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Creating and Maintaining a Strong Security Culture at Airports

National Safe Skies Alliance, Inc.

Sponsored by the Federal Aviation Administration

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    - Dallas-Fort Worth International Airport (DFW)
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    - Denver International Airport (DEN)
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    - Hartsfield-Jackson Atlanta International Airport (ATL)
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HOW TO USE THIS GUIDEBOOK

This guidebook is an all-encompassing source of information on creating and maintaining a strong security culture at airports. To use this guidebook most effectively, begin by reviewing the table of contents to get an overview of the information included, and to identify the sections that are especially relevant to your airport.

You can also use the information in this guidebook to develop other materials for your airport's needs, such as presentations for training, information cards, and other handouts with specific information for various roles within your organization.

See the Resource Review Reference Table in Appendix A for a summary of each resource reviewed as part of the research conducted in developing this guidebook. The table includes keyword tags that highlight the main topics and focus areas covered in each resource so that readers can quickly identify the resources most relevant to the specific needs of their airport.

PARAS ACRONYMS

ACRP	Airport Cooperative Research Program
AIP	Airport Improvement Program
AOA	Air Operations Area
ARFF	Aircraft Rescue & Firefighting
CCTV	Closed Circuit Television
CFR	Code of Federal Regulations
DHS	Department of Homeland Security
DOT	Department of Transportation
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FSD	Federal Security Director
GPS	Global Positioning System
IED	Improvised Explosive Device
IT	Information Technology
MOU	Memorandum of Understanding
RFP	Request for Proposals
ROI	Return on Investment
SIDA	Security Identification Display Area
SOP	Standard Operating Procedure
SSI	Sensitive Security Information
TSA	Transportation Security Administration

ABBREVIATIONS, ACRONYMS, INITIALISMS, AND SYMBOLS

AAAE	American Association of Airport Executives
ACI	Airports Council International
AI	Artificial Intelligence
ASAC	Aviation Security Advisory Committee
ATL	Hartsfield-Jackson Atlanta International Airport
BWI	Baltimore/Washington International Thurgood Marshall Airport
CISA	Cybersecurity and Infrastructure Security Agency
CLT	Charlotte Douglas International Airport
DEN	Denver International Airport
HR	Human Resources
ICAO	International Civil Aviation Organization
ISEB	Infrastructure Security Exercise Branch
I-STEP	Intermodal Security Training and Exercise Program
KPI	Key Performance Indicator
LE	Law Enforcement
PGD	Punta Gorda Airport
QR	Quick Response
SEA	Seattle-Tacoma International Airport
SeMS	Security Management System
SFO	San Francisco International Airport
US	United States
USCP	United States Capitol Police

SUMMARY

This guidebook is a comprehensive resource of information and strategies to help airports build and maintain a strong security culture. The guidebook will empower airports to:

- Develop tailored **outreach and communication** strategies to empower the entire airport community to take an active role in mitigating security threats
- Establish and maintain **leadership engagement** in cultivating a strong security culture and securing executive-level support for security culture initiatives
- **Empower employees** to play an active role in improving overall airport security, and to utilize **reporting systems** to reduce the risk of security incidents and breaches
- Clearly define **hiring considerations for airport security positions** and communicate the roles and responsibilities of all members of the airport community to ensure **accountability at all levels**
- **Reward and recognize employees** who take actions to reinforce a positive culture
- **Leverage available technology** and **training opportunities** to ensure airport employees, tenants, and systems are resilient to evolving and complex threats
- Improve airport security by applying **lessons learned from similar programs and operating models**
- Assess the effects of security initiatives and continually evaluate their impact on security culture using applicable **metrics and measures of success**

The guidebook includes seven main sections:

- **Section 1: Introduction** provides an overview of the guidebook and its purpose and organization.
- **Section 2: Creating a Security Culture** examines the key characteristics and building blocks for a strong security culture.
- **Section 3: Community Engagement and Information Sharing** provides airports with options and strategies for fostering strong relationships with employees, tenants, vendors, and other partners.
- **Section 4: Workforce Management** presents airports with options and strategies for building and sustaining a unified security-minded workforce.
- **Section 5: Assessing Security Culture** outlines different options and approaches to help airports develop their own methods to assess aspects of security culture.
- **Section 6: Case Studies** highlights noteworthy initiatives, programs, and strategies for building and maintaining a strong security culture from three US airports.
- **Section 7: Summary of Options and Strategies** summarizes information discussed throughout the guidebook, and provides concluding thoughts on building a strong security culture at airports.

SECTION 1: INTRODUCTION

Developing a proactive security culture is a complex challenge that must start with an organization's leadership and permeate the entire workforce. Security culture is not tangible; rather, it is inferred, felt, and observed from an organization's practices, daily operations, behaviors, actions, norms, values, and beliefs. It should be integrated with daily operations and procedures and inform the actions of the workforce. Security culture incorporates seven key elements, as shown in Figure 1:

Figure 1. Seven Key Elements of Security Culture

- **Leadership Priorities.** Organization leaders establish culture and lead by example through their actions. Engaged leaders promote security in all aspects of airport operations. Security culture is integrated or interwoven with all aspects of the business strategy.
- **Security Policies.** Effective and targeted security policies provide an organization and its employees and stakeholders with rules and guidelines to reduce organizational risk and achieve unity of purpose, compliance, and accountability with security standards.
- **Training and Awareness.** Classes, online modules, forums, and other methods increase awareness and educate personnel on security threats, risks, and policies, and keep knowledge current. Training and awareness are precursors to effective employee and community engagement.
- **Tools and Technology.** Techology systems, devices, and software can empower members of the airport community to identify, prevent, and respond to security threats; report security incidents; and mitigate risks.
- **Communication and Engagement.** Consistent and meaningful techniques for communicating with and engaging the entire workforce promote security awareness and education, build trust and collaboration, and foster commitment to the organization's security culture.
- **Employee Recognition.** Acknowledgment and affirmation of employees' security-conscious actions and exemplary commitment to security can improve employee engagement and motivate performance.
- **Organizational Culture.** When an organization promotes and prioritizes security in its mission, operations, performance management processes, and overall business model, all members of the community feel a sense of buy-in and engagement, promoting overall program effectiveness.

Security Culture is composed of specific norms, practices, beliefs, values, and attitudes that are embedded in the fabric of the organization's overall culture and reflected by the actions and behaviors of the people within the organization. A strong **Security Culture is observed, felt, and integrated with day-to-day operations and procedures**; it informs the actions of the workforce and reduces the potential risks to life as well as property from various threats. Building and sustaining a strong Security Culture are dependent on many factors, including organizational practices.
(TSA and Freadman, 2022)

1.1 Methodology for This Study

The information in the guidebook was collected through the completion of three tasks. As shown in Figure 2, each subsequent task was informed by the outcomes of the preceding task.

Figure 2. PARAS 0049 Methodology Flowchart

RESOURCE REVIEW

The resource review, which was conducted in 2022, consisted of an examination of existing literature on security culture practices for the critical infrastructure sector in general and airports in particular. The objective of this task was to identify meaningful options and strategies that support airports of all sizes in implementing and maintaining a strong security culture.

Information gathered through the resource review is referenced throughout this guidebook and serves to highlight and expand upon key findings, options, and strategies for building and maintaining a strong security culture. Additionally, resource review findings informed the development of key focus areas for examination during interviews with aviation industry entities and airports. Appendix A, Resource Review Reference Table, includes a summary of every resource reviewed as part of the research conducted in developing this guidebook.

AVIATION INDUSTRY AND AIRPORT INTERVIEWS

Most of the information included in this study was collected through a total of fifteen interviews: four with aviation industry organizations and eleven with airports, as seen in Table 1.

Table 1. Aviation Industry Organizations and Airports Interviewed

Aviation Industry Organizations
American Association of Airport Executives (AAAE)
Airport Council International (ACI) World
Airlines for America
Airline Service Providers Association

Airports
Baltimore/Washington International Thurgood Marshall Airport (BWI)
Charlotte Douglas International Airport (CLT)
Dallas–Fort Worth International Airport (DFW)
Dane County Regional Airport (MSN)
Denver International Airport (DEN)
General Mitchell International Airport (MKE)
Hartsfield-Jackson Atlanta International Airport (ATL)
Punta Gorda Airport (PGD)
San Antonio International Airport (SAT)
San Francisco International Airport (SFO)
Seattle-Tacoma International Airport (SEA)

The first group of interviews was conducted with aviation industry stakeholders. The objective of these interviews was to gather information on available resources, capabilities, and best practices, as well as the most prominent challenges they have observed in promoting a robust security culture across the industry. Information gathered through interviews with aviation industry partners was used to tailor interviews with airports.

The second group of interviews was conducted with representatives from airports across the US. In order to gain a representative picture of the types of airport security cultures and programs, and to ensure the guidance and recommendations in this guidebook can be applied to a variety of airports, the eleven airports interviewed differ in terms of airport category, geographic location (FAA Region), and governance structure.

Airport interviews were conducted individually, and tailored questions were developed for each. The objective was to gather information on each airport's security operations, initiatives, programs, and resources, and illuminate any effective strategies and challenges to building and maintaining their organizational security culture.

AIRPORT CASE STUDIES

Three airports with unique and scalable approaches to building security culture were selected to participate in case studies: BWI, PGD, and SFO. Airport category and governance structure were considered when selecting case study airports to ensure adequate representation of airport sizes and governance models.

Representatives from each airport participated in follow-on one-hour interviews. Each case study interview was tailored to examine three to four programs, practices, initiatives, strategies, or operational approaches that contribute to each airport's robust security culture.

SECTION 2: CREATING A SECURITY CULTURE

2.1 Characteristics of a Strong Security Culture

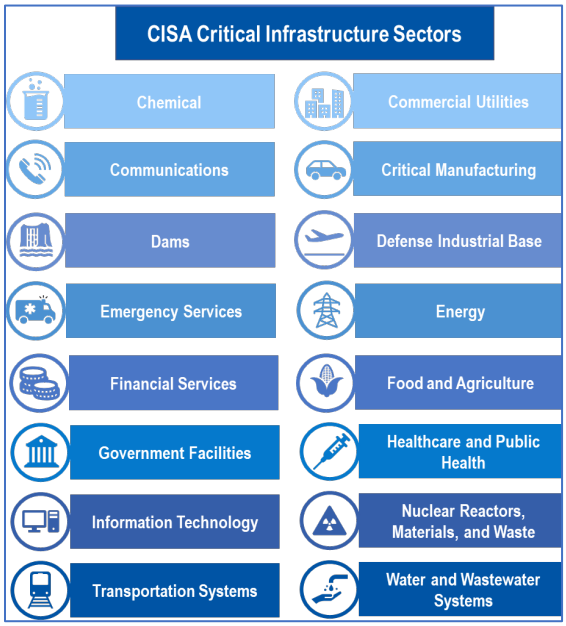
Effective security culture begins at the top of an organization and permeates foundational components such as mission and vision, performance management and metrics, and budgetary allocations. When leaders integrate security culture with these components, it trickles down when implementing supporting policies, programs, strategies, and training approaches. A strong security culture is predicated on building trust and connections across an airport's stakeholder community. This trust is established through a multitude of programs and approaches, including security awareness programs, employee recognition programs, strategic communications, security information-sharing forums and mechanisms, and training on the evolving and persistent threats an entity faces.

Security culture exists in a wide variety of public-facing industries that have a large organizational footprint and customer base, and infrastructure to protect. The Walt Disney Company is one such example, as millions of people visit its theme parks every year. Speaking on Disney's approach to security, the Vice President of Security Operations at The Walt Disney World Resort stated, "Security as a standalone function that doesn't integrate within the business is at best ineffective, and at worse a resource risk…You can be the best security expert in the world, but if you aren't willing to understand how your business operates, you will miss an opportunity to support the business and protect it. Know the business and immerse yourself."[1]

When a strong security culture is not present, organizations struggle to effectively mitigate threats and challenges to the security of their operations. Small lapses that might otherwise be mitigated can lead to more egregious deficiencies, and stakeholders often become complacent rather than vigilant. The Cybersecurity and Infrastructure Security Agency (CISA) defines critical infrastructure sectors, shown in Figure 3, which includes Transportation Systems as those whose assets, systems, and networks are considered so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, and/or national public health.

The classification of airports as critical infrastructure highlights the importance of building and maintaining a strong security culture throughout the aviation industry due to the magnitude of potential consequences that could result from a lapse in security.

Figure 3. CISA's Sixteen Critical Infrastructure Sectors



Source: CISA

[1] "The Magic of Making a Difference | 2021-07-06 | Security Magazine," accessed March 3, 2023, https://www.securitymagazine.com/articles/95579-the-magic-of-making-a-difference.

2.1.1 Security Culture and Airport Threats

To develop a strong airport security culture, organizations need a deep understanding of the threats their security posture and program must defend against. According to the International Civil Aviation Organization (ICAO), airports face numerous threats, including interference with aviation operations, the threat of kinetic attacks and/or terrorism, insider threats, dangers to facility security due to conflict or civil unrest, smuggling of contraband, and cybersecurity incidents with impacts to IT and operational technology. Other threat vectors include activism that disrupts or threatens operations, individuals struggling with mental illness, biological threats, and infectious diseases.

> In the 2010s, we witnessed explosives hidden in electronics and attacks on the public side of the airport. Now, in the 2020s, **we face new and extremely sophisticated threats** from state and non-state actors, ranging from cyberattacks to concerns about hostile and non-hostile unmanned aircraft systems (UAS), in addition to traditional threats.
> - **[David P. Pekoske, TSA Administrator, 2021]**

Establishing and maintaining a strong security culture at an airport is a multifaceted effort. TSA is the regulator responsible for screening all commercial airline passengers and baggage and works closely with airport stakeholders to do so effectively. However, airport security includes much broader measures than just passenger and baggage screening. Airports must maintain physical security for its perimeter, aircraft, and airline employees; vet and badge individuals with unescorted access to restricted areas; monitor for transnational threats (e.g., human trafficking, terrorism); manage dangers posed by natural hazards (e.g., hurricanes, blizzards, or high winds) and domestic disturbances (e.g., protesters, civil unrest); work closely with their tenants to establish clear lines of communication; ensure compliance with security requirements; and stay abreast of new events and challenges affecting their operations. The success of all these security measures, programs, and practices is predicated on the overall security culture of the airport.

2.1.2 Security Culture and the Airport Community

The airport community is diverse, is often affected by high turnover, and includes an amalgamation of discrete yet interconnected and mutually dependent operational and organizational components and entities, referred to herein as the ‘airport community.’ As seen in Figure 4, the airport community incorporates all parties and stakeholder groups that contribute to an airport’s security culture.

These factors create challenges in communication, accountability, education and training, response to security incidents, and unity of purpose, which can hinder the creation and maintenance of a strong security culture. However, if airports can overcome these challenges, they will find that the personnel within their community—who know the rhythms and processes of the airport best—can recognize something out of the norm, making them the best defense against threats.

Figure 4. Airport Community Stakeholders Who Contribute to Security Culture

When security culture is strong and effective, members of the airport community serve as force multipliers for security and law enforcement (LE) officials, understand how their individual actions contribute to the broader security environment, and take proactive steps to mitigate threats.

2.2 Airport Governance Structures

Airports across the US are owned and operated under various governance structures. An airport's governance structure dictates its organizational hierarchy, reporting structure, decision making, hiring, policies, access to resources, operational partnerships and autonomy, and funding mechanisms. Airports governed by authorities, counties, cities, and states were included as part of this study.

If an airport governing authority does not support or endorse proactive security measures above baseline requirements, it will be difficult to build and maintain a strong security culture. Airport leadership sets the vision, agenda, priorities, strategies, and funding and thus determines the outcomes. Interweaving security into the organization's culture requires daily cultivation and active participation from all parties involved, regardless of governance structure.

2.3 Reporting Systems

Reporting systems are paramount to effectively building and maintaining a strong security culture at airports, as they enable aviation workers, and customers/passengers to report suspicious behavior, items, activities, and events. Additionally, reporting security incidents is a criterion in airport security

awareness programs that recognize and reward employees for exemplary actions and commitment to security.

Reporting security incidents is a fundamental layer of a security program that depends on a proactive, alert, and aware workforce to recognize activity that is outside the norm and needs to be reported to enable the airport and LE to investigate and respond. To encourage reporting of security incidents, there are many methods airports can provide to cater to the needs of their community. Common reporting systems include:

- Person-to-person
- Phone number hotlines
- Text message systems
- Email-based systems
- Secure dropboxes
- Mobile applications
- Quick response (QR) codes (unique codes posted throughout the airport that are scannable via smartphone)

Of the airports interviewed for this study, many utilize their own version of an app that helps to reinforce the TSA's "If You See Something, Say Something®" campaign. These apps are typically mobile device–based incident reporting platforms that enable airport personnel to report potential threats to airport security immediately. Many airports interviewed for this study prefer apps for reporting. The airports also identified anonymous reporting as an effective strategy, as it removes employee fears of retribution and increases the likelihood that they will report incidents, thus further strengthening security culture.[2]

In addition to having digital reporting options, airports can also list phone numbers for reporting security incidents on the back of airport badges. Having these phone numbers easily accessible allows employees to call or text to report potential threats when they are identified, which enables rapid information sharing and timely response. An airport interviewed found that equipping badge holders with airport-issued cell phones encouraged reporting and enhanced the quality of reports due to the ability to send pictures of potential threats.

INSIDER THREAT REPORTING

Many of the reporting systems listed above are also suitable for reporting suspected insider threats. For more information on effective reporting mechanisms for insider threats, see PARAS 0026 – *Insider Threat Mitigation at Airports*.[3]

2.4 Training Opportunities

Training is critical for creating a strong security culture, as workforces that are educated and informed on policies, security threats, and consequences will be more likely to recognize and report incidents and respond appropriately. In addition to mandatory training, airports seeking to enhance their security

[2] International Civil Aviation Organization, "Toolkit on Enhancing Security Culture," accessed December 5, 2022, https://www.icao.int/Security/Security-Culture/ICAO%20SC%20Resources/ICAO%20SECURITY%20CULTURE%20TOOLKIT_EN.pdf

[3] Salus Solutions. "PARAS 0026: Insider Threat Mitigation at Airports." Program For Applied Research In Airport Security, March 2021. https://www.sskies.org/images/uploads/subpage/PARAS_0026_InsiderThreatMitigation.FinalReport_.pdf.

culture also provide employees with training on various security-related topics that exceed federal standards and instill a sense of community in keeping the airport secure.

2.4.1 Building Airport Security Culture through Training

Federal security regulations, including 49 CFR § 1542.213, mandate that badge holders at regulated commercial airports receive specific training on airport security requirements, including challenging individuals who are not badged.[4] In addition, many of the airports interviewed for this guidebook stated that they supplement federally mandated training with training that is specific to their airport security protocols and culture. Familiarizing new employees with the duties of their position and their role in contributing to the security of the airport is essential to building and maintaining a strong security culture.

The TSA Intermodal Security Training and Exercise Program (I-STEP) "provides exercise, training, and security planning tools and services to the transportation sector.

I-STEP is a federal exercise program focused on security in the nation's transportation sector. Its mission is to enhance security and reduce risk across the transportation network. Working in partnership with transportation operators, I-STEP enables security partners to continuously improve the risk posture in the nation's transportation systems. Lessons learned from I-STEP exercises, training events and workshops help shape national transportation security policy."

- TSA I-STEP Program

Airports take different approaches to training new employees, especially in the wake of the COVID-19 pandemic. Many of the airports interviewed as part of this study utilized online electronic learning (eLearning) suites to conduct federally required and airport-specific training during the pandemic. In addition to mandated training courses, some of the participating airports offer optional online eLearning security training courses that have been developed by ACI-World, ACI-North America, or AAAE, with topics ranging from insider threat behavior detection to cybersecurity.[5]

While online eLearning training was necessary during the COVID-19 pandemic, and is beneficial in that it enables badge holders and other airport employees to complete additional training voluntarily on an ad-hoc basis, some airports interviewed found it to be less impactful than in-person training in instilling a true sense of an airport's security culture. However, multiple variables impact an airport's ability to conduct in-person trainings and can influence how trainings are delivered. These include existing security culture, airport size, type of training, number of employees who need a particular training, and availability of resources. There is no one-size-fits-all approach to how airports deliver in-person or virtual trainings; airports should experiment with different training delivery methods to identify which work best for their employees.

A useful strategy identified for in-person training, especially those involving new employees, is to have airport senior leadership and security managers attend security training and participate in an interactive manner. Active engagement of senior airport leaders and security managers demonstrates their commitment to the airport's security and emphasizes the importance of security culture. Interactive in-person training also allows the instructors to engage with new employees and reinforce the most critical aspects of security, while instilling a sense of community and trust amongst the airport community members completing the training together.

[4] "49 CFR § 1542 - Airport Security," accessed June 23, 2023, https://www.ecfr.gov/current/title-49/subtitle-B/chapter-XII/subchapter-C/part-1542.
[5] Airport Security Training - ACI World

2.4.2 Continual Training

The airport environment and threats to aviation security are constantly evolving; therefore, airports must continuously train their workforce community on new security protocols, issues, and topics. A common practice identified is requiring badge holders to complete refresher security training courses to re-emphasize key principles and ensure updated security guidance is communicated to more tenured badge holders.

Many of the airports interviewed hold regularly scheduled security meetings, typically on a monthly or quarterly basis, which are open to airport community stakeholders, including airport operations and security personnel, airlines, law enforcement, tenants and service providers, vendors, and LE. The information and topics discussed at these security meetings inform training focus areas and contribute to the development of airport-specific exercises. These are typically abbreviated tabletop exercises, where airport community members who play a role in the airport's security plan or emergency plan engage in discussions on roles and responsibilities in response to simulated scenarios. When members of the broader airport community have the potential to influence the design and focus of trainings and exercises, they are more likely to be motivated to contribute to their airport's security culture through active engagement and involvement in the process. See Section 3.2.2 for additional information on security meetings.[6]

Another strategy to fortify security culture is cross-training, which is the practice of training employees in skillsets or areas of expertise that are not part of their regular job requirements. Cross-training programs help strengthen security culture by exposing members of the airport community to different facets of airport security knowledge. This practice can also improve employee morale and retention, and contribute to innovative security practices borne out of the unique perspectives, observations, and feedback provided by employees engaging in roles and responsibilities beyond their primary role. In some cases, airports have had success in promoting cross-trained airport employees to managerial positions due to their awareness and understanding of broader airport operations and functions. Employee development is a key factor in building employee satisfaction and commitment to security culture.

Some airports demonstrate their commitment to employee professional development by providing funding for employees to attend annual security-related aviation industry conferences. By doing so, employees are encouraged to collaborate with industry colleagues and seek out more training on security-related matters, therefore increasing their knowledge and awareness of those topics and growing the airport's security culture as a result. The concept of continual learning is important in maintaining a strong security culture, as employees are constantly expanding their knowledge of security protocols and emerging threats.

2.4.3 Active Shooter and Survival Training

Members of the aviation industry can also gain a tremendous amount of knowledge and awareness by partaking in voluntary or supplemental trainings, many of which are developed by federal government agencies, such as CISA, in partnership with US airports. Some airports have formed strong partnerships with their respective LE agencies and brought in LE personnel to conduct active shooter training.

[6] Additional guidance for airport security exercises will be available upon completion of the upcoming PARAS project, *PARAS 0051: Guidance for Airport Security Exercises*, which is scheduled for publication in late 2023. "PARAS 0051 Project Statement," accessed March 21, 2023, https://www.sskies.org/images/uploads/subpage/PARAS_0051_Project_Summary.pdf.

During these trainings, LE officers provide hands-on instruction on the actions that members of the airport community can take during an active shooter incident. While these trainings are typically optional, many members of the airport community choose to partake in them, further strengthening security culture as they gain awareness of techniques that can be applied during real-life situations to save the lives of airport workers, passengers, and the entire community. These training engagements also function to strengthen the partnership between the airport community and local LE entities. Establishing cohesive, functional partnerships with local LE has been observed to strengthen the overall security culture at airports.

2.4.4 Human Trafficking Awareness Training

Human trafficking awareness and prevention initiatives have greatly increased in recent years, and have expanded in scope to include the aviation sector. Some airports now require members of the airport community to complete human trafficking awareness courses. These trainings typically cover topics such as an overview of human trafficking, potential victims, warning signs and behavior, distress signals, reporting mechanisms, and appropriate courses of action if an employee believes they are encountering a case of human trafficking.

Additionally, some airports have partnered with the Blue Lightning Initiative to promote awareness of human trafficking at airports by posting signage or plaques with information on how to identify, prevent, and report human trafficking.[7] These training programs and information campaigns help to strengthen security culture at airports as they provide aviation workers with the necessary knowledge to detect and prevent human trafficking.

2.5 Leveraging Technology

Technology can help airports to safeguard lives, data, and critical infrastructure systems. Technologies are being used by airports to protect the airport community and its passengers, and to increase awareness of potential security incidents. Technology can be leveraged to reinforce, enhance, and strengthen security culture.

2.5.1 Employee Screening

Conducting employee screening helps to reduce the number of prohibited and dangerous items that may reach the Sterile Area and aircraft, and deters malicious activity perpetrated by insiders, which may make members of the airport community feel safer in their workplace. This is one of several security layers that contribute to building a strong security culture at airports. Airports have instituted aviation worker screening programs with different methodologies and types of screening equipment as applicable and mandated.

Some airports have implemented a program to screen employees at the time they clock in for work and enter security-controlled areas. One airport security

> **The Cybersecurity and Infrastructure Security Agency Infrastructure Security Exercise Branch (ISEB)** designs, develops, and delivers tabletop, functional, and full-scale exercises (FSE) for a variety of state, local, tribal, and territorial (SLTT) organizations and critical infrastructure owners and operators, focused on threats to the nation's critical infrastructure (e.g., active shooter incidents, insider threats, complex coordinated attacks, improvised explosive devices [IEDs], vehicle-borne IEDs [VBIEDs], hazardous materials [HAZMAT] releases, and natural disasters).
> - **CISA ISEB**

[7] Blue Lightning Initiative | Homeland Security (dhs.gov)

director stated that the deployment of security equipment as part of their airport's full employee screening program strengthens the airport's security culture. This airport deploys x-ray, explosive trace detection, and personnel security scanners that detect metal, ceramic, plastic, and liquid. This visible employee screening program ensures the workforce thinks about airport security daily, and can serve as a way to demonstrate an equitable security culture.

Some airports mandate that all employees are screened, regardless of title or position, which helps to increase the sense of equity (as discussed in Section 4.2). Treating leadership the same as the rest of the workforce establishes consistent security practices and a strong security culture.

In April 2023, TSA issued a National Amendment governing aviation worker screening, which requires Category X, I, and II airports to comply with new screening measures for aviation workers. The individual security culture of each affected airport may influence the manner in which they comply with the new security measures.

2.5.2 Access Control

Access control at commercially regulated airports, as mandated by TSA, plays a critical role in creating and maintaining a strong security culture. Airport-issued identification media (badges) and card readers enable airports to control and limit access to the airport's restricted and controlled areas. The badge provides an audit trail, and the badging and access control system work in tandem to protect Secured Areas of the airport. An employee's badge can easily be deactivated when they no longer are approved or have a need for access. The use of badges and card readers strengthens security culture at airports, as badge holders are restricted to those areas for which they have an operational need based on the access provisioned by their badge. Lock-and-key systems and cipher locks may still be used in some areas, but they can pose several problems. The primary concern is that malign actors or complacent employees may distribute keys and codes to unauthorized individuals, or keys may be lost, which may result in unauthorized individuals gaining access to restricted areas.

Figure 5. Badge and Card Reader Access Point

Source: IdentiSys

One airport implemented a Temporary Badge Program where visitor badges are equipped with technology that tracks and provides an audit trail of visitor access to restricted areas. Visitors must pass a background check using Secure Flight to receive a temporary badge, and the badge can only be issued for a limited number of occurrences. The airport's internal database also prevents a badge holder whose access has been revoked from applying for a temporary visitor badge. This security measure builds and reinforces the airport's strong security culture by vetting visitors, controlling their access in a manner that exceeds federal security requirements, and preventing individuals with revoked badges from obtaining a temporary badge to access security restricted areas of the airport under escort.

2.5.3 Other Technologies

Many of the airports that participated in interviews for this guidebook utilize technologies that help bolster their security culture. Some technologies that airports may consider for this purpose are described in Table 4. This is not an endorsement of the technologies, but simply a representation of some available options in use.

Table 2. Technologies That May Strengthen Airport Security Culture

Technology	Description
Video Tracking and Identification Artificial Intelligence (AI) / Analytics	AI/analytic software is available that can filter through video footage using characteristics such as gender, clothing, and age to locate a specific individual. Airport safety and security personnel can use these tools as a force multiplier to assist in identifying and tracking suspicious actors or individuals who require assistance or are in distress. Systems that automate identification and tracking of potential threats can strengthen security culture at airports by improving situational awareness and increasing the efficiency and effectiveness of the response.
Knowledge Retention Support Applications	Knowledge retention is critical to maintaining a strong security culture in the airport environment. Employees are required to understand a wide range of security protocols and perform a diverse range of security functions in high-risk environments that demand a quick response. Applications are available that reinforce knowledge. Users engage with the app on any internet-connected device to review content that is customized to their airport and current proficiency level. These tools help ensure that critical training stays front of mind, improving compliance with security requirements and resulting in fewer mistakes and security incidents. Use of the app can facilitate more effective training through a “no-fault” environment that builds confidence in employees’ utilization of critical security knowledge. The tool can also be an effective mechanism for improving communication and engagement between front-line security employees and security executive teams.
Incident Reporting Applications	Incident reporting applications are two-way incident management systems that enable airport workers to report concerns via their mobile phones. These systems can be deployed by airport Operations Centers or other 24/7 operations designed to receive safety and security incident reports. These communication platforms can provide an airport with immediate knowledge of a security risk or concern, and facilitate the use of resources, such as surveillance cameras, to enhance situational awareness. In addition, analytics and heat maps can provide airport managers with aggregate knowledge about recurring security incidents and trends, including locations and incident categories.
Tailgating and Piggybacking AI/Analytic	AI/analytic systems are available to address tailgating and piggybacking, where an unauthorized person follows an authorized individual into a secured or restricted area. The software analyzes and correlates data from existing cameras and access control system badge swipes in real time to detect piggybacking/tailgating incidents and enable immediate response. The solutions can be used to identify top tailgating offenders and the portals where incidents occur most frequently, enabling the airport to target risk areas effectively. Furthermore, automated emails can be sent to badge holders observed tailgating, promoting behavioral change and improving an organization’s security culture. This comprehensive approach helps reduce tailgating incidents over time and enhances overall security measures.
Airport Operations Information Management Solutions	Several airports mentioned that they use software for collecting and reporting operations and safety and security data (e.g., tracking security violations, logging the number and types of incidents, monitoring training compliance, etc.). One airport interviewed indicated that their operations personnel use software for

Technology	Description
	inspections, deliveries, and airfield movement, and as an information dashboard and tracking tool. These types of information management tools provide airport leadership and executives with a variety of safety, security, and operations data in real time on a centralized platform, which enables them to make timely and informed decisions, and track security and safety issues over time. Airports can use these systems to strengthen their security culture by assessing safety and security data over time to identify areas for improvement and analyze the impact of corrective actions.

2.6 Options and Strategies

The table below summarizes the options and strategies discussed in Section 2, grouped by desired outcome.

Desired Outcome	Options and Strategies
Increase reporting of security incidents and suspicious activities/items	A myriad of **reporting mechanisms** enable airport community members to report suspicious persons/activities/items in whichever manner they are most comfortable. Reporting mechanisms can include anonymous drop-boxes, QR codes, “See Something, Say Something” apps, and reward and recognition systems that encourage employees to report suspicious activities.
Airport workforce that knows how to respond to security occurrences and emergencies of all types	**In-person and interactive trainings** that engage employees in a hands-on manner. Leadership attendance and participation in trainings emphasizes the importance of training and enhances the security culture.
	Tabletop and full-scale exercises that provide opportunities for airport employees to execute security actions, conceptually and physically, in response to scenario-based and simulated threats and emergencies (active shooter, IED, etc.). Document and assess exercise outcomes and implement corrective actions where necessary.
	Cross-train employees in skillsets and areas of expertise that are not part of their regular job requirements. Exposure to different facets of airport security builds awareness and understanding of broader airport operations and functions, affords professional development opportunities, and improves employee retention and satisfaction – key components of a strong security culture.
Use of technology to enhance situational awareness as airport security/LE force multipliers	**Identify and implement technology solutions** that enhance and augment employees’ daily security operations and situational awareness. Technologies that align with workforce needs and are embraced by employees are more likely to be effective and contribute to reinforcing the airport’s security culture.

SECTION 3: COMMUNITY ENGAGEMENT AND INFORMATION SHARING

Information sharing within and between airport communities promotes a strong security culture by building trust and encouraging participation in the airport's security programs. The following sections discuss strategies that airports can use to promote engagement and information sharing within their security culture. For more in-depth guidance on this topic, see PARAS 0044: *Strategies for Aviation Security Stakeholder Information Sharing*.[8]

3.1 Leadership Engagement

It is imperative that leaders set the tone for creating and maintaining a strong security culture. This can be accomplished by supporting the security team in implementing new security policies and programs, backing valuable capital and operating budget requests that support the airport's security program, and piloting innovative technologies.

Leadership visibility is also an important contributing factor to a strong security culture. Leaders who participate in face-to-face interactions with the airport community and engage in daily operations are engaging in top-down leadership—or leading by example. As mentioned in Section 2.4.1, a beneficial practice is for airport leadership to be present at and participate in training events and activities. Active engagement of senior airport leaders and security managers in security forums, awards ceremonies, and community training and exercises demonstrates their commitment to security and emphasizes the importance of the airport's security culture. Through leading by example, leaders convey to the entire airport community that regardless of their position within the organization, everyone is responsible for creating and maintaining a strong security culture.

Airport leadership is the catalyst for the growth, maturation, and overall strength of the security culture at their airport. If top-down buy-in on security culture is not present, bottom-up buy-in will not be realized. It is important for airport leaders to understand that the success of their airport's security culture is largely dependent on their everyday actions and messaging to the airport community. Obtaining leadership buy-in on airport security culture can be achieved by examining the macro-level benefits that can be realized through an effective security culture, which include:[9]

- Employees are engaged with and take responsibility for security issues
- Levels of compliance with proactive and protective security measures increase
- The risk of security incidents and breaches is reduced when employees think and behave in more security-conscious ways
- Employees are more likely to identify and report behaviors/activities of concern
- Employees feel a greater sense of security and connection to their airport community
- Security is improved without the need for large expenditures

Airport leaders and executives can further demonstrate their commitment to security and security culture by completing ASC training and obtaining their ASC certification. See Section 6.3.1 for a discussion of how this approach is applied at Punta Gorda Airport.

[8] Zoufal, Don, et al. "PARAS 0044: Strategies for Aviation Security Stakeholder Information Sharing." Program for Applied Research in Airport Security, June 2023. https://www.sskies.org/images/uploads/subpage/PARAS_0044.AvSecInfoSharing_.FinalReport_.pdf

[9] "Guide to the Running of a Security Culture Campaign," accessed March 22, 2023, https://www.icao.int/Security/Security-Culture/ICAO%20SC%20Resources/ICAO%20SECURITY%20CULTURE%20STARTER%20PACK%20EN.pdf.

3.2 Outreach and Communication

Frequent, clear, and consistent outreach and communication have been observed to strengthen relationships and grow trust in organizations and partnerships—a fundamental element of a strong security culture. Airports that have strong relationships with their workforce and community often utilize multiple outreach and communication techniques. There are various modes of outreach and communication that airports can utilize to share important security information throughout the airport community. Regardless of the method or strategy, outreach, communication, and engagement efforts must be consistent and inclusive to build and maintain security culture.

3.2.1 Leveraging Authorized Signatories

Project research indicated that one of the most effective ways to disseminate security information and messaging is through Authorized Signatories. Some airports issue tenant advisories and other communications containing security-related updates, news, changes, etc., directly to the Authorized Signatories. The Authorized Signatories are then responsible for communicating those advisories to the employees within their organization and with their business partners. Utilization of the Authorized Signatories to communicate important information from airport security managers to their respective workforce and contractors increases their responsibility and accountability, thus increasing their motivation to communicate information as effectively and comprehensively as possible within their organization. This tiered yet collaborative strategy strengthens security culture as it increases the likelihood that information is communicated to and received by stakeholders throughout the airport community in an effective and efficient manner. Strong communication is an essential component of building and sustaining a strong security culture.

3.2.2 Security Meetings and Information Exchange Forums

Security meetings and information-sharing forums with the broader airport community were identified as a preferred communication vehicle for security matters, and a useful strategy for creating and maintaining a strong security culture. Airports hold these meetings at varying intervals, and individuals and stakeholder groups represented at these meetings include airlines, tenants and service providers, airport security and operations personnel, vendors, law enforcement, and potentially others referenced in Figure 4 (Section 2.1.2). The purpose of these meetings is to review recent security events, introduce new security policies, requirements, initiatives, operational changes, security risks and concerns, areas for improvement, and announcements of awards, recognition, and other accomplishments.

These meetings can also be held as open forums where members of the airport community can voice their concerns and ask questions relevant to security issues. This ability to openly share information strengthens security culture at airports, as parties involved feel a greater sense of ownership and responsibility in maintaining airport security. Importantly, it gives internal and external stakeholders/partners a voice and key connection to decision makers and LE entities who work to keep the airport secure. Building open communication channels between the airport and its community increases trust and accountability, which are essential elements of a strong security culture.

3.2.3 Security Working Groups

Another useful engagement and information-sharing strategy is to establish airport-specific, security-focused working groups. Working groups can take form in a number of ways; however, the airports interviewed stated that the most common working groups involve LE briefings with senior-level airport

community members and subject matter experts. More information on security-focused working groups can be found in Section 6.1.2.

Additionally, some airports have established working groups with one another (e.g., peer review sessions) to share effective security practices, discuss strategies, and develop new and innovative approaches to security. Working groups, regardless of size or personnel composition, enhance security culture by disseminating critical information and new ideas throughout the airport community. More information on airport-to-airport (peer) security working groups can be found in Section 6.2.3.

3.2.4 Security Newsletters, Bulletins, and Marketing Collateral

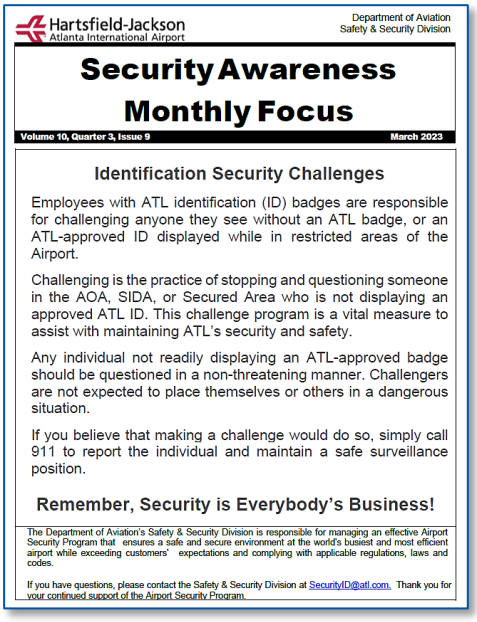
Airport security management teams often utilize newsletters or bulletins to disseminate important security-related information, which educates the airport community and strengthens its security culture. Bulletins, as seen in Figure 6, can be posted in airport employee break rooms and congregation areas, and include articles on security, new policies, programs, important announcements, and standout employees. Newsletters, similar to bulletins, are typically distributed on a monthly basis and can include articles that are submitted or written by members of the airport community, highlight standout employees, and discuss ongoing and upcoming security initiatives and events. At CLT, airport badge holders are encouraged to submit airport security–related articles for inclusion in their Security Awareness Bulletin. Airports noted that they electronically store previous versions of newsletters and bulletins so they can be updated and refined for future use, and so that new and old employees can access legacy resources as needed.

Figure 6. Sample Airport Security Bulletin

Source: CLT

In 2014, ATL implemented the Security Awareness Monthly Focus, as seen in Figure 7, to communicate topical security information to airport stakeholders and employees. The Security Management Team determines the appropriate monthly topic; usually a consensus arises based on airport operation trends, such as piggybacking or prohibited item discoveries. Sometimes the focus involves procedural changes in the credentialing process, notices of updated forms, or monthly national awareness campaigns, such as Human Trafficking Awareness Month.

Figure 7. Security Awareness Monthly Focus (March 2023)



Hartsfield-Jackson Atlanta International Airport
Department of Aviation Safety & Security Division

Security Awareness Monthly Focus

Volume 10, Quarter 3, Issue 9 March 2023

Identification Security Challenges

Employees with ATL identification (ID) badges are responsible for challenging anyone they see without an ATL badge, or an ATL-approved ID displayed while in restricted areas of the Airport.

Challenging is the practice of stopping and questioning someone in the AOA, SIDA, or Secured Area who is not displaying an approved ATL ID. This challenge program is a vital measure to assist with maintaining ATL's security and safety.

Any individual not readily displaying an ATL-approved badge should be questioned in a non-threatening manner. Challengers are not expected to place themselves or others in a dangerous situation.

If you believe that making a challenge would do so, simply call 911 to report the individual and maintain a safe surveillance position.

Remember, Security is Everybody's Business!

The Department of Aviation's Safety & Security Division is responsible for managing an effective Airport Security Program that ensures a safe and secure environment at the world's busiest and most efficient airport while exceeding customers' expectations and complying with applicable regulations, laws and codes.

If you have questions, please contact the Safety & Security Division at SecurityID@atl.com. Thank you for your continued support of the Airport Security Program.

Source: ATL

The monthly focus is emailed to each company's Authorized Signatory to be disseminated to employees. The document is also posted to the airport's website, and a physical copy is posted in the elevator leading to the Airport Security Credentialing Office. The Airport Security Management Team encourages Authorized Signatories to post the Monthly Focus in employee areas. Airport security personnel have noticed monthly focuses displayed in tenants' and airlines' employee breakrooms and other leased spaces.

Another strategy identified in this research was the use of security marketing collateral. For example, security managers and officials post and distribute various types of media including signs, posters, flyers, leaflets, wallet cards, and stickers to communicate and promote important airport security information.

Posting security marketing collateral throughout public and unrestricted areas of an airport strengthens security culture because it serves as a visual cue to the airport's commitment to security, and the airport community, including passengers, is made aware of security protocols.

3.3 Empowering Employees

Employee empowerment is an essential component of a strong security culture that is entwined with many of the other elements covered in this guidebook. It is important to note that employees can be empowered in many different ways, and airport's must consider how to best achieve employee empowerment within the many different aspects of airport security operations. Topics covered in this guidebook with direct ties to employee empowerment are listed below:

- **Section 2.3** covers employee empowerment with regard to reporting methods, specifically how reporting systems encourage employees to report security violations and potential threats.
- **Section 2.4** provides information on the various types of security training programs and initiatives that provide employees with resources and opportunities to enhance their knowledge of airport security operations and advance their own professional development.
- **Section 3.2.2** examines ways to include employees in security meetings and information exchange forums, and encourage them to play an active role in security information sharing and the development of security initiatives, such as trainings and exercises.
- **Section 4.3** describes how employee empowerment is achieved through rewarding and recognizing employees for their security commitment, leadership, and exemplary actions, which contribute to the security of the airport and the airport's overarching security culture.

3.4 Options and Strategies

The table below summarizes the options and strategies discussed in Section 3, grouped by desired outcome.

Desired Outcome	Options and Strategies
Whole community buy-in of security initiatives and culture driven by executives, senior leaders, and managers	**Leadership engagement** to effectively inculcate security into an organization's culture. Leaders who incorporate security as a core element of the organization's mission and core values set a tone for a strong security culture. Leadership engagement in security initiatives, meetings, briefings, and events demonstrates the importance of and their commitment to security, and sets an example for all employees to follow. **Leadership visibility and participation** during security forums, training events, exercises, and promotional activities with employees. Leaders who instill security as a core element of the organization's mission and values exemplify their commitment to security and their organization's security culture. Airport leaders and executives can also obtain their ASC certification to demonstrate their commitment to security culture.

Desired Outcome	Options and Strategies
	Leadership adherence to security policies and protocols at all times, to lead by example and demonstrate that all members of the airport community are held to the same security standards.
Effective communication to increase airport workforce awareness of essential security information	**Clear, consistent, and inclusive communication** of security policies, processes, and procedures to all members of the airport workforce on a regular basis. Information should be easily accessible, easy to comprehend, and frequently updated to incorporate new guidelines.
	Authorized Signatories are effective conduits to communicate important information from airport security managers to their respective workforce and contractors. Communication of security information by Authorized Signatories through their regular channels increases the likelihood that information is received by stakeholders throughout the airport community.
	Strategic posting of security advisories, signage, and marketing collateral prompts employees to practice good security and increase adherence to policy requirements. Advisories could be posted in visible areas such as break rooms, doorways, elevators, and access points to secure areas.
	Regularly disseminated newsletters and bulletins keep the airport community up to date on security information, new policies, programs, initiatives, and other important announcements. They could also incorporate security insights submitted by members of the airport community and recognize standout employees.
Empowered workforce that actively contributes to security initiatives	**Security meetings and information exchange forums** that provide members of the airport community opportunities to participate in security discussions and influence initiatives reduce complacency and increase collaboration, trust, and accountability. Enabling employees to play an active role in security encourages individuals to take ownership of their contributions, and can lead to innovative practices and increased levels of commitment.
Establish working relationships and increase information sharing with other commercial airports	**Airport peer working groups** comprised of representatives from different commercial airports hold formal and informal meetings to share information on security initiatives, strategies, challenges, solutions, technologies, resources, and best practices to improve overall aviation security as well as security at their respective airports.

SECTION 4: WORKFORCE MANAGEMENT

4.1 Hiring and Retention

Candidate screening questionnaires can assist human resources (HR) teams vet potential candidates for security positions, and can reduce the burden of interviewing unqualified candidates

One airport interviewed has implemented a screening questionnaire to assess potential security candidates on multiple factors, including, but not limited to:

- ✓ Writing skills
- ✓ Emotional intelligence
- ✓ Critical thinking
- ✓ Flexibility
- ✓ Aviation industry security knowledge

A strong security culture depends on a qualified and engaged workforce who cares about keeping the workplace safe. A common challenge for airports across the US is hiring and retaining qualified personnel. This is especially true for security positions due to comprehensive background checks and other security-related requirements, perceptions of limited career growth opportunities compared to other industries, and the post-pandemic workforce staffing shortage affecting a myriad of organizations. Many airports seek candidates who have experience in the aviation industry, government, military, or LE; however, it can be difficult to hire individuals from these backgrounds because they typically do not possess the experience necessary to qualify for airport roles that match or exceed their previous job titles. Although some of the skills and requirements necessary for these positions are specialized, a few of the airports interviewed have created marketing campaigns to communicate their willingness to provide candidates with the training necessary to meet airport security position requirements, thus expanding their applicant pool.

SEA's Port Jobs program helps build and sustain a strong security culture by introducing individuals to career paths that provide meaningful employment, and helping employees build skills and advance their careers by offering college classes at the airport.[10] The Port Jobs website provides videos and other educational information to assist job seekers in exploring airport jobs, such as baggage claim agent, aviation maintenance technician, aircraft cleaner, etc. Free services include job search and online job application assistance, resume assistance, security badge test preparation, and education.

Some airports that participated in this study have managed to reduce turnover and increase retention by marketing career growth opportunities associated with airport security positions they are seeking to fill (as discussed in Section 6.1.3). One approach is through job rotation programs, where employees are given opportunities to rotate through different positions that align with their interests and professional development goals. While in a rotational position, personnel are able to learn new skills, gain a functional understanding of different aspects of airport security operations, demonstrate their ability to work in different capacities, and in some cases, move to a permanent role within that specialty or towards managerial positions. Job rotation programs can also alleviate staffing gaps by rotating employees to cover an open role until a permanent candidate is hired for the position.

Job rotation programs, especially for airport security positions, can strengthen security culture by expanding personnel skill sets, increasing cross-collaboration and knowledge sharing between specialties, reinvigorating employee engagement through exposure to new job functions, and reducing the likelihood of burnout. For more information on job rotation programs, see Section 6.1.2.

A few of the airports interviewed have experienced increased turnover due to rapid employee career ladder progression and post-pandemic workforce staffing shortages, leaving many entry-level positions

[10] "Port Jobs | Creating Opportunity, Building Success," accessed March 30, 2023, https://portjobs.org/.

open. In response, some airports are eliminating certain position requirements, such as a college degree. Doing so increases opportunities for individuals from marginalized communities. Easing the barrier to entry into airport security positions while maintaining high character standards helps to build a strong security culture as airports expand their applicant pools and gain a more diverse workforce in terms of experience level and composition.

4.2 Accountability at All Levels

Holding employees accountable for their actions, regardless of their title or position, is vital to maintaining a strong sense of security culture and equity in the organization. Accountability for all employees can be achieved in a number of different ways. Airports interviewed for this guidebook experienced far lower numbers of security violations when utilizing citation programs along with effective training and communication channels, and reward and incentive programs.

4.2.1 Violation Citation Programs

Many airports ensure their community members comply with security requirements by utilizing security violation citation programs. These programs typically include a tiered approach to enforcing citations. Some require first-time offenders to complete additional training pertaining to the security requirement that they violated, and some issue a lower monetary fine for the first offense. Citations progress from less serious to more serious, often culminating with badge revocation if the person is a repeat offender or has committed an egregious security violation.

One interviewed airport approaches security violations from a non-punitive, “education first” perspective. They provide security education on a variety of topics to the whole airport community to encourage participation in the security program, create a more informed workforce, and inculcate workers into the airport’s security culture. In conjunction with this philosophy, the airport provides additional education and training for a worker who commits a security violation deemed a first offense, and does not issue a monetary fine. Airport security leaders meet regularly with the whole community as part of their commitment to violation remediation and the airport’s strong security culture.

Other airports noted positive outcomes when a member of the senior leadership team meets with the individual who committed a violation. This interaction allows leaders to encourage the offender to understand the impact of their actions and strive to uphold the airport’s strong security culture in the future.

For violation programs to be effective and ultimately strengthen security culture, all employees should be held accountable, and airport leadership must demonstrate equity and fully participate in the programs. When all airport community members, including airport leaders, are held accountable for their actions, it signals to the entire workforce that no one is exempt from adherence to airport policies.

4.3 Reward and Recognition

Acknowledgment of employees’ security-conscious actions and exemplary commitment to security improves employee retention and engagement, and motivates performance that helps maintain a strong security culture. These types of programs serve as positive reinforcement by increasing morale and job

performance through the use of incentives, rewards, and recognition to reinforce exemplary performance.[11]

Many airports pair reward programs with recognition programs. An employee is rewarded and publicly recognized for exceeding expectations and significantly contributing to the security of the airport. Rewards and recognition given to employees vary by airport depending on factors such as resource availability, the number of airport workers, and the eligibility criteria. In lieu of formal reward and recognition programs, airports can also strengthen security culture through less formal means, such as meeting with employees, delivering praise, or simply sending a 'thank you' message to acknowledge their efforts.[12]

> "Recognizing employees for the good work they do is a critical leadership skill – and has an impact on morale, productivity, performance, retention, and even customer satisfaction. Yet, there are a frightening number of leaders who fail to do it frequently or skillfully. Based on an analysis of thousands of 360-degree leadership assessments, the authors show there is a strong connection between employee recognition and engagement. Managers who are rated in the top 10% for giving recognition are much more likely to have employees who report feeling engaged, confident they'll be treated fairly, and willing to put in higher levels of discretionary effort."
>
> - **[Zenger and Folkman, 2022]**

4.3.1 Incentives

Incentive programs can strengthen security culture by utilizing both intrinsic and extrinsic motivation to positively change and reward the behavior of the members of their airport community.

Employees may earn rewards and recognition in a number of different ways. Often, airport security compliance personnel or TSA inspectors will conduct a challenge test, which typically involves an employee entering a restricted area of the airport without properly displaying their badge. Airport badge holders working in the restricted area are required to challenge unbadged individuals, request proper identification, and contact airport authorities in accordance with the airport's training, procedures, and airport security program.

Challenge coins, as seen in Figure 8, are often presented to employees who take the correct actions in challenging unbadged individuals. Issuing challenge coins is a form of positive reinforcement, as this commemorative item is psychologically rewarding and encourages employees to continue to take the correct actions. Employees can also earn challenge coins by reporting suspicious or unusual activity to airport security/LE, or by taking exemplary actions during security situations.

Figure 8. TSA Challenge Coin

Source: TSA

Some airports interviewed noted that teaming up with TSA challenge coin initiatives removed the airport's administrative responsibility for the employee recognition program. Because TSA is the champion of the program and has the responsibility of managing the program, it is easier for the airport to participate.

Depending on airport resource availability and governance structure, monetary incentives (including gift cards) may be issued to workers who perform exemplary actions.

[11] Salus Solutions, "PARAS 0026: Insider Threat Mitigation at Airports." Program For Applied Research In Airport Security, March 2021. https://www.sskies.org/images/uploads/subpage/PARAS_0026_InsiderThreatMitigation.FinalReport_.pdf.
[12] "Guide to the Running of a Security Culture Campaign," accessed March 22, 2023, https://www.icao.int/Security/Security-Culture/ICAO%20SC%20Resources/ICAO%20SECURITY%20CULTURE%20STARTER%20PACK%20EN.pdf.

4.3.2 Public and Ceremonial Recognition

Recognition strategies are similar throughout the industry, with many airports issuing monthly newsletters that include an employee spotlight, in addition to holding public ceremonies with recognized employees where they receive certificates, commendations, and rewards. Partnering with TSA to recognize outstanding members of the aviation community has been very beneficial to some airports, because the recognition from the governing authority encourages all members of the aviation community to go above and beyond in their actions. Additionally, leadership recognition of an employee's exemplary commitment to security in front of peers, family, and friends has been observed to increase employee morale and engagement, and further encourage employees to take actions that build and maintain a strong security culture because their actions are validated by the people closest to them in an environment of shared success.

Airports can also recognize employees for their exemplary actions by publishing the names of employees in meeting minutes from security meetings attended by security stakeholders, or by displaying pictures of recognized employees either in public-facing locations or security operations areas.

4.4 Options and Strategies

The table below summarizes the options and strategies discussed in Section 4, grouped by desired outcome.

Desired Outcome	Options and Strategies
Hire and retain quality candidates for security positions	**Candidate screening questionnaires** assist HR teams in vetting potential candidates for security positions, and can reduce the burden of interviewing unqualified candidates.
	Public marketing/hiring campaigns that offer candidates opportunities to complete trainings necessary to meet requirements for open positions. This lessens barriers to entry and may increase applicant pools for open roles.
	Career advancement programs that provide employees with opportunities to enroll in college or professional development courses to build new skills specific to certain roles and encourage in-house career growth. The provision of opportunities for career advancement could reduce turnover and incentivize candidates to apply for open roles.
	Job rotation programs that allow existing employees to apply for and fill open roles temporarily until a permanent candidate is hired. Employees who participate in rotational staffing programs or temporary job rotations may experience reduced burnout, gain new cross-functional skills, forge new internal relationships, and could be appointed to fulfill the role full time.
	Reward and recognition programs that make employees proud of their dedication to their airport's security culture and encourage other employees to strive for the same level of commitment. Rewards may include gift cards, priority parking privileges, and challenge coins, with recognition typically involving some type of public ceremony.
Reduce security violations/ infractions	**Equitable violation programs** that hold all employees accountable for their actions regardless of their title or rank.
	Education programs designed with a non-punitive approach that allow employees to learn from their mistakes.

SECTION 5: ASSESSING SECURITY CULTURE

While there are standardized approaches to measure the effectiveness of new security policies, protocols, requirements, and technologies, there is no standardized, one size fits all approach to assess, measure, or quantify the strength or effectiveness of an airport's security culture. Therefore, a combination of multiple measurement tools and metrics may be used to assess security culture. Airports can utilize key performance indicators (KPI) to categorize factors that contribute to security culture, but the metrics and measures used to assess those KPIs will vary by airport based on their operating model.

The following subsections outline options and approaches to help airports develop methods to assess security culture. However, this research study did not identify any proven measures or metrics to accurately assess the strength of security culture at any given airport. Identifying metrics that effectively measure the success of an airport's security program and effect on security culture would necessitate a dedicated research study.

5.1 Security Management Systems

Some airports expressed an interest in implementing a Security Management System (SeMS) to enhance and promote security, manage security risks, and integrate security into their business operations through record keeping and documentation of all security instances. PARAS 0009 *Guidance for Security Management Systems* defines SeMS as, "a mechanism or management technique to establish and maintain a security culture, and to integrate security into the airport's business. The security culture is utilized to manage security risks, while the inculcation of security into the business provides for more effective, efficient, and sustainable security."[13] Security programs and procedures, standards, tools, and technologies help to manage security risks, while the inculcation of security into the culture of a business provides for more effective, efficient, and sustainable security. The culture aspect is consistent with the Safety Management System experience, which has proven that a positive safety culture results in improved safety through the reduction of safety hazards.[14]

Many airports are in the initial stages of researching SeMS but are not in formal SeMS implementation. SeMS are popular in the European aviation industry, with many large airports utilizing them to manage and maintain all aspects of their airport's security.

5.2 Key Performance Indicators

Identifying measures and metrics to evaluate the success of an airport's security culture proved challenging because success is not easily measurable nor quantifiable. However, some airports have devised various methods for measuring indicators of performance. Below are some examples of KPIs that BWI derived from their strategic plan:

- The number of airport tenant security violations issued per month
- The number of badge renewal violations per month
- The number of violations issued by type (operational and administrative)
- The number of citations issued by type (moving and non-moving)

[13] Rene Rieder Jr., Stacey Peel, and Elizabeth Swinstead, "PARAS 0009: Guidance for Security Management Systems (SeMS)" (Program For Applied Research In Airport Security, March 2018), https://www.sskies.org/images/uploads/subpage/PARAS_0009SeMS_Guidance-Final.pdf.
[14] Ibid.

Although these examples do not directly measure the success of security culture as a whole, they examine individual aspects of security culture. By examining metrics specific to a certain practice or aspect of security, leaders can analyze problems and institute reforms, changes, and incentives that ultimately lead to a stronger security culture.

An expert-led research study examining human factors and behavioral analysis would be needed to identify measures and metrics that accurately reflect the state of an airport's security culture and assess the impact of different security-related programs, policies, and or initiatives on security culture.

SECTION 6: CASE STUDIES

Additional interviews were conducted with three airports to focus on specific areas that help them excel in sustaining a strong security culture. The case studies include BWI, SFO, and PGD.

These airports were selected because of their holistic approach to security culture and commitment to continuous improvement and innovation of their practices. Focus areas for each airport case study interview were determined based on findings from initial interviews with each airport, and are included in Table 3. One apparent theme for all three is that their leadership teams are at the forefront of building and maintaining a strong security culture. This leadership commitment has helped to obtain buy-in from their entire airport community, including both internal and external stakeholders.

Table 3. Case Study Airports and Focus Areas

Airport	Governance Structure	Case Study Focus Areas
BWI	State (Maryland Aviation Administration)	(1) Whole Community Engagement (2) Aviation Community Development (3) Information and Intelligence Sharing and Training
PGD	County (Charlotte County Airport Authority)	(1) Leadership Engagement (2) Community-Wide Accountability (3) Innovative Technologies and External Partnerships
SFO	City/County (City and County of San Francisco)	(1) Safety and Security Promotions Group (2) Rotational Acting Assignment Program (3) Security Personnel Hiring/Retention/Diversity (4) Law Enforcement Partnership

6.1 San Francisco International Airport Case Study

6.1.1 Safety and Security Promotions Group

SFO's commitment to communicating safety and security priorities is highlighted by its Safety and Security Promotions Group. This group utilizes graphics to communicate critical safety and security information throughout the SFO community. One member of SFO's leadership team emphasized the importance of the group in engaging stakeholders, stating, "We really put an emphasis on communication, relations and making sure that we are communicating with everyone so that those relationships are established in the event that a security issue occurs."

The Safety and Security Promotions Group, which has been in place for four years, is sponsored by the SFO Director of Safety and Security Operations and comprises ten members with representation from the following teams:

- Safety and Security Operations
- Safety and Compliance
- Facilities

- Operations Signage
- Graphics
- Marketing and Communications

Personnel from these functional units are selected for the group based on the representation needed, and always include individuals who work with tenants and day-to-day facility operations. The inclusion of these operational units allows SFO to look at security through a variety of lenses, providing an interdisciplinary perspective.

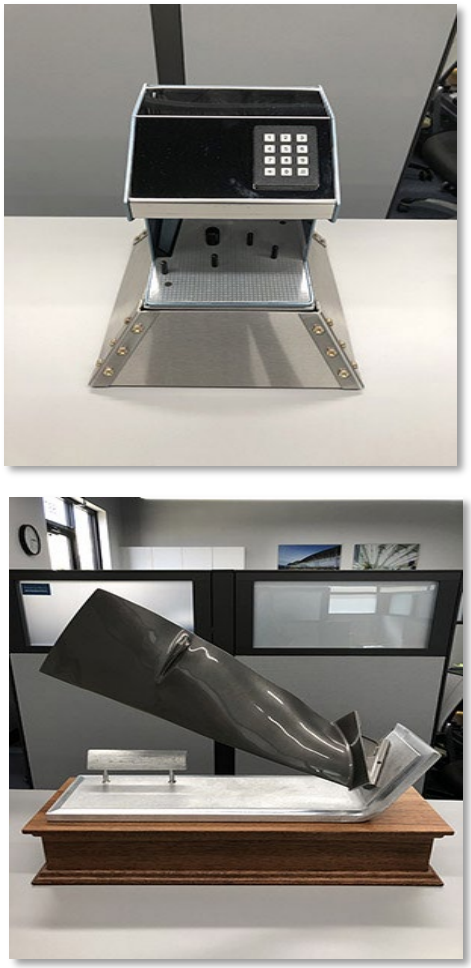
All safety and security signage goes through the Safety and Security Promotions Group to ensure consistency in messaging and to maintain compliance. Individuals from Marketing and Communications, Graphics, Signage, and Compliance teams are included as members of the group so that safety and security products and messaging are communicated to staff in an effective manner. The group develops and posts signage on a rotational basis. Importantly, the group continually looks to rebrand and remarket messaging to get members of the airport community to read it, even if the content of the message was previously promoted.

The group works on initiatives identified by group members or senior management. The focus of topics is based on the following prioritization schedule: (1) safety and security; (2) regulatory compliance; (3) other projects and initiatives.

Of all the work done by the Safety and Security Promotions Group, they indicated putting the most work into establishing and maintaining the Annual Safety and Security Awards.[15] The annual awards, which include the trophies seen in Figure 9, serve to recognize SFO stakeholder companies with safety and security programs or initiatives that have contributed to ensuring a safe and secure working environment for the airport community. Any individual working at SFO can submit nominations for the awards throughout the year. The group issues two awards annually – one for safety and one for security:

- **All Ways Safe Excellence Award** – This award recognizes a company for their outstanding efforts in promoting and ensuring positive safety outcomes at SFO through the development of a program, initiative, idea, or suggestion that resulted in significant safety improvement in one or more following areas:
  - Safe Working Environment
  - Ground Support Equipment Safety Performance
  - Ramp/Airside Safety

Figure 9. SFO All Ways Secure Excellence Award (top) and SFO All Ways Safe Excellence Award (bottom)



Source: SFO

[15] "Annual Safety & Security Awards | SFO Connect," accessed March 21, 2023, https://www.sfoconnect.com/annual-safety-security-awards.

- **All Ways Secure Excellence Award** – This award recognizes a company for their outstanding efforts in promoting and ensuring a strengthened security posture at SFO through the development of a program, initiative, idea, or suggestion that resulted in significant security improvement in one or more following areas:
    - Compliance with the airport's Security Program and the airport's Rules and Regulations
    - Promoting/Encouraging "If You See Something, Say Something"
    - Proper Badge Display/Challenge Procedures

6.1.2 Rotational Acting Assignment Program

SFO's rotational acting assignment program was established because of a need to staff a Security Supervisor position that had been vacant for an extended period. To address the vacancy, SFO rotated multiple analysts, each for a short period of time, to cover the vacant position until a full-time hire was made. The strategy has since blossomed into a successful rotational acting assignment program that not only utilizes existing staff to fill vacant positions but also contributes to the development of workforce skillsets, improves employee retention by reducing burnout, and provides opportunities for in-house career advancement.

The Director of Safety and Security Operations identifies roles that they can utilize as rotational acting assignment opportunities. Typically, all employees are welcome to apply to rotational positions; however, for more sensitive roles such as security positions, the Security Operations Team works with HR to target specific groups or security team members that meet certain requirements and are qualified for the position.

When a rotational role is identified, staff are notified of the position and made aware of any specific requirements for the role (i.e., security qualifications). Interested employees are then required to submit a resume and letter of interest, and participate in one or more interviews.

The selection process focuses on equity and transparency, so employees know that they will be selected based on merit rather than seniority or the length of their career at SFO. Occasionally, more than one person is selected to cover the rotational assignment. Employees who are not selected for the rotational acting assignment also gain valuable professional development skills by participating in interviews during the selection process. This program has significantly boosted the morale of SFO's workforce, as employees receive mentorship throughout the process, and they feel they are unlocking another level of career progression.

The duration of the rotational program depends on the number of employees selected. When more than one individual is selected to fulfill a rotational acting assignment, they typically serve in the position for three months. If only one person is qualified for the assignment, or SFO intends to hire someone to fill the role full time, the individual selected typically fills the assignment for a period of six months.

The program has improved the security culture at SFO by exposing staff – both the individuals fulfilling the rotational assignment and members of teams where rotational staff are inserted into operations – to the "other side" of certain security jobs, roles, practices, etc. This cross-pollination of security personnel and operational mindsets improves overall situational awareness and can lead to innovative approaches that improve overall security and safety.

6.1.3 Security Personnel Hiring and Retention

The San Francisco Bay Area is diverse, with inhabitants hailing from all over the world. As such, SFO engages with a diverse candidate pool and workforce, which has resulted in hiring and retention practices that have become an essential foundational element of their security culture. These practices begin when a prospective employee applies for an open position. The HR department makes itself available to candidates for any questions or concerns they may have throughout the application process. Additionally, current employees who work in positions similar to the job listing are made available to applicants to discuss what the day-to-day job entails and what it is like to work at SFO.

The airport tailors security job descriptions, focusing on key competencies needed for success in the roles. This helps attract more candidates overall, as well as attract candidates with specialized skills to fill specific roles.

Additionally, SFO leverages its Talent Acquisition team, which manages formal outreach programs for job openings. Their responsibilities include:

- Posting jobs to websites that are marketed to the ideal pool of potential candidates
- Assisting with recruitment initiatives, including outreach to specific candidates to ask questions prior to formal interviews
- Reporting to the job poster the number of qualified candidates who have expressed interest or applied for the position, as well as the diversity of the pool of potential candidates

SFO's Talent Mobility team contributes to the retention of existing employees through the management of career mobility programs. These programs are designed to help employees identify career pathways as well as opportunities for advancement, such as classes, training, and courses that can be taken to advance towards a specific role or position. The airport also has a mentoring program that matches employees looking for growth within the organization with other employees who provide guidance aligned with individual goals.

6.1.4 Law Enforcement Partnership

SFO has a unique relationship with all levels of LE, including local, state, and federal. They have established clear and open communication channels with their LE partners, including having their Security Operations Center and airport duty manager monitor activity and ongoing issues in close coordination with LE partners. Not only do these relationships make it easier for SFO personnel and LE to perform their regular duties easier by facilitating the exchange of information, but the close level of collaboration and respect is also a fundamental element of SFO's strong security culture. When a new LE is assigned to the airport, the security operations team meets one-on-one with the officer as part of their orientation to set expectations and emphasize the team-based nature of their role. This has increased security culture buy-in from LE because there is a clear understanding of unity of purpose, shared security mission, and mutual trust.

To maintain clear and open communication channels, SFO holds monthly "iTALK" meetings with tenant managers and LE partners, where LE issues are a key part of the agenda. The airport's LE partners host three weekly calls and, depending on which agency is the host, different airport tenants will participate in discussing ongoing security issues. When the United States Capitol Police (USCP) established a satellite office in San Francisco, SFO's security team worked diligently to form a strong relationship with them. USCP is invited to all of the meetings that other LE partners are invited to.

6.2 Baltimore/Washington International Thurgood Marshall Airport Case Study

6.2.1 Whole Community Engagement

BWI's approach to building and maintaining a strong security culture is rooted in community engagement. Following the September 11 terror attacks, BWI formed a close relationship with TSA as a result of being the first federalized airport. Additionally, BWI has strong working relationships with local LE agencies and private sector security partners. Their relationships with TSA, local LE, and private sector security partners have enabled BWI to become a testbed for security technologies and practices.

BWI's strategic outreach helps them tailor their support to the individual needs of their community members, and ultimately enables them to fund necessary security enhancements. For example, their rental car operators were dealing with a host of automobile thefts and prohibited items such as handguns being left behind in rental vehicles. To address these issues, airport security partnered with the BWI rental car consortium, which consists of the rental car companies and LE. The consortium meets once per quarter to discuss how they can enhance security and examines what has worked for other airports or rental car companies. As a result of these meetings, the airport agreed to fund pop-up barriers and other covert measures to prevent individuals from stealing rental vehicles. Airport security also agreed to strategically place video messaging signage requesting patrons to report suspicious activity to LE. The efforts have led to a decrease in automobile thefts.

The BWI community includes a large population of persons experiencing homelessness. The airport has made a significant effort to treat people experiencing homelessness as equal members of the community, providing the following statement to a local newspaper:

> Homelessness is a serious, complex problem in our society that affects communities around the nation. We want these homeless individuals at BWI-Marshall Airport to receive the support and the care that they need. These are human beings that deserve our respect and our compassion.
>
> These individuals need specialized care and attention provided by professionals who are skilled, trained, and equipped to assist. We are working with federal, state, local, and nonprofit partners to get help for these individuals. We want these individuals to receive the support services that they need to lead safe, fulfilling lives.[16]

Many of the persons experiencing homelessness at the airport tend to congregate in publicly accessible areas. In an effort to ensure the security of all patrons in these areas, BWI has partnered with the County Crisis Response Team to train airport badge holders on how to interact with people experiencing homelessness and, if necessary, connect them with the proper mental health or medical services. This partnership has strengthened the security culture at BWI, as airport badge holders have been equipped with the training necessary to protect themselves, airport customers, and other members of the airport community.

6.2.2 Airport Community Development

A few years ago, the airport badging office went paperless to reduce waste and speed up badge processing. Around the same time, BWI's security leadership overheard badging office employees

[16] "Growing Number Of Homeless People Find Refuge At Airport," wbal.com, accessed March 21, 2023, https://www.wbal.com/article/325387/3/growing-number-of-homeless-people-find-refuge-at-airport.

asking one another about various terminal expansions and construction projects. Since going paperless eliminated the need to manually file applications and thus freed up time on Fridays, leadership took this opportunity to create "Paperless Fridays." On these days, BWI security leadership takes badging office staff to visit partner facilities and receive briefings on new security technologies, unclassified security information, TSA amendments/directives, and other security-related initiatives. This practice has helped to strengthen security culture, as employees in the badging office have come to understand that security culture encompasses the entire airport ecosystem and their jobs play an important role in that ecosystem.

6.2.3 Information and Intelligence Sharing and Training

Due to its location in the National Capital Region (NCR), BWI has cultivated a strong relationship with the intelligence community, including the FBI, USCP, and TSA LE/Federal Air Marshal Service, and other LE agencies. Being in the NCR also means that BWI receives a large amount of intelligence, though the majority of it is unactionable. BWI has created a limited intelligence and classified information distribution list that includes stakeholders in the intelligence community who can monitor and respond to possible threats. BWI is able to share potentially actionable intelligence with members of the distribution list who can vet and verify the credibility of the intelligence.

BWI is a state-owned airport under the jurisdiction of the Maryland Aviation Administration. This means that they are inherently connected to other state-owned transportation bodies (e.g., rail systems, buses, ports, etc.). Every month, BWI participates in meetings with other state transportation partners to discuss transportation security matters and initiatives.

BWI also partners with other commercial airports to conduct what they call "Peer Airport Reviews." These provide participating airports with an open forum to discuss a wide range of security and operational topics in a non-competitive manner. Topics that have been discussed include access control, perimeter hardening projects, and persons experiencing homelessness. BWI began a project to expand its perimeter fencing as a result of these discussions.

BWI has utilized information gathered from these reviews to expand its security practices and strengthen its security culture. Their approach to persons experiencing homelessness stems from one of these meetings, where leaders from Ronald Reagan Washington National Airport, Dulles International Airport, Philadelphia International Airport, and the Port Authority of New York and New Jersey explained how they approached their respective communities of persons facing homelessness and described the positive outcomes.

6.3 Punta Gorda Airport Case Study

6.3.1 Leadership Engagement

A key element of PGD's strong security culture is leadership engagement with security policies and the airport workforce. When entering an operational leadership position at PGD, airport executives are expected to attend ASC training and obtain ASC certification as part of their onboarding. PGD's Chief Executive Officer was the first executive at the airport to obtain the ASC certification, which led to other airport leaders obtaining their ASC certification as well. With all leadership being ASC certified, the implementation of new policies or technologies generally receives little to no pushback from the workforce because airport badge holders recognize that their leadership is making informed decisions that will strengthen the security of the airport. Additionally, PGD leadership designated security as a core part of PGD's vision and mission statement, which supports an understanding in the workforce that

security is equally important as safety, and it demonstrates leadership commitment to security, which is essential to culture building.

6.3.2 Community-Wide Accountability

PGD implemented continuous random screening of all employees, including PGD leadership and executives. This helps the general workforce understand that nobody is exempt from the airport's security rules and regulations, regardless of position. PGD has contracted the local sheriff's department to conduct the screening in an objective manner.

As part of a security improvement initiative, PGD created the Safety and Security Compliance Specialist position. This individual has a strong understanding of the investigative process that is conducted after any type of security incident. In addition to being the lead investigative authority for PGD, this position is also involved in all audits—both internal and external—and can assist in interpreting TSA commentary.

To further increase incident reporting, community engagement, and accountability, PGD created a Safety/Security Concern Drop Box, which is placed in all employee common areas. Employees may anonymously submit tips and reports about various safety and security concerns. Employees may also report issues electronically via a QR code that is attached to the drop box. However, because of the mutual trust that has been built up amongst employees, many airport workers choose to report security concerns directly to their superiors.

6.3.3 Innovative Technologies and External Partnerships

PGD utilizes innovative technologies to assist its workforce in maintaining a strong security culture. However, PGD's governance structure requires that all technologies must be approved by the IT department. In recent years, PGD's security leadership viewed this as a roadblock to procuring innovative technologies; however, this attitude has changed. PGD's security team has now cultivated a strong partnership with the IT department and views them as an asset to PGD's security culture. Now, when the security team wants to pilot or test a technology, the IT department is quick to get on board.

PGD also has a strong relationship with TSA because of their efforts to try to reduce the number of security violations. Rather than approaching inspections with a punitive mindset, TSA now works closely with the airport to focus on changing the outcomes of badge inspections, which in turn has created a greater sense of awareness and ultimately strengthened the security culture.

It is also noteworthy that PGD is only one of two commercial airports in Florida that takes part in the DHS Blue Campaign to counter human trafficking. Signage, as seen in Figure 10, is posted throughout the airport, and employees are trained on how to identify instances of human trafficking. See Section 2.4.4 for more details on human trafficking awareness training.

Figure 10. PGD-Branded Blue Lightning Initiative Signage

Source: PGD

PGD has also piloted innovative technologies that help the security operations team curb security issues. One such technology, Hakimo, enabled the security operations team to detect piggybacking and tailgating.[17] The technology provided an additional layer of accountability and the airport has seen the number of piggybacking and tailgating violations drop sharply.

[17] "Hakimo | AI-Powered Remote Guarding & Monitoring," accessed June 2023, https://www.hakimo.ai/.

SECTION 7: SUMMARY OF OPTIONS AND STRATEGIES

Table 4 includes options and strategies for building and maintaining a strong security culture at commercial airports identified throughout the guidebook.

Table 4. Options and Strategies for Building and Maintaining a Strong Airport Security Culture

Desired Outcome	Options and Strategies
SECTION 2: CREATING A SECURITY CULTURE	
Increase reporting of security incidents and suspicious activities/items	A myriad of **reporting mechanisms** enable airport community members to report suspicious persons/activities/items in whichever manner they are most comfortable. Reporting mechanisms can include anonymous drop-boxes, QR codes, "See Something, Say Something" apps, and reward and recognition systems that encourage employees to report suspicious activities.
Airport workforce that knows how to respond to security occurrences and emergencies of all types	**In-person and interactive trainings** that engage employees in a hands-on manner. Leadership attendance and participation in trainings emphasizes the importance of training and enhances the security culture.
	Tabletop and full-scale exercises that provide opportunities for airport employees to execute security actions, conceptually and physically, in response to scenario-based and simulated threats and emergencies (active shooter, IED, etc.). Document and assess exercise outcomes and implement corrective actions where necessary.
	Cross-train employees in skillsets and areas of expertise that are not part of their regular job requirements. Exposure to different facets of airport security builds awareness and understanding of broader airport operations and functions, affords professional development opportunities, and improves employee retention and satisfaction – key components of a strong security culture.
Use of technology to enhance situational awareness as airport security/LE force multipliers	**Identify and implement technology solutions** that enhance and augment employees' daily security operations and situational awareness. Technologies that align with workforce needs and are embraced by employees are more likely to be effective and contribute to reinforcing the airport's security culture.
SECTION 3: COMMUNITY ENGAGEMENT AND INFORMATION SHARING	
Whole community buy-in of security initiatives and culture driven by executives, senior leaders, and managers	**Leadership engagement** to effectively inculcate security into an organization's culture. Leaders who incorporate security as a core element of the organization's mission and values set a tone for a strong security culture. Leadership engagement in security initiatives, meetings, briefings, and events demonstrates the importance of and their commitment to security, and sets an example for all employees to follow.
	Leadership visibility and participation during security forums, training events, exercises, and promotional activities with employees. Leaders who instill security as a core element of the organization's mission and core values exemplify their commitment to security and their organization's security culture. Airport leaders and executives can also obtain their ASC certification to further demonstrate their commitment to security culture.
	Leadership adherence to security policies and protocols at all times, to lead by example and demonstrate that all members of the airport community are held to the same security standards.

Desired Outcome	Options and Strategies
Effective communication to increase airport workforce awareness of essential security information	**Clear, consistent, and inclusive communication** of security policies, processes, and procedures to all members of the airport workforce on a regular basis. Information should be easily accessible, easy to comprehend, and frequently updated to incorporate new guidelines. **Authorized Signatories** are effective conduits to communicate important information from airport security managers to their respective workforce and contractors. Communication of security information by Authorized Signatories through their regular channels increases the likelihood that information is received by stakeholders throughout the airport community. **Strategic posting of security advisories, signage, and marketing collateral** prompts employees to practice good security and increase adherence to policy requirements. Advisories could be posted in visible areas that employees pass through during the day, such breakrooms, doorways, elevators, and access points to secure areas. **Regularly disseminated newsletters and bulletins** keep the airport community up to date on security information, new policies, programs, initiatives, and other important announcements. They could also incorporate security insights submitted by members of the airport community and recognize standout employees.
Enabled workforce that actively contributes to security initiatives	**Security meetings and information exchange forums** that provide members of the airport community opportunities to participate in security discussions and influence initiatives reduce complacency and increase collaboration, trust, and accountability. Enabling employees to play an active role in security encourages individuals to take ownership of their contributions, and can lead to innovative practices and increased levels of commitment.
Establish working relationships and increase information sharing with other commercial airports	**Airport peer working groups** comprised of representatives from different commercial airports hold formal and informal meetings to share information on security initiatives, strategies, challenges, solutions, technologies, resources, and best practices to improve overall aviation security as well as security at their respective airports.
SECTION 4: WORKFORCE MANAGEMENT	
Hire and retain quality candidates for security positions	**Candidate screening questionnaires** assist HR teams in vetting potential candidates for security positions, and can reduce the burden of interviewing unqualified candidates.
	Public marketing/hiring campaigns that offer candidates opportunities to complete trainings necessary to meet requirements for open positions. This lessens barriers to entry and may increase applicant pools for open roles.
	Career advancement programs that provide employees with opportunities to enroll in college or professional development courses to build new skills specific to certain roles and encourage in-house career growth. The provision of opportunities for career advancement could reduce turnover and incentivize candidates to apply for open roles.
	Job rotation programs that allow existing employees to apply for and fill open roles temporarily until a permanent candidate is hired. Employees who participate in rotational staffing programs or temporary job rotations may experience reduced burnout, gain new cross-functional skills, forge new internal relationships, and could be appointed to fulfill the role full time.

Desired Outcome	Options and Strategies
	Reward and recognition programs that make employees proud of their dedication to their airport's security culture and encourage other employees to strive to achieve the same level of commitment. Rewards may include gift cards, priority parking privileges, and challenge coins, with recognition typically involving some type of public ceremony.
Reduce security violations/ infractions	**Equitable violation programs** that hold all employees accountable for their actions regardless of their title or rank. **Education programs** designed with a non-punitive approach that allow employees to learn from their mistakes.

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APPENDIX A: RESOURCE REVIEW REFERENCE TABLE

Resource	Summary	Key Takeaways	Security Focus Area	Themes
ACRP Report 140: Guidebook on Best Practices for Airport Security	This Guidebook provides information designed to help reduce or mitigate inherent risks of cyberattacks on technology-based systems. Traditional IT infrastructure, such as servers, desktops, and network devices are covered along with increasingly sophisticated and interconnected industrial control systems, such as baggage handling, temperature control, and airfield lighting systems.	Cyberattacks against airports and other critical infrastructure are increasing in number and sophistication. The result has been a loss of confidential and sensitive information, costly disruption to operations, adverse impacts to reputation, and in some cases financial loss and equipment failure. Airport managers and badge holders must implement countermeasures such as maintaining awareness of threats, establishing policies for information security, periodically training badge holders, identifying vulnerabilities, hiring or assigning a Chief Information Security Officer, monitoring employee and system behavior, communicating anomalous activity and successful attacks, preparing to isolate affected systems, and continuously maximizing the level of protection given available resources.	Cybersecurity	Stakeholder Education/Training, Process Improvement, Technology/Automation
2021 National Critical Functions Status Update to the Critical Infrastructure Community	CISA's National Risk Management Center (NRMC) developed the National Critical Functions (NCF) Framework to analyze and manage the risks to the nation's critical infrastructure. The NCF Framework uses an asset-centric approach to better assess how failures in key systems, assets, components, and technologies may cascade across sectors and the overall impacts on the nation. Since 2019, the NRMC has worked to better understand the processes, systems, technologies, and governance that support or enable the provision of each of the 55 NCFs, and has deconstructed each of the NCFs into primary and secondary sub-functions.	One of the NCFs, under the "Distribute" category, is the ability to transport cargo and passengers by air. As such, CISA has a stake in ensuring the security of airports, including building a culture of security. In addition, airports can use the principles laid out in the NCF framework to assess their own risks, vulnerabilities, and the potential impacts of both. Airport stakeholders should continue to monitor updates to the NCF as they are published and incorporate them into their own security plans, particularly any primary and secondary sub-functions that emerge under the "Transport cargo and passengers by air" NCF.	Critical Infrastructure	Community Engagement, Process Improvement, Critical Infrastructure, Risk/Vulnerability Assessment

Resource	Summary	Key Takeaways	Security Focus Area	Themes
Building and Sustaining a Strong Security Culture through Airport Community Security Awareness and Employee Recognition Programs: A Case Study from the United States	Building and sustaining a strong security culture is dependent on many factors, including organizational practices. Engaging the aviation community is a key component of creating and sustaining a security-conscious, proactive, and healthy culture of an organization. Drivers of security stakeholder/ community engagement in the workplace may utilize a variety of methods, such as security awareness programs, employee recognition programs, strategic communications and collaboration, stakeholder security information sharing forums and mechanisms, security remediation meetings, and training on evolving and persistent threats to the aviation community. All of these methods foster connection and trust, which are fundamental to achieving buy-in to and enhanced evolution of the security culture of an organization. This resource examines best practices for implementing and maintaining successful employee recognition programs that bolster overall airport security.	Employee recognition programs are a valuable tool for building and maintaining a strong security culture at airports. However, the success of an employee recognition program heavily depends on careful program design/development, implementation, and maintenance. There is evidence that employee recognition programs at airports can transform and strengthen security culture as long as the program is carefully crafted and sustained over time. Airports seeking to implement or maintain an employee recognition program that strengthens security culture should review and implement best practices from successful programs on aspects such as engaging front-line employees, nomination processes and selection criteria, recognition ceremonies and awards, community engagement and drivers of intrinsic motivation, and program branding and marketing.	Security Culture	Community Engagement, Employee Recognition Programs, Security Awareness Programs
PARAS 0003: Enhancing Communication & Collaboration Among Airport Stakeholders	This Guidebook provides practical material useful to airport operators for enhancing communication and collaboration (C2) among internal and external airport stakeholders. It is designed to fit the needs of a broad spectrum of airports and is scalable to airports of various sizes and types. The Guidebook provides a tool to assess an airport's current conditions relative to C2, and presents a practical step-by-step approach called the C2 Program Lifecycle for enhancing C2 among airport stakeholders.	The Guidebook contains a compilation of real-world C2 success stories and best practices related to C2 from various airports. This includes numerous best practices specific to security issues and spans numerous airports of different sizes.	Communication and Collaboration	Community Engagement, Process Improvement, Security Awareness Programs, Stakeholder Education/Training

Resource	Summary	Key Takeaways	Security Focus Area	Themes
PARAS 0009: Guidance for Security Management Systems (SeMS)	This guidance was developed for those individuals, teams, or task forces who are responsible for establishing and maintaining an SeMS at their airport. It was written with a human-centered design approach; future users were consulted early in its development, influencing both content and format. Its purpose is to: 1) help you understand SeMS; 2) inform you of the benefits of SeMS; 3) help you determine whether your airport is ready to establish an SeMS and determine next steps on your SeMS readiness level; 4) guide you on establishing an SeMS; 5) inform you of the governance required to establish and maintain the SeMS; and 6) guide you on how to undertake quality assurance of the SeMS. An accompanying tool is provided to be used in conjunction with the guidance to measure your SeMS maturity.	The guidance is intended to be a security handbook that increases an airport's SeMS knowledge and guides planners through implementing and maintaining an effective SeMS. However, the document also contains some useful tips and best practices, even for airports that do not decide to fully implement a SeMS.	Aviation	Process Improvement, Security Awareness Programs, Stakeholder Training, Risk/Vulnerability Assessment
PARAS 0026: Insider Threat Mitigation at Airports	This guidebook is an all-encompassing source of information on insider threat mitigation at airports. It begins by defining insider threats and walking through their motivations and risk indicators in broad categories. The document discusses how to detect and deter insider threats through strategies including technology, information sharing, and creating a security-minded culture.	This document emphasizes that insider threat mitigation is an enterprise-wide endeavor. All airport stakeholders must be invested in identifying and mitigating insider threats, and this is an important part of a strong security culture. Section 4 of the document specifically covers cultural strategies for preventing insider threats.	Insider Threat	Process Improvement, Security Awareness Programs, Stakeholder Education/Training, Employee Vetting
ICAO Toolkit on Enhancing Security Culture	A priority action of the Global Aviation Security Plan, as adopted by the ICAO Council in 2017, is to develop security culture and human capability. This document, created by the Aviation Security Panel's Working Group on Training, seeks to build and promote positive security culture by providing States and Industry with a toolkit of best practices.	The document contains a list of best practices and tips arranged in various functional areas, such as Leadership and Reporting Systems. Though brief and lacking detail, these best practices contain some actionable advice for airport managers to implement.	Security Culture	Employee Recognition Programs, Stakeholder Education/Training, Process Improvement, Technology/Automation, and Security Awareness Programs

Resource	Summary	Key Takeaways	Security Focus Area	Themes
2022 Transportation Security Administration (TSA) Checkpoint Requirements and Planning Guide	The TSA is mandated by law to screen air travelers and their carry-on bags to identify and intercept prohibited items at the Security Screening Checkpoints (SSCP) at federalized airports across the United States. Airports must supply adequate space in an acceptable location to be able to install the required equipment and meet all TSA standards.	This Checkpoint Requirements and Planning Guide (CRPG) was created to communicate the current checkpoint design standards for qualified technologies, provide information and planning considerations for emerging technologies anticipated to be qualified within the near future, and provide information to locate equipment within the checkpoint to provide the highest level of security screening and efficiency from the queue through the composure area. The majority of the information in the guide relates to technical specifications for SSCPs rather than security culture considerations.	Airport Physical Security	Process Improvement, Technology/Automation
2017 ICAO Global Aviation Safety Plan (GASeP)	The GASeP incorporates the key aspects and themes from UNSCR 2309 (2016) and ICAO Assembly Resolution A39-18. Specifically, it covers the need for effective, risk-based measures that are assessed regularly to reflect the evolving threat picture, ensuring that measures are effectively implemented on the ground on a sustainable basis; resource allocation and the promotion of a culture of security; and establishing effective national oversight of aviation security systems. The GASeP provides guidance for priority-setting at the international, regional, and State levels; creates a framework within which ICAO, States, and stakeholders can work together to meet shared objectives; supports ICAO's No Country Left Behind initiative to address common challenges; and guides efforts to jointly enhance aviation security.	Overall, this document has less applicability to airport operators than most of the other sources. To the extent that it contains best practices, they are either covered in more depth in other sources, or they are intended for policymakers at the state, regional, and international levels.	Aviation	Risk/Vulnerability Assessment

Resource	Summary	Key Takeaways	Security Focus Area	Themes
PARAS 0027: Guidance for Root Cause Analysis in Aviation Security	This guidebook provides airports with a standard root cause analysis (RCA) process to address aviation security vulnerabilities and noncompliance, and improve the effectiveness of the aviation security enterprise. Aviation security is a complex system. Behaviors and outcomes observed within it emerge as a result of multifaceted and dynamic interactions among many actors, factors, and processes. In such complex systems, approaches to determine causation based on independent and linear cause-effect relationships are of limited utility, as they are not equipped to capture and convey the network of dependencies, interactions, and feedback structures that shape resulting outcomes. Recognizing this complexity, any RCA process recommended for aviation security needs to facilitate a systemic approach in which problems are examined as an integral part of a broader context, dynamic relationships, and long-term behavior patterns.	The RCA methodology presented in this guidebook is based on an expanded version of the Current Reality Tree, a systemic RCA method. This method is specifically designed for complex problems with multiple possible causes, making it well-suited to the airport context. This is because airport security incidents tend to be complex and involve many different stakeholders. The guidance also contains some best practices for integrating RCA into the airport's culture.	Aviation	Process Improvement
PARAS 0029: Criminal History Records Checks (CHRC) and Vetting Aviation Workers Guidebook	This document provides step-by-step guidance and reference material for individuals who conduct and adjudicate CHRCs. It provides an overview of the current regulations, along with suggestions and guidance for those airports and air carriers that want to exceed the minimum federal requirements. Over 200 US airports and numerous air carriers were contacted during this research.	Much of the guidance in this document focuses on the specific employee vetting processes required by law and how airports can carry them out. Thus, there were minimal takeaways with impacts on security culture. However, some best practices for the vetting process have relevance to airport security culture as a whole.	Employee Security	Risk/Vulnerability Assessment, Process Improvement

Resource	Summary	Key Takeaways	Security Focus Area	Themes
PARAS 0028: Recommended Security Guidelines for Airport Planning, Design, and Construction	This document represents the sixth iteration of guidance for the airport security planning and design community. All iterations have had extensive participation and contributions by federal agencies, industry trade associations, and individual architects, engineers, security consultants, and other subject matter experts. The periodic updates have been driven largely by constant changes in both physical and digital technologies, as well as national and international standards, policies, and operational requirements that reflect the changing aviation threat environment.	The guidelines in this document are mainly focused on the construction of new airports and significant additions to existing airports. The bulk of the recommendations are more technical in nature, having to do with subjects such as construction standards and physical security measures. However, the document also contains some useful security culture recommendations that can be applied to existing airports, even if they are not undergoing any significant construction projects.	Airport Physical Security	Critical Infrastructure, Stakeholder Education/Training
PARAS 0024: Consolidated Receiving and Distribution Facilities at Airports	This guidebook covers the planning, design, and implementation of a Consolidated Receiving and Distribution Facility (CRDF). It provides the information needed to implement a CRDF, if one is suited to the airport's objectives.	The guidance in this document is narrowly focused on the specific topic of implementing a CDRF and does not contain any best practices related to security culture that have not been already covered elsewhere.	Airport Physical Security	N/A
2017 Fort Lauderdale-Hollywood International Airport Active Shooter Incident and Post-Event Response After-Action Report	On January 6, 2017, a lone gunman intentionally discharged a firearm at the Fort Lauderdale-Hollywood International Airport (FLL), killing five and wounding six bystanders. Approximately 90 minutes after the initial incident, speculation of additional firearms discharged in other areas within FLL caused panic and led to a chaotic self-evacuation of persons throughout the airport. The purpose of this report is to describe the response to those events, constructively evaluate and assess strategic and tactical operations, and identify issues and challenges specific to this event.	The findings in this document are very specific to the 2017 FLL shooting incident. The recommendations are response focused (e.g., discussing the responsibilities of specific officials) rather than dealing with larger cultural concerns. Further, the findings are very locally focused on FLL and its relationship with its surrounding environment (e.g., local law enforcement). No actionable best practices were found in this document that were not covered elsewhere.	Airport Physical Security	N/A
Security Culture and Human Factors	This article from ICAO discusses security culture from a human resources (HR) perspective. After defining the relevant terms (such as the difference between safety and security), the article lays out several best practices for overcoming common challenges on the HR side of security culture.	Badge holders are considered the weakest link in the airport security chain. However, given due attention, they can become the strongest link, or even the most fundamental element of the security system. By valuing badge holders, airports can reduce turnover and strengthen the institutional security culture at their facilities.	Employee Security	Employee Recognition Programs, Community Engagement