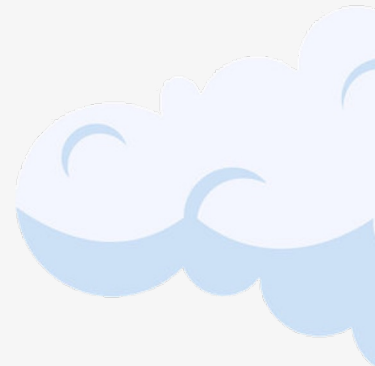


# Robert A. Kalka

*Metropolitan Skyport*

Penetration Test Executive Briefing  
Team XX  
January 14, 2024



# Our Team



Mission Fulfillment

Active Directory Specialist

Web Services & APIs

Principal Operator

Linux Engineer & Tooling

Cloud Engineer & Special Projects

# Overview

01

## Objectives



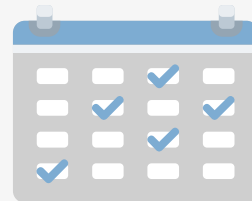
02

## Critical Findings



03

## Remediations



04

## Regulatory Compliance



05

## Observed Strengths

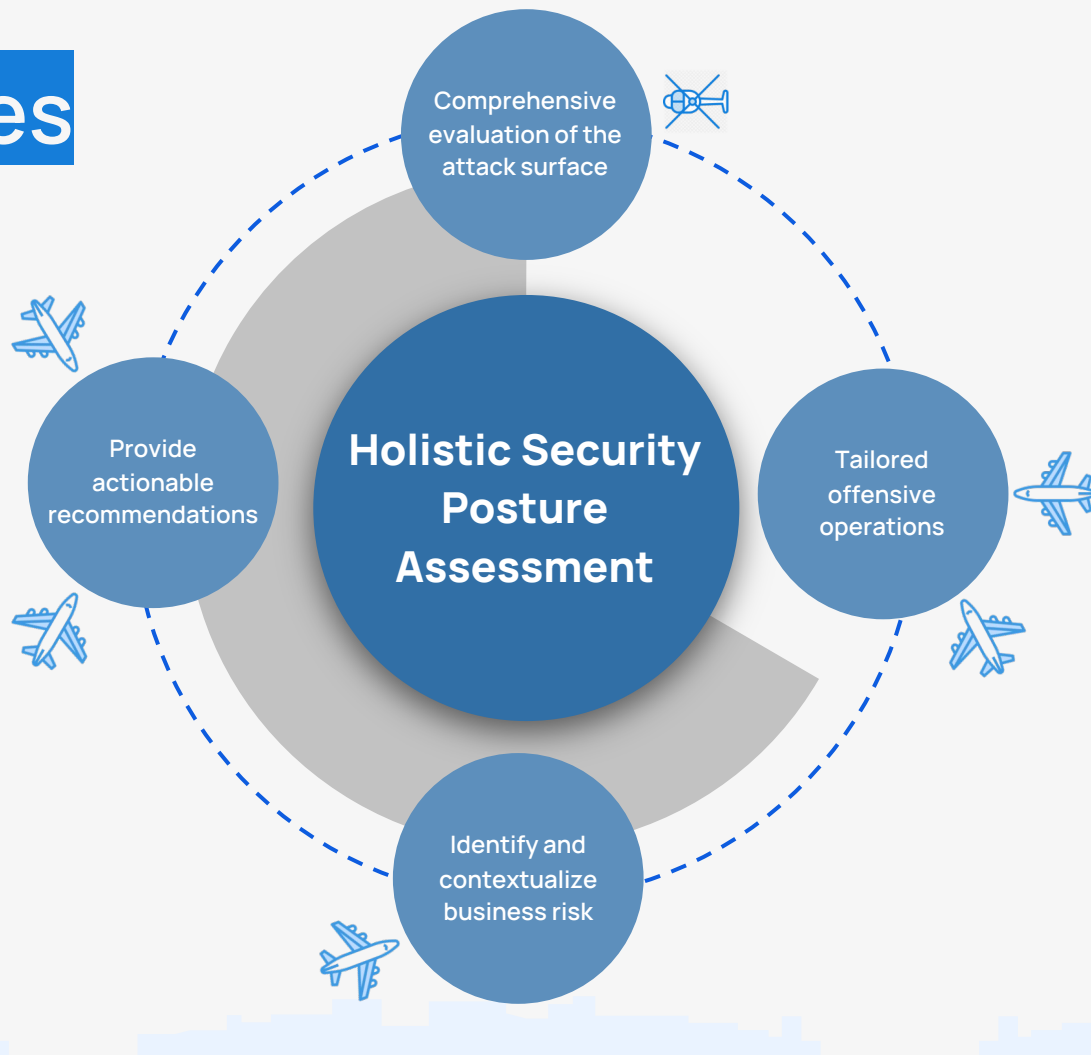


06

## Opportunities for Improvement



# Objectives



# Scope



Corporate  
Network



Guest  
Network



Train  
Network



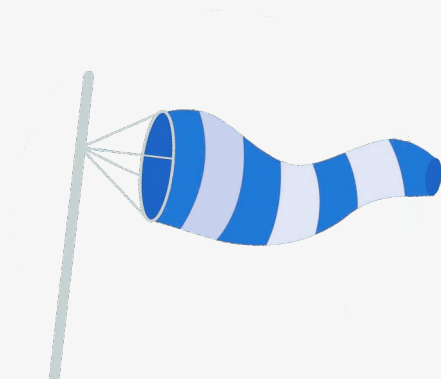
User  
Network



Amazon  
Web  
Services



Radio  
Emission  
Detection



# Assessing Risk (Comprehensive Risk Index)

## Severity

Inherent magnitude of the vulnerability



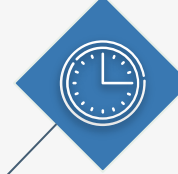
## Ease of Exploitation

Expertise required to exploit vulnerability



## Effort to Fix

Time, effort, and resources required to remediate



## Degree of Exposure

Degree vulnerability is exposed in the infrastructure

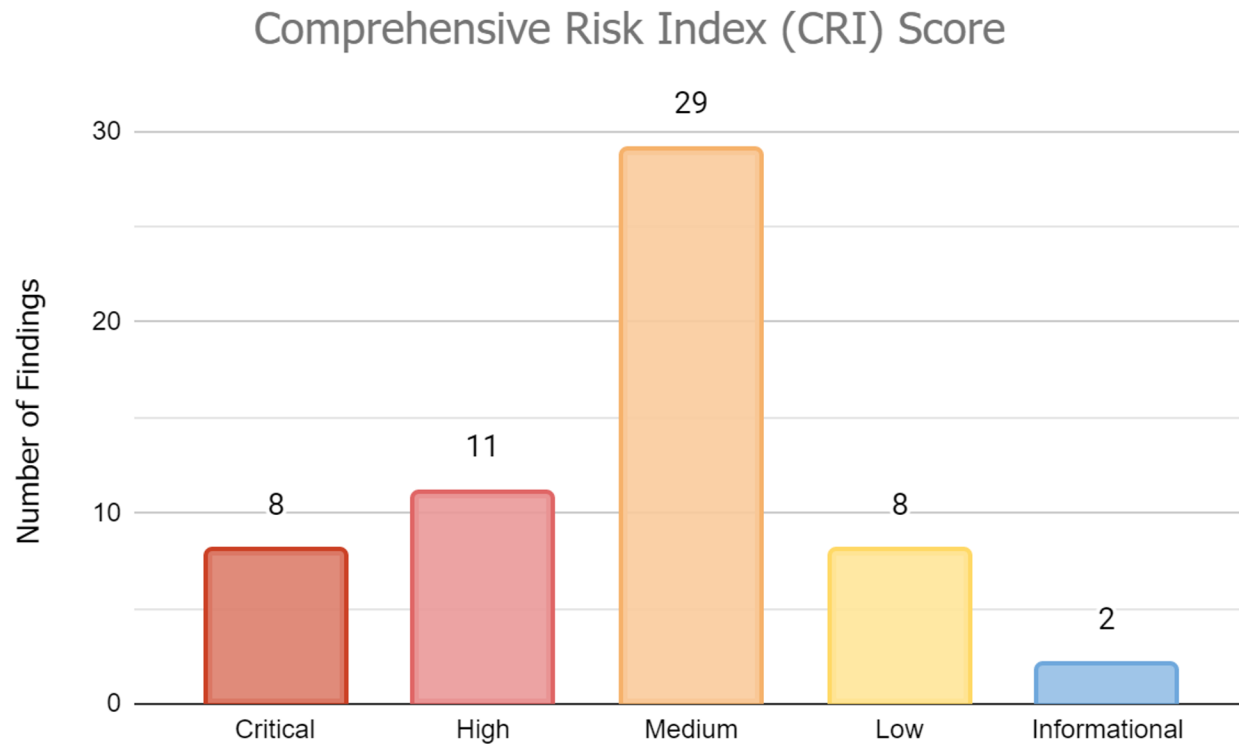


## Business Impact

Impact to business, reputation, and compliance



# Critical Findings



# Critical Findings

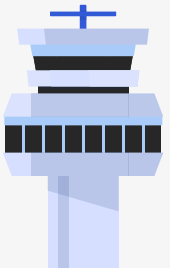
Unauthenticated access to mission critical cyber-physical systems

Exposed sensitive financial and personally identifiable information

Insufficient Windows Active Directory Security Controls

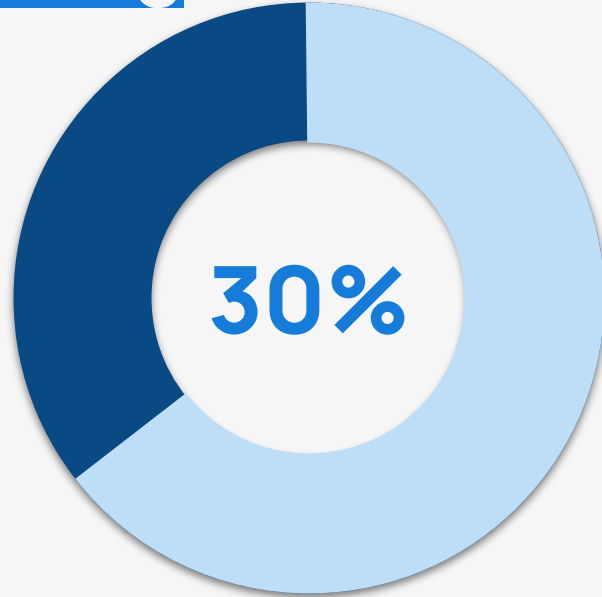


**Existential Risk to  
The Business and to  
Passenger and  
Employee Safety**





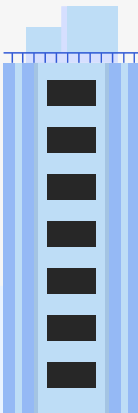
# Remediation Testing



Previous Technical Findings: **23**  
Remediated Findings: **7**

## Residual Risk

- ❖ Social engineering
- ❖ In-house software vulnerabilities
- ❖ Physical security



# Observed Strengths

- ❖ Account Lockout Policies
- ❖ Network Segmentation
- ❖ Secure Software Frameworks



# Regulatory & Compliance



Aviation Cyber  
Initiative (ACI)



Airport  
Operator  
Cybersecurity  
Requirements



24-Hour Breach  
Reporting  
Mandate

# Regulatory Financial Risk

**\$5M**

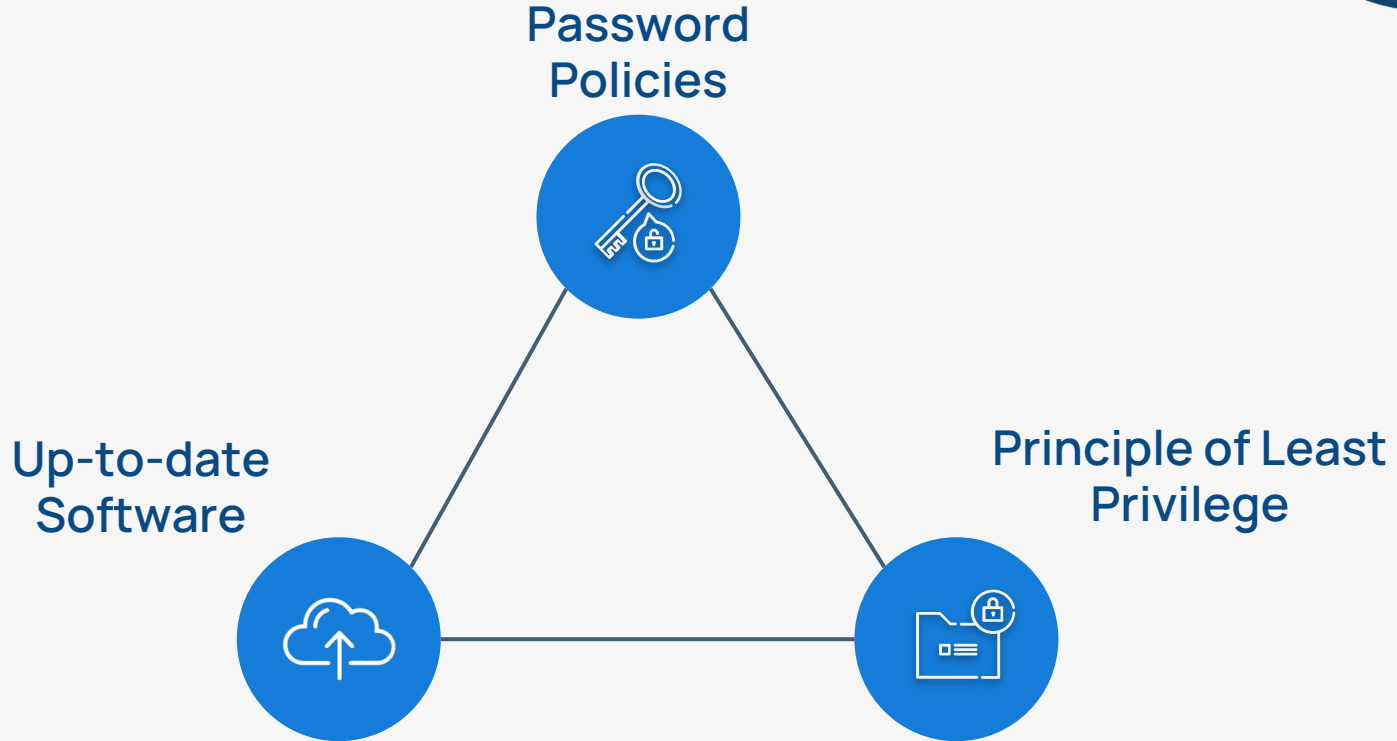
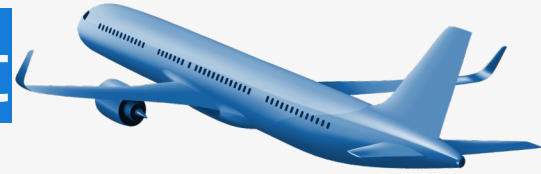
*in forfeited  
grants*

**\$6M**

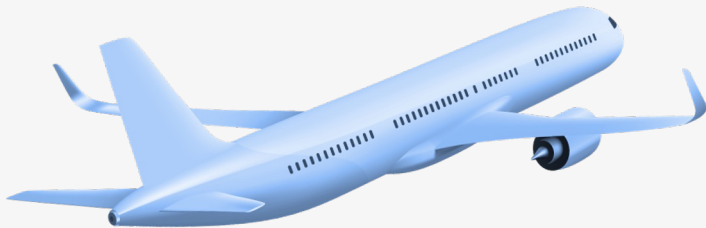
*in  
regulatory  
penalties*



# Opportunities for Improvement



# Takeaways



***Improved security posture***

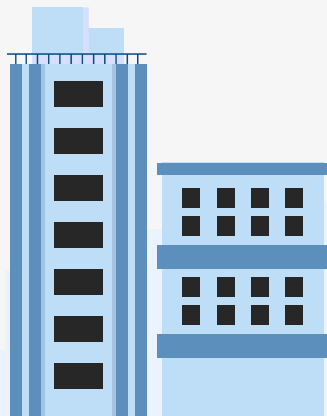
compared to initial engagement

***Critical weaknesses remain***

in RAKMS' security posture

***Opportunity to distinguish RAKMS***

from peers in the airport and aviation industry





# Thank you!

We'd love to take your questions.



*finals-xx@cptc.team*