

Project Management at Twice the Speed of Sound

Introduction

- Joined Royal Australian Air Force out of High School
- Aeronautical Engineering Degree at Australian Defence Force Academy
- Operational F/A-18 Pilot with 2,500 hours
- Graduate Empire Test Pilot School
- Exchange at Office of Chief of Naval Operations at the Pentagon
- Senior Program Manager with Boeing St. Louis



What to Expect?

- Lots of cool aircraft pictures
- Some war stories
- Practical application of 20 years experience in the cockpit
- Not a practical guide to Project Management like a Fighter Pilot
- Not a leadership discussion (but it is all about good leadership)
- A different perspective on Project Management techniques



Realbigtaco

Airmanship and Project Management

- Kids dream of being fighter pilots, but no kid dreams of being a great airman...or Project Manager



Paramount Pictures

VS.



U.S. Government

Airmanship and Project Management

- Airmanship is a multi-dimensional concept that is difficult to define
- Primarily a positive mindset and attitude towards skillful aircraft operations
- Extends beyond the cockpit
- Prevents hazardous attitudes
- Essential to performing a task that is inherently dangerous
- Holds pilot accountable and responsible for their actions

‘A personal state that enables aircrew to exercise sound judgment, display uncompromising flight discipline and demonstrate skillful control of an aircraft and a situation. It is maintained by continuous self-improvement and a desire to perform optimally at all times.’ – NATO Study

Airmanship and Project Management

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Airmanship and Project Management

- A good definition of a successful Project Management mindset
- Must fully commit to principles of project management code of conduct
- Underpinned by discipline
- Foundation to operational excellence at all levels
- Promotes good decision making
- Combats error
- Particularly relevant to aircraft manufacture and sustainment

‘A personal state that enables **managers** to exercise sound judgment, display uncompromising **personal** discipline and demonstrate skillful control of a **project** and a situation. It is maintained by continuous self-improvement and a desire to perform optimally at all times.’

Airmanship and Project Management

- Only effective when part of organizational culture

Australian Defence Force



‘The standard that you walk past,
is the standard that you accept.’
– Lt. Gen. David Morrison

You Cannot Prepare For Every Emergency



Own Work

You Cannot Prepare For Every Emergency

- Some emergencies you can prepare for
- Immediate Action (IA) Items

■ ENGINE FIRE (ENG FIRE LIGHT AND ENGINE FIRE L-R CAS MESSAGE)

- 1. Throttle (affected engine) - IDLE.
 - IF ENG FIRE LIGHT REMAINS ON (15 SECONDS) PROBABLE FIRE
 - 1. ENG FIRE Switch - CONFIRM, then LIFT COVER and PUSH.
 - 2. Either Illuminated BOTTLE ARMED Light - PUSH (bottle armed light goes off).

Engine Fire (Eng Fire Light and Engine Fire L-R CAS Message) Immediate Action Items, (CE-750 AFM, p. 3-8)

- Need to be memorized and performed without error
- What critical information needs to be memorized in your project?



Own Work

You Cannot Prepare For Every Emergency

- There will always be an event or emergency that you cannot prepare for



Iowa Department of Public Safety



Chinese Military Review

You Cannot Prepare For Every Emergency

- There will always be an event or emergency that you cannot prepare for
- ANCA is a methodology taught to prioritize resources (including mental capacity) when faced with an unexpected situation

AVIATE – Keep the plane flying and everyone alive

NAVIGATE – Work out where you need to go and head there

COMMUNICATE – Let other people know you have an emergency and get help

ADMINISTRATE – Sort out administrative tasks such as checklists

You Cannot Prepare For Every Emergency

- There will always be an event or emergency that you cannot prepare for
- ANCA is a methodology taught to prioritize resources (including mental capacity) when faced with an unexpected situation
- Can be applied to project crisis management
- You need your own plan on what you are going to do in an emergency ahead of time

AVIATE – Safety first and stop things getting worse (put out fires)

NAVIGATE – Get things heading in the right direction

COMMUNICATE – Inform the right people, get help and form a team

ADMINISTRATE – Sort out details and start analysis of what went wrong

Getting Behind the Aircraft

- Happens when you allow the situation to control your actions and not the other way around
- Usually the result of a loss of Situational Awareness
- Feels like you have lost control



Own Work

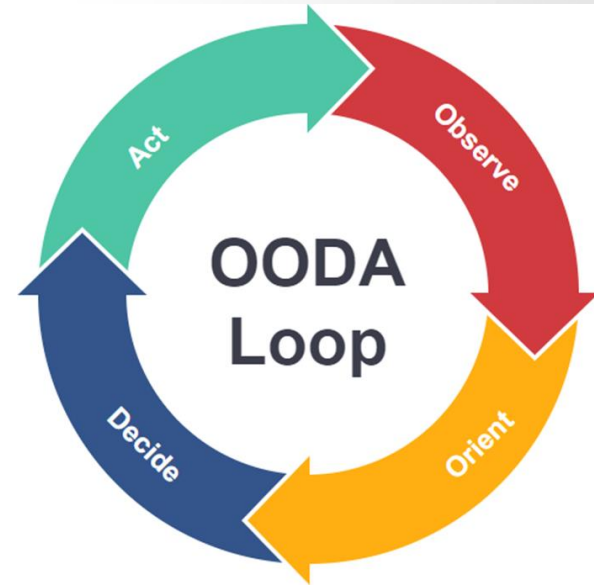
Getting Behind the Aircraft

- Most dangerous thing is to not realize you have lost Situational Awareness, or SA
- Always be on the lookout for clues that you have lost SA
 - Perform regular SA checks
- Avoid task fixation
- Once you have recognized that you have lost SA and are behind the aircraft then need to get it back
- Need to slow things down and not try to make decisions faster

‘Situational Awareness is not just awareness of your environment and perception of events, but also comprehension of their meaning, how they interact with one another, and able to project future status’
– Mica Endsley

Getting Behind the Aircraft

- OODA loop developed by USAF Col. John Boyd
- Four step decision making process
- Tool to regain SA, assess risks and make a decision
- **Observe** – Stop and gather raw information about internal and external environment
- **Orientate** – How does the environment affect my current and future situation in relation to my goals
- **Decide**- Assess potential alternatives and formulate a strategy
- **Act** – Execute plan and reassess



“He who can handle the quickest rate of change survives” – Lt. Col. John Boyd

Get Some Chair Time

- Don't get good by doing the easy stuff
- Almost all flying in a fighter squadron is training
- Goal is to make training as realistic as possible while being safe and effective



Royal Australian Air Force

Get Some Chair Time

- Don't get good by doing the easy stuff
- In aviation use simulators to practice the most challenging scenarios
 - No one has built a project management simulator
- Spent more hour's chair flying than in the simulator or cockpit
- Still visualize before running a meeting or giving a brief
- Don't just visualize things going well
- Be deliberate about everything



United States Navy



United States Navy

That One Perfect Flight

- Relentless pursuit of the perfect flight



United States Navy

That One Perfect Flight

- Relentless pursuit of the perfect flight
- Learn something new every flight
- Continuous self-improvement
- Debrief everything
 - Getting to the why is the challenge
- Importance of accepting criticism
 - In a fighter pilot debrief, ego goes out the door
- Seek critical feedback



Inner Art of Airmanship

Summary

- Disciplined airmanship like mindset
- Have a plan for dealing with an emergency or crisis
- Maintain SA and don't get behind the 'aircraft'
- Visualize the difficult things
- Strive for that 'one perfect flight' and constant self improvement



Royal Australian Air Force

Questions



Own Work