

Privilege Management Framework

An introductory presentation at the
Privilege Management Workshop sponsored by the
National Institute of Standards and Technology
and the National Security Agency
September 1-3, 2009

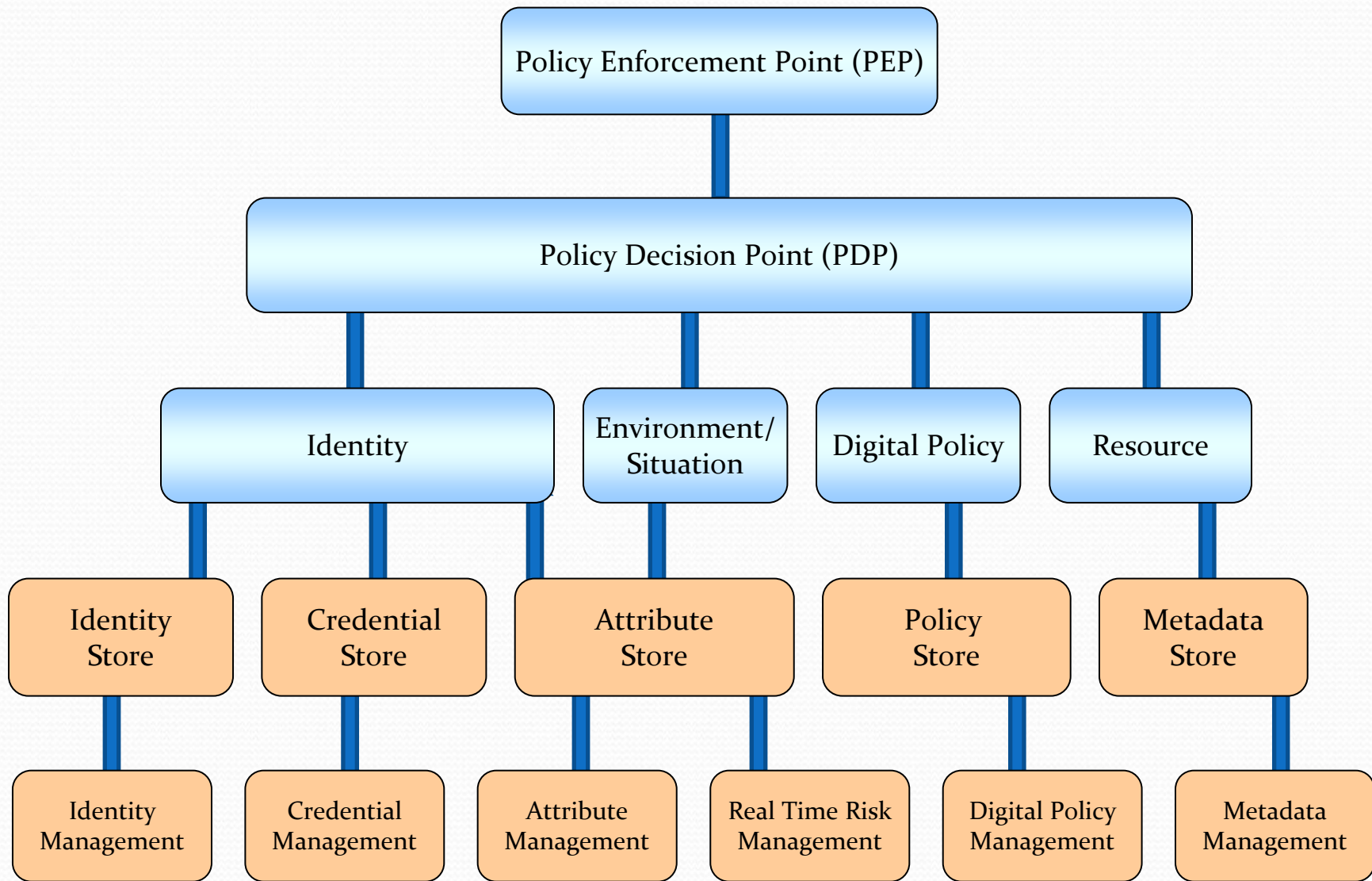
Presented by Len LaPadula

Overview

- Context
- A Focus
- Interfaces
- Access Control Models
- The Four Tracks and The Interfaces

Context

A playing field on which to think about privilege management



Context



Descriptions of the Management Systems

Identity Management: uniquely identifying an entity

Credential Management: creating, issuing, renewing, and revoking credentials for an entity

Attribute Management: managing the properties that describe an entity

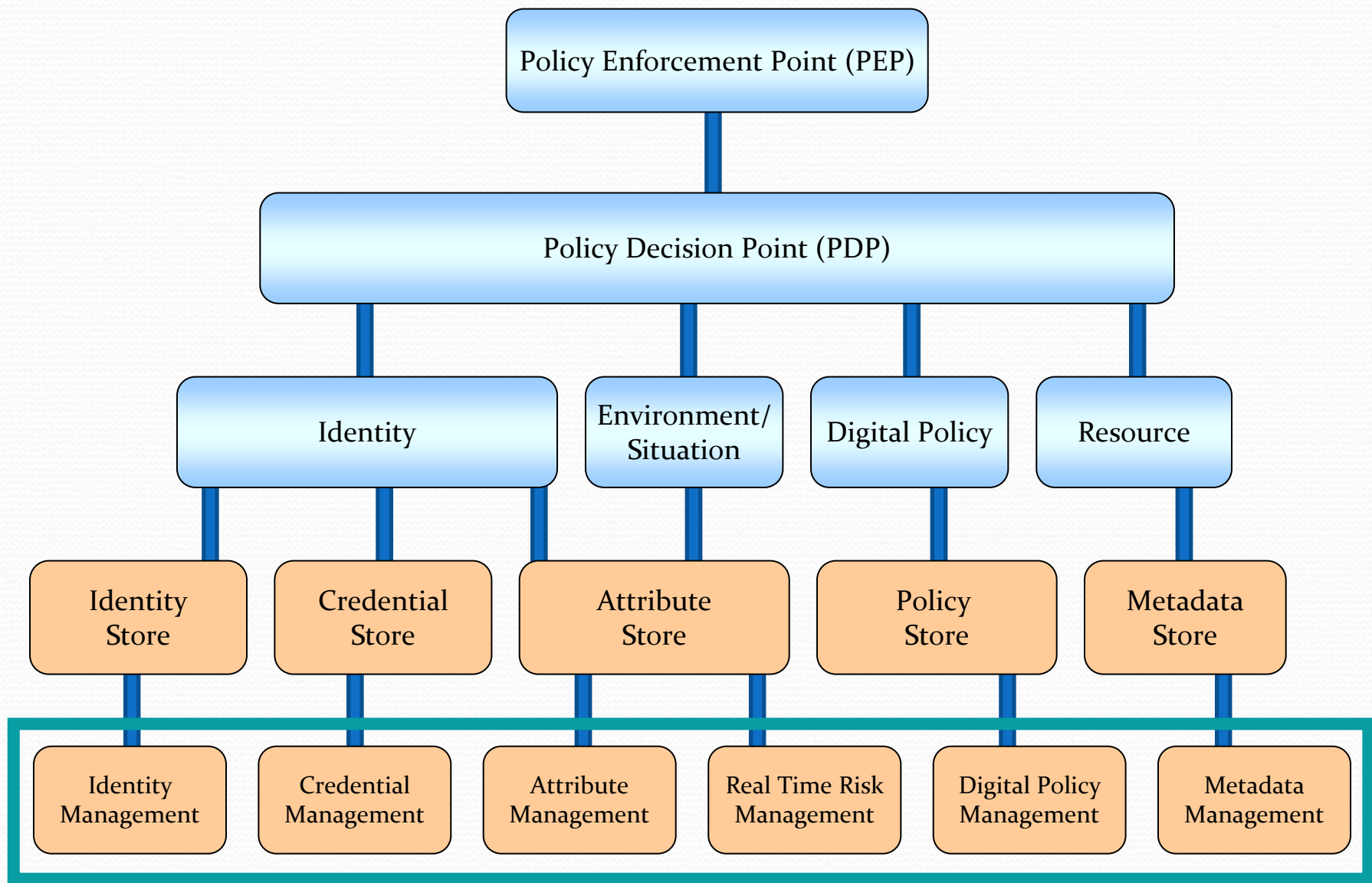
Real Time Risk Management: generating a current state of the environment or situation as a real time input

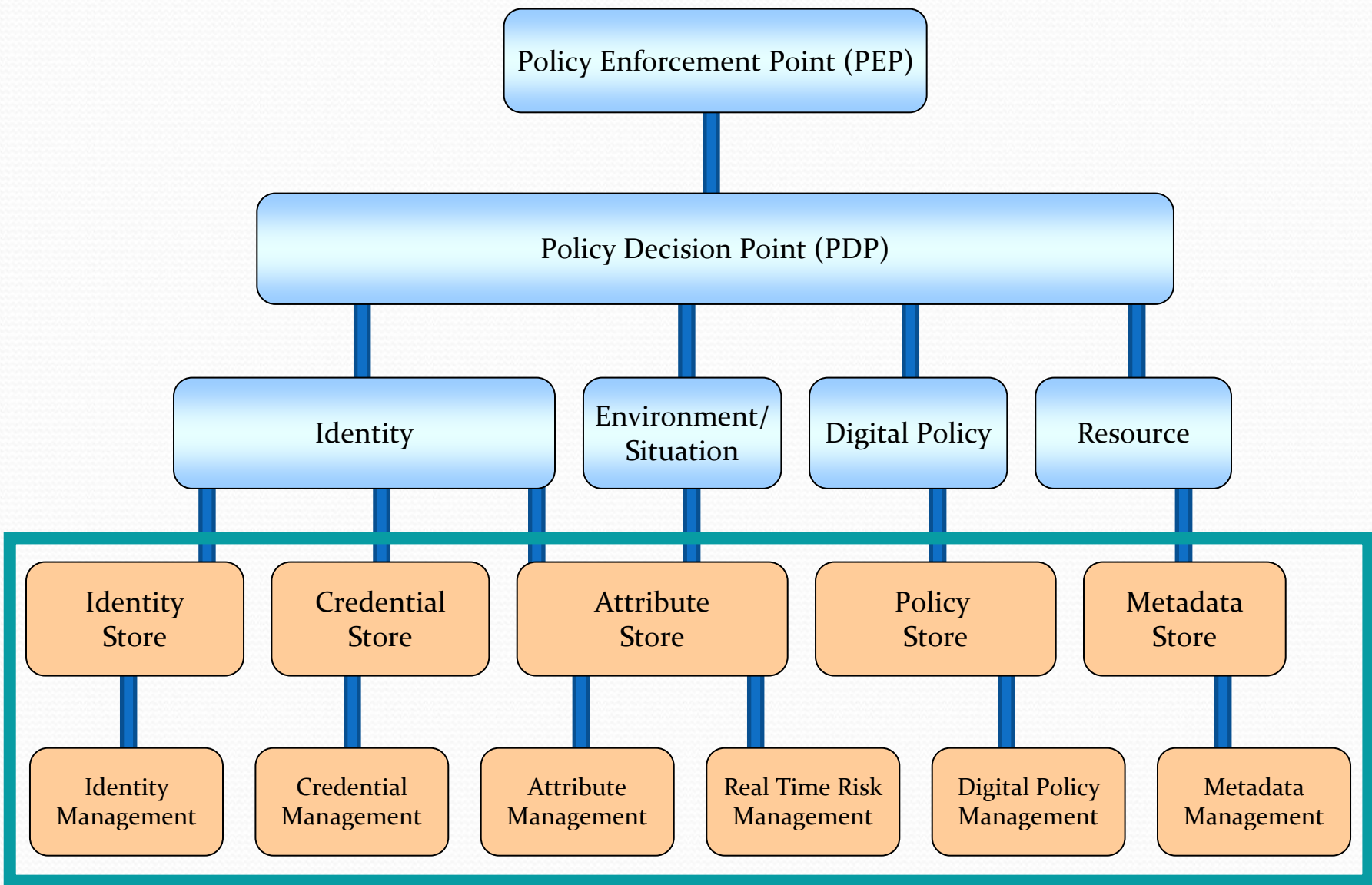
Digital Policy Management: creating, validating, translating, distributing, synchronizing, and de-conflicting authorization policies

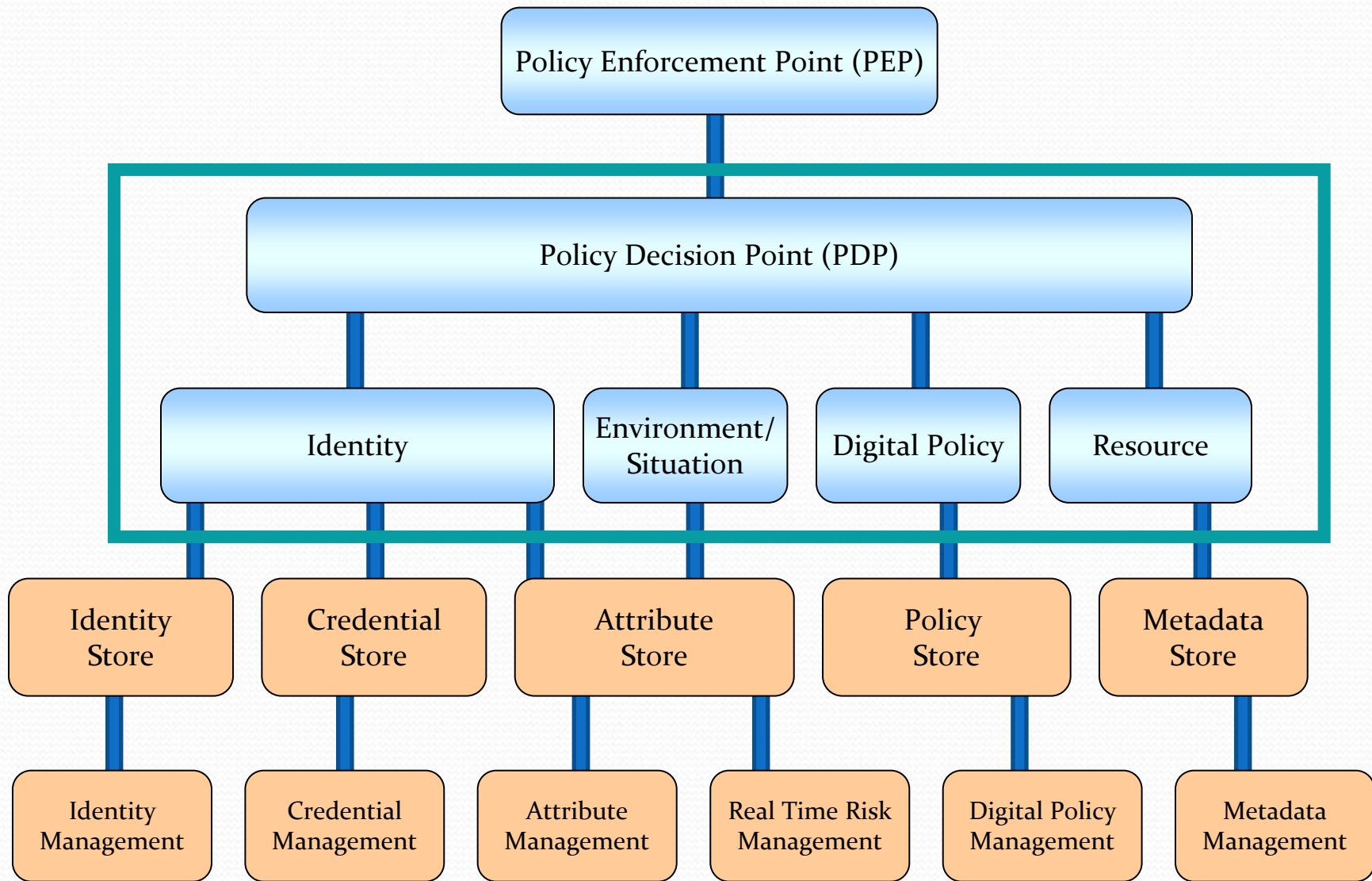
Metadata Management: collecting, storing, and disseminating structural metadata for information resources and services

A Focus

A subset of the enterprise-level access control context for considering some aspects of privilege management



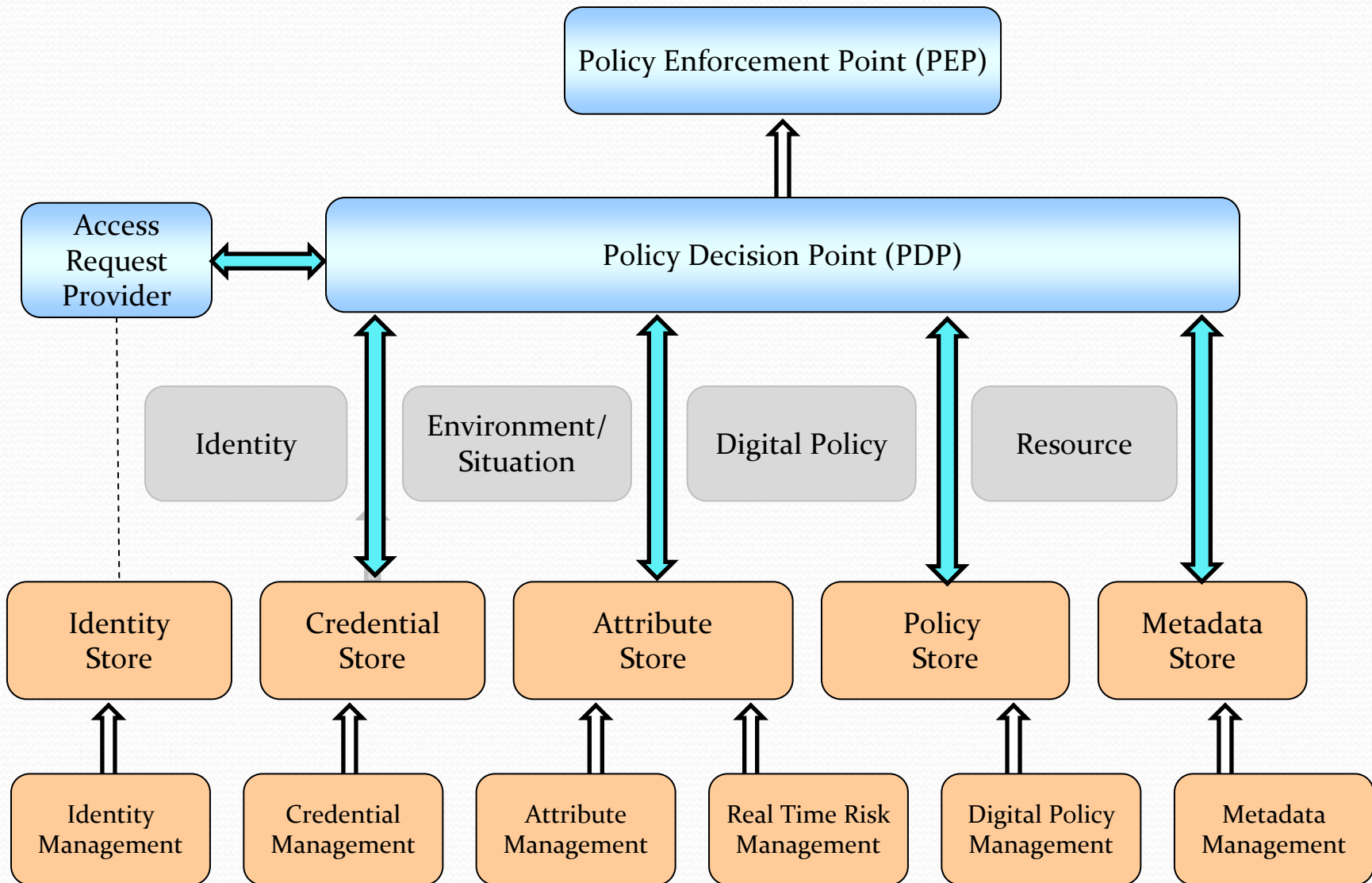




A Focus

Interfaces

An operational representation of the enterprise-level access control context

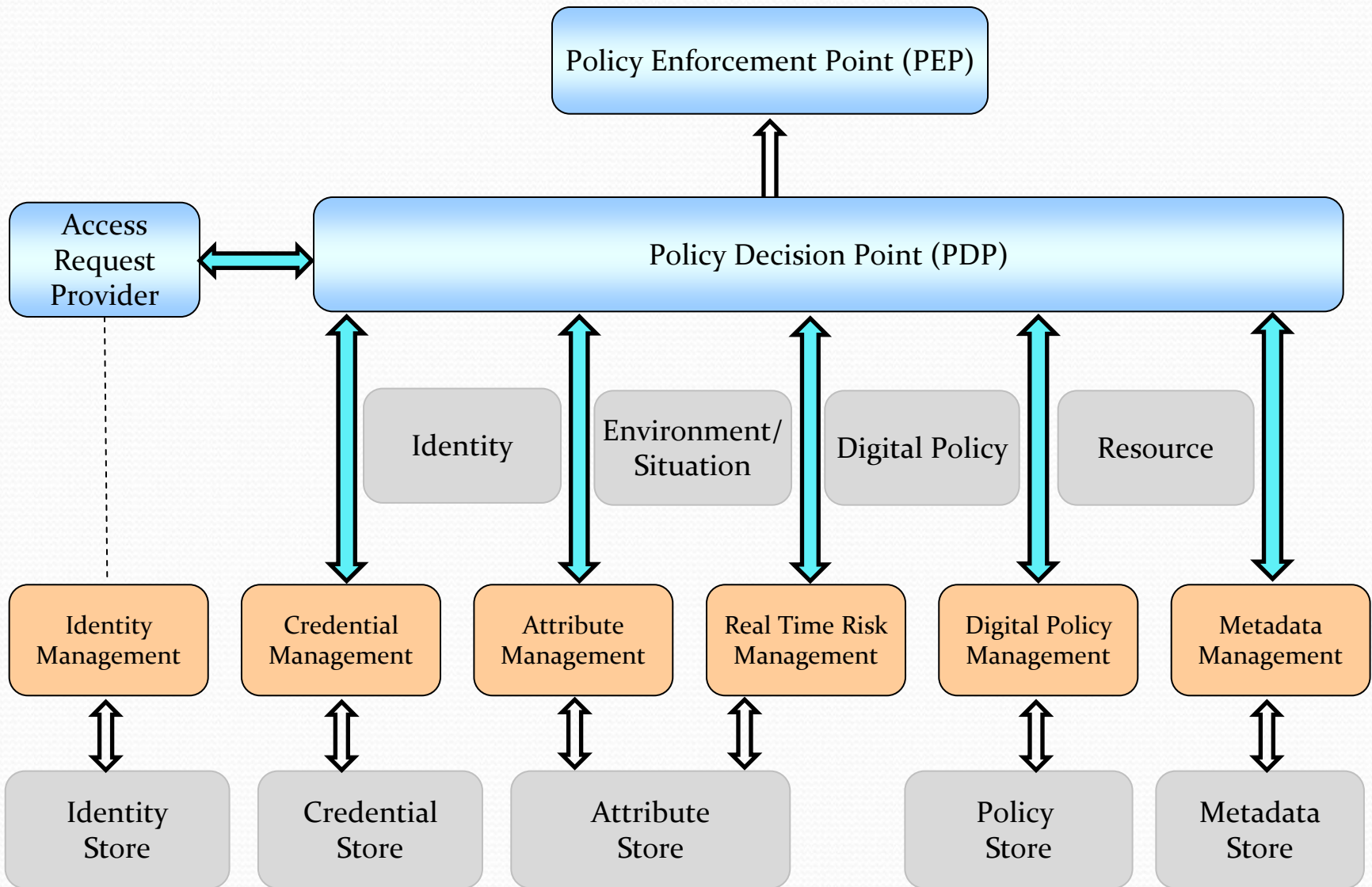


Interfaces



But . . .

there's another way to look at this.



Interfaces



But . . .

there are disadvantages to each of the architectures.



Yes . . .

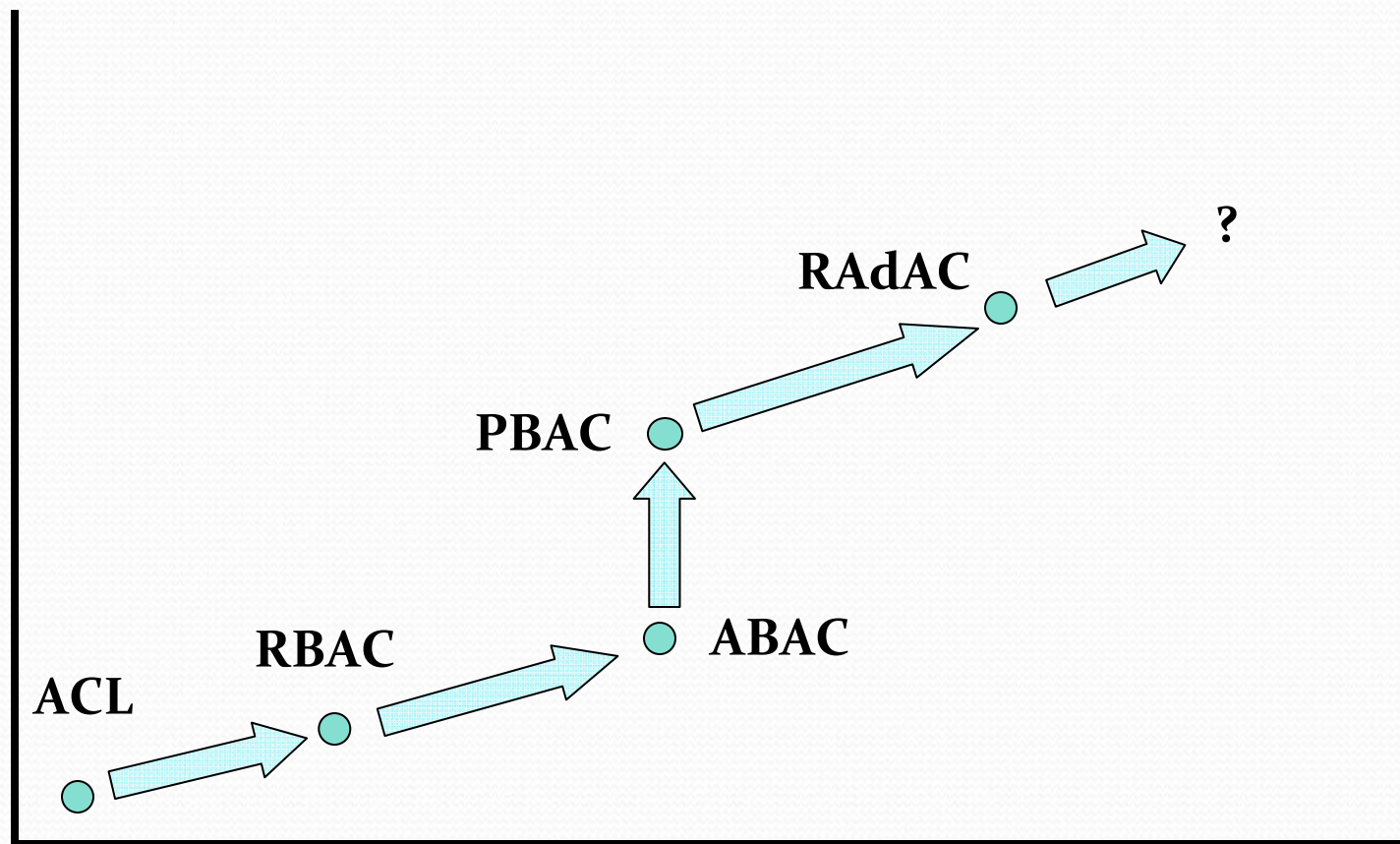
and exploring the advantages and disadvantages of each architecture, and perhaps others you can think of, provides another discussion theme for the four tracks.

Access Control Models

A brief look at five access control models in relation to each other

Access Control Models

Increasing Policy Basis for
Access Control Decision →

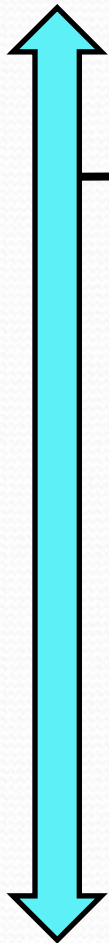


Increasingly Finer Granularity of Access Control →

The Four Tracks and the Interfaces

Some questions for discussion

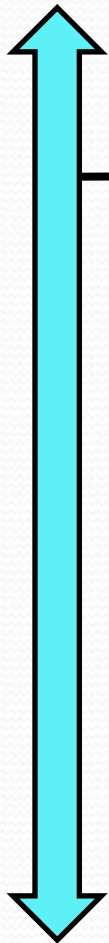
Interfaces and the Four Tracks



Standards and Definitions

- Which existing standards can effectively be used for implementing interfaces?
- Are new standards needed?
- Are standardized definitions needed for describing and implementing interfaces?

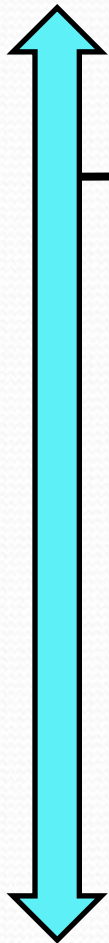
Interfaces and the Four Tracks



Models and Frameworks

- Which existing models apply to which interfaces or sets of interfaces?
- Are new models needed?
- Do appropriate frameworks exist for describing and implementing interfaces?
- Are new frameworks needed?

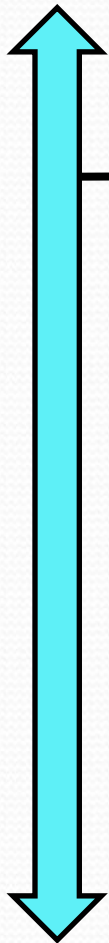
Interfaces and the Four Tracks



State of the Practice and Research Agenda

- What products, technologies, models, and/or frameworks are commonly used for describing, designing, and implementing interfaces?
- Where are the gaps?
- What are the priorities for a research agenda to fill the gaps?

Interfaces and the Four Tracks



Policies and Requirements

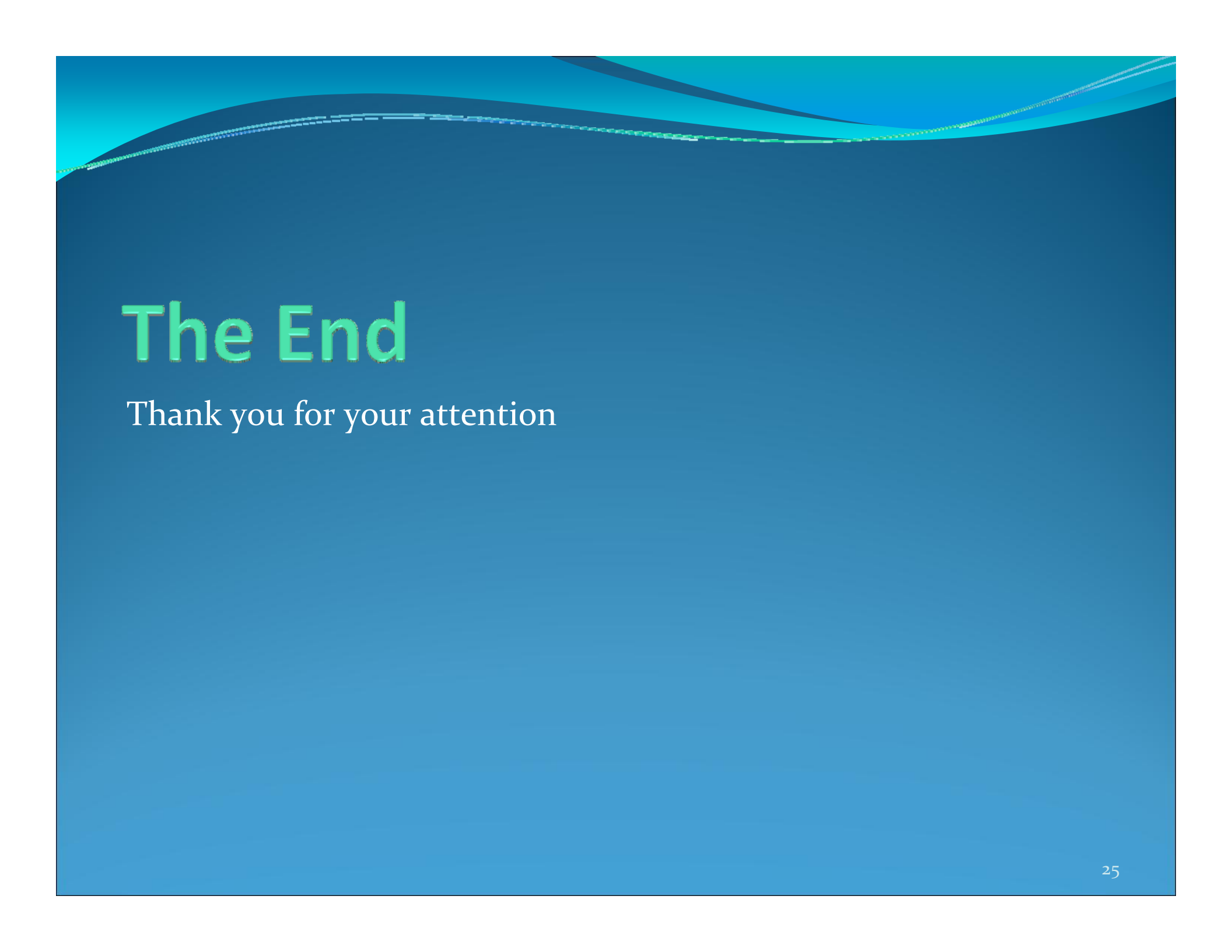
- What policies and requirements impose constraints on interfaces, such as security constraints?
- How do policies and requirements in various sectors affect prioritization of work on the interfaces?
- Where are the needs for which policies and requirements have not been stated in a usable form?

Summary

A brief review

Summary

- Context
- A Focus
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The End

Thank you for your attention