

A hand in a dark sweater holds a small, black, cube-shaped object. The background is a grayscale image of a door handle. A dark horizontal band is overlaid on the image, containing white text.

**Contrôle d'accès : hacking d'un système obsolète  
&  
solutions haute sécurité**

# SPAC >ALLIANCE<

**Everything you need to know about  
your physical badge**

**02/04/2026**



# Introduction

- › Security, features, and legal obligations

## Secure, fit-for-purpose badges in 3 steps

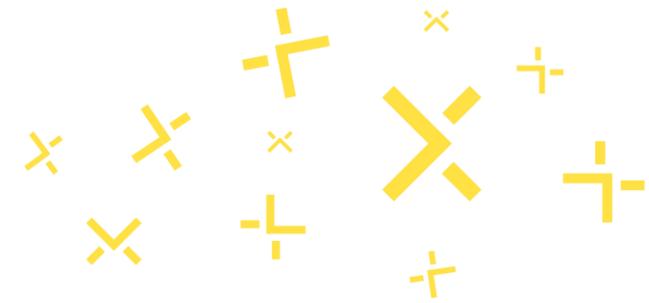
- › How to protect yourself effectively and achieve compliance?

## Time to make the right choices

- › How to identify the right technologies (and the right partner)?

## SPAC Alliance Services

# SPAC Alliance



## FOUNDED IN 2020

- > INFORM & ENGAGE
- > INFLUENCE & ACT
- > STANDARDIZE & CERTIFY

## WE GATHER THE WHOLE ECOSYSTEM



- > MANUFACTURERS
- > INTEGRATORS
- > INSTITUTIONS
- > SERVICE PROVIDERS



- > END-USERS
- > INSTALLERS / DESIGN OFFICES
- > CONSULTANTS
- > JOURNALISTS

# Today's speaker



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# SPAC >ALLIANCE<

**Physical badges:  
From use cases to regulatory  
obligations**

# Targets of physical attacks

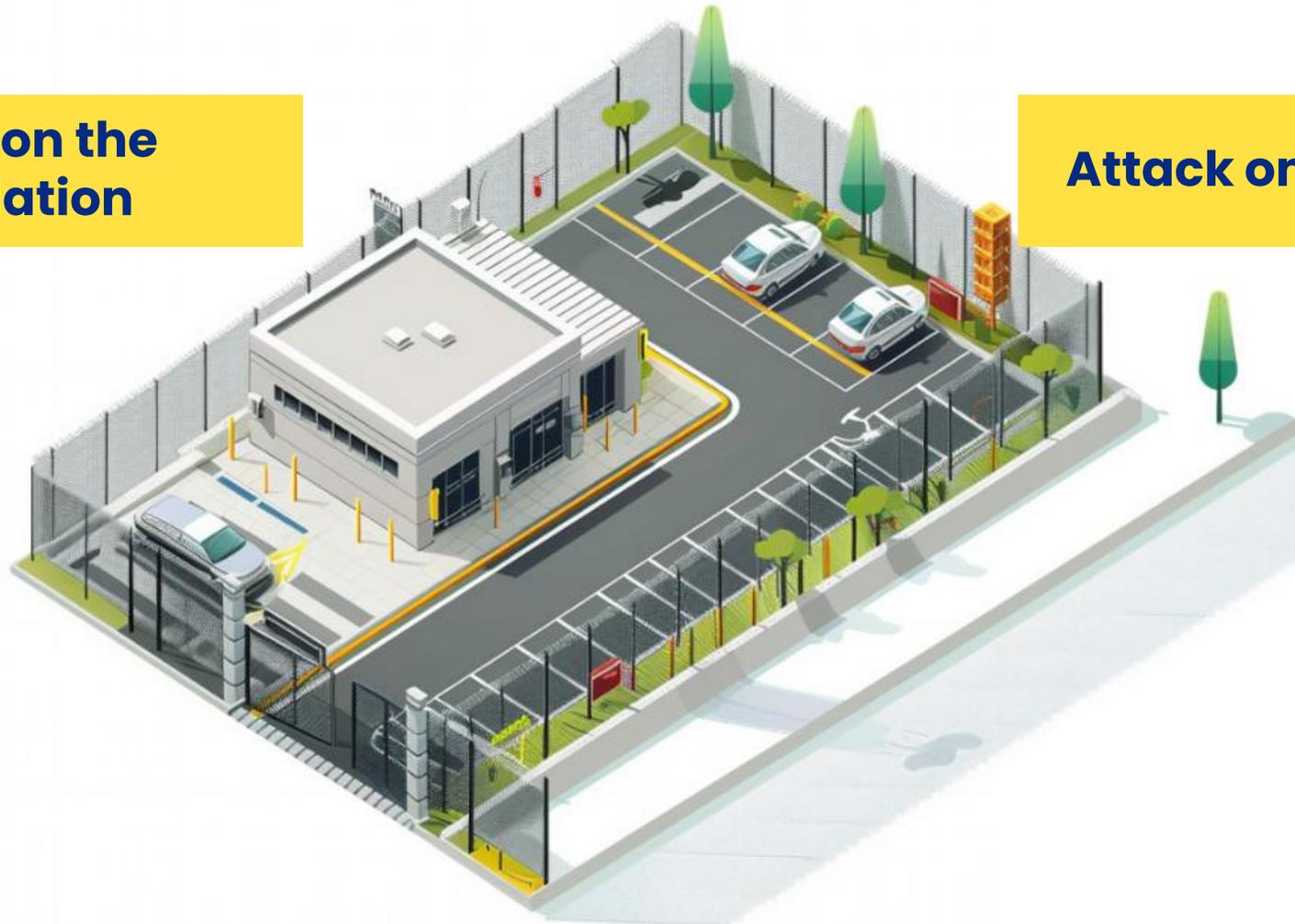


## Attack on the installation

PERIMETRIC

GATE

DOOR



## Attack on equipment

CCTV

READERS

ALARM

SENSORS

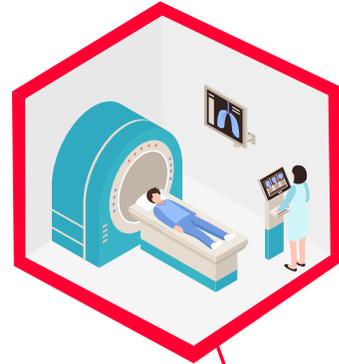
CABLING

BADGES

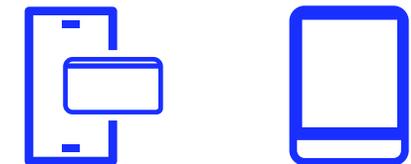
# The Hospital



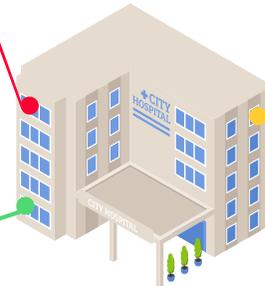
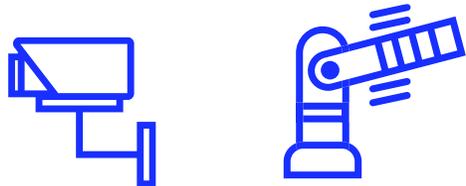
## CRITICAL AREA



## SENSITIVE AREA



## PUBLIC AREA



THREATS

ENGINEERING

THEFT

COPY

COERCION

# One badge, several functions

## ACCESS CONTROL



## KEY MANAGEMENT SYSTEM



## PRINTERS

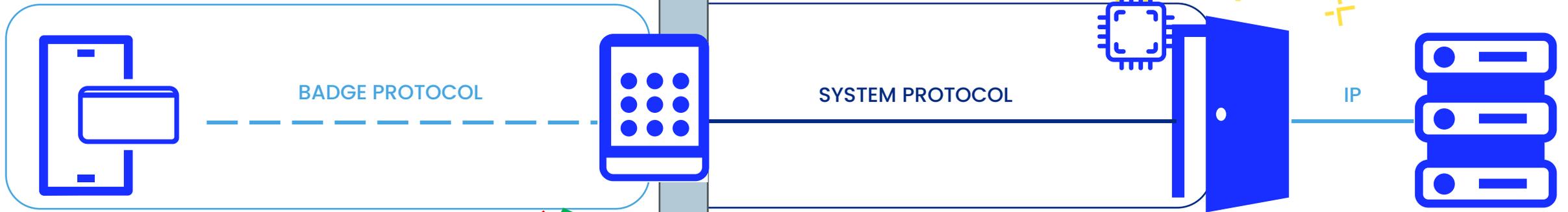


## PARKING



## CAFETERIA

# The credential-reader pair



## 125 kHz BADGES

NO ENCRYPTION

OBSOLETE



(€18)

## 13,56 MHz BADGES

ENCRYPTION

INCREASING SECURITY

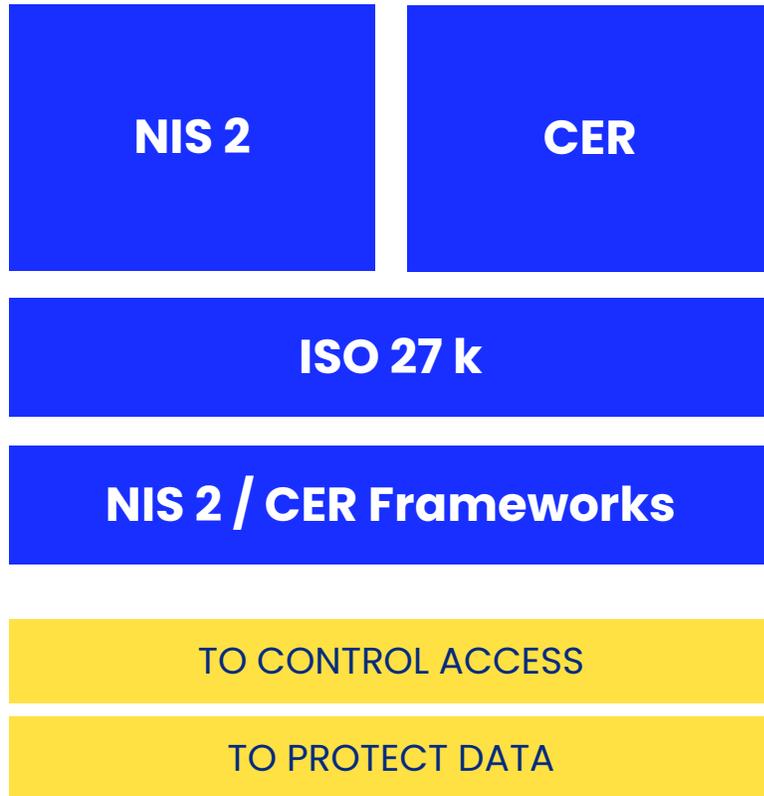
**! CONFIGURATION !**



(€200)

# From recommendation to obligation

## ENTITIES



## MANUFACTURERS



# SPAC >ALLIANCE<

**How to protect yourself effectively  
and achieve compliance?**

**Your secure badge in 3 steps**

# #1 – NEED ANALYSIS



Site analysis

Use's analysis

Recommandations

> COMPLETE AND OBJECTIVE ASSESSMENT

EACH CASE IS UNIQUE

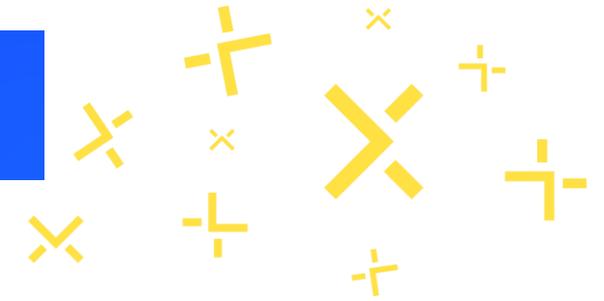
VISITORS

MULTI-SITE

Use cases

Features

# #2 – RISK ANALYSIS



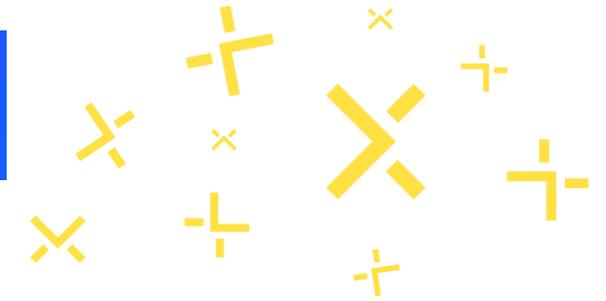
**SITE  
ASSESSMENT**

**REGULATORY  
OBLIGATIONS**

**BEST PRACTICES**

WHAT NEEDS TO BE PROTECTED, AND WHAT ARE THE PRIORITIES?

# #3 – GOVERNANCE



## SECURITY POLICY

ROLES

RESPONSABILITIES

PROCEDURES

> HOW TO DRIVE MY SECURITY?

**FRAMEWORKS AND REFERENCES :**  
ISO 27001 / NIST CSF  
National compliance frameworks

**STRICT GOVERNANCE BASED ON  
SECTOR AND CRITICALITY**

# #3 – Examples



**SYSTEM MANAGEMENT**

**ACCESS PROFILE**

**RIGHTS MANAGEMENT**

**KEY MANAGEMENT**

**BADGE CONFIGURATION**

**SUBCONTRACTORS  
MANAGEMENT**

**TESTS**

**INCIDENT MONITORING**

**EQUIPMENT DISPOSAL**

# SPAC >ALLIANCE<

**How to identify the right technologies  
(and the right partner)?**

**Time to make the right choices**

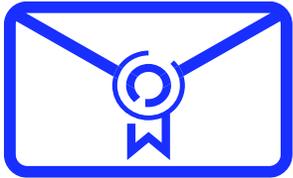
# PROTECT DATA



CONFIDENTIALITY

INTEGRITY

AUTHENTICITY



A LETTER

A SIMPLE CIPHER

INTACT ENVELOPE

WAX SEAL



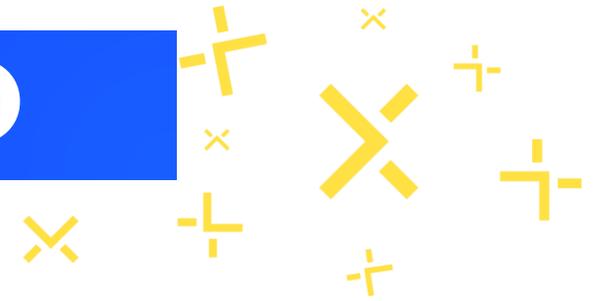
A NUMERIC DATA

ENCRYPTION

NUMERIC HASH

SIGNATURES

# CHOOSE THE RIGHT TECHNO



| OBSOLETES             | 125 kHz CARDS (Prox / EM4100 / HID Prox)             |
|-----------------------|--|
| LOW SECURITY          | MIFARE CLASSIC                                       |
|                       | MIFARE Ultralight / Ultralight C                     |
|                       | MIFARE Plus (SL1)                                    |
| STATE OF ART SECURITY | MIFARE DESFire (EV2, EV3)                            |
|                       | MIFARE DUOX  |
|                       | NXP DNA (UHF)  |
|                       | Calypso Light / Basic / Prime (SPAC Alliance Membre) |

# THREATS ON COMMUNICATION



REPLAY OF THE COMMUNICATION

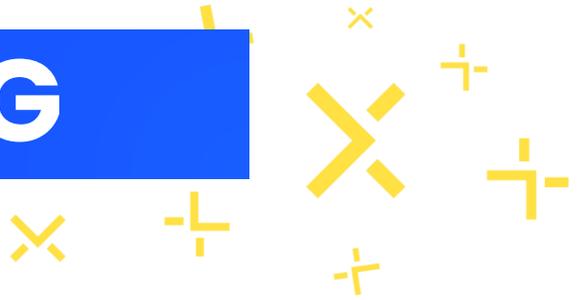
SECURE MESSAGING

RELAY ATTACK

PROXIMITY CHECK

A TRUSTED TECHNOLOGY, IF POORLY DEPLOYED, CAN BE EASILY BYPASSED

# PROPER BADGE FORMATTING



DEFAULT UID + DEFAULT MASTER KEY + DES/3DES

ACCESS CONTROL APP

CAFETERIA APP

NO APP-SPECIFIC KEY

Transaction Timer *inactive*

MUTUAL AUTH *inactive*

SECURE M / PC . *inactive*

ROLLING KEY *inactive*

RANDOM UID + CUSTOM MASTER KEY+ AES

ACCES CONTROL APP

CAFETERIA APP

SPECIFIC KEYS A

SPECIFIC KEYS B

Transaction Timer *active*

Transaction Timer *inactive*

MUTUAL AUTH *active*

MUTUAL AUTH *inactive*

SECURE M / PC *active*

SECURE M / PC *active*

Rolling Key *active*

Rolling Key *inactive*

# ENSURE AND MAINTAIN SECURITY

## ENCODING

PC/SC encoders:  
PUCK range and M519 range

Chip manufacturers' SDKs

EVOLIS printers with an encoding  
module

## SOFTWARE MANAGEMENT

KEY SECURE MANAGER  
Key management

SECard  
Badge formatting

## AUDIT & ANALYSIS

PROXMARK3 (read; analyse,  
interact)

NFC TOOL, NFC Taginfo  
Mobile app

# In a nutshell

- › **Identify a technology that can adapt and evolve with you**
- › **One that ensures your compliance**
- › **A poorly chosen, poorly deployed, or untested technology is the greatest risk: a false sense of security**
- › **Anticipate the transition to digital credentials**



SPAC  
>ALLIANCE<

**SPAC Alliance and its members  
support you**

# DISCOVER SPAC ALLIANCE SERVICES:

## ONLINE SECURITY AUDIT

FREE

ANONYMOUS

FAST

COMPREHENSIVE

## SERVICES



SECURITY AUDIT



GOVERNANCE



BADGE ANALYSIS



MIFARE DESFIRE  
TRAINING

# JOIN THE SPAC ALLIANCE CLUB



› STRENGTHEN YOUR SKILLS

› FULL ACCESS TO OUR CONTENTS

› SPECIAL PRINCING ON SERVICES

› INTERACT WITH MEMBERS

