

Digital Rights Management

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What is DRM?

- Technology that facilitates the persistent authorized use of digitally delivered resources

This sounds pretty good, why all the fuss?



Napster was the Anti-DRM

Hearts and Minds



Alpha-Geeks I



- Linux box running MythTV in attic
- 1TByte storage system
- Custom homebrew set-top boxes
- Almost a year of TV or 1000 movies.

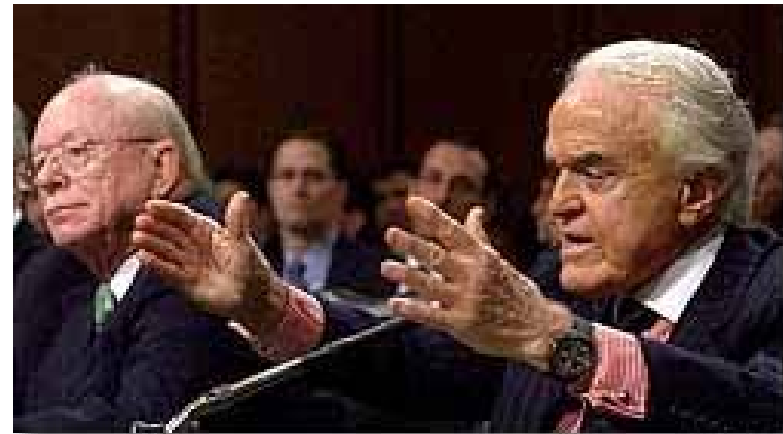


Alpha Geeks II

- Streaming video from Mac client to Linux server to the wider Windows world
 - OS X Laptop
 - iSight
 - Wireless connection
 - Quicktime Broadcaster
 - Linux box
 - Darwin Streaming Server



Content Producers are Scared



AP Photo



Putting the Genie Back in the Bottle?



Shouting Match

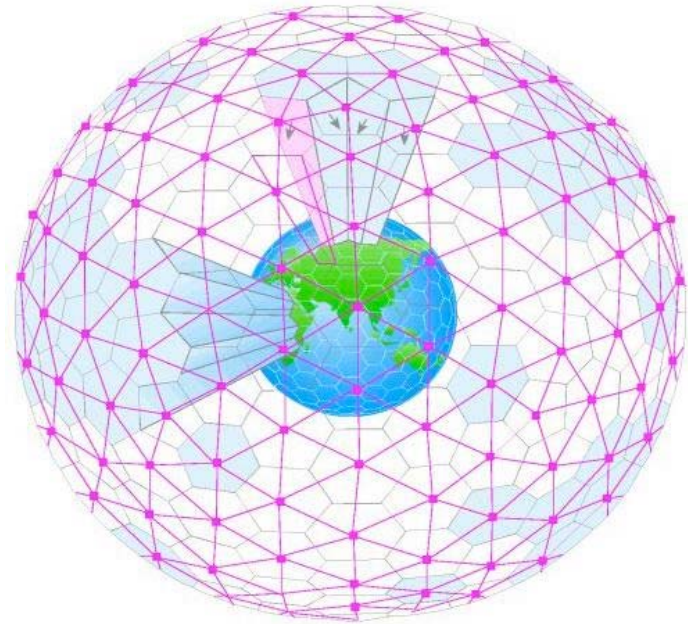
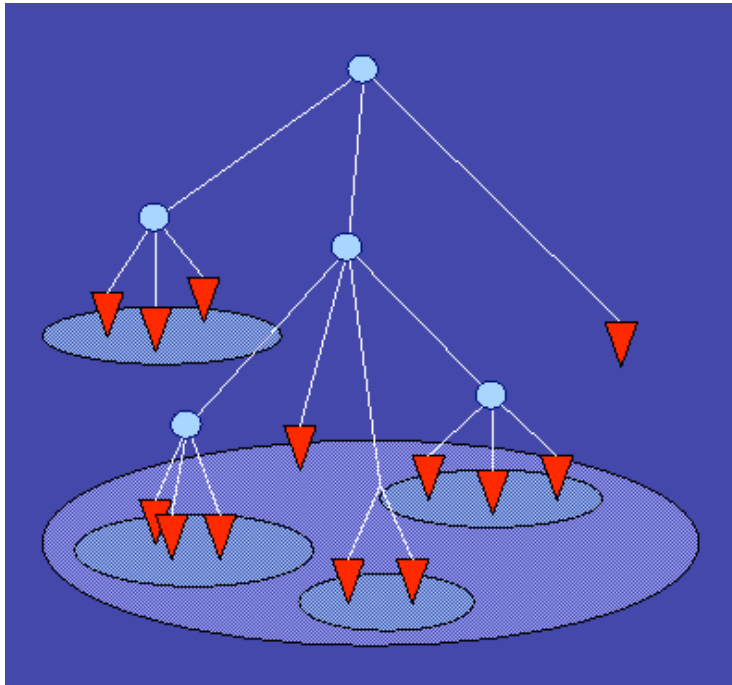


We're just
getting people to
pay for
content!!!!

You're
destroying
the
Internet!!!!



Hierarchies vs. Networks



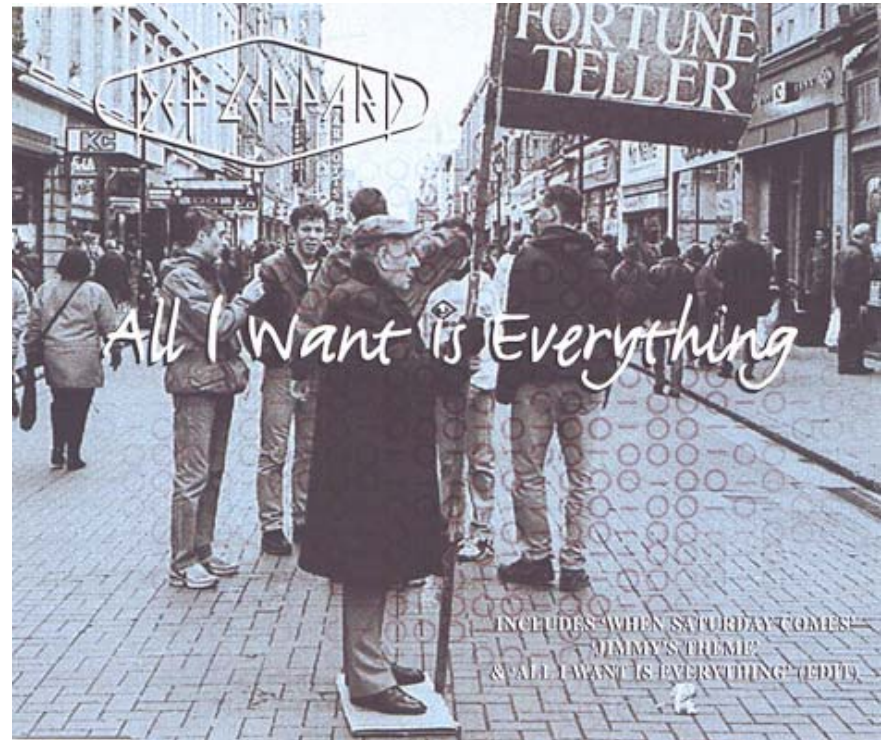
Why Apple and Microsoft?



DRM == Lock-In

Users Want it All!

- Everything
 - Open access
 - Open formats
 - Open sharing
 - Deleted works
 - Movies
- Don't want
 - Tethering, lock-in, restricted rights, DRM





So What?

What the CEO Wants

- To understand the business
- business intelligence
- To be efficient and flexible
- business process automation
- Protect business assets



What the CIO Does



- Gets desktops to work
- Deploys new HR and ERP systems



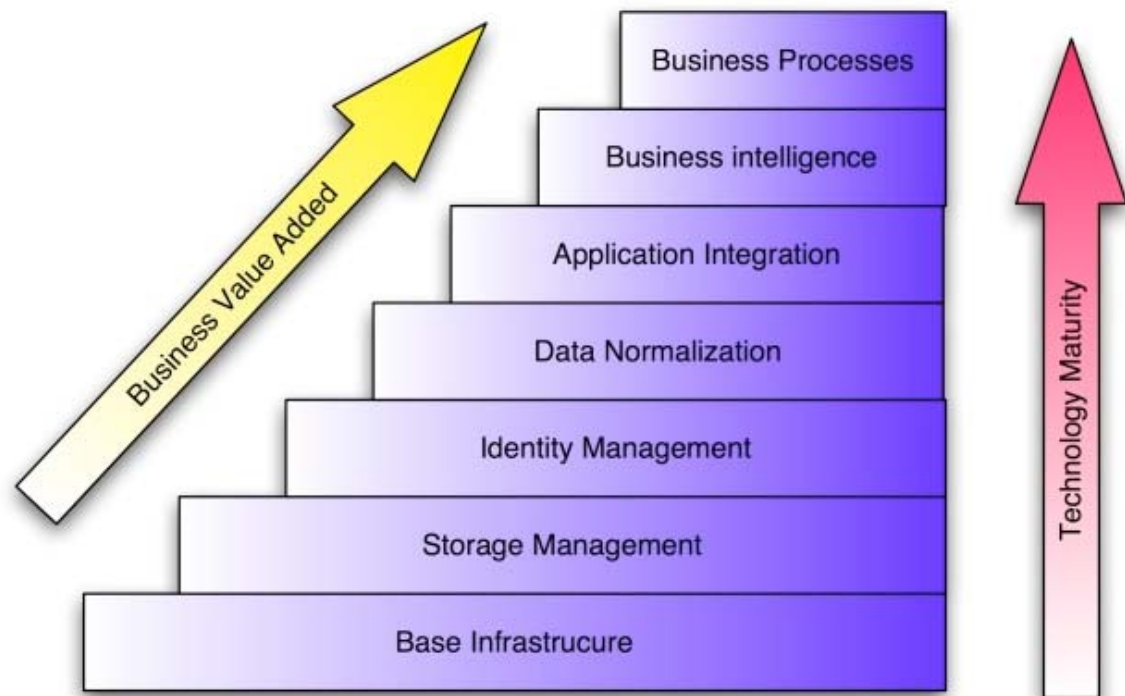
- Installs firewall
- Buys bandwidth
- Manages storage

The Xserve RAID.

Up to 3.5TB in 14 hot-swap drives
High-performance 2Gb Fibre Channel
Starting at just \$5999



Hierarchy of Needs

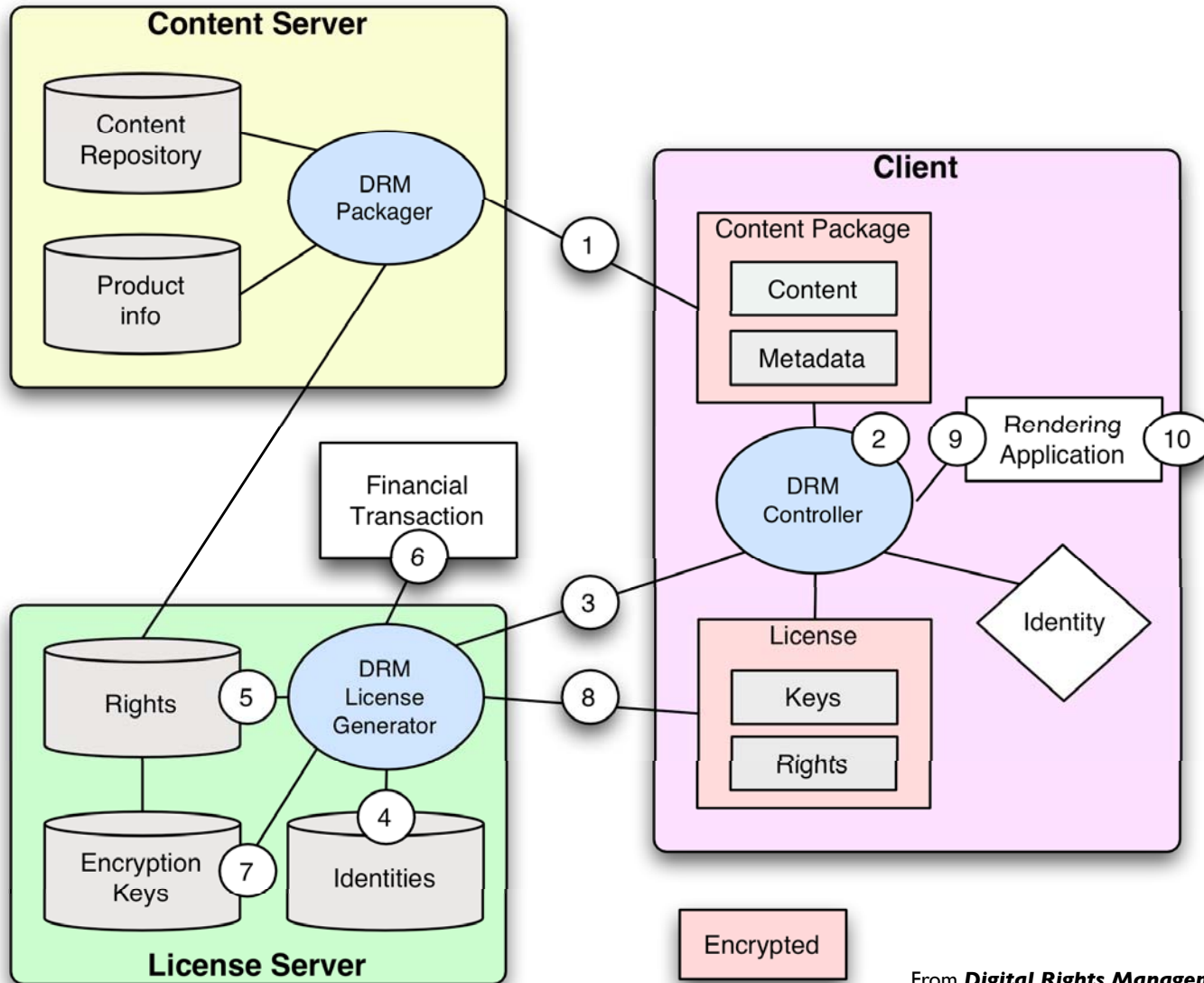


DRM as a Tool

- DRM
 - protects corporate digital assets
 - enabled by identity
- But...is it just one more headache for the CIO?



DRM Reference Architecture



From **Digital Rights Management**, Rosenblatt, et. al.

Alpha Geeks III



“Accountability
is a log
processing
problem”

-Dan Geer

- Access control scales geometrically (its a table)
- Accountability scales linearly
- Access control systems are incredibly vulnerable to DDoS attacks

Protect the Crown Jewels

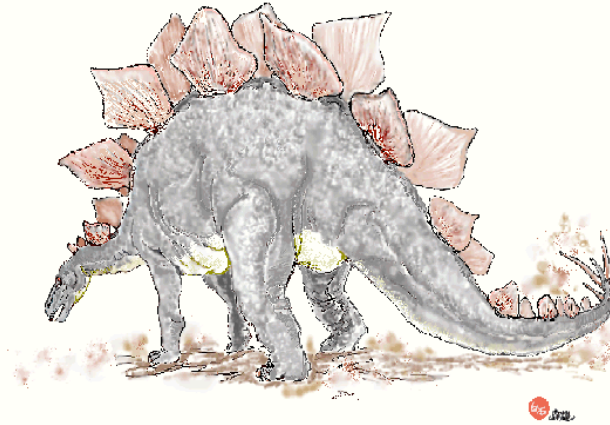


Monitoring

Digital watermarks



Steganography



Ad monitoring



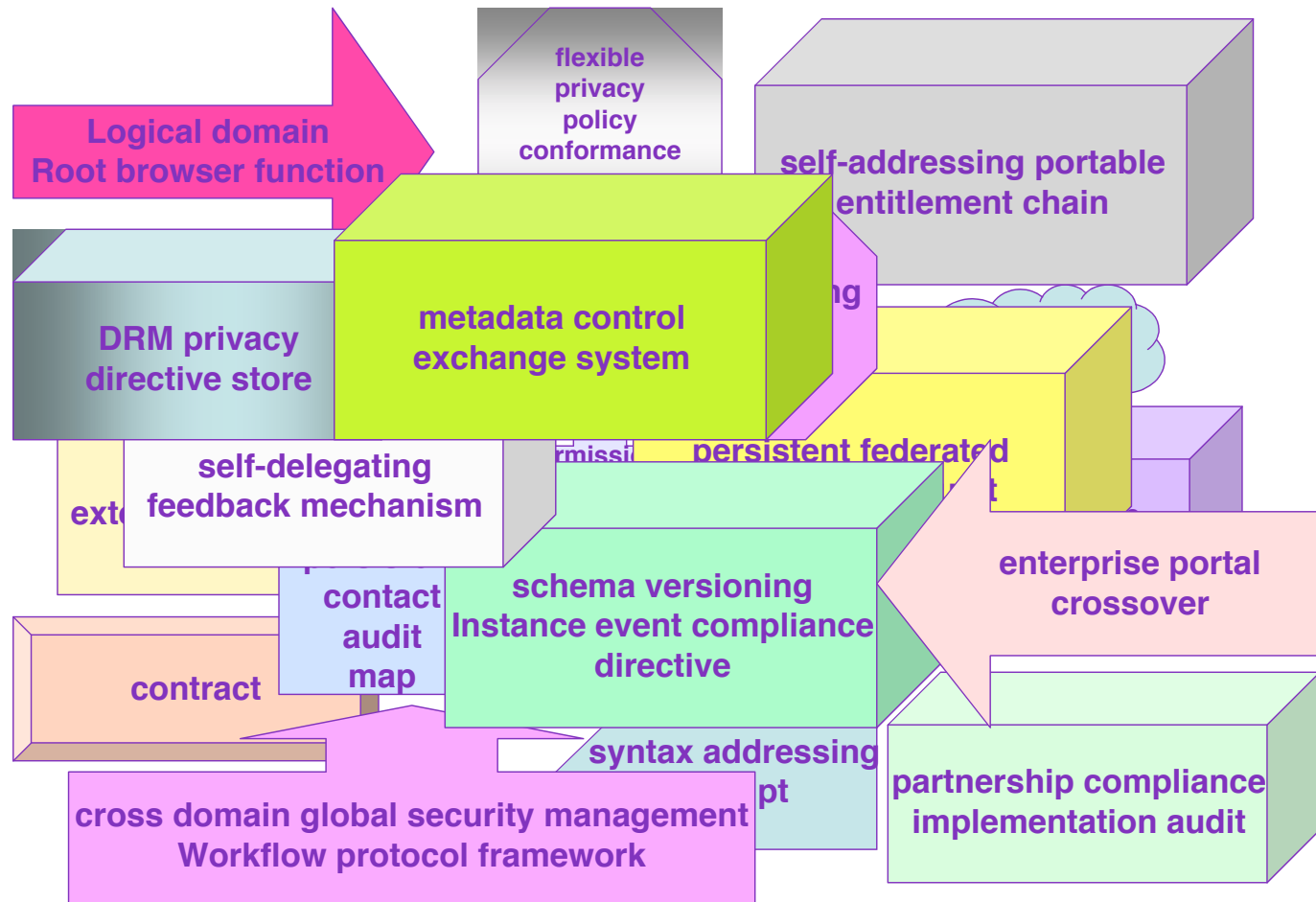
Log processing

Alpha Geek IV

- Tony Scott, CTO of GM
- Extend GM's reach past the sale
 - OnStar
 - Vehicle service
 - Internal directories
 - Supply chain



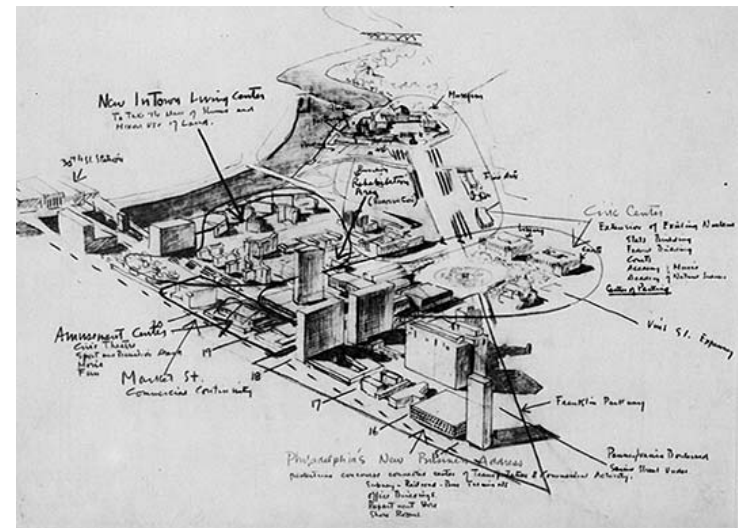
Identity Infrastructure (as built)



Architecture courtesy of Doc Searls

Digital Identity Foundation

- What is the context in which identity systems are created and managed?
- Like city planning
- Architecture is:
 - Standardization
 - Certification
 - Management (rules, regulation, enforcement)
- Identity Management Architecture (IMA)



Turning Security Inside Out

- Digital Identity
- Security
- Asset protection
- Business enabler



IMA is About Business



- Requires functional business model
- Identify resources and entities first
- Identifies dependencies between data and systems
- Driven by long term business goals

Building an IMA

1. Governance

- What are we going to do?

2. Modeling

- Where are we?

3. Planning

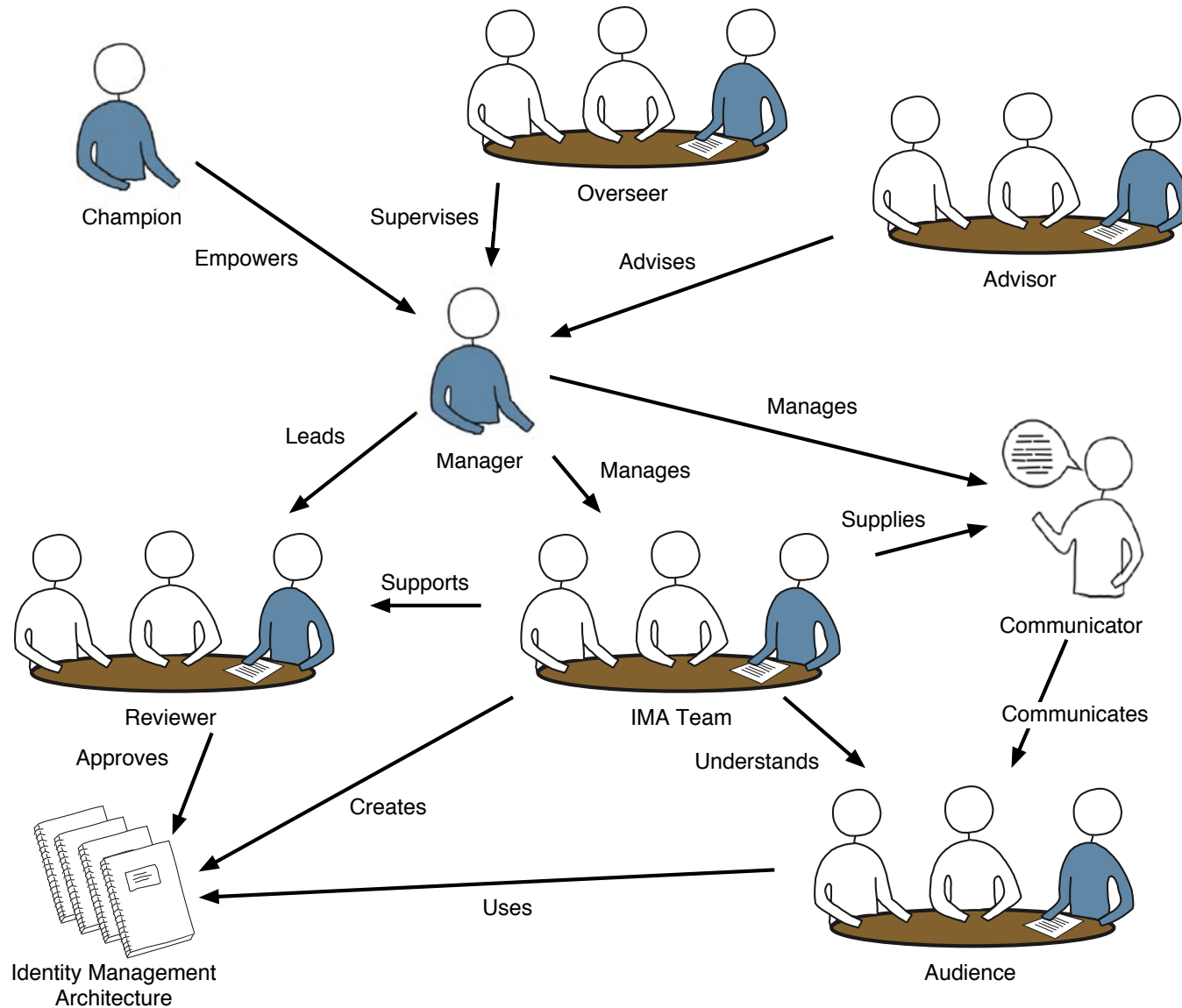
- Where do we want to be?

4. Implementation

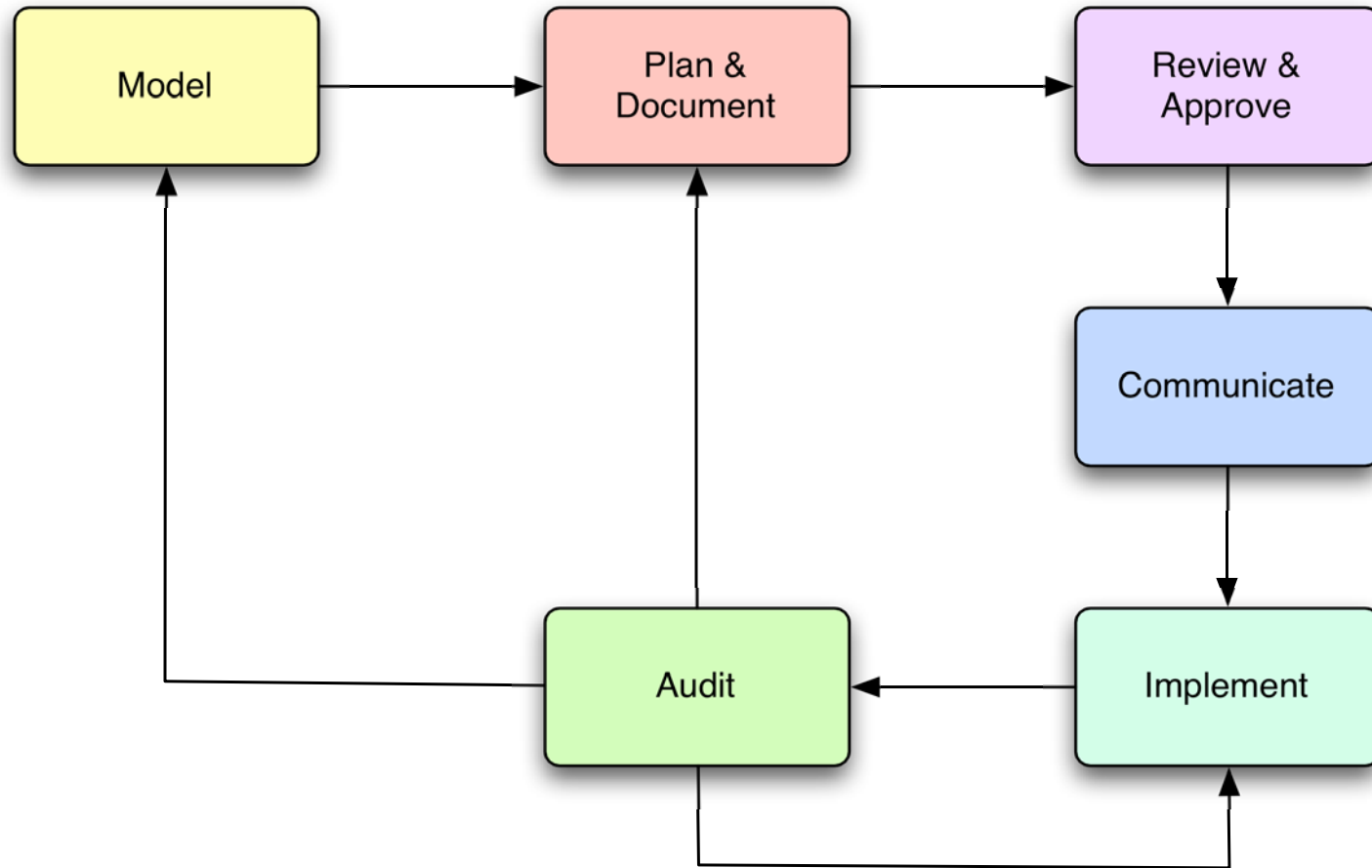
- How do we get there?



IMA Roles



IMA Lifecycle

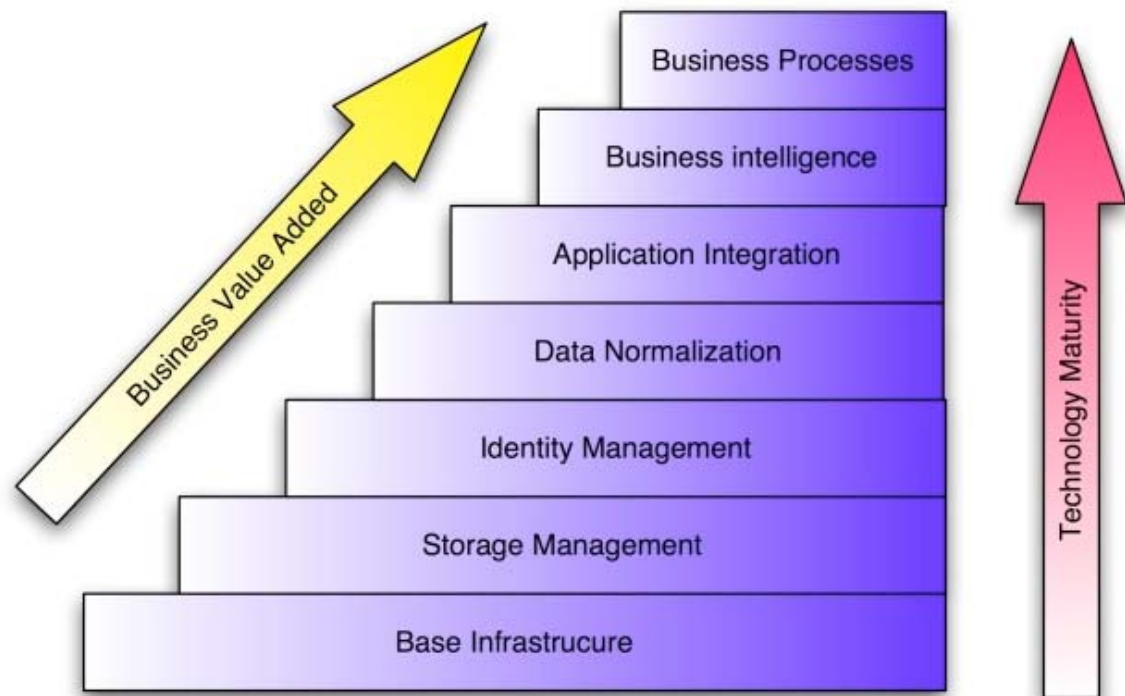


Digital Identity Maturity



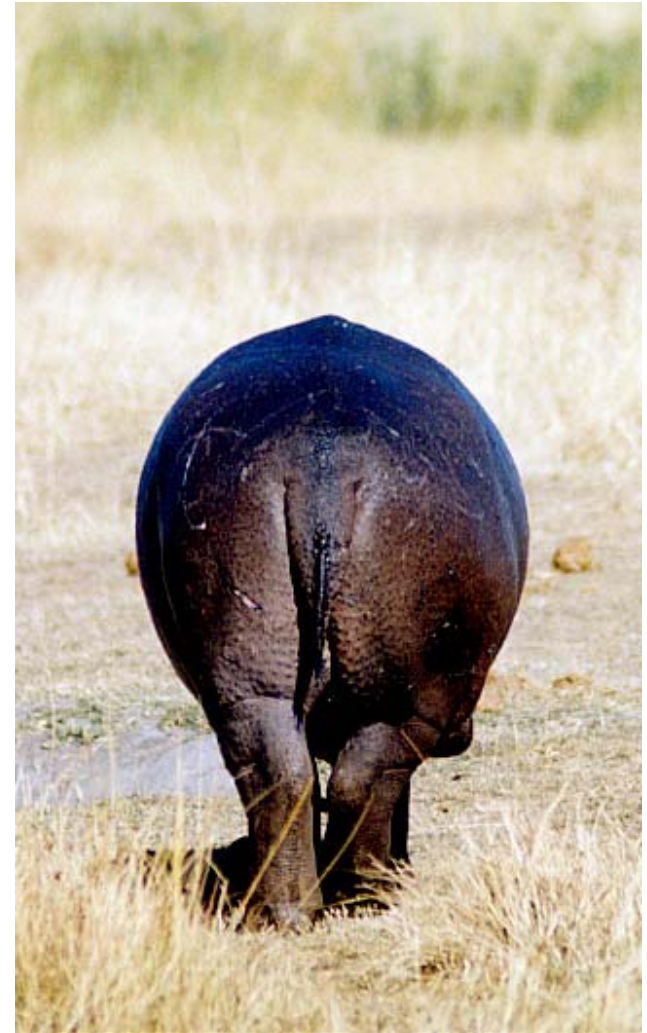
- **Level 1:** Ad Hoc, Random
No planning or structure
- **Level 2:** Repeatable
Not consistent
- **Level 3:** Defined
Consistent, but static
- **Level 4:** Managed
Feedback for adaptability
- **Level 5:** Optimized
Sophisticated metrics and tools

Hierarchy of Needs



Summary

- DRM is controversial
 - Protecting corporate data is smart
 - Controlling customers is dumb
- Identity management is central
- DRM is higher up the IT Hierarchy than identity management



Contact Info

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Questions?

