





IT/IS Strategy

Advanced Information Systems and Business Analytics for Air Transportation

M.Sc. Air Transport Management May 16-21, 2016





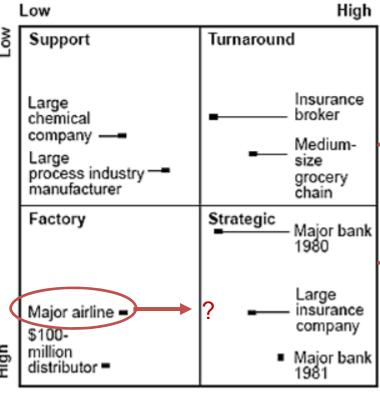


Position of IS by company type

Operations do not depend on smooth IS functionality and IS is not critical to the competitive advantage

Strategic impact of existing operating systems

Depend heavily on IS for smooth operations, but IS not critical for ability to compete Strategic impact of application development portfolio



IS support
necessary but
not critical;
applications are
developed to
achieve
strategic goals

Critically
depend on IS
and IS is vital to
the competitive
advantage

Source: HBR (1983)



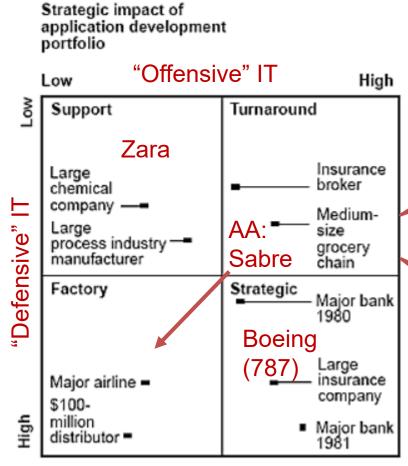


IT and the board of directors

Minimal spending on IT – is money spent wisely? Shall we change mode?

Strategic impact of existing operating systems

Board needs to ensure contingency plans are in plan in case of disruption



Large IT investments; board oversight is critical: competitive advantage at stake

Board
oversight
critical; IT
oversight
committee;
"Spend what it
takes, and
monitor results
like crazy."

Source: HBR (1983)





IT/IS strategy

- Supports the firm's strategy
- Key features:
 - Automation
 - Optimization
 - Data
 - Accessibility/connectivity;
 real-time
 - Speed
- Considerations:
 - In-house or outsource
 - Global vs ad-hoc solutions
 - Degree of flexibility; personalization







IT at THY

- Kerem Kiziltunç, CIO
- "Our IT organization is pretty young. We are about 450 people half of whom joined in the last five years. We use around 300 applications. We manage about 180 contracts and work with more than maybe 100 technology partners."

✓In 2013:

- 130m website visitors
- 680k Fly Turkish app download
- 27,084 devices in service

Source: SITA 2014





Commercial Solutions

Sales Channels

Reservation System

Financial Solutions

Revenue Management

CRIm and Loyalty

Operational Solutions

Flight Management

Team Management

Passenger Operations

Ground Handling
Operations

Cargo Operations

Corporate Development

Work Intelligence and Reporting

Combined Solutions

Demand and Portfolio Management

Corporate Architecture

Infrastructure and Operation

Accounting and Finance

Logistics

Human Resources Network and Line Profitability

Back Office Solutions

User Support Services

Work Continuity

Technological Infrastructure System and Information Security

Source: THY annual report





THY IT Strategy

✓ Two phases:

- First: 2010-2013, back office and revenue related
 - Flight planning
 - Mobile application
 - Overhaul of website
 - Fares and pricing infrastructure
 - Crew planning and transfer
 - Passenger management for the Istanbul hub
 - Large scale ERP transformation program (SAP)
- Second: 2014-2017, customer aspect and operational efficiencies
 - Website, mobile app overhaul/upgrade
 - Web 3.0: personalization, high performance, ease of use, flexible architecture
 - Mobile 2.0: multiple platforms, multiple functions (ticketing, reservations, check-in, M&S, etc.)
 - Enhancements to CRM
 - New data center
 - Replace in-house Passenger Service System?
 - PSS is generally composed of the reservation system (CRS), the inventory system (RMS), and departure control system







FOCUS ON OUTSOURCING





Why outsource?

- Reduce costs
- Speed up delivery time
- ✓ Need to replace IT
- Reliability is of essence
 - Defensive IT: Cannot afford down time
- Many providers can do the job; access focused skills
- Financial considerations
 - → Balance Sheet
 - Fixed to variable cost
- Bargaining consideration





Outsourcing risks

- Loss of control
- Cost savings not there (complex conversion)
- Mostly one-way street
- Vendor stability/inadequate skills/ Doesn't stay on leading edge
- Contract inflexibility/divorce complicated
- Interface between companies poorly conceived
- Benefit timing mismatch





Pros and cons

- Economies of scale (for smaller firms)
- Higher quality of service and backup
- •IT solutions with global reach

Strategic impact of application development portfolio

Low Strategic Support impact of

existing

operating

systems

managed

Outsourcing Presumption: YES, unless huge and well

Factory

Outsourcing Presumption: YES

High

High Turnaround

Outsourcing Presumption:

MIXED

Strategic

Outsourcing Presumption:

MIXED

- Access to leading-edge technology applications and industry skills
- Assure bulletproof reliability
- Rescue an out-of-control internal IT unit

- Access to higher IT professionalism
- Problematic low priority addressed
- Access to current IT technologies
- Reduces risks of inappropriate IT architectures

 Access to leading-edge technology application and industry skills

Source: HBR (1983)

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Pros and cons

- Decision influences/influenced by
 - Position on strategic grid
 - Current structure IT
 - Segregated organization facilitates outsourcing
 - Industry standards
 - Industry patterns
 - Cascading (everyone is using this system...)
 - A web of relationships
 - Ownerships, outsourcers may outsource as well