HP Adaptive Enterprise Framework

hp Services
consulting & integration, Korea

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Adaptive Enterprise의 배경 및 정의
The big shifts

→ All processes and content will be transformed from physical and static to digital, mobile and virtual.

→ The demand for simplicity, manageability and adaptability will change how customers work and organize, buy and use technology.

→ It’s a horizontal, heterogeneous, networked world. Standards are about connection and common language.
The technology shifts today

**Content**
Analog and physical → digital, virtual and mobile

**Processes**
Specialized and repetitive → automated and commoditized

**Services**
People solving complexity → reducing complexity through automation

**Applications**
Custom code and translators → speaking a common language

**Infrastructure**
Vertically integrated IT stacks → standardized, modular, virtualized resources
“It’s not the strongest of the species that survives, nor the most intelligent; but the one most responsive to change.”

—Charles Darwin
Change is constant
Everyday events that send ripples throughout the organization, and the IT that supports it.

Change is unexpected
A merger, a new partner, a sudden shift in the competitive landscape, a new market opportunity.

Change is disruptive
The goal is to minimize the impact of disruptions with an IT environment that is synchronized with the business.

Change presents opportunities
The ability to adapt to change is a key advantage in business. To survive, compete and win, enterprises must adapt.
“Time and cost are the issues … the cost of change is the fastest growing component of infrastructure TCO”
– Meta Group

“It used to be that the efficiency of transactions was all that mattered. Now, the capability to change quickly is more precious than money — it’s more important than having the lowest transaction cost.”
– Jodie Ray, CIO of Texas Instruments

“But now with the business moving so fast we almost need to be ahead of the business … have an infrastructure already in place, so if the business unit wants to do something we’re able to react in a timely fashion…”
– Client CIO [HP market research 2002]
비즈니스 변화는 IT의 신속한 적응을 요구

비즈니스 환경 변화에 따른 충격의 증가

신속한 적응 능력 요구

비즈니스적 도전

• 비용 감소 및 비즈니스 성과, ROI 개선
• 변화에 따른 위기의 최소화
• 새로운 비즈니스방향 및 모델의 추진
• 시장 진입 시간의 최소화
• 경쟁력 있는 합병, 통합 및 분할 가능화

IT의 대응 방안

1. 비즈니스와 IT의 연계
2. 비용감소 및 안정성, 유연성의 확보
3. 복잡성의 감소
4. 현재의 IT자산을 미래에 대비하고 최적화
5. 전사 지원을 통한, 기업 IT의 가치를 극대화

Adaptive Enterprise Framework
Adaptive Enterprise Framework

Manage costs:
- lower operations and acquisition costs
- manage fixed costs
- optimize fixed vs. variable costs
- manage cost of change

Increase quality:
- improve levels of availability and response time
- extend service levels across the enterprise
- agility as service level
- ability to change the service as well as deliver it

Improve agility:
- enable the IT environment to adapt to changing business needs

Mitigate risk:
- ensure security and continuity of business operations
- risk of innovation
- impact of technology implementation

새로운 IT 목표축: Agility

Cost + Quality + Risk + Agility
Adaptive Enterprise의 정의

Adaptive Enterprise란 비즈니스의 극대화를 위해 변화에 빠르게 대응하고, 이를 자산화하는 기업으로서 IT와 비즈니스가 가장 최적의 상태로 조율된 최적의 상태를 유지하며 이의 구성 요소인 infrastructure, management, control, business applications 및 business processes를 전사적 관점에서 끊임없이 진화 시켜감
IT 인프라의 선도자
- 이기종 환경
- 오픈, 분산환경에서의 미션크리티컬 서비스
- 마이크로소프트® 기업IT 서비스
- 데스크톱 및 모바일 환경의 관리
- SAP, Peoplesoft 환경에 대한 운영 관리
- IT 통합
- 오픈 분산환경에서의 IT 관리 서비스

Adaptive Enterprise의 선구자
- HP의 비전 및 구현 방안 제시
- 적응형 Infra의 제공 및 지원
- 솔루션 portfolio의 차별화
비즈니스 결정과 동시에 IT 대응이 즉각적으로 이루어지는 Business와 IT가 완전 동기화된 최고의 단계 실현

- 비즈니스와 IT의 연계를 관리하고 연관 정도를 측정 및 평가
- 이기종 IT 환경의 구성 및 통합
- 비즈니스 프로세스, 응용프로그램 및 IT 환경의 관리 및 통제
- 비즈니스 프로세스와 어플리케이션의 연계 및 확장 (파트너부터 고객의 범위를 포함)
- IT costs are variable, not fixed
Business Challenges

IT Imperatives

 Greater Return on IT

More Agility
• 측정 및 정량화: 더 나은 비즈니스 민첩성을 가능하게 하는 비즈니스와 IT의 연계 및 IT 연계 정도의 정량화

• 구성 및 통합: 적응이 가능한 이 기종 통합 IT 환경

• 변화의 영향력 관리: 모든 단계에서 이 기종 통합 환경 및 연계에 따른 영향력 관리

• 실용적 개혁: 실세계에서의 실용적 개혁을 위해 미래의 아키텍처 및 기술에 대한 년간 40억불의 투자의 산출물 활용

• 세계적 수준의 상품 및 서비스: 데이터센터부터 무선단말기까지, 제품부터 서비스까지 최고의 경쟁력을 가지는 서비스 포트폴리오의 제공
A disciplined approach

- An integrated plan of record with rigorous program management
- Applied design principles across the entire IT environment
- Deployed adaptive network architecture to enable day one communication with suppliers, employees and customers
- Implemented Utility Data Center in Palo Alto, Bristol
- Implemented KeyChain to enable suppliers to deal with real-time shifts in pricing, production and capacity
- Outsourced IT environment to HP Services
- Scaling e-business operations
1. **Measure, assess** and maintain a dynamic link between business and IT.

2. **Architect and integrate** your heterogeneous IT environment.

3. **Manage and control** your business processes, applications, and IT environments.

4. **Extend and link** your business processes and applications horizontally—from suppliers through to customers.

5. Delivers business and technology innovation for today and tomorrow.
• Committing to a higher level of accountability—both for HP and our partners.

• Introducing a new enterprise architecture—a platform for helping our customers manage and capitalize on change, improving agility.

• Delivering a better return on IT by driving standardization, simplification, modularity, and integration across the IT environment.

• Building on a clear technical advantage.
• Aligning all of HP behind the effort: business strategy, technology strategy, investment strategy, services, marketing, and sales team.
Adaptive Enterprise Framework

Real-time business agility

Utility Data Center

Virtualization

Bi-directional controls

Grid computing

Business efficiency

Advanced blades architecture & offerings
Server, storage & printer clustering
Networked storage

Multi-OS strategy
.Net and J2EE support

Server & storage partitioning
Best high availability portfolio

Business stability

Windows and Linux
Shipping Itanium and IA-32

Built-in manageability

More Accountability:

Discrete partitioned

Integrated clustered

Virtualized federated

Utilization

manageability

resources

services

business processes

Networking and I/O

Virtualization

Additional HP resources

Best high availability portfolio

With HP you have the manageability needed to:

Resource utilization

Discrete partitioned and integrated clustered resources

Virtualized federated resources

Discrete partitioned, integrated clustered, virtualized federated resources

Discrete partitioned, integrated clustered, virtualized federated services

Discrete partitioned, integrated clustered, virtualized federated business processes

More Accountability: 명확한 기술적 우위
Improving Agility: Agility Assessment 및 디자인

HP agility 척도
- 시간
- 범위
- 용이성

HP 디자인 원칙
- 단순화
- 표준화
- 모듈화
- 통합

비즈니스 전략
비즈니스 프로세스
HP Adaptive Infrastructure
Better RoIT: AE Darwinism

Adaptive Enterprise Framework
Industry standards mapped to HP’s Darwin Reference Architecture

- Web Services (stds)
- Rich Media
- UDDI
- AAA (Security)
- Future: Application Services
- GRID

- IPF
- Linux
- Windows
- OGSA
- iSCSI
- FCIP
- Some proprietary protocols (abstract from the customer)
- SIP
- Rich Media

- XML
- SOAP
- WSDL
- GRID
- Service description language (including SLA) to capture QoS.
- VoIP
- Future: BPEL, IPv6

- OMI
- CIM
- SNMP
- Resource description language
- Bluefinn
- SIP
- Future: BPEL

Adaptive Enterprise Framework
Key technologies mapped to HP’s Darwin Reference Architecture

- SAP
- PeopleSoft
- Seibel
- Oracle
- Web services
- J2EE & .NET

- Data Protector
- J2EE (BEA)
- .NET (Microsoft)
- Backup & Restore
- Load Balancing
- Windows Media Server
- ZLE
- iHUB

- OpenView
- Utility Controller
- Proliant Essentials
- HPUX Systems Mgmt
- Nimbus
- Utility Data Center

- Workload Mgr
- Proliant, Blades, MS cluster servers
- ESA1000 - CASA
- Superdome, Non-Stop
- XP/VA Arrays, Tape
- NAS, MC
- ServiceGaurd
- OS: UX, Linux, VMS
- Network components
- PCs, PDAs, printers
- Itanium
HP Services mapped to HP’s Darwin Reference Architecture

- Industry specific solutions
- CRM
- ERP
- Enterprise Microsoft

- Enterprise Integration
- Adaptive Application Architecture
- Security

- Agility Assessment
- IT Service Management
- Managed Services
- Business Continuity
- Integrated Support Services

- IT Consolidation
- Virtualization
- Adaptive Network Architecture
- On Demand

- Availability, Deployment, & Performance Services
- Mission Critical Services

Adaptive Enterprise Framework
HP Adaptive Enterprise Service Framework
AE Evolution-Chain Model (Concept Diagram)

1.0 Insight
2.0 Envision
3.0 Visualize
4.0 Integrate
5.0 Virtualize
6.0 Intellectualize
7.0 Realize

Biz. Driven Evolution
IT. Driven Evolution

Biz. Change Drivers
Application Systems
IT Infrastructure
Biz. Change Drivers

MEASURE & ASSESS
time, range, ease
ARCHITECT & INTEGRATE
simplify, standardize, modularize, integrate

MANAGE & CONTROL
assess, advise, act

Business processes
Applications
Infrastructure
Adaptive Enterprise Framework

1.0 Insight
비즈니스 요구를
프로그램화

2.0 Envision
프로젝트
계획

3.0 Visualize
Evolution Solution의
추진에 따른 구체적인
Biz/Information 구성
체계 및 인프라의
설정하고 전사적
Standard에 비즈니스
변화의 정보화 구현 및
통합 실시

4.0 Integrate
부문별 IT
시스템을 통합하여
용역과의 통합

5.0 Virtualize
IT시스템/
어플리케이션의
가상화

6.0 Intellectualize
IT 자원을 통합
Ubiquitous Service

7.0 Realize
전환계획을 수립하고 목표
Target Architecture의
완성을 위한 프로젝트를 식별,
비용 및
일정 등의 구현 계획을 수립

Biz Model 변화에 유동적으로
대응하고 Target
Architecture의 지속적인 관리
및 성장

AE Evolution-Chain Model (Description)

1.0 Insight

2.0 Envision

3.0 Visualize

4.0 Integrate

5.0 Virtualize

6.0 Intellectualize

7.0 Realize

비즈니스 요구를
프로그램화

프로젝트
계획

Evolution Solution의
추진에 따른 구체적인
Biz/Information 구성
체계 및 인프라의
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통합 실시

부문별 IT
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IT시스템/
어플리케이션의
가상화

IT 자원을 통합
Ubiquitous Service

전환계획을 수립하고 목표
Target Architecture의
완성을 위한 프로젝트를 식별,
비용 및
일정 등의 구현 계획을 수립

Biz Model 변화에 유동적으로
대응하고 Target
Architecture의 지속적인 관리
및 성장

Business Driver를 IT
Initiatives로 변환하여
Evolution Area를 도출

도출된 Evolution Area를
위한 Strategy
Consulting과 적응 했을
때의 기업의 변화 모습 및
목표를 구체화하고,
추진계획 (Point of Record)
수립

전환계획을 수립하고 목표
Target Architecture의
완성을 위한 프로젝트를 식별,
비용 및
일정 등의 구현 계획을 수립

Biz Model 변화에 유동적으로
대응하고 Target
Architecture의 지속적인 관리
및 성장

IT 인프라의 통합화를 위한
비즈니스 교체를 적응
가능하고, 쉽게
이해하고 관리하며 수정할
수 있는 통일된 구조의
시스템을 통해 공통으로
사용할 수 있는
Architecture 수립

신속한 비즈니스를 위해,
IT 인프라의 통합은
대상이어야 하며 쉽게
이해하고 관리하며 수정할
수 있는 통일된 구조의
시스템을 통해 공통으로
사용할 수 있는
Architecture 수립

비용 효율성과 IT Service를
마켓에 적기에 제공하기 위해
관련된 H/W, S/W, 해당
어플리케이션의 가상화로
이용해 새로운 Biz Model의
Risk를 감소시키며 서비스의
수준을 향상시키기 위한
아키텍처 수립

사용자의 위치, 사용자의
Device에 상관없이 접근
가능하도록 휴대
Gateway를 설정하며 프리젠테이션
통합을 통해 기업의
시스템을 하나의 시스템처럼
상호 유기적으로 통합할 수
있도록 지능화

Adaptive Enterprise

hp Confidential
AE Evolution-Chain Model (Activity)

1.0 Insight

1.1 Detect any change momentum
1.2 Analysis Business Compass & Context
1.3 Probe the Business Strategy
1.4 Business Agility Workshop
1.5 Assess the Business Value

2.0 Envision

2.1 Conceptual Business Architecture Design
2.2 Logical Business Architecture Design
2.3 Measure & Index Gap
2.4 Filling Gap Strategy
2.5 IT Strategy Planning

2.1 Conceptual Business Architecture Design
2.2 Logical Business Architecture Design
2.3 Measure & Index Gap
2.4 Filling Gap Strategy
2.5 IT Strategy Planning

3.0 Visualize

3.1 Define IT Strategy & Principle
3.2 Develop Enterprise Standard Model
3.3 Develop Enterprise Information Architecture
3.4 Develop Enterprise Application Architecture
3.5 Develop Enterprise Technology Architecture

3.1 Define IT Strategy & Principle
3.2 Develop Enterprise Standard Model
3.3 Develop Enterprise Information Architecture
3.4 Develop Enterprise Application Architecture
3.5 Develop Enterprise Technology Architecture

4.0 Integrate

4.1 Enterprise Data Standard Model
4.2 Enterprise Component Model
4.3 Enterprise Integration Model

4.1 Enterprise Data Standard Model
4.2 Enterprise Component Model
4.3 Enterprise Integration Model

5.0 Virtualizes

5.1 Enterprise Servers Virtualization
5.2 Enterprise Storages Virtualization
5.3 Enterprise Networks Virtualization
5.4 Enterprise Application Virtualization

5.1 Enterprise Servers Virtualization
5.2 Enterprise Storages Virtualization
5.3 Enterprise Networks Virtualization
5.4 Enterprise Application Virtualization

6.0 Intellectualize

6.1 Adaptive Enterprise Reference Architecture
6.2 Service Oriented Architecture for RTE
6.3 Adaptive Management & Control
6.4 Ubiquitous service through Biz portal integration

6.1 Adaptive Enterprise Reference Architecture
6.2 Service Oriented Architecture for RTE
6.3 Adaptive Management & Control
6.4 Ubiquitous service through Biz portal integration

7.0 Realize

7.1 Define Transition Strategy
7.2 Implement the Target architecture
7.3 Integrate existing IT
7.4 Setup the Governance Strategy

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HP AE Strategy & Architecture Service

HP agility metrics
- **time** - Process speed
- **range** - Scope of change management
- **ease** - Management of workload

Manage & Control
- Business Process Management
- Service Management
- Infrastructure Management

AE Strategy & Architecture Service
- Agility Assessment Service
- Business Value Assessment Service
- AE Strategy & Architecture Blueprint Service
- Enterprise Information Strategy Service
- Enterprise Architecture Service
- Adaptive Infrastructure Strategy & Architecture Service
- Adaptive Application Architecture Service
- Adaptive Network Architecture Service
AE Service Framework for FSI Industry

Business processes

Infrastructure services
- Security services
- Registry services
- Web services
- Grid services

Virtualized resources
- Virtualization
- Sourcing
- Sharing
- Pooling

Resources
- Servers
- Storage
- Clients
- Printers
- Network
- Content
- Environment

Channel Integration Front Office
- Next Generation Branch Office
- IP Based Call Center
- Next Generation Online Banking
- Enterprise Portal System

Enterprise Integration Hub
- FEP: Extended Integration Hub
- Internal EI Hub
- Web Based Banking Term. Hub
- Enterprise Security Mgmt System

Common Enterprise Service Hub
- Operational Data Warehouse
- CRM
- Wealth Management
- EDMS/PI

Enterprise Meta Hub
- Rule Based Product Development System
  - Product Meta Hub
- Metadata System
  - Metadata Hub

Back Office
- Core Business System
- Management Solution Service
- ERP
- Bank EDW
- Mgmt Information
- Profit Mgmt
- Risk Mgmt Credit/Mktg
- Risk Mgmt Operational
- Biz Perf Mgmt
- Holding Company EDW

MANAGE & CONTROL
- assess, advise, act

MEASURE & ASSESS
- time, range, ease
AE Service Framework for NSP Industry

Business processes

Mobile & Rich media Domain Service
- Mobile Service Delivery Platform
- Content Distribution & Delivery
- Digital Content Management
- Digital Television

Operation Domain Service
- Customer Relationship Management
- Billing & convergence billing
- Infrastructure & Hosting Solutions
- Integrated Service Management

Network Domain Service
- Intelligent Network Services
- Interactive Voice Services
- Mobile Network Services
- Voce over Packet Service

Infrastructure services
- Security services
- Registry services
- Web services
- Grid services

Virtualized resources
- Virtualization
  - Sourcing
  - Sharing
  - Pooling
- Resources
  - Servers
  - Storage
  - Clients
  - Printers
  - Network
  - Content
  - Environment

Infrastructure

MANAGE & CONTROL
- assess, advise, act

MEASURE & ASSESS
- time, range, ease

Adaptive Enterprise Framework
AE Service Framework for MFG Industry

Business processes

- Business Process Management
- Collaborate Business Integration
  - product lifecycle collaboration
  - Procurement & Sourcing
  - Integrated Plant System
- ERP Consolidation / supply chain optimization
- Partner/Supplier relationship management

Infrastructure services

- Security services
- Registry services
- Web services
- Grid services
- Virtualization
  - Sourcing
  - Sharing
  - Pooling

Virtualized resources

- Servers
- Storage
- Clients
- Printers
- Network
- Content
- Environment

Infrastructure

MEASURE & ASSESS

- time, range, ease

MANAGE & CONTROL

- assess, advise, act