

Security
in Evidence Based Training
Data utilisation

20-21/05/2019

Security and Evidence Based Training Data utilisation

AMC2 ORO.FC.231(c) Evidence-based training :

DATA PROTECTION — FEEDBACK SYSTEM — GRADING SYSTEM:

- a. **The data access and security policy should restrict information access to authorized persons.**
- b. The procedure to prevent disclosure of crew identity should be written in a document, which should be signed by all parties involved (airline management and flight crew member representatives nominated either by the union or the flight crew themselves).

GM2 ORO.FC.231(c) Evidence-based training : DATA PROTECTION — FEEDBACK SYSTEM — GRADING SYSTEM

The procedure to prevent disclosure of crew identity may, as a minimum, define:

- (a) **a data access and security policy that may restrict access to information to specifically authorised persons** identified by their position. The required authorised person(s) does (do) not necessarily need to be the nominated person for crew training (or their deputy(ies)), but could be the EBT programme manager or a third party mutually acceptable to unions or staff and management. (Note: access to the last 12 months training data is required for the examiner that will revalidate the pilot licence);
- (b) the identified **data retention policy and accountability, including the measures taken to ensure the security of the data;**
- (c) the **method to obtain de-identified crew feedback** on those occasions that require specific follow-up;
- (d) the conditions under which advisory briefing or remedial training should take place. This should always be carried out in a constructive and non-punitive manner;
- (e) the conditions under which the confidentiality may be withdrawn for reasons of gross negligence or significant continuing safety concern;
- (f) the **policy for publishing the findings resulting from the EBT programme.**



Security Vs. Safety

We call **Safety** everything related to **fortuitous / accidental events** that can affect material and people (e.g. aircraft design, maintenance...).



Security concerns the prevention of **deliberate malicious acts** aiming at affecting aircraft or people (e.g. hacking, hijacking, sabotage...).



Security Vs. Safety

Dynamic Threats

CHALLENGES



TERRORISM / ACTIVISM



CYBER CRIMES



Cyber Threats

- Inevitable **consequence of essential connectivity**
- **Constantly evolving threats require constantly evolving defenses**
- Best countered with a system architecture that is designed with security as a foundational requirement



New EBT data Development

We had already data from the FDM.



We now add all these new data that were created with EBT and new training forms



EBT modules



Operational feedbacks

Characteristics	Competencies				Remarks	General view	
	NA	A	S	S+		Comments	
Leadership and Work Team Building			X		+	Good participation	Cruise X
Situation Awareness			X		+	Always optimum	X
Work Load Management			X		+		
Decision Making			X		+		
Communication			X		+		
Manual Aircraft Control			X		+		
Automation Aircraft Control			X		+		
Application of procedures			X		+	Good monitoring of track (PF and PM) calls out OK	X
Knowledge			X		+		

Grading system

The availability of data covering both flight operations and training activity has **established the need for the EBT effort** and supported the definition of the resulting training concept and curriculum.



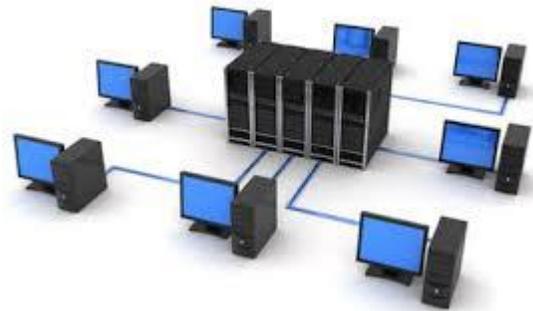
Main principle of data use

Data is the raw form of information stored as columns and rows in our databases, network servers and personal computers.

However, some of this information isn't intended to leave the system.

The unauthorized access of this data could lead to numerous problems.

There has been a **huge emphasis on data security** as of late, largely because of the internet



Computer users are certainly more conscious these days, **but is your data really secure?**



Main principle of data use

If you're not following the essential guidelines, your sensitive information just may be at risk.

It is very important to **wisely choose the appropriate platform** used to store your data.

Backup your data, and test your backups.

These are just a few of the database security problems that exist within organizations.

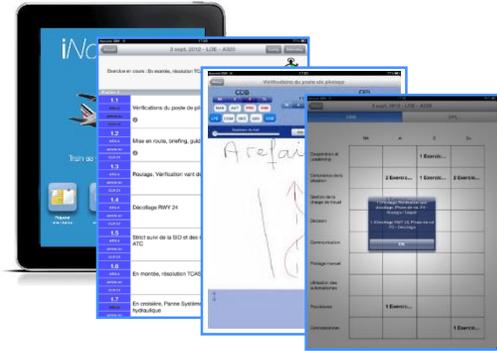
The best way to avoid a lot of these problems is to employ qualified personnel and separate the security responsibilities from the daily database maintenance responsibilities.

Some technical solutions :

- **Encryption** : This security mechanism uses mathematical schemes and algorithms to scramble Data into Strong User Authentication : Authentication is another part of data security.
- **Backup Solutions** : Data security wouldn't be complete without a solution to backup your critical information.



Main principle of data use



Anonymous reports to validate the program

writer



Who can have access

management



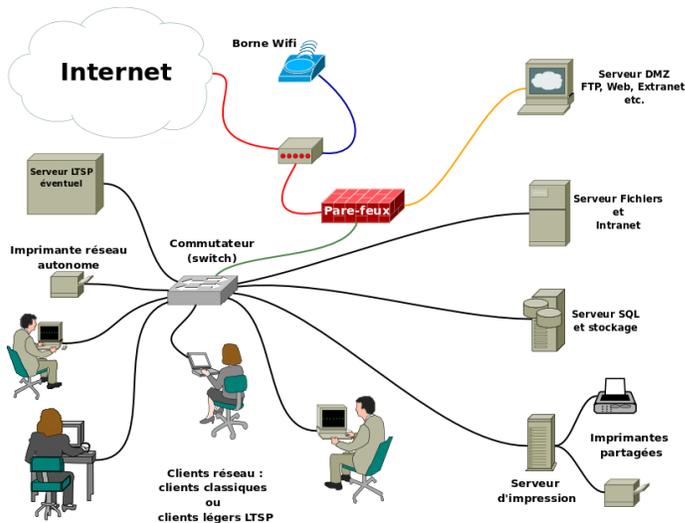
writer



trainee



management



Characteristics	Competencies			Remarks	General view	
	M	A	S		Conséquence	Crise
Leadership and Work Team Building		X		Good participation		X
Situation Awareness		X		Always optimum		X
Work Load Management		X				
Decision Making		X				
Communication		X				
Manual Aircraft Control		X				
Automation Aircraft Control		X				
Application of procedures		X		Good monitoring of track (PF and PM) calls out OK		X
Knowledge		X				

Nominated grading sheet

To keep separations between the people involved we have to create specific profiles



Main principle of data use – Our solutions

	R_FLIGHTOPS_A_V_ADJOINTS-SOL-FLOTTE-AIRBU	R_FLIGHTOPS_A_V_ADJOINTS-SOL-FLOTTE-AIRBU	R_FLIGHTOPS_A_V_ADJOINTS-SOL-FLOTTE-BOEIN	R_FLIGHTOPS_A_V_ASSIST-NIVEAU-PRO-DIV-787	R_FLIGHTOPS_A_V_CADRES-NIVEAU-PRO-FLOTTE	R_FLIGHTOPS_A_V_CADRES-NIVEAU-PRO-FLOTTE	R_FLIGHTOPS_A_V_CADRES-NIVEAU-PRO-FLOTTE	R_FLIGHTOPS_A_V_CADRES-SUPPORTS-METIER	R_FLIGHTOPS_A_V_REPRESENTANTS-PNT_CCO	R_FLIGHTOPS_E_S_TRANSAVIA_MANAGER-PNT	R_FLIGHTOPS_E_S_TRANSAVIA_PNT	R_FLIGHTOPS_E_S_TRANSAVIA_PNT-INSTR	R_FLIGHTOPS_E_S_TRANSAVIA_PROGRAMMES-FC	R_IT_A_V_CPT-TECH_GOOGLEBOX	F_PN_A_V_ADJ-SOL-NIVEAU-PRO-CENTRALISE	F_PN_A_V_ADJ_SOL-DIV	F_PN_A_V_AGENTS-ADMIN-DIV-PNT	F_PN_A_V_AGT-ADMINISTRATIF-FI	F_PN_A_V_AMO_EDOSSIER
P_EDOSSIER_ACCES-TDB_QT					✓	✓	✓												
P_EDOSSIER_ACCESS-HISTORIQUE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓
P_EDOSSIER_ADMIN															✓				✓
P_EDOSSIER_ADMIN_TECH																			
P_EDOSSIER_ADMIN_TRANSAVIA													✓						
P_EDOSSIER_ALERT-ECP-320						✓									✓				
P_EDOSSIER_ALERT-ECP-330-340					✓										✓				
P_EDOSSIER_ALERT-ECP-380					✓										✓				
P_EDOSSIER_ALERT-ECP-720																			

To protect our data, beyond the normal electronic passwords, **we have an entitlement system for our applications based on roles and profiles.**

The conjunction between these two categories makes it possible to give special rights to particular functions of an application.



Main principle of data use – Our solutions

P_EDOSSIER_ADMIN

Profile information

Description: Profil d'administrateur

Target system: HABILE

Criticality of right: READONLY

Identity (50)

Identity	Name	Identifier
<input checked="" type="checkbox"/>	VINCENT	m1460
<input checked="" type="checkbox"/>	YVES	m132
<input checked="" type="checkbox"/>	FREDERIQUE	m325
<input checked="" type="checkbox"/>	HOUDA	t245

Role (4)

- F_PN_A_V_ADJ-SOL-NIVEAU-PRO-CENTRALISE
- F_PN_A_V_AMO_EDOSSIER
- F_PN_A_V_NIVEAU-PRO_PNT
- F_SI_A_V_DEV_EDOSSIER

Application (1)

- EDOSSIER

This specific tool allows us to create :

- **Identities allowed to enter the system**
- **Roles : (redactor, reader, researcher)**
- **Applications allowed**

And so to separate the different population and to segregate them to avoid data to be accessible by everybody.





Evidence based training.

When launching an EBT programme Operators and NAA shall keep in mind that the main goal is:

To improve the overall safety through a more efficient training and checking programme for pilots.

Thank you !!

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One major component to reach this goal is a close and efficient collaboration between the operator and its NAA.