



jtsec

BEYOND IT SECURITY



2020 CC Statistics Report

Is the industry surviving to lockdown?



**ICCC
2020**

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- ❑ CC data collection with CCScraper
- ❑ CC statistics for 2020
- ❑ CC Statistics for 5 years
- ❑ Some historical CC statistics
- ❑ Conclusions

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** presented today in ICCC 2020.
 - ❑ Efficiency dramatically improved: 18 hours vs 5 days of execution.
 - ❑ Nothing is perfect... so we implemented logging and email alert logic in case we find errors / untemplated cases.

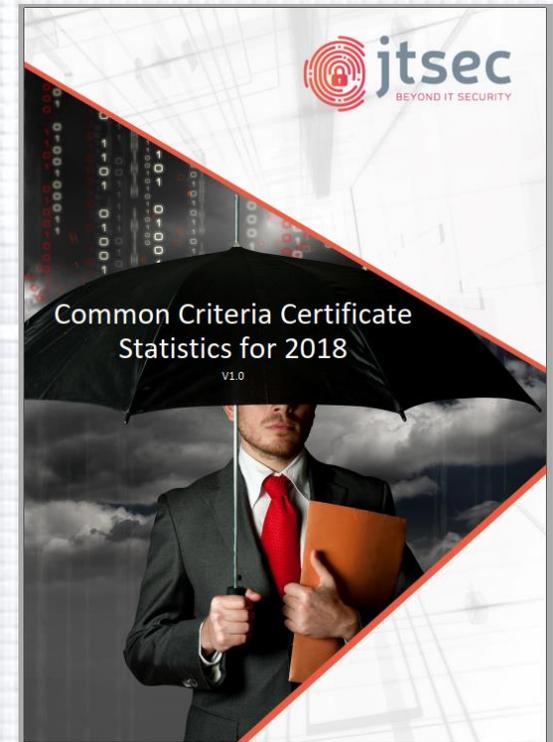
Latest challenges for CCScraper

- ❑ New laboratories found!... we had to review our parsing logic and reports!
- ❑ CSEC website changed its structure during this year: we had to re-code its scraper.
- ❑ NSCIB started to upload **Site Security Certifications** and **dates were removed** from the product listing.
- ❑ The scraper run an OK test in September but... in November the Australian CB **ACSC** website had entirely changed!



CCscraper reports

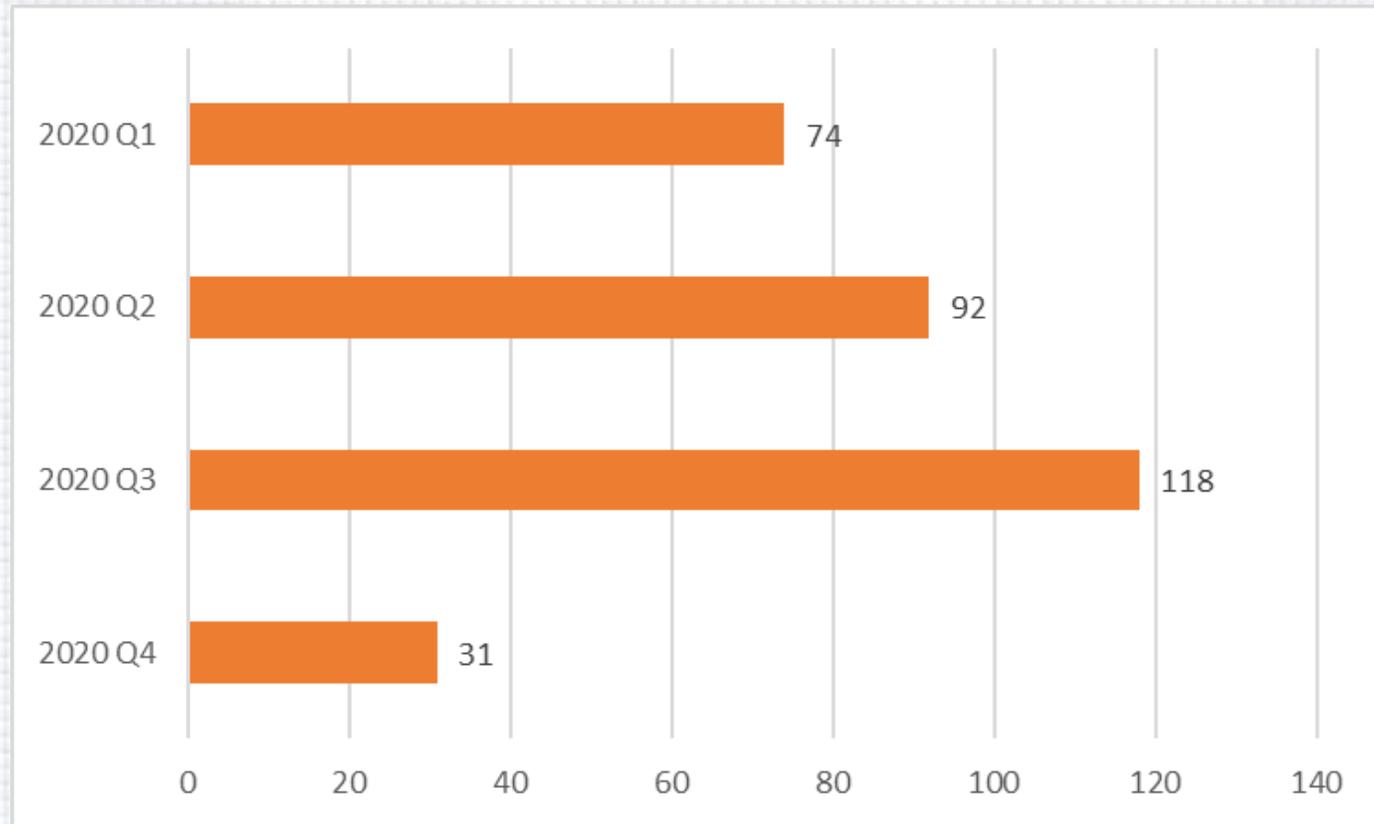
- ❑ With the statistics generated, we publish CC statistics reports in jtsec webpage, at least once per year.
- ❑ <https://www.jtsec.es/blog-entry/25/common-criteria-statistics-report-for-2018>
- ❑ <https://www.jtsec.es/blog-entry/44/common-criteria-statistics-report-for-2019>



CC Statistics for 2020

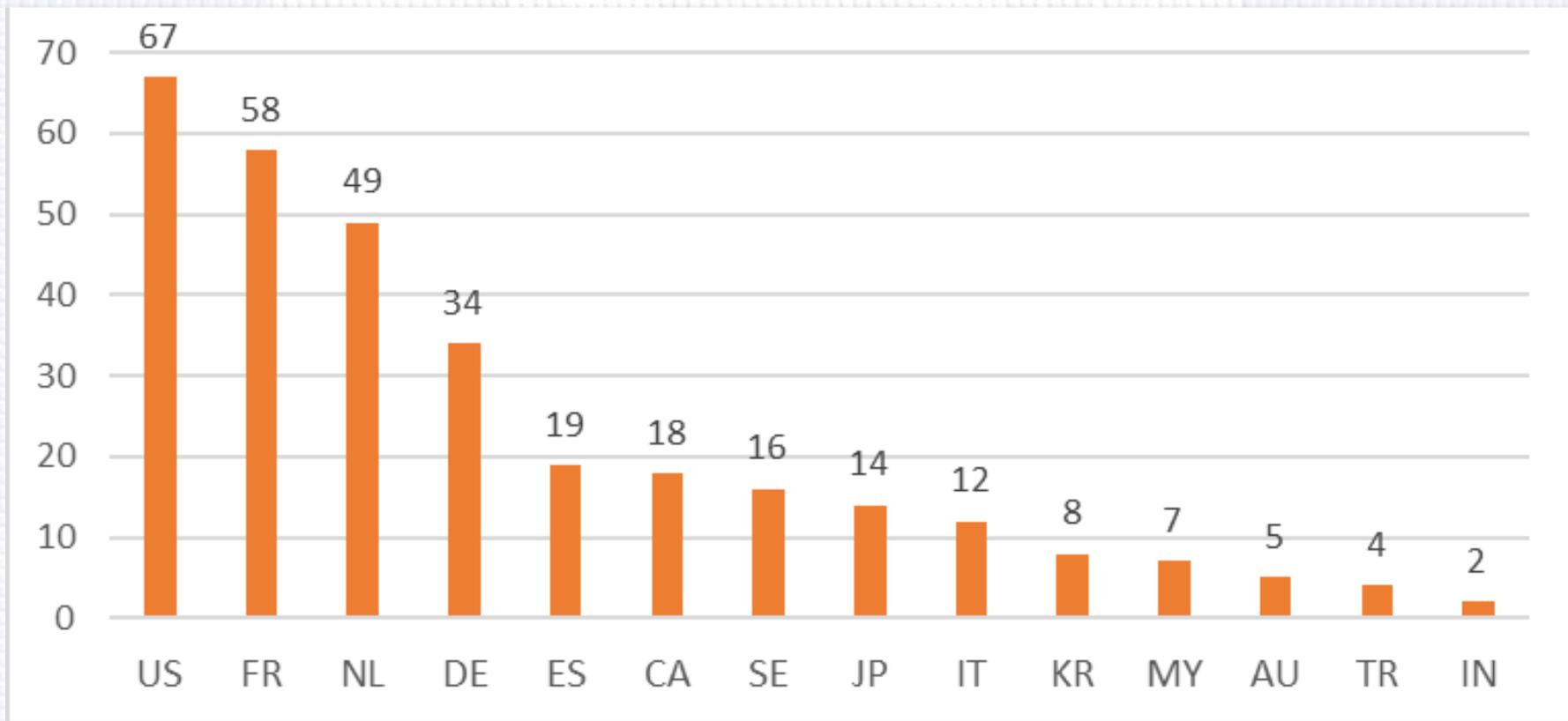
Statistics – 2020 (10 months)

- ❑ 315 products certified during 2020 (data from 05/11/2020)



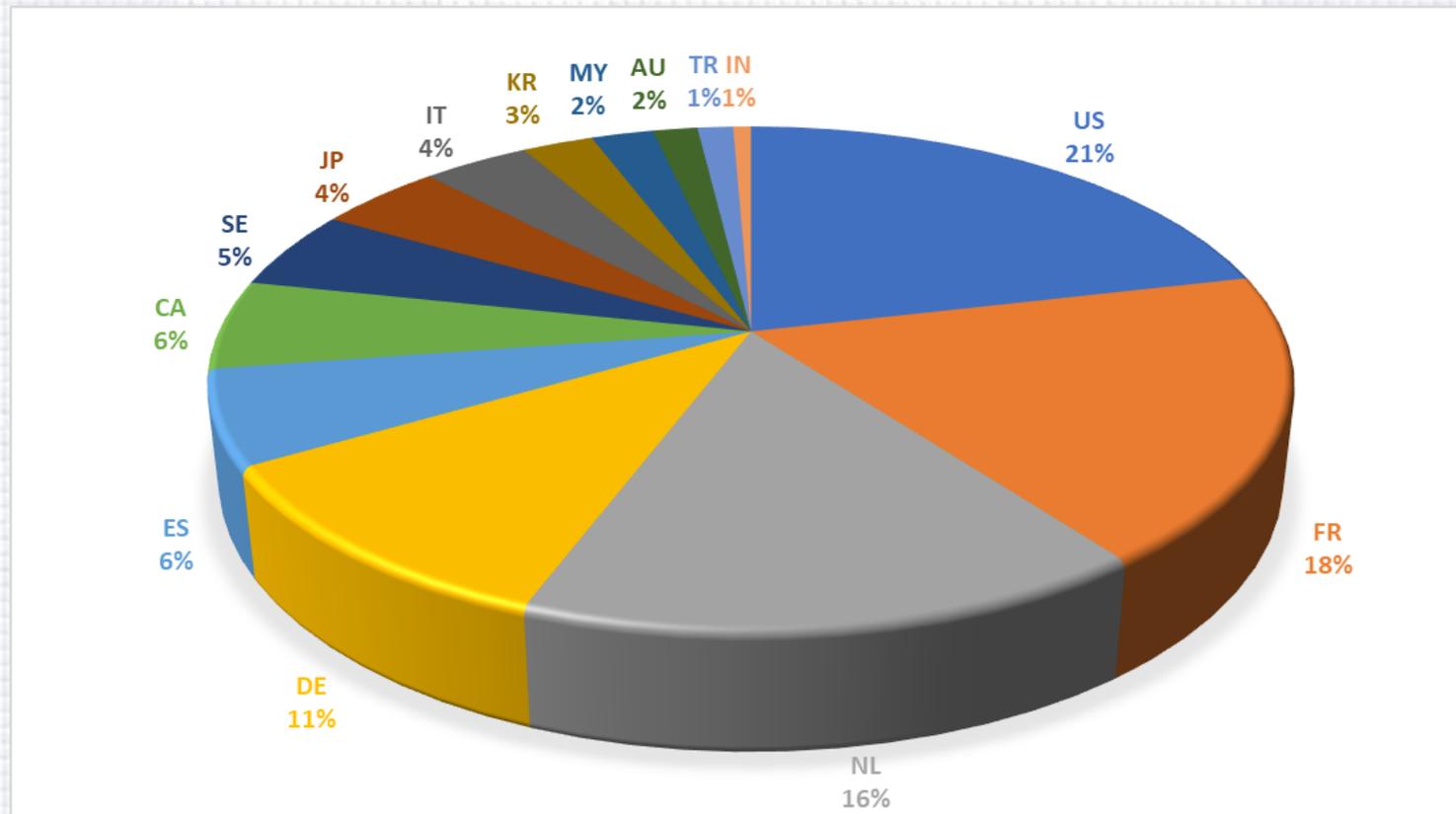
Statistics – 2020 (10 months)

- Top certifier schemes in 2020



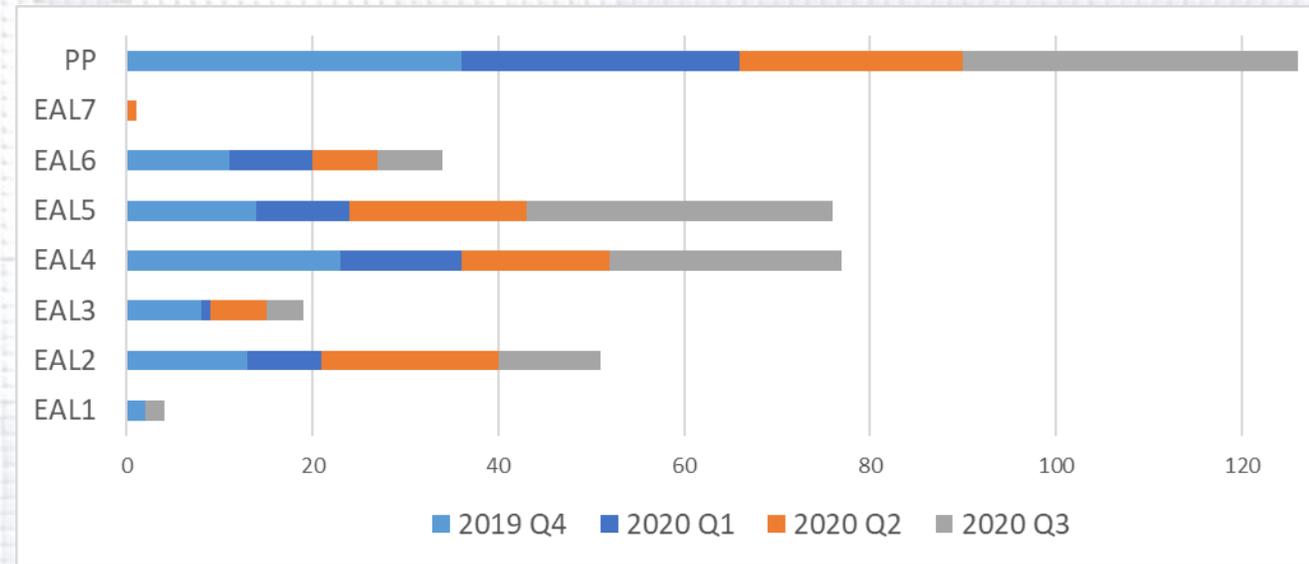
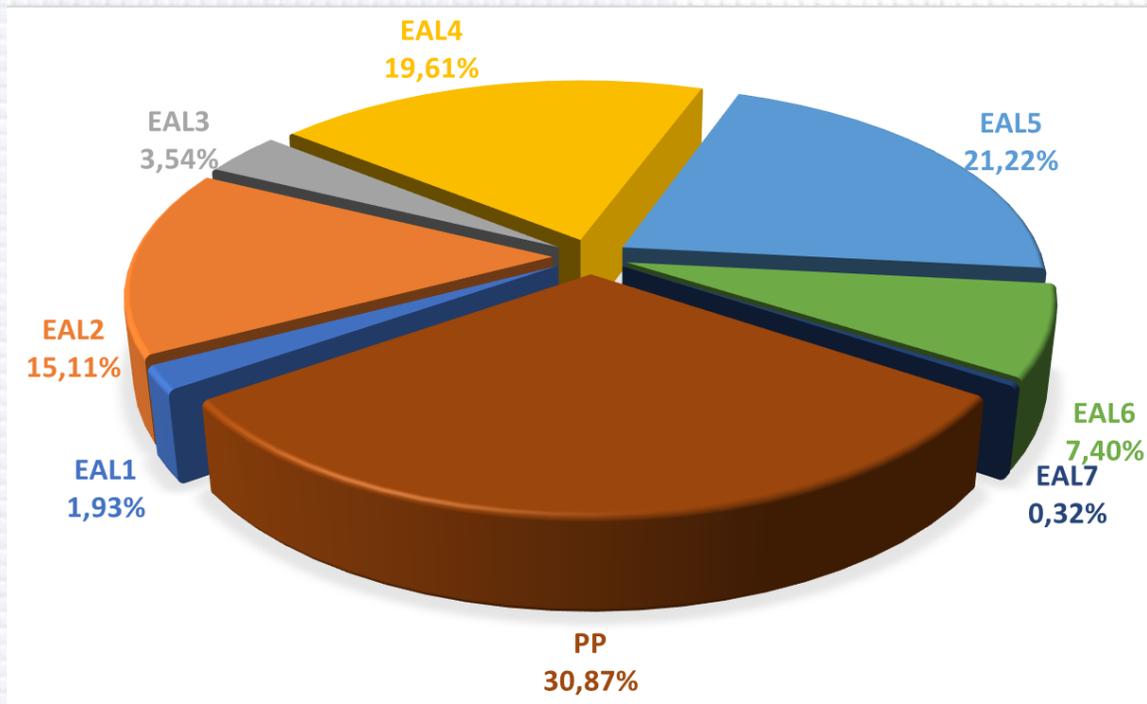
Statistics – 2020 (10 months)

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



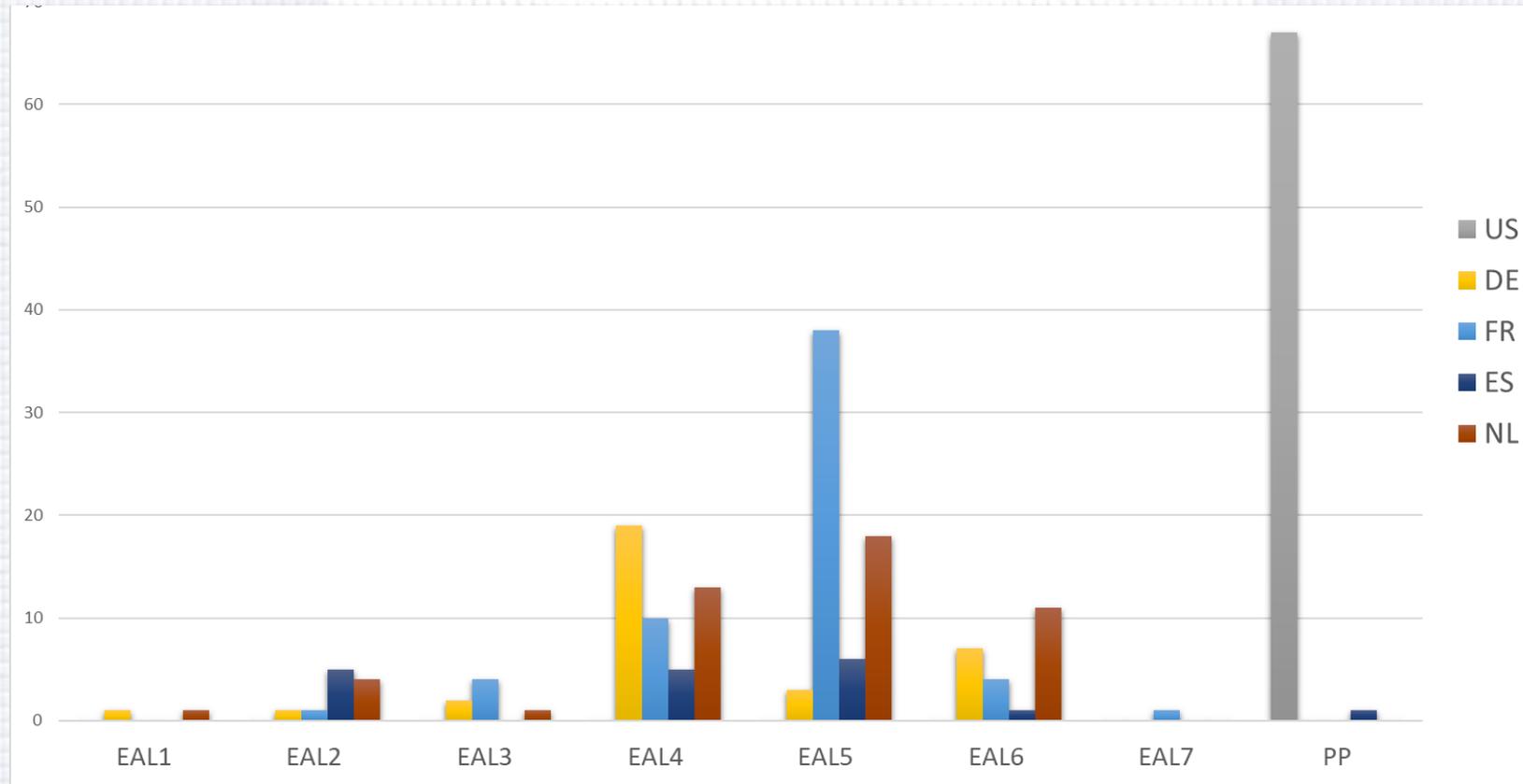
Statistics – 2020 (10 months)

☐ Certified products compliance in 2020



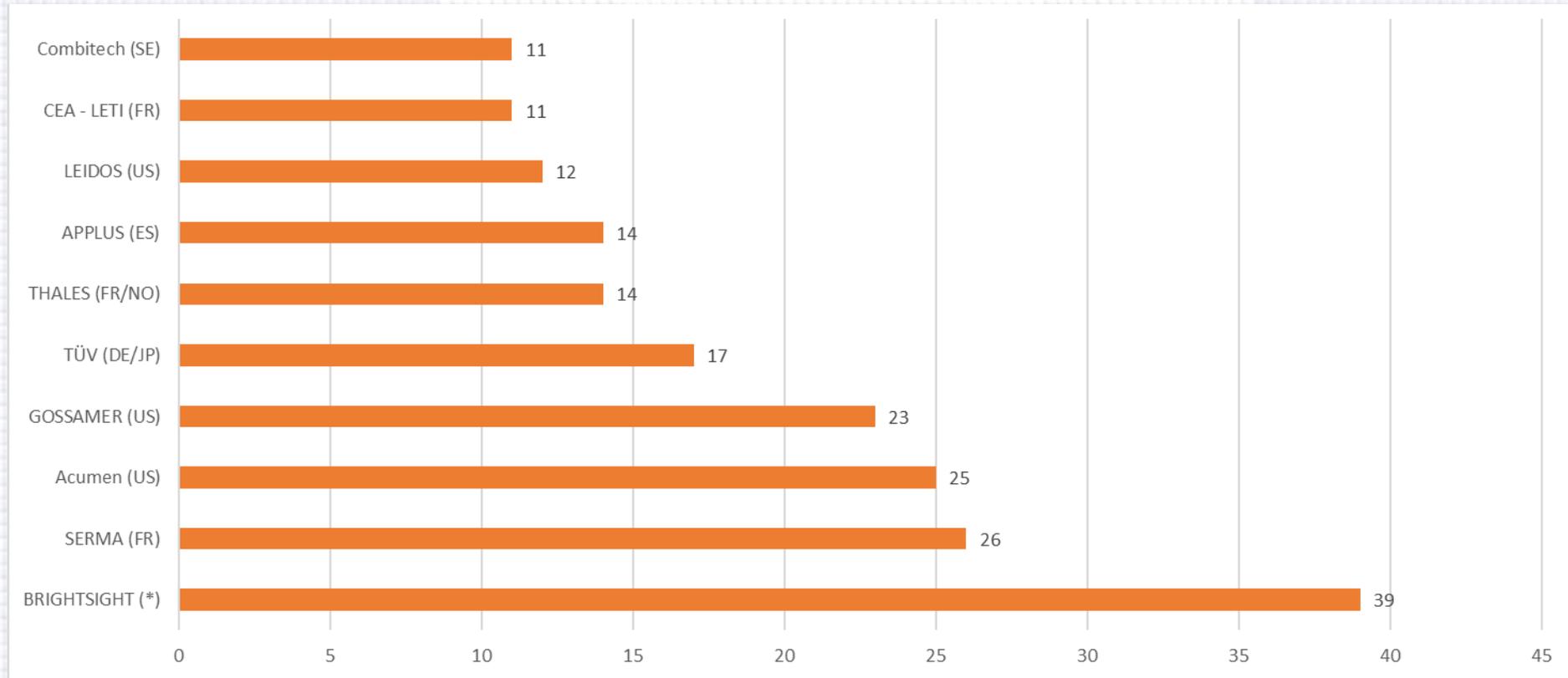
Statistics – 2020 (10 months)

Product assurance level per country during 2020



Statistics – 2020 (10 months)

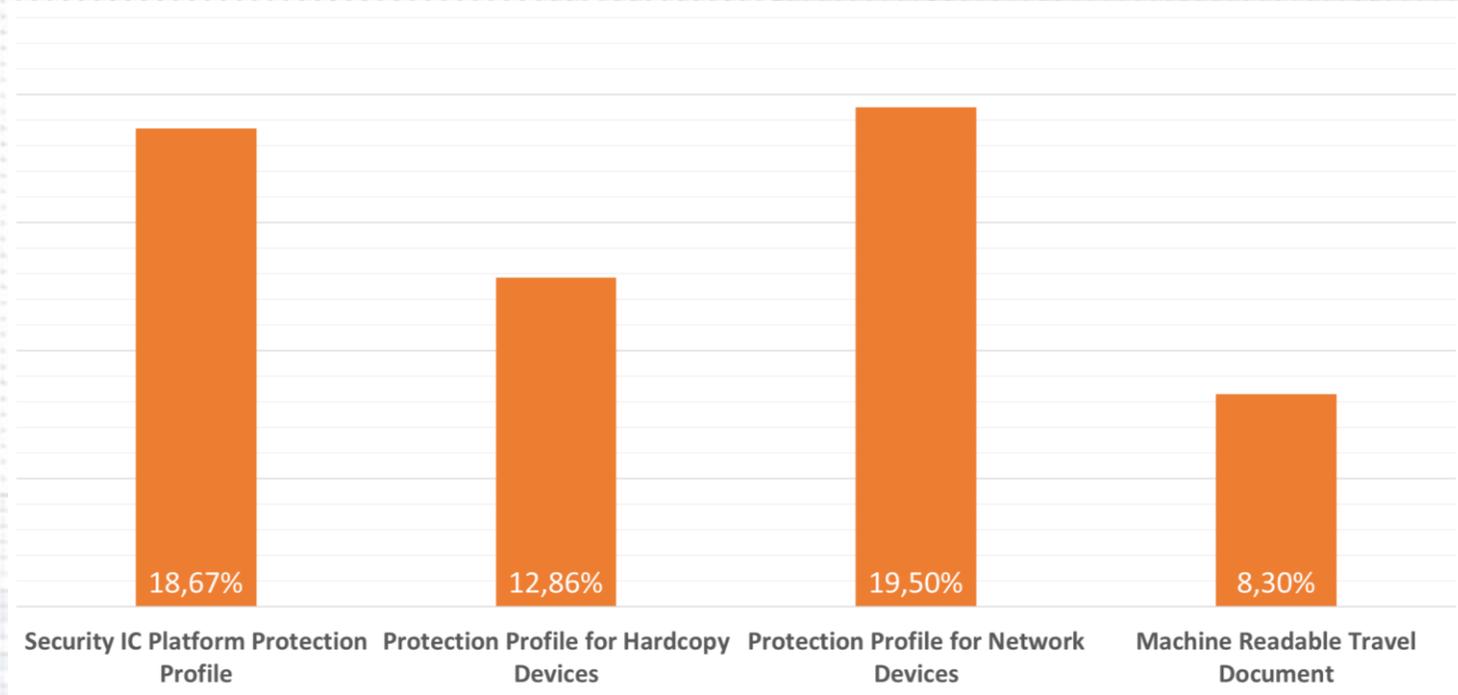
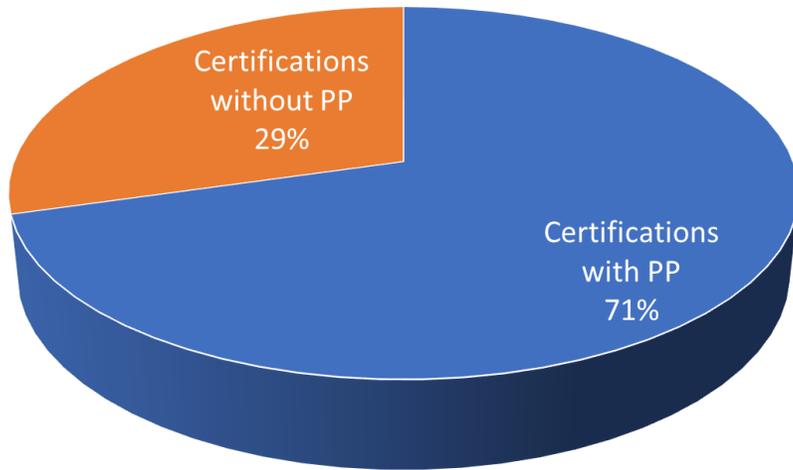
Top 10 Laboratories (2020)



Statistics – 2020 (10 months)

Protection Profile certifications

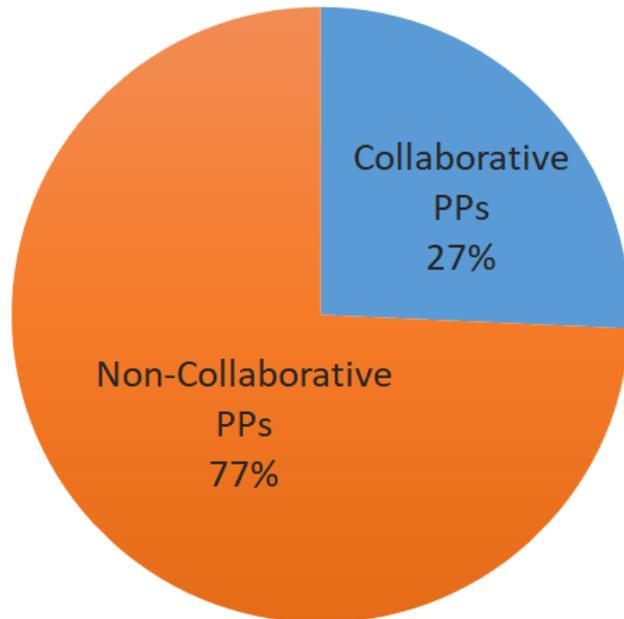
Certifications with Protection Profiles in 2020



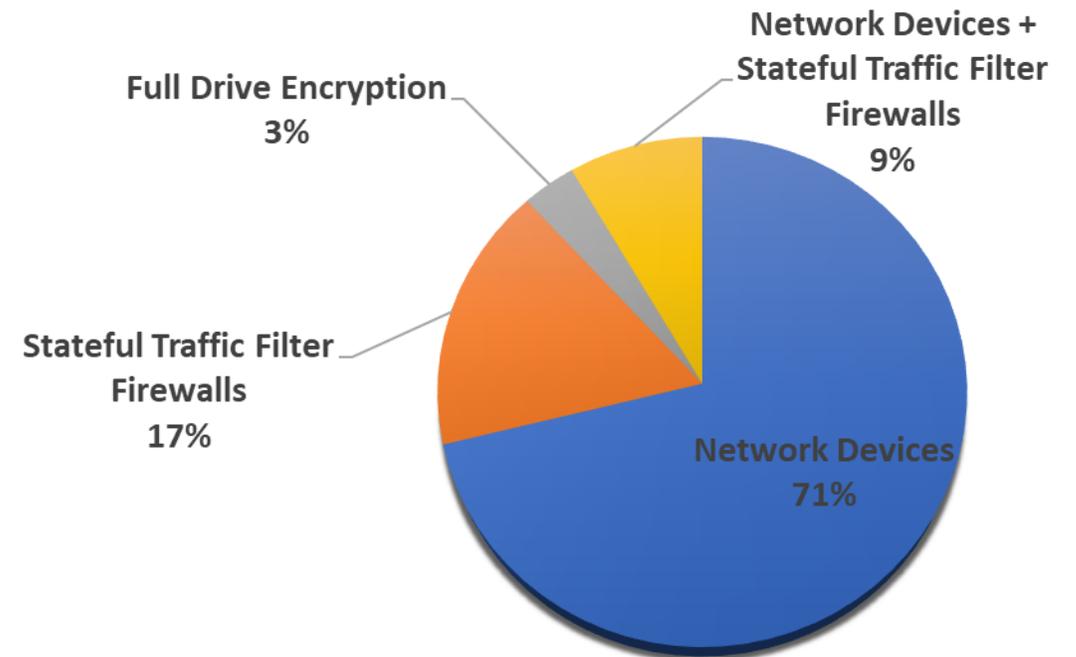
Statistics – 2020 (10 months)

- PP and cPP compliant certifications in 2020

Collaborative PPs vs Non-Collaborative PPs

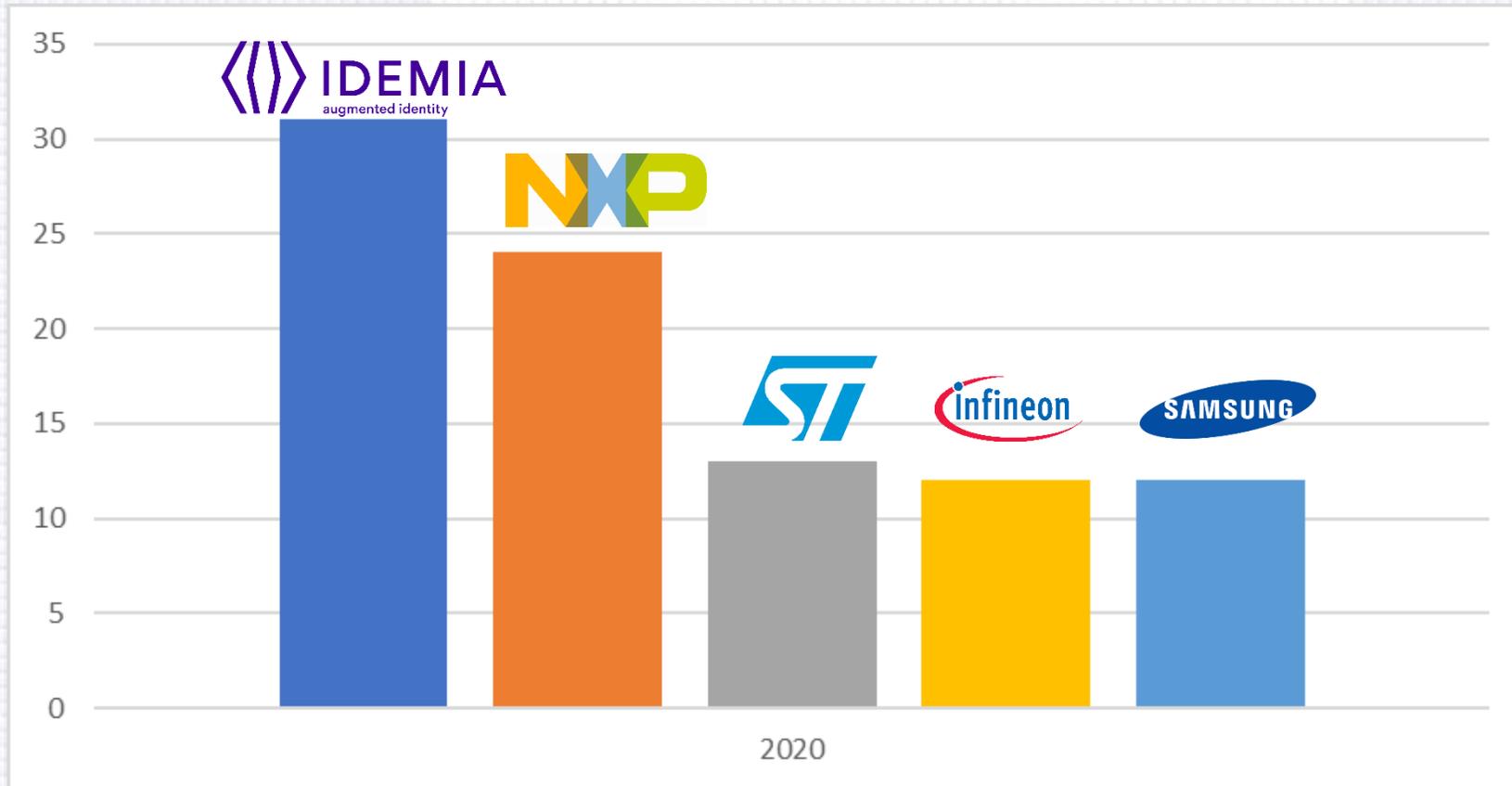


Certifications using CPPs in 2020



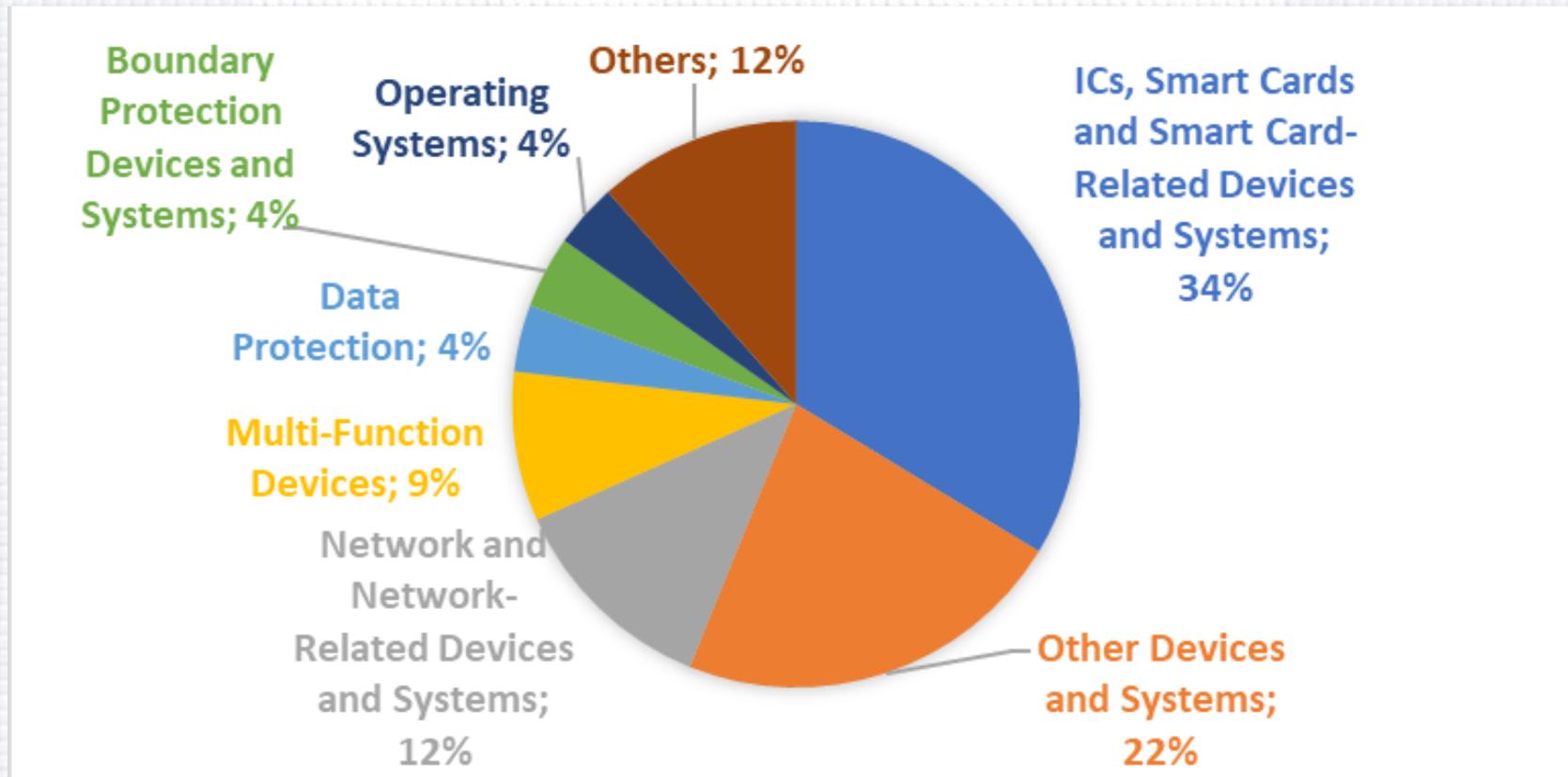
Statistics – 2020 (10 months)

- Top 5 manufacturers of certified products (2020)



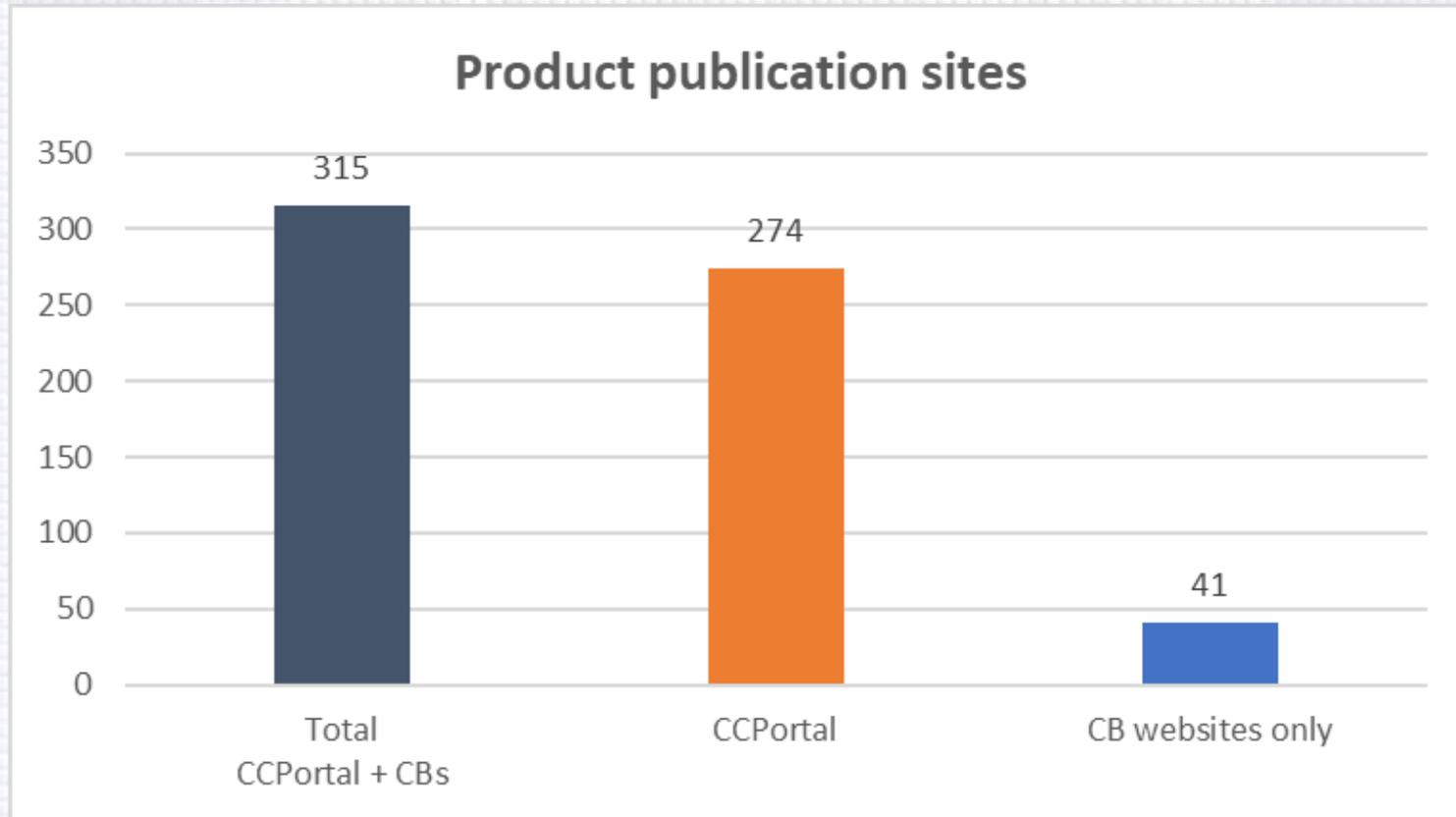
Statistics – 2020 (10 months)

- Top product categories (2020) and their evolution



Statistics – 2020 (10 months)

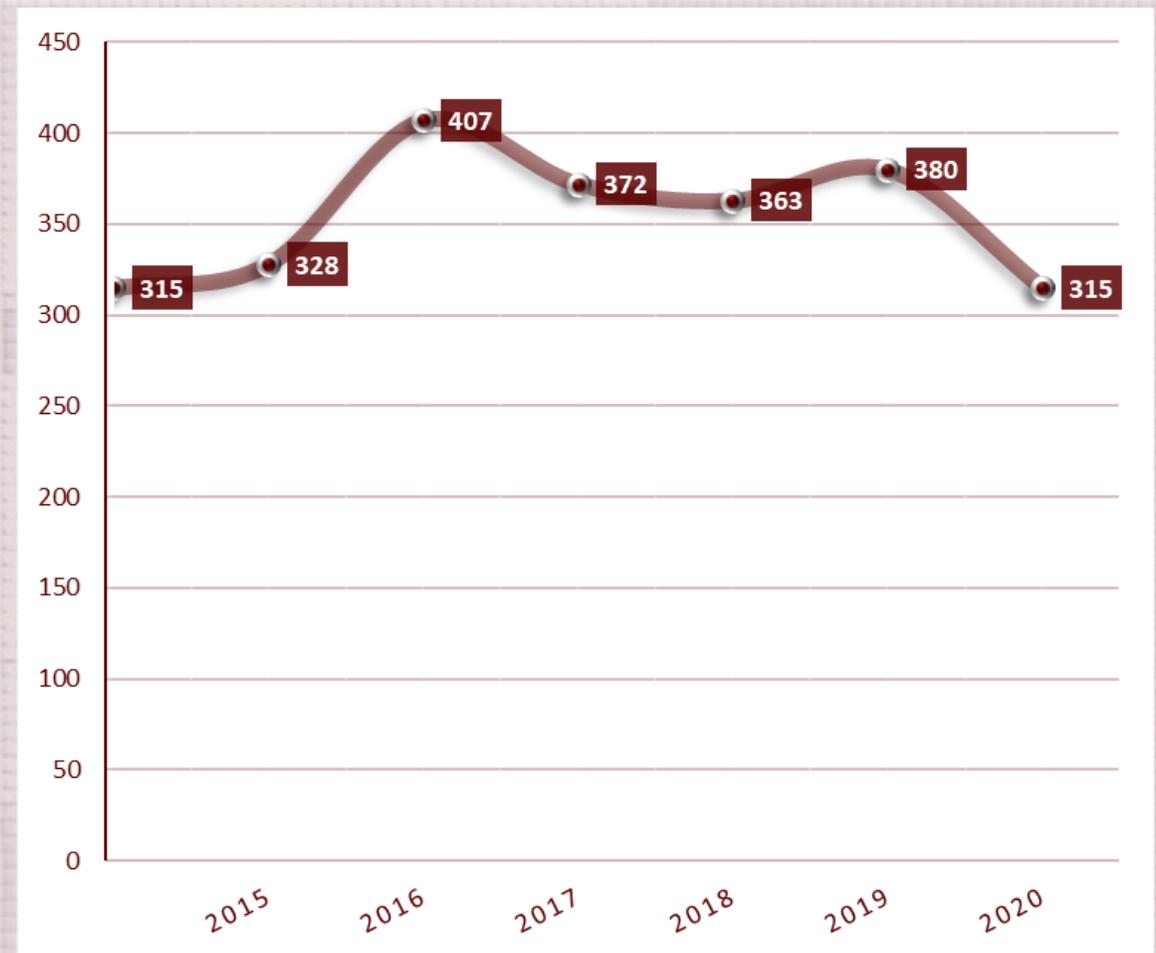
- ❑ Products uploaded to CC Portal vs products only in CB websites



CC Statistics for last 5 years

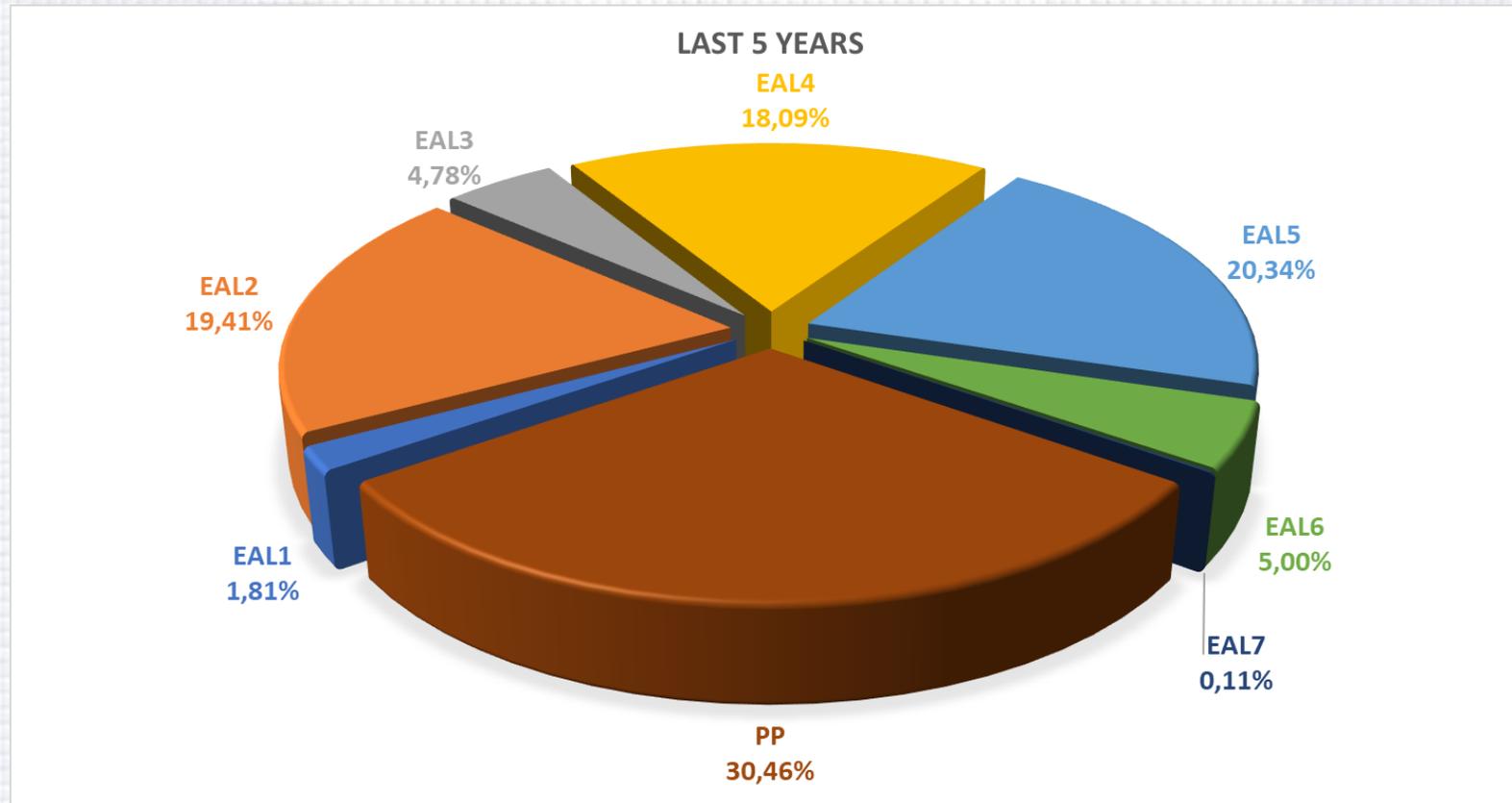
Statistics – 5 years trend

- ❑ Number of certifications in the last 5 years
- ❑ Will 2020 be the **worst** year of the last five?



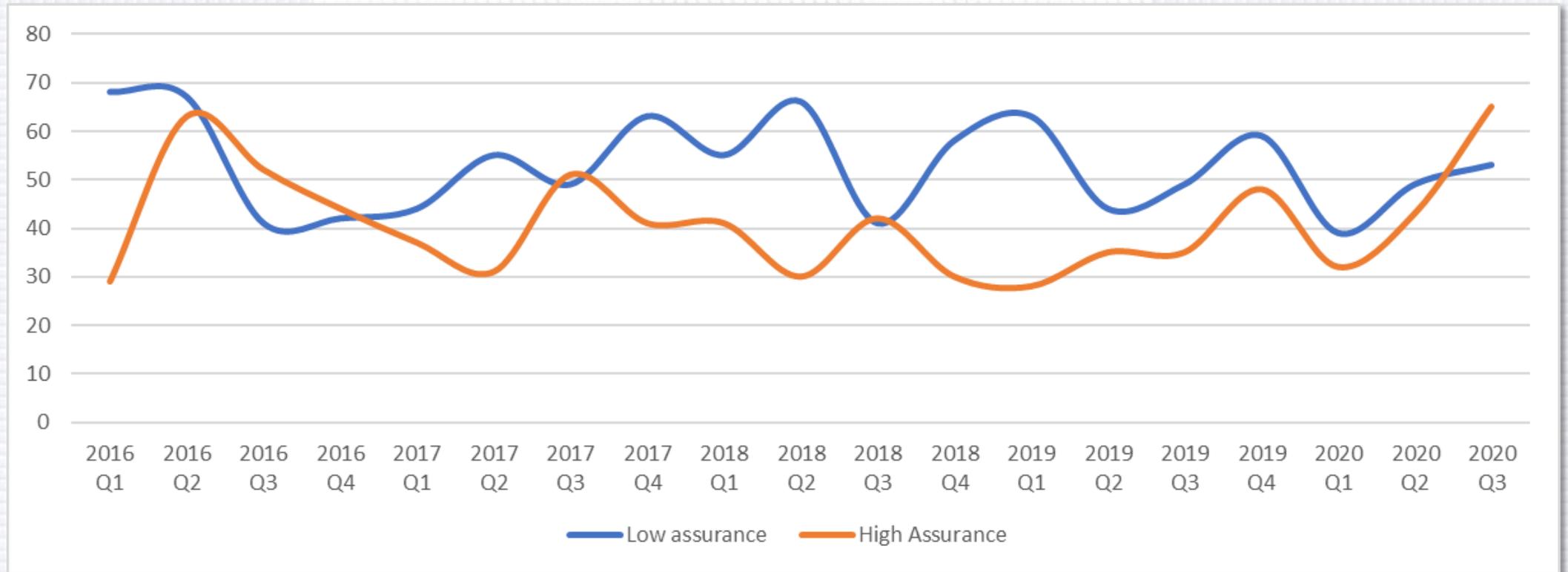
Statistics – 5 years trend

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



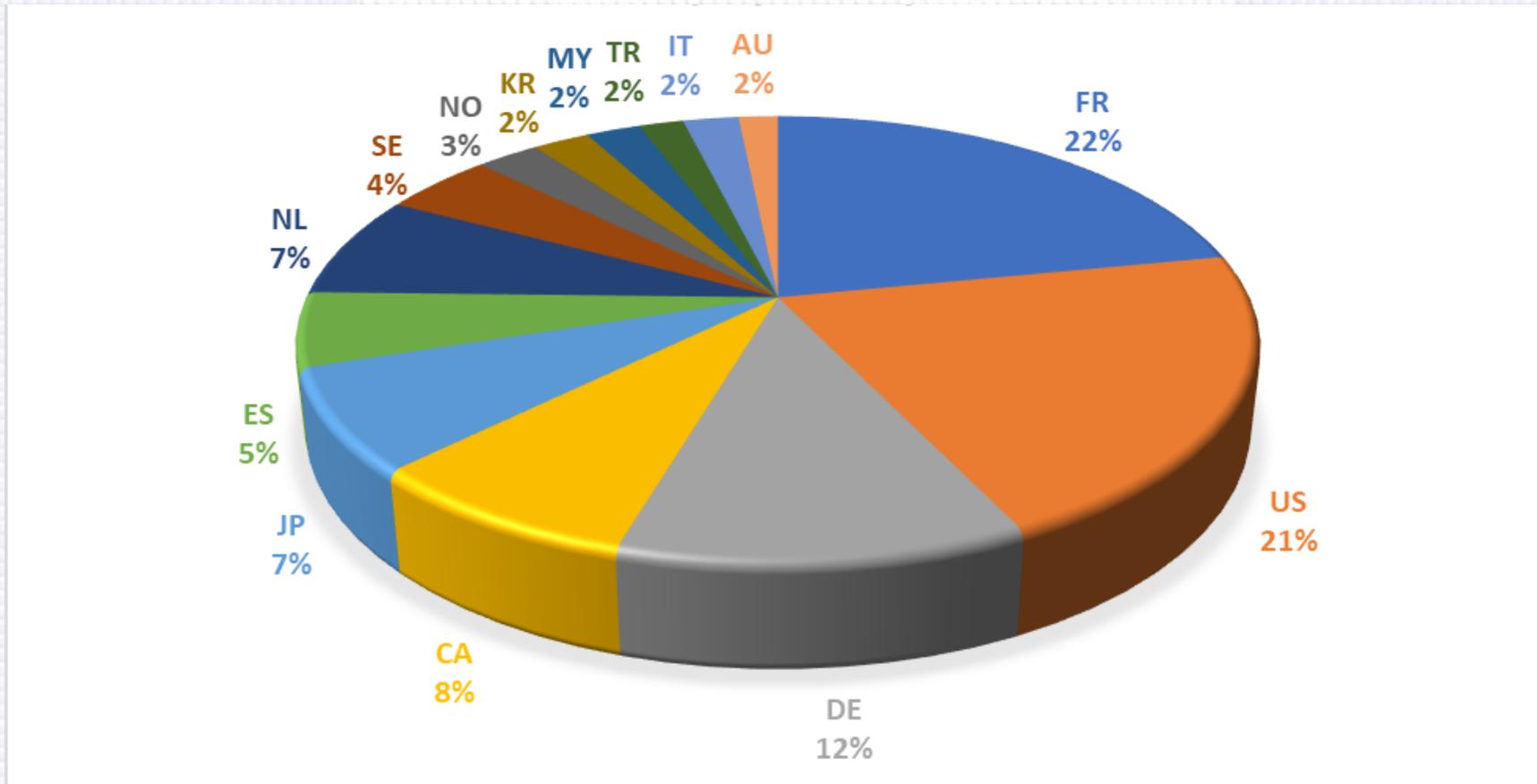
Statistics – 5 year trend

High vs Low assurance in five years

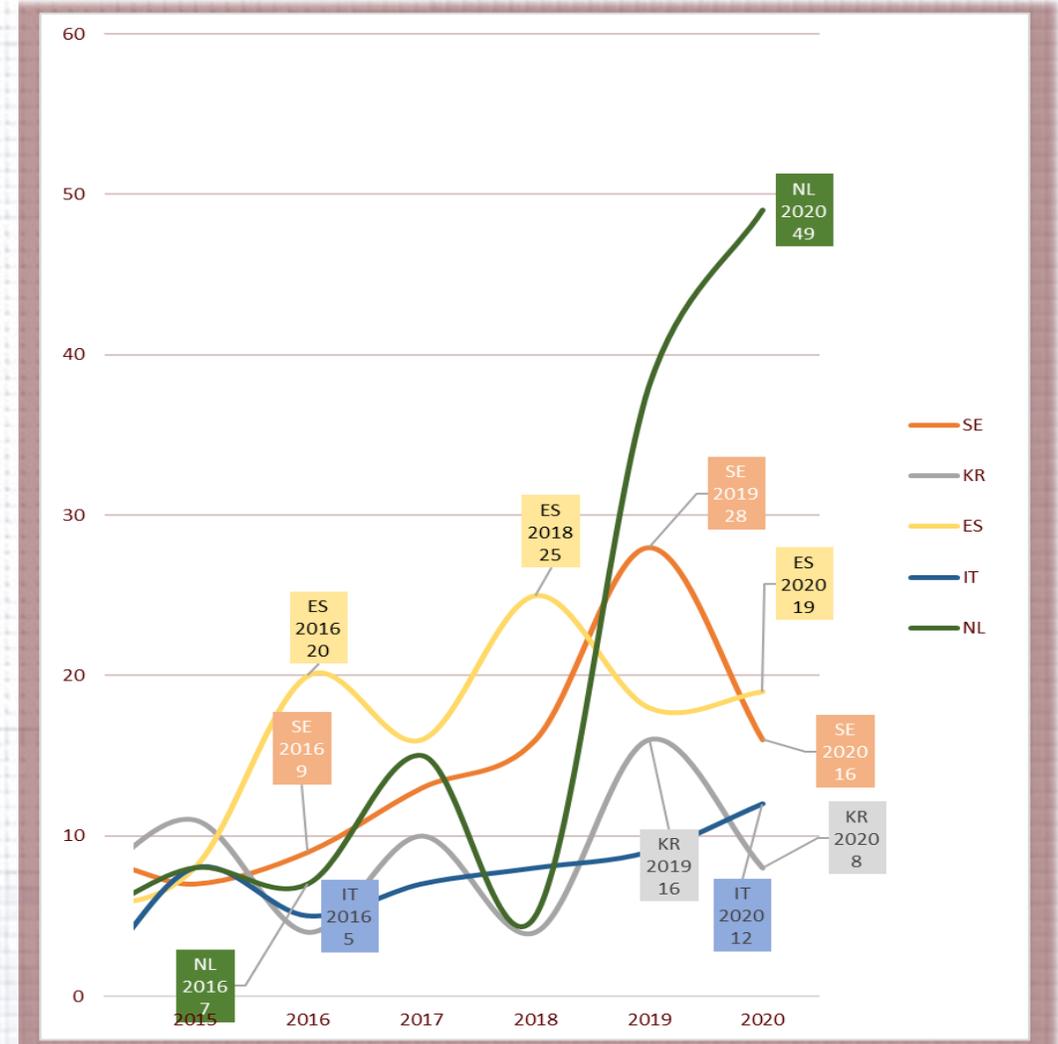
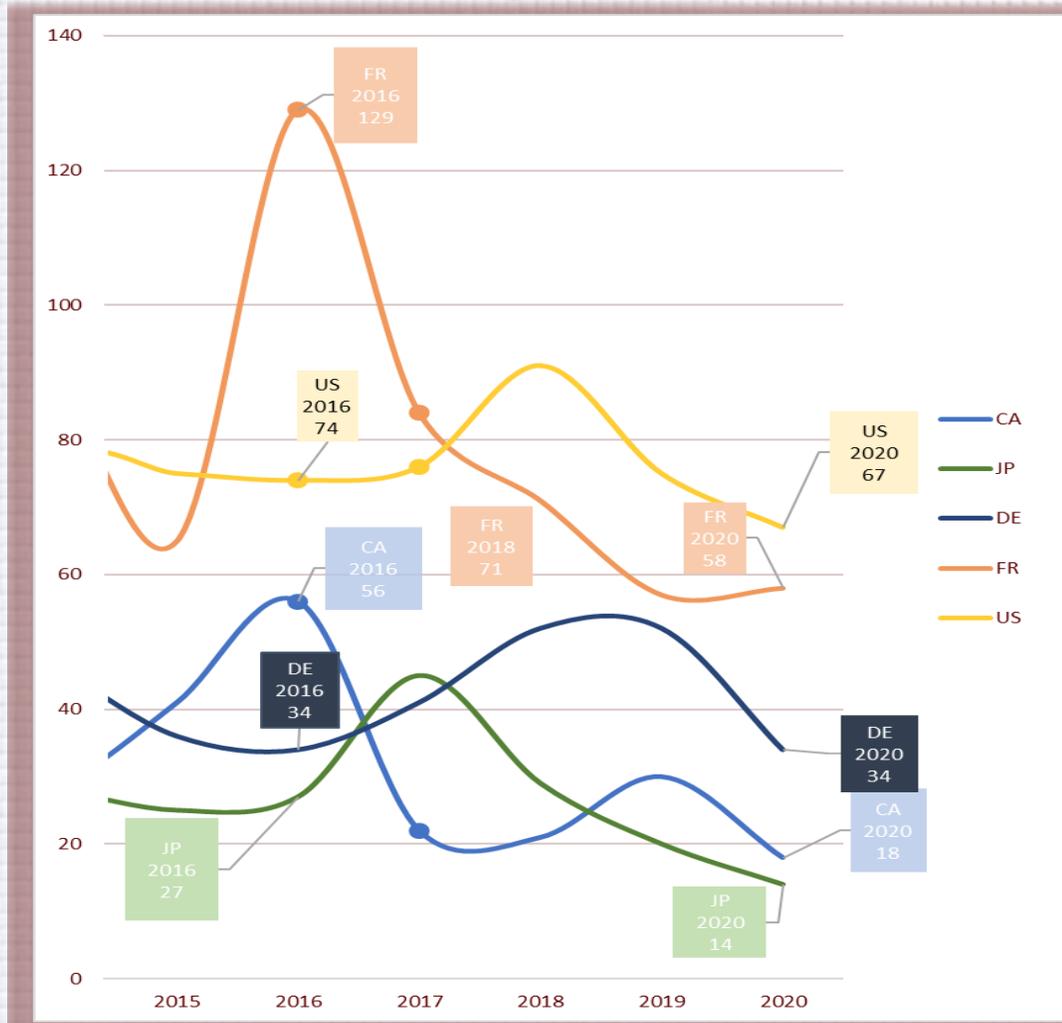


Statistics – 5 year trend

- Certifications per country scheme in the last 5 years

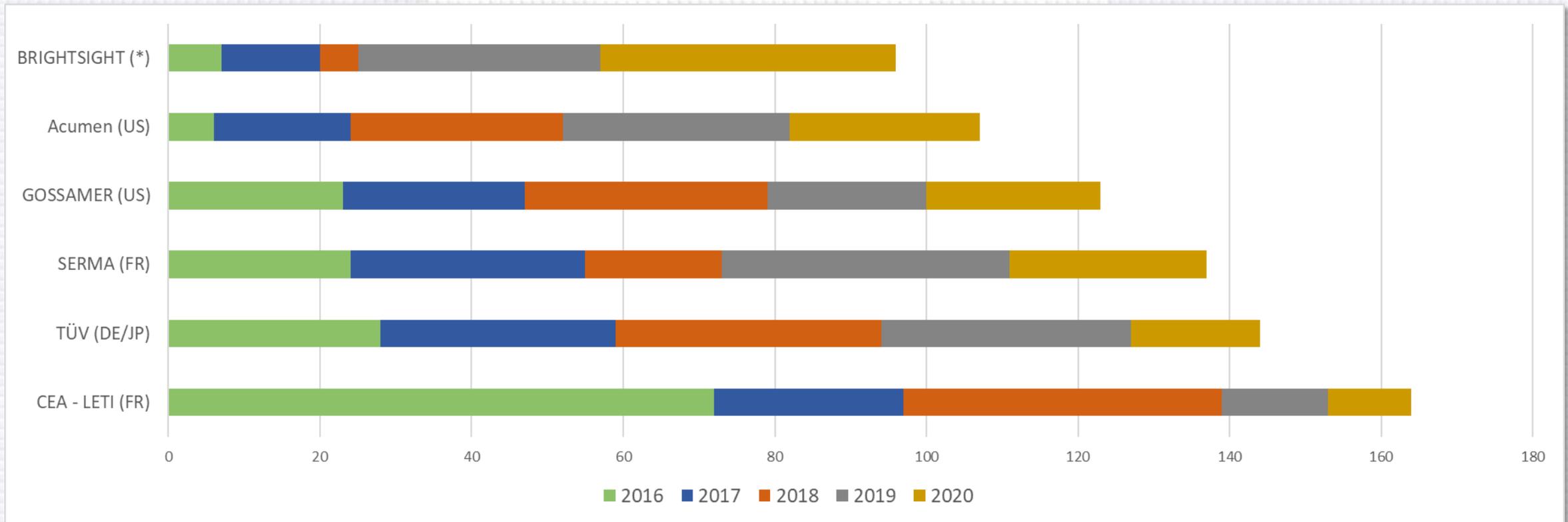


Statistics – 5 year trend



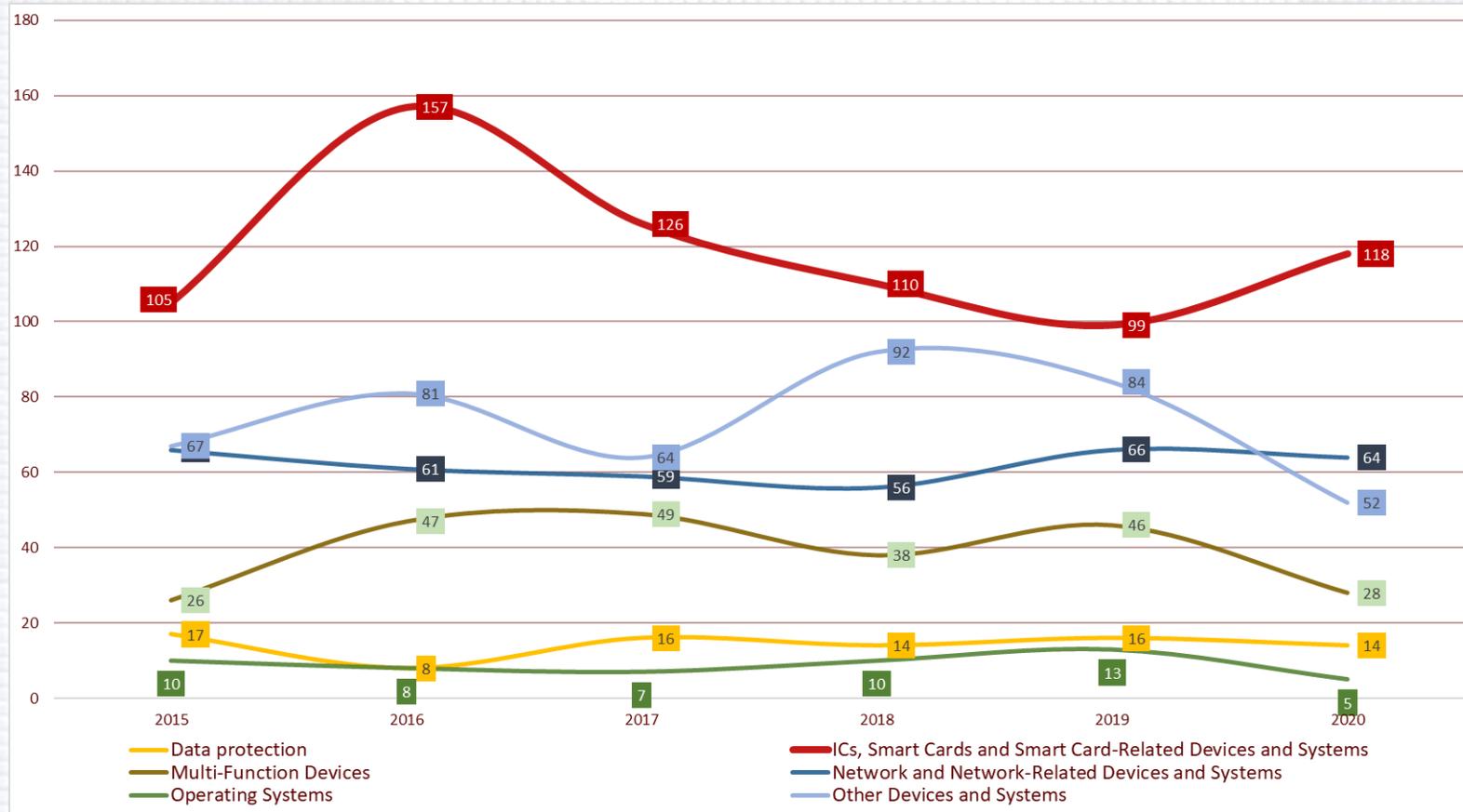
Statistics – 5 year trend

□ Evolution of top 5 laboratories



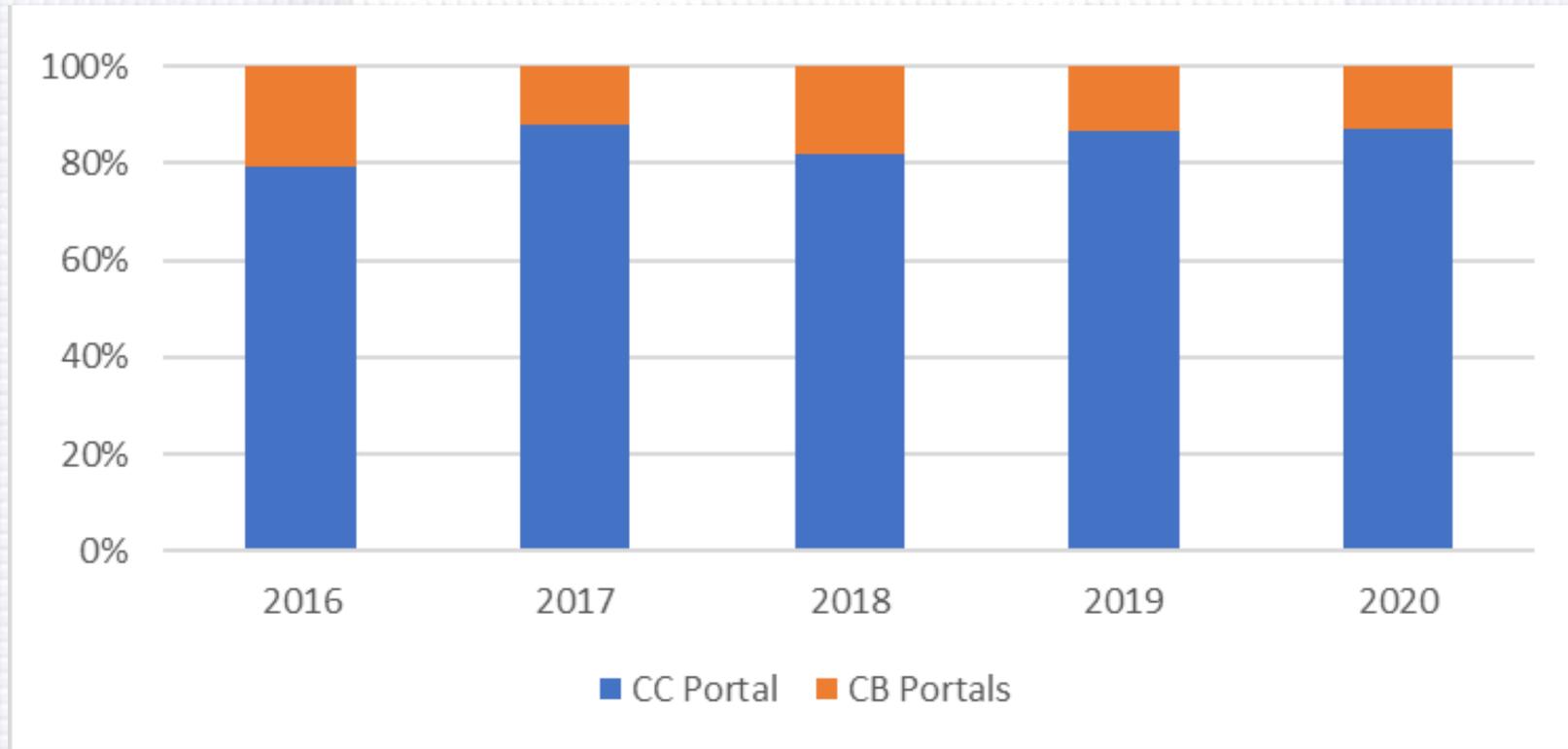
Statistics – 5 year trend

Evolution of top product categories (five years)



Statistics – 5 year trend

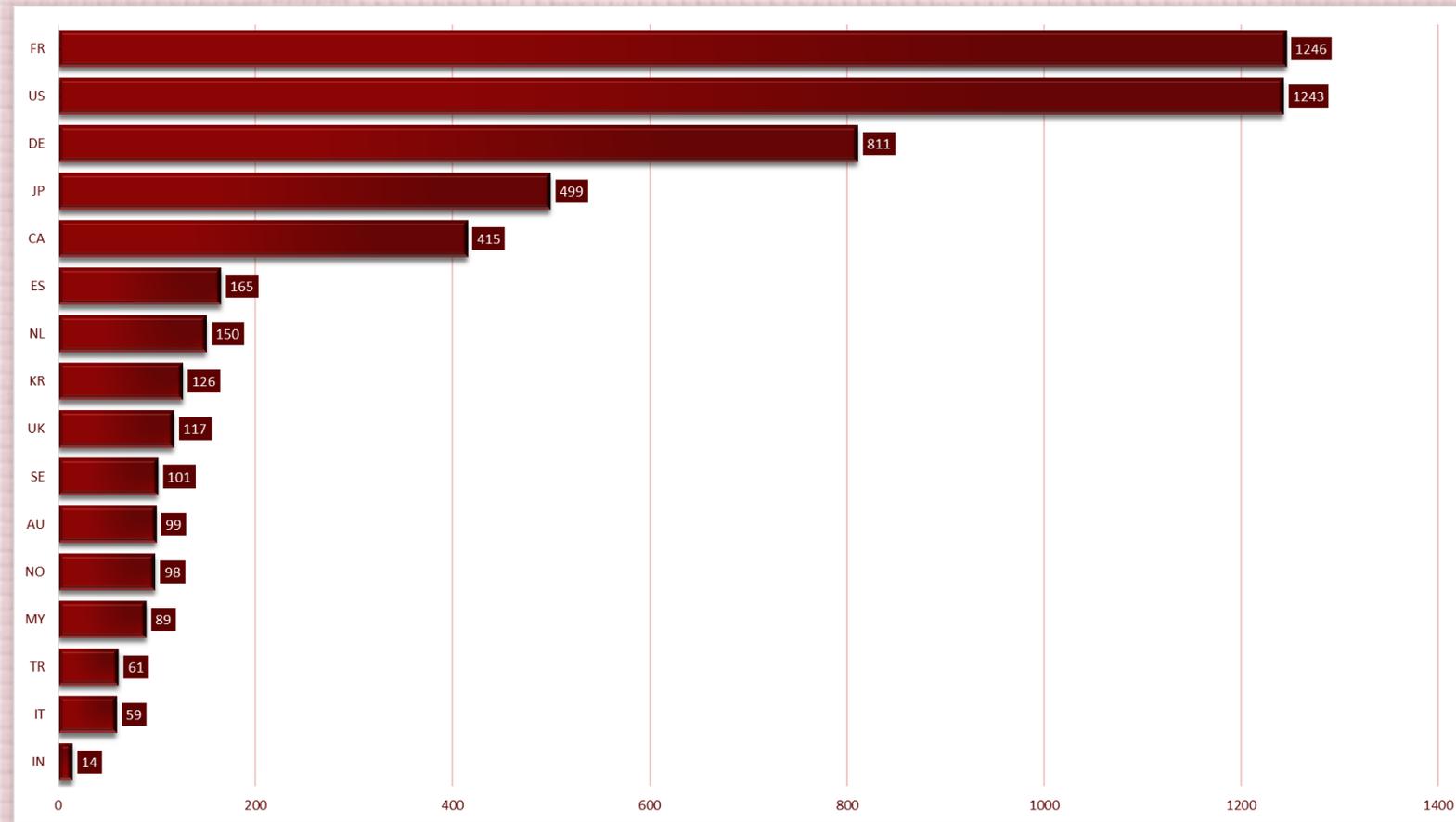
- Product publication: commoncriteriaportal.org vs CBs sites



Some Historical data

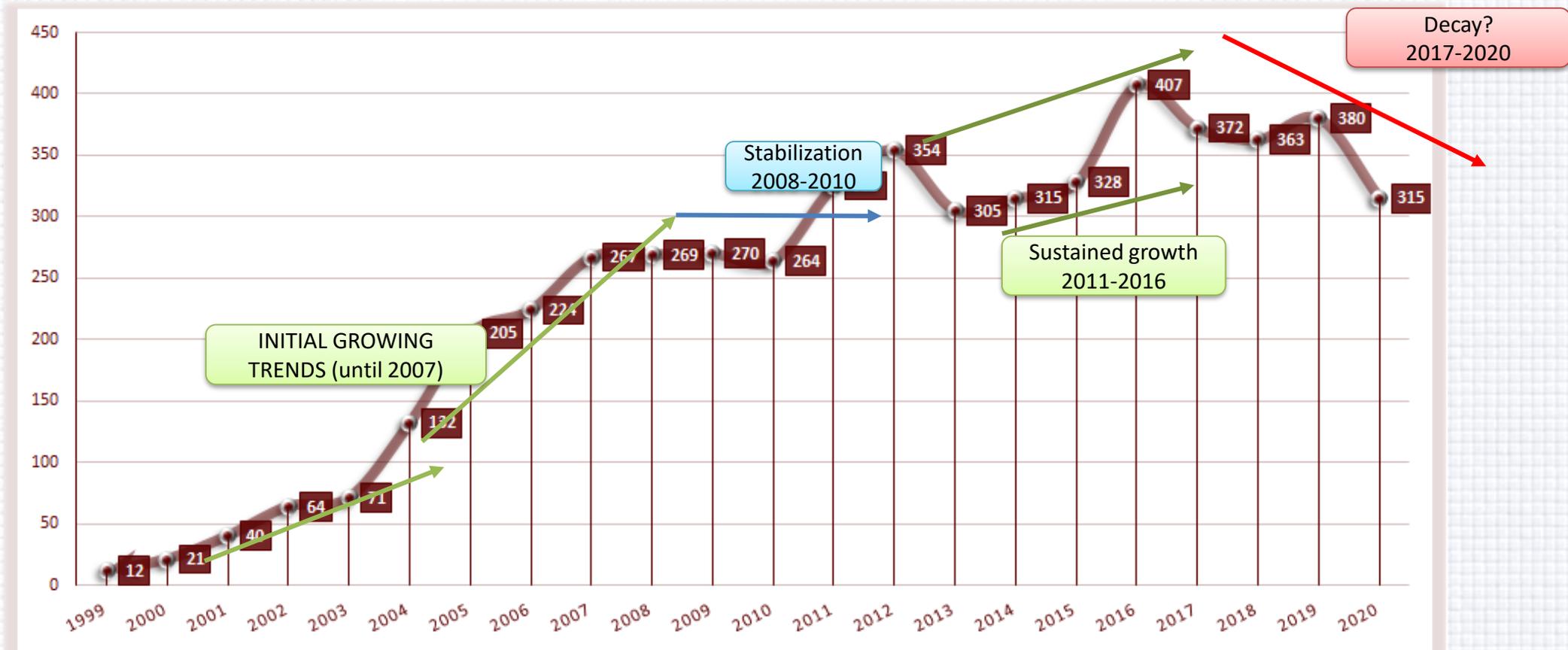
Statistics – Historical Trends

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



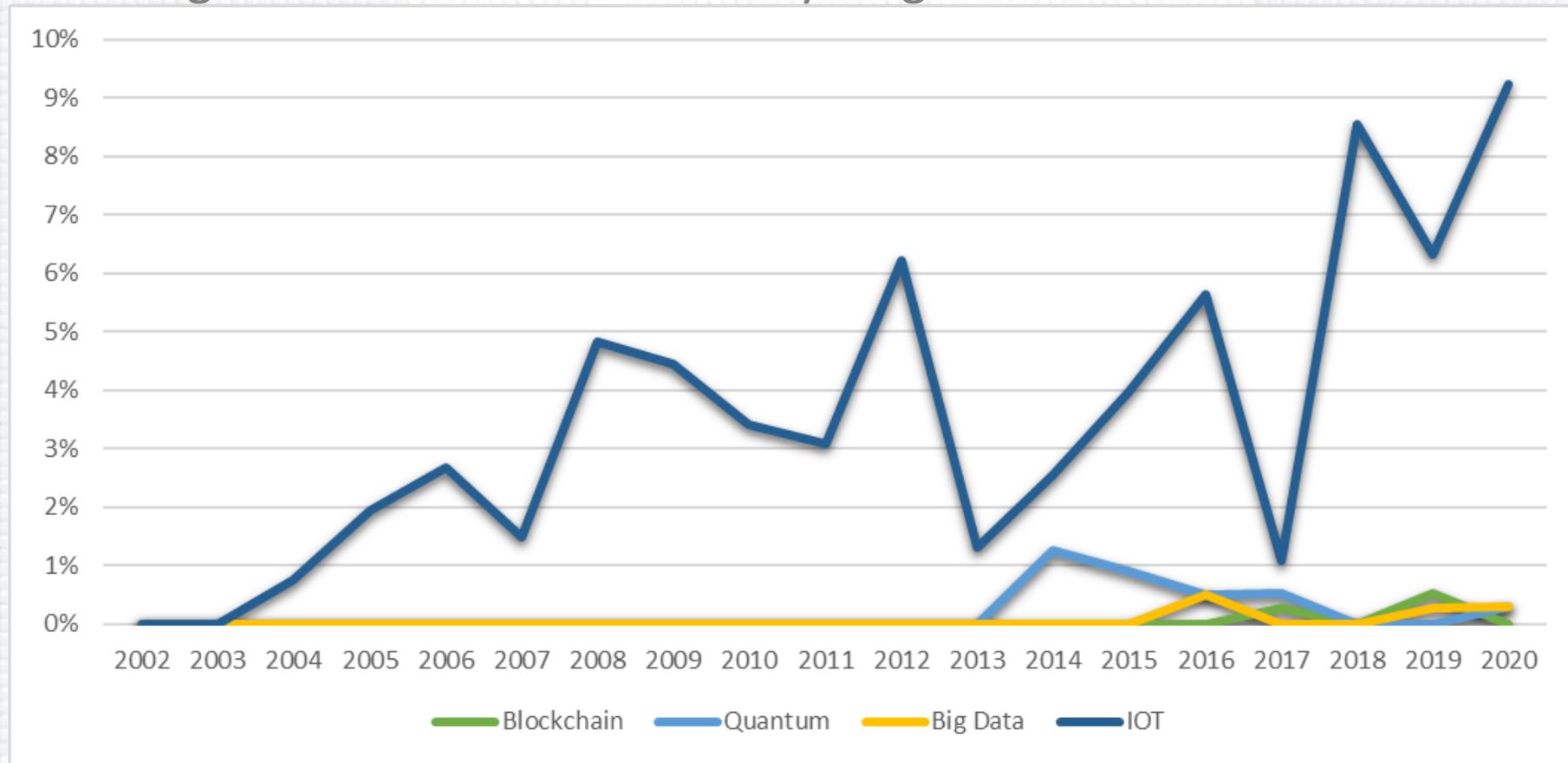
Statistics – Historical Trends

Number of certifications per year



Statistics – Historical Trends

Technological terms found in Security Targets



Conclusions

Conclusions for 2020

- ❑ PP compliant certifications and High-assurance certifications (EAL5+EAL4) predominated. EAL5 slightly > than EAL4 in 2020.
- ❑ 2020 brought **new winners** to the scene:
 - ❑ A new top vendor
 - ❑ A new top evaluation lab
 - ❑ A new top certifying scheme in the top-3
- ❑ CPP_ND was the most used CPP; PP084 was the most used regular PP.
- ❑ ICs & Smartcards were the most certified category, followed by Network Devices.

Has the lockdown affected the industry?

- ❑ 2020 currently has **less certifications** than 2016, 2017, 2018 and 2019. And **65 certifications below 2019**.
- ❑ The **top certifying schemes** lowered their number of certifications, except Netherlands.
- ❑ Most of the **top certification laboratories** certified significantly less products in 2020.



Has the lockdown affected the industry?

- ❑ No noticeable variations between Q1, and Q2-Q3 of 2020 (when lockdown).
- ❑ Unfortunately, we don't collect data about **products under** evaluation and:
 - ❑ Usually the whole CC process until certification takes between 6 and 12 months.
 - ❑ EAL4 and higher require a site audit, the lockdown possibly delayed them.
- ❑ We think that **many evaluations were started in 2019**: labs and certifiers tried not to stop them due to lockdown and **we saw numbers in 2020 related to those certifications**.
- ❑ In our opinion, the COVID could have **delayed evaluations starting in 2020**.
- ❑ Hence, we expect the **same decreasing trend in 2021...** with worst numbers?

Contact

jtsec: Beyond IT Security

Granada & Madrid – Spain

hello@jtsec.es

[@jtsecES](https://twitter.com/jtsecES)

www.jtsec.es



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