Securing Our eCITY

ISSA Information Systems Security Association San Diego Chapter

SD ISC2

SD IEEE

SD IEEE Consultants Network

Forum – Enhance Your Practice by Teaching

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ISSA / ISC2 / Infragard / SOeC… AFCEA / NDIA… IEEE / INCOSE / et al

COMPLEXITY

We "just do IT" ecurity, yber & IA Professionals www.SCIAP.org

Bottom line - As in ALL things

Consulting it is mostly about the '*value proposition*' "AND" sharing!!!

Points to cover / pontificate on

1). Overview of your career and practice. Include how, why and when you decided to do consulting.

2). How, why and when you decided that teaching would be a good addition to your consulting practice.

3). The best part of teaching as it relates to your practice. (What you feel you have gained the most from teaching).

4). Describe the biggest drawbacks of teaching as it has affected your practice. (What made you think twice about teaching).

5). What you think makes a good candidate for a teacher. What kind of people should avoid teaching.

THEN – show a few *cyber education <-> consulting efforts* for examples

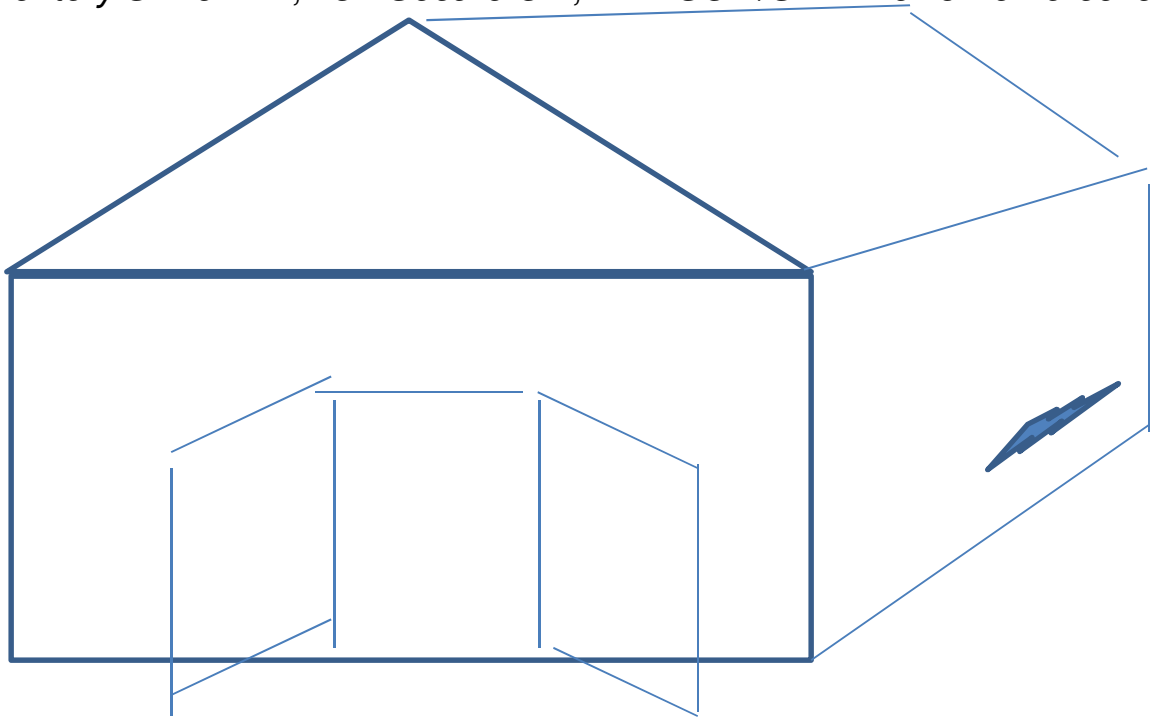
What MUST we do in Cyber?

Manage RISK and DO the Security BASICS

(start by managing the top NSA 10 / SANS 20 mitigations!)

OR.. how about just DOING the Cyber Hygiene Campaign top 5 actions!

(e.g., 1 &2 - Inventory SW & HW, 3 - Secure CM, 4 – SCM/SIEM & 5 - enforce least privileges (*))



Consultants see *value* in Fixing AND Educating

Close the "cyber" barn door first, versus fixing cracks in the wall!

Follow the *Hierarchy of Cyber needs* – mitigate, manage your way up

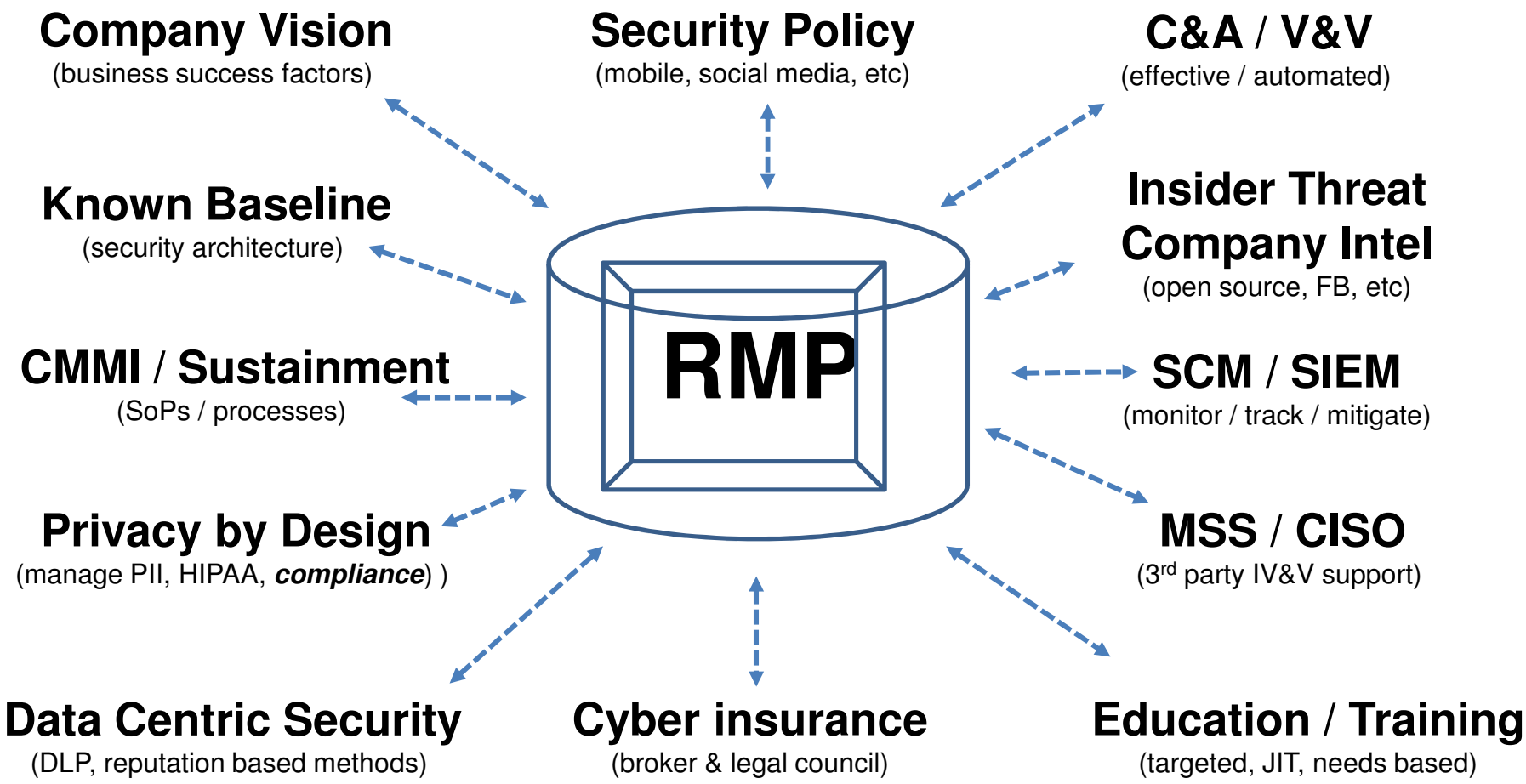
RE: Companies / SMBs need "cyber security operators" – not cyber ninjas!.

(*) https://www.cisecurity.org/about/CyberCampaign2014.cfm)

The Integrated **Business RM** Approach

+ Making the Risk Management Plan (RMP) work! +

*(Will teach "**Cyber Enabled Business Risk Management**" at Webster in fall)*

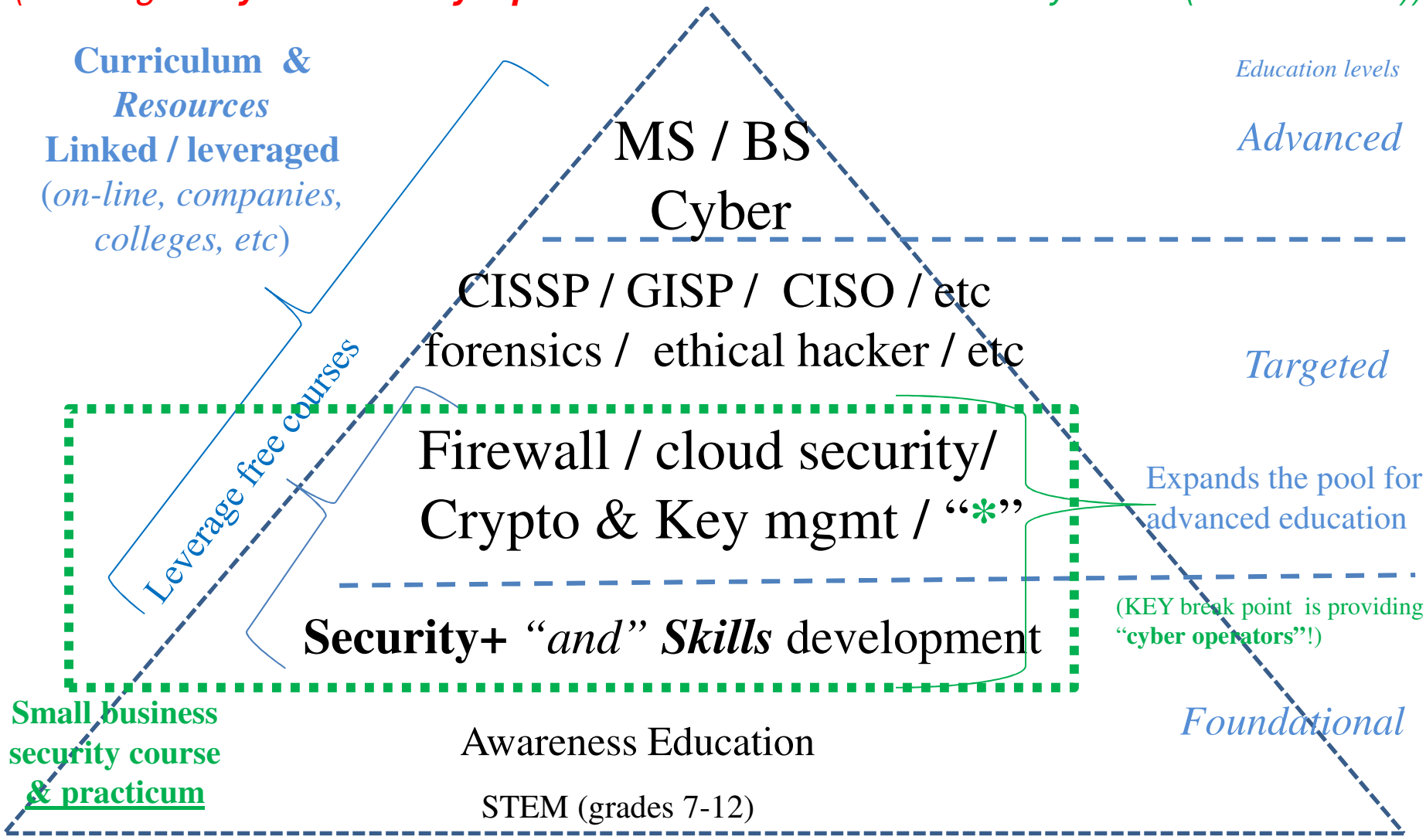


Common Business RMP model *(re: RMF / COBIT & Risk IT)*
AND using the NIST Cybersecurity Framework (re: CAR / ESA)

Cyber Education triangle

"clarifying the *fog of cyber security* through targeted training"

*(Building a "**Cyber Security Operator" course** - seed the entry levels (veterans too))*

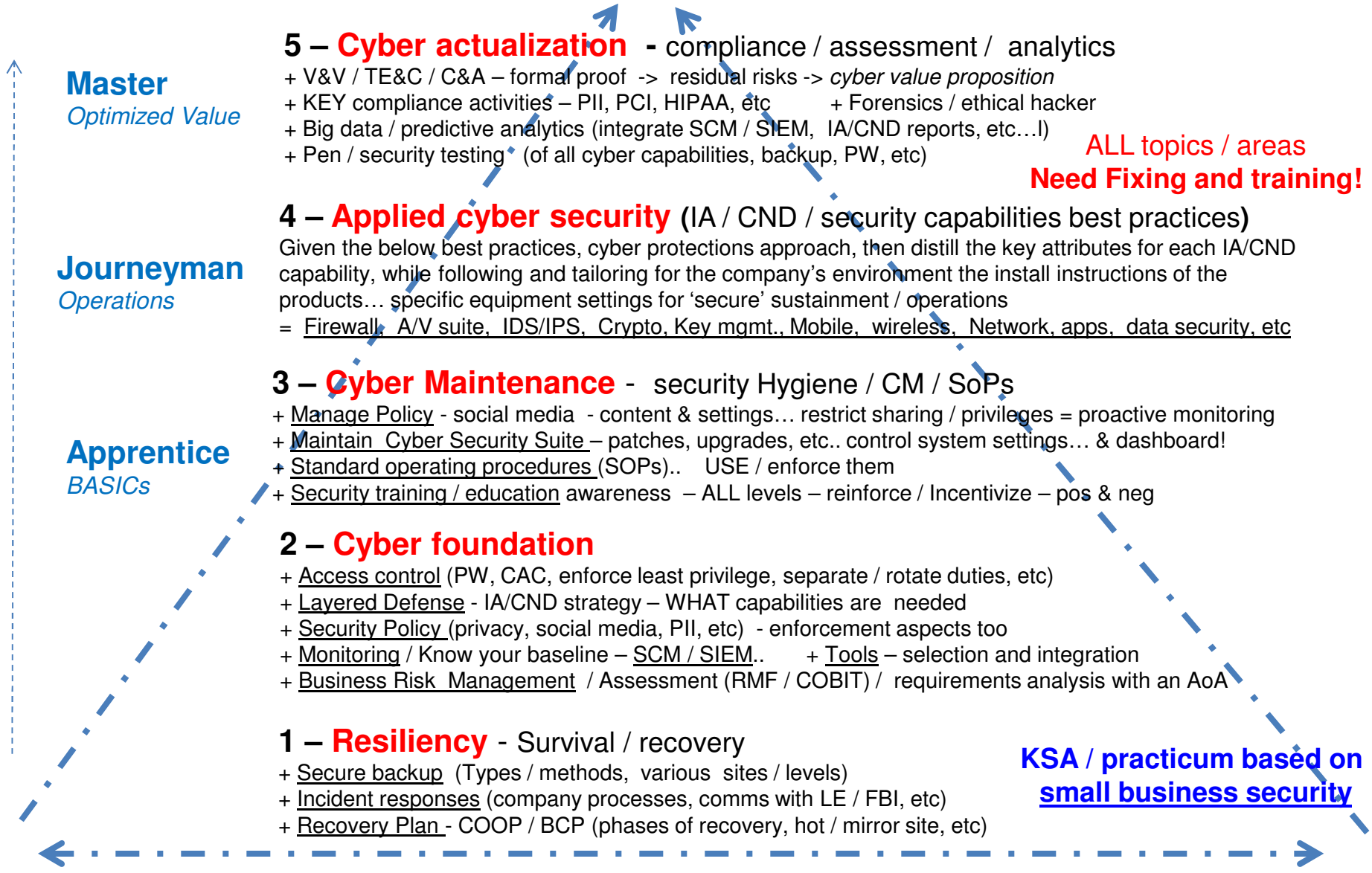


("*" = IDS/IPS, anti-virus, wireless, application development, cloud, web/mobile code, mobile, etc…)

Hierarchy of Cyber Needs

(i.e.….Maslow Triangle…)

Where if you don't take care of the level before the one you are operating in, focusing on, then your efforts are for the most part mute, as you are in a *higher risk status* until the earlier level is satisfied!



Master
Optimized Value

5 – Cyber actualization - compliance / assessment / analytics
+ V&V / TE&C / C&A – formal proof -> residual risks -> *cyber value proposition*
+ KEY compliance activities – PII, PCI, HIPAA, etc + Forensics / ethical hacker
+ Big data / predictive analytics (integrate SCM / SIEM, IA/CND reports, etc…I)
+ Pen / security testing (of all cyber capabilities, backup, PW, etc)

ALL topics / areas
Need Fixing and training!

Journeyman
Operations

4 – Applied cyber security (IA / CND / security capabilities best practices)
Given the below best practices, cyber protections approach, then distill the key attributes for each IA/CND capability, while following and tailoring for the company's environment the install instructions of the products… specific equipment settings for 'secure' sustainment / operations
= Firewall, A/V suite, IDS/IPS, Crypto, Key mgmt., Mobile, wireless, Network, apps, data security, etc

Apprentice
BASICs

3 – Cyber Maintenance - security Hygiene / CM / SoPs
+ Manage Policy - social media - content & settings… restrict sharing / privileges = proactive monitoring
+ Maintain Cyber Security Suite – patches, upgrades, etc.. control system settings… & dashboard!
+ Standard operating procedures (SOPs).. USE / enforce them
+ Security training / education awareness – ALL levels – reinforce / Incentivize – pos & neg

2 – Cyber foundation
+ Access control (PW, CAC, enforce least privilege, separate / rotate duties, etc)
+ Layered Defense - IA/CND strategy – WHAT capabilities are needed
+ Security Policy (privacy, social media, PII, etc) - enforcement aspects too
+ Monitoring / Know your baseline – SCM / SIEM.. + Tools – selection and integration
+ Business Risk Management / Assessment (RMF / COBIT) / requirements analysis with an AoA

1 – Resiliency - Survival / recovery
+ Secure backup (Types / methods, various sites / levels)
+ Incident responses (company processes, comms with LE / FBI, etc)
+ Recovery Plan - COOP / BCP (phases of recovery, hot / mirror site, etc)

KSA / practicum based on small business security

Cyber Security opportunities

(Cyber can **both** enhance consulting AND sharing / teaching opportunities = *PEST*!)

IT / Cyber Global factors – *user pull*

World-wide B2B	IoT / M2M	Consumerization of IT	Privacy / Data
Trust / cloud / sharing	Automation / *Sensors*	Phones / wireless / ***apps***	IP / PII / *compliance*

GAPS / *Needs*

(from the Federal cyber priority council S&T gaps)

TRUST	Resiliency	Agile operations	Effective missions
Distributed / MLS	SW / apps / ***APIs*** / *services*	BE the vanguard / *integration*	*Business success* factors

Vulnerabilities / Threats

(Verizon BDR, Forbes, etc threat reports - what ails us most)

CM / Hygiene	Access control	Top security mitigations	Risk Mgmt
patching / *settings*	*Authentication* is key	*Whitelist*, patch, limit *access, etc…*	*Adhoc* / not global

Opportunities that scale

Effective Business Risk Management (BRM) = *cybersecurity framework* (CMMI / *FAR*

Focus on **reducing business risk**… *Managed security services (MSS)* & *cyber insurance* …

SIEM / SCM	*Mobile Security*	*Mitigate Obsolescence*	*Data Security*
QA hygiene / sensors	Poor apps / IOS weak	*Minimize patching, legacy vulnerabilities*	*Predictive analytics*
*"**ESA**" / simple tools!*	*billions users = volume*	OA / modularity / *APIs* & SCRM	***Privacy by design***