Taking an Asset Management Approach to Reusable Technology Building Blocks
What to Buy, Hold and Sell

Guy B. Sereff
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About The Presenter

Guy B. Sereff

- Author, Speaker and Technology Practitioner

- Vice President / Enterprise Architecture

- Technology Industry Experience

  - *Application Research & Development (12 years)*

  - *Large-Scale Technology Management (8 years)*

  - *Global Enterprise Architecture (7 years)*

- Enterprise Architecture Domain Experience

  - *Business Architecture*

  - *Information Architecture*

  - *Application Architecture*

  - *Solution Architecture*

  - *Architecture Governance*

- Pragmatic Blend of Strategy and Tactical Execution

http://www.linkedin.com/in/guysereff

Agenda

Problem Statement: Our Assets Are Out of Control!

Three-Point Asset Management Plan

- Organize

- Categorize

- Optimize

Recommended Next Steps

Questions and Comments

Problem Statement: *Our Assets Out of Control!*

Organizations have amassed a heterogeneous array of technology gadgets, software packages, utilities and applications over the course of operations

Today's rapid global economic pace makes it very difficult to:

- Stay on top of the vast number of technical components deployed across a firm
- Execute an effective portfolio management strategy

Legacy tools and technology elements get woven deeper and deeper into core business processes over time

This collection of technology 'widgets' often represents years of what was, at the time, a thoughtful investment in meeting the immediate needs of the organization

- But what about *today*?
- What about *tomorrow*?

as·set *
  noun \ˈa-set, ˈa-sət\
  : a valuable person or thing
  : something that is owned by a person, company, etc.

An <u>asset</u> is a discrete, identifiable bounded element that provides some form of value to the entity or organization, whether that value is real or perceived.

Obvious technology asset types include software, hardware, storage devices and communications equipment.

Less obvious asset types include capabilities, business components and business processes.**

Objective: Optimized Technology Asset Management

In order to optimize their technology assets, many successful organizations adopt a *Technology Asset Management Approach,* which involves:

- Following a systematic way of identifying and tracking their assets;

- Grouping their assets in meaningful ways;

- Focusing their time, energy and resources on those assets providing the most value;

- Deprecating those assets providing the least value to the organization.

Optimize

Categorize

Organize

Current State

Maturity Level of Asset Management Effectiveness
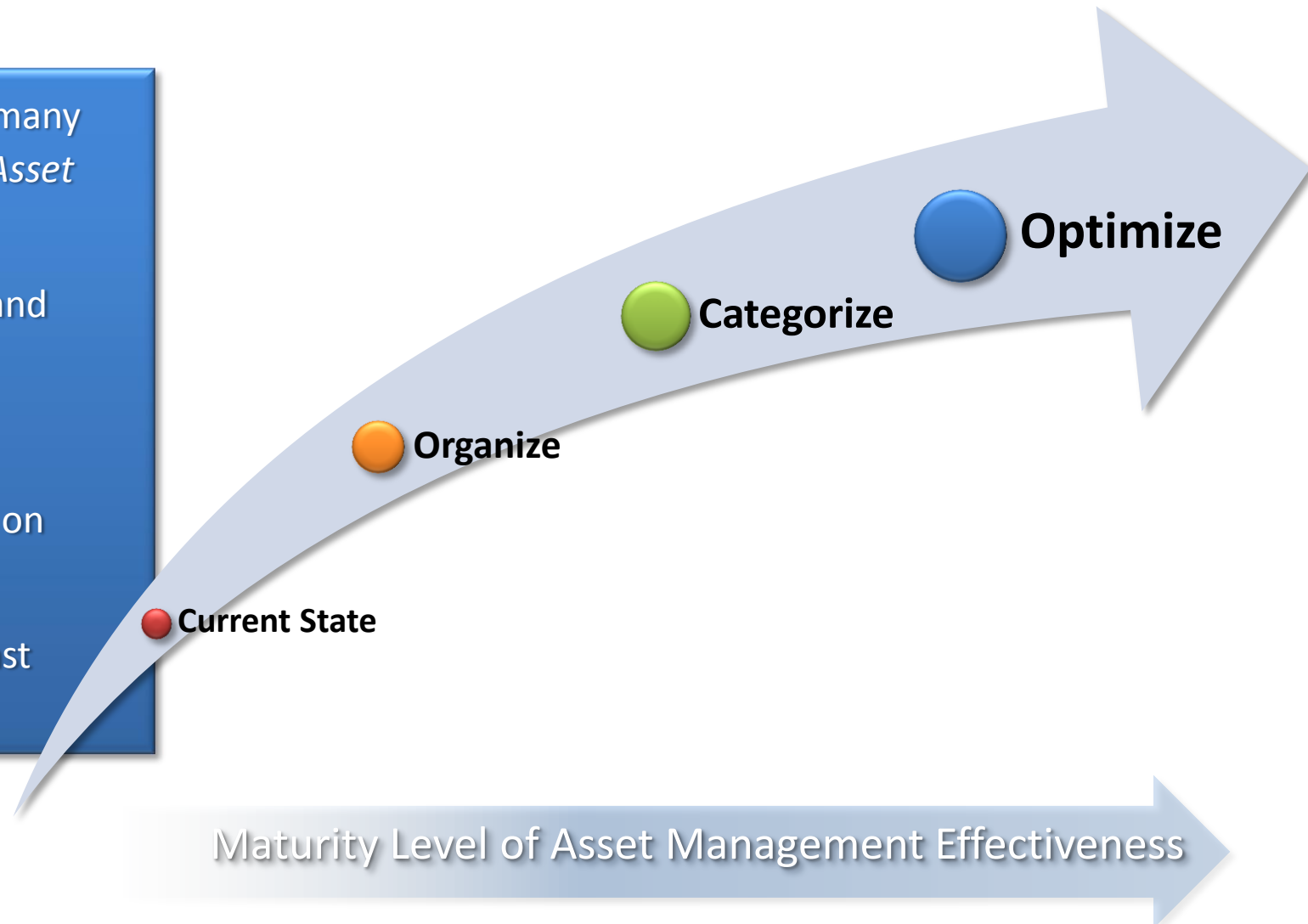
Step 1: Organize

1. *Organize* Assets into a comprehensive Asset Portfolio

2. *Categorize* Assets by targeted Building Blocks and Capabilities

3. *Optimize* Assets through Asset Management techniques, setting and applying asset Buy, Hold and Sell strategies

SAM – Software Asset Management

Software Asset Management (SAM) emerged as an initial attempt to gain some level of understanding and control of what software assets were active across a firm

SAM helps System Administrators identify which vendor packages are *over* licensed (too many) and which are *under* licensed (too few)

- Too many licenses may be good for vendors but pose an 'inefficiency tax' on the firm's operating budget

- Too few licenses may save a few hundred Euros here and there in the short run, but puts the firm in a position of unnecessary legal risk

Information Technology Infrastructure Library (ITIL) defines SAM as:

*...all of the infrastructure and processes necessary for the effective management, control and protection of the software assets...throughout all stages of their lifecycle. ***

IT Asset Management (ITAM) is a set of business practices that incorporates IT assets across the business units within the organization. IT Asset Management joins the financial, inventory and contractual responsibilities to manage the overall life cycle including tactical and strategic decision making. ****

*Rudd - *ITIL's Guide to Software Asset Management* (2009);
** International Association of Information Technology Asset Managers, Inc. (2012)
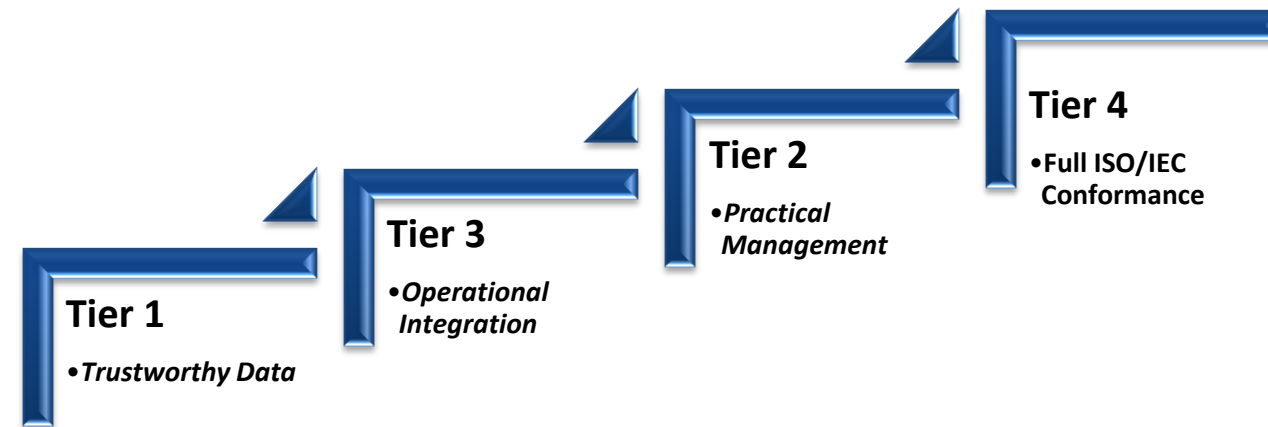
ISO/IEC 19770

ISO/IEC 19770 consists of three main parts, each addressing a core aspect of managing software assets

Not prescriptive in terms of describing *how* something should be done *per se* – more focused on *what* should be done

Outlines a best-practice template to follow for sufficient topical coverage and a mechanism for assessing practice maturity

- **Tier 1:** Trustworthy Data
- **Tier 2:** Operational Integration
- **Tier 3:** Practical Management
- **Tier 4:** Full ISO/IEC Conformance

*ISO/IEC 19770 has been developed to enable an organization to prove that it is performing Software Asset Management (SAM) to a standard sufficient to satisfy corporate governance requirements and ensure effective support for IT service management overall.**

Tier 1
•*Trustworthy Data*

Tier 3
•*Operational Integration*

Tier 2
•*Practical Management*

Tier 4
•**Full ISO/IEC Conformance**

ISO/IEC 19770*

ISO/IEC 19770-1
- Process Framework and Tiered Conformance Assessment

ISO/IEC 19770-2
- Data Standard for Software Identification Tags

ISO/IEC 19770-3
- Data Standard for Software Entitlement Tags

ISO/IEC 19770-5
- Overview and Vocabulary
  Future - Standard Under Development

ISO/IEC 19770-7
- Tag Management
  Future - Standard Under Development

Excellent starting point when creating/assessing the entity's Software Asset Management approach – ensures the organization has established a formal SAM process and includes guidelines for assessing conformance maturity

Related to tagging software assets for identification and authorization tracking

- ISO/IEC 19770 is generally geared more towards vendor software application packages
- These SAM concepts can (and should) be equally applied to custom packages and proprietary applications that have been developed in house
- Our goal is to manage *all* of our software assets

Asset Repository versus Configuration Management Database

A robust asset repository should be established to house the asset details as well as critical asset metadata

- Traditional asset information
- Additional asset Metadata
  - Availability
  - Business Functionality
  - Reusability Readiness
  - Tags (Structured, Social, Collaborative Folksonomy, etc.)
  - Key Asset Relationships

The Asset Repository will have overlapping entities within the Configuration Management Database (CMDB), but it has a broader purpose

Think of the two data stores as complementary rather than mutually exclusive or redundant

Asset Repository	Configuration Management Database
An **Asset Repository** maintains details about each asset such as the information associated with asset discovery, inventory management, contract management and financial management. This repository is concerned with all assets, regardless of their status and purpose, and the financial cost and legal compliance associated with each asset in the infrastructure. An asset repository is likely to be significantly larger than a CMDB in most organizations.	A **CMDB** is a special-purpose repository of Configuration Items (CIs) that contains business service to IT service relationships plus the underlying dependencies of related assets. A CMDB is populated only with CIs containing business IT service relationships and inter-dependencies that are linked to critical business services. The CMDB purposely excludes non-service related assets in order to maintain focus on the mission of service management.

From *IT Asset Management — A Cornerstone for Accelerating ITIL® Success*

Step 2: Categorize

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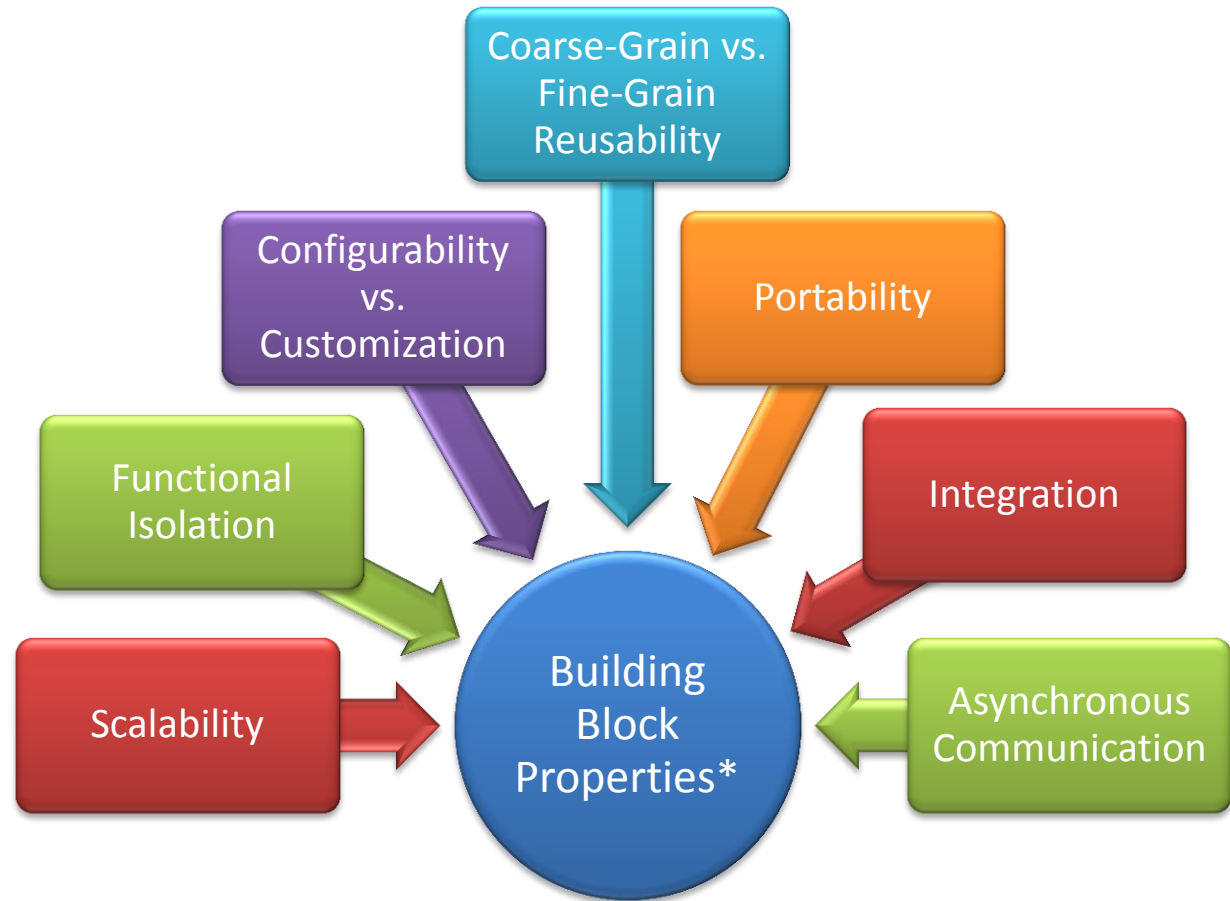
Building Blocks

Building Blocks are a common concept in most mainstream Enterprise Architecture Frameworks

Early work by Sun Microsystems around Building Blocks lead to the identification of discrete elements or components, typically described as:

- *Hard*: hardware and software components combined into a functioning unit

- *Soft*: software component(s) only

- *Connector*: block-to-block communication component(s)

Sun further went on to describe seven properties of Building Blocks that still resonate today, particularly within the Service Oriented Architecture (SOA) paradigm

Coarse-Grain vs. Fine-Grain Reusability

Configurability vs. Customization

Portability

Functional Isolation

Integration

Scalability

Building Block Properties*

Asynchronous Communication

*© 2004, Sun Microsystems

TOGAF® 9 Part IV – *Architecture Content Framework*

*A building block's boundary and specification should be loosely coupled to its implementation; i.e., it should be possible to realize a building block in several different ways without impacting the boundary or specification of the building block. The way in which assets and capabilities are assembled into building blocks will vary widely between individual architectures. Every organization must decide for itself what arrangement of building blocks works best for it. A good choice of building blocks can lead to improvements in legacy system integration, interoperability, and flexibility in the creation of new systems and applications ***

	Architecture Building Blocks	Solution Building Blocks
Characteristics	• Capture architecture requirements • Direct and guide the development of SBBs	• Define what products and components will implement the functionality • Define the implementation • Fulfill business requirements • Are product or vendor-aware
Specification Content	• Fundamental functionality and attributes • Interfaces • Interoperability and relationship with other building blocks • Dependent building blocks with required functionality and named user interfaces • Map to business / organizational entities and policies	• Specific functionality and attributes • Interfaces • Required SBBs • Mapping from the SBBs to the IT topology and operational policies • Specifications of attributes shared across the environment • Performance, configurability • Design drivers and constraints • Relationships between SBBs and ABBs

*TOGAF 9, © 2009

Capabilities View*

Business Capabilities

Areas of competency required by the organization to achieve its vision and strategy; What the organization must be good at

Business Components

Non-Technical resources and operational assets available to support the execution / delivery of the Business Capabilities; How the organization is structured/operates

Technology Capabilities

Systemic features and functions required by Business Components to deliver Business Capabilities; What the systems must be able to do

Technology Components

Technical resources and systemic assets that provide Technology Capabilities; What systems are available

*Sereff - *Launching an Enterprise Business Architecture Practice,* © 2012
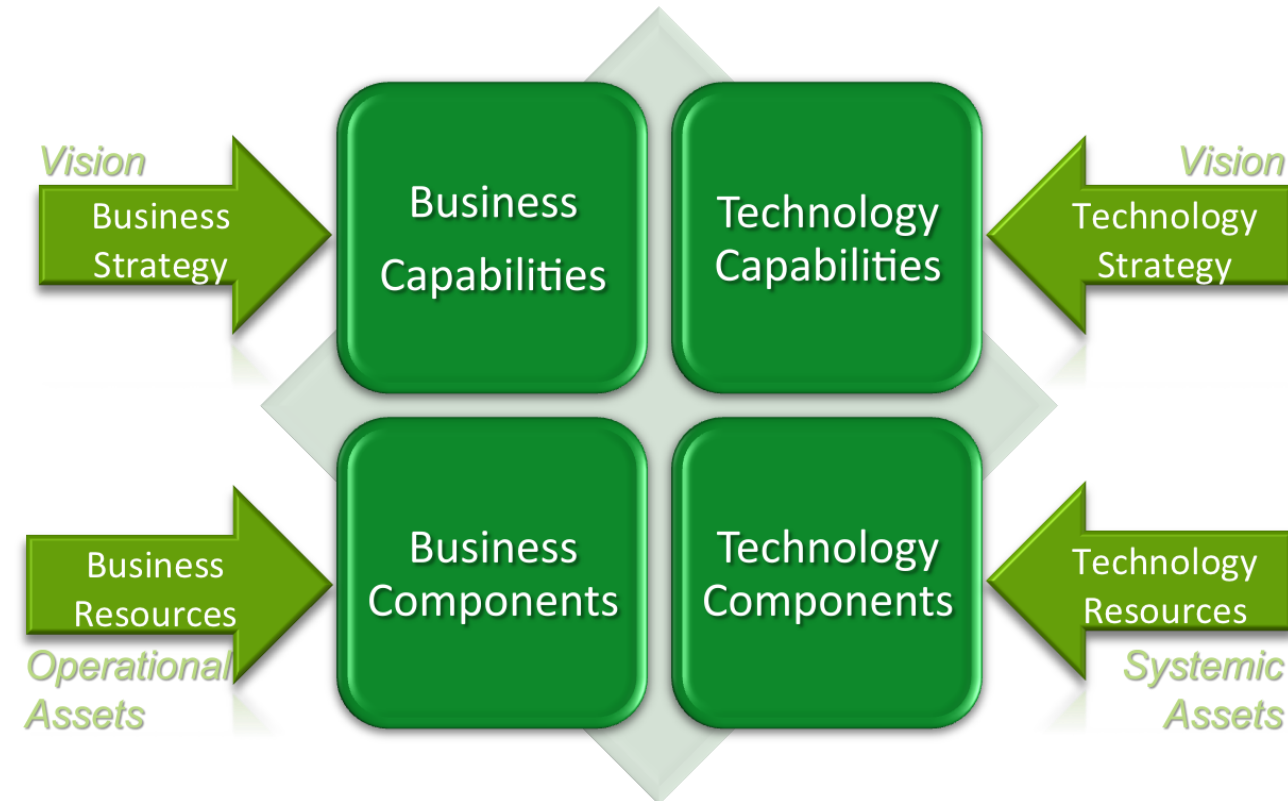
Sample Categorization Questions

- Is this asset instance scalable?

- Is the asset functionally isolated?

- What is the asset's level of configurability?

- What level of asset reuse granularity is supported?

- Does the asset have a published API and corresponding SDK?

- Does the asset support Asynchronous Processing?

- Does the asset represent a defined Building Block? If so, what type, and what are the asset's characteristics and specifications?

- What Business Capabilities does the asset support?

- Which Business Components consume the asset?

- Which Technical Capabilities does the asset provide?

- Is the asset aligned to its prevailing reference architecture? If so, which one?

- Does the asset conform to governing compliance regulations? Is so, which one(s)?

- What does it cost to operate the asset?

- What is the book value of the asset (i.e. is it being amortized and would removal accelerate cost recognition)?

Core Strategic Asset Sample Classification
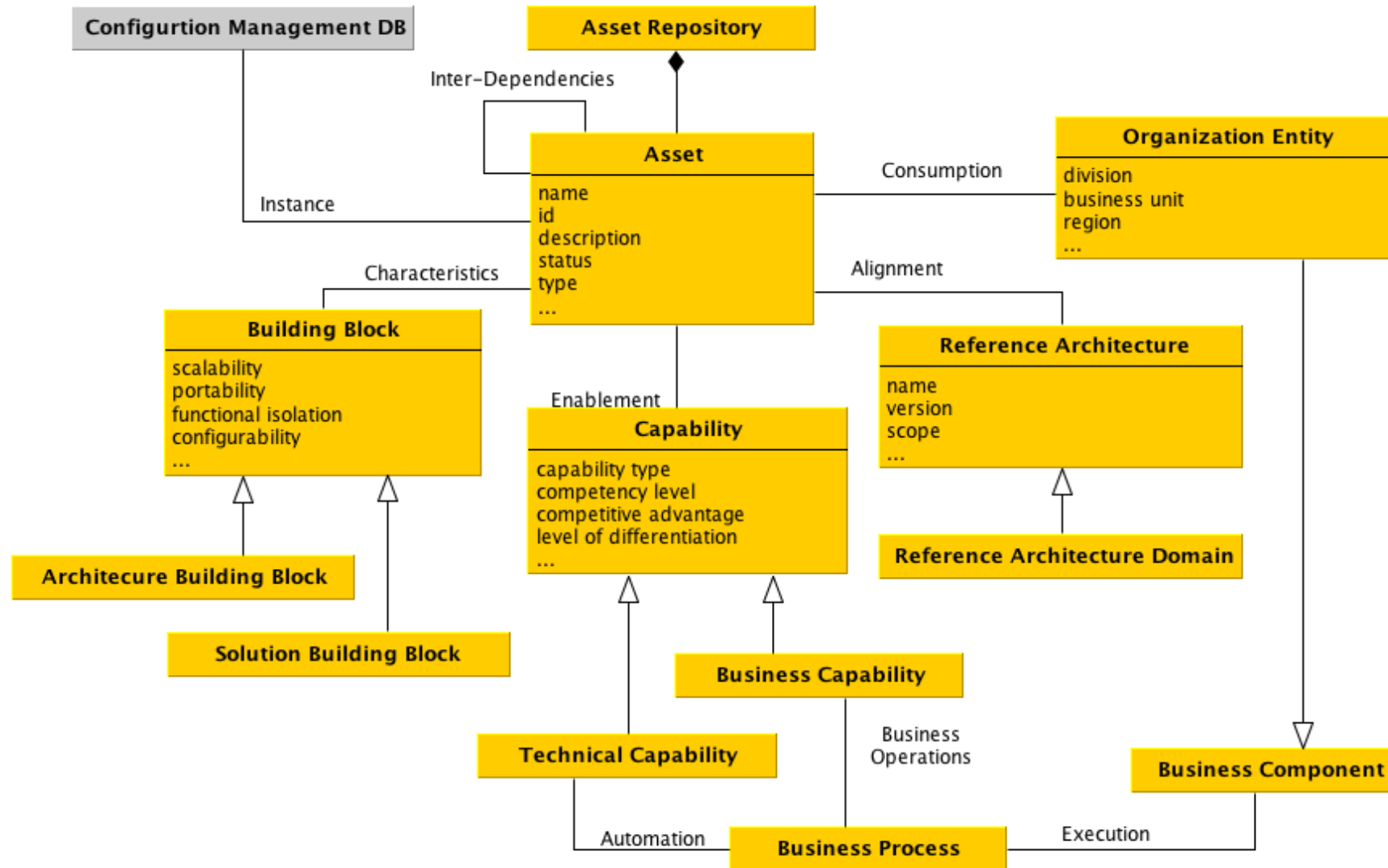
Step 3: Optimize

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Typical Asset Management Lifecycle

Needs Evaluation

Consideration of the opportunity and available resources

Asset Acquisition / Deployment

Implementation of steps necessary to introduce the asset into the ecosystem
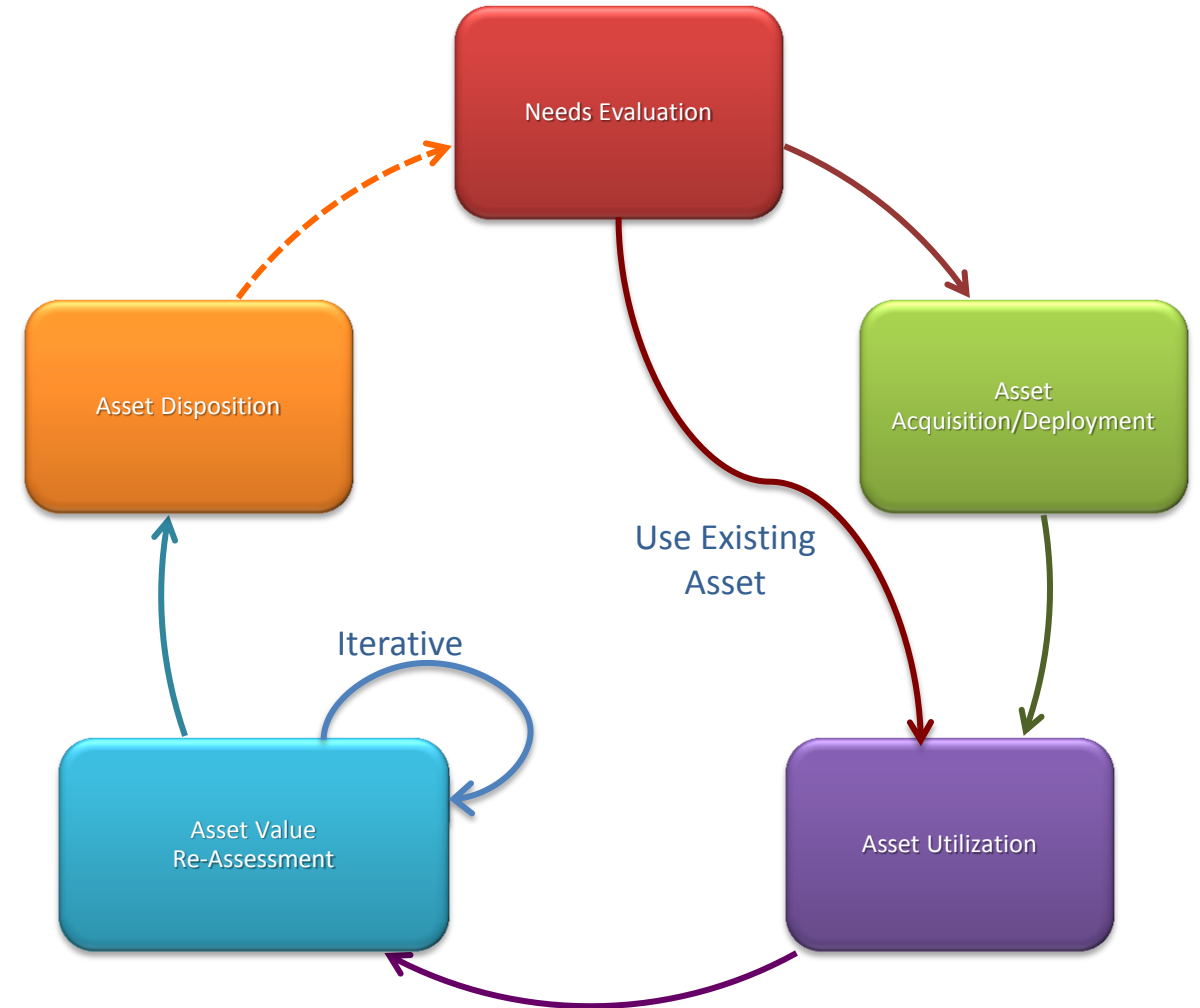
Asset Utilization

Consumption of the asset's capabilities

Asset Value Re-Assessment

Evaluation of the asset's current worth and anticipated economic life

Asset Disposition

Removal of the asset from the portfolio

Buy

Buy assets represent strategic assets either already owned that warrant further investment, or new assets with compelling value propositions
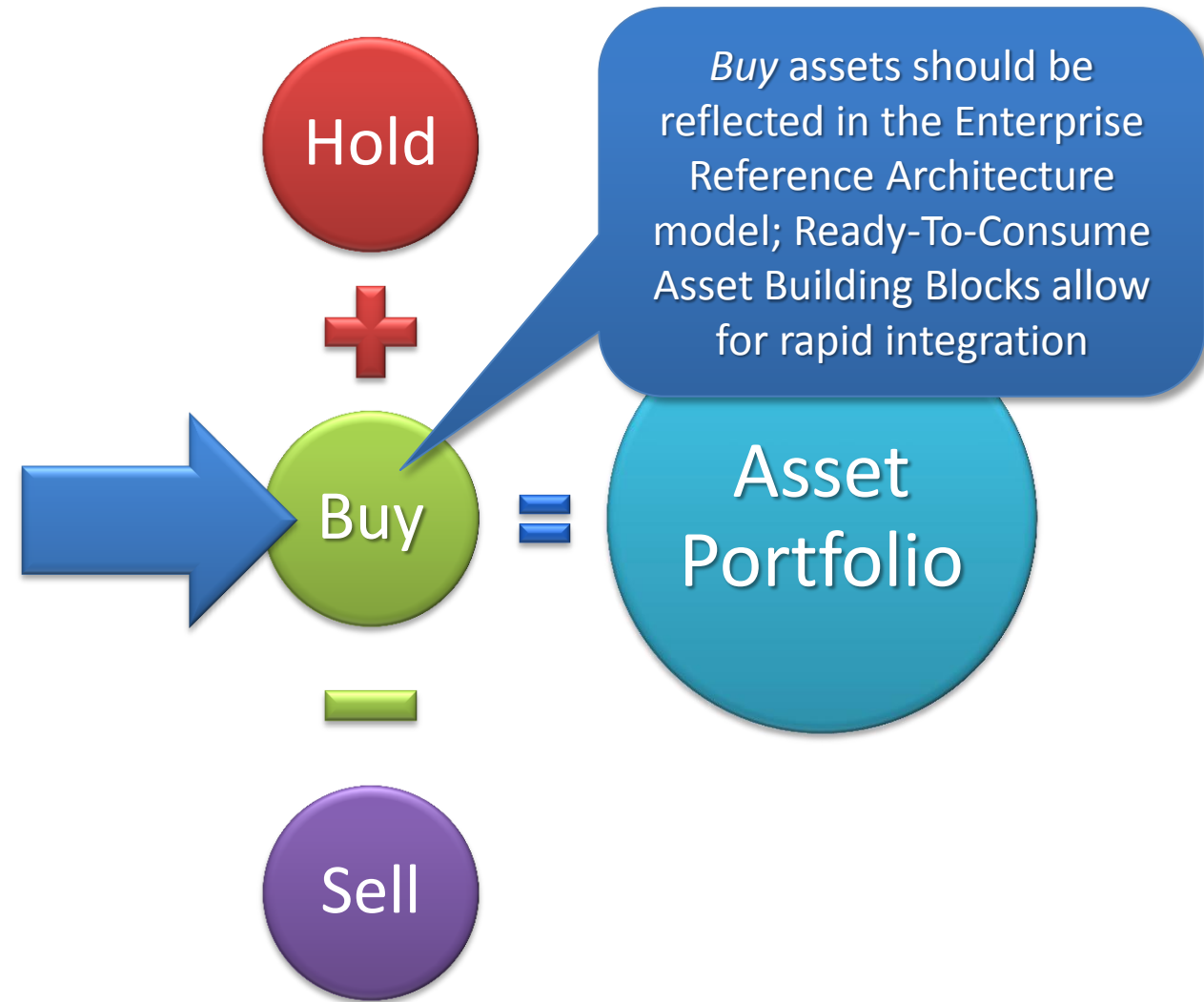
Provide a high level of value to the organization in terms of their impact on the firm relative to their cost of implementation, operation and ownership

Strategically aligned with business direction and targeted capabilities

Fully aligned with prevailing Enterprise Reference Architecture components, advancing roadmap conformance and alignment

Don't confuse the value of an asset's capabilities with the asset itself

Don't assume an asset's past value reflects its current value – yesterday's *Buy* status should be challenged

Hold

Buy

Sell

Asset Portfolio

Buy assets should be reflected in the Enterprise Reference Architecture model; Ready-To-Consume Asset Building Blocks allow for rapid integration

Hold

Hold assets represent existing assets that are still providing value, but may not warrant further expansion

Non-discretionary investments should continue (regulatory compliance updates, performance tuning, maintenance patches, etc.)
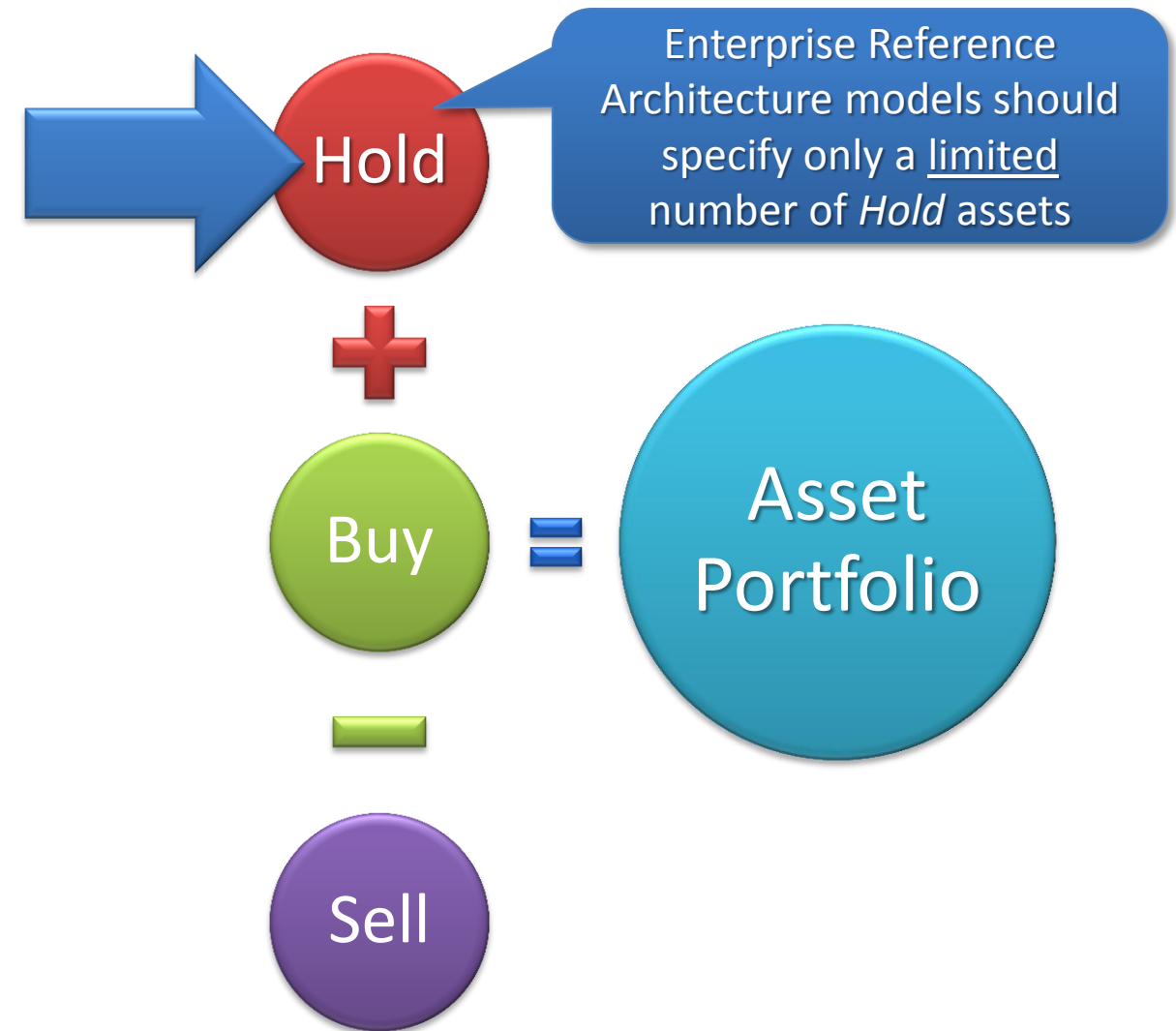
It should be *difficult* to get approval to make discretionary investments in *Hold* assets

Discretionary investments should go through a *very* rigorous cost/benefit analysis – *apply aggressive payback period requirements*

Challenging *Hold* asset investments will not be popular - focus on the business case and net benefit

Redirect to *Buy* asset alternatives where available

Weak asset management discipline equals little differentiation between *Buy* and *Hold* assets

Hold

Enterprise Reference Architecture models should specify only a limited number of *Hold* assets

Buy

Asset Portfolio

Sell

Sell

Sell assets have outlived their useful economic life and are providing low or potentially negative value
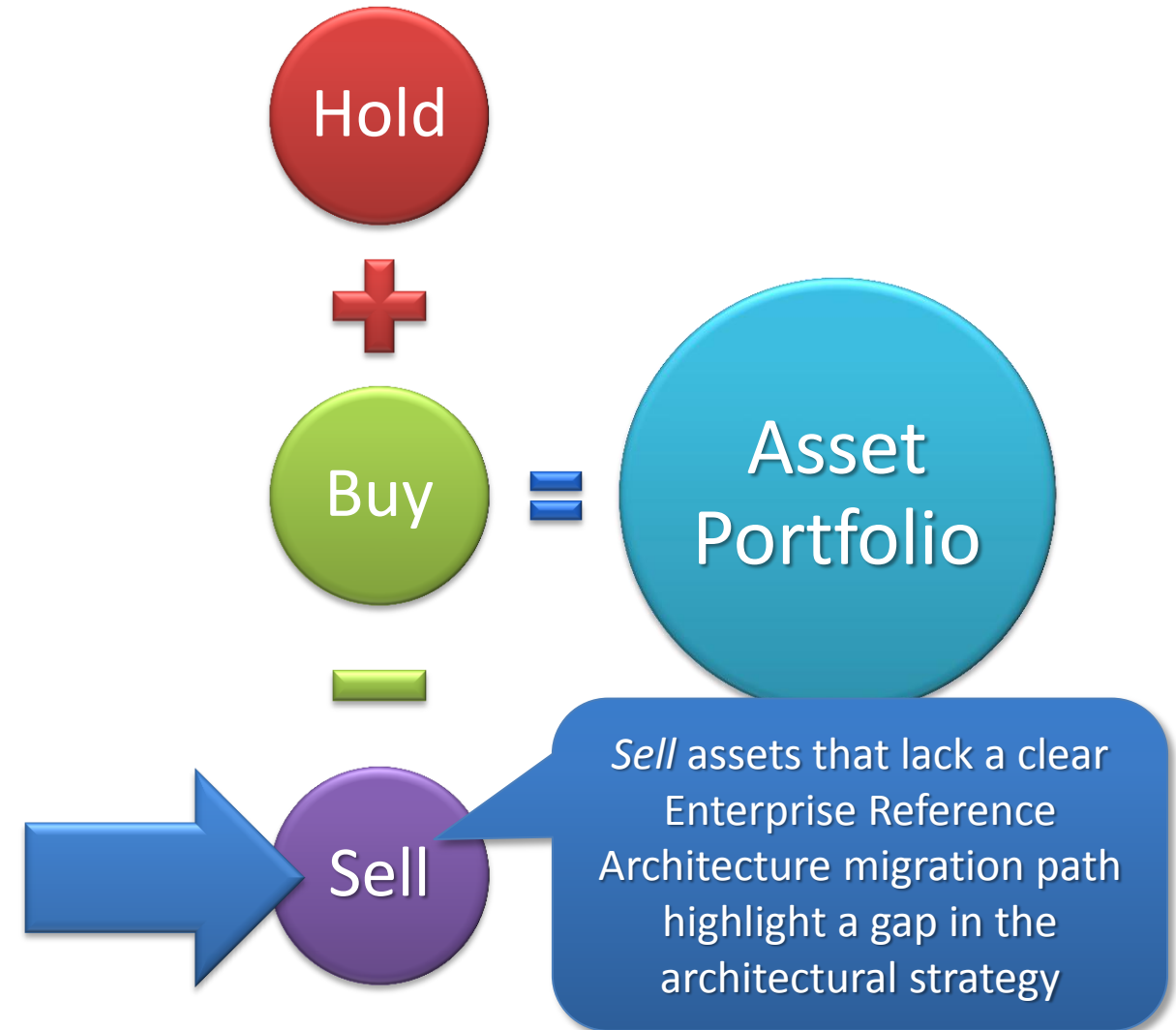
Represent a financial and operational drag on the organization – squanders valuable resources

Limit investments to minimal non-discretionary efforts only (life support model)

No discretionary funding should be made available

Aggressive conversion and retirement plans should be put in motion to remove *Sell* assets as soon as feasibly possible

Don't assume all *Sell* assets are legacy assets or outdated platforms – Active R&D efforts may litter the portfolio with newer assets that need to be pruned

Hold

+

Buy

=

−

Sell

Asset Portfolio

Sell assets that lack a clear Enterprise Reference Architecture migration path highlight a gap in the architectural strategy

Putting Buy-Hold-Sell to Work

Use early architectural deliverables to guide downstream development efforts in the adoption of *Buy* (primary) and *Hold* (secondary) assets and prevent the proliferation of *Sell* assets

Challenge architects who continue to propagate *Sell* assets <u>before</u> the discussion leaves the architecture community

Map Enterprise Reference Architecture specifications to corresponding portfolio assets to ensure full strategic alignment

Design reviews should target and reject solutions based on *Sell* assets, providing a formal deviation approval process where a valid business case can be made

Consider financial disincentives – i.e. higher chargeback rates for *Sell* assets to fund asset retirement

Potential Benefits

- *Alignment of asset investments to the Enterprise Reference Architecture roadmap*

- *Assessment of the Architecture Community's ability to influence investment into strategic assets across the organization*

- *Establishment of a design conformance mechanism*

- *Acceleration of asset retirements*

- *Objective means of determining how discretionary asset investments should occur*

- *Higher asset investment efficiency*

Recommended Next Steps

Take the time to create a thorough conceptual Platform Independent Information Model view of the entire enterprise asset domain before gathering data

Treat the Asset Repository like any other critical business information production data repository

Establish and follow consistent asset disposition criteria to determine when to buy, hold and sell assets

Ensure project and program funding includes sufficient resources to deliberately move off of and remove 'sell' assets

Enhance prioritization processes with weighting based on their primary asset investment category

Organize, Categorize, Optimize!

TIP: Asset Portfolio Management is not easy - people will vigorously defend a system they claim to 'hate' when they believe it is at risk of removal

- Turn the conversation around to focus on why the organization is moving to higher-performing assets

- Track savings based on the retirement of under-performing assets and demonstrate how the process is freeing up capital

- Present a compelling *business case* rather than a compelling *technology case*

Any Questions?

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Download this presentation and accompanying white paper from:
www.orbussoftware.com/downloads