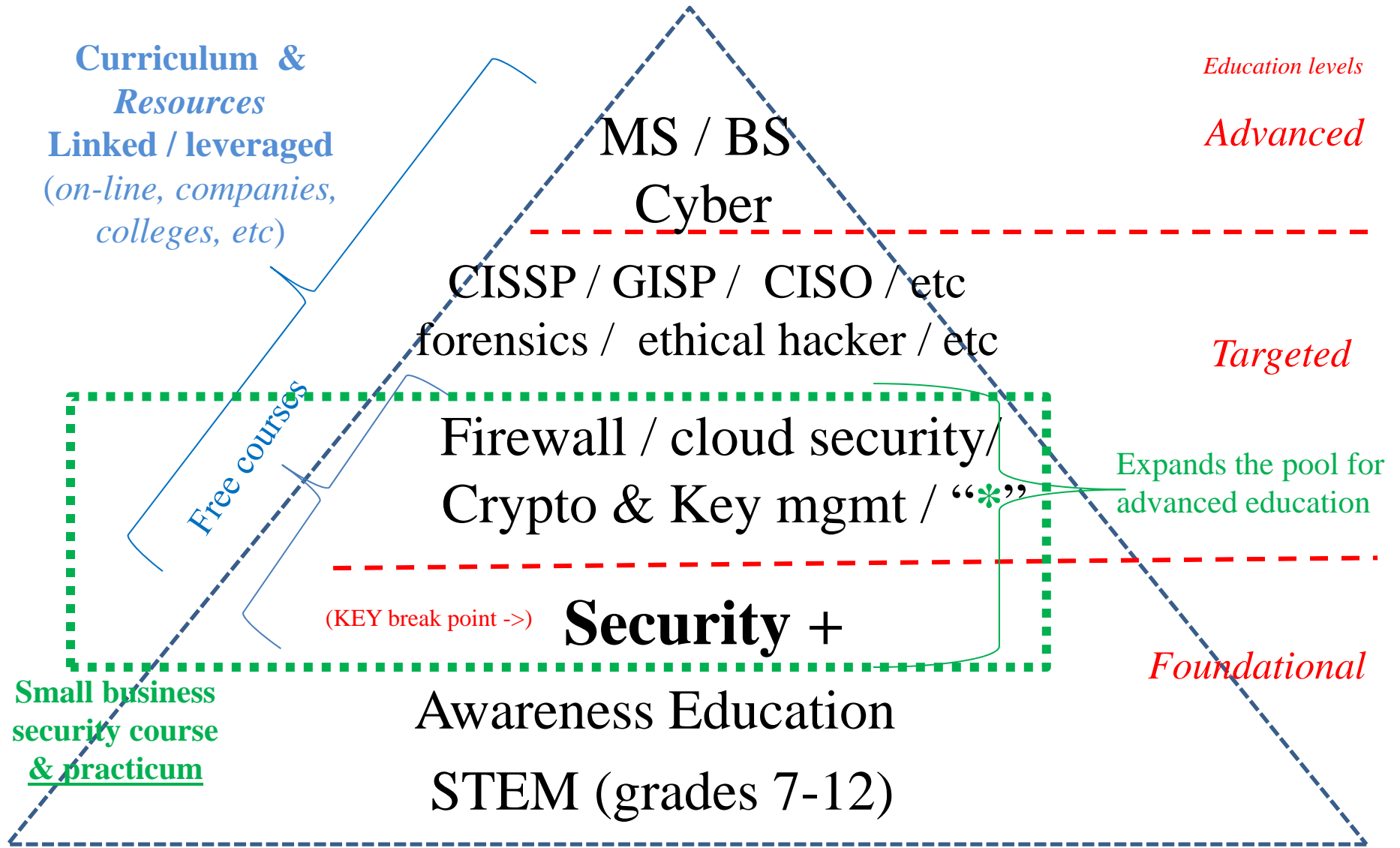


Cyber Education triangle

“clarifying the *fog of cyber security* through targeted training”



(“*” = IDS/IPS, anti-virus, wireless, application development / management, web/mobile code, mobile, etc...)

Notional Cyber education roadmap

(Authoritative sources, categorized, mapped to *CSF*)

NICE

Levels & methods

NSA CAE

Accreditation

Focus areas

NIST

SPs & 'must do'
+ requirements

SANS top 20

Top 35 Mitigations

OWASP top 10

Top 25 SW errors

Customer

Awareness

AND Demand

CERT areas / KSAs

Grouped & aligned

Support key IA needs

Align Needs / Areas

Clarify / map certs to
specific demand areas

Target environment

Curriculum MAP

Objectives

Quantified KSAs

Cyber Needs Paper

Center & align KSAs

with security needs

to also educate leaders

Targeted / focused
Trained / proven KSA

Cyber Workforce

NIST / Whitehouse

Cybersecurity framework (CSF)

foundation

Inputs / factors

Key artifacts

outcome

Cyber capabilities – KSA decomposition

(Objective = Business Risk Management – prioritized vulnerability reductions)

Overall Cyber Security Factors



Main functional Areas / buckets

people	processes	products	policy		
(1) Provision	Analyze	O&M / support	Collect	Investigate	Protect & defend
(2) requirements analysis	Assessment	Pen testing	C&A	Security design	
	Security testing				

From NICE framework = (1) functions... (2) cyber skills (KSAs)



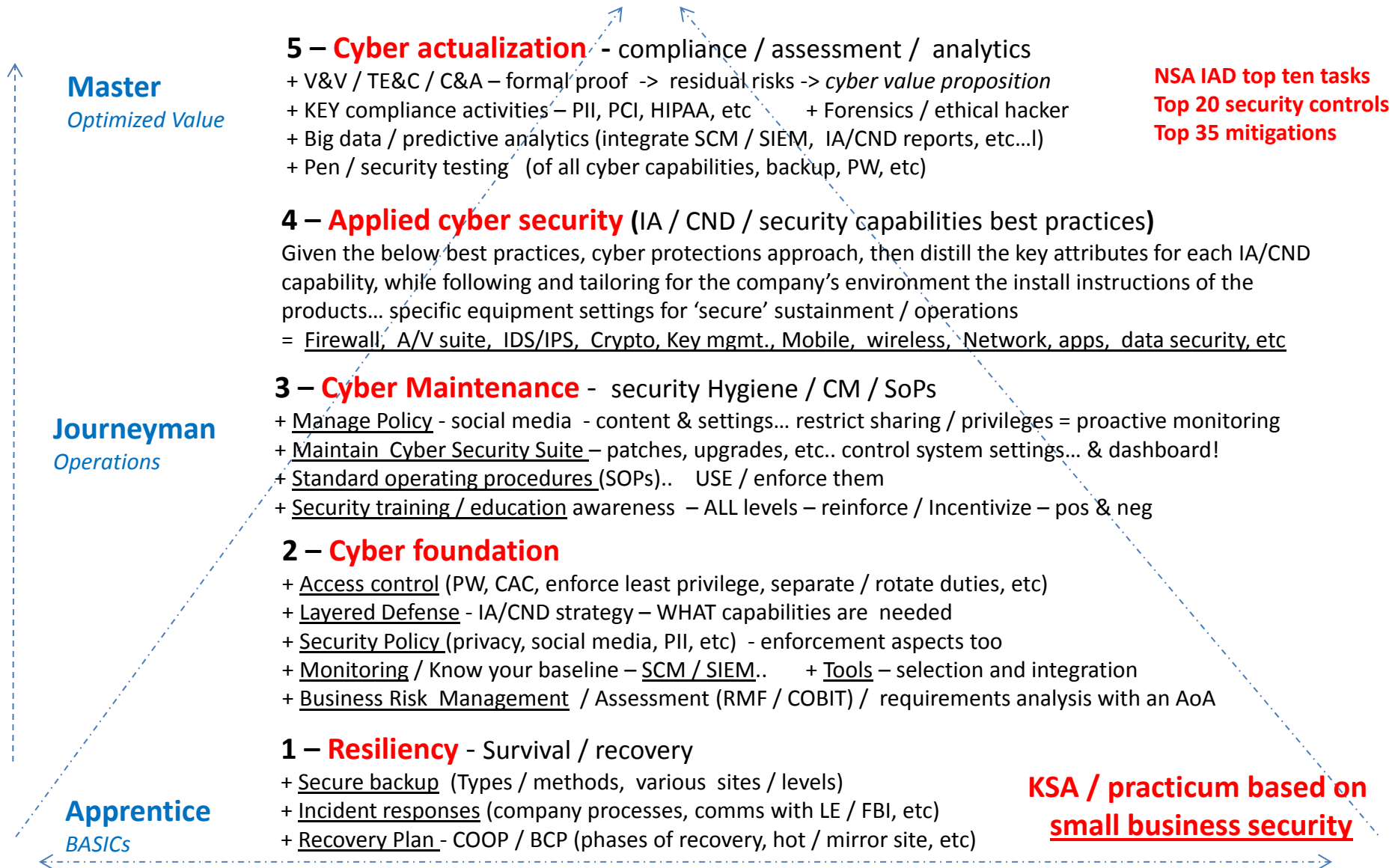
KEY capabilities / products / processes / methods = KSAs

	Compliance	IA/CND & crypto/key mgmt	IA&A	Mobile / wireless	Tools	Policy	Network (client / server / router)
	SW/apps services	Web / active code	Data	O&M/support Sys Admin & CM/hygiene	Threats	C&A (V&V)	RISK Assessment

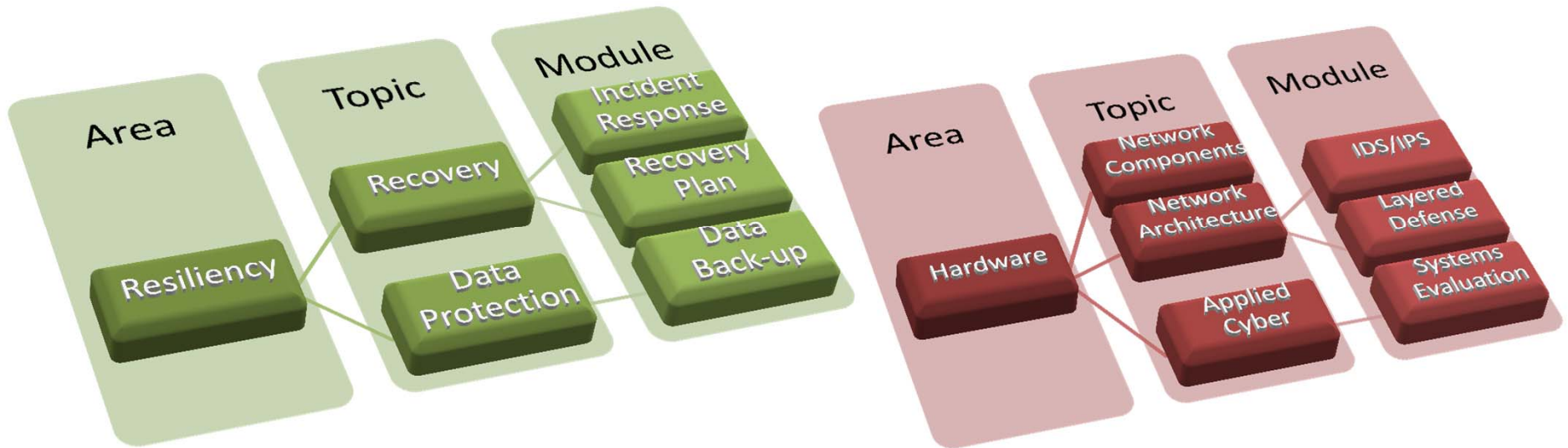
ALL geared to specific positions / types (manager, project lead, Cyber SME / ISSE)
And with some aspect of technical level (apprentice, journeyman, master)

Hierarchy of Cyber Needs (i.e.....Maslow...)

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!



The Cyber Integrated Package



Structured “bottom up” / needs approach to effective cyber education!

