



# COSMIC



Co-funded by the Horizon 2020 programme  
of the European Union



# COSMIC MOTIVATION



The threat of CBRNE components used by terrorists inside containers is one of the major concerns for EU and worldwide security



# COSMIC VISION



CBRNE (Chemical, Biological, Radiological, Nuclear and Explosives) detection in containers



# COSMIC CONSORTIUM



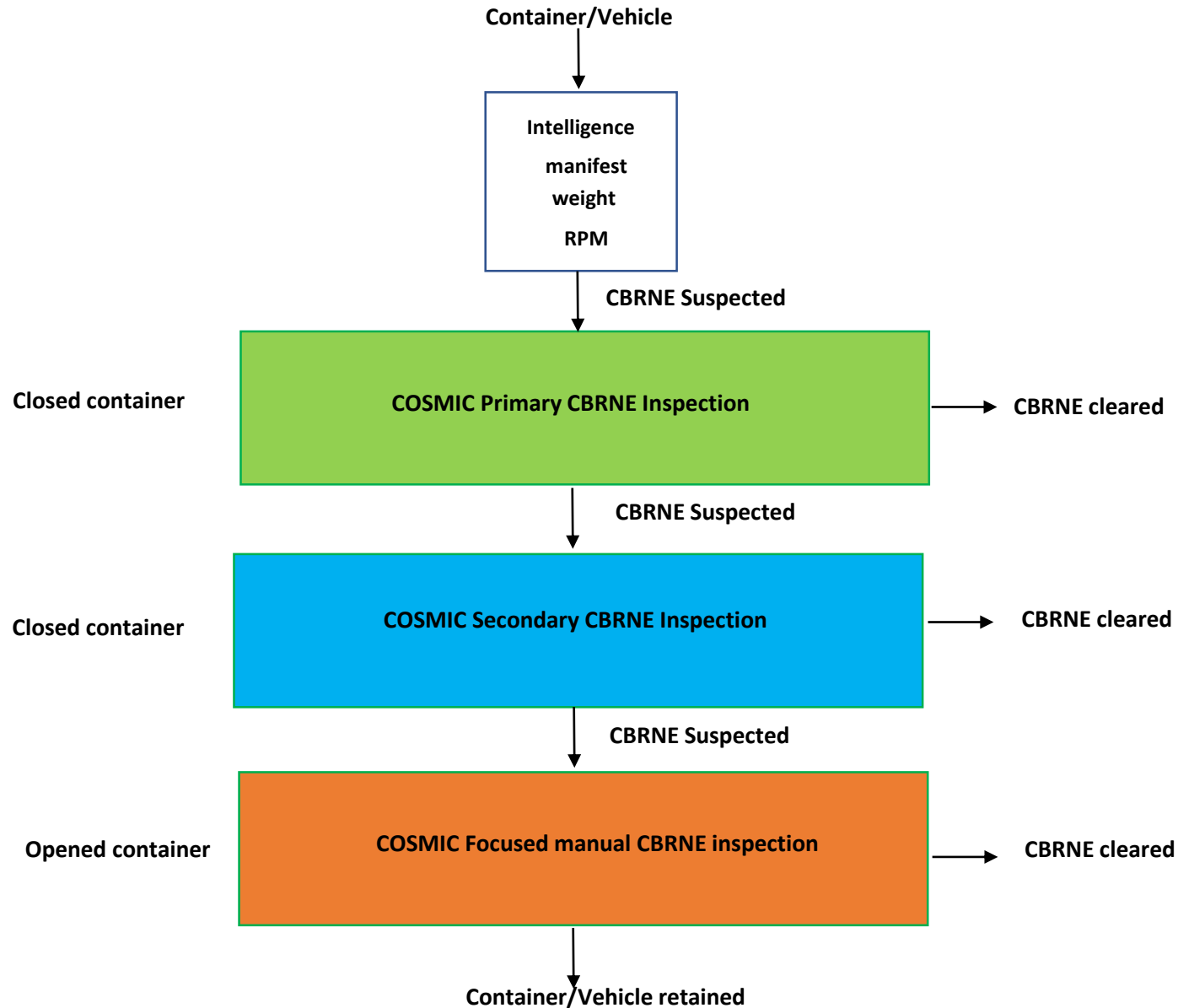
Project start : November.1, 2018

Period : 30 months

Participant No	Participant organisation name
1 (Coordinator)	LINGACOM
2	SEADM
3	ATOS
4	Technion
5	Ben-Gurion University
6	Dutch Custom Administration
7*	Israel National Police
8	Guardia Civil
9	National Centre for Biotechnology of the Spanish National Research Council (CNB-CSIC)

\* INP - Candidate to replace previous end user

# COSMIC CONCPET – 3 STAGE SOLUTION



# COSMIC BENEFITS :



- Fast and reliable detection of CBRNE threats in shipping containers.
- Concept is based on 3 stages:
  - After each detection stage the non-suspected containers are released, and the CBRNE-suspect containers proceed to the next detection stage
- Reduce significantly the physical manual inspection.
- Improve the throughput of the security flow.
- Reduced cost approach to handle inspection of large number of containers and vehicles.
- Introduction of new and innovative CBRNE sensors.

# COSMIC Research activities :



- **New CBRNE Sensors :**
  - Chemical : New chemical sensors for primary and secondary stages.
  - Biological : New innovative sensors capable to analyze biological threats at field instead of lab.
    - Bacteria detection in liquids and solids
    - Virus detection based on physical tests.
  - Radiological and Nuclear : New approach in primary and secondary for detection of shielded nuclear and radioactive materials.
    - New sensor based on cosmic rays muon.
  - Explosives : New Explosives sensors for primary and secondary based on air extraction.
- **Data Collection and Analysis from all sensors.**
  - Management system for the 3 stages inspection.
- **Field trails at 3 end user sites.**



See more details <https://www.cosmic-cbrne.eu/>

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