



C-BORD

effective Container inspection at BORDer control points

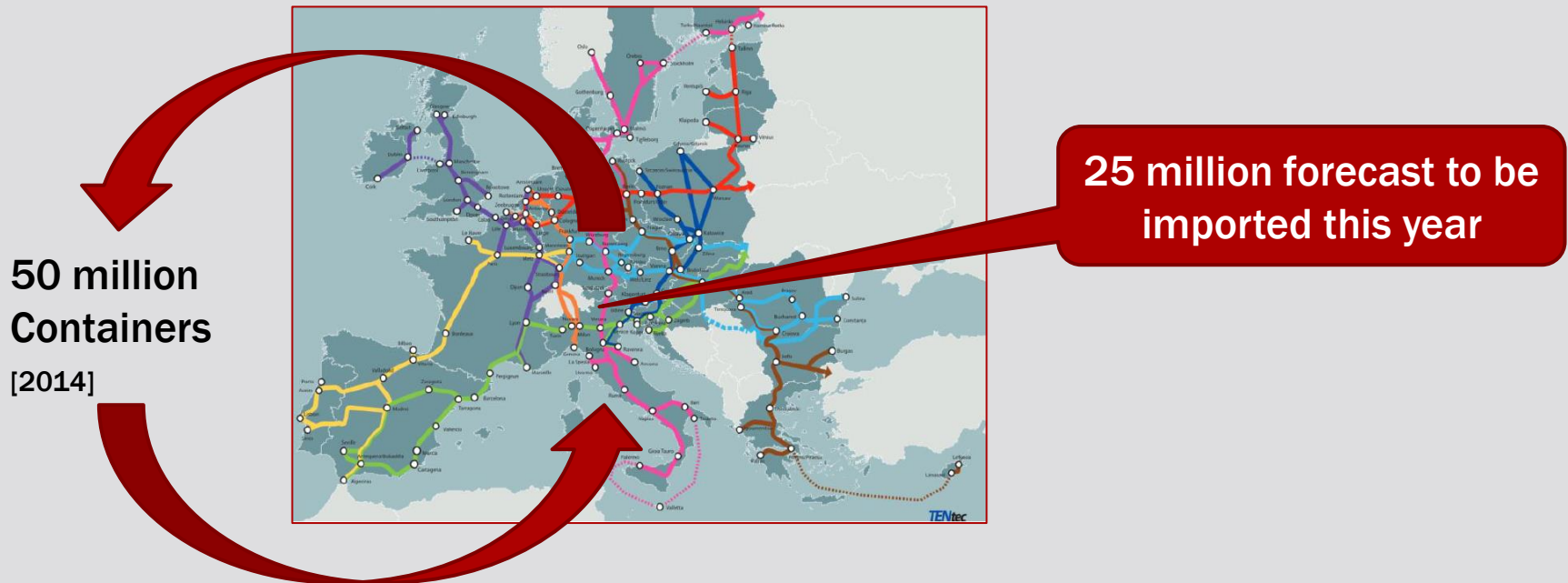
Joint
Exploitation
Event

19May 2017

CONFIDENTIAL. This document has been produced under Grant Agreement 653323. This document and its contents remain the property of the beneficiaries of the C-BORD Consortium and may not be distributed or reproduced without the express written approval of the C-BORD Coordinator, Commissariat à l'énergie atomique et aux énergies alternatives.

THE CHALLENGE

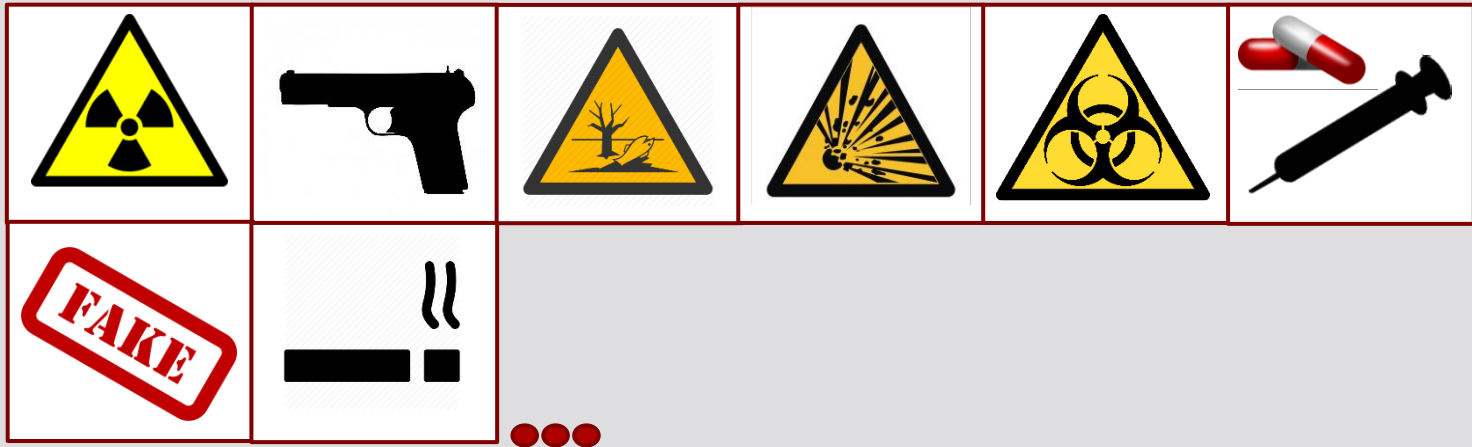
- No single technology can prevent illegal and dangerous goods entering and leaving the EU in cargo containers



- The challenge is to provide an integrated approach that is scalable and can address the magnitude of challenge

THE CHALLENGE

- There is need to interdict Illegal and dangerous goods



- Interdiction of Security related goods and the prevention of terrorism is critical





KEY DRIVERS

- Increase interdiction rate while reducing physical inspections

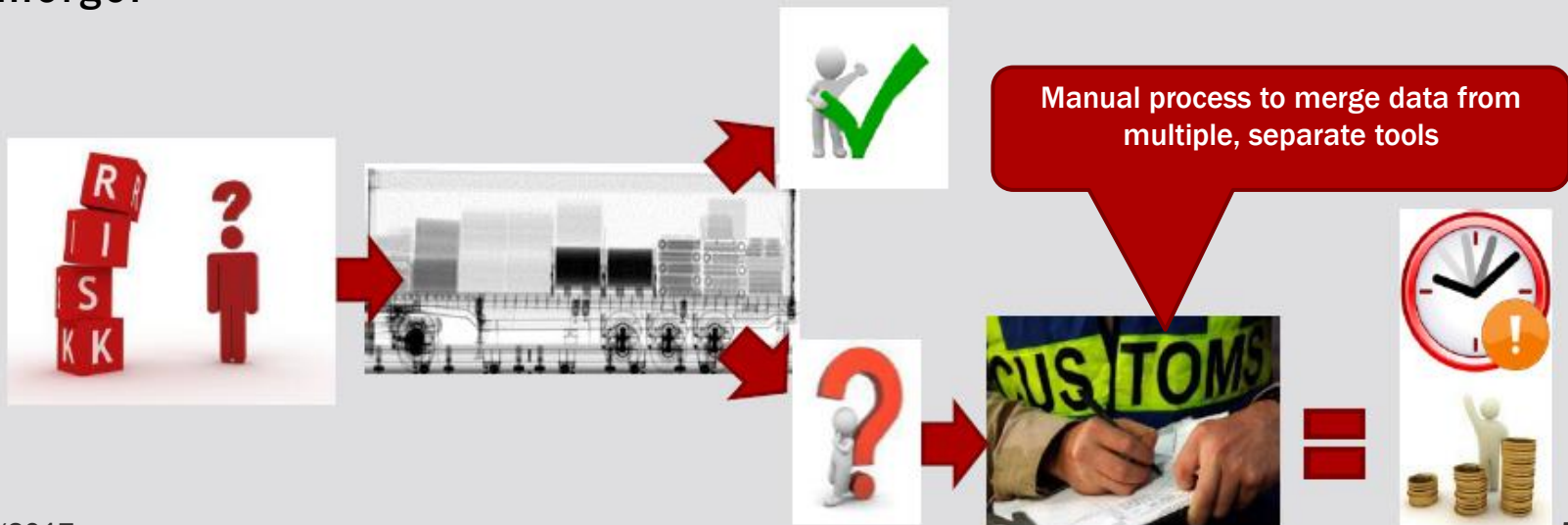
- Reducing Smuggling
 - Cigarettes: >€10 billion annually in public revenue
 - Drugs & Pre-Cursors: >218,000kg Cannabis seized in 2015

- Increasing Nuclear Security
 - ~3000 confirmed events
 - 15% directly related to criminal activities
 - 26% involved theft or loss and
 - 56% involved unauthorized activities



OUR TARGET

- Verify a **real-world solution** for cargo inspection that **fully integrates multiple capabilities** by:
 - ✓ Increasing interdiction of multiple targets; **illegal, dangerous & security related goods**
 - ✓ Reducing non productive physical examinations; Real world trials in 2018
 - ✓ Joining up the latest technologies under a common, intuitive interface
- To join up the data from multiple tools to provide an integrated common platform solution that can grow and be added to as new capabilities emerge.





VISION

Targets

Next Generation Technologies

C-BORD Solution



X-ray + RRTNIS



X-ray + RRTNIS



X-ray + Sniffer + RRTNIS



Radiation Detection + X-ray + Sniffer



X-ray + Sniffer + RRTNIS

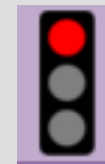


X-ray + Sniffer + RRTNIS



Radiation Detection + X-ray + Photofission

Target Specific Alarm





HOW DOES IT WORK

Sniffer

Molecular detection



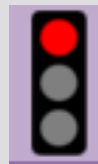
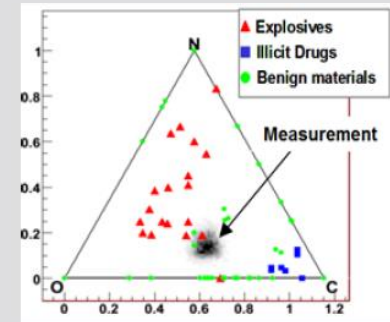
X-ray

Enhanced Discrimination & Location



RRTNIS

Elemental Verification



Target Confirmed

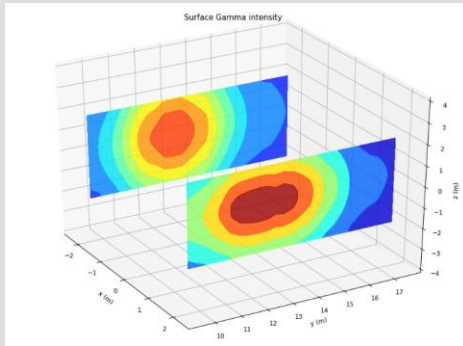




HOW DOES IT WORK

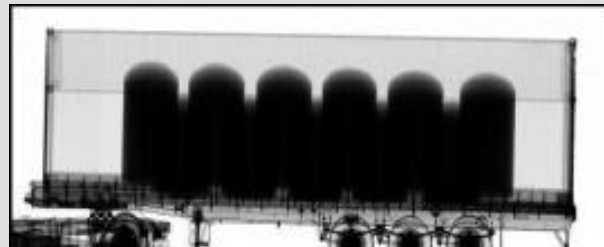
Radiation Portal

Isotope ID
& position



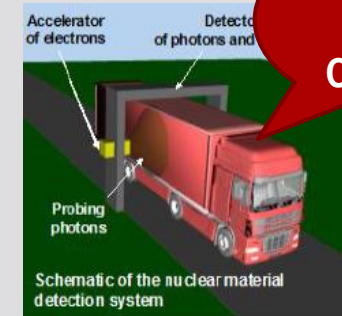
X-ray

Enhanced Discrimination
& Location

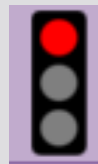


Photofission

SNM Verification



Fissile
material
Confirmed



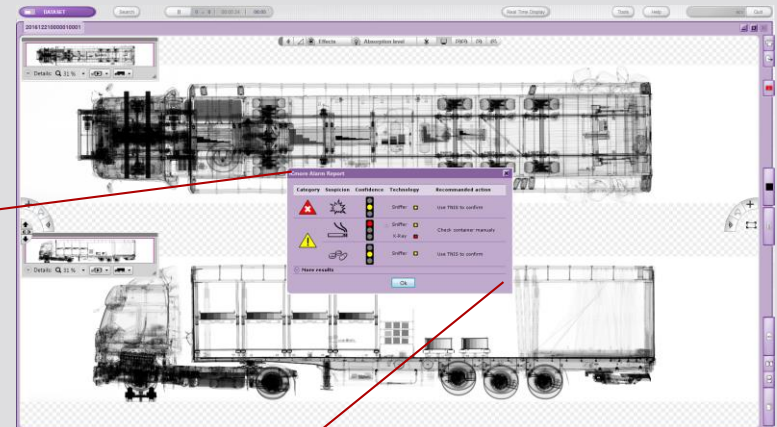
Target Confirmed





SOLUTION

- The C-BORD solution is an integrated platform of detection technologies that :
 - ✓ Are easy to use for target specific inspection
 - ✓ Increase probability of detection
 - ✓ Reduce false alarms
 - ✓ Reduce inspection times
 - ✓ Integrate into single user interface



Category	Suspicion	Confidence	Technology	Recommended action
			Sniffer	Use TNIS to confirm
			Sniffer	Check container manually
			X-Ray	
			Sniffer	Use TNIS to confirm

More results

Ok



IN THE REAL WORLD

- The integrated C-BORD solution will be tested in a live demo

Poland
Gdansk
April 2018

Rapidly relocatable
checkpoint for
seaports



Modular

Hungary
Roszke
May 2018

Rapidly relocatable
checkpoint for land
borders



Flexible

The Netherlands
Rotterdam
June 2018

Fully automated large
volume seaport
solution



Scalable



THANK YOU



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 653323. This text reflects only the author's views and the Commission is not liable for any use that may be made of the information contained therein.

19/05/2017

