



Università di Roma Tor Vergata  
**INTERNATIONAL CBRNe MASTER COURSES**  
Chemical, Biological, Radiological, Nuclear and explosive  
Department of Industrial Engineering and School of Medicine and Surgery



# The IoT as an innovative approach to do multidisciplinary research and didactic

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*Conference on Internet of Things — A Technological Approach*  
*National Technological University, Buenos Aires, Argentina*  
14 October 2016



# *Pretty soon...*

## *I. **EveryThing** will have an IP address.*

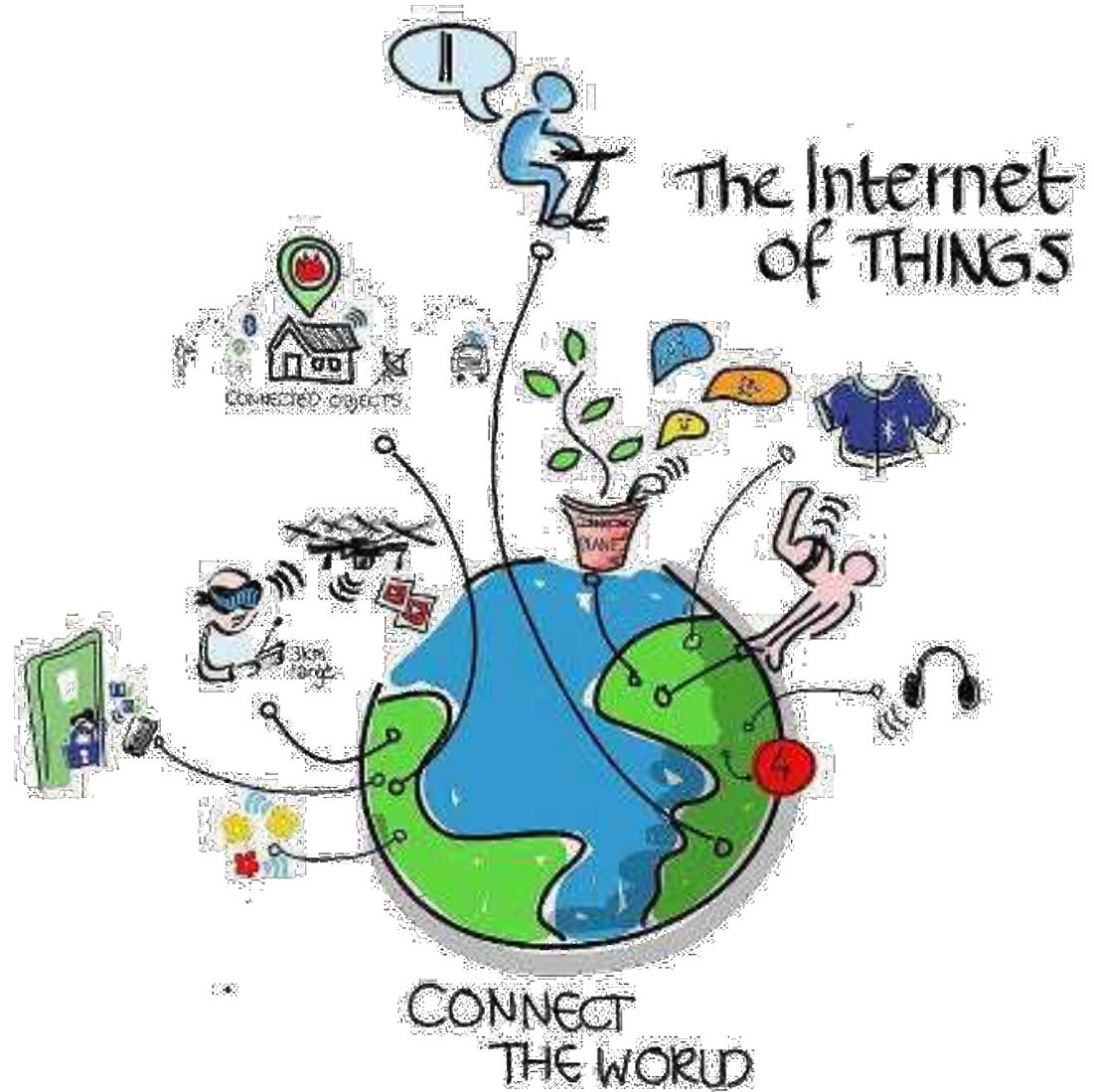
- Household appliances
- Thermostats (e.g., Nest)
- Wearable computing
- Vehicles
- Farm crops and animals

*II. We will have 30B devices by 2020*

*III. We will have the Need for IPv6*

*IV. We will have Low-cost platforms*

# *The mission*





# *The vision*





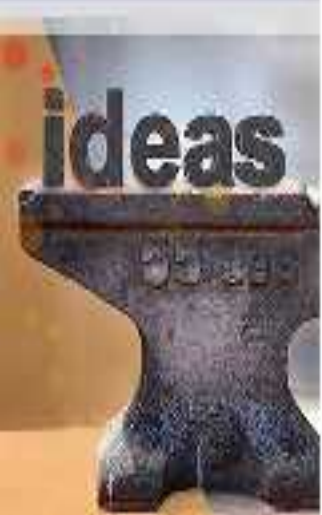
A close-up photograph of a dark, weathered iron anvil. The word "ideas" is written in a bold, black, sans-serif font across the top surface of the anvil. The anvil has a classic shape with a flat top and a curved horn on the right side. The background is a warm, orange-brown color with some geometric shapes and a wooden surface on the right.

**ideas**

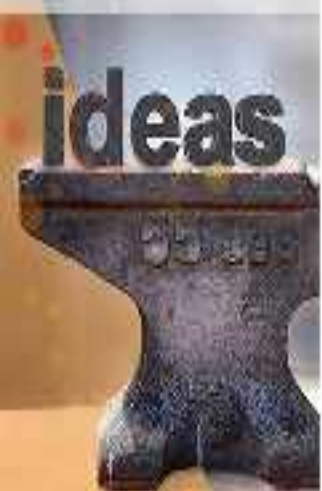
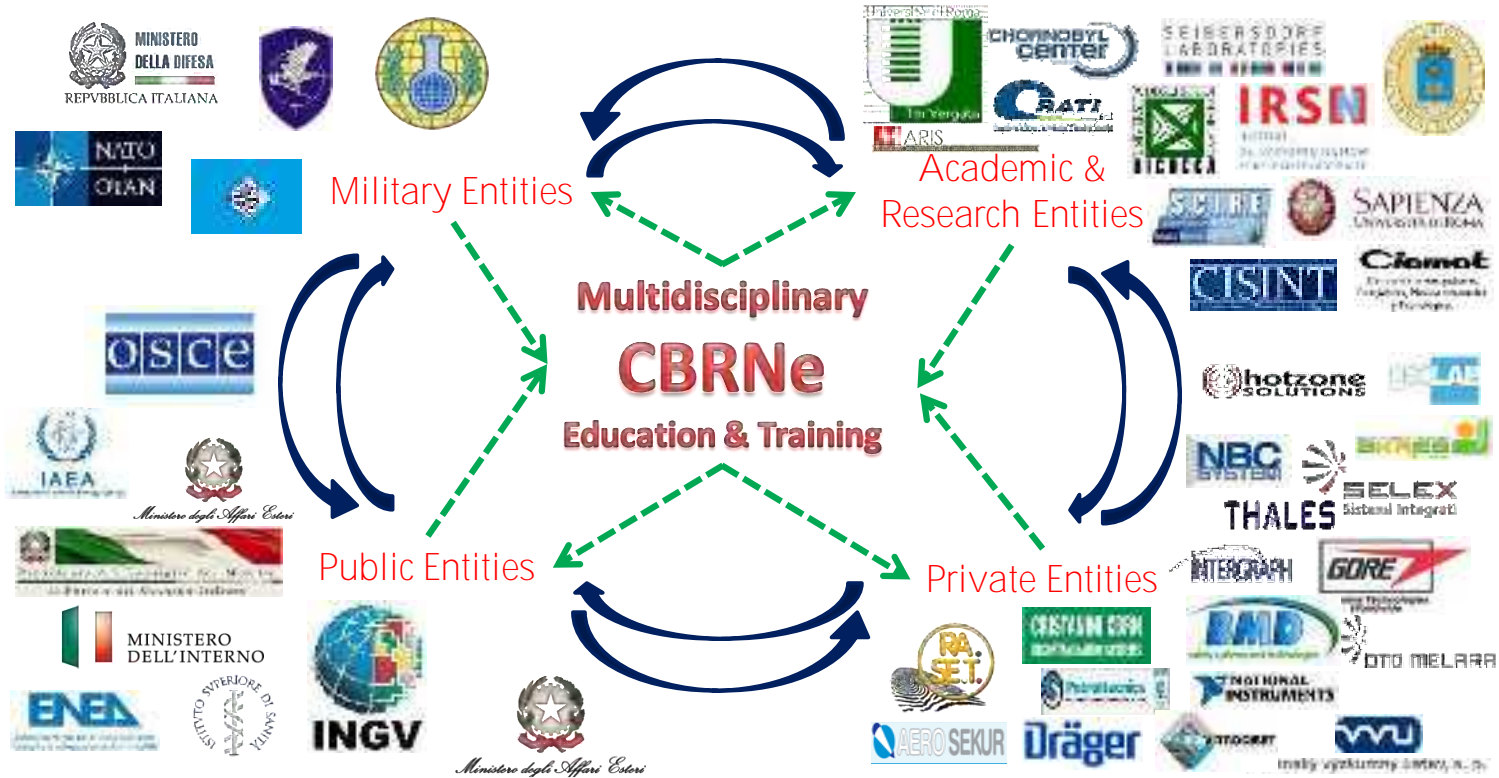
**Use IoT CONCEPT**  
**Use IoT NEOLOGISM**

# *Pretty soon...*

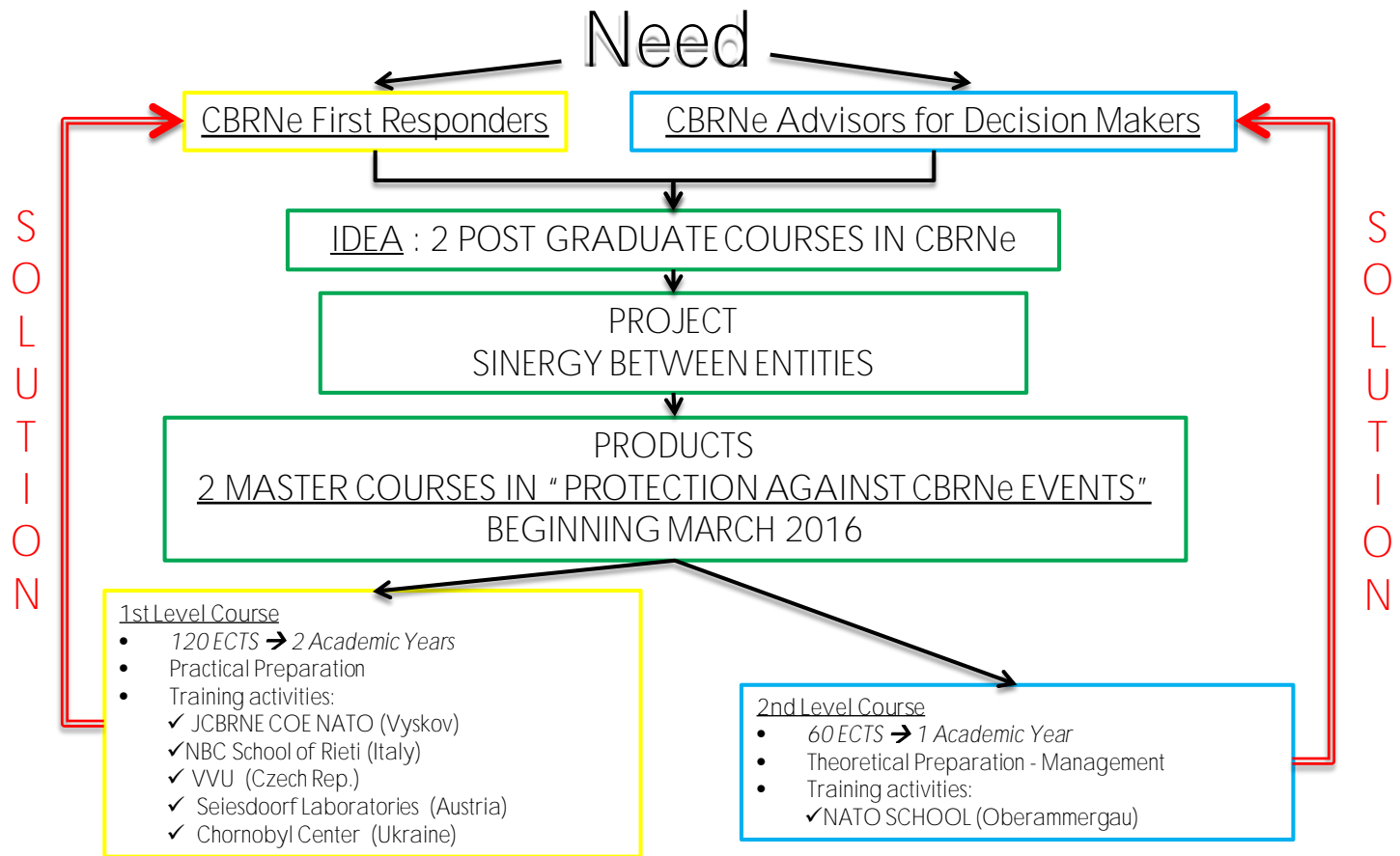
- I. **Everyone** will be subject to risks coming from **Everything***
  - Natural events (earthquake, tsunami etc...)
  - Conventional and unconventional use of chemical, biological, nuclear, radiological and explosive agents
  - War, terrorism
- II. We will have new risks coming from progress: Cyber risk*
- III. We will have people with the Need of emulations*
- IV. We will have new political and social scenarios.*



# The mission



# The vision



[www.mastercbrn.com](http://www.mastercbrn.com)

ideas



*View the problems from  
a new perspective*



Didactic Training Knowledge Spread



Scientific Events

Science Research



**1) IT IS IMPORTANT HAVE EXPERTS THAT LOOK AT...**



Products and New Technologies

- CBRNe agents and weapons
- Detection and Protection
- Decontamination
- DSSs
- Cybersecurity
- Nanotechnologies

**2) .. AND ALSO EXPERTS THAT LOOK AT...**



Old Risk and New Risks

- New Strategies and Laws
- Development and application of International Procedures
- Manage an Emergency
- Cooperate with Decision Makers And First Responders
- Communication, Investigation and Comprehensive approach

**3) .. AND EXPERTS THAT ARE ABLE TO FACE THE..**



First Reponse

- Specific Training
- High Level Preparation
- International Simulation of Emergency
- Continuous upgrade on CBRNe





# TABLE TOP EXERCISES ORGANIZED BY MINISTRY OF INTERIOR, MINISTRY OF DEFENCE AND MINISTRY OF HEALTH



# TRAINING WITH ARMY, NAVY, AIR FORCE, FIRE BRIGADES, POLICE STATE





# TRAINING WITH LIVE SARIN, VX and MUSTARD GAS





# EMERGENCY TRAINING



# NATO SCHOOL



Both Master Courses have been granted with the **NATO SELECTED** status by the **NATO HQ SACT** (Supreme Allied Commander Transformation - Norfolk, Virginia, USA).

The Tor Vergata University has signed a **Cooperation Agreement** with the **OPCW** (Organization for the prohibition of Chemical Weapons), which support the **Master Courses**.

As it is stated in the OPCW Press Release,

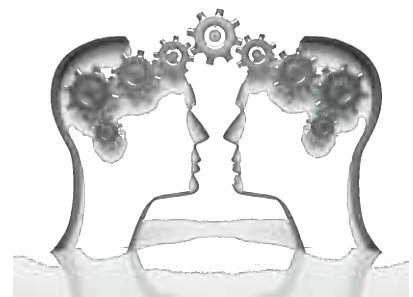
**"It is the first such agreement the OPCW has made with a university in this field"**

([https://www.opcw.org/index.php?id=242&tx\\_ttnews%5Btt\\_news%5D=1719&cHash=a51e455b9203696a4d17771ae5282b11](https://www.opcw.org/index.php?id=242&tx_ttnews%5Btt_news%5D=1719&cHash=a51e455b9203696a4d17771ae5282b11))





SINERGY



# OUR NUMBERS



***100% students with  
a professional occupation  
in 1 year  
after the Diploma achievement***



# 1st Scientific International Conference on CBRNe



Organized by the Health, Safety and Environmental Association, Roma (HESAR)

22-24 MAY 2017  
ROME, ITALY



## WHY ATTEND?

### MEET

Workable Public, Military, Private, Research, Academic CBRNe experts

### LEARN

Different approaches to the CBRNe safety and security in force

### PUBLISH

Scientific papers in internationally recognized peer-reviewed journals

### VISIT

One of the most beautiful cities in the world

## TOPICS

- FAILURE MODE SYSTEMS AND SOLUTIONS
- EMERGENCY COMMUNICATION AND PROTECTION
- MEDICAL MANAGEMENT AND FIRST AID
- DECISION SUPPORT SYSTEM IDEAS
- INTERNATIONAL LEGAL FRAMEWORK
- ECONOMICAL ASPECTS ON CBRNe EVENTS
- DIFFUSION AND DISPERSION OF CBRNe AGENTS
- DETECTION AND IDENTIFICATION OF CBRNe AGENTS
- MODELING AND SIMULATION
- CBRNe FORENSIC
- PROTECTION AND DECONTAMINATION IN CASE OF CBRNe EVENTS
- CYBERSECURITY
- EDUCATION AND TRAINING

## VENUE

Istituto Superiore Antincendi  
(National Fire Academy)

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Contact: [sicc2017@sicc2017.com](mailto:sicc2017@sicc2017.com)





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Colomba Russo



Valentina Gabbarini



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