Delivering Automated Contract, Compliance, and Reporting Solutions to Defense Contractor

A Professional Readiness Experiential Program (PREP) Project Effort

----- ***Authors / Student Project Team Members*** -----

Taylor Le is a senior at George Mason University majoring in Information Technology with a concentration in Cybersecurity and is expected to graduate in May 2026. Throughout his academic and professional journey, he has gained experience in software development, cloud infrastructure, DevSecOps, and process automation. He is especially interested in building security infrastructure and creating automations that reduce repetitive and manual security tasks. Taylor has developed hands-on experience through his role as a software engineer intern at Nightwing, where he built secure CI CD pipelines, created automated smoke tests for applications, and deployed cloud resources using Terraform. He also served as a student research lead at CCI, where he worked on developing machine learning based phishing detection solutions using low cost cloud infrastructure. In addition to his professional experience, Taylor holds the CompTIA Security+ certification and regularly participates in industry events, capture the flag competitions, and hackathons.

Brian Kim is a senior at George Mason University majoring in Cybersecurity Engineering and is expected to graduate in May 2026. He focuses on offensive security, cloud defense, and automation, with experience applying security principles to real-world systems through both industry and analyst-oriented work. Brian is currently a Cyber Security Engineer Intern at Mobius, where he builds and automates secure workflow pipelines using Microsoft Power Automate and integrates Power Platform components to support scalable automation, reduce manual effort, and improve operational consistency. He also works as a CCI Undergraduate Research Assistant in a security analyst capacity, supporting investigations into suspicious domains and phishing activity by collecting and organizing indicators, analyzing trends across datasets, and translating findings into actionable insights for detection and response. In addition, Brian contributes to the Blue Cloak capstone at GMU, helping develop a hybrid AI orchestration platform for cybersecurity automation, including a VS Code extension to streamline workflow management, automate task execution, and visualize orchestration status. Outside of these roles, Brian works with EP Mowing & Landscaping as a remote Cybersecurity Analyst contractor, helping harden company infrastructure and web applications by deploying WAF protections and supporting access control and process review efforts to reduce risk and improve resilience.

Jeffrey Sterns is a senior at James Madison University, majoring in Computer Information Systems with a concentration in Information and Cybersecurity Management, and expected to graduate in May of 2026. He is driven by interests in threat analysis, risk management, and protecting organizational information systems. He gained hands-on experience through an internship experience at Arlington Public Schools as an information technology intern, where he worked with supporting end users, assisted with troubleshooting hardware and software issues, and worked with enterprise IT systems in a real-world environment. This role strengthened his technical foundation while emphasizing the importance of security, reliability, and user-focused IT support. He's currently growing my knowledge in the field through coursework in networking principles, cloud computing, cybersecurity infrastructure. For the future, he wants to pursue a role in the cybersecurity field, with a focus on defensive security, risk analysis, and safeguarding organizational infrastructure and data.

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Introduction

Mobius has experienced significant growth in its headcount and revenue over the past few years. As the organization grew, the complexity of its IT systems and business processes increased along with it. This highlighted a lack of technological implementation across the Contracts and Business Development teams. The student driven Automations Team worked to develop solutions that standardized processes, introduced automation, and improved reporting using Microsoft Power Platform and Dynamics 365.

Business Challenge

One of the most prominent challenges faced by Mobius was the lack of streamlined, automated processes that support growing contract and business development needs. Key workflows within Mobius relied heavily on manual tracking and spreadsheets. This resulted in inconsistent data, limited visibility, and increased process errors. Mobius was in need of a repeatable and scalable solution that reduced manual labor, while improving accuracy, transparency, and governance.

Solution 1: Modification Process For Contracts Team

The contract modification process required multiple manual steps, including data validation, document generation, routing for signatures, and updating funding totals. To address this, a standardized Business Process Flow was implemented within Dynamics 365 to guide users through each stage of the modification lifecycle. Automated flows were created to generate modification documents, send them for electronic signature through Adobe Sign, append finalized documents to the record timeline, and update financial totals upon execution. This solution reduced manual intervention, improved consistency, and ensured that contract records remain accurate and auditable.

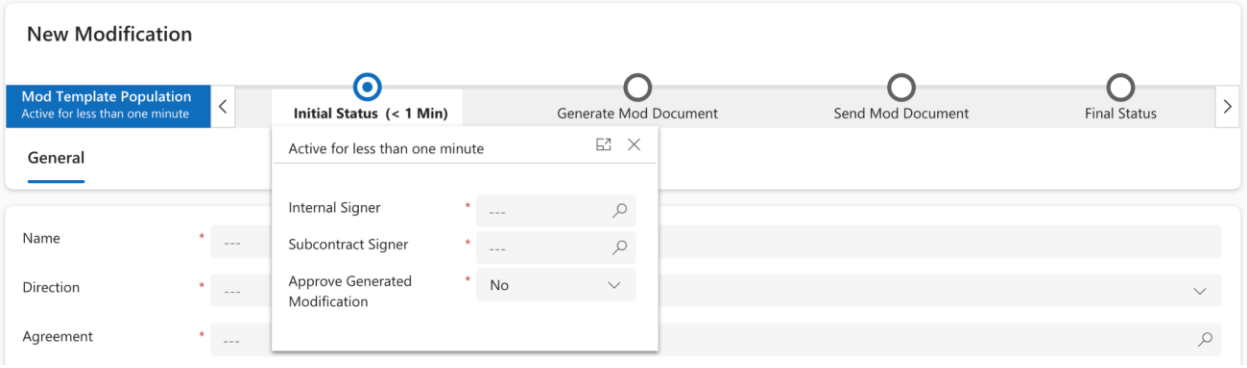

Figure 1: Business Process Flow showing the standardized Modification process.

Solution 2: PR Attestation Process For Contracts Team

The PR attestation process previously required multiple manual steps to ensure each purchase requisition moved cleanly from pending to completed, with each requisition routed as a single document rather than line-by-line and tied to a specific vendor or subcontractor and a unique PR number. To standardize the workflow, we implemented a structured process in Octane, also known as Dynamics 365, within the Contract Management and Requisitions area. In this

process, the requester or project control submits the PR and initiates the approval flow, while designated reviewers record their decisions directly through Teams approval notifications that link back to the requisition and supporting materials in Octane. After all approvals are complete, the system generates a formal approval attestation using the Word Templates option labeled “Approval Attestation,” producing a consistent, standardized record of the requisition details and approval results. The finalized attestation is then saved to the appropriate modification file as the final approval artifact, reducing back-and-forth, improving consistency, and ensuring the contracts team has a clear, auditable trail showing who approved the requisition and when for downstream processing.

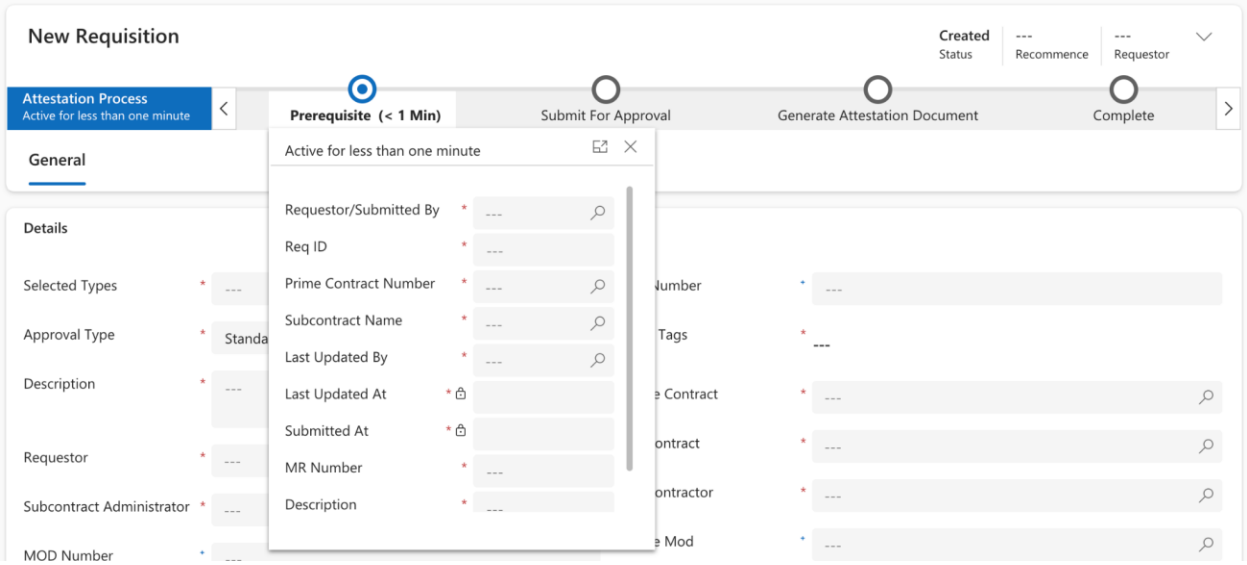

Figure 2: Business Process Flow showing the standardized Attestation process.

Solution 3: Labor Hours Totals Paginated Report For Contracts Team

The objective of this project was to address the need for a standardized, print-ready reporting solution capable of presenting data in a clear, consistent, and professional format to support easy review and distribution. The report was developed using Power BI Report Builder, beginning with a connection to the approved data source through the Dataverse connector to import the required tables. Once the data was loaded, relationships were established between the tables to ensure the final query could accurately retrieve and combine information from multiple sources. A custom column was then created using the Custom Column function to generate the SLIN field, which was derived from the Modification Line ID and required for inclusion in the final report. Following dataset preparation, the report layout was designed using structured tables, headers, and grouping to ensure logical data organization. The Slicer tool was implemented to allow filtering by individual agreements, enabling users to view specific subsets of data as needed. Additionally, formatting and pagination settings were carefully configured to maintain consistency across pages. The final solution is a polished, print-optimized paginated report that effectively transforms raw data into a structured and professional deliverable, supporting accurate analysis and efficient communication of information to all stakeholders.

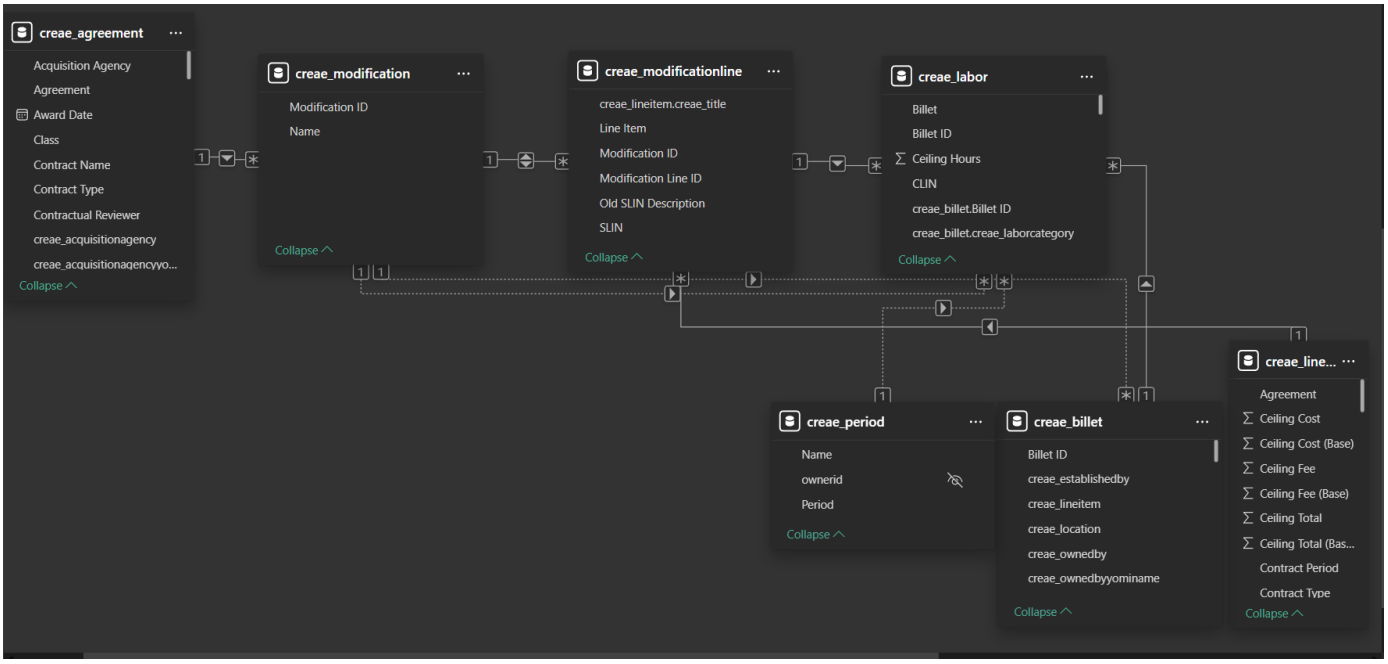

Figure 3: Relationships built between each of the tables needed for the report.

Solution 4: NAICS Code Eligibility For Business Development Team

Tracking NAICS code eligibility was previously complex and difficult to maintain as projections and size standards changed. The student team redesigned the NAICS eligibility logic to be directly associated with opportunity records. Automated recalculation logic was introduced to update eligibility when revenue projections or NAICS thresholds change. Additional fields and visuals were created to indicate eligibility status and proximity to thresholds. This enabled Business Development teams to make faster, more informed bid decisions while reducing compliance risk.

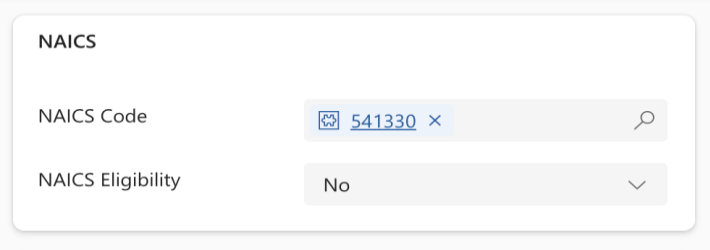

Figure 4: Form showing the NAICS Code assigned to the opportunity and the automatically calculated eligibility.

Solution 5: NDA/TA Process For Business Development Team

The NDA and Teaming Agreement processes were standardized using Business Process Flows and Power Automate. Automated workflows were implemented to generate agreements, send them for electronic signature, track agreement status, and mark records as active or inactive. These improvements reduced manual tracking, increased visibility into agreement status, and ensured consistent handling of legal documents across the organization.

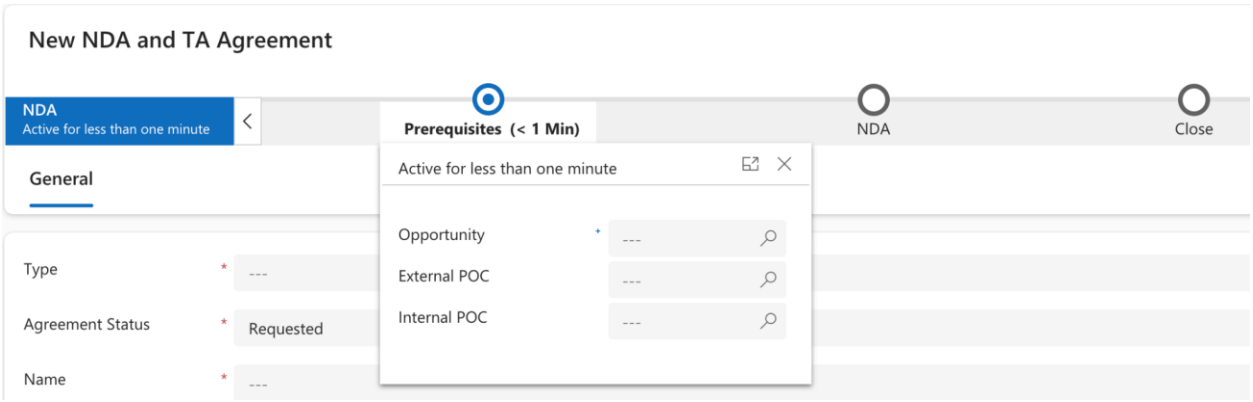

Figure 5: Business Process Flow showing the standardized NDA process.

Results & The Positive Impact

The Octane team successfully delivered a comprehensive set of solutions to the defense contractor that addressed key operational needs across contract management, compliance, reporting, and business development. The first solution focused on improving the contract modification process by implementing a standardized workflow that guides users through the full modification lifecycle. This approach reduced manual intervention, improved consistency, and ensured contract records remained accurate and fully auditable. Additionally, a PR attestation process was developed for the contracts team by implementing a structured workflow within the Octane system. This solution reduced back-and-forth communication, improved process consistency, and created a clear audit trail documenting who approved each requisition and when, supporting downstream processing.

The team also developed a labor hours total paginated report for the contracts team using Power BI Report Builder, providing a standardized, print-ready format that improves data accuracy, enhances usability through filtering, and enables clear communication of critical information to stakeholders. Further supporting business development efforts, the team redesigned the NAICS code eligibility logic to be directly associated with opportunity records. This enhancement allowed the business development team to make faster, more informed bid decisions while reducing compliance risk. Finally, the team standardized the NDA and TA processes for the business development team by implementing Business Process Flows and Power Automate. This solution reduced manual tracking, increased visibility into agreement status, and established a consistent organizational standard for handling legal documents. These solutions strengthen the defense contractor's operational efficiency, improved compliance and data integrity, these solutions equip the teams discussed above with the tools that support decision making and long term success.

Conclusion

Over the course of this PREP engagement, our intern team within Mobius helped address the growing pains caused by manual, spreadsheet-heavy contract and business development workflows. By designing and implementing standardized processes in Dynamics 365 and the Microsoft Power Platform, we delivered solutions that improved consistency, reduced manual effort, and strengthened auditability across key areas of the organization. The contract

modification workflow and PR attestation process introduced clear, repeatable approval paths and reliable documentation, while the labor hours reporting work transformed raw data into a structured, professional report that supports easier review and distribution. In addition, the NAICS eligibility and NDA/TA automation solutions improved tracking, visibility, and decision support for business development and compliance-related activities. Collectively, these improvements provide Mobius with a more scalable operational foundation that improves transparency, reduces errors, and supports continued growth.

PREP Student Reflection

This PREP project gave our Octane team hands-on experience translating real operational pain points into working automation and reporting solutions that Mobius teams can use day-to-day. We strengthened our ability to take ambiguous business requirements, break them into clear process steps, and implement structured workflows inside Dynamics 365 using tools such as Business Process Flows, Power Automate approvals, and standardized document generation. Building solutions like the PR attestation workflow and contract modification process improved our understanding of how to design an auditable approval trail, enforce required-field validation, and generate consistent documentation that supports downstream contract execution. We also grew in stakeholder communication and iteration, since delivering usable solutions required continuous feedback, testing, and refinement with contracts and business development users. Overall, this experience reinforced the importance of process clarity, data consistency, and automation governance, and it helped us build confidence in delivering scalable solutions that reduce manual work while improving reliability, transparency, and accountability.