

TeleTrust/FIDO Alliance

German/US Expert meeting in cooperation with FIDO Alliance

San Francisco, 30.04.2025

FIDO Laboratory Perspective

Marcus Krechel, TÜVIT

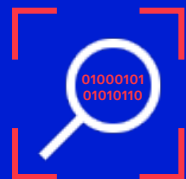
Marcus Krechel

Head of Business Entity Evaluation & Validation



TÜVIT contact details QR-Code

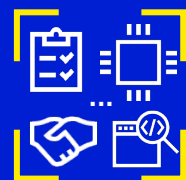




IT SECURITY
LAB



ACCREDITATIONS
worldwide



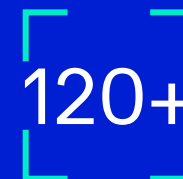
various
SERVICES



multiple
SECTORS

TUVIT

*We
create
trust.*



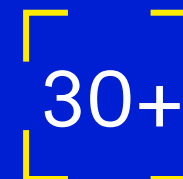
IT Security
EXPERTS

BSZ EMVCo

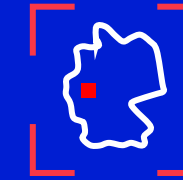
EUCC ... FIDO

NESAS TR

STANDARDS
& CRITERIA



years ITS
EXPERIENCE



LOCATION
Essen, GER


>15.000

EMPLOYEES
worldwide


1.69

SALES
in bill. EUR

Member of
TUVNORDGROUP

*Innovative technologies for everyone -
secure, safe, sustainable & inspiring.*

Status: April 2025; TNG 2024 numbers



>500

LOCATIONS worldwide
>50 countries



>150

years TIC
EXPERIENCE



FIDO Laboratory Perspective

Agenda

- Numbers
- FIDO Certification Programs
- Lab Accreditation
- References
- Contributions & Services
- Conclusion

Numbers

FIDO Laboratory Perspective

- FIDO Numbers
- **TUVIT** Numbers
- Authentication related Numbers

FIDO related Numbers

Status: April 2025

12 years FIDO Alliance (since 2013) Source: FIDO Alliance - Wikipedia	600+ certified products Source: https://fidoalliance.org/certification/	42 FIDO Alliance board members Source: https://fidoalliance.org/members/	250> FIDO Alliance associate members Source: https://fidoalliance.org/members/
2019 TÜVIT accredited FIDO lab since Source: TÜVIT	17 Finished+running FIDO related projects Source: TÜVIT	8+ FIDO evaluators at TÜVIT Source: TÜVIT	50% FIDO IDV evaluations by TÜVIT Source: https://fidoalliance.org/certification/identity-verification/face-verification/
3,9 bill. stolen passwords in 2024 Source: www.forbes.com/sites/daveywinder/2025/02/24/hackers-share-39-billion-stolen-passwords-what-you-need-to-know/	1,03 trill.\$ lost to scams worldwide in 2024 Source: www.statista.com/chart/33872/estimated-average-losses-due-to-scam-activity-per-victim	77% Hacking-related breaches involve stolen credentials Source: 2025 Data Breach Investigations Report Verizon	17,2 bill. total number of breached accounts (2004-2023) Source: ENISA THREAT LANDSCAPE 2024 (chap. 7.1)
4,2% Rise in malicious phishing emails since ChatGPT launched in 2022 Source: The State of Phishing 2024 Report SlashNext	856% Rise in malicious emails in the last six months Source: The State of Phishing 2024 Report SlashNext	50.000 \$ median loss per incident because of Business Email Compromise Source: 2025 Data Breach Investigations Report Verizon	28% of authentication consumers prefer biometrics for logging in Source: FIDO Barometer-Report-Oct-31-2024-2.pdf

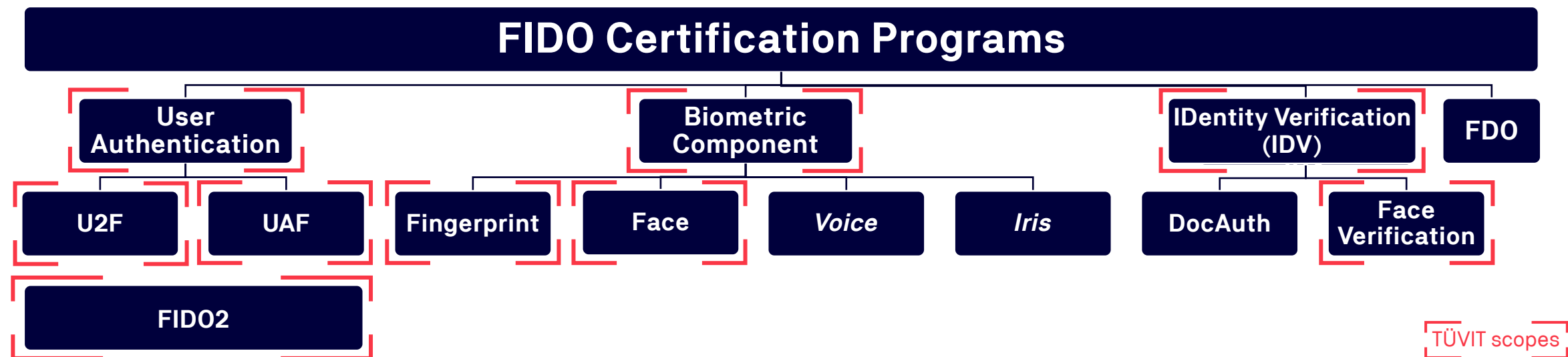
FIDO Certification Programs

FIDO Laboratory Perspective

- FIDO Certification Programs
- Lab Accreditation Process

FIDO Certification Programs

Overview & Subdivision



FIDO User Authentication refers to verifying a user's identity without using passwords

Authenticator Certification Levels (L1/L1+/L2/L3/L3+) introduce Authenticator Security Requirements

Biometric Component Certification is based on ISO standards, e.g.:

- ISO 30107-3/4 (Presentation Attack Detection)
- ISO 19795-1/9 (FRR, FAR)
- ISO 19795-10 (Bias)

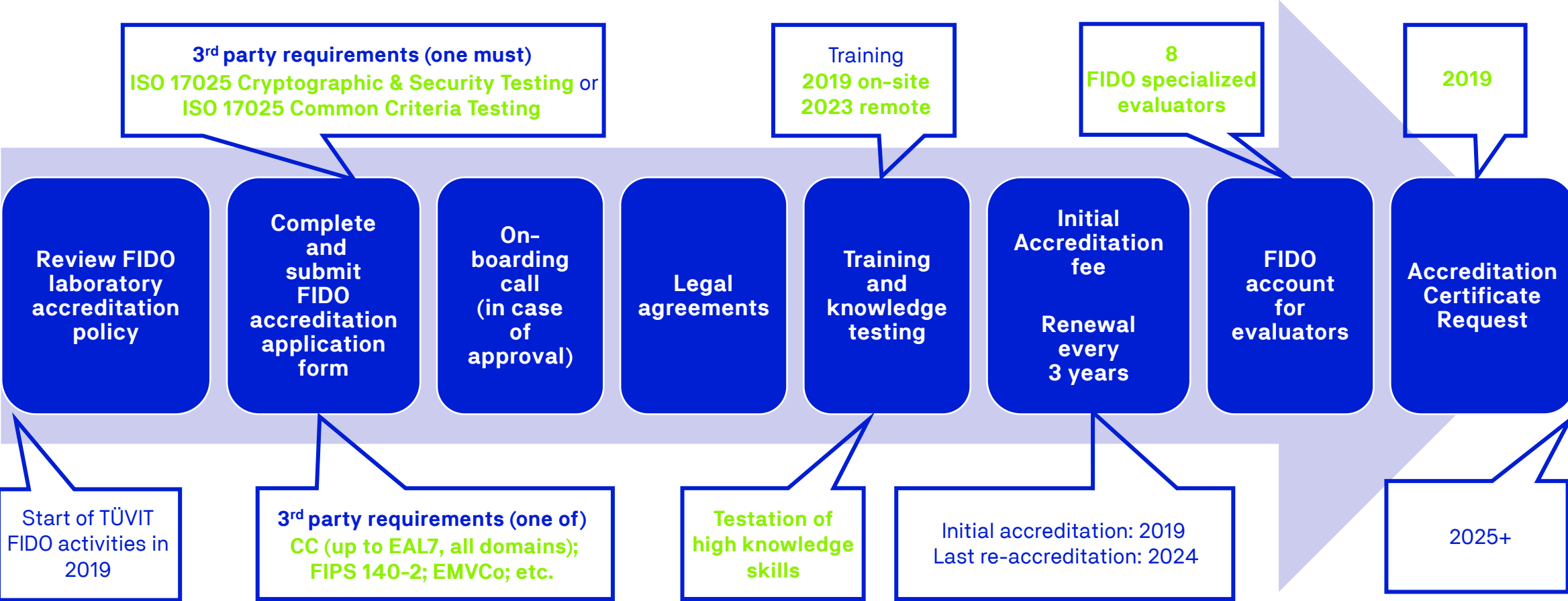
FIDO IDV refers to a process where person's identity is verified & linked to a device or authenticator. It's about binding a verified identity to a secure login method based on FIDO.

FIDO Device Onboard provides an automatic onboarding protocol for IoT devices

DocAuth: Document Authenticity; **IDV:** Identity Verification; **FDO:** FIDO Device Onboard (certification of IoT implementations); **FIDO:** Fast Identity; **FIDO2:** successor of U2F, incl. Passkeys; **U2F:** Universal 2nd Factor (e.g. USB Stick, NFC or BT Token); **UA:** User Authentication; **UAF:** Universal Authentication Framework; enables passwordless logins

Security Lab Accreditation Process

TÜVIT's way



TÜVIT References

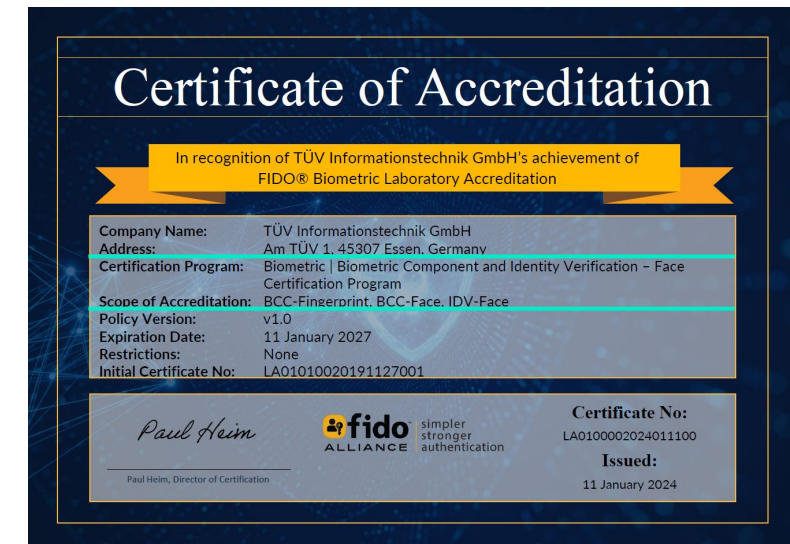
FIDO Laboratory Perspective

- **TÜVIT** Accreditations & Scopes
- References

TÜVIT FIDO Accreditations

Certification Program & Scopes

- User Authentication / Authenticator Security Certification Program
 - Level 1+, Level 2, Level 3, Level 3+
- Biometric Component Certification (BCC)
 - BCC-Fingerprint
 - BCC-Face
- IDentity Verification (IDV)
 - IDV-Face



TUVIT FIDO Projects

References^{*extract}

- FIDO Universal 2nd Factor (U2F)
 - Level 3+ (Pilot project with BSI)
- FIDO User Authentication (FIDO2)
 - Level 2 (references & in progress)
 - Level 3+ (in progress)
- FIDO IDentity Verification (IDV)
 - Level 1 (Face Verification)



Axell



THALES

WiseSecureTech

yubico

....



C A N
• D • identity
O U R

FIDO CERTIFIED
Level 1, Reference Type 1
IDV Face Verification

TÜVIT Contributions & Services

FIDO Laboratory Perspective

- TÜVIT Contributions
- TÜVIT Services

TUVIT Contributions

FIDO Alliance Support



First Mover

- 1st successful U2F Level 3+ evaluation project
- Pilot project with FIDO government level member (BSI)
- 50% of all finished IDV Face Verification projects

Improvements

- FIDO requirements improvements through commenting
- Improvements of readability / structure
- Work activities extensions & refinements

Ressources, Experience, Stability

- Involvement of 8 IT Security experts (FIDO evaluators)
- Experience in all technical domains and sectors, including software, hardware, and biometrics
- Level 3/3+ companion program qualification due to CC EAL 4-7
- Stability since start in 2019

TÜVIT FIDO Services

For Customers & FIDO Alliance



Contacts

User Authentication Certification

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Biometric Component Certification Identity Verification (IDV)

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... for user authentication & biometric component vendors

- FIDO product evaluation
 - + Authenticator evaluations
 - + Biometric evaluations
(all Levels & quick & synergies)
- Workshops
- Training
- Pre-Testing
- Process support

... for FIDO Alliance

- Specification support
- Standardisation support
- Tooling & Test Automation

Conclusion

FIDO Laboratory Perspective

- FIDO Advantages
- **TUVIT** Perspective

FIDO Laboratory Perspective

Conclusion

FIDO Advantages

- Making logins more secure & user-friendly
- Password replacement
- Cross-platform & Cross-device support
- Phishing resistance
- Privacy-preserving
- More trust into implementations via independent evaluations
- Time-to-market orientation
- International acceptance

TÜVIT Perspective

- FIDO is a good portfolio extension
- Satisfying customer needs, incl. synergy effects for multiple services at once
- Supporting the FIDO Alliance with our services & experience



☞ ***Making the authentication world more convenient, faster, and more secure*** ☞
due to FIDO & independent evaluation.

Thanks for your attention

Questions?

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LinkedIn QR-Code