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D3.3
HECTOS Harmonised Security Product Certification
Scheme Framework and Templates
EXECUTIVE PUBLISHABLE SUMMARY

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Summary

HECTOS focuses on harmonisation of evaluation and conformity assessment systems for physical security products, and studies how existing systems and schemes used in other areas could be applied, adapted or developed for products used for physical security of people, property and infrastructure. Physical security equipment and systems are very diverse in technology, concept of operation, application area and performance, making security products difficult to compare in terms of performance, accuracy, usage, trust and validation of functionality. The project will identify mechanisms to evaluate the performance and develop a roadmap as part of the approach towards new harmonised security product certification systems and schemes.

This document provides a publishable summary of the HECTOS Harmonised Certification Scheme Framework and Templates for Physical Security Products, reported in D3.3 *HECTOS Harmonised Security Product Certification Scheme Framework and Templates*.

The certification framework provides a generic approach suitable for all physical security products. Security specific aspects that need to be considered when establishing, managing and operating a scheme and system under the framework are highlighted. These aspects are summarised in two templates which draw together all findings into a user friendly guide on establishing and maintaining evaluation- and certification systems and schemes under the HECTOS framework. The templates provide a step-by-step, flexible approach to adopting the framework, by allowing different user- and or product/application requirements to be included.

The objective of the certification framework is to provide a mechanism for the creation of harmonised evaluation and conformity assessment schemes that enable the mutual recognition between EU Member States and other participants, thus supporting the Single Market international trade and enabling end-users better to implement security capabilities to mitigate the risks they face.

The framework supports:

- Users and manufacturers – by ensuring that the needs of both are covered in the scope and requirements of standards and trusted schemes for evaluation and conformity assessment
- Standards and certification bodies – by ensuring that their standardisation products and schemes are fit-for-purpose, as well as facilitating EU-wide markets for certification schemes and open competition between providers
- Governments and regulators – by providing a mechanism that both supports regulatory certification where necessary and voluntary certification in order to improve assurance of security product capabilities, international trade and the Single Market without the burden of excessive legislation.

Epilogue:

The certification system framework and the template for establishing a scheme and a system under the framework as presented here became the foundation for a CEN/CENELEC workshop agreement. This workshop agreement, CWA 17260:2018, was finalized in January 2018 after agreement between 12 organizations. During the CWA process, aspects of the framework and template were adapted. This was done both in the light of the views and considerations of the HECTOS external workshop participants and as a result of insights gained through the further activities within the HECTOS project, i.e. the stakeholder engagement in WP7 and the case studies performed in WP8. The framework and template concept as presented herein remains the essence of this CWA. It is hoped that the publication of the CWA will facilitate the future implementation of the framework and will provide widely available and valuable guidance on the security specific aspects and challenges of physical security product certification.

The HECTOS framework for harmonised certification of physical security products

The certification framework is based on the ISO/IEC 17000 Conformity Assessment family of standards, adapted and supplemented by features to support the special requirements of security products:

- *Realistic and adversarial testing* – users need to understand how a product will perform in real-life situations
- *Consistency in testing* – tests involving human strength and skill need to be standardised. Procedures are needed to ensure the consistency of tests over time and between test laboratories
- *Complex performance information* – performance attributes such as detection rates are often complex and need to be precisely defined
- *Security sensitivity* – it may be necessary to restrict access to performance data and test methods to avoid revealing weaknesses and gaps to a potential attacker
- *Continually evolving requirements* – changing threats as attackers adapt to exploit weaknesses in security systems mean that security product requirements are always changing
- *Wide range of applications and performance requirements* – many security products are used in a variety of different applications subject to different threats. Schemes need to be carefully managed to ensure testing covers the range of requirements without imposing too large burden on manufacturers
- *Diverse range of types of product, markets and maturity* – from low-cost consumer products selling in large volumes to high-end and costly products with only a handful of sales per year, mean that schemes need to be based on what the market needs and can support.

The framework introduces the concept of a three-layer structure for the certification schemes, with a coordinated system group at the top, enabling the use of a common Security Mark and/or database. The framework accommodates all forms of conformity assessment including pass/fail testing against a threshold and performance measurement schemes.

The HECTOS certification framework comprises:

- a top-level coordinating structure
- certification systems for related product and application areas
- certification schemes with common rules and procedures applying to all the products in the scheme

Key building blocks are presented in Figure 1.

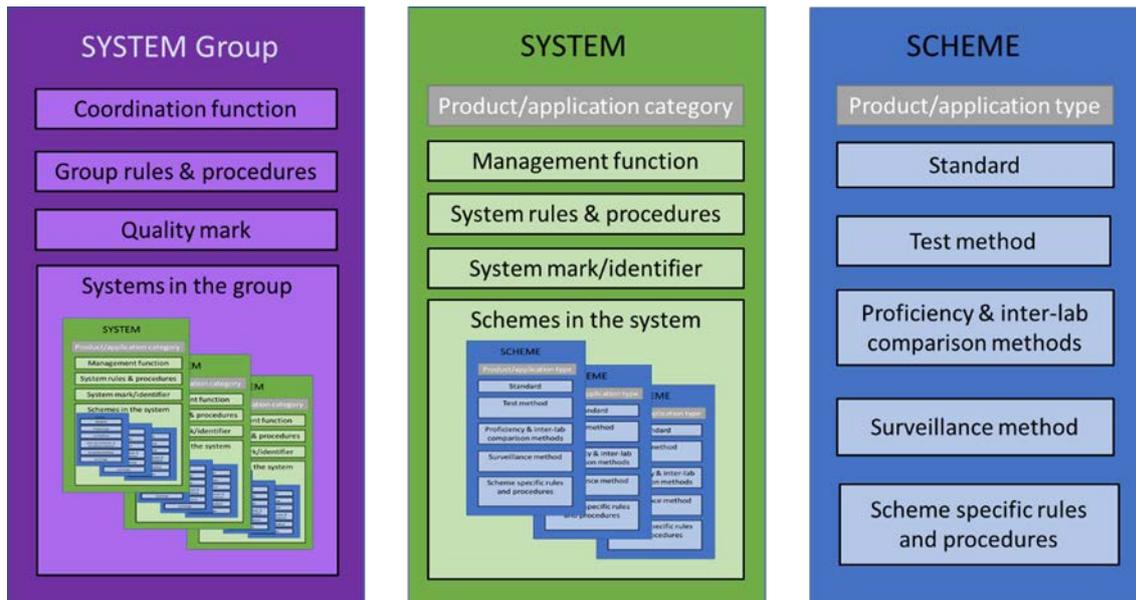


Figure 1: Certification systems and schemes - key building blocks, version of D3.3

Schemes within each of these systems certify one or a group of related product types each with its own standards and/or test methods, setting out a specific set of requirements. These individual product certifications within a scheme are also defined by other controlling documents for ensuring consistency of conformity assessment activities.

The system level includes management procedures and special rules that apply to a particular product category. Scheme specific structures and controlling documents are defined at the scheme level. Of particular importance are: scheme rules and procedures; standards and test methods; and test-specific inter-laboratory and proficiency comparison methods that ensure that all operators in the scheme test and certify in a consistent manner.

Technical Committees (TC, also called System Committees) and scheme *Working Groups* (WG), with expertise in the product category and its application areas, are central in the certification operational structure. The System Committee spans different schemes within a system, and the Working Group brings together the different operators within a single scheme and they can have a similar structure to those of European and international standardisation organisations (although there will not necessarily be a 1:1 correspondence between the two).

The template for the establishment of schemes

The HECTOS certification framework accommodates a wide variety of schemes, defined by product type and/or application area. To support its implementation, two templates have been



prepared providing guides and step-by-step checklist of the activities that need to be carried out in establishing and maintaining schemes and systems within the overall framework. The templates address prerequisites for security product schemes and systems in order to facilitate consistent implementation. The steps in the template for the establishment of a scheme is shown in Figure 2. It consists of nine activities and is designed as a “pick and choose” guideline – i.e. schemes that do not benefit from all of these prerequisites do not need to apply them.

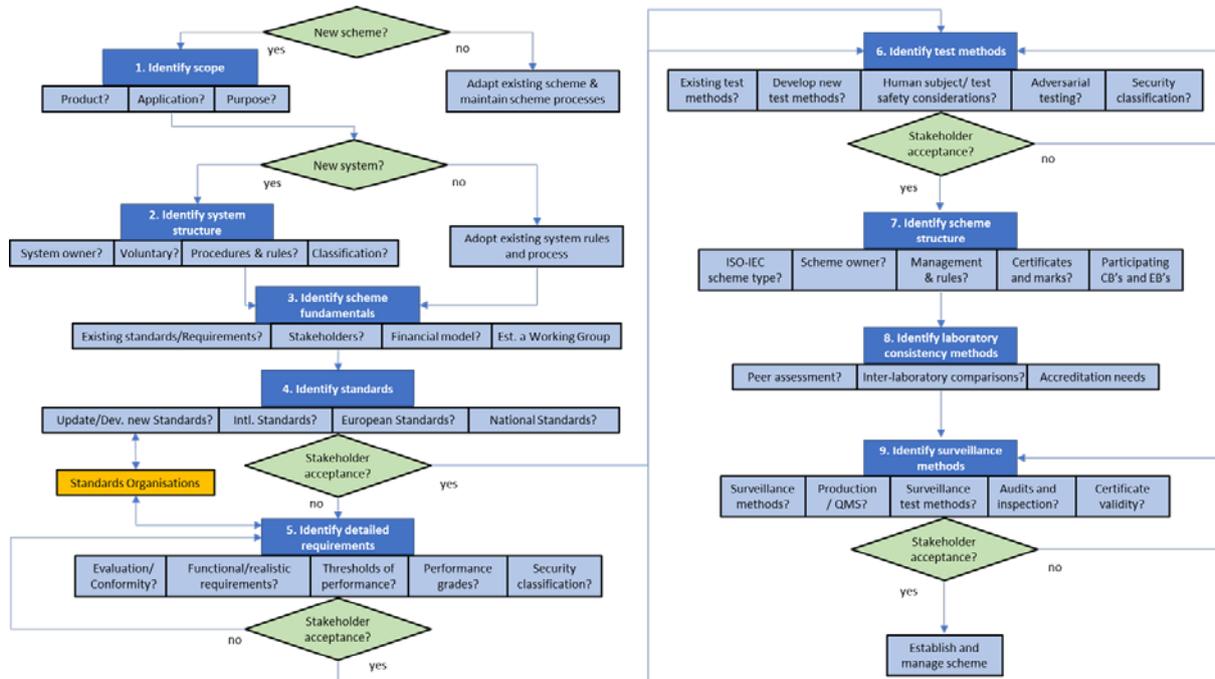


Figure 2: HECTOS template for establishing a certification scheme and system. Stakeholders comprise end-users, suppliers, manufacturers, CBs, EB’s and, when applicable, regulators. Version of D3.3.

The template on maintaining a scheme and a system is generic and designed to meet the needs of a wide range of scheme requirements for diverse product types and applications. Implementation of the HECTOS framework via the template is flexible, as certain features and functions may not be required (or to differing extents) for all physical security product schemes, but the template addresses the security relevant aspects that might be included.

Figure 3 describes identified activities with need for extra emphasis that are applicable for maintaining a scheme and a system at management level, including a suggested distribution between system and scheme.

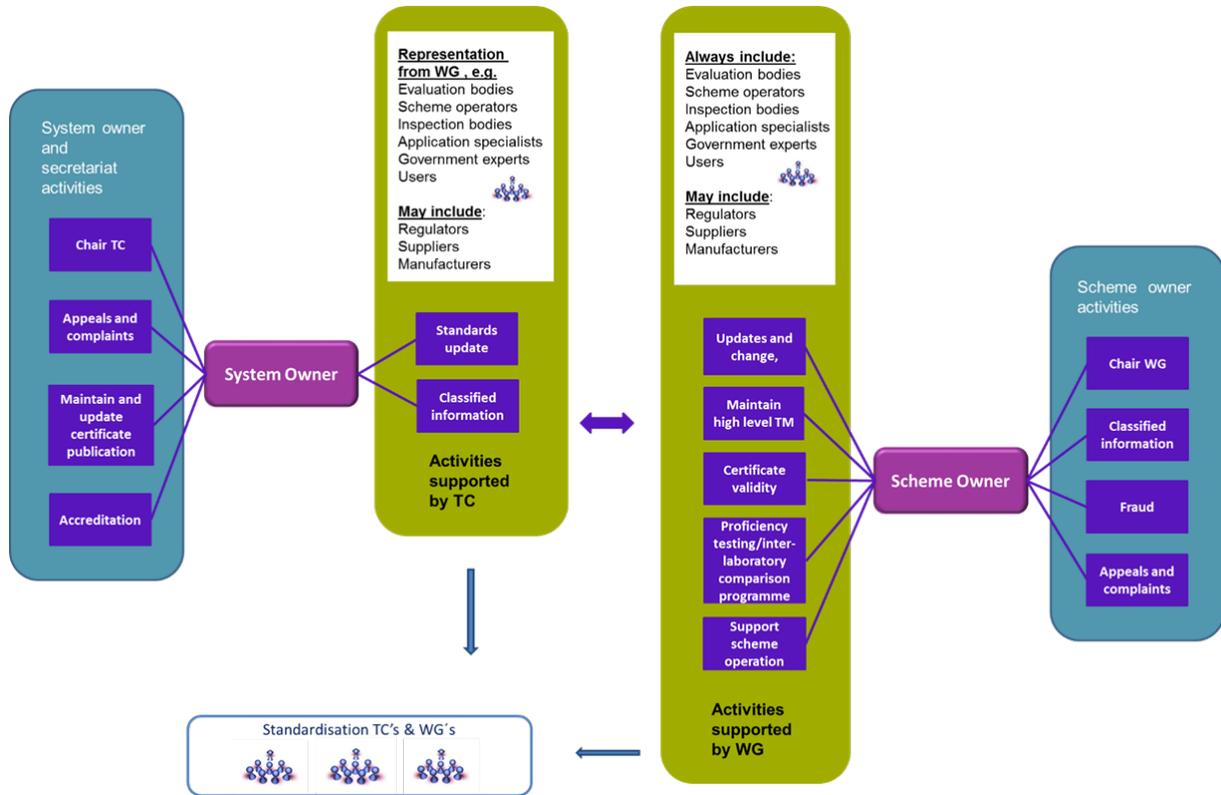


Figure 3: Proposed system management and scheme management activities.

The HECTOS certification framework and template were validated in WP8 and also developed further during the development of the CWA. As mentioned in the epilogue, the final version of the framework and template is published in CEN/CENELEC Workshop Agreement 17260:2018.