

Managing Risks and Security in Outsourced Environment



Vincent Leung CISSP CISA CISM TOGAF
Enterprise Architect - Information Security

19 May 2011



Now you're really flying

Contents

- 1. About Cathay Pacific Airways**
- 2. Outsourcing and its typical risks**
- 3. Managing security in an outsourced environment**



Key facts and figures

- An international airline registered and based in Hong Kong
- 127 aircrafts offering scheduled cargo and passenger services to 143 destinations in 39 countries and territories
- Major shareholders
 - Swire Pacific Limited (43.97%)
 - Air China Limited (29.99%)
 - CITIC Pacific Limited (1.98%)
- About 19,000 staff worldwide



Our vision and missions



CATHAY PACIFIC

Our vision is to be the world's best airline. Being the best means that we always strive to excel in everything we do. Our dynamic team provides the highest quality service so that our customers are happy they chose Cathay Pacific.

We put safety first

We grow a winning team

We provide outstanding products and services

We consistently deliver Service Straight From The Heart

We produce superior financial returns

We support Hong Kong

We are a socially and environmentally responsible company



CATHAY PACIFIC

Now you're really flying

Outsourcing footprints in Cathay Pacific

□ Information technology

- Business solutions hosting – ASP / SaaS
- Data centre hosting and management
- Application maintenance and development
- Network, server and desktop maintenance
-

□ Back office operations

- Aircraft maintenance
- Loyalty marketing
- Ground handling (in small ports outside Hong Kong)
-



Contents

1. About Cathay Pacific Airways

2. Outsourcing and its typical risks

3. Managing security in an outsourced environment



What is outsourcing?

... outsourcing is often viewed as involving the **contracting out of a business function - commonly one previously performed in-house - to an external provider**. In this sense, two organizations may enter into a contractual agreement involving an exchange of services and payments ... (Source: Wikipedia)

Outsourcing can be **onsite** (outsourcing staff working in the same location), **offsite** (outsourcing staff working in a remote location under the same geographical area) or **offshore** (outsourcing staff working in a remote location under different geographical area)



Common reasons of outsourcing

- Focus on core business activities
- Reduce cost – “do the same thing with less”
- Avoid headcount expansion
- Flexibility with respect to both organization and structure

Think about these questions before deciding to outsource a business function or capability

- Is this a core function for the organization?
- Does this function require specific knowledge, process and staff that cannot be replicated externally?
- Can this function be performed by another party for the same or lower price, with the same or higher quality, without any risk induced beyond the organization’s risk appetite?

Outsourcing has its benefits, drawbacks and risks

Possible benefits

- Economy of scale
- Leverage on service providers' experience with wider array of skills, tools, techniques and methodology
- Well defined specifications and better deliverable quality (as a result of having formal contractual agreements)
- Less likely to induce scope creep (as service providers are sensitive to changes which can be time and resource consuming)

Possible drawbacks and risks

- Service degradation, not meeting SLA
- Loss of key personnel
- Fraudulent act by disgruntled employees
- Loss of flexibility to change (as every thing is bounded by contract)
- Loss of control on information security
- Non compliance to regulatory requirements, e.g. data privacy violation
- Offshore-specific risks, e.g. cultural difference



Risk reduction options in outsourcing

- Establish measurable and shared goals and rewards
- Use multiple suppliers for the balancing of power
- Perform regular reviews and benchmarking
- Establish contract change control mechanism
- Make the scope of services modular in the contract and include provisions to consider as many contingencies as possible
- Implement short term contracts with flexibility to extend
- Conduct due diligence with the supplier to confirm the baseline initially set by the supplier in its initial proposal and subsequent negotiations
- Form a contract management team and establish a strategic supplier management discipline
- Establish a change management program on the people side helping the affected staff to adapt to new working model



Contents

1. About Cathay Pacific Airways
2. Outsourcing and its typical risks
3. Managing security in an outsourced environment



Information security considerations in outsourcing

- Embed security considerations in the outsourcing contract
- Understand how the service provider will secure your data
- In case of offshore outsourcing, understand the legislation requirements regarding transborder flow of personal data
- Security awareness should include your service provider
- Last but not least, make sure you have the right to audit your service provider!



A checklist on the security considerations that should be taken in an outsourcing contract

Security Controls Area	Contract Clauses		
Security management	Security policies	Roles and responsibility	Compliance and auditing
Information protection	Information classification	Sharing of information to third parties	Information retention
Identity and access management	Identity administration	Identity auditing	Privilege management
End point and server security	Access control	Threat prevention	Vulnerability management
Network security	Threat prevention	Content filtering	Segregation
Application security	Development	Testing	Monitoring and audits
Physical and personnel security	Information facility access and workplace security	Background checks	Security skills and qualifications
Operations security	Security monitoring	Incident response	Disaster recovery

Wrap up

- **Outsourcing is a tool to achieve cost reduction and operational efficiency, yet the business benefits will be jeopardized if the outsourcing risks are not managed properly**
- **The risks of outsourcing should be identified and managed throughout the whole outsourcing project and contract lifecycle - obtain management oversight in managing the risks because they are business issues**
- **Outsourcing contracts must address all relevant aspects of information security such that service providers are obliged to protect the information of their clients**



End of presentation

vincent_leung@cathaypacific.com

+852-27474875

