



The Resilience Hub

# EMPOWERING & OPERATIONALISING PILOT RESILIENCE



**eats2022**  
BERLIN

20<sup>th</sup> European Airline Training Symposium



**Resilient Pilot**<sup>®</sup>



## Organisational and Individual Resilience (SI-3009)

Organisational **resilience** is a key factor in successfully managing safe operation, but there is scant regulatory guidance on how to apply the concept. **Resilience** comprises both a system's ability to withstand disturbances, challenges and change, and to recover and sustain operations thereafter.



**The positive contribution to safety of each and every staff member is a key component in an organisation's resilience**



## **AMC1.ORO.FC.115 CRM TRAINING**

### **RESILIENCE DEVELOPMENT:**

- 1) Mental Flexibility**
- 2) Performance Adaption**

## **AMC1.ORO.FC. 231 EBT**

### **RESILIENCE DEVELOPMENT:**

- 1) Resilience and Unexpected Events**
- 2) Dilemma and Surprise**

**“A component of the self that enables success in the face of adversity”**

Bartelt (1990)

**“The ability to bounce back from adversity, frustration, and misfortune”**

Ledesma, 2014, p.1

**“the developable capacity to rebound or bounce back from adversity, conflict, and failure or even positive events, progress, and increased responsibility”**

Luthans, 2002a, p. 702

## What does this mean for pilots (and pilot training)?

### The Challenge

- A tough environment
  - *both resources and needs*
- *Some of the greatest challenges are beyond the scope of current training programmes*
- Definition, operationalisation and measurement

### The Opportunity

- Pilot wellbeing is on the agenda
- A highly structured, regulated and well trained community and professional standards
- Changing training philosophies and regulations

“EASA has defined resilience as the ability of flight crew to recognise, absorb and adapt to disruptions

EASA

“Flight crew resilience can be substantiated by raising the level of **competence** and by achieving the appropriate level of **confidence** (trust)”

PTTF and Airbus

“Pilot threat and error is best managed through the Standard Professional **Pilot Competencies** and the deployment of **Personal Strategies – Personal Countermeasures** (i.e. Human Factors) ”

(TEM Philosophy ICAO PANS TRNG DOC 9868)

Through this, we believe that pilots become more competent and confident (i.e. resilient) in the challenges they face in their **Personal** and **Professional** lives.

# Resilience

The ability to develop **confidence** and **competence** by applying countermeasures that mobilise the relevant knowledge, skills and attitudes



## ICAO PANS TRNG

### DOC 9869

Flight crews must, as part of the normal discharge of their operational duties, employ **countermeasures** to keep threats, errors and undesired aircraft states from reducing margins of safety in flight operations. Examples of countermeasures would include checklists, briefings, call-outs and SOPs, as well as **personal strategies and tactics**.

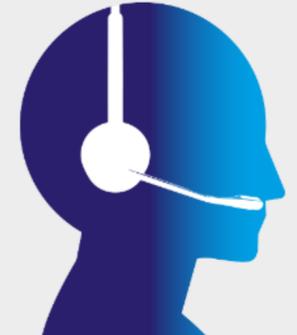
0.0 KNO



1.0 PRO



2.0 COM



3.0 FPA



4.0 FPM



5.0 LTW



6.0 PSD



7.0 SAW



8.0 WLM



## Pilot Competencies

<b>3</b>	<b>Application of Knowledge (KNO)</b>	Demonstrates knowledge and understanding of relevant information, operating instructions, aircraft systems and the operating environment
<b>4</b>	<b>Application of Procedures (PRO)</b>	Identifies and applies appropriate procedures in accordance with published operating instructions and applicable regulations
<b>2</b>	<b>Communication (COM)</b>	Communicates through appropriate means in the operational environment, in both normal and non-normal situations
<b>NO</b>	<b>Flight Path Management Automatic (FPA)</b>	Controls the flight path through automation
<b>NO</b>	<b>Flight Path Management – Manual (FPM)</b>	Controls the flight path through manual control
<b>3</b>	<b>Leadership and Teamwork (LTW)</b>	Influences others to contribute to a shared purpose. Collaborates to accomplish the goals of the team
<b>2</b>	<b>Problem Solving and Decision Making (PSD)</b>	Identifies precursors, mitigates problems, and makes decisions
<b>2</b>	<b>Situation Awareness (SAW)</b>	Perceives, comprehends and manages information and anticipates its effect on the operation
<b>2</b>	<b>Workload Management (WLM)</b>	Maintains available workload capacity by prioritising and distributing tasks using appropriate resources

# Resilience

The ability to develop **confidence** and **competence** by applying countermeasures that mobilise the relevant knowledge, skills and attitudes

## CONFIDENCE

Personal Countermeasures

ANTICIPATING PERSONAL THREATS

MANAGING PERSONAL THREATS

ANTICIPATING PERSONAL ERRORS

MANAGING PERSONAL ERRORS

UNDESIRED PERSONAL STATES



Personal Strategies & Tactics

Empowering pilots to build confidence

Encouraging professional support





Our Personal Countermeasures are based upon The BioPsychoSocial Model of Wellbeing

Engel (1977)

**Physiological  
Countermeasures**

**Psychological  
Countermeasures**

**Social  
Countermeasures**

Physiological Countermeasures		Psychological Countermeasures		Social Countermeasures	
1.1 Managing Fatigue	<b>1</b>	2.1 Understanding Mental Health for Pilots	<b>6</b>	3.1 Managing Financial Wellbeing	<b>2</b>
1.2 Managing Alcohol and/or Substances	<b>3</b>	2.2 Managing Depression	<b>8</b>	3.2 Advocating Diversity and Inclusion	<b>8</b>
1.3 Managing Fitness for Pilots	<b>2</b>	2..3 Managing Sim Anxiety	<b>2</b>	3.3. Understanding what Motivates People	<b>5</b>
1.4 Optimising Physical Health	<b>4</b>	2.4 Developing Resilience in Stressful Times	<b>1</b>	3.4 Managing Conflict	<b>6</b>
1.5 Managing Nutrition and Hydration for Pilots	<b>7</b>	2.5 Managing Change in Turbulent Environments	<b>3</b>	3.5 Managing Personal Relationships	<b>3</b>
1.6 Working with your AMEs	<b>6</b>	2.6 Understanding ourselves (and others)	<b>7</b>	3.6 Managing work/life balance	<b>1</b>
1.7 Managing Long term illness	<b>8</b>	2.7 Managing Personal Anxiety	<b>4</b>	3.7 Peer Support and Networks	<b>7</b>
1.8 Manging Startle and Surprise	<b>5</b>	2.8 Overcoming Self Limiting Beliefs	<b>4</b>	3.8 Managing Professional Relationships	<b>3</b>

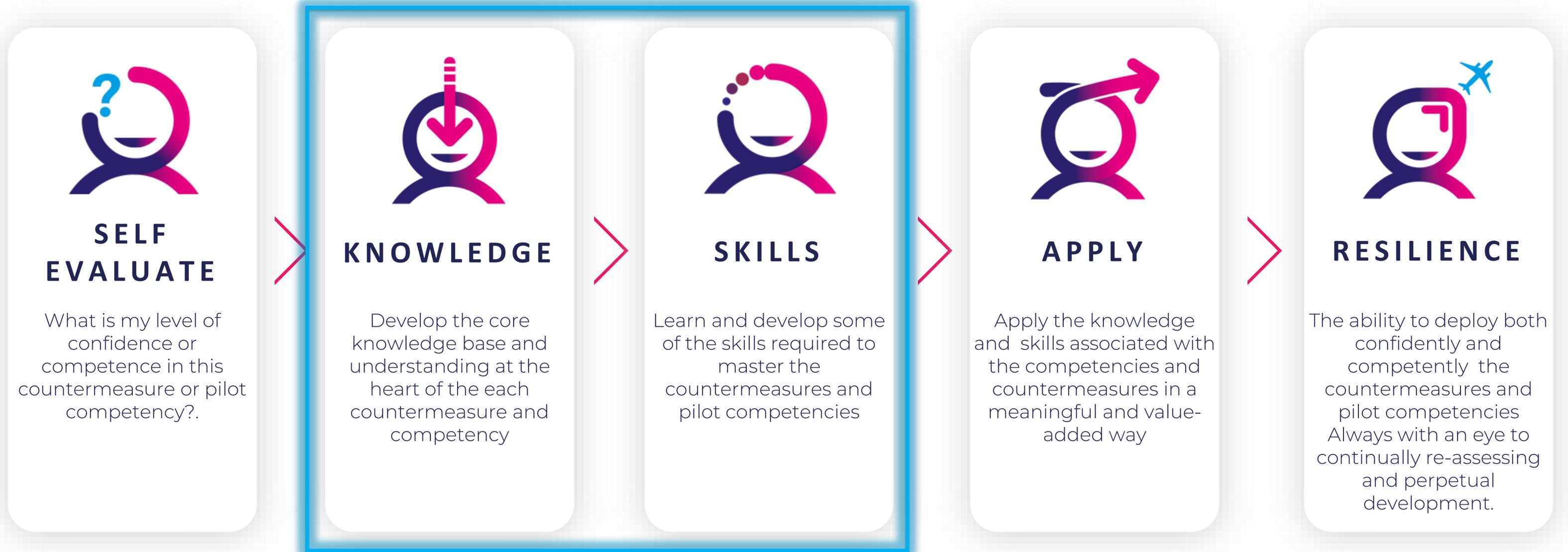


Physiological Countermeasures	Psychological Countermeasures	Social Countermeasures
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2 1.8 Manging Startle and Surprise	2 2.8 Overcoming Self Limiting Beliefs	2 7.8 Managing Professional Relationships



## Our 5 steps to Resilience

Managing Fatigue, Anxiety & Sim Anxiety



# Resilience

The ability to develop **confidence** and **competence** by applying countermeasures that mobilise the relevant knowledge, skills and attitudes

## CONFIDENCE

Personal Countermeasures

## COMPETENCE

Pilot Competences

ANTICIPATING PERSONAL THREATS

ANTICIPATING PILOT THREATS

MANAGING PERSONAL THREATS

MANAGING PILOT THREATS

ANTICIPATING PERSONAL ERRORS

ANTICIPATING PILOT ERRORS

MANAGING PERSONAL ERRORS

MANAGING PILOT ERRORS

UNDESIREDPersonal STATES

UNDESIREDAircraft STATES

Empowering pilots to build confidence

Empowering pilots to build competence

Encouraging professional support

Encouraging professional support

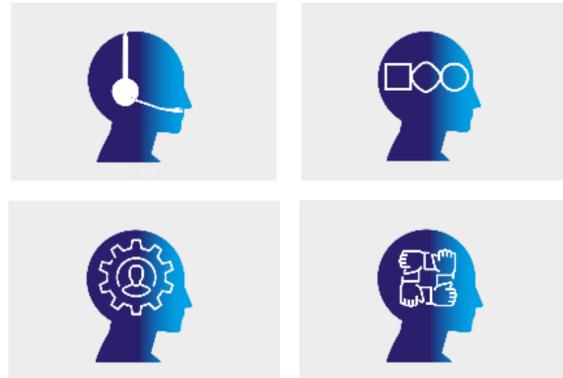


## Pilot Competencies

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## Our 5 steps to Resilience

Developing COM, SAW, WLM, PSD



### SELF EVALUATE

What is my level of confidence or competence in this countermeasure or pilot competency?



### KNOWLEDGE

Develop the core knowledge base and understanding at the heart of the each countermeasure and competency



### SKILLS

Learn and develop some of the skills required to master the countermeasures and pilot competencies



### APPLY

Apply the knowledge and skills associated with the competencies and countermeasures in a meaningful and value-added way



### RESILIENCE

The ability to deploy both confidently and competently the countermeasures and pilot competencies Always with an eye to continually re-assessing and perpetual development.



# Hi Chris

## Welcome to the Resilience Hub



### How Resilient Are You?

Self assessment to identify how confident and competent you are to apply Countermeasures to build resilience



### Our Approach

Applying Threat and Error Management TEM philosophy to identify countermeasures that help to build resilience



### Our Content

A complete list of all courses and materials with links to take you straight to what you need



### Personal Countermeasures

Applying our Personal Countermeasures to the personal threats we face to reduce personal errors and undesired personal states for Duty



### Pilot Competencies

Applying our Professional Competencies as countermeasures to the operational threats we face to reduce errors and undesired aircraft states



### Career Resilience

Applying career and transferable countermeasures to improve our resilience and Industry connection



# The Resilience Hub

**EMPOWERING and  
OPERATIONALISING  
PILOT RESILIENCE**



[www.theresiliencehub.life](http://www.theresiliencehub.life)



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