



**Executive Committee**

**Board Information Item III-B**

**Digital and AI Ecosystem**



# Board Document

OVERVIEW			
PRESENTATION NAME	Digital and AI Ecosystem	DOCUMENT NO.	300050
ACTION OR INFORMATION	Information		
STRATEGIC TRANSFORMATION PLAN GOAL	Service excellence; Talented teams; Regional opportunity and partnership; Financial Stewardship and Resource Management;		
RESOLUTION	No		
EXECUTIVE OWNER			
EXECUTIVE TEAM OWNER	Nicholson, Judd L.;		
ORGANIZATION	Digital Modernization		
DOCUMENT INITIATOR	Hannah Ro		
OTHER INFORMATION			
COMMITTEE	Executive Committee (Non-OIG)	COMMITTEE DATE	7/10/2025
PURPOSE/KEY HIGHLIGHTS	Provide an update regarding the Digital & AI Ecosystem strategy to include accomplishments, organization build out, projects in progress, AI activation, frontline engagement, and methodology for delivery and acceleration.		
DISCUSSION	Update the Board on status and plan for Digital Modernization – Digital and AI Ecosystem Acceleration aligned with all four categories of the Strategic Transformation Plan (Service Excellence, Talented Teams, Regional Opportunity & Partnership, Financial Stewardship & Resource Management).  Metro’s outdated processes and systems are holding us back. Significant frontline frictions as Metro’s systems limit the right data		



## Board Document

and insights across workflows. Manual and paper-based processes require significant change to automate and modernize ways of working. Complex legacy system ecosystems (such as Asset Management) are difficult to change and drive risk and complexity.

Digital and AI acceleration is required to modernize Metro's transit ecosystem.

In the past two years, Digital Modernization has established service & team structure through improved service delivery, establishment of strong teams to manage daily operations, and launched big modernization efforts.

Metro is at a critical inflection point to reach the desired modernized end state. For the next two to four years, Digital Modernization's focus will be to modernize & accelerate the digital and AI ecosystem through reimagined workflows, delivering solutions that enable outcomes, solving frontline frictions, modernizing core systems and infrastructure, achieving cost efficiencies and optimization, and accelerating service delivery.

In the next phase, Digital Modernization will continue to innovate through continuing the new collaboration model and ways of working, upskilling talent and product practices, and legacy systems fully replaced with modern technology / architecture.

In the past two years, there have been a number of key accomplishments:

- New tech capabilities in Transit ops (e.g., Enterprise Video Systems, reduced DLY 95%) & Cust. experience (e.g., MetroPulse, Tap. Ride. Go.)
- Launched multi-year foundational modernization (E.g., ERP, Maximo, Network fabric, Digitization of Rolling Stock)
- Established financial stewardship (E.g., New technology governance and purchasing policies)
- Reset the Digital Modernization org with redefined core capabilities, special event protocols, and momentum behind digital competencies
- Developed a longer-term digital/AI strategy and initiated the shift toward a modern, data-driven tech ecosystem, focused on innovation

Additionally, Digital Modernization has put in place a robust organization for further capability with 385 FTEs. Organization has been fully reset and operating over the past two years and has expanded and transformed capabilities.



## Board Document

### Key Highlights by Digital Modernization Departments

- Operational Technology: 99.99+ Uptime for critical train management systems (e.g. AIM, TPS); 207.5M fare transactions in CY2024
- Infrastructure: \$2.5M savings to date in changed infrastructure strategy with a potential savings of \$7.7M; 28.8% reduction in cellular plan cost; hybrid strategy – cloud & data center model
- Service Delivery: 92% call response within 30s vs 90% target; 82% first call resolution for incidents vs 75% industry standard
- Cybersecurity: Improvement on Cyber Exposure Score from 355 to 219 (lower score is better) with industry average being 375; Cybersecurity training compliance from 53% to 86% with targeted 95%
- Business Applications: 10+ systems currently undergoing modernization
- Digital Ecosystem Acceleration: Transformation launched with details later in the presentation
- Enterprise Architecture: 50 to 0 reduction in non-compliances on quality audits from 2018 to 2024.
- Data & AI: AI activation; planning & pilots for AI and transforming data use; Microsoft productivity; GenAI use cases; and SMART Data Hub

Upcoming vision includes a roadmap of projects for Digital/AI priorities based on Strategic Transformation Plan goals and outcomes with key highlights including ERP, Enterprise Video Systems, rolling stock modernization, network fabric, digitization of products, MTPD ticketing, schedule modernization, Maximo, call center software, asset management, etc.

In broad opportunities to implement AI, WMATA is pursuing an approach to 1) drive staff productivity and better service by taking advantage of available AI tools quickly; 2) pilot and scale AI capabilities that reshape end-to-end workflows; 3) continuously innovate new ways of using AI to solve key challenges:

- Procurement and Human Capital: e.g. AI generated job descriptions, intelligent contract search and spend optimization
- Video Enabled Operations: e.g. Mitigating fare evasion, analyzing passenger volumes
- Bus Fleet & Facilities Maintenance: e.g. repair command center that integrates sensors, fault codes, repair history, manuals into a single view, AI copilot to guide techs, and parts lookup with real-time inventory



## Board Document

- Customer Experience: e.g. Chatbot to enable self-serve wayfinding
- Frontline Digitization: e.g. AI Rule Book & warranty management to digitize rules, manuals, etc – enabling fast search, contextual updates, and greater accessibility
- Supply Chain Optimization: e.g. Reducing costs by improving warranty claims effectiveness; predicting future parts usage to improve availability

Outcome-driven products will move us to a modern Digital & AI ecosystem with a future-fit infrastructure leading into modern ‘lean scoped’ core systems of record. This will unlock value by liberating data from legacy systems and clean necessary data into a rich data layer. The data, analytics, and AI will allow the development and driving of digital products for a “smart business layer” – resulting in outcomes and capabilities that support Metro’s Strategic Transformation Plan.

Achieving these goals and plans will be done in a two-speed approach: 1) continuously delivering business value to build and scale new digital products and 2) concurrently modernizing new capabilities and evolving WMATA’s digital ecosystem. The two-speed approach will cycle together to re-enforce transformation.

Digital Modernization has established a new, collaborative delivery model focused on outcomes between 1) business leaders, 2) front-line teams, and 3) multi-disciplinary digital expertise. The new digital way of working breaks from traditional IT models with a focus on delivering customer and business outcomes; continuous value delivery; engaging and empowerment of frontline teams to solve and drive rapid adoption; fast lane governance; multi-disciplinary teamwork; and solutions that really work for users (avoiding “tech for tech” or “vendor solution lock-in”).

To track AI and the digital ROI, product features (e.g. supply chain parts search and inventory tracking, facilities clean work order information and status) will be measured by product success metrics (product effectiveness and product adoption). These will enable operational metrics (e.g. asset availability and reliability; customer and employee satisfaction; wrench time and utilization; maintenance cost) to drive strategic outcomes serving the Strategic Transformation Plan in all four categories.

Digital Modernization is now positioned for acceleration of Metro’s digital and AI journey to continue the two-speed approach for the future with planned roll-outs:



## Board Document

	<ul style="list-style-type: none"><li>• Building Bus &amp; Facilities maintenance product MVPs</li><li>• AI Safety Rulebook product MVP</li><li>• Defining Maximo upgrade strategy &amp; path</li><li>• Scaling AI/Data products</li><li>• Building ecosystem “one slice at a time”</li><li>• Roll-out AI training across departments</li><li>• Select Maximo partners, launch program, &amp; deploy Maximo</li><li>• 6k Enterprise Video System go-live</li><li>• Digitizing and sustaining end-to-end workflows</li><li>• ERP go-live</li></ul>
<b>INTERESTED PARTIES</b>	N/A
<b>RECOMMENDATION/NEXT STEPS</b>	Present a focused ERP update in September.
<b>FUNDING IMPACT</b>	N/A

July 10, 2025

# Digital and AI Ecosystem Executive Committee

*Accelerating WMATA's Modernization  
Journey through Digital and AI*



OR

SV

BL

YL

GR

metrobus

Metro



Access



# Digital and AI Ecosystem Acceleration

- 1 **Background and what we've achieved**

---
- 2 What is our plan and vision

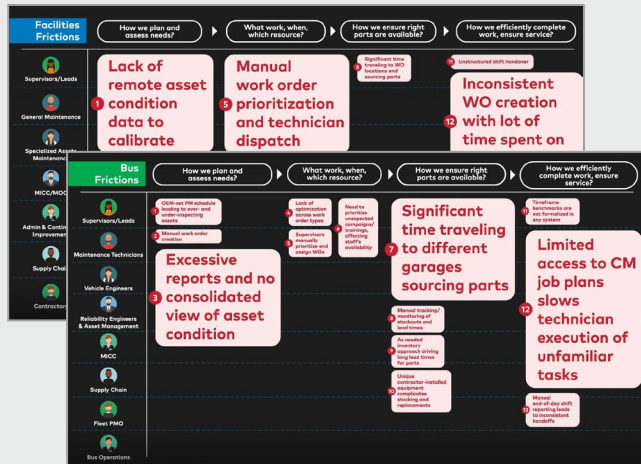
---
- 3 How will we achieve it



# Outdated processes and systems are holding us back



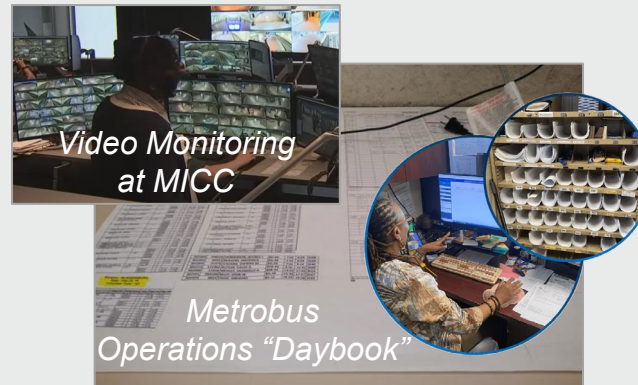
## Significant Frontline Frictions



Across our workflows, our systems limit the right data and insights (e.g., for Fleet and Facilities maintenance)



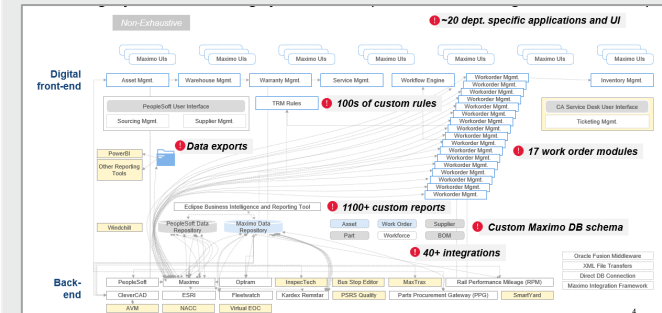
## Manual processes to be automated



Manual and paper-based processes require significant change to modernize ways of working

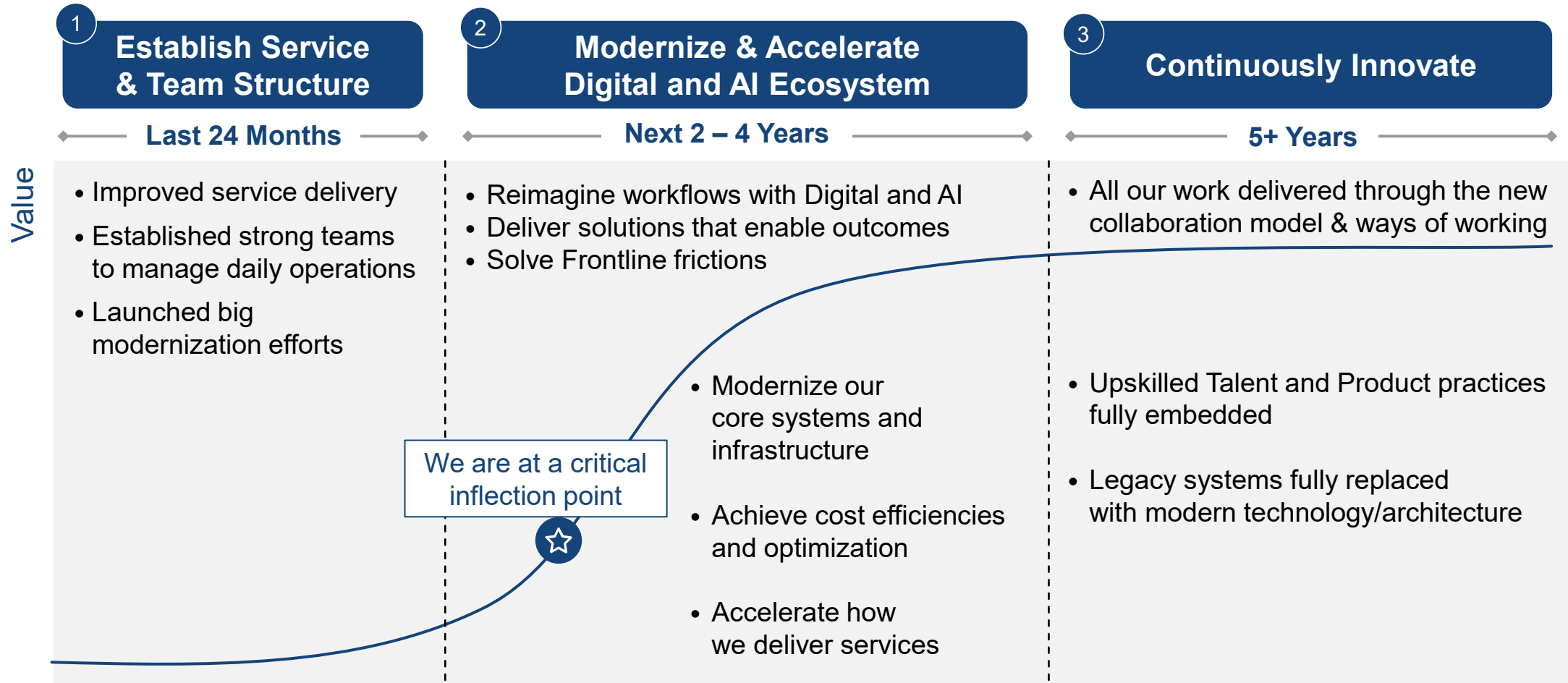


## Complex legacy ecosystem difficult to change



Legacy systems  
(e.g., Asset Management)  
drive risk and complexity

# WMATA is on a journey to modernize our transit ecosystem which requires us to accelerate Digital and AI



# Key tech and digital accomplishments over the past two years



**New tech capabilities** in Transit ops (e.g., Enterprise Video Systems, reduced DLY 95%) & Cust. experience (e.g., MetroPulse, Tap. Ride. Go.)



**Launched multi-year foundational modernization** (E.g., ERP, Maximo, Network fabric, Digitization of Rolling Stock)



**Established financial stewardship** (E.g., New technology governance and purchasing policies)



**Reset the Digital Modernization org** with redefined core capabilities, special event protocols, and momentum behind digital competencies



**Developed a longer-term digital/AI strategy** and initiated the shift toward a modern, data-driven tech ecosystem, focused on innovation



Service  
excellence



Talented  
teams



Regional opportunity  
and partnership



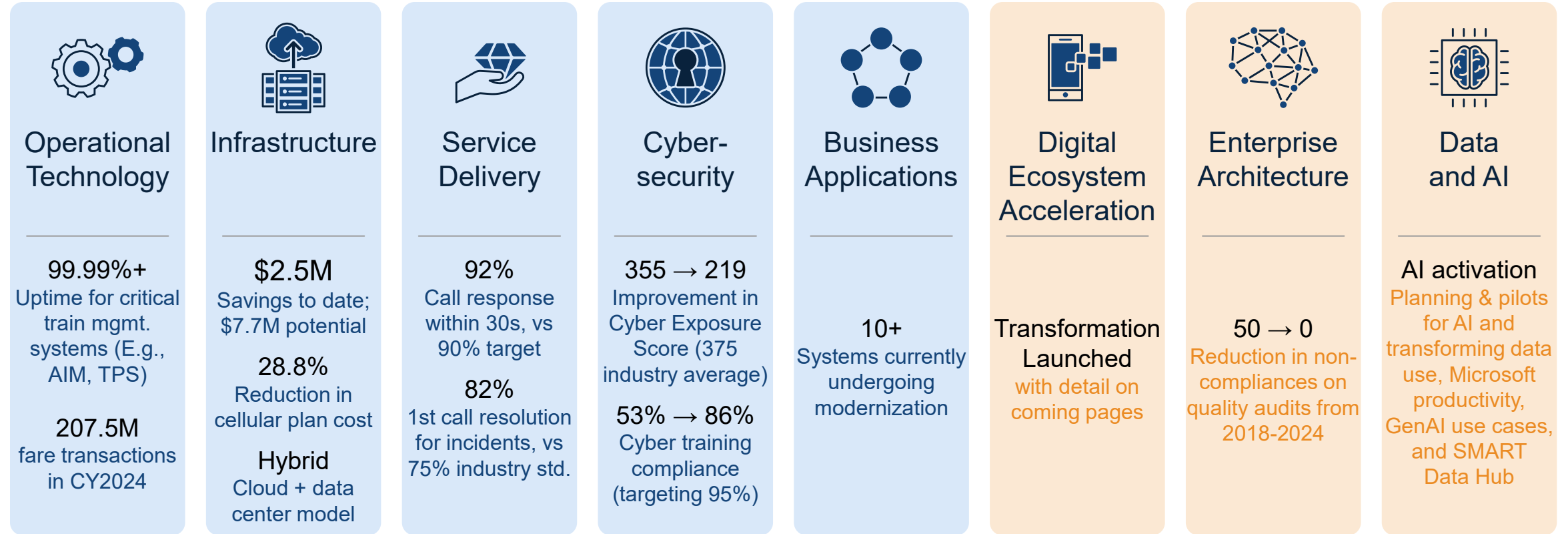
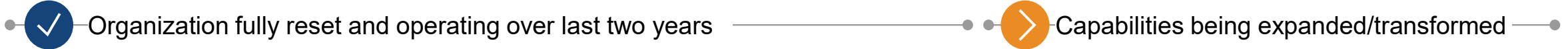
Financial stewardship  
and resource  
management

— Driving towards our Strategic Transformation Plan (STP) Goals —

...But there is  
much more to  
unlock for our  
customers,  
teams, and  
partners

# Robust organization in place, with further capability build ongoing

## Digital Modernization Org (385 FTE)

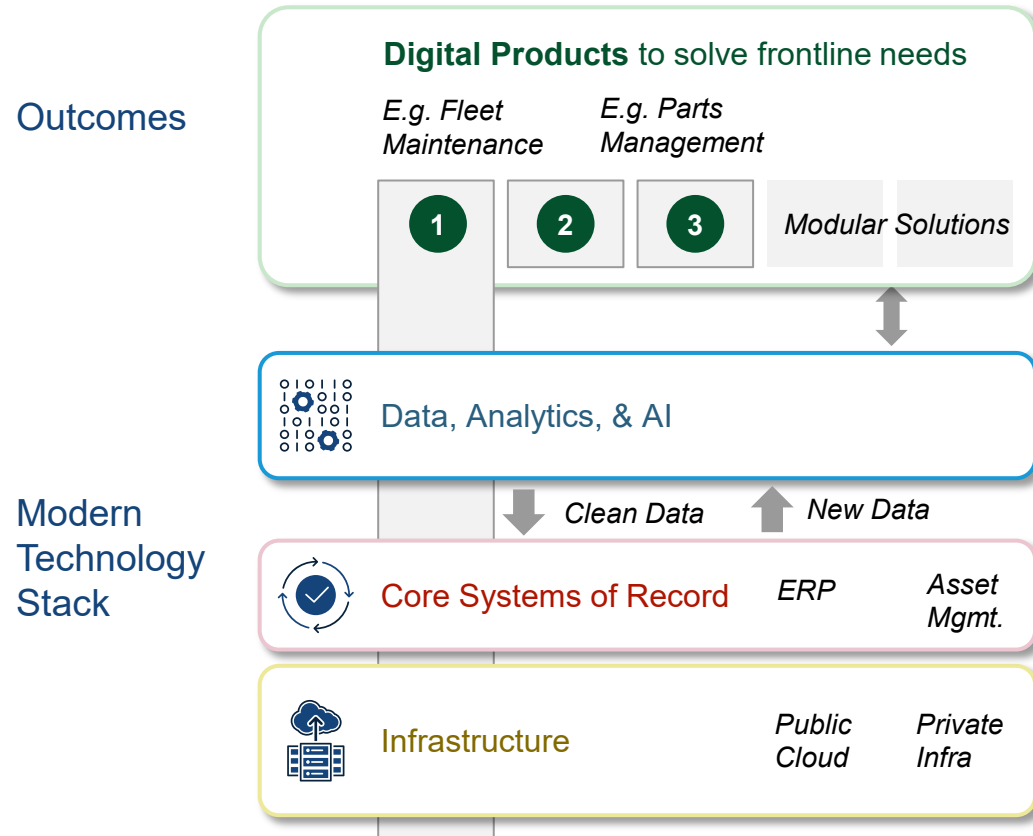


Standing up new Governance, Vendor mgmt., Resource mgmt., etc.

# Digital and AI Ecosystem Acceleration

- 1 Background and what we've achieved
- 2 **What is our plan and vision**
- 3 How will we achieve it

# Outcome-driven products gradually move us to a modern Digital/AI ecosystem



Focus on **Business Outcomes** vs. Tech-for-Tech

**Start small** with a “Minimum Viable” Product, test and learn, and build towards a clear North Star

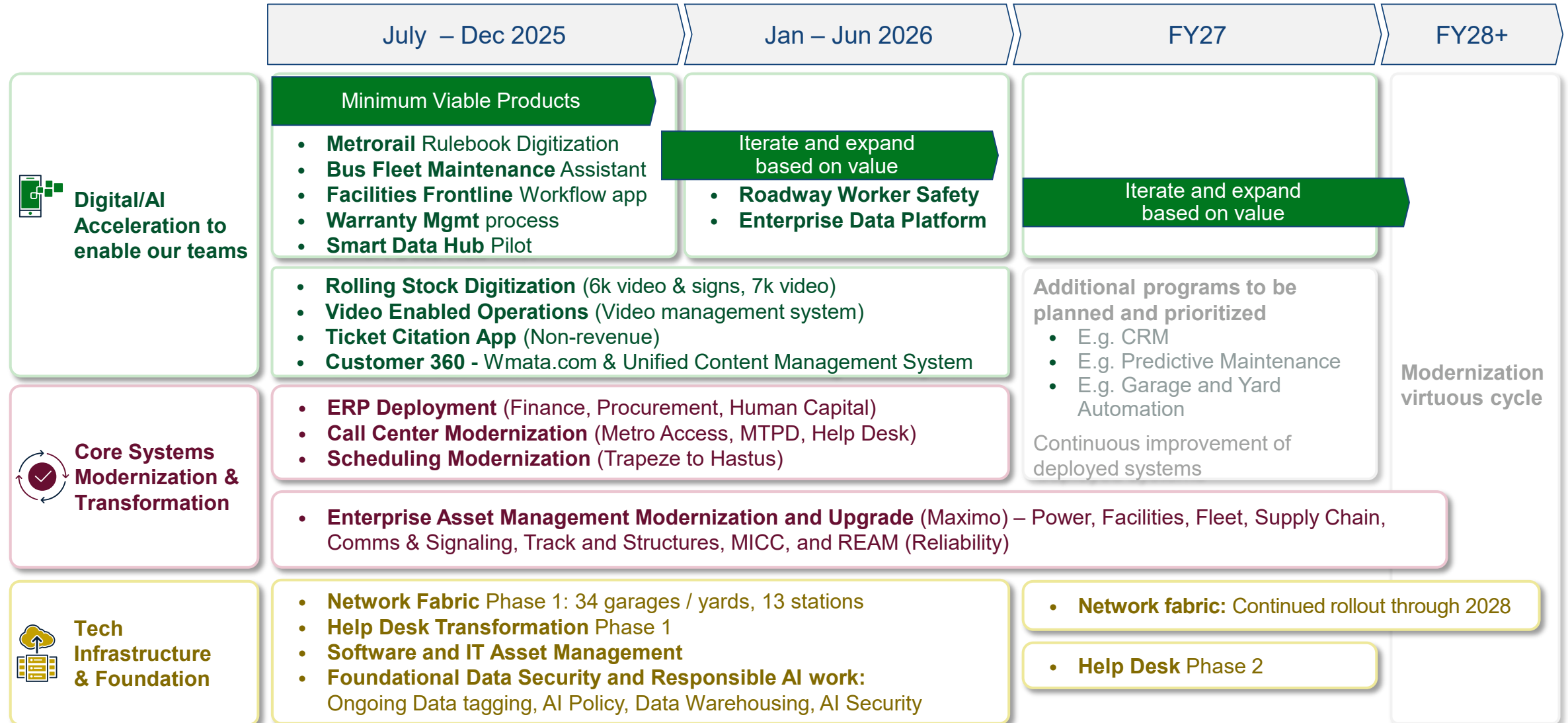
**Clean and liberate our data** to unlock value & insights

**Gradually migrate to modern ‘lean scoped’** core systems

**Future-fit foundation** vs. Adding more on legacy



# Our roadmap of Digital Modernization initiatives over next ~2 yrs.



# AI spotlight: WMATA pursuing six opportunities



## Procurement and Human Capital

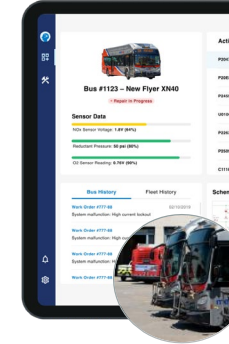
E.g., AI-generated job descriptions

E.g., Intelligent Contract search and spend optimization



## Video enabled operations

E.g., Mitigating fare evasion, analyzing passenger volumes



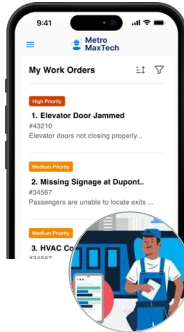
## Bus fleet maintenance

E.g., AI assistance to guide techs, capture voice notes, Repair command center that brings sensors, fault codes, repair history, manuals into a single view



## Customer Experience

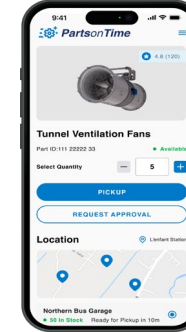
E.g., Chatbot to enable self-serve Wayfinding



## Frontline digitization

E.g., MetroRail Rule Book Search

E.g. Facilities frontline app to capture work notes and status



## Supply Chain Optimization

E.g., Reducing costs by improving Warranty Claims effectiveness

E.g. Parts search to improve visibility, optimize inventory

## Our approach to selecting the right Digital/AI opportunities



Help Staff be productive to drive **adoption**



Reshape our **workflows**, not just “throwing AI” at the problem



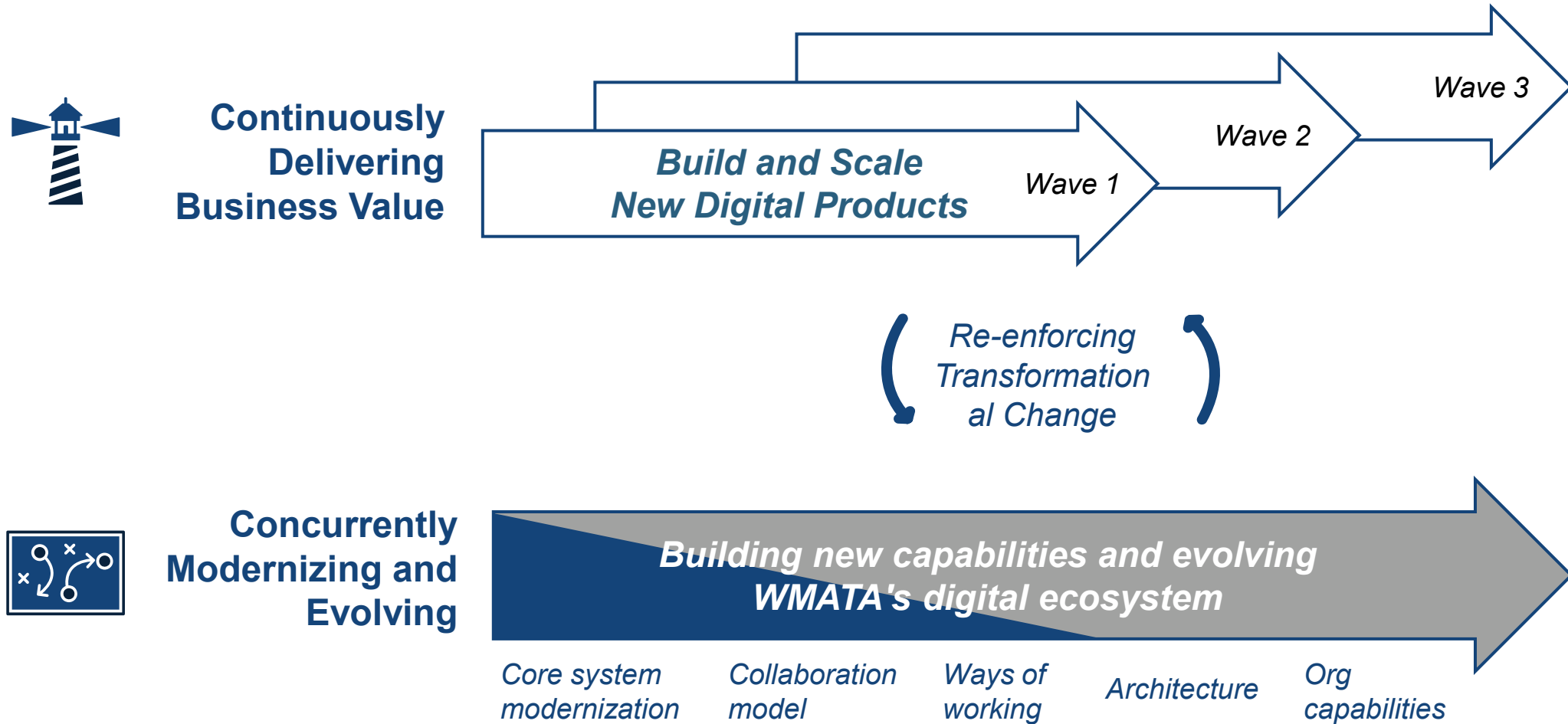
Move the **needle** on key business problems



# Digital and AI Ecosystem Acceleration

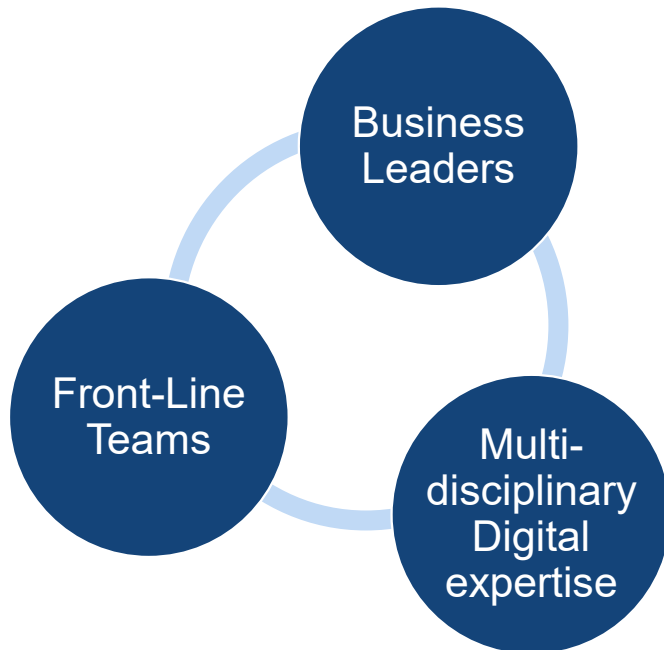
- 1 Background and what we've achieved
- 2 What is our plan and vision
- 3 **How will we achieve it**

# How we will get there: Two-speed approach



# We are establishing a new delivery model focused on outcomes

## New Collaboration Model



## Digital Way of Working *breaks from traditional IT methods*

- ✓ **Obsessive focus** on delivering customer and business outcomes (Few big rocks vs. long list of POCs)
- ✓ **Start small, think big**, Continuous value delivery (vs. big bang)
- ✓ **Engaging and empowering** frontline teams to solve & drive rapid adoption
- ✓ **Fast Lane** governance
- ✓ **Multi-disciplinary** teamwork
- ✓ **Solutions "that really work" for users**, avoid 'tech for tech' or 'vendor solution lock-in'

## Outcomes

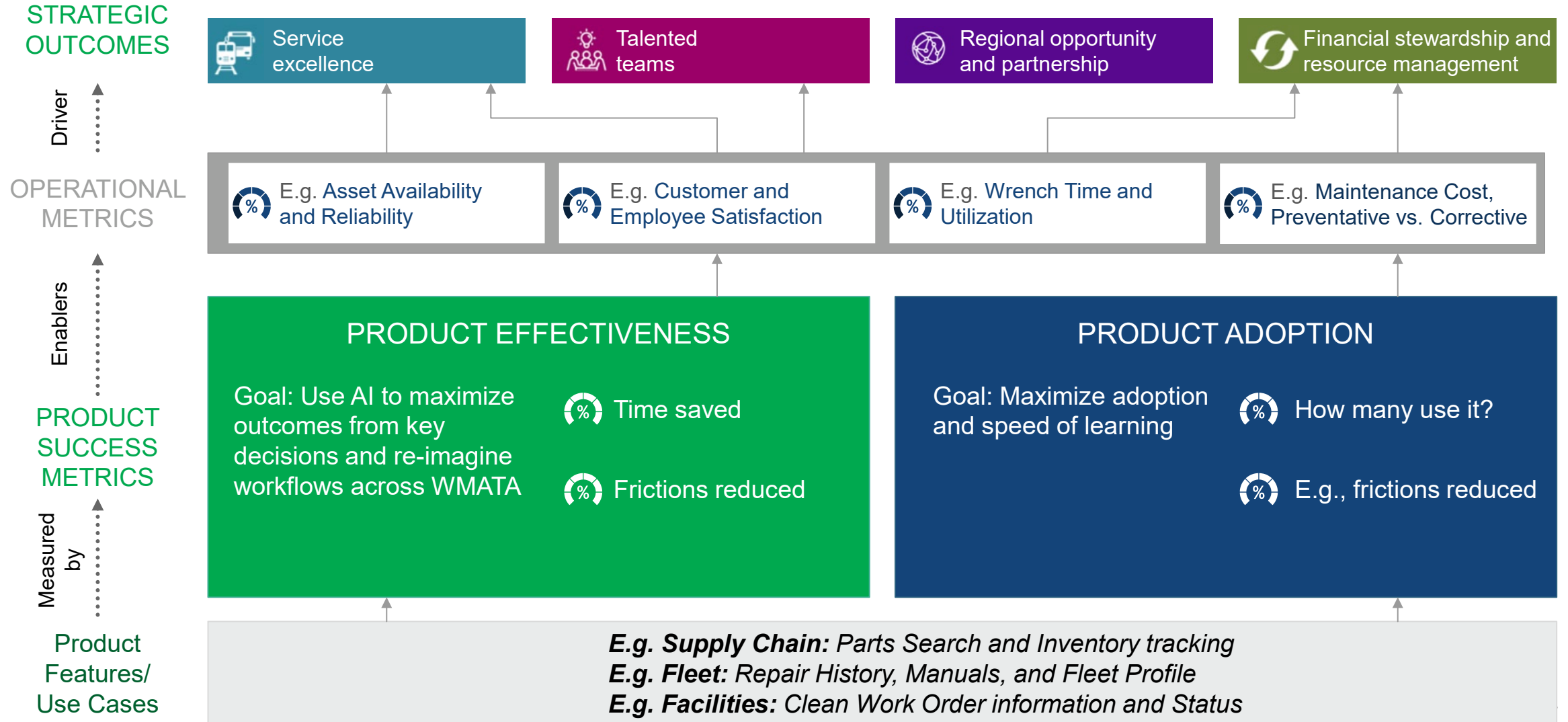
- ↑ Speed to rollout
- ↑ Effectiveness of solution
- ↑ Adoption by end-users
- ↑ Impact
  - 100s of users
  - 3x ROI vs. traditional tech efforts
  - Transform core processes



# Spotlight: Let's re-live this new way of working with our Bus Fleet & Facilities teams

Video Placeholder

# How we will rigorously track ROI from AI/Digital investments



# What's ahead in Metro's Digital and AI Journey: Acceleration

