Running IT as a Business: Overview

Mark Bodman
Enterprise Architect
V 3.6
A New Style of IT
A New Style of IT has emerged...
Based on Forces Transforming Business today

As of 2013 we have...

- 1 billion smart phones users
- 42% growth in smart phones users y/y
- Estimated 10 billion smart phones by 2020
- 4 of 5 employees use personal device for work
- 80% of BYOD activity is not managed

Employee-owned devices will be compromised by malware DOUBLE the rate of corporate-owned devices.

Hype is over...

- Demand for cloud skill growing at 6x IT skills
- 80% of companies saw productivity gains
- 50% of US Government has moved to the cloud
- 75% of SME's use cloud services

Total public cloud market in 2016 will be $206.6 billion

Cloud

Consumerization

Am I ready?

Big Data

Every 60 seconds...

- 98,000+ tweets
- 695,000 status updates
- 11 million instant messages
- 698,445 Google searches
- 168 million+ emails sent
- 1,820TB of data created
- 217 new mobile web users
IT is one Portion of an Organization APQC PCF

APQC Process Classification Framework

With many concerns to address

- ITIL
- COBIT
- TOGAF
- Test Management
- Strategic Planning
- Project Management
- DevOps
- Development
- Agile Development
- Monitoring
- Problem Management
- Change Management
- Configuration
- Demand Management
- Capacity Management
- Requirements
- Management
- Diagnostics
- Event Management
- Incident Management
- Build Management
- Design Management
- GRC
- Policy Management
- Proposal Management
- SLA Management
- Deployment Management
- Release Management
- Cloud
- Mobil
- Social
- SaaS
- PaaS
- IaaS
- SD*
- Technology Debt
- Outsourcing
- More with less
- Multisourcing
- Upgrades
- MTTR
- Lifecycle Management
- Financial Management
- GRC
- License Management
- SOX
- PCI
- Datacenter
- Performance
- Management
The journey towards a New Style of IT...

An Industry Perspective

**Roadmap:**

**Traditional IT**
- Drive efficiencies
- Run the business; Secure the enterprise
- Systems of Record

**New Style of IT**
- TTV for Business
- Lifecycle mgmt defined in apps; Developer Driven
- Systems of Engagement & Insight

**JOURNEY (1-5 Years)**

<table>
<thead>
<tr>
<th>Basic Automation</th>
<th>Advanced Automation</th>
<th>Self-Service</th>
<th>Service Broker</th>
<th>IT as a Service Provider</th>
<th>IT as Low-touch Service Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Process-Centric”</td>
<td>“Service-Centric”</td>
<td>“Service-Centric”</td>
<td>“Insight-Centric”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Details of the Journey:**

**Roadblocks:**
- “new expectations”
- “Silo’d buying and implementations”
- “Multiple standards”
- “Shrinking funding”
- “Lack of pre-scription”
- “Politics”
- “Still trying to figure out today’s operations”
- “Vendor lock-in”
- “Cloud = virtualization (btw...It isn’t)”
- “Skeletons”

**HP Solutions**

- IT Management Reference Architecture
- HP Converged Infrastructure & Cloud
- HAVEn
IT4IT Consortium - Evolving IT for IT

Designed by IT organizations for IT organizations like you

IT4IT Consortium

Strategy/Exec board
Shell, Achmea, AT&T, Munich RE, PwC, Accenture, HP

Community Members
Disney, NBC, Nestle, ING, Barclays, Proctor & Gamble, Paychex, Rabobank, Raiffeisen, AkzoNobel, ...

This work is based upon material developed and published by the IT4IT Consortium.
Applying business concepts to understand “IT as a business” vs. cost center

**Value Chains – Porter**
- Competitive Analysis
- Strategic Concepts
- Value Creation
- Activity cost to profit margin analysis

**Value Streams – Martin**
- Lean / 6-sigma concepts
- Multi-Process Oriented
- Customer focused results
New Viewpoint – How to operate IT, continuously

The Vision: Create Integrated IT management capabilities across the entire service lifecycle

Traditional IT Value Chain

Plan

Build

Deliver

Run

IT Value Streams

Strategy to Portfolio

Requirement to Deploy

Request to Fulfill

Detect to Correct

Reference Architecture
IT Operating Model: Value Chains & Reference Architecture

### Strategy
- Define objectives
- Financial planning
- Set up policies and guidelines
- Enterprise architecture

### Demand
- Consolidate demand
- Create business cases
- Business value, risk, costs, benefits & resources

### Selection
- What-if-analysis
- Rationalize portfolio
- Ensure governance
- Allocate resources, fund and charter projects

### Monitor & change
- Optimize portfolios
- Communicate value
- Evaluate benefit realization

### Strategy to Portfolio

### Define & publish
- Repeatable service
- Standardization
- Alignment with business objectives

### Order a service
- Portal / IT engagement
- Personalized experience
- Self-service

### Route & fulfill
- Integrate with incident, change, asset & demand
- Automate provisioning & status update

### Measure & charge
- Chargeback / showback
- Cost transparency
- Influence demand
- Surveys and ratings

### Request to Fulfill

### Requirements to Deploy

### Requirements
- Business process model
- User experience
- Functional & technical

### Develop
- Technical policy
- Development (Agile, iterative, waterfall,...)
- Source & set up dev environment

### Test
- Functional: desktop, web, mobile
- Performance: desktop, web, mobile
- Security: static, dynamic

### Deploy
- Release plan
- Deployment assets
- Change and configuration process
- Knowledge management
- App monitoring

### Requirements
- IT Service Value
- IT Service Gap

### KPIs:
- R2D Cycle Time
- Requirements ‘Churn’
- Production Defects

### Detect to Correct

### Detect
- Events, alarms & metrics from everything
- User issues
- Relationship among events

### Diagnose
- Root cause
- Severity & business impact
- Define escalation path
- Auto-fix common issues

### Change
- Change request
- Risk analysis
- Approvals

### Resolve
- Implement change
- Verify recovery
- Close records

### KPIs:
- MTTR
- MTBF

### KPIs:
- Cycle Time
- Cost/Service

### Measure & charge
- MTTR
- MTBF

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Without service backbone, it’s impossible to create value and measure outcomes.

**Service Lifecycle: The Value Chain “Back Bone”**

- **Conceptual Model**
  - Service
  - Blueprint

- **Logical Model**
  - Service Catalog Entry
  - Logical Service Blueprint
  - Service Release Blueprint
  - Service Release

- **Physical Model**
  - Desired Service (CI)
  - Actual Service (CI)

**Drive Value Creation**

- **Strategy to Portfolio**
- **Requirement to Deploy**
- **Request to Fulfill**
- **Detect to Correct**

**Traceability, Insight and Measurement**
Our Approach to a Comprehensive Architecture

Start with IT management use cases to build the proper business model

- **Functional Model**
  - What IT does, not how
  - Based on use case, best practice, and standards

- **Lifecycle Model**
  - Service Lifecycle with continuous Assessment, Integration, Delivery, and Operations

- **Information Model**
  - Identify key controlling IT artifacts.
  - Definition of artifacts lifecycles according to lifecycle model.

- **Integration Foundation**
  - Key integrations, based on artifacts
  - Link Information model with Lifecycle model.
Reference Architecture – An IT Functional Model
Reference Architecture – Integrations & Dependencies
Strategy to Portfolio
## Strategy to Portfolio Lifecycle

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- Financial planning
- Set up policies and guidelines
- Enterprise architecture

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- Evaluate benefit realization

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**Executive Scorecard**

**Project & Portfolio Management**

**Application Portfolio Management**

**Enterprise Manager**
Strategy to Portfolio Functional Model

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Requirements to Deploy
Requirements to Deploy Lifecycle

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Agile Manager

Application Lifecycle Management

- Dev integrations
- Quality Center
- HP Anywhere
- Performance Center
- Fortify
- Service Virtualization
- Executive Scorecard

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Requirement to Deploy Functional Model

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Request to Fulfill Lifecycle

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Service Management

Asset Management

Cloud Service Automation

Automation & Orchestration

Executive Scorecard
Request to Fulfill Functional Diagram

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Detect to correct
Resolving Problems in Production: Detect to Correct

**Detect**
- Events, alarms & metrics from everything
- User issues
- Relationship among events

**Diagnose**
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- Severity & business impact
- Define escalation path
- Auto-fix common issues

**Change**
- Change request
- Risk analysis
- Approvals

**Resolve**
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- Verify recovery
- Close records

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**Business Service Management**
- Ops Analytics & Intelligence
- App Performance Management
- Systems & Storage Management
- Network Management

**Service Manager**

**Automation & Orchestration**

**Universal CMDB, Universal Discovery**

**Executive Scorecard**
CLIP: Mature Incident Management Process for Detect to Correct

As Is

App Response Time Slow
J2EE DB Connection Failing
Oracle Slow Query Time

Ticket #1
Ticket #2
Ticket #3

App Expert
Java Expert
DB Expert

Database Problem
Manual Resolution Process

Close Incident

Human Error → re-work

Closed Loop Incident Process

App Response Time Slow
J2EE DB Connection Failing
Oracle Slow Query Time

Auto Event Correlation
Symptom
Cause

Auto Event Correlation
Symptom
Cause

Event correlation
Auto assignment
Automatic resolution

Ticket #1
Automatic Resolution Flow
DB Expert or Operations Bridge
Runbook resolution process

Close Incident
**Use Case: DevOps**

**Business Architecture**
- Business involvement defines demand & requirements as Epics & stories
- Implement Sprint vs. Project planning
- Design in automation & portability

**Strategy to Portfolio**
- Policy Mgmt.
- Proposal Mgmt. (Investment)

**Requirement to Deploy**
- Requirement Mgmt.
- Defect Mgmt.
- Project Delivery mgmt.
- Test Mgmt.
- Build Mgmt.

**Request to Fulfill**
- Leverage in combined Backlog Management
- Automate Testing for - Unit - Functional - Performance - Integration - Security
- Automated Build process
- Automated / Assisted Deployment

**Detect to Correct**
- Prob Mgmt.
- Incident Mgmt.
- Billing/Charg eback
- Diagnostic Remediation
- Event Mgmt.
- Service Monitoring
- Service Portfolio Mgmt.
- Change Mgmt.

- **1.** Business Architecture
- **2.** Automated Deployment
- **3.** Demand Mgmt.
- **4.** Test Mgmt.
- **5.** Automated Build process
- **6.** Build Mgmt.
- **7.** Automated / Assisted Deployment
- **8.** Automatically updated topology
Detect to Correct – KPIs critical for CLIP

Measuring Success in terms of Effectiveness and Efficiency

1. Number and percentage of repeated or duplicate events
2. Number of events/alerts generated without actual degradation of service
3. Number and percentage of events that require human intervention
4. Number and ratio of events compared to number of manually created incidents
5. Number and percentage of events that indicate potential reliability or availability issues
6. Number of incidents resolved without impact to the business
7. Number and percentage of major incidents for each IT Service
8. Size of current incident backlog for each service
9. Percentage of changes creating outages
# Detect to Correct – A maturity model

<table>
<thead>
<tr>
<th>Monitoring</th>
<th>Reactive</th>
<th>Control</th>
<th>Manage</th>
<th>Service-aligned</th>
<th>Business partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network, server, storage</td>
<td>Virtual</td>
<td>User experience</td>
<td>Service viewpoint</td>
<td>Hybrid</td>
<td></td>
</tr>
<tr>
<td>Event</td>
<td>Independent NOCs</td>
<td>Operations bridge</td>
<td>Correlation</td>
<td>Automation</td>
<td>Continual service improvement</td>
</tr>
<tr>
<td>Incident</td>
<td>Workgroup focus</td>
<td>Consolidated service desk</td>
<td>Linked to Event, Problem, Config</td>
<td>SLM, self-service &amp; scorecard</td>
<td>Linked to supplier</td>
</tr>
<tr>
<td>Remediation</td>
<td>Expert based</td>
<td>Some runbooks</td>
<td>Many runbooks</td>
<td>Runbooks at deployment</td>
<td>Automation</td>
</tr>
<tr>
<td>Change</td>
<td>Expert based</td>
<td>For key changes</td>
<td>Dependency aware</td>
<td>Service, config &amp; asset aligned</td>
<td>Linked to supplier</td>
</tr>
<tr>
<td>Configuration</td>
<td>Discovery</td>
<td>Dependency maps</td>
<td>SACM</td>
<td>Service models</td>
<td>Linked to deploy</td>
</tr>
</tbody>
</table>

Detect to Correct
Detect to Correct Functional Diagram

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Reference Implementation: Detect to Correct
Foundational Building Blocks
Support site: Over 450 Supported Integrations

Download: http://support.openview.hp.com/sc/solutions/index.jsp#tab=tab3
UDM – Universal Data Model

Common data model for HP Software Products

Public Site: https://hpln.hp.com/group/universal-data-model

Used for:

- Integrations
- Common Vocabulary and protocol
- Aligned to industry standards (ITIL, CIM, COBIT)

Example model
Conclusions

New style of IT puts **service** at the center – equal emphasis on delivery and consumption

Reference Architecture is **process & tool agnostic** – use appropriate process, mature function, keep artifacts / work flowing

Managing full service and information **lifecycles** are critical

Functional components produce/consume artifacts that power the service lifecycle **continuously**

End to end traceability connects IT to expected **business results**
Proposed Strategic Activities – Next Steps

Typical Assessments and Activities leveraging the Reference Architecture

- Strategic Roadmap & Planning
- Rationalization Exercise
- Maturity Assessment
Example Workshop Milestones and Activities

Workshop focus and Milestones to be determined in Workshop 1

Workshop 1
- “IT as Business” review
- Begin “as-is” Detect to Correct assessment

Workshop 2
- Detect to correct deep-dive
- Began Request to Fulfill “as-is”

Workshop 3
- Completed Detect to correct “as-is”
- Request to Fulfill deep-dive

Workshop 4
- Reviewed detect to Correct “To-Be” (CLIP)
- Propose change by function
- Complete Request to Fulfil “as-is”
Example Value Stream Prioritization

IT spend per % of revenue: %10 (Best in class = 3%)

Strategy to IT Portfolio – Growth & Risk

1. Strategy
2. Service Portfolio
3. Demand
4. Selection

Requirements to Deploy – Growth & productivity

1. Plan & Design
2. Develop
3. Test
4. Deploy

Request to Fulfil – Productivity & Growth

1. Define & Publish
2. Subscribe
3. Fulfil
4. Measure

Detect to Correct – Risk & Productivity

1. Detect
2. Diagnose
3. Change
4. Resolve

Corporate Priorities

1. Growth
2. Productivity
3. Risk
4. Cost

Priority = maturity / Step KPI Impact

Not Evaluated

High Maturity
Medium Maturity
Low Maturity
Example Service Monitoring Recommendation

1. Route all monitoring through BSM (RTSM) to capture all events
   - Generate complete metrics view
   - Necessary for CLIP processing in correlation and automation

2. Reduce event source tools
   - Disparate drives greater cost and increased management overhead

3. Longer term: driver pagers from event management vs. monitoring directly
Example Functional Maturity Assessment
Example Business Capabilities Assessment

Sell and Service Offerings
- Support Campaigns
- Develop Channels
- Prospect for New Customers
- Administrator Sales
- Service Customers
- OnBoard Customers

Develop Marketing Strategy
- Develop Product Strategy
- Market Products
- Operate Customer Intelligence
- Define Business Direction
- Set Pricing
- Forecast Capability Requirements

Manage Risk
- Develop Risk Models
- Manage Reputation
- Define Risk Strategy
- Forecast Regulatory Changes
- Track Regulatory Requirements
- Outreach to Market

Operate Business
- Provide Technology Investment
- Maximize Human Capital
- Optimize Facilities + PUE
- Support Investments
- Develop Strategic Planning
- Manage Financials

Execute Research/Design Products
- Support Main Labs
- Support Field Labs
- Promote R&D Efforts
- Develop Innovation Centers
- Support Teaching Centers
- Enable Field Research
- Ensure X-Dep Review/Change

Execute Account Management
- Administer Collateral
- Manage Accounts
- Issue Account Services
- Fraud/Abuse Detection

Execute Operations Products
- Provide Facility/Site Management Services
- Provide Planning/Development
- Provide Security Services
- Provide R&D Services
- Provide Build Services
- Provide Logistics/Supply Services

Execute Investment Products
- Consumer Investments
- Corporate Financing
- Corporate Investment
- Consumer Investments Education
- Execute Fund Management
- Corporate Tax Services

Develop and Manage Companies
- Define Strategy
- Source Partners
- Company Holdings (Verticals)
- Use Financial Instruments
- Support X-Company Collaborations
- Evolve Contracts

Sample Capability Map with Weighted Strategic Gaps
Thank you