Nate G. Hibbard

Consultant

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

2025 – Present

Ventra 3.0 Implementation Support, Chicago Transit Authority (CTA), Chicago, IL

The Chicago Transit Authority (CTA) is in the process of upgrading its current fare collection system, Ventra™, to a new system known as Ventra 3.0. The Ventra 3.0 system provides key functionality such as cloud-based architecture, open architecture APIs, next-generation fare validation and sales equipment, and new back-office functionality. As the Ventra 3.0 system nears go-live, CTA has entrusted CCG with providing implementation support.

Mr. Hibbard acted as the Technical Lead in multiple areas in the Ventra 3.0 upgrade project, including test defect resolution, pilot support, and Onboard Validator Integration. As the Ventra 3.0 program entered the testing phase, Nate provided technical expertise and defect management strategy to aid in the resolution of crucial system defects. Similarly, as the Ventra 3.0 pilot program was rolled out, he reviewed test reports, identified and categorized critical defects, and worked with the Ventra 3.0 vendor to provide mitigation and resolution plans. Nate also facilitated the integration of the Ventra 3.0 Fare Payment Validator with onboard bus equipment, such as the onboard CAD/AVL system, farebox system, and driver display units.

2025 – Present

PRESTO Integration Feasibility Study, Toronto Parking Authority (TPA), Toronto, ON

Bike Share Toronto (BST) provides a convenient, affordable, and sustainable transportation option through a network of bikes and docking stations across the city. It promotes active transit, reduces traffic congestion, and supports environmental goals by offering accessible short-term bike rentals for residents and visitors in Toronto. In 2025, TPA reached out to CCG to conduct a feasibility study regarding the integration of Bike Share Toronto with PRESTO, the fare collection system of record in the Greater Toronto Area.

As the Technical Lead, Nate was responsible for drafting integration options that allowed TPA to envision the future system and outline potential integration capabilities. He also identified key risks and opportunities for each option. After selecting a preferred option, he played a central role in creating a concept of operations for the future system.

2025 – Present	**Next Generation Go to Card, Metro Transit, Minneapolis-St. Paul, MN** CCG has been working with Metro Transit since 2021, initially to assess the current system, provide recommendations for a future fare collection solution, and evaluate system procurement options. In 2023, CCG was awarded a subsequent contract to provide design and deployment support for a next-generation fare collection system for the region. Mr. Hibbard has provided design review for the Metro Transit system upgrade. He has utilized his fare-collection and back-office experience to provide documentation feedback across several different functional areas, including commercial off-the-shelf solutions, proprietary vendor solutions, Customer Relationship Management (CRM) software, payment applications, system and device monitoring tools, test and implementation planning, and more.
2025 – Present	**Key 2.0 Fare Payment System Design and Procurement, Southeastern Pennsylvania Transportation Authority (SEPTA), Philadelphia, PA** SEPTA is in the process of implementing a new solution to replace its Key 1.0 fare payment system, first launched in 2016. In 2022, SEPTA engaged CCG to provide industry expertise and strategic direction to support this system replacement. After helping to facilitate vendor selection during the procurement process, CCG is now assisting SEPTA with the implementation of the Key 2.0 system. Nate played a central role in the development and assessment of the transition strategy and approach for the Key 2.0 system. He worked with both SEPTA and the Key 2.0 vendor to develop and refine a transition plan that ensures a seamless transition experience for transit users, including bridging the gap between the legacy system vendor and the Key 2.0 vendor. Mr. Hibbard has also played a major role in Key 2.0 Document review, specifically identifying challenge areas within both the documentation and implementation.
2025 – Present	**Compass Modernization Program Procurement Lead Advisory Services, South Coast British Columbia Transportation Authority (TransLink), Vancouver, BC** TransLink is currently engaged in strategic planning for replacement of their Compass fare payment system, first launched in 2013. The planning process begins with defining a critical procurement approach to enable replacement of the complex, regional system by 2030. In 2025, CCG was awarded a contract for procurement and technical lead advisory services for the Compass Modernization Program. Mr. Hibbard was a key contributor in developing technical specification materials for both the pre-procurement and procurement process of the Compass Modernization program, developing comprehensive requirements for the future Compass system. Additionally, he developed and delivered key proponent evaluation materials, including vendor demonstration scenarios and proponent submittal forms. He also ensured that the requirements were complete, and all technical specification materials formed a comprehensive package to ensure a smooth procurement process.
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 and 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 sufficient 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 newly developed hardware such as the fare vending devices, attended sales devices, validators, and retail terminals, while also ensuring that legacy devices communicated 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 integrating both a new institutional and traveler website into the Ventra 3.0 Back Office. He created and standardized an onboarding guide for developers that mapped use cases to software flows, reducing integration time and limiting new defects. He also played a crucial role in the configuration CRM, finance & operations, inventory management, fare product management, and fare policy software enabling the configuration and testing of business rules.

His involvement was integral to 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. Nate also contributed in the creation of a Requirements Traceability Matrix (RTM), which is essential for verifying that the delivered system meets all specific 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 project component.

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 streamline the 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 developing a test suite tfor third-party developers.

His regular participation in design reviews allowed Mr. Hibbard to identify and prioritize gaps and defects, ensuring 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 Back Office (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, and also developed and tested 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 Boing 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