HELIOS

The aviation consultancy of Egis

CYBER-SECURITY BUSINESS CONTINUITY INTEGRATED RISK

THE RESILIENCE FACTORS THAT DRIVE YOUR REPUTATION

INTRODUCTION

We all work hard to build and protect our reputation, and in today's world of 24/7 news and the viral effects of social media, it can be lost so easily. That's why your organisation's approach to risk and security is so important.

It's not just about your ability to cope with abnormal events, it's about how you identify and manage risk across your organisation, the plans you make, the people you involve, your ability to create and maintain a total system view.

At Helios we look at this as organisational resilience. It takes in cyber-security, business continuity and integrated risk, and it cannot be ignored. Integrated risk at the enterprise level includes the analysis and monitoring of safety, security, finance, operations, systems and reputation.

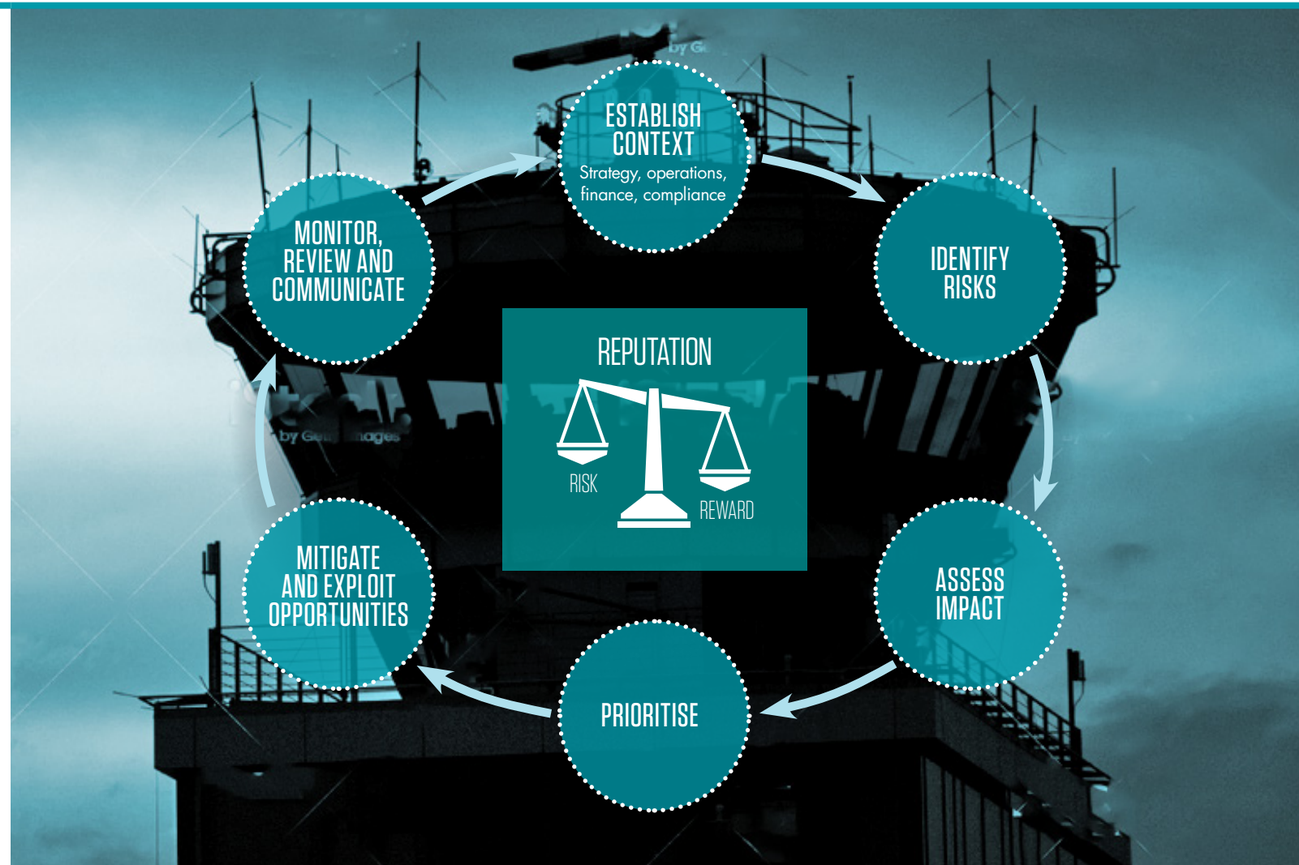
We identify the most effective processes and activities for the situation. It will depend on the data currently collected, the links between business units, the roles of senior decision makers in managing risk, and the regulatory environment.

90%

OF LARGE ORGANISATIONS SUFFERED A SECURITY BREACH IN 2015

MORE THAN 50% OF PEOPLE SAY...

"LACK OF INTEGRATED PROCESSES MAKES IT DIFFICULT TO UNDERSTAND RISKS"



CYBER-SECURITY

Air traffic management's use of a patchwork network of bespoke systems and protocols has traditionally insulated it well from cyber-attack. Airports have tended to keep data in silos, rather than exploiting it as a strategic asset. This is all changing. Aviation is now at a critical juncture in moving towards a highly connected system-of-systems underpinned by common standards and components.

The driver for this change is to increase capacity and reduce costs, but increased cyber-security and resilience will be essential to realise these benefits.

Real or perceived security weaknesses will undermine confidence in new technology, operations and business models. Failures will have inevitable impacts on personal and organisational reputations.

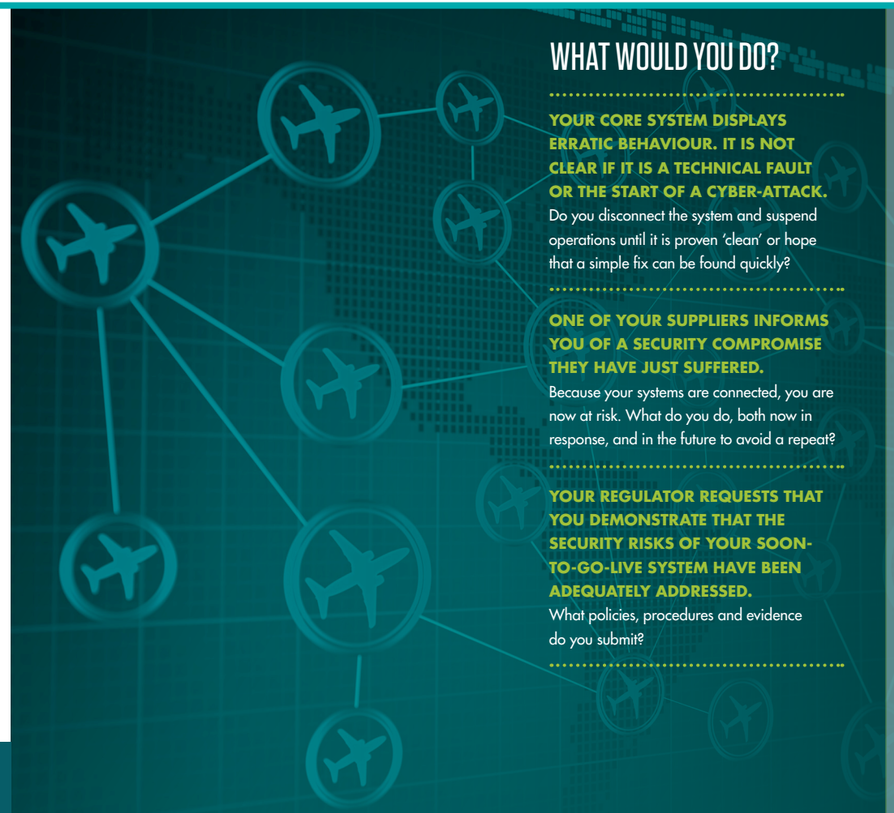
170 DAYS

AVERAGE TIME TO DETECT A MALICIOUS OR CRIMINAL ATTACK

€2+ MILLION

THE COST OF A SERIOUS COMPROMISE OF SECURITY

OUR ADVICE? Take action early to minimise overall cost, take a whole-life approach to progressively build trust, and make sure you are aligned with safety and other strategic goals.



WHAT WOULD YOU DO?

YOUR CORE SYSTEM DISPLAYS ERRATIC BEHAVIOUR. IT IS NOT CLEAR IF IT IS A TECHNICAL FAULT OR THE START OF A CYBER-ATTACK.
Do you disconnect the system and suspend operations until it is proven 'clean' or hope that a simple fix can be found quickly?

ONE OF YOUR SUPPLIERS INFORMS YOU OF A SECURITY COMPROMISE THEY HAVE JUST SUFFERED.
Because your systems are connected, you are now at risk. What do you do, both now in response, and in the future to avoid a repeat?

YOUR REGULATOR REQUESTS THAT YOU DEMONSTRATE THAT THE SECURITY RISKS OF YOUR SOON-TO-GO-LIVE SYSTEM HAVE BEEN ADEQUATELY ADDRESSED.
What policies, procedures and evidence do you submit?

HOW HELIOS CAN HELP

SECURITY GOVERNANCE, increasing awareness, developing a business case, ensuring compliance

INTEGRATED RISK MANAGEMENT, helping align or integrate safety and other systems with security

SECURITY MANAGEMENT SYSTEM, assess against latest ISO/IEC 27001:2013 standard, establish policies and procedures, undertake a readiness audit

CYBER-RISKS, assess your vulnerabilities, identify requirements, design a total system approach to cyber-security

CONSTRUCTIVE SUPPORT, working alongside you to identify strengths and weaknesses and enhancement opportunities

BUSINESS CONTINUITY

Business continuity is your ability to continue delivering services at acceptable predefined levels following a disruptive event. Together with contingency planning, it is an essential requirement today, when your customers are often aware of incidents before you are.

While everyone is familiar with business continuity, it is too often treated as an afterthought, particularly as it deals with low probability, but high impact, events. Even where procedures are in place these have often been developed in isolation or left unchanged despite the changing technical, operational and business environment.

2 YEARS

OF AIR TRAFFIC FLOW DELAY DUE TO UNPLANNED ANS DISRUPTION IN EUROPE IN 2014

€1.3 MILLION

COST PER DAY OF AIRLINE IT SYSTEM FAILURE

OUR ADVICE? Consider business continuity as a specific discipline and develop plans and procedures to keep services running and protect your reputation. Organisational resilience should be your goal.

WHAT WOULD YOU DO?

THERE IS A PROBLEM WITH YOUR PRIMARY DATA PROCESSING SYSTEMS. Do you try and fix the problem, switch to a standby system or move to an alternative location with a fall-back system?

YOUR REGULATOR WANTS ASSURANCE ON THE LEVEL OF SERVICE YOU CAN PROVIDE WHEN A DISRUPTIVE EVENT OCCURS. Do you have contingency plans to cover a wide range of events that have been tested and aligned with your high level policy?

YOU ARE STARTING A NEW HIGH PROFILE PROJECT that will allow you to deliver your services to your customers more efficiently. Is business continuity part of your project planning?

HOW HELIOS CAN HELP

BUSINESS CONTINUITY MANAGEMENT, including developing a framework for organisational resilience

POLICY AND STRATEGY, assessing your risk appetite, capturing requirements

DETAILED PLANNING, analysing impacts and designing mitigations

IMPLEMENTATION AND OPERATIONS, assessing Human Factors aspects, running test exercises

PROMOTION, developing a communication strategy and helping spread the message

REVIEW AND AUDIT, identifying critical failures and comparing to best practice

INTEGRATED RISK

Risk management happens at all levels of the aviation business and covers safety, security, finance, operations, systems and of course, reputation. 'Enterprise risk' is the process that integrates all these risks to provide a global risk picture at board level to set against your high level objectives. Handled well, it can provide organisational and competitive advantage.

Take the recent banking crisis. Analysis showed that there was a lack of strategic risk management despite the presence of sophisticated risk identification programmes.

Conversely, strategic risk management delivers competitive advantage for mining companies where it informs operational and strategic plans, as well as the relationships with local communities.

The benefit is that clear decisions can be taken based on actual data, giving traceability and proper justification. For the most effective results, this will be carried out at an organisational level, rather than for individual departments or units.

68%

ORGANISATIONS CAUGHT OFF GUARD BY AN OPERATIONAL DISRUPTION IN THE LAST FIVE YEARS

$10 BILLION A YEAR

DIRECT & INDIRECT COSTS TO AIRLINES WORLDWIDE OF RAMP ACCIDENTS

OUR ADVICE? By identifying and managing these risks proactively, you are better able to make strategic decisions in the face of uncertainties. Your approach to risk management can help create value for owners, employees, customers, regulators and society overall.

WHAT WOULD YOU DO?

YOUR CEO ASKS FOR THE TOP TEN RISKS TO THE BUSINESS.
Are your answers aligned to your business model and strategic objectives? Can you integrate risk information from different areas to present a coherent overview?

YOUR REGULATOR ASKS FOR EVIDENCE OF SYSTEMATIC RISK MANAGEMENT.
What can you provide?

WHEN A CHANGE OCCURS TO THE ORGANISATION AND ITS SYSTEMS,
how do you report your baseline risk? And how will you continue to monitor it?

HOW HELIOS CAN HELP

IDENTIFY RISKS, map risks to strategy, operations, finance and regulations

SET A COMMON STRUCTURE, a model that centralises reporting and ongoing monitoring

ASSESS IMPACT, strategic, economic, operational and reputational consequences

INTEGRATE AND PRIORITISE, develop the 'Enterprise' view and highlight the critical areas

ENTERPRISE RISK PLANNING, dig into the detail, establishing safety factors, connections, influences, mitigations and opportunities

WHY CHOOSE HELIOS?

EXCELLENCE

Helios is the aviation consultancy of Egis, delivering management consultancy, strategy, investment and technical advice across the globe. Combining analytical rigour, strategic context and creativity, we bring independence and insight to every opportunity we address.

Our total system approach, and the fact that we are at the forefront of changes within the aviation industry makes Helios a formidable strategic partner in cyber-security, business continuity and enterprise risk management.

Our parent company, Egis, is an international group headquartered in Europe, with over 13,000 employees and a turnover of $1bn. With a worldwide reputation for excellence and integrity, our multinational aviation team provides a compelling offer that encompasses consultancy and engineering services to ATM, institutions, airports and aircraft stakeholders. Egis also operates 14 international airports.

EXPERIENCE

Helios successfully completed a major study for SESAR Joint Undertaking (SJU) on how SESAR's new operational concepts and technologies should respond to cyber-security concerns. Supported by Thales, we delivered a threat and vulnerability assessment, a target framework of high-level controls, a cyber-security maturity assessment and a strategy and roadmap for improving cyber-security within SESAR.

For a European ANSP we conducted a systematic review of their contingency provisions against recognised industry best practice. Our report to the board identified the main risks to the business with respect to the current contingency provision and recommended improvement actions.

For an airport in the Middle East we were asked to validate a Feasibility and Options Study on business risks, contingency and business continuity plans of the incumbent ANSP. The work included requirement capture, risk assessment, gap analysis, assessment of each option and identification of additional options.

EXPERTISE

MATT SHREEVE

Matt is a technology policy specialist. He has over 10 years' experience in the policy, programme and change management aspects of developing, deploying and using innovative technologies and services. His particular expertise is in cyber-security, resilience and enterprise architecture. This builds on his past background of building and assuring secure systems within UK Government. Matt led the major SESAR cyber-security study in 2015 and is also a qualified ISO 27001 (Information Security Management Systems) Lead Auditor. His recent clients include the European Commission, ANSPs, SJU, ESA, EUROCONTROL and the GSA, where he is often asked to advise on balancing potential benefits, costs and risks in complex and uncertain situations.

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ADAM PARKINSON

Adam has over 16 years' experience in providing leadership in the development and implementation of new ATM technologies and operational concepts within a European legislative environment, while ensuring that they are aligned to an organisation's business objectives. Adam specialises in risk assessments and a strategic risk-based approach to projects. Recently he has reviewed contingency plans for a European ANSP to highlight potential risks against their ability to provide business continuity. He has also provided funding advice for a project to enable new service delivery and business continuity options. Another assignment involved defining a strategy for the development of safety assessment processes and risk indicators to be integrated within the processes of the wider organisation.

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GLEN SMITH

Glen brings extensive specialism in ATM (safety) risk management at ANSP and regulation level, with over 20 years of experience in the air transport and aerospace domains. He has supported integrated risk, safety management and assurance solutions for the ATM domain, both operational and technical, and has extensive contact with ANSPs, regulators, airspace users, CANSO and EUROCONTROL. He has experience in working with European counterparts within the SESAR programme and other international work, including in the UK, US, Thailand, Singapore, Switzerland, Norway, Ireland, Croatia, Hong Kong, Romania, Bulgaria and Hungary.

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