

M-LOSA in Qantas Engineering

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How To Obtain Visibility Of Hazards/Threats?

Hindsight

- Audits – Internal/External
- On time performance, MELs, Turn time, Maintenance Information System stats & analysis
- Crew, Customer & Regulator Reports/Feedback
- Employee reporting
- Investigations



Foresight

- Maintenance LOSA



Customer Feedback



M-LOSA focus

- Normal human behaviours in an operational environment and
- Aims to identify threats to operational safety and manage risks using a proactive/predictive approach



M-LOSA observers provide non-judgemental systemic observations, rather than an individual assessment and checking.

10 Essential Characteristics of LOSA

1. Real time observation during normal operations
2. Collective management and employee participation
3. Voluntary participation
4. De-identified and confidential data collection
5. Targeted observation
6. Trusted, & trained observers
7. Authentic data collection
8. Data verification
9. Data derived targets for enhancements and improvements
10. Feedback to participants on the results

M-LOSA in Qantas Engineering

- M-LOSA implemented to provide foresight to identify threats and errors that are present, as well as how they are mis/managed during aircraft maintenance
- Targeted activities include:
 - error prone tasks,
 - follow-up on actions from investigations to confirm removal causal factors,
 - Change Management – review to confirm changes/processes are accepted, workable & compliant and
 - follow-up on identified risks



Maintenance Airworthiness Controllers (MAC)

Existing MAC role provides an overarching view of maintenance activity to ensure behaviours are consistent with the:

- QE Safety Vision
- Maintenance Error Reduction Beliefs (MERBS)
- QE Procedural Manual and other Regulatory requirements
- Cardinal rules
- Overview of the day-to-day operation to observe and correct behaviours when carrying out maintenance
- Mentors/coaches



MAC Role Aims

- Improve overall “Airmanship” – coaching to reduce lower risk events
- Supervision distracted by admin tasks

↑ computer use/office work ↓ time supervising

- Supervision misalignment in following procedures
- Support transformational change being undertaken



QE M-LOSA Process

- MACs selected to perform M-LOSAs due to experience, familiarity with business & trust/acceptance by staff
- Briefing sheet for staff
- iAuditor selected as tool to record M-LOSAs

The screenshot displays the iAuditor mobile application interface during an auditing process. The top navigation bar is blue and contains 'Cancel', 'Auditing', and 'Done' buttons. Below this, it shows 'Section 2 of 2 Checklist' and progress indicators '34/34' and '100%'. The main content area is titled 'Safety' and lists several audit items:

- 35. Safety Equipment Worn?** This item has three radio button options: 'Hearing protection', 'Eye Protection', and 'Foot Protection', all of which are currently selected.
- 33. Has enough time been allocated to the task with manpower available?** This item has three radio button options: 'Yes' (selected), 'No', and 'Not Applicable'.
- 34. How many transient workers involved?** This item has a radio button option for '2' which is selected.

Additional interface elements include a 'Select Response' button at the bottom, a 'Comments for Safety Equipment' text field containing 'Appropriate for tasks', and a 'Media for Safety Equipment' section with an 'Add Media' button and a photo thumbnail. A bottom navigation bar shows '00:32:47' and another 'Select Response' button.

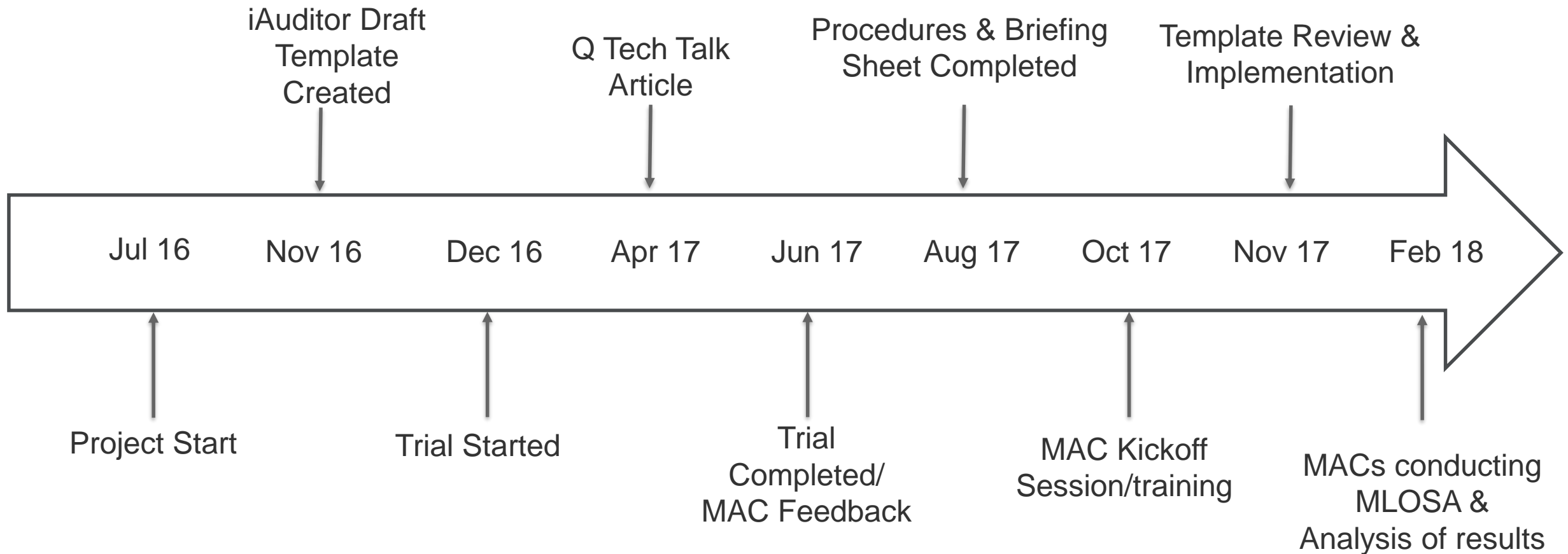
QE M-LOSA Process

iAuditor app features

- Standardised template is shared with MACs and changes automatically shared
- Observations can be recorded via phone/tablet/desktop
- Photos can be uploaded to report
- Observations stored together in system for analysis

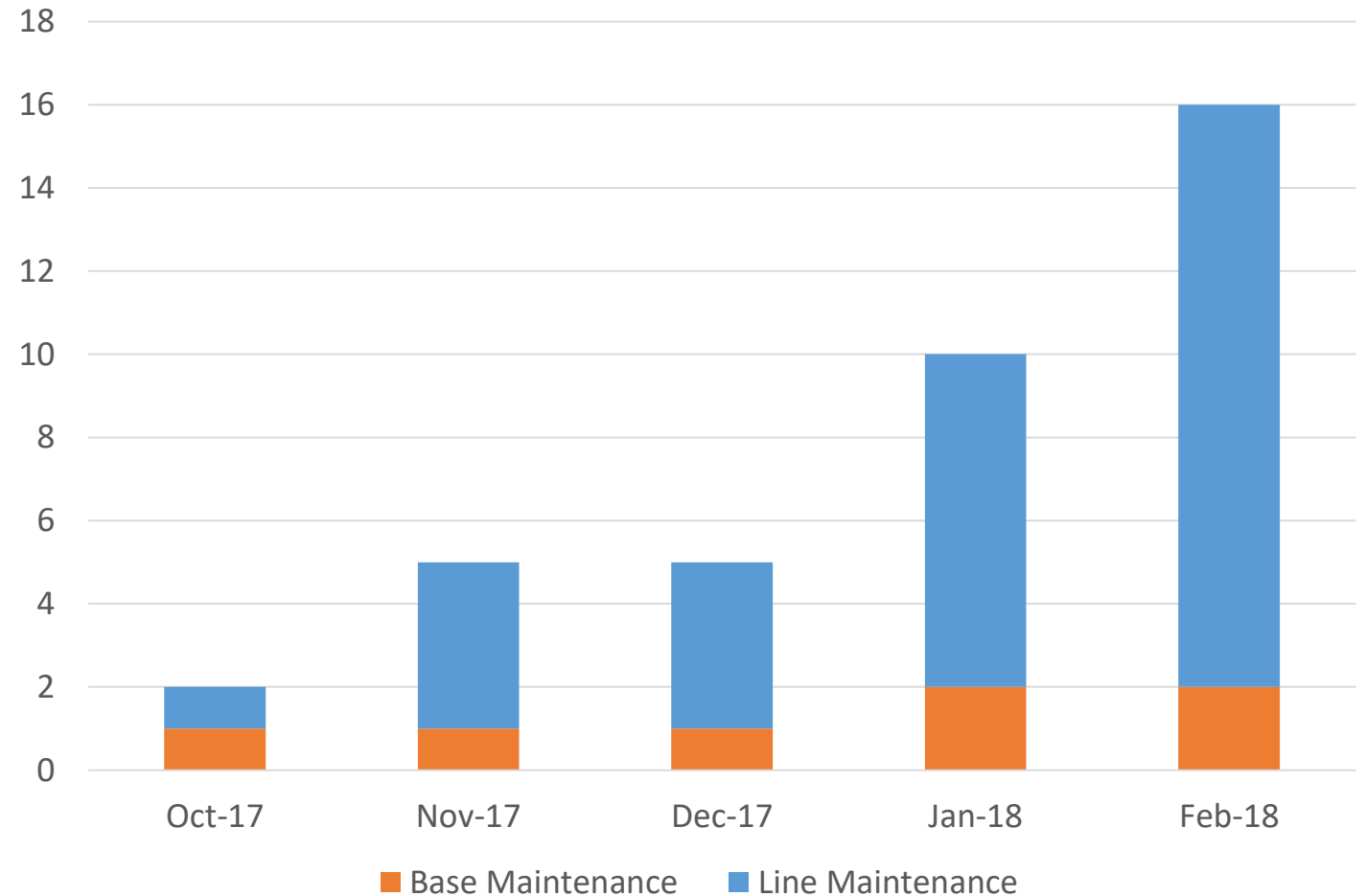
The screenshot displays the iAuditor app interface for an auditing task. The top navigation bar is blue with 'Cancel', 'Auditing', and 'Done' options. Below the navigation bar, the checklist item '35. Safety Equipment Worn?' is shown. Three radio buttons are available for selection: 'Hearing protection', 'Eye Protection', and 'Foot Protection'. A 'Select Response' button is positioned above the 'Comments for Safety Equipment' field, which contains the text 'Appropriate for tasks'. Below the comments field is a 'Media for Safety Equipment' section with an 'Add Media' button. A photo of a worker is visible in the media section. The bottom of the screen shows a 'Select Response' button and a timer for '36. Working at Height' at 00:32:47.

Qantas M-LOSA Timeline



M-LOSA Results

- 38 M-LOSA observations in 9 ports/businesses carried out since Oct 17 by MACs
- Good feedback from MACs & Staff being observed



M-LOSA Results

- Tasks observed include towing, transits, troubleshooting, servicing, MEL application & various component changes
- MLOSA threats observed include
 - Equipment/Tools – Inappropriate for the task, incomplete, not used, defective
 - Information – Not used, Uncontrolled
 - Individual Factors – Task Distractions/Interruptions – Staff interruptions during completion of log
 - Environment/Facilities – e.g. Docking design

M-LOSA Next Steps

- QE M-LOSA Program is maturing
- Areas for improvement
 - Observer skills and familiarisation
 - Identification of threats
 - Enlarge pool of observers into workshops/increase numbers of reports
 - Progress analysis to provide insights into observations to drive improvement actions



Thank You

