CYBERSECURITY

Ministry of Information Technology & Telecommunication
DIGITAL PAKISTAN

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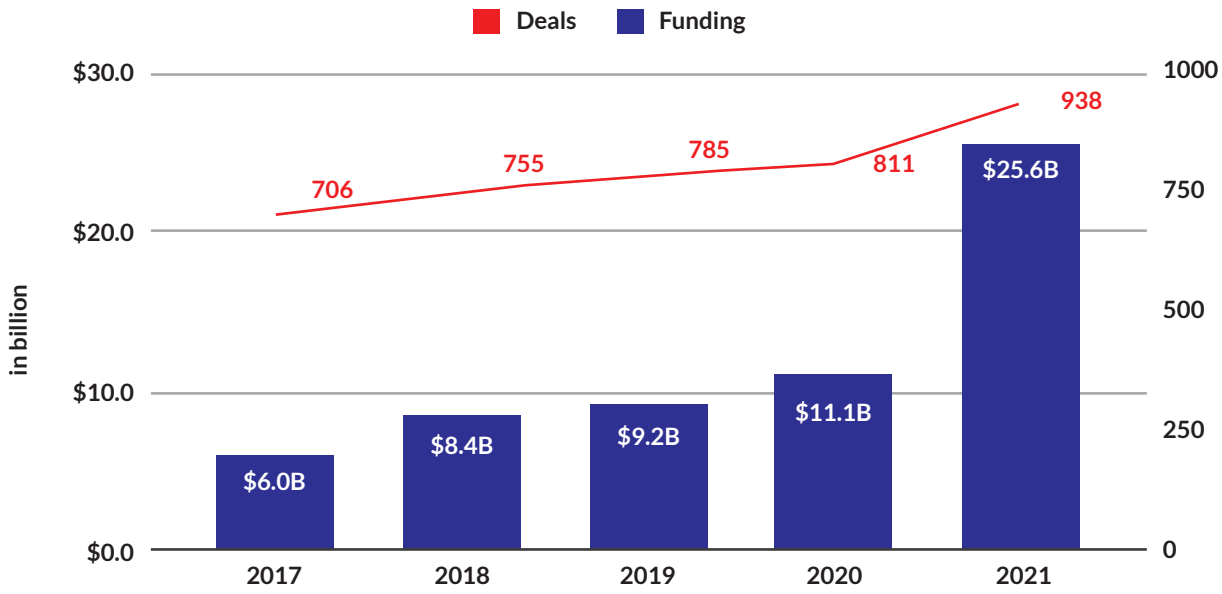
Global Snapshot

As the global economy has become more digital, especially post coronavirus due to higher prevalence of remote work and virtual meetings, there has been a sustained increase in cyber crimes. The number of such complaints filed with the US Federal Bureau of Investigation increased 7% to 847,376 in 2021, worth $6.9 billion.[1]

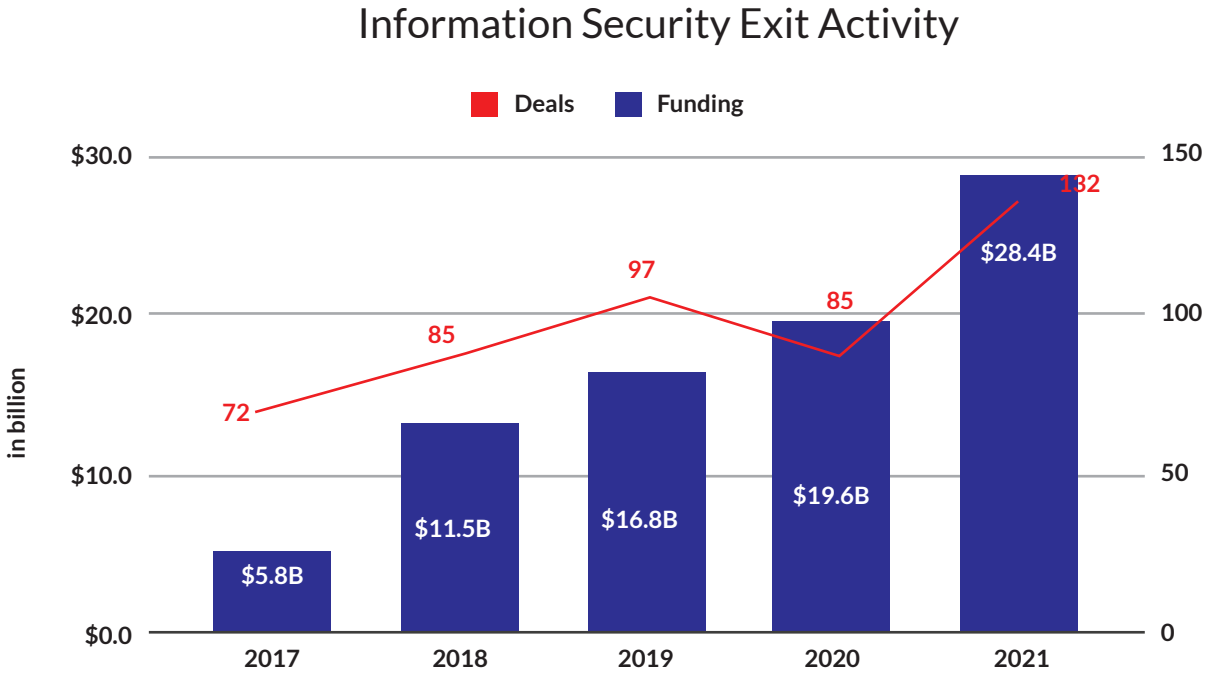
The economic impact of cybercrimes was estimated to be $600 billion annually or 1% of the worldwide gross domestic product as of 2018[2] while more recent projections put the number north of $1 trillion.[3] Consequently, companies have been prompted to prop up their spending on information security, which reached around $150 billion globally in 2021.

Similarly, venture funding into information security companies recorded its highest value in 2021, at $25.6 billion across 938 deals, registering a healthy increase compared to 2020. The number of exits from the sector also hit a peak at $28.4 billion across 132 transactions.

Information Security Funding Activity



[1]*https://www.forbes.com/sites/zacharysmith/2022/03/22/cybercriminals-stole-69-billion-in-2021-using-social-engineering-to-break-into-remote-workplaces/?sh=38419c796cf5*
[2]*https://www.csis.org/analysis/economic-impact-cybercrime#:~:text=The%20report%20concludes%20that%20close,losses%20at%20about%20%24445%20billion.*
[3]*https://www.washingtonpost.com/politics/2020/12/07/cybersecurity-202-global-losses-cybercrime-skyrocketed-nearly-1-trillion-2020/*



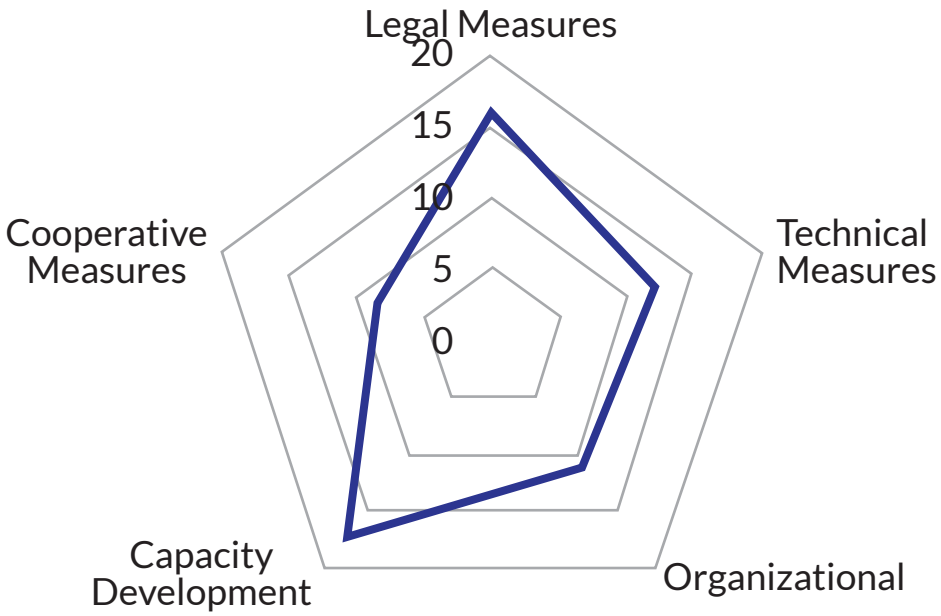
State of Cybersecurity in Pakistan

Given the sustained growth in Pakistan's digital economy on the back of new internet users and higher broadband penetration, the volume of data is multiplying which naturally raises the risk of cyberattacks and related vulnerabilities. The total number of complaints filed with the Cyber Crime Wing of the Federal Investigation Agency rose to 95,567 in 2021, from 84,764 in 2020 with financial fraud among the most common categories.[4]

However, with the increase in risks, there has been a growing sense of urgency regarding cybersecurity from stakeholders who have upped their efforts to deal with any vulnerabilities.

As a result, Pakistan's position on the Global Cybersecurity Index has improved fifteen places to reach 79th in 2020,[5] compared to 94th in 2018.[6]

[4] *https://www.thenews.com.pk/print/921519-fia-received-95-567-cybercrime-complaints-in-2021*
[5] *https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-GCI.01-2021-PDF-E.pdf*
[6] *https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-GCI.01-2018-PDF-E.pdf*



Overall score	Legal Measures	Technical Measures	Organizational Measures	Capacity Development	Cooperative Measures
64.88	15.97	12.26	11.01	17.25	8.38

Source: ITU Global Cybersecurity Index v4, 2020[7]

A Thrust from the Top

As Pakistan becomes more digital, the government has released the National Cyber Security Policy 2021, which identifies the challenges and lays the framework to move forward. Among its key policy deliverables is the constitution of a Cyber Governance Policy Committee which will oversee its execution.

The policy further proposed a designated federal organization, National Computer Emergency Team (NCERT), that will look after the coordination of all cybersecurity related matters across various levels and multiple industries such as banking, telecom, defense etc; and organizational. Further, it lays down the scope for public-private partnerships where the government can create a nurturing environment for cybersecurity companies and encourage startups to solve challenges within the space. Similarly, thanks to the policy push, many universities have started offering undergraduate and postgraduate degrees in cybersecurity, thus skilling human resources within the field. Broadly it covers cyber security governance, active defense, protecting internet-based Services, Information Security Assurance Framework, Cyber Security Research and Development, Capacity Building, and Cybercrime Response Mechanism.

[7] *https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-GCI.01-2021-PDF-E.pdf*

Other government bodies have also taken it on themselves to provide more robust cybersecurity guidelines for industries falling under their mandate. For example, the Securities and Exchange Commission of Pakistan issued a framework for the insurance sector in 2020 while the State Bank enforces checks and balances on the banking industry and increased its efforts after 2018.

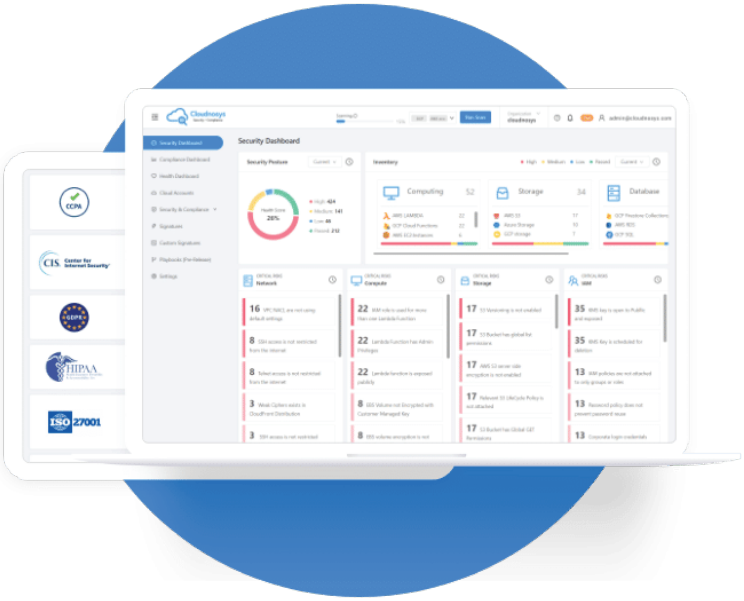
An Opportunity for the Private Sector to Shine

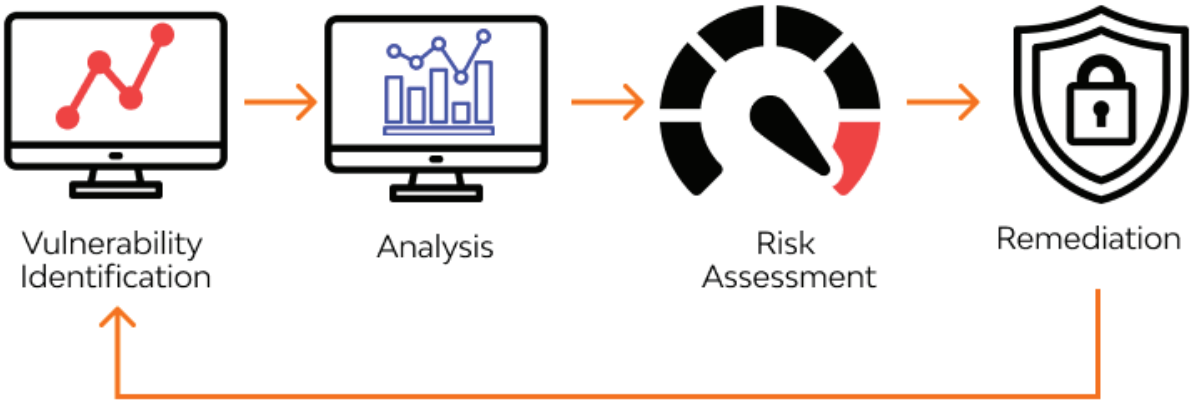
This realization and push from the government have created a unique opportunity for incumbents and new entrants alike to come up with solutions that solve the pain points of the industry and make their cybersecurity infrastructure more resilient.

From threat detection and compliance to identity management and encryption, the sector is largely a greenfield where localized solutions can be provided.

Atompoint

Atompoint is a boutique software development studio, which helps startups and businesses to protect their cloud infrastructure from security threats, data loss and compliance risks with real time monitoring, auditing, and automated remediation.[8]





Thingz Eye

ThingzEye is a spin-off from IoT Research and Innovation Lab (IRIL), Al-Khwarizmi Institute of Computer Science (KICS) at University of Engineering and Technology (UET) Lahore. The IRIL Security Lab is funded by the National Center for Cyber Security (NCCS) and is mandated to develop innovative solutions in the field of IoT security.They offer 360° security solutions for IoT networks. Their services include threat modeling, embedded systems security and quality assurance,penetration testing, IoT hardware vulnerability assessment and devices static and dynamic vulnerability analysis.[9]

[8] *https://atompoint.com/about-us/*
[9] *https://thingzeye.com/about-us/*

Lynx Infosec

Lynx is a cybersecurity firm committed to assisting its clients in achieving security excellence. The organization is catering to the dire technical needs of enterprises by rendering its services in IT security assessment, advanced threat protection, and preparedness for common criteria (CC) product evaluation in order to safeguard the data assets and business technology of enterprises.[10]

Securiti AI

Securiti is a market-leading enterprise security and compliance solutions at Symantec, Blue Coat and Elastica. Their team led Symantec and Blue Coat's cloud security business and pioneered the CASB market with an industry-leading solution that was consistently rated #1 by Forrester Wave and recognized as a Gartner MQ Leader each year. Securiti has been widely recognized as an industry innovator, being named "Most Innovative Start-up" at RSA Conference 2020, Leader in the IDC Marketplace, Leader in the Forrester Wave Privacy Management Software, and winner of the 2020 HPE-IAPP Innovation Award.[11]

[10] *https://lynx-infosec.com/about/*
[11] *https://securiti.ai/*

SlashNext

SlashNext built an Artificial Intelligence (AI) phishing detection engine with virtual browsers and behavioral analysis using computer vision, natural language processing, and several machine-learning classifiers to detect and stop well-crafted multi-payload phishing attacks delivered via multiple communication channels, including legitimate infrastructure. They also patented their cloud and on-device AI technology which goes beyond email protection to multi-channel protection, and stops spear phishing, social engineering, and other targeted human threats. [12]

BugsLife

BugsLife is a cybersecurity company focused on providing top of the line penetration testing services including external penetration testing, internal penetration testing, web application testing and mobile application testing. They help prevent businesses from different types of security breaches. [13]

Growth Arbor

Growth Arbor helps businesses navigate their rising complexity surrounding technology, cyber security and technology infrastructure. Their services include comprehensive assessment on the current cyber security risk posture of a company, from policies and architecture to penetration testing, to the review of devices, software networks and more.[14]

[12] *https://www.slashnext.com/*
[13] *https://www.bugslife.co/*
[14] *https://www.growtharbor.com*

Ebryx

Ebryx is a cybersecurity and engineering solutions provider in multiple domains, including managed security services, security product engineering, and custom software development. Ebryx established its cybersecurity R&D division, which builds custom security solutions for their customers, and for their managed security division, which protects clients from the rapidly evolving threat landscape.[15]

Technogenics

Technogenics is a leading cybersecurity and engineering solution company. They have experienced team leads having more than 10 years of experience in the field of cyber security and product development. Product development experience of their team includes network security, endpoint and cloud security.[16]

Access Pvt Ltd

Access Pvt Ltd provides cyber solutions, promising protection of the work environment and prevention through compliances. Access Pvt Ltd partnered with a global service provider Gemalto, to offer a broad range of security solutions, including protection of critical business data, communications, financial transactions, and digital identities through a full spectrum of encryption technologies.[17]

[15] *https://ebryx.com/about-us/*
[16] *https://www.technogenics.io/index.html*
[17] *https://access.net.pk/infosec/*

Kualitatem

Kualitatem Inc. is an independent software testing and information systems auditing company. As a software testing company, Kualitatem has served a global clientele ensuring the quality of their web, mobile and desktop applications across multiple industry verticals. In addition to application testing, Kualitatem provides quality management of information systems and IT infrastructures. They have secured their clients through security audits, defining security architecture, data leakage prevention and penetration testing. Meanwhile, their audit programs cover processes, procedures, controls, data, hardware, software and networks. [18]

Global SNI

Global SNI provides a wide range of virus security solutions in Pakistan to suit different business needs. The company is one of the best resellers of multiple security solutions such as Sophos, Cisco, Solarwinds, RSA, Kaspersky, Fortinet, McAfee, GFI Software, and Symantec.[19]

Pligence

Ensuring Your Privacy

Pligence is an AI-Based cyber security and privacy company that specializes in providing threat intelligence and cyber security protection solutions.It provides intelligent and automated cyber security solutions to protect end users, enterprises, financial institutions, government organizations and service providers. [20]

[18] *https://www.kualitatem.com/about/*
[19] *https://www.globalsni.com/solutions/*
[20] *https://www.linkedin.com/company/pligence/about/*

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ABOUT THIS INDUSTRY ROUNDUP

Pakistan Software Export Board developed this paper by hiring services of independent consulting firms to prepare this roundup on Pakistan's Cybersecurity sector. The paper focuses on Pakistan-based companies in this vertical and apprises the reader of the expertise available in Pakistan in the Cybersecurity domain.

DISCLAIMER

All the information provided in this roundup is compiled by the consulting firms and based on the available material about the companies covered in this roundup. Coverage in this industry roundup document is not an endorsement by Pakistan Software Export Board (PSEB), Ministry of Information Technology and Telecommunication (MoITT) or the Government of Pakistan (GOP). The Pakistan Software Export Board, Ministry of Information Technology and Telecommunication, or the Government of Pakistan assumes no commercial financial or legal liability accruing from any transactions with the firms featured in this industry roundup.

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