



ICAO Symposium on Innovation in Aviation Security

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**Case studies on challenges in innovation –
combatting threats posed by LAGs and PBIEDs**

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Overview



- Review of the LAGS issue
- Liquid Explosives – the problem
- Liquid Explosives Detection – the Solution

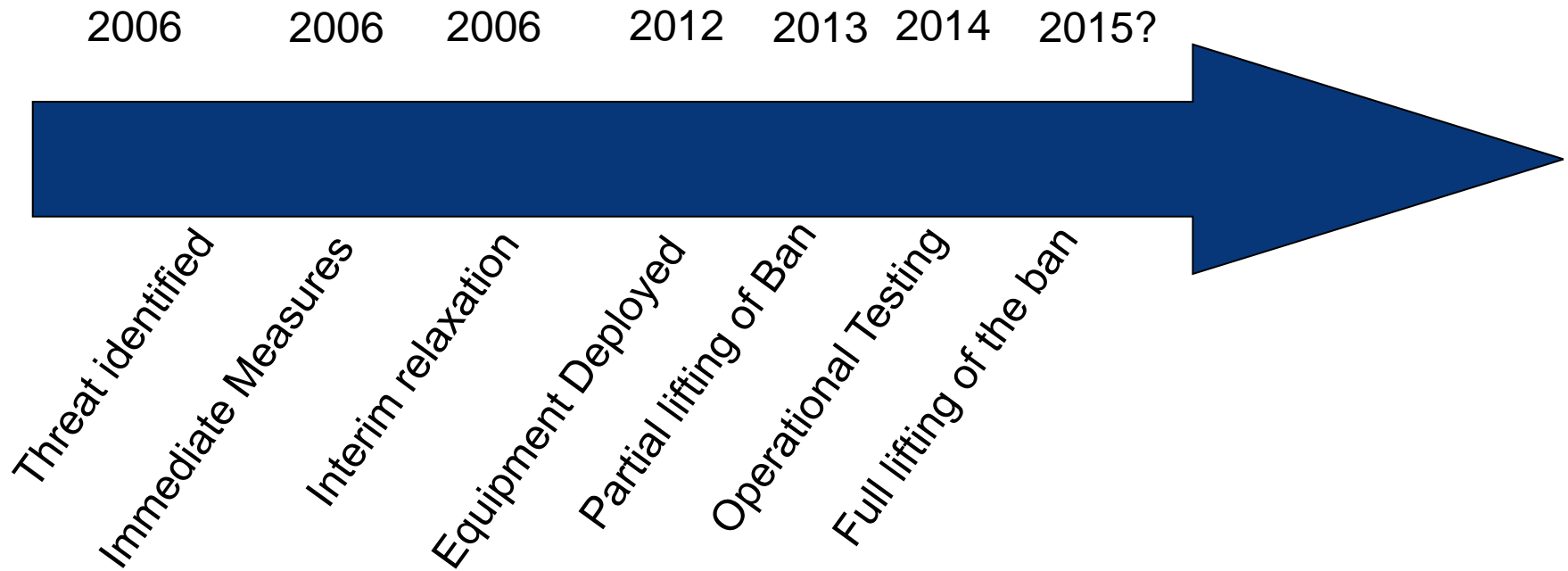
LAGS Issue



- Restrictions a response to a disrupted plot in the UK
- Plan was to use binary liquid explosive
- Would have been difficult to find with extant screening processes
- No existing screening technology was suitable



LAGS Issue Timeline



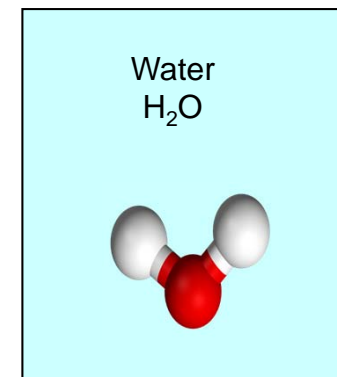
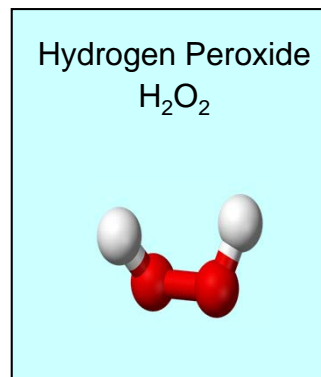
Liquid explosives – the problem



Indistinguishable from benign liquids – even under X-Ray



Lots of benign liquids already carried by passengers, in myriad different container configurations (toothpaste, perfume, alcohol, shampoo, etc etc)





The Solution

- Took a long time because:
 - brand new technology had to be developed
 - New performance standards and testing methodologies required
- Generated a huge amount of innovation (more than 10 different types of technology currently approved by ECAC)
- Needed consideration of different concepts of operation:
 - Can the bottle be opened?
 - Do multiple bottles have to be screened simultaneously?
 - Integrated with existing processes or stand-alone?

Current Position

Multiple equipment models and types now tested and approved to meet different standards and different modes of operation



Manufacturer	Model	Version	Standa	Type
Analogic	Cobra	4.193	2	D/D+
Analogic	Cobra	4.192	2	D/D+
Analogic	Cobra	4.18	1	D/D+
AS&E	SAT BLS	4.0.0.3	1	B
AS&E	SATBLS	4.0.0.4	1	B
Ceia	EMA-3	EMA33540, PVCTEMAO2100, PVEX EMAx5211 CONOPS F1200K0015v1206	3	A
Ceia	EMA-3	EMA33540, PVCTEMAO2100, PVEX EMAx5212 CONOPS F1200K0015v1207	3	A
Ceia	EMA-3	EMA33540, PVCTEMAO2100, PVEX EMAx5213 CONOPS F1200K0015v1208	3	A
Ceia	EMA-3	3540	3	B
Cobalt Light	Insight100	INS100-27	2	B
Cobalt Light	Insight100	v1.9.0 INS100-25-EN Revision 2.5	3	B
Cobalt Light	Insight100	INS100-27	3	B
Cobalt Light	Insight100	2.3, 1.9.0, CONOPS INS100-25-ENB/INS100-24 Type A Rev1.1	3	A
FLIR	Fido X3C		2	A
Gilardoni/ Optosecurity	FEP ME 640 AMX	4.3.6.34598, acquisition version 5.0, liquid detection version 5.3	1	C
Gilardoni/ Optosecurity	FEP ME 640	5.8.0.42386	2	C
Gilardoni/ Optosecurity	FEP ME 640 AMX	5.8.0.42386	2	C
ICX Nomadics	PaxPoint V2	Beta 1.00	2	A
ICX Nomadics	PaxPoint V2	Beta 1.00	3	A
Kromek	Identifier BLS	1003	2	B
Kromek	Identifier BLS	1004	1	B
Kromek	Identifier BLS	1005	1	B
Kromek	Identifier BLS	1006	2	B
Kromek	Identifier	BLS1006 v7.5.09	B	3
Kromek	Identifier	BLS1006 v7.5.10	B	3
L-3 Communications / Optosecurity	ACX 3-view		5	1
L-3 Communications / Optosecurity	ACX6.4-MV with Optosecurity XMS		6.1	1
L-3 Communications / Optosecurity	ACX 6.4 MV with Optosecurity XMS		6	1
L-3 Communications / Optosecurity	ACX6.4-MV		6.4	1
Link Microtek	Emili2		4	2
Link Microtek	Emili2		7.1	2

Equipment undergoing operational trials in a number of airports.



Thank You!