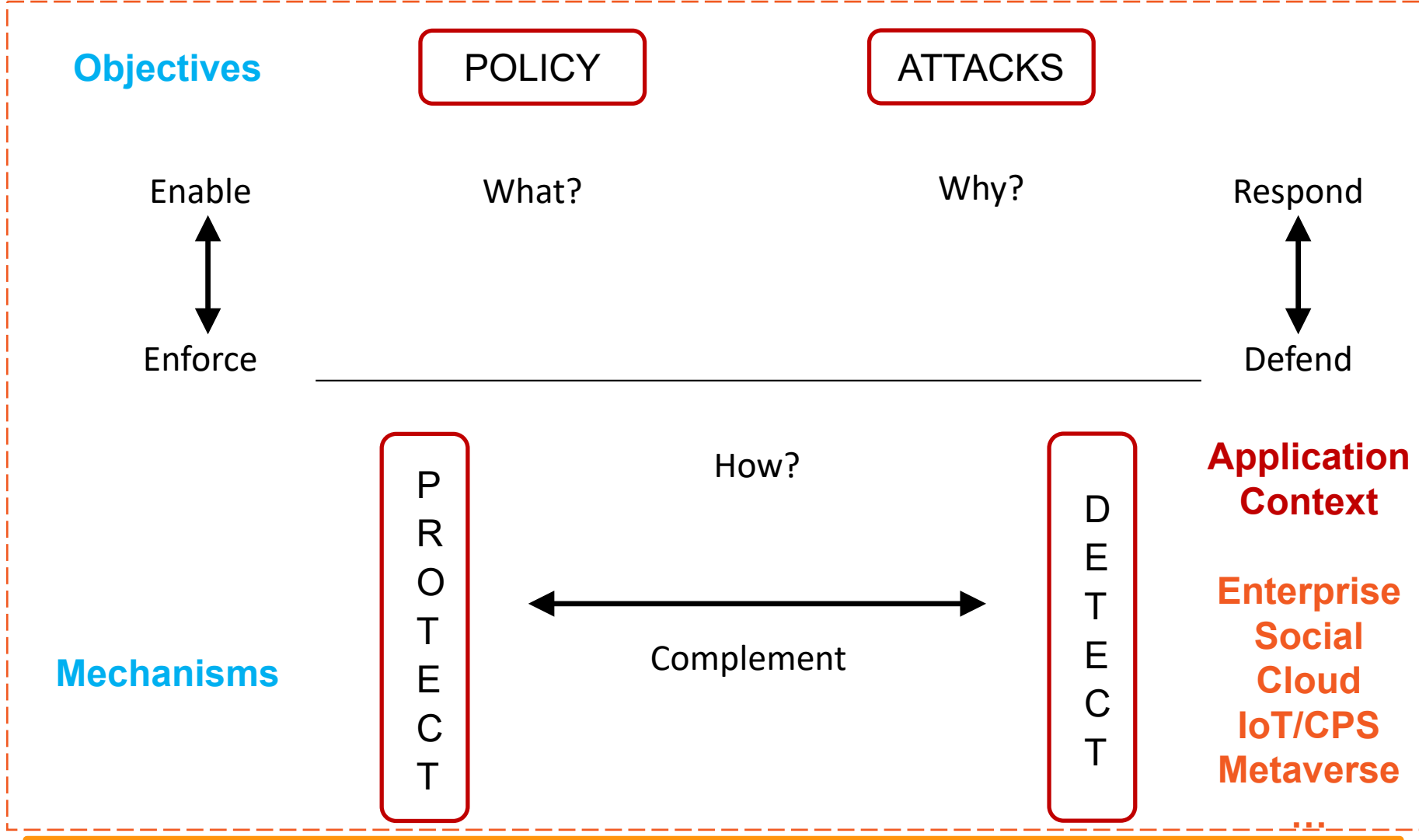# Security and Privacy for Emerging IoT and CPS Domains CODASPY 22 Panel Opening Statement
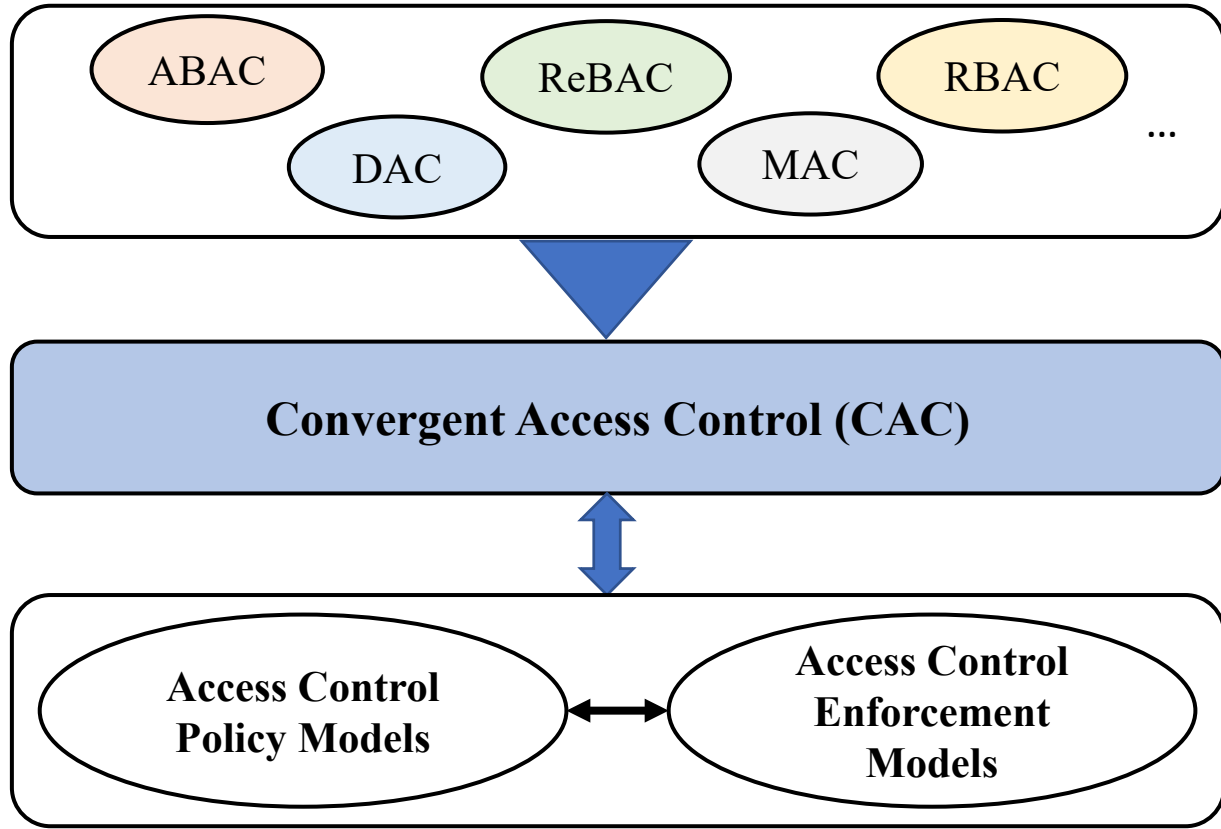
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World-Leading Research with Real-World Impact!

Holistic Cyber Security Research

I·C·S — The Institute for Cyber Security

C·SPECC — Center for Security and Privacy Enhanced Cloud Computing

Objectives

POLICY   ATTACKS

Enable   What?   Why?   Respond

Enforce   Defend

How?

Application Context

Mechanisms   P R O T E C T ← Complement → D E T E C T

Enterprise Social Cloud IoT/CPS Metaverse
…

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Center for Security and Privacy
Enhanced Cloud Computing

ABAC   ReBAC   RBAC   ...
DAC   MAC

Convergent Access Control (CAC)

Access Control Policy Models ⟷ Access Control Enforcement Models

Application Context

Enterprise Social Cloud IoT/CPS Metaverse

...

This slide prepared by Smriti Bhatt

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Dr Sandhu, in your statement you wrote – "The research community must make conscious efforts to move towards convergence and synergy in four fundamental cyber security technologies – protection, detection, policy and attacks. However, the current research and practice is siloed."
What should be done by the community to support such efforts?

Take a smaller bite.

Academia cannot address this by itself. Need synergy with vendors, users and regulators

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➢ What makes security and privacy **intrinsically different and challenging** in IoT and CPS domains? Can we not borrow some fundamental security technologies developed in the past, to develop improvised solutions to solve this problem?

In theory nothing, in practice everything.

➢ **Zero Trust** has become a marketing buzzword, several security vendors, cloud service providers, and enterprises position themselves as Zero Trust security providers. My question is, what's the obsession with Zero Trust, is it Buzz or breakthrough, and how it impacts IoT security?

Great marketing term defined more by what it is not rather than what it is.

➢ What are your recommendations to a **graduate student** beginning research in areas of security and privacy in IoT and CPS?

Don't forget about the forest for the trees.

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