cere

jtsec

BEYOND IT SECURITY

jtsec Beyond IT Security

- Cybersecurity Company providing **evaluation** services in different technical domains (Smart Cards, Hardware and Software)
- Actively involved in **standardization** activities (ISO, CEN/CENELEC, ISCI WGs, ENISA CSA WGs, CCUF, CMUF…)
- Members of the SCCG (Stakeholder Cybersecurity Certification Group)
- Based in Granada and Madrid, **Spain**
- Editor and leader of the ERNCIP thematic group for "Industrial Automation & Control Systems (IACS)".

jtsec - About us

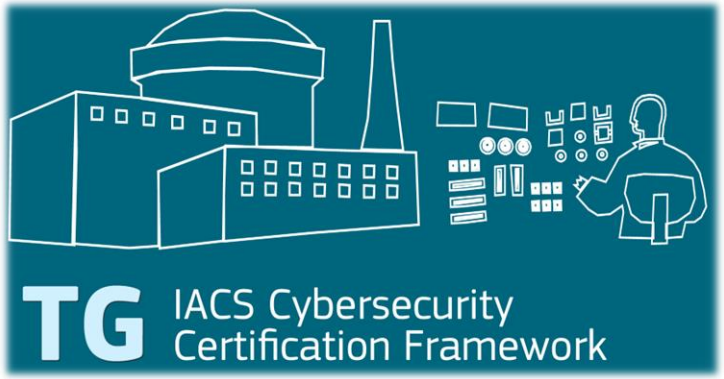
- **José Ruiz:**
- Co-Founder & CTO
- Common Criteria & FIPS 140-2 & 3 Expert
- EUCA/ICMC/ICCC Board member
- Editor at thematical group “IACS Cybersecurity certification”.
- Member of the SCCG (Stakeholder Cybersecurity Certification Group)
- Editor at JTC13 WG3: “Cybersecurity Evaluation Methodology for ICT products”

- **Javier Tallón:**
- Co-Founder & Technical Director
- Full-stack ~~hacker~~ wannabe
- Common Criteria Expert
- Also PCI-PTS, FIPS 140-2, ISO 27K1, SOC2…
- CyberSecurity Teacher at UGR (University of Granada)
- CISSP & OSCP Certified
- Member of ENISA ad-hoc Working Group on SOG-IS successor scheme.

- **jtsec team:**
- Top Notch Experts
- More than 100 products certified
- 6 millions of secured code lines
- 30 years accumulated experience

Editor and leader of the ERNCIP group for IACS

- Industrial Automation & Control Systems (IACS) are essential part of most critical infrastructures and critical services.
- ERNCIP IACS Components Cybersecurity Certification Thematic Group focuses on the cybersecurity certification of Components of Industrial Automation & Control Systems.
- Members are highly reputable experts in the relevant scientific and technical fields
- We are at the frontline of information and action on industrial cybersecurity in Europe.



CERE - Who we are

CERE was originally set up as a Certification Entity for Renewable Energies.

CERE was created to be the access key on the target countries for Renewable Energies, where certification of components, full installations certificates, modeling and software validation of renewable Power Plants, were required.

The company is accredited as Testing Laboratory and Certification Body.

CERE's team has experience in Certification in more than 10 GW of renewable energy's components and installations for worldwide grid integration, design, safety, EMC and grid quality, among others.

During the last 6 years CERE has inspected, evaluated and certified more than 3GW of PV, Wind and Hydro, Power plants.

In order to be updated with the state of the art of the business, CERE participates actively in several International Standardization Committees.

CERE Profile

The Company is managed by Miguel Martínez. Its team has a large experience in Certification for more than 10 years, including renewable energy's components and installations for worldwide grid integration, design, safety, EMC and grid quality, among others.

During the last 6 years CERE has grown exponentially, diversifying its services until the actual company structure:

- Certification
- Converters
- Grid Code & safety
- Simulation
- Trackers
- Batteries
- EMC
- Electrical Vehicle Charger
- Transformers
- Medical devices
- Electric and Electronic devices
- Quality System certification

CERE's Accreditations

- CERE is accredited by ENAC and a2La (IAF/ILAC members) as Certification Body According ISO 17065 and Testing Laboratory according ISO 17025 for Power Generating Units. This fact ensures a deep knowledge in international requirements for components and Renewable Energies Power Plants.
- CERE is also CBTL and NCB for the IEC Scheme.
- MET approval for the North American market
- Sunspec approval
- SII approval for Israel
- RETIE approved certification body for PV inverters (Colombia)
- Corean Approval

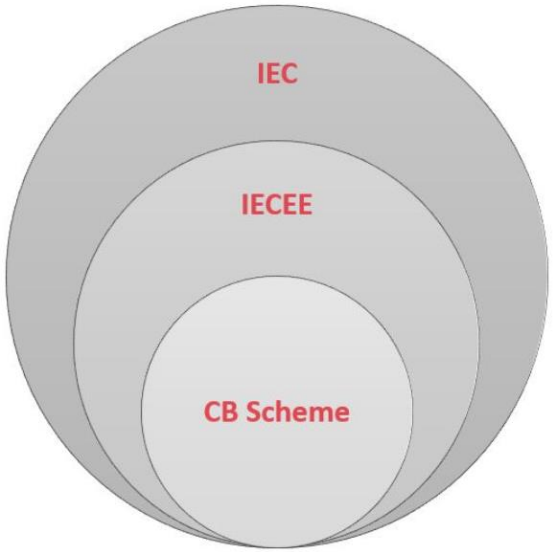
CERE's Accreditation can be checked in:
http://www.cerecertification.com/accreditations

jtsec & CERE NCB partnership

- CERE NCB is an independent Certification Body set up in 2015 according to ISO 17065, offering, among others, cybersecurity certification under the IEC 62443 standard.
- CERE NCB has *qualified* jtsec as the first Spanish NCB to evaluate IEC 62443 4-1 & 62443-4-2 standards.
- jtsec & CERE NCB have created a collaborative framework to offer industrial cybersecurity evaluation and certification services for IEC 62443 4-1 & 62443-4-2 standards.

IEC 62443 Overview

- International Standard (**Methodology**) for the security of industrial automation control systems and components (IACS).
- Only reliable solution for testing the cybersecurity of components in the field of industrial automation.
- These methodology provides, among other, these advantages:
  - Improving component cyber-security
  - Advance of regulatory requirements that will be coming in the next years
  - Improving cyber security awareness within the company



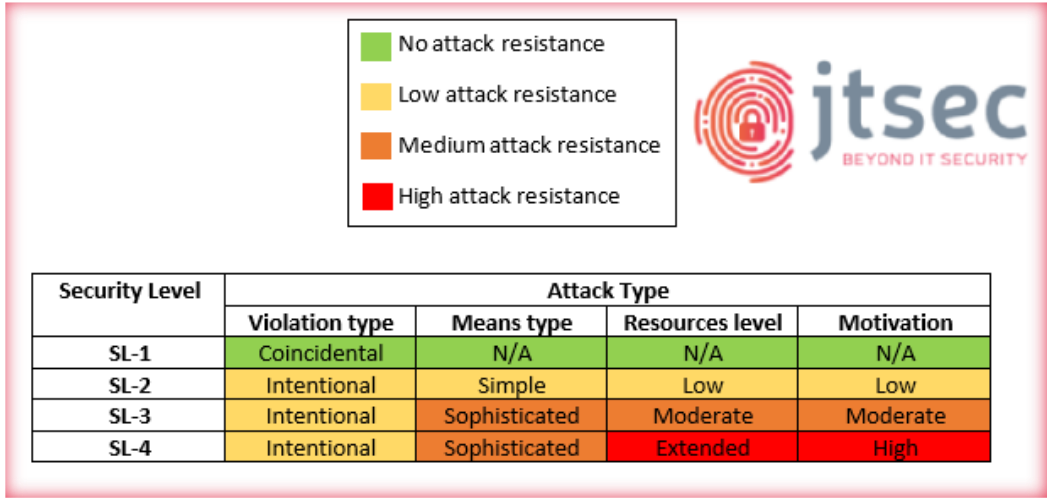
IEC 62443 4-1 Overview

- IEC 62243 4 – 1 is based on 4 maturity levels.
- IEC 62443-4-1: Focused on secure product development life cycle requirements.
- The lifecycle includes the definition of security requirements, secure design, secure implementation (including coding guidelines), verification and validation, defect management, patch management and end-of-life of the product.
- It has 8 practices covering a total of 47 requirements, check all of them.

Maturity level	IEC 62443-4-1 Description
Initial	• Product development is not (or not fully) documented. • There is no consistency between projects. • There is no repeatability of processes.
Managed	• Manage development according to written policies. • Evidence of experience/training of staff who will carry out the process. • You have updated your procedures to conform to this document, but have not yet implemented all of them. • Development will always be done according to documented plans, even in times of stress.
Defined	• Performance can be replicated throughout the supplier's organization. • The processes have been practiced. • Evidence exists to demonstrate this practice.
Improving	• Using appropriate process metrics, product suppliers monitor product efficiency and performance and demonstrate continuous improvement in these areas.

IEC 62443 4-2 Overview

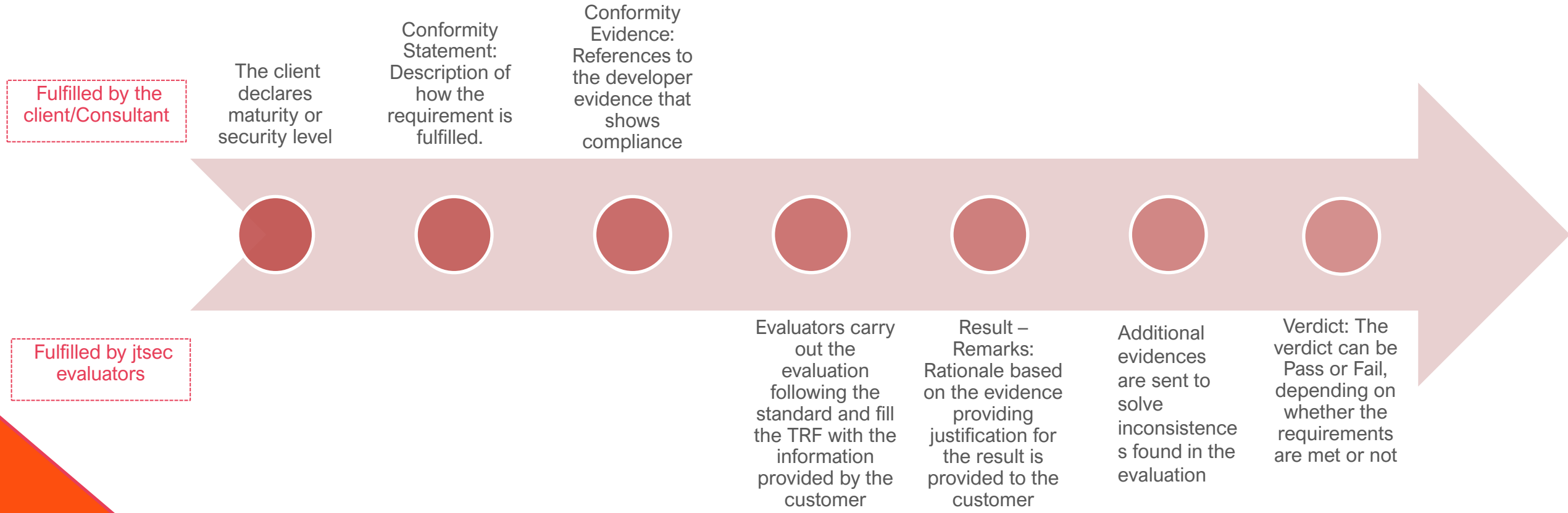
- IEC62443 – 4 -2 is based on four security levels.
- It is mandatory to first obtain the IEC 62443-4-1 certification if you wish to be certified in IEC 62443-4-2.
- IEC 62443-4-2: Focused on the technical security requirements for IACS components, in particular embedded devices, network components, host components and software applications.
- There are 140 requirements in the standard.



Security Level	Attack Type			
	Violation type	Means type	Resources level	Motivation
SL-1	Coincidental	N/A	N/A	N/A
SL-2	Intentional	Simple	Low	Low
SL-3	Intentional	Sophisticated	Moderate	Moderate
SL-4	Intentional	Sophisticated	Extended	High

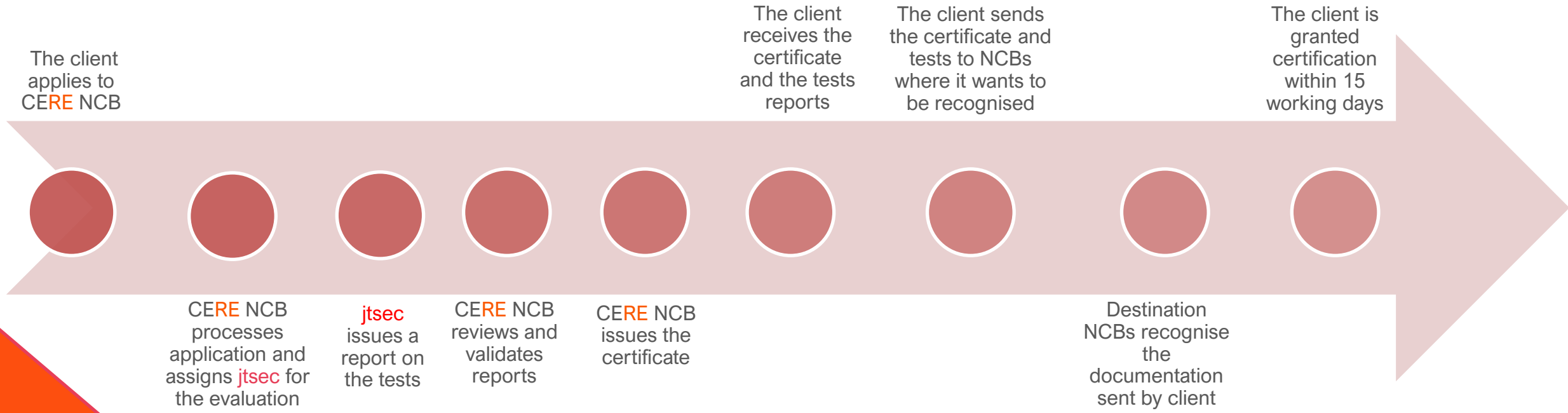
Flowchart of the Evaluation Process

- TRF (Test Report Form) is the output of the evaluation process. It will be submitted to CERE NCB.



Flowchart of the Certification Process

- jtsec is an accredited CBTL by CERE NCB to carry out IEC 62443-4-1 & 4-2 evaluations.
- Three actors are part of the process:
  1. Applying company – **the client**
  2. NCB or CB (the certification body)- **CERE NCB**
  3. CBTL (the laboratory where the tests will be carried out) - **jtsec**



Service Approach

- Turnkey **Approach Evaluation**:
  - ✓ IEC 62443 4-1 (all maturity levels)
  - ✓ IEC 62443 4-2 (all security levels)
- jtsec has **experience** evaluating industrial products and components.
- CERE NCB will validate all the evaluations submitted by jtsec.
- jtsec and CERE NCB approach allows Developers to **minimize the effort and resources from their side.**

Contact us

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