



Nuclear and Aviation Security – A Comparative Analysis

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Nuclear Material and Nuclear Facilities, 13-17 November 2017, Vienna, Austria**

Outline

- **Background to the Study**
- **Project Structure**
- **Forward Programme**
- **Conclusions**

Outline



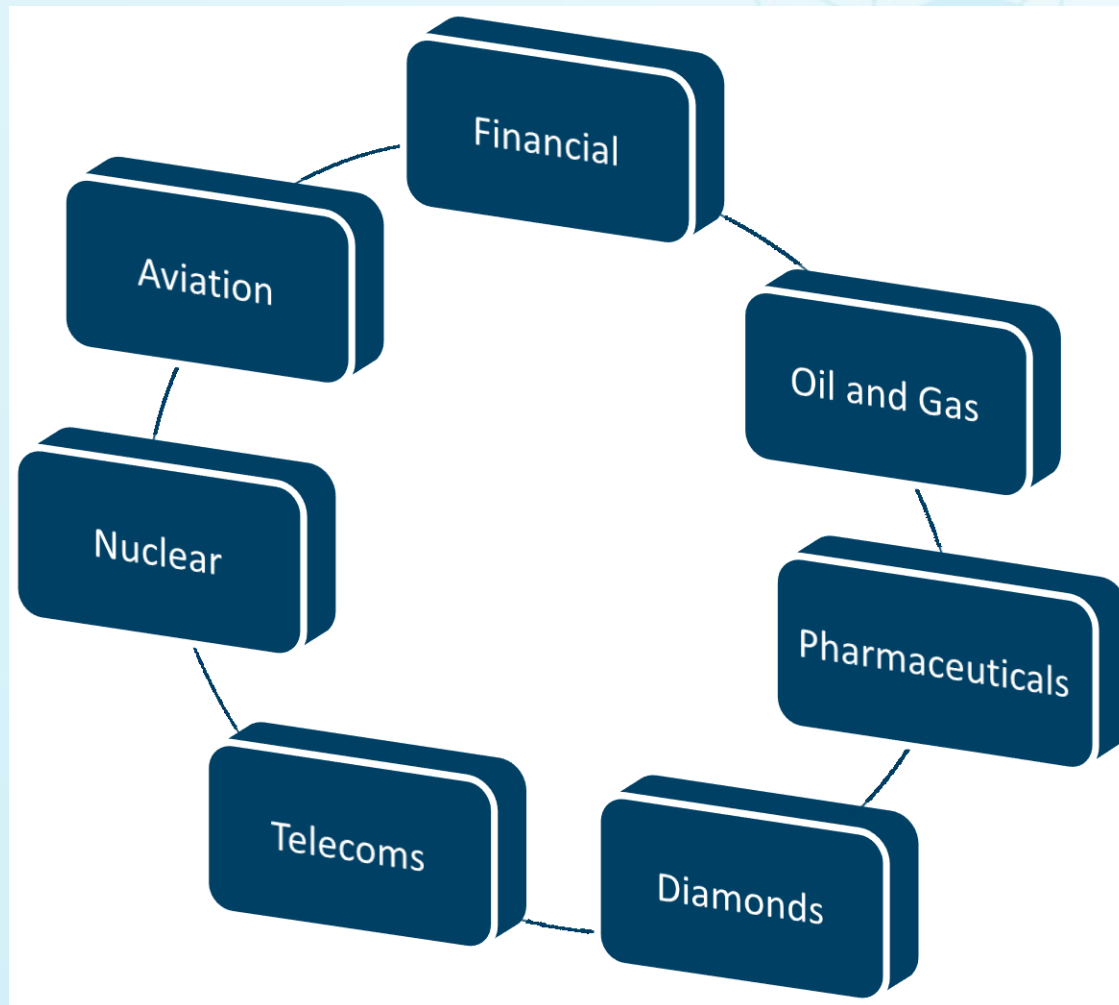
Background to the Study

Project Structure

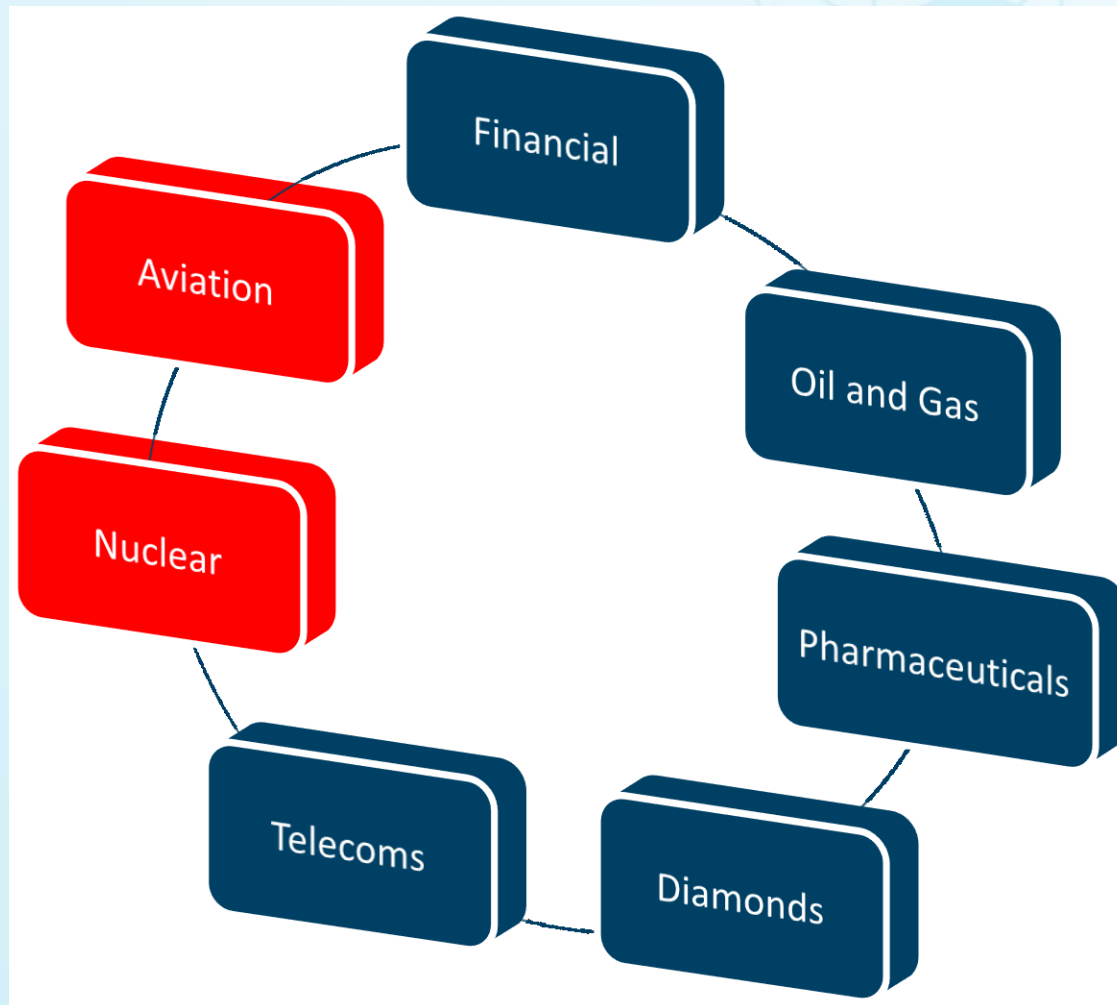
Forward Programme

Conclusions

Multi-Sector Security Director's Committee



Multi-Sector Security Director's Committee



The First Aviation – Nuclear Security Comparison

In the wake of the terrorist attacks in 2001, a comparison was made between two of the largest and most complex industrial sites in the UK, in order to get new perspectives on security management approaches in the different sectors



Sellafield Site, Cumbria, England



Heathrow Airport, London, England



What we found out was a surprise

- **About 90% of the security management issues were the same - at that time:**
 - **Security was seen by many as an expensive overhead that got in the way of operations,**
 - **Multi-agency involvement was complicated and regulations were prescriptive,**
 - **Access control to many different restricted areas for thousands of employees and contractors was challenging**

Aviation and Nuclear Security Comparisons

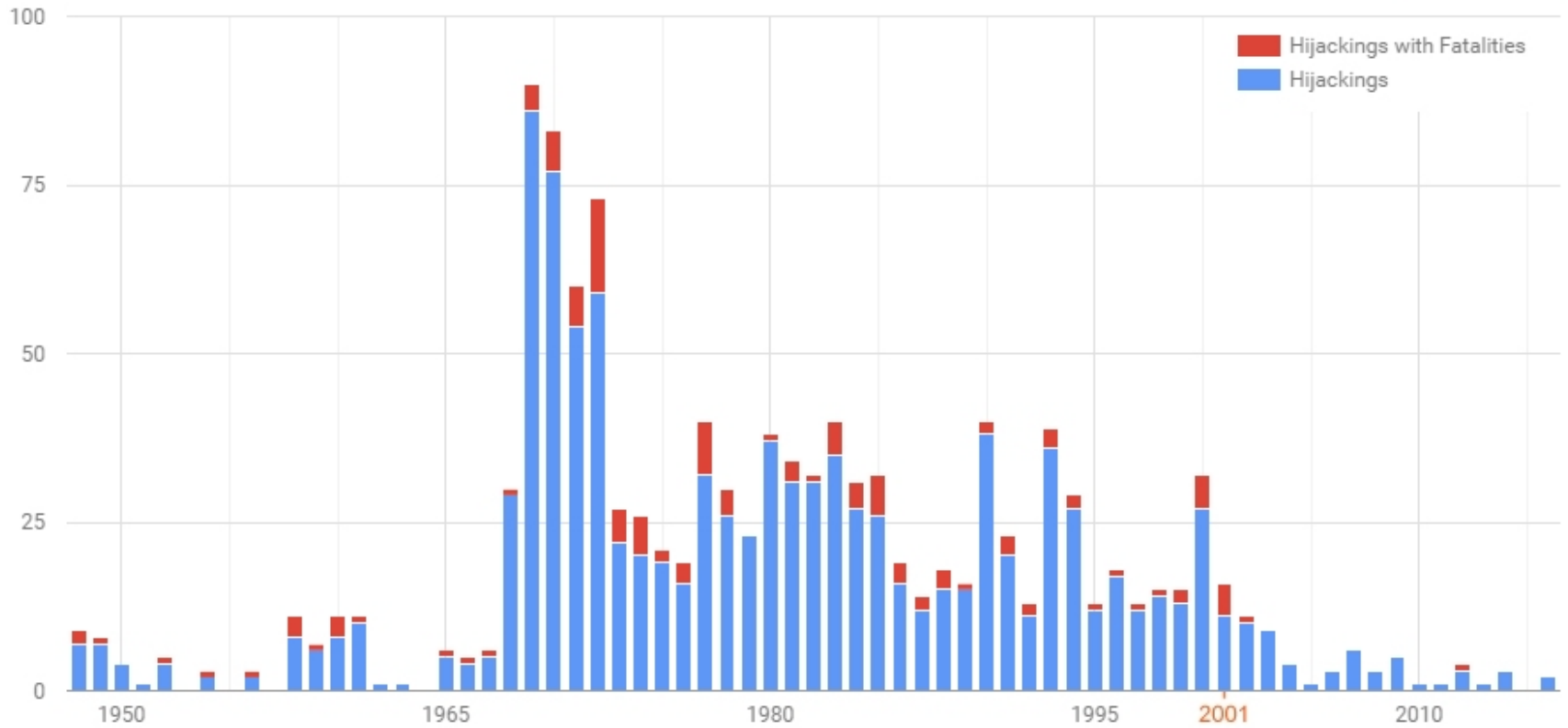
**How do Security Incidents
compare in the two Sectors?**



Aircraft Hijackings and Fatalities

Hijackings per year

Aviation**Safety**Network



IAEA Incident and Trafficking Database (ITDB)

As of 31 December 2015, the ITDB contained a total of 2889 confirmed incidents reported by participating States. Of these 2889 confirmed incidents, 454 incidents involved *unauthorized possession and related criminal activities*, 762 incidents involved reported *theft or loss* and 1622 incidents involved *other unauthorized activities and events*

Confirmed incidents involving unauthorized possession and related criminal activities, 1993–2015

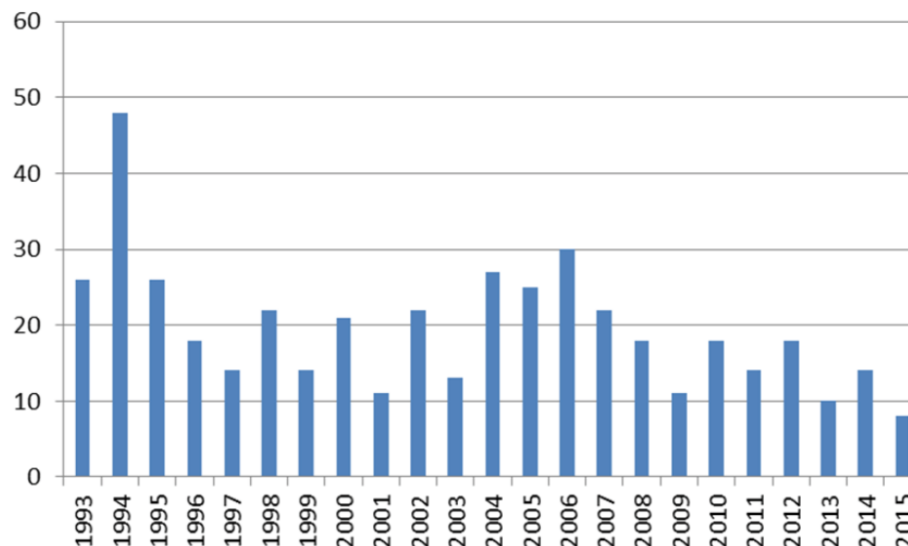
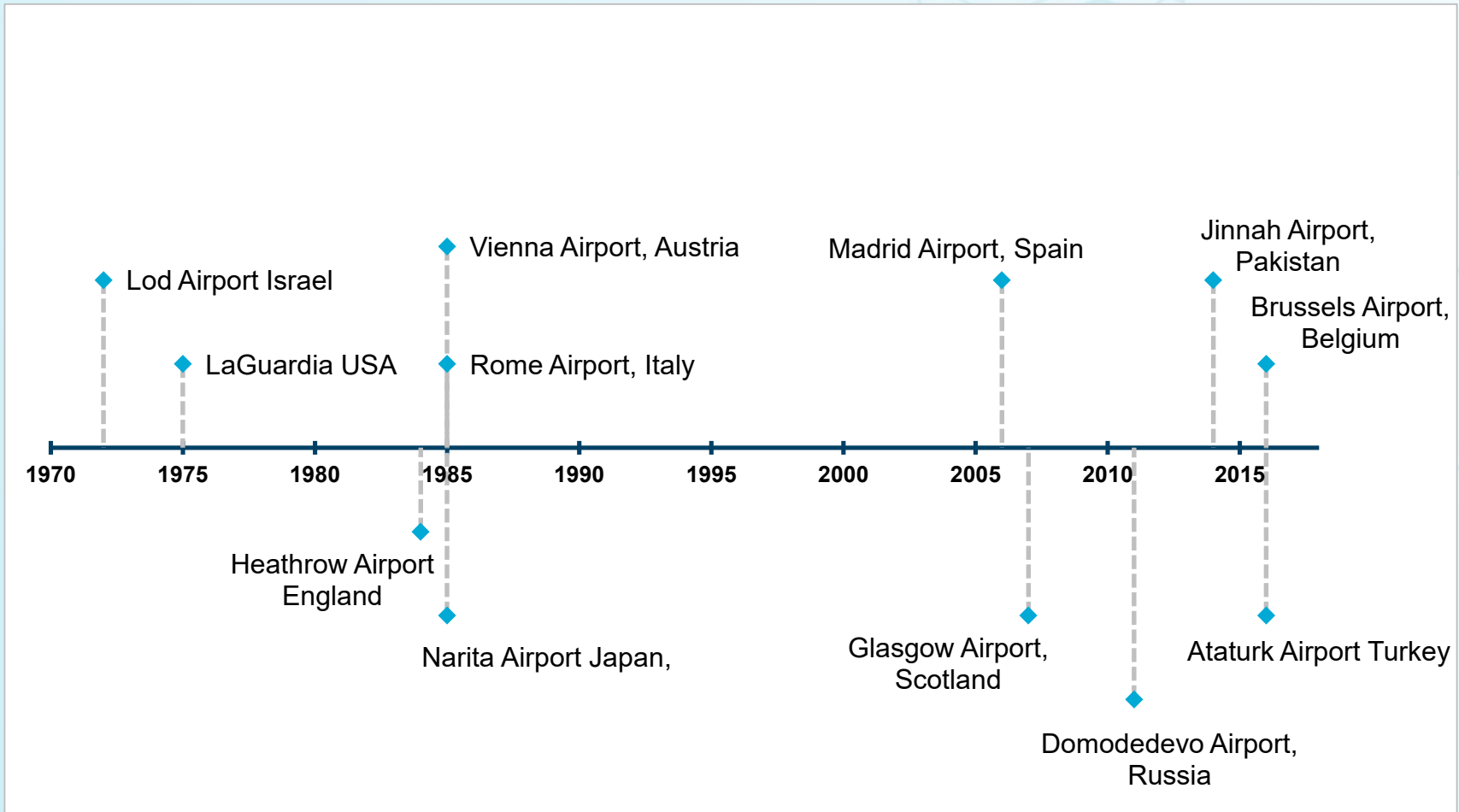


Figure 1 Incidents reported to the ITDB involving unauthorized possession and related criminal activities, 1993–2015.



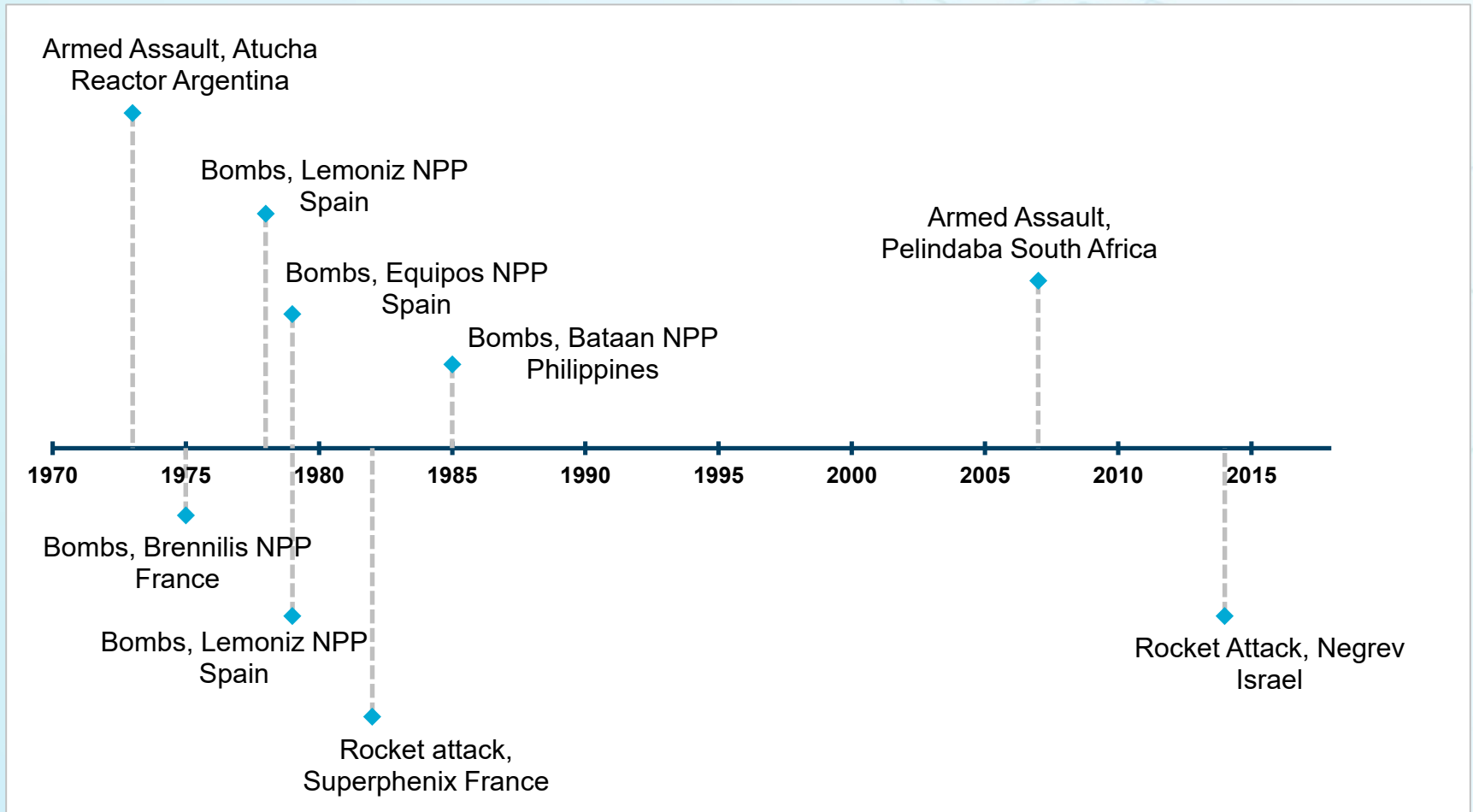
Bombings at Airports



Over 200 Fatalities



Armed Assaults/Bombings at Nuclear Facilities



2 Fatalities. No radiological releases



Flight Paths on 11th September 2001



The background of the poster features a purple gradient. At the top, the ICAO logo is visible, consisting of a globe with wings and the text 'ICAO • OACI • ИКАО' in a circular arrangement. Below the logo, a white commercial airplane is shown in flight. In the center, the text 'High-Level, Ministerial Conference on Aviation Security' is written in a bold, yellow, sans-serif font. Below the text, another white commercial airplane is shown in flight, positioned over a stylized globe of the Earth. To the left of the globe, a grey air traffic control tower is visible. At the bottom, the text 'Montreal, 19 – 20 February 2002' is written in a white, sans-serif font.

**High-Level,
Ministerial Conference
on
Aviation Security**

Montreal,
19 – 20 February 2002

Evolution of Aviation and Nuclear Security

- **Post 9/11, both ICAO and IAEA increased their activities related to security though neither have the word “security” mentioned in their Statutes,**
- **There has been a significant increase in security-related activity at international and national level, and increased regulation,**
- **It seems that the way the two sectors are implementing security is beginning to diverge, but why? What are the key factors?**

What are the factors that might influence security?

- **Aviation is clearly international – less so for nuclear?**
- **Does the ownership of the sectors make a difference (National versus private)?**
- **Nuclear has had a few very big safety-related accidents, but unlike the aviation sector, no recent, significant terrorist attacks; why?**
- **Do politicians perceive the threats, risks and consequences differently in the two sectors?**
- **Is the aviation industry better organised than the nuclear industry to contribute to regulations?**
- **Can the aviation sector measure the cost benefit?**

Why conduct the benchmarking study?

No detailed comparative analysis has ever been conducted of the security arrangements in these two sectors despite the similarities:

Cyber-security, insider threats, human reliability, regulation, and the management and governance required to implement efficient and effective security programmes.

Outline



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Launch of New Study

**WINS has launched a new
18-month international study:
*Aviation and Nuclear Security –
Benchmarking International Policy
and Implementation***

MacArthur
Foundation



WINS – Aviation and Nuclear Security Conferences



AVIATION AND NUCLEAR SECURITY WORKSHOP & ROUNDTABLE

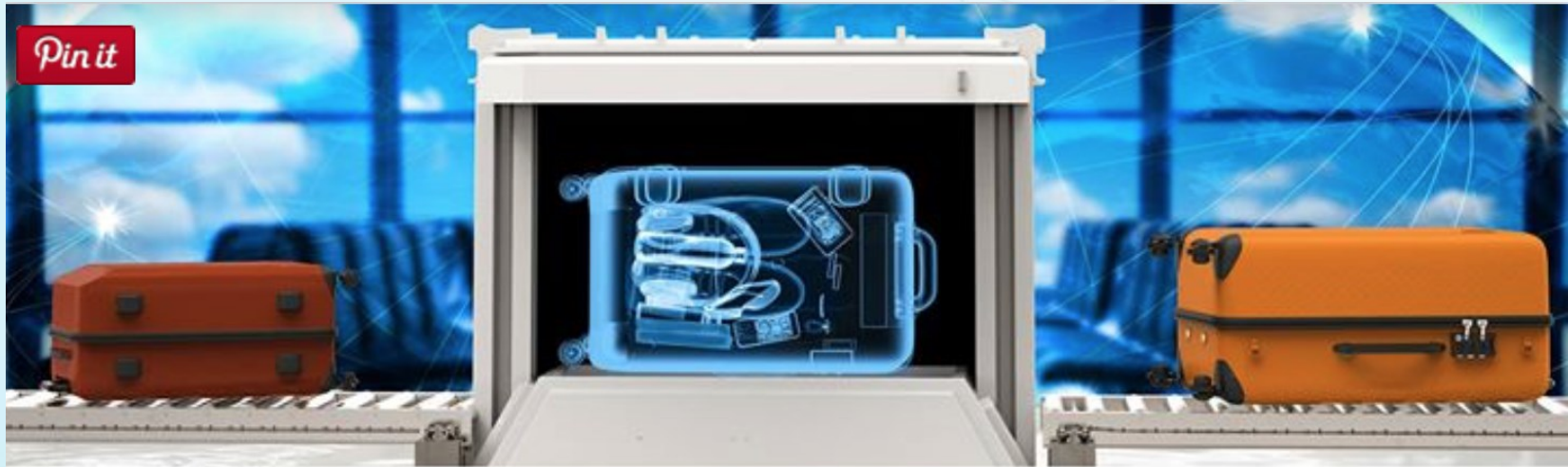
13 & 14 September 2017 – Vienna, Austria



Co-hosted by:
World Institute for Nuclear Security
International Airport Review



ICAO Global Aviation Security Symposium



ICAO Global Aviation Security Symposium #AVSEC2017

AVSEC Culture - Beyond the Standards

ICAO Headquarters, Montréal
12 - 14 September 2017



ICAO



Benchmarking United Nations Agencies to Industry



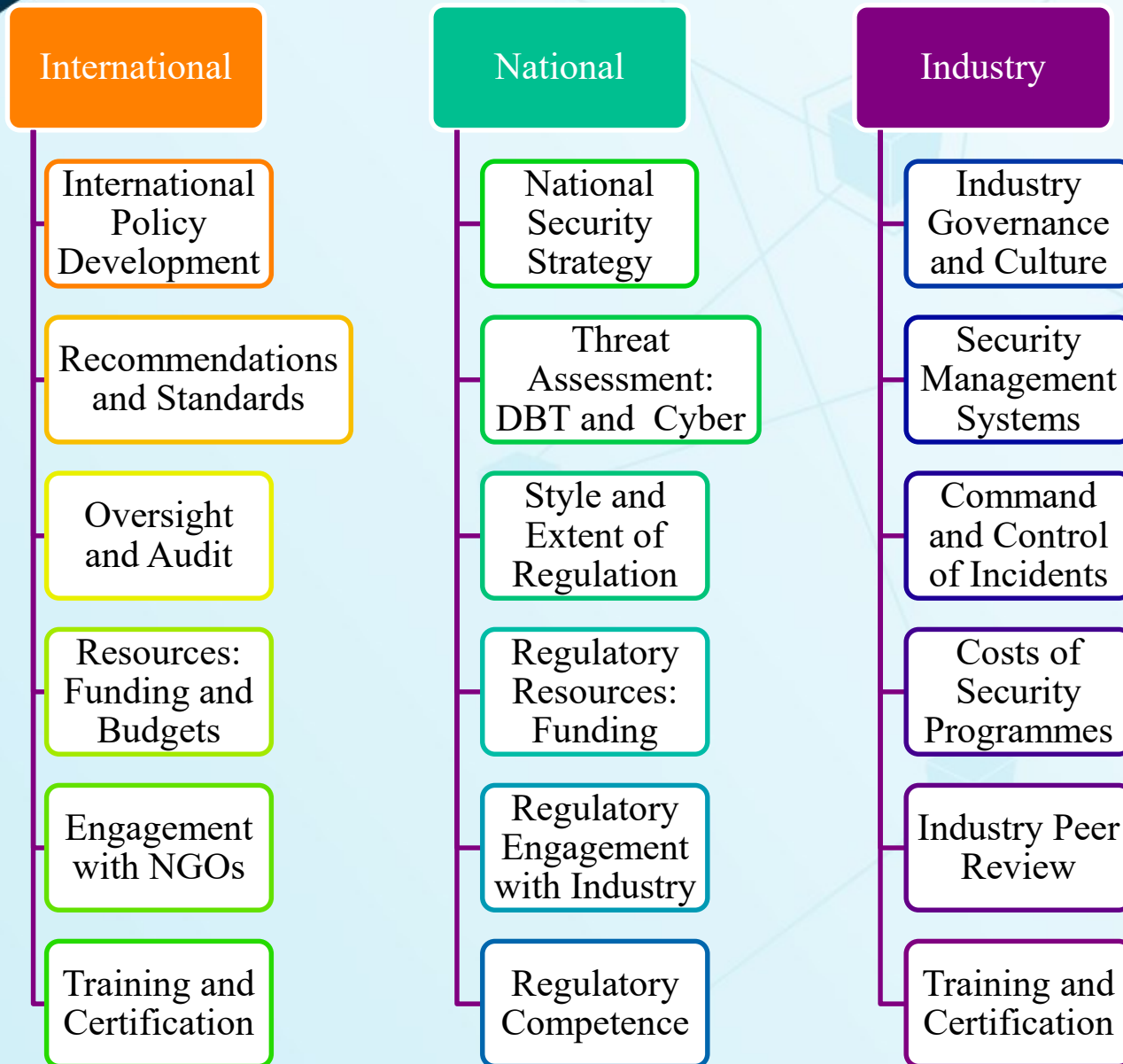
Member States

National Regulators

Industry

- ***Legal and Regulatory Approach***
- ***Industry Engagement and Peer Review***
- ***Best Practices***

Comparative Analysis – Project Structure



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Structured Research and Interviews

The First Phase consists of detailed research and structured Interviews with personnel from all relevant organisations to establish both a formal and candid picture of the arrangements in each sector. The response to the study has been very enthusiastic.

Project Milestones



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Conclusions

- **The Comparative Analysis aims to identify transferable best practices for security oversight, regulation and implementation in the aviation and nuclear sectors,**
- **We want to establish sustainable forums between the two sectors to exchange information and make both sectors more resilient.**

Thank you for your attention

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