



# PARAS

PROGRAM FOR APPLIED  
RESEARCH IN AIRPORT SECURITY



PARAS 0061

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## Ensuring Security Operational Readiness for New and Renovated Facilities

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Sponsored by the Federal Aviation Administration

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Through the ASSIST (Airport Security Systems Integrated Support Testing) Program, Safe Skies conducts independent, impartial evaluations of security equipment, systems, and processes at airports throughout the nation. Individual airports use the results to make informed decisions when deploying security technologies and procedures.

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Through PARAS (Program for Appplied Research in Airport Security), Safe Skies provides a forum for addressing security problems identified by the aviation industry.

A Board of Directors and an Oversight Committee oversee Safe Skies' policies and activities. The Board of Directors focuses on organizational structure and corporate development; the Oversight Committee approves PARAS projects and sets ASSIST Program priorities.

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## PROGRAM FOR APPLIED RESEARCH IN AIRPORT SECURITY

The Program for Applied Research in Airport Security (PARAS) is an industry-driven program that develops near-term practical solutions to security problems faced by airport operators. PARAS is managed by Safe Skies, funded by the Federal Aviation Administration, and modeled after the Airport Cooperative Research Program of the Transportation Research Board.

Problem Statements, which are descriptions of security problems or questions for which airports need guidance, form the basis of PARAS projects. Submitted Problem Statements are reviewed once yearly by the Safe Skies Oversight Committee, but can be submitted at any time.

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Chrysalis Global Aviation and Martina Benedikovicova of Charlotte Douglas International Airport performed the research conducted for this report.

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## SUMMARY

Ensuring security operational readiness during the development or renovation of airport facilities is essential to protecting passengers, maintaining regulatory compliance, and sustaining efficient operations. As airports across the United States undertake large-scale capital programs—often under aggressive timelines and complex stakeholder structures—the need to embed security into every phase of project delivery has become increasingly important.

This report provides comprehensive guidance for integrating security considerations throughout new construction and renovation programs. It focuses on operationalizing security by embedding it into the broader Operational Readiness, Activation, and Transition (ORAT) framework. The recommendations help ensure that systems, procedures, personnel, and interagency coordination are aligned and functional on Day One and remain effective well beyond activation.

The research team used a multi-method approach, including a literature review, structured interviews with a cross-section of US airports, and subject matter expert consultation. This uncovered consistent challenges: lack of early coordination, limited TSA/CBP input during design, inconsistent integration of security in ORAT, and insufficient planning for training, trials, and system acceptance.

In response, the report offers a scalable framework that addresses every stage of security readiness, including stakeholder engagement, regulatory alignment, procedural development, staff familiarization, system testing, and post-activation optimization. Practical tools such as checklists, sample procedures, and planning templates are included to help airports adapt these recommendations to local context. Special considerations for resource-constrained airports are also provided.

Throughout the report, ORAT is treated not just as a project phase, but as a structure for managing complexity and minimizing risk. The interdependence of security and operations is emphasized—delays in security integration, misaligned expectations, or lack of coordination can cascade into broader operational failures. Conversely, a proactive, security-informed ORAT approach ensures smoother transitions, improved compliance, and safer outcomes.

This report is intended for Airport Security Coordinators, ORAT leads, operations executives, and construction partners. By implementing the strategies and tools presented, airports can make security readiness a foundational element of successful facility openings.

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## PARAS ACRONYMS

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

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## ABBREVIATIONS, ACRONYMS, INITIALISMS, AND SYMBOLS

|             |                                                   |
|-------------|---------------------------------------------------|
| <b>ASC</b>  | Airport Security Coordinator                      |
| <b>ASP</b>  | Airport Security Program                          |
| <b>CBIS</b> | Checked Baggage Inspection System                 |
| <b>CBP</b>  | United States Customs and Border Protection       |
| <b>CBRA</b> | Checked Baggage Reconciliation Area               |
| <b>CSP</b>  | Construction Security Plan                        |
| <b>FAT</b>  | Factory Acceptance Testing                        |
| <b>FIS</b>  | Federal Inspection Services                       |
| <b>GSA</b>  | Government Services Administration                |
| <b>KPI</b>  | Key Performance Indicator                         |
| <b>ORAT</b> | Operational Readiness, Activation, and Transition |
| <b>OSR</b>  | On-Screen Resolution                              |
| <b>SSCP</b> | Security Screening Checkpoint                     |

## SECTION 1: INTRODUCTION

Airports across the country are undertaking major capital improvement programs to modernize infrastructure and meet rising demand. These large-scale efforts—often with budgets in the billions—are engines of economic growth and transformation. Amid this surge in development, security remains one of the most critical and complex challenges.

Unfortunately, in many capital programs, security readiness is viewed as a checklist item rather than a dynamic, integrated function. While systems may be installed and procedures drafted, they often fail to translate into real-world readiness. Misaligned responsibilities, limited stakeholder engagement, or late-stage integration efforts can expose serious gaps that threaten safety, compliance, and operations.

Security operational readiness is not simply a matter of technology deployment. It depends on aligning people, processes, and systems in a way that reflects actual operating conditions. This becomes even more pressing as security threats evolve and regulatory requirements grow more complex.

Understanding the proper approach to security readiness—and embedding that understanding throughout a project’s life cycle—is essential to achieving a safe, efficient, and compliant opening.

This report focuses on security operational readiness in the context of new or renovated airport facilities. It does not attempt to serve as a project management manual, but it does emphasize that project delivery and security readiness are closely linked. ORAT, or Operational Readiness, Activation, and Transition, refers to a structured approach used to prepare airport facilities, systems, and stakeholders for safe and efficient operations upon opening. In fact, the most foundational recommendation of this research is to embed security-focused ORAT activities into the overall program management process.

That recommendation is grounded in the fundamental understanding that operational and security challenges are inherently interconnected. Operational disruptions often create vulnerabilities in physical or procedural security. Likewise, a security failure—such as a breach or equipment malfunction—can significantly disrupt airport operations. Ensuring alignment between the two domains is vital for a successful facility launch.

The guidance provided here draws on lessons from airport case studies, subject matter expert (SME) input, and the research team’s applied experience in ORAT and security planning. It is intended for Airport Security Coordinators (ASC), airport executives, TSA partners, and other stakeholders responsible for delivering secure, efficient, and operationally sound airport environments.

### 1.1 Purpose of This Research

PARAS 0061’s scope is focused solely on security operational readiness. That is distinguishable from security during construction, which is addressed by PARAS 0037. This report’s focus is to provide and outline actionable guidance that can help airports and their personnel ensure their new or renovated facility is ready and prepared from a security perspective. As such, this report focuses less on specific efforts and policies *for* the construction process but rather the steps to take during the entire life of the program to ensure security stays top of mind.

Additionally, this report addresses gaps not previously covered in literature. Numerous pieces of literature address design and construction as it relates to security, but few of those offer detailed guidance on operationalizing security efforts during facility transitions, for example.

Airport construction projects introduce risk. The disruption and scale of these projects can lead to security lapses if they are not properly managed. The research team's goal is for this report to become a resource for airport personnel prior to embarking upon such a project.

Many airports that recently underwent some form of physical change generally needed to create their own resources to prepare for their facility transition. They relied on ad hoc methods or past experience. This creates major inconsistencies across the industry, and can lead to security lapses.

It is understandable that security may not be front of mind for an airport constructing a new complex worth in excess of a billion dollars. A lot of construction timelines are becoming faster paced, and some airports face political pressure to finish a project quickly. As such, it is more important than ever to have a security playbook ready so that security readiness is not overshadowed by other important construction concerns, such as budget, schedule, or architectural milestones.

Finally, one notable gap in the literature is how smaller airports should prepare for a major renovation or new construction initiative. Smaller airports face different constraints than larger airports. Those constraints deserve special recommendations. The research team intentionally targeted smaller airports in our interview outreach in the hopes of generating guidance that would be specifically relevant to smaller airports.

## 1.2 How to Read and Use This Report

The research team took steps to write this report in the order of a typical project. Operational Readiness, Activation, and Transition is intentionally placed at the beginning of this report, as ORAT is a process that begins in planning and continues through to construction. It is recommended that readers of this report start by reading the ORAT section to get a high-level overview of ORAT's definition within the scope of this guidebook.

From there, readers can jump to sections that make sense for them. For example, as an airport approaches a major project, they may need guidance on how to coordinate with stakeholders. An entire section of this report is dedicated to stakeholder identification, solicitation, and engagement.

While each section can be read independently, it is important to note that ORAT blurs lines between topics. For example, stakeholder engagement is a necessary input to security-related trials and simulations. As such, there are times where reading a preceding section may be recommended, even if it is not a prerequisite. In situations where this is recommended, the research team made efforts to provide a link to the recommended section in the text.

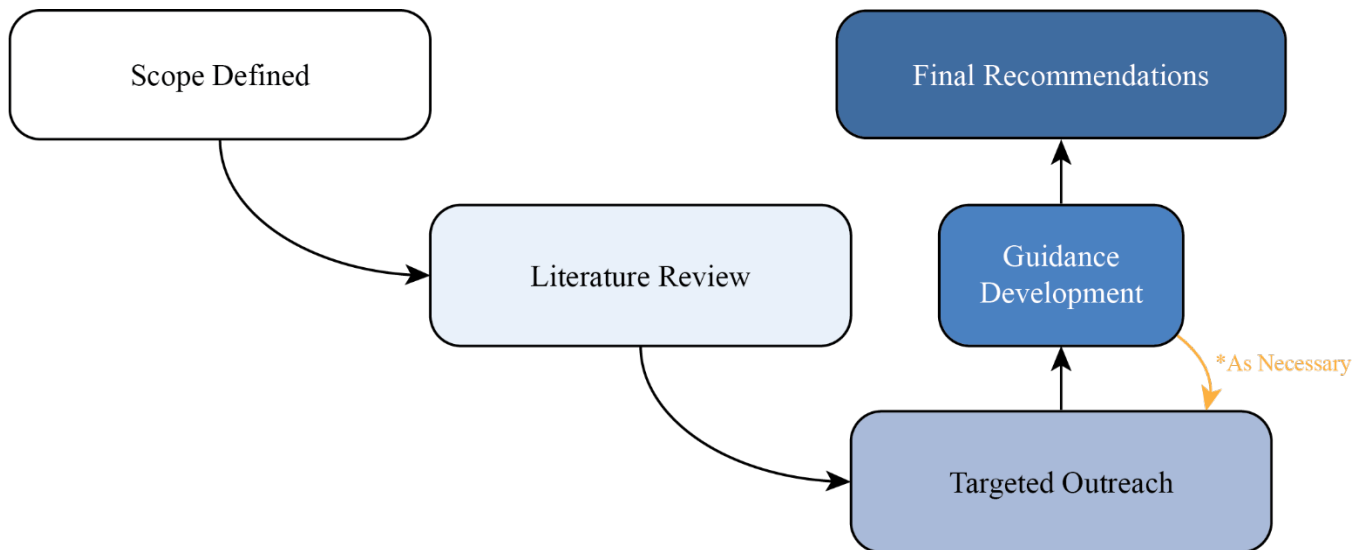
This report also has a number of appendices, some of which include templates and resources that airports can use as examples to "plug with context" into their operations, meaning airports can take the high-level goal of the template but should amend it to fit their airport's specific needs and operations. When a section relates to a given appendix, it is linked within the text.

The research team aimed to not just create a research report but a usable resource that creates a roadmap or blueprint for security-focused ORAT. During a project's life cycle, the research team imagines that airport personnel or project teams may find it prudent to refer back to this document multiple times. That constant process of returning to this resource instead of reading it in a single sitting is an intended feature of the report.

### 1.3 Methodology

This report employed a months-long, multi-faceted research process. Each task in the process informed the succeeding tasks, with intentional opportunities built in to reference back and address any gaps revealed in the previous tasks.

**Figure 1. Research Methodology**



#### 1.3.1 Literature Review

The first step in the research process included an extensive review of previous literature. The research team completed the bulk of this task between the fourth quarter of 2024 and the first month of 2025. As such, research and literature released after this time were less likely to be reviewed. This task's objective was to synthesize previous literature, obtain a comprehensive understanding of previous literature as it relates to the scope of this research, and understand any gaps in previous work that should be addressed in this work.

The research team gathered previous literature from a variety of sources. Special attention was given to the following sources:

- Reports released by the Program for Applied Research in Airport Security (PARAS; managed by National Safe Skies Alliance)
- Reports released by the ACRP (managed by the Transportation Safety Board)
- Reports released by the Government Accountability Office (GAO)
- Industry media, news publications, and news articles written and published by reputable organizations
- Textbooks related to the subject of airport security, airport operations, and airport infrastructure
- Whitepapers and other published material by expert organizations and firms operating in the field
- Federal regulations

The resulting literature review is included in this report as Appendix A, in addition to an extensive bibliography.

### 1.3.2 Targeted Outreach to Airports

After an extensive review of the existing literature, the research team sent interview invitations to airport personnel throughout the country. The goal of these interviews was to ask specific questions about an airport's experience within aviation security for new and renovated facilities.

Airport selection for interviews was based on recent projects known to the research team and recommendations from the project panel, with special attention given to airports that recently completed major new construction or renovation projects. The research team also ensured balance in airport size. After completing the literature review task, the list of targeted airports was amended due to availability of airport personnel and the airport's ability to comment on the scope of the research.

The airports listed in Table 1 commented on the scope of our research.

**Table 1. List of Interviewed Airports<sup>1</sup>**

| <b>Airport</b>                                   |
|--------------------------------------------------|
| Denver International Airport (DEN)               |
| Minneapolis-St. Paul International Airport (MSP) |
| San Francisco International Airport (SFO)        |
| John F. Kennedy International Airport (JFK)      |
| Phoenix Sky-Harbor International Airport (PHX)   |
| Portland International Airport (PDX)             |
| Missoula Montana Airport (MSO)                   |
| Eastern Iowa Airport (CID)                       |
| Minot International Airport (MOT)                |
| Williston Basin International Airport (XWA)      |

Prior to the interviews, the research team generated a series of general questions for all airports. Interviewers would often depart from the general questions to address specific questions about that airport's project and the potential unique issues that specific airport faced. This ensured that the research team received specific information about the airport's challenges and successes that could be properly conveyed in this report.

### 1.3.3 Subject Matter Experts

In addition to airport personnel, the research team enlisted SMEs to comment on the scope of the research based on their experience working at airports. The SMEs all hold or previously held at least one of the following roles:

<sup>1</sup> The research team requested interviews from additional airports that either declined or did not respond to requests. Those airports are not listed.

- Airport operator
- Program manager
- ORAT manager
- ORAT consultant
- Security consultant

The research team's SMEs also helped interview some of the airports, drawing in their experience to ask pointed questions to airport personnel.

## 1.4 Challenges Faced by Airports

This section is dedicated to synthesizing the major takeaways from the research team's targeted outreach. As part of the outreach, the research team inquired about major challenges each airport faced during their renovation or construction effort. The team aimed to find similarities between airports and determine which issues may be challenging the industry at large.

While the outreach sample size is limited, the participating airports were intentionally selected to provide a broad and representative cross-section of the industry. The sample reflects diversity in terms of geographic location, governance structure, and regional policy environments. This range supports the general applicability of the findings across various airport types and operational contexts.

### 1.4.1 Early Coordination Gaps

Multiple airports expressed that gaps existed in coordination with stakeholders that work with the airport. Interestingly, airport personnel expressed greater concern about the gaps that existed with non-airline stakeholders than the airlines. At a high level, this reality makes sense. The airlines represent such an important stakeholder group that they may receive a disproportionate share of the engagement when embarking upon a project.

However, non-airline stakeholders remain crucial to security readiness. For example, when security demarcations change when a new space is activated, that change could affect concession personnel more than an airline. As such, coordination with concessions tenants cannot be ignored or delayed.

Many airports expressed that gaps existed in their coordination with regulatory authorities, specifically TSA. Some of these gaps included missed opportunities for improvements in the design stage. In several cases, changes to security screening checkpoint (SSCP) designs occurred late in the design process or required changes during the construction phase due to misalignment between the airport's assumptions and TSA's requirements or desires.

Conversely, some airports attributed their early coordination with TSA or CBP to be a key to their success. Developing a strong working relationship with the necessary regulatory agencies is an important piece of a program's success. Later sections of this report will address specific strategies for working with regulatory agencies.

A lack of proactive coordination is rarely an instance of negligence. Often, airports expressed surprise at how many stakeholders required coordination. It is difficult to know which stakeholders will be affected by a change until you know how those stakeholders operate. As such, stakeholder identification, solicitation, and engagement is a major element of this report. See Section 3 and Section 4 for detailed information on these elements.



### 1.4.2 ORAT Structure and Resourcing

Different airports presented different understandings of the definition of Operational Readiness, Activation, and Transition. This is not a new phenomenon. ORAT is often understood differently depending on the airport.

Additionally, airports often struggle with the proper approach to establishing an ORAT team. Balancing internal resources with external ones can be a tough challenge. Most successful ORAT programs use both internal and external resources. This report addresses the benefits and drawbacks of balancing too far to either side.

Airports also chronically underrepresent security personnel in the ORAT process. This creates downstream problems for airports.

Also, stakeholders often are not properly engaged, which can lead to a failure of the program and design teams to complete a proper concept of operations and intent of how the facility will operate. That in turn leads to downstream problems for stakeholders during activation.

## SECTION 2: OPERATIONAL READINESS, ACTIVATION, AND TRANSITION

Different airports understand and employ ORAT differently; industry professionals often do not even agree with a definition or the expanded form of “ORAT.” Some refer to it as the more common Operational Readiness, Activation, and Transition, while others employ the less-used Operational Readiness and Airport Transfer.

For the purpose of this report, ORAT will stand for Operational Readiness, Activation, and Transition. At its core, ORAT is a project management structure that ensures all stakeholders, processes, systems, and facilities are fully prepared to operate safely, securely, effectively, and efficiently from the first day of operations in a changed environment.

ORAT is the bridge between planning, design, construction, and operation. It is an ongoing process that coordinates activities and processes across stakeholders to ensure smooth transition toward change. Most of the following sections of this report represent a process in the ORAT flow: stakeholder identification, solicitation, and engagement; compliance; procedure development; training; and systems testing, integration, and acceptance.

All security change can be considered part of the overall ORAT process but not all aspects of ORAT involve security. This report focuses on the security aspects of ORAT, though it tangentially addresses some operational aspects of ORAT, as the same framework used for security change is often used for operational change (e.g., baggage being sent to a new carousel).

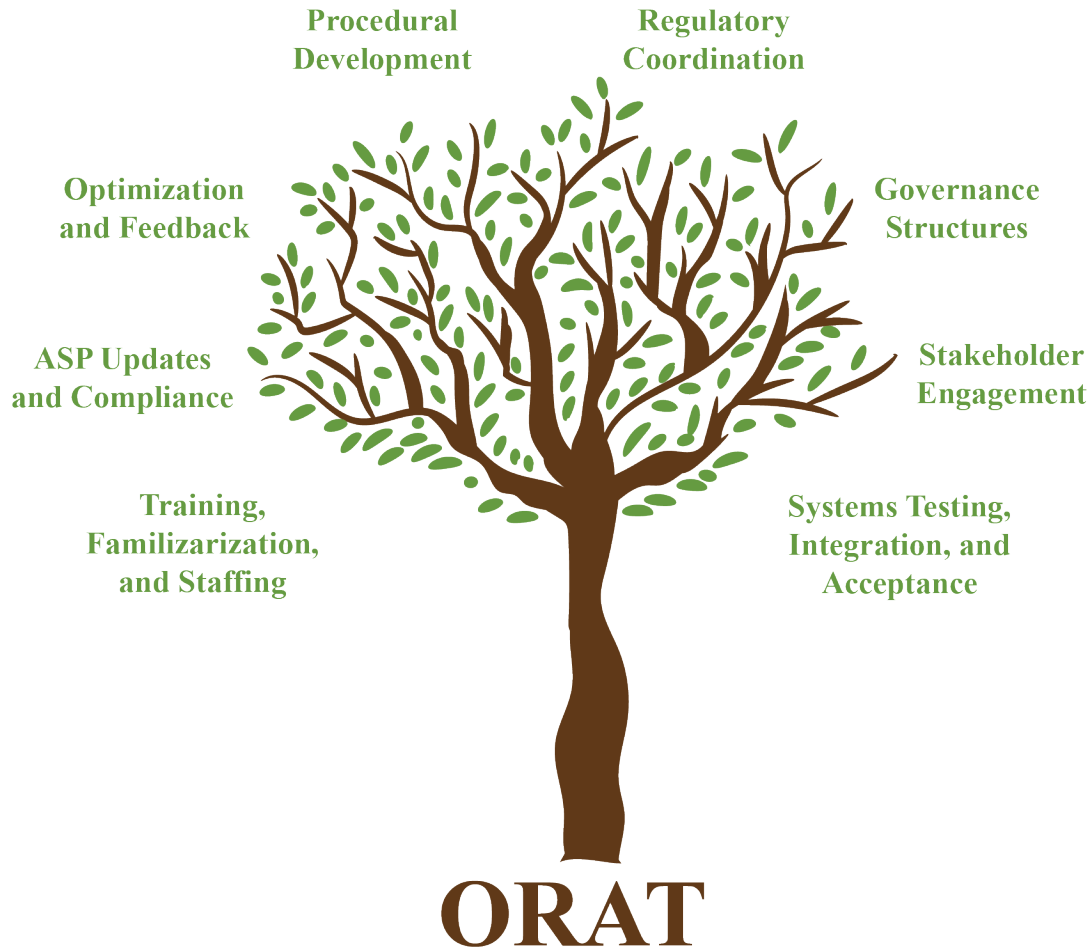
Additional sections of this report will address parts of ORAT. Because ORAT is viewed as a program management structure through which decisions are made, many parts of the activation process are encapsulated by ORAT. Specifically, the research team recommends reading Section 11, which addresses how to optimize the ORAT team’s efforts for future activations.

### 2.1 The Purpose and Role of ORAT

ORAT is an “end-to-end” process, meaning that an adequate ORAT starts during the planning phase and carries through until after the construction phase is actually completed. This ensures that there is a team of ORAT personnel engaging stakeholders during all phases and parts of the process.

The importance of security-related ORAT efforts cannot be overstated. Airports large and small engage ORAT teams—either external or internal—for operational concerns not related to security. For example, airports often hire ORAT consultants to liaise between the airport authority, the construction team, and the airlines. However, airports and their associated ORAT teams must not neglect to integrate security-specific information into a broader ORAT effort. Integrating security information into a larger ORAT scheme can be transformative for airport stakeholders.

Other sections of this report speak to the importance of engaging stakeholders and regulatory authorities early, as well as testing equipment. ORAT sits at the center of all of those key considerations. ORAT might be considered the center of the project management ecosystem while the key considerations are its branches. See Figure 2 for a graphic representation of this ecosystem.

**Figure 2. ORAT as a Project Management Structure**

## 2.2 Integration of Security Objectives into ORAT

Activities related to security readiness should intentionally integrate and synchronize with other ORAT milestones, such as stakeholder identification, stakeholder solicitation, stakeholder engagement, operational handover, systems testing, operational risks, live simulations, training, and stakeholder onboarding.

This makes logical sense as security concerns and operational concerns are tied together in an airport environment. For example, badging and access control systems are required to be operational, with all testing complete, before tenants move into a space. Security system acceptances should align with this overall schedule. ORAT teams that integrate security concerns with operational concerns can close the loop between operational efficiency and security effectiveness.

It is highly recommended that airports designate an ORAT team to incorporate major security milestones into an ORAT Master Schedule that synchronizes with construction schedules. This includes the following:

- Regulatory and compliance reviews
- Credentialing and access control activation
- Security system testing, integration, and acceptance timelines
- Training and familiarization completion for security personnel and other tenants

- Familiarization with airline employees
- Emergency response and incident management solutions
- Security sign-off prior to phased activations or public access

Including these types of security-related items on an ORAT timeline enables proactive tracking of major security milestones and identification of schedule issues early in the process.

Inclusion of these items also ensures that enough time is built into the schedule ahead of activation for security-related familiarization, testing, and training to take place. Some combination of these three items is frequently left out of an airport's overall strategy, although familiarization, testing, and training are all crucial in some fashion for post-activation success.

During outreach to airports, personnel spoke of the importance of integrating security and operational planning. One interviewee at a large airport told the research team that “you can’t really run operations without thinking about security first.”

The implementation schedule for security systems should also be part of construction phasing schedules and overall ORAT schedules. Airports should be advised that some security systems—notably camera, access control, intrusion detection, and public address (PA) systems—are complex and often interdependent technologies that require long testing processes. Their commissioning needs to be aligned with a broader facility readiness efforts. An ORAT team, which oversees the readiness efforts, needs to have involvement in the commissioning process. One prudent approach to eliminating potential barriers is to ensure the ORAT team has full visibility into a comprehensive master schedule that includes security system implementation and commissioning. The ORAT team should be embedded within all aspects of the effort: planning, design, construction, and activation (if applicable).

Section 8 focuses specifically on testing and commissioning equipment. One relevant takeaway of the overall ORAT schedule is to build testing requirements and their associated deadlines into contractual requirements with contractors and subcontractors. For example, if the airport's new access control system must be fully tested and operational two months prior to the facility's scheduled opening in order to allow for badge programming and associated training, the contract should stipulate completion of all site acceptance testing and integration with the badging system by that date. This ensures that downstream readiness activities, such as credentialing, testing, and live trials, can proceed without delay.

## 2.3 ORAT Structure

Airports are still warming to the idea of ORAT as an overall project management structure. As previously mentioned, different airports employ various understandings of ORAT. As such, airports often ask questions about how to properly structure an ORAT team. During targeted outreach for this report, no airport presented the same ORAT structure. A wide array of configurations were represented, ranging from a staff augmentation-like system from an outside consulting firm at one end of the spectrum to a permanent, large-scale team internal to the airport's operations at the other.

These discrepancies are understandable. Airports should be mindful to consider the context of their own operations in order to create a structure that is best for them. What works at a Cat X airport may not be prudent for a Cat II airport. Even a structure that works for one Cat X airport may not be the ideal for a different Cat X airport.

Most airports in the targeted outreach used a combination of internal and external resources on their ORAT teams. External resources present an opportunity to encapsulate and leverage knowledge from previous construction or renovation projects, while internal resources command deep knowledge of an

airport's environment and the stakeholders at that airport. To that end, ORAT teams should consider the following principles when creating an ORAT structure:

- Appointing an ORAT Security Lead or Liaison to serve as the main point of contact for security-related tasks, issues, and coordination.
- Defining roles and responsibilities for security personnel and contractors within the ORAT workstream.
- Creating a Construction Security Plan (CSP), which outlines major dates and various requirements or regulations that exist at each date (for example, a date by which contractors are required to catalog tools that enter a facility). Section 6.6.4 will address CSPs and expand on their purpose.
- Integrate the ORAT Security Lead/Liaison into a standard, regularly scheduled coordination meeting to provide real-time input and feedback to evolving changes during the construction process.

The ORAT team could also include:

- External ORAT consultants
- Airport personnel (operations managers, ASCs, alternate ASCs, etc.)
- Law enforcement liaisons and personnel (EMS, fire, police, etc.)
- Construction team liaison

ORAT teams need to play at the ground level and the executive level. They can bridge the gap between the executive offices and the stakeholders working on the ground. In a way, ORAT teams can operate as “tiger teams,” best described as “specialized, cross-functional team brought together to solve or investigate a specific problem or critical issue.”

Airports should also be aware that a team made up of entirely security personnel may not be ideal. Operational requirements and desires are not irrelevant to security decisions and approaches. Thinking too narrowly can diminish the effectiveness of the team's goal. Additionally, one of ORAT's selling points is that it focuses on how stakeholders *will* operate in the facility post-activation, not just how an owner *would like* for them to operate. As such, bringing more voices from outside of security into the ORAT team can be valuable.

## 2.4 Communication Protocols

ORAT teams must initiate clear and streamlined communication efforts across departments and stakeholders. For security planning to stay aligned with ORAT timelines, it is important to implement structured reporting and escalation procedures for security-related issues, particularly during testing and trial phases.

One aspect of ORAT that is often lost is **decision-making authority**. At its core, ORAT is a “bottom-up” project management tool. It looks at operational challenges and efficiencies at the lowest level of the process and works upward to refine operations. Creating structure at the top—particularly decision-making structure—allows this bottom-up approach to work more effectively. Airports should define early which people have the authority to initiate a change or make a decision on a process. By identifying these people at the outset, decisions can be made more quickly.

The ORAT team should also use shared tracking tools—such as a dashboard, punch list, issue log, etc.—to provide visibility into security milestones and potential roadblocks. Whatever tool is used, there

should be a clear documentation trail for all decisions, approvals, and changes regarding security system deployment, regulatory requirements, and stakeholder engagement.

From an ongoing communication standpoint, the ORAT team should establish standing meetings that can be used to update the team and provide an open forum for team members to address problems. These meetings ensure that no one person gets too specialized; the goal of the ORAT team is to make decisions effectively across all elements of the airport. The ORAT team is not merely a group of specialists but rather a group of people with specialized knowledge and expertise who can make a holistic decision. Because so many areas of the airport or construction process affect one another, becoming too specialized as a team can hinder success.

Additionally, a communication hierarchy should be established. During targeted outreach, airports suggested that stakeholder outreach always takes longer than it should. Developing default methods of communicating with stakeholders is a valuable task for an ORAT team. Having frequent, scheduled communication with stakeholders is worth considering. Some airports use a newsletter that is sent to stakeholders at regular intervals that includes construction updates, security planning updates, and more.

## 2.5 Concepts of Operations

Every stakeholder operates differently. Even within a stakeholder group, operations may look different. For example, it is conceivable that two airlines might employ different methods of managing crew movement through secure areas, or that different concessions tenants handle vendor deliveries in a wide variety of ways. These differing concepts of operations are important for the airport to understand.

Defining the concepts of operations for each stakeholder and stakeholder group is one of the ORAT team's most important roles. Defining these concepts early is a crucial step in understanding how any changes in the facility will affect different stakeholders.

Consider the following example: an airport is preparing to relocate its security screening checkpoint as part of a major terminal renovation. Without clearly defined concepts of operations for an airline, the airport could overlook how the change affects that airline's workflow.

This is why the ORAT and coordination process cannot start after the design phase. Starting your ORAT team's operations early in the planning process unlocks the airport's ability to gain an in-depth understanding of each stakeholder's operations.

ORAT effectively as an insurance policy. There is no question that ORAT efforts cost money: airports either need to spend internal team members' time or hire external consultants. However, because ORAT provides greater understanding of the concepts of operations and stakeholder needs earlier in the process, airports report fewer change orders. Multiple airports reported to the research team that last-minute changes were expensive. Many of these last-minute changes result from failure to understand operational realities and concepts for a given stakeholder.

Additionally, clearly defined and documented concepts of operations directly influence security efficiency and readiness. These documents articulate how people, processes, and technology interact within an environment. When developed early and in coordination with all impacted stakeholders, this allows the security team to anticipate operational impact, identify potential vulnerabilities, and create procedures that align with the actual workflows in which stakeholders work.

For example, a concept of operations that outlines passenger screening flow, baggage handling routes, or emergency egress procedures enables security planners to determine optimal placement of screening



equipment, surveillance coverage, and access control points. Without a clear understanding of how the facility will be used each day, security measures may be mismatched with operational realities, leading to inefficiencies, confusion, or even regulatory compliance issues.

By integrating security considerations into stakeholder concepts of operations discussions, the ORAT team ensures that readiness is not just functional but also secure, intuitive, and aligned with the needs of the end users.

## 2.6 ORAT Tools

During the planning, design, and construction processes, ORAT teams need to keep both the first day of operations and the “second-plus” day of operations in mind. Special consideration should be given to the fact that airport stakeholders often see some degree of turnover. Front-loading strong engagement efforts, initiatives, and training processes will allow airports and stakeholders to manage this turnover with greater ease. In other words, **ORAT is not a “one-and-done” or “one-time” activity**. It is a constantly evolving process that needs to be implemented into the airport’s overall strategy.

As such, it is worthwhile for ORAT teams to generate materials, such as checklists, dashboards, and issue trackers, that can be used both during the current phase and after activation. For example, one could envision a checklist to implement a new access control system. This checklist would outline an objective (for example: ensuring the access control system is fully tested, functional, integrated, and ready to support secure operations on day one of the facility’s activation); from there, it would outline the specific steps required by stakeholders and ORAT team members to achieve the objective.

These types of tools offer post-activation benefits. Aside from the fact that they function as a de facto compliance policy for contractors, they can also create a reusable framework for ongoing testing requirements where they are applicable. Airports often reuse ORAT resources after their construction projects are activated. One airport reported they still use baggage handling system resources that were developed during the construction phase.

Two airports interviewed underwent major construction efforts, and neither airport maintained a defined ORAT team or approach embedded in its operations. However, they created ORAT tools during the construction phase that helped them develop resources, strategies, and frameworks they continued to use after activation.

Another tool worthy of consideration for airports is the “Open Item List,” which help individuals from various entities understand what items are open for discussion and decision. Well-developed open item lists contain the following information:

- **Stakeholder Area:** This section identifies the primary stakeholder group impacted or affected by the item. Examples include “Airline,” “Construction Team,” or “Concessions.”
- **Item Number:** In order to make items easy to track, every item should be numbered, and the number should *never* change. (In other words, if the item is removed, the subsequent items should not be renumbered.) This allows for easy reference to an item in communications.
- **Description:** This section provides a brief description or “topic title” for the open item.
- **Details:** This section helps outline the open item and includes a dated timeline of discussions or decisions on the issue. This section can also include links to external resources as necessary, such as meeting notes in which the item was discussed.
- **Open Date:** Each item should have an “open date” for when the issue was “created.”

- **Closed Date:** Each item should have a “closed date” indicating when a decision was rendered or an item completed. This helps serve as a reference for later in the program.
- **Assignment/Responsibility:** For each item, include the name and entity of the person or people responsible for such action. Multiple people can be included, and stakeholder groups can be included, though when attaching a stakeholder group, it is a best practice to include a point of contact. (For example, instead of merely writing “Concessions Vendor A,” write “John Doe, Concessions Vendor A” to provide a strong point of contact for a viewer of the list.)
- **Status:** Each item should be marked as “Open,” “In Progress,” or “Closed” based on its status.

Table 2. Example of Open Item List

| Stakeholder Group     | Item No. | Subject                                | Detail                                                                                                                                           | Open Date  | Closed Date | Responsibility                                                                   | Status      |
|-----------------------|----------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|----------------------------------------------------------------------------------|-------------|
| Airlines              | A01      | Security Walls for Gate Millwork       | 06-10-2025: Airlines have requested that security walls be added to gate millwork to prevent passenger access to the jet bridge.                 | 06-10-2025 |             | Sam Smith, General Contractor                                                    | In Progress |
| Airlines              | A02      | TSA Security Program Approval          | 06-12-2025: Airline's TSA approved operator standard security program has not yet been submitted.                                                | 06-12-2025 |             | Jane Doe, Airline Manager                                                        | Open        |
| Concessions           | C01      | Secure Area Deliveries Protocol        | 06-15-2025: Concessionaire has not finalized coordination with security for approved delivery schedule and screening proceed into Sterile Areas. | 06-15-2025 | 06-30-2025  | John Doe, Concessions Manager                                                    | Closed      |
| Airport Security Team | S01      | Staff Security Badge Access            | 06-01-2025: Complete checks and ensure all badged staff have the proper clearances prior to opening day.                                         | 06-01-2025 |             | Abby Chung, Security Manager + Airport IT (or any specific individuals)          | In Progress |
| Concessions           | C02      | Security Training for Concession Staff | 06-19-2025: The required airport security training has not been completed by all new concession employees.                                       | 06-19-2025 |             | John Doe, Concessions Manager<br>Airport IT (or any specific individuals)        | Open        |
| Airport Security Team | S02      | CCTV Monitoring Coverage               | 06-07-2025: Airport team has requested that the security staff validate the operational status and coverage of all new terminal CCTV cameras.    | 06-07-2025 | 06-28-2025  | Abby Chung, Airport Security Manager<br>Airport IT (or any specific individuals) | Closed      |



To enhance visibility, coordination, and focus, it is recommended that all readiness items be tracked using a centralized tool or dashboard that visually distinguishes items by status. Color coding is particularly effective, with closed items grayed out to reduce visual clutter and help teams concentrate on those that remain active. This format supports not only day-to-day ORAT team operations but also serves as a tracking mechanism for stakeholder-specific work groups, allowing each group to manage their own readiness responsibilities within a shared framework.

This centralized tracker contributes significantly to stakeholder situational awareness by clearly presenting the current state of open items, in-progress efforts, decisions pending, and issues resolved. It provides a single source of truth for tracking progress, identifying bottlenecks, and aligning actions across departments, contractors, and regulatory partners. The consistent visibility helps ensure that all stakeholders remain informed of interdependencies and coordination needs, reducing duplication and missed handoffs.

A fundamental ORAT principle is to assess each item based on risk—evaluating its potential operational impact, urgency, and required resources—then prioritize and assign deadlines accordingly. Items moving from “Open” to “In Progress” often signals active ownership and attention, which in the research team’s experience tends to elevate the item’s profile among leadership and expedite resolution. When appropriate, workshops or function-specific working groups can be convened to resolve complex or cross-functional issues that require collaboration and decision-making across multiple stakeholders.

## SECTION 3: STAKEHOLDER IDENTIFICATION, SOLICITATION, AND ENGAGEMENT

The complex nature of airport operations makes stakeholder identification and engagement an absolute necessity for airport owners planning to embark on a new program. During targeted outreach, airports of all sizes expressed that early coordination was a primary factor of the successful parts of their facility activation.

A stakeholder refers to any individual, group, or organization that has an interest in a project, its operations, and its effects. The stakeholder profile may differ from airport to airport; it is conceivable that larger airports will have more stakeholders with whom they must coordinate when preparing for a major renovation or new construction initiative. However, every passenger airport will have more than one stakeholder group with whom they must engage.

The following are common stakeholder groups with an interest in security readiness:

- Owner (may be an airport authority, a private operator, or a city department)
- Employees of the owner
- TSA
- CBP
- Airlines and associated personnel
- Ground service operators
- Other federal agencies (DOT, FAA, etc.)
- Airport tenants (concessions, retail stores, etc.)
- Airport law enforcement and emergency services
- Local law enforcement agencies and emergency services
- Contractors, subcontractors, and the construction team
- Technology service providers
- Ground transportation providers
- Passengers and the public

Stakeholders can be internal or external. Internal stakeholders are those keenly involved in the program. These include but are not limited to the program team, construction team, and design team. External stakeholders are those outside of the program. These generally include airlines, concessions tenants, ground service providers, regulatory agencies, and more.

Figure 5 (Section 6.1.1) provides a visual outline of general stakeholders involved at the regulatory level.

### 3.1 Stakeholder Identification

Ahead of a project's kickoff, airport owners and project managers need to identify all of the stakeholders operating in the airport that will be affected by any kind of change. One recommended strategy is to create a profile of all the stakeholders before embarking on the planning phase of a project.

Table 3 presents an example of a stakeholder profile. Airports should amend their stakeholder profiles to include additional information that would be applicable in the context of their specific program.

**Table 3. Stakeholder Profile Example**

| Name        | Title                         | Entity                      | Stakeholder Group | Phone        | Email                   |
|-------------|-------------------------------|-----------------------------|-------------------|--------------|-------------------------|
| John Doe    | Station Manager               | Airline A                   | Airlines Group    | 123-456-7890 | jdoe@airline.com        |
| Jane Doe    | Manager                       | Concessions Tenant A        | Concessions       | 456-789-1230 | jane@concessions.com    |
| Alex Roe    | Shift Leader                  | Passenger Service Company B | Passenger Service | 789-456-1230 | alex@passengerhelp.com  |
| Chris Smith | Access Control System Manager | Airport                     | Airport           | 555-628-4792 | chris.smith@airport.com |

It is important to know which stakeholder groups will be affected **and at what point(s) of the project they will be affected**. Airports frequently neglect to determine the latter. Few errors can cause more problems for a project than neglecting to coordinate with a stakeholder until the last minute, as these stakeholders could potentially require significant time to ready themselves for change.

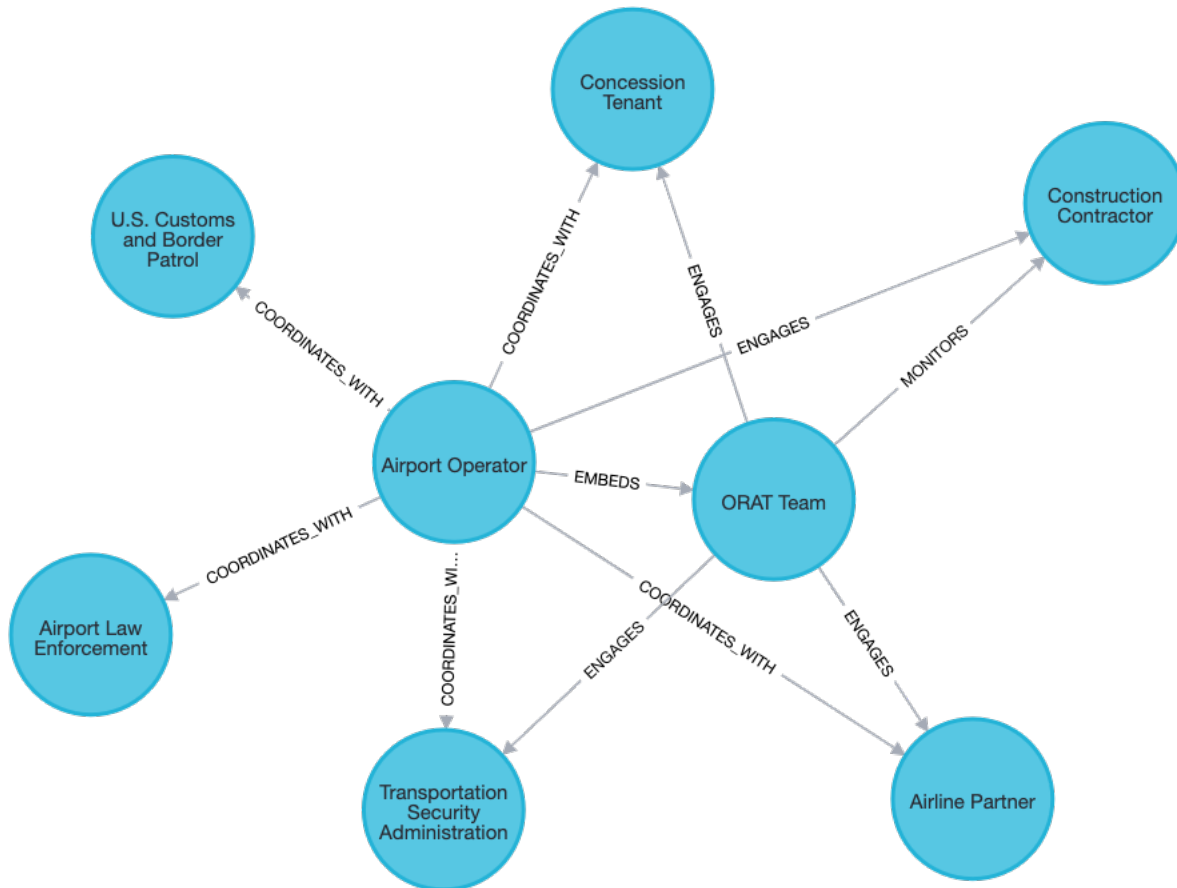
The core point in stakeholder engagement—particularly with airlines and associated personnel—is understanding the concepts of operations and the intent of operations of each stakeholder. Comprehensive understanding of a stakeholder’s concerns and how construction affects its operations is crucial. If airports start during the planning phase, stakeholder engagement presents an opportunity for both the airport and the stakeholder to improve operational efficiency. Airports and stakeholders should often remind themselves that stakeholders and airports have a symbiotic relationship: a stakeholder’s efficiency and readiness will only be as good as the airport’s efficiency (and vice versa). Internalizing and explicitly stating this at the beginning of the planning phase will serve the airport, the stakeholders, and the public at large.

It is also worth noting that these stakeholders often interoperate and coordinate duties, meaning some stakeholders may be indirectly impacted by a project’s operations before an owner expects them to be affected.

As part of a stakeholder identification process, airports should consider creating a network analysis of their stakeholder groups. Network analysis is a method used to map and evaluate relationships, interactions, and influence between entities. By visualizing these connections, airports can better understand dependencies, communication pathways, engagement strategies, and potential points of collaboration or conflict. The work required for this analysis—talking with stakeholder groups and getting to know the people within them—also brings a secondary benefit of identifying the key decision-makers in each group; this can later streamline coordination and engagement efforts, ensuring all relevant parties are engaged in the security readiness process.

Figure 3 presents a very simple example of what a stakeholder network looks like. Of course, the network at an airport is significantly larger. This graphic is simply meant to show an example of how different entities interact.

**Figure 3. Example of a Stakeholder Network Analysis**



Airports must be careful not to exclude non-airline stakeholders. During targeted outreach, airport personnel suggested they may have coordinated effectively with airlines and their associated personnel but neglected to coordinate appropriately with concessions tenants or passenger service providers (wheelchair providers, for example). These failures in coordination can cause downstream problems both operationally and from a security standpoint, leading to potential gaps.

### 3.1.1 Internal Stakeholders

Major renovation and construction projects do not solely affect external entities such as airlines, passengers, concessions personnel, or law enforcement departments; they also have a profound impact on internal stakeholders. Airports often become so busy tending to their external stakeholders that they forget those supporting internal operations.

Internal stakeholders require significant coordination, as even entities that seemingly have little connection to security can play a role in security. For example, an employee in the commercial real estate division of an airport will need to traverse between the public and Sterile areas of the airport. This employee will need to be informed if the pathway for employees between these two areas changes during the project. The airport cannot be deemed “securely ready” if their internal stakeholders know less than their external ones.

Even airport arts, community relations, or procurement personnel can play a role in security readiness. Consider this example: As part of an airport's new construction initiative, the airport wishes to feature art from local artists. In support of this, an airport team member begins to solicit bids from local artists and determines specific locations in the new terminal and public areas of the airport to display the art. Security and construction personnel must now concern themselves with important security questions: Will that piece of artwork obstruct the view of a camera? Could it impact the lidar system that integrates with airport security software? Because the answers to these questions could be costly both in time and money, early coordination with internal stakeholders is crucial to security readiness.

### 3.2 Stakeholder Solicitation

The moment the airport decides to research a renovation or construction program should mark the jumping-off point for a stakeholder solicitation program. This process of stakeholder solicitation, broadly speaking, is to demonstrate to stakeholders why the airport has identified a need for the program, work with the stakeholder to determine how their operations occur, and determine what the stakeholder would like to see in the future.

It is important to go wider with stakeholder solicitation efforts rather than narrower. As construction programs expand, more stakeholders will be affected. By going wider with the stakeholder scope early in the process, airports mitigate the risk of having to complete late-stage stakeholder engagement with a stakeholder that will suddenly be affected by a last-minute change in the construction scope or a change order.

Stakeholder solicitation needs to begin during the planning stage and continue throughout the design and construction phases. Airports expressed that change orders would have been avoided and security issues mitigated had they started with specific stakeholders earlier. Although airports frequently view airlines as the most affected stakeholder group, to ensure security, all stakeholders need to be solicited and engaged early.

### 3.3 Stakeholder Engagement

While each stakeholder group will have a different set of needs and desires, it is important for airports to understand that needs and desires will often differ among individuals within the same stakeholder group. For example, Airline A might prefer biometric-based crew access for their Airline Ticket Office (ATO), while Airline B might prefer a badge-based access system. When discovered early, the airport can employ strategies to reconcile those differences for access into restricted areas and incorporate them into the design. Airports should also be aware that a one-size-fits-all approach runs the risk of creating inefficiencies or compliance challenges for an entity within a stakeholder group.

Another common example is differences in requirements for federal law enforcement agencies and local/airport law enforcement agencies. For example, TSA and its federal protocols may require access to airport security camera feeds only during specific incidents, while local departments require unrestricted direct access to these feeds. Airports should coordinate these needs early in the process and keep their stakeholders informed and engaged throughout the construction process.

During targeted outreach, multiple airports mentioned they employ a dedicated team member on their airport security staff or an outside consultant contracted by the airport to engage stakeholders before the design phase even begins.

Early coordination also makes later engagement easier. Stakeholders—no matter how large or small—can expect significant changes to their operations during a major construction or renovation project. For

example, if an SSCP needs to be temporarily moved to a new location in order to renovate the current space, that switch will affect TSA, airport law enforcement, passengers, airline personnel, and multiple auxiliaries at the airport. Passenger service companies are one example of an often-forgotten stakeholder group. These companies frequently provide wheelchair service to passengers. If an SSCP needs to move, this company's leadership needs to know well in advance to train their employees on a new route from a ticketing counter to a gate.

Multiple airports expressed that language barriers among stakeholder employees often present challenges to stakeholder engagement. Most stakeholders with employees who do not speak English as a first language often also employ a bilingual supervisor. These supervisors wield extraordinary power to engage employees in their organization. Therefore, it is important to start the process of developing relationships with these key supervisors early to allow the airport enough time to develop an engagement strategy that will work for that specific stakeholder.

## SECTION 4: COMMUNICATION AND GOVERNANCE STRUCTURES

Security readiness programs rely heavily on the strength of their communication and governance structures. Personnel at one airport in targeted outreach mentioned that they believe projects “live or die” by communication structures. These structures establish the lines of authority, identify decision makers and the process for those decisions, and ensure all stakeholder groups are aware of evolving risks, changes, and progress.

Clear governance is key in fostering accountability and efficiency. Not only will it ensure a more secure airport environment, it will minimize cost corrections due to clear outlined processes from the beginning of the program’s development. This section outlines key strategies and tools to help airports create a robust governance structure and communication plan. Of course, airports should design a system that works best within the context of their airport. However, this section aims to provide a series of overall principles for governance structures to allow airports to make a context-dependent decision.

### 4.1 Internal Coordination and Decision-Making

At the start a program’s development, airport leadership should define clear roles and responsibilities. This includes which people are empowered to make security-related decisions. Often during major construction programs, decisions are delayed because nobody knows the proper decision-maker. As problems will occur often, a key decision-maker is an important designation.

Airports should also establish internal communication channels—such as stand-up meetings, update meetings, milestone timelines, etc.—to ensure that no issue gets lost in an unused communications process. Any program governance model should include cross-departmental representation. This includes operations, IT, and facilities maintenance, in addition to security.

Aligning security decision-making milestones with overall project delivery timelines and construction phasing schedules is important as well. This process could involve ORAT from the very beginning of the program’s development.

All of these principles help build internal consensus. Documenting decision rationales and sharing them across stakeholder groups in a clear communications channel is important for helping build that consensus over the life cycle of a project. As these programs can be long-term construction initiatives, airports should be proactive about building rapport with stakeholder groups.

### 4.2 Cross-Functional Leadership Roles

Airports should be intentional about connecting different skills areas. For example, a program team only focused on operations will ignore issues related to security, while a team made up entirely of security personnel will ignore operational realities that need to be taken into account. This is the explicit benefit of an ORAT team: ORAT sits at the center of security and operational readiness.

Personnel should be empowered to serve as connectors between the program team, regulatory agencies and compliance, as well as internal airport departments. The responsibilities of these personnel should be well defined, and processes should be detailed enough that cross-department concerns can be handled with ease.

Some airports reported the use of a security readiness lead that can take ownership and authority over security deliverables, staffing, systems, procedures, and compliance. Of course, this role needs to work

in concert with a larger team of stakeholders. It is also recommended that law enforcement personnel and tenant representatives play some role in the security readiness process.

Program Steering Committees and Executive Review Boards are valuable enterprises to adjudicate issues as they arise. These committees should hold regular meetings to discuss ongoing concerns or issues.

Reestablishing roles for each participant throughout the program's progress is crucial. As the program grows, roles may need to change. Revisiting each role will prove valuable to airports throughout the process.

### **4.3 Tools for Transparency and Issue Tracking**

Issue tracking is an important method of maintaining visibility into progress, open issues, and upcoming security changes. The Open Item List outlined in Section 2.6 is one method of tracking open items that come from both internal and external stakeholders.

Centralized issue logs that include clearly assigned owners, deadlines, and notes are valuable. This could integrate any necessary procedure updates or regulatory signoffs. Additionally, it could serve as a method of tracking stakeholder engagement.



## SECTION 5: INTEGRATING SECURITY INTO PROGRAMMING, PLANNING, AND DESIGN

Incorporating security into the early phases of airport development is foundational to achieving operational readiness. Decisions made during programming, planning, and design shape the physical environment, influence stakeholder coordination, and determine whether security systems and procedures can be effectively implemented when the facility becomes operational. Yet in many airport projects, security is not meaningfully addressed until design is well underway or construction has already begun, at which point changes are more difficult, costly, or infeasible.

Proactive integration of security requires more than simply complying with regulations. It calls for embedding security objectives into the airport's broader planning goals, engaging the right stakeholders early, and designing infrastructure that supports secure operations both at opening and into the future. By treating security as a strategic priority rather than an isolated technical requirement, airports can reduce risk, avoid schedule delays, and ensure that safety and regulatory obligations are met without compromising the functionality or experience of the facility.

### 5.1 Early Integration of Security Objectives

Security must be integrated into the project from the outset, beginning in the programming and planning phases and continuing through design, construction, and activation. Establishing clear security goals early helps ensure that secure operations can be supported by the physical layout, systems infrastructure, and stakeholder procedures on day one. These goals should be documented in the basis of design, planning reports, and stakeholder engagement strategies, forming the foundation for security design decisions.

**Table 4. Security Integration Touchpoints Across the Project Life Cycle**

| Project Phase          | Security/ORAT Integration Activities                                                                                                                                                        |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Planning               | Define security goals and design principles; create concept of operations foundation; identify key stakeholders; initiate early risk identification                                         |
| Programming            | Conduct preliminary zoning and circulation studies; align security objectives with operational concepts and facility strategy; build out the concept of operations                          |
| Concept Design         | Engage ASC, TSA, CBP, and other stakeholders; begin space planning for SSCPs, checked baggage inspection systems (CBIS), Federal Inspection Services (FIS), credentialing, and secure zones |
| Schematic Design       | Review access control concepts, preliminary system layouts, surveillance coverage, and secure circulation flow                                                                              |
| Design Development     | Develop detailed security specifications, including training, warranty, asset management, and closeout deliverables                                                                         |
| Construction Documents | Finalize security system designs and infrastructure; integrate ORAT-aligned requirements into bid packages and procurement                                                                  |

| Project Phase   | Security/ORAT Integration Activities                                                                                                 |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Construction    | Install and commission security systems; conduct system testing and walkthroughs, and prepare for trials; track status via dashboard |
| ORAT/Activation | Execute security trials and simulations; conduct training, credentialing, SOP validation, and stakeholder readiness assessments      |
| Transition      | Transfer ownership to airport; resolve open items; optimize security operations through post-opening feedback and adjustments        |

As shown in Table 4, security integration must occur at each phase of the project—from early planning through transition—to ensure alignment with operational and regulatory objectives. During the Planning and Programming phases, airports should define secure and non-secure boundaries, assess preliminary risks, and begin aligning security requirements with operational and business priorities. Stakeholders such as the ASC, law enforcement, TSA, CBP, and IT should be involved early to shape secure circulation paths, screening requirements, and credentialing needs.

As the project enters Design, security elements must be carried into architectural documentation and engineering specifications. At each milestone (30%, 60%, 90%, 100%), submittals should include:

- Security system layout drawings
- Secure zone demarcation plans
- Specifications for access control, CCTV, and intrusion detection
- ORAT-related provisions, such as:
  - Training and demonstration requirements
  - Warranty and service-level obligations
  - Asset management deliverables (e.g., equipment lists, location maps)
  - Closeout documentation aligned with readiness needs

These requirements ensure that security is not only designed to meet regulatory standards, but also positioned to support operations, maintenance, and personnel preparedness at turnover.

In the ORAT Activation Phase, security systems and procedures should be validated through trials and simulations that corroborate real-world performance. These exercises help confirm readiness, expose gaps, and build team confidence. Scenarios may include security screening failures, unauthorized access attempts, or emergency response drills involving security systems.

Finally, in the Transition Phase, the airport takes full operational control of the facility. This phase includes post-opening refinements such as SOP adjustments, optimization of surveillance coverage, and the resolution of deferred issues. Ongoing feedback and performance monitoring ensure that the security program continues to evolve with the airport's needs.

While item tracking and risk-based prioritization support these efforts throughout the project, detailed discussion of those tools is addressed in Section 2.6.

## 5.2 Design Collaboration with Regulatory Authorities

Close and continuous collaboration with regulatory agencies such as TSA and CBP is essential to aligning facility design with evolving security standards. These agencies play a central role in determining how screening, credentialing, and inspection processes are implemented, and they must be engaged as early and consistently as possible.

This collaboration should begin during conceptual design and continue through construction documentation, with structured checkpoints built into the project timeline. TSA input is particularly important for defining spatial and infrastructure needs related to passenger screening checkpoints, baggage inspection areas, and staff screening zones. For international facilities, CBP should be involved in planning FIS areas and securing Sterile corridor layouts. Proactive regulatory engagement helps identify compliance issues early, reducing the risk of late-stage redesigns, regulatory delays, or operational shortfalls.

## 5.3 Security-Supportive Architectural and Technological Design

Security is most effective when it is supported by thoughtful architectural and technological planning. This includes designing physical spaces that facilitate natural surveillance, minimize blind spots, and promote controlled movement of people and goods. The layout of secure areas, staff circulation paths, public zones, and emergency egress routes should reflect both operational needs and security best practices.

Equally important is the integration of infrastructure to support security systems. Adequate routing for power and network cabling, properly sized equipment rooms, and scalable IT infrastructure must be accounted for during design development. Design teams should collaborate closely with security and IT personnel to ensure systems such as access control, CCTV, and alarm monitoring are fully supported by the facility's architecture.

Design flexibility is also critical. As threats and technologies evolve, airports must be able to adapt without major reconstruction. Incorporating flexible layouts, reserving expansion space for future equipment, and enabling modular checkpoint designs can help extend the useful life of a facility while maintaining its security posture.

## 5.4 Embedding Security into Project Milestones

Security must be tracked and managed as a distinct workstream within the project life cycle, with clear deliverables tied to major milestones. These deliverables may include security basis of design documents, regulatory coordination records, updated demarcation drawings, and construction security plans. They should be reviewed alongside other design and engineering submissions and formally approved by relevant stakeholders.

Integrating security activities into the master schedule ensures that critical tasks—such as infrastructure installation, systems testing, credentialing, and training—are aligned with the broader construction and activation timeline. Security should be represented in integrated work plans, risk registers, and readiness dashboards, allowing the project team to monitor progress and respond quickly to emerging challenges.

By embedding security into the planning and design process, airports lay the groundwork for safe, compliant, and effective operations. A proactive, structured approach—supported by the right stakeholders and documented through the right processes—ensures that security readiness is not an afterthought but a guiding principle of successful airport development.

## SECTION 6: SECURITY COMPLIANCE AND REGULATORY COORDINATION

Regulatory compliance is a ubiquitous concern for airports that plays a major role in how an airport creates its security infrastructure. Agencies and organizations at all levels—local, state, and federal governments, as well as international bodies—play a role in setting standards and regulations. Figure 4 demonstrates many of the regulatory authorities and standard-setting organizations at each level. Note that there may be additional authorities involved.

**Figure 4. Regulatory Authorities by Level**



At the federal level, airports need to be prepared to coordinate with multiple agencies. **It is advised that airports start this process early**, perhaps even ahead of (but certainly no later than) the design stage. Multiple airports reported to the research team that stakeholder engagement with regulatory agencies and groups is a key to success.

When airports consider regulatory authorities, it is common to only think about TSA and FAA. However, airports should be mindful that state regulations are not uncommon; additionally, state entities that may not be specifically aviation related can have some interaction with the airport, even if it is tangential or superficial.

## 6.1 Coordination with TSA

TSA plays an important role in new and renovated facilities. As such, airports should be advised that early coordination with the TSA is crucial to a project's successful completion and delivery.

Part of what makes TSA coordination so daunting is that there are multiple touchpoints within TSA. Each requires different attention from airport personnel, meaning the coordination effort might require different personnel from within the airport. Multiple departments might need to be involved. This is a perfect reason to leverage a cross-functional ORAT team.

Nearly every airport during targeted outreach interviews mentioned that either their early coordination with TSA was either a key factor in their success or (in hindsight) something they wish they had prioritized in order to achieve a better outcome. Essentially, the message from multiple airport personnel interviewed could be best described as coordination with the TSA can make or break a program's success.

### 6.1.1 Security Demarcations

TSA is the agency responsible for approving changes to the security demarcations that an airport outlines in its Airport Security Program (ASP). During construction projects, these security demarcations can change, and they almost always change after the construction of a new or renovated facility is completed. As such, early engagement with TSA about these changes is crucial.

Airports should also ensure their contractors are firmly aware of the different security areas within the airport facility. Figure 5 outlines the requirements, security level, and description of each security demarcation.

Personnel leading airport security efforts should not expect contractors to hold a firm understanding of airport security requirements. More large-scale programs are choosing to utilize the valuable joint venture approach, which often pairs a national firm that has significant aviation experience with a local general contractor that supplies most of the onsite staff. As these joint ventures become more common, airports should understand the local firm may not have previous aviation experience and may therefore lack security compliance knowledge in the aviation industry.

A well-written CSP can help alleviate these problems as airports approach activations. See Section 6.6.3 for additional information.

Figure 5. Security Demarcations and Associated Requirements

|                                       | <u>Secured Area</u>                                                                                                                                                                                                         | <u>SIDA</u>                                                                                                                                                                                                             | <u>AOA</u>                                                                                                                                                        | <u>Sterile Area</u>                                                                                                                                                                                     |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Regulatory Requirements</u></b> | <ol style="list-style-type: none"> <li>1. Access controls meeting 49 CFR 1542.207.</li> <li>2. Security training</li> <li>3. Full CHRC and TSA Security Threat Assessment (STA)</li> <li>4. ID display/challenge</li> </ol> | <ol style="list-style-type: none"> <li>1. No access controls required by regs.</li> <li>2. Security training</li> <li>3. Full CHRC and TSA Security Threat Assessment (STA)</li> <li>4. ID display/challenge</li> </ol> | <ol style="list-style-type: none"> <li>1. Basic access controls meeting 49 CFR 1542.</li> <li>2. Provide security information</li> <li>3. STA required</li> </ol> | <ol style="list-style-type: none"> <li>1. Access controls meeting §1542 or screening per §1544.</li> <li>2. Controls per Airport Security Program</li> <li>3. CHRC and STA required</li> </ol>          |
| <b><u>Security Level</u></b>          | Highest level of security including access controls, training, CHRC, STA, and ID display/challenge procedures.                                                                                                              | SIDA relates to ID display and CHRC/STA only. Access controls are determined by requirements of AOA, Sterile, or Secured Area location                                                                                  | Broadest application of security; requirements are not specifically set forth in §1542.<br>STA required                                                           | Sterile area(s) may be SIDA depending upon the Airport Security Program.<br>CHRC and STA required                                                                                                       |
| <b><u>Relational Description</u></b>  | A Secured Area is always a SIDA, because all three SIDA elements are present: Training, CHRC/STA, and ID display/challenge procedures. However, the Secured Area goes beyond SIDA by also requiring access controls.        | SIDA lacks access controls, so a SIDA cannot be a Secured Area.                                                                                                                                                         | The AOA requires only basic access controls, but sets no specific standards beyond those adopted locally in the airport security program                          | The Sterile Area begins immediately after the screening checkpoint(s) and extends to the boundaries of the Secured Area and/or SIDA, where access controls are required to enter the more secure areas. |

### 6.1.2 Space Planning Requirements

TSA often occupies multiple spaces within an airport facility. It is important for airport personnel to understand the different agencies and stakeholders that will be involved in decisions concerning those area. For example, the US General Services Administration (GSA) manages leases for all leasehold spaces in the airport belonging to TSA.

GSA ensures TSA-occupied space meets the federal government's standards for security, accessibility, operational efficiency, and operational effectiveness. Representatives from GSA are involved in negotiating lease agreements, overseeing facility maintenance, and ensuring compliance with federal property management regulations and other associated federal laws.

At an airport facility, GSA works closely with TSA, airport authorities, and other necessary stakeholders to secure appropriate office space or break rooms for TSA personnel. Their involvement ensures adequate support for TSA's operational needs while aligning with the broader infrastructure and security needs of the airport as a whole.

However, airport personnel should be aware that not all spaces involving TSA are considered leasehold spaces. It is crucial to note that certain TSA spaces are expressly **not** considered leasehold spaces. For



example, CBIS areas, Checked Baggage Reconciliation Area (CBRA), and SSCPs are all not considered leasehold spaces, even though TSA personnel work in those spaces. Further sections within this report carefully detail the necessary coordination efforts for the SSCP, CBIS, and CBRA. Table 5 outlines which areas are considered leasehold spaces and which are not.

At the project's outset, it is worth carefully reviewing which spaces within the airport will require coordination with GSA and its representatives. It is highly recommended to start that process as soon as possible, ideally even before the design phase kicks off.

**Table 5. Space Planning for TSA Areas**

| Space Type                 | Leasehold | GSA Coordination | Notes                                                                                                            |
|----------------------------|-----------|------------------|------------------------------------------------------------------------------------------------------------------|
| TSA Administrative Offices | Yes       | Yes              | Coordinate lease early with appropriate airport department                                                       |
| Break Rooms                | Yes       | Yes              | These are often shared-use rooms                                                                                 |
| SSCPs                      | No        | No               | Coordination is still required with TSA, even though GSA is not involved                                         |
| CBIS                       | No        | No               | This is part of the baggage system infrastructure                                                                |
| CBRA                       | No        | No               | Operationally controlled by TSA, but not leased                                                                  |
| Training/Storage Rooms     | Yes       | Yes              | If outside the TSA's operational area, these will be leased spaces that require GSA coordination                 |
| Canine Unit Rooms          | Depends   | Sometimes        | Handled on a case-by-case basis; consult both TSA and GSA early to determine what coordination will be necessary |

### 6.1.3 TSA Physical Security

When airports renovate old facilities, there are multiple points of contact at TSA who will have a hand in coordinating with the airport and personnel. These points of contact should be identified as early in the process as possible, and airport staff should make themselves aware of these individuals and understand each contact's scope ahead of the project's commencement.

For example, TSA's points of contact will include individuals who handle physical security for their facilities, including office spaces, break rooms, etc. Often, these individuals will request the ability to install TSA-owned and operated cameras (and other equipment), manage their own set of keys/key cores, and handle badge-access control for their own spaces.

All of the above will have consequences for the design and construction of a new facility, as well as operational security readiness. As such, airports can manage any of these issues by engaging TSA early in the process. Airports should then involve the contractor; this will help answer questions about funding, installation, and management. For example, if TSA desires, with the airport's approval, to control their own set of keys, the airport and TSA should determine which entity will pay for the

installation of the locks. This coordination should take place early in the design phase to avoid incurring late change orders.

Airport personnel should also be aware that TSA often requests their own telecommunications room for their equipment separate from other entities. This creates a design challenge for airports that needs to be addressed early in the design phase. When a separate room for TSA equipment is not an option, the research team recommends cages and lockable cabinets to protect, secure, and separate TSA's equipment from airport and airline equipment.

#### 6.1.4 Security Screening Checkpoints

Issues related to SSCPs should be addressed very early in the process. SSCPs often cause significant challenges during a major renovation or construction project. The airport holds a keen interest in some aspects of the SSCP, though they hold very little control over its operation or planning. TSA maintains control over the SSCPs.

TSA assigns a specific person to oversee the programming of SSCPs. This person needs to be engaged early in the process. It is also worth noting that it is exceptionally rare for this person to be local to the airport's region.

Since SSCPs are a passenger-facing enterprise, airports often prioritize or consider non-security aspects of the SSCPs. For example, long lines at SSCPs can be a contributing factor in lower passenger satisfaction rates. Airports need to discuss throughput concerns with TSA early. For example, if an airport believes four SSCP lanes are necessary for passenger demand while TSA believes only three are needed, this discrepancy will be easier to solve earlier rather than later.

Additionally, questions arise about what equipment TSA will use in SSCPs and, perhaps more relevant to airport personnel, what entity will pay for such equipment.

The selection of equipment can affect the airport's design for the SSCP area. For example, if the time required for a machine to scan a bag is substantially longer than a previous system, this could result in lines being longer, which means an airport might need to design more space for stanchion lines. Because equipment will change more frequently than the physical SSCP space, airports should consider how to make the space as adaptive or flexible as possible during the design stage. This is yet another reason why early coordination is necessary.

The Checkpoint Requirements and Planning Guide details TSA standards for SSCP physical design, as well as the process for coordinating with TSA to complete a checkpoint improvement project. It would greatly benefit an airport to be familiar with the current standards when initiating a project that involves the SSCP.<sup>2</sup>

#### 6.1.5 Checked Baggage Inspection System and Checked Baggage Reconciliation Area

The CBIS and CBRA are critical spaces in an airport. Airport managers should take specific note to ensure the operational readiness of these spaces, keeping efficiency and effectiveness top of mind. Coordination with the TSA specific to the CBIS and CBRA is paramount to the success of an airport renovation or new construction project that includes these areas.

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<sup>2</sup> TSA Checkpoint Requirements and Planning Guide (August 2025): <https://www.tsa.gov/sites/default/files/checkpoint-requirements-and-planning-guide.pdf>.



It is also important to note that CBIS and CBRA operations may be affected by construction even if the construction is not directly focused on these areas. For example, modifications to the baggage handling system (BHS) at large could disrupt baggage screening operations, require temporary system shutdowns, or necessitate changes to TSA screening procedures. In these situations, airports must coordinate with TSA to create contingency plans that maintain security compliance and operational continuity.

Construction efforts often directly affect the CBIS and CBRA. By including TSA early in the design phase, airports can plan a new space for them on a permanent or temporary basis. Including an ORAT team in this process can help mitigate future issues.

During the design phase, airports should coordinate with TSA on a variety of questions related to the CBIS/CBRA spaces. First, the spaces need to be designed within the guidelines of TSA and other regulatory agencies, and then adequate space must be provided for TSA personnel, the necessary equipment and systems included in these spaces, and areas for manual inspection. Airports would be prudent to allow TSA to address these issues and concerns well ahead of the construction phase, as the space needs to be sufficient for TSA to maintain proper chain of custody while also reviewing the necessary baggage throughput the airport's demand requires.

Testing the equipment in these areas is a crucial component of operational and security readiness. These systems often include explosive detection systems, explosive trace detection systems, and alarm resolution systems. Acceptance testing—factory acceptance testing, site acceptance testing, and operational readiness training—is always necessary to check performance under real-world conditions. TSA often includes its own personnel in system testing, and airports should coordinate with the necessary personnel at TSA to include them. Doing so will mitigate future system failures and issues.

Airports should also work with the TSA to develop post-construction monitoring plans to ensure the system is working efficiently and effectively. These plans should include periodic testing and reviews of the system; a monitoring framework that tracks system performance, processing times, and alarm resolution rates; continuous training plans for TSA personnel; and the identification of process optimization.

The Planning Guidelines and Design Standards for Checked Baggage Inspection Systems details TSA standards for CBIS physical design and operational parameters. It would greatly benefit an airport to be familiar with the current standards when initiating a project that involves the CBIS and CBRA spaces.<sup>3</sup>

### 6.1.6 Remote Screening and On-Screen Resolution

On-Screen Resolution is the process in security screening through which baggage is reviewed for potential threats. In the most simple terms, on-screen resolution (OSR) works as follows:

1. Bags pass through a screening system
2. An OSR system reviews the scan of the bag (usually an x-ray scan)
3. If the system flags a potential threat, the image of the bag is routed electronically to a reviewer to review the image of the bag on a screen
  - That reviewer has a given amount of time to review the bag, often 30 seconds. In that time, the reviewer can override the alarm, allowing the bag to continue through to be picked up by the passenger. If the reviewer believes a potential threat exists, the reviewer can send the bag for manual inspection at the screening lane.

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<sup>3</sup> TSA Planning Guidelines and Design Standards for Checked Baggage Inspection Systems v8.0 (March 2023): <https://sam.gov/opp/680b2642ffbf4c4aba7596653e1231a7/view>.

4. If the reviewer fails to make a determination in the given time window, the system will default to requiring a manual inspection.

During screening for carry-on baggage, it is possible the OSR reviewers sit in a room completely separated from the physical baggage; this is referred to as remote screening. The SMEs interviewed for this research reported that OSR systems for SSCPs are very popular in European airport systems, and their popularity is growing in the United States. As airports develop new facilities, it is likely these systems will proliferate throughout US airports.

The OSR process is also common in CBIS at major airports, although reviewers for checked bags are typically given a longer time to override the alarm, as the throughput demand is not as significant.

## 6.2 Coordination with US Customs and Border Patrol

TSA is not the only federal entity that will require coordination and compliance. It is important for airports to understand CBP's purpose and role within the greater context of airport security. CBP is charged with customs enforcement and the processing of passengers arriving from international destinations. This makes CBP one of the largest law enforcement entities in the world and one of the biggest in the United States.

When developing a new international terminal or renovating an old one, it is imperative that airport personnel coordinate as closely with CBP as they would with TSA. This is also true for any FIS areas or CBP processing facilities.

Airports should examine early on whether CBP is an impacted entity when developing a new facility. Personnel should be aware that CBP might have interest in myriad areas. As with TSA coordination, it is crucial to start this process early. Bringing the necessary CBP stakeholders into the planning and design phases will allow airports to better understand their operations and how the facility can be designed to support them. This will also help ensure the airport is meeting CBP standards for processing areas, queueing lines, interview rooms, and any inspection equipment.

As with TSA, coordination with GSA might be required for any leasehold spaces utilized by CBP. The coordination efforts outlined in Section 6.1.2 must be started early in the process to avoid delays, change orders, or security inefficiencies.

CBP may keep passenger flow models or data for international ports of entry. It is highly recommended that airports work with CBP early to review and incorporate these models' findings into the design of the new or renovated facility. Likewise, as international passenger demand increases, airports must consider the unique infrastructure standards set out for arriving international passengers. Airports need to design secure separation for international passengers arriving from destinations that are not pre-cleared; this often includes Sterile corridors and exit control systems for incoming flights.

Airports should also consider designing facilities to have the ability to expand for major travel events. For example, airports near host cities for the upcoming 2026 World Cup, 2028 Summer Olympics, or the 2034 Winter Olympics, should expect an atypical influx of international passengers, which might require the airport to have temporary solutions ready for longer lines. Building for variable, expanded use is a crucial part of security readiness.

Additionally, CBP might have specific technology and infrastructure requirements that mimic that of a passenger check-in area. For example, CBP often employs self-service kiosks for Global Entry, CBP's trusted-traveler program for pre-approved passengers. There also may be technological needs for CBP's managed cameras, biometric screening systems, or automated power-control units. All of these

technological and infrastructure needs should be worked out early to ensure a smooth transition for security.

CBP should also be intentionally included in any facility trials and technology validations. Some CBP equipment might integrate with airport systems; this is often true for access-control systems or security camera equipment. These integrations need to be tested well before activation with the contractor, CBP, and any relevant airport personnel.

It is recommended to engage CBP in projects even if the airport does not believe it will directly affect CBP's concepts of operations. Airports often find that CBP's scope is larger than they expect before closely examining the concepts of operations.

### 6.3 Coordination with Local/Airport Law Enforcement Entities

Local law enforcement often plays a vital role in an airport's operations. The purpose of law enforcement is to provide security, emergency services, emergency response, and enforcement of federal, state, and local laws at the airport.

One element of local law enforcement worth emphasizing is jurisdiction. Airports often maintain their own police department, but those police departments also usually interact and work closely with their city, county, and state police departments as applicable. Therefore, it is important for an airport to clearly define the various law enforcement agencies and clarify the overlapping jurisdiction and escalation procedures that may exist.

These procedures likely (and hopefully) already exist at an airport, but airports still need to coordinate with these entities at great length during a major construction program. As the construction effort progresses, it will become more important to coordinate with these entities and update procedures accordingly. Additionally, it is recommended to run trials or create working committees as necessary when updating these procedures.<sup>4</sup>

During the design phase, airport teams should start coordination with the various law enforcement entities involved at the airport about what will change when construction begins. It is important that these agencies and their personnel are aware of these changes, and it is crucial that these agencies train the necessary individuals before the changes go into effect. Common changes include shifting of patrol routes or CCTV coverage. If an airport believes that response times will be affected, they might need to consider an increase in staff during construction. Again, trials can be valuable to determine response times in a new environment before they undergo official change.

Other physical changes will need to be coordinated with law enforcement and emergency response as well. Notably, temporary fencing, which is common during construction projects, could change routes for the fire department or ambulance services. Airports should coordinate with these departments well in advance to ensure they are well aware of changes.

Airports should work with the badging office to create secure access protocols during construction phases. Officers should also be well briefed on changes to security demarcations, most notably SIDA boundaries and Secured Areas. Additionally, officers should be aware that escorted guests are frequently present in construction projects. As short-term contractors enter the facility, there are often more non-badged personnel at the airport than usual; officers should be made aware of this.

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<sup>4</sup> Section 9 provides a detailed analysis of developing trials and simulations.

Incident response planning efforts should be ramped up ahead of construction kicking off. This allows all agencies to update their own Emergency Response Plan to reflect the necessary changes in the facility. Additionally, if the airport starts early enough, they can schedule joint tabletop exercises or simulations to help prepare for changes.

## 6.4 Coordination with Other Government Agencies

Airports should be aware of any other government agencies that will need to be engaged throughout the planning, design, and construction processes. Other agencies that may play a role include but are not limited to FAA; DHS; the US Department of Agriculture (USDA); Drug Enforcement Agency (DEA), Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF); the Federal Bureau of Investigation (FBI); and the Department of Defense (DOD).

The first step is to identify which agencies might be relevant to a facility. Airports should be very liberal in their approach here; it is better to engage an entity that will not be relevant to the facility than to neglect to engage an entity for which the facility will be relevant. Airport personnel should establish points of contact at each of the entities and initiate outreach efforts during the early planning stages.

Concurrent with outreach efforts, airports should track permit requirements and any inspection schedules for the agency to ensure they remain compliant. They should also coordinate phased approvals to avoid scheduling impacts or delays during the commissioning process. Airports would be wise to work these agencies' regulatory requirements into their overall compliance checklists to make sure they are not missed.

As part of the airport's outreach initiative, the necessary agency representatives should be included in planning meetings when impacts to their operations are expected. The plans for training and coordinating with their personnel should be clearly defined and communicated, with action items assigned to each stakeholder in the meeting. Airports should be open about their construction timelines, design documents, and emergency response protocols when they can be.

When possible, agency representatives should be included in activation trials, simulations, and Day One coordination. This helps validate each agency's security readiness and operational efforts prior to full occupancy or operations.

## 6.5 Local Government Entities

Fire marshals should be engaged early in the design stages to review the life safety procedures and fire safety procedures in place during and after construction. This includes ensuring clear and safe egress routes, emergency access requirements, fire lane positioning for landside curbs, and code compliance. It is important to coordinate inspection schedules, occupancy requirements and approvals, and permitting processes tied to phased construction or early occupancy.

This also gives the airport the opportunity to address temporary construction conditions that may impede emergency response access. For example, if fencing is going to obstruct access for fire trucks, determining a new fencing outline early could help the airport to avoid a severe delay.

Other local departments worth engaging include but are not limited to building and code enforcement officials. For example, it is important to identify the necessary permits required for fencing, signage, utility work, and occupancy changes. Often, the contractor handles these processes, but the airport should retain some visibility into these processes, as the relationship with these entities will persist even after the program ends.

## 6.6 Airport Security Program

New and renovated facilities innately involve some type of change. Therefore, the ASP will likely be affected and will almost always require updates during or after construction. Construction projects introduce complexity, often presenting as frequent changes that impact all types of security-related concerns. The most frequent changes include changes to security demarcations, security frameworks, access control procedures, door access requirements, perimeter integrity, and emergency response plans.

Considering how fundamental the ASP is to an airport's security framework, it is crucial that airport personnel accurately update the airport's ASP to reflect the ongoing work as well as the new conditions at the airport.

Every airport included in the targeted outreach for this research saw some type of change to its ASP during the construction phase of their projects or after construction was completed. These concerns are universal to all airports undergoing major physical change.

See PARAS 0056 for an in-depth review of ASPs, developing the ASP content, the process for submitting and handling changes, and effectively implementing any necessary changes.

### 6.6.1 Changed Conditions

Changed conditions are perhaps the most significant aspect of the ASP during a construction phase. These occur "when some condition on the airport changes, causing a different condition than what is described in the ASP." Common examples of changed conditions include a change in security demarcations or an access control system going offline. Airports interviewed for this research reported that reconfigured security perimeters or temporary access points for construction personnel and vehicles were commonplace during their construction projects.

See PARAS 0056 for an impact assessment matrix for types of amendments. This document explained which examples of changed conditions are most and least frequent and complex.

### 6.6.2 National Amendments

TSA issues National Amendments (NA) to security programs that affect all airport operators. For example, an NA could require enhanced access control protocols, updated screening procedures, or new credentialing requirements. Airports must ensure these changes are reflected in their security planning.

In outreach interviews, nearly all airports recommended regular engagement with TSA and industry groups to help anticipate any changes and incorporate them into their security planning efforts. It is also highly recommended that airport security personnel stay up to date on trends within the industry.

Regular coordination with TSA stakeholder engagement teams, local FSDs, and industry working groups enables airport operators to remain agile to evolving federal requirements. These relationships can also help interpret the operational implications of new amendments and offer airports a forum to provide feedback on implementation challenges.

Incorporating NAs into facility planning requires not only awareness of regulatory changes but also a methodical approach to evaluating how each change impacts the airport's specific footprint. For instance, a change to access control standards may necessitate revisions to door hardware specifications, credential reader placement, or software integrations with the access control system, all of which are best addressed before final design submittals or procurement. Security planners should work closely

with project managers, design teams, and contractors to track and respond to evolving TSA directives throughout the construction life cycle.

### 6.6.3 Construction Security Plan

A few airports pointed out that a CSP can be a proactive step that helps ensure security compliance during a major construction project. While a CSP is not explicitly required by any federal entity, these plans exist to bridge a gap between contractors, designers, the airport, and security authorities (such as TSA).

Developing and maintaining a CSP can help alleviate future issues in the construction process. For example, it can aid in identifying the necessary ASP amendments and changed conditions at the front end of the project, and it can help make coordination with the TSA more efficient. Often, CSPs include many of the following elements:

- Badging and credentialing requirements for contractors
- Controlling access points for construction vehicles
- Defining construction site boundaries and a phasing plan for the construction and movement of any construction lines
- Any temporary security measures necessary for the project
- Contingency plans specific to the planned construction
- Stakeholder communication and training plans

CSPs may provide detailed security readiness initiatives and the different rules contractors would need to follow at different stages of the construction process. For example, during one airport's recent projects, contractors started work outside of the airport's perimeter fence and were not required to inventory items on the site; after the work commenced inside the perimeter fence, the standard was raised to require the inventorying of certain items.

PARAS 0037 considered the values of a CSP-like system. This report introduced the Project Specific Security Plan to ensure security compliance. CSPs include all of the attributes of the Project Specific Security Plan but also ensure readiness. CSPs outline stakeholder communication efforts and plans to ensure stakeholders are ready to meet new requirements. It is also recommended that CSPs focus on change and how users will need to operate in a new environment. Aspects of the CSP will be addressed in future sections.

A well-written CSP could outline when those types of rules would go into effect. This is particularly helpful when working with local construction teams and contractors who may not come in with any aviation experience. As more projects utilize joint ventures of an aviation-experienced national firm paired with a local general contractor, it becomes considerably more relevant to cater security-related communications to contractors working onsite. CSPs help airports get ahead of what the ASP will look like after an activation.

Additionally, well-written CSPs can work as an in-effect coordination tool during phased transitions. CSPs can be exceptionally useful to define security protocols for each phase of activation. As more airports utilize phased activations over a years-long horizon, a CSP can help track when changes will take place in each phase. Phasing details should include what will trigger transitions to different levels of security to reduce ambiguity.



Once a facility is activated, the facility will need an updated ASP that will remain in place for that facility's operations. Those changes could require some type of coordination with stakeholders. A CSP that outlines at the front-end of a project when those changes will take place will make the stakeholder engagement effort easier.

CSPs should support procedural clarity for both expected and unexpected changes. CSPs could include contingency procedures for events such as equipment failure. Airports can use CSPs to pre-establish authority and escalation procedures for decision-making during security incidents or project schedule changes. When tied to ORAT, CSPs can bridge between temporary construction procedures and permanent operating procedures, providing a roadmap for change.

Any well-written CSP is most effective when accompanied by a communication plan tailored to the construction team, particularly site supervisors and subcontractors. Routine briefings and signage on site can reinforce rules outlined in the CSP. Multiple airports in targeted outreach also mentioned that briefings with tenant managers as they approached activation helped improve compliance with team members who did not speak English as a first language.

#### 6.6.4 Airport Security Program Tracker

When there is a change that affects airport security, it is possible that an ASP amendment is required. As these changes form, airports may be wise to create an internal system that tracks drafting, submittal, responses, and other types of changes to the ASP. This strategy allows for airports—particularly large airports with alternate ASCs—to ensure compliance throughout the construction process.

Trackers should aim to answer the following questions: At what stage of the process is this security change? What aspects of the ASP will need to change? Are there several aspects? Have we properly coordinated those changes internally?

An effective tracking system can take many forms, from a simple spreadsheet to a more complicated project management tool or database system. Regardless of format, its structure should allow security leadership and personnel to quickly assess pending and upcoming items, responsible parties, submission deadlines, and communication logs with the TSA. Ideally, the tracker also includes space to track guidance from the TSA during the review process.

It is important for the ASP tracker to be integrated into greater project management and stakeholder coordination efforts. Changes to facility layout, access control systems, or tenant responsibilities could trigger a number of ASP updates in multiple areas. This tracker can serve as a valuable shared reference point across departments, project teams, construction teams, and operational stakeholders. Additionally, scheduling regular reviews or meetings to discuss the items listed in the tracking system should be built into an overall program schedule.

PARAS 0039 and PARAS 0056 both include a wealth of important strategies for developing and maintaining an ASP.



## SECTION 7: STAFFING, TRAINING, AND FAMILIARIZATION PROGRAMS

The successful activation of a new or renovated airport facility depends heavily on personnel. Airports rightly put a heavy priority on infrastructure, but it is important not to neglect or underestimate the importance of the workforce. While systems testing and regulatory compliance create the structural backbone for security readiness, it is the coordinated deployment of trained personnel that ensures that structure can continue to operate as intended. As activation nears, airports must shift their focus to ensuring the right individuals are in the right roles, equipped with the knowledge, skills, and familiarity to respond confidently in a transformed environment.

This section explores considerations for staffing strategies, stakeholder-specific training approaches, and the mechanisms through which airports can prepare personnel—both internal and external—to operate effectively when doors open on the first day.

### 7.1 Training

Training is often purchased as part of the design process. When designing a facility, the owner sets out a series of training elements in the design specifications. During the planning process, airports should start to ask a series of questions: What should training look like? How early do we need to start the training process? Doing so will avoid future cost implications and operational inefficiencies. If an airport is implementing a system that is new to their airport, such as an OSR as part of its BHS, it is recommended to bring in an outside team to advise on facility transition.

ORAT is a major part of training, which is one reason why it is important to bring an ORAT team into the process early. The ORAT team can help spell out what training should look like for each stakeholder, who will conduct it, and how it will be formatted.

Training needs to be included as part of the contractor's services. The contractor is the expert who knows the ins and outs of their systems and equipment. One effective training strategy is to have the contractors walk through their systems with the teams at the airport that will have the most interaction with these elements. A good start would be to include the airport's maintenance team, who will need to fix issues as they arise post activation.

For operational efficiency, the next step would be to have the contractor show TSA supervisors how the system works. Having the ORAT team included in this process will help ensure that the training addresses all processes affected by the system. This will help future stakeholder coordination and engagement as the facility gets closer to activation.

It is recommended that the program team record any training with the contractor for future reference and use. The importance of that expert-level training cannot be overstated. As airports face staff turnover, they can refer back to these videos to train newly onboarded personnel.

Airports should be aware that training always takes longer than expected. It needs to start early, and it needs to be intentionally built into schedules. Considering how many stakeholders need to be engaged throughout the training process, it is considered an ORAT process by most airports. Most airports in our targeted outreach said their ORAT teams had a role in the training process—either in design or implementation.

### 7.1.1 Training Methods

In a perfect world, an expert would personally train every single user of a piece of equipment or a system in an in-person, live setting. The realities of airport operations means this is rarely possible. The airport cannot cease operations, and each trainee still needs to attend to their normal day job. As such, airports need to adjust.

The train-the-trainer method is an effective method of dealing with this reality while also getting live, onsite training. In this system, a contractor or expert gives in-depth training to supervisors or stakeholders with major sway in their entity. From there, those supervisors (often alongside the airport, program, or ORAT teams) then train their staff.

For some stakeholders, there is a secondary benefit in that the train-the-trainer method allows a bilingual supervisor to provide training in a person's native language.

### 7.1.2 Training Catalog

When planning training processes, it is recommended to create a catalog or schedule of training that will take place. This serves as an early outline of which stakeholders need to be engaged and when that engagement needs to start.

An ideal training catalog has, for each item, a title, description, target stakeholder, point of contact at that target stakeholder, and a phase/date for the training. Additional information can be added as necessary. Table 6 is an example of what a training catalog might look like at an airport.

**Table 6. Training Catalog Example**

| Training                           | Responsible Party                                 | Work Groups                                        | Tabletop | Completion Date |
|------------------------------------|---------------------------------------------------|----------------------------------------------------|----------|-----------------|
| Public Address (PA) System         | Contractor<br>(POC: Jane Doe, XXX-XXX-XXXX)       | Airlines, Safety/Security, Guest Services          | NO       | 12/01/2025      |
| Automated Exit Lanes               | Contractor<br>(POC: John Doe, XXX-XXX-XXXX)       | Safety/Security                                    | YES      | 02/10/2026      |
| Video Surveillance System          | Contractor<br>(POC: Jane Doe, XXX-XXX-XXXX)       | Safety/Security, Operations                        | YES      | 02/10/2025      |
| Passenger Boarding Bridges         | Contractor, ORAT<br>(POC: Jane Doe, XXX-XXX-XXXX) | Airlines, Contractors, Safety/Security, Operations | NO       | 02/14/2025      |
| On-Screen Resolution System (CBRA) | Contractor, TSA<br>(POC: John Doe, XXX-XXX-XXXX)  | TSA, Contractors, Safety/Security                  | NO       | 02/14/2025      |

ORAT teams hold the unique position of engaging both at a high level and the ground level. As such, they become familiar with the concepts of operations, and are the ideal team to work with stakeholders to manage schedule conflicts. For example, ORAT teams will come to know shift schedules for airlines, security personnel, and airport teams, which enables them to know when these trainings can be scheduled to maximize the number of people trained on the system, process, or equipment.

## 7.2 TSA-Specific Considerations

When airports construct new facilities or renovate existing ones, they often expand the SSCPs. In these instances, coordination with TSA should start during the planning phase to ensure appropriate support of screening operations. Stakeholders from multiple interest groups, including airport staff, the construction team, and the ORAT team, should all be involved in this engagement through all phases.

TSA may require specific training on SSCP equipment, OSR equipment, and BHS equipment. Any new procedures will require specific training. TSA regulations may also require specific certification requirements for various equipment or processes. Trials and simulations, which come through the ORAT process, are one method of getting personnel certified in a pre-live, but still active setting. See Section 9 for a detailed analysis of developing and running trials and simulations.

Airports should coordinate with TSA early on what might be required for the pre-activation training process. This includes overtime approvals and potentially even additional staff for TSA. From time to time, TSA will consider supplementing current personnel with Temporary Duty assignments. This could improve efficiency and effectiveness down the road.

Airport staff and program teams must keep in mind that the daily jobs of all stakeholders need to continue. An airport does not and virtually cannot close during operating hours for training; scheduling must be carefully coordinated with TSA, the airport team, program team, and ORAT team to ensure continuity of operations.

## 7.3 Tenant Considerations

Familiarization is a key component of security readiness. ASCs know the importance of bringing all stakeholders into the security conversation. When a facility activates, each stakeholder group should be aware of the new security requirements and operations. Tenants (such as concessions personnel) should not be left out of the coordination and engagement effort.

It is highly recommended to walk with concessions personnel toward the end of the construction process to give an overview of what the new space will look like from an operational and security perspective. For concessions, this might involve where they collect shipments. Airports often utilize a screening room and holding area for incoming shipments. It is crucial that concessions personnel are aware of any new processes before day one.

## 7.4 Day-One Staffing Operations

Even with ideal planning, activation days present challenges. When working in a familiar facility, stakeholders know how to handle unexpected situations because they become so familiar with processes, the facility, and the equipment they are using. Even with a strong familiarization program, all of this goes out the proverbial window on the day a new facility activates.

This speaks to the importance of familiarization. No amount of familiarization will make stakeholders entirely comfortable or ready for fully efficient operations. However, without familiarization, an airport ensures they will *not* be ready.

It is a great practice to supplement airport staff with additional temporary staffing on an activation day. Some airports employ their ORAT team members in shifts to be in the facility for its first few days of operations. If an operational question arises, the ORAT team member can be a valuable resource to the airport operations and security.

An airport needs to consider the passenger experience. No matter how great the signage, wayfinding, or messaging at an airport, a new facility is still new to everyone on the first day. Human interaction is the key to operational efficiency. This can manifest in a series of ways, including:

- Staff positioned near terminal entrances to assist with general wayfinding, direct passengers to appropriate check-in areas, and answer questions that could otherwise lead to congestion for screening.
- Personnel stationed along the SSCP queuing area to manage flow, answer procedural questions, and ensure passengers are prepared for screening. This improves throughput and relieves stress.
- Staff guiding passengers to the correct screening lanes (standard, PreCheck, CLEAR, etc.) and balancing loads between lanes to prevent backups.
- Team members helping ensure correct baggage hygiene behind airline ticket counters, preventing baggage jams, and providing live feedback to personnel. Good baggage hygiene promotes proper baggage screening procedures. Front-of-house operations (checking in a bag) is directly connected to security.
- Staff stationed beyond the checkpoint to help guide passengers.
- Security personnel or uniformed officers stationed near exit lanes to prevent breaches.
- Staff stationed to support new or temporary employees navigating badge readers and biometric systems, helping prevent delays and improper access attempts.
- Adding staff in the airport badging or security office to assist with access control issues and requests, and diagnosis of technological issues. For airports that operate all hours of the day, it is recommended to have 24/7 support after activation for a period of time.
- Creating additional shifts or adding staff for maintenance issues or other IT-related concerns during and around activation of a new facility.

All of these examples need to be specific to the context of an airport's new or renovated facility. What is needed at one airport may not be necessary in another. However, airports must plan for these activation day activities well in advance. Creating a gameplan or "run of show" for the first day is a strong strategy to ensure staffing is well covered. Some airports choose to use a "soft opening" to phase in a few operations at a time, hoping that it will lessen the operational impact. This strategy sometimes proves very valuable, particularly for large facilities. However, even in a soft opening strategy, additional staff is still recommended.

## SECTION 8: SECURITY SYSTEM TESTING, ACCEPTANCE, AND COMMISSIONING

When airports renovate facilities or build new ones, it is often a welcome opportunity to upgrade technology. From BHSs to new security infrastructure, new technology is ubiquitous to airport renovation and construction projects. Because these technologies play such an important role in airport operations and security, it is crucial to create a plan for systems testing, integration, and acceptance that ensures operational and security readiness on day one.

First, all testing requirements need to be laid out in specifications created in the design phase of the project. Those specifications should explain the necessary equipment and the acceptable vendors for such equipment. When the vendors are selected, the contractors submit the selections in what is referred to as a submittal. The owner, program management team, and/or design team typically provides status and action on submittals: approved, approved as noted, revise/resubmit, rejected, or “no exceptions taken” (received for record).

Getting the specific details right during the planning phase of a project is crucial. Testing and integration plans should be included in specifications. The ORAT team should be included early in the planning stage.

A few airports suggested that bringing in an external ORAT team or contractor to supplement their airport staff can add a valuable outside perspective, particularly with newer technologies that contractors worked with at previous airports. For example, an on-screen resolution room might be a new process to an airport undergoing a major renovation project, but an external ORAT team might have previous experience overseeing testing processes for those systems.

### 8.1 Integration and Acceptance Procedures

Airport technologies often work together for a common purpose. For example, an access control system could integrate with a camera systems to alert when the access control system rejects an entry. Because these systems rely on one another, multiple layers of testing are required.

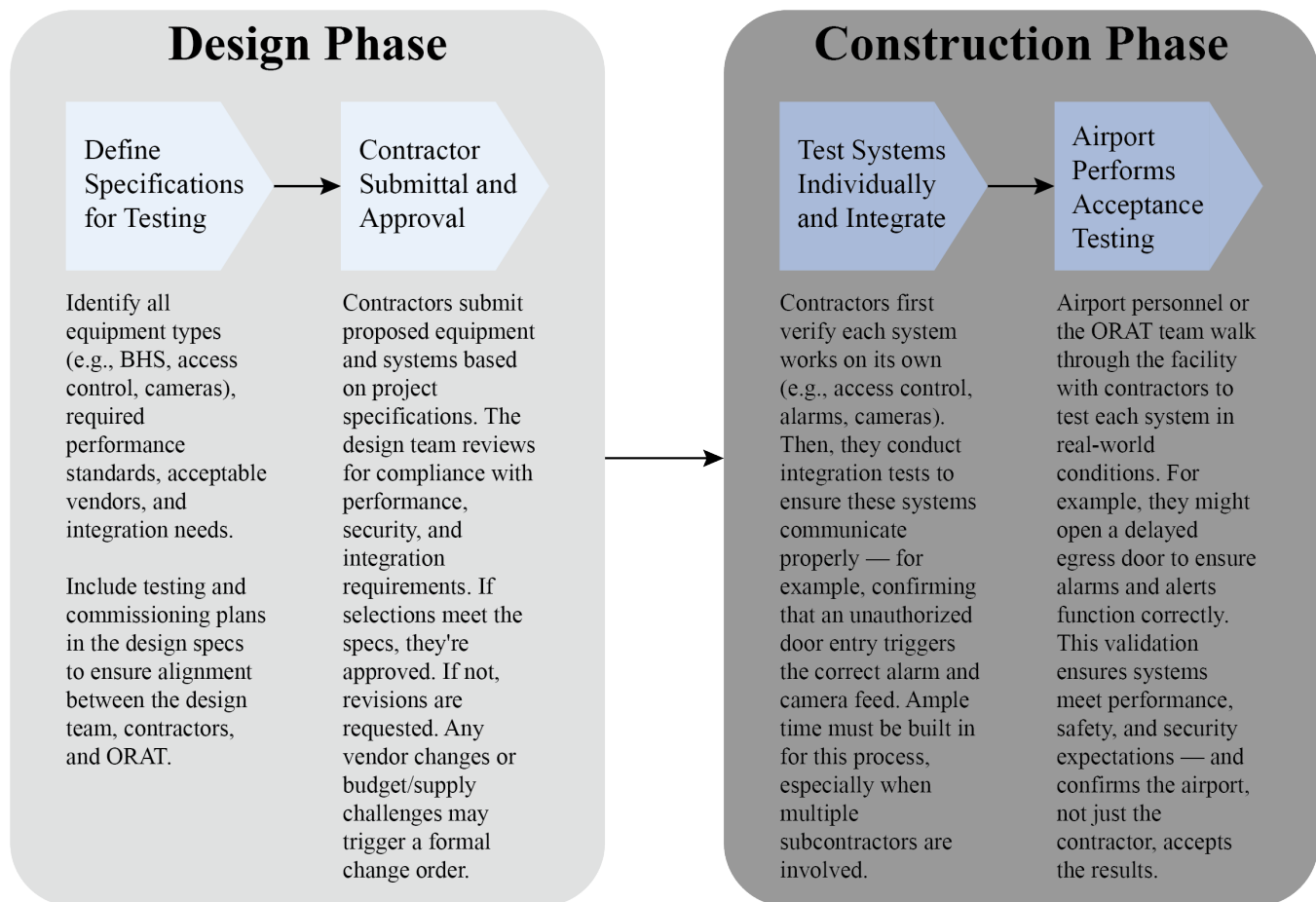
In this example, the contractor needs to test its system and verify its testing to the program team. They must also commission the system. From there, the contractor needs to verify that the system properly integrates with any other necessary systems. Contractors should allow ample time for this testing, as it could involve several subcontractor teams.

Multiple airports in the targeted outreach outlined strategies to ensure testing focuses both on the individual system and the technologies at large. For example, a recent project at one airport included automated exit lanes through which passengers would exit the Sterile Area of the airport. These exit lanes required significant testing, not just because the system was crucial to security but also because it integrated with the airport’s camera and alarm systems. When an automated exit lane sensed a breach, it triggered a camera feed to display in a security room as well as an alarm. These integrations needed to be stress tested, as any breach could cause a security incident.

Airports should also be aware that they bear the responsibility of verifying the test and completing acceptance testing. Acceptance testing is crucial to operational success and also helps airport staff understand how the systems work and how they integrate or interact with other airport technologies. This is important not just for security readiness but also for operational success on opening day.

Acceptance testing can be done by an ORAT team during the construction phase, or it can be done by airport personnel. One strategy employed by a variety of airports is to walk the necessary area with the contractor and perform basic tests as they walk. There is also value in engaging other stakeholders—such as airline personnel, tenant employees, and custodial teams—in the process. For example, airport personnel could walk with an airline’s passenger service agents and open delayed egress doors to hear the alarm. There is no better way of explaining to someone how a technology works than having them do it themselves in a controlled, no-risk setting. Performing tasks such as intentionally setting off door alarms during the construction phase is a valuable step toward stress testing technologies *and* familiarizing stakeholders. Figure 6 describes the testing process.

**Figure 6. Testing Procedure Flow**



It is highly recommended that airports and their program teams engage contractors early on what testing will look like. System contractors working in the airport realm are generally familiar with airport testing requirements, but general contractors without previous aviation experience are often surprised by the amount of time given to testing by airports. These testing procedures are absolutely necessary for ensuring operational efficiency and security readiness, and contractors need to buy into that goal before their construction begins.

## 8.2 Cost Corrections

The importance of outlining specifications at project outset cannot be overstated. If specifications are not accurate or not reflective of what the airport desires, issues will present themselves during the design

and construction phases. These issues almost always result in change orders, which are generally costly and/or time-consuming.

It is also worth noting that supply shortages matter a great deal when it comes to some of these technologies. As shortages of precious metal and labor present themselves, some of these technologies can feature long lead times, production times, or installation schedules. Airports should be aware that last-minute changes may impact schedules and carry cost implications.



## SECTION 9: SECURITY-SPECIFIC TRIALS AND SIMULATIONS

Trials and simulations are valuable methods of empowering stakeholders to get experience in an unfamiliar environment ahead of an activation. Airports often employ some type of operational trial for their stakeholders. Doing so ensures that stakeholders can be operationally efficient and effective ahead of activation. However, it is crucial to expand these trials and simulations to include security-related and security-specific concerns.

Operational trials and security trials, like most elements of ORAT, work in tandem. For example, take a concessions vendor working in a secure area. When the vendor's staff transports screened deliveries to their leased space, they need to know the optimal pathway to transport the items. This is both a security issue and an operational one. The security issue includes whether the employees have proper badge access for each door or elevator in the designed route; the operational issue is whether that route is the most effective for the vendor.

Because these issues are so intertwined, ORAT teams should be heavily involved in both security-based and operations-based trials.

### 9.1 Trial Design and Planning Framework

Designing trials is often both confusing and daunting. How do you properly create a list of trials for an environment as large as an airport? How do you create trials for less-common situations? How do you run a trial when multiple stakeholders hold competing or complementary interests in the same situation at the same time? These are all valuable questions that airports posed during targeted outreach.

Trials need to be keenly linked to stakeholder concepts of operations. At the beginning of a project, airports need to define the concepts of operations for each of the impacted stakeholders operating in the airport space. When projects near completion, the concepts of operations become a driving force in developing trials.

Returning to the concessions vendor example, a concept of operations for that vendor would include how the vendor gets deliveries into their leased space. When the program's construction nears completion, an ORAT team could begin developing a trial framework for that specific concept. The trial would include familiarizing the stakeholder with the new route, soliciting feedback on the new route, and testing the route with the stakeholder to reveal any operational inefficiencies or problems.

Essentially, the program team should be focused on determining the *processes* that each of their stakeholders employ in their operations. When airports find these processes for all their stakeholders—airlines, concessions vendors, tenants, passenger service providers, ground service providers, etc.—they can produce a significant list of processes that can be simulated via a trial.

It is important for airports to note that trials and simulations are not replacements for stakeholder engagement, systems testing, and training; they are merely another approach that fits into the overall ORAT schema. Despite that, trials do serve as a method of “closing the loop,” ensuring the testing and training worked.

### 9.2 Integration into ORAT Master Schedule and Activation Schedule

When considering trials and simulations, it is important to build time for these activities into the master schedule. Specifically, airports should take special care to include time for testing, trials, and simulations in contracts with prime contractors and subcontractors. Some subcontractors may be unaware of how

much testing is needed in an airport facility. Spelling out these needs in writing at the project's outset is necessary to ensure all requirements are provided for in the schedule.

When planning, airports should also be aware that many trials and simulations will require involvement from stakeholders. As such, the airport is not just reliant on the airport's or the prime contractor's schedule but also those of the stakeholders. Stakeholder scheduling requirements need to be coordinated early in the program's construction phase at the latest.

### 9.3 Stakeholder Involvement and Coordination

Stakeholders are the key to success in trials. One of the challenges in trials is that the airport needs buy in from the stakeholders to participate in the trials; the airport can rarely "force" a stakeholder into participating. As such, involving stakeholders in the program early can develop a good relationship that leads to better participation. Allowing the stakeholders to see how a trial will support their operational objectives is a prudent method of getting that buy in.

Stakeholder involvement for the purpose of trials should begin with the airport's development of concepts of operations documents.<sup>5</sup> From there, the airport should develop lists of processes that will change in some way after the renovation or construction effort ends. Airport teams should proactively work alongside the stakeholders to ensure no processes are left unchecked; nobody knows the stakeholders' processes better than the stakeholders themselves. As an added benefit, coordinating early with a stakeholder ensures the stakeholder's leadership feels like their opinion is valued.

Airports should then prioritize the list of processes undergoing change. Some processes can be solely handled through a stakeholder familiarization process. Examples of processes that fall into this category are changes to where certain items are located, such as a printer for boarding passes. For those issues, merely giving a pre-activation tour to stakeholder personnel or leadership can help prepare users for post-activation use.

However, for processes that are more involved, a trial is warranted. For example, if the renovation affects where oversized baggage is picked up after TSA review, this new tug path should undergo a trial with ground service personnel to ensure there are no operational concerns with the new route.

Stakeholders generally possess a strong understanding of which processes should undergo a full trial process and which are lower priority. The airport also has a good understanding of the security changes that will take place for each stakeholder. Airport personnel should leverage that knowledge to make decisions about what processes deserve a full trial. For example, if a new facility will change the process for handling unattended baggage, the airport should run a trial with the necessary stakeholders.

Airport personnel should remind themselves that airlines are not the only stakeholders operating in the new facility. It is important to proactively include all stakeholders—including internal ones—that may be overlooked.<sup>6</sup> The research team's SMEs reported that airport personnel often unintentionally overlook passenger service providers as an affected stakeholder.

### 9.4 Sample Trial Scenarios and Objectives

Trial events are a core element of the ORAT process that provide structured opportunities to validate the readiness of security systems, personnel, procedures, and interagency coordination in a simulated operational environment. These activities allow stakeholders to experience and evaluate realistic

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<sup>5</sup> See Section 2.5 for information on developing concepts of operations documents.

<sup>6</sup> See Section 3.1.1 for information on coordinating with internal stakeholder groups.

operational scenarios in a controlled setting prior to public opening, with a focus on identifying gaps, confirming procedures, and building cross-functional confidence.

Each trial event is designed with clearly defined objectives and observed using standardized tools to ensure that the evaluation process is consistent, actionable, and aligned with overall readiness goals. Outcomes from these events directly inform final training efforts, SOP adjustments, stakeholder coordination, and security system refinements.

Trial events should be conducted progressively, beginning with targeted functional checks and culminating in integrated, full-scale operational simulations. They are most effective when supported by detailed scripts, observer checklists, scorecards, and post-event hot washes to facilitate continuous improvement. All findings should be logged and tracked in the central ORAT readiness dashboard or issue tracker until resolution.

Below is a sample of recommended security-focused trial events and their associated objectives:

**Table 7. Sample Trial Scenarios and Objectives**

| <b>Trial Event</b>                         | <b>Objective(s)</b>                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Access Control Integrity Trial             | Confirm the functionality and reliability of the access control system, including door hardware, badge readers, alert generation, and central system monitoring. Evaluate real-time response from airport security and other stakeholders to triggered alarms or forced entries.                                                            |
| Badge Use and Credential Validation Trial  | Validate that personnel are assigned correct access credentials based on role, department, and operational needs. Assess credential permissions across user groups (e.g., contractors, airline staff, TSA, airport employees), and observe stakeholder adherence to badge display, usage protocols, and denial of access where appropriate. |
| Unattended Bag Trial                       | Review identification, communication, management and containment procedures; evaluate coordination between airport security, law enforcement and TSA.                                                                                                                                                                                       |
| Active Shooter Simulation                  | Assess emergency notification systems, lockdown capabilities, response time of law enforcement, staff evacuation procedures, and coordination between incident command stakeholders.                                                                                                                                                        |
| SSCP Trials                                | Evaluate effectiveness of TSA and if applicable queue staff at SSCPs; confirm queueing layout flow, SOP alignment, prohibited item handling and secondary screening.                                                                                                                                                                        |
| Evacuation and Re-entry Trial              | Validate evacuation signage, egress pathways and doors, communication systems, and staff roles during an emergency event, and secure re-entry procedures.                                                                                                                                                                                   |
| Non-conveyable Screening                   | Trial and validate the screening process for checked items that cannot go through the CBIS.                                                                                                                                                                                                                                                 |
| Aviation Worker Screening Checkpoint Trial | Observe employee screening checkpoint operations SOPs, consistency, and throughput; assess handling of unauthorized items/persons.                                                                                                                                                                                                          |

Each trial event should follow a structured execution process to ensure clarity, consistency, and measurable outcomes. Events should be designed around clear objectives that define what the trial aims

to validate, such as system performance, procedural compliance, stakeholder coordination, or response effectiveness. A detailed event script or scenario narrative should be developed to guide the flow of activities, including timed injects or actions, and ensure that all stakeholders understand the expected sequence and their roles. Execution should include the following components:

- **Pre-Briefing** with all participants to review objectives, stakeholder roles, the scenario script, communication protocols, and safety procedures.
- **Defined Evaluation Criteria** that establish how performance will be assessed, including timeliness, compliance with SOPs, clarity of communication, and observed staff readiness.
- **Observation Tools** such as checklists, scorecards, and designated evaluator roles to ensure consistent and objective data collection.
- **Hot Wash Sessions** immediately after each event to debrief participants, identify strengths and gaps, and capture lessons learned in real time.
- **Issue Tracking and Mitigation Planning**, ensuring all identified issues are documented in the ORAT readiness dashboard or punch list, assigned to responsible parties, and tracked through resolution.

## 9.5 Post-Trial Follow-Up and Continuous Improvement

It is recommended that airport personnel gather the necessary individuals, teams, and stakeholders for an immediate post-trial review. This review can help serve to amend procedures as necessary before activation. It is important to update SOPs and other procedural documents based on the feedback of the trial. The ORAT team should also work closely with stakeholders during the trial to amend processes as new information arises.

As with other ORAT practices, it is a good idea to update a centralized issue log during the trial process. This ensures that all results of the trials are kept in a single forum that can be referenced by airport and program personnel.

Airports often employ “Day Two Plus” trials. These trials, held after activation day, are not a replacement for pre-activation trials. Rather, they serve as a method of continuously refining procedures and processes, and they help improve readiness, operations, and security over time. This is especially useful for phased openings.

## SECTION 10: DEVELOPING PROCEDURES FOR SECURITY READINESS

Procedure development is an often understated but vitally important element of the security readiness process. Procedures are the “operationalization” of security standards and policies developed from the concept of operations outlined by the airport earlier in the process. Without clear procedures, a perfectly designed facility is still at risk of underperforming in both operations and safety. **An adequate facility can be made better with great procedures in place.** Procedures turn concepts into action, reduce confusion, and enable consistent performance across stakeholder groups.

Major construction or renovation programs change physical spaces, but those changes also alter processes for stakeholders. These changes disrupt the procedures with which the stakeholders are familiar. In the new facility, stakeholders might be operating in less familiar environments, which creates risk. Early planning for procedure development will help mitigate issues post activation.

Procedure development should take place alongside stakeholder engagement and ORAT planning efforts. Everything starts with the concepts of operations. Early engagement with tenants, TSA, law enforcement, and other stakeholders will reveal operational needs. As the concepts of operations become more clear, procedures can be drafted to align with those realities. Collaborative, iterative approaches will improve buy-in and usability. If an airport does not properly understand the concepts of operations of each stakeholder group, it risks developing procedures that stakeholders will ignore.

The concept of operations is an analysis that ensures security readiness. For example, a tenant that relies upon just-in-time delivery for their product will require a streamlined screening process through a specific corridor or path. That is an example of a process that can be worked into a facility’s construction plan. Similarly, if TSA wishes to switch to an OSR system for checked bags, it might require a separate OSR room with technology needs and a BHS capable of automatically diverting bags onto a different review line.

The procedure development process also promotes inter- and intra-stakeholder engagement. Through inter-stakeholder engagement, it helps clarify where responsibilities are set to begin and end. For instance, inter-stakeholder engagement would clarify which department or entity will respond to a door alarm, monitor a queuing line during a major event weekend, or respond to an equipment failure. All of these processes should be documented *in writing* to allow for constant review, monitoring, analysis, and reference.

Procedures should be considered living documents. They must adapt to context, new information, and lessons learned. In order to be an effective procedure based on concepts of operations, it is recommended airports consider the following:

1. **The development process must be iterative.** As concepts of operations evolve, so should the procedures for a stakeholder.
2. **The development process should be collaborative.** Airports should consider collaboration a high priority. Stakeholders bring significant institutional knowledge and memory to their own operations, and sometimes a stakeholder’s idea can improve airport operations as a whole. Process development should include representatives from all stakeholders and stakeholder groups.
3. **The development process should be operationally grounded.** Airports should remember that security breaches most frequently occur at the ground level; each breach involves just one door or one ground-level process. As such, airports should reflect not just what is ideal, but what is realistic given space, time, staffing, and system constraints.

Throughout the process, airports should also be on the lookout for Pareto improvements—that is, a change in which at least one stakeholder or entity benefits without making any other stakeholder worse off. Often, these changes can be relatively small to the airport or another stakeholder but make a substantive difference to a stakeholder’s operations. For TSA, this could mean a change to where a queue line starts for an SSCP, or the location of a break room or OSR room. If an airport starts this engagement process during the planning and design phases, changes are easier to implement. As the airport gets closer to starting construction, they are progressively more difficult to implement from a financial, operational, and logistical perspective.

## 10.1 Change Management

It would be hard to find a major renovation or construction project that did not involve some type of notable disruption to a stakeholder. Passenger, stakeholder, and employee experiences are notably different during renovation and construction projects. The spaces, systems, processes, and workflows on which stakeholders have relied for years change, and these changes often occur quickly (even overnight). Therefore, newly developed or revised procedures should accompany the creation of a change management framework to guide the airport and its stakeholders through the transformation.

One frequently cited myth is that change management is about editing or revising documents. In reality, it is far more than that, and it is not a simple process. Change management is the process of actively assisting stakeholders through new ways of working. It is about getting stakeholder “buy-in” and helping them understand, accept, and adopt something that is new to them, such as a new or updated space, process, or piece of equipment. Without this intentional support, airports run the risk of creating operational inefficiencies, undermining operational effectiveness, and inadvertently shaping security vulnerabilities, even with great procedure development.

It is crucial to go beyond the document and get into the field. Airport staff and project managers must remember that operational and security inefficiencies and vulnerabilities start at the ground level. Therefore, change management also starts there. A strong change management framework incorporates all the following:

1. **Clear ownership and accountability:** Every procedure should have an “owner” that is responsible for its development and use.
2. **Documentation and version control:** A centralized system should be able to track procedures and their changes over time, allowing stakeholders to see the most up-to-date guidance. This should include effective dates, drafts, revisions, and approvals.
3. **Change tracking tools:** Logbooks, issue trackers, and dashboards are helpful to view which processes are changing and why. They can also be tailored to different audiences.
4. **Communication plans:** Changes need to be communicated through multiple channels to employees at all levels in different stakeholder groups.
5. **Feedback mechanisms:** Stakeholders and staff should have an easy and communicated method of giving feedback on any procedure. Frequent operational feedback permits real-time improvements to take place.
6. **Assessments:** Checks or audits should be conducted over time to ensure procedures are being followed. Audits also allow airport staff to notice any gaps in real time.

All change management should be approached with a level of empathy and kindness. Change is not easy. Stakeholders could be overwhelmed and uncertain when familiar routines are changed. It is crucial not to omit the “why” from communication; changes without proper and adequate justification breed frustration from stakeholders. Honesty and communication are great policies.



Embedding procedure development, review, and audit within a strong change management framework will reduce resistance, increase readiness, and improve success during and after activations.

## 10.2 Drafting and Documenting Procedures

Airports must draft procedures that clearly define tasks, which must be performed in a way that is consistent, compliant, and easily repeatable. Well-drafted procedures serve as a blueprint for stakeholder actions, and help staff navigate uncertainty such as unfamiliar spaces, situations, technologies, and workflows.

All effective procedures and workflows prioritize clarity. Every step, stakeholder, and responsibility should be clear, and jargon should be avoided. The structure should be logical, and ideally in a step-by-step format. Operational realities should be intentionally incorporated; procedures that ignore operational realities are destined to fail, as stakeholders are likely to ignore the procedure. Decision points, contingencies, and roles should be clearly defined within each procedure.

Airports should also consider that “new” situations—ones for which a procedure does not exist—are possible. It is impossible to create a workflow or procedure for every single situation. However, by creating procedures for a wide array of scenarios, a value-based framework forms. Airports may even find it valuable to outline high-level principles for stakeholder. If an airport demonstrates that passenger safety is a crucial principle to its operations, a stakeholder might respond to a new situation by keeping that front of mind.

Airports understand that one of the differences between strong and weak procedure development is consistency. Strong procedure development includes the following:

1. **Use of consistent templates or design:** Standardizing the formats for all stakeholder procedure documents ensures they know where to look for specific information. They should not need to learn how to read a new procedure document each time they look at one.
2. **Role-specific guidance:** This is often an important element that is not well documented in procedures at airports. In addition to stating what needs to be done; the procedure also needs to include *who* will do it. Explicitly giving responsibility to a person increases the chance that the procedure will be followed in its entirety.
3. **Visual aids:** Diagrams, flowcharts, and annotated floor plans enhance understanding, especially when procedures involve complex spatial navigation or interaction with multiple systems.
4. **Regulatory compliance:** Integrating procedures with regulatory documents is crucial. It might be required that an airport includes certain procedures as part of its ASP, tenant security program, or other regulatory documents. It is recommended that airports coordinate with TSA or other oversight bodies as necessary.

Airports are dynamic environments and operational needs change frequently. As such, all procedures need to be considered living documents. They must change when necessary, and stakeholder engagement needs to be a revolving process that continues to support procedural changes.

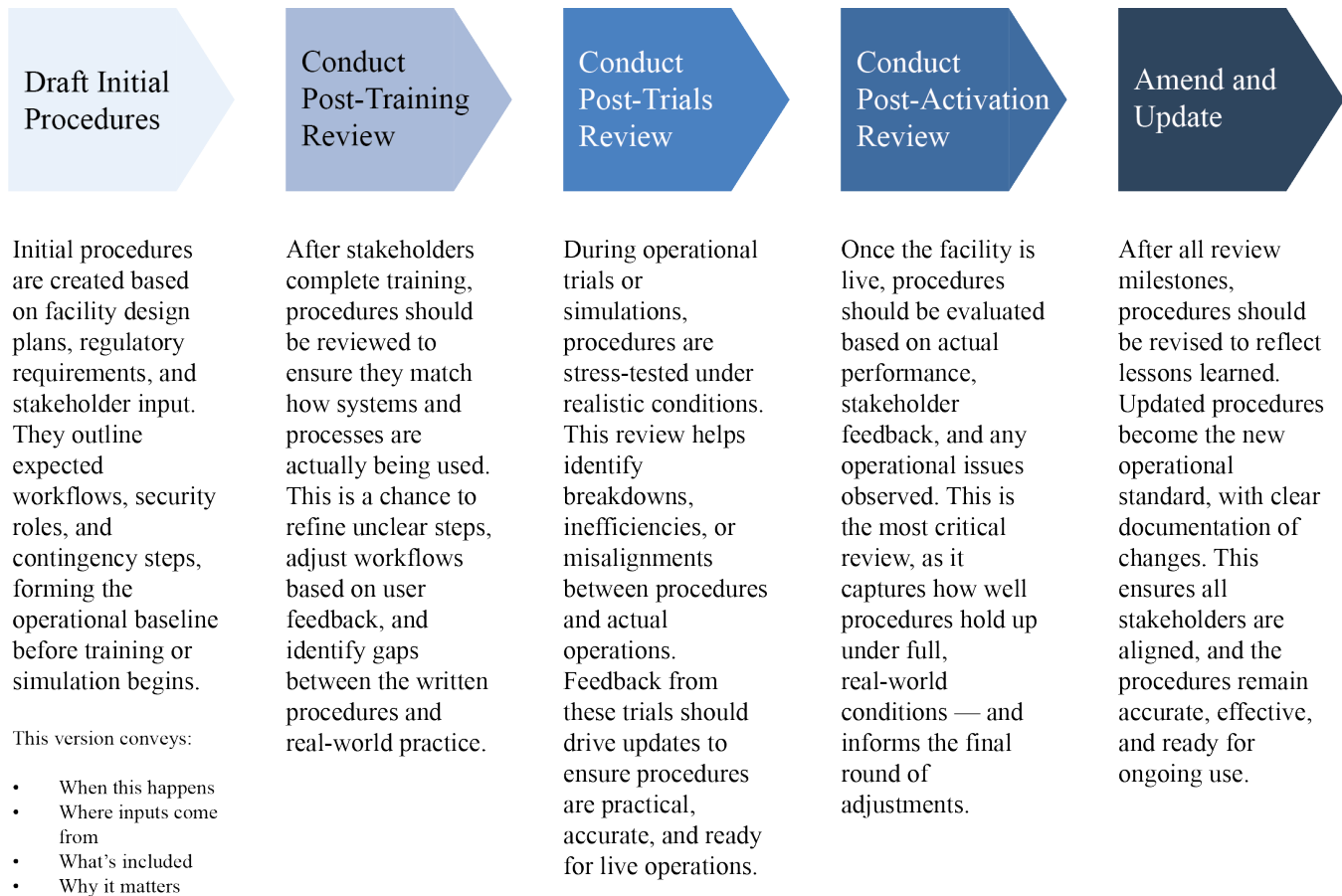
All stakeholders that interact with a respective operation and/or system should be familiarized with and trained on the relevant procedures. The procedures should also be easily accessible. The best-written procedures are rendered weak without the relevant stakeholders being able to easily reference them. Airports in our targeted research used a wide variety of methods to make procedures accessible, including printed binders, applications, shift briefings, and intranets.



### 10.3 Timeline of Procedural Development

Procedures must be living documents. When a new or renovated facility nears completion, airports will have all sorts of guidance from consultants, contractors, and other airports' best practices. Airports should conduct reviews of the original procedures, post-training reviews, post-trials reviews, and post-activation reviews. After all these milestones, the procedures will need to be amended. Figure 7 shows the flow of reviews for procedure development.

**Figure 7. Procedure Development Timeline**



## SECTION 11: POST-ACTIVATION SECURITY OPTIMIZATION AND FEEDBACK

### 11.1 Post-Facto Reviews

It is recommended that ORAT teams employ “post-facto reviews” on a frequent basis. Because airports often conduct construction and renovation programs in phases, there is typically more than one activation. This gives the airport and its ORAT team the opportunity to improve each activation.

After any major activation or move, post-facto reviews give the team the ability to discuss the positives and negatives of the effort. A strong post-facto review might also involve stakeholders who were part of the activation to hear their thoughts on what went well and what could be improved for a future activation.

Post-facto reviews can also inform updates to SOP documents and ORAT tools.<sup>7</sup>

#### 11.1.1 Recommended Timing and Form

The recommended timing for a standard post-facto review is 48–72 hours following an activation. If necessary, an airport can follow up with more formal lessons learned between 30 and 60 days following the review.

Each post-facto review should be a structured, in-person meeting involving key stakeholders, and should be documented thoroughly to allow the ORAT team to reference it upon approaching another major activation. Some of the topics to cover may include but are not limited to:

- Operational issues that emerged on Day One and any operational issues that continue to exist
- Security concerns or near-miss incidents
- Technology or system readiness issues
- Breakdowns in processes or standards
- Staffing gaps and training effectiveness

This hotwash-like activity also gives stakeholders the opportunity to bring new issues to the table. Therefore, the post-facto review also operates as a stakeholder engagement effort for future phases of the program. See Section 3 for a detailed analysis of stakeholder engagement efforts.

### 11.2 Security Performance Monitoring

The purpose of monitoring security performance is to identify inefficiencies, optimize operations and processes, and continuously improve security effectiveness post activation.

An ORAT team should work directly with the security team to create a series of security operations—specific key performance indicators (KPI) that can be used to judge security performance. These should be integrated into a broader ORAT and operational “dashboard” that can be viewed by the ORAT and the security teams.

After collecting and reviewing KPI data, the ORAT team should schedule meetings after activation to review KPIs and examine processes that could improve performance, as necessary. One benefit of an external ORAT team is that a lot of security operations problems are not unique to one airport; as such,

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<sup>7</sup> Section 10 addresses procedure updates in more detail.

an external ORAT team can bring knowledge from previous projects and programs to help fix a problem.

Additionally, ORAT teams should hold meetings with stakeholders, impromptu or otherwise, to solicit feedback and assess whether issues are being resolved and procedures working as intended. Meetings with stakeholders after activation are intended to help the ORAT team “close the loop,” ensuring that security processes are efficient and effective in the weeks after activation.

### 11.3 Continuous Feedback and Procedure Refinement

It is crucial for airport personnel and ORAT teams to continuously refine processes and procedures to match both operational realities and security needs. However, no matter how many trials an airport runs, there will eventually be some situation that arises for the first time, and it is very likely that this will happen in the weeks and months after activation. ORAT teams should be proactive in addressing this. Continuous refinement of procedures is a method of creating closed-loop processes to ensure operational lessons are learned and codified into procedures, standards, and planning cycles.

When building an overall program schedule, ORAT teams should create mechanisms for field personnel to submit real-time feedback. This can be a digital form, standard reporting procedure, portal, or something else entirely. The important element is to route feedback into ORAT and airport leadership review sessions for prioritization.

It is also recommended to create a lessons-learned repository. This is a shared, living document that records key observations and mitigation actions. This can be an input for future activation planning, CSP development, or ASP amendments, as necessary. Most external ORAT firms use this from project to project to ensure the wealth of experience on Project A is carried through to Project B.

Post-training assessments and continuous training are also valuable. Many larger airports reported during targeted outreach that they maintain a full-time internal ORAT team for this reason. Continuous training can be important, as airport stakeholders often see significant turnover from year to year.

## SECTION 12: SPECIFIC GUIDANCE FOR SMALL AIRPORTS

While no airport is immune to challenges during major construction projects, small airports face different types of challenges. Smaller airports still need to develop scalable, flexible solutions that align with TSA and FAA regulations while also ensuring operational security readiness.

### 12.1 Tailoring Security Planning to Scale

While a lot of stakeholders operate at small airports, these airports often have smaller stakeholder groups. This means the airport may be able to directly train and coordinate with personnel within a stakeholder group rather than use a less direct strategy. This might mean that a system or strategy may rely on a few airport staffers, which heightens risk, and makes the airport more susceptible to issues caused by staff turnover. As such, small airports should take specific steps to document their roles and responsibilities, create backup points of contact for stakeholders, and develop continuity plans to mitigate the risk associated with the vulnerability.

Smaller airports should also engage local law enforcement very early. Some small airports may not have a dedicated airport police department, or only a very small department. It is important to establish formal agreements and procedures with larger nearby police departments and emergency response services. Tabletop exercises, trials, and simulations will all help smaller airports work with these outside entities.

Lastly, small airports might find value in regional partnerships and expertise. Statewide airport associations or national conferences can help share good practices between airports to encourage greater operational security effectiveness, readiness, and efficiency. Because smaller airports often have fewer personnel, it might also be valuable to contract with third-party consultants when starting a major construction initiative. This increases de facto staff for the project on a temporary basis, as well as allows for personnel to bring knowledge from similar projects across the country.

Ultimately, small airports must efficiently and effectively do whatever is essential. This requires flexible planning, strong relationship building, and alignment of security with operational needs and realities.

### 12.2 Resources and Technology

Many small airports operate with budget constraints. This might mean their security technology is not as novel or advanced as a large airport, particularly because a large airport might have the staff to manage the expansive infrastructure required. Smaller airports need to find ways to integrate essential technologies to deliver maximum utility while considering budgetary requirements and operational realities.

Airports should prioritize technologies that serve multiple functions. For example, some security systems can provide live footage, recording, and facial recognition all within one system. An “all-in-one” or “many-in-one” system may come at an increased the cost for the specific piece of technology, but overall costs are reduced by avoiding the integration costs of multiple systems.

Additionally, airports can consider modular technologies or temporary infrastructure upgrades to avoid the expensive and time-consuming process of creating permanent infrastructure. For example, mobile checkpoint lanes would allow for lines to shift frequently with passenger demand.

Personnel at smaller airports should keep a close eye on grant programs from FAA and TSA to assist in funding. The benefit of adding one staff member or one piece of technology at a small airport is significantly greater than that of a larger airport.

## 12.3 Staffing Strategies

Staffing was the most significant concern reported by smaller airports during targeted outreach. These airports operate with leaner teams, often with personnel playing more than one role at a time. The person handling corporate real estate could also be the ASC. Limited personnel can strain day-to-day operations during a major construction initiative. Proactive planning helps maintain security continuity and operational resilience.

One of the most effective strategies is to cross-train airport personnel. Personnel may need to take on additional responsibilities, such as access control monitoring, incident reporting, or operations, depending on the phase of the project. This empowers staff to adapt quickly when necessary if schedules shift or new processes are implemented at the airport. It also fosters a deeper connection and understanding of the security values present at the airport, which improves decision-making and communication during periods of change.

Airports should plan ahead to manage staff shortages. Facility activations often require additional staff, whether it comes from a construction team or consultant team. These plans need to be made early. To ensure compliance, temporary personnel still need time to adapt to the environment, understand the security culture, and comprehend expectations.

It is also important for airport leadership to clearly delineate roles, particularly between the ASC and other roles. Regular coordination meetings should be scheduled throughout the construction timeline to ensure a clear understanding of who is responsible for the following (at minimum):

- Escorting unbadged personnel
- Promoting and managing stakeholder engagement
- Managing the access control system and the points of entry
- Executing and changing emergency procedures under temporary configurations
- Communicating and enforcing updates to the ASP

The ASC plays a vital role in any airport, but in a smaller airport environment, they are the connecting piece between operational intent and regulatory requirements. During transitions, the ASC should take an active leadership role in ensuring security compliance and readiness.

## 12.4 Scalable ORAT Practices

ORAT is still critical for small airports. Even with smaller stakeholders, there are still a significant number of stakeholders requiring coordination. Additionally, staff may not be familiar with new technologies, which means stakeholder personnel might require additional training. Major hub airports may engage in months-long trial operations with extensive staffing and simulations; smaller airports must be more practical to align with their scale, resources, budget, and timeline. The key is to find ways to “right size” ORAT planning.

Small airports should develop an ORAT plan that will work for their needs. Many smaller airports transitioning to new systems told the research team that ORAT was their key to success.<sup>8</sup> A small airport’s ORAT planning may emphasize:

1. Activation schedules with weekly stakeholder coordination meetings
2. Tabletop exercises with multiple stakeholders to walk through strategies in a new space

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<sup>8</sup> Appendices C, D, and E in this report provide a brief framework for ORAT checklists.

### 3. Dry runs or familiarization walkthroughs for stakeholder staff

The key for smaller airports is to maximize the utility of ORAT activities while respecting the limited time each stakeholder can give. Furthermore, airports should identify “critical paths” to their facility activation. This could include:

1. **Credentialing and badging:** Ensuring that staff, contractors, subcontractors, consultants, and tenants are all able to get badged in an effective but timely manner
2. **Access control readiness:** Confirming that access readers, security doors, and gate doors are operating as intended
3. **Gate readiness:** Testing passenger boarding bridges and associated equipment to ensure planes can embark and disembark safely and effectively
4. **Passenger movement and flow:** Testing signage, line management, SSCPs, CBRAs, and CBISs
5. **Emergency preparedness:** Coordinating with emergency response departments, updating protocols for the new environment, and training on those protocols

External auxiliary staff for the ORAT role is very common at small airports, and bringing in even a single resource can dramatically improve readiness leading up to activations.

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## APPENDIX A: ANNOTATED LITERATURE ANALYSIS

This annotated analysis describes the gaps in previous literature regarding security operational readiness for new and renovated facilities.

**Table A-1. Annotated Literature Analysis**

| Resource Title                                                                                            | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Key Takeaways                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Themes                                                                           |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| PARAS 0028:<br>Recommended<br>Security Guidelines for<br>Airport Planning,<br>Design, and<br>Construction | PARAS 0028 is a comprehensive guidance document for airport planning, design, and construction. Each section concludes with a checklist that addresses the main points of each section. It also links to PARAS 0016 for the Threat Vulnerability Assessment. The project definition document in Section 2.4 references questions that need to be addressed in the planning stages of airport design. Section 4 is dedicated to testing, ORAT, and owner acceptance.                                                                              | <ul style="list-style-type: none"> <li>Testing individual systems during construction remains a crucial aspect to security readiness.</li> <li>Systems depend on one another, so it is important to evaluate performance of the systems individually and as a group.</li> <li>Every user group and stakeholder holds different needs. As such, those groups need to be carefully considered in planning, design, and construction.</li> </ul>                                                                                                                                                                           | ORAT, Testing, Systems Dependence, Stakeholder Engagement                        |
| PARAS 0030:<br>Guidance for Access<br>Control System (ACS)<br>Transitions                                 | PARAS 0030 provides a thorough framework for airports to effectively manage the transition, upgrade, or replacement of their access control systems. It outlines the ACS transition process in seven phases: planning, pre-procurement, design, procurement, implementation, operations, and future planning. The document emphasizes a methodical approach to early stakeholder engagement, regulatory compliance, and adapting to evolving technologies and data protection laws. It includes best practices, checklists, and lessons learned. | <ul style="list-style-type: none"> <li>Engaging a wide range of stakeholders—airport security, operations, credentialing personnel, TSA, CBP, and IT departments—is crucial for ensuring a successful ACS transition.</li> <li>Airports must ensure their ACS complies with TSA's 49 CFR § 1542 and other federal, state, and local regulations. Increasingly, states are creating their own security regulations.</li> <li>Detailed planning and a phased approach to implementation are necessary to minimize operational disruptions, especially for critical areas like boarding doors and secure zones.</li> </ul> | Stakeholder Engagement, Stakeholder Identification, Security Compliance, Phasing |

| Resource Title                                                                               | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Key Takeaways                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Themes                                                                                                   |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| PARAS 0037: Planning and Operational Security Guidance for Construction Projects at Airports | PARAS 0037's research provides practical and systematic guidance to airport operators on ways to improve their compliance with operational security requirements in relation to airport construction projects.                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>Airports need to identify lessons learned and pitfalls quickly in order to mitigate future incidents and mistakes.</li> <li>Pre-construction planning is a valuable step to mitigate issues and find lapses before they happen.</li> <li>A security startup plan is crucial to the success of any construction process. A working group should be formed to create such a plan, and it should involve personnel from a wide variety of airport operations.</li> </ul> | Security Readiness, Stakeholder Identification, Pre-Construction Planning Processes, Security Compliance |
| PARAS 0039: Security, Operations, and Design Considerations for Airside Vehicle Access Gates | PARAS 0039 addresses all aspects of airside vehicle access gates. The report discusses access control measures, gate design, gate layouts, gate operations, gate placement, barrier types, signals, signage, significant threats to the operations and security of the airport, vehicle inspection technologies, vehicle inspection areas, procurement, project management, implementation, staffing strategies, training, testing, relevant lessons learned, and other considerations. | <ul style="list-style-type: none"> <li>As much as possible, airports should reduce and consolidate signage to ensure it is consistent across all vehicle gates to minimize confusion and "sign fatigue."</li> <li>Building redundancy and robust preventative maintenance programs helps to ensure that equipment will have fewer breakdowns.</li> <li>Airports should consider designing technical solutions with scalability for future capacity and demand.</li> </ul>                                    | Scalability, Technological Implementation, Security Readiness                                            |
| PARAS 0049: Creating and Maintaining a Strong Security Culture at Airports                   | PARAS 0049 explores the concept of airport security culture and provides a comprehensive framework for its implementation, evaluation, and improvement. It emphasizes the need for a positive security culture to enhance both security and safety. Key elements                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>Strong leadership and active engagement from employees at all levels of the airport's organization are crucial for promoting a positive security culture.</li> <li>Continuous training and awareness programs are essential to cultivate and maintain security as</li> </ul>                                                                                                                                                                                          | Stakeholder Engagement, Stakeholder Identification, Ongoing Training Efforts, Administrative Change      |

| Resource Title                                      | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                           | Key Takeaways                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Themes                                     |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
|                                                     | discussed include leadership, training, communication, technology, attitudes, behaviors, and risk management. The report offers recommendations for fostering a shared responsibility for security, outlining strategies to engage employees, implement security measures, and assess progress. Additionally, it includes case studies from major US airports, highlighting the importance of continuous evaluation and improvement.              | <p>a core value among airport staff, passengers, and stakeholders.</p> <ul style="list-style-type: none"> <li>There must be a consistent mechanism for assessing and monitoring security culture to ensure that the practices and attitudes align with security objectives.</li> </ul>                                                                                                                                                                                                                                                        |                                            |
| PARAS 0051: Guidance for Airport Security Exercises | This report offers a comprehensive guide for creating, planning, and conducting airport security exercises, incorporating FEMA's Homeland Security Exercise and Evaluation Program (HSEEP) principles. The document includes templates, real-world scenarios, and evaluation tools to help airports of any size develop effective and efficient security exercises that promote a culture of security while fulfilling TSA-mandated requirements. | <ul style="list-style-type: none"> <li>Integrating FEMA's HSEEP framework leads to more efficient preparedness.</li> <li>Airports are encouraged to regularly conduct exercises such as tabletop exercises, drills, and functional exercises to continually test and improve their security response capabilities.</li> <li>The document emphasizes the importance of post-exercise evaluations, such as hotwashes and After-Action Reports (AAR), to ensure continuous improvement in security practices and response efficiency.</li> </ul> | Stakeholder Engagement, Security Readiness |
| PARAS 0055: Airport Law Enforcement Staffing        | PARAS 0055 discusses the issue of falling recruitment numbers in law enforcement positions while attrition rates are rising. The project developed a staffing tool to help airports of all sizes determine their staffing requirements.                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>Defining the security role of each person working at the airport helps airports determine the minimum practical level of staffing required in different roles.</li> <li>Staffing tools could be used to evaluate workload distribution.</li> </ul>                                                                                                                                                                                                                                                     | Security Readiness                         |

| Resource Title                                                                  | Summary                                                                                                                                                                                                                                                                                                                                                                     | Key Takeaways                                                                                                                                                                                                                                                                                                                                                   | Themes                                                                                                       |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| PARAS 0056: Guidance for Developing and Maintaining an Airport Security Program | The PARAS 0056 research team interviewed ASCs at a variety of different airports to determine best practices for stakeholder engagement strategies, program maintenance strategies, and the development of ASP content.                                                                                                                                                     | <ul style="list-style-type: none"> <li>Amendment language and intent is a critical component to receiving “buy in” from various stakeholders.</li> <li>It is important to use an array of communication strategies.</li> <li>TSA and other law enforcement agencies need to be kept in close contact during any policy or ASP update periods.</li> </ul>        | Stakeholder engagement, Stakeholder motivation, Planning Processes, Administrative Change, Change Management |
| PARAS 0060: Strategies for Developing and Aviation Worker Screening Program     | PARAS 0060 provides guidance for airports in implementing the Aviation Worker Screening program. It gives an overview of implementing an extensive operations program and the considerations that go into setting up such a program. It includes a section on standards of practices and stakeholder collaboration, which is most closely relevant to the PARAS 0061 scope. | <ul style="list-style-type: none"> <li>Gaining support from stakeholders on the placement of access points is crucial. Closure of access points deemed unnecessary require advance communication.</li> <li>Cost analyses must be done well in advance.</li> </ul>                                                                                               | Stakeholder Engagement, Stakeholder Identification, Cost Analyses                                            |
| ACRP Synthesis 20: Airport Terminal Facility Activation Techniques              | ACRP Synthesis 20 tackles a number of important issues relevant to the PARAS 0061 scope. The stakeholder communication and engagement sections focus on how to identify, engage with, and communicate with stakeholders. This includes stakeholders both internal and external to security issues, and also plays a role in the activation schedule.                        | <ul style="list-style-type: none"> <li>Activation teams must keep stakeholders in mind. The process laid out in the ACRP Synthesis is organization, planning, execution, and acceptance.</li> <li>Alongside stakeholder identification, meetings and other communication tactics will be necessary to properly prepare all groups for an activation.</li> </ul> | Stakeholder Engagement, Stakeholder Identification, Activation Schedules, Phasing                            |

## APPENDIX B: ACTIVATION CHECKLIST FOR ACCESS CONTROL

The following is a sample activation checklist for an access control system. This list is meant to serve as a starting point for an airport.<sup>9</sup>

**Project Phase:** Pre-Commissioning / Activation

**Purpose:** To ensure every door is installed, configured, and tested in alignment with the owner's operational intent and airport security protocols.

**Introduction:** This checklist outlines the critical verification, review, and testing steps required to ensure each airport door and access point is fully operational and compliant with the intended security design. The process begins by confirming the owner's operational intent for each door, whether it functions via key access, card reader (single or dual-sided), push-button lockset, or as a non-secured passage. Each subsequent step is designed to validate that the physical hardware, signage, access control programming, and life safety components meet both regulatory standards and the owner's expectations for functionality and security.

**Table B-1. Access Control Activation Checklist**

| Checklist Item                                               | Status (Yes/No) | Notes                              |
|--------------------------------------------------------------|-----------------|------------------------------------|
| <b>1. Define Door Functionality</b>                          |                 |                                    |
| Owner intent established                                     |                 | Key / Card / Passage / Push Button |
| Access type confirmed                                        |                 | Single / Dual reader               |
| Review design and door submittal                             |                 |                                    |
| <b>2. Hardware &amp; Request to Exit (REX) Configuration</b> |                 |                                    |
| Hardware matches intent                                      |                 |                                    |
| REX type installed (eye/button/integral)                     |                 |                                    |
| <b>3. Signage &amp; Room Naming</b>                          |                 |                                    |

<sup>9</sup> In addition to being included here as an appendix, a spreadsheet/Excel version of this checklist is published with PARAS 0061.



| Checklist Item                                      | Status (Yes/No) | Notes                                                    |
|-----------------------------------------------------|-----------------|----------------------------------------------------------|
| Owner-approved room name                            |                 |                                                          |
| Regulatory signage installed                        |                 |                                                          |
| ADA signage installed                               |                 |                                                          |
| Life Safety signage complete                        |                 |                                                          |
| Door/room number affixed                            |                 |                                                          |
| Door numbering scheme                               |                 | Maintain design numbering or modify for existing formats |
| Door numbering consistency                          |                 | Consistency between the legacy and the new building      |
| <b>4. Core Transition &amp; Keying</b>              |                 |                                                          |
| Key and core delivery address and owner POC         |                 |                                                          |
| Construction core removed                           |                 | Remove any latch blocks or shunting                      |
| Knox box coordination                               |                 |                                                          |
| Checklist for construction to the owner core change |                 |                                                          |
| Owner core installed                                |                 |                                                          |
| Keying hierarchy confirmed                          |                 |                                                          |
| <b>5. Access Control Programming</b>                |                 |                                                          |
| Card reader online                                  |                 |                                                          |

| Checklist Item                                          | Status (Yes/No) | Notes                                              |
|---------------------------------------------------------|-----------------|----------------------------------------------------|
| Maintain SSI                                            |                 |                                                    |
| Access groups assigned                                  |                 | Coordinate trial/testing for all access groups     |
| Access groups programmed                                |                 |                                                    |
| Pushbutton code programmed                              |                 | Document code change cycle                         |
| Time zones and open hours configured                    |                 |                                                    |
| Programming limited access paths for employee screening |                 |                                                    |
| <b>6. Functional Testing</b>                            |                 |                                                    |
| Mechanical operation                                    |                 |                                                    |
| Authorized access confirmed                             |                 | Coordinate trial/testing for all authorized groups |
| Door alarm shunting process                             |                 | PBBs and other public access needs                 |
| Hold open timing                                        |                 |                                                    |
| Unauthorized access denied                              |                 |                                                    |
| REX operational                                         |                 |                                                    |
| Breach alarm triggers                                   |                 |                                                    |
| Hold-open alarm triggers                                |                 |                                                    |
| Coordinate camera views and pop-ups                     |                 |                                                    |
| ADA open force test                                     |                 | Max 5 pounds                                       |

| Checklist Item                                 | Status (Yes/No) | Notes                                      |
|------------------------------------------------|-----------------|--------------------------------------------|
| <b>7. Final Inspection &amp; Documentation</b> |                 |                                            |
| Final cleaning complete                        |                 |                                            |
| Obstructions cleared                           |                 |                                            |
| Door functionality and smooth operation        |                 |                                            |
| All documents submitted                        |                 | Schedules, drawings, checklist, key matrix |
| Owner acceptance received                      |                 |                                            |

## APPENDIX C: ACTIVATION CHECKLIST FOR SECURITY SWEEPS

This checklist is designed to guide security personnel through a comprehensive overnight sweep of an airport concourse. The purpose of this sweep is to identify and address any security vulnerabilities, unattended items, or unauthorized presence, ensuring the concourse is secure for the following day's operations. This could also be used as a framework for a security sweep ahead of a major activation.

Date: \_\_\_\_\_

Time Started: \_\_\_\_\_

Time Completed: \_\_\_\_\_

Security Personnel on Duty: \_\_\_\_\_

### General Procedures

☐ **Briefing:** Review any specific instructions, recent incidents, or areas of concern with the team before starting the sweep.

☐ **Equipment Check:** Ensure all necessary equipment (flashlights, radios, communication devices, keys, incident report forms/devices) are operational and fully charged.

☐ **Team Assignment:** Clearly define areas of responsibility for each team member to ensure full coverage.

☐ **Communication Protocol:** Establish and confirm communication methods and escalation procedures for anomalies or incidents.

☐ **Documentation:** Understand the process for documenting findings, incidents, and actions taken.

### Restricted Area Checklists (Airside/Sterile Area)

#### ☐ Gates and Boarding Areas:

☐ Verify all boarding gates are secured and locked.

☐ Check under seats, in trash receptacles, and behind counters for unattended items.

☐ Inspect jet bridges for any unusual activity or unsecured access points.

#### ☐ Concourse Walkways:

☐ Systematically patrol all concourse walkways, checking for suspicious objects or signs of tampering.

☐ Inspect seating areas, planters, and decorative elements for hidden items.

#### ☐ Restrooms (Airside):

☐ Check all stalls, sinks, and common areas for unattended bags or suspicious devices/items.

☐ Verify no individuals are loitering or hiding.

**[ ] Retail & Food Outlets (Airside):**

- ☐ Confirm all kiosks and stores are locked and secured.
- ☐ Look for any signs of forced entry or unusual activity.

**[ ] Service/Utility Rooms (Airside):**

- ☐ Verify all service doors and utility closets are locked and secured.
- ☐ Check for any signs of unauthorized access or tampering.

**[ ] Bag Claim Carousels (if applicable):**

- ☐ Ensure no bags remain on carousels.
- ☐ Inspect the area for any abandoned items.

**Public Area Checks (Landside)<sup>10</sup>****[ ] Ticketing/Check-in Lobbies (if part of concourse structure):**

- ☐ Check all counters, benches, and public seating areas for unattended items.
- ☐ Ensure all non-essential lighting is off and secure.

**[ ] Baggage Claim (Landside):**

- ☐ Verify no individuals are loitering.
- ☐ Check all areas around carousels and exits for suspicious packages, unattended baggage, or suspicious items.

**[ ] Restrooms (Landside):**

- ☐ Check all stalls, sinks, and common areas for unattended bags or suspicious devices/items.
- ☐ Verify no individuals are loitering or hiding.

**[ ] Arrivals/Departures Curbside (if accessible during sweep):**

- ☐ Monitor for unauthorized vehicles or suspicious activity.
- ☐ Conduct visual inspection of planters, bins, and entryways.

**Specific Security System Checks****[ ] CCTV Cameras:**

- ☐ Verify all concourse cameras are operational and have a clear field of view (visual check or system confirmation).
- ☐ Report any non-operational cameras.

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<sup>10</sup> This should only take place after all passengers have been cleared from the concourse.

☐ Test and confirm all access doors, gates, and emergency exits are properly secured and alarming if tampered with.

☐ Check for any bypasses or damage to locking mechanisms.

- [ ] Verify all intrusion detection systems (if applicable) are armed and functioning.
- [ ] Report any false alarms or system malfunctions.

[ ] Visually inspect fire extinguishers, emergency phones, and AEDs for accessibility and tampering.

[ ] **Incident Log:** Record any anomalies, unattended items found, security breaches, or suspicious observations in the incident log.

[ ] **Handover:** Provide a clear and concise handover report to the next shift, detailing any outstanding issues or important observations.

[ ] **Sign-off:** All personnel involved in the sweep sign off on the completed checklist.

## This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on its right side, suggesting it's resting on a surface.

**Signature:**

## APPENDIX D: SAMPLE PROCEDURE FOR UNATTENDED BAGGAGE

The purpose of this Standard Operating Procedure (SOP) is to establish clear and consistent guidelines for the detection, assessment, and resolution of unattended baggage or suspicious items on airport premises. This SOP aims to ensure the safety and security of passengers, staff, and airport infrastructure by defining roles, responsibilities, and appropriate responses to mitigate potential threats.

### Scope

This SOP applies to all airport personnel, including security staff, law enforcement, airport operations, airline employees, and any other individuals or entities operating within the airport's Sterile, public, and restricted areas who may encounter or be notified of an unattended bag or suspicious item.

### Definitions

- **Unattended Bag:** any piece of luggage, package, or personal item left without an owner or guardian in a public or restricted area of the airport that, based on initial observation, does not pose an immediate obvious threat.
- **Suspicious Item:** an unattended bag or item that exhibits characteristics suggestive of a potential threat (e.g., wires, unusual odors, visible power sources, liquids, or any item placed in a surreptitious manner).
- **Sterile Area (Airside):** the area of the airport accessible only to screened passengers and authorized personnel, beyond the security checkpoint.
- **Public Area (Landside):** the area of the airport accessible to the general public, including ticketing lobbies, baggage claim, and public concourses.
- **Restricted Area:** any area of the airport where access is controlled for security reasons, including airside, operational areas, and certain staff-only zones.

### Procedures

The following procedures should be used when an unattended bag is discovered in the Sterile, public, or restricted areas of the airport.

#### INITIAL DETECTION AND REPORTING

1. **Observation:** Any airport personnel observing an unattended bag or suspicious item shall immediately cease approach and maintain visual observation from a safe distance.
2. **No Direct Interaction:** Under no circumstances should personnel touch, move, or open the unattended or suspicious item.
3. **Notification**
  1. **Immediate Call:** Directly contact the Airport Operations Center (AOC) or the designated security dispatch via radio or dedicated emergency line.
  2. **Information to Provide:**
    - Exact location of the item (e.g., Concourse A, Gate 15, near Starbucks)
    - Brief description of the item (e.g., blue suitcase, black backpack, brown box)
    - Any observable characteristics (e.g., size, color, condition, any visible wires, odors, or sounds)



- Whether the item appears suspicious
- Your name, department, and contact number

### SECURITY DISPATCH RESPONSE

1. **Logging:** Record the incident details, including time of call, reporter's information, and item description/location.
2. **Assessment:** Based on the information received, categorize the item as "Unattended Bag" or "Suspicious Item."
3. **Dispatch**
  1. **Unattended Bag (Non-Suspicious):** Dispatch airport security/police to investigate.
  2. **Suspicious Item:** Immediately notify Airport Police, Explosive Ordnance Disposal (EOD)/Bomb Squad (if available on-site or through mutual aid), and Airport Management.
4. **Area Control**
  1. For **Unattended Bags**, advise on maintaining observation and securing the immediate vicinity.
  2. For **Suspicious Items**, immediately advise personnel to establish a safety cordon, evacuate personnel from the immediate vicinity, and direct arriving passengers away from the area.
5. **CCTV Review:** Initiate a review of CCTV footage for the area to identify the person who left the item and their direction of travel.

### ON-SCENE INVESTIGATION AND RESOLUTION

1. **Arrival:** Responding security/police personnel will proceed to the reported location.
2. **Verification**
  1. Confirm the presence of the item and its exact location.
  2. Attempt to identify the owner by verbal announcement (if safe to do so, and for unattended bags only).
  3. Review CCTV footage with AOC/Dispatch if possible.
3. **Determination**
  1. **Owner Identified:** If the owner is found and verifies the item, conduct a brief interview regarding the item's contents and the reason for its unattended status. Educate the owner on airport security policies.
  2. **Owner Not Identified & Non-Suspicious:** If the item is clearly identifiable as luggage and does not present suspicious characteristics, it may be tagged as "unattended" and transported to a designated secure lost and found area. Ensure the item is screened for prohibited items before placement in lost and found, if appropriate and safe.
  3. **Owner Not Identified & Suspicious:** Immediately establish and expand the safety cordon, evacuating all non-essential personnel and passengers from the designated danger zone. Refer to pre-determined evacuation distances for different threat levels.

- Notify relevant emergency services (Fire, EMS) to be on standby.
- **Do not approach the item.** EOD/Bomb Squad takes the lead.
- The EOD/Bomb Squad will utilize specialized equipment (e.g., remote-controlled robots, K9 units) to assess and, if necessary, render the item safe.
- Follow all instructions from EOD/Bomb Squad.

#### 4. Post-Incident Management

1. **Clearance:** Once the item is deemed safe or neutralized, and the area is declared clear by EOD/Police, normal operations may resume.
2. **Evidence Collection:** Any items found to be a threat or containing contraband will be handled as evidence by law enforcement.
3. **Debrief:** Conduct a debriefing with all involved parties to review the incident, identify lessons learned, and update procedures as necessary.

### DOCUMENTATION AND REPORTING

1. **Incident Report:** A detailed incident report must be completed for every unattended bag or suspicious item incident. This report shall include:
  1. Date and time of discovery
  2. Exact location
  3. Description of the item
  4. Name of person who discovered the item
  5. Actions taken by all responding agencies
  6. Outcome of the investigation
  7. Any property details (if confiscated or sent to lost and found)
  8. Photos if available and permissible
2. **Chain of Custody:** If the item is seized as evidence or transferred to lost and found, a strict chain of custody must be maintained and documented.
3. **Notifications:** Relevant airport management, security authorities (e.g., TSA, FAA), and airline partners will be informed of significant incidents as per established communication protocols.

### TRAINING AND EXERCISES

All personnel involved in unattended bag procedures will receive regular training on this SOP, including practical exercises and drills, to ensure proficiency and rapid, effective response.

### Change Log

This document is up to date as of November 1, 2025, following activation of New Facility A. The changes added after trials on October 20, 2025 are listed here for reference:

1. **Incident reporting guidelines were updated to reflect that the name of the person should be included with any report.**