

A Better Take on Technology

Integrated Technology Project Delivery Minimizes Airport Project Turbulence



When Terminal 2 at San Francisco International Airport opens next year, passengers will experience a new facility with cutting-edge features such as preferential parking for electric and hybrid vehicles and a reclaimed-water reuse program. What they won't see is the complex technology system that keeps everything from check-in kiosks to baggage carousels running smoothly.

With its many components, an airport's technology system is one of the most intricate of any operational facility. When everything works in sync, the technology seamlessly keeps travelers secure, helps them navigate the airport and, ultimately, reach their destinations.

Overseeing the design and implementation of the multifaceted systems that run an airport can prove challenging. Technology vendors often aren't familiar with the traditional design-bid-build construction process. Systems are typically designed individually — without coordination — creating extra steps and adding time and expense.

Working as One

With decades of aviation project experience, Burns & McDonnell has learned firsthand that when one entity takes charge of navigating a complex airport system, it pays off in the long run.

As program manager for the terminal improvement project at Kansas City International Airport (KCI) in the early 2000s, Burns & McDonnell worked with the owner to select a system integrator to coordinate all technology projects under a single umbrella.

Burns & McDonnell assisted the owner in selecting a vendor based on best value and experience, not just price. The selection of a system integrator resulted in fewer change orders and faster project delivery.

The process implemented at KCI, known as integrated technology project delivery (ITPD), was not originally planned. But Burns & McDonnell, having seen ITPD success on projects for the federal government, knew the same advantages could be achieved on airport technology projects.

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With the support from the Kansas City Aviation Department's management, legal and contracting staff, and particularly the director of technology, Burns & McDonnell worked closely with the system integrator to provide overall direction and keep all project team members up to date. Using a system integrator was integral to meeting the client's budget and schedule and contributed to the project's completion on time and within budget.

Experience Pays Off

Ron Crain, director of KCI's information technology department during the terminal improvement project, now leads the ITPD effort at Burns & McDonnell.

“The process of ITPD is not a new one,” Crain says. “The approach has been used many times with success, but the practice is rare in the intricate world of airport systems. At KCI, we learned how successful it could be on an airport construction project.”

Burns & McDonnell has been building on the knowledge gained at KCI and has developed a team of engineers and information technology specialists that can apply their skills to projects related to aviation and beyond.

The firm is working with design-build contractor Turner Construction to provide elements of ITPD on San Francisco International Airport's Terminal 2. Burns & McDonnell helped Turner prepare technology specifications and select subcontractors and is leading the vendors through construction. The effort includes coordination of access controls, flight and baggage information displays, system automation, wireless networks, and other airport systems as one turnkey product.

The \$383 million redevelopment project in San Francisco began in September 2008 and is scheduled to be completed in March 2011.

“Having one entity coordinate vendor selection and manage the technology design effort allows for flexibility with the owner, designer, construction manager and vendors,” Crain says. “That results in a seamless process. With everyone working together, we can determine what is best for the project.”

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