

City of Charlotte

3-Year Strategic Roadmap for Artificial Intelligence

Innovation & Technology Department

PURPOSE: The purpose of this strategic roadmap is to provide clear and actionable direction for the City of Charlotte in its adoption of artificial intelligence (AI) technologies over the next three years. With recent advancements in AI, particularly in generative AI (GenAI), which gained widespread attention through OpenAI's ChatGPT release, the potential for transformative change across industries has never been more evident. The City of Charlotte is committed to harnessing this potential to improve public services, enhance operational efficiency, and drive innovation.

This roadmap outlines a phased, structured approach to AI adoption—beginning with foundational governance, capacity building, and pilot projects, and progressing to broader deployment and integration. By fostering strong partnerships, investing in workforce education, and carefully validating AI use cases through proofs of concept, the city wants to ensure that its AI initiatives are ethical, unbiased, and aligned with the City's strategic goals.

Presented in a "crawl-walk-run" phased framework, this roadmap positions the city to responsibly and effectively integrate AI solutions into its business. We will move forward deliberately and thoughtfully, ensuring that our AI implementations remain safe, transparent, and beneficial to all stakeholders.

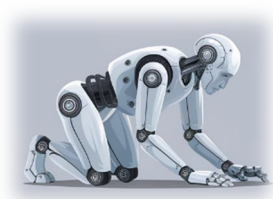
SCOPE: The scope of this strategic roadmap spans all city departments, guiding the development of AI-focused technology investment portfolios for each business area, as well as the internal operations of I&T. This roadmap covers the necessary governance, planning, and execution of AI initiatives, with specific focus on ensuring that each department is aligned with citywide goals. The development of these investment portfolios will begin later in the "crawl" phase, once foundational governance structures are in place, and continue through the "walk" phase as the city builds its AI capabilities.

While data is essential to fully leveraging AI, this roadmap does not delve into a comprehensive data strategy or detailed data architecture design. Instead, it identifies the high-level initiatives required to establish an AI-ready environment. These foundational initiatives will support future efforts to create a robust, complementary data strategy that aligns with AI objectives.

APPROACH: AI is rapidly evolving, driving a wave of innovation and transformation across industries. While the technology continues to mature, the City of Charlotte recognizes both the opportunities and challenges that come with AI's rapid advancement. This roadmap is designed to balance bold ambition with careful planning, ensuring that we stay cognizant of emerging trends while grounding our approach in what is feasible today and in the near future.

To account for AI's fast-paced evolution, the strategic initiatives outlined in this roadmap are more detailed for years one and two, allowing for adjustments in year three as the technology progresses. The city will adopt a measured yet progressive approach, leveraging AI to its full potential while safeguarding citizens and mitigating risks. We will phase the integration of AI into our business environment using a crawl-walk-run methodology, which ensures deliberate and continuous progress.

The City of Charlotte is committed to investing in the necessary resources to fully capitalize on AI's potential. This roadmap aligns AI initiatives with broader business goals, ensuring that our efforts not only advance technology adoption but also enhance city services and outcomes for all stakeholders.



Crawl Phase (Year 1): Foundation and Exploration

The 'Crawl' Phase lays the groundwork for the City of Charlotte's AI adoption, focusing on building the essential foundations for success in the subsequent years. This phase emphasizes establishing governance structures, educating staff, and identifying pilot projects to begin exploring AI's potential.

Benchmarking and Readiness

- **AI Readiness Assessments (Q2 FY25):** Conduct comprehensive evaluations of the city's technological, organizational, and cultural readiness for AI. These assessments will identify key strengths, weaknesses, opportunities, and threats, setting a baseline for tracking progress throughout the roadmap.

Establish AI Governance

- **AI Policy Development (Q1-Q4 FY25):** Draft and implement a comprehensive AI policy focused on ethical use, addressing critical issues such as data privacy, transparency, accountability, and regulatory compliance.
- **AI Governance Structure (Q1-Q3 FY25):** Develop an AI governance framework to oversee all AI-related activities. This structure will define roles, responsibilities, decision-making processes, and ensure adherence to ethical and legal standards.

Define AI Principles and Guidelines

- **AI Guiding Principles (Q2-Q4 FY25):** Create a set of AI principles to guide selection, development, and deployment. These will prioritize ethical considerations, public trust, and alignment with the city's broader strategic objectives.
- **Generative AI Guidelines (Q4 FY24):** Already established, these guidelines ensure responsible and effective use of generative AI, covering key areas like data handling, content creation, and ethical implications.
- **Define AI Risk Tolerance Levels (Q2-Q3 FY25):** Establish clear risk tolerance levels for AI initiatives. This will guide decision-making on whether to approve AI investments based on their potential impact and risk and determine the appropriate level of human oversight required for AI-driven decisions. These thresholds will help balance innovation with safety, ensuring responsible AI use.

AI Educational Offerings for Staff

- **AI Types and Use Cases (Q2-Q4 FY25):** Educate Innovation & Technology (I&T) staff on various AI types, including their pros, cons, prerequisites, and typical use cases. Special focus will be placed on equipping Business Relationship Managers and Department Advocates to identify AI opportunities during their interactions with customer departments.
- **Basic AI Training Curriculum (Q3-Q4 FY25):** Curate online resources and establish a basic AI training program for I&T staff to build foundational knowledge in AI concepts.
- **Focused AI Training (Q2 FY25 & Ongoing):** Expand I&T's ability to directly develop AI capabilities to meet departmental needs. Provide specialized training for staff involved in designing and developing AI solutions, with a focus on practical skills and hands-on experience using AI tools.
- **Leveraging GenAI (Q3-Q4 FY25):** Deliver Lunch and Learn sessions for all city staff on GenAI basics and common opportunities to leverage within the workplace.

Testing and Evaluation

- **AI Platform Evaluation (Q1 FY25 & Ongoing):** Test and assess various AI platforms for performance, features, and cost. The goal is to identify platforms best suited to the city's needs and use cases.
- **Pilot Project Selection and Implementation (Q1-Q4 FY25):** Identify impactful pilot projects with clear objectives and measurable outcomes. Pilot projects will be implemented using agile methodologies to gain practical insights and validate AI models. The pilot projects will also serve as learning opportunities and to demonstrate capability within the I&T organization.

Data-Readiness Work

- **Data Governance (Q2-Q4 FY25):** Review and update the city's Data Governance Policy to ensure that data processes, procedures, and standards align with AI goals. Socialize the results across the organization so that the benefits are understood, and city staff support and comply with it.
- **Data Inventory and Quality Assessment (Q2 FY25-Q2 FY26):** Inventory existing datasets, assess their quality, and ensure they are "AI-ready".
- **Metadata Establishment (Q2 FY25-Q4 FY26):** Develop comprehensive metadata for high-value datasets to facilitate data discovery and usage.
- **Data Architecture/Infrastructure Development (Q2 FY25-Q4 FY27):** Begin developing a robust data infrastructure, including data lakes and warehouses, to support seamless data integration and AI model deployment.

Stakeholder Engagement

- **Partnership Exploration (Q2 FY25 & Ongoing):** Seek partnerships in the public and private sectors to access additional resources, expertise, and opportunities for joint AI initiatives. While some initiatives may best be accomplished by staff, some will be better suited for partners. We will get a better feel for this as we move through these phases and continue to develop our staff.
- **Engagement with City Leadership (Q2 FY25):** Present the 3-year AI Roadmap to city leadership, encouraging them to explore how AI can enhance operations in their respective areas.
- **City Staff Education (Q3-Q4 FY25):** Launch "Lunch & Learn" sessions on Generative AI to educate city staff. Sessions can be recorded and viewed later by staff on demand to provide an ongoing resource for new city staff as well those that may not have been able to make the initial offerings. These sessions will foster a collaborative AI community and build momentum for future AI initiatives.

By focusing on these foundational elements in the first year, the city will be well-positioned to accelerate AI adoption and achieve transformative outcomes in subsequent phases.



Walk Phase (Year 2): Measured Builds and Increasing Momentum

The 'Walk' Phase builds upon the governance foundation as well as the learning experiences gained in year one through piloting initiatives. It is anchored by efforts to build portfolios of AI opportunities around customer departments and internal operations, as well as bolstering the infrastructure and data architecture needed to support more robust offerings. Some initiatives that were introduced in year one will continue here in year two and beyond, such as testing and evaluation of new models and platforms, exploring public & private partnerships, generating metadata, and continuing infrastructure and architecture assessments.

Benchmarking and Readiness

- **AI Readiness Assessments (Q1 FY26):** Conduct a second iteration of evaluations on the city's technological, organizational, and cultural readiness for AI. These assessments will be compared against the year one baseline results to measure progress.

Stakeholder Engagement

- **Partnership Exploration (Q1-Q4 FY26):** Continue to seek partnerships in the public and private sectors to access additional resources, expertise, and opportunities for joint AI initiatives. Year two should also offer opportunities to leverage those partnerships that were uncovered during the initial year.
- **Establish Master Services Agreements (MSAs) with Trusted Vendors (Q3-Q4 FY26):** One of the most time-consuming efforts associated with executing on an identified AI opportunity is the government procurement process. Through the test and evaluation efforts, as well as the partnership explorations, we will seek to identify a handful of trusted companies that can deliver in the various areas of AI. Establishing MSAs with these vendors ahead of time will allow us to then quickly act on identified AI opportunities with our customer departments without delay.

Data-Readiness Work

- **Data Inventory and Quality Assessment (Q1-Q2 FY26):** The need to inventory existing datasets, assess their quality, and ensure they are "AI-ready" will likely carry over into year two and possibly year three due to the sheer amount of data sets generated and maintained within the city. Year two should also address designing and implementing an ongoing process to keep the data inventory and quality information up to date as new data sets are introduced into the organization (likely in collaboration with the existing Technology Investment Process (TIP) which acts as a gate for all new technology investments across the organization.
- **Generate Templates & Documentation for Improved Data Ingestion (Q1-Q4 FY26):** Create standardized templates and documentation to streamline the unstructured data ingestion processes where feasible. Without metadata attached to many incoming documents, such as invoices and other contract attachments as examples, it can be extremely difficult to pull the data for proper usage. These templates will ensure consistency, improve data quality, and accelerate the integration of new data sources into AI systems.
- **Metadata Establishment (Q1-Q4 FY26):** Continue developing comprehensive metadata for high-value datasets to facilitate data discovery and usage. The work in year two should progress on down the prioritized list of datasets, ensuring that those more likely to be incorporated into AI are resolved earlier.
- **Data Architecture Development (Q1-Q4 FY26):** Efforts in year one to begin developing a robust data architecture will easily carry over into year two implementation work. There will also be another round of

assessment and cost estimation for needs going into the next fiscal year to ensure that we can support seamless data integration and even more complex AI model deployment in year three and beyond.

Portfolio Management of AI Opportunities

- **Build Portfolio of AI Opportunities for each Customer Department (Q4 FY25 – Q2 FY26):** A key component of the roadmap is identifying and prioritizing AI solutions that address the unique business needs of each department. This effort begins with a discovery phase, engaging each city department to assess their operational goals and explore potential AI applications. The result is a portfolio of AI opportunities tailored to each department's strategic objectives.

Each opportunity will undergo a thorough analysis to estimate costs, assess potential impact, evaluate risks—including technical feasibility, operational risks, and ethical considerations—and determine projected timelines. This structured analysis will allow for prioritizing AI initiatives based on expected return on investment, risk tolerance, and alignment with citywide priorities, forming the basis for budgetary planning and resource allocation.

- **Build Portfolio of AI Opportunities for I&T Operations (Q4 FY25 – Q2 FY26):** To improve the efficiency, reliability, and scalability of our IT operations, we will create a portfolio of AI-driven opportunities focused on automating key processes. We will start by ensuring that our current operations management tools, such as SolarWinds, are fully implemented and configured. This will ensure that the data collected is ready for AI models to use.

Once this foundation is established, we will evaluate the built-in AI capabilities of these tools and compare them to the option of developing custom AI models. Whether we use built-in features or develop new solutions, our goal is to implement AI in areas like alert management, incident detection, and issue resolution. These solutions will reduce downtime, optimize resources, and cut operational costs.

Infrastructure Enhancements

- **Enhance Infrastructure in Funded Areas to Support AI (Q1 FY26 – Q4 FY26):** To support robust AI offerings, we will focus on enhancing several key areas of our technology infrastructure as a continuation of the initial work that was done in year one. These areas ensure that the organization has the necessary capacity, security, and flexibility to effectively leverage AI technologies. Many of these areas will need to be assessed and sized with consideration for on-prem vs cloud-based enhancements to support the proposed AI Opportunities Portfolios described above. The following are areas to be investigated:

1. Data Infrastructure

- **Data Lakes & Warehouses:** Continue to invest in scalable and secure data storage solutions (e.g., data lakes, warehouses) that can handle vast volumes of structured and unstructured data.
- **Data Pipelines:** Develop or enhance data ingestion and processing pipelines to ensure seamless integration of data from multiple sources and prepare it for AI applications. Data pipelines are designed to move, transform, and process data from various sources into a centralized location (like a data lake or warehouse) where it can be used by AI models and analytics tools. They ensure that data flows efficiently through multiple stages, including extraction, transformation, and loading (ETL).

2. High-Performance Computing (HPC)

- **GPU/TPU Clusters:** With consideration given to the proposed AI Opportunity Portfolios, we may need to purchase or rent high-performance GPUs (Graphics Processing Units) or TPUs (Tensor Processing Units), which are critical for training complex AI models at

scale. Using GPUs or TPUs in a dedicated environment rather than relying solely on cloud services depends on several factors, such as the nature of the task, cost considerations, data security, and operational control. The expected investments within the aforementioned portfolios will help to determine whether this direction is needed and will likely fall into year three or beyond but should be considered nonetheless.

- Cloud Infrastructure: Invest in scalable cloud infrastructure (e.g., AWS, Azure, Google Cloud) for flexible AI model deployment, training, and storage without heavy on-premise investments.

3. AI-Optimized Storage Solutions

- NVMe & SSDs: Invest in high-speed storage solutions like NVMe or SSD drives, which are optimized for the rapid read/write operations required by AI workloads.
- Hybrid Storage Architectures: Consider hybrid storage solutions that combine local high-speed storage with cloud-based options to balance performance and cost.

4. Network & Connectivity

- High-Speed Networks (where/if necessary): Upgrade network bandwidth and latency to support the high data transfer rates needed for real-time AI processing and remote data access. Given the recent network upgrades, this investment will likely be focused on improvements to data transfer rates to/from the cloud rather than within the organization.
- Edge Computing: Consider edge computing solutions to process data closer to where it is generated, reducing latency and bandwidth costs for AI applications in IoT and sensor-heavy environments. This is another infrastructure investment area that will depend on the content of the AI Opportunities Portfolios and likely be more strongly considered in year three and beyond.

5. AI-Specific Platforms & Tools

- Machine Learning (ML) Platforms: Purchase or subscribe to AI/ML platforms like TensorFlow, PyTorch, or AutoML tools that simplify model building, training, and deployment.
- AI Operations (AIOps): Implement AI-powered monitoring and operational tools (AI for IT operations) to automate performance optimization, incident management, and predictive maintenance.
- AI Orchestration: Invest in AI orchestration tools that streamline the deployment, management, and scaling of multiple AI models and workflows. These tools ensure that AI models run efficiently across various environments (e.g., cloud, edge, on-premises) and help manage the lifecycle of models from development to production. Orchestration platforms also facilitate collaboration between data science and IT teams, ensuring smooth integration with existing infrastructure and optimizing resource allocation.

6. Scalable Cloud-Based AI Services

- AI as a Service (AIaaS): Consider further investments in cloud-based AI services (e.g., Google AI, Azure Cognitive Services) to access pre-built models for natural language processing, computer vision, and other AI functions.
- DevOps & MLOps Integration: Fund tools that integrate AI development with DevOps practices, streamlining AI deployment and management through MLOps.

7. Data Collaboration & Sharing Platforms

- Data Exchange Platforms: Create or invest in secure platforms that facilitate internal and external data sharing for AI purposes, ensuring collaboration across departments or even with external partners.
 - APIs for AI Integration: Fund the development of robust APIs to integrate AI models into existing systems and workflows efficiently.
- 8. AI Model Management & Monitoring Tools**
- Model Versioning & Deployment Tools: Invest in tools that allow for seamless versioning, monitoring, and updating of AI models to ensure they stay accurate, efficient, and scalable.
 - Explainability & Bias Detection Tools: Fund the integration of explainability tools (e.g., SHAP, LIME) and bias detection to ensure AI models are transparent, fair, and compliant with ethical standards.
- 9. AI Governance & Compliance Framework**
- AI Governance Tools: Fund the purchase or development of governance tools to ensure responsible AI use, including model auditability, ethical guidelines, and compliance with regulatory standards.
 - Risk Management Platforms: Implement AI risk management platforms that monitor AI models for unintended consequences, biases, and failures in decision-making.

Extend AI Development Capabilities/New Functionalities (Q1-Q4 FY26)

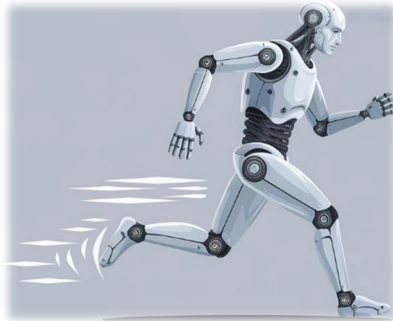
- Depending on the AI opportunities that are either being pursued in the current fiscal year or that are known to be coming in the next fiscal year, the city will target developing certain advanced capabilities to support those proposed solutions. These advanced capabilities demonstrate how AI can be integrated into various aspects of operations, optimizing decision-making, automation, and interaction with data in real-time.
 - 1. Linking AI Models to Live Data in Production Systems**
 - Description: Connecting AI models to live, real-time data streams from production systems. This allows the AI to make decisions or provide recommendations based on up-to-the-minute data, improving responsiveness and outcomes.
 - Example: AI-powered fraud detection systems continuously monitor live financial transactions, flagging suspicious activity as it happens to prevent fraud in real-time.
 - 2. Translating Voice to Text for AI Models**
 - Description: Using advanced voice recognition technology to convert spoken language into text data that AI models can analyze or act upon. This enhances human-AI interaction and enables the automation of manual data entry tasks.
 - Example: AI-powered virtual assistants converting 311 citizen phone calls into text for prompt generation, allowing real-time assistance and decreased call times.
 - 3. Real-Time Predictive Analytics**
 - Description: Integrating AI models with live data to provide real-time predictions and insights. This capability is particularly useful in departments with complex machinery and other large mechanical assets like Aviation, CLTWater, CATS, and logistics, where AI can predict outcomes or detect anomalies as events unfold.
 - Example: AI predicting machine failures in industrial settings using sensor data, enabling proactive maintenance before breakdowns occur.
 - 4. AI Model Explainability**

- Description: Developing models with built-in explainability to provide insights into how decisions are made. This is crucial for regulatory compliance, trust-building, and transparency in AI-driven decision-making.
 - Example: In Housing & Neighborhood Services, explainable AI can provide justifications for loan approval/denial decisions, ensuring that both the city and citizens/businesses understand how the AI arrived at its conclusions.
- 5. Transfer Learning & Multimodal Learning**
- Description: Using AI models trained in one domain and applying that knowledge to another, different but related domain. Multimodal learning involves integrating multiple types of data (e.g., text, images, video) to build richer AI models.
 - Example: AI models that can analyze both text and visual data together, like analyzing video footage while interpreting spoken dialogue, to make more informed decisions.
- 6. Reinforcement Learning (RL) in Dynamic Environments**
- Description: Using RL algorithms to train AI models to adapt and improve through trial and error in real-time environments, especially in changing or unpredictable conditions.
 - Example: AI-driven traffic control systems that learn from vehicle and pedestrian behavior to make better signal control decisions, adapting as the day and traffic evolves.
- 7. Natural Language Processing (NLP) for Complex Interactions**
- Description: Moving beyond basic voice-to-text or text generation, advanced NLP allows AI to understand and engage in complex conversations, handle sarcasm, context switching, and even sentiment analysis in real-time communication.
 - Example: AI-powered customer utility billing chatbots that handle multi-turn conversations with complex queries or analyze customer sentiment to adjust tone accordingly.
- 8. AI-Driven Personalization and Recommendation Systems**
- Description: Leveraging AI to deliver personalized experiences based on real-time user behavior and preferences. Advanced systems can adjust their recommendations dynamically as new data comes in.
 - Example: AI-powered content recommendation engines that not only suggest items based on past behavior but also adapt in real-time as new user actions are recorded (e.g., what you watch and what might be pertinent to your neighborhood).
- 9. Computer Vision for Object Recognition and Scene Understanding**
- Description: Advanced computer vision capabilities allow AI to interpret and understand complex environments, recognizing objects, actions, or even inferring context from visual data.
 - Example: AI systems that can analyze CDOT camera footage to detect delivery vans & trucks for better curb management and revenue opportunities.
- 10. Generative AI with Multi-Step Reasoning**
- Description: Going beyond basic content generation, generative AI can be trained to perform complex multi-step reasoning, allowing it to handle advanced problem-solving tasks, create original content (images, text, code), and simulate scenarios.
 - Example: AI generating legal documents, creative works (like CC&M graphics or background music for city-produced video), or complex software with the capability to reason through tasks and refine its outputs in real-time.

Implement Funded AI Opportunities

- **Implement Funded Departmental AI Opportunities (Q1-Q4 FY26):** AI investments that were identified and funded in the FY26 budget cycle will have an opportunity to be implemented during the second (walk phase) year. As part of the budget process, they will already have been assessed and prioritized accordingly with implementation dates dependent upon resource availability. This will be the first set of complete AI opportunities to be implemented from the customer department portfolios.
- **Implement Funded I&T Operations AI Opportunities (Q1-Q4 FY26):** Also originating from the FY26 budget cycle, the set of funded AI investments targeted towards internal (I&T) operations will be implemented during the second year. This will be the first set of complete AI opportunities to be implemented from the I&T Operations Portfolio.

In Year 2 of the AI roadmap, the City of Charlotte moves from initial pilots and foundational governance to scaling AI efforts across departments and operations. The ‘Walk’ phase focuses on creating AI opportunity portfolios tailored to both customer-facing departments and internal IT operations, expanding data-readiness work, and enhancing infrastructure to support AI initiatives. Continued stakeholder engagement, AI readiness assessments, and partnership explorations will drive the momentum, while infrastructure and data architecture improvements will lay the groundwork for more complex AI solutions in Year 3.



Run Phase (Year 3): Scaling & Embedding AI Across the City

In Year 3, the 'Run' phase will focus on scaling AI initiatives throughout the organization, building on the foundations of earlier phases. As emphasized early within this roadmap, the AI landscape is changing so rapidly we will stick to generalities with what will need to be accomplished in year three. The city will continue efforts of generating metadata, evaluating new platforms/models, and enhancing infrastructure. Top priority, though, will be to scale and implement more AI solutions across the organization now that the foundation has been established.

Benchmarking and Readiness

- **AI Readiness Assessments (Q1 FY27):** Conduct a third iteration of evaluations on the city's technological, organizational, and cultural readiness for AI. These assessments will be compared against both the year one and year two baseline results to measure progress. Given the foundational work that was completed in the first two years, we should expect to see significant improvement here.

Stakeholder Engagement

- **Partnership Exploration (Q1-Q4 FY27):** Continue to seek partnerships in the public and private sectors to access additional resources, expertise, and opportunities for joint AI initiatives. Year three should offer more clarity around the value of existing and potential partnerships, as organizations will have had time to demonstrate their level of AI capabilities.

Data-Readiness Work

- **Metadata Establishment (Q1-Q4 FY27):** Continue developing metadata for any remaining high-value datasets to facilitate data discovery and usage. The work in year three should also address the development of an ongoing process, as part of the city's Technology Investment Process (TIP), that can ensure any new technology investment which contains datasets of value can be made AI-ready.
- **Generate Templates & Documentation for Improved Data Ingestion (Q1-Q4 FY27):** Continue to focus on development of templates and shifting the creation of documents / unstructured data to using these templates to improve their usability within AI solutions.

Research, Education and Skill Building

- **Test & Evaluate Platforms and Models (Q2 & Q4 FY27):** Continue to test and assess the various AI platform and model offerings for performance, features, and cost. The expectation is that these will continue to evolve and improve, and the goal is to identify those best suited to the city's current and upcoming needs. For instance, small language models may be more economical and a better fit for solutions that have a focused training set and that need to run on mobile/edge devices.
- **Assess and Reskill/Upskill I&T Workforce (Q1-Q4 FY27):** While the largest 'lift' of repurposing legacy positions into AI supporting positions should be accomplished by year three, the city will still need to assess how the AI landscape continues to change and adapt its workforce accordingly.
- **Extend AI Development Capabilities/New Functionalities (Q1-Q4 FY27):** As with the year two work in this area, the city will target developing advanced AI-focused capabilities to support current and future proposed solutions that have been identified. The advanced capabilities listed within year two that weren't addressed will likely still be of interest as well as a number of new capabilities that have yet to be discovered.

Continue Infrastructure Enhancements

- **Enhance Infrastructure in Funded Areas to Support AI (Q1–Q4 FY27):** Building upon the infrastructure enhancements that occurred in year two, year three will need to continue the efforts to provide a robust, AI-ready infrastructure that can properly support the AI offerings now and into the future. The categories of potential enhancements will likely have evolved from year two, with some being eliminated due to cloud-vs-on-premise decisions and some added to include new technologies that had not been previously available at the time.
- **Implement Funded Data Infrastructure Priorities (Q1–Q4 FY27):** Depending on the level of funding that was provided and the progress that the city made in the first two years to build a robust, AI-ready data architecture/infrastructure, year three will likely continue to require the construction and refinement of data lakes and warehouses to support seamless data integration and AI model deployment. Evolving technologies in both the data architecture/infrastructure space and the AI models themselves will likely impact these investments in year three to keep up with the latest offerings.

Implement Next Round of Funded AI Opportunities

- **Implement Funded Departmental AI Opportunities (Q1–Q4 FY27):** AI investments that were identified and funded in the FY27 budget cycle will have an opportunity to be implemented during the third (run phase) year. As part of the budget process, they will already have been assessed and prioritized accordingly with implementation dates dependent upon resource availability. This will be the second full set of AI opportunities to be implemented from the customer department portfolios.

Implement Funded I&T Operations AI Opportunities (Q1–Q4 FY27): Also originating from the FY27 budget cycle, the set of funded AI investments targeted towards internal (I&T) operations will be implemented during the third year. This will also be the second set of complete AI opportunities to be implemented from the I&T Operations Portfolio. Building upon the work done in year two, we will explore ways to integrate AI for predictive maintenance, automated issue resolution, and dynamic resource management. This will allow our infrastructure to adapt to changing needs and prevent potential disruptions before they happen. Additionally, AI will help automate routine tasks such as configuration management, compliance monitoring, and service desk operations. By reducing manual effort, our IT teams will have more time to focus on strategic priorities. These AI-driven improvements will position our IT operations as leaders in innovation, ensuring agility and resilience in a rapidly evolving technology landscape.

Year 3 of the roadmap, the 'Run' phase, focuses on expanding and embedding AI solutions across the city's operations. Building on the foundations established in the previous two years, this phase emphasizes scaling AI initiatives, refining infrastructure, and ensuring that the city's data and technology landscape continues to evolve to support AI. With these steps, the city aims to maximize the impact of AI now and into the foreseeable future, driving efficiency and innovation across all levels of its services.

Author's Note: this document was developed with the supporting aid of artificial intelligence tools (primarily ChatGPT and Ideogram.ai), including the generation of the 'crawl-walk-run' robot images at the beginning of each section.

3-Year Strategic Roadmap for Artificial Intelligence

Theme/Category	Strategic Initiatives	TIMELINE												
		Crawl Phase					Walk Phase				Run Phase			
		Q4FY24	Q1FY25	Q2FY25	Q3FY25	Q4FY25	Q1FY26	Q2FY26	Q3FY26	Q4FY26	Q1FY27	Q2FY27	Q3FY27	Q4FY27
GOVERNANCE	Develop & Publish GenAI Guidelines													
GOVERNANCE	Innovation and AI Readiness Assessment(s)													
GOVERNANCE	Define AI Risk Tolerance Levels													
GOVERNANCE	Establish AI Governance Structure & Processes													
GOVERNANCE	Define AI Guiding Principles													
GOVERNANCE	Draft and Approve City AI Policy													
EDUCATION & SKILL BUILDING	Develop AI Usage Case Guides and Basic AI Training Curriculum													
DATA	Data Governance Reaffirmation													
SOLUTION DELIVERY	Introduce/Launch Center of Excellence													
EDUCATION & SKILL BUILDING	Instruct I&T Staff on AI Usage Guides													
EDUCATION & SKILL BUILDING	Educate City Staff on GenAI Opportunities													
SOLUTION DELIVERY	Explore Potential Public & Private Partnerships													
DATA	Inventory, Assess, & Prep Data Environment													
DATA	Generate Templates & Documentation for Improved Data Ingestion													
DATA	Generate Metadata for Data Sources													
SOLUTION DELIVERY	Build & Deploy Initial GenAI Pilot(s)													
EDUCATION & SKILL BUILDING	Test & Evaluate Platforms and Models													
INFRA	Assess Infrastructure for Improvements Needed to Support AI													
DATA	Assess Data Architecture/Infrastructure to Support AI													
EDUCATION & SKILL BUILDING	Assess and Reskill/Upskill I&T Workforce													
SOLUTION DELIVERY	Build AI Opportunities Portfolio for each Department													
SOLUTION DELIVERY	Build AI Opportunities Portfolio within I&T Operations													
INFRA	Enhance Infrastructure in Funded Areas to Support AI													
DATA	Implement Funded Data Infrastructure Priorities													
SOLUTION DELIVERY	Prioritize Departmental Opportunities & Obtain Funding													
SOLUTION DELIVERY	Prioritize Internal Operations Opportunities & Obtain Funding													
EDUCATION & SKILL BUILDING	Extend AI Development Capabilities/New Functionalities													
SOLUTION DELIVERY	Establish Master Services Level Agreements with Trusted Vendors													
SOLUTION DELIVERY	Implement Funded Departmental AI Opportunities													
SOLUTION DELIVERY	Implement Funded I&T Operations AI Opportunities													
SOLUTION DELIVERY	Identify Next Round of AI Opportunities within Departments													
SOLUTION DELIVERY	Identify Next Round of AI Opportunities within I&T Operations													