Asset-based Software Engineering

OMG ADM Workshop
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return on software™

Topics

- Software is important
- Software is forever
- Asset-based Software Engineering
- Visibility, governance, and analytics
- ASE Applied
- Reusable Asset Specification
- Architecture Driven Modernization

Turning IT Cost into Business Value

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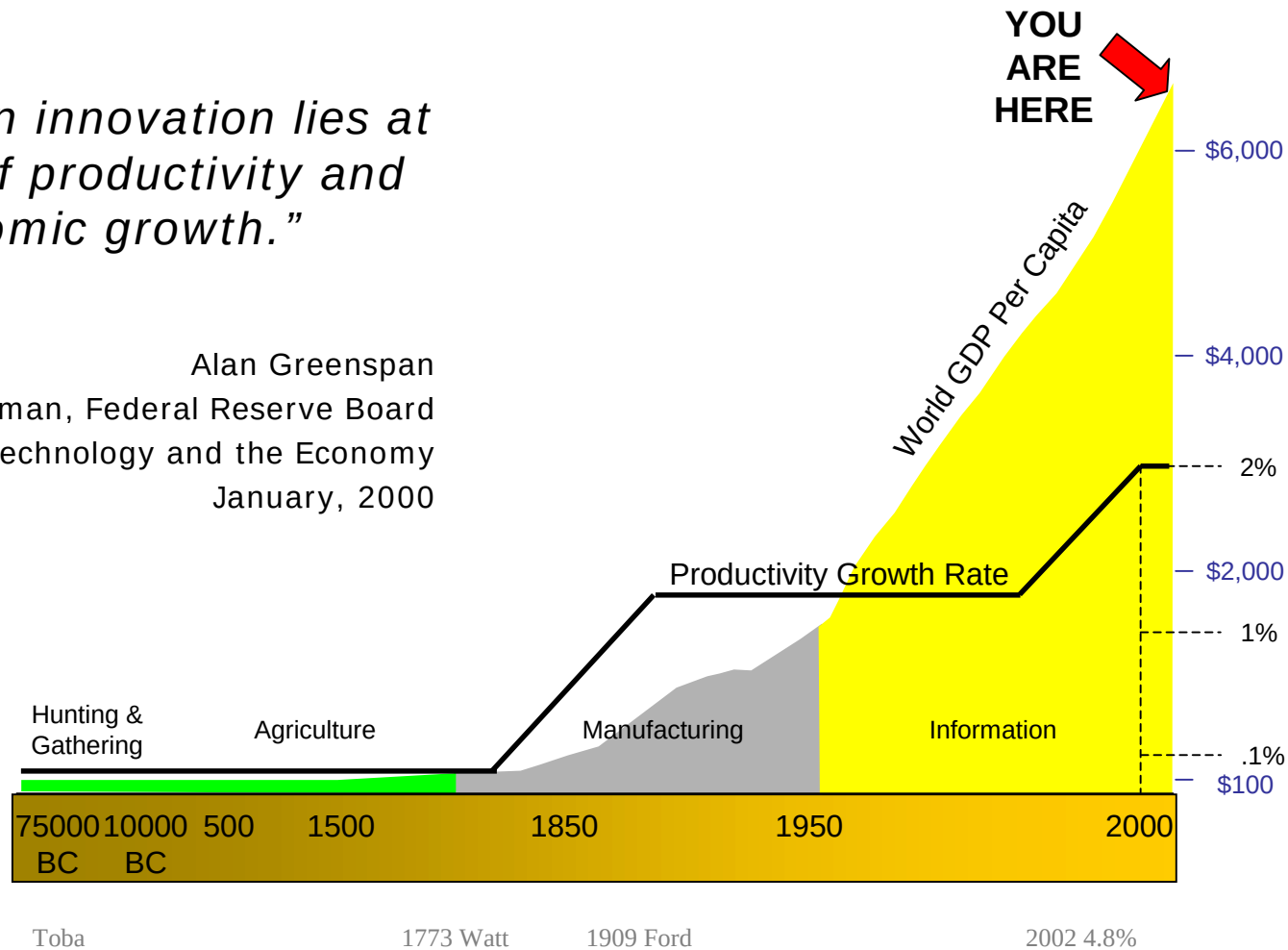
Software is Important
Productivity

"...information innovation lies at the root of productivity and economic growth."

Alan Greenspan
Chairman, Federal Reserve Board
Technology and the Economy
January, 2000



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Software is Important
Our organizations are defined by our software

- Direct
  - Phone systems
  - Web sites
  - Email
  - VRU
- Indirect
  - Internal systems
  - Order origination
  - Order processing
  - Customer service
  - Increasingly all business rules are being embodied in our software systems
- Partners
  - Supply chain systems
  - Flexible partnering systems

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Software is Forever

- "Not the 90's"
- Long-lived platforms
  - Java
  - .Net
  - Web Services
    - Hardware independence = Migrate forever
- Software doesn't wear out
- Valuable intellectual property
- Software transcends developers
- Cost of duplicative systems
  - Cut maintenance by 20%
  - "Write Less Software"

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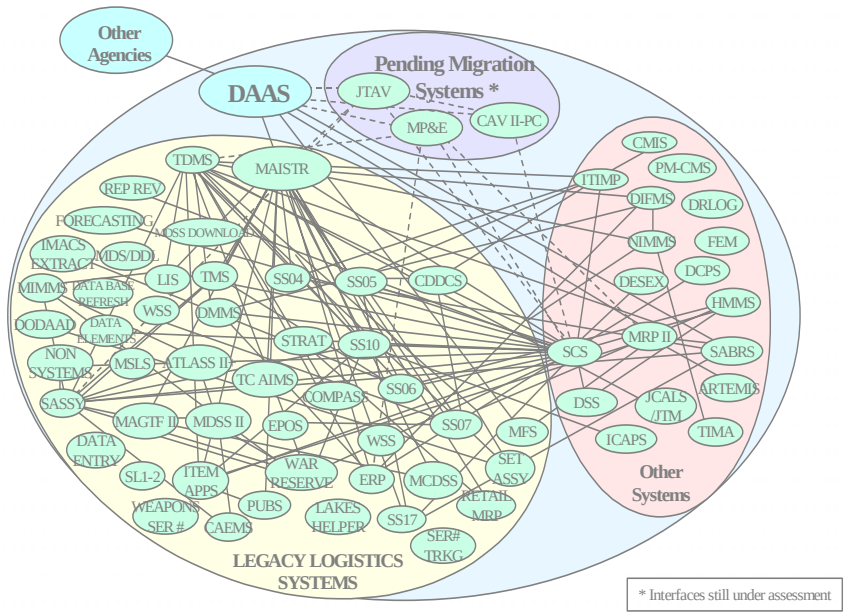
5 Dimensions of Software Complexity

- Complexity as primary constraint on software
  - 1000x increase across 5 dimensions
    - Interface, stakeholders, size, platforms, network
  - Encapsulation best method for managing complexity
  - 7±2 Methods and Properties



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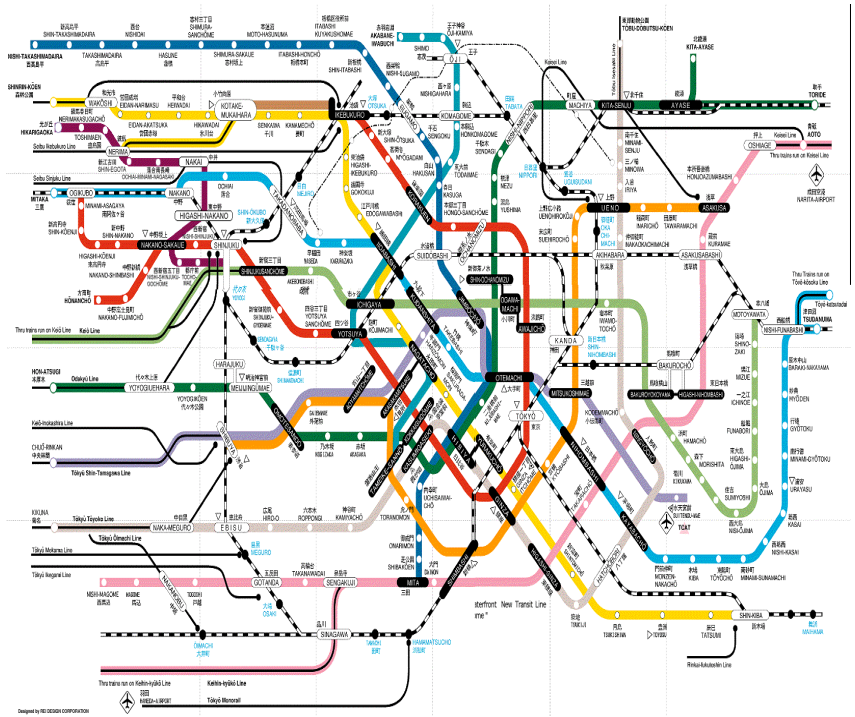
Managing Complexity

- Architectural analogies are wrong!
- Cathedral and the Bazaar
- Goals of the A determined by scale of the E
- Plans in the architect's head
- Brasilia
- Public Infrastructure
  - Roads, utilities, services



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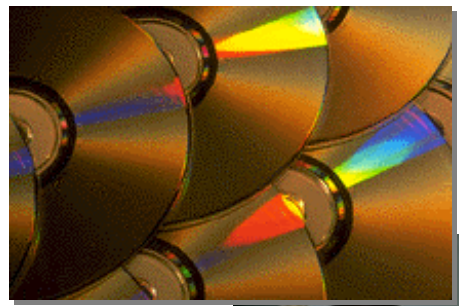
Introducing Asset-based Software Engineering

***Software** needs to be managed as a valuable enterprise **asset**, created through **engineering**, managed as a **portfolio**, and continuously **measured**.*



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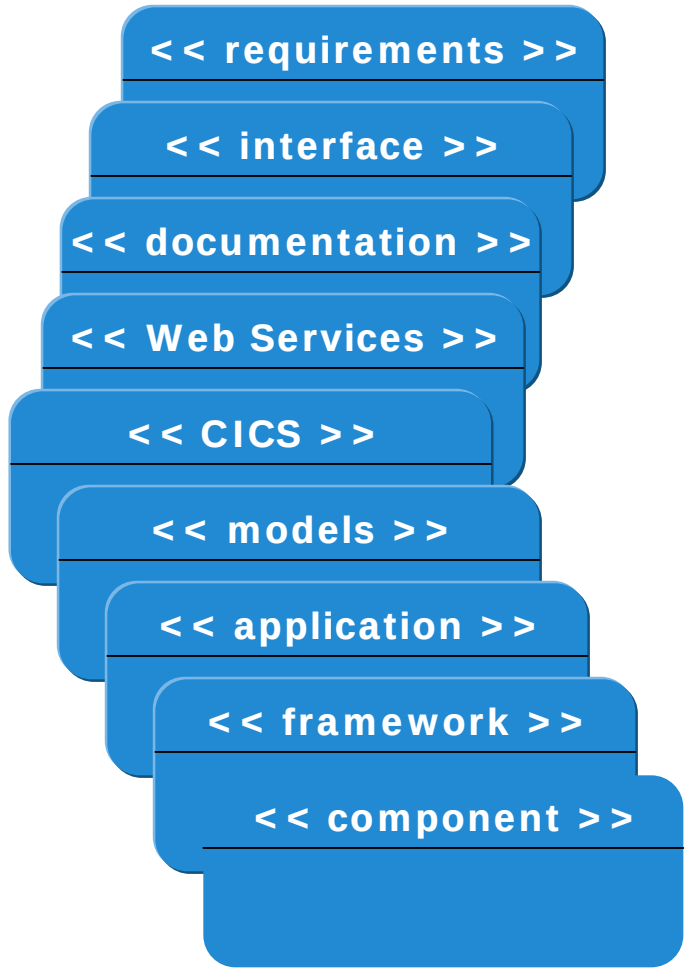
Software as Asset

- Beyond people
- Beyond process
- Two types of software
  - Commodity = expense
  - Strategic = asset
- Many types of assets
- Increasingly long-lived
- Capture and transfer intellectual property
  - Employee turnover



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Engineering Discipline

- From 19th Century Craft to 21st Century Science
- Lessons from auto, building, electronics industries
  - Encapsulation/components
  - Specialization
  - Metrics
  - ROI
- 10% productivity x 200 developers = $2,000,000

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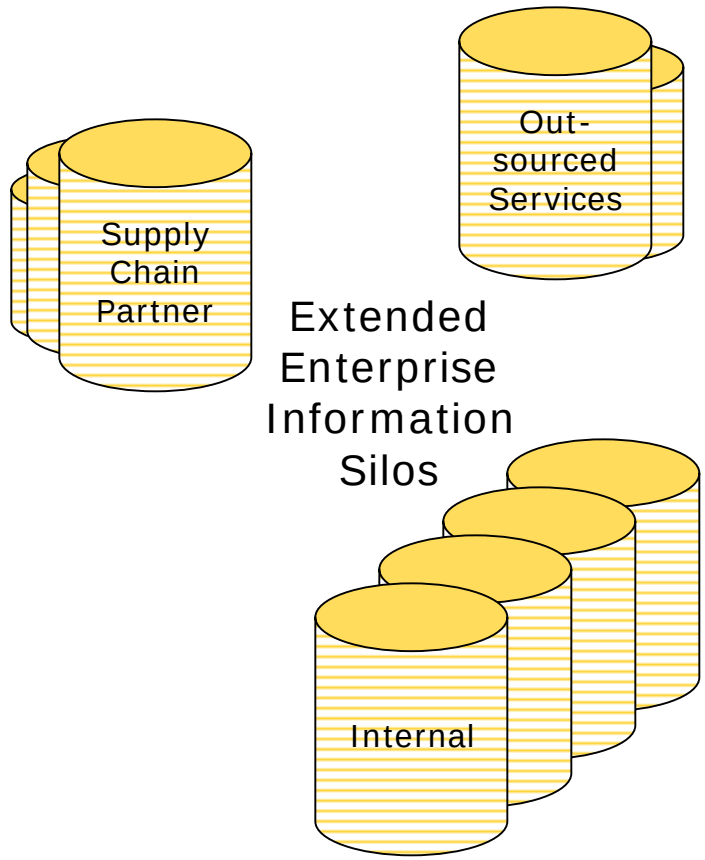
Portfolio of Assets

- Business unit and enterprise views
  - Synergies
  - Exposed via SOA
- Orchestrate
  - People, process, tools, assets
  - Visibility
  - Silos
- Integration
  - Heterogeneous tools
  - Multiple methodologies
  - Web services API



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Visibility, Governance, and Analytics

- Flashline Registry delivers **Software Asset Management** solutions to large organizations which provide:
  - 1. Visibility
    - Enables reuse
    - Reduces duplication
  - 2. Governance
    - Alignment of initiatives, projects and assets
    - Compliance
  - 3. Analytics
    - Portfolio value
    - Asset quality
    - Reuse savings

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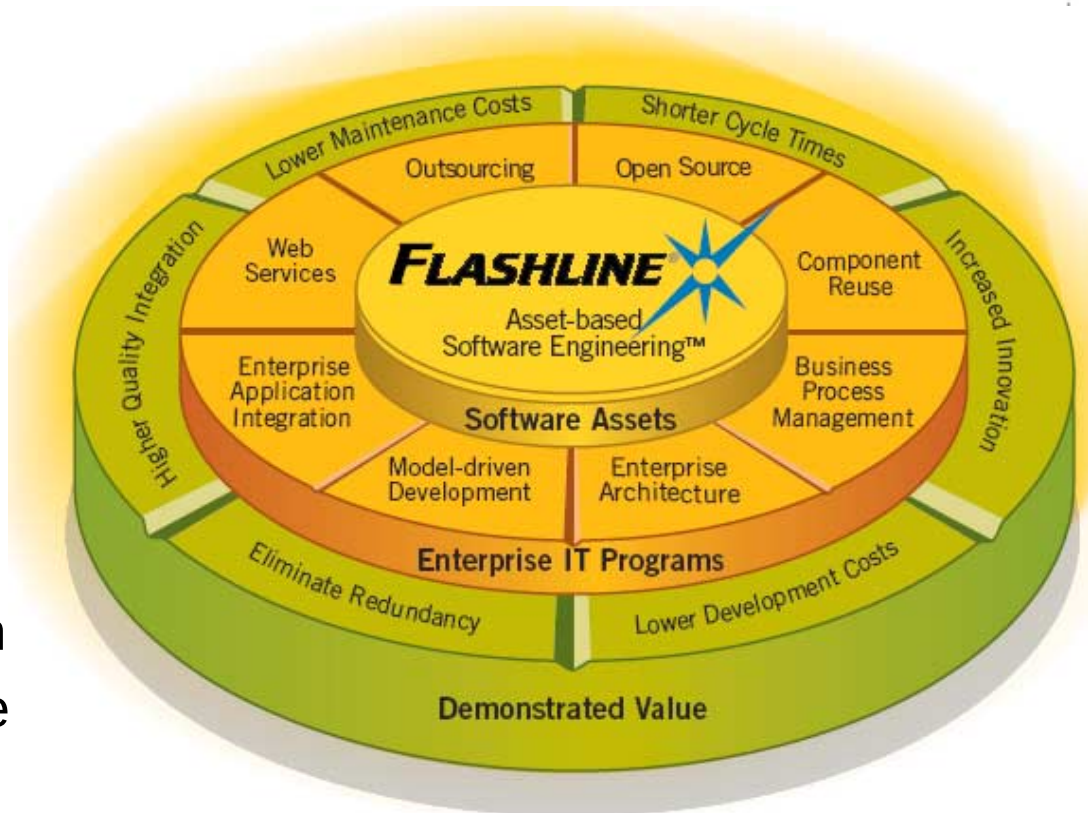
Applying ASE to Enterprise Initiatives

- Ideal for initiatives that span multiple teams
- Open Source
- Reuse
- Outsourcing
- Web Services
- FEA
- Legacy Transformation
- Enterprise Architecture



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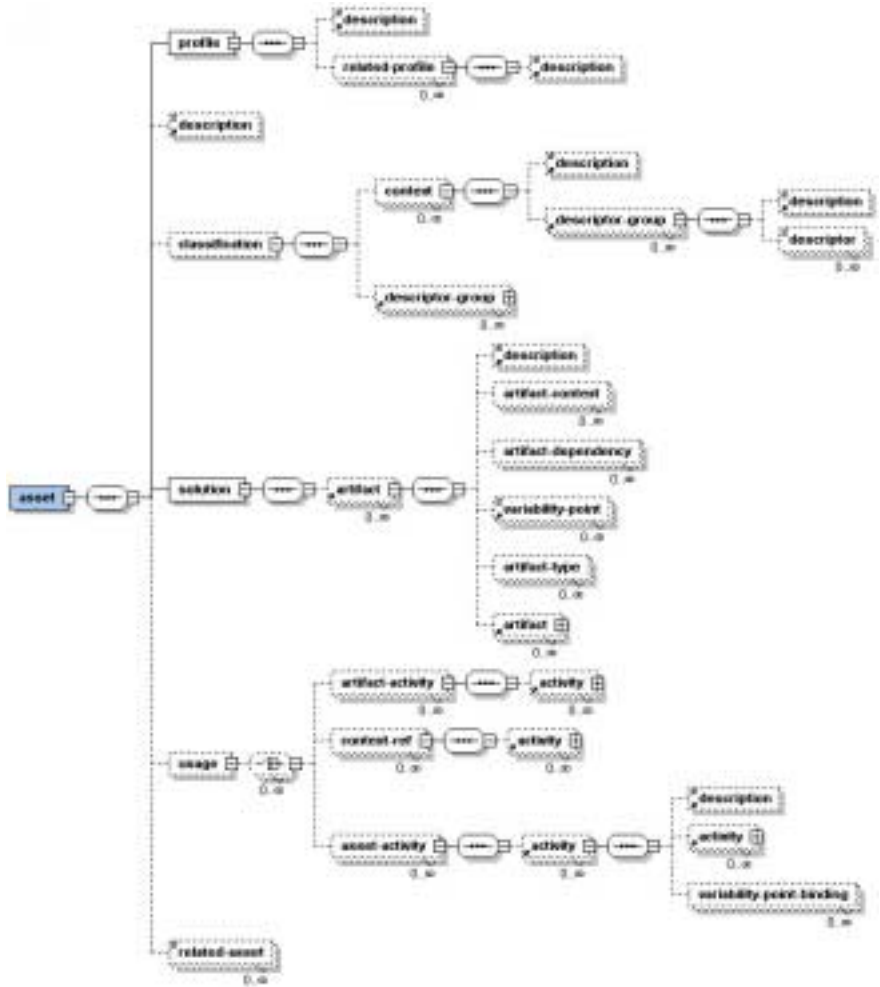
Reusable Asset Specification

- RAS
  - Why
  - What
  - Who
  - How
- Profiles
  - Default
  - Component
  - Web Services
- RAS Services
  - Registry



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Architecture Driven Modernization

- Legacy Assets
  - CICS
  - Cobol Programs
- Core of the Enterprise
- IBM's WebSphere Asset Analyzer
- RAS Profile

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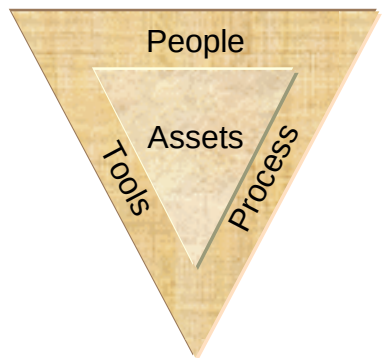
Charles Stack

Turning IT Cost into
Business Value

through

Asset-based
Software Engineering



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