




o perations in practice

the newsletter of o&i consulting

www.oandiconsulting.com

issue 2
spring 2010

contents: passenger screening focus

-  an experience to remember?
balancing needs and expectations when designing passenger screening operations
-  o&i consulting projects
an overview of recent projects in areas including passenger security screening, baggage, maritime and telecoms
-  visualising change
providing statistical and visual views of operational change to assist decision making

an experience to remember?

We look at the role of passenger security screening in influencing a passenger's airport experience and an operator's ability to achieve its objectives.

What does your departure process say about your airport? Does it reflect the kind of airport you are or would like to be? Fresh and different with a 'new' experience for your passengers; slick and seamless with short queues and waiting times; or simply not memorable – for all the right reasons!

Does your departure process leave your infrequent flyers calm, your frequent flyers satisfied, families unstressed...? And as an operator, are you achieving your security and service standards, retail targets, desired public image...?

Passenger security screening plays a central role in influencing a passenger's experience of an airport and an operator's ability to achieve its objectives. But designing this function to meet all levels of expectation is a major challenge, particularly given the rate of change that we are currently experiencing in passenger search.

passenger security screening: what is changing?

'Everything' is probably a slightly exaggerated answer; but certainly enough to force compromises in design and service.

Technology; regulation; threat levels; passenger demographics; airline influenced changes, such as how an increase in online check-in affects passenger show-up times; and passenger expectations are some of the areas of change that are influencing passenger screening. Finding a solution that balances an efficient operation with the appropriate image and service for *your* airport is a tough challenge.

New technologies are certainly one of the main drivers of physical change in this environment at the moment. They help operators to meet regulatory standards and heightened levels of security, with the added potential of achieving operations efficiencies.

However, achieving security and throughput levels cannot be left to new technology alone. Indeed, if technology driven changes are not well thought through and implemented effectively, throughput can in fact be reduced as new technology is introduced.

For new technologies to work well, broader change is required. From a production perspective, they need to be part of an integrated set of facilities, equipment, staff and processes appropriate to your operation: a planned system of logical processes, procedures and work methods carried

out within carefully designed security screening layouts scaled up to ensure sufficient capacity. These processes need to perform predictably and consistently. They need to be sufficiently flexible to accommodate controlled modifications as regulation, technology or other external factors change, and they need to 'work' for all of your passengers.

On the subject of passengers, they too are bringing degrees of change to airport screening. Fluctuations in passenger numbers, the split of passenger types and how they travel both in terms of habits and time are key areas. So your capacity needs to be prepared to handle different passenger types with different levels of experience of the required processes, with differing numbers of bags/items per passenger and with different show-up profiles across the operational day, week, and seasons. We also stress here each passenger group has different levels of user experience of new technologies and processes, which lead to different service needs and expectations. And then there is the less tangible 'travel experience' aspiration to consider.

From a cost perspective, it is important to understand the implications of your aspirations in terms of infrastructure costs as well as key measures such as labour costs and square metres per passenger. Is your desired level of change a viable option financially?

All this needs to be brought together within the context of your overall service objectives. How do you introduce change to meet your efficiency and passenger experience goals?

changing your passenger screening operation

Safety, speed, cost, ambience and perception all have a role to play in today's modern passenger security screening environment. The balance of these will differ depending on what you want for your operation, where you want to take it in the future, your budget, and what your passengers want and need.

First, define your operational requirements in terms of function, technology and service, and what you aspire to as an operator. Talk to your passengers about what they want and consider what you want. Don't assume you will want the same and of course don't assume all passengers want the same either. Also, don't assume that your ideas are a no-go if your passengers (or even regulators) are initially somewhat reticent. Provide them with more information and understanding of your ideas, perhaps invest time into undertaking Human Factors style testing to see how they respond.

all things considered...?

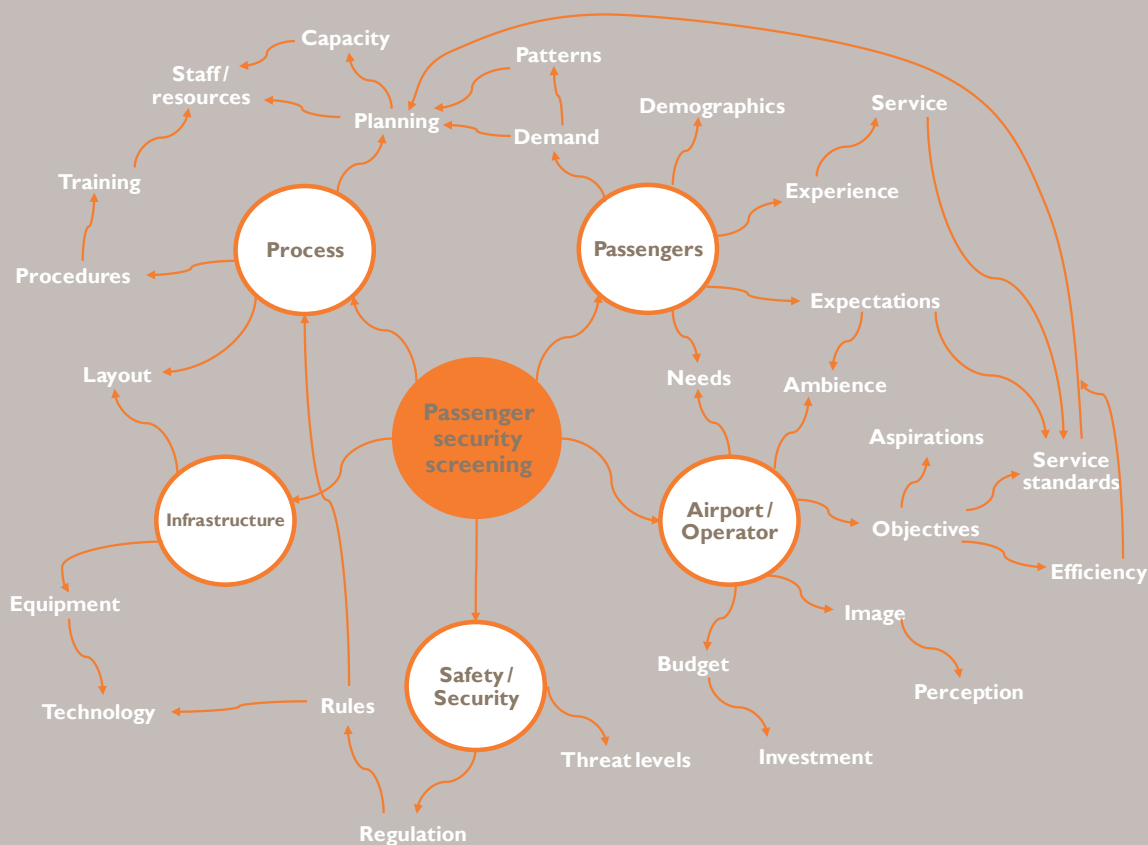


Figure 1

The diagram provides an overview of some of the key factors that need to be considered when designing and improving passenger screening operations.

Observation is a great tool to really understand needs. Observe passenger behaviour, by passenger type, as they move through your current operations. Where are they comfortable? Where do they need guidance?

Introduce them to new technologies, in live or in test situations. Watch how they interact – how they approach equipment and use it. Where and how do they react to automation? Where do they need to be prompted? This will help you to understand what you can do to make the process intuitive and logical, with technologies that are simple to use, making your passengers feel at ease.

Observation and measurement will also help you identify if there is a distinction between the processing requirements of different passenger types. Do some have greater needs than others, e.g. more facilities or service, more direction and instruction? Do passengers need to be segregated based on these requirements? Business passengers may call for speed and little assistance, after all they do this all the time. Families may require more support and human interaction.

Whatever your conclusions, there will be inevitable changes to processes, procedures and layouts. Engineering an efficient and logical end-to-end screening process that integrates the desired equipment is one thing; making it meet the needs of your users in a “user friendly” way is another. The feedback from your research will be invaluable. You will understand how passengers and items flow between functions, where your passengers may require human guidance or whether visual assistance such as signage, colour coding and other more discreet messages are sufficient.

This work will also guide you on the relevant image and ambience for your screening area. Customer service representatives, plasma screens, art, music... how far do you go?

providing the desired service

No matter how good they ‘look and feel’, processes managed sub-optimally by the wrong number of staff operating the wrong number of facilities, not conforming to established process and not well supervised, will result in poor service and/or unnecessary manpower costs. Changes in facilities, equipment or processes all typically require a rebalance of the supply of resources.

In planning capacity, it is necessary to have a clear view of the service standards you would like to achieve and how you can achieve them. You may choose to have one defined service standard for all passengers. However, some passengers may require longer to pass through the process or require more staff members to guide them and you may decide to incur some additional cost to ensure that your passengers receive the service that they expect. On the other hand, depending on your service strategy, you may wish to differentiate by passenger type. This could involve providing certain passengers with a premium service offering (e.g. business class passengers), which will have implications for capacity planning.

One thing that all passengers have in common is that they do not want long waiting times, queues and congestion. With a complete picture of passenger demand patterns, for all passenger groups, across the operational day, week and seasons, current production rates and service standards it is possible to plan capacity and support appropriately. This will ensure that facilities and resources are available at the right time, that passengers do not have to wait unnecessarily and that the process is tuned to the needs of the passenger types using it.

finding the balance

In defining their passenger screening ‘product’ operators are challenged with balancing needs and aspirations, and customer expectations and operational objectives, alongside weighing up investment and cost savings.



Figure 2



Figure 3

creating the experience

Process, planning, waiting times, customer service, communication, and atmosphere all contribute to the customer experience. What would you like your customers to experience?

maintaining performance

It is one thing to introduce your aspired process, yet it is another to achieve and maintain performance targets.

The definition of successful performance will differ by operator. Continuously complying with security regulations is a given; consistently achieving target throughput and productivity, a relaxed and inviting ambience, short queues and waiting times, retail profit margins... are just some of the other possible airport objectives we have touched on in this article.

“Achieving one’s objectives requires a long-term view and coordinated approach to implementation and change management and calls for participation and commitment from all operational levels. Otherwise, it is possible that initial benefits, good service and best practice will be replaced by old habits and sub-optimal performance,” explains David Calder, who has helped international operators with such challenges for many years.

An important step is educating operations teams, supervisors and management in all elements of operational change: new technologies, processes and procedures, service levels and features, passenger expectations, capacity planning.

This should be coupled with coaching in the areas of managing the new process, providing customer service, measuring and managing performance, identifying issues and bottlenecks, responding quickly or even being proactive to potential issues based on available information. Unfortunately it is not enough to have a perfect space and good layout, well planned processes and the right number of staff.

The principles of production management, more commonly employed in the motor industry, were founded on the principle that every employee understands their part in the grand plan. Quality is designed into every process, and staff are trained to optimise the total process. In aviation passenger security screening we have adopted new layouts and technologies. We have an opportunity to further improve in these areas but also to improve the way we train and manage our staff, the way we segment and manage our ‘guests’, and the way we develop and deliver an appropriate service for those guests.

For more information regarding our approach or how we can help improve your operation, please contact:

David Calder, Director

davidcalder@oandiconsulting.com

reference projects

Operations Planning

International Airport, Baggage handling system capacity planning and modelling

o&i consultants completed a baggage handling system demand and capacity study at a major international terminal to ensure future planned BHS developments are appropriate in terms of both scale and timing.

We analysed the existing BHS demand and used future planning schedules to determine when, where and how much additional capacity is required. Our work considered a range of scenarios that address variations in key drivers such as baggage ratios, equipment capabilities and allocation methodologies.

A key element of this project was the development of a capacity modelling tool, with user guide, to assess BHS constraints and pinch-points and enable the airport company to conduct future capacity assessments.

BAA, Olympic Games preparation

Olympics planning and operations development for Heathrow Airport in preparation for the 2012 Olympic and Paralympic Games.

Operations Improvement

Daisy, Scoping study

Provided business consulting expertise in a review of activity in the customer services department of this UK based business telecoms service provider in order to identify opportunities to improve performance and service.

current projects

We are currently working on assignments in the following areas:

- Goods and waste flow survey, analysis and solutions in the rail sector
- Arrivals process capacity review for a UK airport
- Automated boarding process design for an international airport
- Baggage handling capacity improvement for an international airport
- Traffic forecasting to support master planning for an airport operator



o&i consulting has been providing operations expertise to national and international organisations in the aviation, maritime, rail and telecoms sectors.

Recent projects have included:

BAA, Passenger security screening continuous improvement

For 6 months, an o&i consultant performed the role of interim performance improvement manager for BAA at Heathrow's Terminal 3, focussing on the passenger security screening operation.

The role involved baseline measurement of existing processes, followed by development and trialling of new processes and operational layouts designed to improve throughput rates and customer service, whilst maintaining high levels of security compliance.

An important part of this work has been improving supervision and performance management in the area by introducing appropriate performance metrics, coaching supervisors to manage production and process, and establishing robust supervisory routines.

Operations Design

Costain, Passenger screening area relocation

Demonstrated the potential to meet future passenger search capacity and processing requirements at a large international airport in support of a Costain proposal.

o&i consulting determined capacity requirements to meet peak hour demand, and developed plans and 3D drawings to illustrate the possibility of centralising and relocating passenger security screening operations. The diagrams included operational detail such as associated passenger flows and security lane designs to accommodate new technologies.

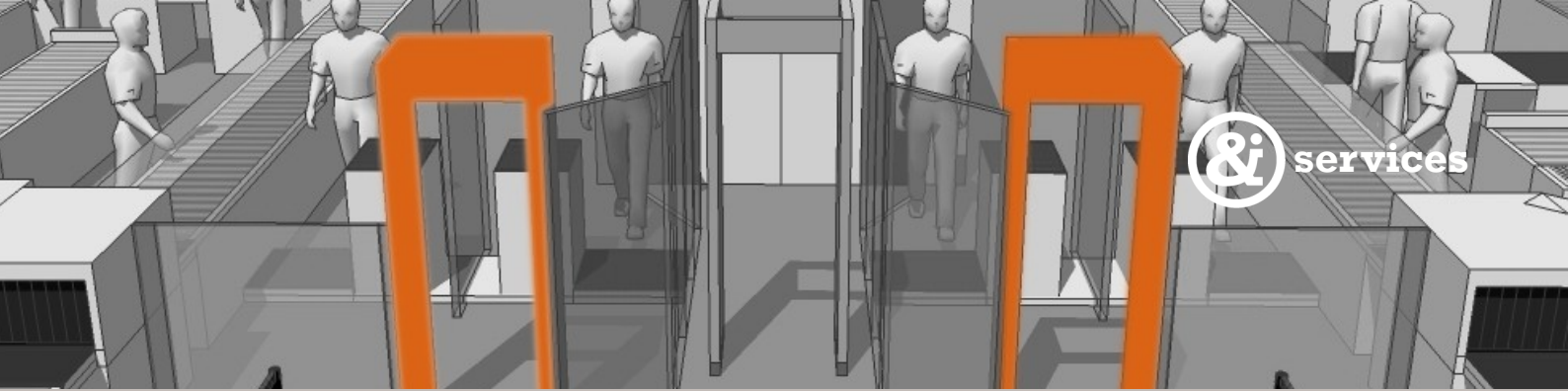
Norfolkline, Vehicle flow management

Process design, procurement and project management support for a vehicle control barrier system.



“For a small company that was set up during a tough period economically, we are extremely pleased with our progress. We can look back on 10 months that have brought us positive results, new customers, new sectors and continued solid relationships with valued clients, contacts and friends. We thank all involved for their contribution,”

Paul Bloch, Director



visualising change

In this and future issues of our newsletter, we will feature a series of short articles that provide a greater insight into how we work and elements of our offering that you may not know about. Our first article of this kind looks at the level of detail we offer to demonstrate our solutions to clients.

As the aviation industry works hard to recover from the effects of recession, operations improvement investments are, understandably, not taken lightly.

Sometimes the operational statistics that justify making improvements just aren't quite enough to convince decision makers, even when they demonstrate cost savings or improved revenue potential.

Sometimes aviation operators require an additional level of detail or an extra dimension of visual support to assist in their decision making process.

Bringing together the statistical and visual detail to explain operations improvement is part of what we do for clients; we help to bring an operation to life and demonstrate the merits of change.

The numbers may make perfect sense. They may identify the operational constraints; they may detail the areas of opportunity and they may quantify their benefit.

We justify our solutions to the finest detail. We provide transparency of information: from the production rates, service standards, number of staff and passenger profiles to

the spatial capacity, facility dimensions and so on. But sometimes you just need to see it to believe it.

Before making the decision to go ahead and demonstrate a solution in live operation, it is understandable that a client may wish to visualise how their operation will change. They may require additional information to be confident that they are making a sound investment, that it is appropriate for their operation and for their employees, and that they understand what their customers will experience.

We help to bring airport and airline operations to life. Not only do we develop 2D layouts and 3D images, we help our clients to understand the complete picture by building a storyboard of facts and images.

This approach provides you with a tangible solution from two perspectives, statistically and visually. You understand not only how long it will take to process your passengers, how many you can process and the number of facilities and employees you require throughout the day, but you are able to visualise the entire process experience, from waiting in the queue to leaving the process.

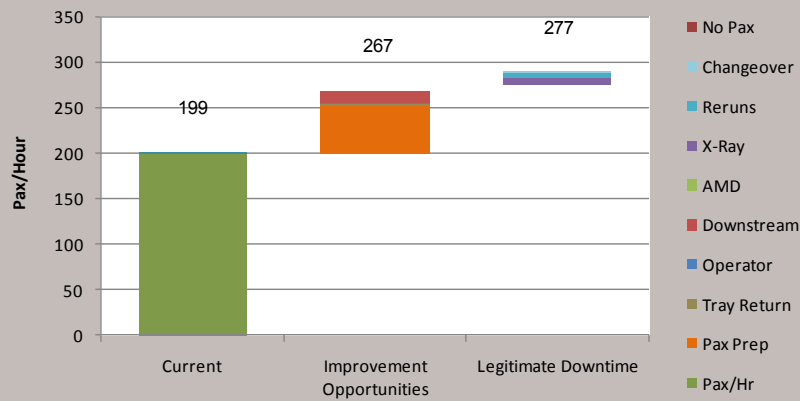
These layers of information are valuable in justifying the decision whether to trial and implement. They also act as useful tools for internal and external communications, coaching and training.

For more information regarding our approach or how we can help improve your operation, please contact:

nevillecoss@oandiconsulting.com

understanding the statistics, process and experience

Figure 4

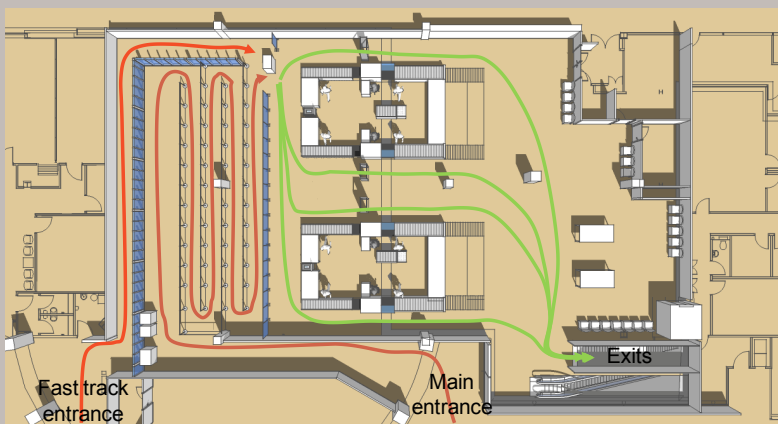


To successfully change your operation, it is important to understand it inside out.

Our approach provides clients with the statistical details to ensure the right process, layout and experience design choices are made.

For example, in Figure 4, we demonstrate the areas of lost production capacity in a passenger screening operation and quantify opportunities to improve passenger throughput.

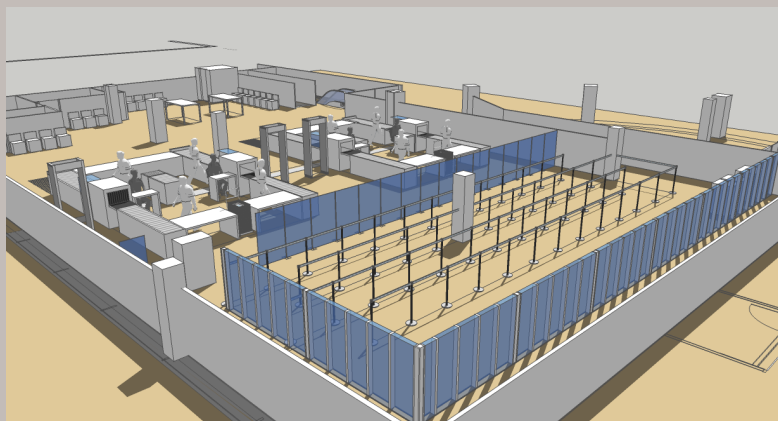
Figure 5



These days a good design needs to deliver on many levels: efficiency, functionality, practicality and experience to name a few.

We help our clients to understand how we will capitalise on improvement opportunities, how layout and equipment changes will fit into available space and how passengers will flow through the facility.

Figure 6

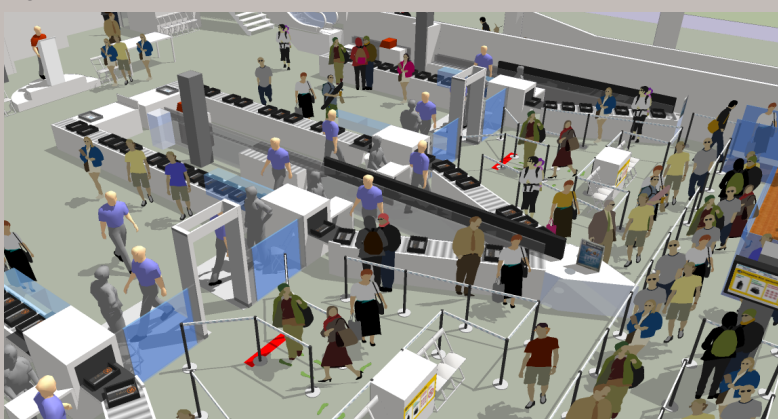


Visualising the customer and staff experience is often the hardest part when presented with a new process design.

Figures 6 and 7 are just two examples of the 3D perspectives we are able to provide to our clients.

They help to bring to life new layouts and demonstrate live operation without incurring the high cost of animation.

Figure 7



“We bring together the statistical and visual details to bring an operation to life and help clients to understand the merits of change,”

Neville Coss, Director

contact our team

- Paul Bloch** Aviation and Distribution Operations Specialist
paulbloch@oandiconsulting.com
- David Calder** Aviation and Distribution Operations Specialist
davidcalder@oandiconsulting.com
- Neville Coss** Airport Planning and Operations Specialist
nevillecoss@oandiconsulting.com
- Chad Hsu** Operations Planning and Modelling Specialist
chadhsu@oandiconsulting.com
- Claire Morgan** Marketing and Communications Specialist
clairemorgan@oandiconsulting.com
- John Packham** Production Engineering Specialist
johnpackham@oandiconsulting.com
- Fiona Rees** Operations Design and Improvement Specialist
fionarees@oandiconsulting.com

We are pleased to offer support

Please feel free to contact any member of our team
at the above email addresses or call us on:

+44 (0)7909 576 915