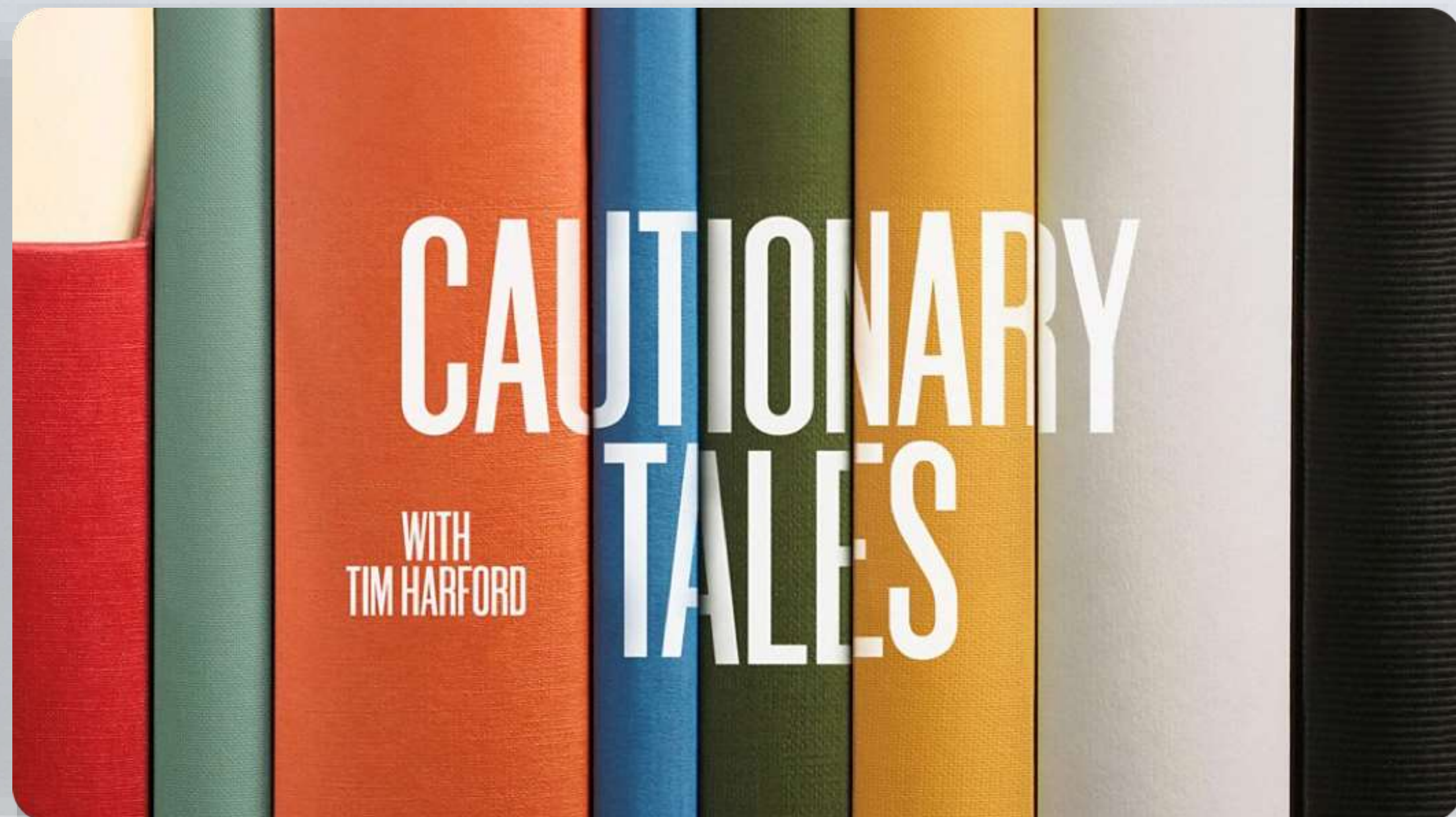


LESS IS MORE

Helen Heenan, MSc FRAeS



(IYKYK)

People systematically overlook subtractive changes

[Gabrielle S. Adams](#) ✉, [Benjamin A. Converse](#) ✉, [Andrew H. Hales](#) & [Leidy E. Klotz](#)



ADDING IS FAVOURED OVER SUBTRACTING IN PROBLEM SOLVING

People are more likely to consider solutions that add features than solutions that remove them, even when removing features is more efficient

Adams, G.S., Converse, B.A., Hales, A.H. *et al.* People systematically overlook subtractive changes. *Nature* 592, 258–261 (2021). <https://doi.org/10.1038/s41586-021-03380-y>







Category	Element	Behavioural marker (examples)
Cooperation	Team building and maintaining	Establishes atmosphere for open communication and participation
	Considering others	Takes condition of other crew members into account
	Supporting others	Helps other crew members in demanding situations
	Conflict solving	Concentrates on what is right rather than who is right
Leadership and managerial skills	Use of authority and assertiveness	Takes initiative to ensure crew involvement and task completion
	Maintaining standards	Intervenes if task completion deviates from standards
	Planning and coordination	Clearly states intentions and goals
	Workload management	Allocates adequate time to complete tasks
Situation awareness	Awareness of aircraft systems	Monitors and reports changes in systems' states
	Awareness of external environment	Collects information about environment (position, weather and traffic)
	Anticipation	Identifies possible future problems
Decision-making	Problem definition and diagnosis	Reviews causal factors with other crew members
	Option generation	States alternative courses of action
		Asks other crew members for options
	Risk assessment and option selection	Considers and shares estimated risk of alternative courses of action
	Outcome review	Checks outcome against plan



























GM6 ORO.FC.II5


























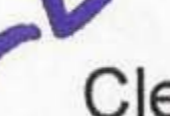
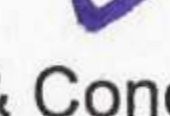




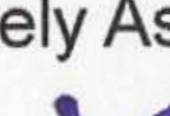
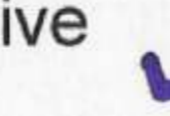



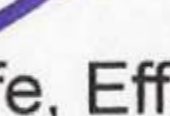

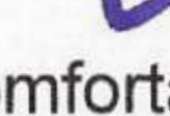



















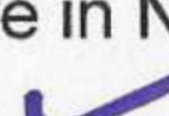



















“The training of the cognitive and social skills needed to support technical training”

Pilot Skills List

Crew	Task Management	Operation
Briefings Outlines Plans & Differences Allocates Tasks Seeks Input Checks Understanding	Situational Awareness Thorough Pre-flight Preparation Stays Ahead & Updates Plans Makes Contingency Plans Keeps Broad Perspective	Professional Style Relaxed & Professional Tone Aspires to High Performance Conscientious & Flexible Self-Aware & Seeks Feedback
Teamwork Balances Rank Authority Flexible & Shows Respect Actively Monitors & Supports Thinks Independently	Workload Recognises High Workload Takes or Makes Time Deals with Overload & Prioritises Avoids Distraction & Distracting	Aircraft Handling Safe, Efficient, Comfortable Automatic/Manual Flight Non Normals/Emergencies Manages Errors
Communication Shares Information/Ideas Actively Listens Assertive When Required Admits Mistakes & Doubts	Decisions Identifies Problems/Issues Involves Others if Needed Evaluates Outcome Uses Structure in New Situations	Applied Knowledge Technical & Operational Use of Checklists SOPs/Policies Commercial/Customer Awareness

Crew	Task Management	Operational
Briefing	Situational Awareness	Professional Style
 <p>Thorough Pre-Flight Preparation Highlights Risks & Threats Shares Ideas & Thinking Interactive, Relevant & Engaging Confirms Understanding</p>	 <p> <ul style="list-style-type: none"> • Anticipates Risks & Threats Stays Ahead & Updates Plans Environment & Time Conscious • Monitors & Reviews Aircraft State Recognises Reduced SA </p> 	 <p>Aspires to High Performance</p>  <p>Conscientious & Flexible</p>  <p>Relaxed & Professional Tone</p>  <p>Self Aware & Seeks Feedback</p>  <p>Customer Awareness</p> 
Communication	Workload Management	Aircraft Operation
 <p> Clear & Concise <ul style="list-style-type: none"> • Shares Information Demonstrates Active Listening Effective Non-Verbal Behaviour Appropriately Assertive </p> 	<p> Recognises High Workload Takes or Makes Time Plans, Prioritises & Allocates Tasks Aware of Crew Capacity Manages Distractions </p>	 <p>Safe, Efficient & Comfortable</p>  <p>Proficient Use & Level of Automation</p> <p>Optimum Use of Aircraft Systems</p> <p>Actively Monitors</p>  <p>Errors Identified & Corrected</p> 
Leadership and Teamwork	Decision Making	Applied Knowledge
 <p> Flexible, Respectful & Supportive Encourages Input & Feedback Admits Mistakes & Doubts <ul style="list-style-type: none"> • Acknowledges Authority Gradient Intervenes Appropriately </p> 	 <p> <ul style="list-style-type: none"> • Diagnoses Problems & Implications Gathers Information & Generates Options Evaluates Outcome & Adapts if Necessary Uses Judgement & Improvises for Safety Uses Structure in New Situations </p>	 <p>Complies with Regulations & Policies</p>  <p>Operational & Commercial Awareness</p>  <p>Upholds Company Culture</p>  <p>Advocates Checklist Discipline</p>  <p>Complies with SOP's</p>   

Crew	Task Management	Operational
Briefing	Situational Awareness	Professional Style
    Thorough Pre-Flight Preparation Highlights Risks & Threats Shares Ideas & Thinking Interactive, Relevant & Engaging Confirms Understanding	    Anticipates Risks & Threats Stays Ahead & Updates Plans  Environment & Time Conscious  Monitors & Reviews Aircraft State  Recognises Reduced SA     	     Aspires to High Performance Conscientious & Flexible  Relaxed & Professional Tone Self Aware & Seeks Feedback  Customer Awareness 
Communication	Workload Management	Aircraft Operation
    Clear & Concise Shares Information  Demonstrates Active Listening Effective Non-Verbal Behaviour  Appropriately Assertive   	 Recognises High Workload Takes or Makes Time Plans, Prioritises & Allocates Tasks Aware of Crew Capacity Manages Distractions 	     Safe, Efficient & Comfortable Proficient Use & Level of Automation  Optimum Use of Aircraft Systems Actively Monitors  Errors Identified & Corrected   
Leadership and Teamwork	Decision Making	Applied Knowledge
  Flexible, Respectful & Supportive Encourages Input & Feedback Admits Mistakes & Doubts Acknowledges Authority Gradient  Intervenes Appropriately   	     Diagnoses Problems & Implications Gathers Information & Generates Options Evaluates Outcome & Adapts if Necessary Uses Judgement & Improvises for Safety Uses Structure in New Situations     	      Complies with Regulations & Policies  Operational & Commercial Awareness  Upholds Company Culture  Advocates Checklist Discipline  Complies with SOP's     

Pilot Skills List

Crew	Task Management	Operation
Briefings Outlines Plans & Differences Allocates Tasks Seeks Input Checks Understanding	Situational Awareness Thorough Pre-flight Preparation Stays Ahead & Updates Plans Makes Contingency Plans Keeps Broad Perspective	Professional Style Relaxed & Professional Tone Aspires to High Performance Conscientious & Flexible Self-Aware & Seeks Feedback
Teamwork Balances Rank Authority Flexible & Shows Respect Actively Monitors & Supports Thinks Independently	Workload Recognises High Workload Takes or Makes Time Deals with Overload & Prioritises Avoids Distraction & Distracting	Aircraft Handling Safe, Efficient, Comfortable Automatic/Manual Flight Non Normals/Emergencies Manages Errors
Communication Shares Information/Ideas Actively Listens Assertive When Required Admits Mistakes & Doubts	Decisions Identifies Problems/Issues Involves Others if Needed Evaluates Outcome Uses Structure in New Situations	Applied Knowledge Technical & Operational Use of Checklists SOPs/Policies Commercial/Customer Awareness

Planning & Briefing	Situational Awareness	Professional Style
<ul style="list-style-type: none"> Shares Thinking Engaging & Interactive Practical & Relevant Plan Highlights Risks & Threats Reviews Aircraft Setup Builds Crew SA 	<ul style="list-style-type: none"> Shares Contingency Plans Anticipates Risks & Threats Stays Ahead & Updates Plans Monitors & Reviews Aircraft State Fuel, Terrain & Time Aware Recognises Reduced SA 	<ul style="list-style-type: none"> Culturally Aware Offers & Accepts Feedback Aspires To High Performance Upholds Company Customer Values Identifies & Resolves Conflicts Conscientious & Enthusiastic
Communication	Workload Management	Flight Path Management
<ul style="list-style-type: none"> Effective Timing Confirms Understanding Demonstrates Active Listening Clear, Concise & Accurate Language Effective Non Verbal Behaviour Appropriately Assertive 	<ul style="list-style-type: none"> Manages Errors Recognises High Workload Manages Distractions & Overload Plans, Prioritises & Allocates Tasks Manages Time Efficiently Aware Of Crew Capacity 	<ul style="list-style-type: none"> Actively Monitors Accurate & Smooth Control Deviations Identified & Corrected Efficient Use and Level Of Automation Safe, Efficient & Comfortable Manual Flight Proficiency
Leadership & Teamwork	Problem Solving & Decisions	Applied Knowledge
<ul style="list-style-type: none"> Flexible & Respectful Assigns Tasks & Supports Admits Mistakes & Doubts Encourages Input & Feedback Correct Authority Gradient Intervenes Appropriately 	<ul style="list-style-type: none"> Sets Priorities Gathers Required Information Identifies Problems & Implications Uses Judgement & Improvises For Safety Employs Decision Making Structure Evaluates & Adapts Decisions 	<ul style="list-style-type: none"> Complies with Regulations Optimum Use of Aircraft Systems Applies Procedures In A Timely Manner Adheres to Normal & Non Normal Procedures Operational & Commercial Awareness Effective Use Of Checklists

Crew	Task Management	Operational
Briefing	Situational Awareness	Professional Style
Thorough Pre-Flight Preparation Highlights Risks & Threats Shares Ideas & Thinking Practical, Relevant & Engaging Confirms Understanding	Anticipates of Risks & Threats Stays Ahead & Updates Plans Environment & Time Conscious Monitors & Reviews Aircraft State Recognises Reduced SA	Aspires to High Performance Conscientious & Flexible Relaxed & Professional Tone Self Aware & Seeks Feedback Customer Awareness
Communication	Workload Management	Aircraft Operation
Clear & Concise Shares Information Demonstrates Active Listening Effective Non-Verbal Behaviour Appropriately Assertive	Recognises High Workload Takes or Makes Time Plans, Prioritises & Allocates Tasks Aware of Crew Capacity Manages Distractions	Safe, Efficient & Comfortable Proficient Use & Level of Automation Optimum Use of Aircraft Systems Actively Monitors Errors Identified & Corrected
Leadership and Teamwork	Decision Making	Applied Knowledge
Flexible, Respectful & Supportive Encourages Input & Feedback Admits Mistakes & Doubts Acknowledges Authority Gradient Intervenes Appropriately	Diagnoses Problems & Implications Gathers Information & Generates Options Evaluates Outcome & Adapts if Necessary Uses Judgement & Improvises for Safety Uses Structure in New Situations	Complies with Regulations & Policies Operational & Commercial Awareness Upholds Company Culture Advocates Checklist Discipline Complies with SOP's

Planning & Briefing	Situational Awareness	Professional Style
Shares Thinking Engaging & Interactive Practical & Relevant Plan Highlights Risks & Threats Reviews Aircraft Setup Builds Crew SA	Shares Contingency Plans Anticipates Risks & Threats Stays Ahead & Updates Plans Monitors & Reviews Aircraft State Fuel, Terrain & Time Aware Recognises Reduced SA	Culturally Aware Offers & Accepts Feedback Aspires To High Performance Upholds Company Customer Values Identifies & Resolves Conflicts Conscientious & Enthusiastic
Communication	Workload Management	Flight Path Management
Effective Timing Confirms Understanding Demonstrates Active Listening Clear, Concise & Accurate Language Effective Non Verbal Behaviour Appropriately Assertive	Manages Errors Recognises High Workload Manages Distractions & Overload Plans, Prioritises & Allocates Tasks Manages Time Efficiently Aware Of Crew Capacity	Actively Monitors Accurate & Smooth Control Deviations Identified & Corrected Efficient Use and Level Of Automation Safe, Efficient & Comfortable Manual Flight Proficiency
Leadership & Teamwork	Problem Solving & Decisions	Applied Knowledge
Flexible & Respectful Assigns Tasks & Supports Admits Mistakes & Doubts Encourages Input & Feedback Correct Authority Gradient Intervenes Appropriately	Sets Priorities Gathers Required Information Identifies Problems & Implications Uses Judgement & Improvises For Safety Employs Decision Making Structure Evaluates & Adapts Decisions	Complies with Regulations Optimum Use of Aircraft Systems Applies Procedures In A Timely Manner Adheres to Normal & Non Normal Procedures Operational & Commercial Awareness Effective Use Of Checklists

Working with Others	Task Management	Pilot Role
Planning & Briefings Thorough Mental Preparation Focuses on Threats & Differences Outlines Plans & How A/C will be Flown Deviations are Only for Safety & Briefed Updates & Adapts When Needed Promotes Monitoring Discipline	Situation Awareness Anticipates Potential Problems Thinks & Stays Ahead of Aircraft Makes & Shares Contingency Plans Manages the Operation & Threats Monitors Plan, Fuel & Systems Aware of all Crews SA Level	Professional Attitude Responsible Role Model Sets & Achieves High Standards Aware of Operation & Passengers Needs Self Controlled & Resolves Conflict Relaxed, Friendly & Respectful Strives in Self Development
Leadership & Teamwork Balances Flight Deck Gradient Flexible, Honest & Acts with Integrity Actively Monitors & Provides Support Openly Shares Independent Thinking Gives or Seeks Direction & Advice Self Aware & Seeks Feedback	Workload Management Makes, Takes & Manages Time Avoids Rushing & Causing Errors Openly Prioritises & Allocates Tasks Manages Distraction & Distracting Aware of & Maintains Capacity Integrates Tasks with Flying	Flight Path Management Safe, Standard & Commercial Monitors Flight Path & Navigation Uses Optimal Automation Level & Modes Monitors FMGC Input, Automation & FMA Smooth & Accurate Manual Handling Corrects Deviations & Errors
Communication Encourages Openness & Inputs Timely, Clear, Standard & Concise Interprets & Aware of Non-Verbal Cues Assertive / Intervenes When Needed Readily Admits Mistakes & Doubts Listens & Checks Understanding	Problem Solving & Decisions Safe, Practical and Sensible Thinks Clearly & Uses Judgment Reviews Outcome & Adapts if Needed Identifies Issues & Resolves Ambiguity Involves Others When Needed Uses DODAR if Appropriate	Procedures & Knowledge SOP Standards & Discipline RT Standards & ATC Adherence Technical & Operational Knowledge Ops Manual Familiarity & Compliance Checklist Use & ECAM Discipline Use of Policies & Procedures

Crew Co-Ordination	Task Management	Operational
Briefing	Situational & Spatial Awareness	Professional Style
Interactive & Engaging Confirms Understanding Thorough Flight Preparation Defines Threat Management Strategy Establishes Situational Comprehension	Recognises Reduced Situational Awareness Confirms Shared Situational Projection Operational & Time Conscious Identifies Risks & Threats Monitors and Reviews Aircraft State	Aspires to High Standards Conscientious & Flexible Relaxed & Professional Tone Self Aware & Seeks Feedback Demonstrates Effective Teamwork
Communication	Workload Management	Aircraft Operation
Clear, Concise & Accurate Shares Information, Ideas & Thinking Demonstrates Effective Listening Interprets Non-Verbal Behaviour Appropriately Assertive	Recognises High Workload Appropriately Takes or Makes Time Plans, Prioritises & Allocates Tasks Aware of Crew Capacity Manages Threats & Errors	Accurate and Smooth Handling Appropriate and Competent Use of Automation Knowledge of Aircraft Systems and Limitations Actively Monitors & Intervenes Appropriately Deviations Identified & Corrected
Leadership	Decision Making	Applied Knowledge
Flexible Leadership Style Creates a Respectful & Supportive Atmosphere Displays & Encourages Initiative Admits Mistakes & Doubts Identifies and Resolves Conflicts	Diagnoses Problems & Implications Uses Appropriate Decision Making Process Considers Options & Risks as Practicable Reviews Outcome & Adapts if Necessary Demonstrates Resilient Adaptability	Commercial & Customer Awareness Knowledge of Regulations & Policies Ops Manual Familiarity and Compliance Upholds Company Culture Advocates RT, SOP & Checklist Discipline

Team	Task	Individual
Planning & Briefing	Situational Awareness	Professional Style
Shares Thinking Engaging & Interactive Practical & Relevant Plan Highlights Risk & Threats Reviews Aircraft Setup Builds Crew SA	Shares Contingency Plans Anticipates Risk & Threat Stays Ahead & Updates Plans Monitors & Reviews Aircraft State Fuel, Terrain & Time Aware Recognises Reduced SA	Culturally Aware Offers & Accepts Feedback Aspires to High Performance Upholds Company Customer Values Identifies & Resolves Conflicts Conscientious & Enthusiastic
Communication	Workload Management	Flight Path Management
Effective Timing Confirms Understanding Demonstrates Active Listening Clear, Concise & Accurate Language Effective Non Verbal Behaviour Appropriately Assertive	Manages Errors Recognises High Workload Manages Distractions & Overload Plans, Prioritises & Allocates Tasks Manages Time Efficiently Aware of Crew Capability	Actively Monitors Accurate & Smooth Control Deviations Identified & Corrected Efficient Use & Level of Automation Safe, Efficient & Comfortable Manual Flight Proficiency
Leadership and Teamwork	Problem Solving & Decisions	Applied Knowledge
Flexible & Respectful Assigns Task & Supports Admits Mistakes & Doubts Encourages Input & Feedback Correct Authority Gradient Intervenes Appropriately	Sets Priorities Gathers Required Information Identifies Problems & Implications Uses Judgement & Improves Safety Employs Decision Making Structure Evaluates & Adapts Decisions	Complies with Regulations Optimum Use of Aircraft Systems Applies Procedures in a Timely Manner Adheres to Normal & Non Normal Procedures Operational & Commercial Awareness Effective Use of Checklists

<p>Professional Standards</p> <ul style="list-style-type: none"> • Manages the aircraft to achieve the highest levels of safety, efficiency and customer experience • Maintains a high standard of discipline, conduct and appearance • Demonstrates responsibility for the duty of care and welfare of the crew and customers • Considers best commercial interests of British Airways when making decisions • Communicates and interacts with customers as appropriate for best commercial advantage • Maintains high operational standards • Conducts reviews to analyse and improve performance • Demonstrates a motivation for continuous professional development 	<p>Situation Awareness</p> <ul style="list-style-type: none"> • Continually maintains awareness of aircraft state, position, flight path and general environment • Continually maintains awareness of the people involved in or affected by the operation • Uses periods of low workload to conduct briefings and think ahead • Identifies and manages threats and errors • Regularly reviews, shares and updates mental models using the elements of situation awareness (Plane, Path, People) • Considers not just 'what' to do but 'how' to do it • Sets gates and establishes bottom lines • Discusses 'what if' scenarios and contingency strategies • Recognises and responds effectively to indications of reduced situation awareness 	<p>Knowledge & Application of Procedures</p> <ul style="list-style-type: none"> • Demonstrates practical knowledge of aircraft limitations and systems • Demonstrates thorough knowledge of regulations, policies and procedures • Correctly sources required operational information • Correctly operates aircraft systems and equipment • Follows SOPs unless safety dictates otherwise • Applies relevant procedural knowledge • Disciplined management of aircraft procedures and checklists
<p>Leadership & Teamwork</p> <ul style="list-style-type: none"> • Takes initiative, inspires and motivates • Empowers and values other team members • Creates atmosphere for open communication • Considers suggestions of others • Does not interfere unnecessarily • Ensures crew involvement and task completion • Supports, coaches, delegates and directs as required • Advocates own position and intervenes when appropriate • Carries out instructions when directed • Demonstrates empathy, respect and tolerance for others • Encourages, gives and receives feedback constructively • Addresses and resolves conflict in a constructive manner 	<p>Workload Management</p> <ul style="list-style-type: none"> • Is calm, methodical and not impulsive • Plans and prioritises tasks effectively (including Fly, Navigate, Communicate) • Anticipates and plans for potential high workload situations • Assesses and manages time to ensure task completion • Distributes tasks appropriately utilising all resources • Manages interruptions and distractions effectively • Recognises signs of stress, fatigue and overload and responds by making time and reducing workload • Offers and accepts assistance and asks for help early 	<p>Manual Flight Control</p> <ul style="list-style-type: none"> • Controls the aircraft manually with accuracy and smoothness • Operates the aircraft within the normal flight envelope • Manages the flight path and energy to achieve optimum operational performance • Uses appropriate modes and makes correct target selections • Monitors flight guidance systems effectively • Detects deviations from the required aircraft state or flight path and takes appropriate action
<p>Communications</p> <ul style="list-style-type: none"> • Conveys information clearly, accurately and in a timely manner • Briefings are open, interactive, concise and relevant • Uses body language that is consistent with verbal messages • Checks for understanding of important information • Listens actively and demonstrates understanding • Resolves uncertainty and ambiguity • Uses relevant and effective questions • Adheres to standard RT phraseology and procedures 	<p>Problem Solving & Decision Making</p> <ul style="list-style-type: none"> • Uses an appropriate decision making process • Allocates appropriate time for decision making process • Uses all resources to diagnose and understand the problem • Asks for options or suggests alternative options • Discusses the risks and consequences of alternative options • Communicates agreed option and assigns tasks • Reviews and validates original decision • Recognises change and adapts plans as required to ensure an optimum outcome 	<p>Automatic Flight Control</p> <ul style="list-style-type: none"> • Controls the aircraft using automation with accuracy and smoothness • Operates the aircraft within the normal flight envelope • Manages the flight path and energy to achieve optimum operational performance • Uses appropriate level of automation • Briefs and uses appropriate modes and makes correct MCP/FCU and MCDU selections • Monitors flight guidance systems effectively including engagement and automatic FMA transitions • Detects deviations from the required aircraft state or flight path and takes appropriate action

Application of knowledge (KNO)	Application of procedures and compliance with regulations (PRO)	Communication (COM)
<p>0.1 Demonstrates practical and applicable knowledge of limitations and systems and their interaction</p> <p>0.2 Demonstrates required knowledge of published operating instructions</p> <p>0.3 Demonstrates knowledge of the physical environment, the air traffic environment including routings, weather, airports and the operational infrastructure.</p> <p>0.4 Demonstrates appropriate knowledge of applicable legislation</p> <p>0.5 Knows where to source required information</p> <p>0.6 Demonstrates a positive interest in acquiring knowledge</p> <p>0.7 Is able to apply knowledge effectively</p>	<p>1.1 Identifies where to find procedures and regulations</p> <p>1.2 Applies relevant operating instructions, procedures and techniques in a timely manner</p> <p>1.3 Follows SOPs unless a higher degree of safety dictates an appropriate deviation</p> <p>1.4 Operates aeroplane systems and associated equipment correctly</p> <p>1.5 Monitors aircraft systems status</p> <p>1.6 Complies with applicable regulations</p> <p>1.7 Applies relevant procedural knowledge</p>	<p>2.1 Determines that recipient is ready and able to receive information</p> <p>2.2 Selects appropriately what, when, how and with whom to communicate</p> <p>2.3 Conveys messages clearly, accurately and concisely</p> <p>2.4 Confirms that the recipient demonstrates understanding of important information</p> <p>2.5 Listens actively and demonstrates understanding when receiving information</p> <p>2.6 Asks relevant and effective questions</p> <p>2.7 Uses appropriate escalation in communication to resolve identified deviations</p> <p>2.8 Uses and interprets non-verbal communication in a manner appropriate to the organisational and social culture</p> <p>2.9 Adheres to standard radiotelephone phraseology and procedures</p> <p>2.10 Accurately reads, interprets, constructs and responds to datalink messages in English</p>
Aeroplane flight path management – automation (FPA)	Aeroplane flight path management – manual control (FPM)	Leadership & teamwork (LTW)
<p>3.1 Uses appropriate flight management, guidance systems and automation, as installed and applicable to the conditions</p> <p>3.2 Monitors and detects deviations from the intended flight path and takes appropriate action</p> <p>3.3 Manages the flight path safely to achieve optimum operational performance</p> <p>3.4 Maintains the intended flight path during flight using automation while managing other tasks and distractions</p> <p>3.5 Selects appropriate level and mode of automation in a timely manner considering phase of flight and workload</p> <p>3.6 Effectively monitors automation, including engagement and automatic mode transitions</p>	<p>4.1 Controls the aircraft manually with accuracy and smoothness as appropriate to the situation</p> <p>4.2 Monitors and detects deviations from the intended flight path and takes appropriate action</p> <p>4.3 Manually controls the aeroplane using the relationship between aeroplane attitude, speed and thrust, and navigation signals or visual information</p> <p>4.4 Manages the flight path safely to achieve optimum operational performance</p> <p>4.5 Maintains the intended flight path during manual flight while managing other tasks and distractions</p> <p>4.6 Uses appropriate flight management and guidance systems, as installed and applicable to the conditions</p> <p>4.7 Effectively monitors flight guidance systems including engagement and automatic mode transitions</p>	<p>5.1 Encourages team participation and open communication</p> <p>5.2 Demonstrates initiative and provides direction when required</p> <p>5.3 Engages others in planning</p> <p>5.4 Considers inputs from others</p> <p>5.5 Gives and receives feedback constructively</p> <p>5.6 Addresses and resolves conflicts and disagreements in a constructive manner</p> <p>5.7 Exercises decisive leadership when required</p> <p>5.8 Accepts responsibility for decisions and actions</p> <p>5.9 Carries out instructions when directed</p> <p>5.10 Applies effective intervention strategies to resolve identified deviations</p> <p>5.11 Manages cultural and language challenges, as applicable</p>
Problem-solving — decision-making (PSD)	Situation awareness and management of information (SAW)	Workload management (WLM)
<p>6.1 Identifies, assesses and manages threats and errors in a timely manner</p> <p>6.2 Seeks accurate and adequate information from appropriate sources</p> <p>6.3 Identifies and verifies what and why things have gone wrong, if appropriate</p> <p>6.4 Perseveres in working through problems while prioritizing safety</p> <p>6.5 Identifies and considers appropriate options</p> <p>6.6 Applies appropriate and timely decision-making techniques</p> <p>6.7 Monitors, reviews and adapts decisions as required</p> <p>6.8 Adapts when faced with situations where no guidance or procedure exists</p> <p>6.9 Demonstrates resilience when encountering an unexpected event</p>	<p>7.1 Monitors and assesses the state of the aeroplane and its systems</p> <p>7.2 Monitors and assesses the aeroplane's energy state, and its anticipated flight path</p> <p>7.3 Monitors and assesses the general environment as it may affect the operation</p> <p>7.4 Validates the accuracy of information and checks for gross errors</p> <p>7.5 Maintains awareness of the people involved in or affected by the operation and their capacity to perform as expected</p> <p>7.6 Develops effective contingency plans based upon potential risks associated with threats and errors</p> <p>7.7 Responds to indications of reduced situation awareness</p>	<p>8.1 Exercises self-control in all situations</p> <p>8.2 Plans, prioritizes and schedules appropriate tasks effectively</p> <p>8.3 Manages time efficiently when carrying out tasks</p> <p>8.4 Offers and gives assistance</p> <p>8.5 Delegates tasks</p> <p>8.6 Seeks and accepts assistance, when appropriate</p> <p>8.7 Monitors, reviews and cross-checks actions conscientiously</p> <p>8.8 Verifies that tasks are completed to the expected outcome</p> <p>8.9 Manages and recovers from interruptions, distractions, variations and failures effectively while performing tasks</p>

Competency	Competency description	Behavioural indicator
Application of Procedures	Identifies and applies procedures in accordance with published operating instructions and applicable regulations, using the appropriate knowledge.	<ul style="list-style-type: none">• Identifies the source of operating instructions• Follows SOPs unless a higher degree of safety dictates an appropriate deviation• Identifies and follows all operating instructions in a timely manner• Correctly operates aircraft systems and associated equipment• Complies with applicable regulations• Applies relevant procedural knowledge
Communication	Demonstrates effective oral, non-verbal and written communications, in normal and non-normal situations.	<ul style="list-style-type: none">• Ensures the recipient is ready and able to receive the 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• Adheres to standard radiotelephone phraseology and procedures• Accurately reads and interprets required company and flight documentation• Accurately reads, interprets, constructs and responds to datalink messages in English• Completes accurate reports as required by operating procedures• Correctly interprets non-verbal communication• Uses eye contact, body movement and gestures that are consistent with and support verbal messages
Aircraft Flight Path Management, automation	Controls the aircraft flight path through automation, including appropriate use of flight management system(s) and guidance.	<ul style="list-style-type: none">• Controls the aircraft using automation with accuracy and smoothness as appropriate to the situation• Detects deviations from the desired aircraft trajectory and takes appropriate action• Contains the aircraft within the normal flight envelope• Manages the flight path to achieve optimum operational performance• Maintains the desired flight path during flight using automation whilst managing other tasks and distractions• Selects appropriate level and mode of automation in a timely manner considering phase of flight and workload• Effectively monitors automation, including engagement and automatic mode transitions
Aircraft Flight Path Management, manual control	Controls the aircraft flight path through manual flight, including appropriate use of flight management system(s) and flight guidance systems.	<ul style="list-style-type: none">• Controls the aircraft manually with accuracy and smoothness as appropriate to the situation• Detects deviations from the desired aircraft trajectory and takes appropriate action• Contains the aircraft within the normal flight envelope• Controls the aircraft safely using only the relationship between aircraft attitude, speed and thrust• Manages the flight path to achieve optimum operational performance• Maintains the desired flight path during manual flight whilst managing other tasks and distractions• Selects appropriate level and mode of flight guidance systems in a timely manner considering phase of flight and workload• Effectively monitors flight guidance systems including engagement and automatic mode transitions
Leadership and Teamwork	Demonstrates effective leadership and team working	<ul style="list-style-type: none">• Understands and agrees with the crew's roles and objectives• Creates an atmosphere of open communication and encourages team participation• Uses initiative and gives directions when required• Admits mistakes and takes responsibility• Anticipates and responds appropriately to other crew members' needs• Carries out instructions when directed• Communicates relevant concerns and intentions• Gives and receives feedback constructively• Confidently intervenes when important for safety• Demonstrates empathy and shows respect and tolerance for other people• Engages others in planning and allocates activities fairly and appropriately according to abilities• Addresses and resolves conflicts and disagreements in a constructive manner• Projects self-control in all situations
Problem Solving and Decision Making	Accurately identifies risks and resolves problems. Uses the appropriate decision-making processes.	<ul style="list-style-type: none">• 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 without reducing safety• Uses appropriate and timely decision-making processes• Sets priorities appropriately• Identifies and considers options effectively.• Monitors, reviews, and adapts decisions as required• Identifies and manages risks effectively• Improvises when faced with unforeseeable circumstances to achieve the safest outcome
Situation Awareness	Perceives and comprehends all of the relevant information available and anticipates what could happen that may affect the operation.	<ul style="list-style-type: none">• Identifies and assesses accurately the state of the aircraft and its systems• Identifies and assesses accurately the aircraft's vertical and lateral position, and its anticipated flight path.• Identifies and assesses accurately the general environment as it may affect the operation• Keeps track of time and fuel• Maintains awareness of the people involved in or affected by the operation and their capacity to perform as expected• Anticipates accurately what could happen, plans and stays ahead of the situation• Develops effective contingency plans based upon potential threats• Identifies and manages threats to the safety of the aircraft and people.• Recognizes and effectively responds to indications of reduced situation awareness.
Workload Management	Manages available resources efficiently to prioritize and perform tasks in a timely manner under all circumstances	<ul style="list-style-type: none">• Maintains self-control in all situations• Plans, prioritizes and schedules tasks effectively• Manages time efficiently when carrying out tasks• Offers and accepts assistance, delegates when necessary and asks for help early• Reviews, monitors and cross-checks actions conscientiously• Verifies that tasks are completed to the expected outcome• Manages and recovers from interruptions, distractions, variations and failures effectively

Category	Element	Behavioural marker (examples)
Cooperation	Team building and maintaining	Establishes atmosphere for open communication and participation
	Considering others	Takes condition of other crew members into account
	Supporting others	Helps other crew members in demanding situations
	Conflict solving	Concentrates on what is right rather than who is right
Leadership and managerial skills	Use of authority and assertiveness	Takes initiative to ensure crew involvement and task completion
	Maintaining standards	Intervenes if task completion deviates from standards
	Planning and coordination	Clearly states intentions and goals
	Workload management	Allocates adequate time to complete tasks
Situation awareness	Awareness of aircraft systems	Monitors and reports changes in systems' states
	Awareness of external environment	Collects information about environment (position, weather and traffic)
	Anticipation	Identifies possible future problems
Decision-making	Problem definition and diagnosis	Reviews causal factors with other crew members
	Option generation	States alternative courses of action
	Risk assessment and option selection	Asks other crew members for options
	Outcome review	Considers and shares estimated risk of alternative courses of action
	Outcome review	Checks outcome against plan

Pilot Skills List			
Crew	Task Management	Operation	
Briefings	Situational Awareness	Professional Style	
Outlines Plans & Differences	Thorough Pre-Flight Preparation	Relaxed & Professional Tone	
Allocates Tasks	Stays Ahead & Updates Plans	Aspires to High Performance	
Seeks Input	Makes Contingency Plans	Conscientious & Flexible	
Checks Understanding	Keeps Broad Perspective	Self-Aware & Seeks Feedback	
Teamwork	Workload	Aircraft Handling	
Balances Rank Authority	Recognises High Workload	Safe, Efficient, Comfortable	
Flexible & Shows Respect	Takes or Makes Time	Automatic/Manual Flight	
Actively Monitors & Supports	Deals with Overload & Prioritises	Non Normals/Emergencies	
Thinks Independently	Avoids Distraction & Distracting	Manages Errors	
Communication	Decisions	Applied Knowledge	
Shares Information/Ideas	Identifies Problems/Issues	Technical & Operational	
Actively Listens	Involves Others if Needed	Use of Checklists	
Assertive When Required	Evaluates Outcome	SOPs/Policies	
Admits Mistakes & Doubts	Uses Structure in New Situations	Commercial/Customer Awareness	

Crew Co-Ordination	Task Management	Operational
Briefing	Situational & Spatial Awareness	Professional Style
Interactive & Engaging Confirms Understanding Thorough Flight Preparation Defines Threat Management Strategy Establishes Situational Comprehension	Recognises Reduced Situational Awareness Confirms Shared Situational Projection Operational & Time Conscious Identifies Risks & Threats Monitors and Reviews Aircraft State	Aspires to High Standards Conscientious & Flexible Relaxed & Professional Tone Self Aware & Seeks Feedback Demonstrates Effective Teamwork
Communication	Workload Management	Aircraft Operation
Clear, Concise & Accurate Shares Information, Ideas & Thinking Demonstrates Effective Listening Interprets Non-Verbal Behaviour Appropriately Assertive	Recognises High Workload Appropriately Takes or Makes Time Plans, Prioritises & Allocates Tasks Aware of Crew Capacity Manages Threats & Errors	Accurate and Smooth Handling Appropriate and Competent Use of Automation Knowledge of Aircraft Systems and Limitations Actively Monitors & Intervenes Appropriately Deviations Identified & Corrected
Leadership	Decision Making	Applied Knowledge
Flexible Leadership Style Creates a Respectful & Supportive Atmosphere Displays & Encourages Initiative Admits Mistakes & Doubts Identifies and Resolves Conflicts	Diagnoses Problems & Implications Uses Appropriate Decision Making Process Considers Options & Risks as Practicable Reviews Outcome & Adapts if Necessary Demonstrates Resilient Adaptability	Commercial & Customer Awareness Knowledge of Regulations & Policies Ops Manual Familiarity and Compliance Upholds Company Culture Advocates RT, SOP & Checklist Discipline

Competency	Competency description	Behavioural indicator
Application of Procedures	Identifies and applies procedures in accordance with published operating instructions and applicable regulations, using the appropriate knowledge.	<ul style="list-style-type: none"> Identifies the source of operating instructions Follows SOPs unless a higher degree of safety dictates an appropriate deviation Identifies and follows all operating instructions in a timely manner Correctly operates aircraft systems and associated equipment Complies with applicable regulations Applies relevant procedural knowledge
Communication	Demonstrates effective oral, non-verbal and written communications, in normal and non-normal situations.	<ul style="list-style-type: none"> Ensures the recipient is ready and able to receive the 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 Adheres to standard radiotelephone phraseology and procedures Accurately reads and interprets required company and flight documentation Accurately reads, interprets, constructs and responds to datalink messages in English Completes accurate reports as required by operating procedures Correctly interprets non-verbal communication Uses eye contact, body movement and gestures that are consistent with and support verbal messages
Aircraft Flight Path Management, automation	Controls the aircraft flight path through automation, including appropriate use of flight management system(s) and guidance.	<ul style="list-style-type: none"> Controls the aircraft using automation with accuracy and smoothness as appropriate to the situation Detects deviations from the desired aircraft trajectory and takes appropriate action Contains the aircraft within the normal flight envelope Manages the flight path to achieve optimum operational performance Maintains the desired flight path during flight using automation whilst managing other tasks and distractions Selects appropriate level and mode of automation in a timely manner considering phase of flight and workload Effectively monitors automation, including engagement and automatic mode transitions
Aircraft Flight Path Management, manual control	Controls the aircraft flight path through manual flight, including appropriate use of flight management system(s) and flight guidance systems.	<ul style="list-style-type: none"> Controls the aircraft manually with accuracy and smoothness as appropriate to the situation Detects deviations from the desired aircraft trajectory and takes appropriate action Contains the aircraft within the normal flight envelope Controls the aircraft safely using only the relationship between aircraft attitude, speed and thrust Manages the flight path to achieve optimum operational performance Maintains the desired flight path during manual flight whilst managing other tasks and distractions Selects appropriate level and mode of flight guidance systems in a timely manner considering phase of flight and workload Effectively monitors flight guidance systems including engagement and automatic mode transitions
Leadership and Teamwork	Demonstrates effective leadership and team working	<ul style="list-style-type: none"> Understands and agrees with the crew's roles and objectives Creates an atmosphere of open communication and encourages team participation Uses initiative and gives directions when required Admits mistakes and takes responsibility Anticipates and responds appropriately to other crew members' needs Carries out instructions when directed Communicates relevant concerns and intentions Gives and receives feedback constructively Confidently intervenes when important for safety Demonstrates empathy and shows respect and tolerance for other people Engages others in planning and allocates activities fairly and appropriately according to abilities Addresses and resolves conflicts and disagreements in a constructive manner Projects self-control in all situations
Problem Solving and Decision Making	Accurately identifies risks and resolves problems. Uses the appropriate decision-making processes.	<ul style="list-style-type: none"> Seeks accurate and adequate information from appropriate sources Identifies and verifies what and why things have gone wrong Employ(s) proper problem-solving strategies Persuades in working through problems without reducing safety Uses appropriate and timely decision-making processes Sets priorities appropriately Identifies and considers options effectively Monitors, reviews, and adapts decisions as required Identifies and manages risks effectively Improves when faced with unforeseeable circumstances to achieve the safest outcome
Situation Awareness	Perceives and comprehends all of the relevant information available and anticipates what could happen that may affect the operation.	<ul style="list-style-type: none"> Identifies and assesses accurately the state of the aircraft and its systems Identifies and assesses accurately the aircraft's vertical and lateral position, and its anticipated flight path Identifies and assesses accurately the general environment as it may affect the operation Keeps track of time and fuel Maintains awareness of the people involved in or affected by the operation and their capacity to perform as expected Anticipates accurately what could happen, plans and stays ahead of the situation Develops effective contingency plans based upon potential threats Identifies and manages threats to the safety of the aircraft and people Recognizes and effectively responds to indications of reduced situation awareness.
Workload Management	Manages available resources efficiently to prioritise and perform tasks in a timely manner under all circumstances	<ul style="list-style-type: none"> Maintains self-control in all situations Plans, prioritises and schedules tasks effectively Manages time efficiently when carrying out tasks Offers and accepts assistance, delegates when necessary and asks for help when required Reviews, monitors and cross-checks actions conscientiously Verifies that tasks are completed to the expected outcome Manages and recovers from interruptions, distractions, variations and failures effectively

Planning & Briefing	Situational Awareness	Professional Style
Shares Thinking Engaging & Interactive Practical & Relevant Plan Highlights Risks & Threats Reviews Aircraft Setup Builds Crew SA	Shares Contingency Plans Anticipates Risks & Threats Stays Ahead & Updates Plans Monitors & Reviews Aircraft State Fuel, Terrain & Time Aware Recognises Reduced SA	Culturally Aware Offers & Accepts Feedback Aspires To High Performance Upholds Company Customer Values Identifies & Resolves Conflicts Conscientious & Enthusiastic
Communication	Workload Management	Flight Path Management
Effective Timing Confirms Understanding Demonstrates Active Listening Clear, Concise & Accurate Language Effective Non Verbal Behaviour Appropriately Assertive	Manages Errors Recognises High Workload Manages Distractions & Overload Plans, Prioritises & Allocates Tasks Manages Time Efficiently Aware Of Crew Capacity	Actively Monitors Accurate & Smooth Control Deviations Identified & Corrected Efficient Use and Level Of Automation Safe, Efficient & Comfortable Manual Flight Proficiency
Leadership & Teamwork	Problem Solving & Decisions	Applied Knowledge
Flexible & Respectful Assigns Tasks & Supports Admits Mistakes & Doubts Encourages Input & Feedback Correct Authority Gradient Intervenes Appropriately	Sets Priorities Gathers Required Information Identifies Problems & Implications Uses Judgement & Improvises For Safety Employs Decision Making Structure Evaluates & Adapts Decisions	Complies with Regulations Optimum Use of Aircraft Systems Applies Procedures In A Timely Manner Adheres to Normal & Non Normal Procedures Operational & Commercial Awareness Effective Use Of Checklists

Team	Task	Individual
Planning & Briefing	Situational Awareness	Professional Style
Shares Thinking Engaging & Interactive Practical & Relevant Plan Highlights Risk & Threats Reviews Aircraft Setup Builds Crew SA	Shares Contingency Plans Anticipates Risk & Threat Stays Ahead & Updates Plans Monitors & Reviews Aircraft State Fuel, Terrain & Time Aware Recognises Reduced SA	Culturally Aware Offers & Accepts Feedback Aspires to High Performance Upholds Company Customer Values Identifies & Resolves Conflicts Conscientious & Enthusiastic
Communication	Workload Management	Flight Path Management
Effective Timing Confirms Understanding Demonstrates Active Listening Clear, Concise & Accurate Language Effective Non Verbal Behaviour Appropriately Assertive	Manages Errors Recognises High Workload Manages Distractions & Overload Plans, Prioritises & Allocates Tasks Manages Time Efficiently Aware of Crew Capability	Actively Monitors Accurate & Smooth Control Deviations Identified & Corrected Efficient Use & Level of Automation Safe, Efficient & Comfortable Manual Flight Proficiency
Leadership and Teamwork	Problem Solving & Decisions	Applied Knowledge
Flexible & Respectful Assigns Task & Supports Admits Mistakes & Doubts Encourages Input & Feedback Correct Authority Gradient Intervenes Appropriately	Sets Priorities Gathers Required Information Identifies Problems & Implications Uses Judgement & Improves Safety Employs Decision Making Structure Evaluates & Adapts Decisions	Complies with Regulations Optimum Use of Aircraft Systems Applies Procedures in a Timely Manner Adheres to Normal & Non Normal Procedures Operational & Commercial Awareness Effective Use of Checklists

Working with Others	Task Management	Pilot Role
Planning & Briefings	Situation Awareness	Professional Attitude
Thorough Mental Preparation Focuses on Threats & Differences Outlines Plans & How A/C will be Flown Deviations are Only for Safety & Briefed Updates & Adapts When Needed Promotes Monitoring Discipline	Anticipates Potential Problems Thinks & Stays Ahead of Aircraft Makes & Shares Contingency Plans Manages the Operation & Threats Monitors Plan, Fuel & Systems Aware of all Crews SA Level	Responsible Role Model Sets & Achieves High Standards Aware of Operation & Passengers Needs Self Controlled & Resolves Conflict Relaxed, Friendly & Respectful Strives in Self Development
Leadership & Teamwork	Workload Management	Flight Path Management
Balances Flight Deck Gradient Flexible, Honest & Acts with Integrity Actively Monitors & Provides Support Openly Shares Independent Thinking Gives or Seeks Direction & Advice Self Aware & Seeks Feedback	Makes, Takes & Manages Time Avoids Rushing & Causing Errors Openly Prioritises & Allocates Tasks Manages Distraction & Distracting Aware of & Maintains Capacity Integrates Tasks with Flying	Safe, Standard & Commercial Monitors Flight Path & Navigation Uses Optimal Automation Level & Modes Monitors FMGC Input, Automation & FMA Smooth & Accurate Manual Handling Corrects Deviations & Errors
Communication	Problem Solving & Decisions	Procedures & Knowledge
Encourages Openness & Inputs Timely, Clear, Standard & Concise Interprets & Aware of Non-Verbal Cues Assertive / Intervenes When Needed Readily Admits Mistakes & Doubts Listens & Checks Understanding	Safe, Practical and Sensible Thinks Clearly & Uses Judgment Reviews Outcome & Adapts if Needed Identifies Issues & Resolves Ambiguity Involves Others When Needed Uses DODAR if Appropriate	SOP Standards & Discipline RT Standards & ATC Adherence Technical & Operational Knowledge Ops Manual Familiarity & Compliance Checklist Use & ECAM Discipline Use of Policies & Procedures

Professional Standards	Situation Awareness	Knowledge & Application of Procedures
<ul style="list-style-type: none"> Manages the aircraft to achieve the highest levels of safety, efficiency and customer experience Maintains a high standard of discipline, conduct and appearance Demonstrates responsibility for the duty of care and welfare of the crew and customers Considers best commercial interests of British Airways when making decisions Communicates and interacts with customers as appropriate for best commercial advantage Maintains high operational standards Conducts reviews to analyse and improve performance Demonstrates a motivation for continuous professional development 	<ul style="list-style-type: none"> Continually maintains awareness of aircraft state, position, flight path and general environment Continually maintains awareness of the people involved in or affected by the operation Uses periods of low workload to conduct briefings and think ahead Identifies and manages threats and errors Regularly reviews, shares and updates mental models using the elements of situation awareness (Plane, Path, People) Considers not just 'what' to do but 'how' to do it Sets gates and establishes bottom lines Discusses 'what if' scenarios and contingency strategies Recognises and responds effectively to indications of reduced situation awareness 	<ul style="list-style-type: none"> Demonstrates practical knowledge of aircraft limitations and systems Demonstrates thorough knowledge of regulations, policies and procedures Correctly sources required operational information Correctly operates aircraft systems and equipment Follows SOPs unless safety dictates otherwise Applies relevant procedural knowledge Disciplined management of aircraft procedures and checklists
Leadership & Teamwork	Workload Management	Manual Flight Control
<ul style="list-style-type: none"> Takes initiative, inspires and motivates Empowers and values other team members Creates atmosphere for open communication Considers suggestions of others Does not interfere unnecessarily Ensures crew involvement and task completion Supports, coaches, delegates and directs as required Advocates own position and intervenes when appropriate Carries out instructions when directed Demonstrates empathy, respect and tolerance for others Encourages, gives and receives feedback constructively Addresses and resolves conflict in a constructive manner 	<ul style="list-style-type: none"> Is calm, methodical and not impulsive Plans and prioritises tasks effectively (including Fly, Navigate, Communicate) Anticipates and plans for potential high workload situations Assesses and manages time to ensure task completion Distributes tasks appropriately utilising all resources Manages interruptions and distractions effectively Recognises signs of stress, fatigue and overload and responds by signing time and reducing workload Offers and accepts assistance and asks for help early 	<ul style="list-style-type: none"> Controls the aircraft manually with accuracy and smoothness as appropriate to the situation Manages the flight path and energy to achieve optimum operational performance Uses appropriate modes and makes correct target selections Monitors flight guidance systems effectively Detects deviations from the required aircraft state or flight path and takes appropriate action
Communications	Problem Solving & Decision Making	Automatic Flight Control
<ul style="list-style-type: none"> Conveys information clearly, accurately and in a timely manner Briefings are open, interactive, concise and relevant Uses body language that is consistent with verbal messages Checks for understanding of important information Listens actively and demonstrates understanding Resolves uncertainty and ambiguity Uses relevant and effective questions Adheres to standard RT phraseology and procedures 	<ul style="list-style-type: none"> Uses an appropriate decision making process Allocates appropriate time for decision making process Uses all resources to diagnose and understand the problem Asks for options or suggests alternative options Discusses the risks and consequences of alternative options Communicates agreed option and assigns tasks Reviews and validates original decision Recognises change and adapts plans as required to ensure an optimum outcome 	<ul style="list-style-type: none"> Controls the aircraft using automation with accuracy and smoothness Operates the aircraft within the normal flight envelope Manages the flight path and energy to achieve optimum operational performance Uses appropriate level of automation Briefs and uses appropriate modes and makes correct MCP/FCU and MCDU selections Monitors flight guidance systems effectively including engagement and automatic FMA transitions Detects deviations from the required aircraft state or flight path and takes appropriate action

Application of knowledge (KNO)	Application of procedures and compliance with regulations (PRO)	Communication (COM)
<ol style="list-style-type: none"> Demonstrates practical and applicable knowledge of limitations and systems and their interaction Demonstrates appropriate knowledge of published operating instructions Demonstrates knowledge of the physical environment, the current environment and the flight deck Demonstrates appropriate knowledge of applicable legislation Applies relevant procedural knowledge Demonstrates a good understanding of the knowledge Is able to apply knowledge effectively 	<ol style="list-style-type: none"> Identifies when to find procedures and regulations Applies relevant operating instructions, procedures and regulations in a timely manner Follows SOPs unless a higher degree of safety dictates an appropriate deviation Operates aircraft systems and associated equipment correctly Monitors aircraft systems status Complies with applicable regulations Applies relevant procedural knowledge 	<ol style="list-style-type: none"> Determines that 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 demonstrates understanding of important information Carries out instructions when directed Admits mistakes and takes responsibility Anticipates and responds appropriately to other crew members' needs Carries out instructions when directed Communicates relevant concerns and intentions Gives and receives feedback constructively Confidently intervenes when important for safety Demonstrates empathy and shows respect and tolerance for other people Engages others in planning and allocates activities fairly and appropriately according to abilities Addresses and resolves conflicts and disagreements in a constructive manner Projects self-control in all situations
Aeroplane flight path management – automation (FPA)	Aeroplane flight path management – manual control (FPM)	Leadership & teamwork (LTW)
<ol style="list-style-type: none"> Uses appropriate flight management, guidance systems and automation, as needed and applicable to the situation Monitors and detects deviations from the intended flight path and takes appropriate action Manages the flight path to achieve optimum operational performance Manages the flight path during flight using automation whilst managing other tasks and distractions Selects appropriate level and mode of automation in a timely manner considering phase of flight and workload Effectively monitors automation, including engagement and automatic mode transitions 	<ol style="list-style-type: none"> Controls the aircraft manually with accuracy and smoothness as appropriate to the situation Monitors and detects deviations from the intended flight path and takes appropriate action Manages the flight path to achieve optimum operational performance Manages the flight path during flight using automation whilst managing other tasks and distractions Selects appropriate level and mode of automation in a timely manner considering phase of flight and workload Effectively monitors flight guidance systems including engagement and automatic mode transitions 	<ol style="list-style-type: none"> Encourages team participation and open communication Demonstrates initiative and provides direction when required Regulates when in planning Considers inputs from others Gives and receives feedback constructively Carries out instructions when directed Admits mistakes and takes responsibility Anticipates and responds appropriately to other crew members' needs Carries out instructions when directed Communicates relevant concerns and intentions Gives and receives feedback constructively Confidently intervenes when important for safety Demonstrates empathy and shows respect and tolerance for other people Engages others in planning and allocates activities fairly and appropriately according to abilities Addresses and resolves conflicts and disagreements in a constructive manner Projects self-control in all situations
Problem solving – decision making (PSD)	Situation awareness and management of information (SAWI)	Workload management (WLM)
<ol style="list-style-type: none"> Identifies, assesses and manages threats and errors in a timely manner Monitors and detects deviations from the intended flight path and takes appropriate action Manages the flight path to achieve optimum operational performance Manages the flight path during flight using automation whilst managing other tasks and distractions Selects appropriate level and mode of automation in a timely manner considering phase of flight and workload Effectively monitors automation, including engagement and automatic mode transitions 	<ol style="list-style-type: none"> Monitors and detects deviations from the intended flight path and takes appropriate action Manages the flight path to achieve optimum operational performance Manages the flight path during flight using automation whilst managing other tasks and distractions Selects appropriate level and mode of automation in a timely manner considering phase of flight and workload Effectively monitors flight guidance systems including engagement and automatic mode transitions 	<ol style="list-style-type: none"> Encourages team participation and open communication Demonstrates initiative and provides direction when required Regulates when in planning Considers inputs from others Gives and receives feedback constructively Carries out instructions when directed Admits mistakes and takes responsibility Anticipates and responds appropriately to other crew members' needs Carries out instructions when directed Communicates relevant concerns and intentions Gives and receives feedback constructively Confidently intervenes when important for safety Demonstrates empathy and shows respect and tolerance for other people Engages others in planning and allocates activities fairly and appropriately according to abilities Addresses and resolves conflicts and disagreements in a constructive manner Projects self-control in all situations



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NOTECHS

Pilot Skills List		
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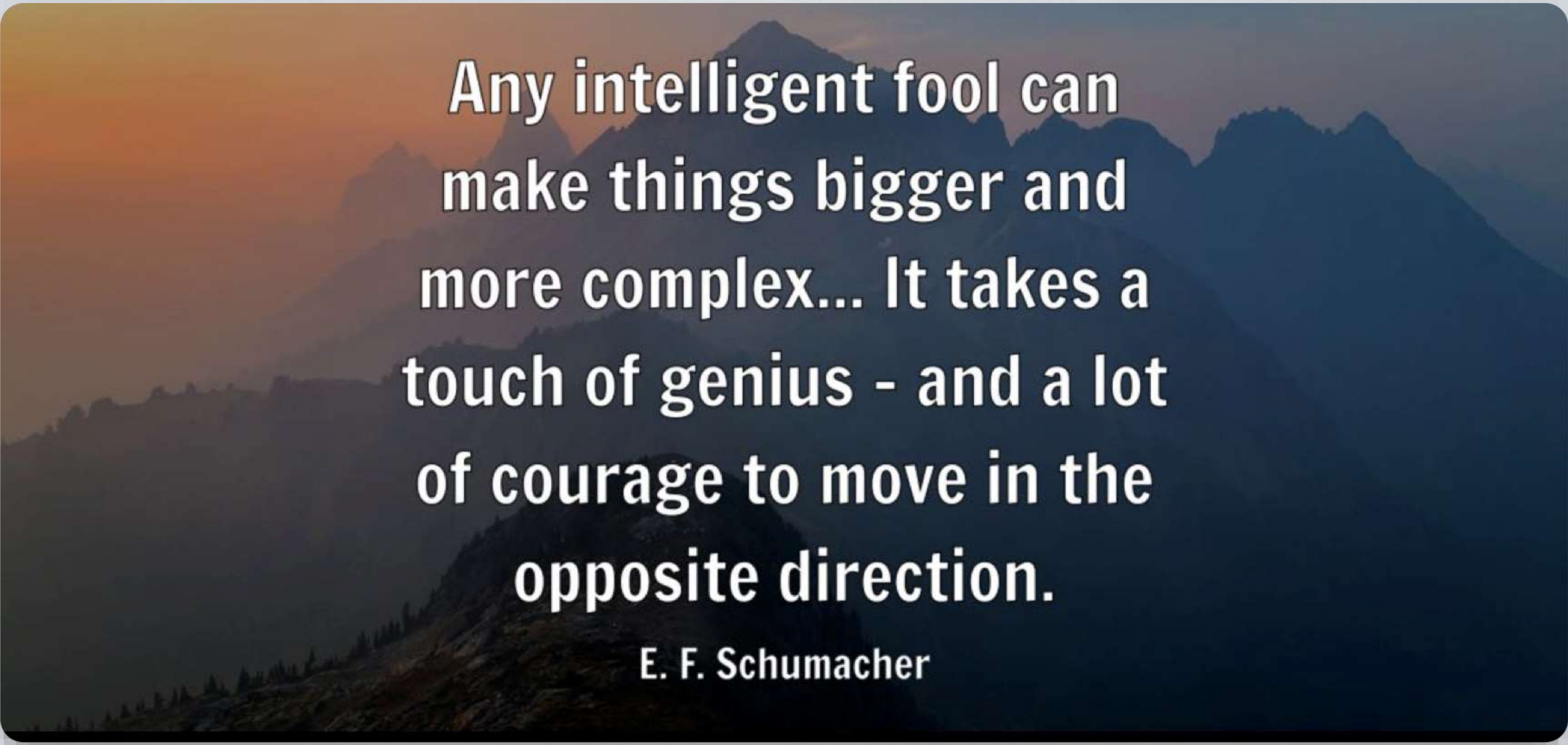
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Competency	Competency description	Behavioural indicator
Application of Procedures	Identifies and applies procedures in accordance with published operating instructions and applicable regulations using the appropriate knowledge.	<ul style="list-style-type: none">• Identifies the source of operating instructions• Follows SOPs unless a higher degree of safety dictates an appropriate deviation• Identifies and follows all operating instructions in a timely manner• Correctly operates aircraft systems and associated equipment• Complies with applicable regulations• Applies relevant procedural knowledge
Communication	Demonstrates effective oral, non-verbal and written communications, in normal and non-normal situations.	<ul style="list-style-type: none">• Ensures the recipient is ready and able to receive the 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• Adheres to standard radiotelephone phraseology and procedures• Accurately reads and interprets required company and flight documentation• Accurately reads, interprets, constructs and responds to datalink messages in English• Completes accurate reports as required by operating procedures• Correctly interprets non-verbal communication• Uses eye contact, body movement and gestures that are consistent with and support verbal messages
Aircraft Flight Path Management, automation	Controls the aircraft flight path through automation, including appropriate use of flight management system(s) and guidance.	<ul style="list-style-type: none">• Controls the aircraft using automation with accuracy and smoothness as appropriate to the situation• Detects deviations from the desired aircraft trajectory and takes appropriate action• Contains the aircraft within the normal flight envelope• Manages the flight path to achieve optimum operational performance• Maintains the desired flight path during flight using automation whilst managing other tasks and distractions• Selects appropriate level and mode of automation in a timely manner considering phase of flight and workload• Effectively monitors automation, including engagement and automatic mode transitions
Aircraft Flight Path Management, manual control	Controls the aircraft flight path through manual flight, including appropriate use of flight management system(s) and flight guidance systems.	<ul style="list-style-type: none">• Controls the aircraft manually with accuracy and smoothness as appropriate to the situation• Detects deviations from the desired aircraft trajectory and takes appropriate action• Contains the aircraft within the normal flight envelope• Controls the aircraft safely using only the relationship between aircraft attitude, speed and thrust• Manages the flight path to achieve optimum operational performance• Maintains the desired flight path during manual flight whilst managing other tasks and distractions• Selects appropriate level and mode of flight guidance systems in a timely manner considering phase of flight and workload• Effectively monitors flight guidance systems including engagement and automatic mode transitions
Leadership and Teamwork	Demonstrates effective leadership and team working	<ul style="list-style-type: none">• Understands and agrees with the crew's roles and objectives• Creates an atmosphere of open communication and encourages team participation• Uses initiative and gives directions when required• Admits mistakes and takes responsibility• Anticipates and responds appropriately to other crew members' needs• Carries out instructions when directed• Communicates relevant concerns and intentions• Gives and receives feedback constructively• Confidently intervenes when important for safety• Demonstrates empathy and shows respect and tolerance for other people• Engages others in planning and allocates activities fairly and appropriately according to abilities• Addresses and resolves conflicts and disagreements in a constructive manner• Projects self-control in all situations
Problem Solving and Decision Making	Accurately identifies risks and resolves problems. Uses the appropriate decision-making processes.	<ul style="list-style-type: none">• 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 without reducing safety• Uses appropriate and timely decision-making processes• Sets priorities appropriately• Identifies and considers options effectively.• Monitors, reviews, and adapts decisions as required• Identifies and manages risks effectively• Improvises when faced with unforeseeable circumstances to achieve the safest outcome
Situation Awareness	Perceives and comprehends all of the relevant information available and anticipates what could happen that may affect the operation.	<ul style="list-style-type: none">• Identifies and assesses accurately the state of the aircraft and its systems• Identifies and assesses accurately the aircraft's vertical and lateral position, and its anticipated flight path.• Identifies and assesses accurately the general environment as it may affect the operation• Keeps track of time and fuel• Maintains awareness of the people involved in or affected by the operation and their capacity to perform as expected• Anticipates accurately what could happen, plans and stays ahead of the situation• Develops effective contingency plans based upon potential threats• Identifies and manages threats to the safety of the aircraft and people.• Recognizes and effectively responds to indications of reduced situation awareness.
Workload Management	Manages available resources efficiently to prioritize and perform tasks in a timely manner under all circumstances	<ul style="list-style-type: none">• Maintains self-control in all situations• Plans, prioritizes and schedules tasks effectively• Manages time efficiently when carrying out tasks• Offers and accepts assistance, delegates when necessary and asks for help early• Reviews, monitors and cross-checks actions conscientiously• Verifies that tasks are completed to the expected outcome• Manages and recovers from interruptions, distractions, variations and failures effectively



**Any intelligent fool can
make things bigger and
more complex... It takes a
touch of genius - and a lot
of courage to move in the
opposite direction.**

E. F. Schumacher