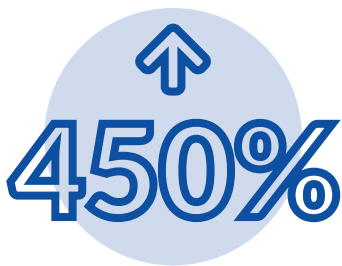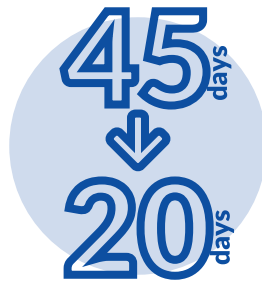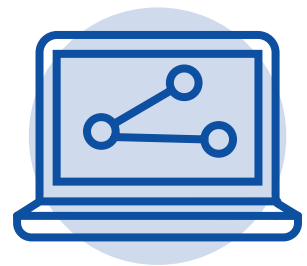# How Lockheed Martin, Northrop Grumman & BAE Systems Support F-35 Training System with LCMS Efficiencies

450%

Increase onboarding team members with dominKnow | ONE LCMS

45 days → **20** days

Faster Content Updates

Integration Capabilities Enabled Realistic Training Scenarios

"*The back-and-forth collaboration with the dominKnow team has been invaluable. Even beyond the initial system transition, the team has continued to work closely alongside us to ensure we're maximizing our investment and being set up for success. You don't find that in many places.*"

Matt Schieber
Instructional System Designer, Lockheed Martin

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Client Overview

Lockheed Martin is a global defense technology company driving innovation and advancing scientific discovery. Their all-domain mission solutions and 21st Century Security® vision accelerate the delivery of transformative technologies to ensure those they serve always stay ahead of ready. The group interviewed here works in collaboration with Northrop Grumman and BAE Systems on the F-35 Lightning II program. Northrop Grumman Corporation is an American multinational aerospace and defense company with 95,000 employees, making it one of the largest military manufacturers and technology providers. BAE Systems, Inc. is the U.S. subsidiary of BAE Systems plc, an international defense, aerospace and security company which delivers a full range of products and services for air, land and naval forces, as well as advanced electronics, security, information technology solutions and customer support services.

Highlights

Challenge

Finding a new LCMS solution with the following capabilities

- On-Premises Deployment
- Smart Content Reuse
- Quizzes and Assessments
- Multi-lingual Support
- Transition of Existing Content

Solution

Leveraging dominKnow's content authoring and knowledge management solution dominKnow | ONE with dynamic publishing and hosting service Convey.

Results

- The time to proficiency for new LCMS authors has decreased from 4-6 months to just 2-3 weeks.
- The time to update and release new content was reduced from 45 days to 20 days.
- The software simulation training in dominKnow has streamlined the training process, integrating real-life simulations into the learning program, and providing better preparation for their next stage of training.

Challenge

Before adopting dominKnow, the team was utilizing Kenexa Learning Content Management System (LCMS), a learning content management system they had set up in the early 2000s. This technology was pivotal in managing the extensive training materials for their programs. However, as IBM deprecated the tool, the team faced the challenge of finding a new solution. This process involved issuing a Request for Information (RFI) to 20+ vendors, shortlisting the responses, spanning a 1.5-year process due to the complexity of their existing setup and the need for a robust replacement.

Evaluation Criteria and Dealbreakers for a New LCMS:

When evaluating the capabilities of their prospective solution, several key criteria influenced the decision. Some of which included:

- **On-Premises Deployment:** The need for on-premises solutions due to sensitive data security and compliance requirements.
- **Smart Content Reuse:** The ability to efficiently manage content across different uses without duplication of authoring efforts.
- **Quizzes and Assessments:** Features for creating and reporting on assessment outcomes were critical for evaluating learner proficiency, and readiness for the next stage of F-35 training.
- **Multi-lingual Support:** As Lockheed Martin's clientele spans multiple countries and languages, the training must be possible in many natively spoken languages (even right-to-left languages).
- **Transition of Existing Content:** Given Lockheed Martin's extensive library of training materials that already existed, effectively converting content from their previous LCMS system (Kenexa), instead of starting over, was critical.

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After dominKnow was chosen as the best LCMS, the conversion process included 70,000+ media assets and 1,000 lessons across 150+ courses. All going through a series of programmatic conversion processes for speed, and supporting services ensuring accuracy to maintain their ongoing editability in the new platform. This also included the necessary metadata and tagging information for future categorization and search capabilities.

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>
> *- Matt Schieber, Instructional System Designer, Lockheed Martin*

User Landscape

The team interviewed here is a small but critical hub to the overall authoring team. They control the administrative and branding elements for all 70+ Lockheed Martin and Northrop Grumman training content authors to be able to create content within the confines of specific Lockheed Martin RMS requirements and do so with speed and quality required to reach the project's goals. This team plays a central role in ensuring accuracy and compliance in branded templates, methods, and processes for all the authors to create and update content to specification as quickly as possible.

Major Pain Points In order to create and maintain best-in-class training content required by Lockheed Martin, the LCMS goes far beyond the list of dealbreakers previously mentioned. Some of the key functions that **Ray and his team have found beneficial in helping them achieve their organizational goals include**:

- **Single-Source Repository:** Centralized content management for streamlined content creation and updating, without any duplication of effort.
- **HTML5 Support:** Facilitating modern, responsive content delivery across any device.
- **Widgets:** Quickly adding customizable elements to enhance learning experiences without a great deal of effort.
- **Language Translation Workflow:** Efficient management of multilingual content.
- **Blended training model:** Flexible content outputs to repurpose content for a classroom setting as well as formal and informal eLearning outputs from the same courseware.
- **Software Training:** Simple lesson creation for software-based lessons, which are easily editable when updates are required. No need for video editing.
- **Triggers:** Enhancing interactivity and engagement within the courses.
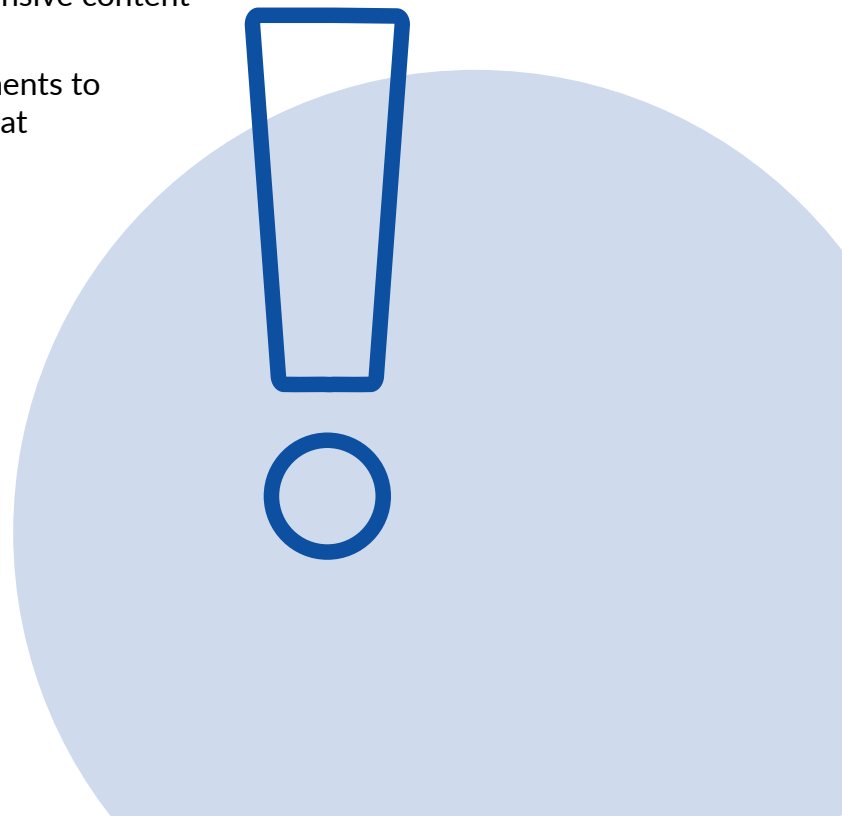
Solution

> *"Overall, dominKnow has delivered on the needs that we had initially set out in our search for an LCMS replacement and continues to be a trusted partner in our training content authoring and management environment for a few key reasons." (listed below)*
>
> *- Matt Schieber, Instructional System Designer, Lockheed Martin*

1. dominKnow has been a trusted partner in not only supporting the transition to a new enterprise platform, but providing ongoing guidance to ensure dominKnow ONE is serving the needs of the evolving F-35 Lightning II 5th generation fighter jet program.

2. The platform has delivered on its promise of creating a **sustainable curriculum** by accommodating efficient workflows required for an enterprise-level learning team to maintain courseware at the speed of business.

3. The level of robustness from the authoring has been central to the team's ability to create engaging, impactful experiences that meet the needs of modern learner sensibilities. This is thanks to many of the built-in themes and functions, and the ability to integrate highly-customized elements that are specific to our needs, like integrating our simulations via SCORM files right into the content.
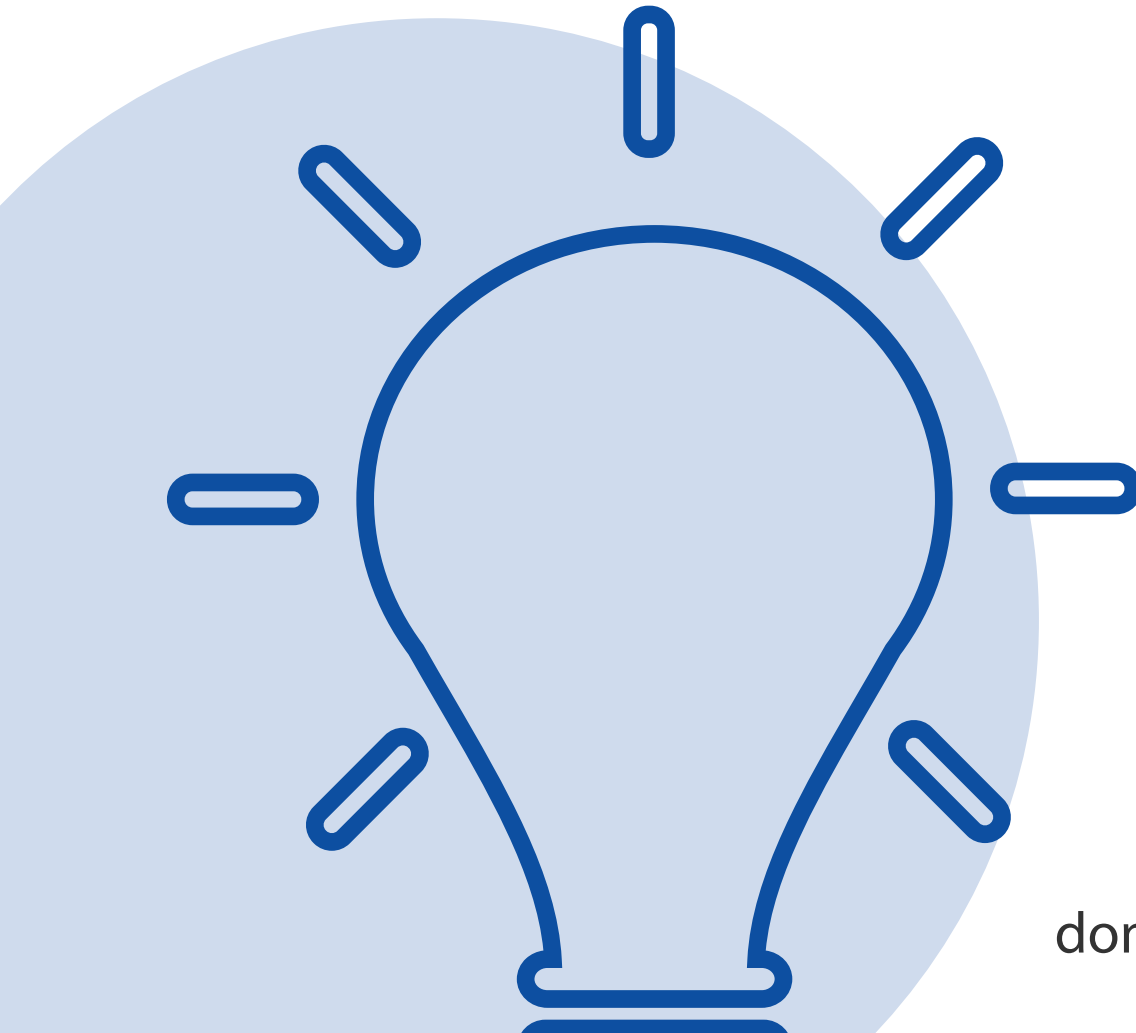
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Results

Since adopting dominKnow less than two years ago, the Lockheed Martin team has achieved several significant improvements:

- **Onboarding Efficiency:** The time to proficiency for new LCMS authors has decreased from 4-6months to just 2-3 weeks – **a 450% improvement!**
- **Content Update Speed:** The time to update and release new content has been reduced from 45days to 20 days – **a 225% improvement!**
- **Training Program:** The software simulation training on dominKnow has streamlined the training process, integrating real-life simulations into the learning program, and providing better preparation for their next stage of training

> *"Through dominKnow's highly configurable capabilities, we've been able to integrate our flight simulations via SCORM file, right into the learning environment, bridging the gap even closer between the training materials and the live 360° dome flight simulator. Ultimately better preparing pilots for the real world."*

- Matt Schieber, Instructional System Designer, Lockheed Martin

Overall, dominKnow has enabled a more effective training environment, aligning with the team's goals of providing a sustainable curriculum, reducing costs, and improving the overall quality and speed of content delivery.

"

"Of all the goals for the training team, the most important is the sustainability of the curriculum, which is a big cost-factor for the program. dominKnow LCMS facilitates those efficiencies for us."

Ray Gutierrez

F-35 Lead System Engineer, Integration & Test at Northrop Grumman

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What's Next

What's next for F-35 Lightning II Training team?

The collaborative teams of Lockheed Martin, Northrop Grumman, and BAE Systems continue to push the limits, ensuring mission readiness for pilots and maintainers. Near-term, the specific advancements targeted are to provide a better overall UX for students that allow them to navigate the courseware and testing with more fluidity, as to provide a better outcome, and not have to work within the confines a particular learning process.

LOCKHEED MARTIN　　**NORTHROP GRUMMAN**　　**BAE SYSTEMS**

About the contributors.

Individuals interviewed are learning specialists collaborating on the F-35 program from Lockheed Martin, Northrop Grumman, and BAE Systems.

Matt Schieber: Instructional System Designer – Lockheed Martin. 15 year veteran in aerospace, and 8 years on the F-35 program.

Ray Gutierrez: Northrop Grumman. 14 year veteran on the F-35 program, starting off as a subject matter expert in maintenance engineering, later transitioning to systems engineering and testing.

Allysia Lara: Communications lead, F-35 Training and Logistics, Lockheed Martin. 7-years in the program, responsible for marketing and communications.

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