Supporting European Aviation



# Cybersecurity in Aviation

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## EUROCONTROL



EUROCONTROL is an inter-governmental, pan-European, civil-military organisation dedicated to supporting European aviation.



EUROCONTROL

1960s

1980s

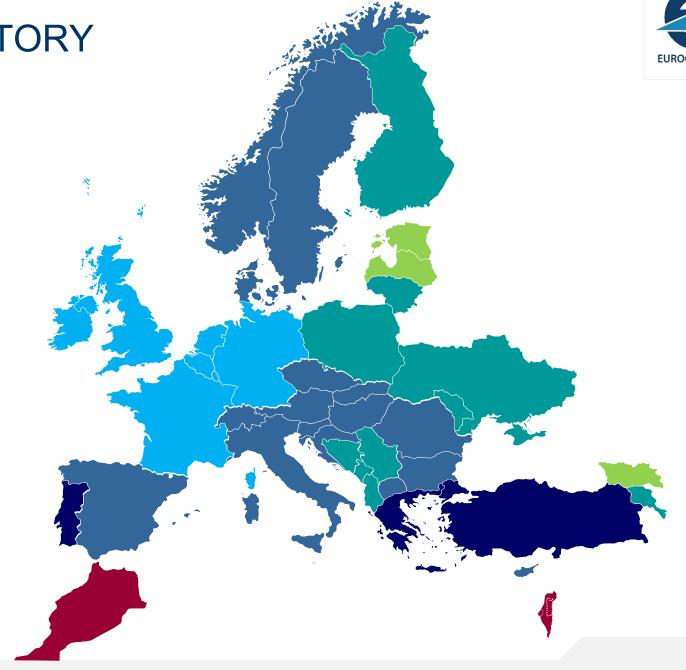
1990s

2000s

2010s

41 Member States & the European Union

2 'Comprehensive Agreement' States: Morocco & Israel



<sup>&</sup>quot;The designations employed and the presentation of the material on maps in this presentation do not imply the expression of any opinion whatsoever on the part of EUROCONTROL concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries

## **Building the Single European Sky!**

Provide air traffic services in upper airspace of Benelux & North west of Germany



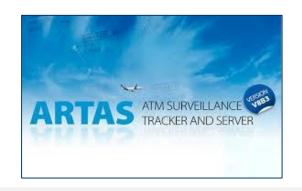




Manage the pan-European network



R&D => Deployment

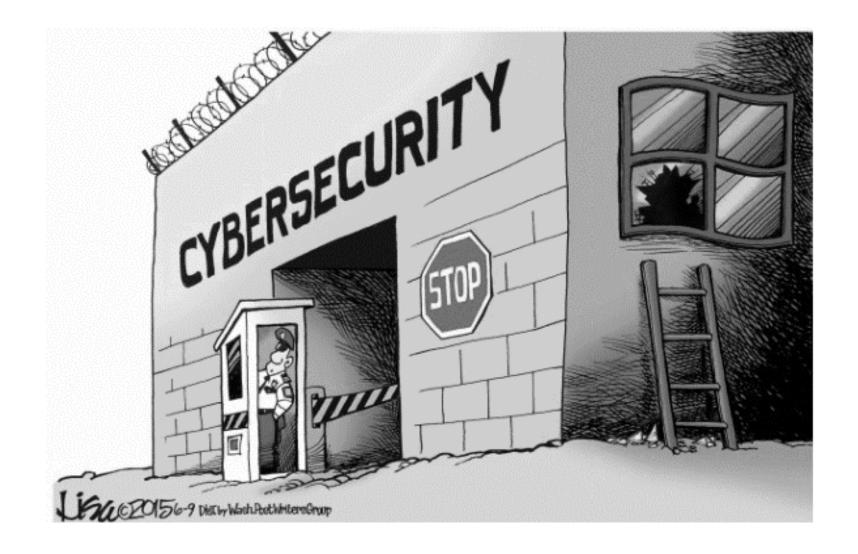


**Products** 

Collect route and terminal charges

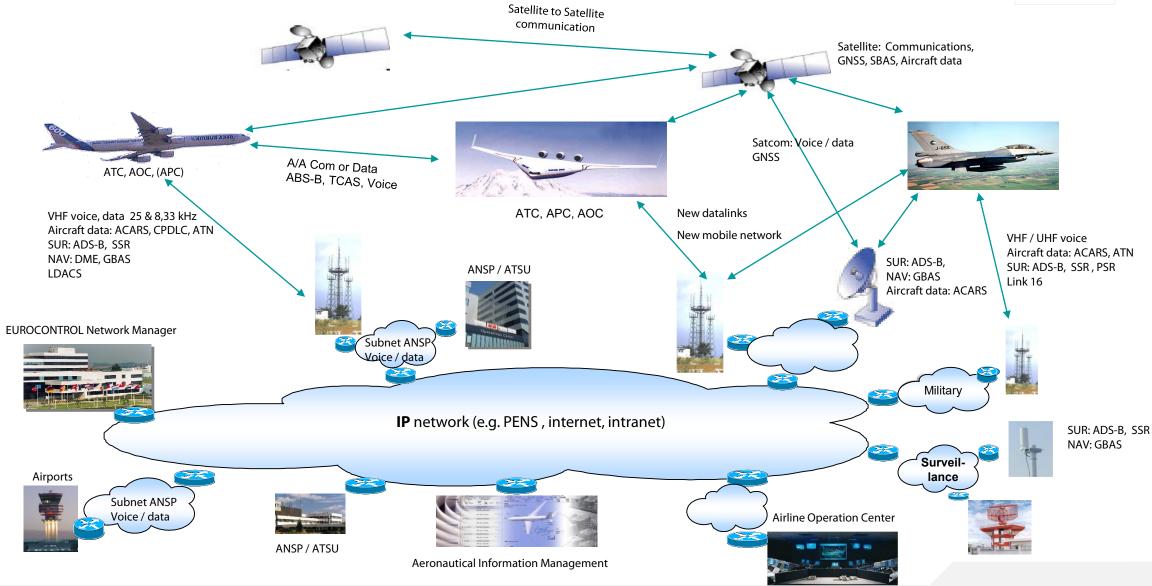




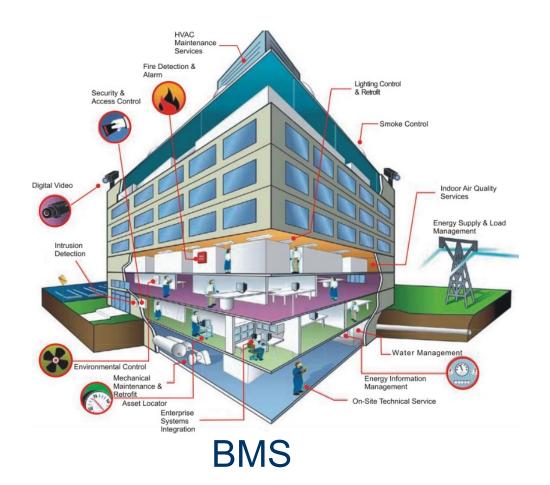


### Overview on Aviation Network











**Power Supply** 



**HVAC** 

EUROCONTROL/EATM-CERT 7











Aviation =
Mix of legacy and new
... forever





Manufacturing giant Aebi Schmidt hit by ransomware

Zack Whittaker @zackwhittaker / 11:04 PM GMT+2 • April 23, 2019



Kopter Group (Leonardo) have been hacked and data locked and stolen. They do not write to us so we will publish all data in 72 hours. Some example files have been uploaded for proof. 2019-12-17\_Statement\_of\_Accounts\_\_\_Sales\_Contracts xisx Avionic\_Elec\_Detailed\_Plan.xism Projekt LINDEN - Linden\_Finance Q&A\_05122019\_V1xisx Projekt LINDEN - Linden\_Finance Q&A\_05122019\_xisx Projekt LINDEN - Linden\_Finance Q&A\_05122019\_C1.xisx Projekt LINDEN - Linden\_Finance

All data release in final upload.



Boeing Hit by Cyberattack, Says
Jetliner Production Not Affected

Aircraft production and deliveries aren't affected, the airplane manufacturer said.

Bloomberg MAR 29, 2018

Airbus hit by series of cyber attacks on suppliers





Sa rday, 12 December 2020 08:38

Dassault subsidiary in US hit by Windows Ragnar Locker ransomware Featured

# Aerospace Giant Embraer Downed by Suspected Ransomware

#### Tech Giant GE Discloses Data Breach After Service Provider Hack

By Sergiu Gatlan March 23, 2020 0 05:47 PM 0





AIRLINE NEWS

Israeli Flight Attendant Sold Access to Private Passenger Information and Airline Systems in Major Security Breach



EasyJet admits data of nine million hacked

British Airways fined £20m over data breach











Home / About / SFO News / NOTICE OF DATA BREACH: March 2020

#### **NOTICE OF DATA BREACH: March 2020**

Click Here for Notice

April 7, 2020

TO: All Airport Commission Employees

FROM: Airport ITT

SUBIECT: Notice of Data Breach

# Source: Hacker holding Cleveland Hopkins International Airport systems hostage demands ransom via Bitcoin



By Paul Orlousky | April 25, 2019 at 4:20 PM EDT - Updated April 26 at 10:46 AM

### **European Airport Systems Infected With Monero-Mining Malware**

By Sergiu Gatlan

October 17, 2019 11:47 AM 0

SITA cyber attack accesses passenger data for multiple airlines

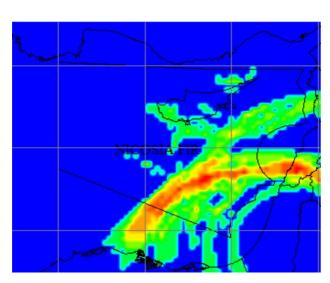
#### A Cyberattack on Garmin Disrupted More Than Workouts

A ransomware hit and subsequent outage caused problems in the company's aviation services, including flight planning and mapping.







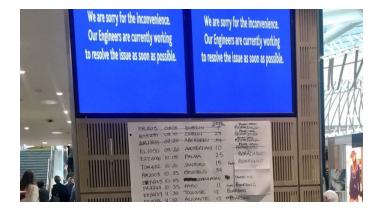


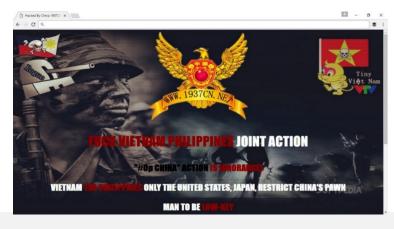
Man hijacks Portland airport monitor to play video games, until PDX officials declare 'game over'

Posted Jan 16, 2020









# Airline forced to cancel flights in Alaska after cyberattack

By Associated Press

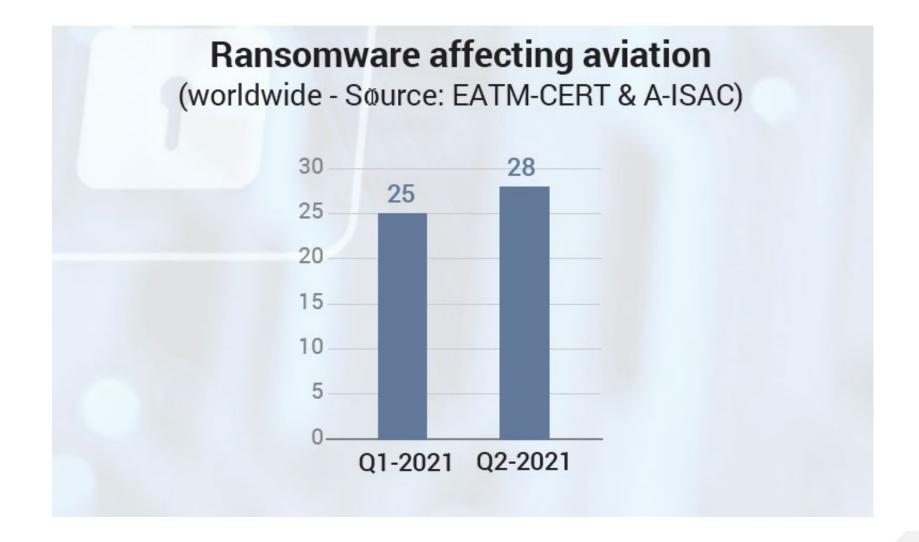
December 23, 2019 | 12:16pm











Cybersecurity in Aerospace 12

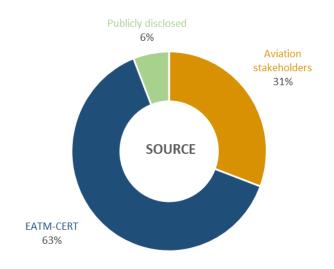
### https://www.eurocontrol.int/cybersecurity

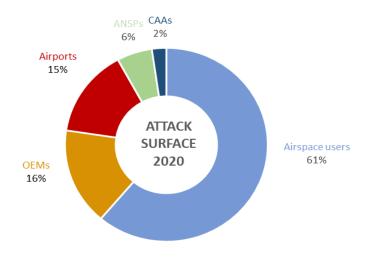


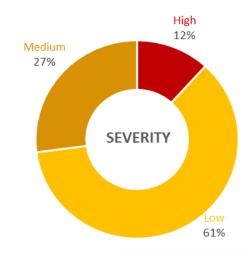


## EATM-CERT 2021 report on cyber in aviation











~200 events

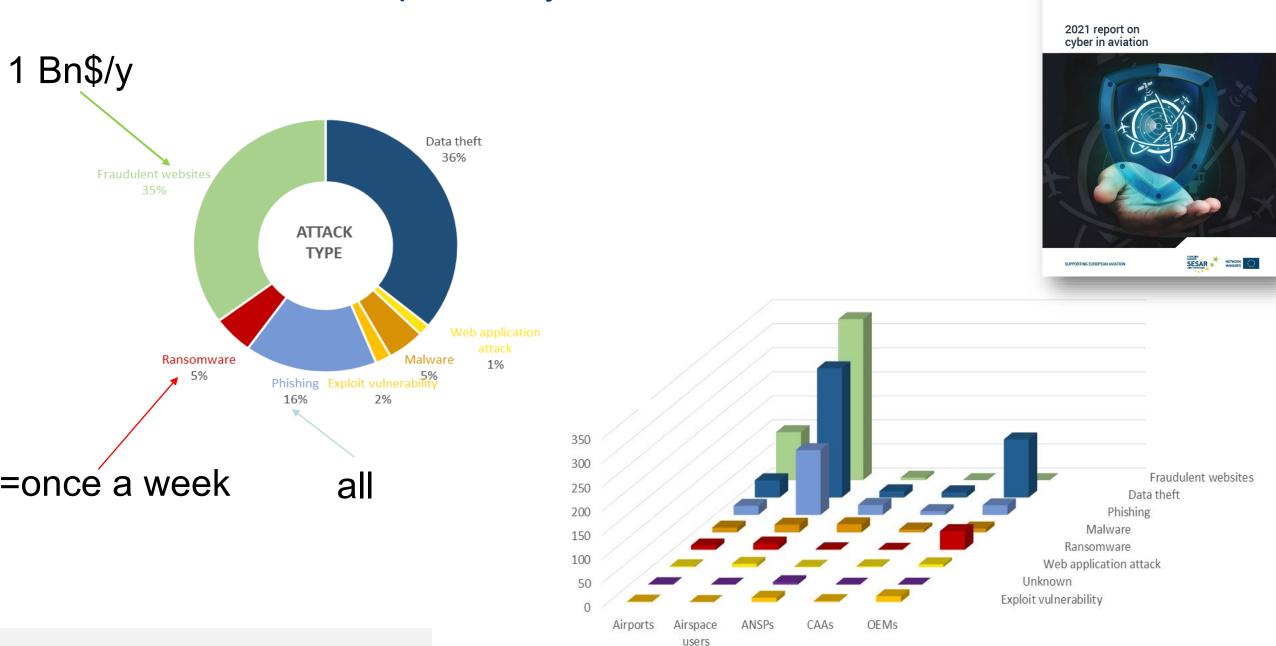
~1.260 events

Report is TLP:GREEN



SUPPORTING EUROPEAN AVIATION

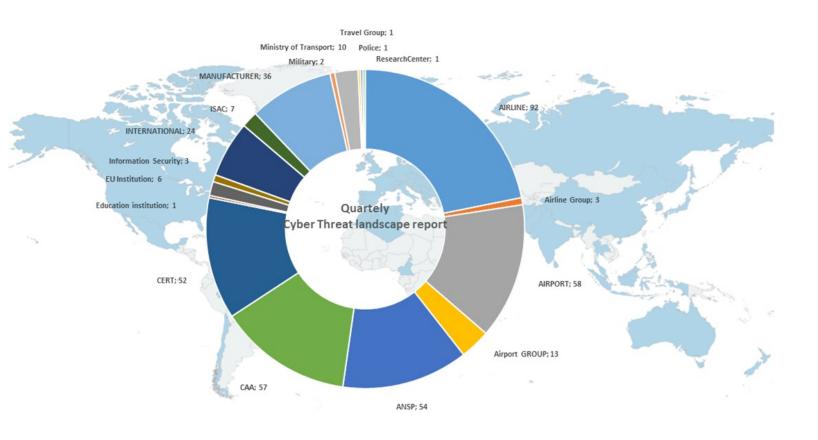
## EATM-CERT 2021 report on cyber in aviation



Regional sectorial (ATM) CERT: combine cyber and domain expertise EUROCONTROL Cyber Cyber **EACCC** Cyber intelligence Provider **EASA ECCSA ATM CI Provider EATM-CERT** Alerts/Incidents (US & other Regions Cyber ATM CERT) - intelligence Intelligence **EE-ISAC** National CERTs **ER-ISAC** Alerts/ Intelligence A-ISAC Incidents /services **OT-ISAC EUROCONTROL/NM SOC** Significant Incidents **EUROPOL** Alerts/other incidents - intelligence - intelligence/services **EUROCONTROL/MUAC SOC CERT-EU ENISA** Recommendations Logs NATO/EDA SOC Manufacturer SOC Manufacturer SOC ATM Stakeholder System Manufacturer TF-CSIRT **ATM EUROCONTROL** Trusted Introducer Stakeholder

## Quarterly cyber threat landscape report

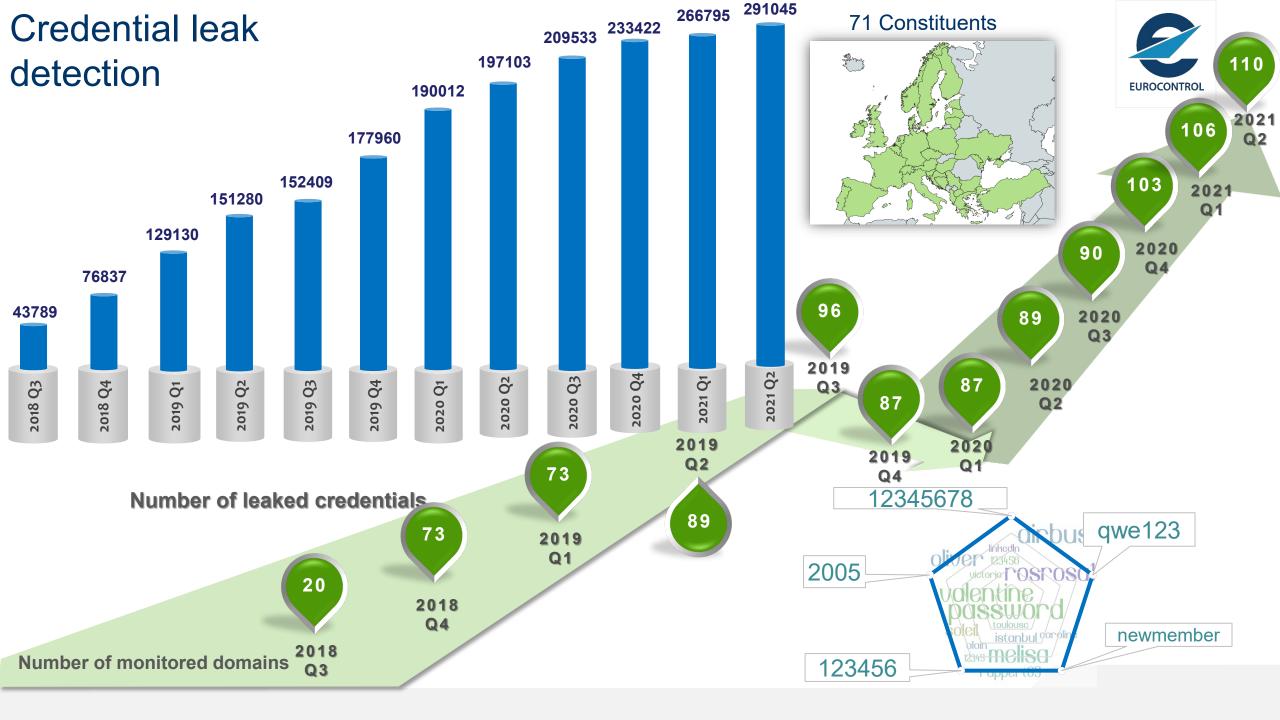




421 organisations

1,223 individuals



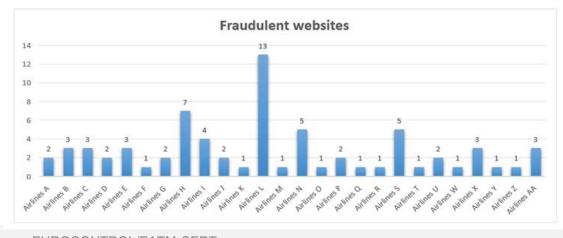


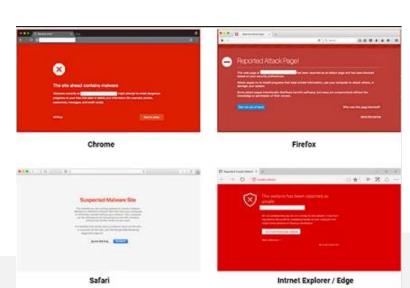


## Fraudulent websites impersonating airlines



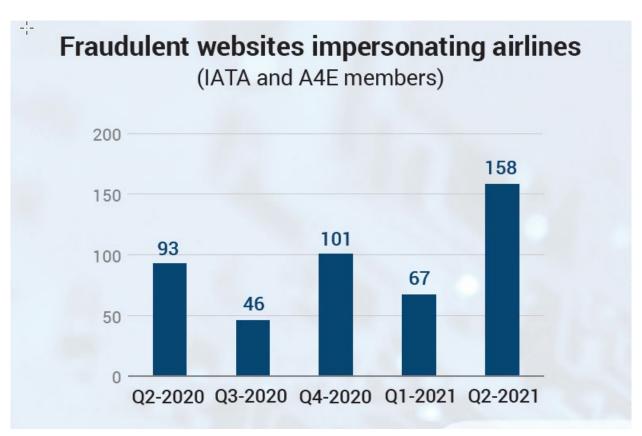
## Financial impact: ~1Bn\$/y (IATA)







## Fraudulent websites

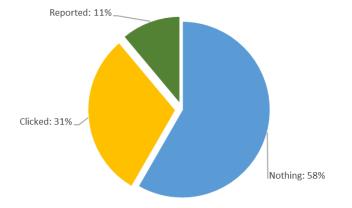


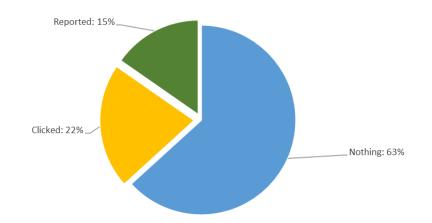


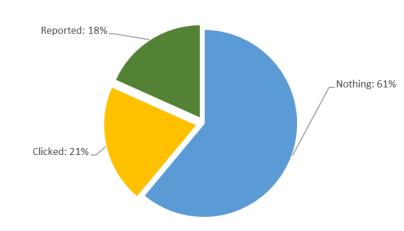
## Phishing awareness campaigns



- Tested within EUROCONTROL (2 campaigns)
- Available for your constituents' use











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