



U.S. Department of Transportation



2025 - 2029



DOT IT STRATEGIC PLAN

A PATH TO **DOT IT**



MESSAGE FROM THE SECRETARY



A Unified Vision for the Department of Transportation

The “1DOT” initiative is a comprehensive, long-term effort to unify and strengthen the Department of Transportation (DOT). It is designed to foster accountability, eliminate redundancies, and enhance efficiency across all transportation modes. By bringing all modal administrations together, both operationally and physically, at our headquarters in the Navy Yard, Washington, D.C., we can foster the kind of collaboration needed to achieve big things.

As we modernize our IT infrastructure, we’re investing in resilient, secure, and future-ready technology that strengthens the safety and reliability of every journey. This plan also helps us cut red tape and eliminate outdated systems, making the DOT more agile and efficient. By aligning our technology with our core values, we’re ensuring our systems keep America safe while supporting a streamlined, pro-growth future for transportation.

Sean Duffy





MESSAGE FROM THE CHIEF DIGITAL & INFORMATION OFFICER



My vision for IT at the U.S. Department of Transportation (DOT) is not an ambition — it is a current, measurable commitment to delivering results for the American public. Technology is a core strategic enabler of our mission to advance safety, modernization, and efficiency across our nation's highways, railways, airways, and waterways. This vision centers on building a modern, resilient, and secure digital foundation — aligned with statutory mandates, Administration priorities, and Congressional direction — to meet today's challenges and anticipate tomorrow's needs.

Safety is DOT's top priority, and our IT strategy reflects that. We are committed to strengthening critical infrastructure and sensitive data against evolving cyber threats. We are embedding security-by-design principles in every system and process, with implementation of a comprehensive zero-trust architecture, threat detection, and real-time monitoring. These capabilities will mitigate risks such as ransomware, phishing, and supply chain vulnerabilities, ensuring the operational continuity of Transportation's critical systems.

We are committed to true modernization, retiring outdated, siloed systems, and replacing them with integrated, data-driven solutions that create a seamless flow of information across the Department and with external partners. By treating data as a strategic asset, we will improve safety analytics, enhance infrastructure planning, and increase the efficiency of public-facing services. Modernization investments will be tracked against performance benchmarks and cost-savings goals, ensuring Congress and OMB see quantifiable returns on appropriated and approved funds. Emerging technologies will be applied where they deliver measurable benefits, from predicting infrastructure maintenance needs to optimizing transportation operations.

We will invest in the skills, tools, and collaborative environment necessary for our federal and contractor workforce to meet modernization goals. Professional development in emerging technologies, opportunities to apply new skills to real-world challenges, and a culture of continuous learning will ensure the DOT retains the technical expertise and agility to better serve the American public.

This unified, Department-wide strategy consolidates and aligns IT investments to reduce duplication, improve accountability, and deliver consistent, high-quality services. We will maintain transparency in how funds are allocated, ensure compliance with federal IT policies and reporting requirements, and prioritize DOT initiatives that deliver the greatest public value. We will strengthen our national transportation systems, protect critical assets, and deliver the safe, modern, and efficient "1DOT IT" that Americans expect.

Pavan Pidugu

EXECUTIVE SUMMARY



Mission

To empower the Department to achieve its strategic goals and objectives by rapidly delivering innovative technology solutions that drive measurable value.



Vision

To be the strategic partner and digital engine that empowers the U.S. Department of Transportation to lead with innovation, ensuring a safe, efficient, and interconnected transportation future for all Americans.

The DOT IT Strategic Plan for calendar years 2025–2029 charts a clear course to unify, modernize, and professionalize Department-wide IT capability under a single “1DOT IT” operating model. The Plan reduces legacy complexity, accelerates delivery of customer-centered digital products, and strengthens workforce and vendor relationships to deliver dependable technology that supports the Department’s mission and serves the American public. Our plan sets forth four strategic goals.

- **Eliminate Technical Debt** — Consolidate and simplify the IT portfolio by migrating suitable systems to cloud-native architectures, enforcing architectural governance, integrating automated security and quality testing, and reducing redundant technologies to increase reliability and lower risk.
- **Become Customer-Centric** — Design and deliver technology around the needs of users and mission partners through customer feedback channels, journey mapping, a unified analytics view, and an intuitive service portal for real-time support and transparency.
- **Build Obsessive Products** — Move from project-based to product-based delivery with persistent, mission-aligned digital factories that adopt uniform Agile and DevOps practices, design thinking, and data-driven iteration to produce high-quality, user-focused solutions.
- **Grow Talent** — Invest in our Federal workforce’s technical capability via skills assessments, targeted training (cloud-native, Agile, data/AI, security), rotations and mentorship, competency-based hiring, and performance-based recognition to retain and scale institutional expertise.

Achieving our strategic goals means we must evolve our operating model to become “1DOT IT” Team. Our team will be structured into two complementary domains: digital factories that deliver mission-focused products and centralized Shared Services that provide governance, common platforms, standards, and enablement. This structure streamlines delivery, reduces duplication, and ensures consistent security and interoperability across the Department.

Together, we will deliver safer, more resilient digital services that reduce operational expense and risk while ensuring continuity of support for the Department’s mission and functions. We will prioritize and begin modernization efforts that retire our most brittle legacy systems, establishing repeatable digital service delivery patterns that enable delivery at speed. We will position our workforce with the necessary skills and tools to lead this transformation, and we will adopt an outcome-based vendor engagement approach to ensure our external partners are aligned with and delivering to the Department’s goals.

CURRENT STATE OF DOT INFORMATION TECHNOLOGY



While DOT has consolidated commodity information technology services, digital services are siloed by Operating Administration. **DOT operates more than 425 information systems** with redundancies such as 10+ grants systems, 4+ registration systems, or 3+ inspection systems.

DOT's information technology portfolio carries significant technical debt that is expensive to operate and hard to secure. The results are unsatisfied customers and missing functionality. **DOT operates over 45 systems across seven (7) data centers running on over 4,200 servers.**



DOT struggles to modernize its way out of silos because of misaligned and redundant staff.

There are redundancies in functions such as cybersecurity and portfolio management. There are gaps in functions such as product management and artificial intelligence.

"1DOT IT" is the way forward to transform the current state and help DOT become a mission-driven, technology-powered organization.

ORGANIZING FOR SUCCESS

To enhance our Department's immediate and long-term technological capabilities while strengthening oversight and alignment with this IT Strategic Plan, we will be implementing a streamlined organizational structure that operates as "1DOT IT" team. Working together, we will enable collaborative projects that support the Department's mission through our new digital factories and a streamlined Shared Services construct. This organizational structure will improve horizontal and vertical collaboration/coordination, increasing overall transparency of DOT IT budget utilization and aligning allocations to the Department's strategic goals.

The digital factories will deliver agile, scalable, and mission-focused digital solutions to drive operational efficiency, enhance user experiences, and accelerate digital transformation across the Department's mission. Digital factories will specialize in product management, application

development, digital delivery, mission-specific analytics, and application operations. For the digital factories, the strategy is delivery. They will ensure existing projects deliver on their current roadmaps, while working to document and manage points where roadmaps can converge. New digital solutions will follow updated processes that implement the goals and objectives of this IT Strategic Plan, while providing the required level of transparency and visibility.

The Shared Services will provide the governance, technology, standards, and enablement that support the digital factories and DOT workforce in using technology to deliver the best solutions to our customers. Shared Services are an essential part of the digital supply chain, and alignment with the digital factories is crucial to product success. Simplifying, standardizing, and automating will make Shared Services work repeatable, enabling faster product flow to customers.



FRAMEWORK

The U.S. Department of Transportation (DOT) 2025–2029 IT Strategic Plan charts the course for unifying and simplifying our IT landscape to enable a strategy-led, technologically empowered DOT. Rather than chasing trends, this Plan focuses on strategic, customer-centric digital products and services that deliver Mission value. Our approach is rooted in making technology work for people – fast, secure, and focused on real business outcomes. We will achieve this by emphasizing three key focus areas that serve as a guide for decision-making and resource allocation.



Cultivating a Builder Mentality



We're transitioning away from outsourcing our expertise to vendors and contractors towards a "builder mentality." By proactively solving problems, constantly seeking to improve ourselves, driving meaningful value, being adaptable to change, and continuously learning, we become a modern, efficient "1DOT IT."

Simplifying and Unifying Systems



We're simplifying redundant tools and moving towards building one best-in-class product for each job or use case. For example, one comprehensive system to support grant solutions. Similarly, we will transform OCIO into THE technology development center for DOT.

Transforming How We Work & Think



We're transforming how we think about, understand, collaborate on, and deliver solutions. By fostering a culture of cooperation, deploying modern tech stacks, and designing for growth, we're laying the groundwork for a smarter, more trusted, and future-ready DOT.

STRATEGIC GOAL 1: ELIMINATE TECHNICAL DEBT

Eliminating technical debt is essential to building a fast, reliable, and innovative DOT IT environment. By resolving outdated systems and legacy challenges, we free up critical resources, reduce the risk of breakdowns, and enable faster, more efficient development. Furthermore, by improving performance, reliability, and transparency, we strengthen trust in our systems and services.

To achieve this, we will standardize and migrate appropriate applications to cloud-native architectures, reducing complexity and increasing scalability. We will integrate automated security and quality testing across all DevSecOps pipelines to proactively address vulnerabilities and improve code integrity. Architectural governance will be enforced to eliminate shadow IT and identify redundant or obsolete technologies. Enterprise architecture and investment decisions will be vendor-agnostic and aligned with open standards, emphasizing a product-centric mentality focusing on total cost of ownership and business outcomes.

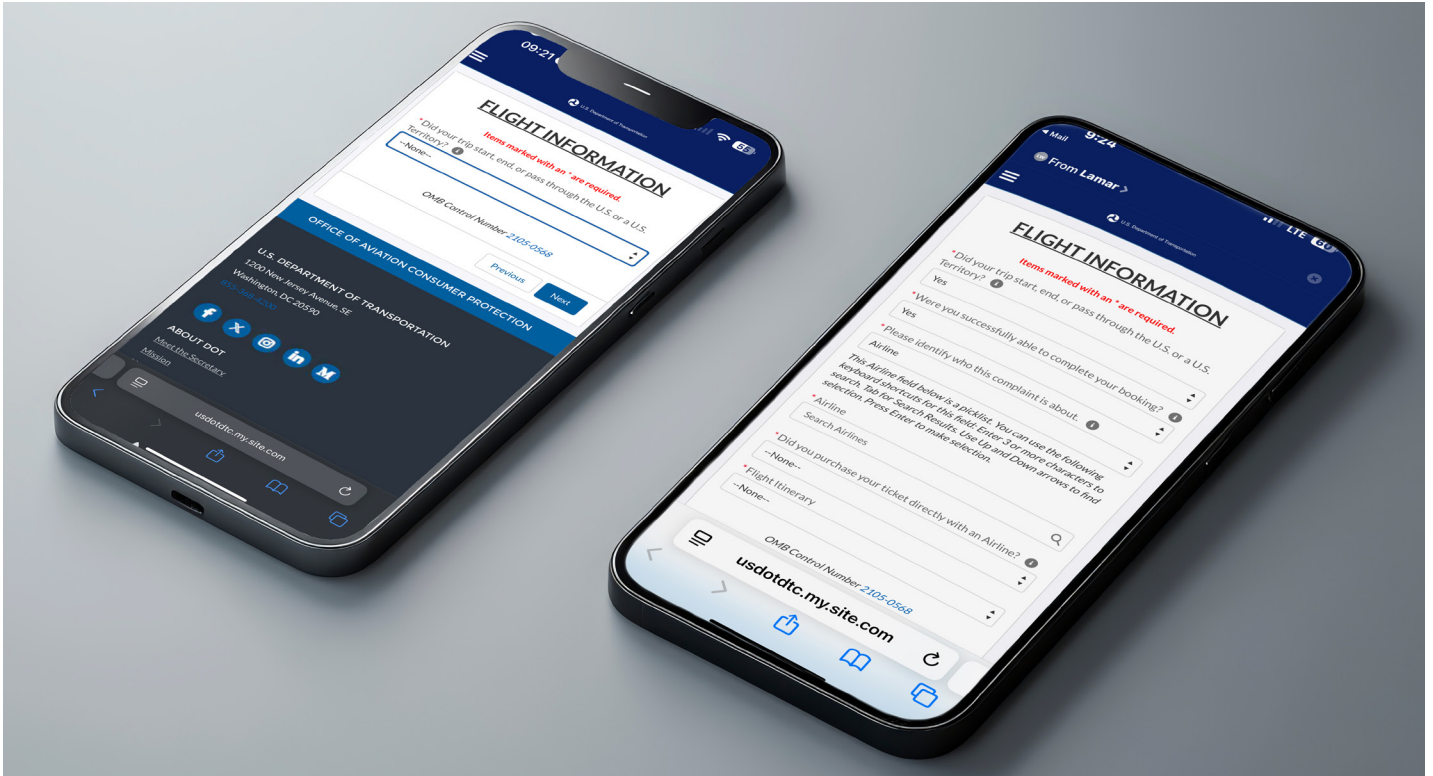
In addition, we will centralize and optimize documentation of system architecture, dependencies, and ownership to improve visibility and accountability. We will adopt outcome-based vendor management practices that ensure technology partners are held accountable for delivering measurable business value. Lastly, we will optimize enterprise agreements for greater cost efficiency and transparency.

THE FUTURE IN FOCUS

By eliminating technical debt as the “1DOT IT” unified team, OCIO will be able to aggregate requirements across the IT portfolio, and drive vendor accountability/efficiency to meet current and future technology needs. Moreover, we will be able to minimize and thereby effectively respond to current/future cyber threats and their respective impacts. By bringing together and consolidating the needs and expectations of DOT’s many different projects and initiatives, we achieve our strategic business objectives.



STRATEGIC GOAL 2: BECOME CUSTOMER-CENTRIC



Becoming a customer-centric organization means putting our customers' needs, goals, and experiences at the center of every decision. This approach fosters trust, delivers smoother, faster experiences, and builds a culture where technology is not only functional, but also valued and embraced by those we serve. To that end, we will design solutions that respond to real customer needs, rather than reinforcing outdated structures.

To operationalize this goal, we will implement multiple customer feedback channels tailored to both digital products and shared services; derived insights will be consolidated into a single analytics platform for a holistic view of the customer experience. We will use design frameworks to build detailed customer personas and journey maps that guide product development with emphasis and clarity. Furthermore, by introducing new “ways of working” – including defined team topologies aligned with mission delivery – we will foster stronger collaboration and more effective service across “1DOT IT.”

We will also improve how we measure and act on customer satisfaction by launching an intuitive service portal with real-time support that tracks feature delivery and measures customer effort and speed. A formal Customer Advisory Board will provide strategic guidance, while embedding digital factories directly into mission areas to ensure continuous alignment. Finally, we will enhance transparency with unified communication tools to keep customers informed of service status, improvements, and development timelines, thereby reinforcing our commitment to open, responsive IT services.

THE FUTURE IN FOCUS

By shifting our focus to the customer, we build a more complete overview of the customer experience that enables us to strategically direct our resources to achieve meaningful results. This allows us to simplify our work processes to align funds with outcomes and break down organizational and financial barriers, improving collaboration. By building the right thing exactly when it's needed, we create a more efficient DOT.

STRATEGIC GOAL 3: BUILD OBSESSIVE PRODUCTS

To build obsessive products is to hyperfocus on the customer experience (CX) by delivering digital solutions and shared services that are seamless, reliable, and continuously improving. This level of commitment transforms ordinary tools into indispensable assets and drives long-term satisfaction.

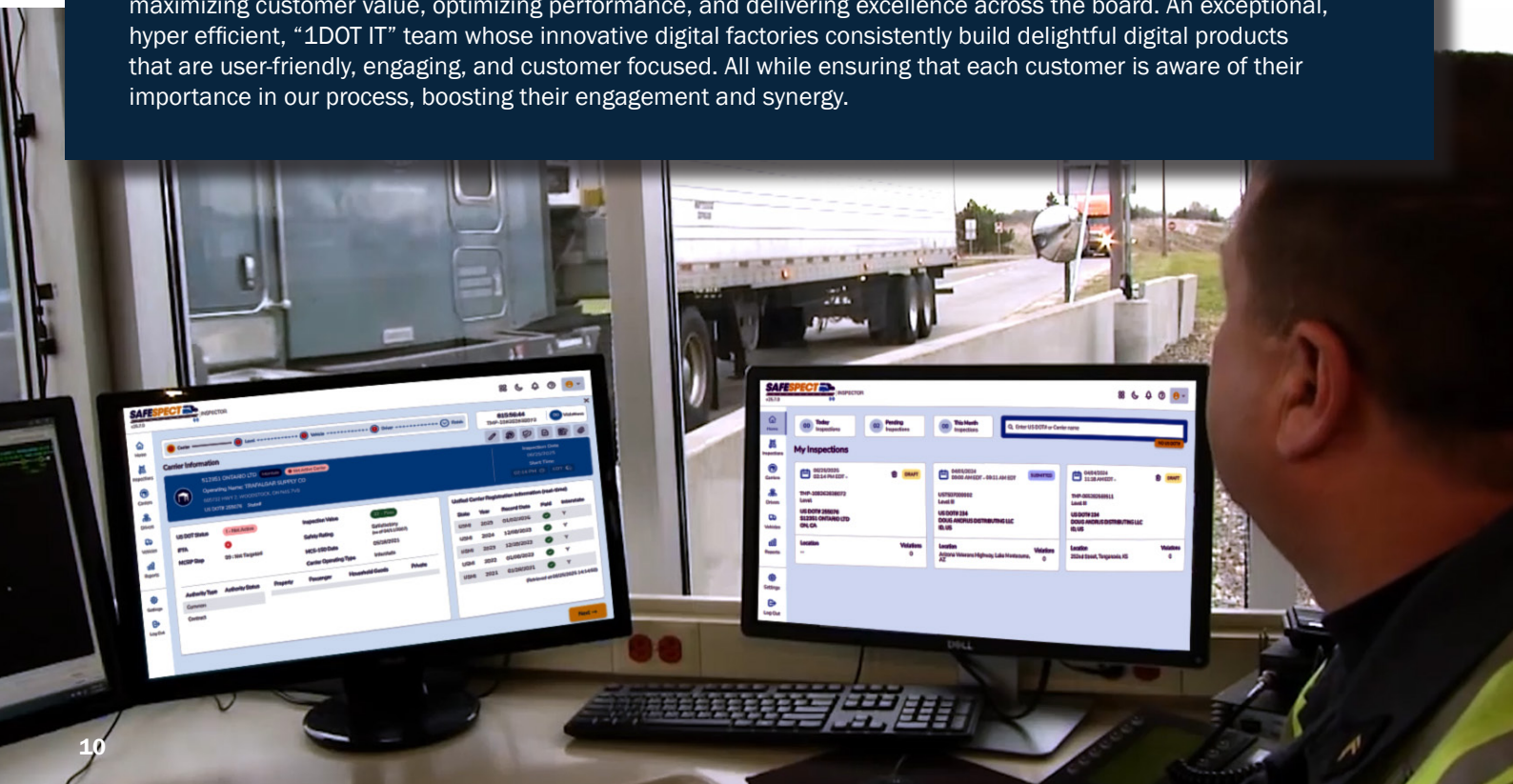
We will standardize enterprise-wide Agile and DevOps practices across our digital factories to ensure consistent delivery and continuous improvement. We will align teams on clear processes and quality benchmarks through regular maturity assessments and the adoption of proven frameworks (such as Scrum@Scale or SAFe). By fully transitioning from project-based to product-based delivery, we will enable long-term planning, persistent product teams, and stronger ownership, thereby allowing us to build, iterate, and refine with focus and accountability.

To support this transformation, we will establish a centralized CX team that embeds design thinking, customer research, and data-driven insights across product development. Product decisions will be informed by customer analytics, A/B testing, and a linked data strategy that provides a full view of customer behavior. Moreover, we will automate routine IT tasks and integrate intuitive self-service features into our products and services, making our digital tools smarter, faster, and easier to use.

THE FUTURE IN FOCUS

By building obsessive products, we chart a course for a unified, nimble, and efficient “1DOT IT” in which our IT products and services converge, even as we deliver on current roadmaps and projects. We shape a truly DOT-wide collaborative environment that allows us to start new initiatives in alignment with the latest processes and technological advancements. And we will achieve this while seamlessly integrating our IT shared services with digital factories to deliver excellence to the customer at every turn.

Ultimately, we establish a unified organization where every use case and IT product/service is geared towards maximizing customer value, optimizing performance, and delivering excellence across the board. An exceptional, hyper efficient, “1DOT IT” team whose innovative digital factories consistently build delightful digital products that are user-friendly, engaging, and customer focused. All while ensuring that each customer is aware of their importance in our process, boosting their engagement and synergy.



STRATEGIC GOAL 4: GROW TALENT

Building a high-performing IT organization requires home-grown talent. Empowered employees fuel innovation, solve complex problems, and drive sustainable progress. To cultivate this strength, we will utilize a comprehensive IT skills assessment aligned to industry standards, followed by targeted training in cloud-native technologies, Agile development, data and AI literacy, and modern security practices.



We will also expand professional development through structured cross-training, rotation, and mentorship programs. In particular, by rotating staff across digital factories and shared services, we will promote a broader understanding of the full IT ecosystem and foster collaboration across teams. We will establish a formal mentorship program, led by senior IT staff, to build leadership and technical depth, while supporting individual growth. Simultaneously, we will revamp the hiring process to be faster and more strategic, using competency-based interviews to identify candidates with Agile mindsets and hands-on experience with modern IT practices.

To retain and motivate high performers, we will implement a transparent, 360-degree feedback system and performance-based rewards tied to team and organizational outcomes; this includes clear promotion paths and recognition of technical and product delivery excellence.

Lastly, we will nurture a culture of continuous learning and mission empathy by encouraging staff to engage in learning opportunities and participate in activities (such as Customer Journey Mapping Workshops), to ensure that everyone understands the real-world impact of their work.

THE FUTURE IN FOCUS

In democratizing our data, we ensure all DOT has access and the skills needed to make use of organizational data; we create a continuously improving, data-driven culture whose performance can be measured, relative to our IT Strategic Plan, in real time. Additionally, by prioritizing our people and sourcing/growing top talent, we enable improved productivity and performance, enhance employee retention/engagement, and strengthen our culture of collaboration.

Ultimately, by empowering our workforce with the skills to optimize their daily activities while automating as much as possible, we build an efficient, versatile, future-ready “1DOT.”

DOT IT STRATEGIC GOALS

The DOT IT Strategic Plan lays out the organizational structure and framework that will guide us on our “1DOT IT” journey. As we embrace a builder mentality, we will continually improve, optimize, simplify, and unify our systems. We will transform how we work and think to keep pace with the increasing demands for more IT capacity, flexibility, and improved solutions. Our strategic goals emphasize collaboration and customer-focused product delivery, the implementation of modern technology, and organizational growth as necessary to building trust and driving lasting change. Taken together, the organization, framework, and strategic goals outline the objectives that position DOT to meet the people, process, and technology challenges of tomorrow.

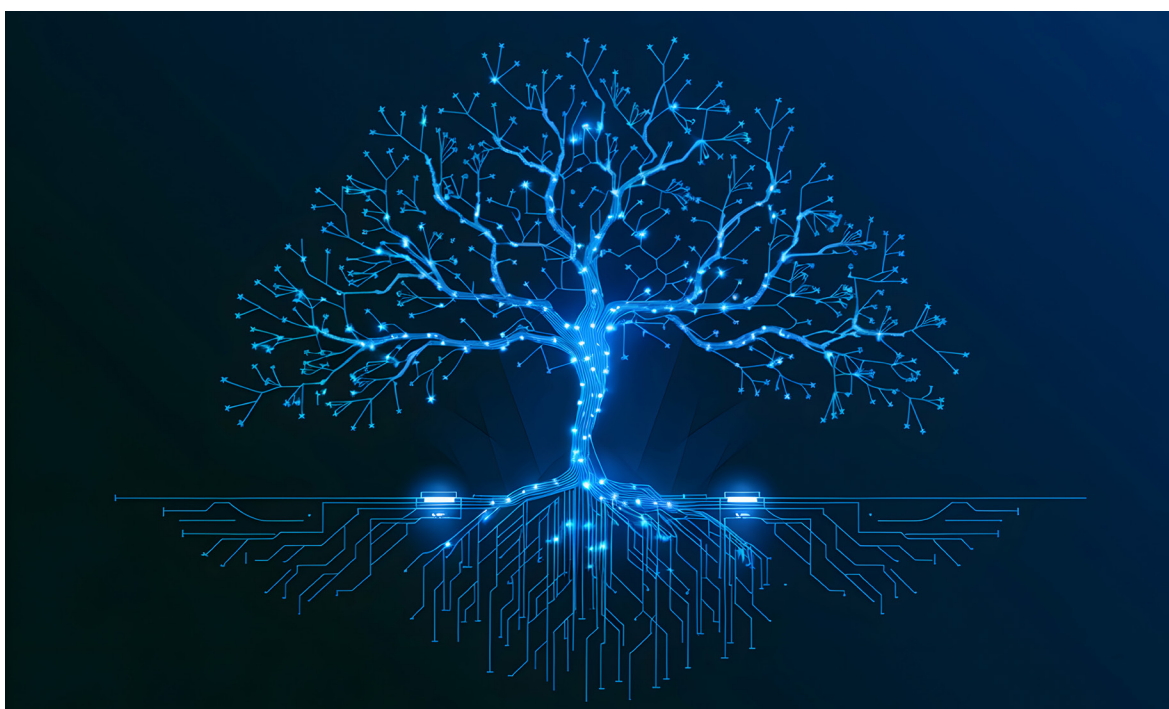
	CULTIVATING A BUILDER MENTALITY	SIMPLIFYING AND UNIFYING SYSTEMS	TRANSFORMING HOW WE WORK AND THINK
ELIMINATE TECHNICAL DEBT	Cultivate a hands-on maker culture to increase transparency, optimize documentation, and refactor outdated systems	Streamline complex architectures into standardized, cloud-native frameworks underpinned by outcome-based vendor management	Overhaul legacy systems with vendor-agnostic architecture and an investment management framework that meets future demands
BECOME CUSTOMER-CENTRIC	Build products with the customer’s voice in mind from the first prototype, incorporating customer feedback and satisfaction metrics throughout the product lifecycle	Work as “1DOT IT” CIO team to develop a deep mission and customer understanding using customer journey maps and unified messaging, channels, and operations	Align digital factories and customer engagement processes to enable transparent and proactive digital delivery, meeting changing customer needs and fostering innovation at every touchpoint
BUILD OBSESSIVE PRODUCTS	Take ownership of product creation – including the customer and developer experience – with an emphasis on quality, iterative progress, and self-service capabilities	Implement unified, repeatable Agile and DevOps practices that enhance product quality and efficiency, using data to drive product design and facilitate data linkage, collaborating with other government agencies and DOT Operating Administrations for data sharing to break down data silos	Transition from a project management to a product development lifecycle to encourage innovation and transform how teams think and operate
GROW TALENT	Promote experiential learning and mentorship to build technical and creative skills	Use uniform methods and clear guidelines to accelerate onboarding, manage performance, and develop and recruit talent	Develop a culture of continuous learning and adaptive change management to equip talent for future challenges

CONCLUSION

Eliminating technical debt is a critical foundation for transforming our IT environment into a fast, reliable, and innovative “1DOT IT.” As we address legacy systems and outdated processes, we unlock the capacity to develop new solutions more efficiently, while also reducing costly disruptions. This strategic focus not only improves system performance and transparency, but also builds trust with customers by ensuring our technology consistently supports mission goals and directly focuses on their needs. Through cloud-native migration, automated security testing, and rigorous architectural governance, we simplify our technology landscape and optimize our investments for long-term success.

In establishing a vendor-agnostic decision-making process, we create the single best product that fulfills the requirements of each use case. Doing so refines the acquisition process and reallocates resources, delivering cost-savings to the Department. Simultaneously, by enhancing visibility and accountability through centralized documentation and the adoption of outcome-based vendor management – i.e., holding partners responsible for delivering real business value – we deliver product/service excellence. Such an approach ensures our IT systems are modern, secure, aligned to our strategic priorities, and cost-effective. Lastly, by focusing on home-grown talent, we position DOT for future success.

Ultimately, by realizing our four Strategic Goals – eliminating technical debt, becoming customer-centric, building obsessive products, and growing talent – we lay the groundwork for a more agile, customer-focused, high-performing IT organization. A “1DOT IT” equipped to meet the evolving needs of the Department, the public we serve, and an ever-changing digital ecosystem.





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