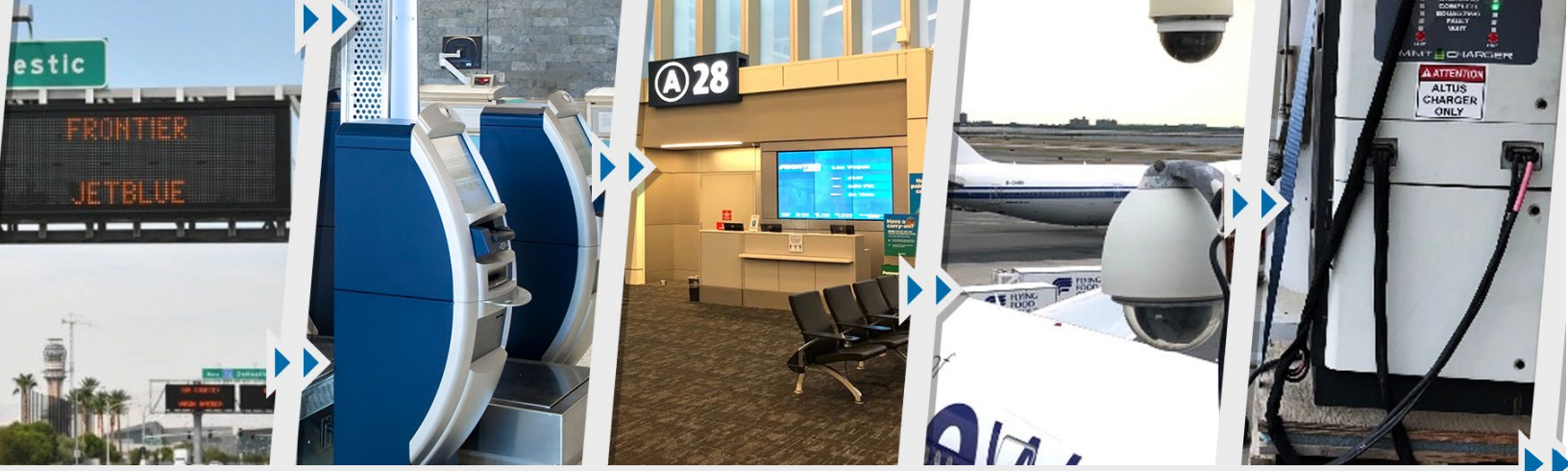The following document is supplemental to *ACRP WebResource 17: Developing a Holistic Airport Common Use Program* (ACRP Project 03-52 "Guidelines for Adapting and Managing Airport Common Use Programs"). The full WebResource can be found at https://crp.trb.org/acrpwebresource17/.

Developing a Holistic Airport Common Use Program

Airport Executive Summary

The air travel industry is always on the move. Having experienced record highs and lows financially, as well as unprecedented operational challenges stemming from numerous global external events, it has been characterized by some as *hyperdynamic*. The effects of such continual and rapid evolution upon airports demonstrate the necessity and opportunities inherent in prioritizing operational flexibility. The adoption and strategic implementation of a common use philosophy can be a powerful enabler of operational flexibility, meeting the needs of all stakeholders and enhancing the guest experience.

Defining Common Use—A Broadening Term

Common use is an operating philosophy that refers to the use of facilities, services, and infrastructure in a shared manner by multiple airport stakeholders (such as airlines, federal agencies, business partners, concessionaires, and any other entities doing business at the airport). This enables completely flexible use of space, whether during times of flight expansion or contraction, and it can greatly enhance the overall efficiency of all facets of operations. This alone can help defer brick and mortar expansion costs—bytes instead of bricks. This flexibility is paramount during times of work on the facility, whether maintenance, renovation, or even entirely new space.

It can also enhance the customer experience when used to ensure the facility can accommodate a sizeable number of passengers at any given time, and that in a very friendly manner. Statically leased or assigned space is not conducive to a customer-friendly situation, particularly in a growth environment, as more flights are often placed into a space that is not sized to accommodate the passenger load. The result is a spillover that nobody appreciates—least of all, the customers—from chairs to the floor, and often to adjacent gates or other areas.

All these benefits come with a *truly* common use environment. However, at many airports, common use has "already been implemented" and is now viewed through the rather limited lens of "just something that the IT department installs and/or maintains." There is a conceptual box that has been placed around common use, as shown in Figure 1.

Figure 1: The Box of Common Use

This includes the following systems:

- Agent-facing systems with associated peripheral devices (boarding pass printers, bag tag printers, card swipes, boarding gate equipment, and bar code reading equipment)
- Customer-facing systems, such as self-service kiosks, with the Common Use Self-Service ("CUSS") standard confirmed by IATA and rolled-out by airports and airlines in the early 2000's
- Associated dynamic signage systems, which in the early days were not well-integrated and comprised rather tedious manual systems and monitors that may or may not have displayed the precise color used by the air airline logos

While The Box has brought immense value to a great number of airports, the passing of time, the progression of technology, and the trial by countless operational scenarios and irregular operations have shown that *a much broader view of common use is necessary* to fully gaining the flexibility that common use can enable. Years of lessons learned are causing some airport operators to rethink their approach; they are starting to open The Box, as shown in Figure 2.

Figure 2: Opening The Box of Common Use

This open box includes systems and processes that directly support airport, airline and passenger needs, such as: signage, including all types and functionality; curbside check-in and self-bag drop functionality; VOIP phone system integration; outbound and inbound baggage processing; wired and wireless network infrastructure; ramp systems and control; electrical recharge units; analytics systems; biometrics-based systems; airport operational databases (AODB); resource management systems (RMS); and many others spanning all facilities, services, and stakeholders in the airport environment.

A Holistic Common Use Perspective and Program

The open box common use operating philosophy can be applied to **potentially everything** in the airport environment. Airport operators with this view have a *holistic* common use perspective. This perspective is one in which everything is on the table and everyone is involved, as shown in Figure 3.

Figure 3: Holistic Common Use Perspective

An airport operator with a holistic common use perspective needs an accompanying program to plan and manage common use efforts. Figure 4 presents the key elements of such a program.

Figure 4: Key Elements of a Holistic Common Use Program

The Box of common use is already in place at several airports—or at least in specific terminals—and there is no question as to the benefit, even in a rather limited implementation. Yet most of these programs have yet to embody a truly holistic perspective. But is this really that important? And if so, why would that be the case?

The following reasons shown in Figure 5 make a holistic common use program a *necessity* for those that wish to operate their airport efficiently and serve their airline partners, stakeholders, and customers effectively.
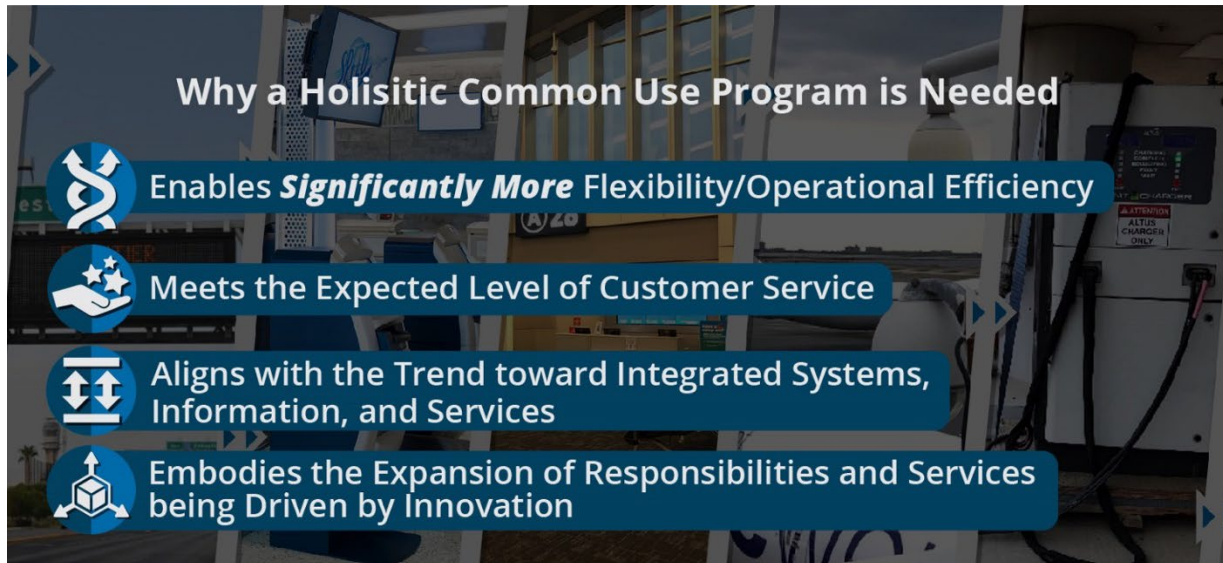

Figure 5: Why a Holistic Common Use Program is Needed

How the Holistic Common Use Perspective Plays Out in an Airport

KEY FACTORS THAT DRIVE SPECIFIC NEEDS OF A HOLISTIC COMMON USE PROGRAM

In the context of a holistic operating model, every airport has a mix of criteria that makes it truly unique, starting from different points and perspectives, and needful of its own roadmap. Figure 6 presents these Key Factors.

Figure 6: Factors that Drive Specific Needs of a Holistic Common Use Program

The WebResource provides a full breakdown of these factors and how they contribute to what can form a starting point for an airport operator.

PROGRESSION AND NEED FOR ADVANCING AT DIFFERENT LEVELS

The progression of the core common use elements over time will largely look similar at most airports, with the scope and scale varying based on the extent that each element brings value to each given airport. For illustration purposes, Figure 7 presents 5 levels to describe the typical progression of common use at airports. See the WebResource for full descriptions of each.
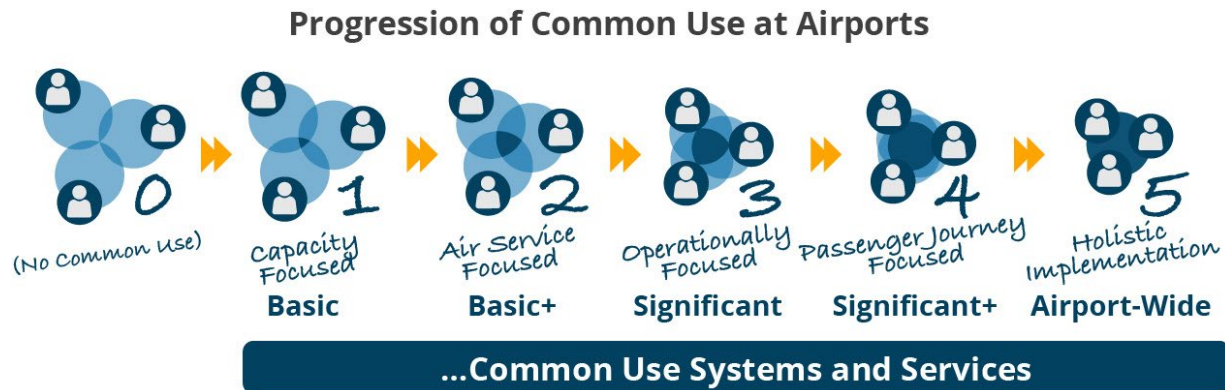
Progression of Common Use at Airports

0	1	2	3	4	5
(No Common Use)	Capacity Focused	Air Service Focused	Operationally Focused	Passenger Journey Focused	Holistic Implementation
	Basic	**Basic+**	**Significant**	**Significant+**	**Airport-Wide**

…Common Use Systems and Services

Figure 7: Progression of Common Use at Airports

STAKEHOLDERS INVOLVED

Virtually every airport employee has some level of involvement in a holistic common use program because the program itself becomes the new operating culture of the airport. This includes executives and staff in the following business functions: operations, facilities, maintenance, planning, business, properties, air service development, public affairs, customer service, passenger experience, technology, and innovation. In short, a holistic program runs through the entire matrix of an organization: top-to-bottom and left-to-right, including and involving even external stakeholders.

Common Use Self-Assessment

The WebResource provides an Assessment and Planning Worksheet that airport stakeholders can use to capture their current state with common use and start to plan for the future. The assessment includes the major sections of assessing the visionary philosophy / methodology; challenges and opportunities; holistic progression level; stakeholders leading and involved; issues and challenges by stakeholder group; and systems, equipment, emerging technologies, data, and services.

Developing a Common Use Program

Figure 4 presented the key elements of a common use program, which are governance, relationship development, strategic elements, management, and sustainability. The following provides a summary of each of these areas.

GOVERNANCE

Since a more holistic approach to common use is rooted in the desire to *best meet stakeholder needs*, the common use program should have checks and balances to *ensure that any future efforts fully align* with the needs of the airport and its key stakeholders, such as airlines and regulatory agencies. A governance program provides these needed checks and balances, consisting of effective principles, processes, and practices that define the authority levels and responsibilities necessary to achieve the airport's mission, vision, and objectives—all in complete alignment with the airport governance approach.

In building effective governance structures, there are four outcomes or objectives that airports should seek, as shown in Figure 8.

Figure 8: Specific Outcomes of Common Use Governance

STRATEGIC ELEMENTS

To ensure the program has a strong foundation on the business goals of the airport, and to set in motion an intelligent plan, it is important to define the common use program's management framework, including a strategic plan, architecture, and implementation plan, as shown in Figure 9.
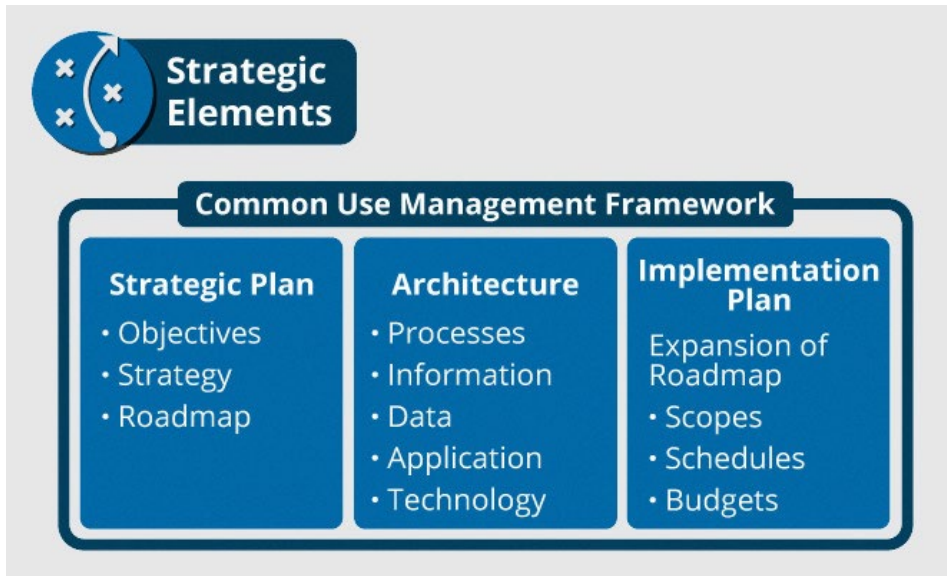
Figure 9: Strategic Elements of a Holistic Common Use Program

IMPLEMENTATION OF SOLUTIONS

As an interlude between the planning and management elements of the common use program, the WebResource provides what can be considered as evergreen content to be referenced during each common use implementation process.

Launching Common Use Initiatives

It is first important to consider best practices in project definition and requirements development, as summarized in Figure 10. Though these are more typically seen in system implementation projects, keep in mind that much of this can be applied to other initiatives such as new methodologies or processes.
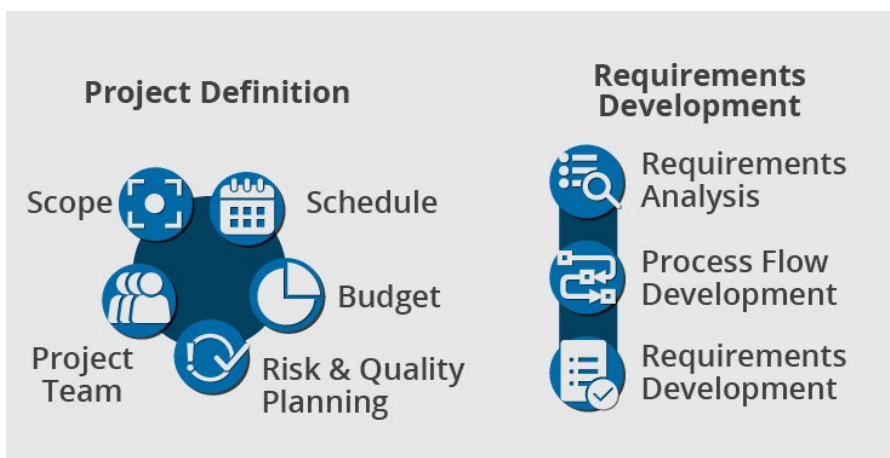

Figure 10: Project Definition and Requirements Development

Procuring Common Use Initiatives

There are many variables to consider when procuring common use solutions, including the type of solicitation being used and the strategy for solution providers. Based on these variables, there are key solicitation requirements that should be included and essential evaluation criteria that should be considered, as shown in Figure 11.
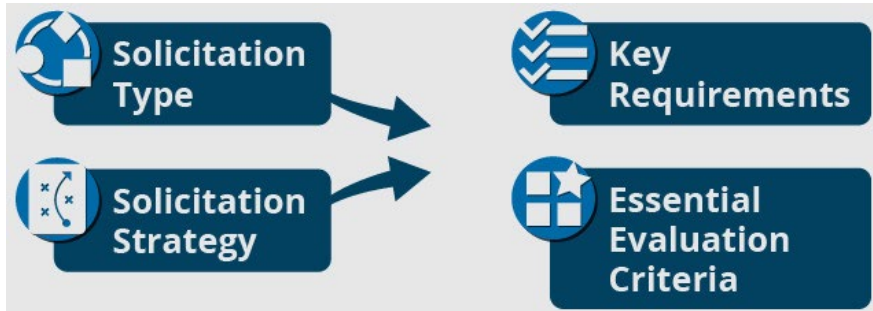

Figure 11: Solicitation Variables, Requirements, and Criteria

The WebResource describes the solicitation types of system implementation and facility construction and the solicitation strategies of single solution provider, multiple solution providers, master systems integrator, and support services providers. These choices impact which key requirements are identified in a solicitation and which evaluation criteria are deemed essential.

PROGRAM MANAGEMENT

Management of the common use program requires a series of interrelated processes that ensure that the common use program remains in alignment with its governance objectives. It is also best to formally identify a team that is responsible for these areas, as shown in Figure 12.

Figure 12: Management Team and Areas

Ideally, each division within the airport would provide representation as part of a collective management team that maintains responsibilities for that division's inputs to the common use program, including the business functions noted earlier: executives, operations, facilities,

maintenance, planning, business, properties, air service development, public affairs, customer service, passenger experience, technology, and innovation.

This leads to the overall areas of **governance alignment** (keeping the program in alignment with its objectives), **implementation** (ensuring future implementations are managed well and transitioned into operation), **support** (providing the support, security, and controls needed for operational use), and **evaluate** (measuring performance and compliance).

PROGRAM SUSTAINABILITY

In considering the future of a common use program, an airport operator must start from where they are today and take the appropriate next step for their specific situation. There is no "one-size-fits-all" model of common use, so the next move forward must be uniquely tailored to fit the airport. Figure 13 presents ways to help sustain a program into the future.

Figure 13: Sustaining Your Common Use Program

Collaboration is essential to overcoming challenges and improving how the common use program operates, and it should extend beyond the boundaries of the organization, to external stakeholders and other industry players through involvement in working groups and attendance at conferences. It is also important to keep a finger on the pulse of the latest trends to identify innovation opportunities and plan how to increase the benefits provided to the airport through innovation. And as time passes, seek to expand the program to best meet the needs of a changing organization.

Thanks for reading the Executive Summary of the ACRP WebResource for Developing a Holistic Airport Common Use Program. Visit the website and look for the Deep Dive, which provides the full set of content, rich with examples and analysis of key concepts.