



jtsec

BEYOND IT SECURITY



2021 CC Statistics Report

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- ☐ CC data collection with CCScraper
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About me



- ❑ **José Manuel Pulido:**
- ❑ Lead Cybersecurity Consultant and Senior Cybersecurity Evaluator at jtsec
- ❑ Common Criteria expert
- ❑ CCToolbox developer
- ❑ More than 10 years of experience in cybersecurity technologies
- ❑ Speaker at several conferences including ICCC20

About us



- ❑ Cybersecurity **evaluation** & consultancy **services**
- ❑ Common Criteria and LINCE accredited lab.
- ❑ Developers of the most powerful tool for Common Criteria, CCToolbox.
- ❑ **Involved in standardization** activities (ISO, CEN/CENELEC, ISCI WGs, ENISA CSA WGs, CCUF, CMUF, ERNCIP, ...)
- ❑ Members of the SCCG (Stakeholder Cybersecurity Certification Group)

CC data collection with CCScraper

What is CCScraper



- ❑ Web scraper written in Python. Created in 2018 by jtsec.
- ❑ CCScraper collects data about certified products from **commoncriteriaportal.org** and from the **websites** of the **Certification Body**.
- ❑ **Tons of interesting data** collected: date of certification, EAL, PP, Product Category, certification lab, etc. and even SFRs used or technical terms in the ST!
- ❑ Data is interpreted and organized / merged into a **list of unique certified products**. We generate the statistics from that data.



CCScraper history

- ❑ **CCScraper v1.0** was first presented here in the ICCC in 2018.
 - ❑ Only data from **commoncriteriaportal.org** was collected.
- ❑ **CCScraper v2.0** was presented in ICCC 2019.
 - ❑ Main feature: add information from CB websites and merge into unique products
- ❑ **CCScraper v2.1** was presented in ICCC 2020, with mainly efficiency improvements and email alerts.
- ❑ This year we present **CCScraper v2.2** with some upgrades for ICCC 2021.
 - ❑ Find changes in CB sites in a quicker and more reliable way.
 - ❑ Improved logic to avoid false duplicates.
 - ❑ Some bugs fixed 😊

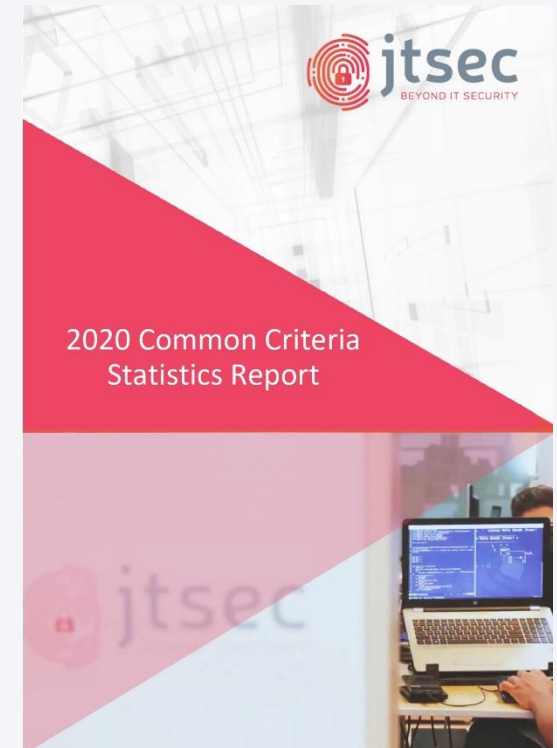
Latest challenges for CCScraper

- ❑ Modification of the name of some labs.
- ❑ We could include SERTIT (the Norwegian Certification Scheme) after almost two years of website maintenance.
- ❑ We have had to change the way we constructed the OCSI (Italy) URLs (so we had no access)



CCscraper reports

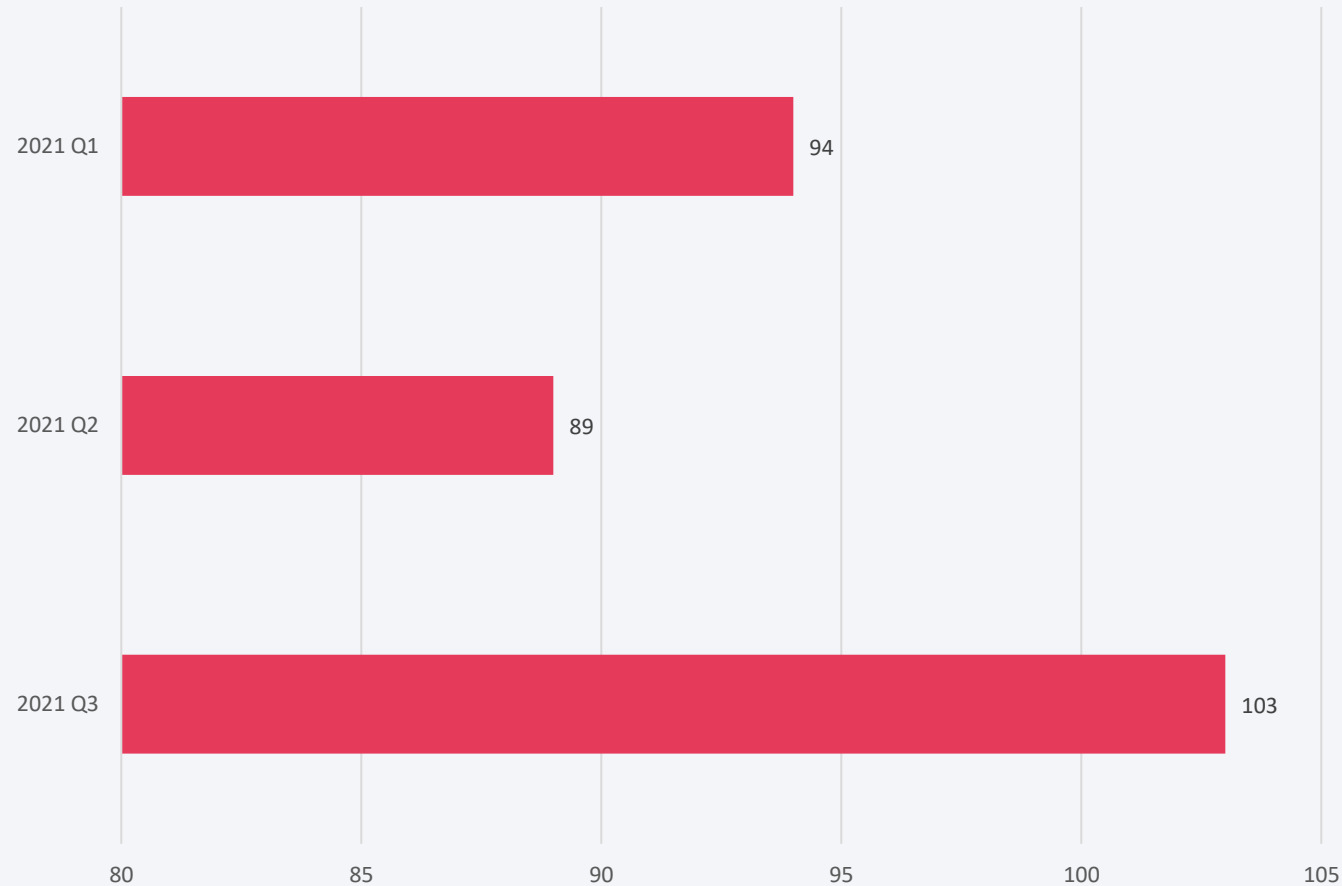
- ❑ With the statistics generated, we publish CC statistics reports in jtsec webpage, at least once per year.
- ❑ <https://www.jtsec.es/blog-entry/44/common-criteria-statistics-report-for-2019>
- ❑ <https://www.jtsec.es/blog-entry/85/common-criteria-statistics-report-for-2020>



CC Statistics for 2021

Statistics – 2021 (9 months)

☐ **286** products certified during 2021 (data from 30/09/2021)



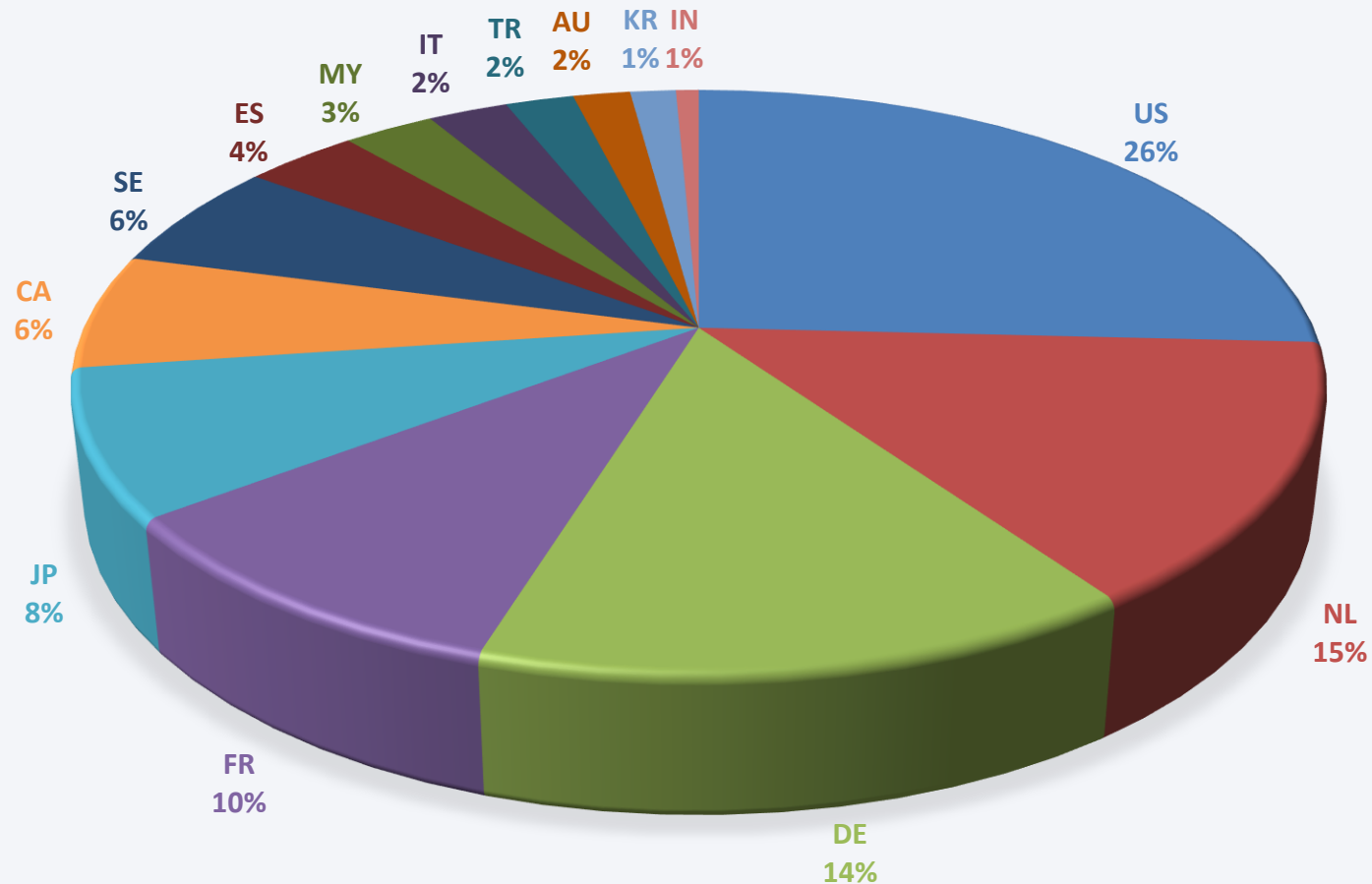
Statistics – 2021 (9 months)

Top certifier schemes in 2021



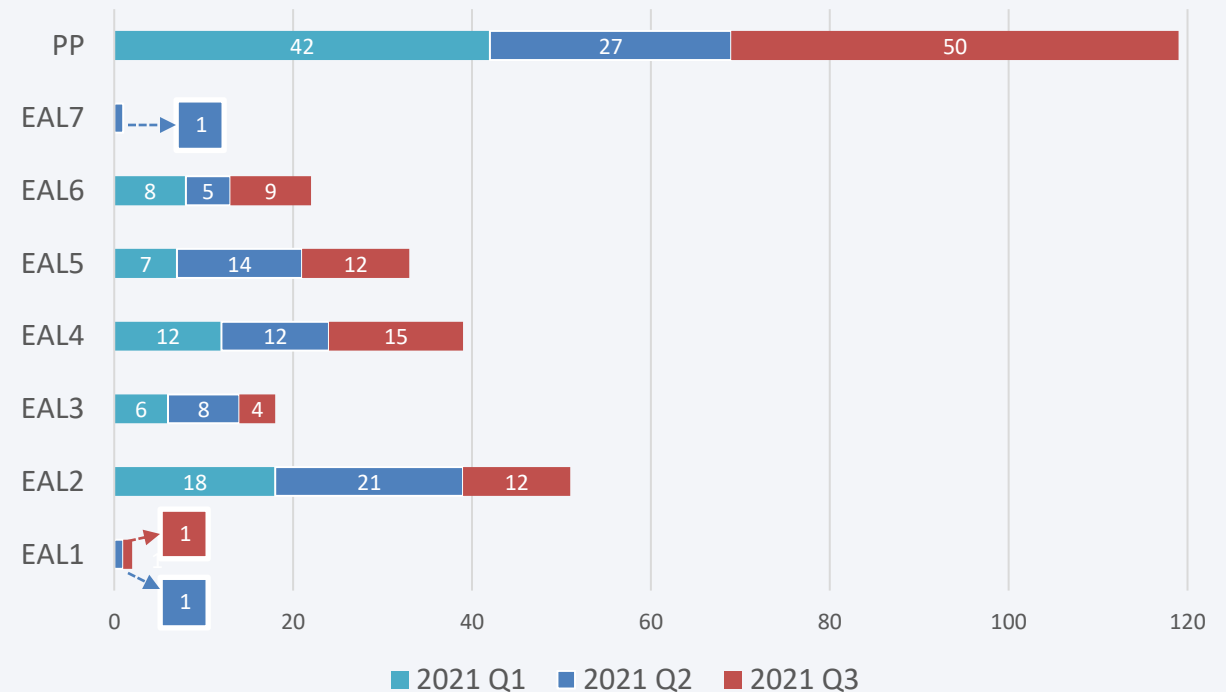
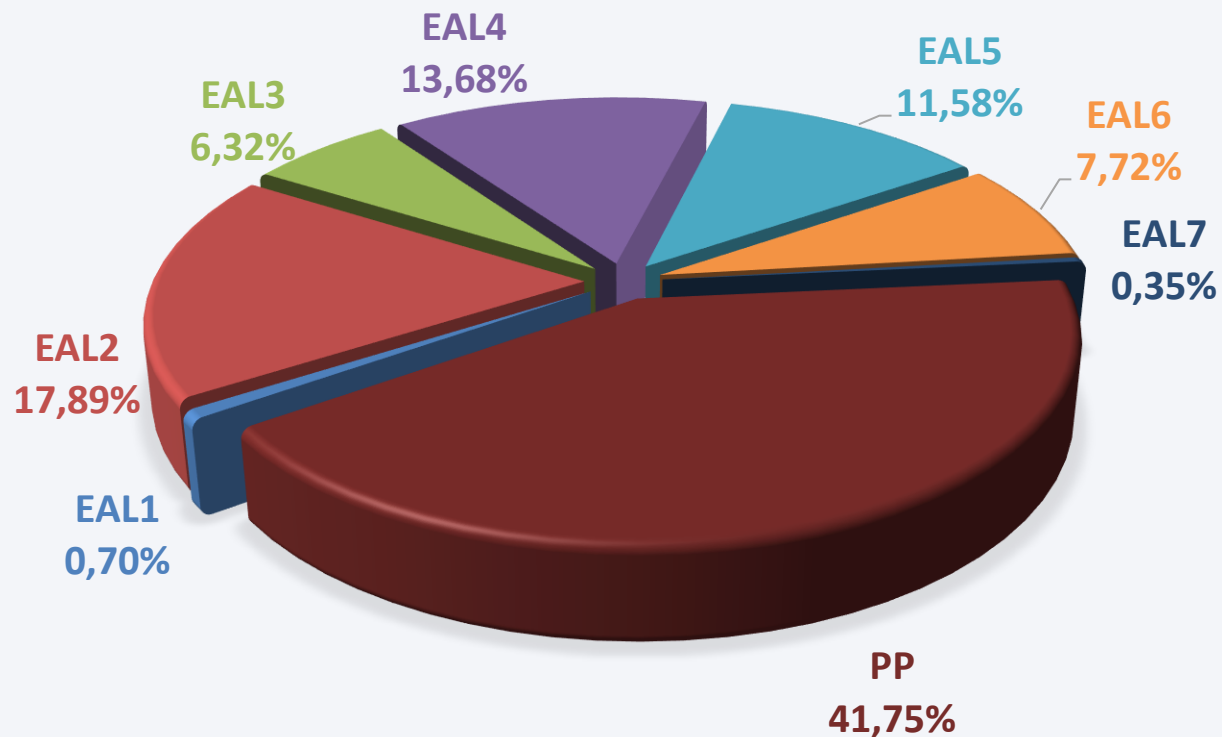
Statistics – 2021 (9 months)


 The top 3 schemes add up to 55% of the certifications!



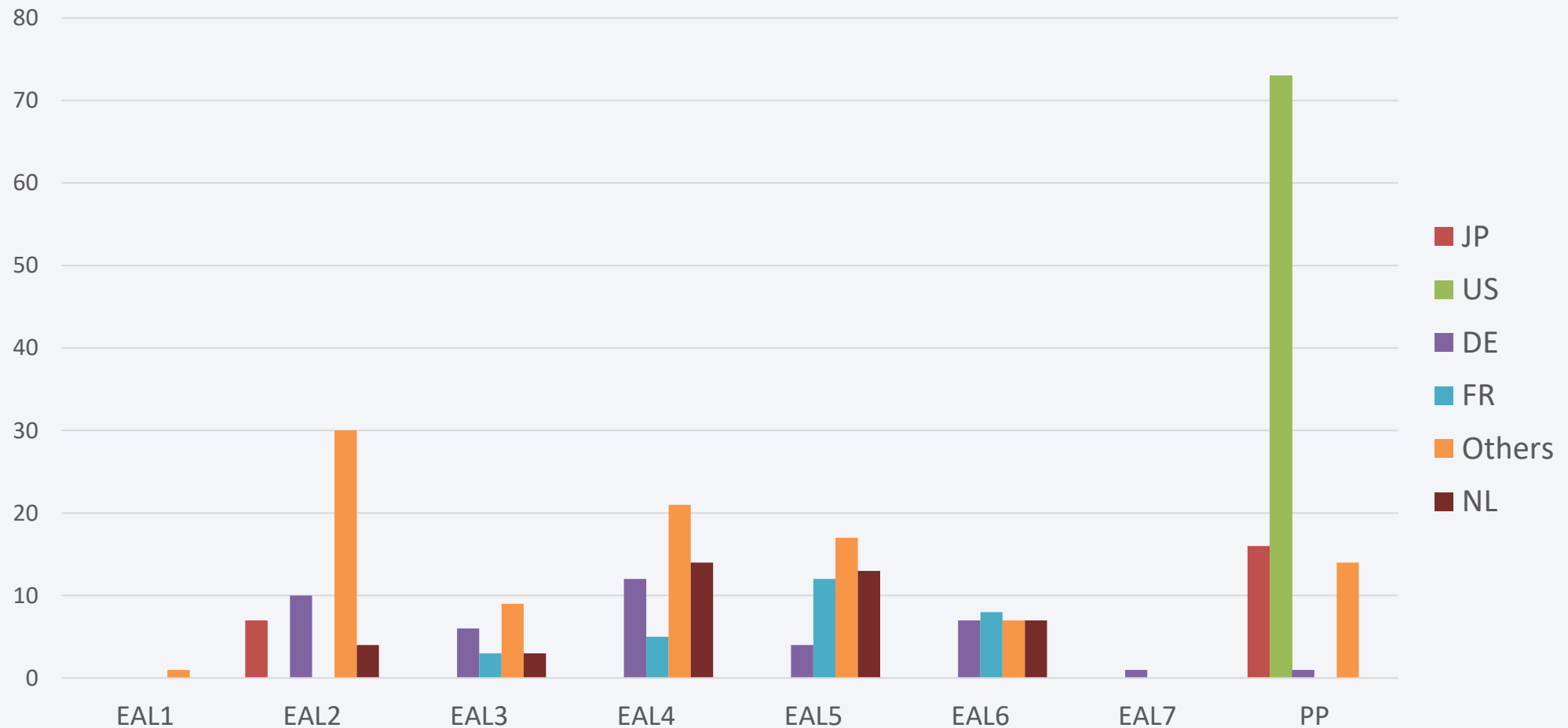
Statistics – 2021 (9 months)

 Certified products compliance in 2021



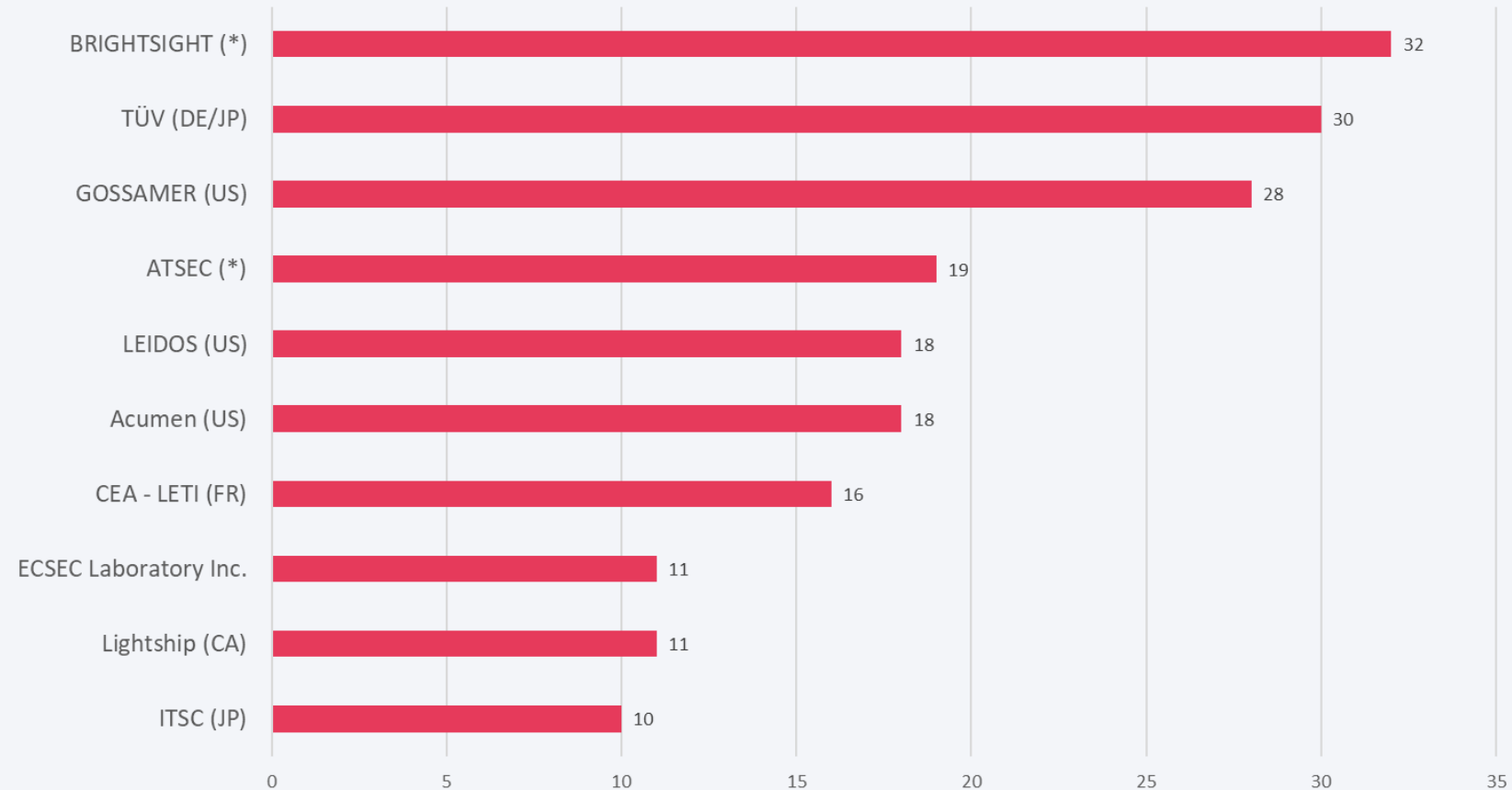
Statistics – 2021 (9 months)

Product assurance level per country during 2021



Statistics – 2021 (9 months)

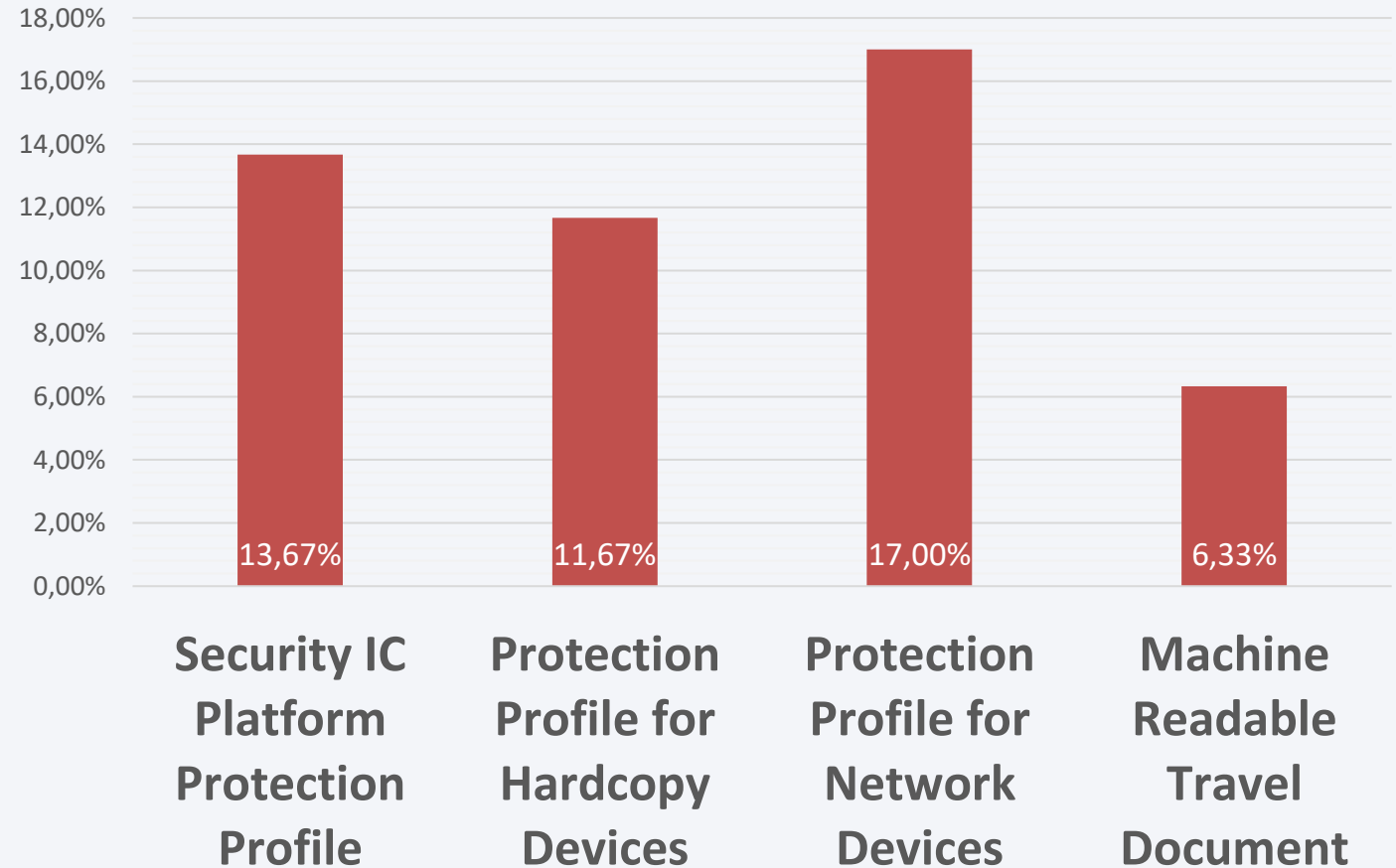
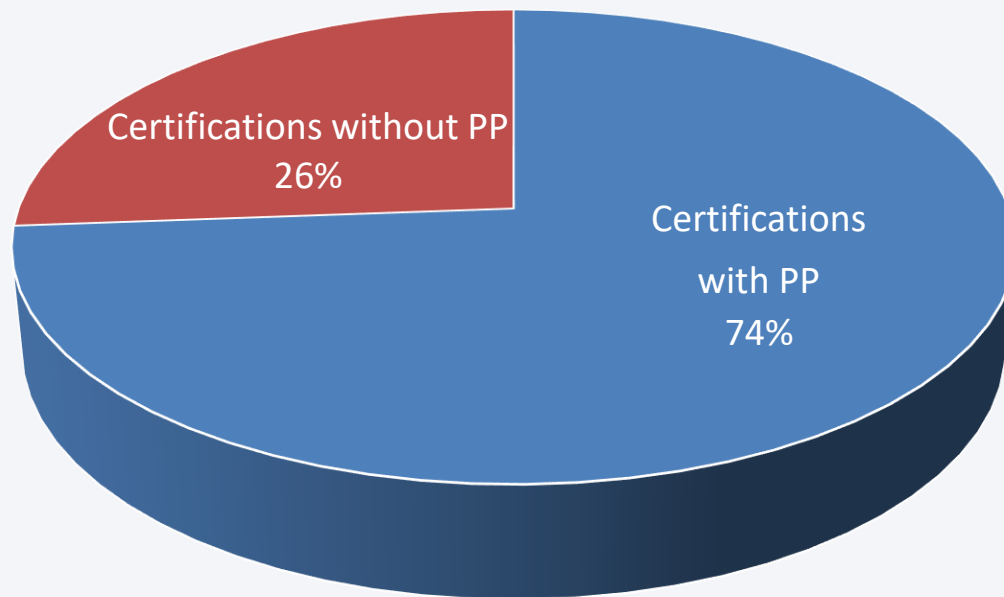
Top 10 Laboratories (2021)



Statistics – 2021 (9 months)

Protection Profile certifications

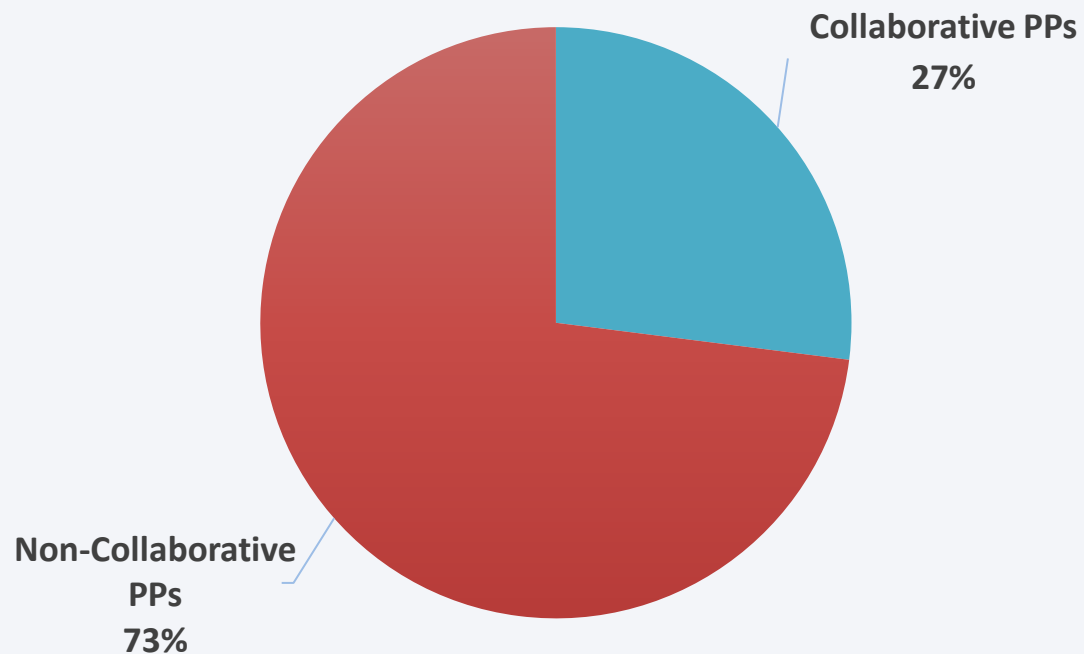
Certifications with Protection Profiles in 2021



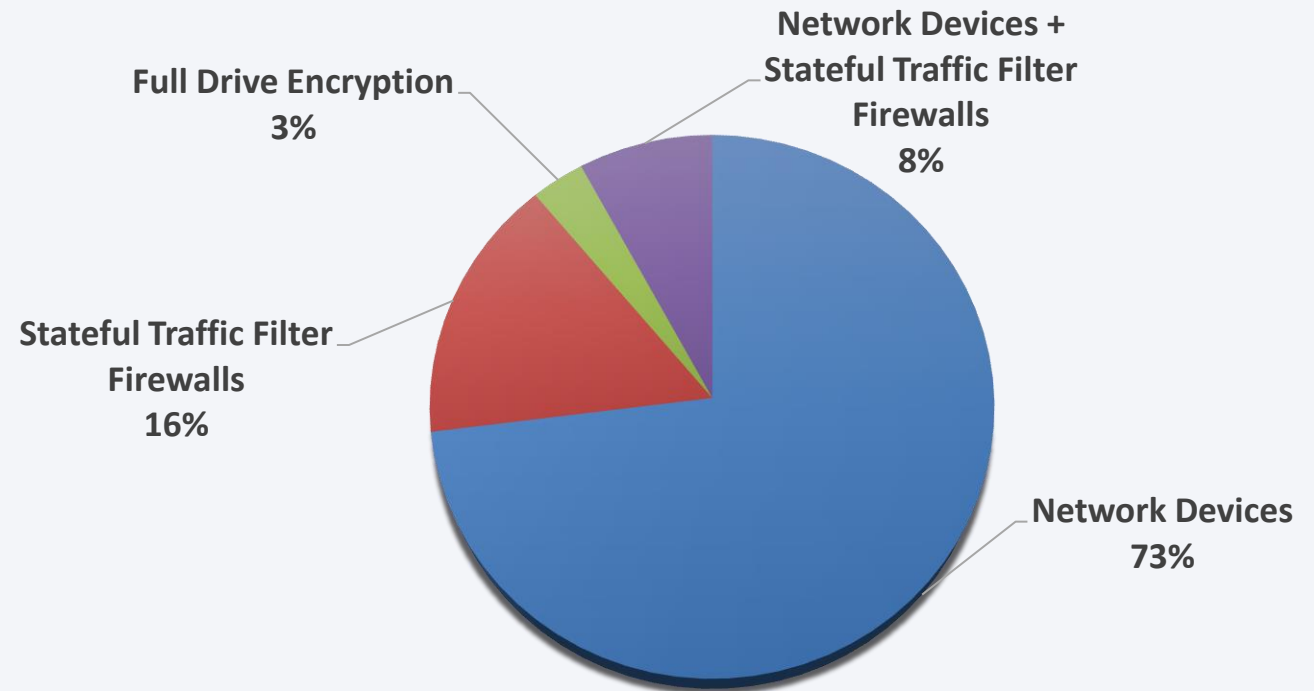
Statistics – 2021 (9 months)

PP and cPP compliant certifications in 2021

Collaborative PPs vs Non-Collaborative PPs

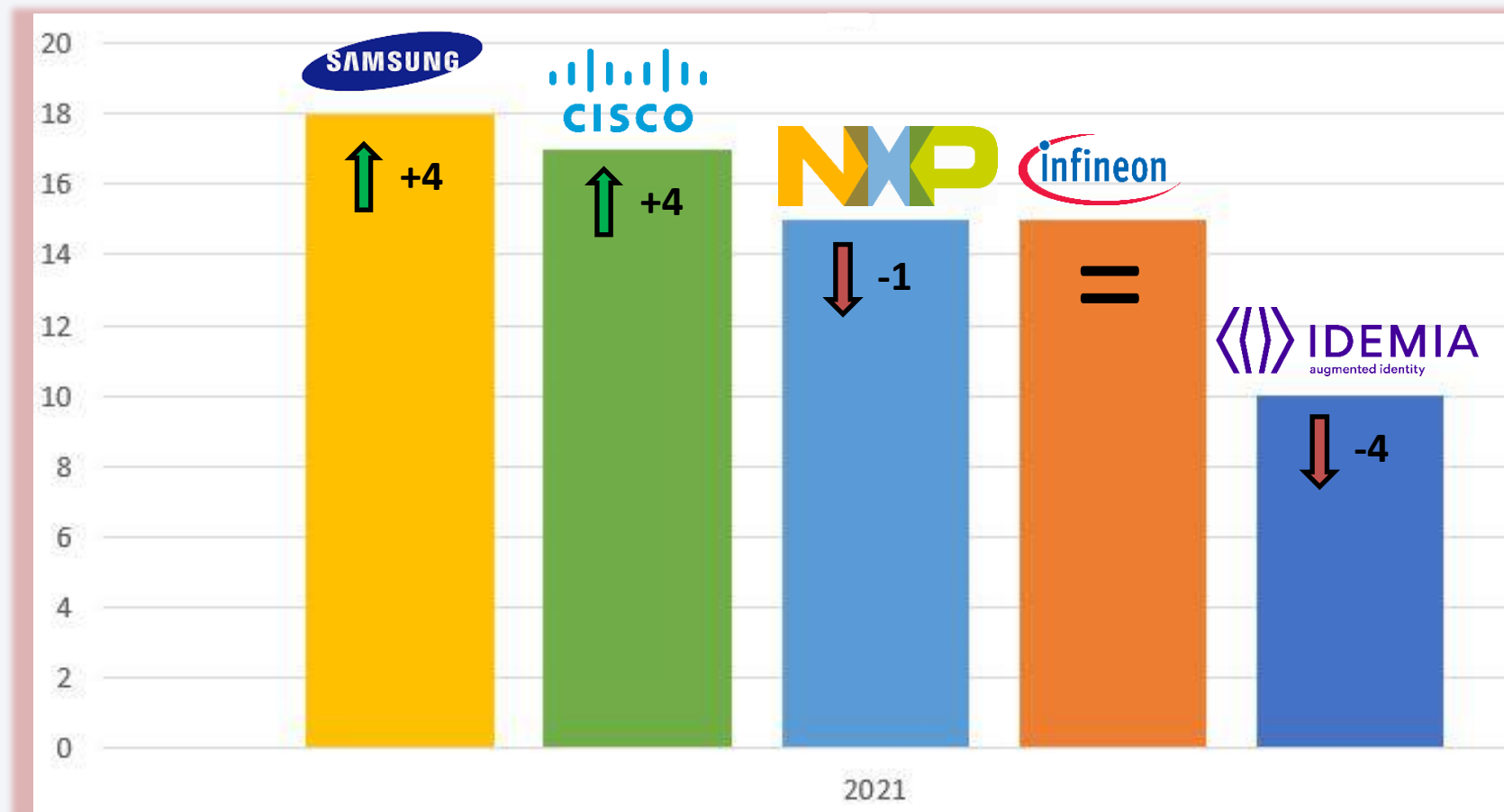


Certifications using CPPs in 2021



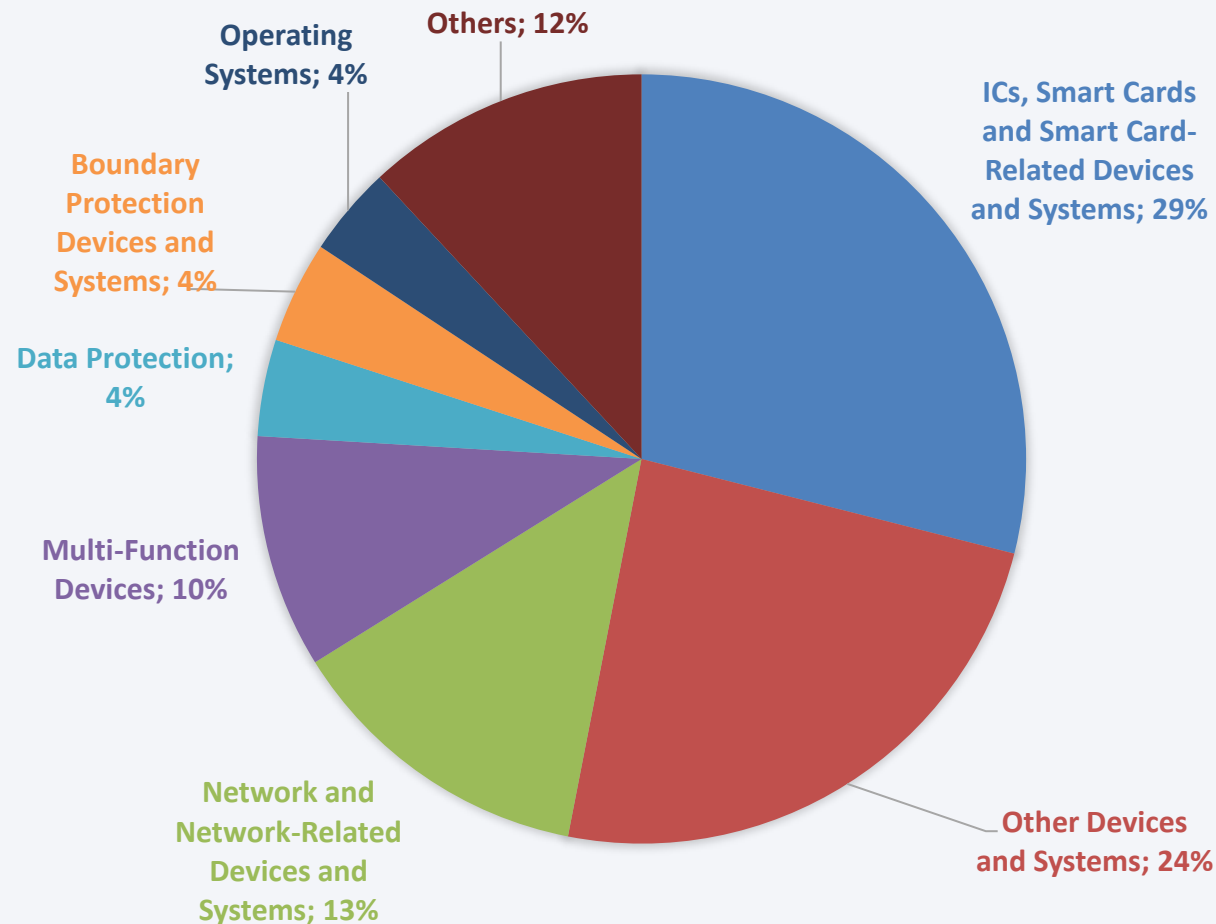
Statistics – 2021 (9 months)

- Top 5 manufacturers of certified products (2021)



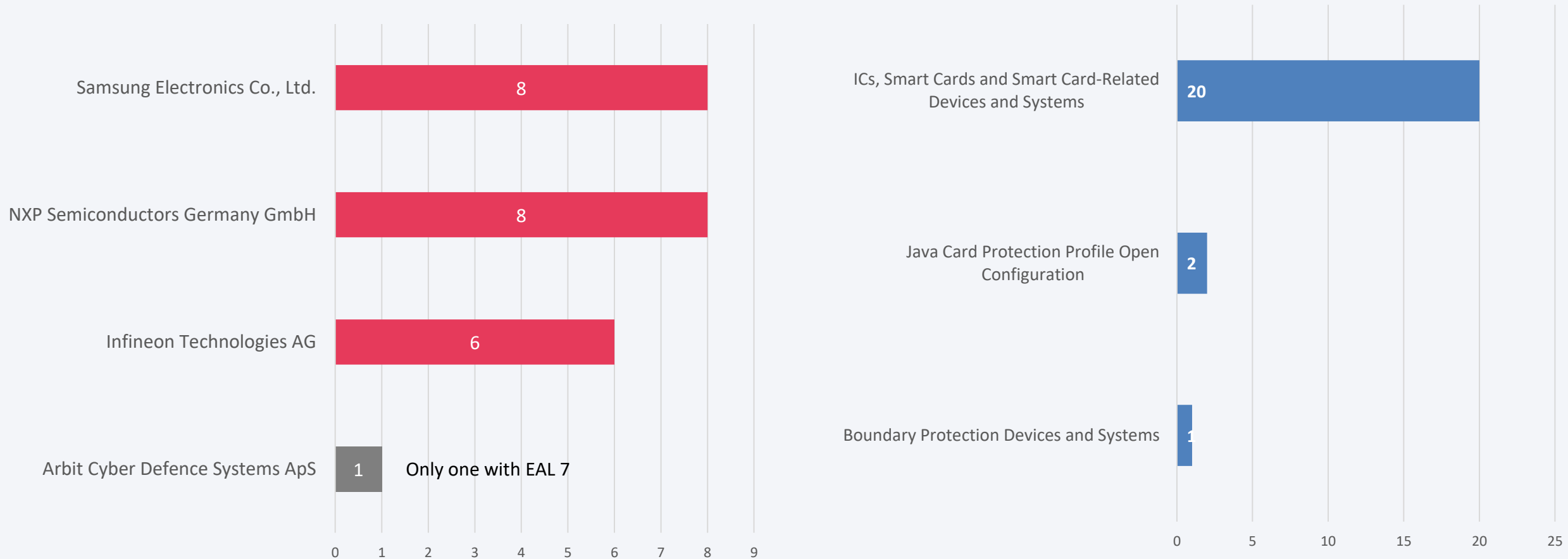
Statistics – 2021 (9 months)

- Top product categories (2021) and their evolution



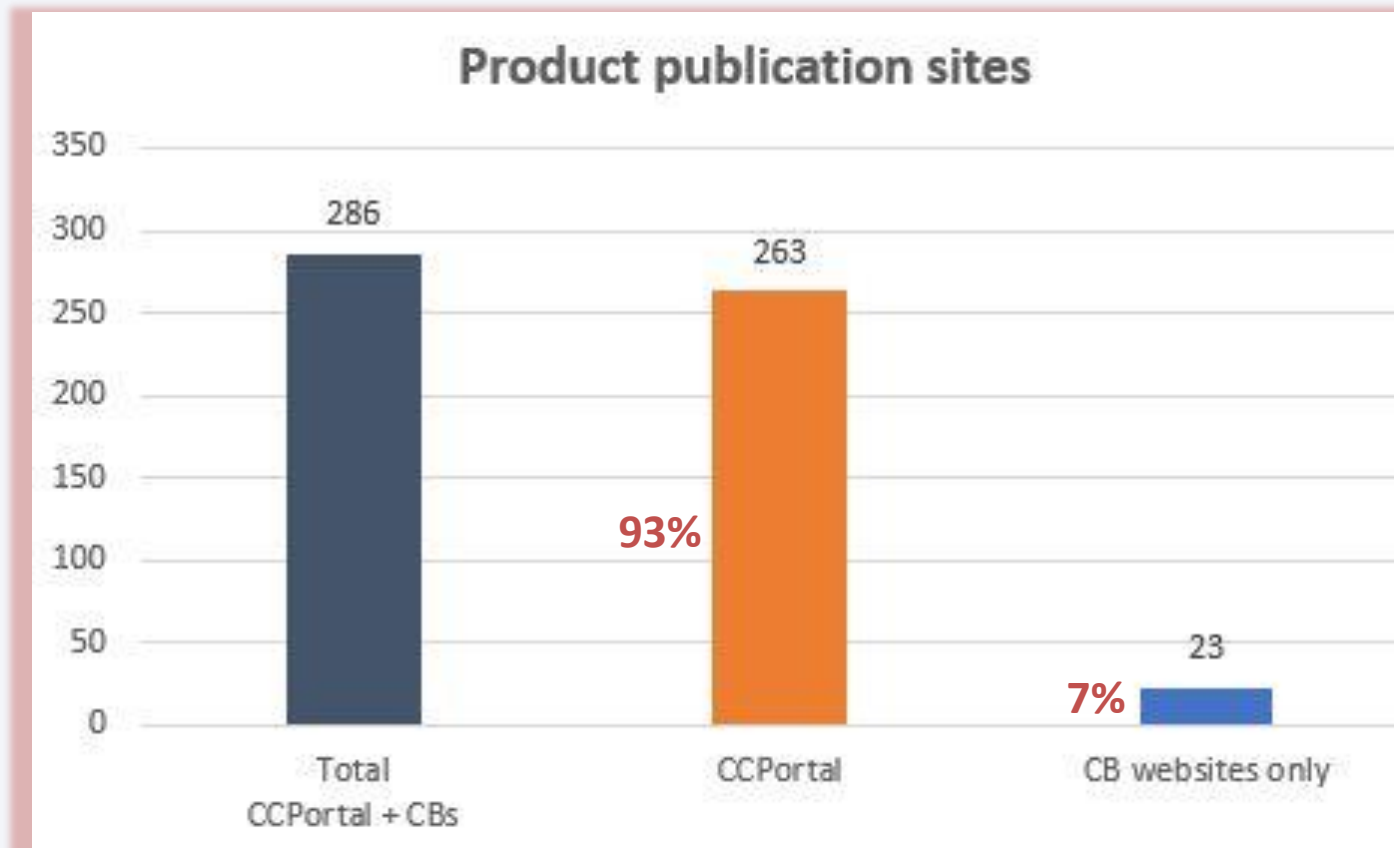
Statistics – Higher EAL manufacturers

Manufacturers and categories that obtained EAL6 & EAL7



Statistics – 2021 (9 months)

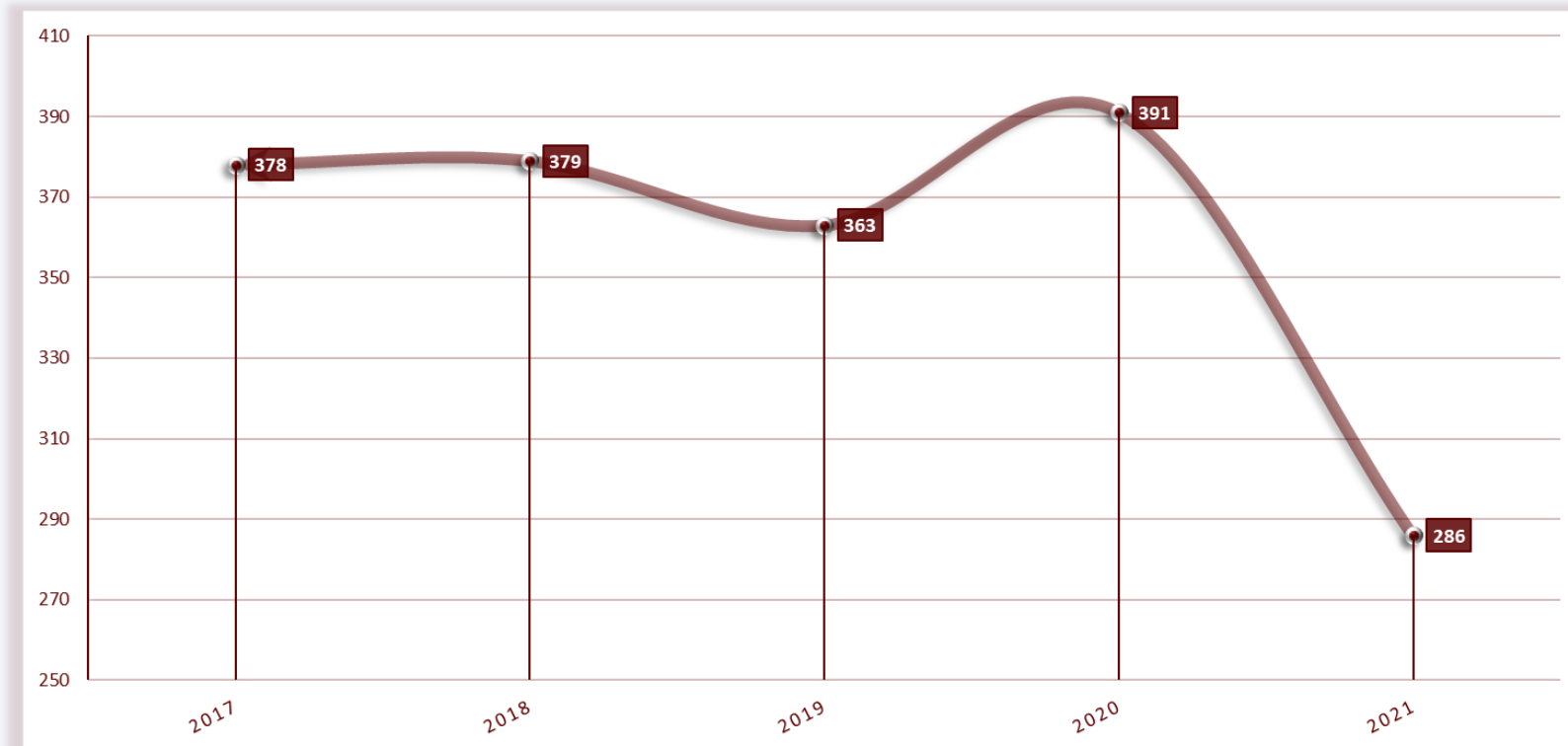
- Products uploaded to CC Portal vs products only in CB websites



CC Statistics for last 5 years

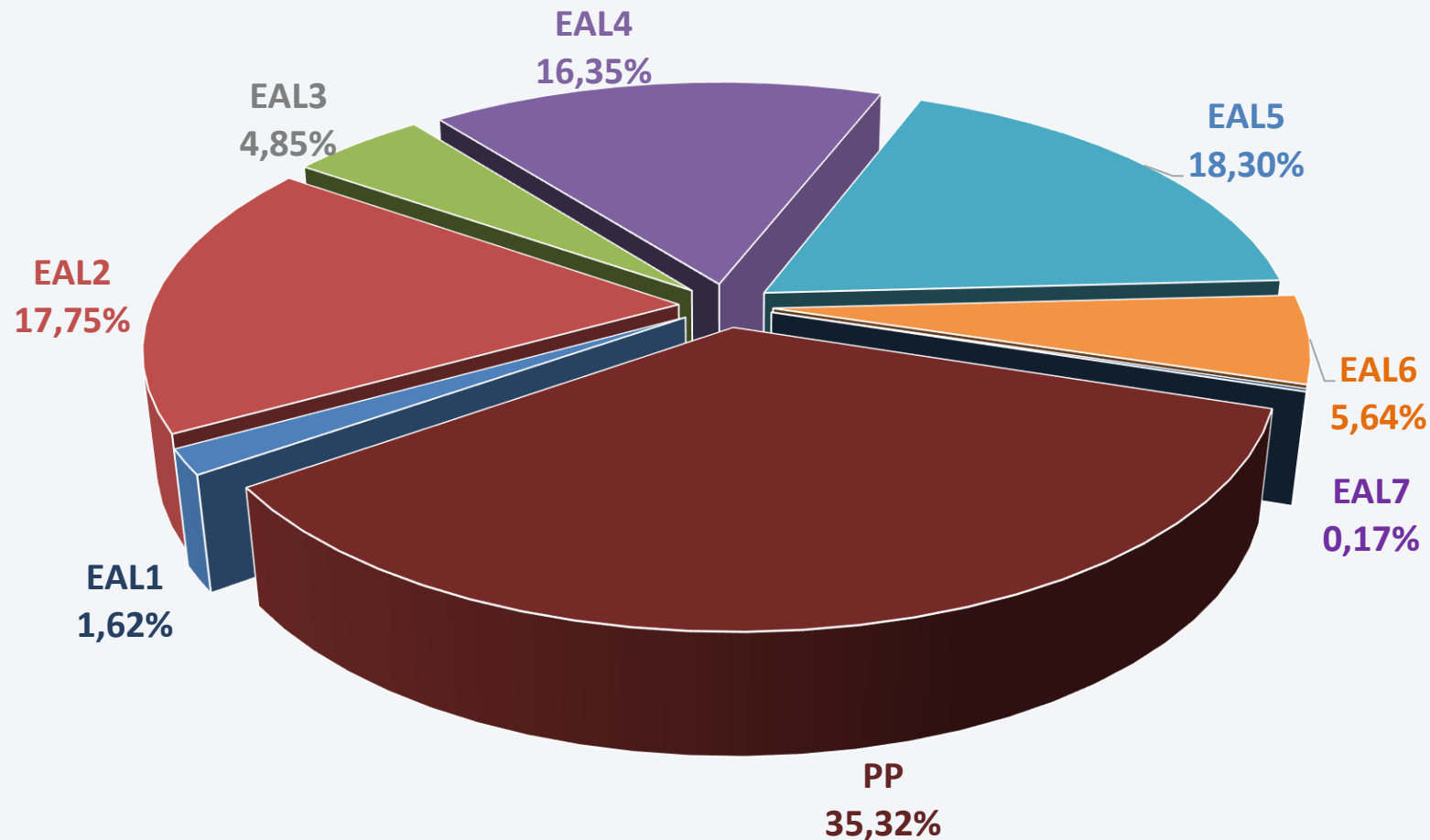
Statistics – 5 years trend

- ❑ Number of certifications in the last 5 years
- ❑ Will 2021 be the **worst year** of the last five?



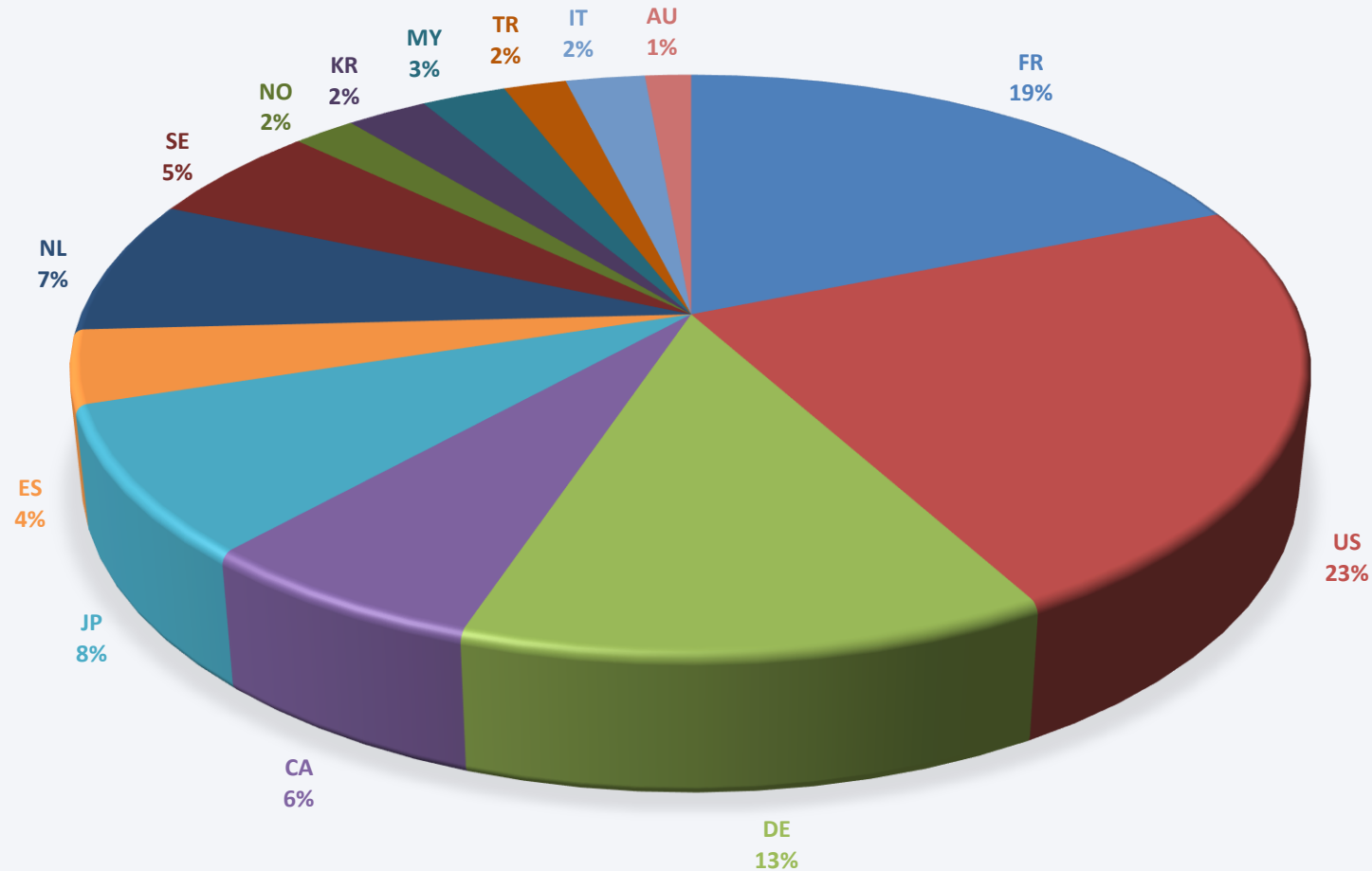
Statistics – 5 years trend

Compliance with EAL or PP of certified products (5 year)



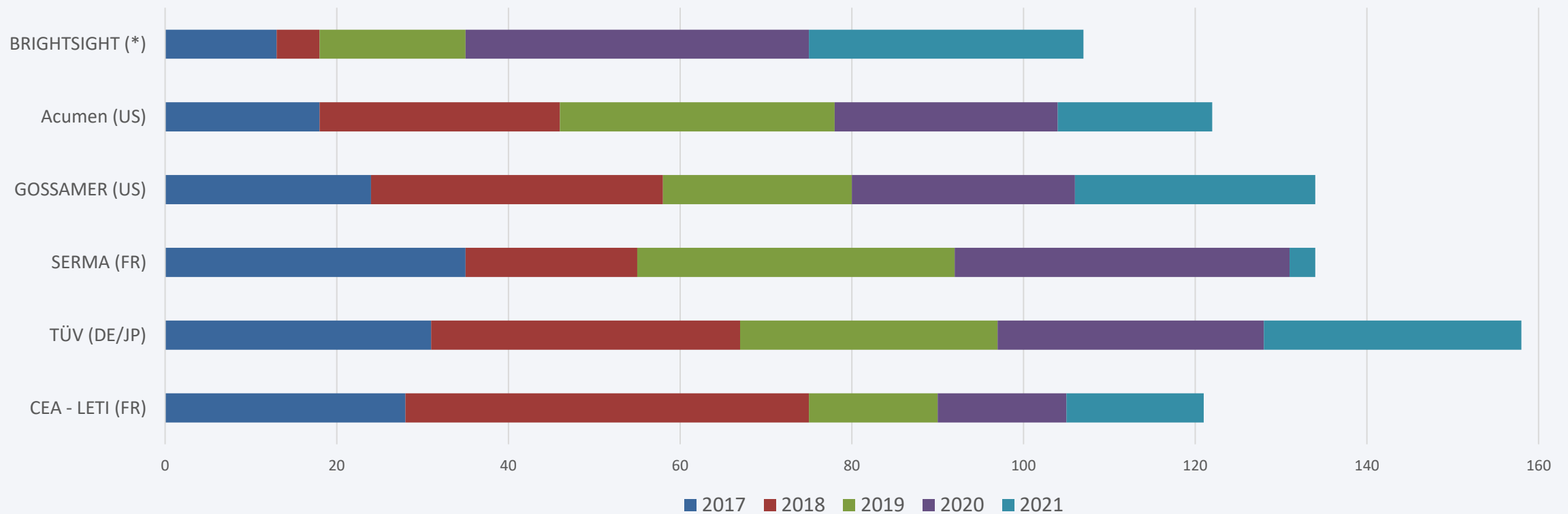
Statistics – 5 year trend

□ Certifications per country scheme in the last 5 years



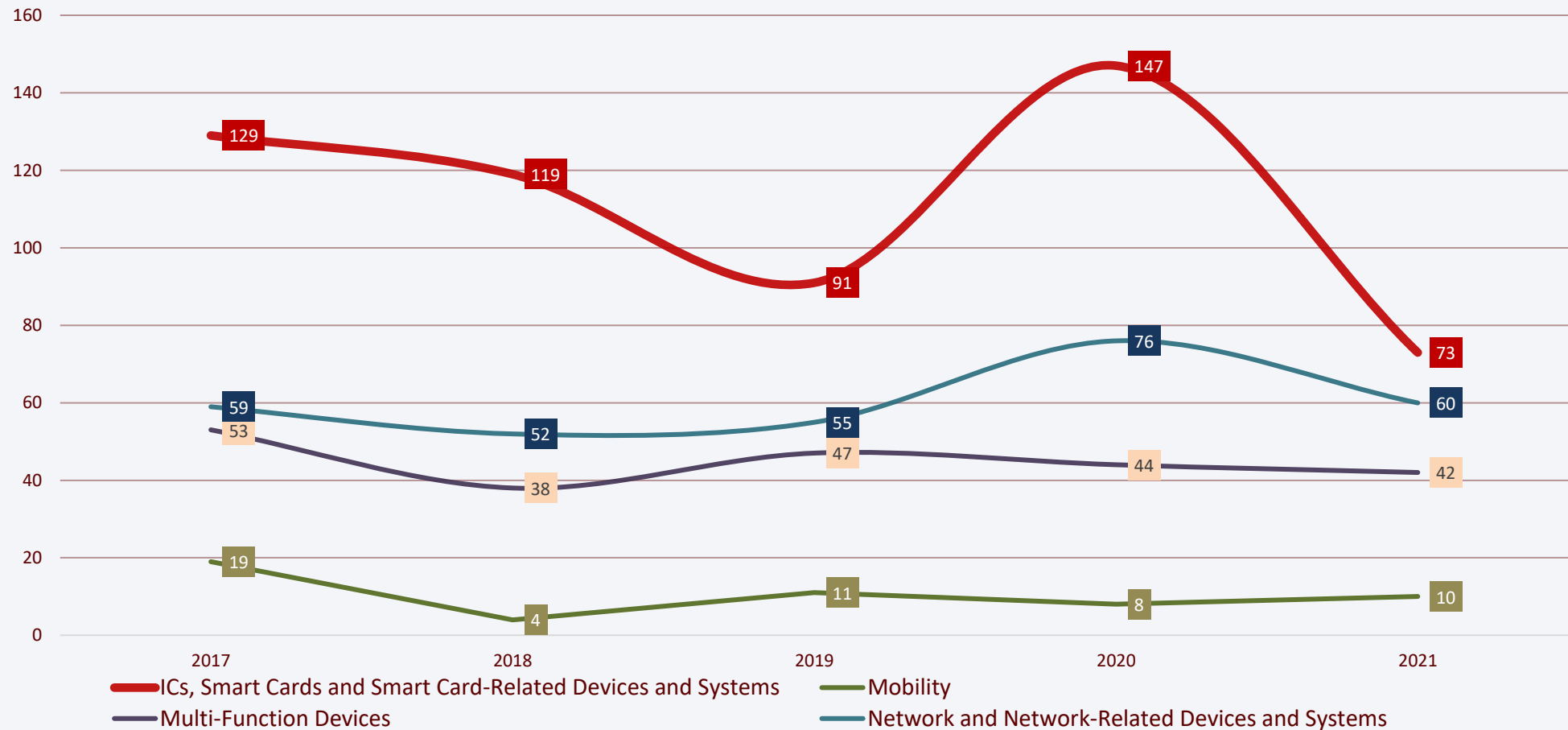
Statistics – 5 year trend

Evolution of top 6 laboratories



Statistics – 5 year trend

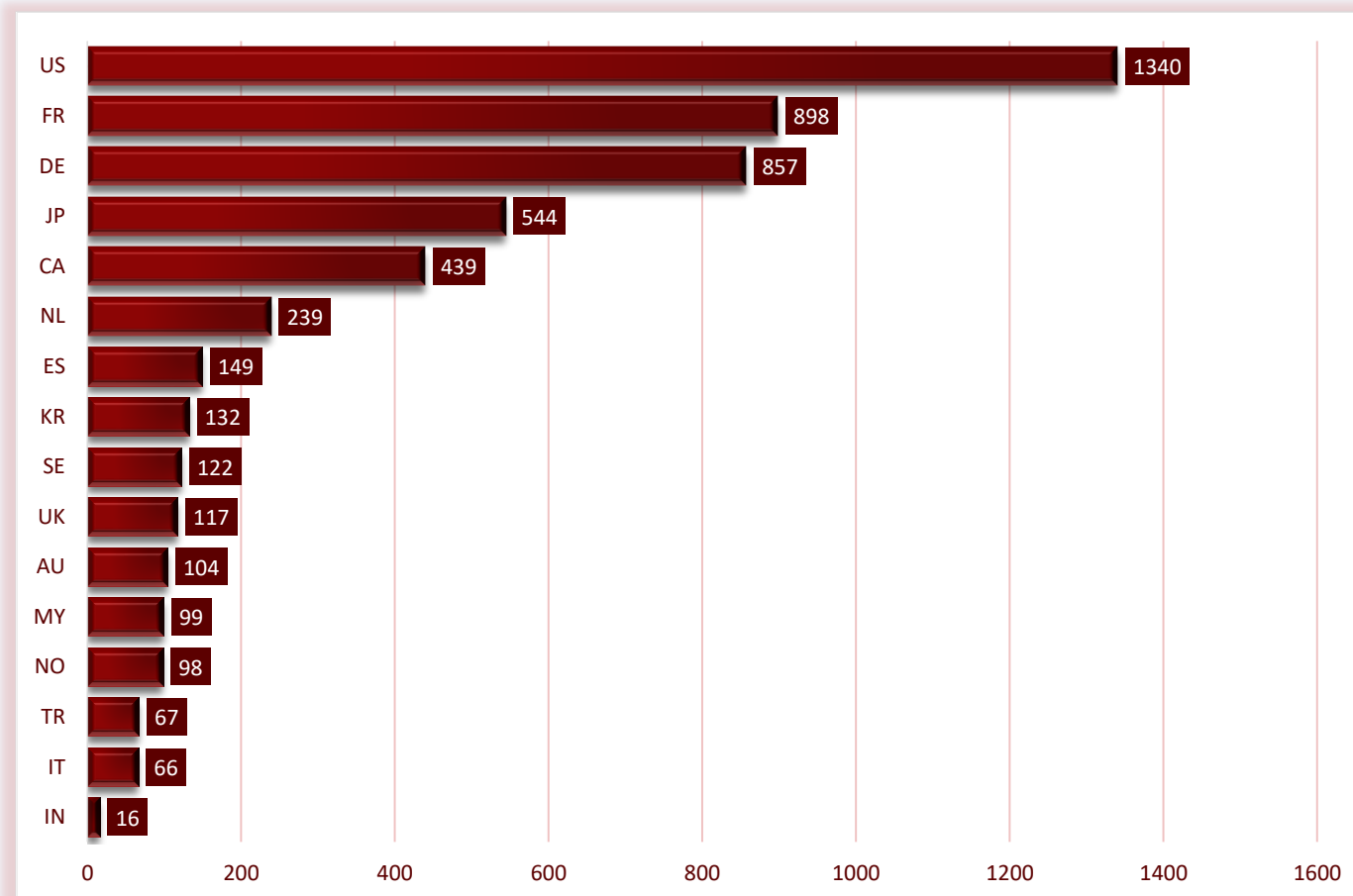
Evolution of top product categories (five years)



Some Historical data

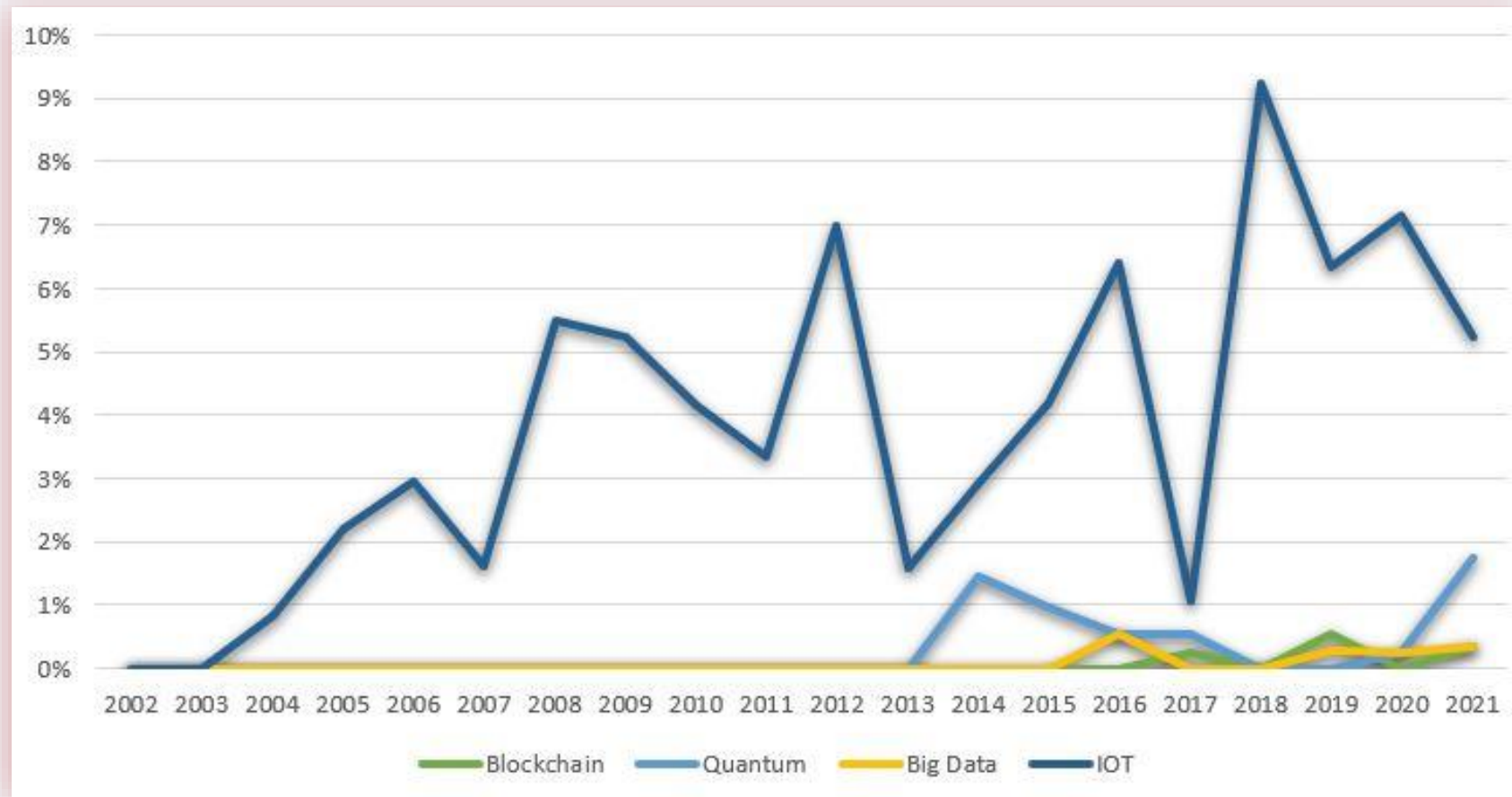
Statistics – Historical Trends

- Number of certifications per country, historical (archived included)



Statistics – Historical Trends

Technological terms found in Security Targets



Conclusions

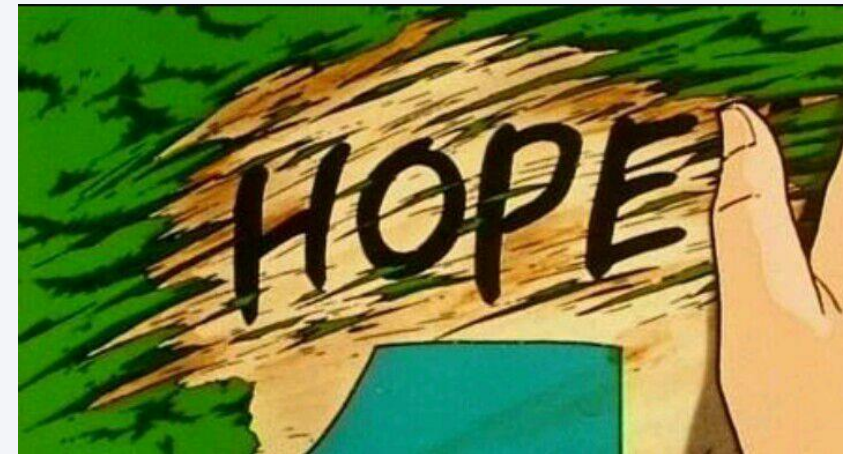
Global numbers in the end of the Pandemics era

- ❑ 2021 shows overall a **small number of certifications**, below the previous five years.
- ❑ The **top certifying schemes** show numbers very similar to the ones in 2020 by this date, some schemes are a bit up and some a bit down.
- ❑ Most of the **top certification laboratories** don't show big variations in their numbers with respect to 2021.
- ❑ Exception: SERMA (3) as lab and ST Microelectronics as vendor (1) in 2021.



Global numbers in the end of the Pandemics era

- ❑ Global numbers, they are very **similar to 2020** by 30th September: 286 vs 284.
- ❑ In last year's ICCC we were very pessimistic, but **it went really up during the Q4**, and the year ended with more than 390 certifications.
- ❑ We expected bigger impacts in certifications started in 2020 and to be ended in 2021.
- ❑ Here we are and the **numbers lead to pessimism again...** will we be wrong again?



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**“Any fool can make something complicated. It takes a
genius to make it simple.”
Woody Guthrie**