Airport Operations

Dr. Joe Sulmona

Istanbul Technical University

Air Transportation Management

M.Sc. Program

Airport Planning and Management

Module 5

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Outline

A. Introduction

B. Airport Operational Framework

C. Customer Experience Management

D. Aerodrome Safety Management

E. Conclusion

TURKISH AVIATION ACADEMY

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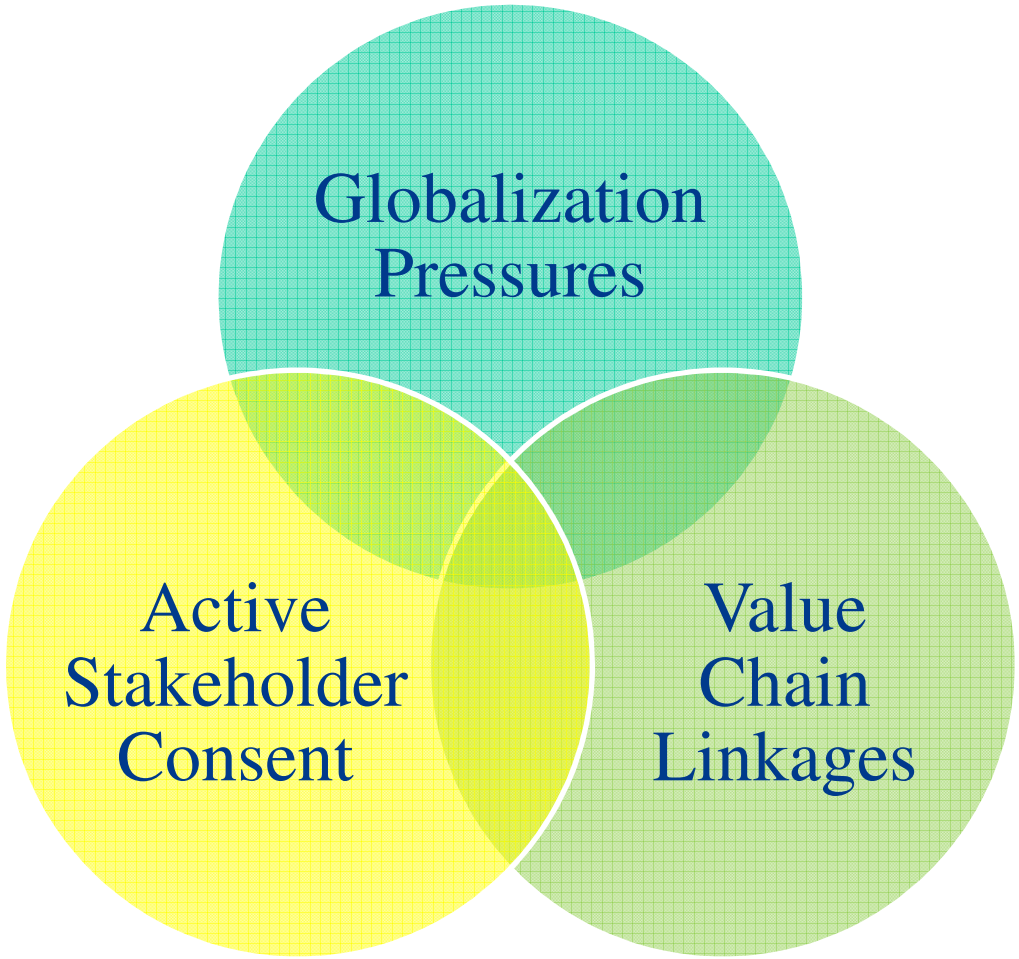
Introduction

Change Imperatives



Change Imperatives

- **Effective Strategic Response**
  - Align organizational and individual accountability
  - Develop people
  - Use technology
  - Encourage common outcomes
  - Demand collaboration
  - Promote success
  - Learn from failures

Change Imperatives

- **Preparing Organization for Change**
  - Recognize everyone is a partner
  - Build relationships even with adversaries
  - Solutions can come from unexpected sources
  - Plan tasks to learn from different perspectives
  - Quality demands total organizational commitment

Change Imperatives

- **Encourage Diversity and Collaborative Dissent**
  - Recognize change will lead to resistance
  - Create assurances about process transparency and inclusiveness, but cannot guarantee outcomes
  - And admit that resolving conflicting views is not simple

Change Imperatives

Change Imperatives

- **Encourage Broad Leadership Types**
  - Open to wide perspectives
  - Manages but does not avoid risk
  - Empathy for circumstances
  - Effective communications
  - Motivates by example
  - Builds consensus
  - Dedicated to task
  - Value-laden
  - Ultimately about **Serving Others**

Airport Operational Framework

Airport Process Change

- **Factors Driving Process Change**
  - Privatisation
  - Funding constraints
  - Resource management challenges
  - Capacity expansion
  - Technology / automation potential
  - Passenger experience management
  - Safety / security considerations
  - Environmental and social obligations

Journey Management Perspective

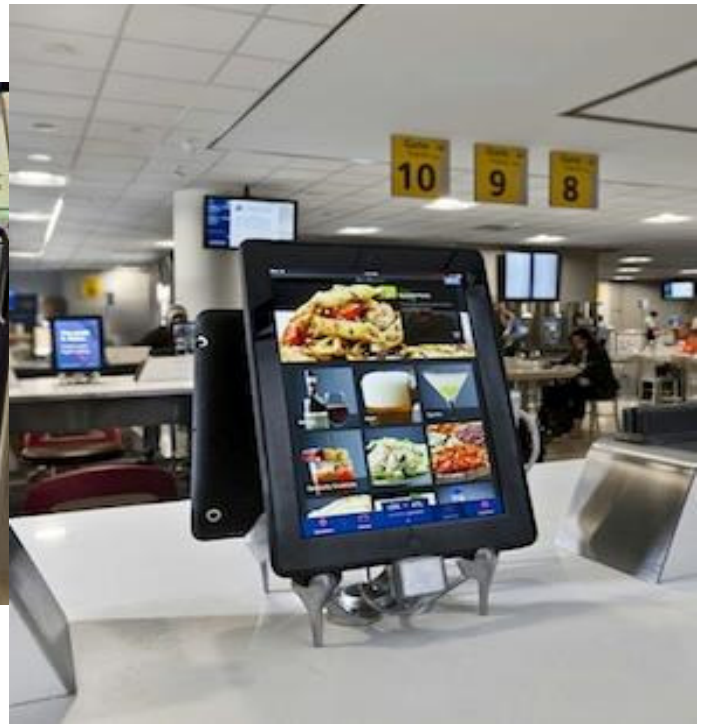
- **Multi-Modal Choices**

Journey Management Perspective

- **Air Service Choice**

Journey Management Perspective

- **Passenger Service Choice**



http://www.futuretravelexperience.com/2014/06/hamad-international-airport-qatar-airways-trial-iataaci-smart-security/

Journey Management Perspective

- **Baggage Service Choice**

Journey Management Perspective

- **Cargo Airport Choice**

https://www.youtube.com/watch?v=Ut6XaKEHcZs

Operational Planning Framework

- **Airport needs to establish framework**
  - Operational Plans
  - Maintenance & Life Cycle Plans
  - Safety/Security and Business Continuity Plans
- **Successful airports do not just happen**
  - Rapid response to challenges
  - Replicability in service excellence
  - Support corporate knowledge building
  - Engage / treat contractors as if internal staff

Operational Plans

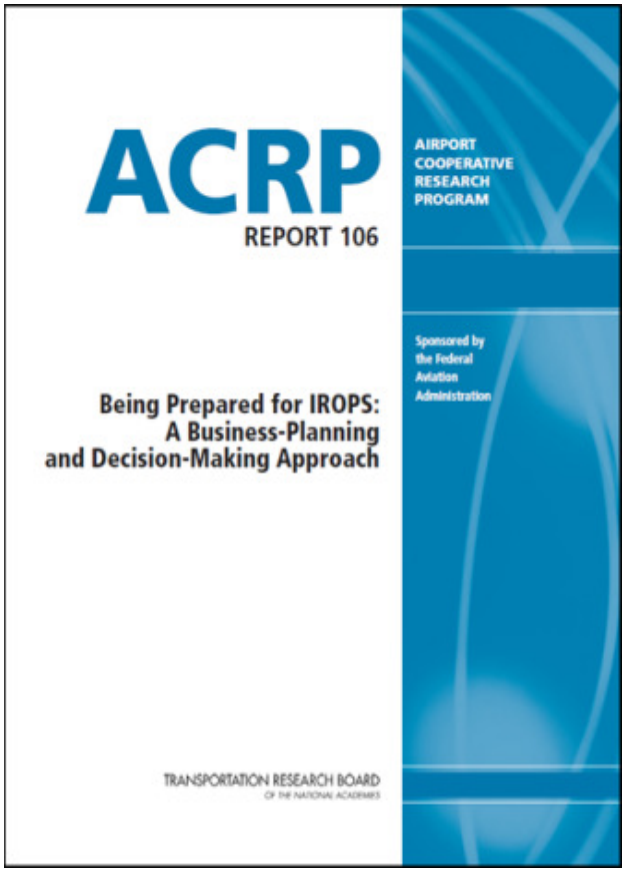
- **Wide variety of topics**
  - Terminal facility (gates, check-in, etc) aligned with SLOT control procedures
  - Baggage management protocols
  - Airside Vehicle Operation procedures
  - Routine maintenance / FOD management
  - Aeronautical Information (NOTAM)
  - Wildlife control / environmental spill procedures
  - Construction project control in operational areas
  - Live system training and disaster event drills

Preventative Plans

- **Expected Events**
  - Work with equipment manufacturers and suppliers to develop a forward-looking schedule
  - Prepare Condition Reports that assess condition of facilities and equipment to identify when maintenance / rehabilitation may be required
  - Introduce incentives into preventive maintenance contracts that links high levels of service reliability with contractor payments
  - Make life-cycle capital investment decisions – or length of concession (**New IST - 25 years**)

Responsive Plans

- **Un-Desired Events**
  - **B**usiness **C**ontinuity **P**lanning prepares to minimize impacts, protect image, preserve profitability and maintain investor confidence
  - Saves re-launch costs and shortens recovery period
  - Necessary to manage litigation costs associated with "duty of care" obligations

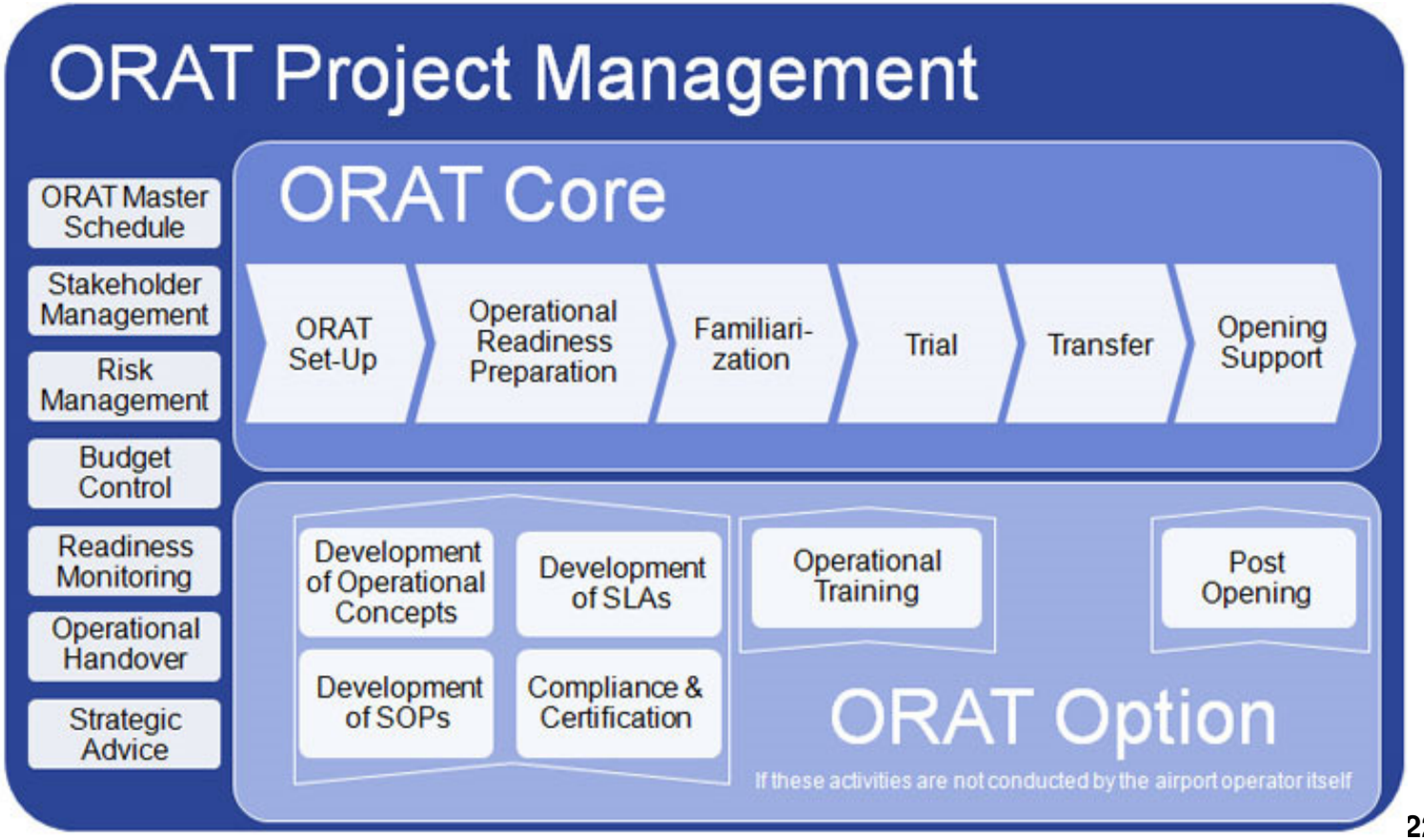


Responsive Plans

- **Operational Readiness and Airport Transfer Plans (ORAT)**
  - Comprehensive approach to ensure readiness of new airport or infrastructure project
  - Focus on project stages to provide expertise to execute scheduled operational start and transfer
  - Requires attention at the MasterPlan stage as complexity of project initiation needs to be considered in planning approval criteria

Responsive Plans

- **Operational Readiness and Airport Transfer Plans (ORAT)**



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Customer Experience Management

Paradigm Shift

- **Shift from customer service to customer experience delivery orientation**

Customer Experience Orientation

- **Shifting Priorities?**
  - Minimum airport service levels (**SLA**)
  - Reasonable passenger / shipper expectations
  - Willingness-to-pay versus service offering
  - Preferred airports do what well
  - In consumer product saturated world, customer experience growing in importance
  - And how can airport measure desired customer experience in an effective way

Customer Experience Orientation

- **Preferred Outcomes**
  - Operational Efficiency
  - Clear signage / wayfinding
  - Retail / F&B choices
  - Guest relations
  - Simple sequential steps
  - Reflects ‘Sense of Place’
  - Efficient Recovery
  - Easy access
  - Short queues
  - Pleasant surrounds
  - Value for Money
  - Respects diversity
  - Welcoming
  - Clean

Manage Experience

- **Management Tasks**
  - Define market position through service standards
  - Consistent delivery of basics, e.g. cleanliness
  - Assess performance to determine future change
  - Invest in modern facilities and processes
  - Engage employees / contractors on service vision
  - Requires leadership from across organization
    - Customer Relations Department might be lead, but crucial everyone have customer delivery responsibilities in their areas

Manage Experience

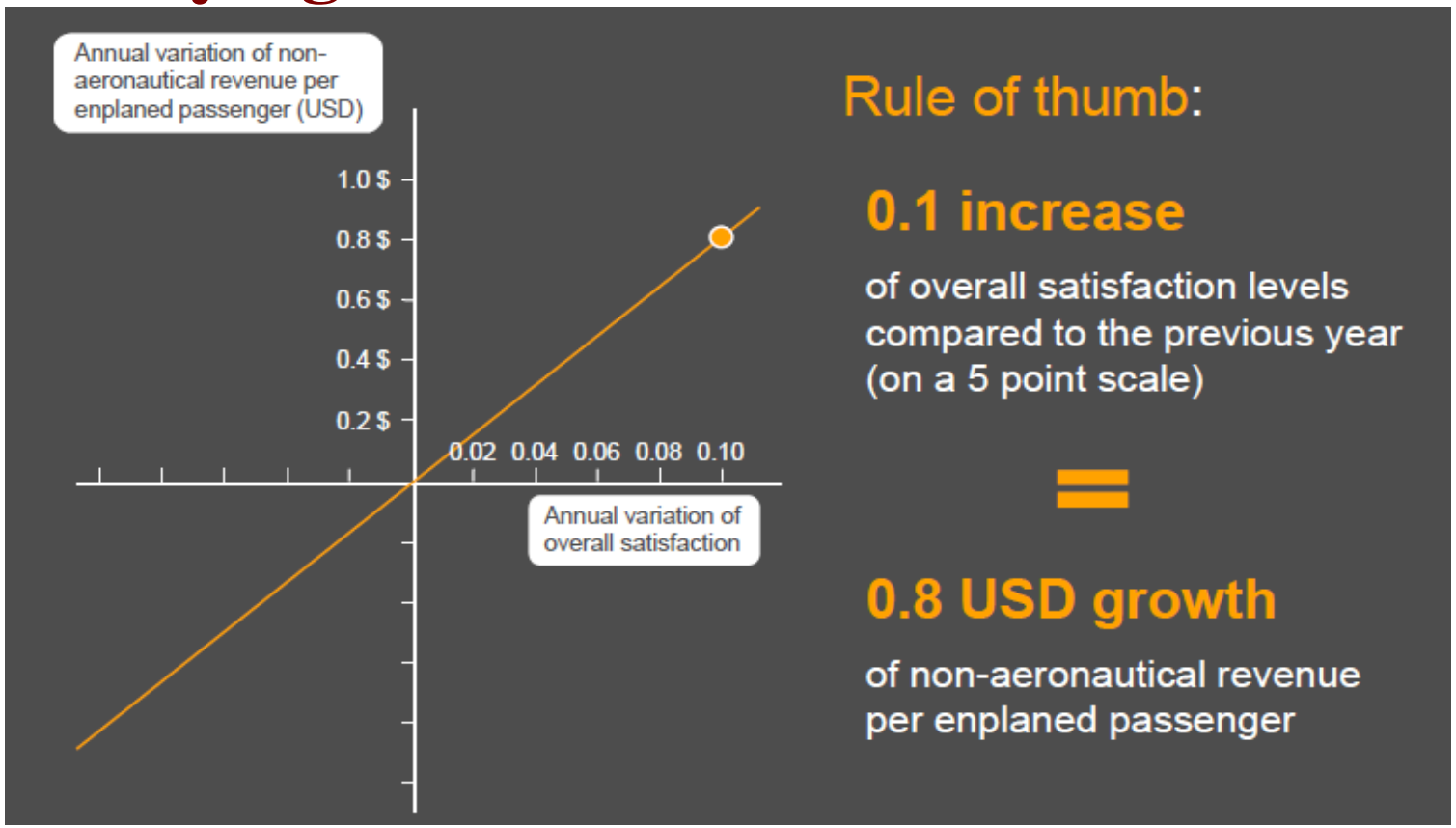
- **Service Differentiation**
  - Many airports indistinguishable from each other
  - Passengers interested in uniqueness, especially leisure travellers seeking disconnect from reality
  - Airport service offering is not just attractive building design and local tourism promotion
  - Recognize customers wish to drive their experience
  - Advanced airport experiences involve new way of thinking about the role of the customer

http://www.airportdynamics.tv/videos/watch/190

Your Favorite Airport Customer Experience?

Customer Experience ROI

- **Justifying Investment**



Source: DKMA, 2010

Customer Experience ROI

- **DKMA study identified airports could improve satisfaction levels by 0.1 year:**
  - Without new terminals or closing facilities
  - Without radically transforming their airport
- **Primary strategy involved was for airport to optimise the passenger experience:**
  - Identify what matters most to passengers
  - Focus management / contractor efforts on improving what matters most to passengers

Measuring Customer Experience

- **Customer Satisfaction**
  - Measure of how productions and services meet or exceed customer expectations
- **Gap Analysis**
  - Gap between expectation of performance and customer perception
- **Simple Success Formula, but Hard to Do**
  - When customer perception of performance meets or exceed customer expectation

Measuring Customer Experience

- **Airport Measurement Tools**
  - Market Research
    - Surveys
    - Focus Groups
  - Consumer Complaints
    - Mystery Shopping
  - Benchmarking
    - Internal / External Inspections and Audits
  - Consultations with service providers

Measuring Customer Experience

Airport Service Quality Programmes

Airport Service Quality Initiative

A range of management tools based on benchmarking and best practice, to help airports improve customer service.

Measuring Customer Experience

Key Aims of the Research

To help improve Retail / F&B performance, the survey aims to answer key questions on three commercial activities

	Food & Beverage	Retail (Non-Duty Free)	Retail (Duty-Free)
			
Satisfaction Rating	What is our rating for friendliness of staff?	What is the overall satisfaction for Non-Duty shopping? How does this compare with other airports?	What aspects of the service have the most impact on overall satisfaction?
Sales Performance	What is the share of impulse spending? How does this compare with other airports?	What is the reason for not buying Non-Duty Free at our airport?	How much did each passenger spend on Duty Free items? How does this compare with other airports?
Consumer Profile & Behaviour	How much total time at the airport is required for F&B spending?	What passenger type is spending the most? How does this compare with other airports?	What is the spending pattern of different nationalities?

Measuring Customer Experience

Methodology: Overview

Common Service Performance measurements

The methodology benefits from synergies and compatibilities with the ASQ Survey

Who is surveyed ?	Frequency of survey	Sample size	Fieldwork Procedure
➲ Departing passengers at the gate	➲ Two quarters per year Q1 & Q3	➲ 1,000 questionnaires	➲ Similar to the ASQ Survey

Measuring Customer Experience

ASQ Retail Deliverables

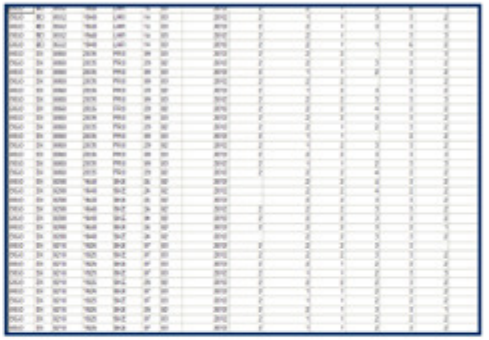
Retail / F&B Benchmark Survey Key Deliverables

1. Management Summary

- Excel based tool allowing quick access to main results
- Passenger satisfaction ranking and scores over time
- KPI and key sales ratios rankings and data trend over time
- Demographic profile ranked and trend over time

2. Benchmark Report

- All airports performance graphed and benchmarked
- Satisfaction ratings for retail experience
- Sales performance by type of retail etc
- Key customer groups comparisons



3. Raw Data

- Full raw data set
- Excel, SPSS, CSV file cleaned, ready for analysis

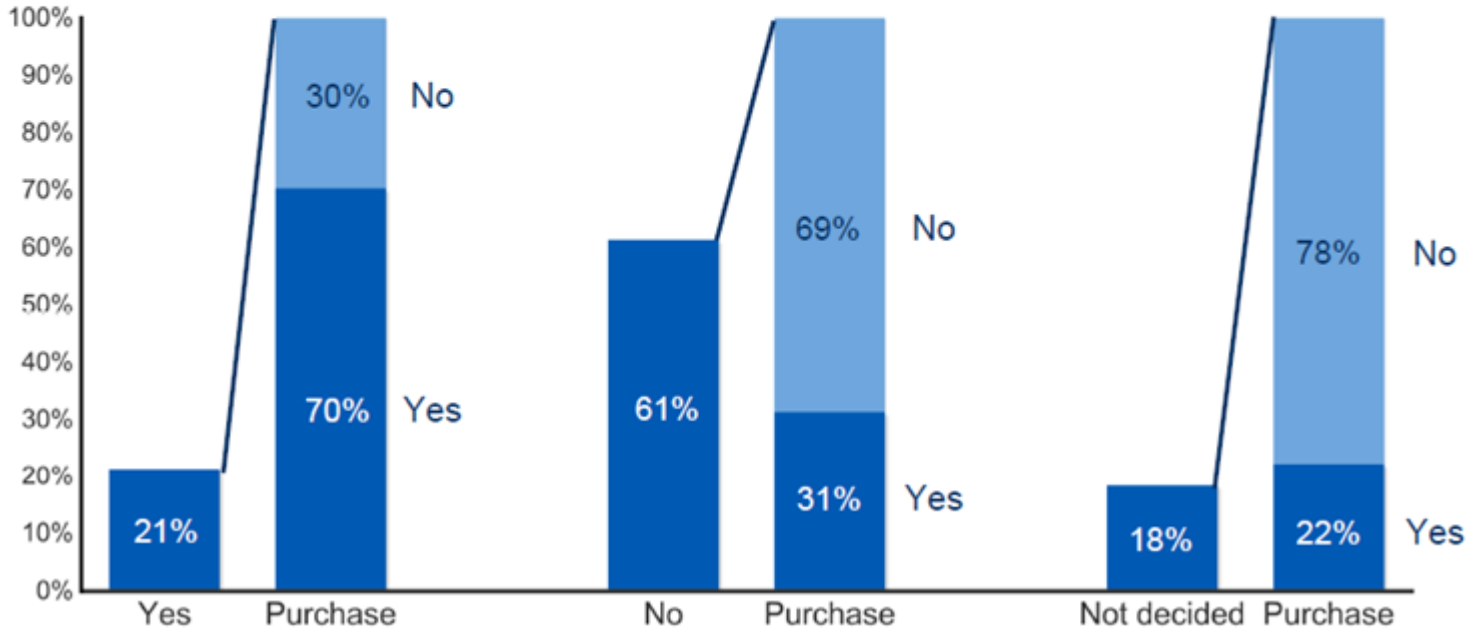
Measuring Customer Experience

Sales Performance

Illustrative

Duty Free sales conversion rates

Before you came to the airport, did you intend to make a Duty Free purchase at this airport today?



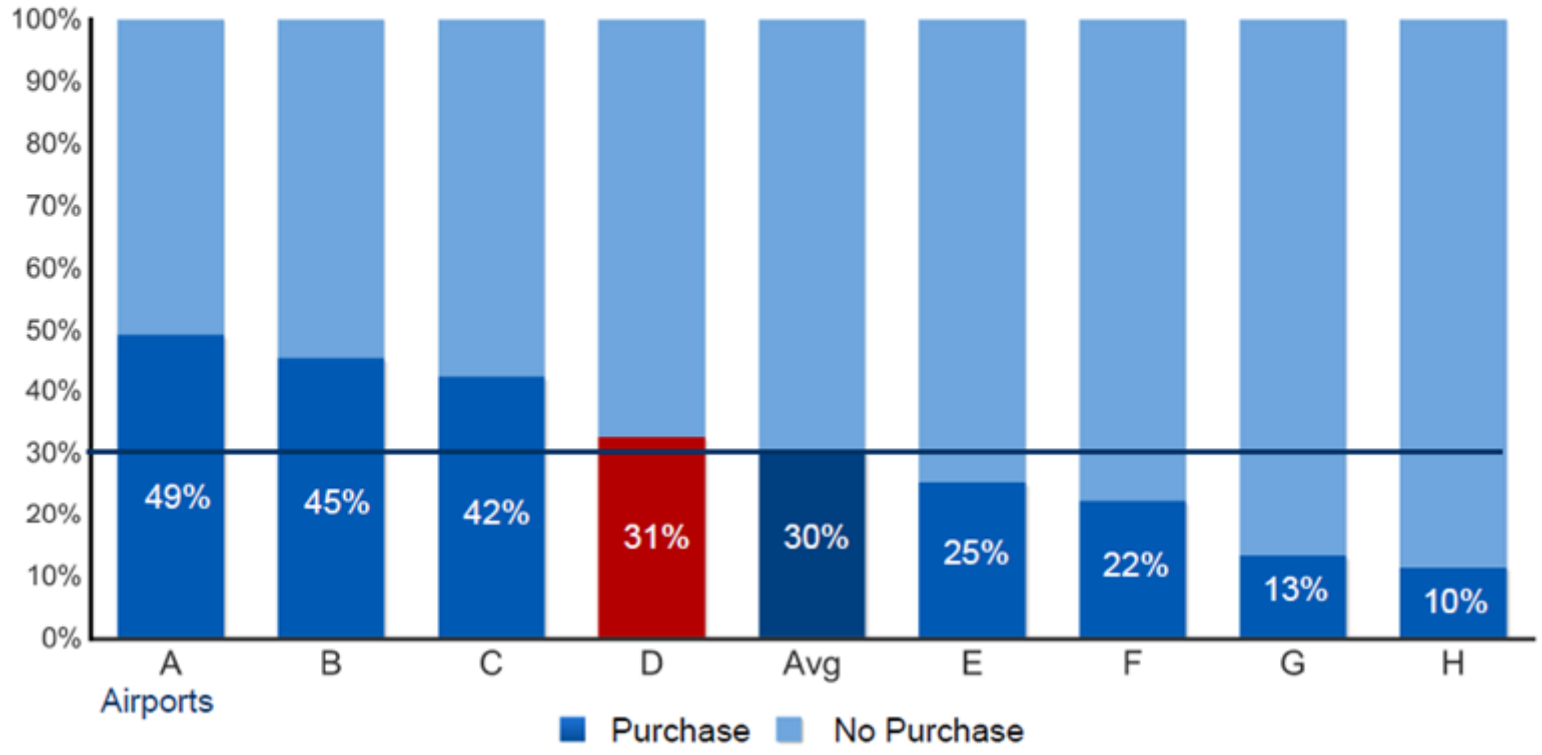
Measuring Customer Experience

Sales Performance

Benchmarking the conversion rate

Illustrative

Spending behaviour of passengers not intending to purchase Duty Free



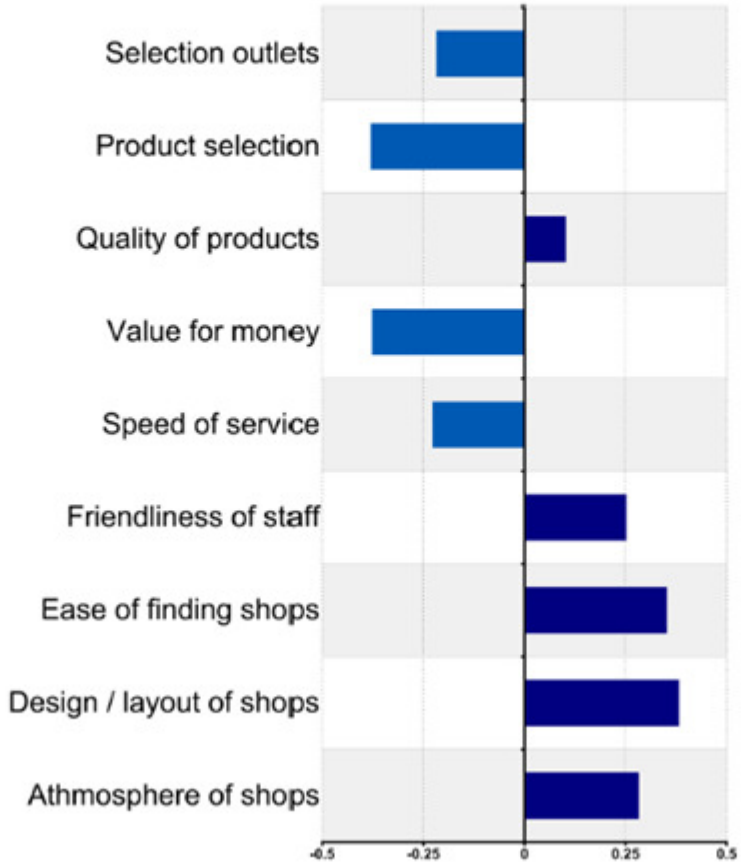
Measuring Customer Experience

Retail Offering satisfaction ratings: Satisfaction Gap

Benchmarking service quality at Retail outlets

Illustrative

Panel Airports Average Better



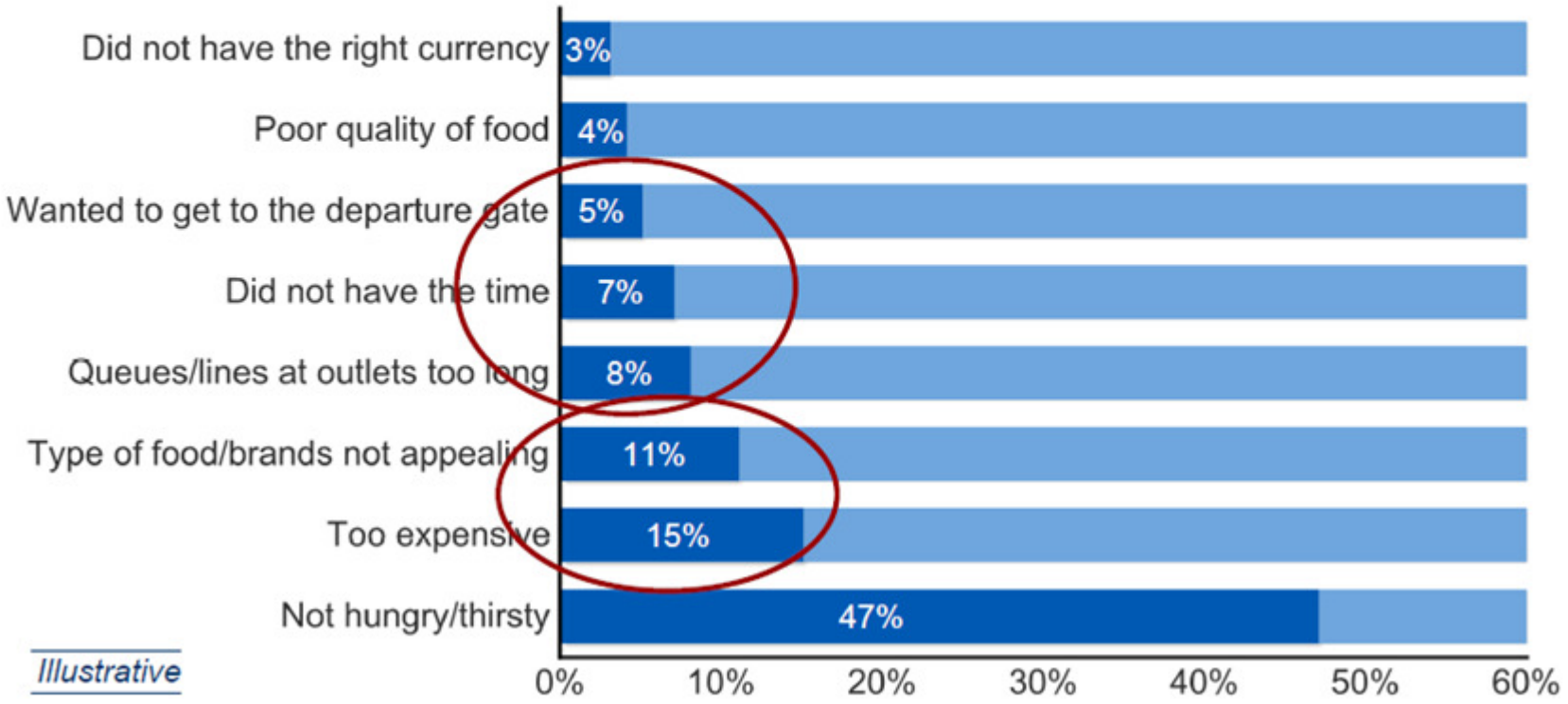
Airport X Better

Measuring Customer Experience

ASQ AIRPORT SERVICE QUALITY

Reasons for not buying F&B

Reason for not purchasing for passengers NOT PLANNING to make a purchase



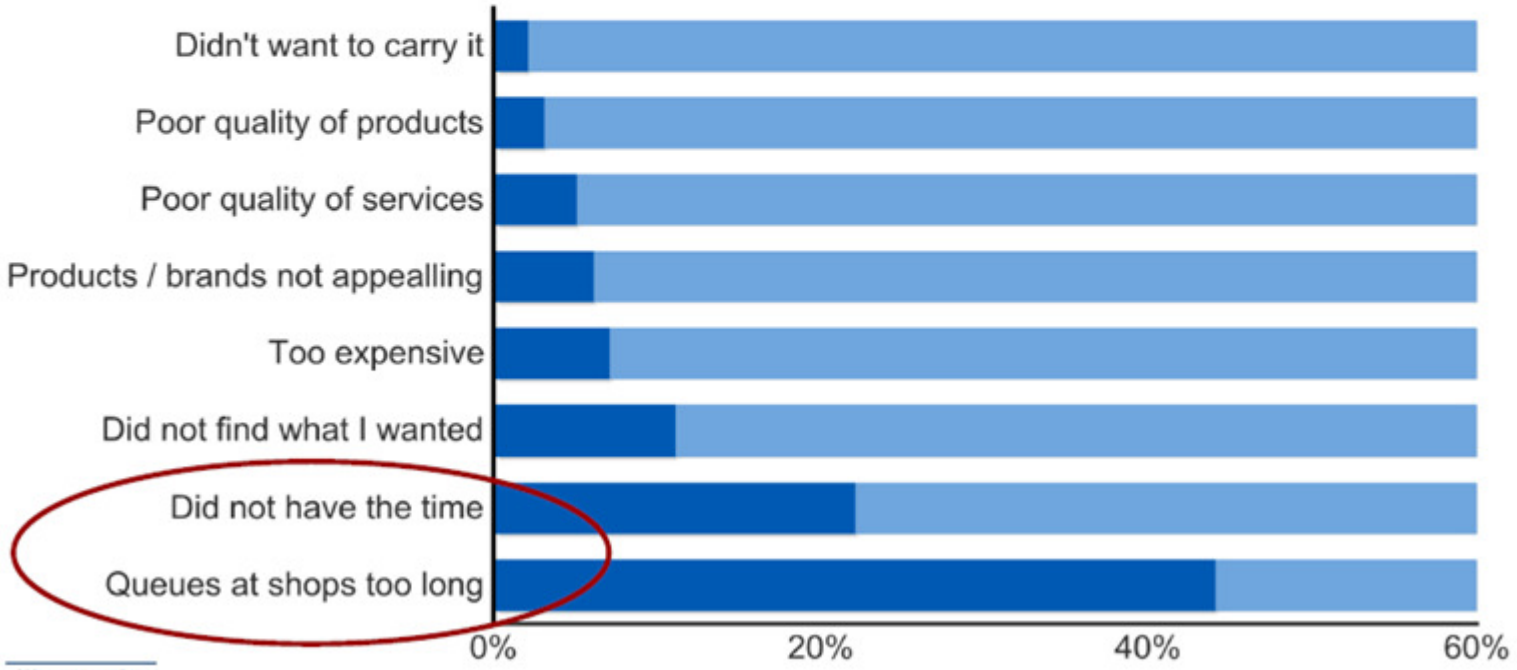
Illustrative

Measuring Customer Experience

Sales performance

Understanding why planned purchases are not taking place

Duty Free: Reason for not purchasing of passengers PLANNING to make a purchase



Illustrative

Measuring Customer Experience

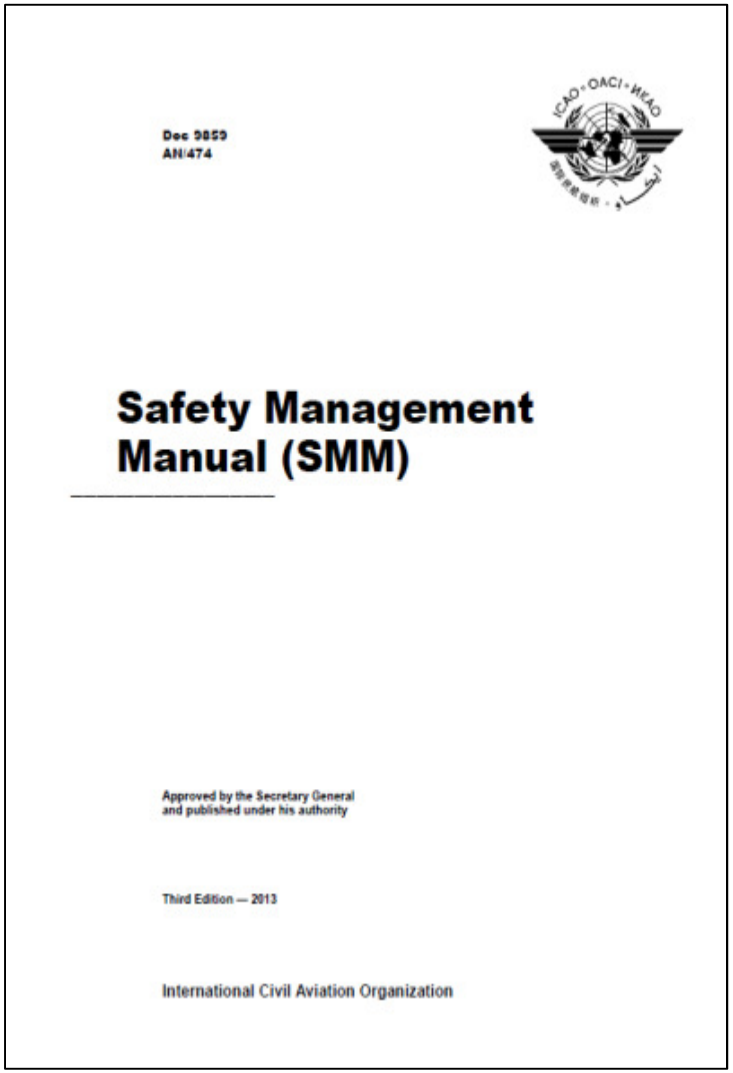
Dwell Time

The available time at the airport is a strong key driver for spending

Aerodrome Safety Management

Aerodrome Safety Management

- **Safety is fundamental to essence of service quality!**
  - ‘The state in which the possibility of harm to persons or of property damage is reduced to and maintained at or below, an acceptable level through a continuing process of hazard identification and safety risk management’

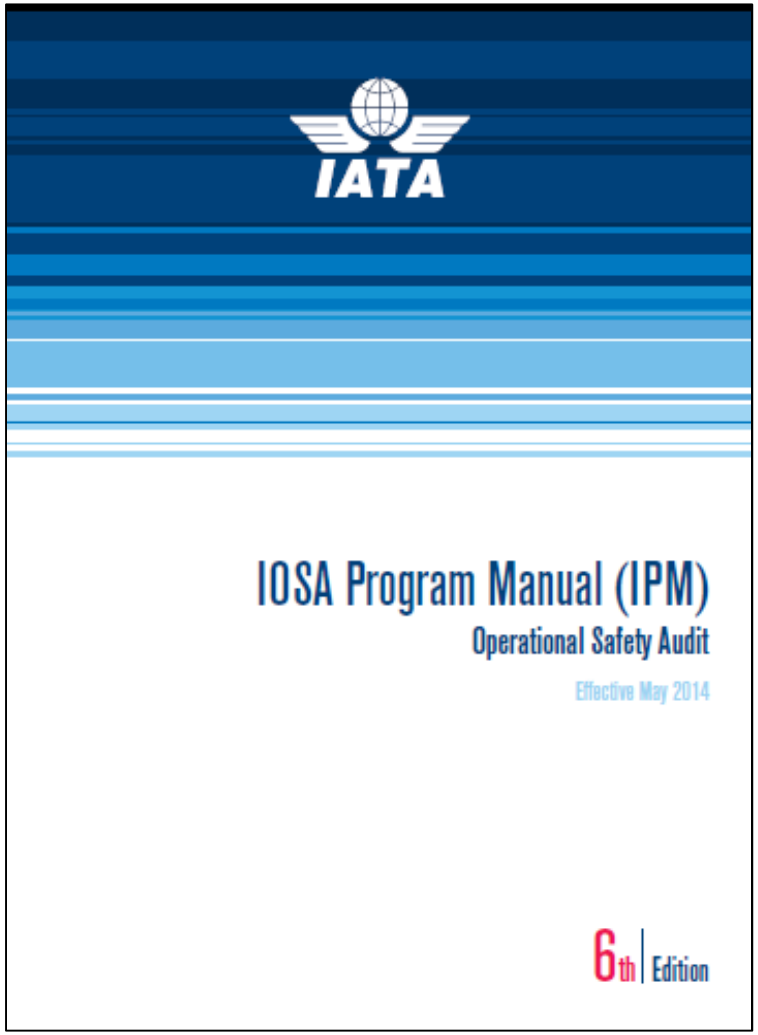


Aerodrome Safety Management

- **Safety First ?**
  - In complex aviation system, hazards exist and errors will occur, thus Zero Accidents is desirable but largely an unachievable goal
  - Yet, airport mgmt must strive to transfer, reduce and/or mitigate hazards
  - All risks must be managed effectively, with aim to balance protection for all stakeholders that will invariably lead to conflict

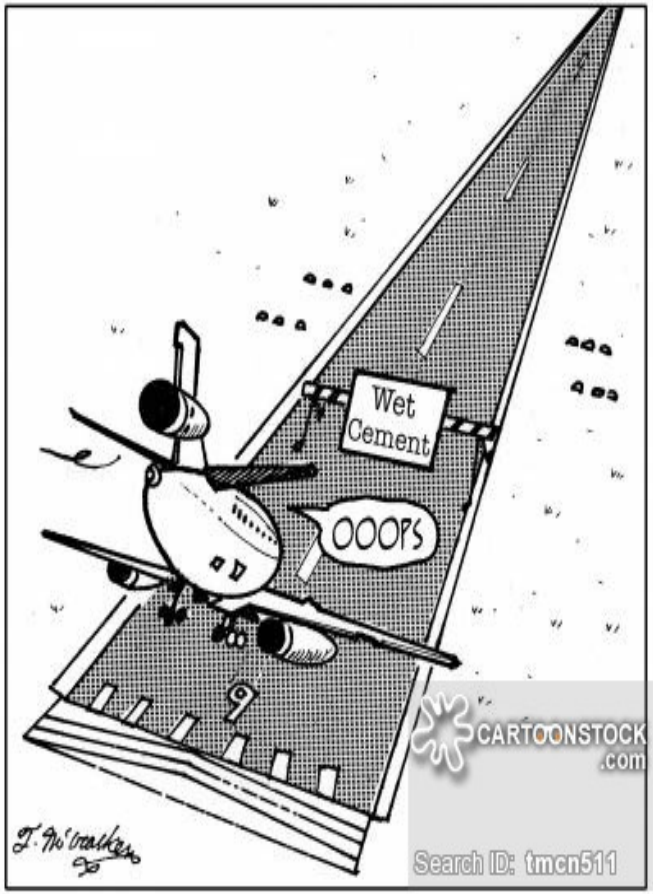
Aerodrome Safety Management

- **Regulatory Compliance**
  - If Regulator issues Airport Operators Certificate (AOC) does this assure safety?
  - ICAO SARP compliance and even national laws may be insufficient, especially in developing countries
  - IATA adopting higher performance standards, so airports need to do the same



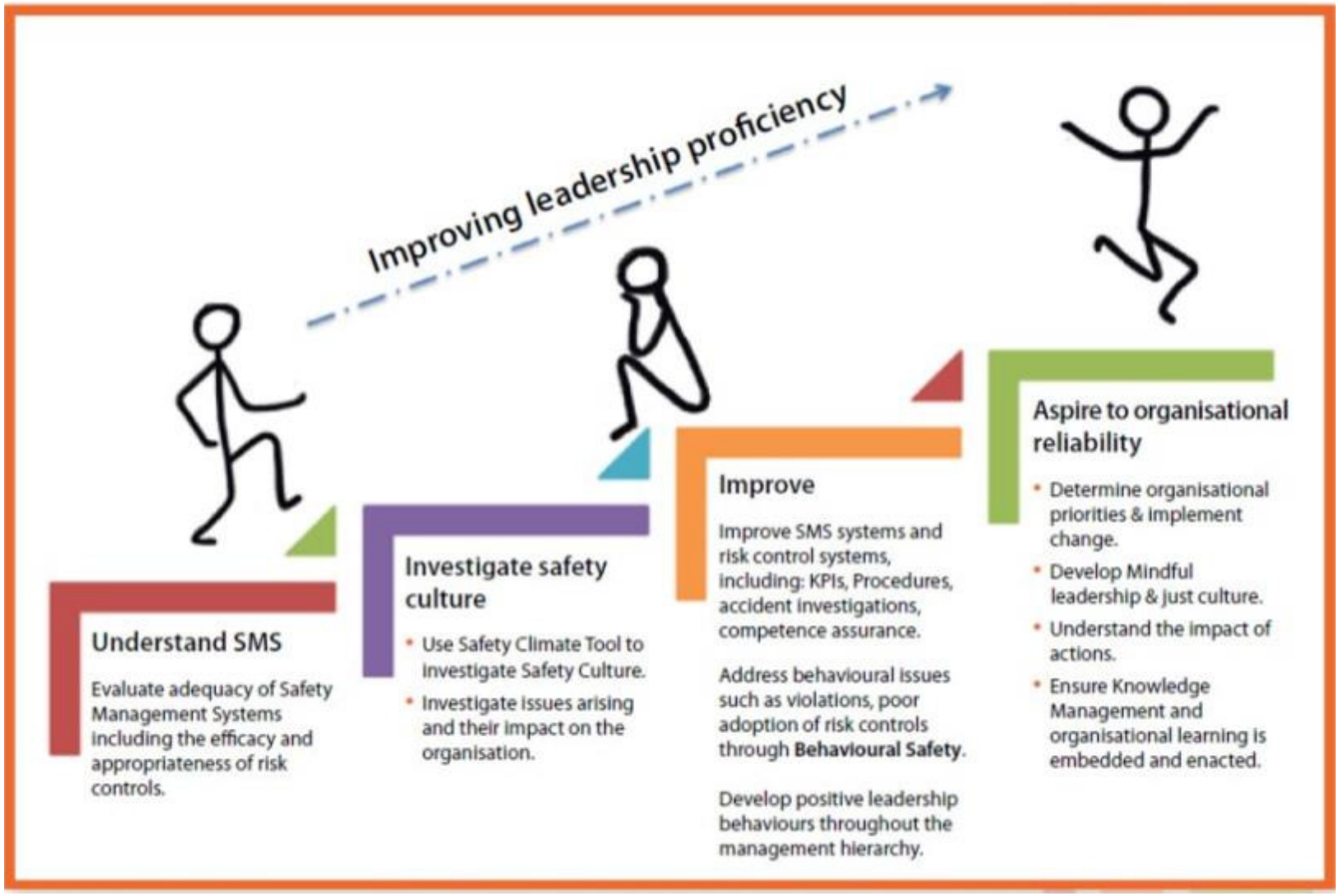
Aerodrome Safety Management

- **Safety Culture**
  - Staff attitude towards safety
  - Tolerance of work-arounds the established safety protocols is serious organizational problem
  - Airports must lead managing quality and service reliability
  - Understand "Just Culture" principles to encourage compliance, but avoid lack of responsibility for the guilty



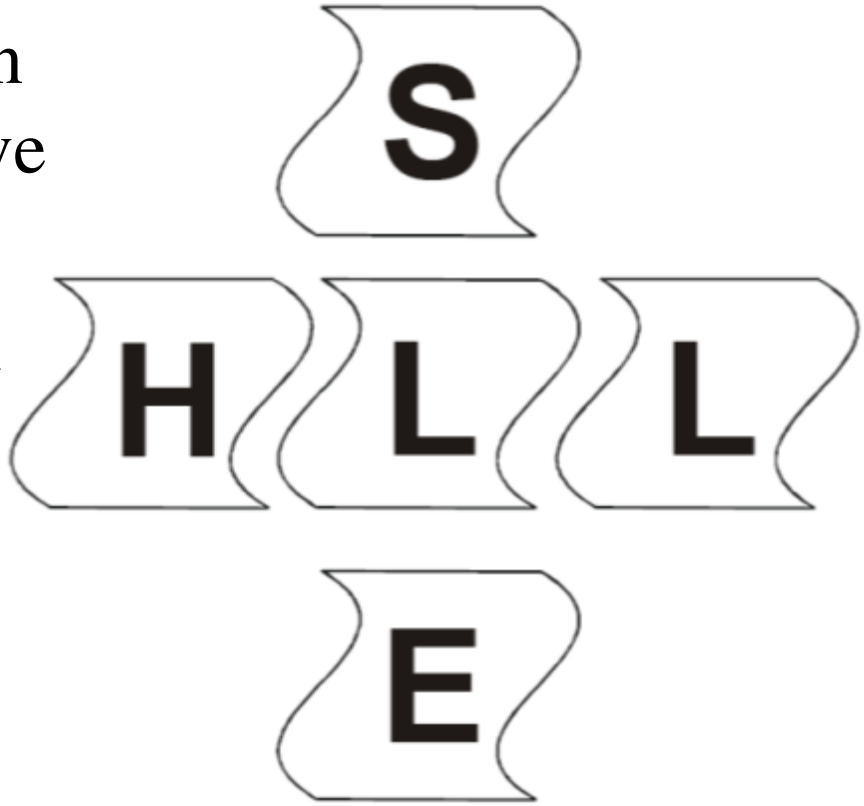
For years pilots grumbled about the runway, so airport management was surprised by the grumbling when they finally fixed the problems.

Breeding Safety Culture



Breeding Safety Culture

- **Error Avoidance Model**
  - Aviation complexity can strain ability for effective human interaction
  - Demands sophistication with hiring, training, and an overall approach to build confidence that safety is consistently achievable



SHELL Model

- **Liveware Definition**
  - Humans at front line of operations, regardless of the support processing done by automated systems
  - Interface imperfect with the various components of the airport operational system
  - All system inputs must be carefully matched to human capacity if stresses/failures in the system are to be preferably avoided but at least reduced
  - While humans are remarkably adaptable, and can apply effective judgement in the most complex of situations, this capacity can be overwhelmed

SHELL Model

- **Liveware-Hardware Interface**
  - Refers to relationship between the human and the physical attributes of equipment, machines and facilities
  - Interface between human and technology is commonly considered with reference to human performance and there is often a natural human tendency to adapt to L-H mismatches
  - Nonetheless, this tendency has the potential to mask serious deficiencies, which may only become evident after an occurrence

SHELL Model

- **Liveware-Software Interface**
  - Relationship between human and supporting systems found in workplace, e.g. regulations, manuals, checklists, publications, standard operating procedures (SOPs) and software
  - Includes issues as recent experience, accuracy, format and presentation, vocabulary, clarity and commonly used symbols
  - Particular challenge in international aviation given broad cross-cultural mis-match that can occur, not just from language but from cultural meanings

SHELL Model

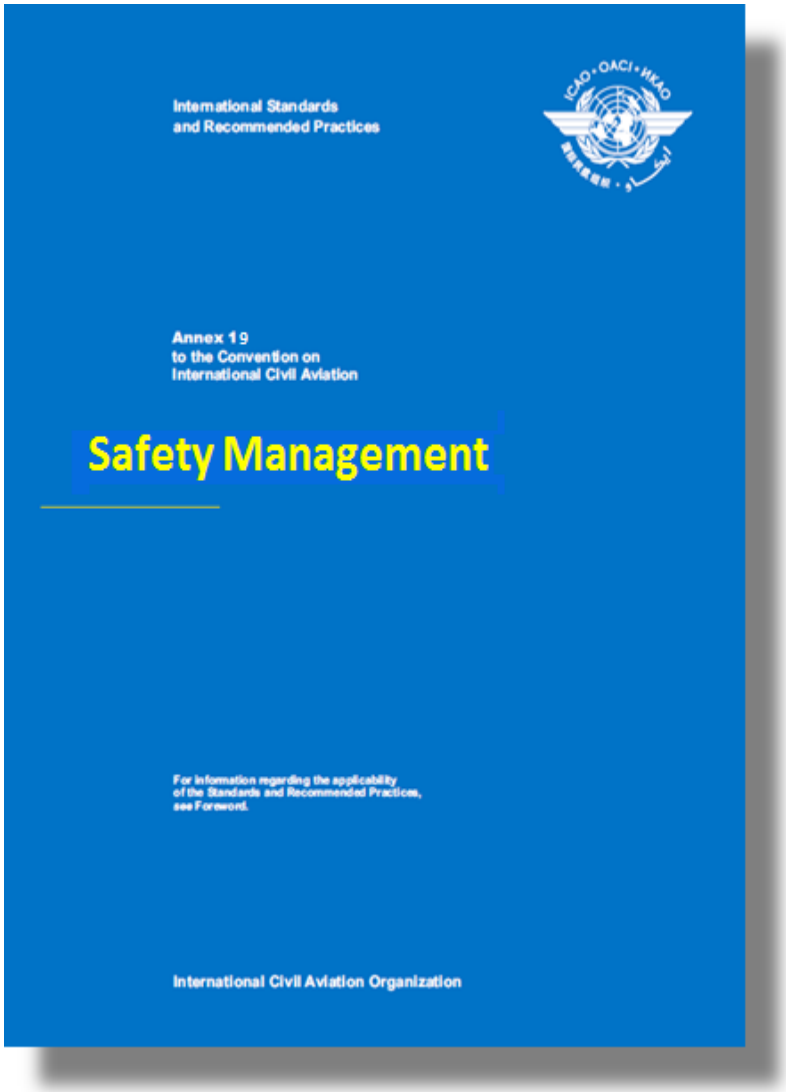
- **Liveware-Liveware Interface**
  - Relations among people, often with conflicting perspectives, responsibilities, and experiences
  - Recognize communication and inter-personal skills, as well as group dynamics play a role in determining human performance
  - Better approach to Crew Resource Management (CRM) creates focus on operational errors across multiple aviation domains, including ground ops
  - Staff / mgmt relationships also another source of organizational conflict that can introduce errors

SHELL Model

- **Liveware-Environment Interface**
  - Internal and external environments such as noise, temperature, ambient light, vibration, air quality, weather factors, aviation infrastructure and terrain influence human perceptions and risk avoidance
  - Psychological and physiological forces, including illness, fatigue, financial uncertainty, personal relationships and career issues can induce errors
  - Aviation disturbs biological rhythms / sleep pattern that can hide personal or system problems as night / weekend work not always effectively supervised

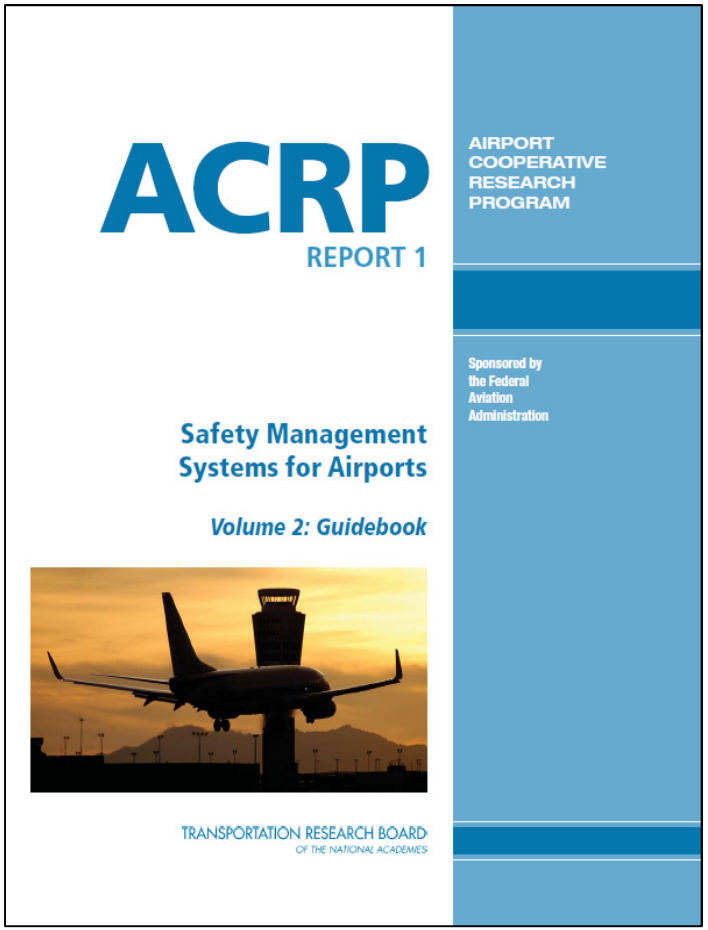
Safety Accountability

- **Integrated Safety Management Adopted by ICAO in Annex 19**
  - Safety Accountabilities refer to demands on individuals to deliver, either directly, or through supervision / management of others, including those individuals with delegated responsibility

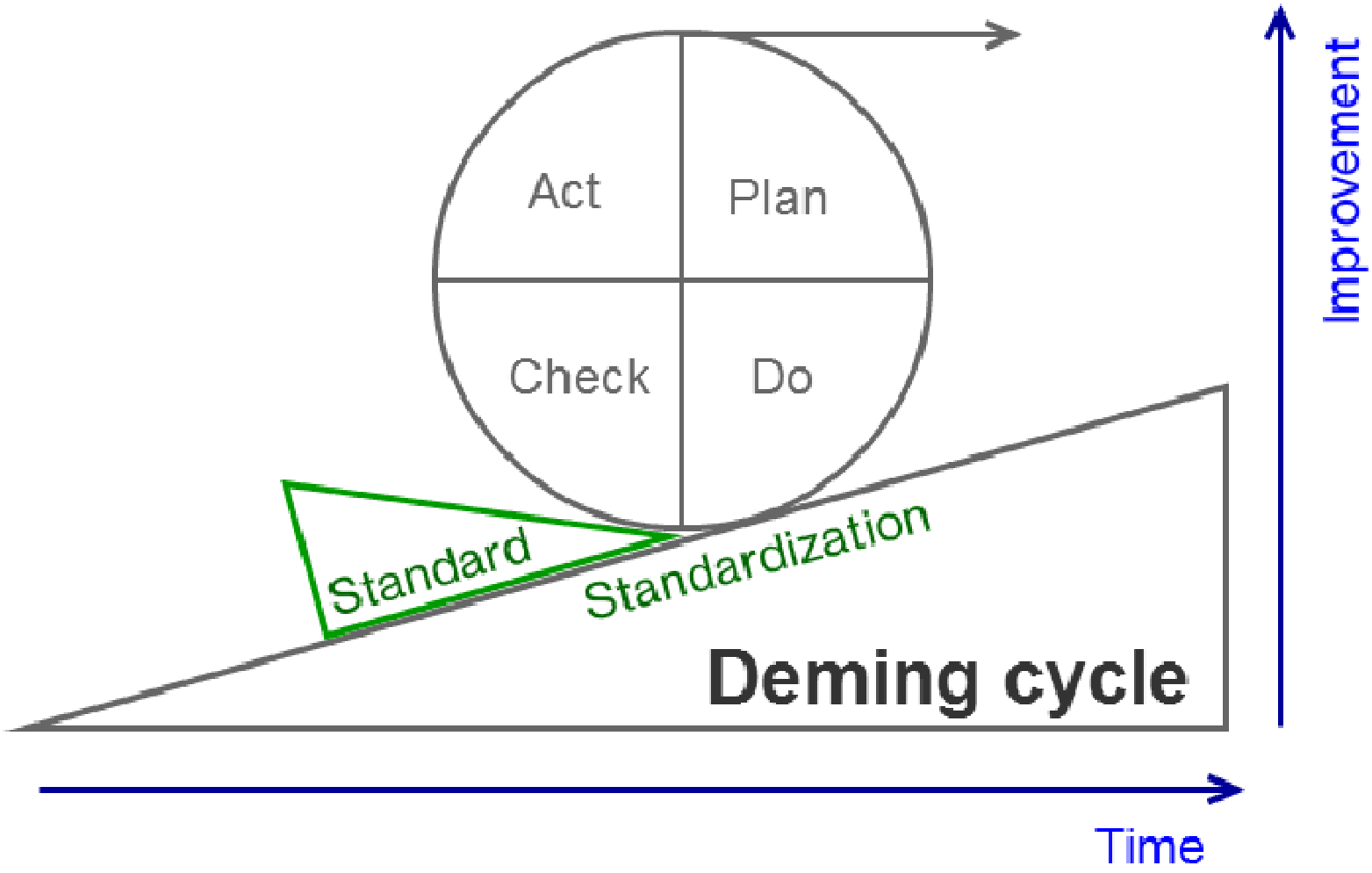


Safety Accountability

- **Integrated Safety Management Everyone's Responsibility**
  - Cascading decision-making framework involving governance structure, through management, operational directors, supervisors and ultimately line-workers
  - Airport industry complex with contractors, outsource partners, and stakeholder interests



Safety Implementation



Conclusion

Conclusion

http://www.airportdynamics.tv/videos/watch/255

Conclusion

- **Operations Planning core to airport success**
  - Customer experience management requires clear service standards, routine performance assessments, introduction of modern facilities and processes, and organization-wide leadership
  - Best-practice airports are most effective in responding to challenges, offer reliable service excellence, ensure knowledge is shared amongst stakeholders, and builds value chain community
  - Must understand human – system interface as complex systems will introduce quality gaps that may remain unnoticed until system failure

Select References

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Questions ?