



# *Limitations of Detection: Evolution of the Nuclear Threat*

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# The Nonstate Actor

*“Yesterday’s nonproliferation efforts were successful, in part, because they addressed the motives of aspiring state proliferants. Today’s efforts to prevent nuclear terrorism should take a similar approach. Understanding—and addressing—the motivations of nonstate actors should be as important as locking down nuclear weapons and materials.” – Bonnie Jenkins*

# Early Detection Systems

## Original Threat Basis

- The opportunist
- Small criminal organizations

## Implementation of Detection Systems

- Border control
- Facility and port control

# Changes in the Threat Basis

## Drivers to Change

- Technology
  - Limitations to knowledge control
  - Increased sophistication- the cyber threat
- Policy
  - Funding laws
- Changes to smuggling pathways
  - Implementation of detection systems have forced smugglers to use alternative routes

# Potential New Adversary

## The Nonstate Actor

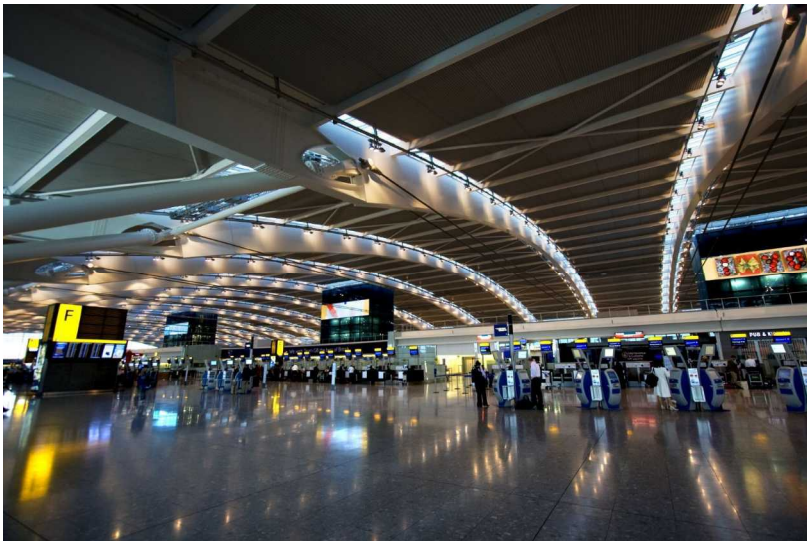
- Motivation
- Capabilities

## Potential Alternative Pathways

- Dhows
- Alternative Shipping “Containers”
- Cyber Threat

# How to Address the New Threat

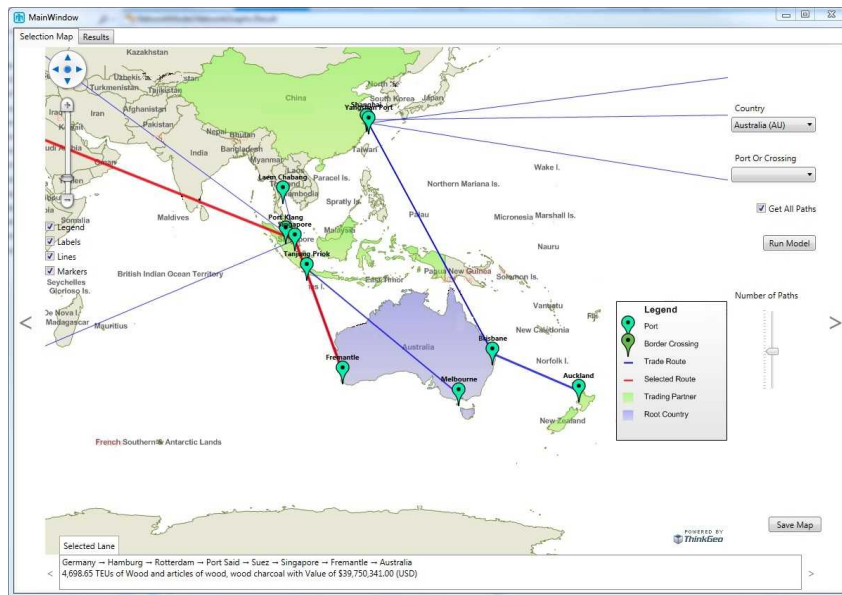
- Detection Systems
  - Mobile vs Fixed
  - Covert Detection



# How to Address the New Threat

## Pathway Analysis

- Global Network Modeling
- Social Network Monitoring
- Human Behavior Modeling



```
In[1]= SocialMediaData["Facebook", "FriendNetwork"]
```

```
Out[1]=
```



# Conclusion

Controlling the supply of nuclear weapons may not be enough to prevent a catastrophic nuclear terrorist attack.

A more holistic approach to nonproliferation, as well as an flexible strategy, is required to stay ahead of the evolution of the nonstate actor threat.



# Questions

**Thank you!**