



NATIONAL SAFE SKIES ALLIANCE

Program for Applied Research in Airport Security

PARAS 0034 Project Summary

Project Title:	Optimization of Airport Security Camera Systems
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Effective Date:	November 30, 2020
Contract Time:	12 Months
Funds:	\$149,980

BACKGROUND

As airports expand and upgrade their CCTV/camera systems, there are many factors that must be considered to ensure the technology is being used to its greatest advantage, and that any upgrades/replacements are appropriate for the airport's environment and intended use. Integration/system compatibility needs, installation considerations, and ongoing calibration/system evaluation issues must all be considered early in the planning process. Concerns surrounding cybersecurity, and the privacy of data collected by camera systems and how it may be used or exploited must also be considered.

The use of video analytics increases the need for an informed implementation strategy. This technology can enable airports to enhance their security infrastructure and increase operational efficiency. However, it is a complex technology that also has the potential to add even greater problems if its impacts are not considered during planning. Analytic technology is a large undertaking that should be approached with a solid understanding of its strengths, limitations, optimal operating conditions, and privacy concerns.

Guidance is needed to help airports optimize the use of their existing technology, make well-informed decisions when expanding or upgrading their video surveillance system, and ensuring continued effectiveness and efficiency of their CCTV/camera systems.

OBJECTIVE

The objective of this research is to provide practical, systematic guidance to assist airports in optimizing security camera systems/CCTV to maximize their capabilities and increase operational efficiency. At a minimum, the guidance should address:

- Needs assessments, including stakeholder needs, desired capabilities, and regulatory requirements
- Strategies for optimizing existing technology, including configuration management
- Considerations for upgrade/replacement strategies, including:
 - System limitations/gap analysis
 - IT requirements (e.g., infrastructure, cybersecurity, scalability, etc.)
 - Suitability for analytics and associated requirements
 - Camera capability requirements
 - Camera placement and field of view considerations
 - Environmental conditions
 - Lighting conditions and requirements
 - Integration with existing systems
 - Cost/benefit, including capital expenditures and O&M

- Future planning and scalability
- Airport governance
- Strategies for vendor vetting and selection
- Strategies for ongoing system evaluation/optimization
- Strategies for stakeholder collaboration (e.g., leveraging tenant-controlled camera coverage, etc.)
- Privacy and legal implications
- End-user training and permissions management