



DENVER INTERNATIONAL AIRPORT

Operational Readiness, Activation, and Transition (ORAT)
STANDARDS MANUAL

Design, Engineering and Construction (DEC)

Revised: August 2026



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Summary of Revisions

Date	Revision Description
August 7, 2026	ISSUE ORAT SM v4.0 Standardized titles across divisions Clarified responsibilities related to asset management and tracking Updated Toolkits at the end of each chapter Added more detail on primary partnerships Project Tier definition and guidance updated Adjusted language related to Integrated Schedule/Milestone Tracker Updated ORAT Roadmap
November 18, 2025	ISSUE ORAT SM v3.0 Additions of Wayfinding and BT as primary partners Updated nomenclature for consistency among divisions Revised/rewrite of chapter regarding Maintenance Plans to include CMMS
May 12, 2025	ISSUE ORAT SM v2.0 Chapters added for Operational Response and Construction Alignment and Ongoing Operational Readiness Projects. Updated Roadmap to adjust for new chapters and include ORCA and Ongoing Operational Readiness Projects in cyclical visual Additions made to better align DEN divisions with overall ORAT process.
November 22, 2024	ISSUE ORAT SM v1.0 All updates accepted.
November 11, 2024	ISSUE ORAT SM v1.0 All updates have been made in accordance with the Questions log submitted
October 14, 2024	Draft ORAT SM v0.2 Updates have been made in line with the Questions Log submitted. There are still a few outstanding sections requiring DEC direction/input: - Project Tier definition and guidelines on scoring - Confirm who defines and develops stakeholder lists - Language for Section 1.3 and 1.4 – DEN to share
July 24, 2024	Draft ORAT SM v0.1 This Draft is intended to be piloted before it is finalized and brought into use at DEN. Chapter 1 contains a lot of standard DEN DSM headings and it is up to the DEN ORAT Team to decide how and if they want to include these sections. The contents of each Chapter has been completed and is intended to be refined during the Pilot and specific documentation needs agreed.

December 15, 2023

Roles and Responsibilities are also likely to require refinement.

Draft High-level Framework

Structure of Document drafted.

Descriptions of what each section will include is shown in italics.

Purpose of Design Standards Manuals (DSM)

The DEN Design Standards have been developed to ensure a unified and consistent approach to the thematic and technical design for DEN. These standards are for use and strict implementation by all consultants under contract to DEN, to tenants, and all other consultants under contract to any other entity for the design of projects at DEN. The Standards Manuals are working documents, which are revised and updated, as required, to address the general, conceptual, design, and technical standards for all areas of design for DEN.

1.0.1. ORAT Standards Manual

This ORAT Standards Manual (OSM) for DEN has been prepared for use for DEN projects and programs. The OSM will primarily be implemented by DEC's ORAT team or the Special Projects ORAT team; however, other DEN divisions should follow this manual when they implement their own ORAT process. Additionally, selected professionally licensed architectural and engineering consultants that provide project ORAT teams will be responsible for implementing the ORAT process outlined in this Standards Manual. The OSM has been developed using industry best practices and through internal DEN stakeholder workshops to ensure it reflects the DEN Project Life Cycle (PLC) and environment. The approach should be used as a framework, and it is expected to be customized to fit the needs of the specific project and stakeholders.

The OSM is intended to bring a wide range of resources together in one place to help project teams successfully achieve airport and stakeholder goals and objectives. It provides a framework to deliver fully functional facilities, on-time project handover, mitigated opening days and project activations, and prepared stakeholders for initial and ongoing operations. Every DEN project is unique; some may be large in scale while others are small with a greater impact on operations. All projects, however, should follow a similar delivery approach to ensure project objectives are achieved and the OSM provides the structure to enable that goal. By embedding ORAT into the PLC, we create a foundation for a well-prepared and efficiently operating airport, ready to meet the demands of modern air travel. The OSM outlines a delivery approach that should be used across all projects. It aims to provide consistency for all project types and stakeholders.

The OSM is intended to be used as a whole, as each manual is complementary to the other Design Standards Manuals (DSM). To understand the overall thematic and standards for DEN, the applicable manuals must be utilized together and not separated from the DSMs. The standards shall not be quoted, copied, or referenced in any bidding or construction contract documents. Content contained in the OSM shall not be copied in any bidding or construction documents, except where specifically instructed to do so. All information contained in these standards must be fully explained and shown in all bidding and contract documents. Consultants and Vendors shall not reproduce, duplicate in any manner, transmit to other consultants or other entities, or use in conjunction with other projects without the express written consent of DEN.

The OSM is a "live" document which will be reviewed, developed, and updated on a regular basis to ensure that it captures lessons learned from future pilots and projects. Any requests for updates and changes should be directed to the DEC ORAT Aviation Program Manager for consideration.

NOTE: This document is optimized for duplex (double-sided) printing.

1.0.2. Variance from DEN Standards Manuals

Requests for non-conformance or variance from DEN Standards manuals, for any DEN or Tenant Projects, must be formally submitted using the online manual Variance Request form at the following website:

Requests for non-conformance or variance from DEN Design Standards manuals, for any DEN or Tenant Projects, must be formally submitted in writing to the DEN Project Manager for routing and review. Variance requests may or may not be approved by DEN and response will be communicated to the requestor.

Variance requests may or may not be approved by DEN and response will be communicated to the requestor.

Chapter 2- ORAT Introduction

2.0. Introduction and Purpose

2.0.1. Operational Readiness, Activation, and Transition (ORAT)

ORAT is a systematic approach used to ensure that new or significantly renovated facilities, recurring projects, and new infrastructure are fully prepared to operate efficiently and effectively from day one. ORAT focuses on coordinating the efforts of various stakeholders, testing systems and procedures, and training staff before the facility opens to the public.

Key Objectives of ORAT:

- Seamless Operations: Ensuring all airport and tenant operations run smoothly.
- Staff Preparedness: Training airport staff to handle new equipment, systems, and procedures effectively.
- System Integration: Testing and validating that all technological systems, such as IT networks, communication systems, and security protocols, are fully integrated and functional.
- Stakeholder Coordination: Bringing together airlines, airport authorities, service providers, and other stakeholders to collaborate and align operational procedures.
- Transparent Information: Providing real-time information on the state of readiness to gain stakeholder confidence and align expectations.
- Passenger Experience: Ensuring the facility is ready to provide a positive and efficient experience for passengers from the moment they enter the airport.
- Construction Response: Providing stakeholders with support to prepare and adapt to construction activities that have a direct impact on their operation.
- Space Transition: Assure stakeholders are prepared for ownership responsibilities and operations they will assume at handoff.

The DEN ORAT approach concentrates on complete readiness, not just operational readiness. This approach is all encompassing and includes assessing and supporting the development of ORAT construction contingency activities, preparations to open, operate, manage, and maintain a new service. This approach also facilitates the opportunity to make progressive changes and adjustments ahead of the formal opening to ensure success. ORAT may be involved at any time throughout the project lifecycle.

2.1. Intended Users

The intended users of the OSM are those who will be involved in ORAT delivery on projects, however, an awareness of ORAT processes for any project role or stakeholder at DEN is beneficial.

Users include:

1. ORAT Manager – this is the dedicated DEN ORAT resource that will manage ORAT implementation across projects.
2. ORAT Team – depending on the project, a dedicated ORAT team may be established to lead the

coordination of ORAT activities on projects. For example, depending on the size of projects, team members may be assigned to specific stakeholder groups or be assigned to develop trainings and exercises.

3. Project Manager – across all project types, the PM will need to have an awareness of the ORAT requirements and how it impacts their projects. For smaller projects, direct ORAT support may be limited. Therefore, the PMs will need to have information to ensure ORAT will be incorporated into their projects.
4. Designers – all design professionals engaged by DEN need to have an awareness of the ORAT requirements and incorporate the intent into design drawings and specifications. The designers will also participate in ORAT process activities.
5. DEN Operations, Maintenance, and Asset Management Groups – stakeholders in these groups will be the beneficiaries and key collaborators in the ORAT process as it aims to provide a smooth handover to these groups for business-as-usual.
6. Airport Safety – primary partnership. Airport Safety ensures operational functionality from a safety perspective and work hand-in-hand with ORAT on addressing stakeholder needs throughout the project lifecycle.
7. Airline Affairs – primary partnership. Airline Affairs is the airline tenant representative division for all air carriers at DEN, including cargo. The division encompasses both CCD employees and contracted staff augmentation. Any communications throughout the project with airlines must go through Airline Affairs and/or the Airline Technical Representative (ATR).
8. Planning & Design – primary partnership. Planning & Design is responsible for long-range airport planning, facility planning, architectural and interior design, space planning, allocation, landside planning, and wayfinding systems. Planning professionals should be engaged in the full overview from analysis, construction impacts, and final readiness planning to assure success in coordination with the Planning & Design team and ORAT. Additionally, ORAT will champion the reengagement of Planning by the Project Manager in instances of scope changes.
9. Business Technologies – primary partnership with each project and with new technology initiatives. Business Technology teams are key project integration, commissioning partners and are integral to standing up new and existing technology systems and processes with new projects and key stakeholders including airlines, tenants, and concessionaires. Business Technology teams provide support for post project completion and must be included in the ORAT process from the defining phases through day 2 follow-up. New business technology processes should also have ORAT team involvement to ensure stakeholder engagement and implementation assurance that follows the operational readiness process.

In addition to the intended users, the following is a list of stakeholders who have a key role in regulatory requirements. Those listed below should be notified of projects, but those listed may not have an active role in the project.

Group	Regulatory area
Airside Operations, Construction Liaison	Part 139
Terminal Operations, Construction Liaison	Part 1542
Security, Construction Liaison	Part 1542
Sustainability, Environmental Manager	Environmental
Denver Fire Department, Chief	NFPA, Code Compliance
Airport Safety, Director	Safety, risk management
Culture and Strategy, ADA Manager	ADA, Title VI Compliance
Culture and Strategy, Public Art Manager	Percent for Art

2.2. Vision 100 and Operation 2045

Vision 100 and Operation 2045 are two phases of DEN's strategic plan. Vision 100 is phase one and is focused on preparing the airport to serve 100 million annual passengers in the next several years. Operation 2045 is phase two and is focused on preparing the airport for its 50th anniversary in 2045 and for an expected 120 million-plus annual passengers. Both phases combined serve as a blueprint to align decision-making and accountability. Learn more on flydenver.com. The ORAT process supports Vision 100 and Operation 2045 in the following manner:

Sustainability and Resilience: ORAT strengthens both resiliency and environmental sustainability in airport operations. By carefully planning for new facilities and systems, ORAT ensures they can adapt to disruptions, enhancing operational resilience. Additionally, ORAT incorporates sustainable practices, emphasizing energy efficiency, waste reduction, and resource conservation in new operations. This approach supports the airport's long-term sustainability goals and aligns developments with broader environmental commitments. More information on DEN sustainability requirements can be found in the DEN Sustainability Design Standards Manual on flydenver.com.

EDI & Accessibility: At its core, ORAT is committed to comprehensive stakeholder engagement, ensuring that a broad range of perspectives are included. This involves engaging not only with various divisions and sections within DEN but also with external stakeholders, including airlines, tenants, and federal partners. ORAT has adopted a proactive approach by collaborating closely with a variety of stakeholders with diverse viewpoints from ADA expertise to customer experience and more beginning from the Define phase of projects. This collaboration ensures that accessibility considerations are integrated early on, facilitating connections with DEC's project managers to guarantee that all individuals passing through DEN have an inclusive and accessible experience.

Operational Excellence: ORAT is the epitome of Vision 100's Operational Excellence guiding principle. The core value of ORAT is functionality for the end user. This is accomplished through close collaboration with partners DEN wide to ensure a smooth transition from project definition to delivery and closeout. ORAT also supports project lessons learned, which allows DEN to identify critical touchpoints that should be accounted for in subsequent initiatives to mitigate past issues and augment past successes.

Enhancing the Customer Experience: The individuals that pass-through DEN, including employees and passengers, are the primary customers of DEN projects. By consistently focusing on their future needs throughout the project lifecycle, ORAT aims to deliver a final product that feels seamlessly integrated, with minimal disruption or inconvenience. ORAT prioritizes these customers and actively advocates for needs, ensuring that input is incorporated into the project. This approach helps facilitate a smooth transition to daily operations.

2.3. OSM Structure

2.3.1. Contents

The OSM contains the following chapters:

- Chapter 1** | [ORAT Introduction](#). This chapter introduces ORAT, how the OSM aligns and supports Vision 100. It also includes the DEN ORAT Roadmap which succinctly highlights the ORAT activities across the DEN PLC. It also defines the key principles of scalability *and* the impact it has on how ORAT is applied to projects.
- Chapter 2** | [Operational Response and Construction Alignment](#). This chapter provides an overview of how stakeholder construction impact support is conducted throughout the delivery process. It outlines the strategies and tools used to identify potential impacts early, communicate effectively with affected stakeholders, and implement mitigation measures that minimize operational disruptions. The chapter also highlights the importance of collaboration between project teams and stakeholders to ensure that construction activities are carried out smoothly, with minimal impact on day-to-day operations.
- Chapter 3** | [Define Phase](#). This chapter sets out each dedicated activity for the Define Phase which ensures early ORAT and stakeholder awareness of the project Business Case, developing a preliminary ORAT plan and establishing governance, management, and control of ORAT and associated activities. Step-by-step guidance is provided on how to enact the specific activity and its successful outcomes. Where applicable, it identifies how the activity changes based on the scale of the project. The chapter concludes with a Toolkit that identifies a Checklist of items and any available Templates or other useful resources available.
- Chapter 4** | [Deliver Phase: Prepare](#). This chapter sets out each dedicated activity for the Prepare stage of the Deliver Phase which ensures end-user input into the design; reviewing operational impacts with each identified stakeholder and initiating plan updates for Operations & Maintenance (O&M) and Asset Management. Step-by-step guidance is provided on how to enact the specific activity and its successful outcomes. Where applicable, it identifies how the activity changes based on the scale of the project. The chapter concludes with a Toolkit that identifies a Checklist of items and any available Templates or other useful resources available.
- Chapter 5** | [Deliver Phase: Plan](#). This chapter sets out each dedicated activity for the Plan stage of the Deliver Phase which is developing processes and procedures for use in the new facility. Identifying people needs along with designing operational exercises to prove that people, processes, systems, and assets work together. Step-by-step guidance is provided on how to enact the specific activity and its successful outcomes. Where applicable, it identifies how the activity changes based on the scale of the project. The chapter concludes with a Toolkit that identifies a Checklist of items and any available Templates or other useful resources available.
- Chapter 6** | [Deliver Phase: Execute](#). This chapter sets out each dedicated activity for the Execute stage of the Deliver Phase ensuring people are ready for transition in terms of training and familiarization; operational exercise delivery and management from a construction site into a live operational facility. Step-by-step guidance is provided on how to enact the specific activity and its successful outcomes. Where applicable, it identifies how the activity changes based on the scale of the project. The chapter concludes with a Toolkit that identifies a Checklist of items and any available Templates or other useful resources available.
- Chapter 7** | [Closeout Phase](#). This chapter sets out each dedicated activity for the Closeout Phase ensuring

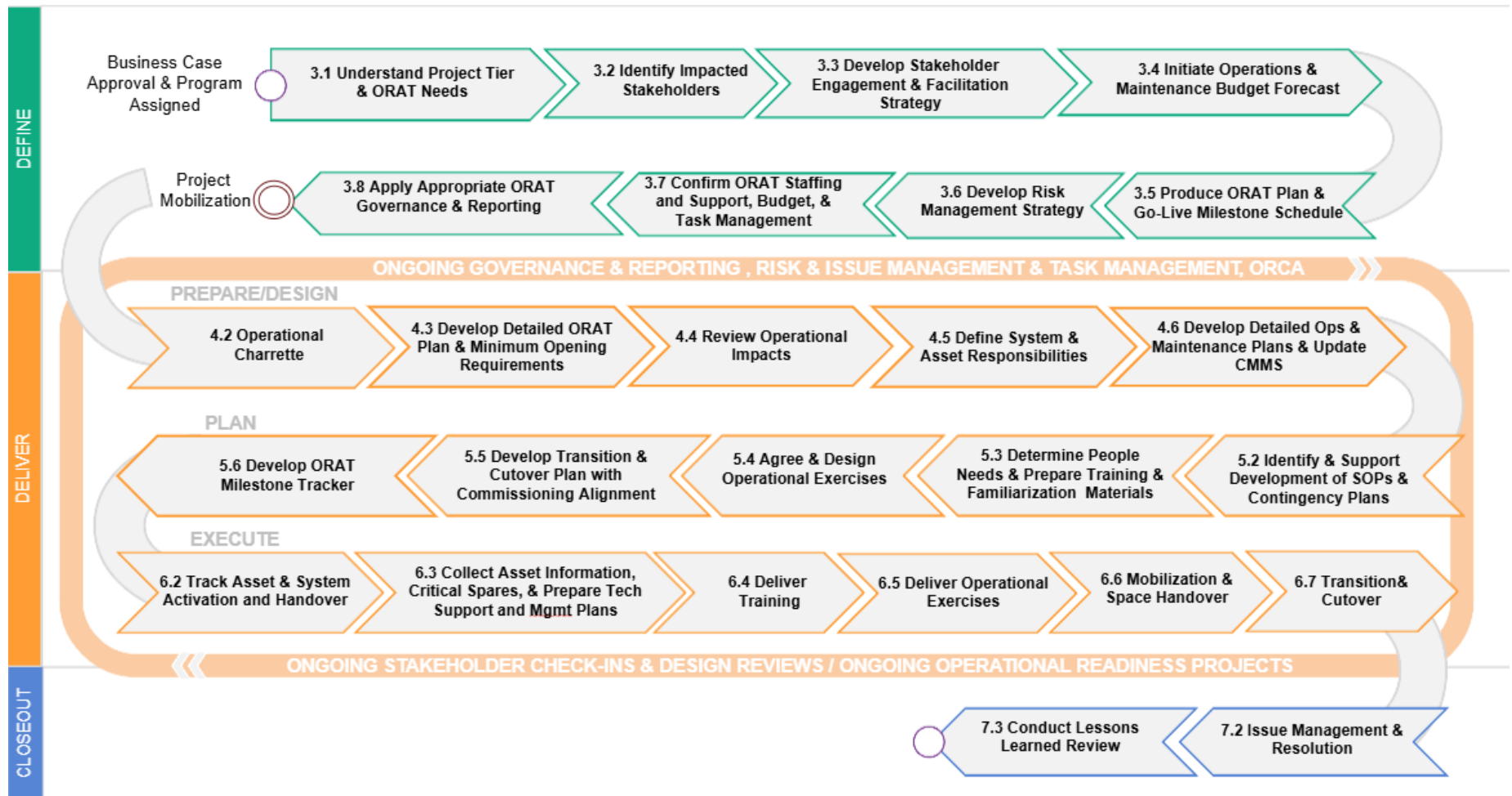
issues are resolved and lessons learned for continuous improvement. Step-by-step guidance is provided on how to enact the specific activity and its successful outcomes. Where applicable, it identifies how the activity changes based on the scale of the project. The chapter concludes with a Toolkit that identifies a Checklist of items and any available Templates or other useful resources available.

Chapter 8 | [Ongoing Operational Readiness Projects](#). This chapter introduces the recurring nature of operational readiness efforts that support ongoing construction, renovation, and system integration across the airport. Rather than being limited to one-time initiatives, these projects are part of a continuous cycle that ensures facilities and operations remain aligned with current and future demands. Each readiness effort is designed to validate that people, processes, and infrastructure are prepared for seamless activation, with minimal disruption to day-to-day operations.

2.4. DEN ORAT Roadmap

The DEN ORAT Roadmap, detailed below, is organized to align with DEN's PMO PLC. It outlines specific activities and considerations that need to occur during the various phases of a project to assure that end state operations are at the forefront throughout project delivery. Not all tools or level of effort described in the OSM are appropriate for each project, so it is important that the [Project Categorization](#) (described in the next section) is understood early in the PLC so ORAT can be applied efficiently and effectively. In Figure 1, the numbering corresponds to the applicable section found within the OSM for ease of navigation.

Figure 1 DEN ORAT Roadmap



2.4.1. Project Categorization – Applying ORAT at Different Scales

ORAT provides a framework for ensuring end-user operators and maintainers are considered throughout the design process and the transition from construction into operation. ORAT activities, such as an Operational Impact Assessment and Stakeholder Engagement, apply to every DEN project, large or small, to ensure that nothing is overlooked.

What varies per project is the scale of each activity – for example, how many stakeholders are engaged, how many operational planning workshops are held, how many communications are sent, or how many Operational Exercises are conducted.

Categorization systems are critical for describing, organizing, and managing the project portfolio within large organizations. Using a categorization model based on project complexity, risk, and value, provides DEN with improved visibility of the capital portfolio and the ability to measure key metrics for resourcing and portfolio planning.

The OSM provides guidance on how to scale ORAT activities up to fit larger projects and down to fit smaller projects throughout all sections depending on the Tier assigned following the categorization of the project which occurs in the PLC Initiation Phase.

2.4.1.1. Project Tier Definition

DEN uses a project categorization system that breaks the portfolio into three (3) groups: Tier I, Tier II, and Tier III projects. The category (Tier) assigned to the project determines which level of governance it requires. It also helps inform the planning and execution of ORAT activities.

The project category is determined by evaluating ten (10) important aspects of each project. The category (Tier I, Tier II, or Tier III) is based on categorization scores, driven by a scoring table using options weightings to assign a maximum of two hundred points across the nine aspects. The aspects assessed include:

1. Operational Impact - Measures how the activated project changes or influences day-to-day airport operations, passenger flow, or existing processes once it goes live.
2. Stakeholder Complexity - Evaluates the number and diversity of stakeholders affected and the degree of coordination required among divisions, tenants, and partner agencies to ensure successful readiness and activation.
3. Readiness Scope - Defines the extent of readiness activities needed for activation. Includes familiarization, training, exercise, documentation, and post-opening stabilization.
4. Operational Risk - Reflects the potential for operational, safety, compliance, or reputational issues during or after activation if readiness steps are incomplete or delayed.
5. Public Visibility - Assesses how visible the project is to passengers and the general public, and whether it impacts perception, wayfinding, or customer experience.
6. Construction Operational Impacts - Captures how construction activities affect active operations. Includes access restrictions, phasing, reroutes, or service interruptions during delivery.
7. Executive Visibility - Identifies the level of interest and reporting required by airport leadership.
8. Facility Change Complexity - Assesses the significance of changes to how the space will function based on whether it is newly built or renovated. Changes may include shifts in physical work flow, space size, layout driven process changes, equipment driven process changes or temporary relocations
9. Project Conflicts - Identifies the level of conflict one project may have on another project or a project will

have on an asset of the airport (e.g. AGTS, airfield, etc.) The conflicts can consist of conflicting priorities, scope interactions that could create delays, or overlapping timelines in the same area).

2.4.1.2. Application Principles

In the Define Phase, the Project Tier should be understood within the Understand Project Tier & ORAT Needs phase of the project and considered in the development of the ORAT Plan & Go-Live Milestone Schedule.

For the Deliver Phase, where applicable, certain sections in the OSM contain guidance on how ORAT should be scaled for different Project Tiers. The OSM should be used to inform how many and to what extent activities should be carried out.

2.4.2. Roles and Responsibilities

ORAT is a collaborative process that will be led by the DEN ORAT Aviation Program Managers. ORAT Aviation Program Managers are responsible for overseeing the successful implementation and delivery of the DEN ORAT approach across DEN projects. Project Managers will be close partners with the ORAT Manager to enable the integration of ORAT into all projects, regardless of size and scale.

Operations, Maintenance, Technology, and Asset Management are key stakeholders in an ORAT Program as these groups are the end-users of a project's assets, systems, and spaces, and therefore, who the ORAT Program is serving through the facilitation of a smooth transition into business-as-usual.

For each activity detailed in the OSM, the group with Primary Responsibility for delivery is indicated, as well as the Key Collaborator(s). A sample table is shown on the right. While the ORAT Manager is responsible for overall ORAT outcomes, they are not responsible for each activity. The ORAT Manager should provide the framework that enables collaborators in their readiness activities.

Primary Responsibility	ORAT
Key Collaborator(s)	Ops, Mx, BT PM
Project Tier Applicability	All

The following groups are referred to throughout the document:

- Project Sponsor (Sponsor) - responsible for overall project definition and preliminary budget in the Define Phase. The Project Sponsor is consulted by the Project Manager in the remaining phases through Closeout.
- DEC Project Management Office (PMO) – responsible for maintaining the Project Lifecycle process .
- Project Manager (PM) - responsible for overall project delivery from Project Mobilization to Project Close Out. They enable the ORAT Manager by providing information to support ORAT implementation and should incorporate ORAT into project schedules and budgets.
- ORAT Aviation Program Manager (ORAT APM) – divisional roles residing in DEN DEC and Special Projects. ORAT Aviation Program Managers are responsible for the successful implementation and delivery of the DEN ORAT Approach across DEN projects.
- ORAT Manager (ORAT) – assigned party by the ORAT divisional leadership and is responsible for successful delivery of the ORAT program and its successful outcomes. Facilitates and supports collaboration across other stakeholder groups to ensure readiness activities are completed.

- Operations, Maintenance, Business Technology, and Asset Management Groups (Ops, Mx, BT, and AM)
– responsible for their own readiness by engaging in the ORAT process and ensuring the timely completion of activities, facilitated by the ORAT Manager.

End of Chapter

Chapter 3- Operational Response and Construction Alignment

3.0. Introduction

Purpose: To describe the ORAT activities associated with stakeholder support throughout the construction schedule to minimize or mitigate impacts to daily operations and emergency response. Operational Response and Construction Alignment (ORCA) will take place throughout the project lifecycle, beginning with anticipated impacts identified during the Define Phase and refined further as construction activities are developed through Delivery.

Considerations:

- What access may be blocked to non-construction areas which would restrict passenger and employee flow (e.g. gates, restrooms, concessionaires, major roadways, etc.)?
- Will airport or airline operations be impacted?
- Will other tenants or business partners be impacted (e.g. advertising, Smarte Carte, art, etc.)
- What noise and vibrations may occur during activities that would disrupt daily operations?
- Will the project create dust or air quality issues?
- Will construction be conducted during holidays, times of increased volume or during severe weather/winter seasons?
- Are 24-hour operations impacted?
- Will services or amenities be reduced or no longer available?
- Will there be regular maintenance items that need to be rescheduled?
- Will laydown space minimize impact on operations?

3.1. Identify construction major activities, milestones, and impacted stakeholders

Primary Responsibility	PM
Key Collaborator(s)	ORAT
Project Tier Applicability	All

In coordination with the Project Manager (PM), ORAT will begin by identifying key construction milestones and major activities that may significantly impact airport operations, employee workflows, and/or the passenger experience. Each identified milestone should be assessed to determine the anticipated timeline and duration of impact (e.g., overnight, short-term, long-term).

Step 1: Review Construction Schedules and Phasing Plans

Begin by reviewing the construction schedule, detailed look-ahead plans, and phasing diagrams to identify major construction activities and critical milestones. Focus on events that involve closures, wayfinding interruptions, cutovers, relocations, or utility work- especially those that intersect with operational areas or require significant coordination or have the potential to cause significant issues if not completed as planned.

Begin by reviewing the construction schedule, detailed look-ahead plans, and phasing diagrams to identify major construction activities and critical milestones.

Step 2: Align activities with operational and passenger areas

Cross-reference identified construction milestones with operational and passenger flow areas to assess potential level of disruption. This alignment helps prioritize which activities require more detailed planning and mitigation efforts

Step 3: Identify impacted stakeholders

Once key activities and milestones are identified, they will be reviewed collaboratively with impacted stakeholders, and PM to validate assumptions, identify potential gaps, and gather additional operational insight. ORAT may facilitate Working Group discussions with the PM to explore coordination strategies and align on recommended mitigation activities. In instances where specific coordination activities cannot be clearly defined during these discussions, ORAT will work directly with impacted City and County of Denver stakeholders to discuss operational impacts.

Step 4: Maintain ongoing coordination between ORAT, PM, and stakeholders

Establish regular coordination touchpoints between ORAT, the PM and stakeholders to review upcoming work, share insights, and identify stakeholder impacts. These conversations help surface those potential operational impacts early and ensure all teams are aligned on what activities may require additional planning or stakeholder engagement.

3.1.1. Successful Outcomes:

- ✓ **Identification of high impact milestones** - A thorough review of construction schedules helped identify key milestones that could significantly impact airport operations and passenger movement.
- ✓ **Identification of Potential Disruptions** - Cross-referencing construction activities with operational and passenger flow areas allowed for the early identification of potential disruptions.
- ✓ **Identification of Impacted Stakeholders** - Ongoing coordination between ORAT, PM, and stakeholders enabled the identification of impacted areas and key stakeholders for further discussion and planning.

3.2. Develop the Construction Operational Workshop

Primary Responsibility	ORAT
Key Collaborator(s)	PM
Project Tier Applicability	Varies

A Construction Operational Workshop (COW) is a collaborative session focused on addressing the operational impacts of upcoming construction activities at the airport. It brings together key stakeholders to review potential disruptions and align on strategies for mitigation. The workshop also provides an opportunity to discuss workarounds and plan for emergency contingencies to ensure smooth operations. For multi-phase projects and programs that have evolving and varying impacts, ongoing stakeholder meetings or COWs will take place to coordinate upcoming construction activities.

Step 1: Involve Primary Stakeholders in COW Development

Begin by engaging primary stakeholders – such as Maintenance, Terminal Operations, Security, Airline Affairs, and Airfield Operations – in the early stages of planning the COW. Collaborate with these teams to define the key operational considerations and generate relevant questions. This ensures the workshop focuses on areas that have the most impact on day-to-day operations and addresses specific concerns that stakeholders will need to manage during construction activities.

Step 2: Develop and Structure the COW

Once the relevant topics and questions are identified, structure the COW with a clear agenda: start with an introduction to the construction activity and its potential operational impacts. Follow this with a Q&A session to clarify any uncertainties and ensure all stakeholders have a solid understanding of the upcoming work. This will provide the foundation for collaborative discussions in the next step.

Step 3: Facilitate Collaborative Discussion on Mitigation Strategies

Facilitate a structured discussion focused on identifying standardized workarounds for non-emergency impacts and emergency contingencies for critical scenarios. Encourage stakeholders to share their insights and suggestions based on their unique operational perspectives. The goal is to develop practical solutions that minimize disruptions across the airport while ensuring all teams are aligned on how to respond to potential issues. By allowing stakeholders to hear each other's contributions, the session fosters a sense of collective ownership and enhances coordination.

Successful Outcomes:

- ✓ **Early Identification of Operational Impacts** - The COW enables the early identification of potential operational disruptions, allowing stakeholders to proactively prepare and mitigate risks.
- ✓ **Collaborative Development of Mitigation Strategies** - Through facilitated discussions, stakeholders collaboratively discuss practical workarounds for non-emergency disruptions and contingency plans for emergencies, ensuring smoother operations during construction.
- ✓ **Foundation for ORCA Plan Development** - The discussions and insights gathered during the COW serve as a critical input for the development of the ORCA (Operational Readiness for Construction Activities) plan, addressing identified impacts.

3.3. Develop the ORCA Worksheet/Plan

Insights and feedback collected during the COW will inform the development of an ORCA Worksheet or Plan. The level of detail and scope of the ORCAs will depend on the scale, duration, and complexity of the anticipated operational impact.

Primary Responsibility	ORAT
Key Collaborator(s)	Ops, Mx, PM
Project Tier Applicability	Varies

Assess need for Planning:

- For minor or localized disruptions, ORAT will develop a streamlined ORCA worksheet, or other appropriate tool. This document will outline the anticipated impacts, mitigation strategies, responsible parties and contacts, and any temporary changes to daily operations. Once drafted, it will be circulated among relevant stakeholders for feedback, refinement, and eventual distribution.
- For major or prolonged construction impacts - such as those requiring temporary updates to existing emergency response or development of new contingencies - ORAT will coordinate with the designated planning section (e.g., Terminal Operations, Emergency Management, etc.) to facilitate ORCA Plan development through collaborative planning discussions.

Each ORCA plan will ensure construction readiness by documenting adjustments to both routine operations and emergency or irregular response protocols, supporting operational resilience throughout the construction timeframe.

- ✓ **Contingency Development** - Contingency procedures are developed to maintain operational resilience throughout all construction phases.
- ✓ **Roles and Responsibilities** - Clear roles, responsibilities, and communication channels are established between project and operational teams.
- ✓ **Activity Alignment** - Construction activities are aligned with airport operations to ensure a safe, efficient, and passenger-focused delivery.

3.4. Operational Response and Construction Alignment Toolkit

Checklist	Templates	Reference Resources
☐ Master Checklist	Construction Operational Workshop (COW) PowerPoint ORCA Worksheet ORCA Mini Worksheet	

End of Chapter

Chapter 4- Define Phase

4.0. Introduction

Purpose: To set the ORAT project / program up for success and to establish the basis for the management and control.

Considerations:

- Who will be the project recipient or impacted stakeholders?
- How will the project / program be managed and controlled?
- What ORAT governance structures need to be in place?
- How do we ensure alignment on the future end state?
- What does Opening Day look like, can we smooth or soften the opening by understanding what is critical and not critical?
- How do we ensure the broader stakeholder group is clear on our approach?
- Who do we need to engage with and communicate to, and with what method and frequency?
- How do we ensure high-level ORAT operational risks and issues are identified early and discussed regularly?

4.1. Understand Project Tier & ORAT Needs

Primary Responsibility	ORAT
Key Collaborator(s)	PM
Project Tier Applicability	All

This activity focuses on sufficiently understanding the project context, size and impact, to determine high-level ORAT needs, such as resources and budget. The following approach will be used to ensure the Project Sponsor and ORAT Manager are aligned in their understanding of the project and requirements for ORAT.

4.1.1. Step 1: Understand Project

The project has not yet been mobilized but its intent should have been defined through the development of the approved Business Case. At this stage, the ORAT Manager should familiarize themselves with the approved Business Case, the future project's benefits and risks, and its scope, if known. This will enable the ORAT Manager to make informed decisions on ORAT needs of the future project.

4.1.2. Step 2: Understand Project Tier

The categorization of a project tier occurs once a request for support has been initiated and a project assigned to the appropriate ORAT Manager. Once assigned, the assigned ORAT Manager will assess the tier based on the Project Tier Workbook and review results with the ORAT Aviation Program Manager. It should reflect operational impact and the extent of ORAT activities needed.

The operational impact of the project considers how much end-users will be impacted by the project outcome. For example, if a new technology is being introduced at DEN, users, operators and maintainers will need to undergo extensive training, testing, and documentation review, more so than with a familiar system replacement. Additionally, the project may require a new process to be developed or new job roles to be created to operate following Cutover and go-live. Tiers are broken out into three levels with Tier I being high impact and Tier III being low impact. The Tier is determined by evaluating nine (9) categories. The tiering model uses weighted scoring to focus on factors that drive operational impact. Categories that drive operational disruption, risk, and coordination carry more weight, while planning and integration effort are considered at a moderate level. Visibility is included but weighted lower so it doesn't drive the outcome. This keeps tiering grounded in real impact and complexity, not project profile. The description of the categories is as follows:

- Operational Impact- Measures how the activated project changes or influences day-to-day airport operations, passenger flow, or existing processes once it goes live.
- Stakeholder Complexity- Evaluates the number and diversity of stakeholders affected and the degree of coordination required among divisions, tenants, and partner agencies to ensure successful readiness and activation.
- Readiness Scope- Defines the extent of readiness activities needed for activation. Includes familiarization, training, exercise, documentation, and post-opening stabilization.
- Operational Risk- Reflects the potential for operational, safety, compliance, or reputational issues during or after activation if readiness steps are incomplete or delayed.
- Public Visibility - Assesses how visible the project is to passengers and the general public, and whether it impacts perception, wayfinding, or customer experience.
- Construction Operational Impacts - Captures how construction activities affect active operations. Includes access restrictions, phasing, reroutes, or service interruptions during delivery.

- Executive and Senior Leader Visibility- Identifies the level of interest and reporting required by airport leadership.
- Facility Change Complexity- Assesses the significance of changes to how the space will function based on whether it is newly built or renovated. Changes may include shifts in physical work flow, space size, layout driven process changes, equipment driven process changes or temp relocations.
- Project Conflicts - Identifies the level of conflict one project may have on another project or a project will have on an asset of the airport.(e.g. AGTS, airfield, etc) The conflicts can consist of conflicting priorities, scope interactions that could create delays, or overlapping timelines in the same area.

This initial consideration is high-level at this stage and a tier may change depending on evolving project considerations. A more robust [Operational Impact Assessment](#) should be conducted during the [Deliver Phase: Prepare](#).

Throughout applicable subsequent sections in the OSM, an ORAT application for the different Project Tiers is provided. This provides guidance on what ORAT activities should be applied depending on the size of the project and its operational impact.

4.1.3. Step 3: Determine High-Level ORAT Needs

The ORAT Manager should determine the High-Level ORAT Needs based on the Project Tier designation. This early understanding of the ORAT needs allows for sufficient time to mobilize required resources (e.g., labor and/or budget) and to provide awareness of requirements that may be asked of the project (e.g., time allocation in project schedule for delivering ORAT activities).

Types of ORAT Needs that should be considered are:

- Will operational processes and Standard Operating Procedures (SOPs) need to be redefined? Will Operations, Technology, and Maintenance Plans need to be updated?
- Will operations or new technology systems need to be trialed due to the level or complexity of change or impact the project has on the facility, process, or staff? Will time need to be dedicated in the project schedule for these Operational Exercises?
- Will training need to be delivered? Will this likely be delivered by suppliers, or will supplementary training need to be coordinated by an ORAT Team?
- What ORAT resources will be needed to deliver these ORAT activities? Will additional labor be needed (e.g., external consultants) and will a budget be required?

These needs are intended to only be high-level at this stage for the purpose of providing early awareness to inform the mobilization of the project. These needs should be documented for reference later as they will be pulled into the [ORAT Plan](#), within the Project Management Plan (PMP) as defined by the PMO.

4.1.4. Successful Outcomes:

- ✓ **Clarity on the Project Tier** – its size and impact on stakeholders.
- ✓ **Understanding of its ORAT Needs** – whether an ORAT Team will be required to deliver readiness activities such as training and operational exercises.

4.2. Identify Impacted Stakeholders

Primary Responsibility	PM
Key Collaborator(s)	ORAT
Project Tier Applicability	All

Impacted stakeholders are defined as all parties with an interest in, or influence on the successful activation and operation of the project. Impacted stakeholders includes anyone that has operations, ownership, or is acquiring the space based on the specific project. Identifying all stakeholders is crucial to the success of the project to generate buy-in, ensure awareness and preparedness, and mitigate resistance. This activity is a precursor to developing the [Stakeholder Engagement and Facilitation Strategy](#), as part of the PMP.

4.2.1. Step 1: ORAT Input into Stakeholder Identification

The ORAT Manager should work with the Project Manager and internal teams to identify and document stakeholders using the Business Case as a key reference document. The identification should be conducted holistically – considering operations, maintenance, and management roles. If the Business case has been developed prior to the ORAT teams' involvement, risks and gaps should be evaluated.

4.2.2. Step 2: Document Stakeholders

A comprehensive contact list documenting project stakeholders and their respective CCD single point of contact, and notes from engagement should be developed and maintained by the project with input from, and accessible to, the ORAT Manager. The key stakeholders should be notified of the project at this stage for awareness and initial engagement. This will be further developed and monitored throughout the project. This list is independent of the primary stakeholder list developed as part of the ORAT Plan and PMP and is frequently updated.

Standard DEN CCD stakeholder groups include, but are not limited to Airline Affairs, , building operations and facilities management groups, janitorial groups, security services, BT, and emergency responders. Additional non-CCD stakeholder groups (e.g. airlines/air service providers, TSA, CBP) may be included in discussions through designated CCD points of contact.

4.2.3. Successful Outcomes:

- ✓ **Stakeholders identified** – all stakeholders impacted by the future project are identified.
- ✓ **Stakeholder contacts documented** – points of contact for impacted stakeholders are documented and notified of project.

4.3. Develop Stakeholder Engagement & Facilitation Strategy

Primary Responsibility	PM
Key Collaborator(s)	ORAT
Project Tier Applicability	Varies

It is important to engage with the right people, at the right level, at the right time. Therefore, once stakeholders have been identified, a mapping process, supported by the ORAT Manager, will be undertaken to inform an effective Stakeholder Engagement and Facilitation Strategy which will be included in the PMP. A robust stakeholder engagement approach should be implemented that is clear, consistent, and effective at getting messages across to impacted parties.

4.3.1. Step 1: ORAT Input into Stakeholder Mapping

The ORAT Manager supports the identification of stakeholders—all parties with an interest in, or influence (positive or negative) on, the successful activation and operation of the project—on a map of influence and interest.

This mapping results in stakeholders being assigned into a relevant quadrant that informs the level of management and communication required.

Throughout the project, the ORAT Manager, with the Project Sponsor, should continue to analyze project stakeholders and monitor each stakeholder's influence and interest to facilitate the most effective method of communication.

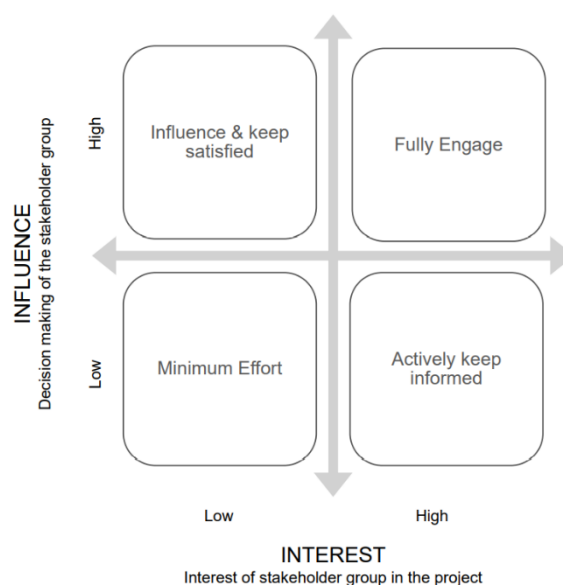


Figure 2 Influence and Interest Matrix

4.3.2. Step 2: ORAT Input into Engagement & Facilitation Strategy

Once stakeholders have been mapped, the ORAT Manager should support the development of the level of engagement, management and communication for each stakeholder group based on the quadrant they were allocated to. Approaches for consideration include:

- Existing Project Management and Coordination Meetings
- Regular 1:1 Check-Ins for two-way communication
- Monthly All-Stakeholder Conference Calls
- Monthly Email Update Communications

Guiding Principles for communication should also be documented in the Strategy. They could include:

- Openness and honesty are vital;
- Comprehensiveness is important;
- Relevance is a key priority; people should not be burdened with information which has no relevance to them, nor should it be more detailed than is necessary;

- Timeliness is crucial; information must be up-to-date and available when needed; and
- Plain language must be used, acronym-free, jargon-free and with further explanation where needed.

4.3.3. Step 3: Ongoing Stakeholder Status Check-Ins

As operational readiness transitions from the Define to Deliver Phase, periodic status check-ins with stakeholders are utilized to monitor progress of readiness activities and keep the project on track. This is represented by the orange circle on the [DEN ORAT Roadmap](#) around the Deliver Phase activities.

Stakeholders can be monitored by reviewing progress of readiness activities, such as updating or defining new SOPs, completion of Training & Familiarization activities, participation in Operational Exercises and finally their Transition activities. Additionally, 1:1 stakeholder check-ins offer the ORAT Team an opportunity to receive feedback and gauge stakeholders' perceived level of confidence for Opening Day.

4.3.4. Successful Outcomes:

- ✓ **Stakeholders mapped** – stakeholders are mapped according to their influence and interest in the project to determine their engagement and communications needs.
- ✓ **Communication plan agreed** – using the stakeholder mapping, a robust communication plan should be agreed upon to ensure each group is informed to the right level at the right time.

4.4. Initiate Operations & Maintenance Budget Forecast

Primary Responsibility	AM, Ops, Mx, BT
Key Collaborator(s)	ORAT
Project Tier Applicability	Varies

Early awareness of new systems, assets, and spaces and their potential impact to resourcing and budgets provides significant value to operations, maintenance, and asset management groups. This information allows these groups to appropriately plan their future forecasts to ensure they can incorporate these assets into operations in a cost-effective and stable way. The following approach will be used to ensure stakeholders (e.g., operations, maintenance, facilities management) begin preparing budget forecasts before project mobilization considering preventative maintenance, replacements and upgrades, and staffing for operations and maintenance.

The ORAT Manager will support operations, maintenance, and asset management groups to complete these activities if needed.

4.4.1. Step 1: Begin Whole-Life Cost Estimates Enterprise-Wide

At this stage of the Define Phase, impacted stakeholders (e.g., operations, maintenance, facilities management,) should begin to assess potential whole-life cost impacts for operation and maintenance and relevant Business Case information should be provided to the stakeholders for reference in completion of the initial whole life cost worksheet. The whole life cost worksheet serves to pre-identify possible cost of the project deliverable (initial cost; operating cost; maintenance cost, and contract extension cost, new full time employee positions) over its entire lifespan. These will feed into future planning and initial budget forecasts that will need to be reevaluated after the design is further developed later in the project.

4.4.2. Step 2: Define Information Requirements for the Contractor

At this stage, Asset Management should consider defining documentation requirements for the contractor (e.g., asset warranty information, operations and maintenance (O&M) manuals, initial preventive maintenance schedules, asset data, etc.) that will allow them to prepare for the integration of any new assets. These requirements should not be technical but consider more the timelines and templates needed to ensure they are usable for future end-user groups.

4.4.3. Successful Outcomes:

- ✓ **Whole-life initial cost assessment completed** – using the Business Case, initial assessment should be completed so operations, maintenance, and asset management groups can plan accordingly.
- ✓ **Contractor information requirements agreed upon**— clear requirements for the Contractor should be articulated, agreed upon, and included as requirements in the Request for Proposal (RFP) to ensure the smooth handover and integration of assets later in the project.

4.5. Produce Draft ORAT Plan & Go-Live Milestone Schedule

Primary Responsibility	ORAT
Key Collaborator(s)	PM
Project Tier Applicability	All

At this stage there is information that is still unknown and as such, the Draft ORAT Plan articulates how ORAT is intended to be delivered for the project and is refined later when more details are known in the [Deliver Phase](#). The draft plan describes the governance; management processes and anticipated readiness activities that could be implemented and their intended outcomes. The Plan intends to answer the who, what, where, why, how, and when of ensuring a successful go-live of the project. The Go-Live Milestone Schedule identifies the milestones that will be critical to the delivery of ORAT activities to provide early awareness of ORAT timescales to the Project Sponsor and Project Manager.

The draft ORAT Plan will be developed by the ORAT Manager with integral support from the Project Manager.

4.5.1. Step 1: Produce Draft ORAT Plan

While not all the necessary information is known at this point, it is important to start considering what the answers might be across these different components, and the intention documented that will then be refined in the [Deliver Phase](#). Using the ORAT Plan Template, the ORAT Manager should produce a Draft ORAT Plan outlining the anticipated approach to ensuring the readiness of operations given the current understanding of the impact of new facilities and/or assets and technologies. The Draft ORAT Plan should consider the following components:

- ORAT Governance including risk management and reporting processes.
 - What governance 'layers' need to be in place for the project? Will this project require additional working groups?
 - How will specific ORAT risks and issues be managed on the project?
 - How will ORAT progress be reported and to whom?
- Construction and Commissioning Alignment (when applicable).
 - What interfaces and dependencies are believed to be required with construction and commissioning activities, if any?
 - What operational readiness milestones need to be integrated into the commissioning schedule?
 - How are the construction and commissioning teams going to be engaged to ensure the right information is received at the right time?
- Operational Response and Construction Alignment Planning
 - Are operational impacts anticipated as part of the construction process?
 - Will there be a need for large-scale coordination with stakeholders for construction contingency planning?
 - What will the documentation process be for smaller impact contingency plans and reviews?
- Operations Planning
 - Will operations and maintenance processes need to be reviewed and with which groups?
 - What existing plans and documents need updating?
 - Will new plans and documents need to be developed?
 - How long might the operational readiness planning take?
 - Will additional staff and resources be required?

- Training & Familiarization
 - Is training and familiarization anticipated to be required?
 - What contractual training is anticipated to be delivered, if any?
- Operational Exercises
 - Are Operational Exercises likely to be required?
 - What type (e.g., Tabletop; Drill; Functional; Full-scale or Emergency)?
- Transition & Go-Live
 - Is the project go-live anticipated to be phased?
 - Are relocations or first time move-ins expected to be required?

4.5.2. Step 2: Produce Go-Live Milestone Schedule

The Go-Live Milestone Schedule is intended to be a high-level schedule outlining the timescales associated with the identified activities in the ORAT Plan (e.g. Training and Familiarization and Operational Exercises).

At this stage, only a list of key milestone dates and a simple visual roadmap is required. Later, an [Integrated Schedule](#) will be developed with dependencies between construction and commissioning activities.

The Go-Live Milestone Schedule should be shared with the Project Sponsor once the project is mobilized to ensure early awareness of ORAT activities.

4.5.3. Successful Outcomes:

- ✓ **ORAT Plan documented in Project Management Plan (PMP)** – the ORAT Plan template is updated for the project and incorporated into the PMP.
- ✓ **Go-Live Milestone Schedule developed** – the key milestones and activities of the project, for the ORAT Plan, are visualized in a Schedule to provide early awareness of ORAT needs.

4.6. Develop Operational Risk Management Strategy

Primary Responsibility	PM
Key Collaborator(s)	ORAT
Project Tier Applicability	All

Managing and mitigating operational risk is key to the successful delivery of all projects. At DEN, operational risks are managed as part of the overall project- whether it be threats or opportunities to the operations throughout construction or after project go-live. Risks associated with a successful operational readiness, activation, and transition to end-user groups are captured at the project level with input from primary impacted stakeholders.

The ORAT Manager will provide input into the Operational Risk Management Strategy for the project, including the early identification of risks, and throughout the course of the project.

4.6.1. Step 1: Participate in site walks with PMs responsible for project programming

ORAT will join the PMs responsible for project programming in initial site walks before stakeholder engagement begins to identify early operational and readiness considerations. These walks will help ORAT flag potential operational risks, access constraints, and phasing issues that should be addressed in the project's risk management strategy to be confirmed by project stakeholders. The findings will also inform updates to the stakeholder engagement strategy by identifying which groups need to be involved and when, ensuring focused and efficient coordination as the project moves forward.

4.6.2. Step 2: ORAT Input into Project Risk Management Strategy

The Project Manager will be drafting the Risk Management Strategy as part of the PMP, following Project Life Cycle (PLC) guidelines. As part of this, the ORAT Manager should input risks to construction activities and successful operational readiness, activation, and transition to end-user groups. These could include:

- Interaction with airfield Protected Surfaces and Safety Zones
- Impact of seasonal weather changes on schedule
- Reduced passenger flow and airport capacity
- Decreased emergency response effectiveness
- Development of poor public perception if construction is seen as excessively disruptive
- Impacts to airlines business partners or tenants
- Tenant and vendor ability to mobilize, implement, or perform expected operations
- Scope gaps that impact operational processes
- Timeline constraints and technology or software development risks
- Operational contract award timelines

Throughout the project, specific risks will arise that should be captured for mitigation actions to be agreed upon. The ORAT Manager will need to collaborate with the Project Manager and stakeholders throughout the project to manage risks. The Operational Risk Management Strategy is ongoing throughout the project.

4.6.3. Successful Outcomes:

- ✓ **ORAT Operational Risks incorporated into Project Risk Management Strategy** – risks to successful operational readiness, activation, and transition are acknowledged by the Project Manager and included in the overall Risk Management Strategy.

4.7. Confirm ORAT Staffing and Support, Budget and Task Management

Primary Responsibility	ORAT APM
Key Collaborator(s)	PM
Project Tier Applicability	Varies

Based on the Project Tier determined, the ORAT Aviation Program Manager (APM) may assign DEN resources or external resources to execute the ORAT Plan. The Confirm ORAT Staffing and Support, Budget and Task Management activity focuses on the assignment and onboarding of ORAT staff resources to the project and the setup of ORAT resource and task management to deliver ORAT activities. The following approach will be used to initiate the ORAT Team for the project.

4.7.1. Step 1: Establish ORAT Team

The ORAT Aviation Program Manager should appoint ORAT staffing and support to form the ORAT Team for the project based on the project tier and ORAT needs determined in the definition phase. The ORAT Aviation Program Manager is responsible for establishing the ORAT management requirements for the project.

The ORAT Aviation Program Manager will:

- Assign roles and responsibilities for all members of the ORAT Team and the roles and responsibilities of the ORAT Working Group members – ORAT Working Group described in section 3.8 below;
- Communicate the organizational structure for the ORAT Team and extended team (e.g., ORAT Working Group);
- Agree on an operational risk identification process that clearly defines the methodology for raising risks to operational readiness and escalating them to the project;
- Agree on an issue resolution process that clearly defines the methodology for raising issues and resolving them;
- Create a contact list for participants providing a single source for ORAT participants across all stakeholders;
- Establish workstreams for the various ORAT tasks and activities. This is a key function in which the ORAT Team and stakeholders participate to generate the materials necessary to move the ORAT program forward; and
- Ensure awareness of all statutory and regulatory requirements that need to be achieved to put an airport facility into operation. A key part of the success of any ORAT program is early identification of these requirements.

Application at different Project Tiers:

4.7.2. Tier III	4.7.3. Tier II	4.7.4. Tier I
ORAT Aviation Program Manager may task ORAT resource to support project as needed	ORAT resource(s) may be assigned to manage/support ORAT efforts across multiple projects	Establish dedicated ORAT Team, potentially utilizing external contractors, with responsibilities and workstreams as needed

4.7.5. Step 2: Finalize ORAT Budget

The ORAT Aviation Program Manager should finalize the ORAT budget for PM approval. The budget should be based on the ORAT Plan and its activities including Familiarization, Training, and Operational Exercises. For projects where a dedicated ORAT Team is required, budget should be accommodated in the Project's overall budget.

4.7.6. Step 3: Establish ORAT Task Management

Similarly, to deliver any project, the ORAT Aviation Program Manager should establish how day-to-day tasks will be managed with the Project Sponsor. This involves the establishment of review meetings and the utilization of action trackers.

4.7.7. Successful Outcomes:

- ✓ **ORAT Team established** – depending on the Project Tier, the ORAT Team is established to effectively deliver the ORAT activities required by the project.
- ✓ **ORAT Budget established** – the budget needs for ORAT are identified, depending on the initial ORAT Plan.

4.8. Apply Appropriate ORAT Governance & Reporting

Primary Responsibility	ORAT APM
Key Collaborator(s)	PM
Project Tier Applicability	Varies

This activity refers to the mobilization of the DEN ORAT Governance Framework (Figure 4 below) and application of specific processes and tools to monitor and report that the ORAT Program is on track and delivering its intended benefits. An ORAT Governance Framework is in place at DEN, across all projects, to provide authority and accountability for defining and controlling ORAT activities, outcomes, and ensuring successful go-lives across concurrent DEN projects. At this stage, the project should be established within the existing Governance Framework and decisions made on the appropriate level of application of governance and reporting based on the Project Tier.

Governance is key to the delivery of ORAT as it:

- Defines clear roles and responsibilities;
- Provides assurance to key stakeholders and sponsors that the project is on track to deliver against the ORAT Plan and ORAT Milestone Tracker;
- Empowers efficient and effective decision-making by defining levels of authority;
- Establishes effective escalation routes for risk and issue management;
- Establishes decision gates/key milestones for review and approval of planning and execution activities; and
- Provides confidence to Corporate and Business-As-Usual stakeholders.

For each project, an ORAT Working Group should be established that is responsible for the ORAT application per project, and ORAT Focus Groups if required (determined by [Project Tier](#)).

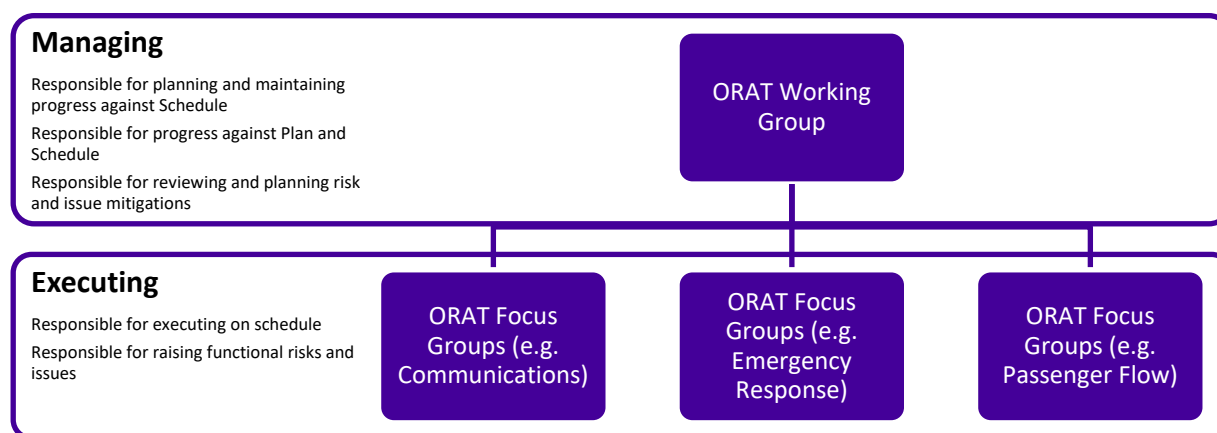


Figure 3 DEN ORAT Governance Framework

4.8.1. Step 1: Establish the ORAT Working Group

The purpose of the ORAT Working Group is to plan and manage the execution of the ORAT activities specified in the ORAT Plan. Each project requires its own Working Group, and the group size is determined by the Project Tier.

The ORAT Working Group is led by the ORAT Manager and is composed of representatives from a specific stakeholder group that is key to planning and delivering readiness activities (e.g. Operations Working Group, Maintenance Working Group). The Group should include representation from stakeholders included in project delivery and those that are critical to designing and developing ORAT activities.

Application at different Project Tiers:

4.8.2. Tier III	4.8.3. Tier II	4.8.4. Tier I
Likely no Working Group required	Small Working Group made up of 1-3 stakeholder representatives	Medium Working Group made up of 3-6 stakeholder representatives

4.8.5. Step 2: Establish ORAT Focus Groups

An ORAT Focus Group is a subject-matter-expert-driven team that operates in tandem with the ORAT Working Group. Each Focus Group is formed to focus on a specific function, operational activity, or technical area that requires detailed planning, coordination, and problem-solving as part of the broader readiness and activation effort.

Focus Groups are composed of a cross section of key stakeholders from multiple divisions and sections involved in a function, including internal airport departments, tenant representatives, contractors, and agency partners who bring deep expertise and operational insight into the area of focus. The group meets regularly to:

- Review project-specific impacts to their functional area
- Identify operational risks and requirements

- Develop readiness strategies and mitigation plans
- Define and validate scenarios for trials and simulations
- Support development of SOPs, training content, and contingency plans
- Provide input into the Operational Readiness Deliverables, such as the ORCAS (Operational Resilience for Construction Activities Plans) and Toolkits

Each Focus Group operates under clear objectives and timelines aligned with the master ORAT schedule. They report key updates, issues, and decisions to the ORAT Working Group to ensure alignment, escalation of concerns, and integration with other functional areas.

4.8.6. Step 3: Establish ORAT Reporting

Ensuring stakeholders are provided regular, transparent progress updates on ORAT activities is key to good ORAT governance and effective project delivery. Reports should be sent to key stakeholder leaders with the status of readiness activities, milestones achieved, and any risks and issues. By keeping everyone in the loop with updates on a weekly, monthly, or quarterly basis you help provide accountability and plan any mitigations efficiently. The main aim of the report is to escalate risks and issues.

The ability to generate summarized reports on the progress of the different ORAT activities, relative to an initial baseline plan will enable key stakeholder leaders to have real time access to information as required. A management system to record progress information and to generate user definable reports will simplify reporting activities and should ensure more accurate and auditable reports are generated. The types of metrics reported will vary depending on the stage of the program but typical metrics might include:

- Number of SOPs to be developed and progress to completion;
- Number of impacted stakeholder groups and ongoing engagement assessment;
- Number of technical or operational training materials to be developed and progress to completion;
- Training Design and Delivery progress against milestones;
- Exercise Design and Delivery progress against milestones;
- Number of stakeholders attending training and familiarization activities;
- Space readiness status;
- Risks identification, management and mitigation; and
- Issues identification, management and resolution

4.8.7. Successful Outcomes:

- ✓ **Project established in existing OSC** – the project should be established within the standing OSC
- ✓ **ORAT Working Group established** – depending on Project Tier, the Working Group should be established by the ORAT Manager

- ✓ **ORAT Reporting established** – cadence and audience of reporting should be agreed upon utilizing existing reporting tools and templates and aligned to the Stakeholder Engagement and Management Strategy

4.9. Define Phase Toolkit

Checklist	Templates	Reference Resources
☐ Project Categorization Tool	[Project Management Plan (PMP)]	[Refer to the Project Management Manual and Project Life Cycle (PLC)]
☐ Stakeholder Contact List	[ORAT Risk Register]	
☐ ORAT Milestone Tracker	[]	ORAT a la Carte Menu
	[ORAT Plan]	[PLC Project Categorization Methodology]
	[	
	[O&M Budget and Additional Resources Justification]	

Chapter 5- Deliver Phase

The Deliver Phase is broken into three subphases – Prepare, Plan, and Execute. The three subphases have distinct activity chevrons but the entire phase is encompassed by a loop of ongoing underlying activities indicated by the orange circle.

The underlying activities include:

- Ongoing Governance & Reporting;
- Risk & Issue Management & Task Management;
- Ongoing Stakeholder Check-ins & Design Reviews and
- Ongoing ORAT implementation plan and action list reviews

Each of these activities is initiated, and the responsibilities and involved parties are established during the Define phase ([Section 2.4](#), [Section 2.7](#), [Section 2.9](#)). To ensure alignment between DEN and the project team, maintain timely progress, and preserve the vision and needs of all impacted stakeholders and facilities, regular program management and monitoring are essential. The ORAT Manager is responsible for overseeing these activities, and a schedule of meetings and check-ins should be established in the Define Phase and followed consistently throughout the Deliver Phase of the project.

5.0. Prepare/Design

5.0.1. Introduction

Purpose: To structure the ORAT Program by developing trackers; reviewing operational impacts and defining system and asset responsibilities.

Considerations:

- What ORAT resources are needed to successfully complete the project / program?
- Is this something we can manage in-house or do we need to look externally?
- How new, different or changing are the project / program processes and systems?
- How impactful will this be on our stakeholders?
- How do we ensure all parties are aligned on the future end state?

5.1. Operational Charrette

Primary Responsibility	Designer/PM
Key Collaborator(s)	ORAT
Project Tier Applicability	Varies

An operational charrette is a collaborative meeting during which a range of stakeholder representatives discuss the vision and ideas to inform design options. The intent of the Operational Charrette at DEN Project Mobilization is to involve end-user operations and maintenance groups in the early operational process to ensure their needs are captured in the requirements for the design. Engaged designers should facilitate the session and ensure a robust information capture and documentation process. The ORAT Team will support on-going design reviews and page turns as defined in the relevant DSM, typically at 30-60-90 percent. In addition, ORAT will support the conduction of a Safety Risk Assessment at 90 percent design in coordination with Airport Safety or designated third party. The need for a second SRA depending on the size and scope of the project and its impacts may be conducted prior to handover. The Operational Charrette is separate from the Owner's Project Requirements within the Project Charter as outlined in the DEN Sustainability DSM.

5.1.1. Step 1: Schedule Operational Charrette

The Operational Charrette should happen early-on in project delivery – before detailed design is completed. The ORAT Manager should ensure it happens as part of the process and support the designer by inviting relevant project stakeholders, frontline staff, and end-users to participate. The ORAT Manager should ensure end-user operators and maintainers are sufficiently represented to provide input.

5.1.2. Step 2: Deliver Operational Charrette

The designer, in close collaboration with the ORAT Manager, should facilitate a collaborative Operational Charrette, capturing design priorities, including Operational Requirements. In large projects, several charrettes should be delivered across the relevant functional areas.

Principles for delivering the charrette(s) include:

- Defining goals that are obtainable and yet demanding, so that expectations can be managed.
- Building out a schedule that factors in breaks and keeps a demanding pace
- Trying to find a location on the project site, which will get everyone off their home turf
- Strive for diversity in authority, culture, gender, and expertise, and know the personalities and group dynamics ahead of time, if possible
- Participants should feel listened to and considerations weighed equally during the sessions
- Decision making processes should be outlined and cost impact constraints identified for charrette effectiveness. Example questions to utilize during the charrette(s) to capture end-user operational needs and input include:
 - How are operations conducted today in this area? What systems and tools are used? What supporting infrastructure and spaces are required?
 - What challenges are faced today in this area?
 - What would make operations more efficient and effective? What innovations could be incorporated in future?
 - What DEN Standards need to be adhered to?
 - What are the performance needs that must be met by the operation?

Application at different Project Tiers:

5.1.3. Tier III Workshop with Primary Stakeholder group may be sufficient	5.1.4. Tier II Single operational charrette involving multiple stakeholder groups	5.1.5. Tier I Multiple operational charrettes may be needed to ensure participation from all project stakeholder groups, and key frontline staff and end-users
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5.1.6. Step 3: Develop Operational Requirements

The designer should produce a summary of initial Operational Requirements for the design in a clear and concise document. The Operational Requirements should detail how the product will be used to satisfy users’ need and the necessary components to ensure it optimizes operations and is future-proofed.

5.1.7. Step 4: Prioritize and Select Operational Requirements

An exercise should take place to ensure that the outputs from the Operational Charrettes are reviewed and prioritized. The priority list should not become a list of nice-to-haves but rather a considered list of implementable requirements for design development.

This review and prioritization exercise should be undertaken by the Project Manager and Project Sponsor.

5.1.8. Successful Outcomes:

- ✓ **Operational Requirements for the design captured and prioritized** – through a facilitated process led by the designer, requirements should be captured that acknowledge how the product will be operated and maintained.
- ✓ **End-User groups included in early design stage** – involving end-user groups, such as operators and maintainers, early in the design process means the design is more likely to meet their needs and avoid costly changes later or inefficiencies.

5.2. Develop Detailed ORAT Plan & Minimum Opening Requirements

Primary Responsibility	ORAT
Key Collaborator(s)	PM
Project Tier Applicability	All

This activity focuses on the further development of the ORAT Plan in the PMP and defining Minimum Opening Requirements to support and align ORAT decision-making. These are measurable standards stakeholders can use to determine if the project is ready for the transition from construction to operations. The following approach will be used to develop the detailed ORAT Plan and establish Minimum Opening Requirements for the project.

5.2.1. Step 1: Develop Detailed ORAT Plan

At roughly 80% design, the ORAT Team should finalize the ORAT Plan that was initially developed in the [Define Phase](#) by detailing the type and target number of activities required. While the initial ORAT Plan in the Define Phase considered what activities may need to be delivered, expanding this into the detailed ORAT Plan provides confirmation on what exactly will be delivered, when and how. For example, the purpose, type and number of training, familiarization and operational exercises should be clearly planned with the materials required to support them and intended timeframes. The Detailed ORAT Plan should consider the following components:

- ORAT Governance including risk management and reporting processes
 - What is the agreed governance structure for the project?
 - How are project risks being managed?
 - How is ORAT progress reported and to whom?
 - *If the project is a new technology or maintenance process how is the ORAT team and process integrated into the lifecycle of the project?*
- Program Management including team roles and task management
 - What team roles and responsibilities are in place?
 - How is the team being managed and tasks allocated?
- Construction and Commissioning Alignment
 - What interfaces are in place with construction and commissioning activities, if any? What dependencies are there on construction and commissioning activities?
 - How will construction and commissioning teams be engaged to ensure the right information is received at the right time? Who are the key contact groups?
- Operations Planning & Stakeholder Readiness Planning
 - What operations and maintenance processes need to be reviewed and with which groups?
 - How will these reviews be conducted?
 - What plans and documents need updating?
 - What will stakeholder(s) need to provide/ implement in the process
 - When will this be done?
 - What is the space readiness and acceptance process for each stakeholder?
- Training & Familiarization
 - What training and familiarization is required? For which stakeholders?
 - What contractual training will be delivered, if any?

- Operational Exercises
 - What Operational Exercises are required? What type (e.g., Drill, Functional, Full-scale or Emergency)?
 - When will these Operational Exercises take place?
 - Who are the key stakeholders?
 - What is the communication plan/ planning requirements and stakeholders that will need to be part of the Operational Exercise planning and execution?
 - What feedback loop is there to update process documents?
- Transition & Go-Live
 - How will project Go-Live be phased? How will cutover occur?
 - Which stakeholder groups are involved in the transition?
 - When will the moves take place?
 - What are wayfinding/signage changes and schedule?
 - *What technology systems will be changed and what vendors need to be included in the transition start-up?*
 - What types of public notifications and public facing mediums (e.g. websites) must be updated?
 - What documentation material will be provided for Go Live Readiness:
 - Operational Playbooks
 - Tenant move sequencing plans and detailed timelines
 - Employee route maps

The Detailed ORAT Plan will be a living document throughout the Program and can be updated if required.

5.2.2. Step 2: Develop Minimum Opening Requirements

Forming a collective vision and agreeing expectations for activation is a crucial part of the Deliver Phase: Prepare. The ORAT Manager should facilitate leaders from key stakeholder groups and the OSC members in a Activation workshop to articulate and agree upon Minimum Opening Requirements that define a shared vision for what should happen on Opening Day. These Requirements guide future ORAT decision-making.

The Activation Workshop should serve to meet the following objectives:

- Align stakeholders on a common vision for Opening Day;
- Define the exact Minimum Opening Requirements that must be in place for opening to occur; and
- Prioritize any activities if required.

These Minimum Opening Requirements should specify the minimum thresholds for the safe operation of the airport and for meeting business objectives. Early identification of these minimum requirements is essential as they guide the prioritization of ORAT activities and the OSC will use the Minimum Opening Requirements to feed into the [Transition and Cutover Planning](#) and support decision making as to whether the transition to Opening Day can occur.

5.2.3. Successful Outcomes:

- ✓ **ORAT Plan updated in PMP** – the ORAT Plan template is updated to include exactly what will be delivered for the project, as well as, when and how.
- ✓ **Go-Live Milestone Schedule updated** – the full list of planned activities defined in the updated ORAT Plan are visualized in a Schedule to provide continued awareness of ORAT Needs.

5.3. Review Operational Impacts

Primary Responsibility	ORAT
Key Collaborator(s)	PM
Project Tier Applicability	Varies

This activity focuses on reviewing operational impacts by conducting an Operational Impact Assessment. The outcome of the Operational Impact Assessment is a document that provides a high-level overview of the processes, people, and systems impacted by the project. It enables stakeholders to understand the scope of the project change and its implications to their operations. Ultimately, its aim is to identify what the ORAT Program needs to address through activities such as process updates, training and familiarization, and operational exercises.

5.3.1. Step 1: Conduct Operational Impact Assessment Workshop(s)

The Operational Impact Assessment is produced through a series of workshops, facilitated by the ORAT Team, led by the ORAT Manager, that systematically evaluates the final design against current operations to assess the project’s impact on people, processes, and systems. Attendees should include representatives from impacted stakeholder groups, including frontline staff who know the operation well.

Depending on the Project Tier, several workshops throughout the duration of the project may be required to facilitate effective sessions for stakeholders. To aid delivery, operations can be organized into operational flows and steps, and workshops could be delivered to cover relevant flows and steps depending on the session length. Operational flows for an airport include passengers, baggage, aircraft, staff, goods, and waste. Each operational flow can be further divided into a series of logical steps in sequence. For example, the passenger operational flow might consist of the following steps: arriving at departures, checking in, security screening, pre-boarding, boarding, deplaning, baggage claim, and exit to ground transportation. For each operational step that the project influences, impacts of the new design should be assessed utilizing the following criteria:

New People – does a new role need to be created, or an existing job description updated? For example, adding a larger terminal footprint will impact janitorial contracts.

New Process- does an existing process need to be changed, or is a new process required? For example, introducing automated bag drop units at check-in will affect check-in processes. This is a change for the operation that should be trained and tested prior to go-live.

New System – is a new technology or asset being introduced? A new system being implemented will have impacts on wider integration, and the people and processes utilizing it. Therefore, it should be tested, information captured, and staff prepared to utilize the system.

Typically, the first portion of the workshop should provide an overview of the new design as attendees are likely unfamiliar. This will require attendance from someone a design team representative who can present it in detail. Once the design has been presented, attendees should discuss and agree on the impact on people, process, and systems for each operational step as high, medium, or low.

Application at different Project Tiers:

5.3.2. Tier III	5.3.3. Tier II	5.3.4. Tier I
1-3 Workshops may be required to complete the Operational Impact Assessment with a small number of stakeholder groups represented	4-8 Workshops may be required to complete the Operational Impact Assessment with a medium number of stakeholder groups represented	9-20 Workshops may be required to complete the Operational Impact Assessment with a large number of stakeholder groups represented

Step 2: Document Operational Impact Assessment

The Operational Impact Assessment document should consolidate the agreed high, medium, or low impact for each operational step. This then informs operations planning and readiness activities planning as the focus should be on high and medium impacts.

5.3.5. Successful Outcomes:

- ✓ **Complete Operational Impact Assessment** – the Operational Impact Assessment workshops are completed with target stakeholders, operational impacts are documented, prioritized and agreed with stakeholders to begin operations planning and readiness activities planning.

5.4. Define System & Asset Responsibilities

This activity brings together technical, operational, and delivery team stakeholders to define system and asset responsibilities. This ensures there is clarity on roles regarding new systems and assets (e.g. who is maintaining) and allows for subsequent readiness activities to be planned for appropriately.

Primary Responsibility	ORAT
Key Collaborator(s)	Ops, Mx, BT AM, PM
Project Tier Applicability	All

5.4.1. Step 1: Develop Project Owner, Operator, Maintainer, User (OOMU) Responsibilities Matrix

The OOMU matrix serves as a detailed stakeholder contact list that provides specific points of contact for various aspects of a system, asset, or process. The OOMU categories are defined as follows:

- Owner – responsible for overall oversight
- Operator – responsible for the daily or operational oversight
- Maintainer – responsible for upkeep or troubleshooting
- User – final consumer and non-CCD partners (e.g. Xcel Energy, Airlines)

The ORAT Team should develop an OOMU Responsibilities Matrix document for each system, process, or asset class during all project phases and the end state. The following approach should be used:

- Review existing master OOMU – Identify initial contacts from master OOMU.
- Focus on scope of all impacted systems – what systems are new or impacted by the project? Utilizing the Operational Impact Assessment, only focus on the systems impacted by the project and those it integrates with.
- Understand the system specifications – are there any contractual requirements that impact responsibilities of the new system? Review contract documents to understand any requirements.
- Align stakeholder groups - stakeholders will likely need facilitated discussions on who will inherit the new systems and to agree what responsibilities (Owner, Operator, Maintainer, or User) will be.
- Document a new or updated project specific OOMU - ensure a clear and concise project specific OOMU is created with version control and is shared with relevant stakeholders. Ensure that specific tenant and new system information is included in addition to the items from the master list.

The Matrix should be reviewed throughout a project and beyond, and any changes communicated to stakeholders.

5.4.2. Successful Outcomes:

- ✓ **System & Asset responsibilities agreed and documented in the OOMU** – the OOMU documents agreed stakeholder responsibilities for each system or asset.
- ✓ **Periodic OOMU reviews** – any changes in system or asset responsibilities are captured in the OOMU and communicated to stakeholders.

5.5. Develop Detailed Operations and Technology Plans and Update the CMMS

Primary Responsibility	Ops, Mx, AM, BT
Key Collaborator(s)	ORAT
Project Tier Applicability	Varies

Once impacts have been understood and responsibilities for systems defined, detailed plans for how operations, maintenance and asset management will be conducted should be input into the existing Computerized Maintenance Management System (CMMS). The CMMS should be updated by the relevant groups, facilitated by the ORAT Team.

This section refers to the development of DEN Operations, Technology Program Operations, and Maintenance Plan documents or playbooks, rather than contractually provided O&M Manuals as part of a construction handover process. The following approach should be used to ensure airport stakeholders and the ORAT Team are aligned in their development of the O&M and asset management plans.

5.5.1. Step 1: Develop Draft Operations and Maintenance Plans and Update the CMMS

At this stage, an intentional document review should be conducted by Operations and Maintenance teams to update any Operations and Maintenance Plans, such as the Preventive Maintenance Plan, Asset Management teams should update the CMMS and begin preparations to take over ongoing operation and maintenance responsibilities and manage assets.

Information, such as asset data and warranty information provided by the Contractor or Supplier is critical to undertaking these updates.

Step 2: Outline and Plan O&M implementation and training plan with Contractor & PM

Familiarize Contractor with O&M training and familiarization requirements:

- Conduct planning sessions to review training & familiarization session requirements with contractors.

If draft O&M Manuals or asset information has not been received at this point in the project, then Specifications can be used as reference. Later, the Plans can be updated as formal documents are received and install begins (e.g. asset nameplate information becomes available).

The ORAT Team should facilitate the establishment of expectations on what information is included in the documentation issued by the Contractor (e.g., asset warranty information, commissioning documentation, O&M manuals, preventive maintenance schedules, technology user guides, asset data, etc.) and support the maintenance, operations, asset management and facilities management groups to update their Plans and work with the Contractor to review draft O&Ms, spare parts, and warranty information.

5.5.2. Step 3: Update Service Contracts

Due to the specialized nature of certain building systems and/or to supplement airport staffing, DEN may outsource operations and maintenance services for select systems. To prepare for the day-to-day operations and maintenance of new facilities, airport stakeholders may need to establish new or modify existing service contracts as well as review additional staffing requirements to support the additional equipment and building footprint. Operations and maintenance groups should update their Service Contracts, supported by the ORAT Team, to facilitate providing reference information.

5.5.3. Successful Outcomes:

- ✓ **CMMS updated** – the CMMS should be reviewed and updated using new system information referencing any available contractor/supplier-provided asset information.
- ✓ **Service Contracts updated** – to prepare for operations and maintenance, service contracts should be updated to ensure seamless asset integration.

5.6. Deliver Phase: Prepare Toolkit

Checklist	Templates	Reference Resources
☐ Operational Design Charrettes	[OOMU]	[Refer to the Project Management Manual and Project Life Cycle (PLC)]
☐ Minimum Opening Requirements	]	[Project Management Plan (PMP)]
☐	ORAT Plan	[Project Delivery/Construction Schedule]
		[Draft Operations & Maintenance Plans]
		[CMMS]
		[Service Contracts]

End of Chapter

Chapter 6- Deliver Phase

6.0. Plan

6.0.1. Introduction

Purpose: To define new or updated processes; identify people readiness needs along with designing Training and Familiarization materials and Operational Exercises. To develop a Transition & Cutover plan to all feed into an Integrated Schedule.

Considerations:

- Can we ensure we are defining only new or changing processes?
- Can we use operational exercise planning to engage contractors and align expectations?
- How do we ensure stakeholder ownership of Operational Exercises?
- How do we ensure we are meeting stakeholder training needs?
- How do we ensure Commissioning inform and are aligned with the Transition and Cutover plans?
- How do we ensure enough time is factored into the Master Schedule for all ORAT activities? Has the contractor and PM aligned with the ORAT space handover timeline and deliverables?
- Has the contractor provided an O&M training team, training schedule, and identified all spec required training documents, and milestones per spec required O&M requirements?
- Are all familiarization sessions identified and documented in the ORAT handover plan?
- Have the stakeholders and contract teams finalized warranty start dates, space signoff steps, and expectations for added stock deliveries, and physical turn-over requirements?
- Are day two support contracts in place for servicing, and contract management for software, systems and new technology project components?
- Are day 2 points of contact and service expectations for support activity defined?

6.1. Identify & Support Development of SOPs and Contingency Plans

Primary Responsibility	Ops, Mx, BT
Key Collaborator(s)	ORAT
Project Tier Applicability	Varies

As a result of the project scope of change (e.g. a new system or new facility footprint), new operational processes may need to be defined or updated. The changes required should have been identified in the [Operational Impact Assessment](#). The following approach should be used to ensure impacted stakeholders, identified in [Section 2.4](#), are engaged to define SOPs, Work Instructions and Contingency Plans with ORAT support as needed.

6.1.1. Step 1: Identify SOPs and Contingency Plans

After completion of the Operational Impact Assessment, each stakeholder group will have awareness of processes requiring development or updating at a high-level. Further analysis should be conducted to:

- Identify any operations SOP documents or procedural manuals that need updating;
- Identify any Contingency or Emergency Plans that need updating; and
- Identify any further overarching/high-level processes that may not be formal documents but need to be updated and communicated to stakeholders.

6.1.2. Step 2: Support the development and update of SOPs

Processes identified as having a high or medium level of impact associated with them as they are new or changing should be intentionally discussed with key stakeholders.

The ORAT Manager can either:

- Facilitate stakeholder workshops to identify, discuss and agree upon new or changing processes with support from experts to provide any required technical information; or
- Monitor stakeholders who wish to discuss internally.

In facilitated workshops, it is important to hear from staff conducting these processes to ensure that every aspect is understood and planned for in the new facility. For complex processes, Visio Process Maps, or similar format, can be used to align stakeholders. It is also important in workshops to ensure a focus on the 'future-state' process as opposed to the 'current-state' process. Once new or updated processes have been agreed upon, it is the responsibility of the stakeholders to document them in the relevant SOP, Work Instruction, or Contingency/Emergency Plan.

Additionally, process validation exercises can take place at any point after the process has been documented to align stakeholders and confirm understanding. It is important to have validated the process through a tabletop discussion before the delivery of an Operational Exercise within the new facility.

6.1.3. Successful Outcomes:

- ✓ **Complete process review** – each stakeholder group confirms processes have been reviewed against the Operational Impact Assessment and that relevant SOPs and Contingency / Emergency Plans are up to date.
- ✓ **Complete service and support for day 2 needs** – facilitate conversations needed for establishing points of contact and day 2 service and support mechanisms for each established and new technology or system that is being included in the project scope.

6.2. Determine People Needs & Prepare Training & Familiarization Materials

Primary Responsibility	ORAT
Key Collaborator(s)	PM
Project Tier Applicability	All

The new facility relies upon people to function and staff preparedness is essential for the operational success of the facility on Opening Day. Comprehensive training programs should be implemented to ensure that end users, maintainers, and operators are completely familiar with the terminal by Opening Day, and technically trained to utilize the new facility and its assets for their job role. The following approach should be used to ensure training needs are defined and training materials prepared.

6.2.1. Step 1: Coordinate Training Needs Analysis & Assess Spec Covered Training Segments

A Training Needs Analysis (TNA) provides the opportunity to have a consistent and reliable way of capturing stakeholders' training needs. The TNA should be conducted by the ORAT Manager through stakeholder discussions and in consultation with the Project Team.

The Operational Impact Assessment, updated SOPs, and draft Operational & Maintenance Plans should inform the TNA. The TNA forms the baseline of the people readiness program and detailed planning of familiarization activities, technical training delivery, and any recruitment and induction requirements. The TNA should identify:

- Technical and operational training needs due to changing processes, systems, and/or equipment;
- Training level and type required depending on job role, including any formal technical certifications necessary for asset care and maintenance;
- Familiarization requirements because of new systems, facilities, or procedures;
- Review and understanding of official manuals and manufacturer guidance to ensure proper operation and maintenance to prevent warranty issues;
- Training plan for DEN Stakeholders, and project space owners should be individually evaluated and planned for each user group.

6.2.2. Step 2: Develop Training & Familiarization Schedule

The completed TNA should provide a detailed analysis of what training is required and to what level. This should be used to refine the Training & Familiarization Plan within the Detailed ORAT Plan into a Training & Familiarization Schedule with the specific activities that will be conducted and when they will be delivered. The Schedule should also identify which trainings may require annual renewals/reviews or to be used in future onboarding. Ensure Training & Familiarization sessions are scheduled as early as possible, and that attendance is tracked and verified. Types of Training & Familiarizations include:

Type	Description	Examples
General Facility Familiarization	Provides an overview of the general facility, spaces, functions and covers aspects that stakeholders will encounter during their day-to-day activities.	Staff entry points, paths of travel, location of amenities, employee parking, vendor delivery areas, waste disposal, use of building technology
Public Safety and Security	Orientation in life safety systems,	Evacuation routes, assembly points, access for first responders, locations of

Familiarization	emergency and security procedures	emergency equipment and phones
Systems / O&M Familiarization	Orientation in basic operation and procedures of airport systems to enhance contractual training	Shared-use terminal equipment, baggage handling equipment, gate operations, exit lane equipment, new technology for security, ticketing operations, digital signage
Operational Training	Stakeholder-specific training focused on the areas, systems, and functions relevant to the stakeholder being trained. This training may cover all the systems and operational processes	Handling of oversize inbound and outbound baggage, swing gate operation, passenger processing associated with arriving and departing passengers, aircraft pushback procedures
Technical Training (see below)	Supplier-led training on newly installed and commissioned systems	Air Handling Units, Glycol Mixing pumps, advanced lighting controls, emergency communication, conveyance systems, energy management components, systems connected to piping and cuts, access hatches

Table 1 Types of Training & Familiarizations

6.2.3. Step 3: Support Technical Training

If new systems are being implemented by the project, it is likely that the manufacturer or supplier will have a contractual obligation to deliver Technical Training. Technical Training is typically focused on system operation and maintenance and is geared towards maintenance or technical personnel. It has specific requirements defined in the contract such as number of participants and number of sessions.

Coordination of the required training with suppliers should be integrated into the ORAT Program. The ORAT Team can review training curriculums to ensure they meet the end-user’s needs and track and assure that quality delivery takes place for all systems across the project. This should be done in close collaboration with the Project Manager and Project Engineers to ensure there is not an overlap of responsibility. Useful tools for ensuring end-user needs are met include:

- Training Plan Review Checklist – to ensure it meets training best practices such as clear learning objectives, knowledge checks, and accessible content
- Session Sign-In Sheet – to enable effective tracking of attendance
- Session Feedback Form – to assess that attendees feel confident they can now operate or maintain the system
- Session Video Recording – sessions are recorded and saved for future use

Note, beyond technical training, stakeholder participation in the wider commissioning process, such as witness testing, should be encouraged as it provides opportunity for further learning and familiarity.

6.2.4. Step 4: Prepare Training & Familiarization Materials

Familiarization is normally generic and the responsibility of the ORAT Team. Familiarizations are made to provide awareness of facility spaces, systems, operations, and/or processes. It has very few limitations and can be

adjusted or presented as many times as required to accomplish the operational objectives. Familiarization programs are typically delivered on a train-the-trainer basis, and are supported by maps, booklets, breakroom videos, reference cards, and other collateral created for the purpose of educating stakeholders on the spatial changes being made to the Airport as part of the project. A familiarization journey allows for customization of materials such that individual learning styles, preferences, and circumstances can be taken into consideration when choosing a communication method.

6.2.5. Successful Outcomes:

- ✓ **Training Needs Analysis completed** – consolidated list of all impacted stakeholder training and familiarization needs
- ✓ **Training & Familiarization Schedule** – sessions are schedule as early as possible
- ✓ **Technical Training Support** – training curriculums reviewed to ensure user needs will be met and quality delivery takes place

6.3. Agree & Design Operational Exercises

Delivery of a new or modified space/system/facility should always undergo a thorough Operational Exercise Program to ensure it meets end-user requirements for operation. Operational Exercises are a series of stakeholder-focused tests that verify staff readiness to operate systems and processes, under different operating states (normal, irregular, and emergency operations). The Operational Exercise Program should be designed to test the areas of greatest risk- new and changing processes, and any new systems and facility spaces as indicated by the Operational Impact Assessment.

The Program should be progressive, starting with singular systems and processes in Tabletop exercises and Drills and ultimately leading to a full-scale operational exercise featuring volunteer passengers if required by the Project Tier. Operational Exercises vary in size, complexity and overall execution and are adapted to closely simulate actual operating conditions. Contingency processes and emergency situations should also be tested to ensure staff and facility readiness. It is critical to capture and address any operational issues that are identified during an Operational Exercise to ensure minimal impact during live operations. The following approach will be used to ensure Operational Exercises are identified and designed appropriately.

Type of Exercise	Description	Examples
Tabletop	Single or multiple process review before the ability to physically test and verify	Review of vehicle service routes
Drill	Single process testing (discrete processes, singular function, asset of isolated process), typically under normal operating conditions	Landside check-in; Wayfinding, Aircraft fit checks
Functional	Multiple process testing (more than one linked process, multiple assets, requires volunteers)	Outbound passenger flow through check-in and security
Full-scale	Multiple process and high-volume pressure testing (linkages, integration of processes) Operation of combined systems, end-to-end processes, and integrated operational scenarios. Also provides an opportunity to validate	Integration of inbound and outbound baggage handling with departing, arriving, and transfer passenger processing

	corrected issues from previous Drills	
Emergency	Tests of emergency operation, command and control, and communication procedures. Emergency Exercises may include a series of orientation and familiarization exercises for first responders, and for personnel involved with emergency operations and procedures	Terminal evacuation; Active shooter training, Explosive device disposal

Table 2 Types of Operational Exercises

6.3.1. Step 1: Identify Exercise Needs

The ORAT Team should identify the Operational Exercises that are required as a function of new or changing processes and systems, informed by the Operational Impact Assessment. A Tabletop and/or a Drill should be identified for each new or changing process at a minimum. Functional, Full-scale, and Emergency Exercises should be delivered if the project has a larger footprint with integrations across many stakeholder processes and systems.

The ORAT Team should develop the list of required Operational Exercises and seek approval from the OSC. Depending on the Project Tier and the number and type of exercises needed, the ORAT Team should begin coordination with the DEN Training & Exercise Team at this Step to ensure alignment and any required support. This will likely only be required for Tier 2 and 3.

Application at different Project Tiers:

6.3.2. Tier III	6.3.3. Tier II	6.3.4. Tier I
Functional and Full-scale Exercises are unlikely to be used at this Project Tier	Full-scale Exercises are unlikely to be used at this Project Tier	Full-scale Exercises may be required at this Project Tier

6.3.5. Step 2: Design Operational Exercises

Once the list of required Operational Exercises has been agreed with the OSC, exercises will be designed to simulate real operations. Clear objectives for each Operational Exercise must be agreed and evaluation criteria determined. Scenarios will be designed to prove the exercise objectives and scripts developed for the different roles in each scenario. Making the Operational Exercise as “real” as possible will benefit both the staff and the exercise results.

For each agreed Operational Exercise, the ORAT Team will collaborate with process/system/space owners, subject matter experts (SMEs) and end-users to design an Operational Exercise Plan defining the following items:

- Owner - who has accountability for its delivery and its pass/fail decision
- Objectives - what the exercise is proving
- Exercise Evaluation Guide- what constitutes a success vs a failure (e.g. KPI achieved, quantitative & qualitative measures attained)

- Scenarios - what scenarios will be delivered to meet the exercise objectives
- Location & Footprint - where the exercise will take place
- Dependencies - what systems need to be functional, what processes need to be agreed, what approvals granted and what training delivered prior to execution

The Operational Exercise Plans will be presented to and reviewed by the OSC for final approval before Operational Exercises are delivered in the Execute Phase. Functional and Full-scale operational exercises may require the use of volunteers, which may incur costs requiring approval.

6.3.6. Step 3: Schedule Operational Exercises

The ORAT Team should schedule preliminary Operational Exercise dates, in coordination with end-user stakeholders referring to the latest activation dates. Operational Exercises require unimpeded access to building areas and functioning systems and are therefore scheduled in close collaboration with the Project Team.

Tabletop exercises can take place any time. Drills should take place as soon as systems are ready, and the space can be cleared for access. Drills can typically be delivered in a Personal Protective Equipment (PPE)-environment (coordinating with the PM to ensure compliance based on the specific work areas). Larger exercises such as Functional, Full-scale, and Emergency likely require the space to be PPE-free and therefore are typically timed to start after the Temporary Certificate of Occupancy (TCO) construction milestone.

Schedule for coordination, pre-operational exercise inspections, ensuring safety, readiness, etc. and then Go/No-Go decisions should be built in. Additionally, consider allocating time for corrective action, re-running operational exercises, and rescheduling.

6.3.7. Successful Outcomes:

- ✓ **Identified and designed exercises** – exercises are identified and designed through the development of Operational Exercise Plans
- ✓ **Scheduled exercises** – establish timeline of which Operational Exercises will take place when

6.4. Develop Transition and Cutover Plan/ Start-Up Plan with Commissioning alignment

The objective of the transition & cutover activity is to plan how the transition and cutover will take place – what time it will occur, if it will be phased, and what primary activities are needed to support the transition. The following guiding principles should be considered:

Primary Responsibility	Contractor
Key Collaborator(s)	ORAT, PM, Cx
Project Tier Applicability	All

- Opening Day should be driven by a state of readiness, rather than a date,
- Phased Opening can mitigate impacts to stakeholders,
- Sufficient time should be given post TCO, pre-Opening Day for final fit-outs, Operational Exercises and Issue Resolution,
- Commissioning activities should be completed prior to cutover, and
- No hard opening dates should be published in the media before there is assurance that these dates can be met

6.4.1. Step 1: Develop Transition and Cutover Plan

The ORAT Team should develop a Transition and Cutover Plan informed by the [Minimum Opening Requirements](#) defined in the Deliver Phase: Prepare. These Plans are crucial for ensuring that all necessary elements are in place for the transition and cutover, facilitating the smooth movement of people and equipment into the space, and the commencement of operations. Effective logistical planning will help mitigate risks during Activation. This Plan should also consider:

- Opening Strategy - there are a range of Opening Strategy and Transition tools available, and one should be selected as per the nature and risk profile of the project. All opening strategies must be carefully coordinated with end-users and stakeholders to minimize service interruptions and/or reductions in capacity. Opening Strategies include:

Type of Opening	Description
Phased	Progressive opening of phases, a ramp up into full operation
Big Bang	One large scale opening with no ramp up
Hard Opening Date	Follows a strict deadline that must be achieved and cannot slip
Soft Opening Date	Follows a proposed date that allows for slippage should more time be needed to revisit project requirements

Table 3 Types of Opening Strategies

- Move Plan - it is important to identify requirements around the physical move component early in the project. Moves are widely recognized to be stressful, expensive and time-consuming and as such it is important to engage early on with a Move Coordinator (if applicable) to support the planning and execution. Aspects to consider:
 - Type of move (e.g. Airport, project, or tenant led)
 - Roles and responsibilities

- Logistics requirements
- Schedule dates for the moves - consolidated, phased or overnight moves, any opportunities for early moves
- Inventory of items to be relocated including furniture, equipment, services, points of connection, and IT requirements
- Operational dependencies (e.g., Business Technology & IT, Systems and Facilities, Staff and Goods, Routes in/out, and Emergency Access & Evacuation)
- IT coordination for common-use equipment and interfaces with airline/tenant host servers
- Any specific requirements or proprietary processes that might not be supported by the Move Coordinator (if applicable) and may require additional coordination such as interfaces to airlines/tenant technology
- Decommissioning of spaces, equipment, or services that are being vacated
- Construction coordination and alignment
- Cutover contingency / fallback planning

6.4.2. Step 2: Develop Transition Checklists and Review

In collaboration with Commissioning, and DEN stakeholders, the ORAT Team will develop a series of Transition Checklists to track the state of readiness moving towards Opening Day. The Transition Checklists are developed to document and track 90/60/30-day milestones to Opening Day and the Room Readiness Checklists are developed to assure the readiness of each room for each tenant.

A primary component to the Checklist development includes inventorying all transition activities that are required to be completed by the Airport, project team, agencies, and tenants. Checklists are used for tracking, reporting and communicating status of transition activities. Transition Checklists are comprehensive lists of tasks, related to either a system, process or facility, that need to be accomplished to support the opening. Unlike construction or commissioning checklists, Transition checklists are stakeholder-focused and tasks are grouped by working group. The Transition Checklist development is a collaborative effort, led by the ORAT Team, and assisted by stakeholders, tenants, agencies and contractors to validate. After the Checklists are finalized and approved by stakeholders, the ORAT Team manages them, reviews progress relative to the construction schedule and project milestones, updates them as necessary, and reports back on status. The completed Transition Checklists may be employed to confirm stakeholder sign-off. The level of detail and type of checklist required for a project largely depends on the size and scope of the project.

6.4.3. Successful Outcomes:

- ✓ **Minimal risks to Activation** – Transition and Cutover plans sufficiently reduce risks during activation through considered logistical planning and scheduling of transition activities.
- ✓ **Keep Stakeholders Informed & Aligned on Deliverables**- Provide cohesive information to all stakeholders for deliverable accountability and timeline awareness.

6.5. Develop ORAT Milestone Tracker

Primary Responsibility	ORAT
Key Collaborator(s)	PM
Project Tier Applicability	All

A Milestone Tracker that integrates construction, commissioning, and ORAT activities for the project should be developed by the ORAT Manager in consultation with the PM and contractor. For the ORAT Program, this enables the Project Team to be aware of when ORAT activities will take place and their dependencies, as well as ensures ORAT is incorporated and woven in throughout the lifecycle of the project instead of a closeout activity. Alignment with the ongoing design of operational exercises and construction activities facilitates the development of operational readiness countdowns, tracking and reporting of ORAT milestones relative to construction progress, and identification of risks owing to construction issues or delays.

6.5.1. Step 1: Develop ORAT Tracker

The ORAT Team should develop a detailed ORAT Tracker, aligning to a Go-Live Schedule developed by the contractor and incorporating detailed ORAT activities with durations and dependencies. At this point in the project, the specific ORAT activities that will be delivered should be known through the development of a detailed ORAT Plan.

These activities should be established in a Schedule program (e.g., MS Project, MS Excel, P6 or Smartsheet) when able, but may be captured in an Excel spreadsheet.

6.5.2. Step 2: Align ORAT Schedule in Program Schedule

Using the ORAT Schedule, the ORAT Manager should ensure ORAT activities are captured in ORAT Milestone Tracker and communicated to the PM and contractor. Not all activities need to be included, just those on site and requiring alignment to construction and commissioning milestones.

6.5.3. Successful Outcomes:

- ✓ **ORAT Milestone Tracker** – single GORAT reference updated to include construction, commission, and ORAT activities to act as a single source of truth for scheduling of activities for the ORAT Manager.

6.6. Deliver Phase: Plan Toolkit

Checklist	Templates	Reference Resources
☐ Master Checklist	[Training Needs Analysis]	[Refer to the Project Management Manual and Project Life Cycle (PLC)]
☐ ORAT Milestone Tracker	[Training and Exercise Plan]	[New or updated SOPs]
		[Contingency Plans]
		[Training and Familiarization Materials]
		[Transition & Cutover Plan]

End of Chapter

Chapter 7- Deliver Phase

7.0. Execute

7.0.1. Introduction

Purpose: To deliver the Training and Familiarization and Operational Exercises program including System and Facility Activation and Handover.

Considerations:

- How do we ensure the Training and Familiarization Program is effective?
- How do we successfully coordinate all the moving parts – System and Facility readiness with people readiness and Operational Exercise delivery?
- Are there opportunities to support the transition of ownership through operator involvement in testing and commissioning activities?
- How do we ensure that Opening Day is based on operational readiness not construction completion?
- How do we ensure a smooth, well-coordinated Transition?
- Where do we want to be 90 / 60 / 30 days out from Opening Day?
- When do we publicize Opening Day in the media?
- Does the project need a follow-up SRA from Airport Safety or third party?
- Does the project trigger an SRA in accordance with the DEN SMS Manual? (The DEN SMS Supervisor determines SRA necessity)

7.1. Track Asset & System Activation and Handover

Primary Responsibility	AM, Mx, BT
Key Collaborator(s)	PM, ORAT
Project Tier Applicability	All

At Handover, the formal transition of ownership of systems and facilities from the contractor to DEN takes place. On some projects, assets and systems may be activated into operational use prior to formal Handover at substantial completion but maintenance responsibilities may remain with the contractor/construction team until Handover is complete with all necessary documentation. The following approach should be used to ensure construction and Airport stakeholders track facility and system status throughout the delivery phase to prepare for Handover.

7.1.1. Step 1: Develop the Handover Plan/Schedule for Assets and Systems

The Project Manager should provide clear information on when assets and systems will be turned over to DEN, and when DEN assumes responsibility for them. This should be documented in a Handover Plan or Schedule, developed by the Project Manager. Key aspects to consider as part of this Handover Plan include but are not limited to:

- Document and Knowledge Transfer: Early O&Ms, as-built drawings, training materials, Service Level Agreements
- Additional stock turnover: Ensure all additional stock documented, turned over the owner, and signed off with delivery transmittal by both owner and GC
- Commissioning and Testing confirmation: Functional testing, acceptance testing and commissioning documentation
- Asset Lifecycle information: Asset register, maintenance plans, warranty information and spare parts
- Support points of contact/ processes for day 2 issues and resolution

The ORAT Team should ensure that Asset Management, Business Technology, and Maintenance groups are aware of the Handover Plan to enable them to prepare accordingly. The ORAT Team should also review that the Handover Plan aligns with the [Minimum Opening Requirements](#) regarding which assets and systems are required for a smooth transition to opening.

7.1.2. Step 2: Track Activation and Handover

The ORAT Team should compile a general Asset and System Activation Checklist using information provided by the Project Team. Onsite inspections need to be undertaken to ensure construction and commissioning activities are proceeding in alignment with the agreed Schedule. This activity is intended to inform ORAT planning and operational risk mitigation, not become an assessment of construction status or specific assets. The Asset and System Activation Checklist should be used by the ORAT Team to prepare operations and maintenance requirements at the time of transition.

7.1.3. Successful Outcomes:

- ✓ **Agreed requirements and plan for Handover** – all parties agree that the physical asset is complete, meets design criteria, and is “ready for operation”. Sign-off may be required via memo from the Project to verify handover and acceptance
- ✓ **Complete list of readiness activities** – to easily track, report, and communicate the status of Activation

activities with stakeholders

7.2. Collect Asset Information, Critical Spares & Prepare Technology Support and Management Plans

Primary Responsibility	AM, PM
Key Collaborator(s)	ORAT, Ops, Mx, BT
Project Tier Applicability	All

As the project transitions into operations, the contractor or supplier should provide the required asset information and any critical spares to DEN, as required. The Project Manager is responsible for ensuring this information is provided to Asset Management and Maintenance groups to enable them to update asset records and to prepare Technology Support and Management Plans. The role of ORAT in this step of the PLC is not to collect the asset data, but rather ensure the Project Manager, Asset Management, and associated stakeholders exchange information necessary for information collection.

7.2.1. Step 1: Collect Asset Information

It is essential that asset information handover is aligned with the project turnover or when the Airport formally assumes responsibility of ownership, including operation and maintenance. Airport stakeholders responsible for maintaining the facility should be notified of this assumed responsibility of ownership, including partial utilization of building systems or areas that may be put into service prior to a building stage completion. The asset information provides the necessary tools for efficient operation and maintenance of the new facility and includes, but is not limited to:

- Operation and maintenance manuals,
- Asset data,
- Warranties (including start and end dates),
- As-built and record drawings,
- Critical spares list,
- Training material (e.g., record of attendance, training videos, training syllabus)

The ORAT team will track that this information must be transferred far in advance of Handover to enable the Airport to make decisions and execute other readiness tasks.

7.2.2. Step 2: Acquire Critical Spares List

The critical spares list is an essential component of the asset information that should be provided by the contractor or supplier to the Asset Management and Maintenance teams at Handover. If spares themselves are not received as part of Handover, at minimum, a critical spares list should be provided as identified by the Specifications and Contracts. The PM should review this list and make the necessary arrangements to ensure spares can be procured quickly in a failure and that operational contracts include future provision of critical spares. The ORAT Team should track that this activity takes place and support the PM to receive information from the Project Manager, if needed.

7.2.3. Step 3: Prepare Technology Support Plans

Business Technology Project and System leads should develop system support plans documents to define how the new technology will be supported and maintained. These plans can include information from the systems O&M manuals and technical user information. BT teams should work closely with the ORAT team to provide documented plans for support information and processes for all day 2 systems use, issues, and maintenance.

To ensure a smooth transition and rapid generation of benefits from the investment, this information must be completed and fully embedded into maintenance workflows and solutions prior to Handover. Maintenance software and systems should be populated, and staff provided with information they need in a form that enables them to understand the operation and the tasks they must perform to safely and efficiently use and care for the facility. This information includes, for example:

- HAZOP and other safety and environmental analyses with associated documentation, strategies for inspection, training, certification, etc.
- Control system, historian, and alarm system configuration information (hardware addresses, conversion parameters, loop parameters, etc.)
- Reliability analysis for all critical equipment including all information and strategies for inspection and preventive maintenance (PM)
- Material masters and supplier data bases for direct and maintenance, repair and operations materials fully initialized in the facility's procurement software
- Operating, inspection, and maintenance procedures
- Defined processes for managing new operational technology systems and issue resolution

7.2.4. Successful Outcomes:

- ✓ **Effective information handover process**— Stakeholders clearly articulate the kinds of information the Airport needs and how it will use that information to operate and maintain the facility
- ✓ **Operation & Maintenance information embedded into workflows** – provide O&M systems and staff with information they need in a form that enables them to understand the operation and the tasks they must perform to safely, efficiently use and care for the facility

7.3. Deliver Training

Primary Responsibility	PM/ORAT
Key Collaborator(s)	AM, Mx, BT
Project Tier Applicability	All

Effective training delivery is key to a successful transition from a current to future-state. For a new facility to operate effectively, staff must be confident in their roles and able to respond in any situation.

The tracking and reporting of overall readiness of critical operational staff is essential to ensure the smooth execution and reliability of Operational Exercises and overall staff readiness for Opening Day. The following approach will be used to ensure all training and familiarization activities are scheduled, delivered, tracked, and progress reported to the OSC.

7.3.1. Step 1: Coordinate and Execute Training and Familiarization

The ORAT Team should coordinate with stakeholders as early as possible to deliver against the Training and Familiarization Schedule. Considerations for attendance include role prioritization, shift patterns, and inclusion as a participant in the Operational Exercises. Leaders from stakeholder groups will need to play an active role in identifying staff and ensuring their presence at sessions.

The activities and sessions should be delivered in line with the [Training and Familiarization Schedule](#) and the materials developed earlier in the ORAT Program. At each session, attendance should be recorded via attendance forms or Workday, and feedback received.

7.3.2. Step 2: Track People Readiness Progress

The ORAT Team should track people readiness progress via recorded attendance. Where training and familiarization is not overseen by the ORAT Team, such as with technical training, they should receive attendance registers from the Trainer. A People Readiness Tracker should be established to consolidate and monitor the percentage of completion and overall readiness of critical operational staff. This tracker is developed and maintained in consultation with each of the stakeholders who have an operational resource within a facility. By developing this tool early, it will allow for tracking of individual stakeholder progress and a clear status for reporting overall program readiness. The Trainer should proactively monitor employee performance, acceptance, participation rates and gather participant feedback across all Training and Familiarization activities delivered to stakeholders.

Training and Familiarization activities may continue long after Opening Day due to the continual onboarding of new staff. Trainers will continue to collect training delivery data post to evaluate the ongoing effectiveness.

7.3.3. Successful Outcomes:

- ✓ **Training assurance and staff readiness** - upon completion of Training and Familiarization, staff are prepared to demonstrate proficiency during the Operational Exercises

7.4. Deliver Operational Exercises

Primary Responsibility	ORAT
Key Collaborator(s)	Ops, Mx, PM
Project Tier Applicability	All

The delivery of Operational Exercises is dependent on functioning systems and equipment, trained staff, and having unimpeded access to relevant building areas. Once these prerequisites are met, Operational Exercises can be performed with the intent to identify and resolve any issues with systems, processes, or training in a controlled environment. An Operational Exercise is complete when the exercise has been carried out, participants, volunteers, and observers have been debriefed, and all Operational Exercise results and feedback have been collected. The following approach will be used to ensure all Operational Exercises are appropriately scheduled and delivered for the project.

7.4.1. Step 1: Develop Controller and Evaluator Handbook

The logistics and resource requirements for each Operational Exercise will depend on the complexity of the Exercise, the areas in scope, and the number of volunteers participating. Tabletops and Drills may not require as much logistics support (e.g., providing Operational Exercise materials such as scripts may be all that is required). Functional and Full-scale Exercises may require significantly more logistics and resource support (e.g., preparing staging areas for volunteers, catering, volunteer incentives, bussing/transportation and publicity and communications support).

A Controller and Evaluator Handbook, developed by the ORAT Team, is a step-by-step script detailing what is required from Operational Exercise volunteers and participants to ensure the objective is met. This document will detail the run-of-show and key responsibilities during the exercise delivery. It provides guidance for participants and instructions on how to successfully take part in the exercise to achieve the testing of a particular process, function, or facility.

7.4.2. Step 2: Monitor Status of all Dependencies

For an Operational Exercise to be delivered, all dependencies (e.g., training delivery and facilities and systems activation), should be complete. The ORAT Team should collaborate with the Project Team to understand the status of all dependency items and, if needed, adjust the schedule to allow the Exercise to be delivered.

7.4.3. Step 3: Schedule a Go/No-Go with the OSC

Once the Operational Exercises have been scheduled, and the Controller and Evaluator Handbook completed, the ORAT Manager should schedule a Go/No-Go with the OSC 48/24 hours prior to the Operational Exercise date for final review of all dependencies and potential conflicts. Before commencing each Operational Exercise, assessments will be made to:

- Establish that all dependencies have been met and if not, assess whether approved workarounds are in place,
- Equipment and systems have been confirmed to be functional,
- Confirm necessary resources (people, equipment, site access) are available,
- Confirm that all logistics are in place

A Go/No-Go decision is made based on these assessments and clearly defined Go/No-Go criteria before executing any exercise. If a “Go” decision is made, the Operational Exercise will be executed in accordance with the agreed upon Controller and Evaluator Handbook. If a “No-Go” decision is made, the Operational Exercise

may be postponed to a later date, the project risk register needs to be updated, and a Go-Live risk assessment completed for each failed process.

7.4.4. Step 4: Execute Operational Exercises

Operational Exercises are executed in accordance with the established Controller and Evaluator Handbook and the agreed schedule. Operational Exercises commence with Drills, which test a subset of the overall operations process and allow readiness assessments to be made on a small scale to confirm the effectiveness of the subset process. This then progresses to Functional exercises, which confirm, on a small scale, the effectiveness of the full end-to-end process. Optionally, the Operational Exercise plan may include a series of exercises to assess fallback and emergency scenarios, which assess emergency processes. Culminating in Full-scale exercises, which are a combination of drills to test combined system operation, end-to-end processes, and integrated operational scenarios.

7.4.5. Step 5: Collect Observer Feedback

Critical to Exercise delivery is capturing feedback using prepared feedback forms received from exercise volunteers and observers. They offer the opportunity for open-ended feedback and are easily analyzed and collated post-operational exercise execution. Specific observer feedback forms for select SME observers may be created to collect observations and feedback regarding a specific function, process, or feature.

7.4.6. Step 6: Compile an Exercise After Action Review (AAR) and record issues raised by Operational Exercise in the Issues Tracker

This is the concluding phase in the Operational Exercise process and its main output is the AAR. After each Exercise, an analysis is performed to review participant feedback to determine if the Operational Exercise objectives and exercise evaluation criteria were met. An AAR is produced as an accurate record of outcomes of the Exercise, and details, whether the Exercise passed or failed, issues identified and prioritized, and action items assigned. The results of the Operational Exercise will be reviewed and evaluated to determine the necessity of:

- Corrective action (captured in the [Issues Tracker](#))
- Process changes or new fallback procedures
- Re-running an Operational Exercise, or portion of an Exercise

7.4.7. Successful Outcomes:

- ✓ **Demonstrated Operational Readiness** – confirmation of system or asset implementation, updated processes, and staff training
- ✓ **Issues identified and assigned for resolution** – issues captured through observation and feedback are assigned or escalated to the appropriate stakeholders for resolution

7.5. Mobilizations & Space Handover

Primary Responsibility	Move Coordinator
Key Collaborator(s)	ORAT
Project Tier Applicability	All

Whether the Airport is embarking on a completely new build or simply shuffling operational and tenant space arrangements, move management is a core component of the [Transition and Cutover Plan](#). Even a small move can consist of many connected parts that need to be synchronized, and it’s the collective job of the ORAT Team, move coordinator, and facility managers team to make sure that the day-to-day operations of the Airport are not heavily impacted in the process. If stakeholders are not properly looped in and all the variables considered, a move can quickly cost more and take longer than anticipated. The following approach will be used to ensure Mobilization and Space Handover is appropriately delivered for the project.

7.5.1. Step 1: Onboard Move Coordinator and Prepare Moves

The ORAT Team and/or Project Team should identify or onboard a Move Coordinator when it becomes necessary to relocate people, services, and equipment on a larger scale. The Move Coordinator should be responsible for planning, scheduling, and coordinating the logistics of the relocation.

The ORAT Team and Move Coordinator will collaborate with stakeholders to schedule tenant walkthroughs to verify space, flag issues, and identify furniture, equipment, or service locations. Issues with the space may be escalated as needed, and furniture/equipment locations may be collated and relayed to the move specialists.

7.5.2. Space Handover Roles and Responsibilities Matrix – Created to define key handover roles and responsibilities, the matrix should include:

- *Handover Points of contact (Moving company, ORAT Manager, contract installation teams)*
- *Signage & Wayfinding Updates – Timing and locations of all signage, Passenger Processing, and Construction material changes*
- *Space Access – timing for core removals, lock programing, or key handover*

7.5.3. Step 2: Execute Space Handover and Moves

The ORAT Team and Move Coordinator should execute stakeholder moves; provide support during stakeholder relocations including advice regarding security procedures, access, and pass functionality as well as delivery of goods. Move communication collateral should be created to support the delivery of critical information and key messages regarding the move, including but not limited to:

- Move schedule e.g., move date, packing and unpacking dates,
- Changes to operation during move-in,
- Available move support,
- Contact information for FM, IT, etc.

After the move is complete and the relocated staff becomes familiar with the space, the Move Coordinator shall follow-up with the stakeholder’s point of contact to collect any post-move punch list items to be completed by appropriate parties.

The methods and frequency of communication delivered to each stakeholder should be appropriate to the Project Tier.

7.5.4. Successful Outcomes:

- ✓ **Minimal disruptions to operations** – through planned and coordinated moves, ideally executed during off-peak hours or seasons if possible
- ✓ **Minimizing remedial work post space moves** – through tenant walkthroughs to verify space, flag issues, and identify furniture, equipment, or service locations

7.6. Transition & Cutover

Primary Responsibility	ORAT
Key Collaborator(s)	PM
Project Tier Applicability	All

The final activity in the Deliver Phase, Execute, is to verify the completion of construction and planned ORAT activities and deliver transition and cutover. The following approach will be used to ensure operational readiness at activation and a smooth transition into operations.

7.6.1. Step 1: Execute various Turnover Checklist Items

The [Turnover Readiness Checklist](#), developed earlier in the ORAT Program, details the activities needed for operations groups to be ready to inherit the new systems and/or spaces. The ORAT Team should facilitate the responsible owners checklist to ensure they are completed in a timely manner. A regular meeting can aid in ensuring owners are held accountable to complete their items.

7.6.2. Step 2: Schedule a Go/No-Go with the OSC

Vital to the success of the transition process, and the final countdown to opening, is a Go/No-Go decision point on the opening date. Validation checks on the proposed opening date should be made progressively throughout the project with key milestones highlighted in the overall ORAT program to assess the viability of the proposed opening date. As the project advances, the ORAT Team should conduct regular checks to evaluate the likelihood of achieving the target Opening Day. A risk assessment should be performed, considering key indicators such as construction completion, training and familiarization completion, and operational exercise completion. The target Opening Day should be regularly reviewed against the current perceived risk.

- If, at the time of assessment, the risk is perceived to be high and sufficient mitigation cannot be put in place to reduce the risk, the Working Group should recommend to Senior Leadership whether to delay the Opening Day.
- If, at the time of assessment, the risk is perceived as medium or low, with sufficient mitigation in place to reduce the risks, then the Opening Day should be endorsed by the OSC, and the project should proceed with transition plans towards the final countdown.

The final assessment for activation should be made at the 30-day countdown period (at the very latest), considering all measures as well as the results of the 90- and 60-day countdown process. The same assessment practice will be followed to give a final Go/No-Go decision for the Opening Day. The status of key indicators for activation and risk mitigation plans should be communicated to stakeholders as needed. Key issues that may affect the activation date include:

- construction progress
- system installation & commissioning progress
- acceptance of facilities and systems
- stakeholder readiness
- recruitment, training and familiarization progress
- unresolved critical issues raised during Operational Exercises
- achievement of statutory certification

Step 3: Support Go-Live

The final countdown to opening is the most critical period, marked by intense activities and numerous relocations and moves. A clear central command and control process is crucial for success during this period. This process should monitor and manage the moves, resolve issues as they arise, and mitigate risks as needed.

Large transition projects often require a task force to coordinate the activation and go-live time period. Their mission is to coordinate the technical, operations, and procurement teams and keep stakeholders informed of the project status, make cross-functional decisions, and, crucially, resolve operational complications.

The task force should be composed of employees familiar with the transition project scope, assigned resources, and task schedule so they can manage the transition and issue coordinate. issues. These employees should be identified at least a month in advance to ensure they are prepared for go-live. Over the go-live period, this task force will have overall control of the transition process and ensure any activities to deliver it are coordinated and executed.

Most facility activations include a launch event. While arranging this event should not be the responsibility of the ORAT Team, close coordination is necessary to ensure the event's timing is appropriate and does not impact opening and readiness activities. The timing of the launch event and the actual opening date should not coincide; previous experience has shown that launch events can occur either before the Opening Day (typically with a soft launch or long migration) or after the Opening Day with an 'official opening' celebrating a successful transition. By coordinating the event around a successful ORAT Program, a positive public relations message can be presented without impacting operational readiness preparations and activities.

7.6.3. Step 4: Identify post-opening support requirements

Once the ORAT Program has been successfully completed, and the facility has been opened to the public, core members of the ORAT Team are recommended to perform a monitoring and evaluation function to determine if the facility is operating as expected, including the following reviews:

- coordination of any remedial works required
- validate that service support teams for technology and maintenance are able and prepared for supporting systems and facilities
- handover of all ORAT documentation
- recommendations to improve facilities or operational processes related to facilities and/or equipment

7.6.4. Successful Outcomes:

- ✓ **Opening Assurance** – by verifying the completion of construction and planned ORAT activities, and support activation

7.7. Deliver Phase: Execute Toolkit

Checklist	Templates	Reference Resources
☐ ☐ Master Checklist	[Contractor/ Mover RACI for Handover] [Controller and Evaluator Handbook] [ORAT Exercise After Action Review] [Operational Exercise Documents] [Controller and Evaluator Handbook] [Observer Feedback]	[Refer to the Project Management Manual and Project Life Cycle (PLC)] [Asset Information] [Critical Spares List] [Maintenance Plans] [Go/No-Go Meetings] [Handover Plans for Assets and Systems]

End of Chapter

Chapter 8- Closeout Phase

8.0. Introduction

Purpose: To provide on-going support for issues resolution, ensuring changes are embedded and there is a sustained operation

Considerations:

- Have we celebrated our successes?
- Who is responsible for Issues Management & Resolution?
- How do we ensure performance is monitored?
- How will learning be embedded to improve our next project?

8.1. Issue Management & Resolution

Issue Management as previously defined is the process of identifying, analyzing, resolving, and preventing problems that can arise during project implementation. The following approach will be used to ensure issues are properly captured and actioned by stakeholders.

Primary Responsibility	ORAT
Key Collaborator(s)	Ops, Mx, PM
Project Tier Applicability	All

8.1.1. Step 1: Update ORAT Issues Tracker

The ORAT Team should actively be utilizing the [Issues Tracker](#) and/or the ORAT Tracker, developed during the Define Phase and used throughout the project to compile issues raised throughout the delivery, and specifically issues observed and raised during each Operational Exercise and on Opening Day. The ORAT Manager should work with stakeholders to ensure they take ownership and report their open issues and track their resolution.

Issues should be tracked by the ORAT Manager until 1-month post-Go-Live. Following that, Issues should be turned over to relevant Stakeholder Groups to continue through their own resolution processes.

8.1.2. Successful Outcomes:

- ✓ Clearly defined issues resolution ownership – of activation and “Day 2” issues

8.2. Support Lessons Learned Review or 30-60-90 Day Follow-up

Primary Responsibility	ORAT
Key Collaborator(s)	PM
Project Tier Applicability	All

Learning occurs on every project. We learn from our own project experiences as well as the experiences of others. Project managers, team members and leadership should all participate in the lessons observed sessions, review the outcomes and make decisions on how to use the knowledge gained. Sharing lessons learned among project team members prevents an organization from repeating the same mistakes and allows them to take advantage of organizational best practices. Innovative approaches and good work practices can be shared with others. Lessons observed can be used to improve future projects and future stages of current projects. The following approach will be used to ensure lessons learned are captured and stored for reference on future projects.

8.2.1. Step 1: ORAT Support in Hotwashes and Lessons Learned Workshops

The Hotwash is a structured debrief held immediately after a project has been completed and activated. Its purpose is to gather critical operational feedback from on-the-ground stakeholders as they familiarize themselves with new or modified operational areas and identify immediate needs. Depending on the project's scope and complexity, Hotwashes may recur within the first week of operations to support a smooth transition and ensure stabilization of stakeholder activities. They can be applied to projects of any scale to facilitate rapid feedback, address emerging issues, and strengthen coordination during early operational phases.

A Lessons Learned review takes place no sooner than 30 days after project completion to ensure full activation and stable operations. Conducted either individually or collectively, these workshops include key representatives from all impacted stakeholder groups. The review evaluates every aspect of the project, capturing insights from stakeholders, employees, and passengers to form a comprehensive project assessment. Lessons Learned workshops identify successes, challenges, and areas for improvement, supporting stronger ORAT planning, design coordination, construction impact management, stakeholder engagement, training, and operational handover for future projects.

8.2.2. Step 1a: Conduct 30-60-90 Day Follow-up with Stakeholders

In instances when a full hotwash or Lessons Learned discussion is not needed, the ORAT Manager may send follow up communications at 30-60-90-day intervals to identify any concerns about the project. These communications include questions including, but not limited to the following:

- Is the project operating as intended?
- Are there any maintenance or operational issues encountered to date?
- Any adjustments or considerations to address?

8.2.3. Successful Outcomes:

- ✓ **Continuous Learning** – from lessons learned to improve future projects and future stages of current projects

8.3. Close Out Phase: Toolkit

Checklist	Templates	Reference Resources
☐ Master Checklist	[ORAT Lessons Learned Presentation] [30-60-90 Day Follow-up Email]	[Refer to the Project Management Manual and Project Life Cycle (PLC)]

End of Chapter

Ongoing Operational Readiness Projects

8.4. Introduction

Purpose: To provide consistent readiness planning for recurring projects ensures stakeholders, systems, and processes to remain aligned and preserve infrastructure throughout each cycle.

Considerations:

- Is this work scheduled with other maintenance or project initiatives?
- Is a stakeholder briefing or refresher periodically required?
- Are operational readiness considerations documented and referenced on a recurring basis for each cycle?
- Have updates or changes to stakeholder contacts, procedures, or infrastructure been accounted for since the last occurrence?
- What recurring disruptions or risks have emerged in past years, and how are they being mitigated this time?

8.5. Establish a Recurring Operational Readiness Framework

Primary Responsibility	ORAT
Key Collaborator(s)	PM
Project Tier Applicability	All

8.5.1. Step 1: Define scope and triggers for each cycle

For recurring projects, like seasonal reactivation of infrastructure or phased gate openings, ORAT can clearly outline what initiates an ORAT cycle for a recurring process (e.g., gate rehabilitations, annual pavement rehab). From there, criteria is established to signal when readiness planning should begin so teams aren't caught off guard. The ORAT Manager should discuss with the Project Manager any updates or alterations to the project's cycle to identify areas which may need adjusting from the operational readiness side.

Step 2: Identify and formalize stakeholder roles

Recurring projects often involve the same core teams (Airside Ops, Terminal Ops, Security, BT, Airlines, Asset Management), so it's essential to define their roles in a way that carries over from one cycle to the next. Consider confirming points of contact and assigning standing roles to specific individuals (e.g. Airline Coordinator, Airfield Liaison) to reduce ramp-up time.

Step 3: Align recurring timelines with Ops and construction timelines

Work backward from known construction phases or operational change windows. Develop a readiness calendar that maps to quarterly or semi-annual cycles, and incorporate flexibility for scope changes or delays. Include tactical planning identification and alignment with other ongoing and one time construction to ensure project deconfliction.

Step 4: Standardize and centralize toolkit items for recurring projects

Create a consistent suite of ORAT tools that are specific to the activities associated with recurring projects and can be reused or lightly customized each cycle through review with the Project Manager. Store these in a central location to promote cross-project consistency and reduce redundant work.

Successful Outcomes:

- ✓ **Consistent Stakeholder Engagement** – Stakeholders across departments (e.g., Terminal Ops, Security, Airlines) are clear on their roles, expectations, and timelines at the start of each cycle, reducing ramp-up time and eliminating confusion about responsibilities
- ✓ **Reusable Toolkit and Process Templates** – Standardized ORAT tools are actively used and easily adapted for each cycle, increasing efficiency and ensuring consistent quality across projects

8.6. Run the Operational Readiness Cycle

8.6.1. Step 1: Host periodic familiarization seminars

Host periodic or cycle-specific familiarization session to review current project details, stakeholder changes, and upcoming operational impacts.

Use this as the moment to reconnect the ORAT team, Project Team, and stakeholders with the context and expectations for this iteration.

Primary Responsibility	ORAT
Key Collaborator(s)	PM, Ops, Mx, BT, AM
Project Tier Applicability	All

Step 2: Facilitate Readiness Touchpoints

Each readiness cycle should include targeted engagement activities that reflect the anticipated operational impacts. These activities serve to validate plans, identify potential gaps, and confirm alignment across departments. The format should be selected based on the complexity and risk of the upcoming change to end state and operational response to construction activities. The goal is to ensure all affected stakeholders are aligned on expectations, understand their responsibilities, and are prepared to respond effectively when the change is implemented. These engagements should be documented and integrated into readiness tracking tools to support transparency and follow-up.

Step 3: Adjust, and escalate as needed

Even within a recurring structure, each cycle may introduce new variables. To maintain momentum and minimize disruption, the ORAT team can assist in supporting flexible response mechanisms that enable timely decision-making. These can include predefined escalation paths, rapid coordination channels, and clear ownership of issue resolution. The ORAT team should actively monitor risks or misalignments and be empowered to convene the right stakeholders quickly. By embedding responsiveness into the process, the team can adjust to emerging conditions without losing alignment or delaying key milestones, ensuring the project stays on track while maintaining readiness integrity.

Successful outcomes:

- ✓ **Shared understanding** – Stakeholders review each cycle with a clear grasp of current project details, recent changes, and expectations, resulting in stronger coordination throughout the cycle
- ✓ **Responsive Execution** – When unexpected conditions arise in routine cyclical projects, clear response paths allow for timely decisions and issue resolution, keeping milestones and readiness on track

8.7. Capture Lessons Learned and Prepare for Recurring Cycles

Step 1: Periodic Debrief during cycle

A brief but structured debrief can document what worked and what didn't. This can capture lessons learned, assess stakeholder feedback, and identify opportunities for improvement. These sessions should involve a cross-section of participants – ORAT, project teams, and key operational stakeholders – to gather diverse perspectives. The debrief should be short but purposeful and aimed at reinforcing what's working. These touchbacks become a feedback loop that strengthens each subsequent iteration.

Step 2: Update documents and tools

Capturing and summarizing key takeaways throughout recurring project supports a culture of continuous improvement and operational learning. By documenting what was learned, what changed, and what gaps emerged, the Project Team helps preserve institutional knowledge that might otherwise be lost between cycles or across staffing changes. Accessible summaries allow teams to revisit insights when planning future iterations, reducing repeated missteps and reinforcing what works well. This approach also helps maintain alignment across departments by creating a shared reference point for decisions, priorities, and outcomes by strengthening collaboration and ensuring lessons are carried forward in a meaningful way. The ORAT Team can assist the Project Team in identifying and capturing these lessons learned from an operational standpoint.

Step 3: Incorporate lessons learned into the cycle

Anticipating previously observed trigger points, such as scheduled turnovers, construction milestones, or seasonal operational shifts, enables the ORAT team to collaborate closely with the Project Manager to begin readiness preparations early. This foresight reduces reliance on reactive planning and supports more deliberate coordination across teams. Early engagement improves stakeholder availability, clarifies resourcing needs, and ensures operational considerations are fully integrated into the project timeline. Over time, this proactive approach reinforces consistency, predictability, and accountability, embedding readiness as a core element of each project cycle.

Successful outcomes:

- ✓ **Informed Adaptation** – Regular debriefs capture real-time insights and stakeholder feedback, enabling the team to refine processes and approaches with each recurrence while maintaining alignment across participants
- ✓ **Preserved Knowledge** – Documented lessons and updates to readiness tools ensure that improvements are retained across cycles, reducing knowledge loss and supporting continuity, even as teams or project conditions change
- ✓ **Proactive Execution** - Incorporating operational lessons learned into early planning helps mitigate recurring risks, align stakeholders earlier, and position the ORAT team to deliver consistent, well-coordinated readiness outcomes

8.8. Ongoing Operational Readiness Projects: Toolkit

Checklist	Templates	Reference Resources
☐ Master Checklist	ORAT Lessons Learned Presentation	[GARDI Lessons Learned Tracker]

End of Chapter