



DGP/27-IP/18
18/9/19

DANGEROUS GOODS PANEL (DGP)

TWENTY-SEVENTH MEETING

Montréal, 16 to 20 September 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

2.3: Develop proposals, if necessary, for amendments to the *Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284SU) for incorporation in the 2021-2022 Edition

FRENCH APPROACH OF CBT RELATED TO DANGEROUS GOODS

(Presented by P. Tatin)

French Approach of CBT related to DG



*DGP/27
Montreal – September 2019*



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Direction Générale de l'Aviation Civile

Ministère de la Transition Ecologique et Solidaire

What's new since April 2019

Guide and Matrix in English

CBTool in English

Feedback from 3 Operators

Next step



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French Approach of CBT related to DG

Guide translated in English

- Guide presented in April which was in French has been translated
- The matrix has also been translated and the same "A to Z" example is included

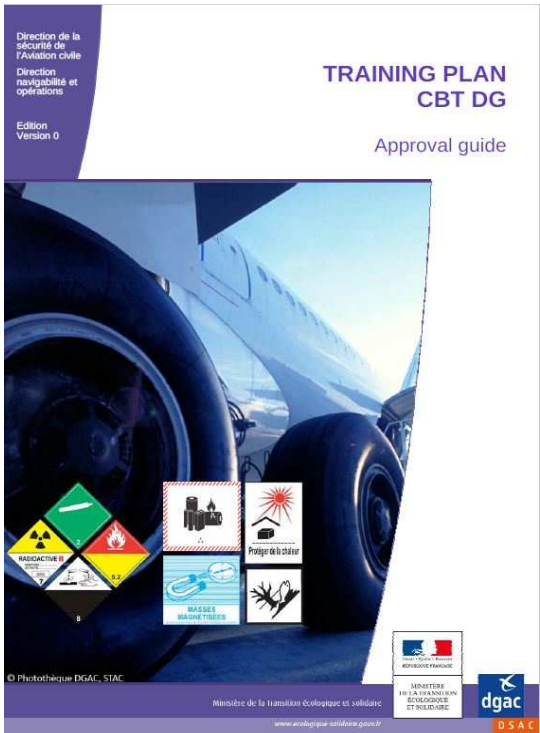
Tâche	Titre				Titre
	DFL1	DFL2	DFL3	DFL4	
Indicate	DFL1	DFL2	DFL3	DFL4	DFL4

Sérialisation de la tâche	Titre				
	1	2	3	4	5
1	1	1	1	1	1

Sérialisation de la tâche	Titre				
	1	2	3	4	5
1	1	1	1	1	1
2	2	2	2	2	2
3	1	2	1	1	1
4	1	1	1	1	1
5	1	1	1	1	1
6	1	2	2	2	2
7	2	1	2	2	2
8	2	1	2	2	2
9	1	2	1	2	2
10	2	1	2	2	2

Titre	Titre				
	1	2	3	4	5
111	1	1	1	1	1
112	2	2	2	2	2
113	1	1	1	1	1
114	2	2	2	2	2
115	1	1	1	1	1
116	2	2	2	2	2
117	1	1	1	1	1
118	2	2	2	2	2
119	1	1	1	1	1
120	2	2	2	2	2

Repertoire of procedures and regulations with modifications	Communication	Identification, assessment and risk management	Problem solving and decision making	Workload Management
Identifies where to find procedures and regulations	Asks relevant and effective questions	Identifies, assesses and manages risks and threats to safety effectively	Monitors, reviews and cross-checks actions conscientiously	Verifies that tasks are completed to the expected outcome



Adapted competency	Description	Performance criteria	
		Observable behaviour	Competency assessment
Application of procedures and compliance with regulations	...	Identifies where to find procedures and regulations	Subpart "regulations/procedures" Note ≥ 80%
		Complies with applicable regulations	
Communication	...	Asks relevant and effective questions	Workshop solving "simulation"
Problem solving and decision making	...	Identifies, assesses and manages risks and threats to safety effectively	
Workload Management	...	Verifies that tasks are completed to the expected outcome	

Adapted competency	Description	Performance criteria	
		Observable behaviour	Competency assessment
Application of procedures and compliance with regulations	...	Identifies where to find procedures and regulations	Subpart "regulations/procedures" Note ≥ 80%
		Complies with applicable regulations	
Communication	...	Asks relevant and effective questions	Questions in theoretical test
Problem solving and decision making	...	Identifies, assesses and manages risks and threats to safety effectively	
Workload Management	...	Monitors, reviews and cross-checks actions conscientiously	Subpart "NOTOC" Note ≥ 80%
		Verifies that tasks are completed to the expected outcome	



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Last April, demonstration of the beta version, but in French

Simulation matrice

Préparation d'expédition de marchandises dangereuses	Traitement ou acceptation de marchandises présentées comme cargo général
Traitement ou acceptation de marchandises dangereuses	Manutention de la cargaison (entrepot, unités de chargements, soutes cargo...)
Acceptation des bagages, gestion de la zone d'embarquement ou autres tâches impliquant un contact direct avec les passagers	Planification du chargement des aéronefs

PNT		
Connaissances	ST 6.2	ST 7.1
Portée et champ d'application	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Restrictions imposées au transport aérien de MDs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Définitions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Formation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sûreté des MDs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dispositions générales relatives aux matières radioactives	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Compte rendu d'accidents, d'incidents et événements concernant des MDs	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Classification : Généralités	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Classification : Classes**	<input type="checkbox"/>	<input type="checkbox"/>
Liste des MDs : Généralités	<input type="checkbox"/>	<input type="checkbox"/>
Liste des MDs : Agencement	<input type="checkbox"/>	<input type="checkbox"/>
Dispositions particulières	<input type="checkbox"/>	<input type="checkbox"/>
Marchandises dangereuses en quantités limitées	<input type="checkbox"/>	<input type="checkbox"/>
Marchandises dangereuses emballées en quantités exemptées	<input type="checkbox"/>	<input type="checkbox"/>



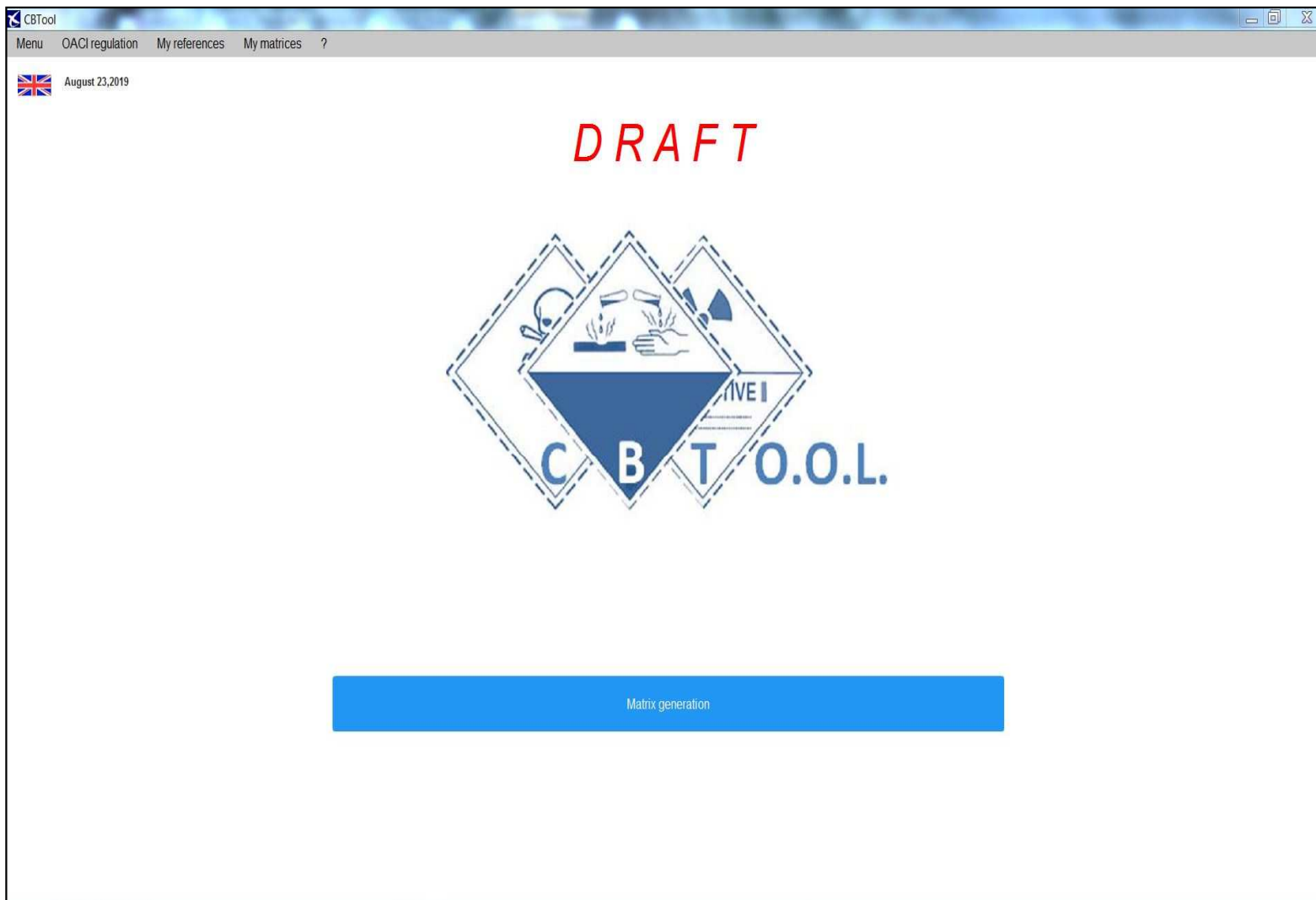
Filtrage

PNT				
Sous-tâches et activités				
Connaissances	ST 6.2	ST 7.1	ST 7.2	ST 7.3
Portée et champ d'application	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restrictions imposées au transport aérien de MDs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Définitions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Formation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sûreté des MDs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dispositions générales relatives aux matières radioactives	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compte rendu d'accidents, d'incidents et événements concernant des MDs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Classification : Généralités	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marquages	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Etiquetages	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Procédures d'acceptation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entreposage et chargement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspection et décontamination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Renseignements à fournir	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dispositions relatives aux passagers ou membres d'équipage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dispositions visant à aider à reconnaître les marchandises dangereuses non déclarées	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opérations effectuées par hélicoptère	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

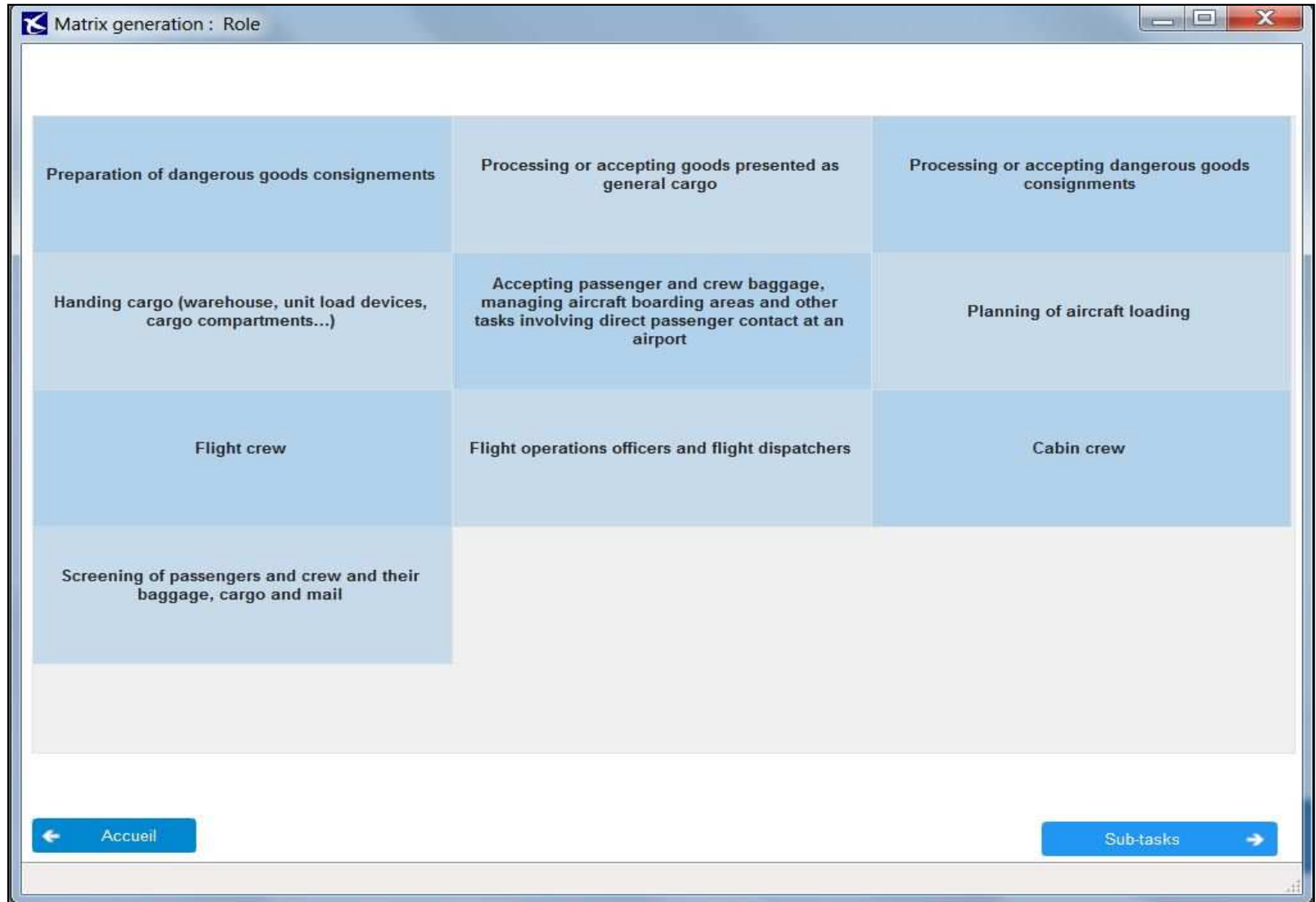
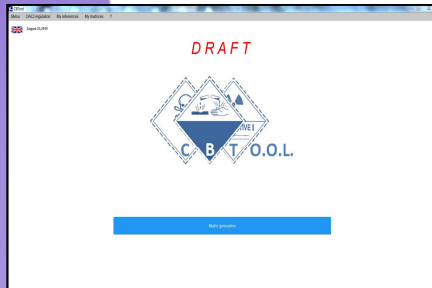
Comportements			
	6.2.1	6.2.2	7.3
*Application des procédures et respect des	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Application des procédures et respect des	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Application des procédures et respect des	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Application des procédures et respect des	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



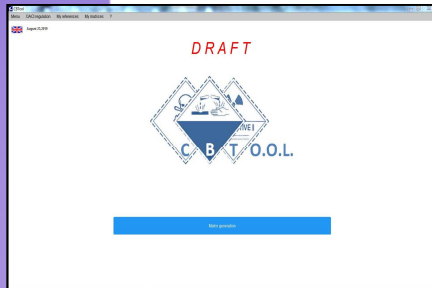
Today, demonstration of the beta version is possible in English



Today, demonstration of the beta version is possible in English



Today, demonstration of the beta version is possible in English



CBTool

Fight crew Knowledges

Knowledge	ST 6.2 Manage dangerous goods pre- and during flight	ST 7.1 Report dangerous goods accidents	ST 7.2 Report dangerous goods incidents	ST 7.3 Report dangerous goods declared/misdeclared
Scope and applicability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Limitation of dangerous goods on aircraft	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Definitions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Training	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DG security	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General provisions concerning radioactive material	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reporting of DG accidents, incidents and other occurrences	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Classification - General	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Classification - Classes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DG list - General	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DG list - Arrangement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Special provisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DG in limited quantities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DG in excepted quantities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packing Instructions - General	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packing Instructions - Classes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preparing DG shipment - General	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Markings	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Labelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packaging applicability, nomenclature and codes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marking of packagings other than inner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Requirements for packagings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packaging performance tests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packaging specifications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acceptance procedure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Storage and loading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspection and decontamination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Provision of information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provisions concerning passengers and crew	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provisions to aid recognition of undeclared DG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helicopter operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

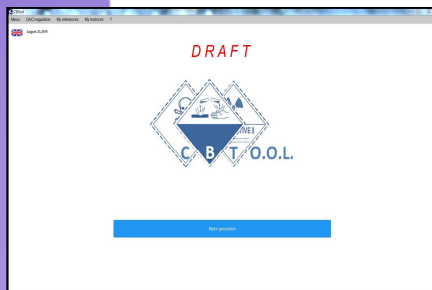
Niveaux de compétence

Basic	Functional	Mastery	Expert
1	2	3	4
Have a general knowledge or understanding of basic techniques and concepts.	Apply methods independently. The assistance of an executive or expert may be required from time to time.	Adapt his/her actions, solve problems without assistance.	Be able to provide advice and answer to questions (instruction equivalent).

Sub-tasks Verify ? Skills



Today, demonstration of the beta version is possible in English



The screenshot shows the 'CBTool : Result' window for 'Flight crew'. It features a progression chart with four stages: Basic (1), Functional (2), Mastery (3), and Expert (4). The 'Mastery' stage is highlighted in red. Below the chart is a list of sub-tasks and skills, including 'ST 6.2 Manage dangerous goods pre- and during flight' and 'ST 7.1 Report dangerous goods accidents'. The 'Knowledges' section lists items like 'Scope and applicability' and 'Classification - General'. The 'Attitudes' section includes 'Application of procedures and compliance with regulations' and 'Communication'.

Flight crew

Sub-tasks / Skills

- ST 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
- ST 7.1 Report dangerous goods accidents
 - 7.1 Transport cargo/baggage to facility/terminal
- ST 7.2 Report dangerous goods incidents
 - 7.2 Report dangerous goods incidents
- ST 7.3 Report undeclared/misdeclared dangerous goods

Knowledges

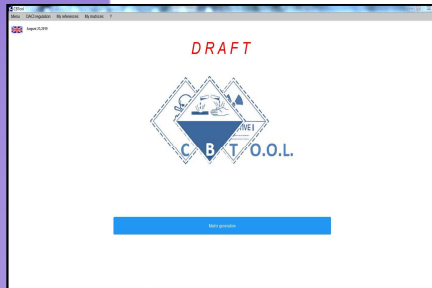
- Scope and applicability
- Limitation of dangerous goods on aircraft
- Definitions
- DG security
- General provisions concerning radioactive material
- Classification - General

Attitudes

- Application of procedures and compliance with regulations
 - Identifies where to find procedures and regulations
 - Follows relevant procedures in a timely manner
 - Complies with applicable regulations
 - Applies relevant procedural knowledge
- Communication
 - Ensures the recipient is ready and able to receive information
 - Confirms that the recipient correctly understands important information
 - Asks relevant and effective questions



Today, demonstration of the beta version is possible in English



Detect presence of dangerous goods not permitted in baggage				
Adapted competency	Description	Performance criteria		
		Observable behaviour	Competency assessment	
Application of procedures and compliance with regulations	...	Identifies where to find procedures and regulations	Subpart "regulations/procedures" Note ≥ 80%	Questions in theoretical test
		Complies with applicable regulations		
Communication	...	Asks relevant and effective questions	Ensure that questions related to the DG have been asked in case of a green tag procedure.	Workshop "simulation"
Problem solving and decision making	...	Identifies, assesses and manages risks and threats to safety effectively		
Workload Management	...	Verifies that tasks are completed to the expected outcome		

Interpret NOTOC				
Adapted competency	Description	Performance criteria		
		Observable behaviour	Competency assessment	
Application of procedures and compliance with regulations	...	Identifies where to find procedures and regulations	Subpart "regulations/procedures" Note ≥ 80%	Questions in theoretical test
		Complies with applicable regulations		
Communication	...	Asks relevant and effective questions	Subpart "NOTOC" Note ≥ 80%	Questions in theoretical test
Problem solving and decision making	...	Identifies, assesses and manages risks and threats to safety effectively		
Workload Management	...	Monitors, reviews and cross-checks actions conscientiously	Subpart "NOTOC" Note ≥ 80%	Questions in theoretical test
		Verifies that tasks are completed to the expected outcome		



Training contents and criteria

Knowledge test -----

Subpart "regulations / procedures"

Plan courses and questions about:

- o DG not declared in baggage,
- o NOTOC;
- o Emergency procedures
(including communication with the technical ground operations agent).

Criterion: Subpart note $\geq 80\%$

Subpart "NOTOC"

Plan exercise modification/correction of incorrect NOTOC

Criterion: Subpart note ≥ 80

Practical workshop -----

Plan a part with green tag procedure

Criterion: Ensures that DG questions have been answered

Flight simulator -----

Plan scenario of a fire in a cargo compartment with DG onboard.

Criteria:

NOTOC analysis + Use of emergency instructions Doc 9481

Applies emergency instructions Doc 9481

Transmits ATC:

- DG presence;
- proper shipping name;
- class/div;
- subsidiary risks;
- location.

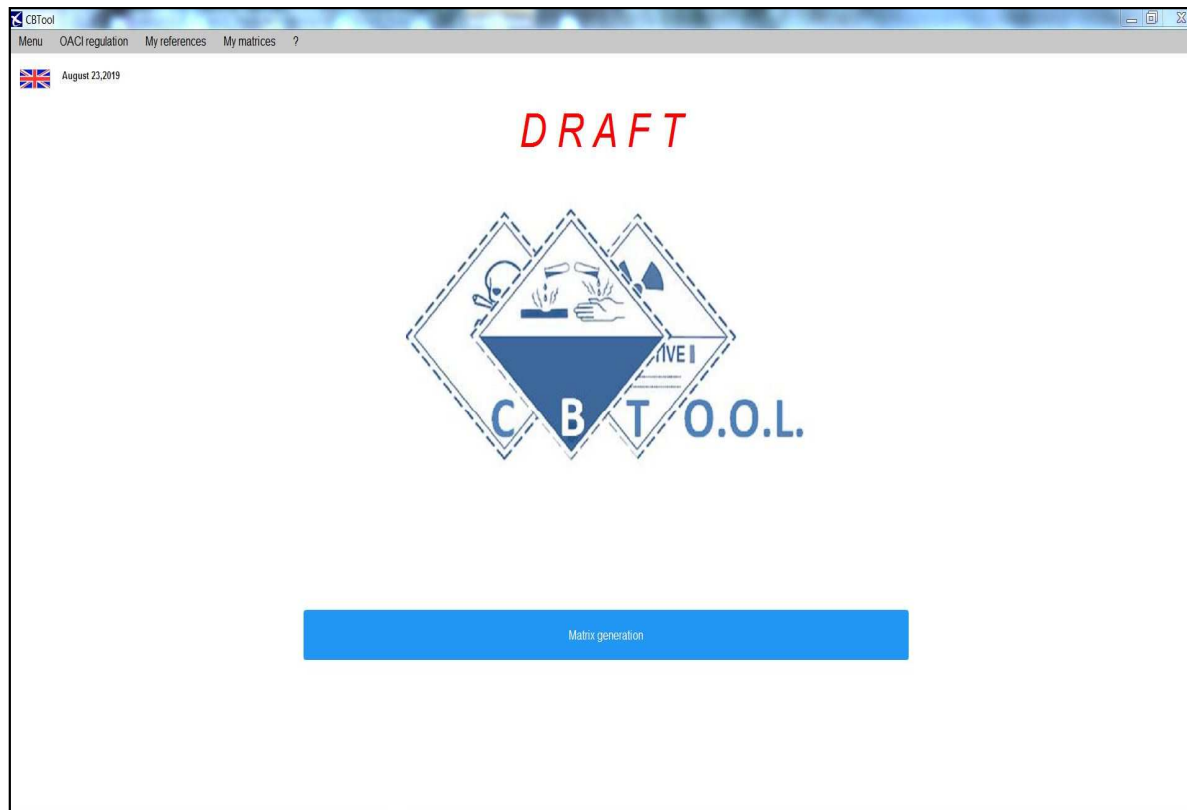
Demonstrates tranquility, organization and ability to remain in control of the situation

Calm, clear and concise communication

Listening carefully

Executes instructions

Quick demonstration ...



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Ministère de la Transition Ecologique et Solidaire

- **Guide and Excel Matrix has been sent to Operators and Training Organizations for feedbacks and comments**
- **We got some comments only on the guide, but none on the Matrix**
- **One operator has started to use the Matrix with a much more complex situation :**
 - **Multi-Function Flight Crew**

**We are also very
interesting in your
feedback**

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- **Finalization of the guide and CBTool for October**
- **Meeting with Operators and Training Organizations in November**
- **May be the first approvals for the beginning of 2020**

Thank you very much for your attention

