



SUMMARY

Mr. Hibbard is a seasoned software and systems integration professional with deep expertise in urban mobility technology. His work bridges disciplines such as system architecture and documentation, requirements development, verification and traceability, and 3rd-party software integration. At Cubic, he acted as the technical lead for the implementation of the Urban Mobility Backoffice on the Ventra Program, supporting Open Architecture System development, documentation, and verification, including requirements traceability efforts. As a skilled communicator, Mr. Hibbard interfaces with clients translating complex technical challenges into clear, actionable solutions that align with organizational and operational goals.

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PROJECT EXPERIENCE

2020 – 2025

Back Office Integration, Ventra 3.0, Chicago Transit Authority (CTA), Chicago, IL

As the technical lead and Back Office (UMB) authority for the Ventra 3.0 project in Chicago, Mr. Hibbard played a central role in integrating the Back Office and customizing the system to meet the unique needs of CTA, PACE, and Metra. His contributions allowed for the configuration & testing of a complex, multimodal transit system, and set the program up for future successful delivery. He performed gap analyses and design reviews to ensure that the Back Office solution was adequate for Ventra 3.0.

In addition, Nate developed and integrated key back office and device monitoring solutions that allowed for rapid troubleshooting and reporting. He led integration efforts for recently developed hardware such as the fare vending devices, attended sales devices, validators, and retail terminals, while also ensuring legacy devices communicate efficiently with the Back Office, allowing for a smooth transition period between the Ventra 2.0 and Ventra 3.0 systems.

Nate was instrumental in the integration of both a new institutional and traveler website that would integrate into the Ventra 3.0 Back Office. He created and standardized an onboarding guide for developers that maps use cases to software flows, reducing integration time and limiting new defects. He also played a crucial role in the configuration of CRM, finance & operations, inventory management, fare product management, & fare policy software, allowing for the configuration and testing of business rules.

His involvement was integral in the validation process for the Ventra 3.0 Project where he played a key role in defect management during all phases of Ventra 3.0 integration testing, and was entrusted to determine, implement, and document important configuration items. He participated in the creation of a Requirements Traceability Matrix (RTM), which is integral in determining that the system as delivered meets all requirements.

2023 – 2025

Open Architecture Design, Ventra 3.0, Chicago Transit Authority (CTA), Chicago, IL

On the Ventra 3.0 Project for CTA, Nate directed the implementation of an Open Architecture System. He coordinated efforts between vendors and the CTA, aligning the development schedule with agency priorities to ensure timely delivery of this critical component of the project.

He created, reviewed, and facilitated the approval of onboarding guides, integration guides, and API specification documents for several key functional areas including sales devices, a mobile app, websites, inspection device, and customer service.

To create a more streamlined integration process, Mr. Hibbard coordinated with vendors and integrators, allowing third-party vendors to connect seamlessly with the Ventra 3.0 Back Office. This included standardizing documentation, creating an efficient onboarding process, and the creation of a test suite that could be provided to third-party developers.

His regular participation in design reviews allowed Mr. Hibbard to identify and prioritize gaps and defects, to ensure a fully functional system that incorporates industry-leading Open Architecture design practices.

SKILLS

2025

General: Automated Fare Collection Systems, Information Technology Management, Risk Mitigation, API Design and Structure, System Testing, Integration Oversight, Data Security

Database: SQL, SQL Developer, Toad, Nifi, Oracle Golden Gate

API: Postman, Apigee, Graylog, Apache Kafka. Microsoft: Microsoft Dynamics (CRM and Finance & Operations), Microsoft Office

Cloud/Server: Kubernetes Lens, Microsoft Azure, MobaXTerm

WORK HISTORY

2025 – Present

Consultant, Clevor Consulting Group

Nate joined Clevor Consulting Group in 2025, bringing with him a strong background in testing and transitioning automated fare collection systems.

2020 – 2025

Cubic Transportation Systems

Senior Project Engineer

As a Senior Project Engineer, Nathan led the software development lifecycle for the Ventra instance of the Urban Mobility Backoffice (UMB), overseeing feature enhancements, defect resolutions, and software patch deployments. He collaborated with third-party integrators to develop, document, and test interfaces between external systems and devices, and the Ventra platform.

Mr. Hibbard defined, documented, and managed the integration between the bus fare collection system and the onboard CAD/AVL system. He led troubleshooting efforts for APIs, devices, and third-party integrations, as well as developing and testing the Ventra website integration with UMB.

Nathan also contributed to the design and implementation of data structures across more than 33 applications, supporting functions such as customer management and financial transactions. He analyzed and developed specifications and integration guides for third-party vendor devices and APIs.

He led configuration efforts for both account-based and card-based fare collection systems, covering a range of fare models including point-to-point, flat fare, open-loop, and closed-loop payments. He successfully integrated Cubic’s Urban Mobility Backoffice with both in-house and third-party devices, ensuring data storage compliance with PCI and PII standards.

Additionally, Nathan oversaw both informal and formal testing for the CTA public transportation portal. He created a configuration guide to support the implementation of Blue-Green development systems across other company programs and pioneered the company’s first Blue-Green software development process.

Mr. Hibbard also integrated Microsoft Dynamics portals with the Ventra Chicago back-office systems and regularly presented to clients to ensure their requirements were clearly understood and met.

2018 – 2020

The Boeing Company

Engineering Accelerated Hiring Initiative

777X Airplane Level Integration Team: Systems Engineer

At Boeing, Mr. Hibbard optimized flight test and ground test hours for the 777-9 by working closely with leadership and flight test operations teams to enhance efficiency and resource utilization. He completed detailed single-and multiple-failure analyses to ensure the aircraft met all safety requirements, and presented these failure cases to pilots to support the classification of failure hazard categories and assess crew workload.

Nathan collaborated with individual system teams to ensure comprehensive test coverage for all failure scenarios, and contributed to lab testing efforts to validate analytical findings. Additionally, he assisted in system testing, design, and verification of crew operations procedures, supporting the overall safety and functionality of the aircraft.

2017 – 2017

Guebelle Research Group

Modeling Team Member/ Co-Author

Nathan co-authored a research study on the frontal polymerization of unidirectional carbon-fiber-reinforced composites, utilizing MATLAB to simulate the polymerization reaction of dicyclopentadiene and characterize its behavior.

EDUCATION

2025

University of Indiana, Kelley School of Business

Master of Business Administration

Master of Science in Information Technology Management

2019

University of Illinois at Urbana-Champaign

Bachelor of Science in Aerospace Engineering