

Framework Overview

Proposed New York City Computer Vision Deployment Framework: A Risk-Based Approach to Responsible Innovation

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This guidance was developed by Aspen Policy Academy fellows while participating in the Science and Technology Policy Fellowship. The Fellows were asked to recommend updates to the New York City Office of Technology and Innovation's [Artificial Intelligence Action Plan](#). This document presents a framework for implementing computer vision technologies across city agencies while protecting civil liberties and fostering public trust. The full project, including a policy brief explaining the fellows' core recommendations, is [available here](#). Please note that all authors' opinions published here are their own. This publication does not reflect the views of the Aspen Policy Academy or the Aspen Institute.

Harnessing Computer Vision for Public Benefit

New York City agencies are beginning to adopt computer vision technologies for purposes such as transportation optimization, infrastructure monitoring, and public safety. These tools have the potential to improve services, reduce costs, and enhance residents' quality of life. At the same time, computer vision raises important questions about privacy, accountability, and public impact. Without clear frameworks, we risk either stifling beneficial innovations or deploying technologies that undermine civil liberties.

Using Computer Vision Responsibly: A 3-Tier Deployment Framework

The following framework provides practical steps for agencies that are exploring responsible computer vision deployment, ensuring that these systems deliver public benefits while upholding the city's commitment to civil rights.



Tier	Risk Level	Examples	Governance
Tier 1: Foundational	Low privacy impact, no identifying information	Traffic flow optimization, infrastructure monitoring, waste management alerts	Standard privacy assessment, public notification, streamlined approval
Tier 2: Operational	Moderate privacy impact, engineered anonymization	Smart traffic management with face blurring, parking enforcement with data limits	Enhanced OTI review, community notification, annual bias audits
Tier 3: Sensitive	High privacy impact, identifying information collection	Facial recognition, individual tracking, predictive analytics	Rigorous oversight committee, community hearings, independent audits

Key Principles

- **Privacy by Design:** Edge processing preferred, automatic deletion of personal identifiers where feasible.
- **Vulnerable Population Protection:** Enhanced safeguards for undocumented immigrants, homeless individuals, youth, the elderly, and communities of color.
- **Community Control:** Mandatory engagement for Tier 3 deployments, multilingual notification, and independent monitoring with community advocates.
- **Bias Prevention:** Algorithmic testing with qualified evaluators, continuous monitoring, and clear remediation protocols.

Implementation Benefits

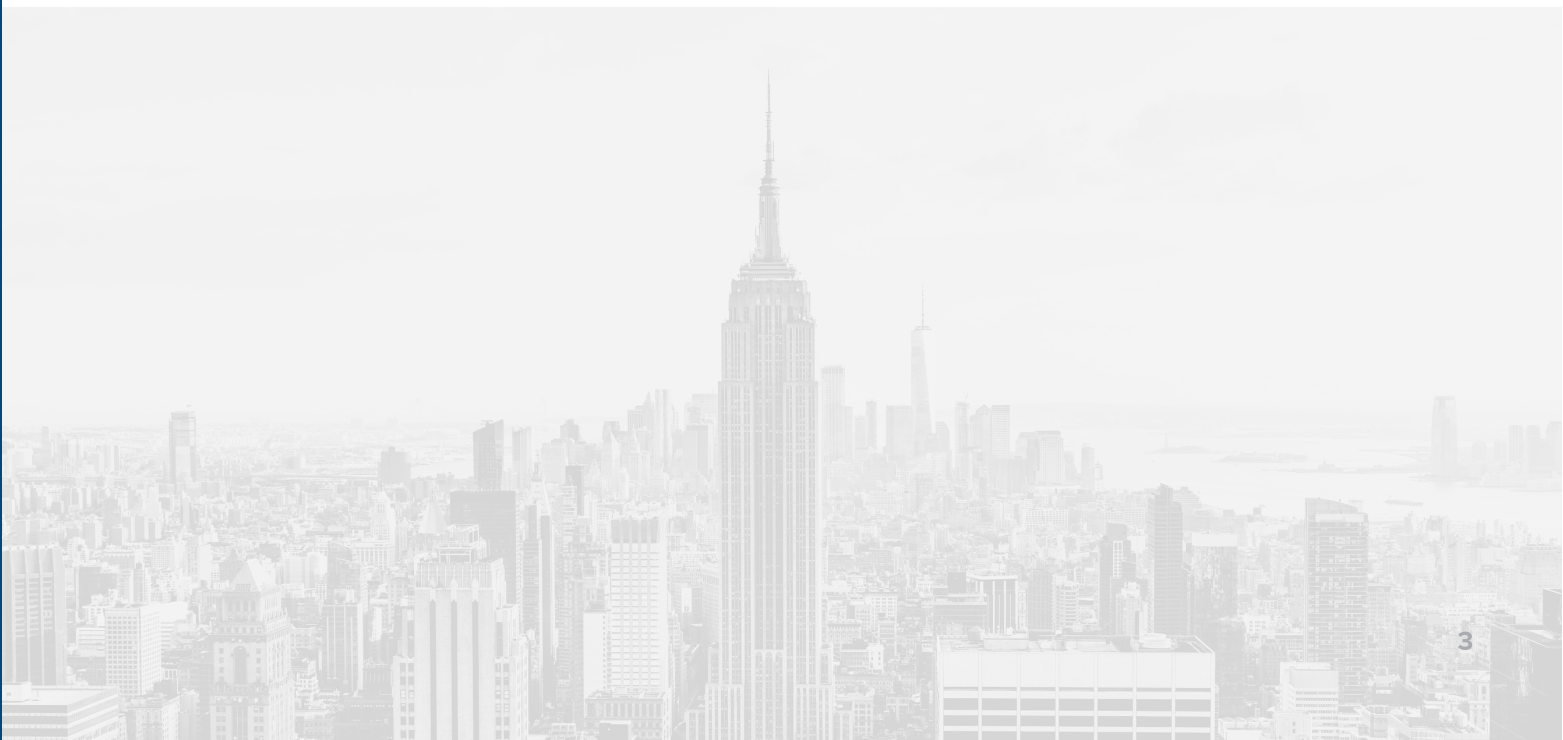
- **Enables innovation:** Streamlines beneficial, low-risk applications.

- **Ensures accountability:** Applies appropriate oversight for community-impacting technologies.
- **Builds trust:** Requires comprehensive engagement for civil liberties applications.
- **Shows leadership:** Positions New York City as a national model for responsible computer vision governance.

Next Steps

- **Explore how to integrate the framework** into your department's existing policy and AI governance processes.
- **Start with Tier 1 computer vision projects** to build experience and demonstrate public benefit.
- **Engage early with OTI** for consultation on all computer vision initiatives.
- **Establish regular reviews** to update guidance as technologies evolve.

If you'd like to learn more, see the full project, including a policy brief explaining the fellows' core recommendations, at aspennpolicyacademy.org/project/nyc-computer-vision-deployment-2025.





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