NASA Network Sustainment Analysis and Trends

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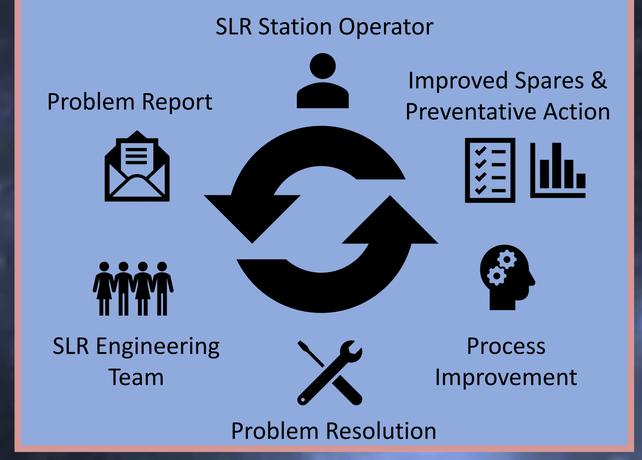
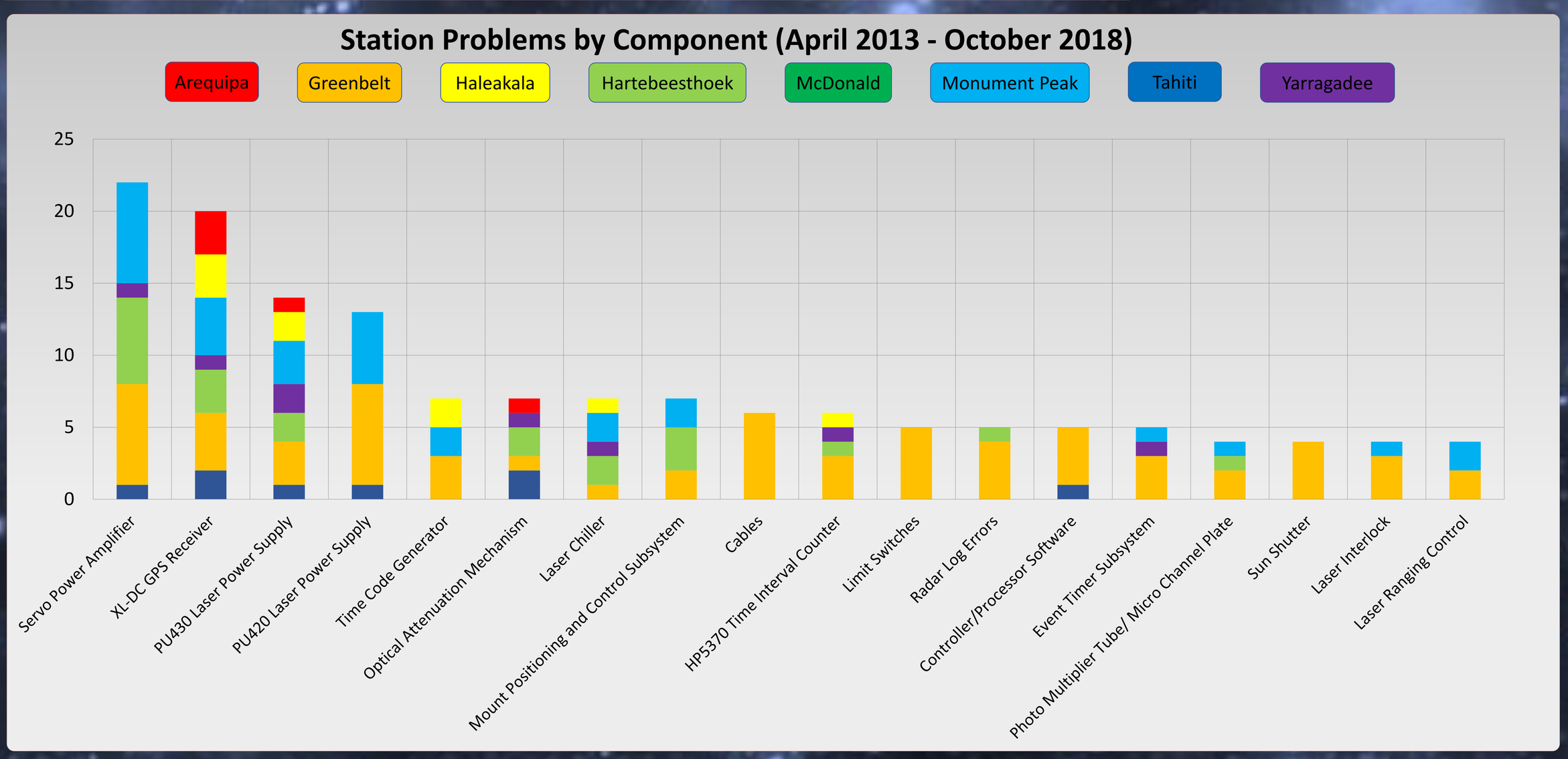
Improved Problem Reporting and Engineering Sustainment Plan

- ❑ Implementation of station problem reporting forms across the NASA network of SLR stations to obtain key data and metrics (subsystem/component failures, root cause).
- ❑ Engineering & operations email listserv for reporting problems and knowledge sharing.
- ❑ Data and metrics feed spare parts posture and engineering solutions for improved reliability and maintainability.
- ❑ Station participation and accurate reporting is critical to the overall process.



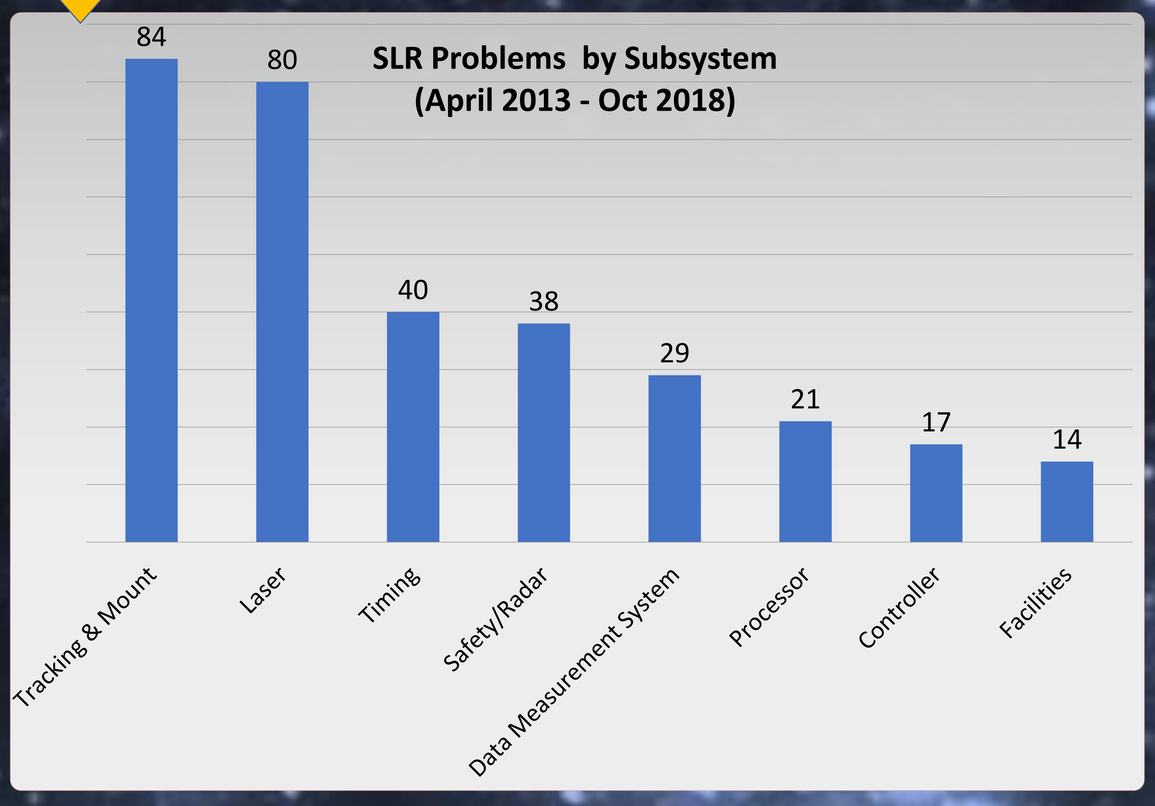


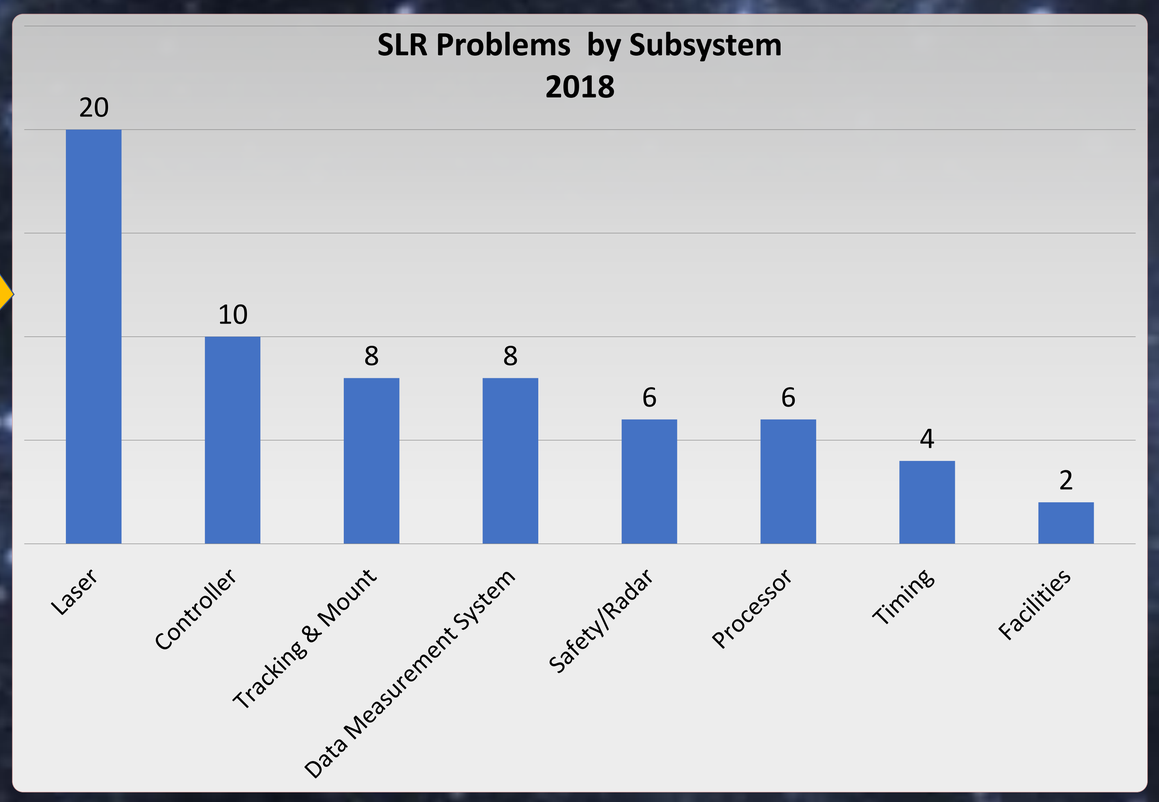
Laser and Tracking & Mount subsystems accounted for 53% of all problems since April 2013.

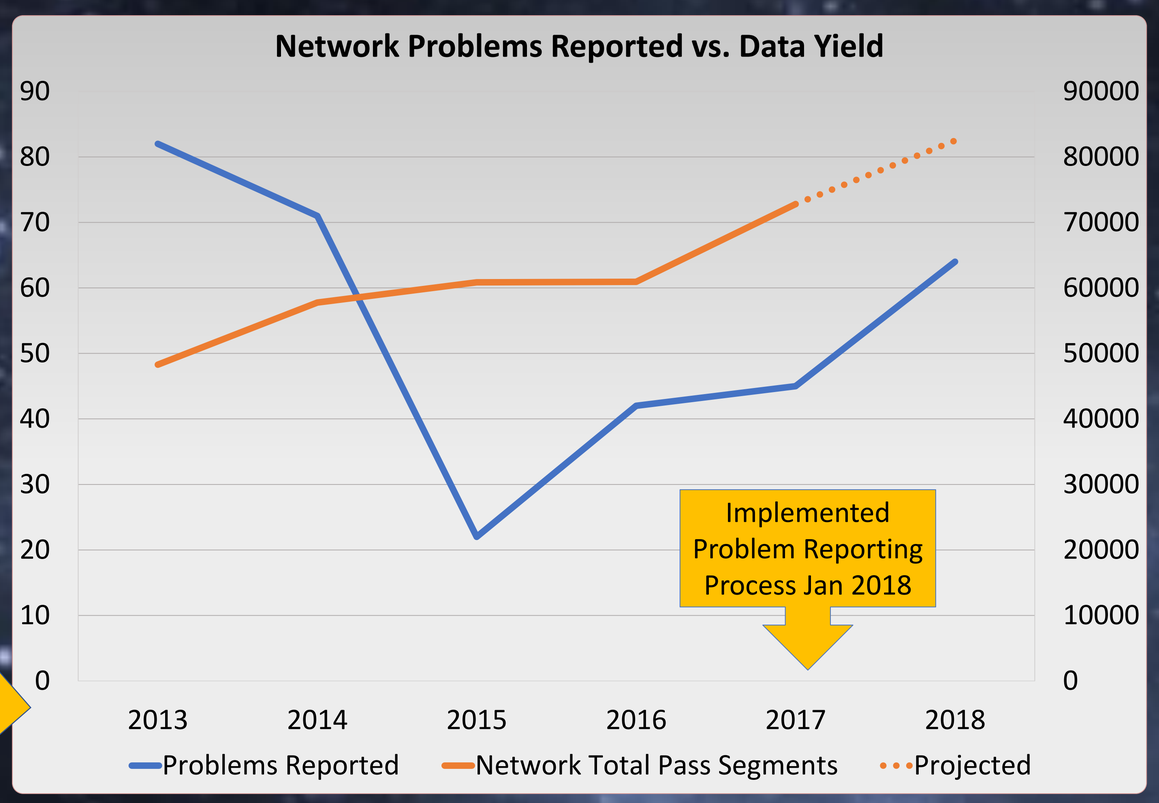
Actions:

- ❑ SLR Engineering procured spare parts and repaired laser power supplies and servo power amplifiers for network spares.
- ❑ Reviewed obsolete components with high failure rates for upgrade or replacement.

Increase in controller hardware issues in 2018 have led to investigation of potential hardware upgrades.







Conclusions:

- ❑ Increase in problem reporting has led to more effective communication for quicker maintenance and repair.
- ❑ Component failure data gives greater insight into sparing and preventative maintenance.
- ❑ SLR Engineering continues to review processes to better understand and define how problem reporting data can be used to improve sustainment activities.

Data yield and problems reported have steadily increased over the last two years, with 2018 data yield projected to surpass 2017 even with an increase in problem reporting.

International Workshop on Laser Ranging (IWLR), Canberra, Australia, November 2018