



Architecture Governance in Hewlett-Packard

Ted Lohman
Enterprise Architecture Team
HP Information Technology Office

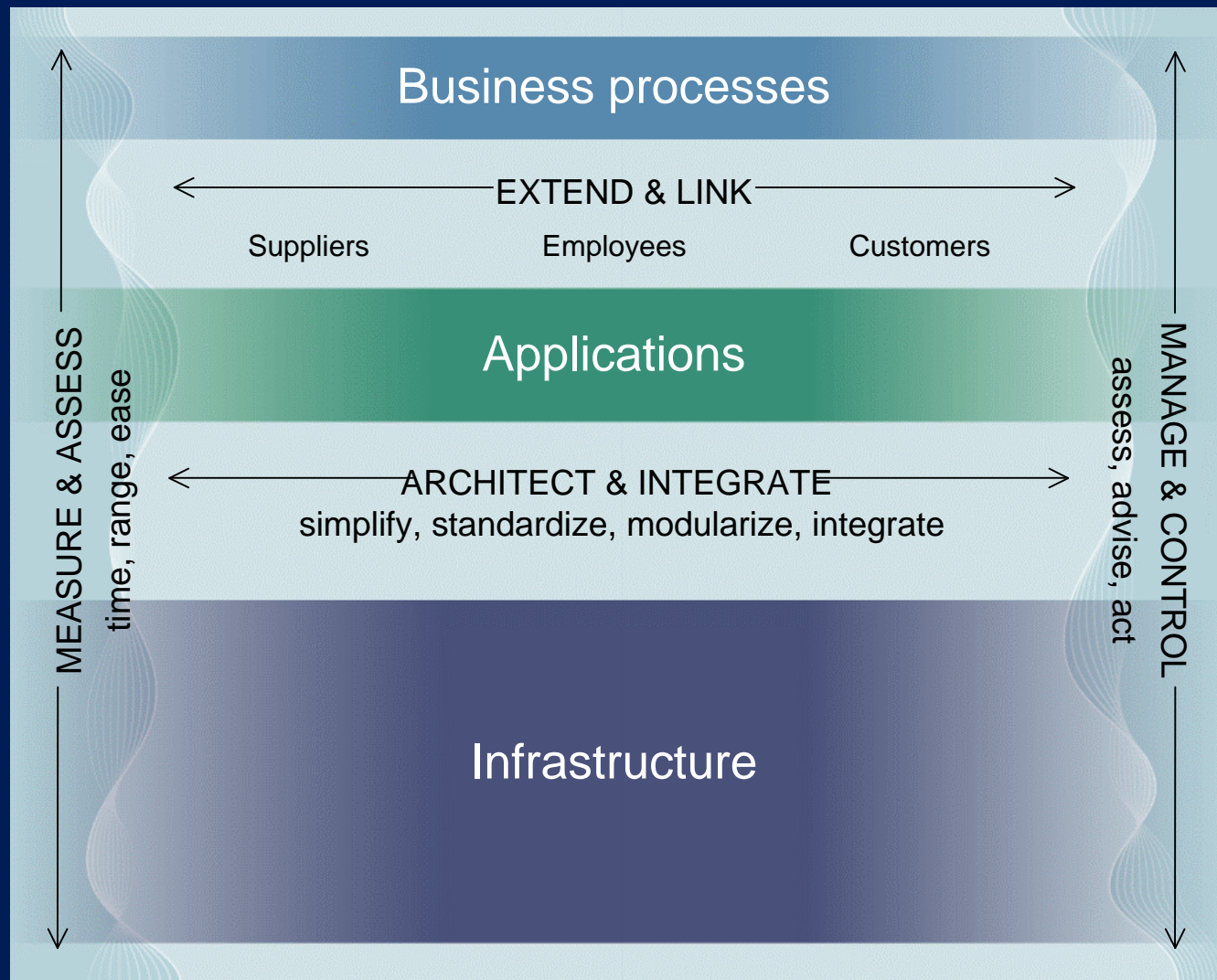


Agenda



- Basis of HP's Enterprise Architecture governance
- Elements of governance
 - Governing board (Architecture Management Team)
 - Architecture contributors
 - Supporting processes
- Successes
- Comparison to TOGAF 8.1 Governance Material
- Future steps

Framework for an adaptive enterprise



Key Elements Of The IT Operating Model

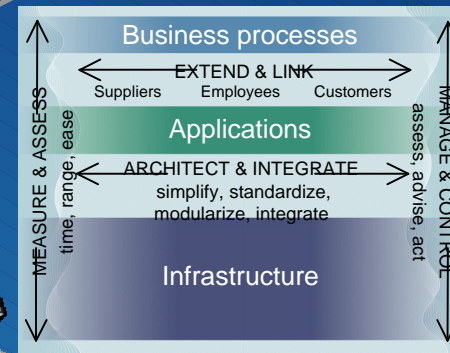


1. Foundation for IT excellence:

- IT team & organization
- operating model



**Program
Mgmt. Office**



Architecture



Governance



Plan Of Record

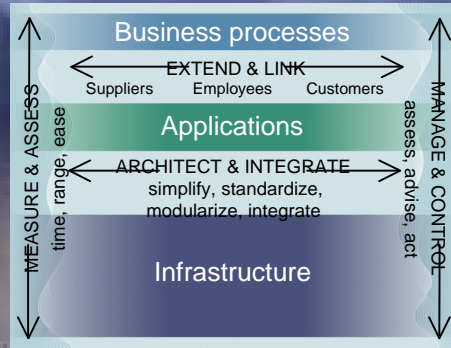


Strategy

2. All elements are:

- owned by domain experts
- common worldwide
- in place now

HP's IT Principles Guide Enterprise Architecture



Business Processes

IT delivers against defined business processes

Information

Data is managed as an asset

Applications

*Buy, don't build
Deploy "good enough" solutions*

Application Infrastructure

One is better than more

Core Infrastructure

Continuously improve efficiency

Be HP's best reference account

“One of the things I’m passionate about though, is having an Enterprise Architecture and making sure that everything we do fits the puzzle.”

Bob Napier
CIO, Hewlett-Packard

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EA program roles & responsibilities



- Overall governance – **Architecture Management Team “AMT”**
 - *Cross-organization Architecture Board to oversee and govern the implementation of the EA strategy*
 - *Responsible for reviewing and maintaining the overall architecture*
- Overall architecture program – **ITO Enterprise Architecture**
 - *Provide architecture frameworks and global processes*
- Group/Function architecture – **Functional Architecture Teams**
 - *Provide business/function architecture and processes*
- Architecture content – **Domain leads and communities**
 - *Develop and own architecture domain content*
- Change drivers – **Project Teams and domain contributors**
 - *Propose new solutions and work with domain leads to develop future and transition architectures*

Architecture Management Team (AMT)



Each AMT member is responsible and accountable for

- Connecting to and meeting changing **business needs**
- Establishing an **architecture community** in their business/function that is part of the one collaborative HP EA program
- Ensuring **architecture compliance** by
 - Raising awareness of EA
 - Supporting and implementing AMT decisions
 - Implementing common and business specific EA processes (e.g. PAR)
- Ensuring **consistency and alignment** of sub-architectures and utilizing the AMT to resolve issues
- Driving **development of “big A” architectures** that bring about the transformation of IT

Domain Leads



- Respected area experts
- Understand business and industry trends for domain impact/strategic direction
- Responsible for gathering requirements to determine domain course
- Obtain consensus on product direction, solution context
- Document domain deliverables using EA supplied templates
- Work with EA to publish and promote domain direction

Domain Contributors



- Provide business/functional input
- Deliver regional perspectives
- Participate in communities within and across other domains
- Work with domain leads but have the option to escalate to:
 - EA organization
 - AMT representative

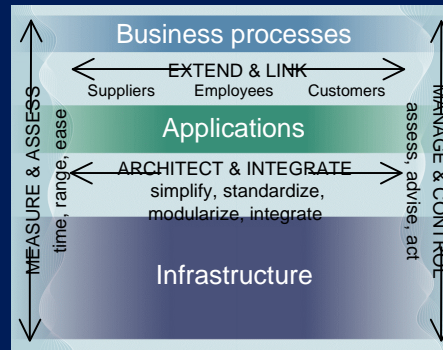
Overall Architecture Governance



Architecture Management Team:

- Covering Infrastructure and Applications space
- Made up of senior IT managers and VPs
- “Supreme Court” for architectural conflicts
- Approves policies
- Chooses domain leads

AMT
One body
Meets Monthly
WELL Orchestrated agendas
Reflective of all IT



Domain Leads/contributors:

- Produce architectural statements, strategy, policies, standards
- The “go-to” person for questions about a domain
- Escalate issues to AMT through EA



Majority of decisions occur in the domains

Policies and Standards



Malicious Code And Tools Policy - Microsoft Internet Explorer provided by Compaq Computer Corporation

Address: <http://it.corp.hp.com/ea/app/polstd.aspx?id=policy-2>

Malicious Code And Tools Policy

Status: **Approved**

Contents:

- Summary
- Definitions
- Compliance
- Scope
- References
- Revisions
- Policy
- Con...
- Docu...

Summary

Data, software, and business processes have a value to the assets, allow sensitive information to be disclosed to unauthorized response processes. Furthermore, HP's reputation could be damaged by the Company. This document describes HP's policy prohibiting...

Scope

This policy applies to all HP employees, temporaries, contract well as those who represent themselves as being affiliated in...

Policy

Possession and Use of Malicious Hardware and Software

Any form of malicious hardware or software intended to disclose, transmitted, traded, or used.

Unless specifically authorized by MSDD Information Security security must not be created, acquired, possessed, transmit, discover secret passwords, identify security vulnerabilities, or...

Misuse of Approved Hardware and Software

Approved hardware or software must not be maliciously use...

Possession and Use of Security Scanning and Probing

Unless specifically authorized by MSDD Information Security...

Done

Web Presentation Architecture (WPA) Framework Usage Standard - Microsoft Internet Explorer provided by Compaq Computer Corporation

Address: <http://it.corp.hp.com/ea/app/polstd.aspx?id=standard-4>

Web Presentation Architecture (WPA) Framework Usage Standard

Status: **Approved**

Contents:

- Summary
- Definitions
- Revisions
- Scope
- References
- Document Info
- Standard
- Constraints
- Authority
- Implementation

Summary

This standard recommends the use of the Web Presentation Architecture (WPA) for developing J2EE based dynamic web applications, including portals, and customized views of shared services.

WPA provides a lightweight development framework based on the Model-View-Controller pattern. WPA extends the (very popular) open source Apache Struts framework to provide several value-added features and HP specific customizations.

WPA's features include consuming WSDL-based web services, the ability to re-purpose content by changing the look-and-feel of pages and the navigational behavior of the web application without having to modify code. The HP-specific customizations include tag libraries for HPWeb, SNF2 and @hp look-and-feel, HP Passport integration etc.

By using WPA framework, developers can quickly and easily create well-designed, modularized, scalable and easily maintainable web applications and portals. WPA is deployed as a standard J2EE web app and runs on the BEA WebLogic app server, as well as on Apache Tomcat.

The WPA framework will enable HP IT organizations in achieving faster time to market, improved developer productivity, reduced development and maintenance costs, and gain the ability to deal with change quickly.

The WPA framework is widely used in WW/Ops eBusiness IT and HP Services. Frameworks such as WPA help in moving to a Services Oriented Architecture, and extend the ability to invest once and leverage many times to the web application space as well.

Scope

Dynamic web applications and portals are increasingly being used to support key business initiatives and decrease customer interaction costs. Some of these web applications will be bought off-the-shelf, some will be built internally, and many others will be a combination of buy and customize.

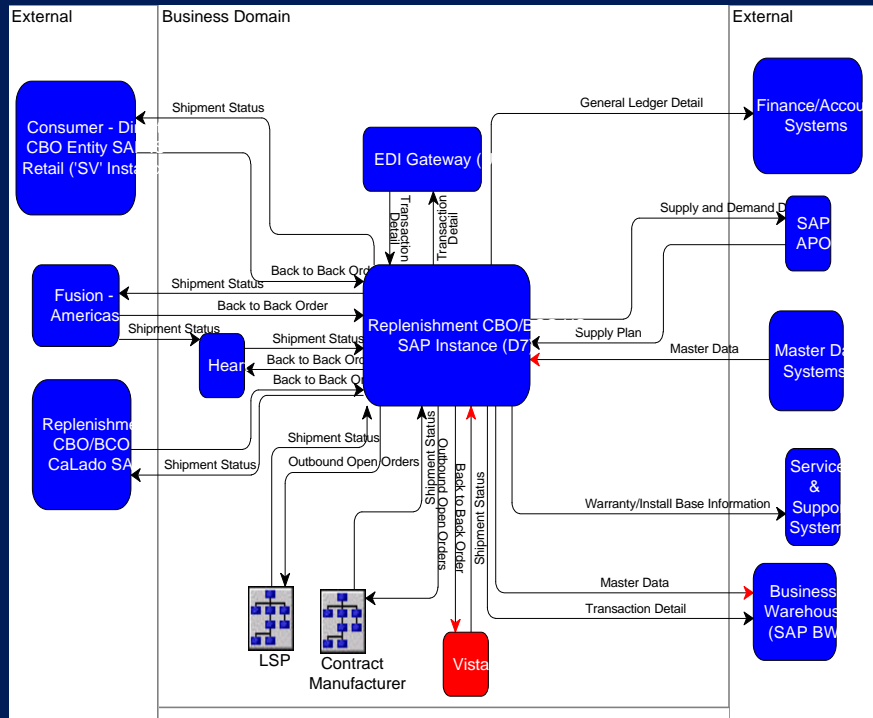
This standard applies to dynamic web applications that are built internally using Java and J2EE technologies (such as servlets, JSPs etc.), and where practical, to the customization pieces of the buy-and-customize web applications that utilize Java and J2EE.

Local intranet

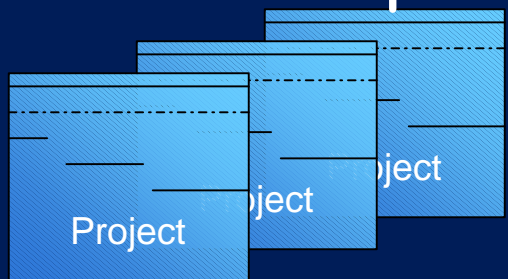
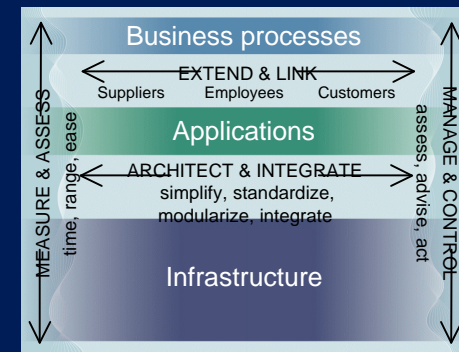
Domain and Program Architecture Governance



Program/Project Architecture



Domain Architectures ("roadmap")



"...There will be architecture tests from an enterprise standpoint to make sure the pieces fit together."

– Bob Napier, HP CIO

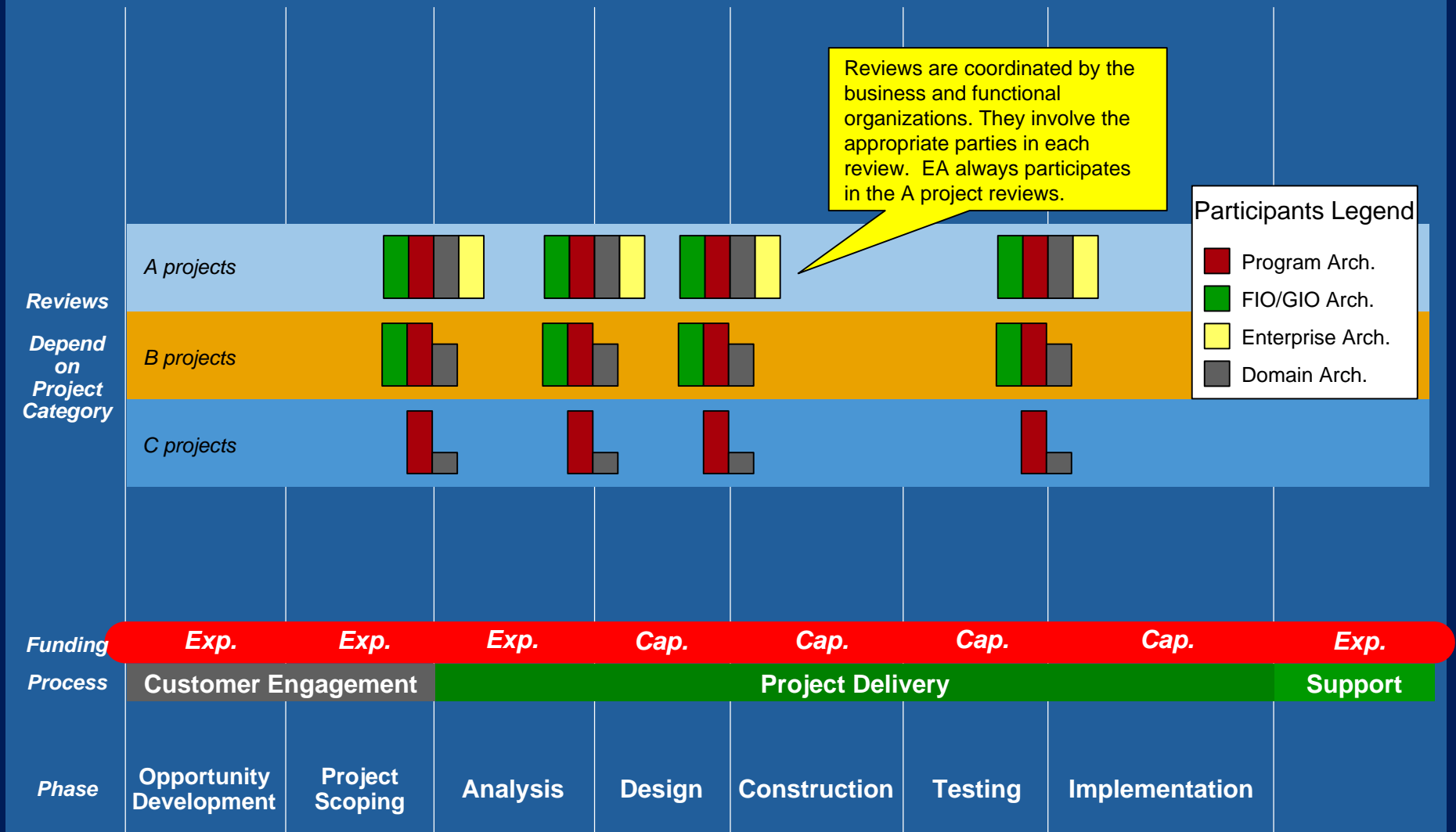
Project Architecture Review (PAR)



Reviews are coordinated by the business and functional organizations. They involve the appropriate parties in each review. EA always participates in the A project reviews.

Participants Legend

- Program Arch.
- FIO/GIO Arch.
- Enterprise Arch.
- Domain Arch.

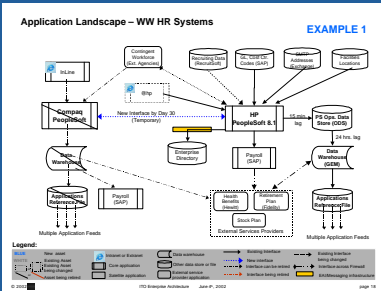


Artifact and Lifecycle Context

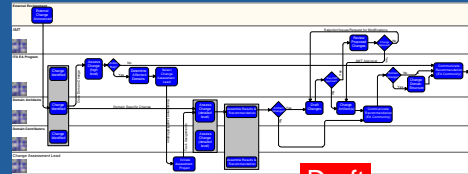


Legend

- IT Systems Review Board Funding & Prioritization Decision Point
- Architecture Review Point



Pathway to Production (P2P)



Question	Answer	Risk Level
1. When the system is installed, are there any data migration tasks that must occur?		
2. Do you have contingency plans in place if critical components of the system fail?		
3. Is there a report to show a parallel process in place for some period of time?		
4. Are you in place for some period of time?		
5. Are you in place for some period of time?		
6. Have related security processes been reviewed?		
7. Are all affected systems ready to go?		
8. Are all dependent systems ready to go?		
9. Do you have a Business Continuity Plan/Disaster Recovery Plan in place and has been tested?		
10.		
11.		
12.		
13.		
14.		

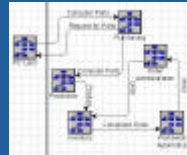
2. SDPM

2.1 Functional Scope

2.2 System Scope

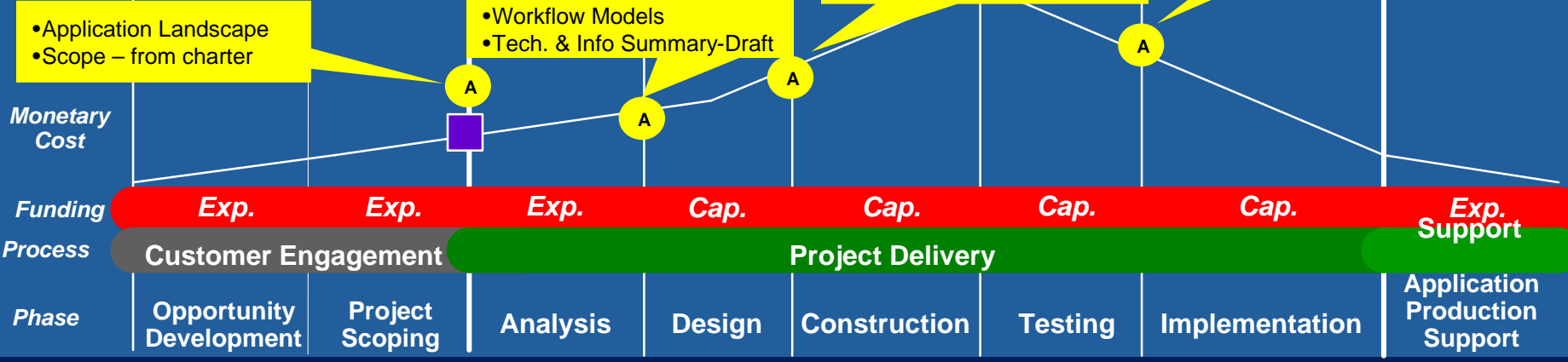
2.3 Deployment Scope

2.4 Assumptions and Constraints



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Final								
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Major Enterprise Architecture Successes



- Directions & technologies defined for 95% of the current 191 IT subject areas (Domains)
- Solution directions driving a 30% reduction of IT products within a year
- Architecture decisions from the EA community along with Sunset PMO support, assisting in the retirement of 1006 applications and 2068 instances in fy03
- Implemented architecture review process for projects
- Utilizing HP IT EA as an HP competitive advantage in several customer engagements (together with HPS C&I)
- Dynamic & heavily used EA web site drives collaboration, standardization & simplification

Comparison to TOGAF 8.1 Governance Material



- AMT is a global architecture governance board with the participation of all businesses/functions
- Some businesses have chosen to create their own governance boards -- all businesses participate in governance responsibilities
- Domain leads do not have formal governance boards, just governance responsibilities
- A formal compliance review process is being used
- No formal architecture contracts being used

Future Directions



- “Big A” architecture initiatives will utilize EA methodology based on TOGAF and other proprietary internal methodologies. These “Big A” initiatives will provide additional context for implementation programs/projects
- More formal architecture contracts will be explored
- The responsibility of domain leads will be increasing as the role matures and communities become stronger
- Governance efforts will continue to drive the principle of “Be HP’s best reference account”



i n v e n t

Architecture Management Team Objectives



Exercise architectural leadership by

- Actively supporting and promoting the values and objectives of one collaborative, enterprise-wide Enterprise Architecture
- Providing high level architectural guidance having the benefit for the entire enterprise in mind
- Setting priorities for initiatives and tasks under consideration of business requirements and HP IT's principles
- Developing and supporting AMT decisions
- Support the continuous improvement of the Enterprise Architecture by
- Appointing domain owners within their area of responsibility and ensuring quality domain content is being delivered
- Supporting the development and implementation of appropriate EA change and governance processes
- Approving policies and proposals
- Appointing representatives within their area of responsibility for Standards Approval
- Working with other AMT members to resolve architectural differences
- Continuously developing architectural knowledge
- Actively supporting cross-functional Architecture Improvement Programs (AIPs)

Domain Lead Objectives



- Create a “community”. This means to align a network of cross-functional, regional, and organizational contacts for the particular subject area and continuously facilitate information exchange
- Define scope, key initiatives, strategic direction, governing technologies and product selections that align to business needs and HP IT Principles. Keep Information up-to-date and accurate
- Support the continuous improvement of the Enterprise Architecture including PAR, AIP, Policies & Standards, and Governance processes
- Make HP a prime reference account for Enterprise Architecture to our customers by providing the best domain strategy and product selection.
- Be a liaison for IT to our customers
- Find opportunities to reduce costs by reducing the total number of solutions within a domain
- Continuously develop subject area knowledge