EVERYTHING IS CONNECTED:
RISK LEADERSHIP AT COPENHAGEN AIRPORTS

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ABSTRACT

Globalization can take many forms. In the case of Copenhagen Airports (CPH) it could be said that the world comes to CPH. More properly stated, CPH operates within a global transportation network and thus finds itself competing within (and outside of) a highly interconnected system of transportation hubs and service providers. It is this interconnectivity that serves as a central fact for the airport and its risk management efforts. Beyond the obvious exposure to “contagion” risks, how does global interconnectivity affect risk management and risk leadership practices within CPH? Two scenarios are presented in this case to provide insights into the challenges facing organizations operating in highly integrated networks.

Key Terms: Enterprise Risk Management, Risk Leaders/Leadership, Contagion Risk, Airports, SAS, Digital Disruption.
INTRODUCTION

“Our vision is for Copenhagen Airport to be the preferred gateway of northern Europe and a gateway for travels to other destinations, all while making you wish you could stay. CPH’s World Class Hub strategy is designed to make this vision come true.”

-Copenhagen Airport’s Vision Statement

Copenhagen Airports’ vision reflects a world-wide business strategy shaped by the Scandinavian cultural underpinnings of tradition and comfort. Seeking new growth and establishing itself as an important international airport and hub of northern Europe, CPH has defined an assertive strategy to achieve its vision. However, CPH faces risk management challenges as an organization that is highly integrated into a global network. Other major European airports vie for new routes and serve to intensify competition, and this produces challenges to CPH’s vision. Given competition and disruptive events since 9/11, the Airport has experienced enviable growth commensurate with its strategy, breaking records on passengers travelling through the airport (2011-2015) as well as surpassing expectations for revenue growth.

Critically to this case study, CPH operates in a highly integrated global transportation network. Among the many consequences of high interconnectivity is that CPH influences - and is influenced by - its customers (and other forces) no matter where they are in that global network. It is, in fact, this interconnectivity that serves as a critical factor in all aspects of management within CPH. Copenhagen Airport defines its customers as passengers that do or will purchase goods and services throughout the airport, and business partners as airlines, ground handlers, retailers, restaurants, and cargo operators that support CPH’s vision.

Copenhagen Airport has been actively managing risk since its inception in 1925, weathering both dramatic episodes and significant longer-term occurrences. The Airport’s historic growth was disrupted by World War II - particularly the Nazi occupation of Denmark - and more recent impacts on aviation by events like 9/11, SARS and the global financial crisis. Evolutionary changes of the aviation industry are important as well; however, pressures spurred by the consumer behaviors and digital disruption have directly led to strategic issues, leading to a new era in risk management for CPH. In light of decades of regulatory changes, government structure shifts, public/private ownership changes, and technology advancement, this case study unveils the current circumstances, and challenges students to consider significant business questions on strategy, leadership and risk management.
Interconnectivity

Everything is Connected: Risk Leadership at Copenhagen Airports

Global organizations seek to effectively handle diverse, complex, and interacting risks. Risk Leadership requires an informed set of capabilities that includes resilience, adaptability and cultural competence to manage strategic, operational, and economic risks. This case study connects risk management execution with corporate strategy to highlight the importance of learning from past events, as well as looking forward into a highly interconnected global landscape.

SETTING THE CONTEXT

The Business of CPH

Hosting over 26.6 million passengers in 2015, Copenhagen Airports reported a continuing rise in annual passenger volume, with 3.8% growth compared to 2014. CPH competes with a number of airports in central and northern Europe, including Stockholm, Oslo, Brussels, Zurich, Berlin, Amsterdam, Munich and Frankfurt with over 254,000 flights annually routing through CPH. Business and leisure travelers utilize CPH for mainly international travel, making CPH a regional hub for global destinations.

CPH has been an international airport since its inception in 1925 and currently serves passengers traveling to 156 global destinations, 32 being intercontinental. The international consumer and cargo business has been an important consideration in CPH’s strategy. Ongoing investment in the structure, technology, services and logistics is required to sustain this growth. CPH invested more than 1 billion Danish Kroner, approximately $155 million, in 2015 into airport operations.

International airport rankings provide insight into competitors, airport usage patterns and recent passenger growth rates. CPH ranks among the top 25 international airports, closest to New York’s LaGuardia in terms of 2014 passenger volume. Of the top-ranked, busiest European airports, only Istanbul outpaces CPH’s annualized growth pattern with 10.7% in 2014. London, Paris and Frankfurt all reported passenger growth in 2014 lower than 3%. These figures compare to overall growth in the industry of 5.1% in passenger counts. Dubai International continues to make significant strides as a world’s major international hub connecting long-haul passenger and multi-modal logistic flights.

See Appendix, Figure 1 for annual passenger growth marked by historical events.

CPH supports 23,000 jobs in 700 businesses while driving a “seamless airport” experience. A one roof – one terminal airport hosts a major shopping mall featuring specialty retail, food and beverage, and tax free stores. With an online presence, Shop.cph.dk connects with customers digitally while promoting the CPH brand.
CPH Early Beginnings
In 1925 flying was for the privileged, fashionable few and the addition of a civil airport was an attraction extraordinaire for Copenhagener. Sunday outings may have included a visit to the Kastrup grassy field for families to watch the large birds take off. As flying advanced so did Copenhagen’s new air terminal, constructed in 1939, just before World War II erupted. Needless to say, civilian air transportation was dramatically affected during Nazi occupation, which ended with the liberation of Denmark in 1945.

After the war, the airport rapidly expanded, with intercontinental and overseas flights to the U.S. being particularly popular. Copenhagen became home to Europe’s third largest airport hosting 300,000 passengers in 1948. The airport continued to expand as business travel and airmail became important to international trade. By 1956, the airport served one million passengers. Management undertook efforts to modernize terminals, lengthen runways to accommodate jet aircraft and utilize technically advanced equipment. Expansion phases continued into 1970s with 180,000 flights and eight million passengers flying through Copenhagen airport.

Significant Modern Changes
In 1980, the Danish parliament approved a plan to expand the airport to accommodate 20-22 million passengers. The new plan included the Danish flare for culture, customers, and environment. The focus was on the traveler’s experience and providing relaxing, beautiful Scandinavian design with amenities and comfortable surroundings. Cargo and technical facilities were constructed far from the passengers’ view. Modernizing for efficient handling became an ongoing endeavor as Copenhagen Airport expanded including domestic and international terminals, parking lots, a railway station and a spacious Terminal 3.
Today roadway, metro and railway connections provide easy access to the airport. Trains from Malmö, Stockholm and Gothenburg in Sweden, and the major Danish cities in CPHs catchment area speed passengers to the airport’s train platform situated less than 100 meters from check-in counters. Amenities at the airport include a five-star hotel, duty free shopping, a central security checkpoint and Metro station service to Copenhagen City Centre only 12 minutes away.
ORGANIZATION AND LEADERSHIP

Copenhagen Airports' organizational model is influenced by its ownership. In 1990 the company was converted into a public limited company, Københavns Lufthavne A/S (Copenhagen Airports A/S), with the government as sole shareholder. Subsequently, on April 11, 1994, it was decided to reduce the Danish government ownership stake and to have the company's shares listed on the Copenhagen Stock Exchange. Currently the Danish Government owns 39.2% while Ontario Teachers' Pension Plan (OTPP) and Macquarie European Infrastructure Fund III (MEIF3) through a joint holding company own 57.6%. The remaining ownership is constituted of international (1.8%) and Danish (1.4%) private investors. The company is based in Kastrup, Denmark.

Copenhagen Airports owns and operates Kastrup, the international airport in Copenhagen, and Roskilde airport, situated 41 kilometers west of Copenhagen. Kastrup is also the site of CPH's corporate headquarters. The company provides traffic management, maintenance, and security services, as well as managing the Copenhagen Airport Shopping Center (CASC) and airport projects. CPH also owns the Hotel Hilton located at the Kastrup site.

![Figure 1.4 CPH Stock Valuation Chart, June 13, 2016](image)

Operating in two segments, Aeronautical and Non-aeronautical, the Aeronautical segment includes all airport flight operation functions, while the Non-aeronautical segment provides facilities and services to passengers. This segment leases CPH owned buildings, premises, and land that are used for hotel, parking, and the CASC. Professional and consulting services concerning airport operation and related services are also part of the non-aeronautical segment.

Guiding the two operating segments, CPH’s leadership team consists of seven executive positions engaged with a Board of Directors to manage and govern the Airports’ strategy and operations. The following roles report to the Chief Executive Officer:
• Chief Financial Officer (CFO) - Oversees all areas of finance, including accounting, internal controls and compliance, commercial and corporate finance, and Corporate Affairs & Legal (CAL) which includes Enterprise Risk Management (ERM) function.
• Chief Information Officer (CIO), Assets and Technology - A recently expanded role, includes all technical installations, IT systems, runway facilities and buildings.
• Chief Operations officer (COO), Customer Service and Operations - Responsible for several business units including customer care (CCA), traffic (TRA), baggage (BAG), security (SEC), quality management (QMA), environmental affairs (MAF), airport optimization (OPT), service excellence (SEE) as well as the Roskilde Airport (RKE).
• Chief Commercial Officer (CCO), Marketing and Sales - Emphasizes business to consumer (BTC) and business to business (BTB) marketing and sales, including route development, e-commerce, real estate, parking and the Copenhagen Airport Shopping Center (CASC).
• Vice President, Human Resources (VP HR) - Oversees internal communications, health and safety programs, union and employee relations, all employee related matters and development plans.
• Vice President, External Relations (VP EXR) - Responsible for all external communication, stakeholder relation management, company website and press handling.

Figure 1.5 Organization and Leadership at CPH

CPH Board of Directors
The Board of Directors is responsible for the overall strategic management of CPH. The Board consists of nine members, six elected by the shareholders at the annual general meeting and three elected by employees. Under Danish law employees have a right to Board level representation. These employees hold four-year Board terms and act within the same rights, duties, and responsibilities as shareholder elected Board members. This group meets five times per year, including a two-day strategy seminar, with all agendas defined in an annual plan.
The Board of Directors is responsible for:

- Organizing and monitoring of executive management
- Monitoring of bookkeeping and financial reporting, including risk management and internal controls
- Monitoring all capital resources
- Defining the overall goals, strategies, action plans and investment policies of CPH.

**UNIQUE SCANINAVIAN BUSINESS CULTURE**

Photo 1.6 Copenhagen’s Historic Waterfront

Scandinavian firms are widely considered to be reflections of the region’s culture and history. Ownership, community engagement, and cooperative communication with employees all contribute to a Scandinavian management approach that is observable today.

Denmark is a Nordic country bordering Germany and connected to southern Sweden by a bridge. Copenhagen, the capital city (1.3 million) is the center of business and government. With a population of 5.61 million (including the Faeroe Islands and Greenland), most Danes speak three languages—Danish (of course), German, as well as English.

Denmark is a constitutional monarchy and is among the world’s most politically stable democracies. With a highly skilled labor force and its central location, Denmark is an excellent distribution point for trade within Scandinavia, Northern Europe and extended European Union markets. Danes are considered to be helpful, open, and tolerant of other cultures and place great emphasis on equal rights and respect. Danes support education through substantial public funding provided by high taxation rates.

Within business there are generally no strict hierarchies between employees and management. Informal and discreet behaviors are more common, as social positioning and boasting are played down in public. While Danish people value peaceful and unassertive behavior, discussion and debate are central to Danish culture. Respectful negotiations and team work are valued in Danish working life. Denmark’s democratic processes and structures are demonstrated by highly valued work-life balance within a democratic system of
government which provides many social services through taxation. Denmark values public and private sector collaboration with no restrictions.

Denmark and other Scandinavian countries seek engaged, idea-rich and responsible employees. Management differentiates itself by being future-oriented, creating flat organizations and valuing participation in decision making. Although pressured by the increasingly globalized world, Denmark’s management strives to remain the opposite of hierarchical, authoritative command-and-control models. Motivation and values are cornerstone to the Danish business model.

![Figure 1.7 Hofstede Comparison: Denmark and U.S.](image)

See Appendix for additional information on Dimensions of National Culture

**RISK MANAGEMENT AT CPH**

**Risk Leadership Background**

As in any other airport, CPH has always worked with risk management as a part of daily operations. Enterprise Risk Management can be dated back to 2003/2004, when a financial analyst was assigned to identify risks in CPH in a risk register based on a standardized approach with a 4 x 4 risk matrix (probability and impact). In late 2005, Macquarie Airports (MAP) became the majority shareholder in CPH, whereby CPH began its current existence as a quasi-public organization.

In 2006, three Board committees were established under the CPH Board, including an Audit Committee that required CPH develop a standardized risk assessment and reporting process. The audit committee subsequently changed its name to the Audit & Risk Management Committee (ARMC). At the same time MAP asked CPH to convert to a 5 x 5 risk matrix, expanding the probability and effect analysis and adding risk score comments. CPH used this risk matrix until 2013. At this point, ARMC and the CPH leadership team recognized the whole ERM approach, including risk identification, risk assessment and risk reporting, needed to be fully redeveloped. As evidence of this need, the 2013 risk register contained 120 risks which were not considered sufficiently helpful to managers who, in their daily jobs, found it challenging to fully comprehend the risk profile. In addition to reform, the
leadership team desired to put greater emphasis on risk management and suggested a new, systematic way to anchor the responsibility for risks.

New ERM Role and Approach

In late 2013, as part of the ERM revitalization effort, CPH’s management established a new role, the Group Risk Manager (GRM), to strategically assess current organization-wide challenges, ensure CPH is prepared for growth, and remain competitive in a global, technology advanced industry. Management defined this role to oversee the overall corporate risk exposure in terms of continuous risk identifications, assessments, monitoring, updating and reporting of the risk register. The new GRM role reports to CPH’s General Counsel, who is responsible for all legal affairs and CPH’s insurance program. General Counsel and CHP’s legal team informs the GRM of emerging risks as well as Board level concerns. Kristine Raffel has held the new GRM position since April, 2014.

![ERM Organization and Governance Model at CPH](Image)

In dialog with relevant risk owners and risk champions, Ms. Raffel brought attention to the key work of identifying and evaluating risks and coached the organization on the new risk management approach. She specifically worked with managers throughout the organization to secure alignment, build transparency, and ensure quality assessment of risks.
Figure 1.9 Group Risk Manager Roles and Responsibilities

Bow-Tie Approach

When establishing the new ERM approach Ms. Raffel chose to structure CPH’s group risks and risk management based on the "Bow-Tie" model, an approach that provides a holistic view and ensures consistent handling of risks. This approach embraces both the causes and consequences as the preventive and reactive handling thereof. Introducing and applying the new risk management approach and holistic methodology at CPH resulted in:

- Simplified risk register identifying 50-60 risks, versus 120 risks under the previous model
- Focus on uncertainties, not problems
- Identification and analysis of missed opportunities
- Clear structure and definitions

Under this model, CPH leaders and risk owners identify risks as they assess performance and growth in light of CPH’s strategy and expectations. A threat or opportunity will typically be triggered by a number of underlying root causes. The coloring in the model shows the degree of influence CPH has over the root cause and thereby the chances of CPH affecting the probability of the risk/opportunity materializing through preventive measures.

The effect of a triggered threat or opportunity is expressed in a number of consequences. In order to limit the negative impact of a given risk, CPH works with a number of reactive measures. These measures may include crisis organization, contingency plans, emergency response plans, all functioning within an overall Business Continuity Management program. CPH has also chosen to minimize the economic impact on some risks through insurance coverage provided by external carriers.

Figure 1.8 illustrates the Bow-Tie model and the concepts that are used in the practice of risk management today:
Risk Appetite

The essential objectives of CPH’s Risk Management strategy are to define the organization’s risk appetite, reinforce consistent risk communication, and manage CPH’s corporate risks. Copenhagen Airport’s Board of Directors defines the organization’s risk appetite at a high level. The description then contributes to the ongoing evaluation and prioritization of risks against CPH’s strategy targets. Risk appetite is therefore an important tool in supporting decisions and meeting the company’s strategic goals. The Board aims to both reduce the risk exposure of the company and ensure that CPH takes adequate risk in the right, strategic places to benefit CPH.

In 2015, CPH conducted an exercise involving the whole organization, including the Board of Directors, to more clearly express its established risk appetite. The risk appetite scale varies from completely avoiding risk to accepting unlimited risk. CPH’s specific risk appetite levels lie within these dimensions. CPH then produced risk appetite descriptions and set risk tolerance levels in the following ten areas: Safety, Security, Environment, Occupational Health & Safety, Internal Controls & Compliance, Funding & Hedging, Reputation, Information Technology, Capacity & Operation, and Business Development & Digitalization.

Copenhagen Airport’s risk appetite supports the basic principles underlying the organization’s risk management behavior. Leaders communicate CPH’s risk appetite to employees, recognizing these individuals are critical to daily operations. Leaders and employees then develop a common understanding of risks and the potential impact on CPH.

Risk Activities and Reporting Cycles

Ms. Raffel contributes to Copenhagen Airports’ annual report, a report required of all Danish publicly held firms. While this report covers year-end fiscal reporting, it also reports on risk practices, risk monitoring, and future risk-related priorities. Ms. Raffel’s contributions to the annual report provide a high-level view of the risk conditions at CPH as an important statement both to CPH’s shareholders and employees as well as to other stakeholders.

Box 1.1 Risk Activities and Reporting Cycles

Since establishing the risk approach, Ms. Raffel owns the following activities:

- Advises and teaches the organization in relation to CPH risk appetite
- Obtains an overview of the entire organization’s overall risk profile. Establishes a complete risk picture of potential and actual risks (both threats and missed opportunities)
- Continuously updates of CPH’s corporate risk register based on input from a number of risk owners and risk champions in CPH
- Reports risks updates in annual reports and other risk reporting as required
- Advises and teaches the organization to identify, define and assess risks
- Ensures the necessary link between ERM and CPH’s insurance coverage, including assistance with insurance strategy
- Develops and implements relevant templates, processes and IT tools in support of CPH’s ERM activities
Additionally, she considers the ongoing, tactical role of risk management as represented in CPH’s quarterly reporting. Quarterly risk goals reflect the organization’s operations, market competition, and risk landscape. In addition to the classic and more generic types of risks, CPH is exposed to the portfolio of static threats and opportunities that are characteristic of the aviation industry. The extent and type of risks that CPH is exposed to is diverse; covering risks within safety and security, operational risks, commercial risks, financial risks, strategic risks, compliance risks, political risks, and reputational risks.

Ms. Raffel evaluates the uniquely connected risks that impact modern, global airports, such as political and regulatory changes, changing consumer behavior, airline competition, natural disasters, security breaches and violent acts, and technology challenges. As with many internationally operated businesses, these contagion risks (often also known as Global Risks) cross many boundaries and pose high degrees of uncertainty. The quarterly risk management goals and subsequent reporting reflect both the external and internal factors that pressure the modern airport. CPH considers their risk management approach vital to strategic planning and decision-making.

Box 1.2 Risk Activities and Reporting Cycles continued

Specifically in relation to the quarterly ERM reporting, she performs the following activities:
- Conducts individual risk meetings with risk owners to secure risk updates
- Implements specific studies of risks in consultation with risk owners
- Facilitates risk discussions at quarterly business units leader meetings
- Reports to the management team, Audit Risk Management Committee and CPH’s Board of Directors on risk register, with focus on selected-risks (Top 10)
- Facilitates quarterly discussions with management team about risk priorities
- Follows-up on input from the management team, Audit Risk Management Committee and CPH’s Board of Directors
- Updates and evaluates CPH’s Business Continuity Management plans
- Provides leverage of risk insight in cross-organizational decision making

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Box 1.3 CHP Annual Reports

Additional information on Copenhagen Airports risk management views may be found in the Annual Reports.

The 2015 CPH Annual Report defined risk as “uncertain (both positive and negative) future events or developments that could impact CPH’s ability to meet its strategic targets.” The report further emphasized the need to strike a balance between risk and return. “It is not a question of avoiding risk (risk aversion), but of risk awareness and of identifying and exploiting opportunities, and accepting the right level of risk that creates value for the business and for CPH’s stakeholders.”

Risk Areas are identified in the report, including the following that demonstrate the connected nature of CPH’s business, both within the industry and across the global transportation network.

- **Hub Status** - Identifies the dependence on airline customers, route development, and major airlines. CPH sites resiliency as a leadership capability, as they respond to industry and economic changes.
- **Safety and Security** - While complying to regulations and governments agency monitoring to ensure the safety of employees and passengers, CPH also develops and practices contingency plans to quickly react to short notice events.
- **Capacity** - Given growth trends, CPH implements expansion projects, striking a balance between passenger volume, financial development, service levels and operations.
CONTAGION RISKS

CONTAGION RISK: Interrelated risks observed across risk types, including natural hazards, man-made disasters, and terrorist events that can affect macroeconomic changes and financial market vulnerabilities. Organizations may experience serious disruption in production, effectiveness, and financial stability due to the immediate, interconnected systems, processes and networks. Economic activity may be impacted across regions, possibly globally. Environmental conditions or characteristics facilitate the rapid—if not instantaneous—spread of a peril or perils. In some circumstances the term Contagion Risk can also refer to the peril itself, such as the Zika virus. The contagion effect explains the possibility of spread of economic crisis or boom across countries or regions.

Multiple, current scenarios present compelling risk related questions for modern airports. These scenarios present potential contagion risks and concerns for Ms. Raffel, CPH leaders, employees, shareholders and, of course, travelers and consumers of airport services. High visibility events as well as operational concerns emerge and pose questions for risk managers to evaluate.

- Regulatory changes imposed by the European Union or Denmark require CPH to adhere to new and sometimes costly standards or a less flexible regulatory regime. Copenhagen Airports partners with airlines to understand the impact of new regulatory demands. Costs are evaluated and either reduces CPH’s or partners’ profitability or increase charges to consumers of the airports’ services, thereby reducing CPH’s competitiveness. Also operational and consumer impacts are evaluated, such as increase time in queues or flowtime of luggage. While immediate assessments are considered, businesses and government look critically at the broader, strategic impact on local jobs and national gross domestic product (GDP).

Regulatory changes are an example of the contagion effect, as governments attempt to control or mitigate risk across industry-wide concerns. While CPH may have some influence, the organization must comply or risk direct exposure to core risk factors (terrorist attacks), fines and public scrutiny. CPH views regulatory compliance, strict adherence to statutes put forth both by the European Union and Denmark as critical. This view is described and documented within CPH’s risk appetite.

- Capacity constraints are brought on by the increased demand on CPH’s airports. While growth is considered a positive opportunity, it brings significant cost and potential for new risks to CPH. As broader market factors influence capability needs and risks, CPH views this as a business strategy decision where risk factors must be considered. Also, the

“Traffic growth is very positive, but with it there are always new things to think about. Can we provide capacity in time to cope with growth? Security, check-in, gates, and other customer services all need to expand at same pace as growth. Our choices influence investments, jobs, passengers and risks that encircle all stakeholders. The many interdependencies between individual expansion projects challenge a well-functioning airport, both from a consumer and company perspective.”

- Kristine Raffel
financial stability and growth of major industry partners, such as airlines, influence CPH’s decision making. CPH’s risk appetite guides the pace of growth, such as the expansion of facilities or hiring additional staff. Leaders balance risk and reward when assessing and executing on capacity questions.

Photo 1.12 Major airline partner at CPH

- **Global financial crises** influence worldwide markets, currency exchange, and business and leisure travel choices. Consumers reacting to local, regional and world-wide events spend less on leisure and business travel when threats are perceived. The EU and other agencies have taken many steps to contain the ongoing financial crisis and limit its impact on the broader economy. Equally important, CPH risk managers work within their organization to clearly define risks and communicate action plans to better ensure their ongoing success. Specifically, CPH risk owners consider their horizontal and vertical value chain to identify partners impacted by the financial crises and the business impact of contagion risk. These partners include the major airlines utilizing CPH for their operations.

- **Natural disasters** impact airports directly, affecting operations and consumer confidence in safety and security measures. As an example, the 2010 eruption of Eyjafjallajökull, an Icelandic volcano created a huge ash cloud which completely paralyzed the air traffic in large parts of the world, and causing about 100,000 flight cancelation. Copenhagen Airport, among several affected European facilities, was forced to close and suspended all in- and out-bound traffic for 10 days, losing the business of an estimated 400,000 passengers. Precautionary measures came after experts stated concerns over fine particles that could clog air intake systems and damage engines. The ash cloud resulted in the largest ever air traffic shutdown due to natural disaster and presented a contagion risk for not only airports, but extended global market activity.
Security breaches and terror threats exist prominently in current airport risk assessments. Since 9/11, multiple incidents have been reported globally with far reaching economic and safety implications. The 9/11 terror event heightened the need for security awareness and forced the air transportation industry to adopt strict guidelines worldwide. Even with stricter measures in place, incidents occurred internationally, including the 2015 terrorist attacks in Paris, the 2015 Turkish airport explosion, and the terror attack in Brussels airport in February, 2016. However, many security breaches were deterred due to risk prevention measures.

At CPH, leaders assess the probability of security risks and terror attacks and take actions as a responsible organization in connection with the Police Investigation Service in Denmark. Also, CPH is a participating member of the Airports Council International Europe which governs over 450 airports in 44 European countries. Overseeing the interests of 90% of the EU’s airports, ACI develops security recommendations.

CPH operates under the Schengen Agreement, which enables border-free travel within the European Union countries who have adopted the Agreement. Under this agreement, EU citizens are not required to show passport upon entry. However, the EU is considering changing passport control for all incoming passengers. These realities present operational and financial questions, ultimately with increased costs being passed from government, airline and airports to the customers.

Technology advancements pose complicated risks and opportunities that challenge all modern airports. Organizations see these as high risk scenarios as more than a tool used by terrorists. Cybercrime also poses a tangible, competitive threat as anonymous hackers may create disruption far beyond the actual incident. Operational impacts extend to baggage handling, check-n processes, security screenings, and general flow within a busy airport. Also, communication channels could be interrupted affecting information boards and websites that provide boarding direction to waiting passengers. Alternative or manual backup plans would need to be engaged.

“The volcanic eruption in 2010 was the largest ever seen. The more recent 2014 event thankfully did not produce an ash cloud. However, learning from these natural events, CPH now has business contingency plans that could be engaged quickly. Alternative airport use scenarios consider opportunities to aid the community, leverage available resources toward maintenance projects, as well as open our regional shopping mall for broader use. The ash cloud event remains in back of our mind.”

- Kristine Raffel

“A large part of the increased charges at CPH the past 10 years reflect the changing security landscape and increased security costs. With refugees from southern and eastern European nations in strife, other nations must react to this huge issue. EU airports are forced to address new policies on security and air travel.”

- Kristine Raffel
CPH joins airports worldwide in efforts to understand technology and information security risks. In a 2015 study, CPH initiated an independent assessment of the maturity in relation to the ISO279001 standard for managing information security.

Digital technology advancement, however, provides new operational growth and revenue building across partners. CPH currently hosts the largest retail shopping mall in Denmark. This mall currently identifies customers as only the travelers passing through the airport. With many high-end brand retailers, as well as specialty shops, restaurants and services, CPH sees a potential opportunity in e-commerce to attract broader consumer internet spending.

“Independent reviewers gave CPH a satisfactory rating with opportunities for improvement agreed to by CPH leaders. It is estimated that the improvements will raise the airports’ maturity to a higher level than the defined ACI baseline. While the specific results of the independent study are confidential, the maturity scale definitions provide a framework to understand and measure airport information security.”

- Kristine Raffel

**ASSESSING CONNECTEDNESS, RISK AND STRATEGY**

Coming into her role as risk leader for CPH, Ms. Raffel considers the connectedness of current economic conditions, growth expectations and the operational performance of the airport. This includes CPH’s external partners, technology trends and consumer preferences. She and the airport’s leaders emphasize the need to assess risks, but importantly understand risk management as a tool to capitalize on opportunity and help support CPH’s strategic direction.

Two critical risks are currently being addressed by Ms. Raffel, CPH risk leaders and business teams attempting to understand internal and external environments, threats and opportunities. The team looks historically at the near demise of a crucial partner and its ongoing influence on growth of the airport’s aeronautical business. Additionally, the team assesses alternatives to embrace digital technology trends that influence the prominent retail position at the airport.
RISK SCENARIO 1
THE NEAR DEATH EXPERIENCE OF SAS

“I love flying SAS. Always have. I think they have a great product with good service at a fair price. Yet, I still believe they will go bankrupt.”

-SAS Customer Comment, Blog Post, Engage // Innovate, November 11, 2012

ABSTRACT
In 2012, Scandinavian Airlines (SAS) publicly announced that the company would go bankrupt if they did not succeed to settle critical unions contracts. Four years after the near collapse of SAS, Kristine Raffel and CPH’s executives continue to assess the current conditions and financial health of the aviation industry, including SAS. Since the 2012 announcement, SAS has endured union negotiations and cost cutting efforts. Today the airline is again profitable after a tough restructuring process and the decline of fuel prices; however, the European airline industry remains highly competitive and the legacy carriers, like SAS, continue to struggle with a higher cost structure than the low cost carriers. Regulations imposed by governments as well as government investment in CPH contribute to complicated tightrope conditions, as CPH evaluates strategic growth, airline industry alliances and danger signals across all business sectors.
SETTING - BANKRUPTCY THREAT

In 2012, Scandinavian Airline announced its near bankruptcy position following a period plagued by drop in demand, increasing operating costs, high jet-fuel prices, and low-cost carrier competition. Overall air travel demand dropped due to the global economic downturn (2008-2009), which resulted in a more competitive consumer and business travel market. Many Nordic carriers responded to the downturn with low-cost options and extended routes. SAS, however, is charged with resisting market conditions and retaining an operating plan and cost basis that resulted in declining unit revenue and profit. SAS first reported trouble in 1st quarter 2012 giving indicators to investors and employees that structural changes would be needed. Later that year, as SAS announced restructuring details and its 2012 3rd quarter results, leadership considered a 5-point plan to rebound from a near death business scenario. The potential failure of this major airline would shake not only the airline and its employees, but have regional impact specifically on the economic health and growth plans of Copenhagen Airports.

Scandinavian Airlines devised a multi-point plan, conceived by leadership and approved by the SAS board of directors. An immediate, abrupt reaction was required in response to the supporting European Union (EU) governments’ decision to cut credit lines unless terms and conditions are met. As part of this response, SAS planned to cut salaries and 800 jobs in an effort to dramatically reduce costs. In an effort to raise cash, SAS, also sold Wideroe regional airline, ground handling services and other assets.

Market analysts monitored SAS Group financial preparedness, cash flow from operating activities and year ending results. Earlier in 2012, the Barcelona-based carrier, Spanair, filed for bankruptcy protection. Spanair’s former owner, Scandinavian Airlines (SAS), owned 10.9%, further complicating the operating dilemma at SAS. Trading on the Stockholm Exchange, SAS stock tumbled during the 2011-2012 period, marking a historic low in the stock’s history.
Reaction from consumers, industry watchers and social media turned ugly as SAS considered changes. While SAS was widely recognized for good service at a fair price, various external sources commented on leadership, culture, and lack of innovation as factors that drove SAS toward bankruptcy. SAS employees were vocal about the 2009-2012 performance and the influence of governments’ demands. As 50% owners, national governments demanded cost restructuring, however employees rejected at the plan to cut employee salaries by up to 25%. With operating cost constraints being considered, public observers and employees questioned top management salaries, especially the CEO’s whose fixed salary at was more that the entire seven-person management team at Norwegian Air. Comparing profits of the
competitors, market watchers compared stock performance of the two airlines, SAS (orange) and NAS (green). See Figure 2.1. In response to critical conditions, new credit lines were established from major banks as well as from the Sweden, Norway and Denmark governments. SAS’s executives addressed major changes to employment terms, conditions, union labor agreements and pension schemes to address bailout demands. At CPH, the Board of Directors and leadership team recognized the immediate operational and strategic impact in the potential failure of SAS. The growth and organizational health of the airline was critical to CHP’s strategy as well as longitudinal changes needed to ensure CPH’s viability.

Copenhagen Airport’s CEO and executive team continue to face critical challenges in the wake of these experiences. A failure of this major airline would shake not only the airline and its employees, but would have a major negative impact on the economic health and growth plans of CPH. CPH’s management team faced strategic decisions based on their risk assessment of this event.

ENGAGING RISK MANAGEMENT

In the second quarter of 2014, as a new member of the executive leadership team, Ms. Raffel attended an offsite executive briefing where leaders presented business contingency management plan related to the SAS bankruptcy. During this dramatic introduction to CPH’s largest most impactful risk concern, Ms. Raffel, in her new role, quickly ascertained the position of the owners, Board of Directors as well as the leadership team. This meeting would initiate an ongoing, formal dialogue across CPH business sectors to assess risks, refine growth strategy and directly impact tactical steps impacting airport operations.

Ms. Raffel learned that Lufthansa, SAS, and other European Union airlines strongly asserted that government regulation and rising taxes damaged the Europe airline sector. CPH was aware of rising fuel costs and slow growth in the sector which both enflamed the highly competitive industry and impacted CPH’s revenue. Scandinavian Airlines and Copenhagen Airports, both under partial European governments ownership, was forced to adhere to regulations, pay required taxes, and address key stakeholders adding to the complications of the bankruptcy aftermath.

As part of the SAS bankruptcy cost reduction strategy, the airline convinced multiple unions to agree to wage cuts, many up to 15 percent. In marathon negotiating sessions, SAS and union executives debated the options, understanding the fate of the firm rested on cost reduction measures which could positively impact credit ratings and investor confidence. Following announcements on union agreements, SAS stock rose 3 percent, their highest in
three weeks. Banks and shareholder governments also responded to the new working contracts new credit facilities totaling $519 million.

“Now we have a base to work on our plans. This is a first step. There remains a lot of work to do but it is a first, important step.”

- Richard Gustafson, SAS Chief Executive in Copenhagen

MONITORING AND SURVEILANCE

Copenhagen Airports remained conservative when considering its network of partners and implications of the SAS bankruptcy aftermath. Given the strategic importance of SAS to CPH, leadership from both firms intended to build a cohesive working partnership to address mutual interests. Compelled to monitor SAS and other airlines’ financial health situation, CPH also took on an active posture evaluating all publicly shared reporting and privately held, regular meetings dialogue. Understanding SAS may choose to hold some aspects of operations and financial health confidential, CPH leaders reviewed facts (flight booking trends, cost of fuel, payroll) as well as observations quarterly, in line with regular risk updates. Moving forward, CPH reported these findings internally and compiled a risk report that addressed important points including liquidity and financing, activity and operations, profitability, solidity and risks, danger signals, and an overall CPH management viewpoint.

STRATEGIC GROWTH AND COMPETITION

Approximately 70 different airlines utilize Copenhagen Airport’s facility. In 2015, the top five airlines, respectively SAS, Norwegian, EasyJet, Ryanair and Lufthansa, accounted for 67% of the total passenger count. With SAS the significant market leader, business continuity of the major partner is demonstrated by their market share.

![Top 5 airlines](chart.png)

*Figure 2.5 Major airlines market share*
Short-haul routes from Scandinavia, the Baltics, Poland, Northern Germany and the UK feed passengers to long-haul routes. Low cost carriers (LCC) have focused on point to point traffic in Europe with no transfer options with other airlines. New fast growing LCCs have gained the highest growth rates in the last 10 years, based on a lean business models compared to the legacy carriers. To the LCCs costs and efficient operations are the most important factors. Airlines such as EasyJet and Norwegian gained market share at CPH reaching 28% in 2015. Since 2015 Ryanair presented a new important source of growth in this segment. As a result of their lower average ticket prices this has boosted demand significantly, especially leisure travel.

![Figure 2.6 Low cost carrier growing market share](image)

CPH “sells” the capital city of Copenhagen and the Øresund to airline partners using the picturesque regional attractions, vibrant businesses, hotels, conference facilities and cruising ports. Competition between airports and countries to retain and attract new routes has become fierce. However, in recent years CPH developed a continuous growth trajectory and has twice been voted the best airport in the world by World Route Conference in route development among airports between 20 and 50 million passengers annually.

“For Copenhagen Airport it is incredibly important that we can maintain and develop cooperation with all airlines, including our strategic partner SAS. It provides travelers with optimal opportunities from CPH to travel around the world.”

- Thomas Woldbye, CEO

**LEARNINGS FROM OTHER EUROPEAN AIRPORTS**

The leaders at CPH also reflected on two historical examples where the bankruptcy of a flagcarrier impacted the airport. In Brussels Airport (BRU), Sabena airlines went bankrupt in 2001, just after a peak in passenger air travel in 2000. After many years of extensive recovery efforts, total passenger counts have only in recent years reached the levels prior to bankruptcy. In Zurich (ZRH), Swissair went bankrupt in 2002 after record breaking total passengers in 2000. In this case it took almost 10 years before the prior level of passenger
volume was achieved again. The two scenarios illustrate the impact a major airline failure has on its primary airport.

**Figure 2.7** Brussels passenger count by year  
**Figure 2.8** Zurich passenger count by year
BUSINESS PROBLEM - EXPANSION OF TERMINAL 4

For several years CPH leaders debated the need to construct a new Terminal 4 based on traffic growth continued. Historically, terminal expansion had been the way CPH had provided capacity needs. Constructing a new terminal would indicate an estimated $1 billion investment for a construction project that would span over 5 years.

Inauguration of a new terminal was a distant achievement, even after the required management and Board approvals. In their favor, Copenhagen Airport recovered quicker than most other European airports from the 2007-9 financial crisis. If the traffic growth continued, a decision to construct terminal 4 would need to be taken soon.

According to the Danish Aviation Act, CPH is subject to a capacity obligation. Thus, the Danish authorities could order investments at CPH, if Denmark’s need for international flight connections is at stake. Although the scope of the capacity obligation is narrow and, thus, unlikely to lead to investment orders, there was a real risk that CPH’s image and reputation would be severely tarnished if CPH arrived at a build decision too late.

A CALL TO ACTION

Kristine Raffel attended an offsite executive briefing where leaders presented business contingency plans related to the possible SAS bankruptcy. During this dramatic introduction to CPH’s largest most impactful risk concern, leaders were pressed to quickly assess risks and alternatives related to the airport’s growth and expansion.

CPH has much higher passenger numbers than the catchment area around the airport would suggest. With the growth figures in recent years, CPH would need to take a decision on constructing a new terminal 4 soon. However, if SAS were to go bankrupt in the coming years, CPH would be at risk ending up with vacant capacity, a condition seen in Brussels and Zurich. Such a development would also have a negative impact on CPH’s charge levels and overall competitiveness.

- Thomas Woldbye, CEO

STUDENT QUESTIONS

Given the experiences with the risk of a SAS bankruptcy, students are asked to consider this and like scenarios impact on CPH’s strategy.

1. Envision the bankruptcy scenario of SAS, a major strategic partner to CPH, in light of the definition of contagion risk. Does the near death of a significant revenue and industry partner imply a highly networked, contagion impact? Explain your answer and provide examples of impacts.

2. Coming out of the SAS challenges and thinking about strategic partners, how could CPH (or any firm) proactively monitor and assess the health and stability of these partners? Describe the goal and objective of this type of response, the potential benefits, and tactically, how would you operationalize this type of activity?

3. Given CPH’s growth and success as a European travel hub, airport expansion plans were approved and fully backed by Board. However, with the SAS challenges, these
plans needed to be revisited and potentially modified. Consider your role as the CEO of Copenhagen Airports when answering the following questions:

a. What immediate actions would you direct to assess the risk and impact of a SAS bankruptcy?

b. What data points are most relevant to this assessment?

c. When considering the approved growth plan (Terminal 4) and investment for the airport, what alternatives do you see for CPH? List and explain the risks and benefits for each.

d. Choose an alternative, as the new strategic growth approach. Discuss your position on why this is the best strategy to both maximize CPH's ongoing economic opportunity and reduce the risk and impact from a major partner's financial difficulties.

e. Describe your expectations of the Enterprise Risk Management practice, given the exposure of the SAS challenges. What is the potentially revised directive to the Group Risk Manager, your C-level direct reports, and the risk leaders embedded in the organization?
RISK SCENARIO 2
DIGITAL DISTURPTION: IMPACTS ON RISK AND STRATEGY

Figure 3.1 CPH Shopping Mall, Brand mix

ABSTRACT
Technology and marketing experts predict a continued evolution in retail trends over the next decade as consumers respond to digital disruption and social media prevalence. In a highly connected world, businesses seek to exploit this opportunity. However, the evolution presents wide ranging issues for retailers to keep pace with technology, attract discerning customers, drive innovative marketing, and ultimately command market share. Brick and mortar malls must transition to remain relevant as e-commerce matures and omnichannel retailing emerges. For Copenhagen Airport, leadership resolutely recognizes the need to address digital risks and opportunities, while adding to the complexities of an international airport – security, duty-free zones, and limited customers. The CPH strategic, profit seeking business model combines retail and airport operations under one corporate risk umbrella.

“Omnichannel is the path from search to purchase. The evolution from brick and mortar retail to digital is no longer an option for businesses. Lines are blurred as consumers expect to engage across multiple marketing channels to arrive at a purchase, anywhere, anytime, any device.”

- Steve Stephan, SVP Technology Services, PFS Web
SETTING - COPENHAGEN AIRPORT SHOPPING CENTER

Copenhagen Airport owns and manages the largest mall in Denmark, measured on revenue presenting a mix of international, luxury and local brands to regional and global travelers. With passenger growth on the rise, retail turn has increased 30% since 2011 providing CPH with a significant revenue source. An estimated 62% of the 26.6 million (2015) travelers passing through CPH shop at the extensive mall which offers tax-free shopping, a variety of retail options as well as several food and beverage possibilities. As the travel hub of Scandinavia, CPH hosts business and leisure travelers recognizing the repeat purchasing power of its retail customers. Significant to repeat foot traffic, 46% of CPH travelers pass through CPH at least once per quarter. Current revenue from retail represents significant percentage of CPH annual income.

CPH finds their strategic business model influenced by digital disruption. Opportunities and threats present new risks in a highly connected, rapidly changing global environment. How does a mall of this scale remain relevant and profitable in the face of quickly evolving omnichannel competition? Additionally, how does technology, consumerism, and globalization enhance or challenge CPH's retail strategy? Copenhagen Airport addresses this digital dilemma currently as one of the top risks and strategic challenges facing this unique airport model.

Copenhagen Airport’s current marketing strategy leverages social media to appeal to a growing millennial customer base. Digitally savvy, this traveling customer base demands full use of social engagement strategies that spur buying trends. Shoppers, as well as travelers, have a digitally influenced and sophisticated pallet requiring VIP store treatment and attentive service that requires more than luxury brands and competitive pricing. CPH recognizes this in its marketing strategy, yet finds pressure in rising consumer expectations.

Figure 3.2 CPH Enlargement Plan, Ariel view of field with enhancements
BUSINESS PROBLEM – DIGITAL STRATEGIES

Copenhagen Airports' strategic challenges in 2015 identified margin and competition as key factors toward success. The connected nature of CPH’s business extends in this case beyond retail competition, vendors, and supply chain to the overall airport strategy across business sectors. Specifically, the decreasing margins within the airline industry transfer financial pressures to airports that are already dealing with lower revenue from the airlines, heightened automation requirements, increased government regulation, and more risk sharing across the transportation industry value chain. Due to compounding margin pressure, CPH considers expanding and improving its retail shopping mall to enhance passenger traffic, consumer sales, and ultimately revenue for the airport.

Figure 3.3 CPH Consumer Shopping Experience

The CPH growth strategy includes growth in “non-aeronautical business”. Currently more than 50% of CPH’s revenues are gained from the current brick and mortar shopping mall, food and beverage, and parking in this segment. CPH looks to strategically enhance its retail strategy and understand expansion alternatives including the popular, yet regulated tax free shopping.
Tax free shopping at CPH offers its customers international brands at tax-free prices and allows EU citizens the same, attractive non-taxed prices as non-EU customers. In order to provide this benefit, Tax Free at Copenhagen Airport must record the destination data from the customer’s boarding card and all customers are required to show their boarding pass when shopping at the Tax Free shop.

**Box 3.2 Terminology of Retail Inventory Turnover Ratio**

Managing inventory levels is important for most businesses and this is especially true for retailers and any company that sells physical goods. The Retail Inventory Turnover Ratio is a key measure for evaluating just how efficient management is at managing company inventory and generating sales from it.

Calculation:
Annual Cost of Goods Sold / Average Inventory at Cost = Inventory Turnover (Turns)

**Box 3.3 Description of Tax Free Revenue Model:**

Rent paid to CPH is based on the retailers’ revenue by product category. A minimum rent is set based on departing passenger counts, differentiating EU and non-EU passengers. Higher minimums are set for non-EU passengers.

Specifically, the rent calculation is a product of turnover. As the retailer is more successful at selling products, the rent paid to CPH increases. The gross turnover reflects all sales of goods and services, including goods delivered to customers. This includes distance selling (telephone, internet, and mail orders) as cash or credit sales. The retailer must register and report all sales as part of turnover.

Copenhagen Airports, like other competitive airports in the EU, collects this scanned data, including flight number and destination for strategic purposes. Tax Free at Copenhagen Airport also captures information from the customer receipt to produce retail sales statistics. This data collection and analysis allows CPH to better select a range of products that best meet its customers’ needs.

Copenhagen Airports currently engages Heinemann, as its duty free operator. Heinemann offers limited reservation online capabilities for customers who wish to reserve product for pickup at the airport. A recent enhancement to the digital sales model includes home delivery, in addition to pick-up at store. CPH marketing materials announce the enhanced service. “As something completely new you can get the products you buy in the airport TAX FREE shop and in the TAX FREE-store online shop, sent to your home. Spend min. 500 kr. and get free shipping - we deliver when you are back home from vacation, or on the day that suits you. So you can shop tax free both online and in the airport without worrying about extra luggage.”

The E-commerce Strategy is owned by CPH’s E-commerce and Marketing manager reporting to the Chief Commercial Officer. The Digital Airport track is one of the four strategic focus areas in CPH’s newly adopted growth strategy. This strategy, launched spring of 2016, is currently being rolled out in the various functions. CPH has been actively planning and building this strategy since
2013, with ongoing technical capability and market assessments, the strategy. This process allows CPH to manage risks as well as maintain an opportunistic view of risk and strategy.

As additional examples of the advancement in E-commerce Strategy, today six retailers at the Copenhagen Airport Shopping Center, have online, simple e-commerce capability. CPH and Heinemann expect this number to grow as e-commerce capabilities and services are expanded. Also, the Food to Fly offering started in 2016 offers take-out food selections via a mobile application. CPH desires the Food to Fly strategy expanded and integrated with their e-commerce strategy.

Copenhagen Airport leaders consider the growth of retail, including food and beverage, as a significant sources of revenue for the CPH business strategy. With increasing pressure on profitability, competition, and digital expectations of passengers, CPH leaders must consider the combination of risk management, opportunity, and corporate strategy to address this business problem.

GOALS

Copenhagen Airports is currently considering several goals and development strategies to enhance the airport’s ongoing business development and increase retail revenue. Leaders defined the following goals and seek to further analyze the market to understand customer expectations and set priorities:

- Creating overall growth in sales revenue for the shopping center
- Providing product and service online research data, informing passengers
- Offering pre-orders, home delivery, pickup, and product return services
- Enhancing product assortment, specialty stores and food and beverage units
- Digitalizing the shopping experience for shoppers and employees
- Expanding Food to Fly concept online
- Increasing shopper dwell time
- Offering benefit programs for shoppers
- Leveraging social media

However, the e-commerce strategy continues to be refined. Leaders desire to develop a three-year plan to address these goals, better articulate priorities and address several ongoing and challenging questions with CPH’s digital strategy.
STUDENT QUESTIONS

Students are asked to study the potential position of CPH and alternatives to expand e-commerce, develop an omnichannel retail shopping experience to consumers, and increase revenue.

Your focus is to supply CPH with insights on the

A) Current view of CPH’s e-commerce strategy,
B) Potential alternatives for an expanded e-commerce shopping platform, and
C) The use of omnichannel strategies to enhance the customer experience.

Consider the position of CPH as a retailer as well as a travel hub for northern Scandinavia and gateway to world travel. Research the demographics of the travelers, potential expectations of the immediate regional market (specifically Denmark and Sweden). In your report, briefly discuss alternatives and choose a strategy for senior leaders.

Specifically address the following:

1) Propose a research strategy to gain insights into the potential customer base. Include information on interview or survey questions, intended research participants, and geographic distribution.
2) Based on data provided in the case and your additional cultural research, identify cultural indicators and values that should be considered by CPH leaders when addressing this risk and opportunity?
3) Prioritize services and approach to e-commerce and omnichannel development. Develop a proposal including timeline. Discuss competition, current technology, and trends.
4) What are the risks and barriers to your proposal?
5) What are the remaining open questions that need to be explored to meet CPH’s goals?
6) Finally, propose a risk strategy to address the digital dilemma. Within your proposal be sure to include:
   a. Who needs to be involved internally and externally to enhance CPH’s strategy.
   b. What is the revenue proposition (benefit to CPH) as well as risks?
   c. What should the Board of Directors expect of the Group Risk Manager and risk owners at CPH while implementing your strategy? This direction should encompass monitoring risk as well as continued assessment of strategic direction.
Figure 5

Total risk heat map

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1 - 4 = Green
5 - 15 = Yellow
16 - 40 = Red

Probability

Figure 6

Security

Risk appetite:
- Security has to protect employees, passengers, airlines and other companies operating at CPH as well as the general public in all matters related to safeguarding civil aviation against acts of unlawful interference.
- As a result CPH has very limited risk appetite within security and puts considerable effort into ensuring security in order to reduce to the greatest possible extent the probability of incidents occurring.
- In addition, CPH is subject to a wide variety of regulatory requirements. Its compliance is continuously monitored and evaluated by the Danish Transport Authority. CPH avoids taking any risks that will affect CPH’s ability to be compliant with security regulations.
- CPH should always have updated contingency plans to allow it to react at short notice to events that could have a considerable effect on CPH’s goals and targets.

Risk tolerance levels:
- CPH should never reach a security level where there is risk of an EU Article 15 injunction.
- CPH will always evaluate any risk through a “Risk based approach” in coordination with the Police and Danish Transport Authority (demand in the Danish National Security Program (NASP)).
- Any risk in yellow and red shall be meticulously evaluated in order to either mitigate risk or accept the specific risk by the proper management level in CPH (Head of Security Department and COO).
Risk appetite:
- CPH needs to be innovative, cutting-edge and focus on digitalisation in order to be relevant for ancillary value to its stakeholders and customers.
- Consequently, CPH has a receptive risk appetite within business development and innovation. Especially in the area of e-commerce and digitalization, there is a willingness to innovate and try new approaches to business and operation.
- Every now and then CPH should be leading the innovation and digitalisation both in the aeronautical and non-aeronautical area, and thereby experience potentially more failures. Thus, it is acknowledged that from time to time there will be failures that over time hopefully are fewer than the successes.
- Investments in non-aeronautical capacity (incl. CAGC, Real Estate & Parking) and in digitalisation are always to be assessed in a business case perspective and the potential revenue and margins should be analysed against CAPEX/OPEX in the business tool light. If/when approved, close follow up should be carried out on performance and if necessary timely corrective actions should be initiated.

Risk tolerance levels:
- CPH should never initiate projects or initiatives that have not been through the formal Business Case Light process.
- CPH should not be too fa sucent with the opportunities of technology — versus constantly focussing on the end-user perspective; what is the real benefit of the service/product.
- CPH should always have an outside-in perspective, understanding the objectives of the passengers/customer/ partners - and be creative finding solutions, while having constant focus on automated and uniform processes.
Professor Geert Hofstede conducted one of the most comprehensive studies of how values in the workplace are influenced by culture. He defines culture as “the collective programming of the mind distinguishing the members of one group or category of people from others”. The six dimensions of national culture are based on extensive research done by Professor Geert Hofstede, Gert Jan Hofstede, Michael Minkov and their research teams.

Power Distance Index (DI)
This dimension expresses the degree to which the less powerful members of a society accept and expect that power is distributed unequally. The fundamental issue here is how a society handles inequalities among people. People in societies exhibiting a large degree of Power Distance accept a hierarchical order in which everybody has a place and which needs no
further justification. In societies with low Power Distance, people strive to equalise the
distribution of power and demand justification for inequalities of power.

Individualism versus Collectivism (IDC)
The high side of this dimension, called individualism, can be defined as a preference for a
loosely-knit social framework in which individuals are expected to take care of only
themselves and their immediate families. Its opposite, collectivism, represents a preference
for a tightly-knit framework in society in which individuals can expect their relatives or
members of a particular in-group to look after them in exchange for unquestioning loyalty. A
society’s position on this dimension is reflected in whether people’s self-image is defined in
terms of “I” or “we.”

Masculinity versus Femininity (MAS)
The Masculinity side of this dimension represents a preference in society for achievement,
heroism, assertiveness and material rewards for success. Society at large is more competitive.
Its opposite, femininity, stands for a preference for cooperation, modesty, caring for the weak
and quality of life. Society at large is more consensus-oriented. In the business context
Masculinity versus Femininity is sometimes also related to as “tough versus tender” cultures.

Uncertainty Avoidance Index (UAI)
The Uncertainty Avoidance dimension expresses the degree to which the members of a
society feel uncomfortable with uncertainty and ambiguity. The fundamental issue here is
how a society deals with the fact that the future can never be known: should we try to control
the future or just let it happen? Countries exhibiting strong UAI maintain rigid codes of belief
and behavior and are intolerant of unorthodox behavior and ideas. Weak UAI societies
maintain a more relaxed attitude in which practice counts more than principles.

Long Term Orientation versus Short Term Normative Orientation (LTO)
Every society has to maintain some links with its own past while dealing with the challenges of
the present and the future. Societies prioritize these two existential goals differently. Societies
who score low on this dimension, for example, prefer to maintain time-honored traditions
and norms while viewing societal change with suspicion. Those with a culture which scores
high, on the other hand, take a more pragmatic approach: they encourage thrift and efforts in
modern education as a way to prepare for the future. In the business context this dimension
is related to as “(short term) normative versus (long term) pragmatic” (PRA). In the academic
environment the terminology Monumentalism versus Flexhumility is sometimes also used.

Indulgence versus Restraint (IND)
Indulgence stands for a society that allows relatively free gratification of basic and natural
human drives related to enjoying life and having fun. Restraint stands for a society that
suppresses gratification of needs and regulates it by means of strict social norms.
SAS warns of ‘final call’ for survival

November 12, 2012

Financial Times, Richard Milne, Nordic Correspondent

SAS warned workers on Monday that they had six days to agree to swinging cuts in pay and pensions or else the perennially lossmaking Scandinavian airline could lose its fight for survival.

SAS wants to cut 40 per cent of its workforce either through redundancies or by selling businesses and is asking its remaining staff to take a pay cut of up to 15 per cent and move to defined contribution pensions.

Rickard Gustafson, chief executive, said the governments of Sweden, Norway and Denmark – which own half of the airline – and several lenders had given their backing to a new SKr3.5bn ($519m) credit facility but only if workers agreed to the new terms. SAS has scheduled a board meeting for Sunday to decide if it should press ahead or end its existence.

Mr. Gustafson described it as SAS’s “final call if there is to be a SAS in the future” and added that lenders had said: “We give you this chance to turn the company around. Otherwise we will not support you.”

A director said: “If the agreement is not delivered, then SAS is no more.”

SAS is perhaps the most threatened of all flag carriers in western Europe after being hit by fierce competition from Norwegian Air Shuttle and Ryanair, combined with its own high cost structure and complicated operations across three Scandinavian countries. It is more focused on short-haul flights than many other flag carriers, leaving it more exposed to low-cost rivals who have lured away its lucrative business customers.

Spain’s Iberia is also fighting for survival and a number of large European airlines are looking to cut costs in a year that has already seen Spanair and Hungary’s Malev go bankrupt.

The latest plan reflects the exasperation of the government shareholders, which have participated in two rights issues in 2009 and 2010. Attempts to sell SAS have foundered in recent years as well.

Mr. Gustafson, whose own pay will be cut by 20 per cent, said the airline intended to sell SKr3bn in assets, including its ground handling and Norwegian regional airline, Widerøe. The restructuring should boost pre-tax earnings by SKr3bn annually, on top of SKr5bn of savings announced a year ago, by cutting the workforce from 15,000 to 9,000.
The trigger for the move is an imminent pensions accounting change that SAS has warned could wipe out almost all of its shareholder equity by reducing it by up to SKr10.7bn. SAS said the proposed changes to workers’ pensions would reduce the hit to equity by SKr2.8bn.

All eyes are now on SAS’s staff, who have complained in the past that they have cut as much as they can. A union representing Danish cabin crew on Monday said it had entered into a new agreement just four months ago in which it gave SAS “emergency first aid”.

But it added: “We are of course willing to listen to the management and the challenges that they think are responsible for the current situation.”

**Figure 12**

**REGULATORY MODEL**

CPH’s charges are regulated, which is the case for all large airports in Europe. In Europe a distinction is made between single till and dual till models when setting the level of airport charges that may be levied from the airlines. The former takes account of all cost and revenues generated at the airport, including the commercial activities such as shopping, parking and hotel, whereas the latter when setting the charges only focusses on aeronautical costs and revenues.

CPH’s regulatory model is a so-called hybrid model, which mixes the features of the single and dual till models. As a starting point CPH has a dual till model; however, according to the Danish regulatory model CPH is obliged to subsidize the aeronautical charges with some of the profits generated in the commercial area. This so-called cross-subsidization should be between 10 to 50 percent of the surplus commercial profits. Whether the cross-subsidization level is in the high or low end of this spectrum depends on how CPH’s level of charges compares to the levels of charges of comparable European airports. Thus, the more competitive CPH’s charges level is, the lower the level of cross-subsidization is required. In the aeronautical area all assets and investments are part of the regulated asset base (RAB). Prior to calculating the charges CPH is allowed a rate of return on the RAB based on a weighted average cost of capital (WACC) calculation. Based on the above the Regulator will calculate revenue caps for a four year period, which CPH will transform into airport charges based on the forecasted traffic for the period.

The above rules are only followed (the so-called the fall-back procedure) if it is not possible for CPH and the airlines according to a regulated process to negotiate a voluntary agreement. It goes without saying that the parties in the negotiations speculate on what the outcome of a fall-back procedure will be. Thus, the parties will only enter into a voluntary agreement if they believe the result is better than if the charges are set according to the fall back procedure.

The Danish regulatory model has proven successful and so far - both in 2009 and 2014 - CPH has managed to negotiate a voluntary agreement with its airline customers, thereby avoiding having the charges set according to the fall-back procedure, which is less flexible.
BIOGRAPHIES

Kristine Raffel, Group Risk Manager, Copenhagen Airports

Ms. Raffel, who is Danish, holds a Higher Diploma degree from Copenhagen Business School (CBS) with focus on Economy and international trade. Prior to this she finalized an education as Market Economist with focus on marketing and language, also from CBS. Based on this she worked nine years at IBM where she had various assignments within international logistics, marketing, contract management and process optimization. She then developed her expertise in risk management at Deloitte-Europe, where she held roles as Senior Consultant and Manager. In this capacity she worked with public and private organizations on process, strategy and project risk management and led risk assessments, measurements and reporting.

Patricia Connolly Stephan, MBA

Patricia Stephan is the Blanch Research Fellow working with Dr. Peter Young on risk and global leadership initiatives at the University of St. Thomas’ Opus College of Business. Pat is currently in University of St. Thomas Leadership Doctorate program and is writing her dissertation on risk leadership and information technology partnerships in an emerging market setting. Pat completed her M.B.A. at St. Thomas and is a member of Beta Gamma Sigma. She holds a B.A. in management information systems and business.

Pat is an Information Technology leader with extensive experience in IT strategy, LEAN operations, systems development, supply chain management and vendor management. She is Managing Partner at Cashel Rock Associates, an independent consultant firm providing CIO advisory services to global firms on various IT topics including service management, transformation and strategy. In her most recent corporate role, Pat worked for Polaris where she led teams to transform IT, grow technical services and support an advancing, global enterprise. At Target Corporation, Pat held several senior leadership positions in infrastructure, systems development, operations, service management and strategy. She has extensive experience with enterprise software, ITSM optimization, multi-shore workforce, vendor negotiation and quality management. Pat enjoys developing talent and has led several career coaching, recruiting and global workforce planning initiatives at both Polaris and Target. She has been recognized internationally for her leadership in building highly effective, global teams. Prior to corporate roles, she was an IT consultant with KPMG focused on risk management and disaster recovery in the finance and insurance sectors.

Pat is from St. Paul, MN and enjoys travel, music and sports with her husband and two children. She has served on the Board of Directors for local non-profit organizations and has consulted with various organizational leaders on Corporate Social Responsibility and community giving.

Peter C. Young, PhD

Peter C. Young, PhD holds the 3M Endowed Chair in International Business, and in that position is responsible for global business education initiatives at the University of St. Thomas’ Opus College of Business. From 1994-2011 he held the E. W. Blanch, Senior Chair in Risk Management in the Opus College of Business. In that capacity, he was (and remains) responsible for the MBA courses and non-degree programs in risk management. He also
serves as advisor to (and co-creator of) the University of St. Thomas actuarial science program, which in 2011 received recognition as a Center for Actuarial Excellence. Professor Young has been a visiting professor to City University in London and Aoyama Gakuin University in Tokyo, and has held a distinguished honorary professorship at Glasgow Caledonian University in Scotland. He was selected as a Distinguished Alumnus of the Year for the University of Nebraska-Omaha and was honored with the ALARM-UK Lifetime Service award. Most recently, he has been selected as an Honorary Fellow of the Institute of Risk Management in London.

Dr. Young holds a Ph.D. in Risk Management from the University of Minnesota and a Master’s Degree in Public Administration from the University of Nebraska-Omaha. He is considered a leading authority and educator on the subject of risk management. He has written extensively on the subject of risk management, including an influential risk management textbook, Risk Management and Insurance (McGraw-Hill, co-authored with Michael Smith), which generally is considered the first major textbook to develop the concept of organization/enterprise-wide risk management. He has also coauthored (with Martin Fone) Managing Risks in Public Organisations, which has become a widely-used book on UK public sector risk management.

In 2015 Lexis-Nexis published his most recent book, Risk Management and Leadership. Currently, he heads the Risk Leadership Project at the University of St. Thomas, which is a research, project, and program development initiative that coordinates work across the affiliated fields of Risk Management, Compliance, Governance, CSR/Sustainability, and Strategic Management. This work involves collaborations with the St. Thomas School of Law, School of Engineering, Mathematics Department, and Health Care Management. Additionally, Copenhagen Business School (Denmark) is a collaborator on this project.

Recent and current work (with clients or partnering organizations) includes:

- Risk management advising and consulting to the South Dakota Technology and Science Authority (US) and the Sanford Laboratory, public organizations tasked with managing the conversion of the western hemisphere’s largest gold mine into an underground scientific laboratory.
- Risk management executive training for Amlin plc (UK), in partnership with Templeton College–Oxford University (UK).
- Risk management advising and consulting to SABMiller plc (UK and South Africa).
- Strategic risk planning with Kommunal Landspensjonskasse, a Norwegian life, casualty insurance and financial services company.
REFERENCES


