



Appknox Case Study

Securing the mobile app landscape for a financial governing body in India

Overview



Challenge

The institution that governed the first successful experiment in open banking in the world grappled with ensuring the security of its mobile applications, detecting and addressing vulnerabilities, ensuring compliance, and maintaining efficiency and productivity.

The lack of a comprehensive and automated approach to vulnerability detection and remediation made it difficult to address these challenges. As a result, the organization's security posture was compromised.



Solution

Appknox's automated vulnerability assessment tool seamlessly integrated to solve these intricate challenges and leveraged our manual pen-testing expertise. This dynamic combination offered a scalable solution for overseeing vulnerabilities across the expansive landscape of 35+ applications.

What set it apart was its ability to conduct non-intrusive vulnerability detection and a unified vulnerability dashboard enriched with advanced analytics and contextual risk management.



Results

With Appknox, the governing body witnessed a transformation in its security assessment workflow and swiftly identified a staggering 650 vulnerabilities within the initial 90 minutes spent on each application. Appknox streamlined workflows and delivered substantial time savings.

Real-time visibility into the security posture of all applications became a reality, empowering the regulatory institution to prioritize and address the most critical issues.

What Appknox helped achieve

01

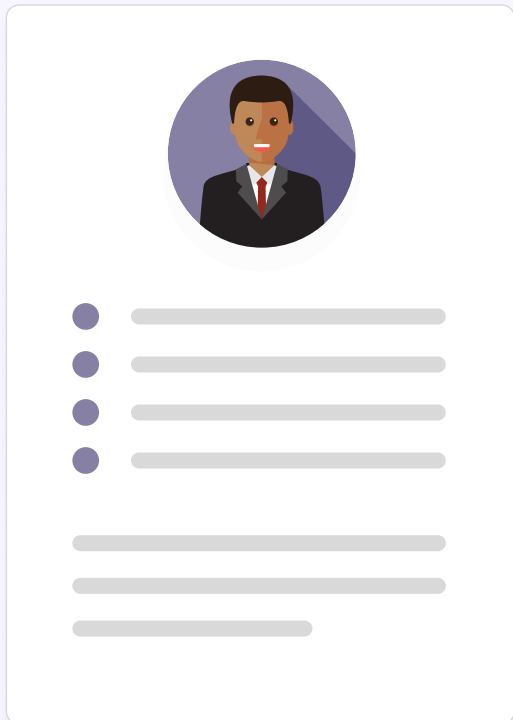
Save 90% of time spent on manual vulnerability detection

02

Reduce unnecessary vulnerability remediation by focusing on high-impact threats and <1% false positives.

03

Integrate APIs securely, ensuring that sensitive data is protected and that APIs are not vulnerable to attacks.



Client profile

INDUSTRY

Government | Financial Services

SERVICE LOCATION

Global

HEADQUARTERS

India

REVENUE

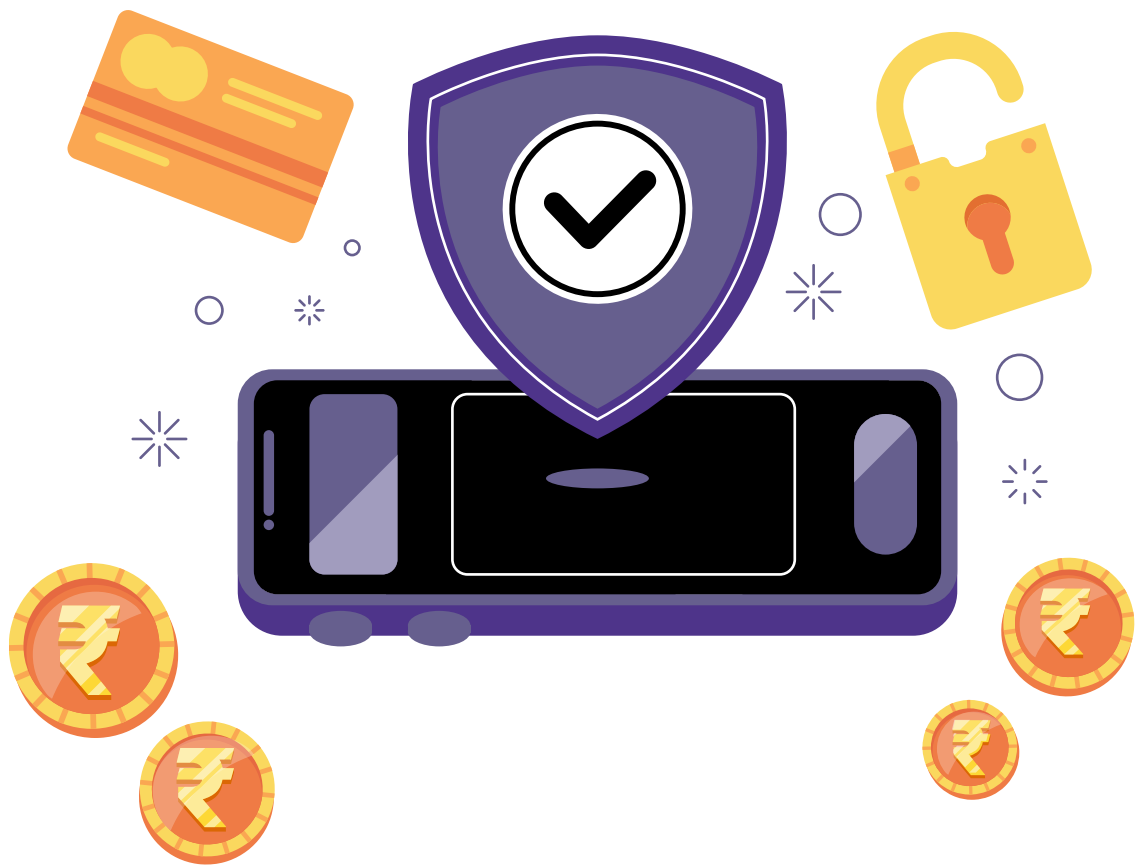
\$2.5B

EMPLOYEES

2000+

SECURITY TEAM SIZE

10-15



About the company

Headquartered in India, the governing institution is known for implementing the most successful and widespread use case for open banking for the first time in the global banking space for the largest democracy in the world and enabling millions of secure financial transactions in a brand-new open banking landscape with UPI, one of the world's largest open banking use cases so far.

About 5 years after launching the model, they'd reached a staggering 920 million transactions by the end of 2018.

The challenges

Navigating through challenges that are unheard of coupled with the entire ecosystem progressing towards the common goal of making banking accessible and efficient plagued the largest governing body of the most successful open banking experiment for the largest democracy in the world.

Here's a list of some of the top challenges faced by the PSP.



Major security vulnerabilities in UPI apps

Managing security vulnerabilities in a large portfolio of UPI-based apps was challenging, making it crucial to have a solution that can detect and prevent potential threats.



Lack of mobile app security expertise

Internal teams at the governing institution lacked the necessary expertise to handle mobile app security, making it essential to have a robust solution that is dependable, easy to adopt and accurate.



Authentication weaknesses

Ensuring robust authentication mechanisms across a large portfolio of apps was difficult, highlighting the need for a solution that can strengthen login security and prevent password bypasses.



Single-vendor security dependence

Relying on a single vendor for all security concerns was risky, as it left the institution vulnerable to potential security breaches. A solution that can offer a multi-vendor approach to security which the internal team can closely follow in real-time was necessary.

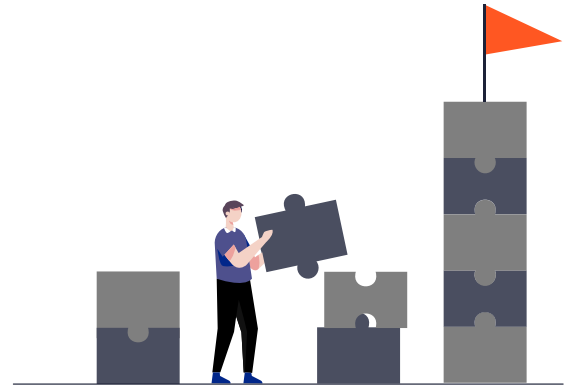


OTP system vulnerabilities

The One Time Password (OTP) system, meant to provide an additional layer of security, was found to be vulnerable to brute force attacks, emphasizing the importance of a solution that can effectively manage and secure user accounts.

The solution

Managing the security of hundreds of mobile apps can be daunting coupled with challenges like scaling vulnerability detection, adhering to internal protocols, and maintaining code integrity. The governing was on the lookout for a robust on-premise solution. Appknox's automated vulnerability assessment tool and manual pen-testing with a private device farm empowered them to identify potential security risks and remediate them.



Vulnerability details at a glance

Appknox's dashboard provided a quick overview of vulnerabilities, allowing the governing body to quickly identify and address potential security risks. These vulnerabilities were classified by impact variables based on the level of threat they posed, enabling them to prioritize which ones to address first.



CVSS based reporting

Appknox used the Common Vulnerability Scoring System (CVSS) to rate the severity of vulnerabilities, making it easier for the security team to compare and contrast the risks posed by different vulnerabilities and prioritize which ones needed immediate attention.



Automated and manual scans

Appknox offered both automated and manual scanning to give the apps comprehensive coverage. The automated scan generated a low-false-positive assessment in 60 minutes, while the manual scan by pentesters helped build a hack-proof mobile app.



On-Premise deployment

Appknox's on-premise deployment model allowed for scanning solutions to be hosted on the governing body's own servers, ensuring that data was never uploaded to the cloud and providing increased confidentiality and ownership.



DevSecOps

Appknox's solutions facilitated a shift to DevSecOps, enabling them to build security into their development process and collaborate openly to adopt an enablement attitude towards security.

The impact

By leveraging Appknox's automated vulnerability assessment and remediation capabilities, the governing body was able to detect and address vulnerabilities in its mobile applications more efficiently and effectively. This resulted in significant improvements in the security posture of the application portfolio.



Parameter	Before Appknox	After Appknox	Savings
Time	Manual scans across 35+ apps were time-consuming and error-prone	Focus on remediation instead of lengthy manual scans	Saved 80% of time spent on manual vulnerability detection
Compliance	Limited visibility impacted security alignment with internal SOPs	Streamlined compliance testing with standardized processes	Reduced compliance audit preparation time by 60%
Effort	Disruptive code modifications lead to risks and delays	Continuous security without development disruptions	Saved 70% of development time and resources
Efficiency	Fragmented view hindered visibility and prioritization	Prioritize critical threats and optimize remediation efforts across the app portfolio	Improved vulnerability identification and remediation accuracy by 25%
Productivity	Difficulty prioritizing vulnerabilities based on actual exploitability context	Address the most critical risks first and maximize security RO	Reduced remediation costs by 40% by focusing on high-impact threats and <1% false positives

KEY INSIGHTS

51

Vulnerabilities in 1st Scan

341

Applications Analysed

15

Critical Scan



Appknox has been a crucial partner with us to ensure utmost security of our UPI-based application. We have had good early detection of vulnerabilities with the help of very energetic and brilliant security professionals.

-Head of Risk Management

The Appknox advantage

Appknox is an enterprise-grade security platform that helps developers, security researchers, and enterprises build a safe and secure mobile ecosystem faster with automated security checks.

THE APPKNOX IMPACT

<90 mins

comprehensive automated VA

<1%

false negatives

8+

compliances

Trusted by Gartner, loved by enterprises

- ✓ Recognized in Gartner Peer Insights Voice of Customer
- ✓ Gartner Hype Cycle for Application Security
- ✓ Gartner Notable Vendor

**Unleash the power of
superior scalable security
with Appknox today.**

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