WHITEPAPER

DAU SysML Workshop Comparison With Cameo & Innoslate

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EXECUTIVE SUMMARY

This report presents a comparative analysis of two Systems Modeling Language (SysML) tools: CATIA Magic Systems of Systems Architect (Cameo) and SPEC Innovations' Innoslate, used in the WSE-032: Digital Acquisition Modeling Workshop offered by the Defense Acquisition University (DAU). The workshop teaches Model-Based Systems Engineering (MBSE) using Systems Modeling Language (SysML), with the Photon Torpedo system model serving as a common instructional example.

A pilot Innoslate workshop conducted in July 2025 evaluated the effectiveness of Innoslate as compared to seven previously held Cameo workshops. Twelve participants registered in the pilot, with eight completing all 10 lessons. The results showed that Innoslate significantly reduced lesson completion time—by an average of 43%—while maintaining instructional integrity and improving usability. Lessons 04 (Block Definition Diagram) and 05 (Activity Diagram) showed the most significant time savings, with reductions of 58% and 54% respectively.

The findings support a recommendation to adopt Innoslate as another primary tool for WSE-032 and future MBSE training initiatives.

INTRODUCTION

The Defense Acquisition University (DAU) is a training organization within the U.S. Department of Defense (DoD) and is committed to training and educating defense acquisition professionals with the knowledge, skills, and tools necessary to advance their careers. DAU's mission spans multiple disciplines, from program management to logistics and engineering. The wide range of available education ensures that all defense acquisition personnel across the DoD are prepared to operate in a rapidly evolving environment.

One course offered by DAU is WSE-032: Digital Acquisition Modeling Workshop. This course is designed to introduce the defense acquisition students to the fundamentals of Model-Based Systems Engineering (MBSE). To do this, students are guided through a sequence of 10 lessons.

With each lesson, students progress from importing requirements to modeling system behavior and even simulating different scenarios of an example kill chain, all within a digital environment. More specifically, students work within the DAU Digital Engineering Ecosystem, building diagrams that adhere to the Systems Modeling Language (SysML). This entails capturing requirements in the Requirements Diagram, defining the system architecture through Block Definition Diagrams, and modeling system behavior through Activity and Use Case Diagrams, along with additional diagrams for detailing various aspects of the system.

This workshop is an asynchronous, self-paced course suitable for students of any level of prior MBSE knowledge. This means that students are not formally instructed by DAU staff and can complete lessons at any time, ideally without any instructor intervention. WSE-032 places the responsibility of learning primarily on the individual. Because this workshop is a self-paced course, each lesson that students complete must be clear, organized, and accessible. Without a live instructor to guide them, learners must rely entirely on the provided resources and materials to understand the concept of SysML and how exactly to proceed to the next step.

Previously, DAU has used CATIA Magic Systems of Systems Architect (Cameo) as the MBSE tool that students use to model these SysML diagrams. This is because Cameo was preemptively selected to be DAU's primary MBSE tool with no alternative tool evaluation. While Cameo is a powerful and widely used MBSE tool, its complexity, steep learning curve, and tool limitations create challenges for new users, especially those unfamiliar with MBSE in the first place. Additionally, DAU's goal with WSE-032 is to teach the concepts and methodology of SysML, not to train students on a single proprietary tool. Students and staff at DAU have requested to explore alternative tools to support their MBSE workshops and needs. This creates an opportunity to explore additional platforms/tools that can make the learning process even more accessible while still preserving the core concepts of this workshop and providing the same SysML instruction.

Recognizing these established challenges and opportunities, SPEC Innovations has been working closely with DAU to adapt the entirety of WSE-032 into Innoslate, the cloud and web-based MBSE platform specifically designed for accessibility, collaboration, and ease of use. The ability to host the workshop entirely within an online browser removes many barriers, including installation, licensing, or even the need to use a virtual machine just to access the tool.

The objective of this whitepaper is to document the process used to translate WSE-032 from Cameo to Innoslate, showcase the findings that were yielded from a pilot workshop test after the translation was complete, and analyze the results to confirm if the transition from Cameo to Innoslate led to an improved change in student efficiency and understanding of the SysML concepts taught in WSE-032.

BACKGROUND

As mentioned in the introduction, WSE-032 was originally taught using 10 lessons specifically designed for Cameo. These lessons had to be revised for Innoslate to assess the feasibility of teaching the same SysML concepts in a different tool. This transition was not a direct export or automated conversion due to the entire system architecture being different between the two tools, as well as specific screenshots and buttons being integrated into the lessons (in the form of telling students exactly which buttons to click and where to go in Cameo). Because of this, a full manual recreation of the photon torpedo model had to be done. The process of recreating all 10 lessons took several months, complete with multiple review processes and revisions. It required careful translation of every instructional step, from logging on to adding entities from the Cameo-based workshop, into Innoslate's architecture, while still preserving the logical flow, learning objectives, and overall instructional clarity.

The Cameo workshop was meticulously designed, complete with comprehensive instructions in workbook and video form, that supported the needs of students with no prior experience in either Cameo or SysML itself. These materials even included detailed narrative explanations, numerous annotated screenshots, and a step-by-step format that left virtually no confusion on which buttons to press, menus to navigate, or elements to create. This approach to instruction enabled students to progress through each lesson independently, with relatively minimal instructor intervention. Replicating this level of detail in each lesson instruction became a high priority when recreating the Innoslate version of the workshop. Every click, drag, and menu selection required for each lesson had to be explicitly documented. This ensured that learners new to Innoslate could follow the instructions without any confusion, regardless of any prior modeling experience. Due to the differences between Cameo and Innoslate tools, a one-to-one transition was impossible. Some adaptations to lessons were required to align the lessons with Innoslate's modeling environment and user interface.

However, the underlying foundation of SysML concepts, such as creating diagrams and demonstrating model traceability, was still preserved. In some cases, system functionality was even enhanced due to the expansive features that Innoslate offers, such as diagram simulation, report creation, and verification analysis, which Cameo could not easily offer.

Each of the 10 lessons in the WSE-032 SysML workshop is structured to introduce a specific SysML diagram or matrix and progressively build the photon torpedo system model. At the start of the class, students begin with a brand-new project and conclude with a complete, holistic, and traceable model. By adapting these lessons to Innoslate, the intent was to preserve both the detailed instructional sequence (complete with annotated screenshots) and the progressive laying of model elements, so that a new lesson builds off the previous lesson's work. Each of the 10 lessons is explained in detail below. The description of each lesson holds for both Cameo and Innoslate-led versions of the workshop. However, if Innoslate's version was drastically different than Cameo's counterpart, then those differences are noted within the description. Screenshots of each completed lesson are also shown in the appendix:

Lesson 01: DAU Enterprise Ecosystem and Model Structure Package Diagram (pkg): The first lesson, in Cameo, introduces students to DAU's modeling environment and instructs students how to access DAU's virtual machine, DAU's OneDrive, and Cameo for creating the SysML diagrams. It also teaches students how to utilize DAU's Microsoft Teams as the main workshop repository for all the lessons and communications between the students and the instructors, including Office Hours. In Innoslate, students did not need to use many of DAU's enterprise ecosystem elements, including the virtual machine, OneDrive, or Microsoft Teams as the main workshop repository, due to Innoslate's capability of hosting its ecosystem within the web-based tool. Because of this, Innoslate's version of this lesson was heavily modified to introduce students to Innoslate's features, such as how to access the tool, navigate within the tool to access each lesson's workbook, create and export the SysML diagrams and matrices, and provide student feedback. DAU's Microsoft Teams was used only for online meetings between the students and the instructors during Office Hours. In Cameo's version of this lesson, the package diagram and other model elements were already created, such as the general structure of the model, including named folders and a defined logical architecture. In Innoslate's version of this lesson, students start with a completely blank project and create their SysML Package diagrams on their own. Students then export their diagrams within Innoslate into a MS Word document file, which, along with their model captured in Innoslate, is the student deliverable for each lesson.

Lesson 02: Analyze Stakeholder Needs - Use Case Diagram (uc): The second lesson focuses on defining the behavioral modeling of the system through a Use Case Diagram. Students identify and diagram the photon torpedo's primary interactions with internal and external actors, which will define the scope of the system's functionality from a zoomed-out operational perspective.

Lesson 03: Analyze Stakeholder Needs - Requirements Diagram (req) & Requirements Matrix: The third lesson moves into defining the system's requirements. In Cameo, students first import the requirements from their OneDrive by copying the Excel file over from DAU's Microsoft Teams file repository. In Innoslate, students first import the requirements found in the Excel file from the database within the tool itself. The requirements are then structured into a hierarchy within the Requirements Diagram. These requirements are then put into a matrix where they can be traced to other project elements.

Lesson 04: Define Logical Architecture - Block Definition Diagram (bdd): The fourth lesson covers structural modeling of the photon torpedo's subsystem elements. Students create a Block Definition Diagram to define the components that make up the photon torpedo system, as well as establish the hierarchy and relationships between these components.

Lesson 05: Define Logical Architecture - Activity Diagram (act): The fifth lesson continues the logical architecture by creating an Activity Diagram to represent a high-level workflow of the photon torpedo system. Swimlanes, actions, and control flows are created to visualize the system's behavior.

Lesson 06: Internal Block Diagram (ibd): The sixth lesson focuses on the internal structure of the system by modeling how its components interact with each other and how data (messages, information, orders, etc.) flows from one subsystem to another. This is done through the Internal Block Diagram.

Lesson 07: Parametric Diagram (par): The seventh lesson has students building a parametric diagram. This showcases how performance, constraints, and other variables are used to measure system behavior and specifications. For this lesson, weight was the parametric being investigated and compared against the requirement.

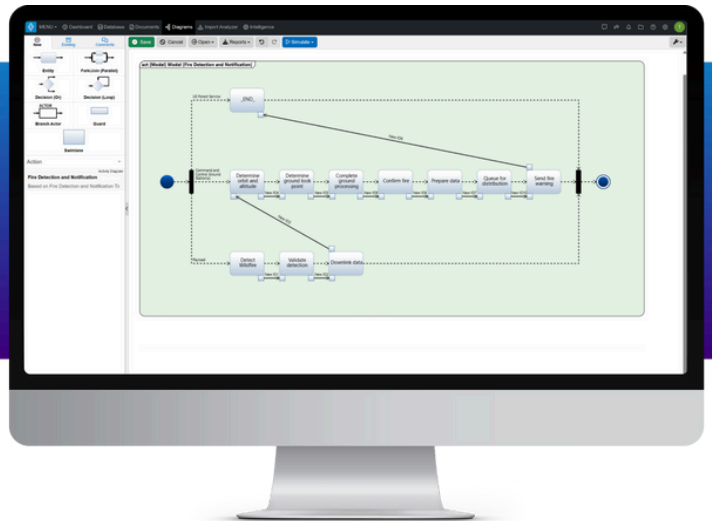
Lesson 08: Sequence Diagram (seq): The eighth lesson further models system behavior using the Sequence Diagram, which represents the step-by-step message interactions between the system and external entities during a specific scenario.

Lesson 09: State Machine Diagram (stm): The ninth lesson has students model various operational states of the photon torpedo through the State Machine Diagram. This shows the different actions performed by the system and the events that trigger transitions between them.

Lesson 10: Traceability Matrix and Allocation Matrix: The tenth and final lesson concludes the workshop by generating traceability matrices that illustrate exactly how all model elements are interconnected. This final step especially demonstrates the importance of building a coherent, consistent, and traceable model that can be analyzed and followed. In the event that any parts of the instructions were missed and components are not connected, that mistake will be evident in this lesson.

Bonus Lesson: Presentation PowerPoint Report Instructions: This is a bonus lesson for both Innoslate and Cameo versions of WSE-032, where students compile all work in a PowerPoint-like presentation. In Cameo, students create a PowerPoint report template, import all lesson diagrams into this template, and save this presentation via a PowerPoint tool to then open that tool to showcase all completed lessons and diagrams. Innoslate simplifies this process by allowing students to do so in Presentation View where slides are created to showcase the live diagram in each of the 10 lessons. Note that if the diagrams are updated anywhere in the project, those changes will also be reflected in the slides. Also, the presentation slides can be saved as a PowerPoint file.

Once all 10 lessons have been completed, students will have created an entire photon torpedo system model that is traceable, holistic, and cohesive. These lessons are the core framework for WSE-032 and provide participants with foundational knowledge of SysML.



PURPOSE

The purpose of this whitepaper is to evaluate the feasibility and overall effectiveness of having students complete the WSE-032 workshop (SysML Immersion) using Innoslate as compared to Cameo. By replicating each of the previously mentioned lessons from the DAU curriculum within Innoslate's digital environment, this whitepaper will determine whether students can achieve the same learning objectives when using Innoslate as they can when using Cameo. It is important to note that this study is not intended to completely replace the teaching or use of Cameo for WSE-032 since doing so would go against DAU's core concept of teaching SysML for this workshop, not teaching a single tool. Instead, it will focus on identifying where Innoslate can provide equal or even improved efficiency and learning comprehension in a SysML training environment.

METRICS

To effectively evaluate Innoslate's effectiveness as another tool for the WSE-032 workshop, a set of metrics was established before the start of the pilot test. These metrics were administered through feedback forms that pilot testers completed after each lesson. These metrics were designed to capture both quantitative and qualitative aspects of the 10 lessons. As the overall goal was to ensure a fair comparison between the two tools, the same feedback questions used in the actual Cameo-led workshop were also used in the Innoslate-led pilot workshop. By doing so, a fair analysis can be conducted to assess whether Innoslate meets or exceeds the instructional value delivered by Cameo.

One difference between the two tools immediately noticed was how the feedback was administered. The Cameo workshop relied heavily on Microsoft Teams to publish student resource documents, host office hours for students/staff to communicate, share feedback forms/data metrics, and much more. In contrast, the Innoslate tool enabled document sharing, fostered collaboration, facilitated immediate feedback changes, and retained feedback form data all within Innoslate itself. This was especially useful for pilot testing because testers did not need to navigate away from Innoslate when completing lessons, and feedback was readily available upon submission of the forms.

The feedback form questions, along with the Innoslate attributes used for each question, are as follows (an image of the feedback form is available in the appendix):

- **Lesson Number (Enumeration):** A list of options for students to click and select which lesson the feedback is referring to.
- **Start Time (Date & Time):** A time/date option for students to specify the exact day and time they started the lesson.
- **Completion Time (Date & Time):** A time/date option for students to specify the exact day and time they completed the lesson.
- **Email (Text):** A text field for students to enter their DAU student email address.
- **Student (Text):** A text field for students to enter their names.
- **Total Points (Number):** A number field to see the total number of points this lesson was worth. Note that it is set to a default of 1 by DAU staff, and students do not edit this field.
- **Estimate how much time you spent on this lesson in hours (Enumeration):** One of the most important fields for collecting metric data. A list of time options ranging from 1, 2, or 3 hours depicting how long students took to complete each lesson.
- **Overall, how would you rate this lesson? (1-5) (Enumeration):** A list of options from 1 to 5 for students to rate the lesson.
- **Were the instructions for the lesson easy to follow? (Enumeration)**: A yes or no option for students to provide feedback on the ease of use of the instructions.
- **Do you feel like you met the learning objectives? (Enumeration):** A yes or no option for students to provide feedback on the learning objectives.
- **Do you affirm that the work submitted in the correct naming syntax was completed by you with no outside assistance? (Enumeration):** A yes or no option to confirm that students' work was their own without unauthorized help.
- **Points - Do you affirm the work submitted in the correct naming syntax was completed by you with no outside assistance? (Number):** A point awarded to confirm that the students' work was their own. Note that it is set to a default of 1 by DAU staff. It should be 0 if the previous question was answered "no".
- **How can we improve this lesson? (Text):** Another vital prompt for students to provide feedback and improvements to the lesson they believe should be added.
- **What worked well and what could use some work for the class or this lesson? (Text):** Another text field for students to voice their feedback on the lesson or class in general.
- **Attach your MS Word file generated as the SysML report for this lesson (File):** A prompt that allows students to insert a file to submit their report for the lesson.

After the pilot student testing period concluded, the feedback forms that were completed by participants were then collected and analyzed. The qualitative inputs, such as open-ended lesson improvement suggestions, provided valuable insights into the user experience while using Innoslate. However, **the primary quantitative measure used in this paper's results was the time it took for users to complete each lesson.** This metric was prioritized due to its direct reflection of the ability of Innoslate to facilitate learning. By comparing the time for completion data from both Cameo and Innoslate workshops, a comparative analysis can be made to determine if Innoslate can offer measurable gains in learning efficiency and is worth adding to DAU's suite of available tools for students to learn SysML. **Another metric that was documented and used for this analysis was the page count for each lesson workbook that students had to follow to complete the lesson.** By comparing the page count for each workbook from both Cameo and Innoslate workshops, a comparative analysis was made to determine if Innoslate can offer measurable gains in reducing learning friction for students and saving DAU time when updates to these workbooks become necessary.

RESULTS

The overall pilot student reception of Innoslate during the pilot workshop was universally positive. The qualitative feedback from pilot student testers concluded that they had strong enthusiasm for using Innoslate. Each student tester who completed all 10 lessons expressed very positive opinions about their experience. Many users described the tool as intuitive and easy to use and navigate. After completing the final lesson, many student testers even expressed their interest in continuing to use Innoslate for future applications in their work environment. This confirms the qualitative value proposition. In addition to the testers' initial approval, they also provided suggestions for future improvement to Innoslate, ideas that can further enhance the tool's functionality.

From a quantitative perspective, the pilot test results showed a substantial reduction in lesson competition times compared to previous WSE-032 workshops conducted using Cameo. There was a total of 12 pilot testers, of whom seven provided detailed information on lesson duration times. Three testers had to drop out of the pilot due to outside work-related reasons, and others did not provide usable quantitative feedback. Historical data from 7 prior Cameo-led workshops held in 2024 were used to calculate the Cameo baseline for Innoslate to be compared to.

From the recorded data from these Cameo workshops, it was calculated that it took students an average of 22 hours to complete all 10 lessons. By contrast, the pilot student testers using Innoslate completed all lessons in an average of about 12.5 hours. On a per-lesson basis, Innoslate users averaged about 75 minutes (1.2 hrs) per lesson, whereas Cameo users averaged about 2.2 hours (132 mins) per lesson.

Table 1 breaks down the average completion (duration) time for each lesson between Cameo and Innoslate and the reduction in time with Innoslate as compared to Cameo.

Lesson No.	Lesson Completion Times		Ratio of	Reduction in
	Cameo (mins)	Innoslate (mins)	Inn/Cam (%)	Time (%)
Lesson 01	120	68.4	57.0	43.0
Lesson 02	108	68.4	63.3	36.7
Lesson 03	126	77.4	61.4	38.6
Lesson 04	162	68.4	42.2	57.8
Lesson 05	168	77.4	46.1	53.9
Lesson 06	138	68.4	49.6	50.4
Lesson 07	162	94.2	58.1	41.9
Lesson 08	138	68.4	49.6	50.4
Lesson 09	108	77.4	71.7	28.3
Lesson 10	90	77.4	86.0	14.0
Average	**132**	**74.6**	**56.5**	**43.5**

Table 1. Lesson Completion Time

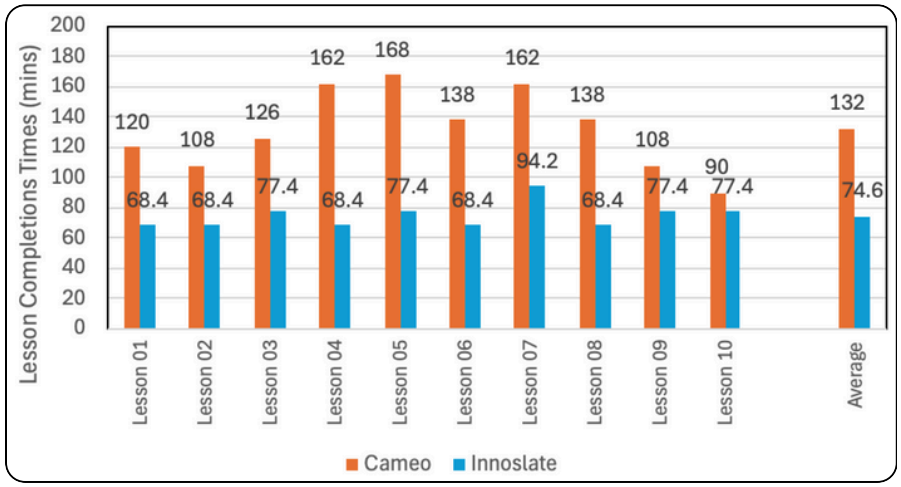


Figure 1. Comparison of Innoslate & Cameo Lesson Completion Times

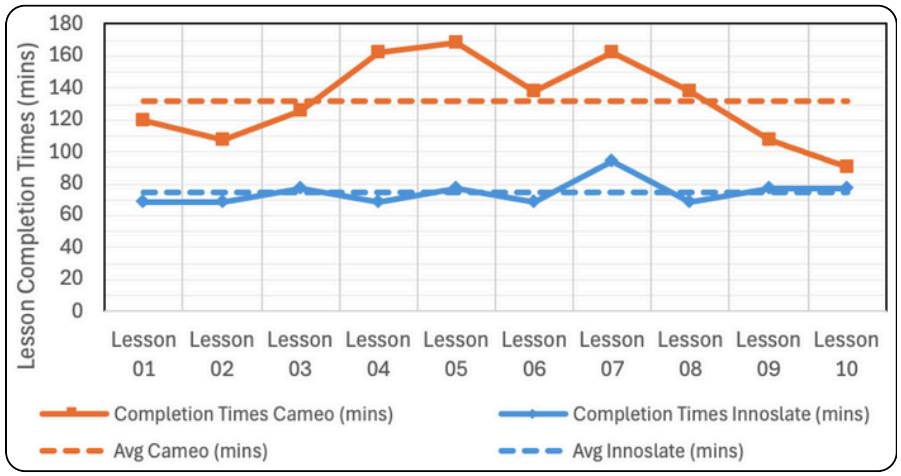


Figure 2. Lesson Completion Times Compared to Average

Across the board, pilot testers completed each lesson in less time using the Innoslate tool and associated digital ecosystem than the Cameo tool and its associated ecosystem. This result was an unexpected outcome given that users had little to no experience with Innoslate before this pilot workshop. There is one notable outlier in Innoslate's data during pilot testing. One participant logged completion times that were significantly longer than the group average. Upon investigation, it was revealed that this participant intentionally took much more time to work through each lesson in very fine detail. This was reflected in the feedback provided for each lesson, as it was much more specific and refined than all other testers' feedback. As a result of this feedback, however, his recorded times reflected not only the duration of completing the lesson but also the additional time spent on thoroughly reviewing and incorporating revision suggestions for lesson content. The breakdown of each tester's lesson time can also be found in the Appendix. Overall, the above data suggest that Innoslate both maintained high levels of satisfaction among participants and improved the efficiency of lesson completion.

Another important note that may have helped contribute to the difference in workshop times was the length of the instructional document in terms of pages. **Across all 10 lessons, the Cameo lesson averaged about 78 pages per lesson, whereas the Innoslate lesson documents averaged about 34 pages per lesson, which is a reduction of about 54% in document length.** Of those pages in the Cameo instruction documents, a sizeable chunk of the guides was dedicated to manually assembling the lesson report, which was not needed in Innoslate. Reports in Innoslate can be created with a single "Reports" button click, eliminating the need for a lengthy explanation of how to build a report. A breakdown of the per-lesson page count is seen in Table 2.

Total Workbook Page Count			
Lesson	Cameo	Innoslate	Page Count Reduction (%)
1	45	28	37.8
2	53	35	34
3	67	39	41.8
4	86	21	75.6
5	92	50	45.7
6	98	32	67.3
7	90	33	63.3
8	95	33	65.3
9	85	26	69.4
10	71	43	39.4
Average	**78.2**	**34.0**	**54.0**

Table 2. Instruction Page Count per Workbook Lesson

[View the final data spreadsheet.]

SUMMARY

This pilot study evaluated whether Defense Acquisition University's WSE-032: Digital Acquisition Modeling workshop, which has previously been completed using Cameo, could be fully and effectively completed using Innoslate. Over a several-month process of converting each lesson, instruction, and diagram from Cameo to Innoslate, all 10 lessons were faithfully recreated with step-by-step instructions (capturing every click, menu opening, and element) so that students with no prior experience in the tool could work independently from an instructor. Afterwards, a pilot student test was conducted with DoD and DAU personnel to validate the reconstruction of the lessons. Due to Innoslate's cloud native capabilities, lessons, feedback forms, and instruction guides can all be administered and performed within the tool ecosystem without needing to navigate elsewhere, which greatly helped the setup and execution of the pilot. The only outside capability Innoslate needed to use was the online meeting capability of a tool such as DAU's Microsoft Teams video group call to host the daily Office Hours.

Feedback was divided into qualitative and quantitative metrics. Of the qualitative feedback, Innoslate was unanimously favored and regarded positively. Student testers found the tool intuitive and well-suited for their future modeling work outside of the workshop. Student testers even offered creative and constructive suggestions for future improvements to Innoslate. Of the quantitative feedback, the data showed a substantial reduction in time to lesson completion when using Innoslate versus previous Cameo-based workshops of WSE-032. Using the available detailed lesson durations from 7 of the 12 pilot student testers and historical averages of 7 prior Cameo workshops, it was calculated that course completion times dropped from roughly 22 hours using Cameo to approximately 12.5 hours using Innoslate. Per-lesson averages were about 75 minutes in Innoslate and about 132 minutes in Cameo. Every lesson exhibited a sizeable time difference, and in most cases reduced completion time by roughly one hour while still retaining the core concepts of SysML and its diagrams.

Overall, the pilot student workshop demonstrated that Innoslate can feasibly be implemented into DAU's Mission Assistance and catalog of available tools for this WSE-032 workshop. Also, students reported high usability and willingness to adopt the tool, and Innoslate's digital environment can significantly reduce the time required to finish each lesson.

RECOMMENDATIONS

Over the course of the pilot, testers identified multiple gaps in the instructions that affected their ability to complete the lesson seamlessly. Before the full-scale implementation of Innoslate in WSE-032 can begin, each lesson must be revised to address all points of feedback given. It is also recommended to have another pilot with a much larger student group to strengthen the data and metrics found initially. As mentioned previously, detailed timing data were available for only 7 of the 12 pilot participants, while the historical Cameo benchmark provided data from 7 previously run workshops. Assessing more students with Innoslate will significantly strengthen the data showcased, enabling us to determine whether the outlier in Innoslate's metrics was an isolated instance or a more consistent trend.

Since student testers expressed ease of use of Innoslate and a willingness to adopt Innoslate for future modeling work, a case can be made that Innoslate can potentially support longer-term training and use beyond a single workshop. This is why it is also recommended to possibly expand Innoslate's use to additional courses and workshops, as Innoslate is a tool that is not exclusively for systems engineering, but can be used by other functional areas.

CONCLUSION

The pilot workshop demonstrated that delivering WSE-032 through Innoslate is not only welcome, as DAU wishes to teach knowledge, not tools, but also offers several instructional advantages. Most notably, there were substantial and consistent reductions in lesson completion time. These reductions were seen in both per-lesson and total course time data. When factoring in the uniformly positive qualitative feedback about usability and onboarding, the overall results suggest that Innoslate does reduce learning friction and required learning overhead so that students can stay focused on learning SysML concepts rather than learning tool mechanics.

The result of all this work was a complete, tool-specific workshop that mirrored the learning objectives of the original Cameo workshop while taking advantage of Innoslate's unique capabilities. Since most workshop elements, such as lesson instructions, documentation, and feedback were hosted inside Innoslate's environment, student testers experienced fewer switches to other applications, simpler artifact submission, and faster access to instructions/guidance. As a whole, the pilot workshop gave clear evidence that Innoslate can achieve WSE-032 learning objectives with a strong user acceptance while still preserving model completeness and traceability.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Ready to Make the Switch to Innoslate?
If your organization is using CATIA Magic Systems of Systems Architect (Cameo), explore our **CATIA to Innoslate Transition Guide** to learn how to seamlessly transition your models & workflows to Innoslate.
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APPENDIX

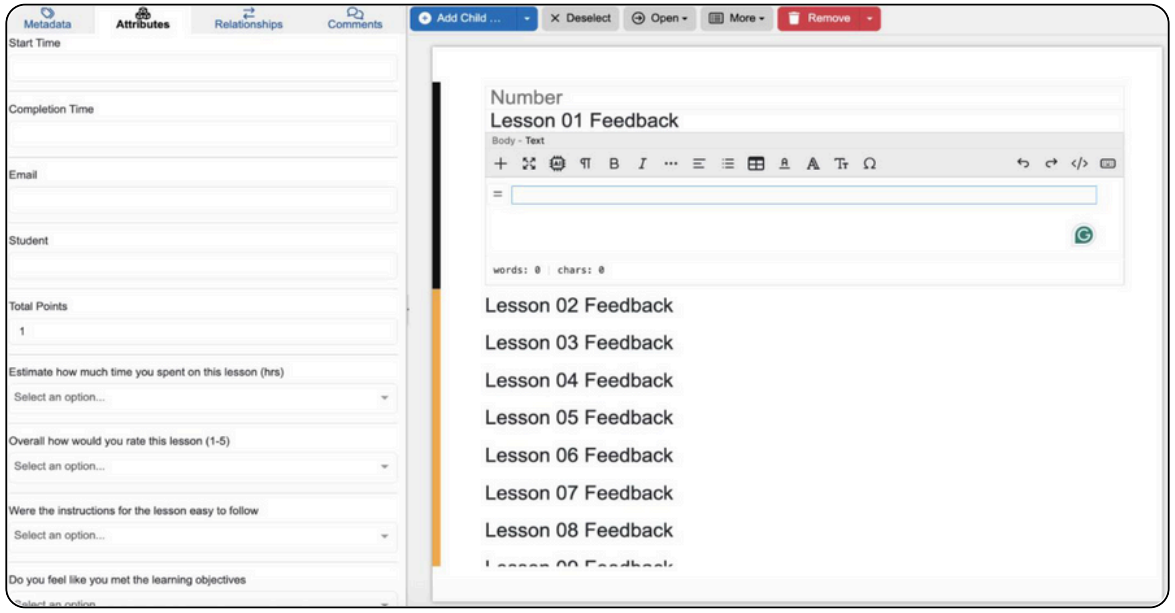

Figure 3. Student Feedback Form

WSE-032 Total Students Passing		*161*	AVERAGE HOURS / LESSON										
AVERAGES OF	7	Offerings	*2.0*	*1.8*	*2.1*	*2.7*	*2.8*	*2.3*	*2.7*	*2.3*	*1.8*	*1.5*	*2.2*
COURSE	**MONTH**	**PASS**	**L01**	**L02**	**L03**	**L04**	**L05**	**L06**	**L07**	**L08**	**L09**	**L10**	**HR/Lesson**
MAY PILOT	MAY '24	31	1.9	1.3	1.8	2.1	2.4	1.8	2.4	2.1	1.6	1.4	*1.9*
WSE 032-2024-22280	JUN '24	30	1.8	1.6	2.0	2.4	2.7	2.1	2.7	2.2	1.4	1.5	*2.0*
WSE 032-2024-22368	JUL '24	19	2.1	2.1	2.2	2.8	2.8	2.1	2.6	2.1	1.5	1.5	*2.2*
WSE 032-2024-22369	AUG '24	19	2.0	1.7	1.7	2.2	2.4	2.1	2.4	2.1	1.6	1.4	*2.0*
WSE 032-2024-22370	SEP '24	36	2.1	1.9	2.0	2.6	2.8	2.1	2.5	2.1	1.9	1.5	*2.2*
WSE 032-2025-22934	OCT '24	16	1.9	1.9	2.3	2.9	2.8	2.4	2.6	2.1	1.7	1.4	*2.2*
WSE 032-2025-22936	DEC '24	10	2.5	2.4	2.7	3.6	3.6	3.3	3.4	3.2	2.6	1.9	*2.9*
		AVG =	2.0	1.8	2.1	2.7	2.8	2.3	2.7	2.3	1.8	1.5	2.2

Figure 4. WSE-032 Cameo Historical Data

	Time (mins)										Total Time	Total Time	Avg Time/Lesson	Avg Time/Lesson
Organization	Lesson 01	Lesson 02	Lesson 03	Lesson 04	Lesson 05	Lesson 06	Lesson 07	Lesson 08	Lesson 09	Lesson 10	(mins)	(hrs)	(mins)	(hrs)
DAU CNE E&T Department	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DAU CNE E&T Department	26	20	25	20	30	35	30	35	25	25	271	4.52	27.10	0.45
DAU CNE E&T Department	30	30	35	30	30	30	35	35	30	30	315	5.25	31.50	0.53
DAU CNE E&T Department	?	?	?	?	?	?	?	?	?	?	NA	NA	NA	NA
DAU CNE E&T Department	30	30	60	45	40	35	45	35	35	50	405	6.75	40.50	0.68
DAU CNE E&T Department	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DAU CNE E&T Department	75	75	75	75	75	75	300	75	180	180	1185	19.75	118.50	1.98
DOD CIO SAP IT	30	25	30	35	40	25	30	30	20	20	285	4.75	28.50	0.48
DOD CIO SAP IT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOD CIO SAP IT	37	24	25	25	45	35	35	22	24	25	297	4.95	29.70	0.50
ME Student at the University of Wyoming	?	?	?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DAU CNE E&T Department	45	20	75	30	85	58	60	52	45	60	530	8.83	53.00	0.88
Innoslate Avg from Pilot Workshop=	**39.0**	**32.0**	**46.4**	**37.1**	**49.3**	**41.9**	**76.4**	**40.6**	**51.3**	**55.7**	**469.7**	**7.83**	**46.97**	**0.78**

Figure 5. Individual Innoslate Lesson Completion Times

	Time (rounded hrs)										Total Time	Avg Time/Lesson
Organization	Lesson 01	Lesson 02	Lesson 03	Lesson 04	Lesson 05	Lesson 06	Lesson 07	Lesson 08	Lesson 09	Lesson 10	(rounded hrs)	(hrs)
DAU CNE E&T Department	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DAU CNE E&T Department	1	1	1	1	1	1	1	1	1	1	10	**1**
DAU CNE E&T Department	1	1	1	1	1	1	1	1	1	1	10	**1**
DAU CNE E&T Department	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DAU CNE E&T Department	1	1	1	1	1	1	1	1	1	1	10	**1**
DAU CNE E&T Department	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DAU CNE E&T Department	2	2	2	2	2	2	5	2	3	3	25	**2.5**
DOD CIO SAP IT	1	1	1	1	1	1	1	1	1	1	10	**1**
DOD CIO SAP IT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DOD CIO SAP IT	1	1	1	1	1	1	1	1	1	1	10	**1**
ME Student at the University of Wyoming	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DAU CNE E&T Department	1	1	2	1	2	1	1	1	1	1	12	**1.2**
Innoslate Avg from Pilot Workshop=	**1.14**	**1.14**	**1.29**	**1.14**	**1.29**	**1.14**	**1.57**	**1.14**	**1.29**	**1.29**	**12.43**	**1.243**
Cameo Avg from 7 Workshops=	**2.0**	**1.8**	**2.1**	**2.7**	**2.8**	**2.3**	**2.7**	**2.3**	**1.8**	**1.5**	**22.0**	**2.200**
Innoslate/Cameo Time Comparison (%) =	**57.1**	**63.5**	**61.2**	**42.3**	**45.9**	**49.7**	**58.2**	**49.7**	**71.4**	**85.7**	**56.5**	**56.49**
Reduction in Time (%) =	42.9	36.5	38.8	57.7	54.1	50.3	41.8	50.3	28.6	14.3	43.5	43.51

Figure 6. Averaged Innoslate Lesson Completion Times

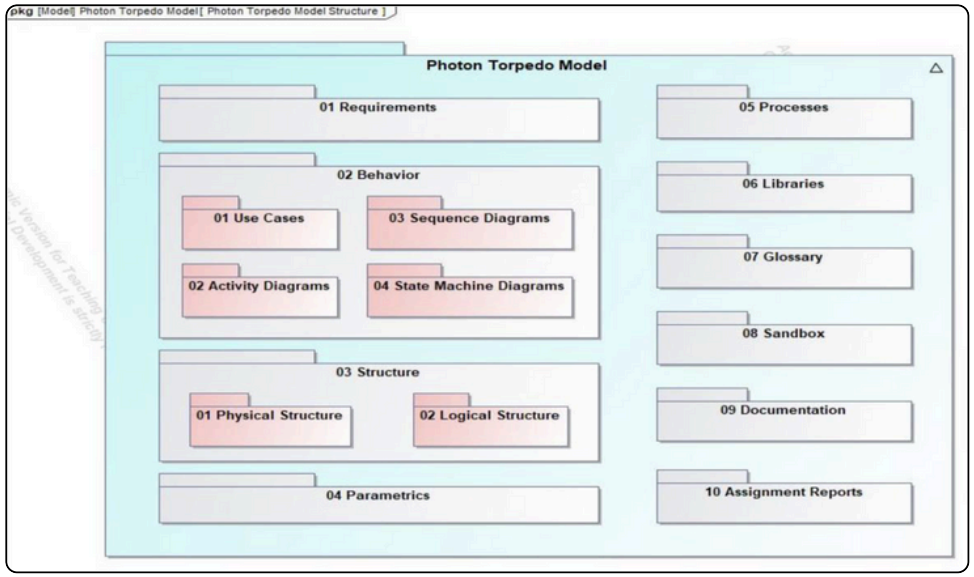

Figure 7. Lesson 1 in Cameo

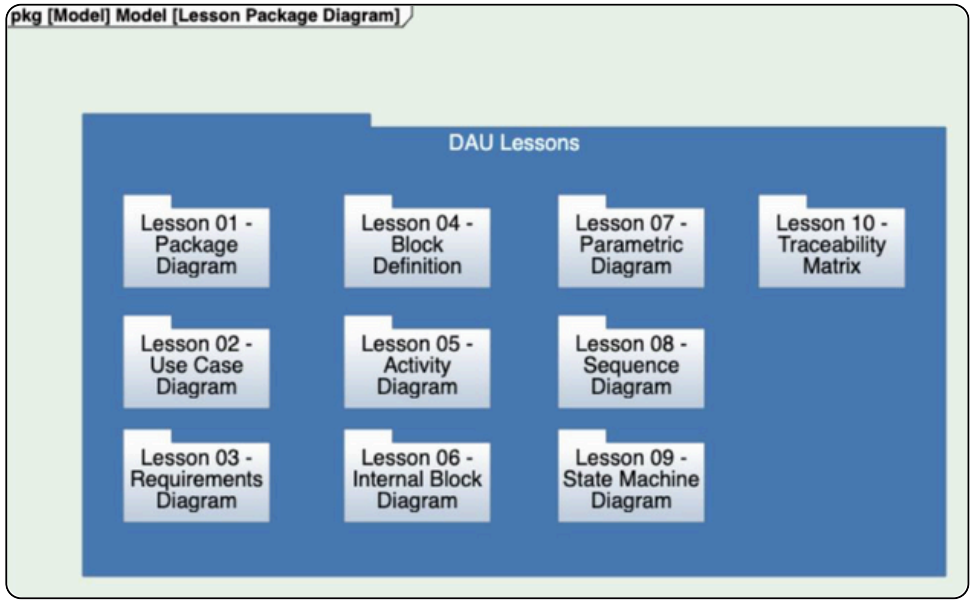

Figure 8. Lesson 1 in Innoslate

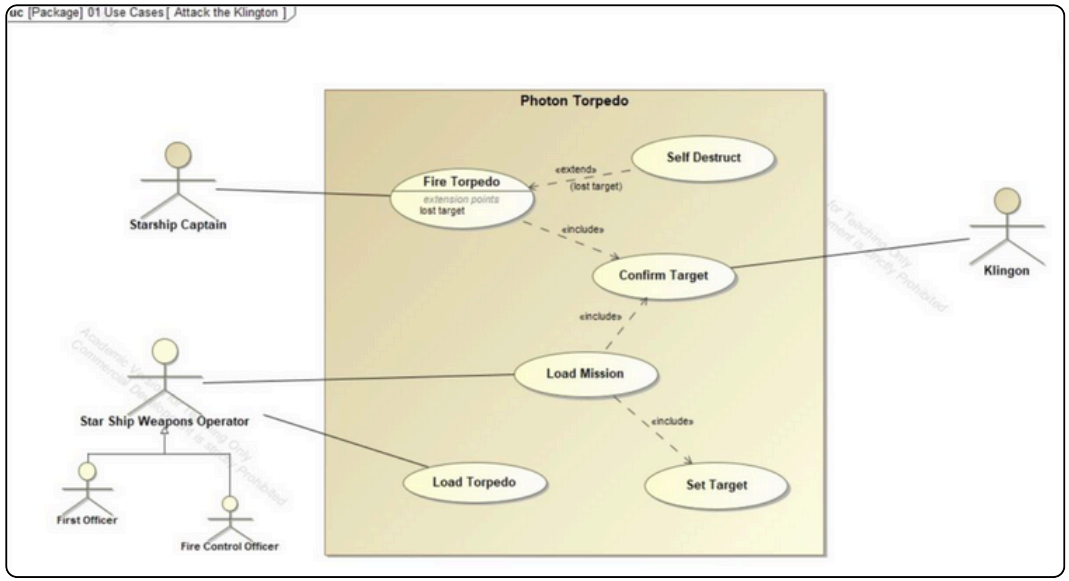

Figure 9. Lesson 2 in Cameo

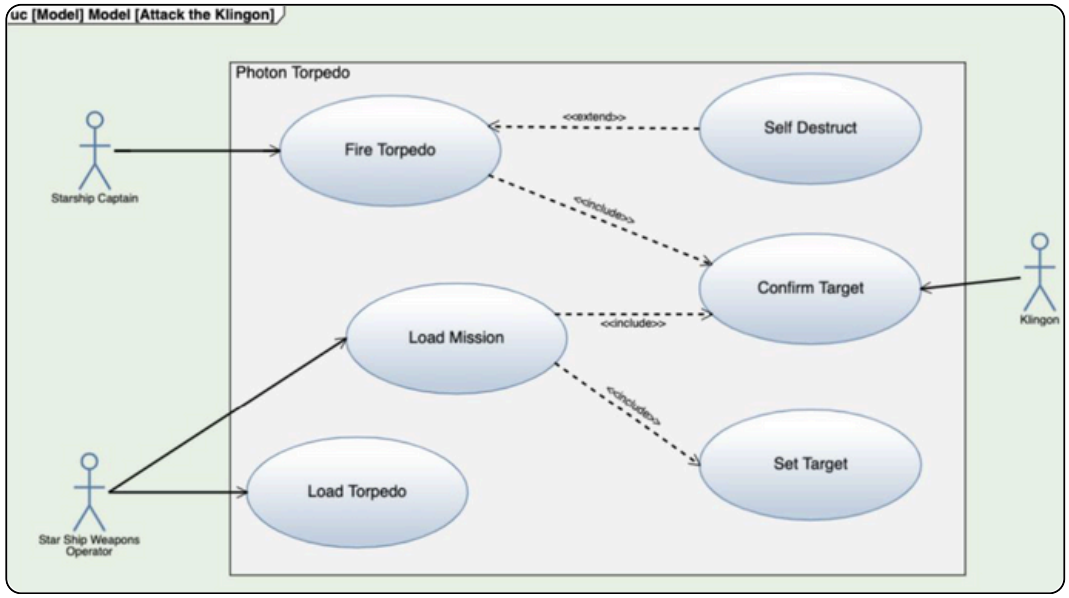

Figure 10. Lesson 2 in Innoslate

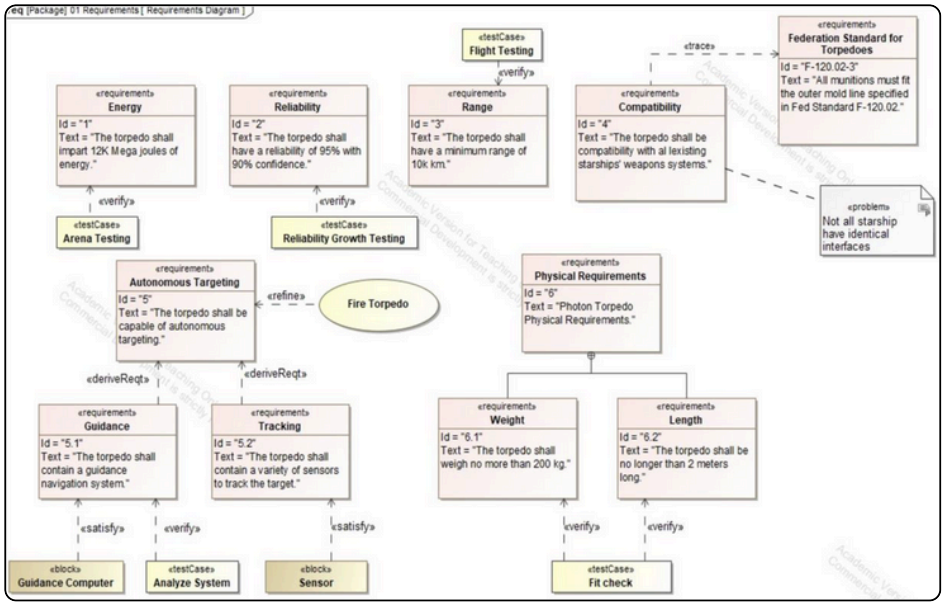

Figure 11. Lesson 3 in Cameo

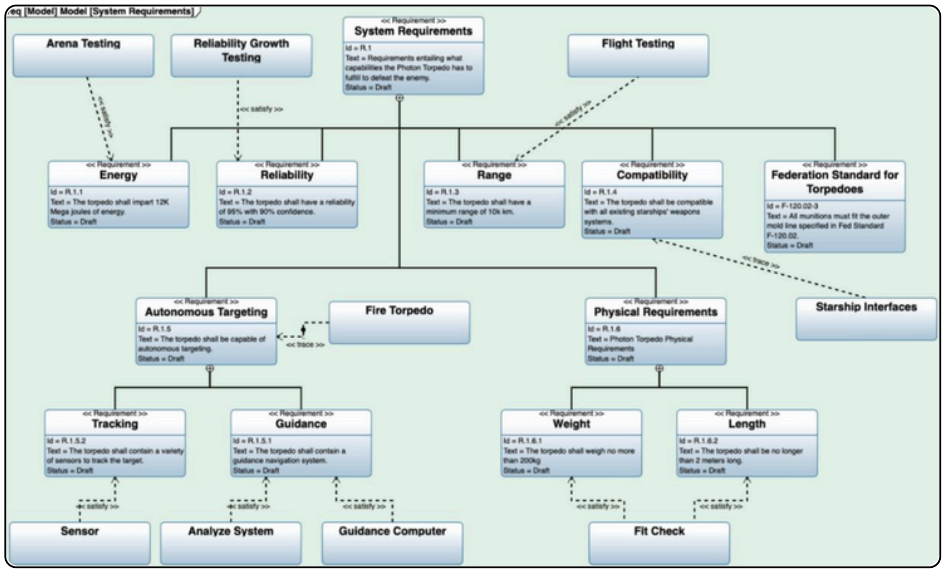

Figure 12. Lesson 3 in Innoslate

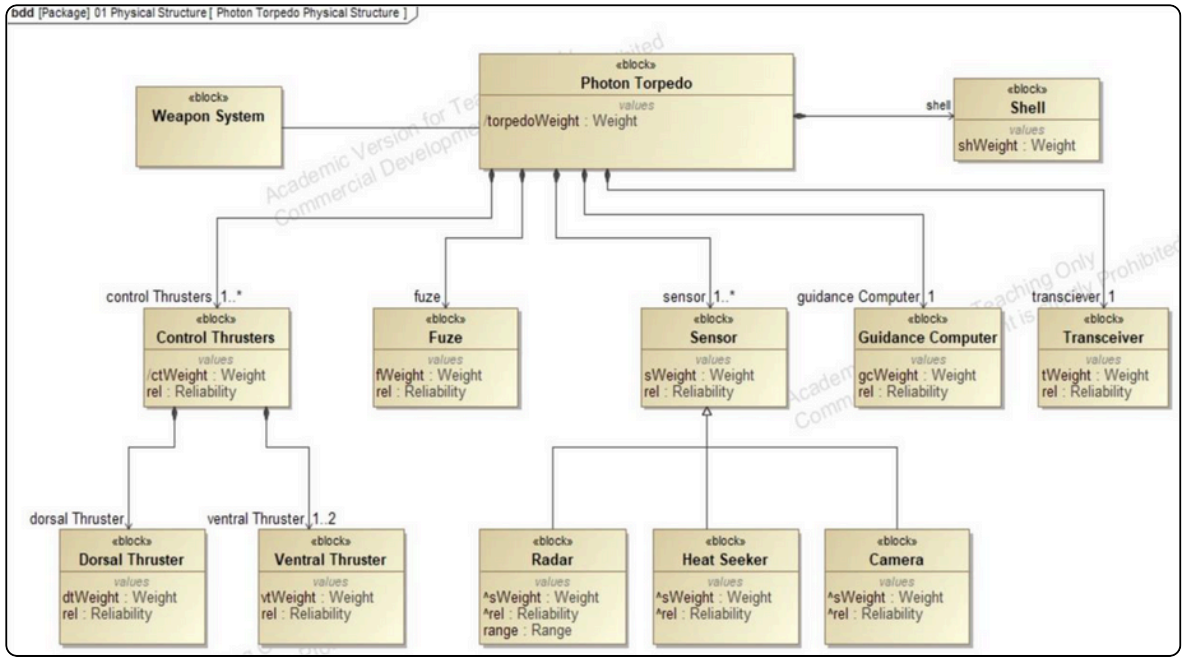

Figure 13. Lesson 4 in Cameo

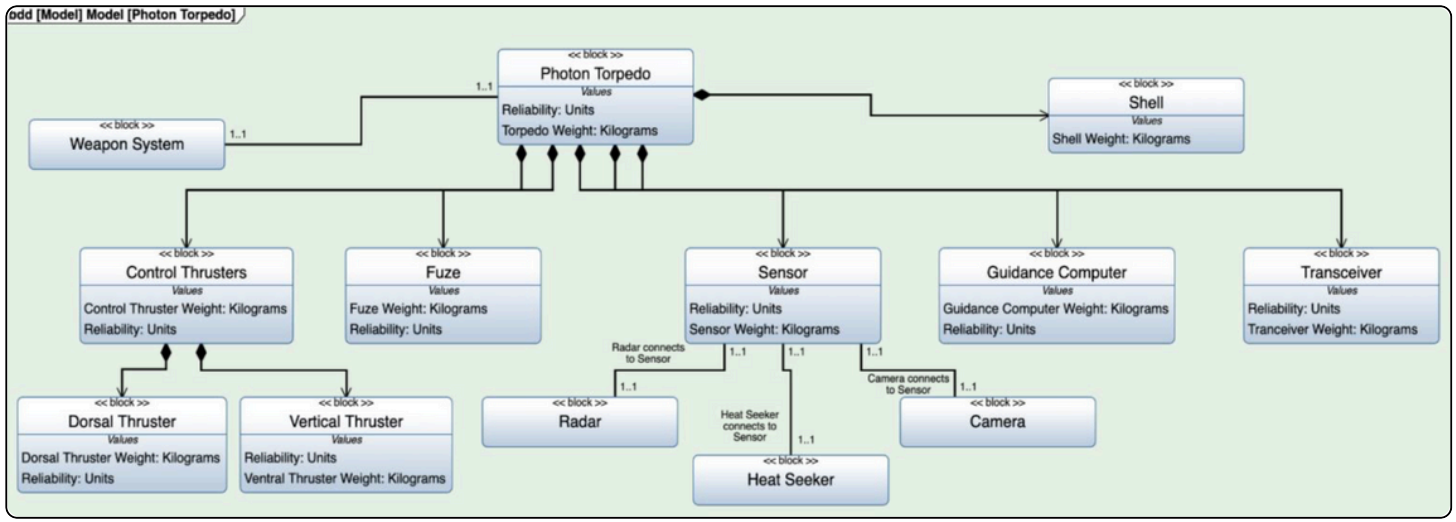

Figure 14. Lesson 4 in Innoslate

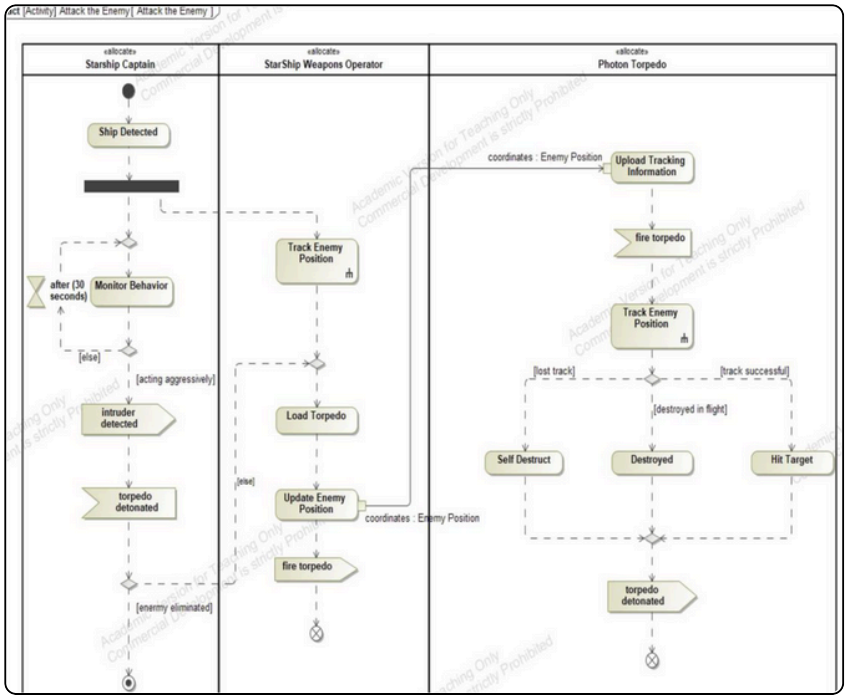

Figure 15. Lesson 5 in Cameo

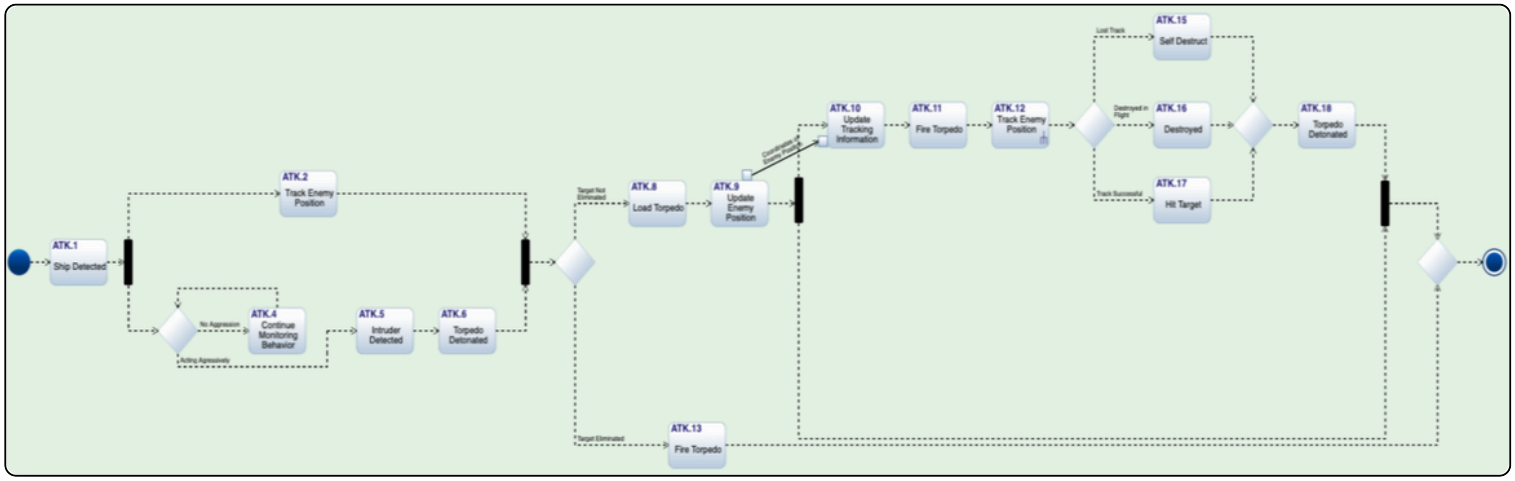

Figure 16. Lesson 5 in Innoslate

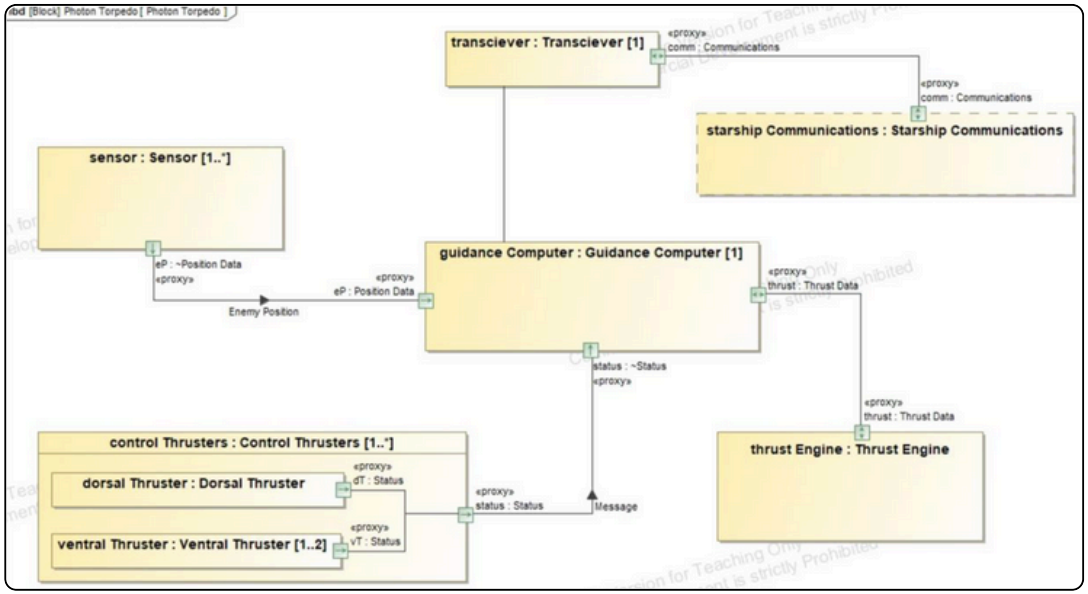

Figure 17. Lesson 6 in Cameo

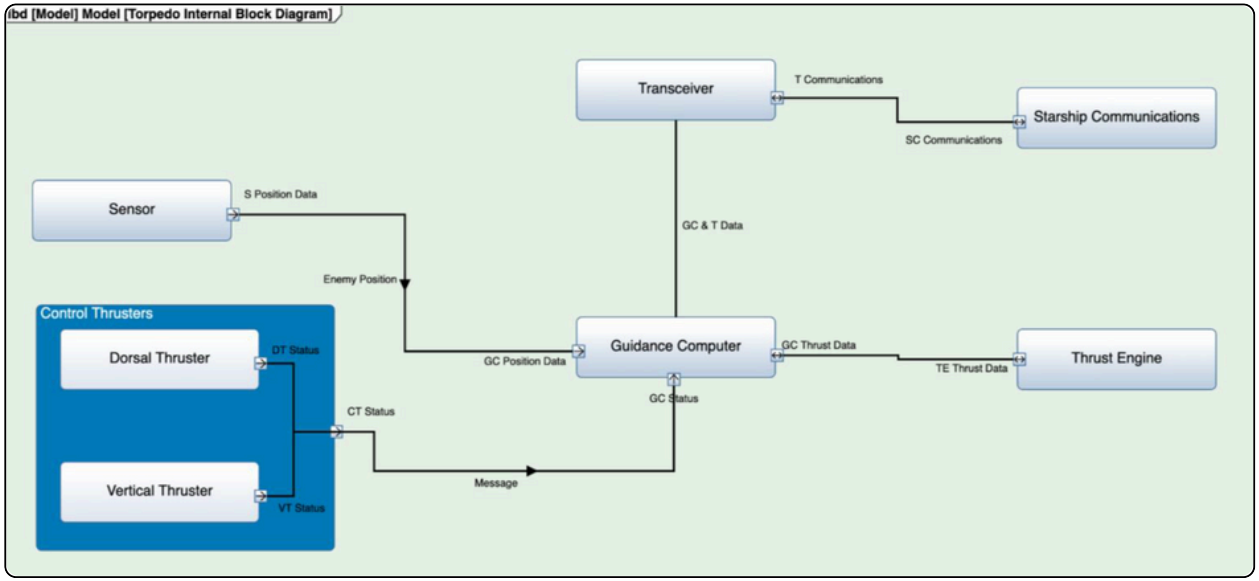

Figure 18. Lesson 6 in Innoslate

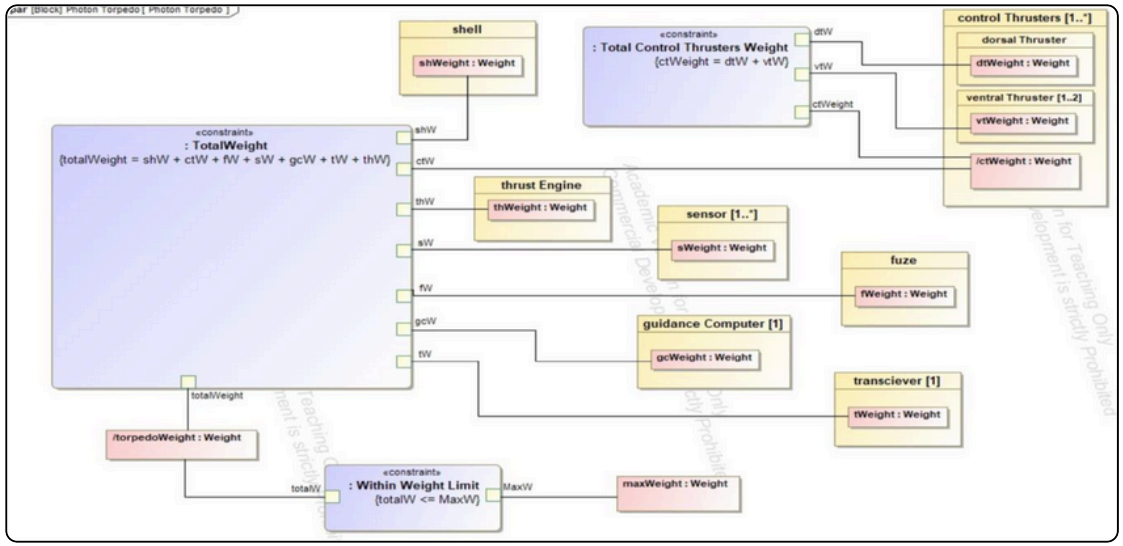

Figure 19. Lesson 7 in Cameo

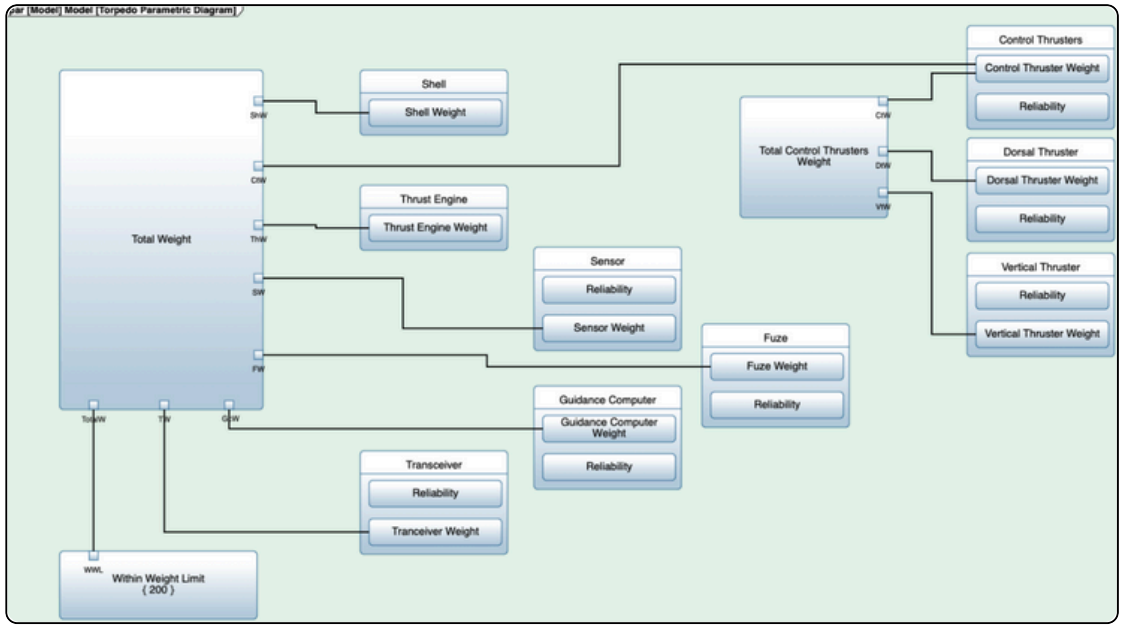

Figure 20. Lesson 7 in Innoslate

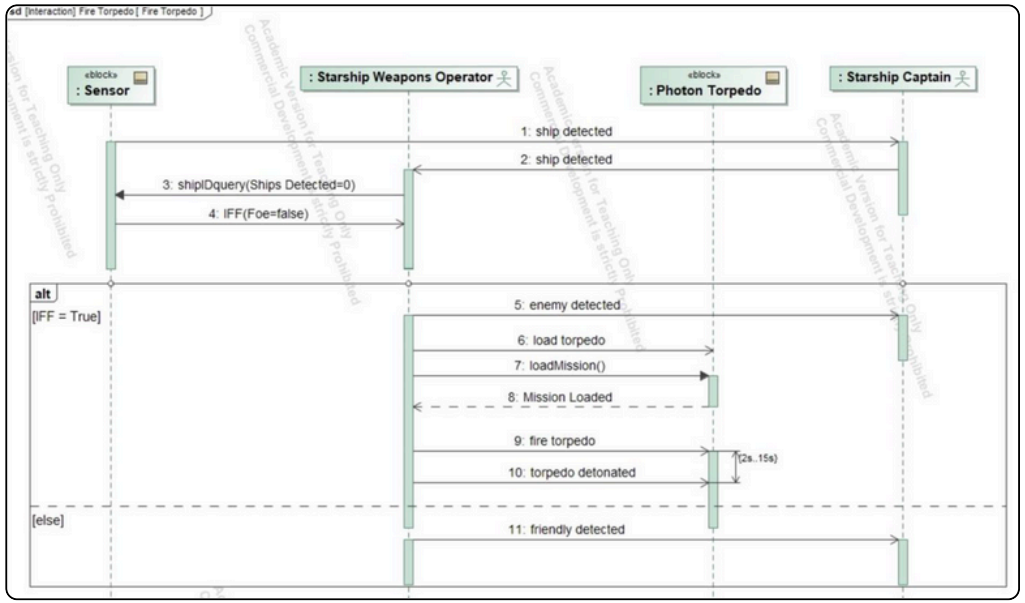

Figure 21. Lesson 8 in Cameo

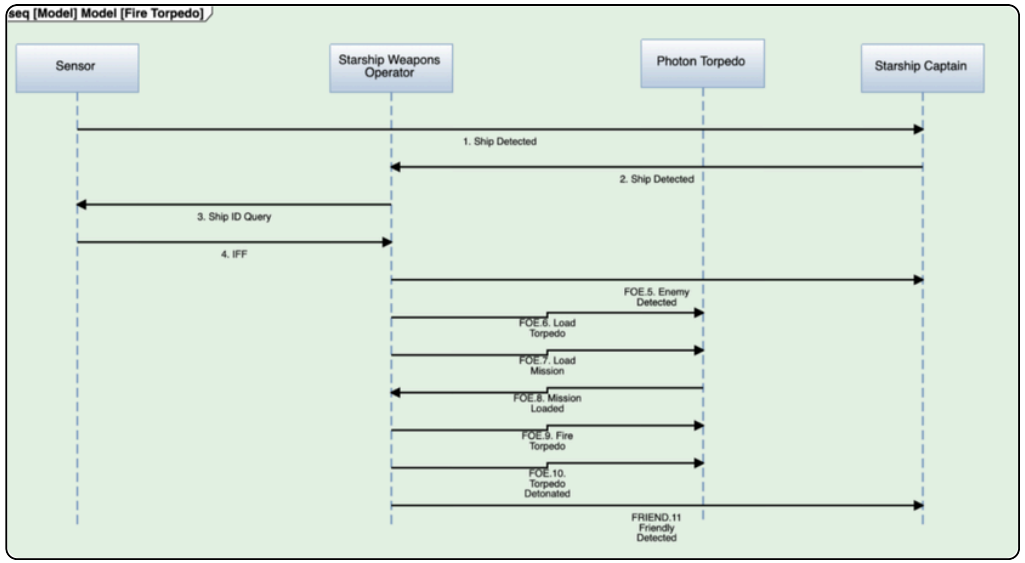

Figure 22. Lesson 8 in Innoslate

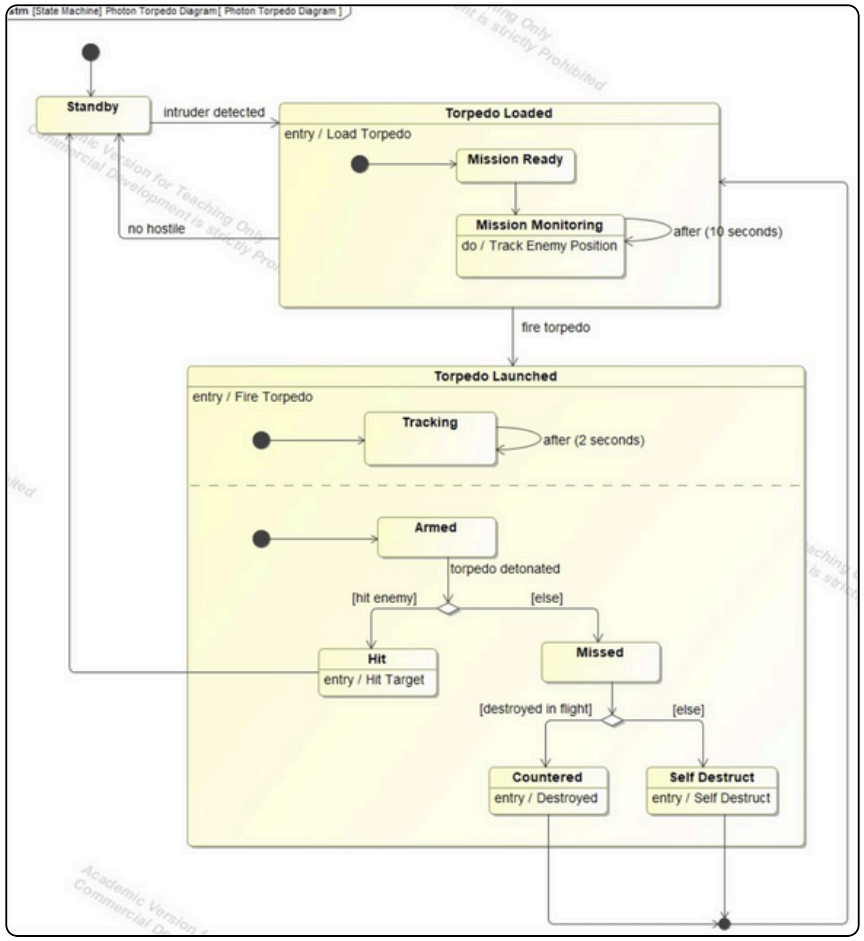

Figure 23. Lesson 9 in Cameo

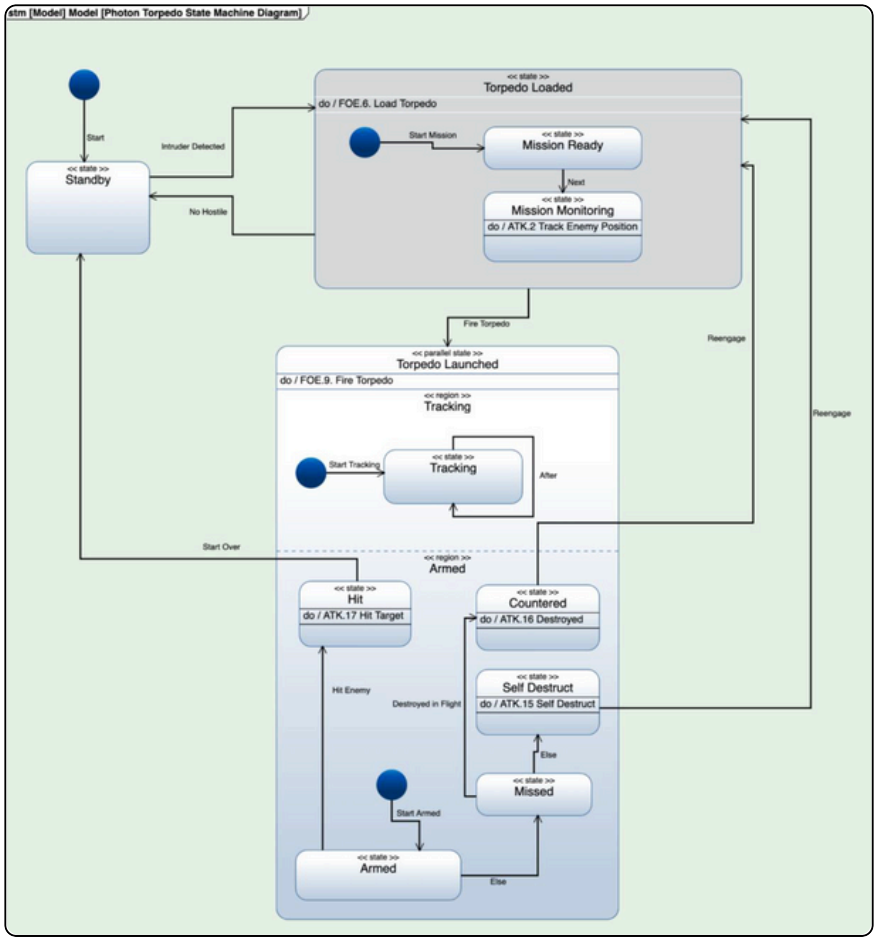

Figure 24. Lesson 9 in Innoslate

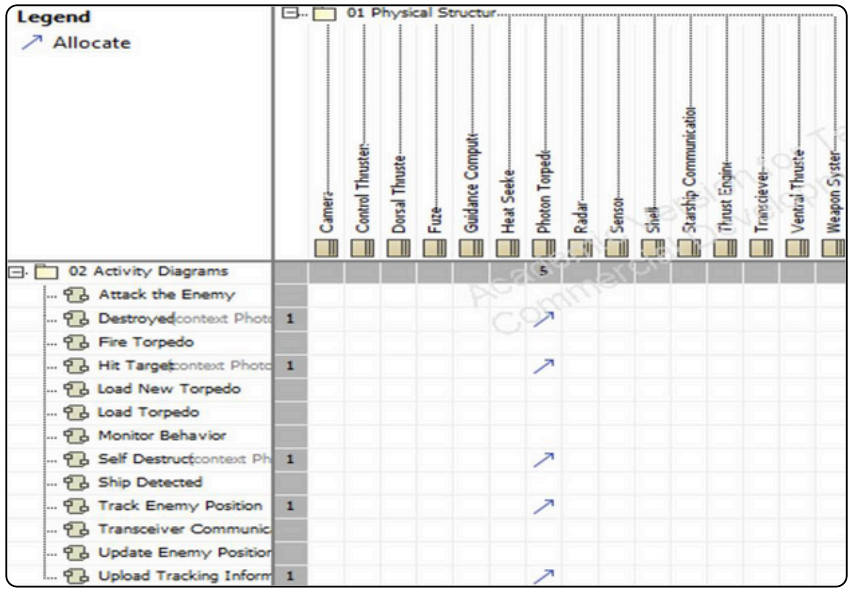

Figure 25. Lesson 10 in Cameo

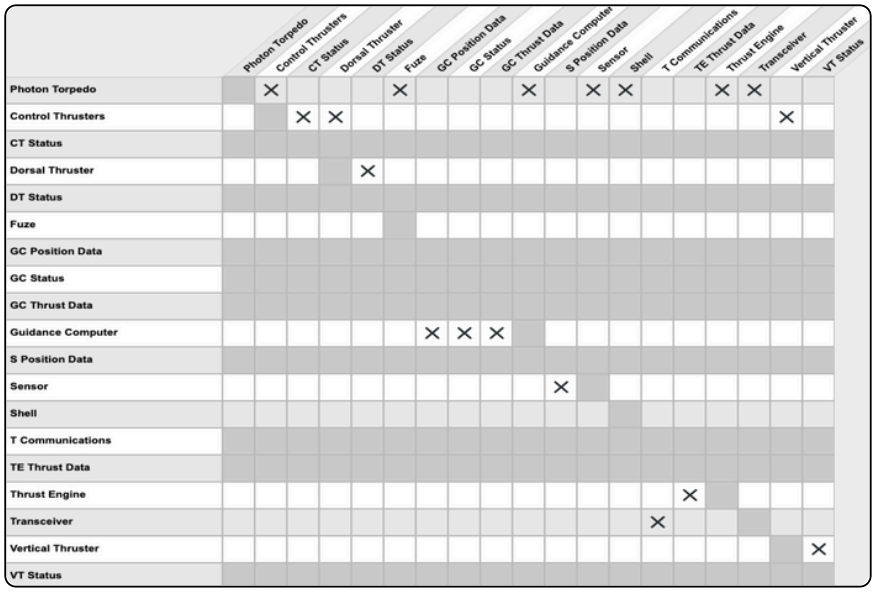

Figure 26. Lesson 10 in Innoslate