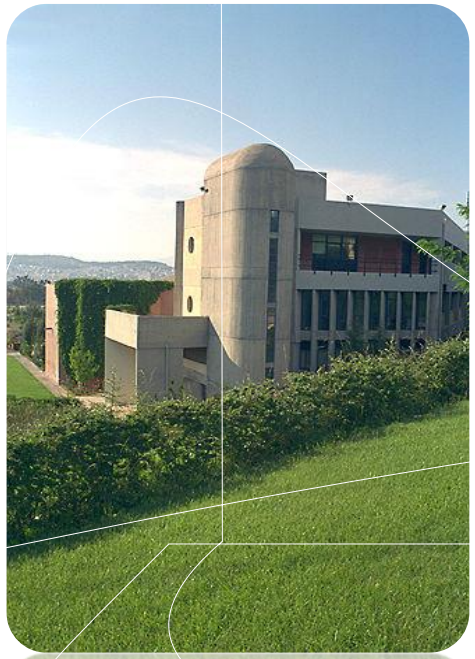
5G Enabled Video Analytics for Detecting Container Seals in Port Operations

ICCS & Position of the I-SENSE group

ICCS

A public scientific & technological institute which undertakes advanced research in the field of electrical, electronic and computer engineering & technologies.



I-SENSE GROUP

Intelligent Transport

5G-LOGINNOV Project

5GLOGINNOV

Horizon 2020 call	H2020 – ICT- 2020
Topic	ICT-42-2020
Type of Action	IA
Duration	36 months
Start date	September 1st, 2020
Project title	5G-LOGINNOV

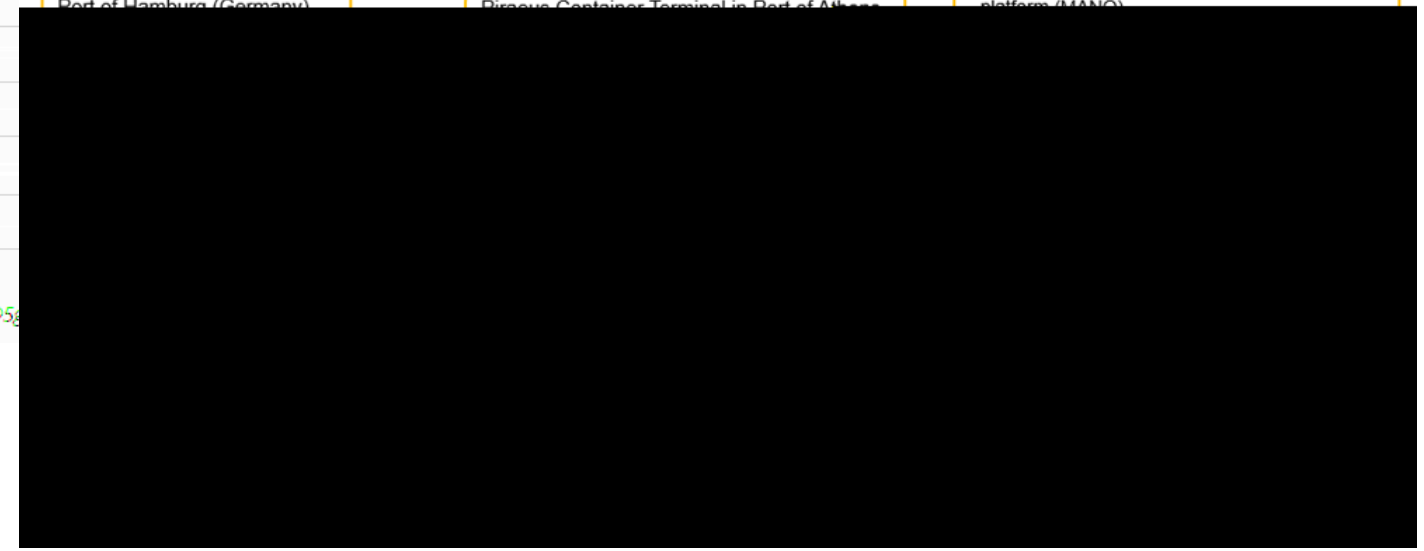
Website: www.5g-loginnov.eu Social media: Contact: 5G-Loginnov-Contact@5g

Main achievements

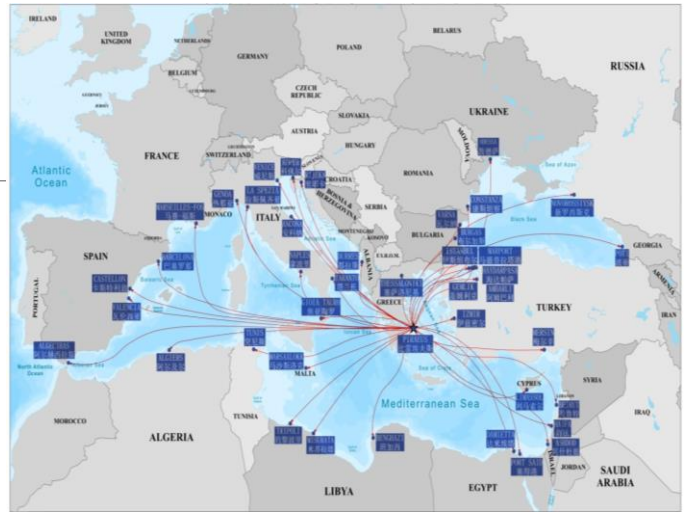
3 LIVING LABS:

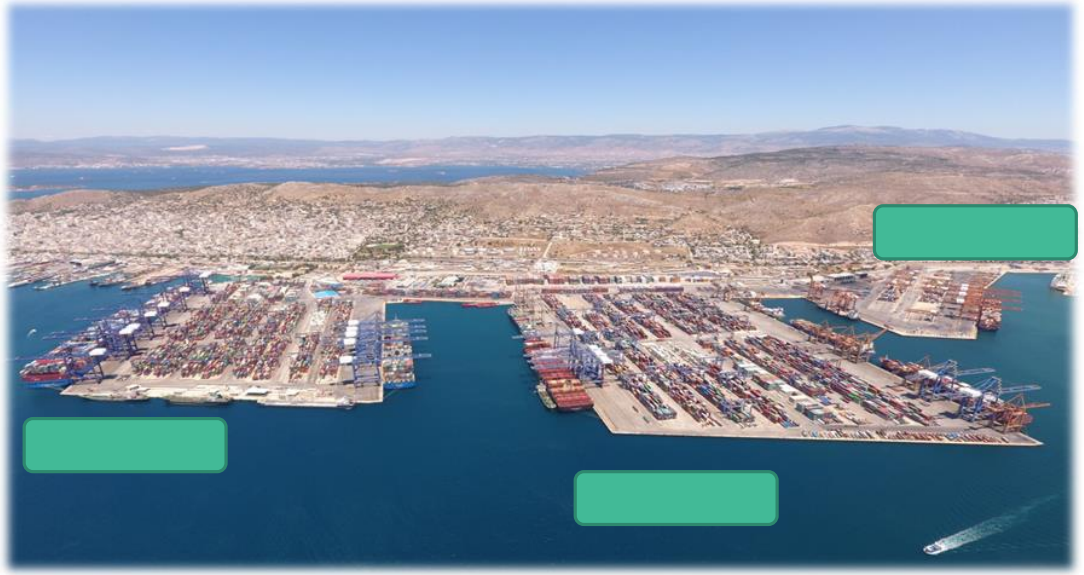
11 USE CASES:

- UC1: Management and Network Orchestration

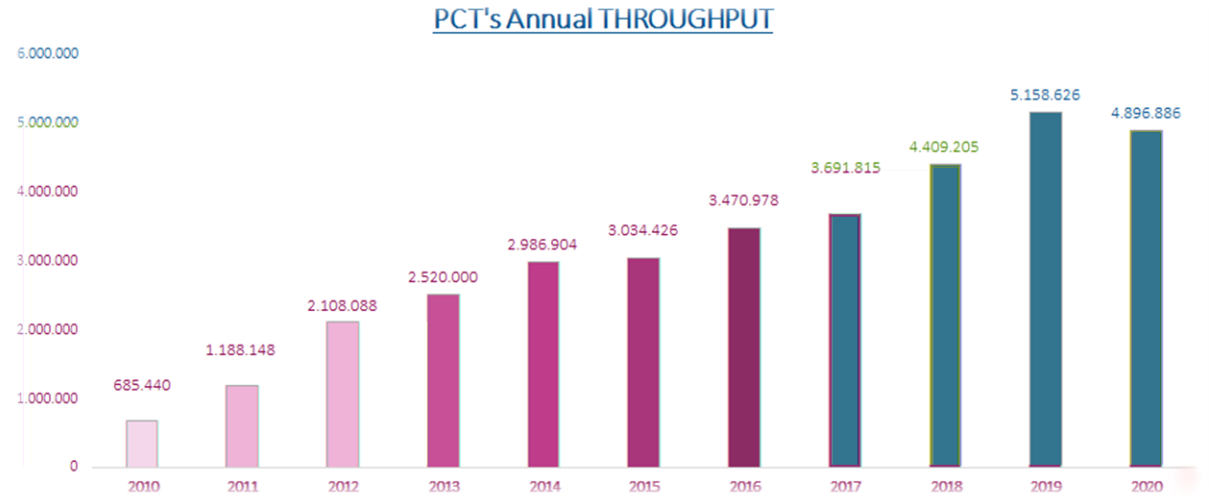


Athens geographical overview
Piraeus Container Terminal (PCT)





Problem Statement (Container Seal Detection)



Container Seal Detection

Considered Methods

- *deep learning classification*
  - _____
- *deep learning detection*
  - _____

The Designed Method

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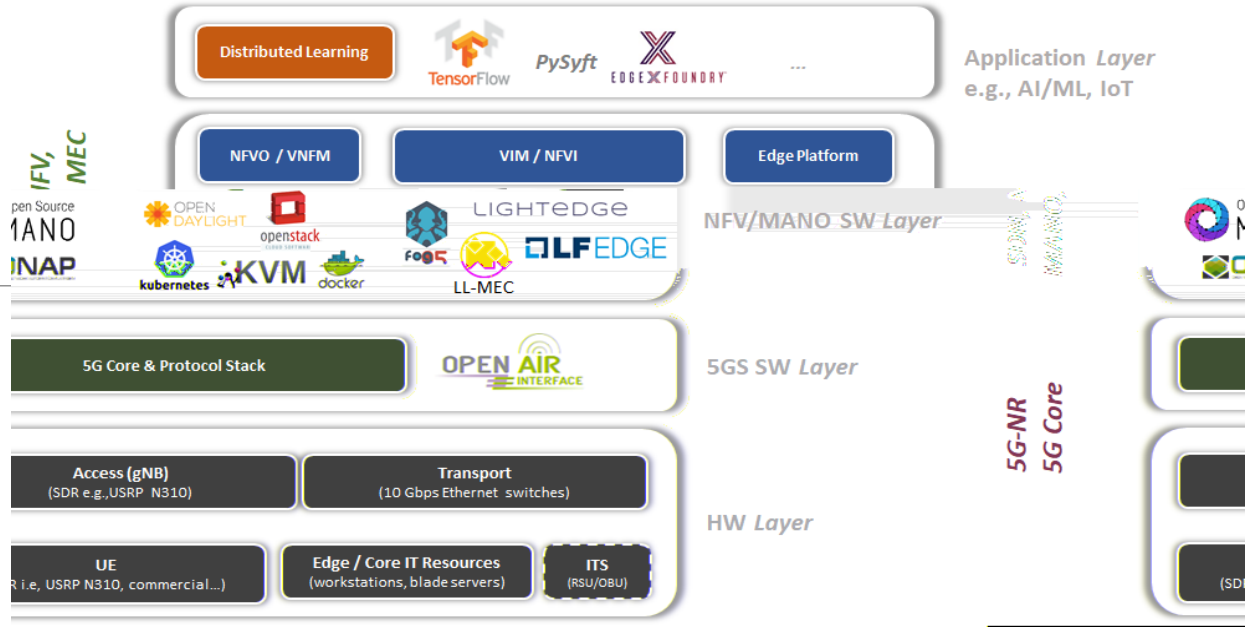
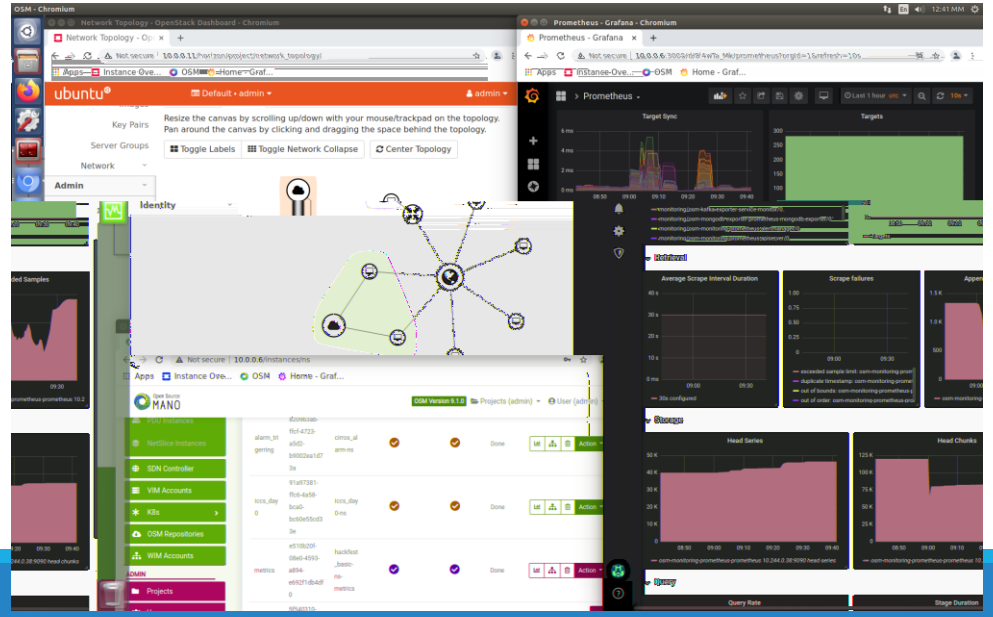
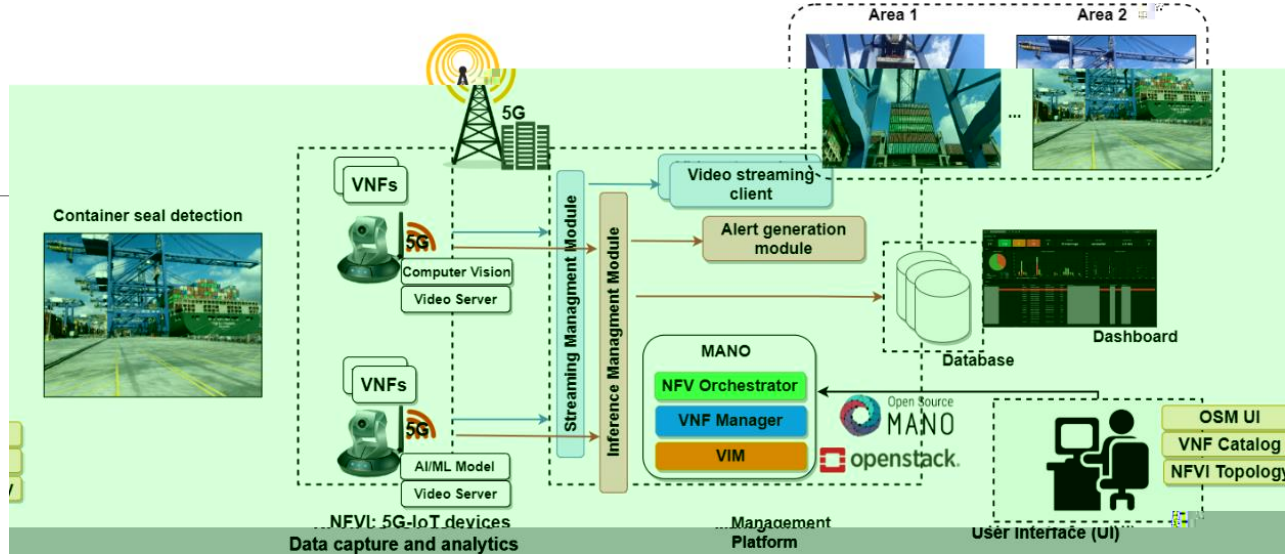
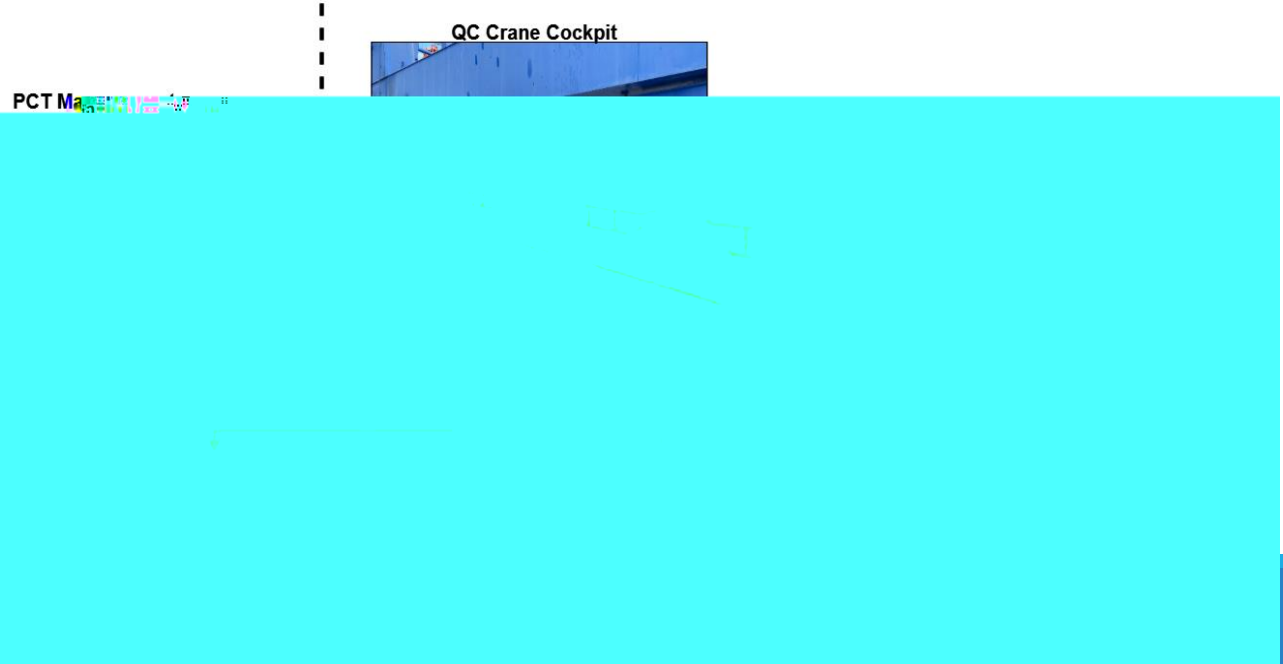
The ICCS 5G TestBed: Technologies in a Nutshell



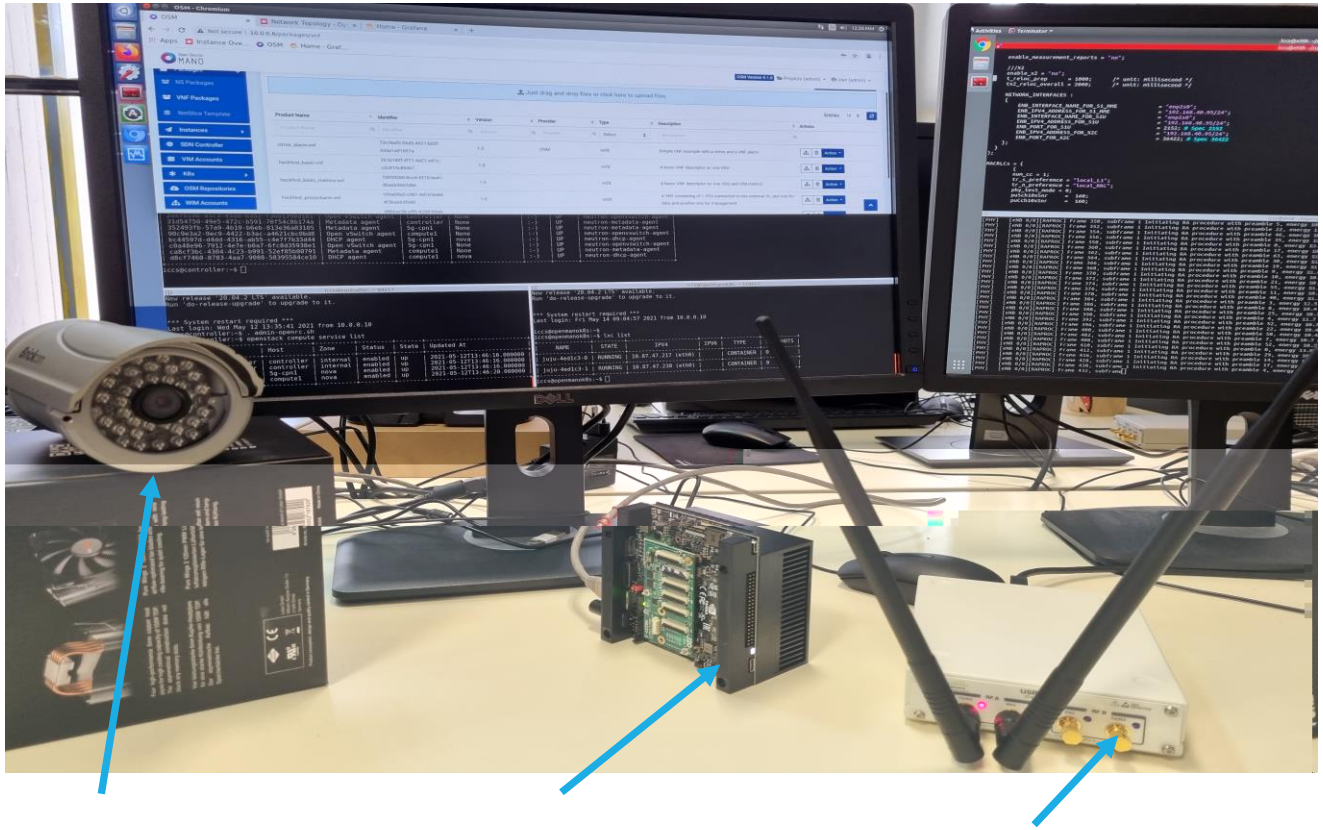


5G-IoT and Video analytics with NFV-MANO support





Experimentation Setup



Results

	Actual Sealed	Actual Non-Sealed	**Accuracy**
Classified as Sealed	921	50	94.85%
Classified as Non-Sealed	79	950	92.35%
Recall	92.10%	95.00%	
	Overall Accuracy:	93.55%	

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Thanks for your attention