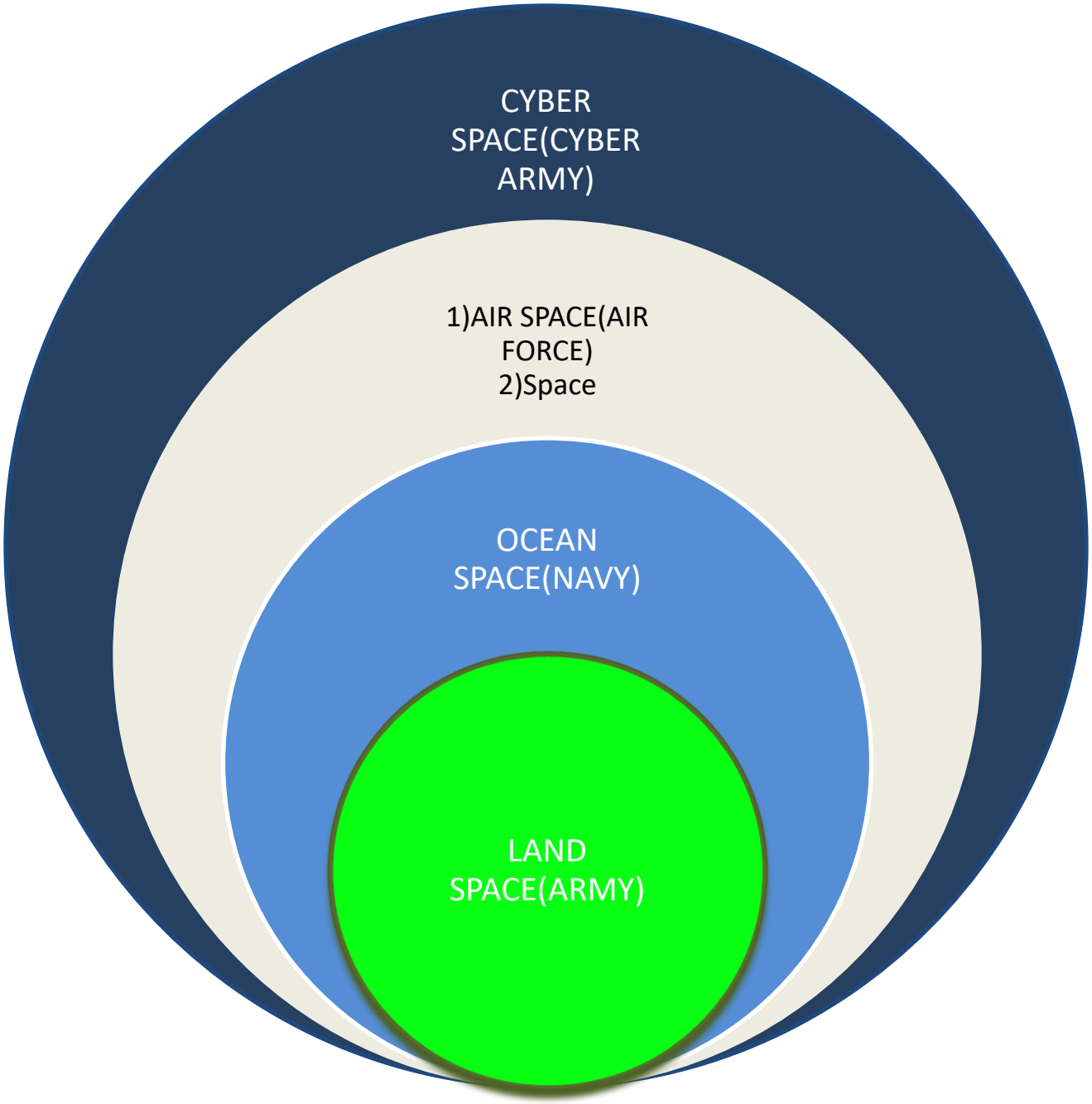
Cyber Security challenges: Govt of India's Policy Preparedness- An Overview

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a **SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC** and to secure to all its citizens **JUSTICE**, social, economic and political;
LIBERTY of thought, expression, belief, faith and worship;
EQUALITY of status and of opportunity; and to promote among them all **FRATERNITY** assuring the dignity of the individual and the unity and integrity of the Nation; **IN OUR CONSTITUENT ASSEMBLY** this 26th day of November, 1949, do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

Land borders of India [edit]

Land Border Country	Length (km) and (mi)[1]	Force	Comments
Bhutan	600 kilometres (370 mi)[2]	Sashastra Seema Bal	Open border
Myanmar	1,643 kilometres (1,021 mi)	Assam Rifles and Indian Army	
Nepal	1,758 kilometres (1,092 mi)[3]	Sashastra Seema Bal	Open border
Pakistan	3,323 kilometres (2,065 mi)	Border Security Force	
China	3,380 kilometres (2,100 mi)	Indo-Tibetan Border Police and Special Frontier Force	
Bangladesh	4,097 kilometres (2,546 mi)	Border Security Force	India–Bangladesh enclaves exchanged

Maritime Border Country	Length (km) and (mi)[1]	Force	Comments
Bangladesh		Indian Navy	New Moore Island
Indonesia		Indian Navy	Indira Point
Myanmar		Indian Navy	Coco Islands
Pakistan		Indian Navy	Sir Creek
Thailand		Indian Navy	Similan Islands
Sri Lanka	>400 kilometres (250 mi)[4]	Indian Navy	Katchatheevu
Maldives		Indian Navy	Maliku Kandu


CYBER SPACE(CYBER ARMY)
1)AIR SPACE(AIR FORCE)
2)Space
OCEAN SPACE(NAVY)
LAND SPACE(ARMY)

Cyber Space

- https://www.youtube.com/watch?v=mvilzm6yRCg
- https://www.youtube.com/watch?v=ddMpugGIHVE

- Cyberspace is a complex environment consisting of interactions between people, software and services, supported by worldwide distribution of information and communication technology (ICT) devices and networks.
- Owing to the numerous benefits brought about by technological advancements, the cyberspace today is a common pool used by citizens, businesses, critical information infrastructure, military and governments in a manner that makes it difficult to draw clear boundaries among these different groups. The cyberspace is expected to be more complex in the foreseeable future, with many fold increase in networks and devices connected to it.

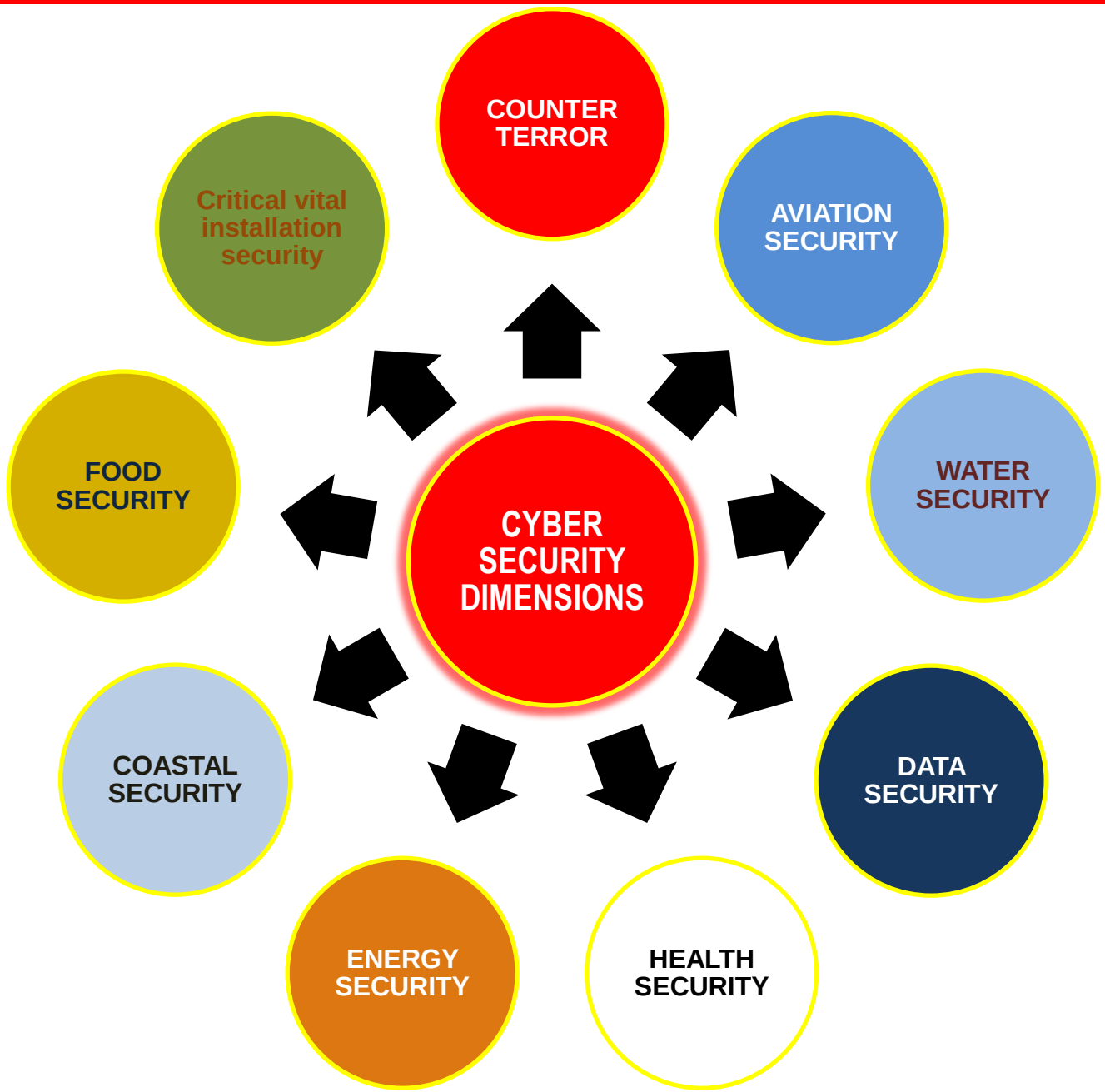
- The government has been a key driver for increased adoption of IT-based products and IT enabled services in Public services

  i) Healthcare ii) Education iii) Financial services

https://www.youtube.com/watch?v=ddMpugGIHVE&t=412s (security scan)

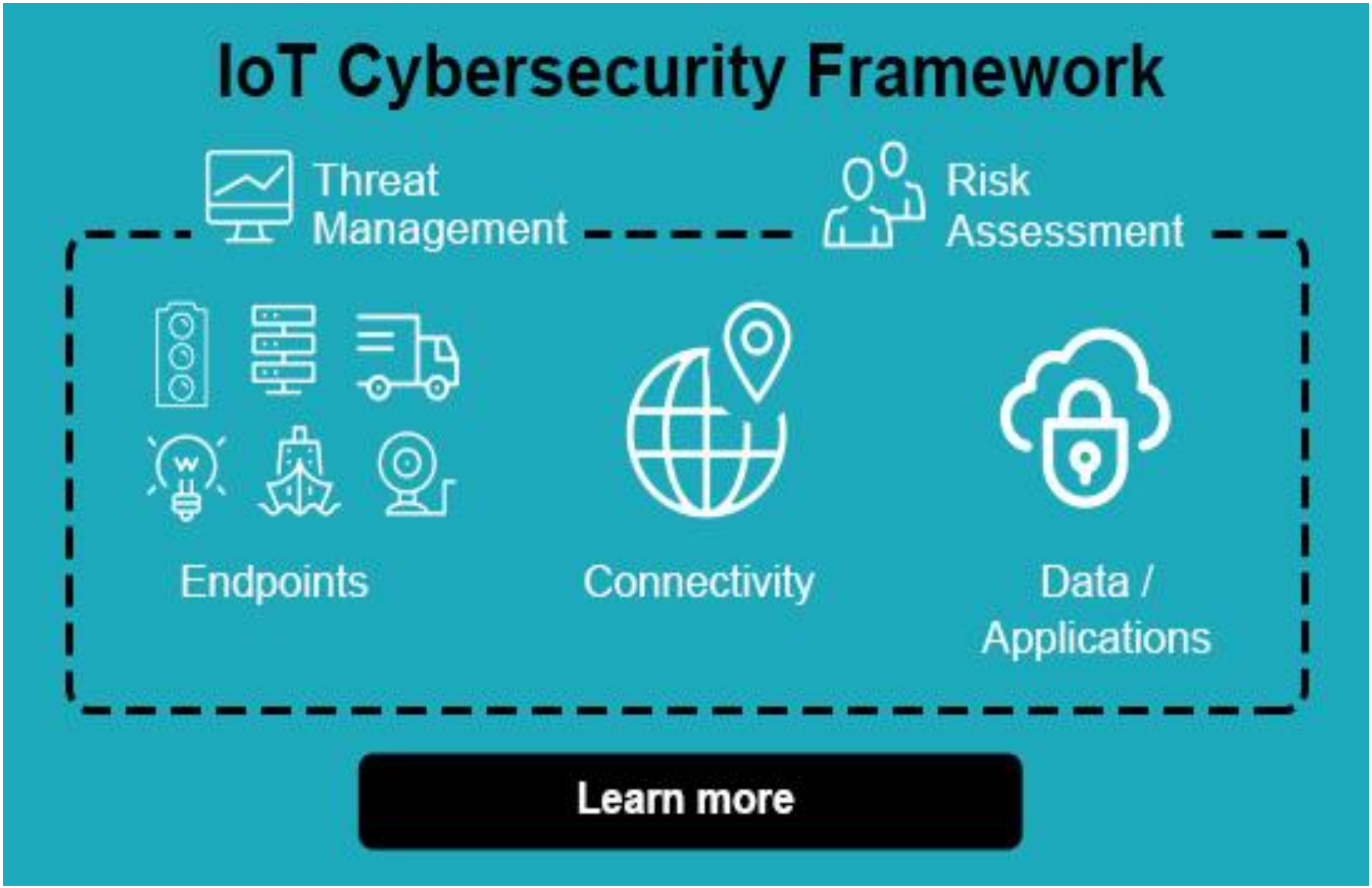
- https://www.youtube.com/watch?v=ARmvM_UGq-k (security scan)

CYBER SECURITY DIMENSIONS

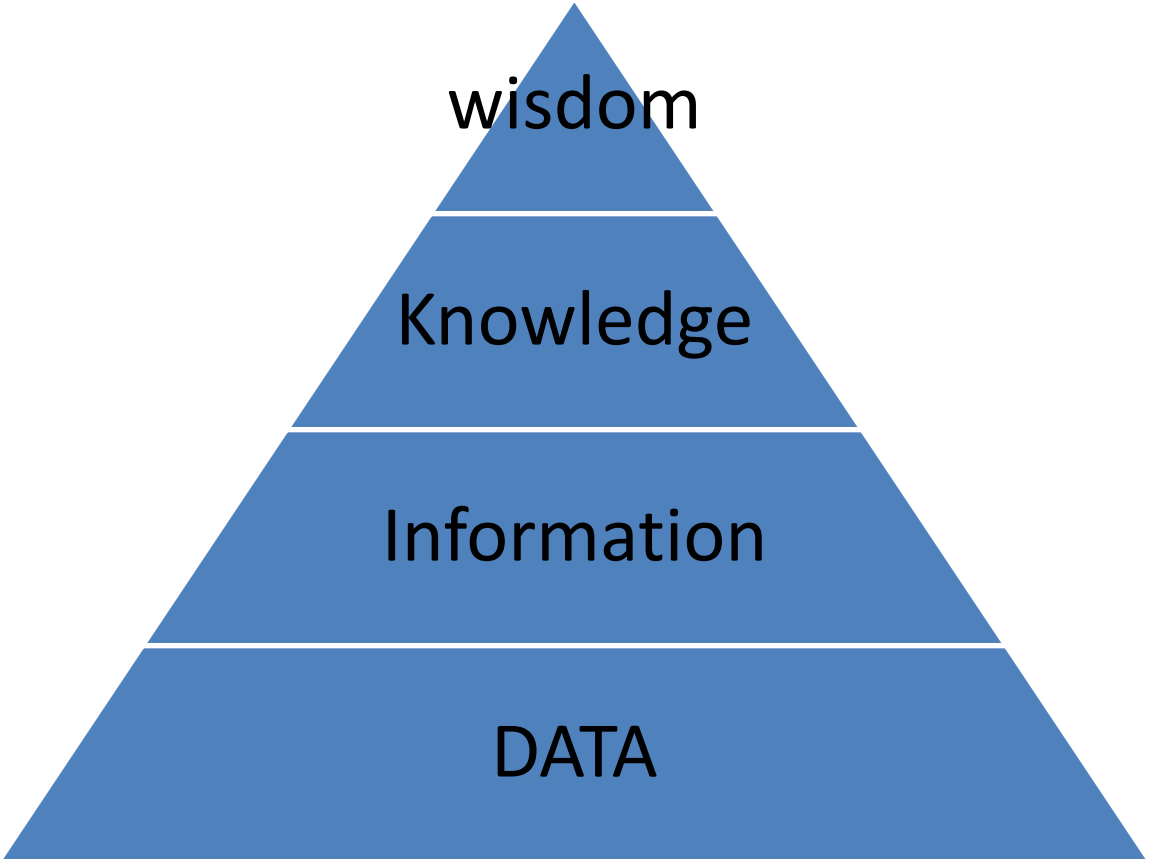


- Cyberspace is vulnerable to a wide variety of incidents, whether intentional or accidental, manmade or natural, and the data exchanged in the cyberspace can be exploited

- A cyber related incident of national significance may take any form; an organized cyber attack, an uncontrolled exploit such as computer virus or worms or any malicious software code, a national disaster with significant cyber consequences or other related incidents
- Mechanism for Cyber Attacks Cyber attacks can be carried out in a number of ways. Among them:
- Computer-network attacks
- Supply-chain attacks
- Social-networking-led attacks
- Attacks on radio networks for GPS and wireless networks
- Radio frequencies with sufficiently high power to disrupt all unprotected electronics in a given geographical area

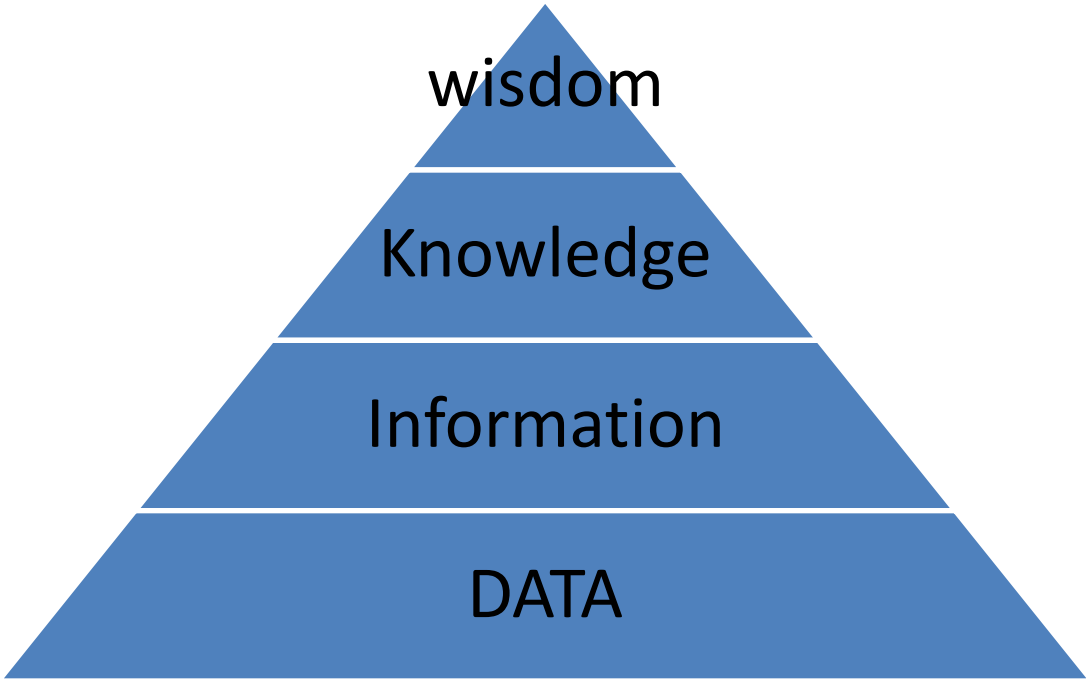

IoT Cybersecurity Framework
Threat Management
Risk Assessment
Endpoints
Connectivity
Data / Applications
Learn more

- Some challenges bear more weight than others and we aimed to quantify or rank which concerns security professionals deemed most important. When presented with a list of well-defined problems in network security, respondents identified the top challenges as follows:
- 1) Insider threats – 44%
  2) IT infrastructure complexity – 42%
  3) Absence of leader support – 40%
  4) Lack of tool interoperability – 37%
  5) Shadow IT – 31%
  6) Weak controls for privileged access – 29%
  7) Cloud visibility – 28%
  8) BYOD – 26%
  9) Too many alerts – 22%
  10) Too many tools – 18%



Data

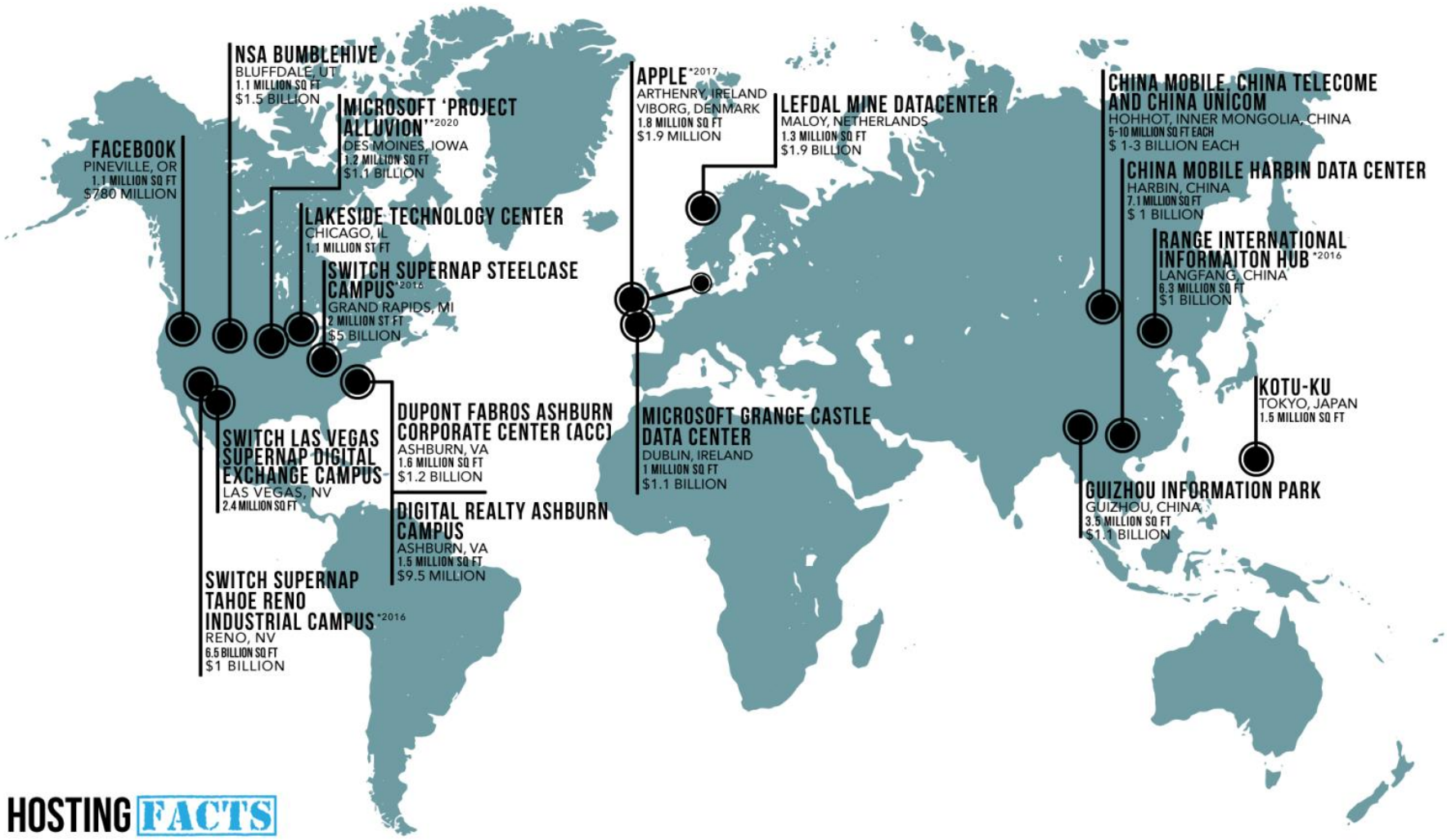
China, USA, India, UK, North Carolina, East Africa, Norway, Virginia



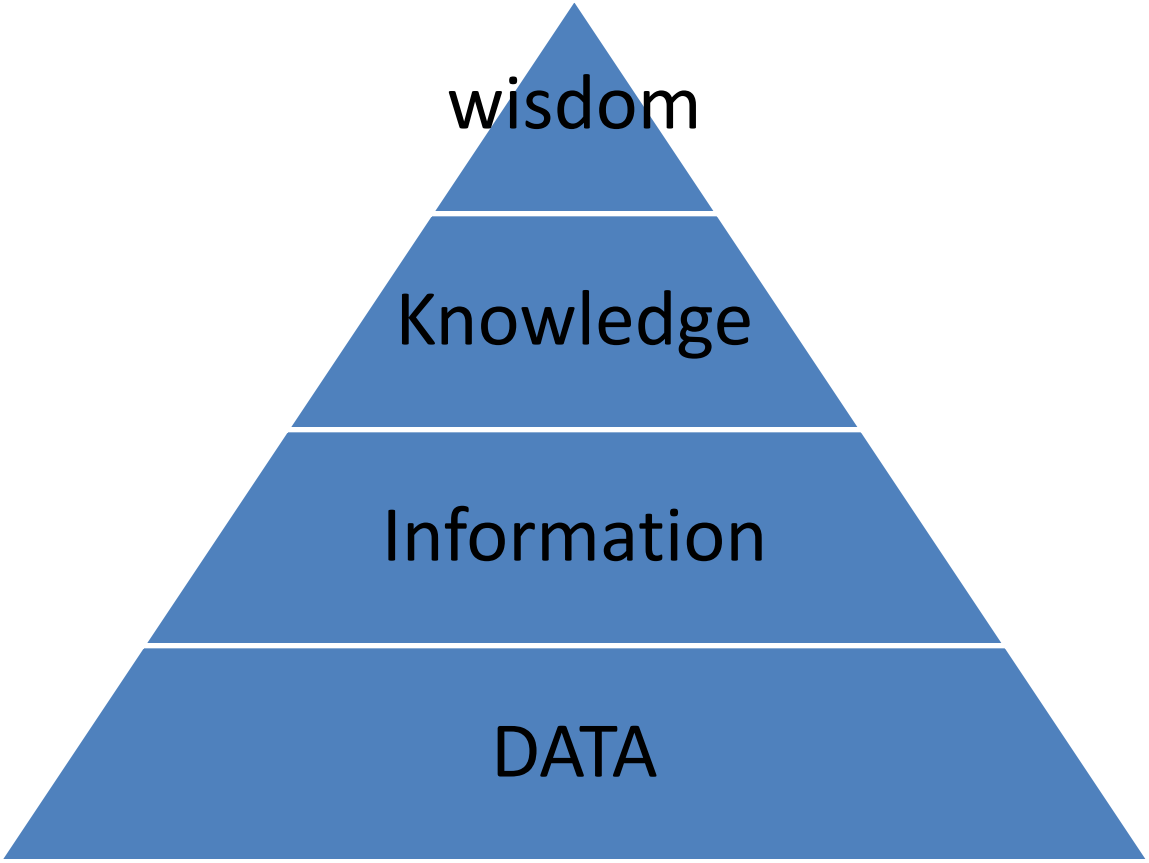
Information:

- China with Range International Data Centre of 6.3mn sq. ft . Harbin data centre
- Mauritius has 5 colocation data centres, 4 cloud service providers
- In us there is 1 data centre for every 100 people as the devices are more in the locality (lakeside technology centre, switch supernap, Microsoft data centre)
- Virginia with DuPont Fabros tech of 2.1mn sq. ft

India has Tulip Data centre located in Bangalore it is the largest data centre covering 1mn sq. Ft. With 12,000 server racks



HOSTING FACTS



Knowledge:

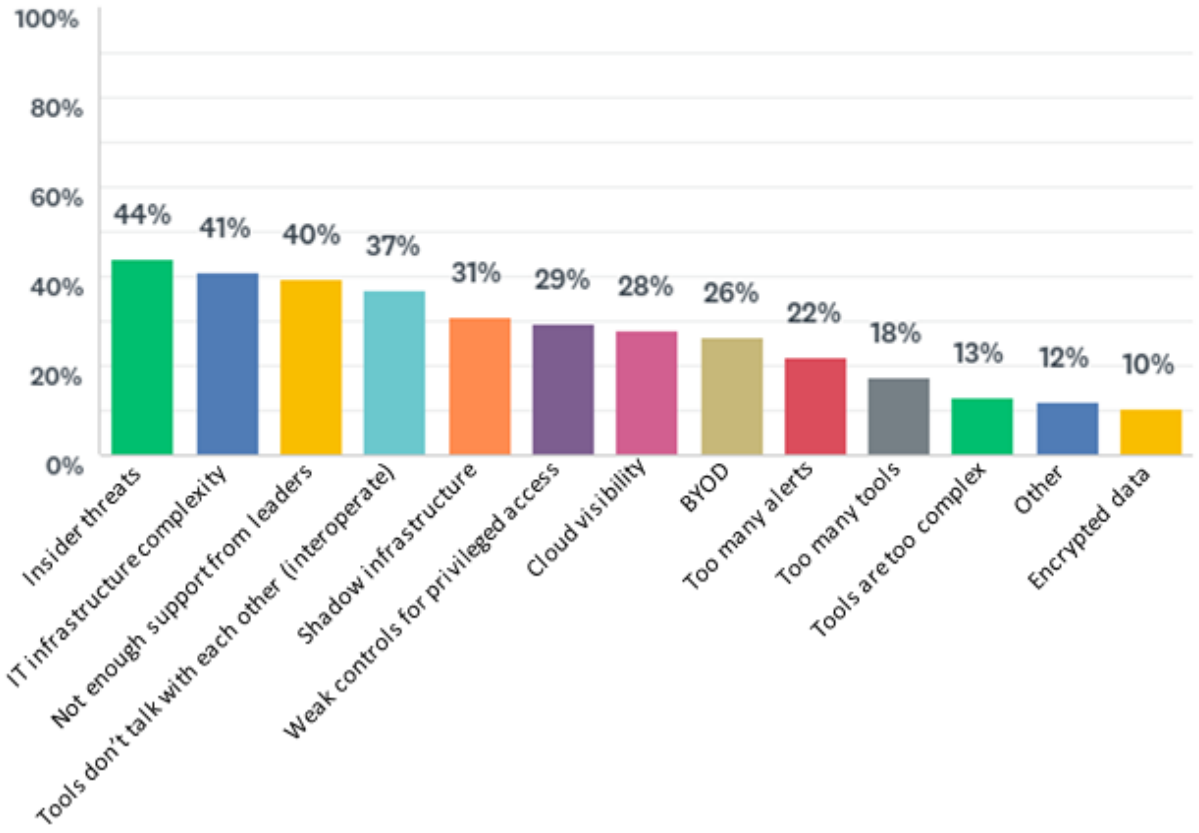
The major challenge is that assuring the security (natural & manmade) to all the data centres irrespective to its geographical location

Wisdom:

If we fail to protect out data there will be a doomsday

- Accounting legend code
- Accreditation Authority
- Active and passive content
- Advanced persistent threats
- Key processor
- phishing social engineering
- Ad Hoc network
- Advanced encryption standard(AES)
- Advance Persistent threat
- Authorized vendor program

What are the top challenges in network security facing your organization?




Information
Technology
IT
Mobile
phone
Internet
Data
Communication
Business

- Nation’s critical information infrastructure a 24x7 National Critical Information Infrastructure Protection Centre (NCIIPC) and mandating security practices related to the design, acquisition, development, use and operation of information resources.

- Recognizing the importance of data protection and keeping personal data of citizens secure and protected, Ministry of Electronics and Information Technology (MeitY), Government of India constituted a Committee of Experts under the Chairmanship of Justice B N Srikrishna, Former Judge, Supreme Court of India. **14th August 2018**

Challenge :

- To enable protection of information while in process, handling, storage & transit so as to safeguard privacy of citizen's

CYBER SECURITY AWARENESS - CLOSING THE LOOP

Adapted from *Guidelines on Cyber Security Onboard Ships* Published by BIMCO

- Govt of India's Policy initiatives--National Critical Information Infrastructure Protection Centre https://nciipc.gov.in/
- Computer emergency response team https://www.cert-in.org.in/
- Inter Institutional Inclusive Innovations Center https://i4c.in/
- Cyber Swachhta Kendra https://www.cyberswachhtakendra.gov.in/
- Data Security Council of India https://www.dsci.in/

- National Informatics Center https://www.nic.in/
- Standardization Testing and Quality Certification Directories http://www.stqc.gov.in/
- Controller of Certifying Authorities http://www.cca.gov.in/
- .IN Registry https://www.registry.in/
- Digital India Corporation https://medialabasia.in/
- National Informatics Centre Services Inc. http://www.nicsi.com/
- National Internet Exchange of India https://nixi.in/
- Centre for Development of Advanced Computinghttps://www.cdac.in/

- Centre for Materials for Electronics Technology http://cmet.gov.in/
- Education & Research in Computer Networking http://www.eis.ernet.in/
- National Institute of Electronics and Information Technology http://www.nielit.gov.in/
- Research & Development Activities of SAMEER https://www.sameer.gov.in/researchanddev.asp
- Software Technology Parks of India https://www.stpi.in/

- Cyber security policy 2013 https://meity.gov.in/writereaddata/files/downloads/National_cyber_security_policy-2013%281%29.pdf
- Roles and Responsibilities of Chief Information Security Officers https://meity.gov.in/writereaddata/files/CISO_Roles_Responsibilities.pdf
- Cyber surakshit Bharat https://meity.gov.in/writereaddata/files/Cyber_Surakshit_Bharat_Programme.pdf
- National Cyber Coordination Centre
- NATGRID
- Defence Research and Development Organisation_NETRA
- https://www.youtube.com/watch?v=VFEn6awMCn8(with and without internet)

We believe in

“You and I Together”.

Thank you

Dr.Kanneganti Ramesh Babu
Founder-Director
Center for Human Security Studies
www.chss.org.in
Hyderabad
9652810374
Kanneganti.ramesh@gmail.com
contactchss@gmail.com