

AVOIDING PROGRAM DISRUPTION:

HOW A&D COMPANIES CAN LEVERAGE
THE POWER OF CLOUD-BASED PLM



Introduction

The size and complexity of today's aerospace and defense (A&D) programs make it difficult to gain an accurate view of their status. As a result, it's hard for program managers to identify problems and take timely corrective action to avoid costly disruptions.

Findings from Lifecycle Insights' 2023 PLM Study reveal the threat such disruptions pose: Nearly half of study respondents (47%) cited cost overruns and missed deadlines and delays as one of the top-three challenges facing their businesses.

Program Complexity Fuels Disruption

All program managers seek to maintain an accurate view of their programs so they can identify potential issues before they grow into catastrophic disruptions. In the A&D industry, doing so is especially vital, as those problems can easily result in months-long program delays and millions of dollars in added costs. But A&D program managers face a tall task on that front.

The programs they oversee are inherently complex, and their companies often work with numerous contractors, suppliers, and other partners, which only increases the scope of the challenge.

When this complexity overwhelms program managers' ability to keep an accurate view of the program, it's impossible for them to identify problems and take corrective action before issues occur.

To avoid these disruptions and conclude programs on time and on budget, program managers need tools that can give them the visibility they need to assess and deal with potential threats.



PLM Challenges Prevent Widespread Adoption

Product lifecycle management (PLM) solutions provide the capabilities program managers and other cross-functional stakeholders need to capture and maintain the complex product and system definitions at the center of modern A&D programs. These solutions provide the visibility these stakeholders require to gain insight into programs and minimize disruptive outcomes.

Despite the potential advantages of PLM solutions, however, relatively few A&D programs use them. Study findings indicate that nearly half of those surveyed (47%) do not currently use a PLM solution. Findings also suggest that this low level of adoption is caused by the issues that traditional on-premise PLM solutions present.

One such issue is that these solutions can be difficult to deploy—some 40% of respondents said they lack the personnel to plan and manage the adoption process. In addition, 29% of respondents feel that implementing and scaling the solution would be too difficult, and a similar number (28%) lack the necessary IT infrastructure to support adoption.

The difficulty of deployment, added costs, and extensive maintenance needs of on-premise PLM solutions have kept many A&D programs from reducing disruption. As a result, these companies risk the cost overruns and missed deadlines that study respondents identified as among their most pressing challenges.

A&D PROGRAMS FACE ADOPTION BARRIERS

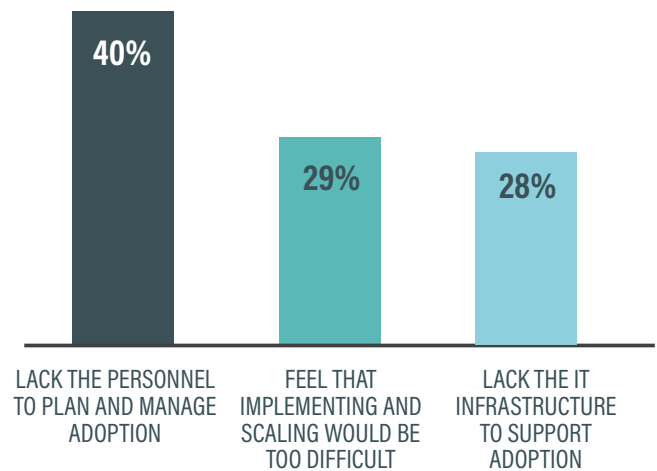


Figure 1
The issues cited above often prevent A&D companies from adopting on-premise PLM solutions.



Cloud-Based PLM Mitigates Adoption Issues and Reduces Disruption

As with their on-premise counterparts, cloud-based PLM solutions provide numerous capabilities that minimize the disruption A&D programs often face. However, cloud-based PLM also provides additional functionality and removes multiple barriers to adoption.

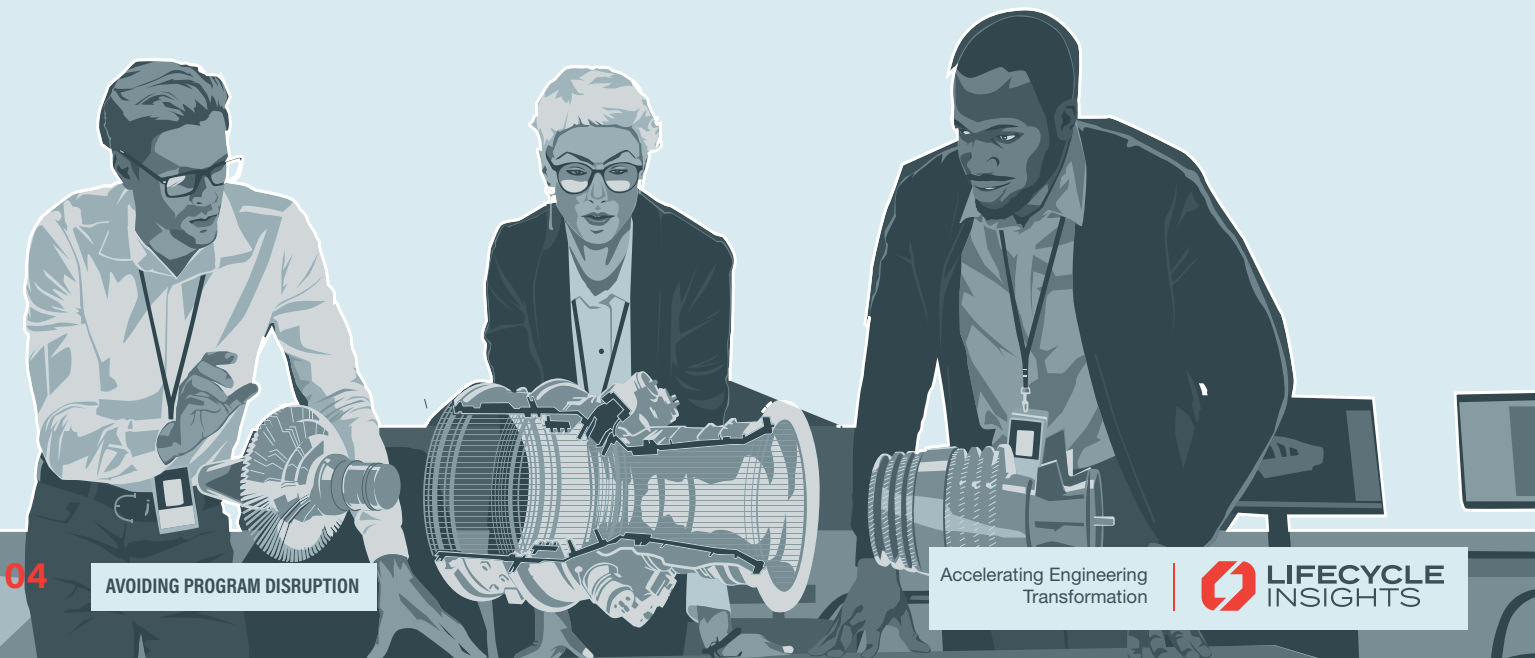
Because these solutions require no dedicated hardware and offer their own IT infrastructure, companies can adopt them without worrying about equipment costs, system maintenance needs, or heavy personnel investments. Cloud-based solutions can also be scaled and provisioned to the size of the program, ensuring that stakeholders don't waste money on unneeded licenses and machines.

Adding users and involving external stakeholders is simpler with cloud-based PLM solutions. Coordinating work with suppliers and other partners gives program managers added insight into potential supply chain and procurement issues, which 65% of study respondents cited as a top-three challenge and which contributes heavily to A&D program disruption.

In addition, cloud-based PLM offers A&D program managers the comprehensive and accurate view they need to find and proactively address issues and errors, thereby avoiding the cost overruns and delays that put program budgets and deadlines at risk.



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Conclusion

Disruption is a near-constant threat when navigating the complexity of modern A&D programs. These programs involve so many moving parts and stakeholders that it is incredibly difficult for program managers to find and resolve every potential problem before it creates more significant consequences. But cloud-based PLM solutions enable them to do exactly that. And because these solutions are easier to deploy, less expensive to maintain, and more readily scalable than their on-premise alternative, A&D programs can mitigate disruption while avoiding the challenges of adoption.

Recommendations

As they consider opportunities to reduce disruption, organizations that participate in A&D programs should:

- assess how they currently build an accurate, up-to-date view of programs;
- determine how democratized, cloud-based PLM solutions that can capture and support complex vehicle and system definitions would affect program managers' ability to gain an accurate, up-to-date view of programs; and
- investigate cloud-based PLM solutions to determine how these solutions would fit within their programs.





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