described in terms of what are the responsibilities, see descriptions in Chapter 5]*	Knowledge Base	Classifying dangerous goods	Preparing dangerous goods shipment	Processing/ accepting cargo	Managing cargo pre-loading	Accepting passenger and crew baggage	Transporting cargo/baggage	Collecting safety data
0 Understanding the basics of dangerous goods								
0.1 Recognizing dangerous goods								
0.1.1 Understand the definition								
0.1.2 Recognize the legal framework (global, local, training legal requirements)								
0.1.3 Identify the application scope								
0.2 Identifying the general limitations								
0.2.1 Develop a sense of potential hidden dangerous goods								
0.2.2 Recognize the difference between hidden vs undeclared dangerous goods								
0.2.3 Familiarized with passenger provisions vs cargo provisions in various situation (examples)								
0.3 Positioning different roles and responsibilities								
0.3.1 Clarify the individual and collective role of the supply chain stakeholders								
0.3.2 Understand the passengers responsibilities								
0.3.3 Recognized the role and impact of State & operators variations								
0.4 Understanding the criticality of classification & packaging								
0.4.1 Differentiate between hazard vs risk								
0.4.2 Identify the general information about classes, divisions								
0.4.3 Understand general principles of Packing Groups								
0.4.4 Consider multiple hazards								

0.5 Interpreting the hazard communication

0.5.1 Recognize the different marking basic requirements

0.5.2 Recognize the variety of labeling and their meaning

0.5.3 Identify the required documentation for DG shipments and their role in the process.

0.6 Familiarizing with basic Emergency Response

0.6.1 Create awareness about general emergency procedures

0.6.2 Recognize country specific emergency procedures including exemptions and approvals

0.6.3 Apply the employer emergency response requirements

1 Classifying dangerous goods

1.1 Evaluate substance or article against classification criteria

1.1.1 Determine if it is dangerous goods

1.1.2 Determine if it is forbidden under any circumstances

1.2 Determine dangerous goods description

1.2.1 Determine class or division

1.2.2 Determine packing group

1.2.3 Determine proper shipping name and UN number

1.2.4 Determine if it is forbidden unless approval or exemption is granted

1.3 Review special provisions

1.3.1 Assess if special provision(s) is applicable

1.3.2 Apply special provision(s)

2 Preparing dangerous goods shipment

2.1 Assess packing options including quantity limitations

2.1.1 Consider limitations (de minimis quantities, excepted quantities, limited quantities, passenger aircraft, cargo aircraft only, special provisions, dangerous goods in the mail)

2.1.2 Consider State and operator variations

2.1.3 Determine if all-packed-in-one can be used

2.1.4 Select how dangerous goods will be shipped based on limitations and variations

2.2 Apply packing requirements

2.2.1 Consider constraints of packing instructions

2.2.2 Select appropriate packaging materials (absorbent, cushioning, etc.)

2.2.3 Assemble package

2.2.4 Comply with the packaging test report when UN specification packaging is required

2.3 Apply marks and labels

2.3.1 Determine applicable marks

2.3.2 Apply marks

2.3.3 Determine applicable labels

2.3.4 Apply labels

2.4 Assess use of overpack

2.4.1 Determine if overpack can be used

2.4.2 Apply marks if necessary

2.4.3 Apply labels if necessary

2.5 Prepare documentation

2.5.1 Complete the dangerous goods transport document

2.5.2 Complete other transport documents (e.g. air waybill)

2.5.3 Include other required documentation (approvals/exemptions, etc.)

2.5.4 Retain copies of documents as required

3 Processing/accepting cargo

3.1 Review documentation

3.1.1 Verify dangerous goods transport document

3.1.2 Verify other transport documents (e.g. air waybill)

3.1.3 Verify other documents (exemptions, approvals, etc.)

3.1.4 Verify State/operator variations

3.2 Review package(s)

3.2.1 Verify marks

3.2.2 Verify labels

3.2.3 Verify package type

3.2.4 Verify package conditions

3.2.5 Verify State/operator variations

3.3 Complete acceptance procedures

3.3.1 Complete acceptance checklist

3.3.2 Provide shipment information for load planning

3.3.3 Retain documents as required

3.4 Process/accept cargo other than dangerous goods

3.4.1 Check documentation for indications of undeclared dangerous goods

3.4.2 Check packages for indications of undeclared dangerous goods

4 Managing cargo pre-loading

4.1 Plan loading

4.1.1 Determine stowage requirements

4.1.2 Determine segregation, separation, aircraft/compartment limitations

4.2 Prepare load for aircraft

4.2.1 Check packages for indications of undeclared dangerous goods

4.2.2 Check for damage and/or leakage

4.2.3 Apply stowage requirements (e.g. segregation, separation, orientation)

4.2.4 Apply ULD tags when applicable

4.2.5 Transport cargo to aircraft

4.3 Issue NOTOC

4.3.1 Enter required information

4.3.2 Verify conformance with load plan

4.3.3 Transmit to loading personnel

5 Accepting passenger and crew baggage

5.1 Process baggage

5.1.1 Identify forbidden dangerous goods

5.1.2 Apply approval requirements

5.2 Accept baggage

5.2.1 Apply operator requirements

5.2.2 Verify passenger baggage requirements

5.2.3 Advise pilot-in-command

6 Transporting cargo/baggage

6.1 Load aircraft

6.1.1 Transport cargo/baggage to aircraft

6.1.2 Check packages for indications of undeclared dangerous goods

6.1.3 Check for damage and/or leakage

6.1.4 Apply stowage requirements (e.g. segregation, separation, orientation, securing and protecting from damage)

6.1.5 Verify that NOTOC reflects against aircraft load

6.1.6 Verify passenger baggage requirements

6.1.7 Inform pilot-in-command and flight operations officer/flight dispatcher

6.2 Manage dangerous goods pre and during flight

6.2.1 Detect presence of dangerous goods not permitted in baggage

6.2.2 Interpret NOTOC

6.2.3 Apply procedures in the event of an emergency

6.2.4 Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency

6.2.5 Inform emergency services of the dangerous goods on board in the event of an emergency

6.3 Unload aircraft

6.3.1 Apply specific unloading considerations

6.3.2 Check packages for indications of undeclared dangerous goods

6.3.3 Check for damage and/or leakage

6.3.4 Transport cargo/baggage to facility/terminal

7 Collecting safety data

7.1 Report dangerous goods accidents

7.2 Report dangerous goods incidents

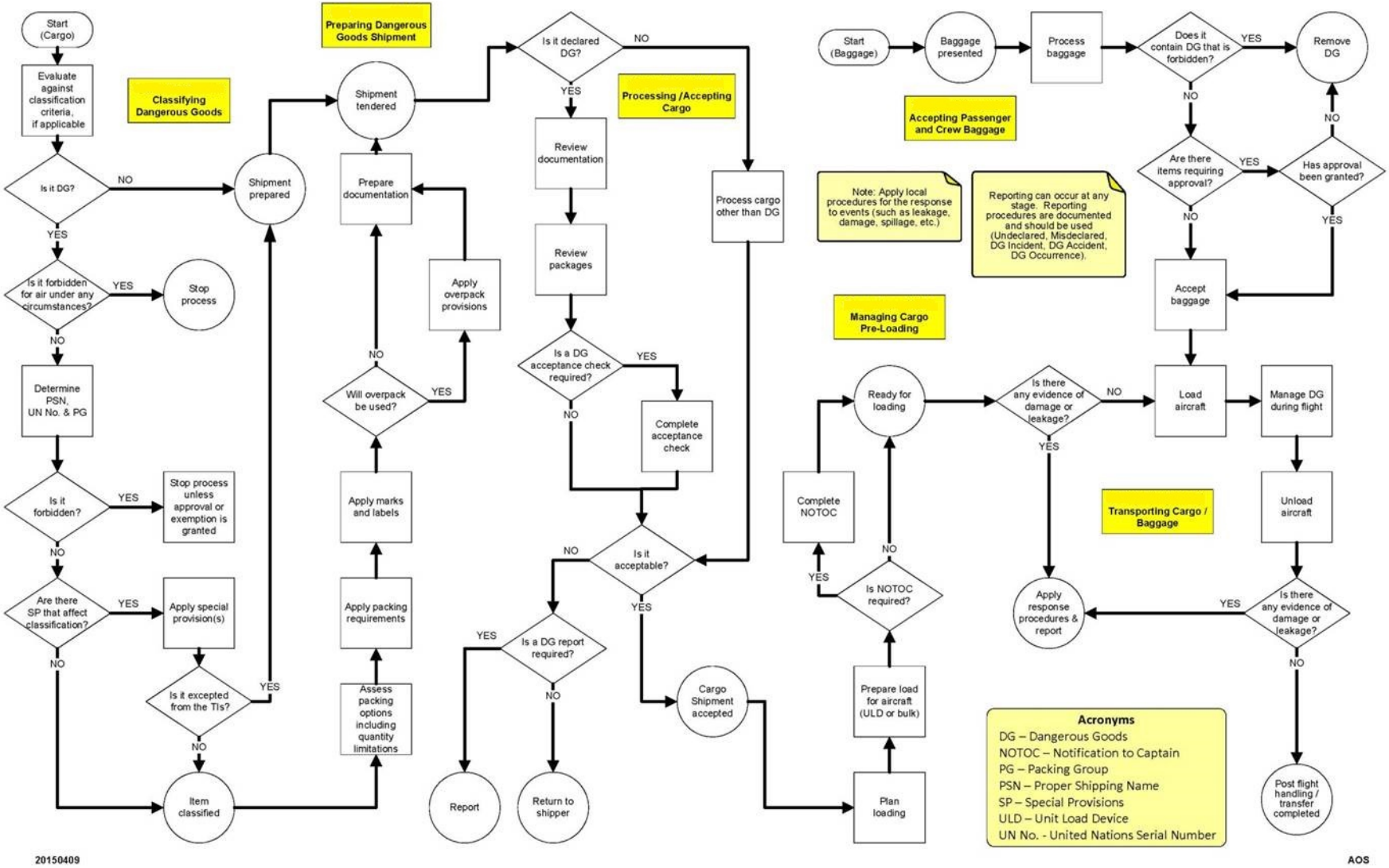
7.3 Report undeclared / mis-declared dangerous goods

7.4 Report dangerous goods occurrences

_____

DRAFT Chapter 3

DANGEROUS GOODS FUNCTIONS — PROCESS FLOWCHART


Start (Cargo)
Evaluate against classification criteria, if applicable
Classifying Dangerous Goods
Is it DG?
NO
YES
Shipment prepared
Is it forbidden for air under any circumstances?
YES
Stop process
NO
Determine PSN, UN No. & PG
Is it forbidden?
YES
Stop process unless approval or exemption is granted
NO
Are there SP that affect classification?
YES
Apply special provision(s)
NO
Is it excepted from the TIs?
YES
NO
Item classified
Preparing Dangerous Goods Shipment
Shipment tendered
Prepare documentation
Apply overpack provisions
Will overpack be used?
NO
YES
Apply marks and labels
Apply packing requirements
Assess packing options including quantity limitations
Is it declared DG?
NO
YES
Processing /Accepting Cargo
Review documentation
Review packages
Process cargo other than DG
Is a DG acceptance check required?
YES
NO
Complete acceptance check
Is it acceptable?
NO
YES
Is a DG report required?
YES
NO
Report
Return to shipper
Cargo Shipment accepted
Plan loading
Prepare load for aircraft (ULD or bulk)
Is NOTOC required?
NO
YES
Complete NOTOC
Ready for loading
Managing Cargo Pre-Loading
Start (Baggage)
Baggage presented
Process baggage
Accepting Passenger and Crew Baggage
Does it contain DG that is forbidden?
YES
Remove DG
NO
Are there items requiring approval?
YES
Has approval been granted?
NO
YES
NO
Accept baggage
Note: Apply local procedures for the response to events (such as leakage, damage, spillage, etc.)
Reporting can occur at any stage. Reporting procedures are documented and should be used (Undeclared, Misdeclared, DG Incident, DG Accident, DG Occurrence).
Is there any evidence of damage or leakage?
NO
YES
Load aircraft
Manage DG during flight
Transporting Cargo / Baggage
Unload aircraft
Apply response procedures & report
Is there any evidence of damage or leakage?
YES
NO
Post flight handling / transfer completed
Acronyms
DG – Dangerous Goods
NOTOC – Notification to Captain
PG – Packing Group
PSN – Proper Shipping Name
SP – Special Provisions
ULD – Unit Load Device
UN No. - United Nations Serial Number
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DRAFT Chapter 4

TASK/KNOWLEDGE MATRIX TOOL

This chapter contains a generic task/knowledge matrix table that can be used as a tool to map out the knowledge that is necessary to perform specific tasks. Tasks corresponding to the task list provided in Table 3-1 are listed across the columns of the table and knowledge elements are listed down the rows. The employer should indicate what knowledge is needed for a particular task within the organization with a check mark at the point at which the task element and the knowledge element intersect. To facilitate this process, some cells in the table have been shaded. These shaded cells identify knowledge elements that would normally be irrelevant to the corresponding task and for which a checkmark would not normally be necessary.

Template for determining the knowledge that should be maintained by personnel performing specific tasks

Note.— The numbers under "Dangerous goods tasks" refer to tasks and activities from Table 3-1. The titles of the tasks are replicated in a legend below the following table.

	Dangerous goods tasks																							
	1. Classifying dangerous goods			2. Preparing dangerous goods shipment					3. Processing/ accepting cargo				4. Managing cargo pre-loading			5. Accept-ing passenger and crew baggage		6. Transporting cargo/baggage			7. Collecting safety data			
Dangerous goods knowledge	1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	6.1	6.2	6.3	7.1	7.2	7.3	7.4
Scope and applicability																								
Limitation of dangerous goods on aircraft																								
Definitions																								
Training																								
Dangerous goods security																								
General provisions concerning radioactive material																								
Reporting of dangerous goods accidents, incidents and other occurrences																								
Classification — General																								
Classification — Class 1																								
Classification — Class 2																								
Classification — Class 3																								
Classification — Class 4																								
Classification — Class 5																								
Classification — Class 6																								
Classification — Class 7																								
Classification — Class 8																								
Classification — Class 9																								
Dangerous goods list — General																								
Dangerous goods list — Arrangement																								

	Dangerous goods tasks																							
	1. Classifying dangerous goods			2. Preparing dangerous goods shipment					3. Processing/ accepting cargo				4. Managing cargo pre-loading			5. Accept-ing passenger and crew baggage		6. Transporting cargo/baggage			7. Collecting safety data			
Dangerous goods knowledge	1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	6.1	6.2	6.3	7.1	7.2	7.3	7.4
Special provisions							■						■	■	■			■	■	■				
Dangerous goods in limited quantities	■	■										■	■	■	■	■	■	■	■	■				
Dangerous goods packed in excepted quantities	■	■								■	■	■	■	■	■	■	■	■	■	■				
Packing Instructions — General	■											■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 1												■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 2	■	■										■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 3	■		■									■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 4	■		■									■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 5	■											■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 6	■											■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 7												■	■	■	■	■	■	■	■	■				
Packing Instructions — Class 8	■											■	■	■	■			■	■	■				
Packing Instructions — Class 9	■											■	■	■	■	■	■	■	■	■				
Preparing dangerous goods shipment — general												■	■	■	■	■	■	■	■	■				
Package markings	■	■																						
Labelling	■	■		■																				
Documentation	■	■	■	■	■	■	■						■	■		■	■	■	■	■				
Packaging applicability, nomenclature and codes	■	■	■			■	■					■	■	■	■	■	■	■	■	■				
Marking of packagings other than inner packagings	■	■		■	■							■	■		■	■	■		■					
Requirements for packagings	■	■										■	■	■	■	■	■	■	■	■				
Packaging performance tests	■	■				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
Requirements for the construction and testing of cylinders and closed cryogenic receptacles, aerosol dispensers and small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas	■					■	■					■	■	■	■	■	■	■	■	■				
Packagings for infectious substances of Category A	■	■	■			■	■					■	■	■	■	■	■	■	■	■				
Requirements for the construction, testing and approval of packages for radioactive material and for the approval of such material							■					■	■	■	■	■	■	■	■	■				
Acceptance procedures	■	■	■	■	■	■	■	■				■	■		■	■	■	■		■				
Storage and loading	■	■	■	■	■	■	■	■	■			■					■							

	Dangerous goods tasks																							
	1. Classifying dangerous goods			2. Preparing dangerous goods shipment					3. Processing/ accepting cargo				4. Managing cargo pre-loading			5. Accept-ing passenger and crew baggage		6. Transporting cargo/baggage			7. Collecting safety data			
Dangerous goods knowledge	1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	4.1	4.2	4.3	5.1	5.2	6.1	6.2	6.3	7.1	7.2	7.3	7.4
Inspection and decontamination	■	■	■	■	■	■	■	■	■			■	■				■							
Provision of information	■	■	■	■	■	■	■	■	■	■	■	■		■		■	■			■				
Provisions concerning passengers and crew																								
Provisions to aid recognition of undeclared dangerous goods	■																							
Helicopter operations	■	■	■	■	■	■	■	■	■	■	■	■				■	■							
~~Provisions for dangerous goods carried by passengers or crew~~																								

Tasks

1. Classifying dangerous goods
   - 1.1 — Evaluate substance or article against classification criteria
   - 1.2 — Determine dangerous goods description
   - 1.3 — Review special provisions

2. Preparing dangerous goods shipment
   - 2.1 — Assess packing options including quantity limitations
   - 2.2 — Apply packing requirements
   - 2.3 — Apply marks and labels
   - 2.4 — Assess use of overpack
   - 2.5 — Prepare documentation

3. Processing/accepting cargo
   - 3.1 — Review documentation
   - 3.2 — Review package(s)
   - 3.3 — Complete acceptance procedures
   - 3.4 — Process/accept cargo other than dangerous goods

4. Managing cargo pre-loading
   - 4.1 — Plan loading
   - 4.2 — Prepare load for aircraft
   - 4.3 — Issue NOTOC

5. Accepting passenger and crew baggage
   - 5.1 — Process baggage
   - 5.2 — Accept baggage

6. Transporting cargo/baggage
   - 6.1 — Load aircraft
   - 6.2 — Manage dangerous goods pre and during flight
   - 6.3 — Unload aircraft

7. Collecting safety data
   - 7.1 — Report dangerous goods accidents
   - 7.2 — Report dangerous goods incidents
   - 7.3 — Report undeclared/misdeclared dangerous goods
   - 7.4 — Report dangerous goods occurrences

DRAFT Chapter 5

ADAPTED TASK LISTS FOR CERTAIN WELL-DEFINED ROLES

5.1. INTRODUCTION

The examples below indicate the tasks from the task list provided in Chapter 3 that personnel responsible for certain well-defined functions would typically perform and for which training, and assessment would therefore be required. Personnel would need to have relevant knowledge to competently perform these tasks. The task/knowledge matrix tool provided in Chapter 5 may be used as a guide for determining what knowledge is needed for a given task. The examples in this chapter and the task/knowledge tool provided in Chapter 4 may be used for designing training programmes. However, they should not be considered as mandatory. Additional training and assessment may be required for personnel assigned additional responsibilities and less training and assessment may be required for personnel assigned less responsibilities to those presented in these lists. The employer is responsible for ensuring employees are competent to perform the functions for which they are responsible and must therefore ensure that training programmes are designed to accomplish this. Dangerous goods training programmes are subject to State approval in accordance with national regulations, policies and procedures.

5.2. PERSONNEL RESPONSIBLE FOR PREPARING DANGEROUS GOODS CONSIGNMENTS

Training and assessment for personnel preparing dangerous goods consignments for transport may be tailored to address only those classes, divisions or even UN numbers that they prepare for transport. Training and assessment may also be limited to address only the specific tasks personnel perform. For example, where personnel are only responsible for the packing, marking and labelling of packages and overpacks, training and assessment may be tailored to address just those tasks. Personnel would need to have relevant knowledge to competently perform these functions. The task/knowledge matrix tool provided in Chapter 5 may be used as a guide for determining what knowledge is needed. The following are tasks personnel responsible for preparation of dangerous goods consignments typically perform and for which training, and assessment would therefore be required:

Function: Personnel preparing dangerous goods consignments for transport (Personnel classifying dangerous goods for transport is provided simultaneously)				**Classifying dangerous goods**	**Preparing dangerous goods shipment**
0	Understanding the basics of dangerous goods			✸	✸
	0.1	Recognizing dangerous goods		✸	✸
		0.1.1	Understand the definition		
		0.1.2	Recognize the legal frame- work (global, local, training legal requirements)		
		0.1.3	Identify the application scope		
	0.2	Identifying the general limitations		✸	✸
		0.2.1	Develop a sense of potential hidden dangerous goods		
		0.2.2	Recognize the difference between hidden vs undeclared dangerous goods		
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)		
	0.3	Positioning different roles and responsibilities		✸	✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders		
		0.3.2	Understand the passengers responsibilities		

		0.3.3	Recognized the role and impact of State & operator variations		
Function: Personnel preparing dangerous goods consignments for transport (Personnel classifying dangerous goods for transport is provided simultaneously)				**Classifying dangerous goods**	**Preparing dangerous goods shipment**
	0.4		Understanding the criticality of classification & packaging	✸	✸
		0.4.1	Differentiate between hazard vs risk		
		0.4.2	Identify the general information about classes, divisions		
		0.4.3	Understand general principles of Packing Groups		
		0.4.4	Consider multiple hazards		
	0.5		Interpreting the hazard communication	✸	✸
		0.5.1	Recognize the different marking basic requirements		
		0.5.2	Recognize the variety of labeling and their meaning		
		0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.		
	0.6		Familiarizing with basic Emergency Response	✸	✸
		0.6.1	Create awareness about general emergency procedures		
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals		
		0.6.3	Apply the employer emergency response requirements		
1			Classifying dangerous goods	✸✸✸	✸✸
	1.1		Evaluate substance or article against classification criteria	✸✸✸	✸✸
		1.1.1	Determine if it is dangerous goods		
		1.1.2	Determine if it is forbidden under any circumstances		
	1.2		Determine dangerous goods description	✸✸✸	✸✸
		1.2.1	Determine class or division		
		1.2.2	Determine packing group		
		1.2.3	Determine proper shipping name and UN number		
		1.2.4	Determine if it is forbidden unless approval or exemption is granted		

Function: Personnel preparing dangerous goods consignments for transport (Personnel classifying dangerous goods for transport is provided simultaneously)				**Classifying dangerous goods**	**Preparing dangerous goods shipment**
	1.3	Review special provisions		✱✱✱	✱✱
		1.3.1	Assess if special provision(s) is applicable		
		1.3.2	Apply special provision(s)		
2	Preparing dangerous goods shipment				✱✱✱
	2.1	Assess packing options including quantity limitations			✱✱✱
		2.1.1	Consider limitations (de minimis quantities, excepted quantities, limited quantities, passenger aircraft, cargo aircraft only, special provisions, dangerous goods in the mail)		
		2.1.2	Consider State and operator variations		
		2.1.3	Determine if all-packed-in- one can be used		
		2.1.4	Select how dangerous goods will be shipped based on limitations and variations		
	2.2	Apply packing requirements			✱✱✱
		2.2.1	Consider constraints of packing instructions		
		2.2.2	Select appropriate packaging materials (absorbent, cushioning, etc.)		
		2.2.3	Assemble package		
		2.2.4	Comply with the packaging test report when UN specification packaging is required		
	2.3	Apply marks and labels			✱✱✱
		2.3.1	Determine applicable marks		
		2.3.2	Apply marks		
		2.3.3	Determine applicable labels		
		2.3.4	Apply labels		
	2.4	Assess use of overpack			✱✱✱
		2.4.1	Determine if overpack can be used		
		2.4.2	Apply marks if necessary		
		2.4.3	Apply labels if necessary		
	2.5	Prepare documentation			✱✱✱
		2.5.1	Complete the dangerous goods transport document		
		2.5.2	Complete other transport documents (e.g. air waybill)		

Function: Personnel preparing dangerous goods consignments for transport (Personnel classifying dangerous goods for transport is provided simultaneously)				**Classifying dangerous goods**	**Preparing dangerous goods shipment**
		2.5.3	Include other required documentation (approvals/exemptions, etc.)		
		2.5.4	Retain copies of documents as required		
7	Collecting safety data			✸	✸✸
	7.1		Report dangerous goods accidents	✸	✸✸
	7.2		Report dangerous goods incidents	✸	✸✸
	7.3		Report undeclared/mis-declared dangerous goods	N/A	N/A
	7.4		Report dangerous goods occurrences	✸	✸✸

5.3. PERSONS RESPONSIBLE FOR PROCESSING OR ACCEPTING GOODS PRESENTED AS GENERAL CARGO

Personnel responsible for processing goods presented as general cargo [should/must] be competent to perform tasks aimed at preventing undeclared dangerous goods from being loaded on an aircraft. They may work for freight forwarders, ground handling agents or operators. Personnel would need to have relevant knowledge to competently perform these tasks. The task/knowledge matrix tool provided in Chapter 5 may be used as a guide for determining what knowledge is needed. They may need additional knowledge and be capable of performing at a more advanced skill level depending on the actual responsibilities assigned. The following are tasks aimed at preventing undeclared dangerous goods from being loaded on aircraft such personnel would typically perform and for which training and assessment may be required.

Function: Personnel responsible for processing or accepting goods presented as general cargo				**Processing/ accepting cargo**
9	Understanding the basics of dangerous goods			
	0.1		Recognizing dangerous goods	
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2		Identifying the general limitations	
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference between hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3		Positioning different roles and responsibilities	
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	

Function: Personnel responsible for processing or accepting goods presented as general cargo				**Processing/ accepting cargo**
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4		Understanding the criticality of classification & packaging	
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of packing groups	
		0.4.4	Consider multiple hazards	
	0.5		Interpreting the hazard communication	✸
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labels and their meaning	
		0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.	
	0.6		Familiarizing with basic emergency response	✸
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
3	Processing/accepting cargo			✸✸✸
	3.4		Process/accept cargo other than dangerous goods	✸✸✸
		3.4.1	Check documentation for indications of undeclared dangerous goods	
		3.4.2	Check packages for indications of undeclared dangerous goods	
7	Collecting safety data			✸✸
	7.1		Report dangerous goods accidents	N/A
	7.2		Report dangerous goods incidents	✸✸
	7.3		Report undeclared/mis-declared dangerous goods	✸✸
	7.4		Report dangerous goods occurrences	N/A

5.4. PERSONNEL RESPONSIBLE FOR PROCESSING OR ACCEPTING DANGEROUS GOODS CONSIGNMENTS

The following are tasks personnel responsible for processing or accepting dangerous goods consignments typically perform and for which training and assessment would therefore be required:

Function: Personnel responsible for processing or accepting dangerous goods consignments				**Processing/ accepting cargo**
0	Understanding the basics of dangerous goods			
	0.1	Recognizing dangerous goods		✸
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		✸
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4	Understanding the criticality of classification & packaging		✸
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of Packing Groups	
		0.4.4	Consider multiple hazards	
	0.5	Interpreting the hazard communication		✸
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labeling and their meaning	
		0.5.3	Identify the required documentation for DG shipments and their role in the process.	

Function: Personnel responsible for processing or accepting goods presented as general cargo				**Processing/ accepting cargo**
	0.6		Familiarizing with basic Emergency Response	✸
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
3	Processing/accepting cargo			
	3.1		Review documentation	✸✸✸
		3.1.1	Verify dangerous goods transport document	
		3.1.2	Verify other transport documents (e.g. air waybill)	
		3.1.3	Verify other documents (exemptions, approvals, etc.)	
		3.1.4	Verify State/operator variations	
	3.2		Review package(s)	✸✸✸
		3.2.1	Verify marks	
		3.2.2	Verify labels	
		3.2.3	Verify package type	
		3.2.4	Verify package conditions	
		3.2.5	Verify State/operator variations	
	3.3		Complete acceptance procedures	✸✸✸
		3.3.1	Complete acceptance checklist	
		3.3.2	Provide shipment information for load planning	
		3.3.3	Retain documents as required	
	3.4		Process/accept cargo other than dangerous goods	N/A
		3.4.1	Check documentation for indications of undeclared dangerous goods	
		3.4.2	Check packages for indications of undeclared dangerous goods	
7	Collecting safety data			✸✸
	7.1		Report dangerous goods accidents	✸✸
	7.2		Report dangerous goods incidents	✸✸
	7.3		Report undeclared/mis-declared dangerous goods	✸✸
	7.4		Report dangerous goods occurrences	✸✸

5.5. PERSONS RESPONSIBLE FOR HANDLING CARGO IN A WAREHOUSE, LOADING AND UNLOADING UNIT LOAD DEVICES AND LOADING AND UNLOADING AIRCRAFT CARGO COMPARTMENTS

The following are tasks personnel responsible for handling cargo in a warehouse, loading and unloading unit load devices and loading and unloading passenger baggage and aircraft cargo compartments typically perform and for which training and assessment would therefore be required:

Function: Personnel responsible for handling cargo in a warehouse, loading and unloading ULD and loading and unloading aircraft cargo compartments.				**Managing cargo pre-loading**
0	Understanding the basics of dangerous goods			✸
	0.1	Recognizing dangerous goods		✸
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		✸
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4	Understanding the criticality of classification & packaging		✸
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of Packing Groups	
		0.4.4	Consider multiple hazards	
	0.5	Interpreting the hazard communication		✸
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labeling and their meaning	
		0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.	

Function: Personnel responsible for handling cargo in a warehouse, loading and unloading ULD and loading and unloading aircraft cargo compartments.				**Managing cargo pre-loading**
	0.6		Familiarizing with basic emergency response	✸
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
4	Managing cargo pre-loading			✸✸✸
	4.1	Plan loading		
		4.1.1	Determine stowage requirements	
		4.1.2	Determine segregation, separation, aircraft/compartment limitations	
	4.2	Prepare load for aircraft		✸✸✸
		4.2.1	Check packages for indications of undeclared dangerous goods	
		4.2.2	Check for damage and/or leakage	
		4.2.3	Apply stowage requirements (e.g. segregation, separation, orientation)	
		4.2.4	Apply ULD tags when applicable	
		4.2.5	Transport cargo to aircraft	
	4.3	Issue written information to pilot-in-command		✸✸✸
		4.3.1	Enter required information	
		4.3.2	Verify conformance with load plan	
		4.3.3	Transmit to loading personnel	
6	Transporting cargo/baggage			
	6.1	Load aircraft		✸✸✸
		6.1.1	Transport cargo/baggage to aircraft	
		6.1.2	Check packages for indications of undeclared dangerous goods	
		6.1.3	Check for damage and/or leak- age	
		6.1.4	Apply stowage requirements (e.g. segregation, separation, orientation, securing and protecting from damage)	
		6.1.5	Verify that NOTOC reflects against aircraft load	
		6.1.6	Verify passenger baggage requirements	
		6.1.7	Inform pilot-in-command and flight operations officer/flight dispatcher	

Function: Personnel responsible for handling cargo in a warehouse, loading and unloading ULD and loading and unloading aircraft cargo compartments.				**Managing cargo pre-loading**
	6.2	Manage dangerous goods pre and during flight		N/A
		6.2.1	Detect presence of dangerous goods not permitted in baggage	N/A
		6.2.2	Interpret NOTOC	N/A
		6.2.3	Apply procedures in the event of an emergency	N/A
		6.2.4	Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency	N/A
		6.2.5	Inform emergency services of the dangerous goods on board in the event of an emergency	N/A
	6.3	Unload aircraft		✸✸✸
		6.3.1	Apply specific unloading considerations	
		6.3.2	Check packages for indications of undeclared dangerous goods	
		6.3.3	Check for damage and/or leakage	
		6.3.4	Transport cargo/baggage to facility/terminal	
7	Collecting safety data			✸✸
	7.1	Report dangerous goods accidents		✸✸
	7.2	Report dangerous goods incidents		✸✸
	7.3	Report undeclared/mis-declared dangerous goods		✸✸
	7.4	Report dangerous goods occurrences		✸✸

5.6. PERSONS RESPONSIBLE FOR ACCEPTING PASSENGER AND CREW BAGGAGE, MANAGING AIRCRAFT BOARDING AREAS AND OTHER TASKS INVOLVING DIRECT PASSENGER CONTACT AT AN AIRPORT

The following are tasks personnel responsible for accepting passenger and crew baggage, managing aircraft boarding areas and other functions involving direct passenger contact at an airport typically perform and for which training and assessment would therefore be required.

Function: Personnel responsible for accepting passenger and crew baggage, managing aircraft boarding areas and other tasks involving direct passenger contact at an airport.				**Accepting passenger and crew baggage**
0	Understanding the basics of dangerous goods			✸
	0.1	Recognizing dangerous goods		✸
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	

Function: Personnel responsible for accepting passenger and crew baggage, managing aircraft boarding areas and other tasks involving direct passenger contact at an airport.				**Accepting passenger and crew baggage**
	0.2		Identifying the general limitations	✸
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3		Positioning different roles and responsibilities	✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4		Understanding the criticality of classification & packaging	✸
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of Packing Groups	
		0.4.4	Consider multiple hazards	
	0.5		Interpreting the hazard communication	✸
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labeling and their meaning	
		0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.	
	0.6		Familiarizing with basic emergency response	✸
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
5	Accepting passenger and crew baggage			✸✸✸
	5.1		Process baggage	✸✸✸
		5.1.1	Identify forbidden dangerous goods	
		5.1.2	Apply approval requirements	

Function: Personnel responsible for accepting passenger and crew baggage, managing aircraft boarding areas and other tasks involving direct passenger contact at an airport.				**Accepting passenger and crew baggage**
	5.2	Accept baggage		✸✸✸
		5.2.1	Apply operator requirements	
		5.2.2	Verify passenger baggage requirements	
		5.2.3	Advise pilot-in-command	
7	Collecting safety data			✸
	7.1	Report dangerous goods accidents		
		7.2	Report dangerous goods incidents	✸
		7.3	Report undeclared/mis-declared dangerous goods	✸
		7.4	Report dangerous goods occurrences	

5.7. PERSONNEL RESPONSIBLE FOR THE PLANNING OF AIRCRAFT LOADING

The following are tasks personnel responsible for planning of aircraft loading (passengers, baggage, mail and cargo) would typically perform and for which training and assessment would therefore be required:

Function: Personnel responsible for planning of aircraft loading				**Managing cargo pre-loading**
0	Understanding the basics of dangerous goods			✸
	0.1	Recognizing dangerous goods		✸
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		✸
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	

Function: Personnel responsible for planning of aircraft loading			**Managing cargo pre-loading**
0.4	Understanding the criticality of classification & packaging		✸
	0.4.1	Differentiate between hazard vs risk	
	0.4.2	Identify the general information about classes, divisions	
	0.4.3	Understand general principles of packing groups	
	0.4.4	Consider multiple hazards	
0.5	Interpreting the hazard communication		✸
	0.5.1	Recognize the different marking basic requirements	
	0.5.2	Recognize the variety of labels and their meaning	
	0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.	
0.6	Familiarizing with basic emergency response		✸
	0.6.1	Create awareness about general emergency procedures	
	0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
	0.6.3	Apply the employer emergency response requirements	
Managing cargo pre-loading			✸✸✸
4.1	Plan loading		✸✸✸
	4.1.1	Determine stowage requirements	
	4.1.2	Determine segregation, separation, aircraft/compartment limitations	
4.3	Issue written information to pilot-in-command		✸✸✸
	4.3.1	Enter required information	
	4.3.2	Verify conformance with load plan	
	4.3.3	Transmit to loading personnel	

5.8. FLIGHT CREW

The following are tasks the flight crew would typically perform and for which training and assessment would therefore be required:

Function: Flight Crew				**Transporting cargo / baggage**
0	Understanding the basics of dangerous goods			✸
	0.1	Recognizing dangerous goods		✸
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	

Function: Flight Crew				**Transporting cargo / baggage**
	0.2		Identifying the general limitations	✸
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3		Positioning different roles and responsibilities	✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4		Understanding the criticality of classification & packaging	✸
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of packing groups	
		0.4.4	Consider multiple hazards	
	0.5		Interpreting the hazard communication	✸
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labels and their meaning	
		0.5.3	Identify the required documentation for dangerous goods shipments and their role in the process.	
	0.6		Familiarizing with basic emergency response	✸
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
6	Transporting cargo/baggage			
	6.2		Manage dangerous goods pre and during flight	✸✸✸
		6.2.1	Detect presence of dangerous goods not permitted in baggage	
		6.2.2	Interpret NOTOC	
		6.2.3	Apply procedures in the event of an emergency	
		6.2.4	Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency	

Function: Flight Crew				**Transporting cargo / baggage**
		6.2.5	Inform emergency services of the dangerous goods on board in the event of an emergency	
7	Collecting safety data			✸✸
	7.1	Report dangerous goods accidents		✸✸
	7.2	Report dangerous goods incidents		✸✸
	7.3	Report undeclared/mis-declared dangerous goods		✸✸
	7.4	Report dangerous goods occurrences		✸✸

5.9. FLIGHT OPERATIONS OFFICERS AND FLIGHT DISPATCHERS

The following are tasks flight operations officers and flight dispatchers would typically perform and for which training and assessment would therefore be required:

Function: Personnel responsible for flight operations and flight dispatchers				**Transporting cargo / baggage**
0	Understanding the basics of dangerous goods			✸
	0.1	Recognizing dangerous goods		✸
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		✸
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4	Understanding the criticality of classification & packaging		✸
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of packing groups	
		0.4.4	Consider multiple hazards	

Function: Personnel responsible for flight operations and flight dispatchers				**Transporting cargo / baggage**
	0.5	Interpreting the hazard communication		*
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labels and their meaning	
		0.5.3	Identify the required documentation for DG shipments and their role in the process.	
	0.6	Familiarizing with basic emergency response		*
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
6	Transporting cargo/baggage			
	6.2	Manage dangerous goods pre and during flight		***
		6.2.1	Detect presence of dangerous goods not permitted in baggage	N/A
		6.2.2	Interpret NOTOC	
		6.2.3	Apply procedures in the event of an emergency	
		6.2.4	Inform flight operations officer/flight dispatcher/air traffic control in the event of an emergency	N/A
		6.2.5	Inform emergency services of the dangerous goods on board in the event of an emergency	

5.10. CABIN CREW

The following are tasks the cabin crew would typically perform and for which training and assessment would therefore be required:

Function: Cabin Crew				**Transporting cargo/ baggage**
0	Understanding the basics of dangerous goods			*
	0.1	Recognizing dangerous goods		*
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal framework (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		*
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference be- tween hidden vs undeclared dangerous goods	

Function: Cabin Crew				**Transporting cargo/ baggage**
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3		Positioning different roles and responsibilities	✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4		Understanding the criticality of classification & packaging	✸
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of packing groups	
		0.4.4	Consider multiple hazards	
	0.5		Interpreting the hazard communication	✸
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labels and their meaning	
		0.5.3	Identify the required documentation for DG shipments and their role in the process.	
	0.6		Familiarizing with basic emergency response	✸
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
5	Accepting passenger and crew baggage			✸✸✸
	5.2		Accept baggage	✸✸✸
		5.2.1	Apply operator requirements	
		5.2.2	Verify passenger baggage requirements	
6	Transporting cargo/baggage			✸✸✸
	6.2		Manage dangerous goods pre and during flight	✸✸✸
		6.2.1	Detect presence of dangerous goods not permitted in baggage	
		6.2.3	Apply procedures in the event of an emergency	
7	Collecting safety data			✸
	7.1		Report dangerous goods accidents	N/A
	7.2		Report dangerous goods incidents	✸
	7.3		Report undeclared/mis-declared dangerous goods	✸
	7.4		Report dangerous goods occurrences	N/A

5.11. PERSONNEL RESPONSIBLE FOR THE SCREENING PASSENGERS AND CREW AND THEIR BAGGAGE, CARGO AND MAIL

The following are tasks that personnel responsible for the screening passengers and crew and their baggage, cargo and mail would typically perform and for which training and assessment would therefore be required:

Function: Personnel responsible for security screening (Passenger and crew, baggage, cargo and mail)				**Processing / accepting cargo / Processing passenger and crew baggage**
0	Understanding the basics of dangerous goods			✸
	0.1	Recognizing dangerous goods		✸
		0.1.1	Understand the definition	
		0.1.2	Recognize the legal frame- work (global, local, training legal requirements)	
		0.1.3	Identify the application scope	
	0.2	Identifying the general limitations		
		0.2.1	Develop a sense of potential hidden dangerous goods	
		0.2.2	Recognize the difference between hidden vs undeclared dangerous goods	
		0.2.3	Familiarized with passenger provisions vs cargo provisions in various situation (examples)	
	0.3	Positioning different roles and responsibilities		✸
		0.3.1	Clarify the individual and collective role of the supply chain stakeholders	
		0.3.2	Understand the passengers responsibilities	
		0.3.3	Recognized the role and impact of State & operator variations	
	0.4	Understanding the criticality of classification & packaging		✸
		0.4.1	Differentiate between hazard vs risk	
		0.4.2	Identify the general information about classes, divisions	
		0.4.3	Understand general principles of packing groups	
		0.4.4	Consider multiple hazards	
	0.5	Interpreting the hazard communication		✸
		0.5.1	Recognize the different marking basic requirements	
		0.5.2	Recognize the variety of labeling and their meaning	
		0.5.3	Identify the required documentation for DG shipments and their role in the process.	

Function: Personnel responsible for security screening (Passenger and crew, baggage, cargo and mail)				**Processing / accepting cargo / Processing passenger and crew baggage**
	0.6		Familiarizing with basic emergency response	✸
		0.6.1	Create awareness about general emergency procedures	
		0.6.2	Recognize country specific emergency procedures including exemptions and approvals	
		0.6.3	Apply the employer emergency response requirements	
3	Processing/accepting cargo / mail			✸✸✸
	3.4		Process/accept cargo other than dangerous goods	
		3.4.1	Check documentation for indications of undeclared dangerous goods	
		3.4.2	Check packages for indications of undeclared dangerous goods	
5	Accepting passenger and crew baggage			✸✸✸
	5.1		Process baggage	
		5.1.1	Identify forbidden dangerous goods	
		5.1.2	Apply approval requirements	
7	Collecting safety data			✸✸
	7.1		Report dangerous goods accidents	
	7.2		Report dangerous goods incidents	✸✸
	7.3		Report undeclared/mis-declared dangerous goods	✸✸
	7.4		Report dangerous goods occurrences	

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