CYBERSECURITY ADVISORY BOARD

February 19, 2019

AGENDA

- Introductions
- Disclaimer
- Purpose/Objectives
- Cybersecurity Strategy and Roadmap
  - Background
  - Current initiatives FY 18-19
  - Coming initiatives for FY 19-20
  - Roadmap for FY 20-21
- Feedback and Action Items
- Closing

INTRODUCTIONS

- Alex Tosheff, CSO, Vmware
- Arun Singh, Senior Director Security, Salesforce.com
- George DeCesare, SVP/Chief Technology Risk Officer, Kaiser Permanente
- Justin Dietrich, CISO, Santa Clara County
- Joe Fulton, PhD, CISO, Splunk
- Malcom Harkins, Chief Security and Trust Officer, Cylance
- Michael Makstman, CISO, City & County of San Francisco
- Taher Elgamal, CTO, Salesforce.com
- Yassir Abousselham, SVP/Chief Security Officer, Okta

DISCLAIMER

- This is a body created to advise City Management and staff. Advisory Board members are required to comply with the City's Procurement and Contract Process and related Integrity and Conflict of Interest provisions. Advisory Board members also need to avoid making recommendations that promote products and/or services that directly benefit their business interests, and must exclude any sales content to avoid procurement conflicts.

- The above requirements are for the benefit of the public, City, and any vendors that want to preserve their right to participate in future procurements.

PURPOSE/OBJECTIVES

Build a Secure City

- Partner with cybersecurity leaders for insights
- Best ways to secure people, systems, and our community
- Refine City's strategies, tactics, operations, and resourcing
- Plan for IoT and Data at scale
- Support privacy

A staggering range of City services…

6,200 employees

11.5 million airport passengers per year

9.2 million library items checked out

565,000 police emergency calls per year

69,000 streetlights

38,000 building permits

3,500 acres of parkland

3,000 fires per year

2,400 miles of streets

178 zoo animals

San Jose

35%
Asian

32%
Latino

26%
White

3%
Black

3%
Two+ races

39% born outside the United States

Your residents are experiencing a service delivery revolution

But does that revolution include your local government?

Introduces Prime offering free two day shipping

Steve Jobs Unveils the iPhone

Offers on demand streaming music of your choice

Summon and pay for a ride using an app

Hits one Million nights booked allowing anyone to stay anywhere

Over one Billion people are connected and sharing their lives

Alexa let's you use natural language voice commands

| 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2017 |

Local Government must innovate or be left behind…

LOCAL GOV UNDER ATTACK

~$30M

9/27/2018 06:45 PM

CDOT computers held for ranso

Ransomware Attack Hits Port of San Diego

he attack began Monday and continues to have an impact on services

This is a presentation slide showing multiple news article screenshots overlaid.

Forbes

Billionaires   Innovation   Leadership   Money

Forbes CommunityVoice   Connecting expert communities to the Forbes audience.   What is This?

1,837 views | Apr 18, 2018, 07:15am

Cities Are Facing A Deluge Of Cyberattacks, And The Worst Is Yet To Come

Cesar Cerrudo Forbes Council
Forbes Technology Council CommunityVoice ⓘ

POST WRITTEN BY

Cesar Cerrudo

Professional hacker and CTO of **IOActive Labs**, creating cutting-edge research on AI, Cars, Smart Cities, Robots, IoT and Blockchain Security.

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SUN

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attack affecting
park permits and
e attack, first reported
statement from the port.

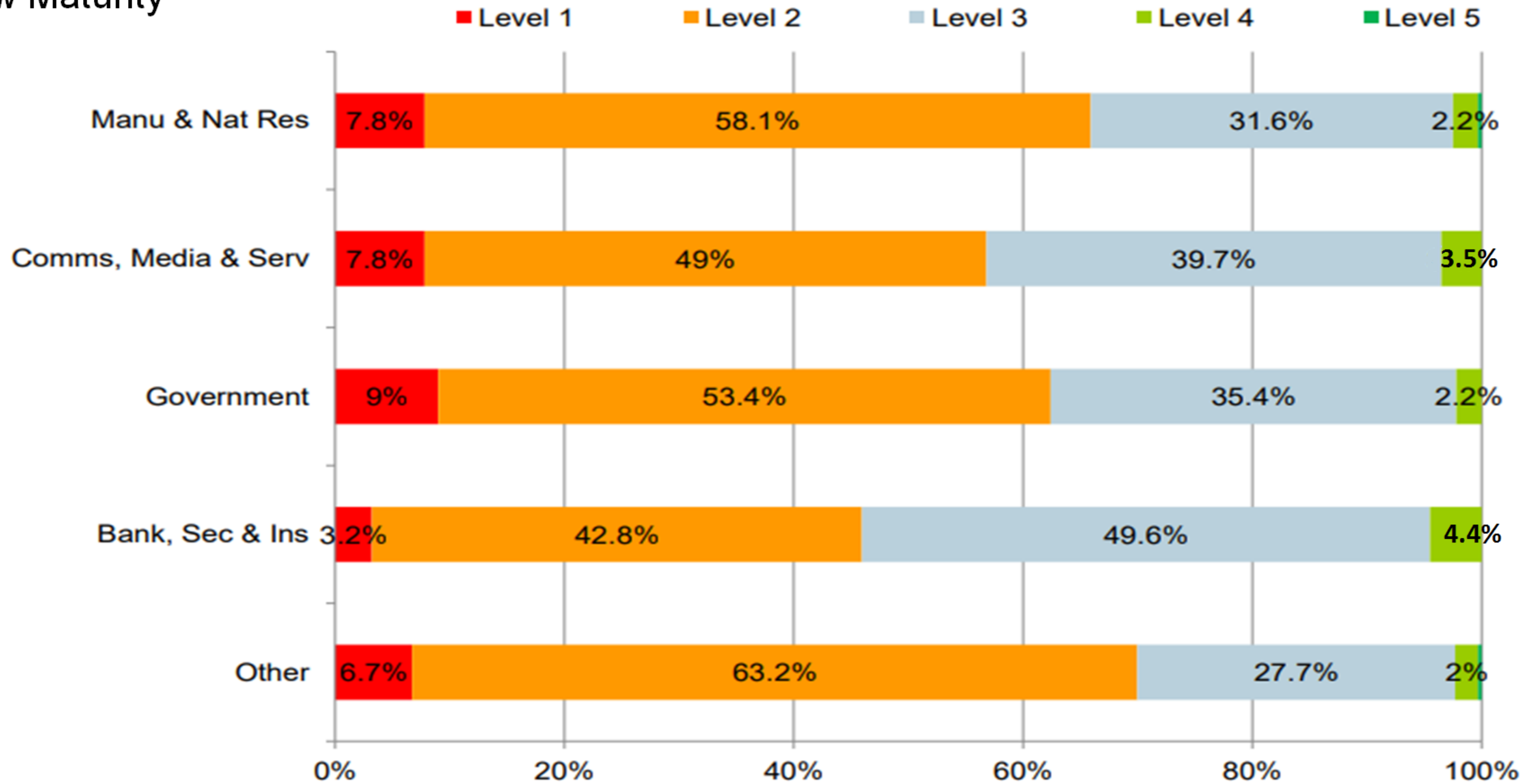em hacked,
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attack and the one that
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during a random scan and a
ccording to a security advisor.

ologetic as it is invasive. In Atlanta's case, a
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CBS 13 WJZ

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e confirmed to The Baltimore Sun on

SEC

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STATE OF LOCAL GOV. SECURITY

Slow Maturity

Legend: ■ Level 1 ■ Level 2 ■ Level 3 ■ Level 4 ■ Level 5

Industry	Level 1	Level 2	Level 3	Level 4
Manu & Nat Res	7.8%	58.1%	31.6%	2.2%
Comms, Media & Serv	7.8%	49%	39.7%	3.5%
Government	9%	53.4%	35.4%	2.2%
Bank, Sec & Ins	3.2%	42.8%	49.6%	4.4%
Other	6.7%	63.2%	27.7%	2%

SAN JOSE RISK PROFILE

Vectors
- Phishing/Smishing/Vishing
- Ransomware/Cryptoware Attacks
- Exposures from Weak Controls
- Internal Threats
- Advanced Threats

Impacts
- Audits / Insurance / Bonds
- Reputation
- Lawsuits
- Services
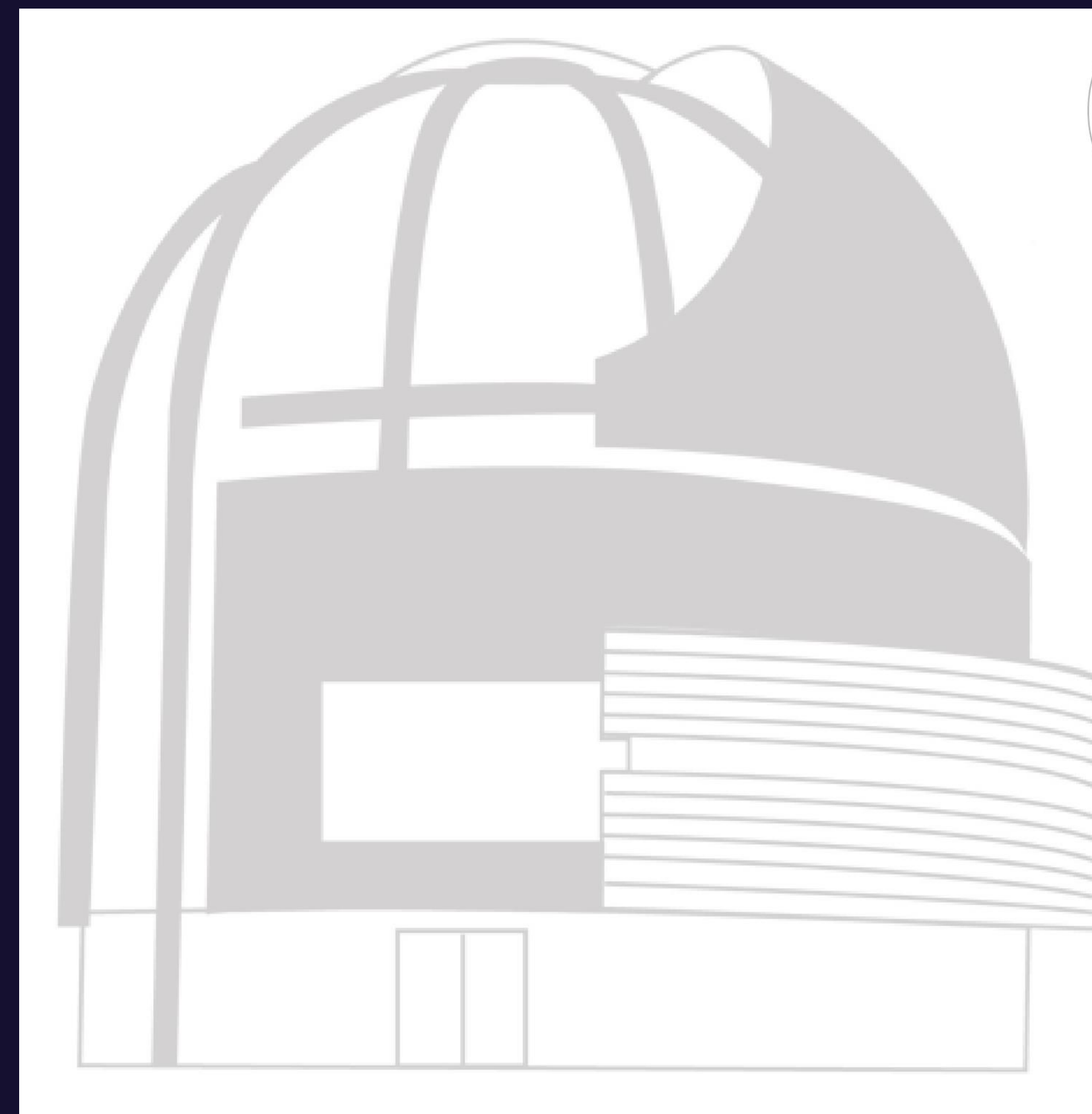
CYBERSECURITY STRATEGIES

- <u>Leadership</u>: CIO-CISO Tag Team
- <u>Build Org</u>: Cyber Office, Advisory Board, Work Plan, Resources
- <u>Habituation</u>: Practiced Learning and Cyberdisaster Drills
- <u>Keep Current with Risks</u>: Vendor-sourced Services
- <u>Ally for Power</u>: Allied Intel Sharing, Joint Response, Talent Development
- <u>Security at Scale</u>: Pattern-Based Security through AI

BUSINESS STRATEGY

PEOPLE
CIO/CISO Tag Team
Executive Team "Owns it"
Cybersecurity Habits
Lean Team

Secure City

TOOLBOX
Artificial Intelligence/ML/DL
Security Assessments
vSOC Monitoring
Incident Response Partners
Perimeter Security
Habit-forming Training per Audience

ALLIED PROCESSES
Cyberthreat Intel Alliance
Incident and Joint Response
Cyberdisaster Drills
Innovative Vendor-Partner Services

CYBERSECURITY TACTICS

- Cybersecurity Office
- NIST Cybersecurity Framework
- CMMI Security Maturity Model
- NSA Defense-in-depth
- IoT NIST Guidelines
- Intelligence Sharing
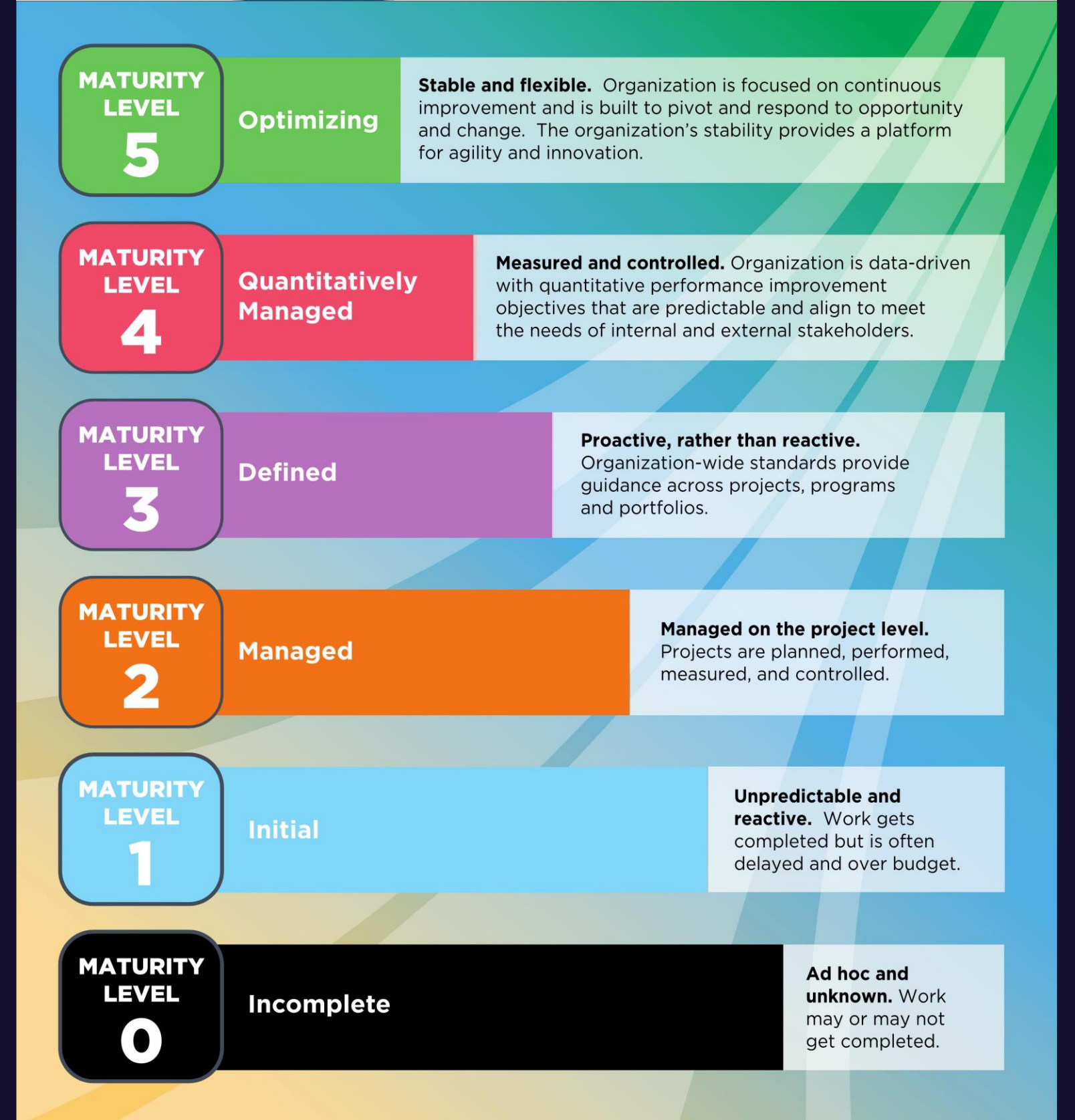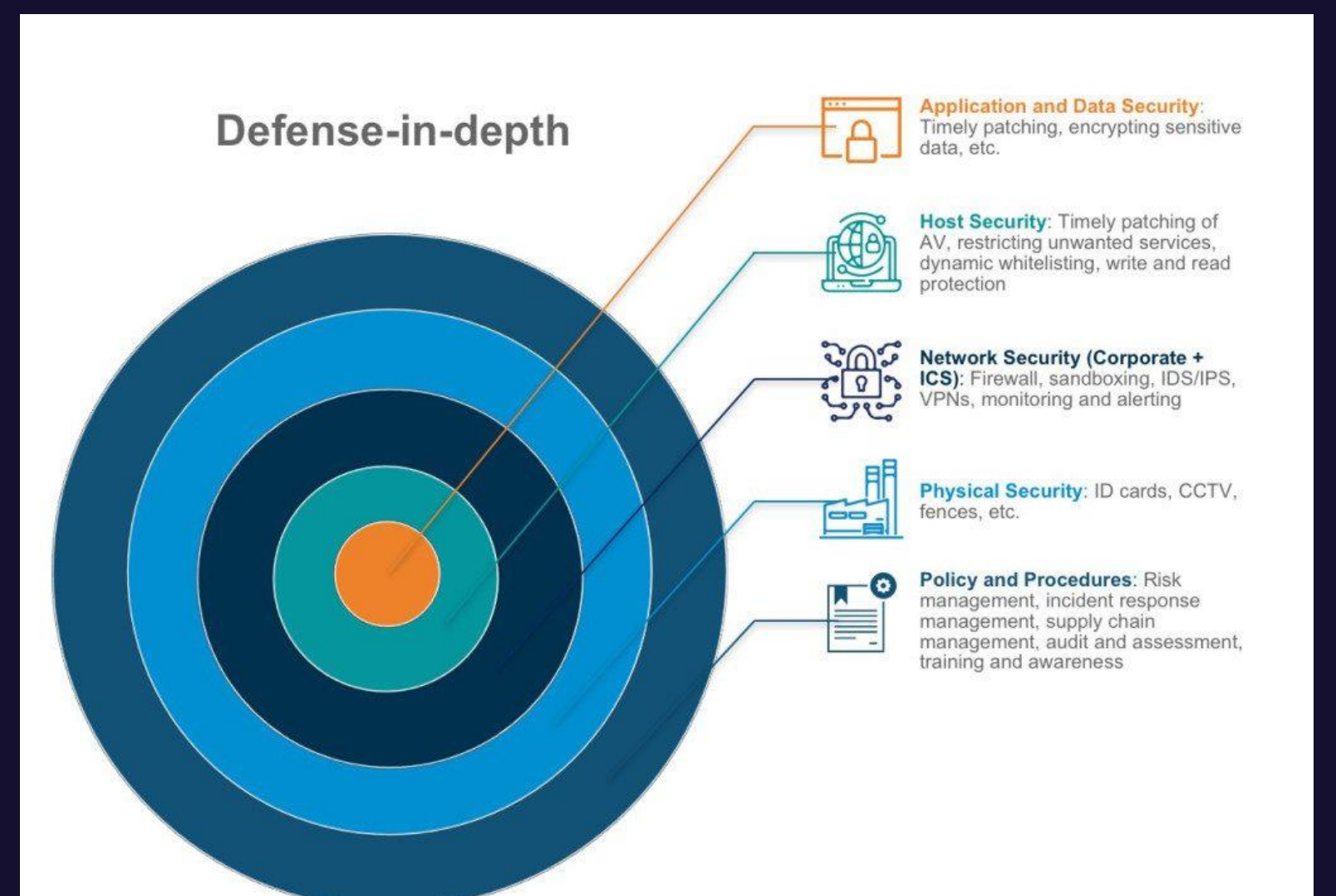
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Thank you!