The Power of eBonding:

Customer Enablement Through Electronic Bonding

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GLOBAL CAPABILITY.
PERSONAL ACCOUNTABILITY.

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Customer Enablement
The Customer is Driving the Marketplace

– **Information on demand**
– **Simplify operations**
– **Control costs, increase value and efficiency**
– **Better leveraging of technology**
– **Improve infrastructure, processes and service**

Provides 24x7 access to automated online sales, service support, network/service administration and account management tools making it "easier to do business," while still enabling customers to engage their vendor's account team

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Customer Enablement
High-Level Volume Challenges

CRITICAL NEEDS	→	CHALLENGES	→	OUTCOMES
Repairs:	• Notifications • Tracking • Monitoring	• Data re-key (swivel chair) • Long cycle times • Manual tracking		• Duplication of effort • Poor customer satisfaction • Service request delay
Ordering:	• Creation • Tracking • Trending	• Slow data creation • Not integrated to sourcing approval processes • Manual order status • Inadequate trending tools		• Long implementation intervals • Loss of productivity • Operational inefficiencies
Management Reporting:	• Billing Reconciliation • Detail • Forecasting	• Error-prone process • Labor intensive • Lack of information • Factionalized data detail		• Poor forecasting • Lack of detail • Insufficient billing reconciliation

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Customer Enablement is the Solution
Providing a Process Improvement Framework

An online Web portal that contains more than 100 applications and tools that enable you to manage your telecom products and services

Verizon Enterprise Center

eBonding

EDI
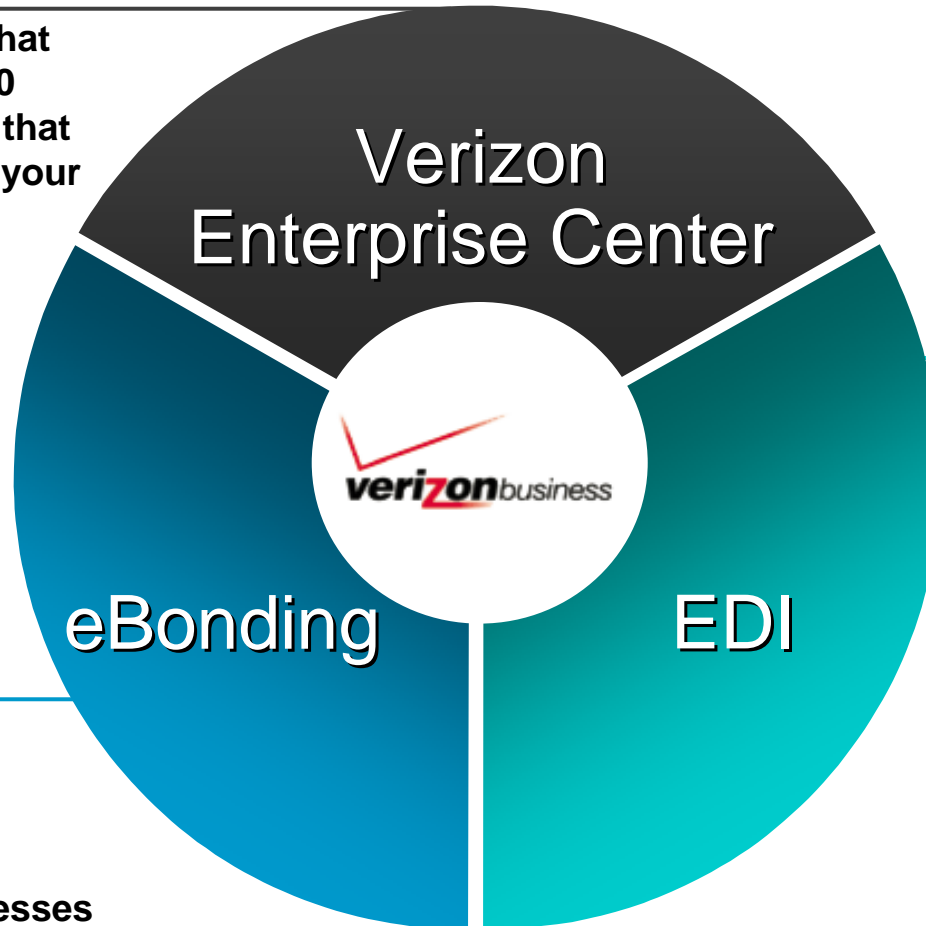
An electronic file delivery system for transporting large volumes of billing data to automate your monthly invoice processing

A seamless system-to-system interface that eliminates many swivel-chair processes

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So... What About "eBonding?"

- **"eBonding," or electronic bonding, refers to a B2B software interface that automates the data exchange between two business applications**
  - Changes in transactional data in System A are reflected in System B, in effect "bonding" the two sets of data in order to deliver an end-to-end software-based business process

- **eBonding software interfaces must provide several key functions:**
  - Process mapping
  - Data mapping
  - Messaging integrity
  - Security and policy management

- **eBonding interfaces are not protocol or API specific**
  - Legacy protocols and proprietary implementations exist
  - Industry standards beginning to emerge
  - Adaptors or "API clients" are often part of the design model
  - Companies and suppliers that are evolving to SOA-based IT infrastructures are best positioned to create "quantum leap" value add

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Customer Enablement
Why eBond to Manage Your Services?

With eBonding, you can better manage your data and network challenges. eBonding can help you transform your business processes

Seamlessly integrate systems
- Streamline existing business processes
- Receive automated updates and notifications
- Securely transport business critical information

Improve operational efficiencies
- Eliminate "swivel-chair" processes
- Manage high-volume orders
- Improve B2B processes

Strengthen fault management capabilities
- Eliminate manual tracking and improve billing reconciliation
- Initiate circuit health reviews
- Proactively manage problem circuit tests

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Delivering Process Improvement to the End User
Services and Communities of Interest

Users align to features based on job scope and responsibilities within their enterprises. Two main communities exist:

Role: IT and Operations

Responsibilities focus on issue management to maximizing service availability and performance

Users
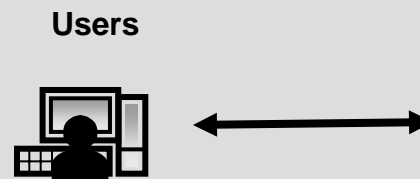
Tools:
Ticketing
Testing
Alarms
Inventory
Topology

Role: Administration and Management

Focus on governance (contracts), asset/change management, planning and cost controls
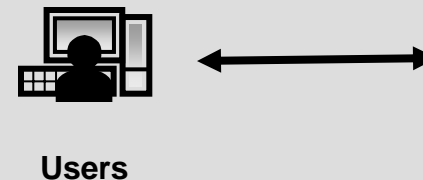
Users

Tools:
Inventory
Catalogs
Invoices
Order entry
Order status

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Targeting Administrative Users:
Key Business Processes

Inventory Management

- **Access up-to-date network inventory:**
  - Request network inventory on demand from the Verizon provisioning systems

- **Get inventory detail for bill and site reconciliation:**
  - Link provisioning detail to billing detail record information
  - Match to CMBD and other local inventory data details

Order Management

- **Get order status:**
  - Get order status, including current order milestone dates

- **Create and update orders:**
  - Place orders via more than 65 Verizon Business and ILEC product templates
  - Submit moves, adds, changes and disconnects

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Sample Inventory Management Applications

- **Match provisioning inventory records to billing detail records**
  - Create an extended view of the carrier details

- **Synch provisioning detail to local asset databases**
  - Automated database updates

- **Compare inventory update to prior inventory details**
  - Derive exception reports or change reports

- **Aggregate details by product time**
  - Product roll-ups for TCO analysis

- **Compare inventory to order activity**
  - Verify provisioned configuration vs. original request

- **Derive hierarchy and topology relationships**
  - Verify product to billing ID relationships
  - Define product relationship to other network elements

- **Extend record data locally for "business line" views**
  - Add alias info (i.e. user, site, application references)
  - Add internal hierarchy tags

- **Automated integration into related workflow processes**
  - Site validation, alias look-ups, automated research requests

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Sample eBonding Order Management Applications

- **Electronic order submission from customer sourcing systems or workflow applications**
  - Zero-touch submission, integrated response tracking (i.e. order confirms)

- **Customer database-driven form validation/pre-population**
  - Simplified order form creation based on local database info or prior orders
  - Bulk/batch user interface controlled by local workflow

- **Local application control over desktop views, permissions and approvals**
  - Common back-end gateway services all users, managed by workflow
  - Common desktop design can extend across multiple suppliers

- **Automated order status integration**
  - Electronic return feed of provisioning status with milestones and jeopardy details
  - Real-time status query
  - Derived status reporting, i.e. milestones due, orders with issues, service level analysis

- **Integration with change management and configuration management processes**
  - Change notification derived from order status
  - Order history and service delivery milestones can be stored locally

- **Integration with asset management processes**
  - Define look forward view of "new" and "pending" asset details

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Targeting Operations Users:
Key Business Processes

Trouble Management

- **Get ticket status:**
  - Request trouble status
  - Request ticket escalation, closure, re-open, monitor circuit
  - Receive ticket status in near real time
- **Create and update tickets:**
  - Create, modify, retrieve and cancel trouble tickets
- **Single integration point across all services:**
  - ILEC, IXC, managed services, global repair support within a common API

Circuit Testing

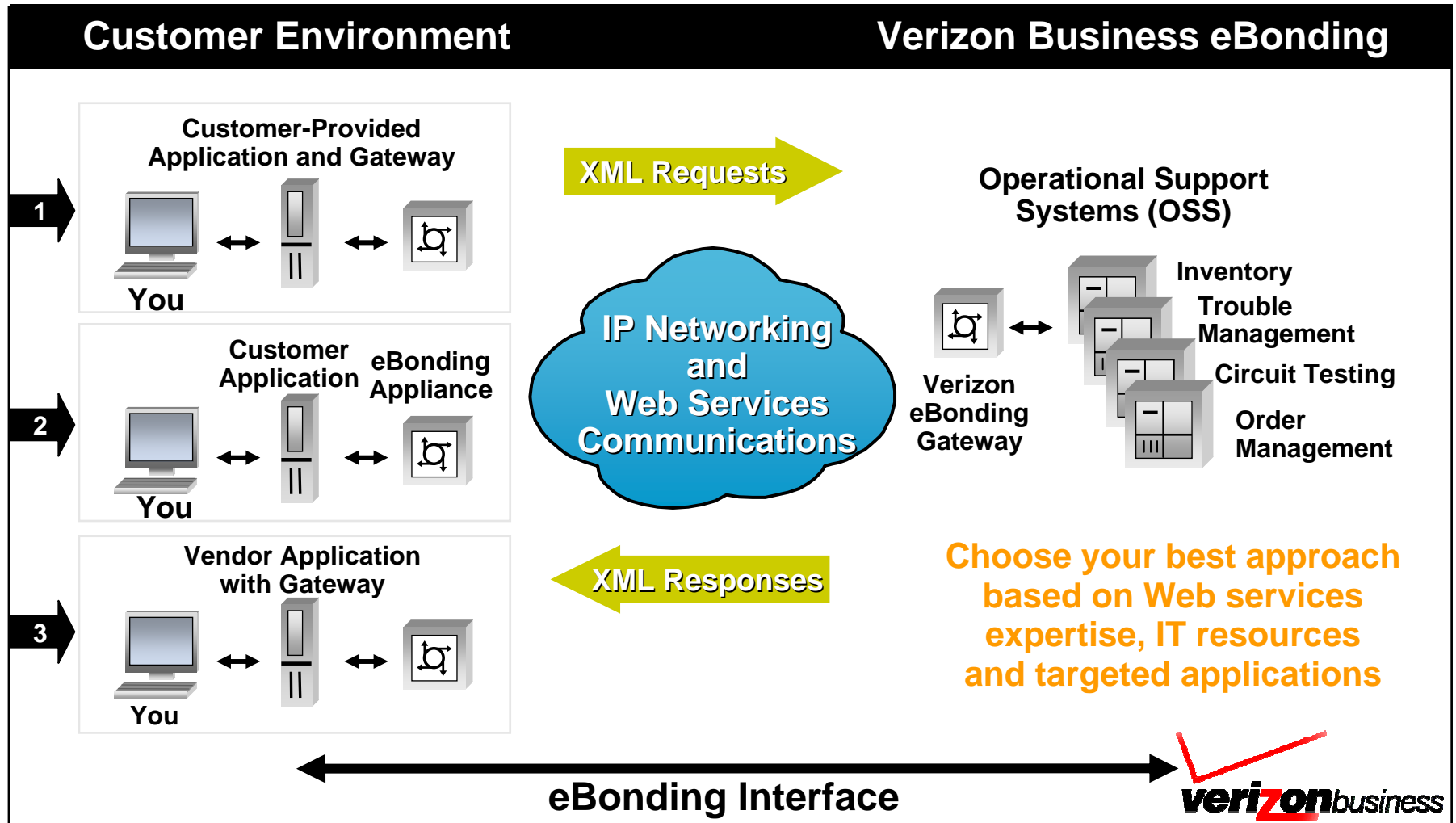- **Proactively perform circuit health reviews:**
  - View alarm, ticket and test status
  - Perform "discovery" by location or service element
- **Monitor with non-intrusive testing:**
  - Monitor live data for a specified duration
- **Get detailed measurements and analysis:**
  - Priority 1 ticket automatically created for tracking purposes with test result details included

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Incident Management and Repairs Applications

- **Asset data-driven trouble ticket case exchange**
  - Translate site codes to asset names (i.e. circuit IDs)
  - Identify primary vs. spare

- **Create NOC visibility to changes via inventory data**
  - Identify new services
  - Identify services with recent provisioning changes
  - Identify services cancelled
  - Integrate data look-up or research directly into case management workflow

- **Support ticket creation by alternate references**
  - Use inventory to map user name or site code to provisioned network elements

- **Create a network topology view**
  - Expand inventory data to include topology relationships
    » i.e. Identify the router in the circuit inventory record or show the application using a port/PVC or IP

- **Use network asset data details to develop TCO models**
  - Leverage topology and billing data cross references to create cost models
    » i.e. Average cost per port, average cost of bandwidth

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Deploying eBonding In Your IT Environment
Interface Options

Customer Environment　　　　　　**Verizon Business eBonding**

1 Customer-Provided Application and Gateway
You

2 Customer Application　eBonding Appliance
You

3 Vendor Application with Gateway
You

XML Requests →

← XML Responses

IP Networking and Web Services Communications

Verizon eBonding Gateway

Operational Support Systems (OSS)

Inventory
Trouble Management
Circuit Testing
Order Management

Choose your best approach based on Web services expertise, IT resources and targeted applications

eBonding Interface

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Option 1 –
Customer-Hosted Application & Gateway

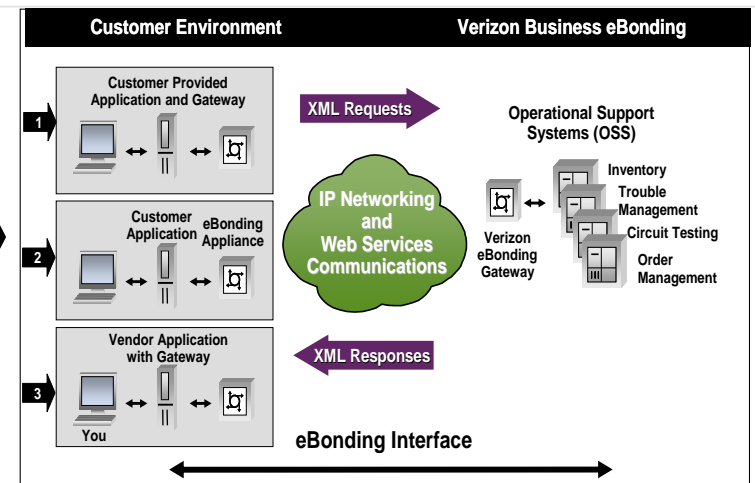## Implement your own Web services gateway using software toolkits

Your Custom Interface Options

Web Services Interoperability (WS-I)-Compliant Interface Solution

▸ Customer-hosted Web services interface that meets standards set by WS-I

Mapped Interface Solution

▸ Custom-developed mapping via API clients, software table mapping, or extensions to existing services

Customer Environment   Verizon Business eBonding

1   Customer Provided Application and Gateway

2   Customer Application   eBonding Appliance

3   Vendor Application with Gateway   You

XML Requests

XML Responses

IP Networking and Web Services Communications

Operational Support Systems (OSS)

Verizon eBonding Gateway

Inventory
Trouble Management
Circuit Testing
Order Management

eBonding Interface

Your Integration Resources

eBonding Implementation Toolkit

▸ Software Developer's Kit ("SDK") – design & programming guidance for interfacing software applications APIs

▸ Client Software – customer installable programs which support the application programming interface (API) client-side interface with COTS or custom software applications

▸ Server/Gateway Software – customer installable programs that support the adaptor software or server-side API that will interface with the vendor's eBonding interface

Project Management & Technical Requirements

▸ Implementation project manager

▸ Project plan customized to meet deployment needs

▸ General timelines and estimated capacity planning

▸ Deliverable templates for each phase of the project lifecycle

▸ Technical experts with direct experience building eBonding interfaces

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Option 2 –
Turnkey eBonding Gateways

Integrate with a turnkey eBonding Gateway through an eBonding Appliance or eBonding Implementation Toolkit

Integration eBonding Appliance Interface Options

COTS adaptor solutions

▶ Pre-packaged solutions designed to map to COTS products such as BMC Remedy/HP-Peregrine and similar vendor APIs
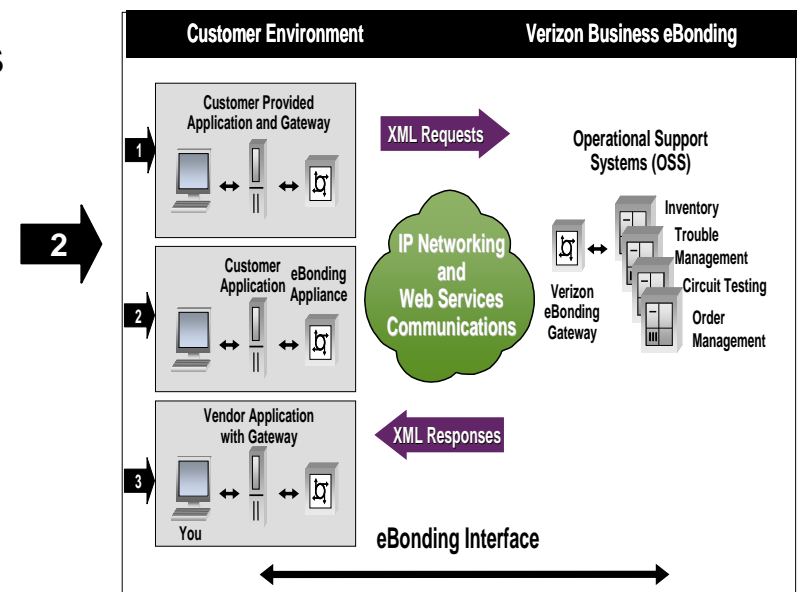
Shadow table solution

▶ Integration service that connects and communicates via a software table structure that maps your data formats to the vendor's record structure

Web services adaptor solution

▶ Tailored solutions designed to map to customer-defined Web services

Custom API client solution

▶ Integration designed for new or application-specific APIs

Implementation Benefits

Reliability

▶ Stability and consistency with tried and tested pre-packaged solution

Simplicity

▶ Reduced development effort with turnkey default forms and easy-to-use database table interface

Extensibility

▶ Simplified interface development can increase flexibility for interface changes to adjust to your business needs

Option 3 –
eBonding Through Vendor Partnerships

■ **Add value with solutions specifically designed to work with Verizon Business**

Implementation Benefits

Quick and easy
▸ Reduced integration project timeline for customers eligible to use an existing vendor eBonding interface.
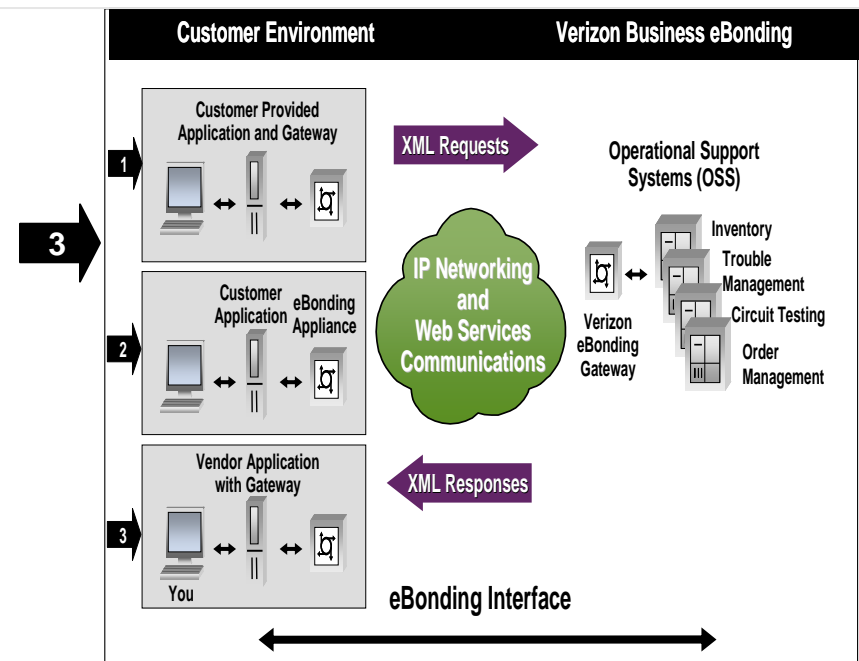
Seamless integration
▸ No impact to existing processes and systems

Chose from leading vendors
▸ Pre-packaged solutions with leading software vendors

Professionally managed and maintained software

The Verizon Business eBonding Vendor Partner Program

Cost-effective and turnkey solution for you to easily adopt and effectively manage your resources and business

- World-class telecom expense management software providers are providing an on ramp for customers to connect to VzB systems using their software
- Leverage your existing technology to automate business processes and seamlessly manage your Verizon Business products and services
- New partners are being added to the program as they develop their interfaces

Verizon Business eBonding Partner Program
Overview and Goals

- Leverage a "one-to-many" concept
- Formalize and structure a working business relationship between application service providers and Verizon Business
- Targets customer premise application and service bureaus providing telecommunications management support
- Two options for TM vendors:
  - Vendor Partner
    - Verizon Business, vendor and customer all in relationship
    - Governed by contract
    - SOW(s) outline the development of the interface and ongoing business and support processes
  - Other
    - Vendor works with Verizon Business as an agent on behalf of customer that wishes to automate eBonded services
    - No contract

Verizon Business Vendor Partner Program
Roles and Responsibilities

Verizon Business	Vendor Partner
Assists vendor in design, testing and deployment of eBonding service(s)	Designs, develops and deploys gateway to Verizon Business eBonding
Provides 24x7 Tier 2 support	Tier 1 support for interface(s)
Project manages all customer implementations	Analyzes changes to interface(s) as appropriate
Participates in presentations to customers	Maintains software license relationship to customer
Keeps vendor up to date on enhancements and additional options as available	

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eBonding Security Considerations

Confidentiality

Provided by use of encryption at the transport layer using server-side SSL between customer's application and Verizon Business gateway

Authentication and Authorization

Achieved by verifying credentials (username and password) provided by customer application with the set of credentials stored in Verizon Business LDAP

Integrity

Obtained by customer application signing the message with private key of X.509 certificate and eBroker being able to verify using public key of X.509 certificate

Non-Repudiation

Accomplished by logging the transaction after the integrity of the message is proven
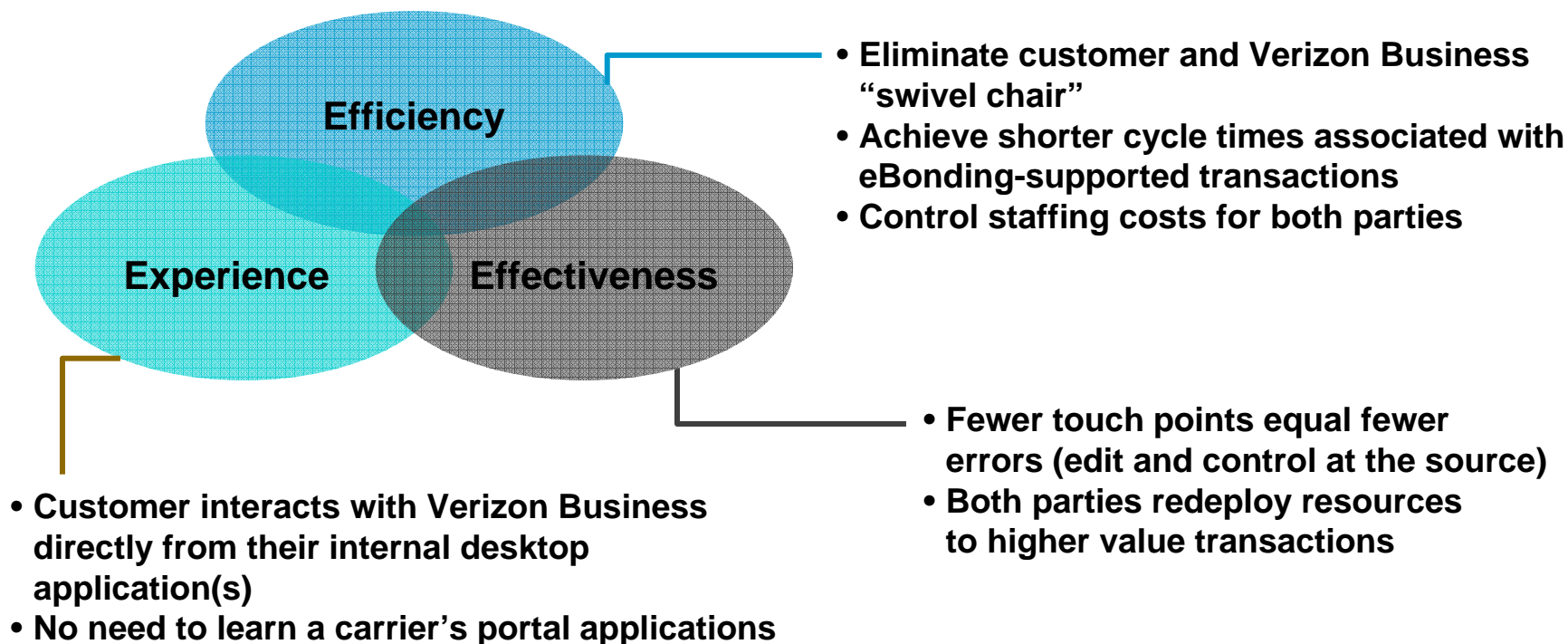
Governance and Access Controls

All usage is authenticated, avoid "social engineering" security issues possible with e-mails and telephone calls

Evaluating Your Return on Investment
eBonding Benefits

The benefits of eBonding can include increased efficiency, greater effectiveness and an improved customer experience

Efficiency

Experience

Effectiveness

- **Eliminate customer and Verizon Business "swivel chair"**
- **Achieve shorter cycle times associated with eBonding-supported transactions**
- **Control staffing costs for both parties**

- **Fewer touch points equal fewer errors (edit and control at the source)**
- **Both parties redeploy resources to higher value transactions**

- **Customer interacts with Verizon Business directly from their internal desktop application(s)**
- **No need to learn a carrier's portal applications**

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eBonding Payback Modeling
Volume and ROI

Orders and Inventory Reports

Trouble Management/Repair

Portal

Toolkits

eBonding Integration

1 to 50   50 to 100   100+

Transactions Per Month
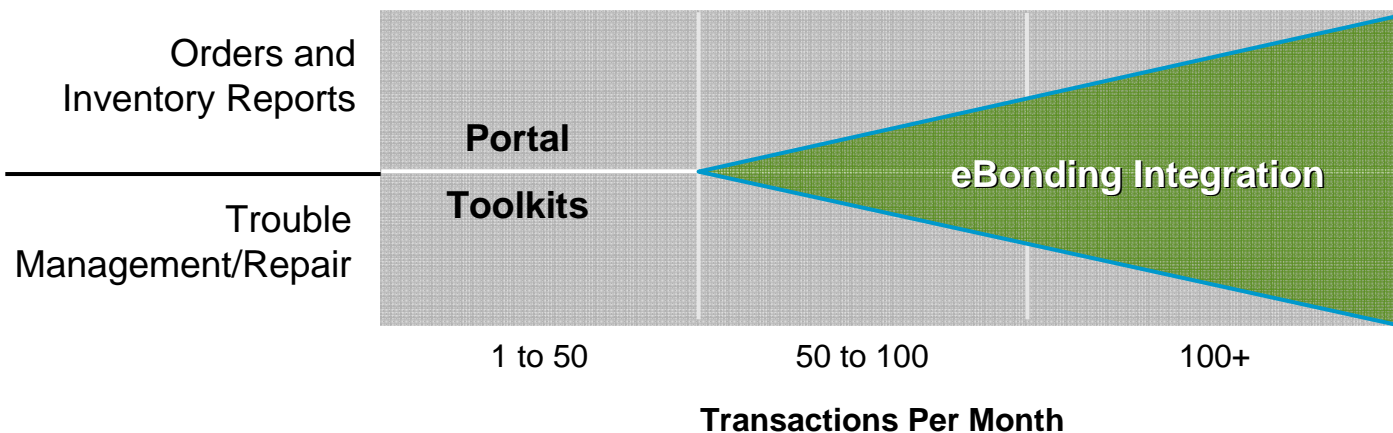
Experience positive returns on your investment in as little as 3 months*

# of Tickets/Month	Payback Time (in months)	~ 3-yr ROI (%)
80	16	180 +
200	6	450 +
400	3	900 +

*Assumes no eBonding appliance and 1:3 reactive (customer-initiated) to proactive (vendor-initiated) trouble ticket ratio. ROI is meant to be representative based on general time and motion analysis.

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Customer Enablement Adoption
Verizon Business is Leading the Way

Efficient, secure and connected	• Advanced system integration • Better operational efficiencies • Two-factor authentication • Strong fault management capabilities	**eBonding 2007** **CRM Excellence Award**
Save on operational costs	• High volume equals automation • ROI usually realized in less than 3 months* • Increase profits by reducing overhead	
Backed by Verizon Business' network and service	• Verizon Business' breadth and depth • Speed, innovation and ease of use • 24x7 control to "back-office" systems	

Gain operational efficiencies, improve your customers' experience, reduce errors and realize return on investment with eBonding

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*Assumes no eBonding appliance and 1:3 reactive (customer-initiated) to proactive (Verizon-initiated) trouble ticket ratio.

Question and Answer