



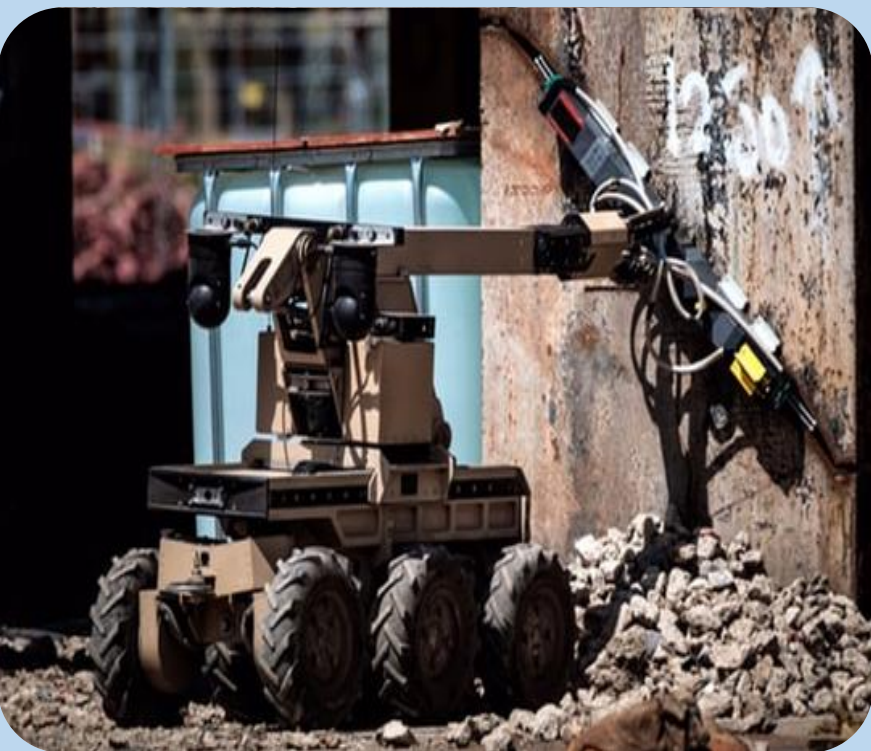
# **National M.E.M. Conference**

## **4<sup>th</sup> November 2016 Athlone**



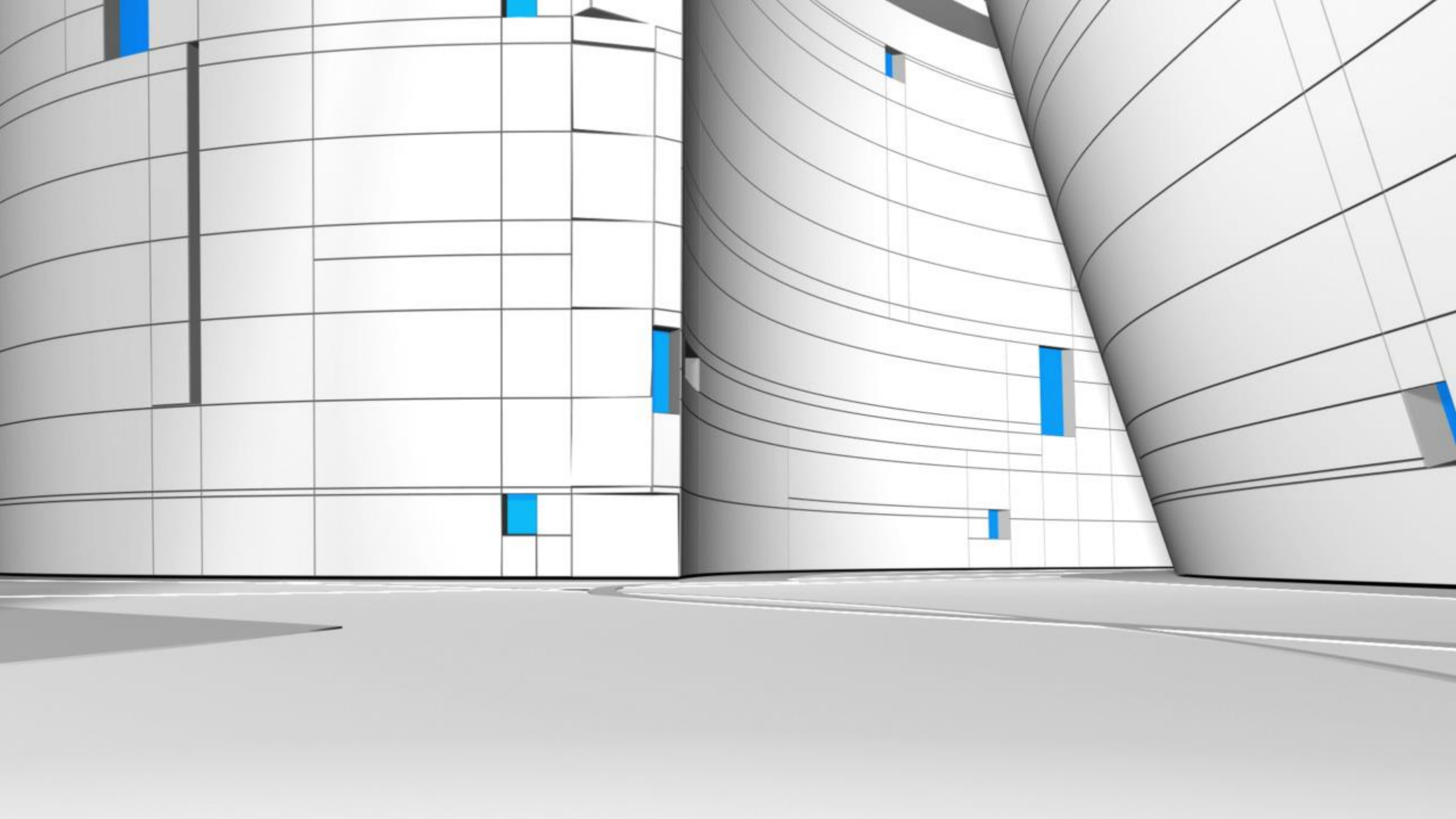
# EU Horizon 2020

# ROCSAFE



**Finbarr O'Sullivan**  
**An Garda Síochána**

*Funded under EU Horizon 2020  
under Contract (GA) number 700264*







# **EU Horizon 2020 worth**

# **80 billion Euro**

## **2014 - 2020**





ried



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# **R** **Remotely** **O** **Operated** **C** **CBRNe** **S** **Scene** **A** **Assessment** **F** **Forensic** **E** **Examination**

## **COMBINATION**

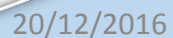
### **Robotic Aerial Vehicles (Drone)**



### **Robotic Ground Vehicles**



**Irish Consortium scored an incredible score of 14.5 out of 15 for this project.**





INTERNATIONAL PROJECT LED BY NUI GALWAY  
AWARDED €4.8 MILLION IN EU FUNDING



## Dr Michael Madden NUI Galway

Led by **Dr Michael Madden** from the College of Engineering & Informatics at **NUI Galway**, the ROCSAFE project will focus on developing ICT and Security software to gather forensic intelligence in the event of a terrorist attack.





## IRISH PARTNERS

- **National University of Ireland Galway**
- **Defence Forces Ireland**
- **Tyndall Institute – University College Cork**
- **REAMDA**
- **HSE –**
- **Inter-Agency Emergency Management Office**

**There are 13 partners in total involved in the ROCSAFE project across Ireland, Italy, Portugal, Spain and Germany, along with a wider set of advisory board members.**

## INTERNATIONAL PARTNERS

- **Consorzio C.R.E.O.**
- **CNR – INM**
- **Scorpio Networks Ltd**
- **Aeorum**
- **INOV Inesc Inovacao**
- **Valentia Police**
- **IBATECH**
- **Microfluidic Chipshop**
- **Saab Group (TBC)**

## CBRNe accidents or attacks are low probability but of high consequence

- Lack of accurate & instantaneous detection and identification technologies.
- Lack of reliable / fast stand-off/remote detection methods for most CBE threat substances.
- Lack of systems that can detect multiple threats and degree of hazard.
- Safe sampling without putting First Responder at risk.
- No standardised approach to sampling.
- **DECISION SUPPORT TOOLS**

# RGVs: An Early Trial at Didcot Power Station

23/02/16  
Four Killed



20/12/2016

EU Project 'ROCSAFE'

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# SYNERGY

**PRA**s

**VES**

**Academia**

**Private**

**Army / Navy**

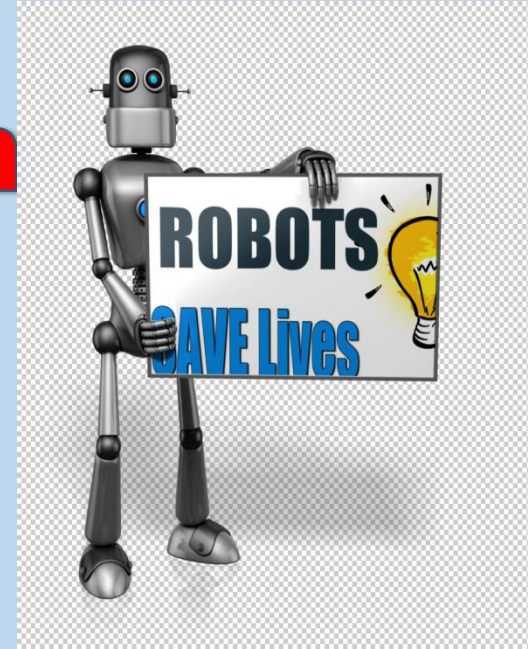


**Think it!**  
**Design it !**  
**Build it!**



# BENEFITS

- 1. Protect Civilian Population**
- 2. Protect EOD Team**
- 3. Gather evidence for prosecution**
- 4. Other applications !!!!**



# KEY MESSAGE

- 1. Expertise is present.**
- 2. Finance is available from EU.**
- 3. PRA / VES / STATE: Synergy exists**



Project 'ROCSAFE'





# Destination !

RAVs with automatic navigation and routes optimised for finding zones of interest and scene overview



Video, images, relayed to Central Decision Management.  
Command Centre with map-based GUI showing threat colour maps, etc.  
Video & maps augmented with analysed sensor results.



All data streamed to Central Decision Management



Forensic results, when available, transmitted to Central Decision Management

RGVs deployed directly to zones of interest. Equipped with tools for forensic evidence collection



Forensic samples delivered to mobile lab [which is outside the scope of ROCSAFE]