Agenda and Objectives

- Review architecture framework required to support e-business
  - What is the core business driver for building a Web Foundation
  - What is the Web Foundation...how is it a framework for building an e-business infrastructure
  - What are the four cornerstones of the Web Foundations...what is strategic and why
  - How can this framework be used in your organization

Relationships Have Become the Currency of the New World

- The Internet has enabled major shifts in business value
- Value is being driven by transforming business relationships
- Information is the key to providing rich relationships
- Understanding how to leverage IT to build rich relationships is the true key to success
Cisco and other companies have faced the same problems—Silo’s (or jumbles) of infrastructure keeping businesses from deploying applications quickly.

The Internet Provides the Opportunity to “Start Over”

- Partner
- Supplier
- Customer
- Employee

Internet Infrastructure

- Customer Satisfaction
- Increase Productivity
- Increase Revenue
- Support Center
- Application Server and Network
- Order Mgmt (Support)
- Application Server and Network
- Order Mgmt (Sales)
- Application Server and Network

40+ Years of IT Application and Infrastructure
The Building Blocks of the Internet Infrastructure

- Partner
- Supplier
- Customer
- Employee

Internet Infrastructure
- E-Publishing (User Experience)
- Entitlement/User Management (Security)
- Internet Integration (Access)

Intelligent Network Foundation

- Customer Satisfaction
- Increase Productivity
- Increase Revenue
- Order Mgmt (Support)
- Support Center

- Application Server and Network

The Building Blocks of the Internet Infrastructure

- Requisite Systems and Information Repositories
  (Systems, Platforms, and Data)

- Enabling Technologies
  (Interaction, Process, and Knowledge)

- Networked Applications
  Employee Services, Commerce, Supply Chain, Customer Care, More...

Business Goals

Prerequisite and Existing Systems Provide Information for the Networked Applications

Foundation Technologies Provide the Basis for All Other Applications

The Web Foundation Removes Barriers

Networked Applications Build the Relationships

Enabling Technologies Allow You to Build the Networked Applications

Integration
- Network
- Foundation Technologies
- Entitlement/ User Management

Content Management

The Logical Architecture of the Web Foundation

The Four Cornerstones of the Web Foundation Architecture
The Four Cornerstones

Building the Foundation for the E-Business Platform

Entitlement and User Management: Scalable Security

- Internet is increasing the points of interaction
- Internet breaks down boundaries, expanding the complexity of security requirements
- User sets are expanding, requiring a shift in the management model
- The fragmented birth of internet initiatives typically yields multiple user profiles
Web Foundation Framework: Entitlement/User Management

- Resource or Function
- Entitlement
  - Who are you
  - What do you have access to
- Policy
- Resources
- User Profiles
- User Management
  - Who are you
  - What are your roles
- Personalization engine

Entitlement/User Mgmt Architecture and Players

- Resource or Function
- Entitlement
  - Who are you
  - What do you have access to
- Policy
- System of Record
- User Management
  - Who are you
  - What are your roles
- Personalization Engine

- ERP (SAP, Oracle, PS, BAAN, etc)
- HRMS (PS, Lawson, Oracle, etc)
- Dir: Netscape, Novell, CriticalPath, IBM, Sun, Oracle, etc...
- RDBMS: Oracle, Sybase, etc...
- Netegrity, IBM, Verity, enTrust, Oblix, etc...
- Oblix, Novell, CriticalPath, etc...
- Broadvision, ATG, Vignette, etc...
Entitlement/User Management Is a Strategic Component

- It provides the basic security that will enable you to expose information and functionality
- Personalization is impossible unless you understand who your users are
- Applications have much larger user sets, requiring new models for management
- Interapplication processes are more common, requiring seamless access

E-Publishing: The Vision for Transformation

- Transforming the usual single direction content flow into a closed-loop cycle
- Content Management is the core of this transformation
Web Foundation Framework: Content Management

Authors

Content Continuum

Manage/Publish

Audience

Create

Content

Design

Logic

System to control
- Multiple sources of content
- Multiple types of content
- Different timelines
- Different processes
- Content structure

Specific requirements
- Content validation
- Content versioning
- Link management
- Search and metadata integration
- Integrated QA environment
- Automated deployment to multiple targets

Multiple Tools
Disparate Teams
Variance in Skills

System to control
- Multiple sources of content
- Multiple types of content
- Different timelines
- Different processes
- Content structure

Specific requirements
- Content validation
- Content versioning
- Link management
- Search and metadata integration
- Integrated QA environment
- Automated deployment to multiple targets

Deliver

Content

Users

Rules

- Multiple platforms
- Diverse targets
- Personalization
- Usage analysis

Multiple Tools
Disparate Teams
Variance in Skills

Content Management: Architecture and Players

Content Creation

Marketing
Corp ID and Imaging
Customer Support
Engineering

Content Management

Validate, Manage, Deploy

Content Delivery

XML
DOM

- Frontpage
- Dreamweaver
- Framemaker
- Homesite

- MS Word
- Photoshop
- Illustrator
- Etc...

- Interwoven
- OpenMarket
- Vignette

- Documentum, Filenet
- MKS, Continuus

- Alliare, Broadvision, ATG, Vignette

Multicast

- ATG
- Broadvision
- Vignette

QoS

- Apache
- Microsoft
- Netscape

- BEA
- Sun
- Bluestone
- Oracle
- Etc...

Multicast

- ATG
- Broadvision
- Vignette

IPSec

- Apache
- Microsoft
- Netscape

- BEA
- Sun
- Bluestone
- Oracle
- Etc...

Multicast

- ATG
- Broadvision
- Vignette

Rdist

- Apache
- Microsoft
- Netscape

- BEA
- Sun
- Bluestone
- Oracle
- Etc...

Multicast

- ATG
- Broadvision
- Vignette

Rule

Content

Integration

Content

Network

Entitlement

Integration

Content

Network

Entitlement
Content Management Is a Strategic Component

- It is the users first interaction with your information, the most portion of the user experience with the most impact
- Wide-scale user experience changes require all content to have a controlled structure
- Personalization is impossible unless you understand what your content is
- Control of the user experience and the resulting relationship requires control of the content

Web Foundation Framework: Internet Integration

- Packaged Application (ERP, CRM, SFA)
- Application Database
- In-House “Legacy” Application
- Custom Interface
- DB Interface
- Integration Backbone
- Integration Controller
- Rules Base
- External Standard Interface
- Custom/Packaged Interface
- Enterprise Information Portal
- External Site
Web Foundation Solutions: Enterprise Integration

- Adapters/interfaces
  - Provides "out-of-the-box" connectivity
  - "Standardizes" access
  - Protects downstream investments

- Technologies
  - XML, SQL, RMI, IIOP, API, etc...

- Multiple solutions combine for:
  - Translation/transformation
  - Guaranteed, sequenced delivery
  - Publish/discover/subscribe
  - Multicast
  - Process repository (phase II)

Providers:
- Tibco
- Neon
- Software technology
- Active software
- Vitra
- Crossworlds
- Extrinsic
- WebMethods
- Bowstreet
- Netfish
- Etc...

Enterprise Integration Is a Strategic Component

- Designed to create seamless view of enterprise
- Enables you to extend the boundaries of enterprise while hiding the complexities of your processes and systems
- Hides the complexity of data from other applications and developers
- Enables you to take part in emerging industry standards
Network Foundation

- More than just the routers and switches
  - Paths between routers require routing protocol
  - Hosts include servers and user stations
- Infrastructure services for name, address, and reliability
  - DNS, DHCP, HSRP
- Internet scaling
  - Cache, LocalDirector, Multicast, QoS
- Security
  - Firewall, intrusion detection, authentication
Network Foundation Components

Network Foundation Component Integration

Network Foundation Components

Host

Router

Switch

DNS

DHCP

Name

Address

Cache

RSVP

DSCP

QoS

HSRP

IGP/BGP

Multicast

Path

Intrusion Detection

Firewall

Security

QoS

DSVP

DSCP

HSPR

IGP/BGP

Multicast

Path

Intrusion Detection

Firewall

Security

Network Foundation Components

Is a Strategic Component

- Provides the basis for networked applications
- Directly supports mission critical business functions
- Removes the barriers of time and geography
- Provides services to the applications and platforms to enable advanced applications to be deployed faster, with scalability, reliability and security built in
The Four Cornerstones of the Web Foundation Architecture

- **External Connections**
  - Customers
  - Partners
  - Suppliers

- **Internal Connections**
  - Process, Knowledge, and Development Enablers
  - App Servers, Workflow, 3rd Party Apps, ...

- **“DMZ” Connections**
  - Entitlement/User Management
  - Internet Integration
  - Meta

- **External Connections**
  - Web Services
  - Internet

- **Content Management**
  - Authoring
  - Manage/Publish

- **Pre-Req’s**
  - ERP
  - Data Sources

- **Internet Integration**
  - Middleware, EAI, Legacy Access, ...

Building on the Cornerstones

Using the Web Foundation in Your Organization
The Web Foundation

Business Goals

Networked Applications

Build the Relationships

Employee Services

Commerce

Supply Chain

Customer Care

More...

Enabling Technologies

(Interaction, Process, and Knowledge)

Requisite Systems and Information Repositories

(Systems, Platforms, and Data)

Integration

Content Mgmt

Foundation Technologies

Network

Entitlement/User Mgmt

Prerequisite and Existing Systems Provide Information for the Networked Applications

Foundation Technologies Provide the Basis for All Other Applications

Enabling Technologies Allow You to Build the Networked Applications

Enabling Technologies

Networked Applications

Build the Relationships

The Web Foundation

Enabling Technologies

The Set of Tools and Technologies that Facilitate the Creation of Networked Applications

Knowledge Enablers

Collaboration... Knowledge Tools... Learning

Process Enablers

Document Management... Work Management

Interaction Enablers

Adaptive Content... Application Guarantors...

Communication Enablers... Electronic Distribution...

Legacy Data Transformation

Development Enablers

Requisite Systems and Information Repositories

(Systems, Platforms, and Data)
Foundation Technologies: The Four Cornerstones

Internet Integration
Access to your Existing Infrastructure

Content Management
Structure, Process, and Control

Network Foundation
Connectivity, Reliability, and Intelligence

Entitlement and User Management
Identity, Integrity, and Scalable Management

Cisco Connection Online
An IBS Example for Customer Service

These Networked Applications Were the Key, High-Impact Functions to Achieve That Goal
An IBS Example for Customer Service

Integration:
Most data store in Oracle databases, so integration was based on SQL*plus

Network:
Provided Web Services for external use, and browser access for employees

Content Mgmt:
Stored the content in file system with restore capabilities

Entitlement:
Used firewalls (router based) and Access Control Lists (ACL) for security. Stored the user info in a centralized directory (database)

Used existing systems
- product documentation
- engineering defect tracking system
- customer information (for security)

Built new systems
- Technical Tips

Integration
- Product Information
- Customer/Contract Info
- Defect Tracking
- Tech-Tip System

Content Mgmt
- Product Information
- Customer/Contract Info
- Defect Tracking
- Tech-Tip System

Foundation Technology
- Integration
- Network
- Foundation Technology
- Content Mgmt
- Entitlement

Enabling Technology
- Adaptive Content
- Document Management

Prerequisite Sys
- Product Information
- Customer/Contract Info
- Defect Tracking
- Tech-Tip System

Bug Navigator
- Tech-Tips
- Product Data Center

Cisco Connection Online
Adaptive Content to show different tools to different levels of users:
- Customers
- Partners
- Employees

Document Mgmt to insure accuracy and post content automatically

Networked Applications
- Bug Navigator
- Tech-Tips
- Product Data Center

Enabling Technology
- Adaptive Content
- Document Management

Prerequisite Sys
- Product Information
- Customer/Contract Info
- Defect Tracking
- Tech-Tip System

Foundation Technology
- Integration
- Content Mgmt
- Network
- Entitlement

Iterations Have Created a Broad Suite of Applications
The Roadmap to an Agile Organization

Summary

- Relationships are the currency of the New World
- Rich user experience with information is the key to those relationships
- A Web Foundation allows an organization to quickly and reliably deploy the applications that provide that experience

- Building the four cornerstones of the Web Foundation today will enable agility and provide the organization the platform for future success
Business Transformations, New IT Architectures

Session: 3100

Please Complete Your Evaluation Form

Session: 3100