Problem

What Problem(s) Date When

Different, unusual, unique

State city Where

Unit, area, equipment Task being performed

Impact to the Goals

Potential for deaths of 278 passengers, Safety 11 crew members Cust. Service Failure of safety procedures Property, Equip, Mtls Potential for loss of plane

Detroit MI

Attempted bombing

December 25, 2009

Northwest Airlines Flight 253

Final approach from Amsterdam

Suspect allowed to board with explosives

Potential for

deaths of 278

passengers, 11

crew members

Property

Goal

Impacted

ATTEMPTED BOMBING

Suspect's visa

not revoked

AND

Suspect not

added to no-fly

Ingredients

hidden under

suspect's

clothing

Flight 253 - December 25, 2009

Despite constantly increasing airport security, a man suspected of terrorism was able to board a flight from Amsterdam to Detroit with ~80 grams of explosive and a liquid detonator. However, the device did not detonate, likely saving the plane.

"Our system did not work in this instance."

- Homeland Security Secretary Janet Napolitano

Effect

Suspect boarded

plane with

explosive mixture

tetranitrate (PETN)

to more thorough

searches at

checkpoints

Evidence: FBI

pentaerythritol

analysis -

Cause

Evidence

Suspect

allowed to

board plane

AND

Explosive

ngredients not

Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

CAUSE MAPPING

Analysis

in London

No follow-up

required by

procedure?

Problem Solving • Incident Investigation • Root Cause Analysis

Step Problem

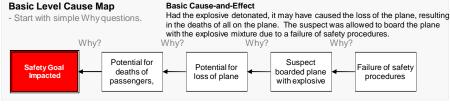
Problem? Why did it happen?

Solutions

What will be done?

What's the

Analysis



More Detailed Cause Map - Add detail as information becomes available

Safety Goal

Impacted

Detailed Cause-and-Effect

The suspect was able to board the plane because despite warnings from his father, there was insufficient information to add him to the no-fly list (see process map) and his visa was not revoked

Officials in the U.S. were unaware a visa had been issued by the U.S. embassy in London. Additionally, while the information from the suspect's father was entered into TIDE (a terrorist intelligence database), there was no follow-up on the information. It's unclear if there was no follow-up required, or if the follow-up was just not performed.

Process Map

For security reasons, there is little detail on the process used to add potential terrorists to various watch lists. What we do know is that all terrorist intelligence is entered into TIDE. The information is reviewed nightly for inclusion into the TSDB, from which the no-fly and selectee lists are developed. The suspect was not put on

AND to additional screening. The suspect was not pased through detected by a body scan, which may have detected the explosives, security because they are not used on passengers traveling to the U.S. because of the privacy issues. The ingredients were ailure of safety hidden in the suspect's undergarments and so were not procedures detected by security. either list. Customer Service Goa TSDB = Terrorist "Selectee list" = Secondary TIDF = Terrorist Identities Impacted Screening Database Security Screening Datasmart Environment Intelligence Meets Entries Individual not permitted YES YES Individual Meets Intelligence examined by to board commercial information criteria assessed as criteria fo information criteria for for TSDB 'selectee interagency significant aircraft for travel in or out entered into no-fly list received TIDE team of the U.S. NO NO Individuals subjected

In an admitted failure of safety procedures, the explosives

the suspect was considered not specific enough for the

were not detected by airport security. The information about

suspect to be put on the "selectee list" which would have led

Potential for

loss of plane

Potential for

detonation of

explosives on

plane

Checks for

other lists

performed

Officials in U.S. Visa issued by unaware visa U.S. Embassy

had been

issued

AND

on

list

Suspect not

given additional

screenings

AND

Suspect not

passed through

body scan

"Reasonable

Evidence

suspicion"

standard

Datasmart

No follow-up AND information in TIDE Follow-up Evidence: TIDE = procedure Terrorist Identities not followed ? Insufficient information to justify adding to

Suspect not

added to

selectee list

Prohibited from

using on

passengers to

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Insufficient

information to

justify adding to

list

Evidence:

suspicion"

standard

"Reasonable

Privacy issues