AESA-EASA

2020 High Level Cybersecurity Conference

"EU regulation for the management of cyber risks: time for implementation"

ENAIRE

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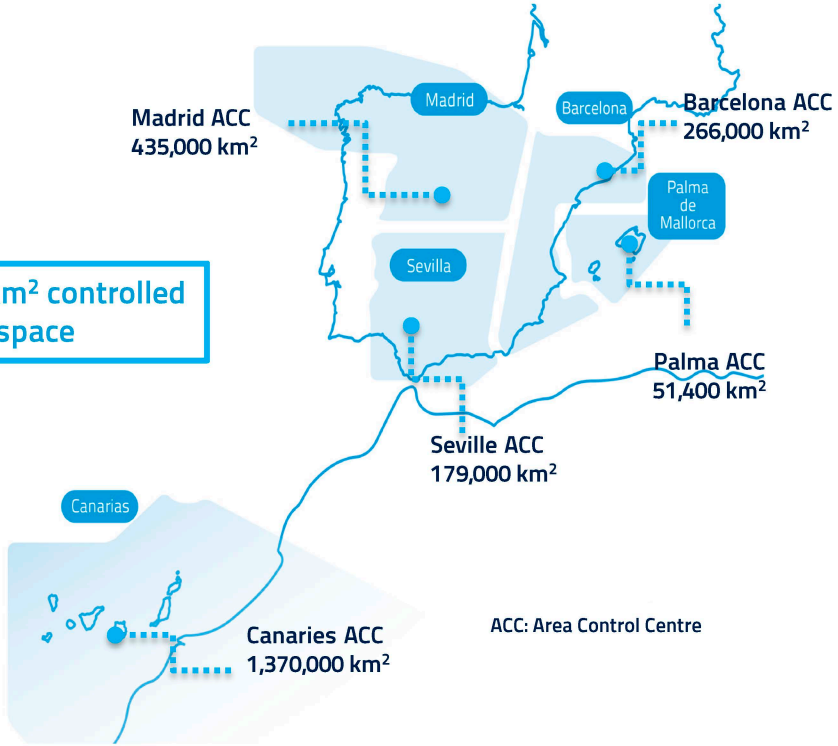
EU regulation for the management of cyber risks: time for implementation

The importance of a coordinated approach to cybersecurity in aviation

- ✓ About us
- ✓ ENAIRE in the world
- ✓ ENAIRE in Spain
- ✓ Regulation and strategies
- ✓ Overall picture
- ✓ Next steps

About us

ENAIRE



2,190,000 km² controlled airspace

Main ANSP in Spain with ~4,000 employees

3 Flight Information Regions:
- Madrid
- Barcelona
- Canaries

5 Air Navigation Regional Directorates:
- **Central-North** - Madrid ACC
- **East** - Barcelona ACC
- **South** - Seville ACC
- **Canaries** - Canaries ACC
- **Balearic Islands** - Palma ACC

3 Terminal Control Centres

22 Control Towers

Communication, Navigation & Surveillance provider in Spanish airspace and AENA airports

Airspace Information Services provider in Spain

ENAIRE in the world

International stakeholders

ENAIRE in Spain

National stakeholders

Regulation and strategies

Ongoing international initiatives

ICAO

Aviation Cybersecurity Strategy

ESCP

Strategy For Cybersecurity in Aviation

EU

Cybersecurity Strategy

ISO

Standard 27001

Information Security Management

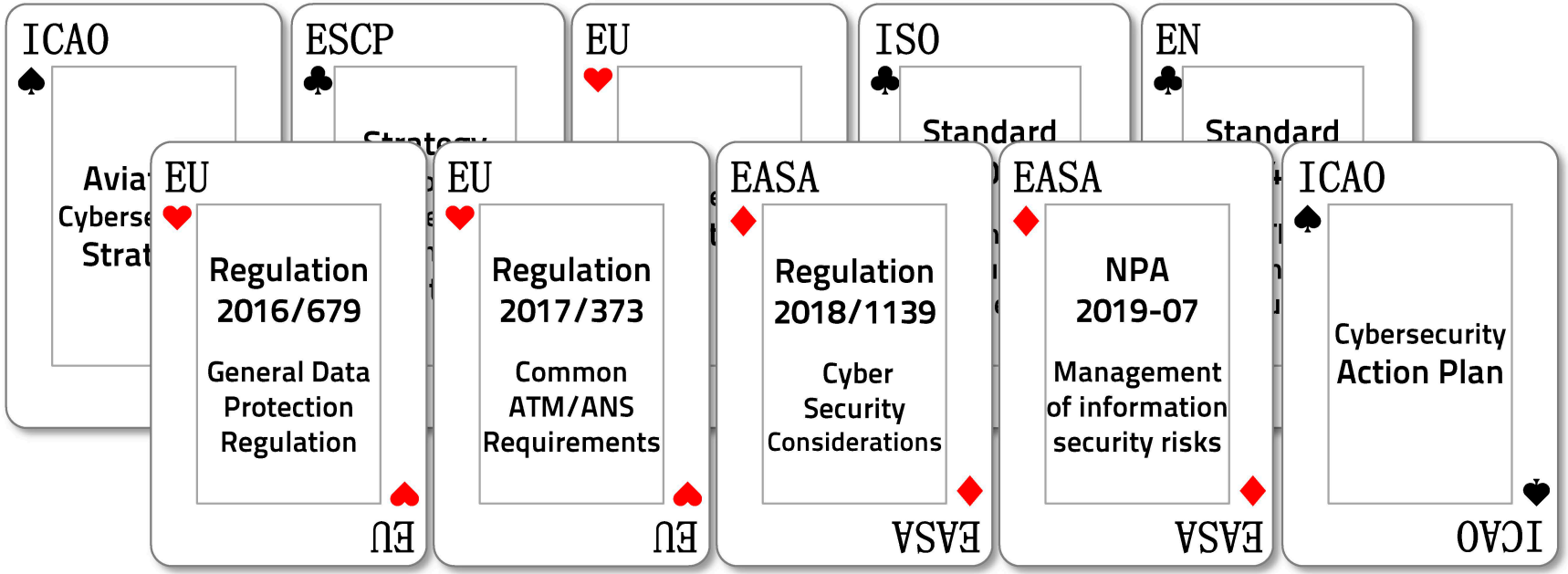
EN

Standard 16495

ATM Information Security

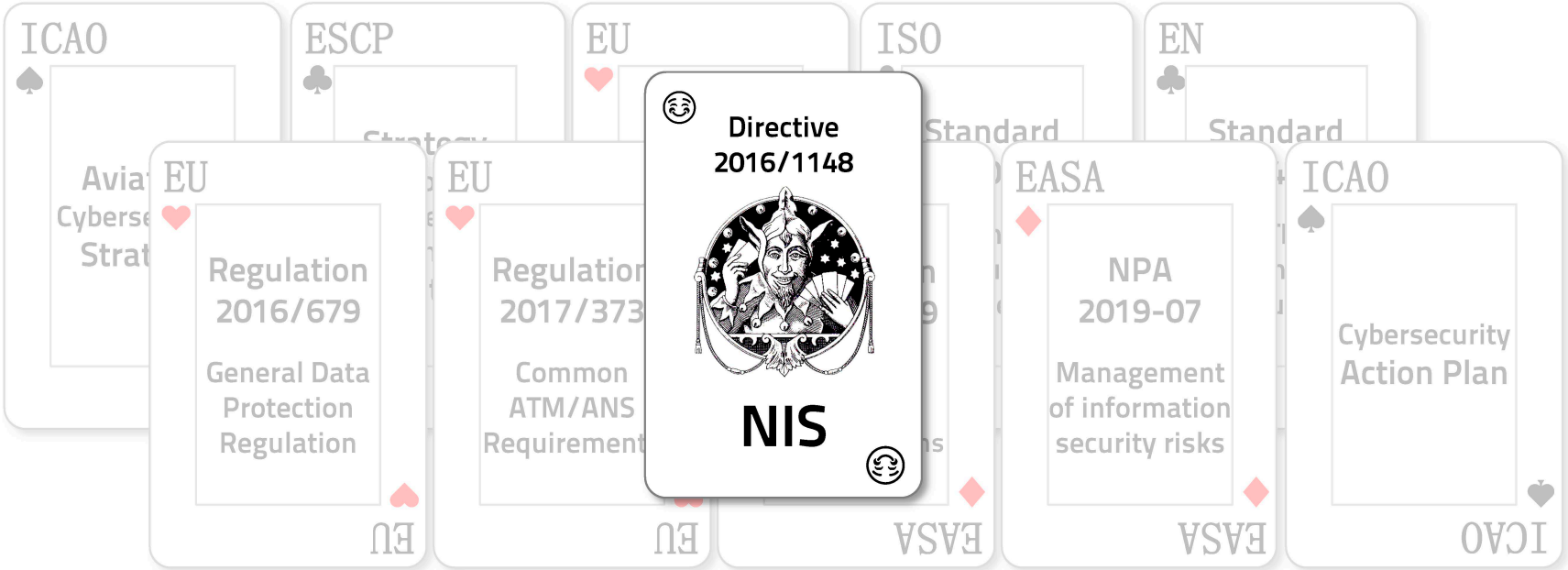
Regulation and strategies

Ongoing international initiatives



Regulation and strategies

Ongoing international initiatives



Regulation and strategies

Ongoing national initiatives

Law 8/2011
Critical Infrastructures Protection

Royal Decree 704/2011
Implementing Regulation of
Law 8/2011

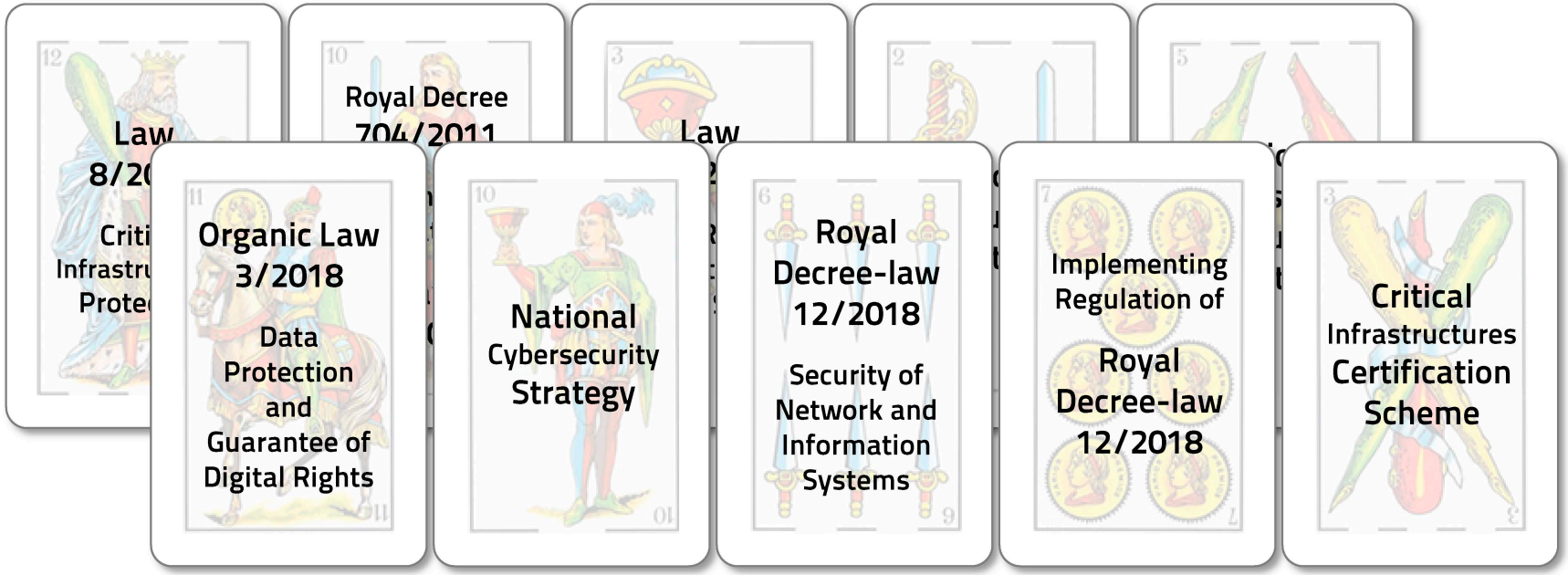
Law 40/2015
Legal Regime of the Public Sector

National Security Strategy

National Aerospace Security Strategy

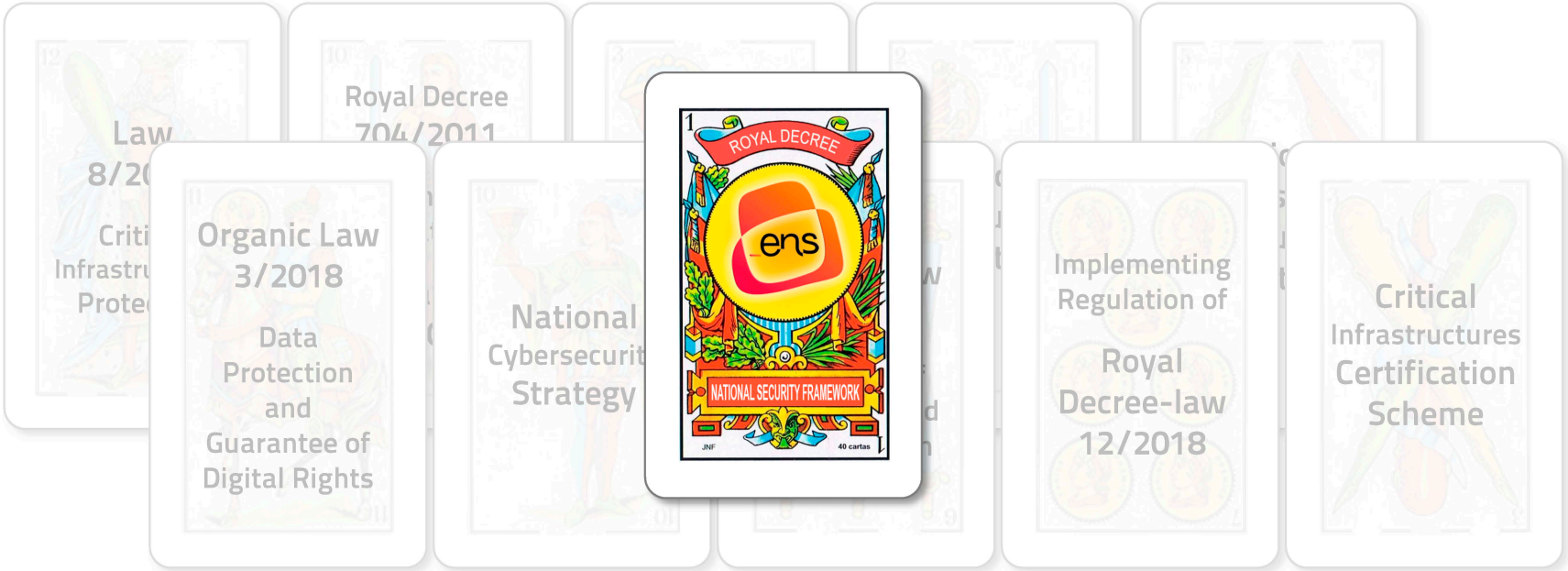
Regulation and strategies

Ongoing national initiatives



Regulation and strategies

Ongoing national initiatives



Regulation and strategies

Ongoing national initiatives

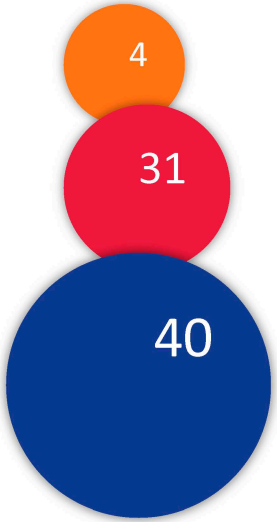
National Security Framework (Esquema Nacional de Seguridad – ENS)

- Security policy regarding the use of electronic means, based on **basic principles** and **minimum requirements** to allow the adequate **protection of the information**: systems, data, communications and services.

- Security measures based on risk analysis and management, assets and information systems (75 controls).

- Based on different standards (ISO 27001, NIST…).
- 3 Categories: High, Medium, Low (according to criticality).
- 6 Maturity levels: L0 (0%), L1 (10%), L2 (50%), L3 (80%), L4 (90%), L5 (100%).

- Complemented by the "**National guide for cyber-incident notification and management**" (first one in the world).



✓ Organizational framework:
Policy, regulation and procedures.

✓ Operational framework:
Planification, control, operation, external services, continuity, monitoring…

✓ Protection measures:
Assets, facilities, infrastructures, staff, equipment, communications, applications, information, services…

Overall picture

Benefits of convergence

It is very positive that in Europe the regulations revolve around the **NIS Directive**...

...as well as in Spain the main reference is the **National Security Framework** (ENS).

Overall picture

Benefits of convergence

Critical Infrastructures
Certification Scheme

Common ATM/ANS Requirements
(Regulation 2017/373)

ENS

Royal Decree 3/2010
National Security Framework

Management of security
risks (NPA 2019-07)

Implementing Regulation

NIS

Royal Decree-law 12/2018

Directive (EU) 2016/1148

Security of Network and Information Systems

Next steps

Wish list

- ✓ Formal agreement between authorities CAA – CYBER:
  Regulation (EU) 2017/373 → NPA 2019-07 → NIS Directive.

- ✓ Acceptance of national regulatory frameworks in Europe…
  …as long as they demonstrate to satisfy the NIS Directive.

- ✓ Do not reinvent the wheel:

  - ➢ Preserve the NIS spirit of a single focal point for communication and notification.
  - ➢ Use existing channels to improve the exchange of information (CERTs).
  - ➢ Use existing models / standards / references to the extent possible.
  - ➢ Ensure that any new certification or model brings a real benefit.

Thank you

Bonus track

Bibliography and references

- ✓ National Security Framework (ENS)
- ✓ National Cybersecurity Strategy (2019)
- ✓ Spanish approach to cybersecurity
- ✓ National guide for cyber-incident notification and management (available in Spanish only)
- ✓ CCN-STIC-817 National Security Framework cyber-incident management
- ✓ CCN-STIC-825 ENS – National Security Framework. Certifications 27001
- ✓ Global Cybersecurity Index (GCI) 2018 – What is CGI – Spain in the CGI