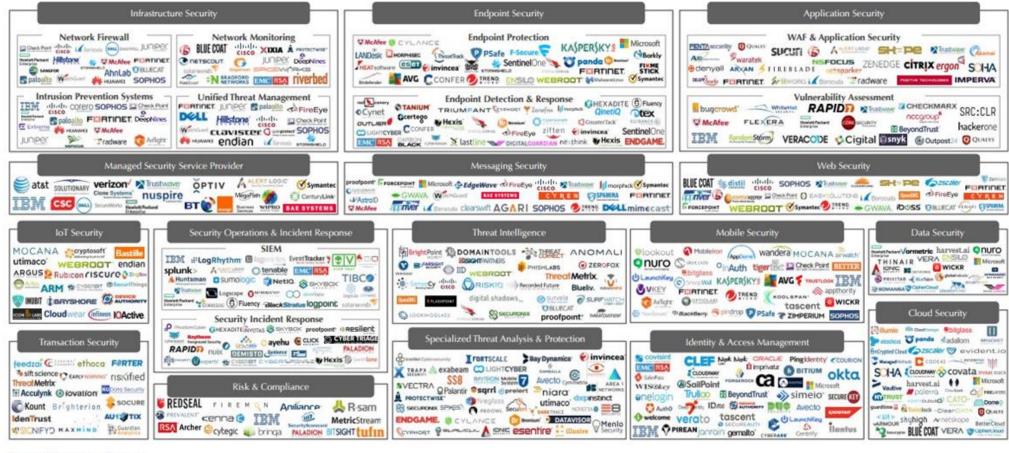


CYBERSECURITY INNOVATION IN THE NORDICS

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SCATTERED MARKET – SOME SEGMENTS GROW FAST, SOME LESS SO, SOME VERY PROFITABLE, SOME LOSS MAKING



Source: Momentum Partners.



Advanced ~

crunchbase

Events

§ Investors	Funding Rounds	→ Acquisitions	People
V 1-50 NEXT > of 33,103	results		
Organization Name V	IPO Status V	Operating Sta	tus v Numb
1. Lacework	Private	Active	501-10
2. games Gate.io	Private	Active	101-25
3. Socure	Private	Active	251-50
4. GitLab	Public	Active	1001-5
5. CrowdStrike	Public	Active	1001-5
6. SentinelOne	Public	Active	501-10
7. sift Sift	Private	Active	101-25
8. Drata	Private	Active	51-
9. BT BT	Public	Active	
10. Darktrace	Public	Active	
11. CLEAR	Public	Active	
12. Contrast Security	Private	Active	
13. Cybereason	Private	Active	
14. essel Expel	Private	Active	
15. Cloudflare	Public	Active	
16 🗖 Agr			

HOW MANY "STARTUPS" IN SECURITY?

security, cloud security, cyber security, network security 33 103 companies 721 companies (2.2% out of 33k)



NORDICS VIEW

Highly digitalized market

Strong Startup & Innovation ecosystem

Home markets hardly big enough

What works here – (typically) works everywhere

A Nordic Startup should consider to:

- Go global fast
- Hire remotely
- Be cost efficient
- Think slow, act fast



SECURITY CHARACTERISTICS IN THE NORDICS

Security.... Same same? But still the same?



Image source: pixabay (CC license)



THEMES FOR THE COMING YEARS



- Computing is commodity distributed AI maintaining security and privacy can make a difference
- Everyone is big on AI trustworthiness is an important challenge
- Multi-cloud (and on-premise / cloud hybrid) at times with data sovereignty requirements
- Cyber security is HUGE market (and growing)





JOINT RESEARCH, CO-OPERATION AND PUBLIC FUNDING ENABLE GROWTH AND NEW INITIATIVES

- Horizon 2020 (Horizon Europe) is the most attractive funding instrument by the European Commission for F-Secure's R&I activities
- Competition is intense but the high Horizon funding rates and EU-wide collaboration opportunities justify the efforts.
- European Cyber Security Organization (ECSO)
 facilitates Horizon project partnerships within the
 European cybersecurity community



A LOOK AT A FEW RESEARCH PROJECTS

- **SSICLOPS** (2015 2018): designed and prototyped key content distribution and client query handling algorithms of F-Secure Security Cloud
- **SOCCRATES** (2019 2022): combining vulnerability information, asset and information inventory with attack detection capabilities
- **CC-DRIVER** (2020 2023): developing an ML-assisted platform for Threat Intelligence handling
- **SIFIS-HOME** (2020 2023): working on improving the resilience of Smart Home systems and privacy-aware network traffic analytics



HORIZON PROJECTS AS ENABLERS

F-Secure research activities in certain domains were essentially enabled by Horizon 2020 funding and collaboration:

- **SHERPA** (2018 2021) research on security of ML-powered systems how those can be attacked and abused and how to defend them (we publish actively on the topic at https://blog.f-secure.com/artificial-intelligence-cyber-security/)
- The work started in SHERPA is now continuing in **SPATIAL** (2021 2024) (https://www.f-secure.com/en/press/p/f-secure-aims-for-more-secure-ai-as-a-part-of-spatial-)
- **SAPPAN** (2019 2022) was an initial point of our Project Blackfin (https://sappan-project.eu/)



CASE EXAMPLE: SAPPAN PROJECT

Sharing and Automation for Privacy-Preserving Attack Neutralization

(received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement no. 833418)

- Consortium: Fraunhofer FIT (DE), Masaryk University (CZ), F-Secure (FI), RWTH Aachen University (DE), Hewlett Packard Enterprise (IE), CESNET (CZ), University of Stuttgart (DE), Dreamlab Technologies (CH)
- Main objectives:
 - Distributing of attack detection and response capabilities among endpoints, organizational security backends and security service provider backends
 - Sharing of cybersecurity data and detection and response models (ML) in confidentiality- and privacy-preserving ways





INNOVATIONS FROM THE F-SECURE'S AI RESEARCH STREAM (initiated by the SAPPAN project)

ADAPTIVE DETECTIONS

Intelligent, on-client anomaly detection (UEBA)

What is 'anomalous' depends on the context: models constructed locally, aggregated on the level of an organization, and aggregated globally provide increased attack detection power

INTELLIGENT RESPONSE

Augmented Threat Hunting: Human with Al

Supporting security personnel in handling cyber incidents. Defining 'incident similarity' aptly, we significantly reduce the handling time or even fully automate the response operations

CONTEXTUAL SWARM INTELLIGENCE

Agents interact and collaborate for the ultimate situational awareness



THANK YOU

3 cool things

- Cyber Security
- Nordics (sometimes literally)
- Collaboration and research



