



Connected Finance: Branch Optimisation

Grow Revenue, Improve
Service & Reduce Costs



Financial Services Enterprise **Replicable Business Model**
Branch Optimisation

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Significant challenges remain in a highly competitive increasingly commoditised marketplace

Under pressure to cut costs, streamline operations and improve business results

The branch infrastructure is outdated and too inflexible for our current business objectives



The need to embrace a common communications platform to ensure effective multi-channel interactions

The need to position the branch as a central source of sales



The need to differentiate in an increasingly competitive market

Minimal consistent service across channels

The need to improve employee productivity and customer service



Ensure you capitalise on the customer in-branch experience

'Moments of truth' in the branch:

- Entrance

Welcomed with knowledge

Routed to the most appropriate service point

Delivered service guarantee

- Waiting

Entertainment

Relevant information based upon meeting

- Meeting

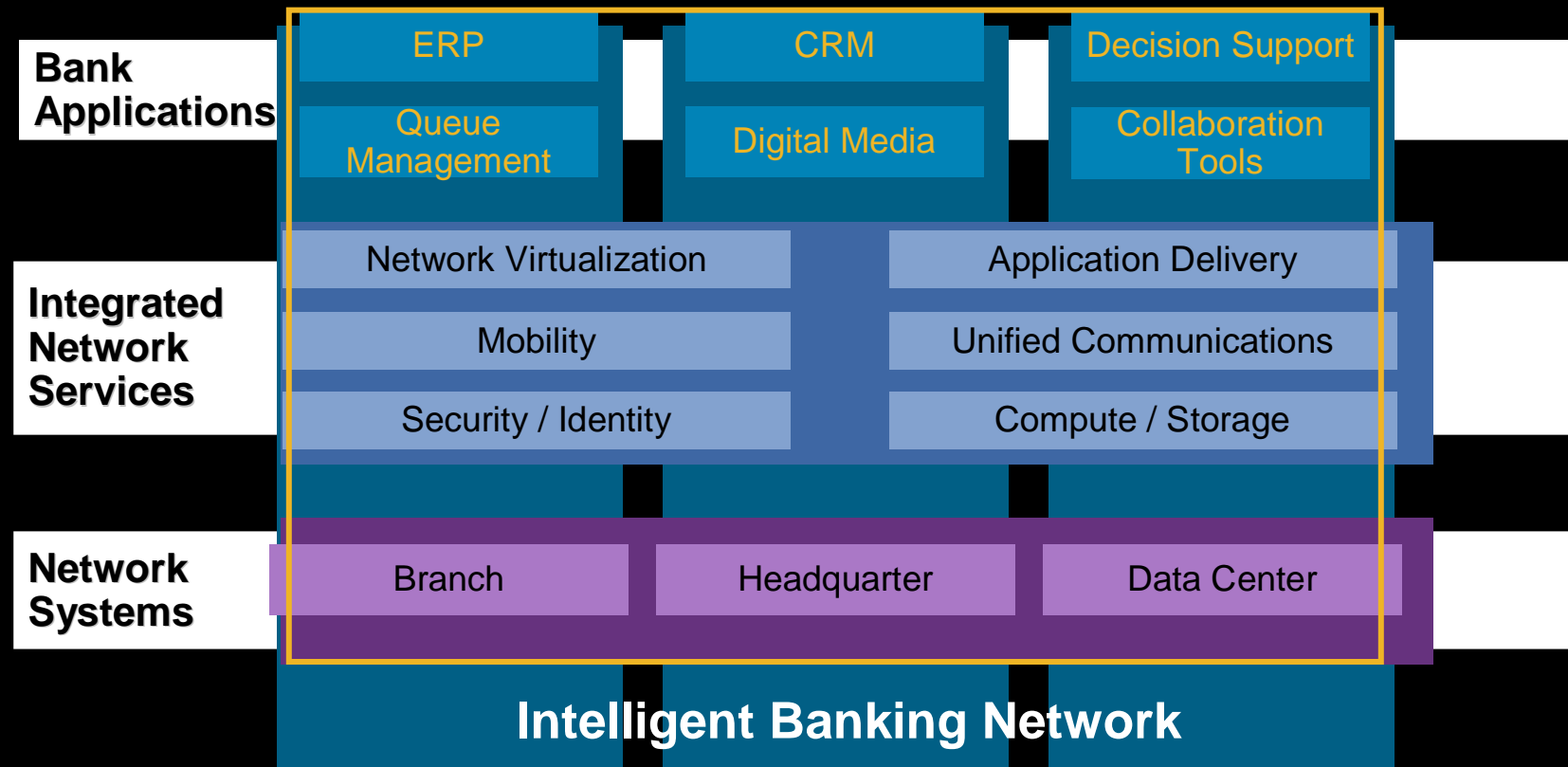
Satisfy all requests first time

Completion.



Financial Services: From Transactions to Interactions

Multi-Channel Banking Architecture



Architectural Approach

Enabling Future Financial Services Today

Multi-Channel Banking Architecture

Retail Branch

Contact Centre

Internet Banking

Mobile Banking

Self-Service Kiosk

- Extended Sales & Service
- Branch Optimisation
- The Virtual Branch

- Virtual Contact Centre
- Virtual Expert
- At-Home Agent

- Secure Internet Banking
- Sales Driven Web

- Secure Mobile Banking

- Digital Media Systems
- Intelligent ATM
- Self-service Banking

Connected Finance

Transforming Branch Transactions into Customer Interactions

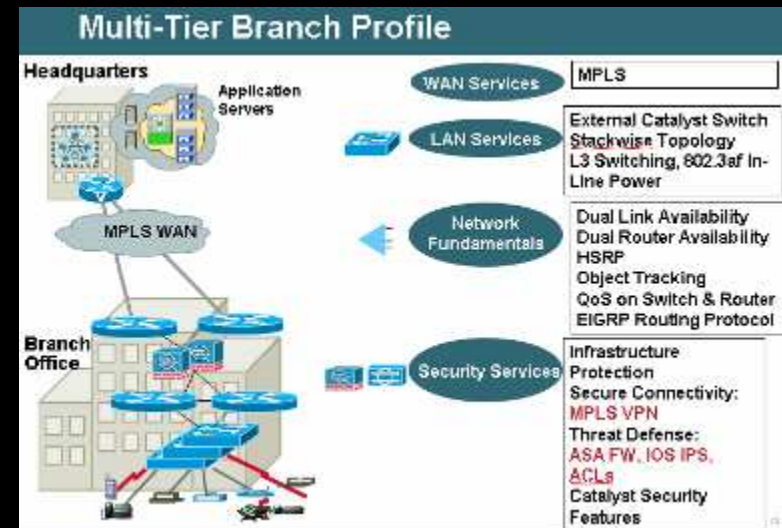
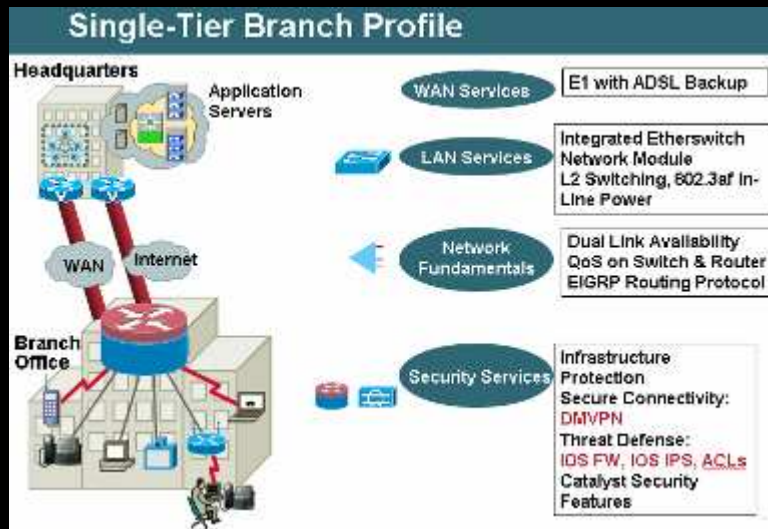
Branch Network Architecture

Branch

Headquarter

Data Center

- Scalable Network design adapted to size of the branch
- Redundant Network elements provide high availability
- Integrated Service Router provides comprehensive platform for services
- Centralized Management





Integrated Network Services

*Benefits for an
Optimized Branch*



Security & Identity Services

Network Virtualization	Application Delivery
Mobility	Unified Communications
Security / Identity	Compute / Storage

- Security within a Branch is more than just a firewall or any point product
 Creating a security function that can be reused, end to end
- Identity Services within this architecture enable banks to seamlessly authenticate and track resources across the network
- Branch regulatory compliance is ensured by securing intellectual property, proprietary information and therefore brand equity

Operational Control	Threat Control and Containment	Secure Transactions	Confidential Communications
<ul style="list-style-type: none"> Central security provisioning and policy definition Security policy compliance Desktop and server endpoint protection Security event correlation 	<ul style="list-style-type: none"> Secure deployment of mission-critical applications Malware protection and content control Intrusion prevention Application abuse control Distributed denial-of-service (DDoS) attack mitigation 	<ul style="list-style-type: none"> Advanced inspection Day-zero protection for Web-based applications Advanced application security 	<ul style="list-style-type: none"> Ubiquitous secure VPNs Confidentiality authentication and anti-replay services Network integrated services Clientless and client-based VPNs

Security Services

Real-Time Transparent Security Services

AAA	802.1x	NAC	PKI	WebAuth
<ul style="list-style-type: none"> Authentication, authorization, & accounting, a system in an IP network to control the computer resources that users have access to & track user activity 	<ul style="list-style-type: none"> Authentication standard used to identify users before allowing their traffic onto the network 	<ul style="list-style-type: none"> Network admission control that enforces security policies on device and user access to the network 	<ul style="list-style-type: none"> Public key infrastructure for encryption & decryption Certificate authority Registration authority Certificate directory Certificate management system 	<ul style="list-style-type: none"> Centralized access control to Web directories

Identity Services

Real-Time Transparent Identity Services

Supporting Security & Compliance Requirements

Mobility Services

Network Virtualization

Application Delivery

Mobility

Unified Communications

Security / Identity

Compute / Storage

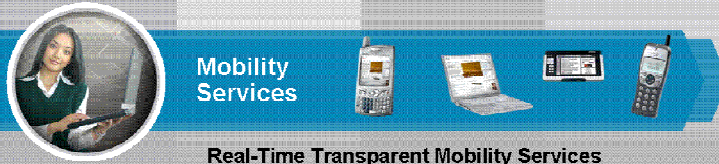
- Mobility Services functionality within the Branch architecture is a combination of voice, location, security and guest networking capabilities
- Major benefits of this functionality for the banking industry include:

Gain competitive advantage by improving cost efficiencies of mobile working

Increase productivity by for asset and inventory tracking applications reducing support and replacement costs

Improving decision making effectiveness by decreasing the time and complexity needed to access information and respond to market changes

Security	Guest	Voice	Location
<ul style="list-style-type: none"> ▪ Mobility-specific security ▪ Integration with security services for the network 	<ul style="list-style-type: none"> ▪ Non-employee access to network resources, without compromising enterprise security ▪ WLAN specific and integrated into network 	<ul style="list-style-type: none"> ▪ Voice WLAN and Wi-Fi and cellular phones with end-to-end quality of service and manageability integrated into unified communications services 	<ul style="list-style-type: none"> ▪ Provides location data for Wi-Fi devices, supporting security, management, and troubleshooting in the network in addition to providing a location API service to applications



Mobility Services

Real-Time Transparent Mobility Services

Supporting Operational Efficiency, Customer Experience Regulatory Compliance and Commercial Effectiveness Requirements

Network Virtualization Services

Network Virtualization

Mobility

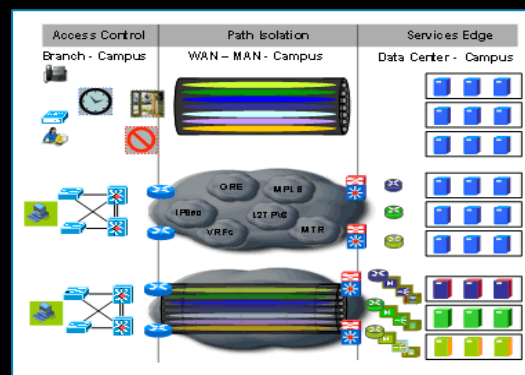
Security / Identity

Application Delivery

Unified Communications

Compute / Storage

- Virtualization of Services is a key component of the Branch architecture
- Banks can build and re-use services
 - Recognize economies of scale and increased control of assets
- Network Virtualization simplifies network operations
 - Enabling banks to securely share a common network infrastructure between groups of users, applications, and devices
- Use of a common infrastructure places an increased emphasis on security in order to protect assets and satisfy regulatory and privacy concerns



Supporting Operational Efficiency and Regulatory Compliance

Storage Services

Network Virtualization

Application Delivery

Mobility


Unified Communications

Security / Identity

Compute / Storage

- Virtualizing Storage is an efficient way of managing a banks storage needs and optimizing branch based operations
- Also delivers a vehicle to make these resources available throughout the network, a key attribute for a Service Oriented Network Architecture
- Intelligent storage networking architectures can help to:
 - Reduce expenses
 - Increase agility for changing priorities
 - Improve remote file management and backup for the banking industry

Data Migration	Data Replication	Backup and Recovery	Virtualization	Compliance and Retention
<ul style="list-style-type: none">Transparent data movement for server consolidation	<ul style="list-style-type: none">Network-based data replication services across servers and data centersTransparent movement of SAN data on existing IP networks	<ul style="list-style-type: none">Backup and restoration of data within service-level agreement (SLA)Network accelerated data movement for improved backup performance	<ul style="list-style-type: none">Thin provisioning, data mobility, and cloning across all storage devices	<ul style="list-style-type: none">Encrypted solution for data at rest

Storage Services
Real-Time Transparent Storage Services

Supporting Operational Efficiency and Regulatory Compliance

Application Delivery Services

Network Virtualization

Application Delivery

Mobility


Unified Communications

Security / Identity


Compute / Storage

- Offers banks a simpler, lower-cost application infrastructure model
- Ensure that the existing IP network becomes the foundation for the banks nervous system
- Link branches across great distances by embedding reusable infrastructure services into the network; Services become available for use by any application, device or person anywhere
- Specific to this architecture are the following solutions:
 - Cisco Wide Area Application Services (WAAS)
 - Cisco Application & Content Networking System
 - Cisco Digital Media System

Cache	Acceleration	Load Balancing	Quality of Service
<ul style="list-style-type: none"> Stores highly requested data locally to improve application performance 	<ul style="list-style-type: none"> Uses compression to improve performance to remote sites over WAN connections 	<ul style="list-style-type: none"> Disburses traffic to multiple points to increase throughput and application response time 	<ul style="list-style-type: none"> Monitors and prioritizes traffic based on policy



Application Services



Real-Time Transparent Identity Services

Supporting Operational Efficiency, Customer Experience, Regulatory Compliance and Commercial Effectiveness Requirements

Unified Communications Services

Network Virtualization

Application Delivery

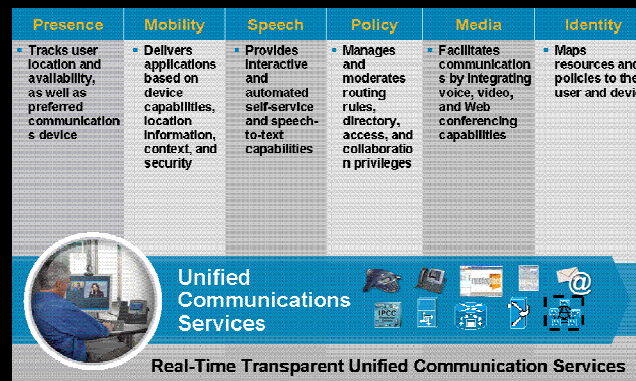
Mobility

Unified Communications

Security / Identity

Compute / Storage

- UC is a corner stone of the Branch Architecture, offering major benefits:
 - Cost savings by leveraging the IP network to support voice and video applications
 - Provides a solid foundation upon which to integrate new and innovative applications into the branch environment
- Uses the Integrated Network Services from the network architecture
- Offers virtualized user & communication services to business applications
- Expands the range “voice and collaboration” services to include powerful new shared services



**Supporting Operational Efficiency, Customer Experience
Regulatory Compliance and Commercial Effectiveness Requirements**



Technology Solutions for the Optimized Branch



Unified Communications Content Mapping

Network Virtualization

Application Delivery

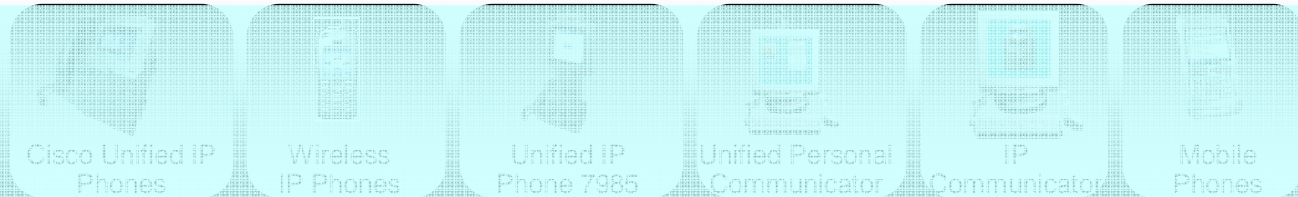
Mobility

Unified Communications

Security / Identity

Compute / Storage

Endpoints



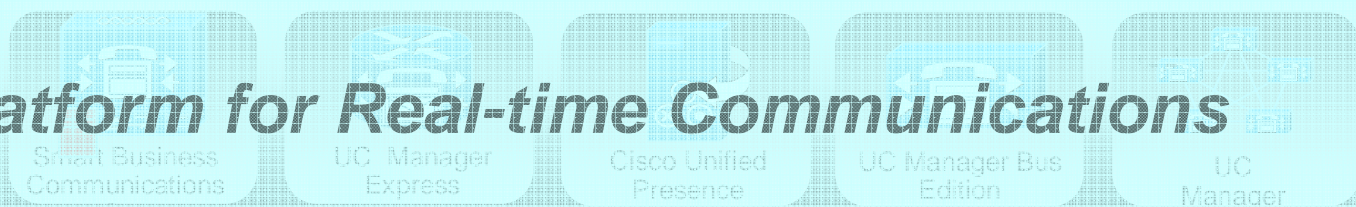
Communications Applications

Applications

Cisco Unified Communications System

Services

Platform for Real-time Communications



Infrastructure



Top UC Use Cases in Financial Services

Improving Branch Customer Experience & Collaboration

Network Virtualization

Application Delivery

Mobility

Unified Communications

Security / Identity

Compute / Storage

Use Case	Description
Internal Collaboration	Accelerate business processes and resolve issues better by better facilitating connecting people in a workflow sequence (click conferencing, PC desktop sharing, and desktop video)
Virtual Expert	Capture sales opportunities by bringing expertise from within the organization to the point of need (fixed or mobile)
Sales Productivity	Increase sales per banker from redirecting time savings into prospecting and cross-sell, sharing best practices and ramping up new hires faster
Phone beyond voice	Extract more value of capital resources in branch by leveraging the IP end-point as a multi-function computing terminal (e.g. self service, advertising)
Interactive Web	Drive value online by facilitating product sales, increasing differentiation and customer service levels while reducing CC handling times
Digital Media	Increase sales and product inquiries by mass-customizing rich media advertising/merchandising to location and time slot level branch demographics

How a Virtual Sales Experts Assisted Sales Model Work



Contact Center Multi-Channel Integration Benefits

- Cisco Voice Portal ensures:

Branch staff have more time to engage in face-to-face discussions

Redirection of call to VM and CC based on staff availability

Qualification and queuing of calls using the Cisco Voice GW before transferring call to an agent

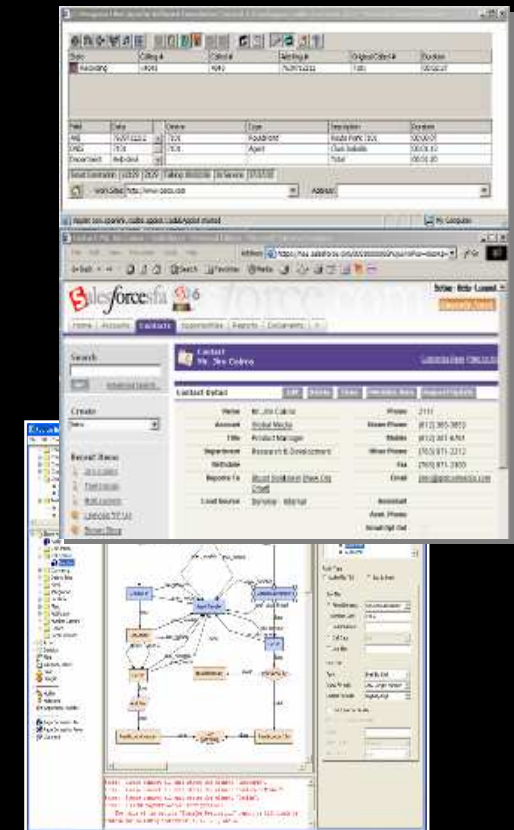
- Integration of branches with CC

CC agents and branch staff will be able to share call context, presence information and applications using UCCE collaboration tools

- Consistent customer experience between web and voice interface

Consolidated dial plan so all business numbers are converged with the single 800 number

Voice Portal services converged with the Enterprise Web Portal using VXML and ASR technologies



UC Contact Center Deployment Model

Network Virtualization

Application Delivery

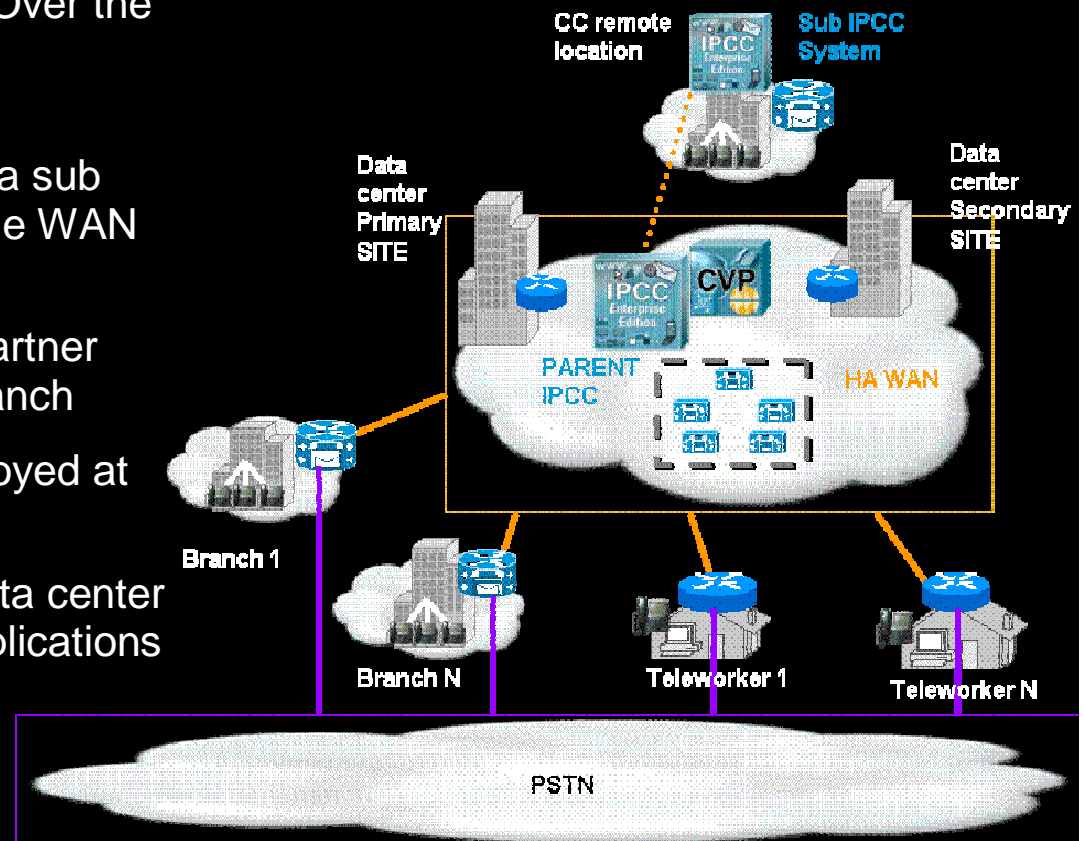
Mobility

Unified Communications

Security / Identity

Compute / Storage

- Solution can be deployed as Cluster Over the WAN, protecting against Site or WAN Disasters
- Distributed architecture by deploying a sub IPCC system at the bank branch, if the WAN has become unreliable
- Call recording supported through a partner solution (NICE); deployed at each branch
- ASR & TTS partner engines are deployed at each remote location
- All components are secured in the data center where integration with back office applications will take place



Supporting Operational Efficiency, Customer Experience and Regulatory Compliance Requirements

Cisco MeetingPlace – Rich Media Conferencing

The screenshot displays the Cisco MeetingPlace interface during a meeting. The main window shows a presentation slide titled "21st Century Business Imperatives" with the subtitle "New Work and Communications Model". The slide content includes:

- Speed and agility** required to be competitive
- Continuity and Compliance** no longer *nice to have*s
- Innovation** is a key driver of business performance
- Green** business practices becoming mainstream

The slide also features a central diagram with five interconnected blue circles:

- Anytime, Anywhere, Access and Availability
- Collaborative Communities
- Built-in Resiliency and Compliance
- Travel/Commuting Reduction Programs
- Blurring of Work and Free Time

On the left, the "Participant List (4)" shows: My Status (Speaking: Connie Tang), Connie Tang, Tana Franko, Olga (Guest), and Todd Tatum (Guest). Below it is a "Chat (Q & A)" window with a question from Todd Tatum (Guest) and a response from Tana Franko.

On the right, the "Presenter Chat" window shows a message from Connie Tang: "Let's follow this agenda Jack will go first followed by Connie". Below it are four video thumbnails showing participants.

At the bottom, the "Q & A (Linked to Chat)" window shows a question from Todd Tatum (Guest) and a response from Tana Franko. The "Presenter Notes" window contains instructions for presenters and moderators regarding permissions.

Business Driver for Video Conferencing

- Training for branch employees
- Ability to interview new employee candidates remotely
- Connect with loan specialists
- Sr. management working from home
- Work aid for branch managers
- Meetings with networking partner
- Preserve business culture



WAAS

Branch IT Infrastructure Issues

Network Virtualization

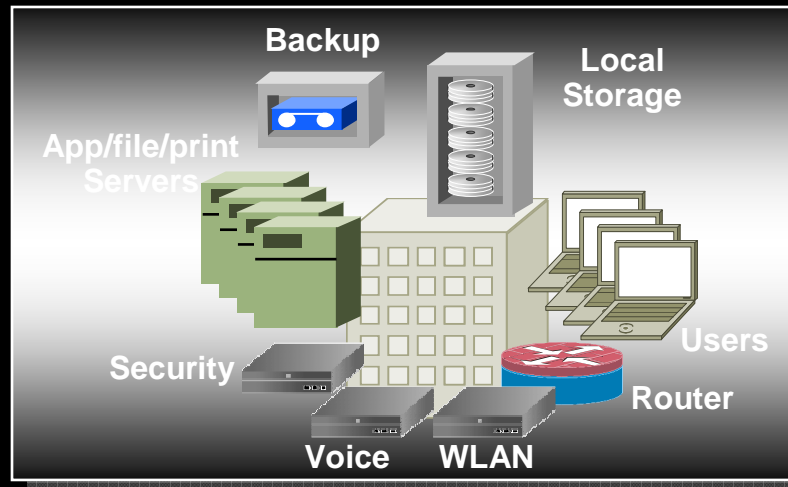
Application Delivery

Mobility

Unified Communications

Security / Identity

Compute / Storage



Companies spend 6 billion dollars per year on branch servers, storage, backup and management

- Source: IDC, Gartner, Cisco

Branches consume 70- 90% of business resources. - Source: NetworkWorld

Most enterprises have many servers running at 15% or less utilization, but still requiring 100% administration

- Source: Gartner

- Reduce operating expenses through the replacement of branch servers with a “thin branch” architecture to access all the necessary applications and information centrally delivered and managed through a secure, high availability data centre

File, print and application servers

Storage and backup

Plethora of networking equipments

Costly off-site vaulting

Compliance

Risk management

- WAN limitations prevent centralization

Bandwidth & throughput limitations

Latency and packet loss

End user experience

Branch and Data Center Consolidation

Network Virtualization

Application Delivery

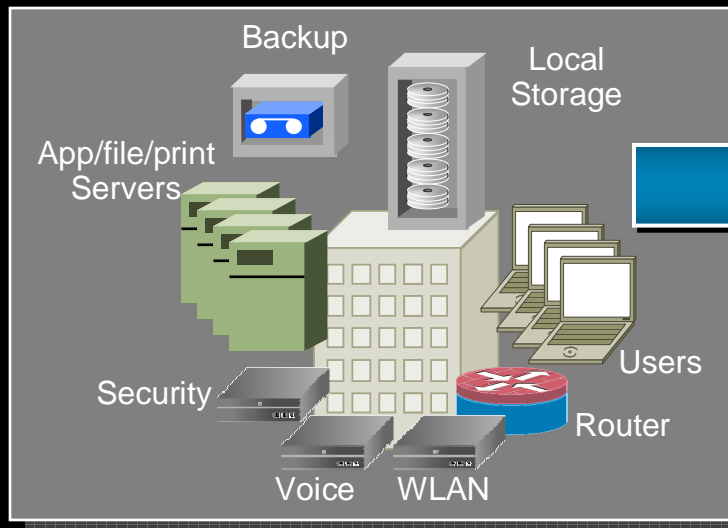
Mobility

Unified Communications

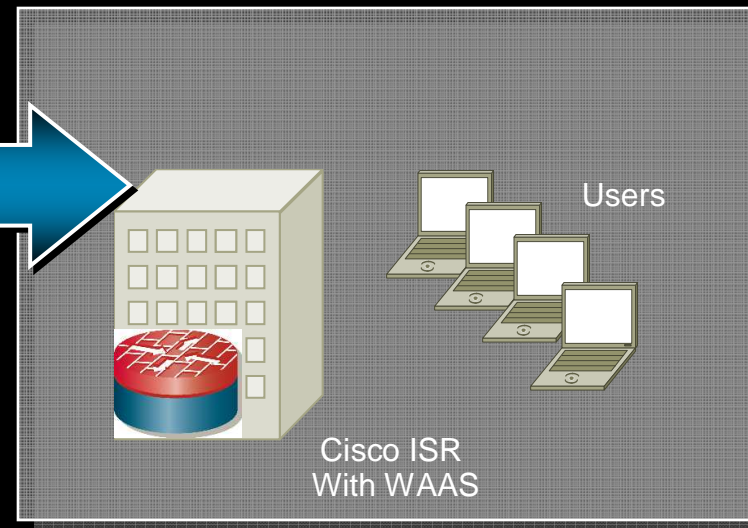
Security / Identity

Compute / Storage

High TCO & Complex



Low TCO & Simplified



Server Consolidation

- Leverage data center scale
- Email servers
- File servers
- Application servers
- Print servers
- SMS servers

Storage Consolidation

- NAS
- Backup equipment
- Tape
- Encryption gears
- Offsite vault

Networking Consolidation Via ISR

- WAN Optimization & Acceleration
- Firewall
- IPS
- VPN
- VoIP
- WLAN
- Switch
- Router

Digital Media Solutions

Improving Branch Customer Experience

- Improve branch customer experience
- Optimize revenue generating processes
- Improve productivity and capacity of branch employees
- Improve brand awareness
- Foster consistent corporate culture
- Lower cost structure



Traditional product introduction processes are resource intensive, time-consuming, and expensive.

Result: lengthy, uneven launches, costly printed materials, and poor coordination with employee training

Addressing Customer Challenges

Pain Points

- Communication challenges with traditional media out to stores/local venues
- Targeted marketing to customers
- No easy way to get content out to stores/branches
- Operational efficiency
- High cost of traditional communications
- Flexibility to be able to respond to (rapidly) changing conditions

Digital Signage

Benefits

- Drives sales through upsell, cross-sell
- Enhance brand and customer experience
- Ability to quickly respond and target content based on audience and location
- Simple to install, manage and use
- Use same platform for marketing, training

Cost effective and efficient messaging

Cisco Digital Media System

Message from the Bank's CEO

Real time Advertising

In Branch Training on branch desktops

Uniform Product launches

A new Customer Experience



Cisco Digital Media System

Network Virtualization

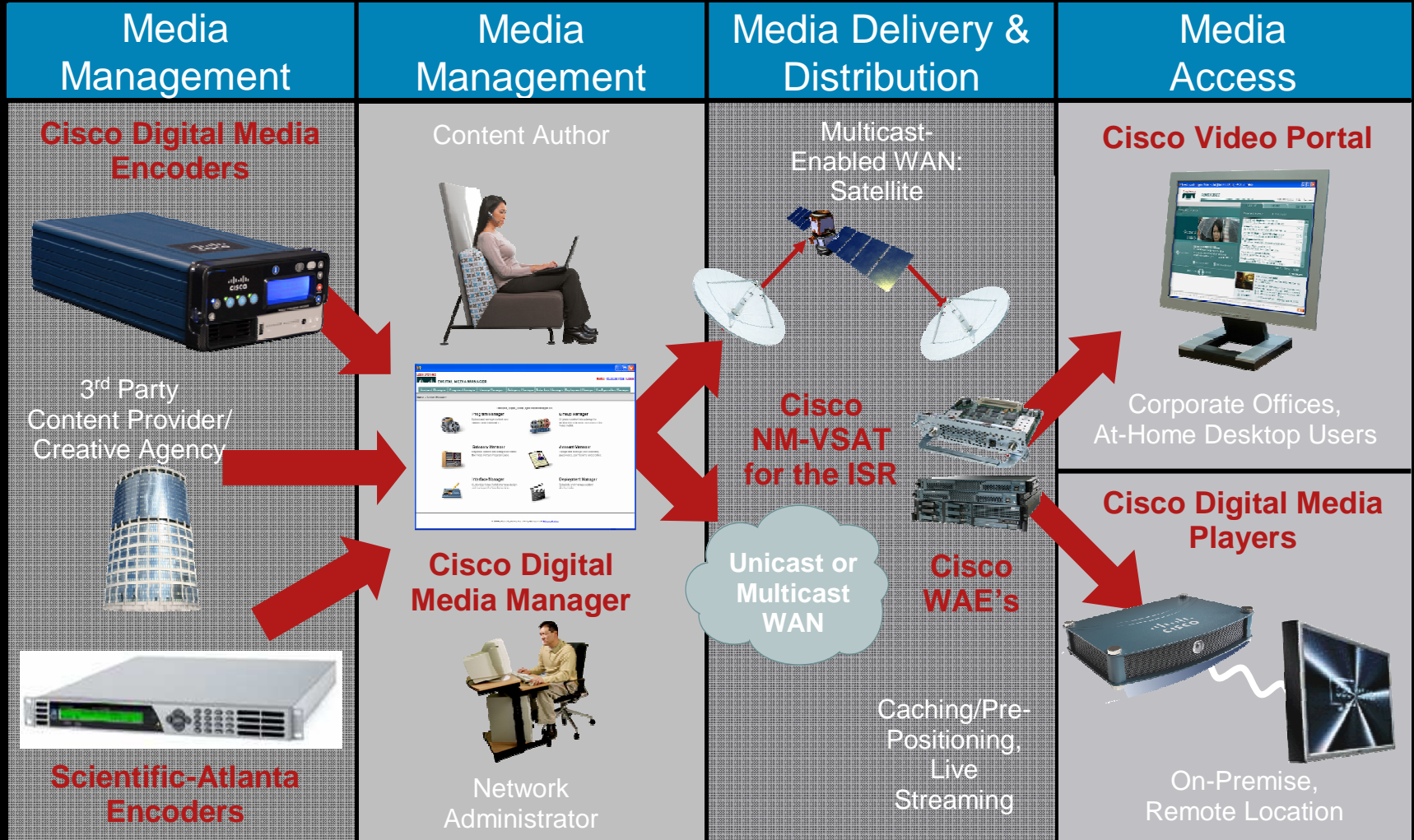
Application Delivery

Mobility

Unified Communications

Security / Identity

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“The branch represents the significant opportunity for changing the customer experience”

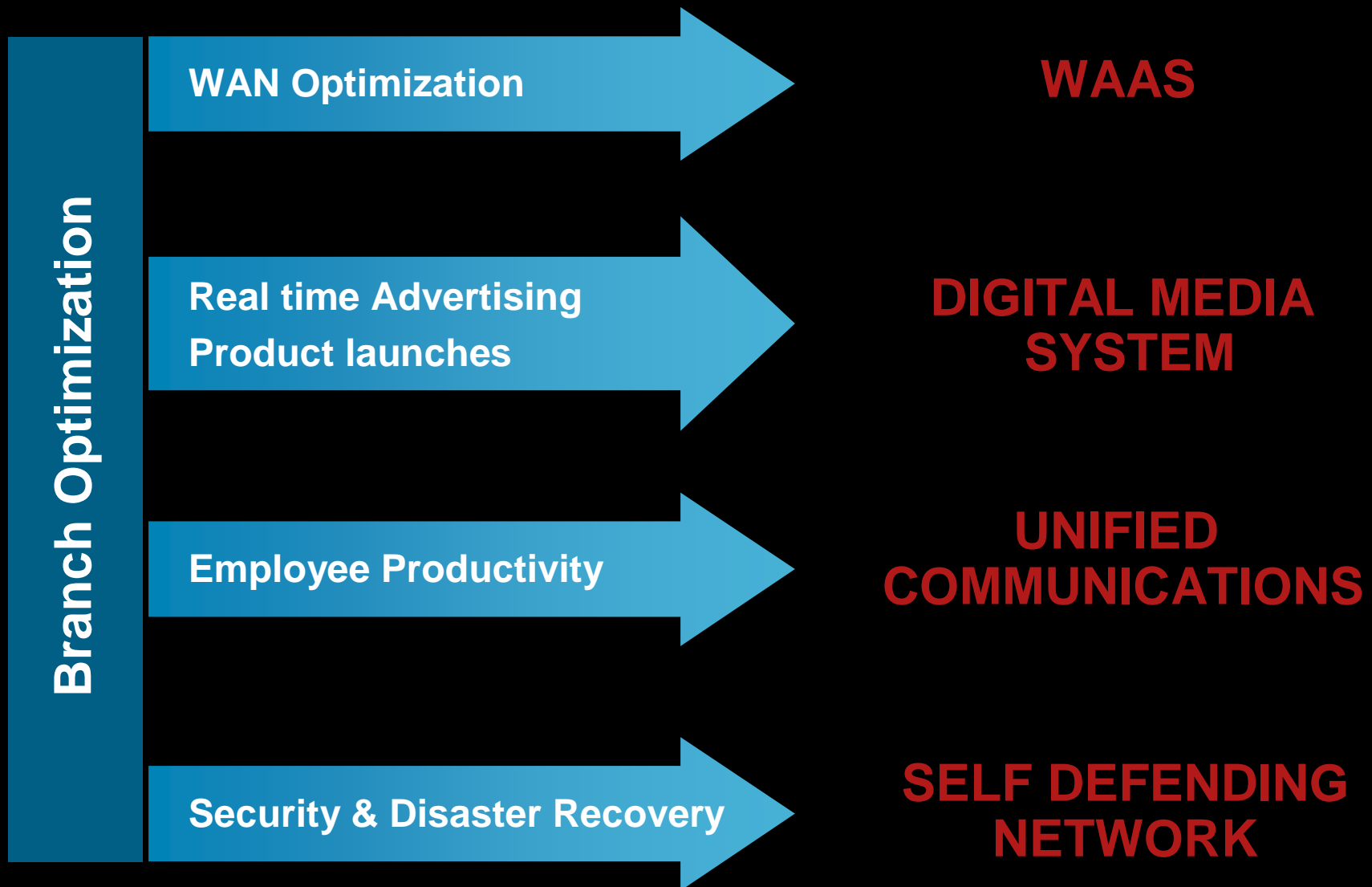
From this.....



to this.....

Combining Sales and Operational Improvements

CISCO Technologies to remember



The Platform for Application Integration

ERP

CRM

Decision Support

Queue Management

Digital Media

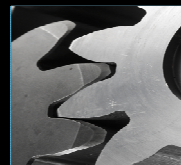
Collaboration Tools

- Converged Network Platform for Data, Voice and Video
- Intelligent Network Embedded Services to support banking applications
- Set of APIs that allow custom integration of applications
- World class Cisco Advanced Services & accredited Cisco Partner support

Converged Network Platform



Rich set of APIs



Intelligent Network Services



Cisco Advanced Services & Partners



**Supporting Operational Efficiency, Customer Experience
Regulatory Compliance and Commercial Effectiveness**

