Joint Investment Program on CBRN Protection
Joint Investment Programme CBRN (JIP CBRN)

- The EDA steering Board established the Joint Investment Programme CBRN (JIP CBRN) in spring 2010

- Contributing Members: AT, BE, CZ, DE, ES, IE, IT, FR, NL, PL, PT, SE and NO with a Budget of 12 million EURO


- Adressing the following shortfalls:
  - stand-off detection C threats
  - point detection B threats
  - mixed CBRN samples handling
  - modelling and simulation of CBRN architectures
  - decontamination management
  - sensor networking for CBR
  - protection equipment
JIP CBRN (1/2)

- Next generation Collective Protection
  - RIAQ (new filter technologies for COLPRO)
    - A reliable, responsive, smart, multi-functional and cost effective filtration for buildings to protect soldiers, inhabitants, workers and visitors from airborne hazards.

- Next generation Individual Protection
  - PRO-SAFE (low burden PPE development)
    - Develop a system to detect the concentration of chemical warfare agents on textile substrates.
  - SWITCH PROTECT (low burden PPE development)
    - An adaptive membrane is being developed that will give a new dimension to personal protective clothing.

- Improved Decontamination
  - DCLAW (DECON wipes development)
    - Highly man-portable, broadly-specific and high throughput decontamination method that is safe and presents minimal risk to military and defence equipment and personnel.
  - QUIXOTE (new DECON concepts)
    - A biological and chemical decontamination unit from Cold Plasma Technology

- DECON control
  - RACED (DECON control technologies and methods)
    - Obtain insight into the health risk from possibly residual hazard remaining on decontaminated objects and contribute to the solution of the how-clean-is-clean challenge.

- CBRN Sensor networking
  - CENSIT (CBRN sensors fusion and networking)
    - What improved operational performance is possible to achieve by fusion of sensor information in tactical networks in order to enhance the CBRN situational awareness.
JIP CBRN (2/2)

- Modelling and Simulation of CBRN architectures
  - MASC (development of CBRN protection architecture plug and play M&S tools)
    - Modules allowing for the evaluation of CBRN defence architectures that are currently implemented in the National Defence organizations
  - European approach for mixed CBRN samples handling
    - BFREE (development of validated procedures to separation and preparation of potential mixtures into distinct samples)
      - Efficient sample processing and risk mitigation methods for ensuring safe handling and preparation of mixed CBRN samples
  - Stand off C detection
    - AMURFOCAL (detection using amplified quantum cascade laser technology)
      - To explore different operational aspects of CWA detection and to create the library of reflectance spectra
    - MICLID (detection using Mid Infrared LIDAR)
      - Developing a new generation lidar system for stand-off detection of chemical warfare agents.
  - Next generation B point detection
    - IPODS (detection using single cell MALDI-TOF mass spectrometry linked to a Quick Immune Detection System)
      - Objective of “CBRN situational awareness” and, “biological point detection” in field and urban environments and operations.
    - RAMBO (detection using combination of Surface Enhanced Raman Spectroscopy with Phages and PCR)
      - Advanced methods, instrumentation and sensing strategies/protocols for continuous monitoring of air particles against biological threats
    - BIOTYPE (detection using antibody lab-on-chip technology with Photonic Integrated Circuits)
      - A sensor system for the early detection and identification of B-threats.