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The bridge to possible

Leveraging an Architecture Framework to drive Business Outcomes

Kevin Wetzel, Delivery Architect
Arul Jagadeesan, Delivery Architect
BRKXAR-1011



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Introduction



Kevin Wetzel :

is a Delivery Architect within Cisco's Customer Experience (CX) organization focused on driving customer business value leveraging architecture methodology to align IT initiatives with Business Outcomes. He is a result driven IT professional with vast experience in innovation, convergence, operations, engineering, and security. He has 25+ years of experience as an Enterprise customer (Airlines, Manufacturing & Healthcare) and 8 years with Cisco CX (Finance, Airlines, Manufacturing & Healthcare). He's delivered in roles of engineering, architecture and management, over all infrastructure verticals (network, security, compute, storage, voice/collaboration, contact center and desktop). He supports project initiatives with solid financial expectations utilizing TCO and ROI information created through business and technology optimization.



Arul Jagadeesan :

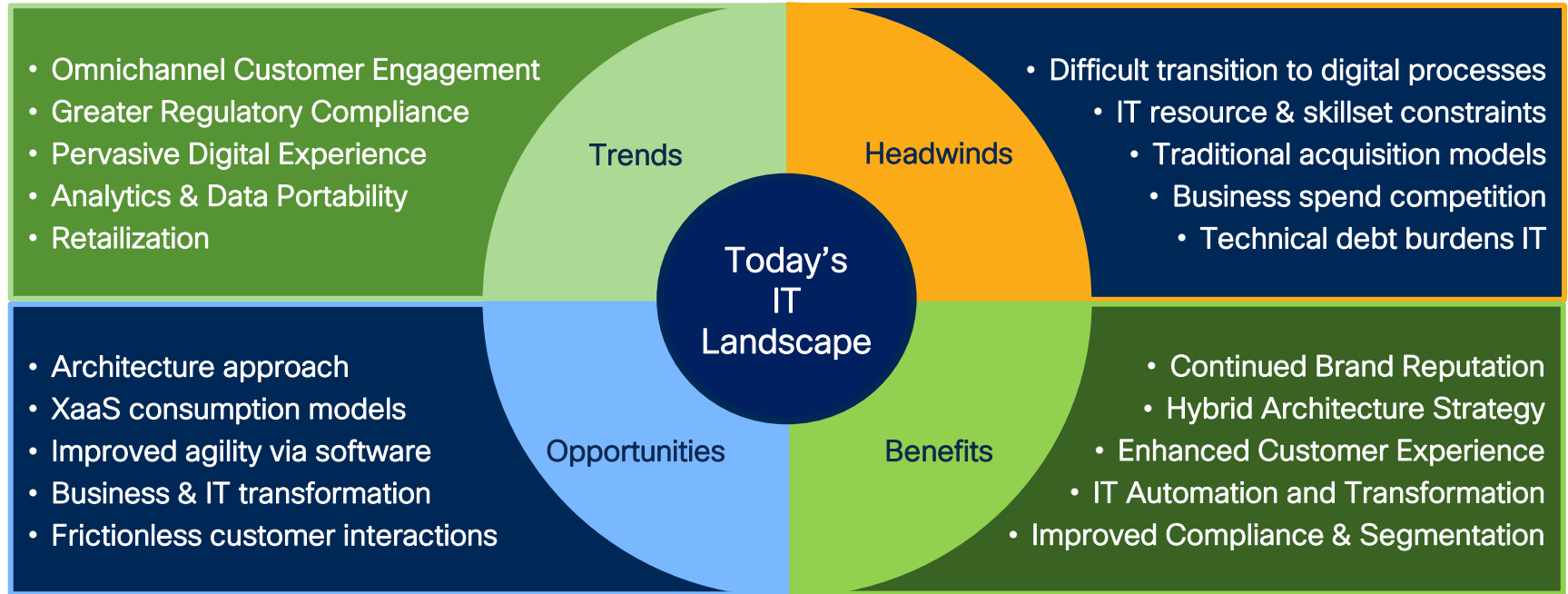
- Trusted advisor with 20+ years of experience in IT field
- Led numerous network transformations, M&A and Divestitures
- Cisco and Cloud Certified
- Enjoys playing Chess, Tennis & Basketball
- Active in Boys & Girls Scouts and Community Services



Agenda

- Introduction
- Customer Use Cases
- Benefits to an Architecture Approach
- Architecture Framework Overview
- Aligning to “Business Outcomes”
- Conclusion

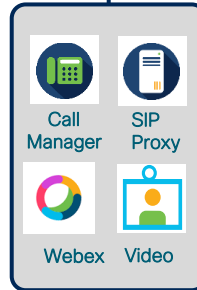
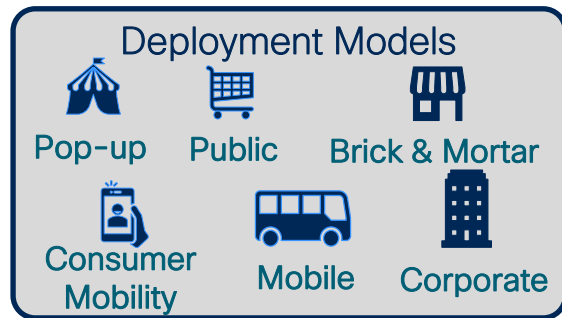
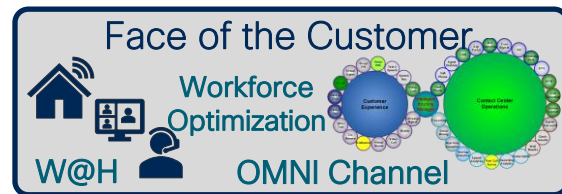
Architecture Viewpoint





Digital Landscape

Reference Architecture



Communication Methods



- Protection from Advanced Threats on endpoints
- Protection from compromised credentials
- Validation of trusted endpoints
- User and Device proxy support
- Media quality across different bandwidths
- User authentication with SSO, OAuth, MFA
- Seamless and BYOD wireless capability
- Realtime collaboration via Webex

Customer Experiences

- Mobile
- Virtualization
- Improved communication
- Data Portability
- Location Guidance / Tracking
- Greater Data / Experience Correlation

Application Security Stack



Innovation Foundation

- Zero touch deployment, wireless assurance and SW image management via DNA Center
- Service Catalog delivery via ServiceNow integration
- Secure cloud access via Secure Cloud Analytics and proxy cloud instances
- Secure Cloud Analytics + ISE integration to obtain critical network visibility and better control access to data and resources



Automation



Customer Use-cases

Use Case #1: Nurse Call (Clinical communications and collaboration)

Key Business Imperatives

Clinical Communications, Patient Safety and Experience

Business Background

- Lifecycle issues with clinical wireless system impacting availability and patient care

Business Challenges

- Existing wireless infrastructure was designed for convenience
- Network infrastructure was at or near end-of-life

Cisco Approach and Solution

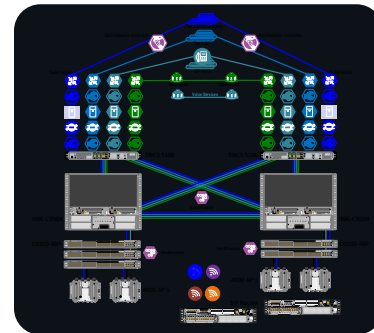
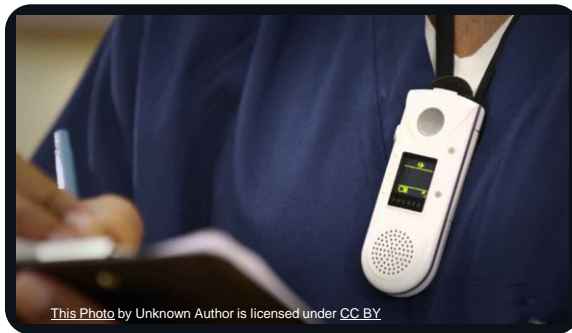
- Outcomes based Architecture Approach
- Correlation of business capabilities were defined
- Total Cost of Ownership analysis developed
- Four-year Hospital Refresh program funded

Capabilities:

- Security redesign (ISE)
- Bluetooth signaling & location services
- (WLAN) 9800 infrastructure
- Deployment Automation (PNP) CAT 9K
- Analytics (DNAC)

IT Benefits

- Business support of full infrastructure refresh optimizes deployment costs and resource commitments



Business Benefits

- Significant improvement in clinical staff communications
- Reduction in service and patient safety risk
- Cost containment benefits from TCO analysis
- Reduction in business interruptions through “full Stack” infrastructure refresh

Use Case #2: Guest Experience (Analytics & Insights)

Key Business Imperatives

Enhance guest experience and satisfaction.

Business Background

- Challenges around inconsistent service quality

Business Challenges

- Lack of visibility into guest preferences and behavior.
- Concerns about data security and privacy compliance.

Cisco Approach and Solution

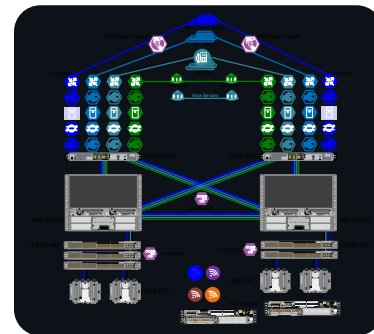
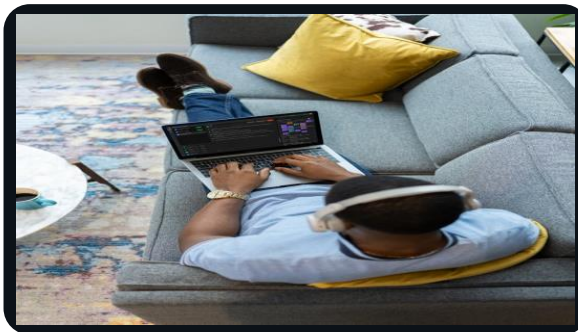
- Outcomes based Architecture Approach
- Correlation of business capabilities were defined
- Total Cost of Ownership analysis developed
- 3-Year Network Transformation program funded

Capabilities:

- Data driven insights
- Security measures and compliance
- Software as a Service (SaaS)
- Guest Data Analysis

IT Benefits

- Analytics and machine learning capabilities for real-time insights.



Business Benefits

- Enhanced guest experience
- Increased revenue through personalized offers
- Enhanced data security and compliance

Benefits to an Architecture Approach

Technology Approach

Silo'ed Perspective

Wrong Technology
Lost Opportunity

Lifecycle Management

Prolonged Service Delivery
Shadow IT

Process Antiquate

Increased Resource Burden
Increased Complexity

Skill-Set Gaps

Service Degradation
Efficiency Loss

Use Case #1 – Nurse Call

- Direct Wireless Dependency
- Infrastructure largely at LDoS
- SME selected/tested 2 Solutions
- Both Solution met current needs

Solution A



\$100

Solution B



\$60

- SME was recommending Solution B based upon acquisition costs

Architecture “Outcomes” Approach

Service Discussion

Breaks Technology Silos
Focus on Capabilities

Focus Business Outcomes

Greater Capability Def
Transformational

Extends Beyond Technology

People – (Constraints/Skills)
Process – (Efficiencies/Auto)

Increased Transparency

Identifies Service Gaps
Improved TCO Definition

Use Case #1 – Nurse Call

- Engaged EA Team
- Identified Add'l Business Outcomes
- Expanded Wireless Capability Req's

Solution A



\$100

- All Req Capabilities Supported

Solution B



\$60

- 70% of Capabilities Supported
- Add'l Prods Req
- Solution B created added complexity
- Increased acquisition costs & TCO

\$10M TCO Savings over Solution B

Use Case # 1 Outcomes

Technology Approach

PROs

- Testing of Current state successful with both Solutions
- Tested with existing tools

CONs

- Only acquisition costs were understood
- Total Cost of Ownership was mis-understood

Architecture Approach

PROs

- Increased business awareness
- Included full technology stack
- Identified technology gaps
- Cost awareness / avoidance

CONs

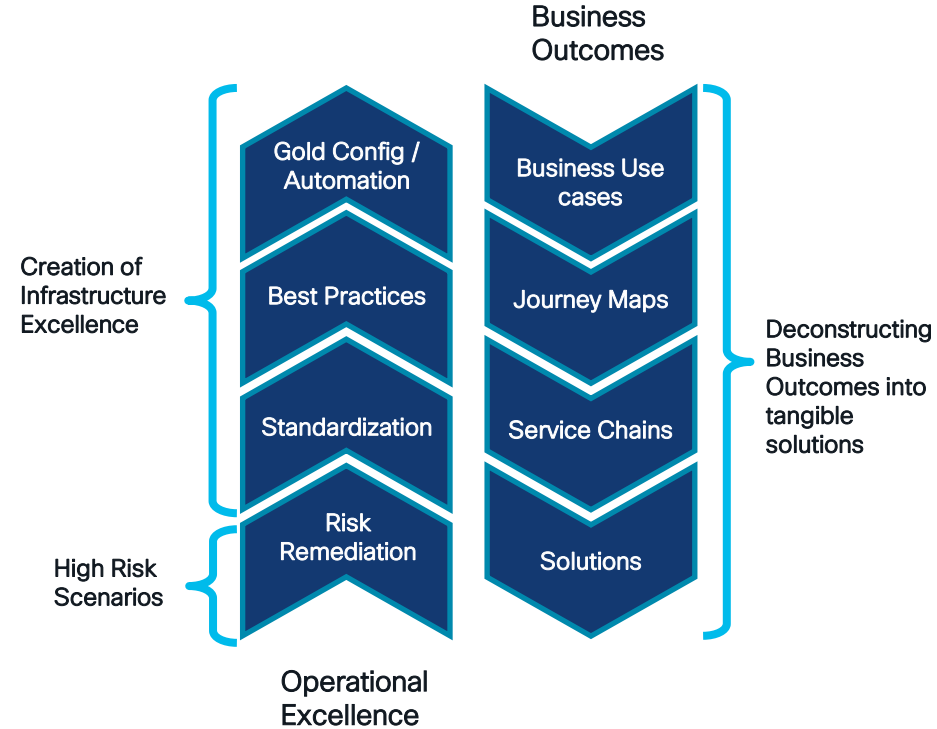
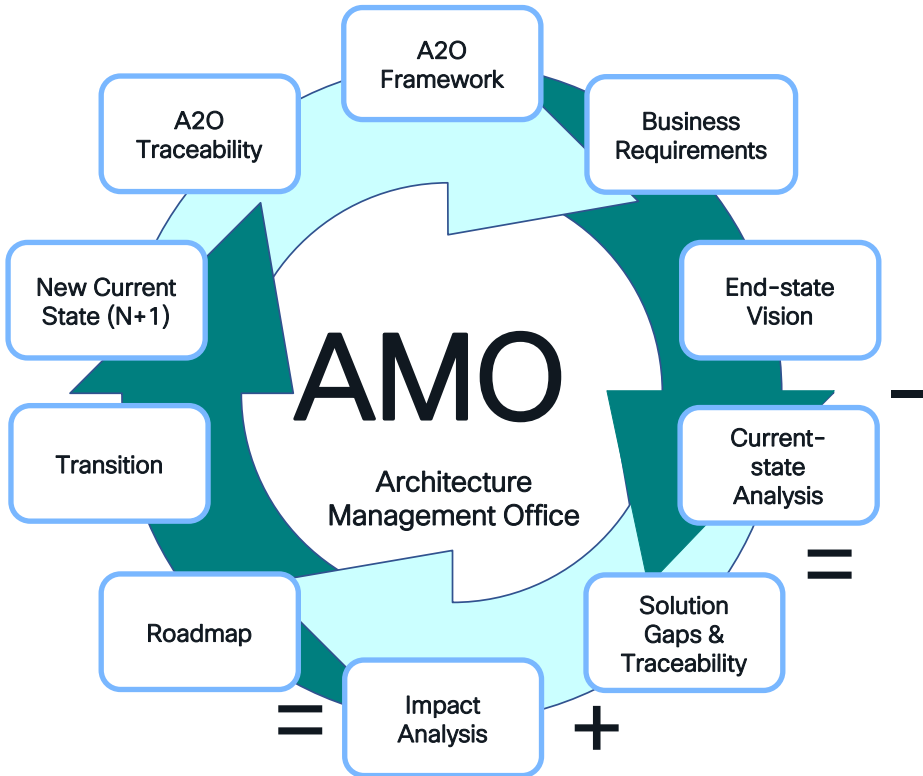
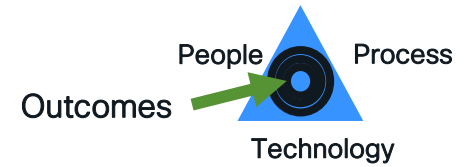
- Added time to complete

Benefits Achieved

- Business Sponsorship
- Service Chain identified other technology LDoS issues
- Technology Gaps were proactively filled
- Executive and Board support for a Hospital Refresh Program
- Security Improvements
- Funding significantly beyond what LCM approach could attain
- Increased stability of business applications
- **Reduction of business interruptions**

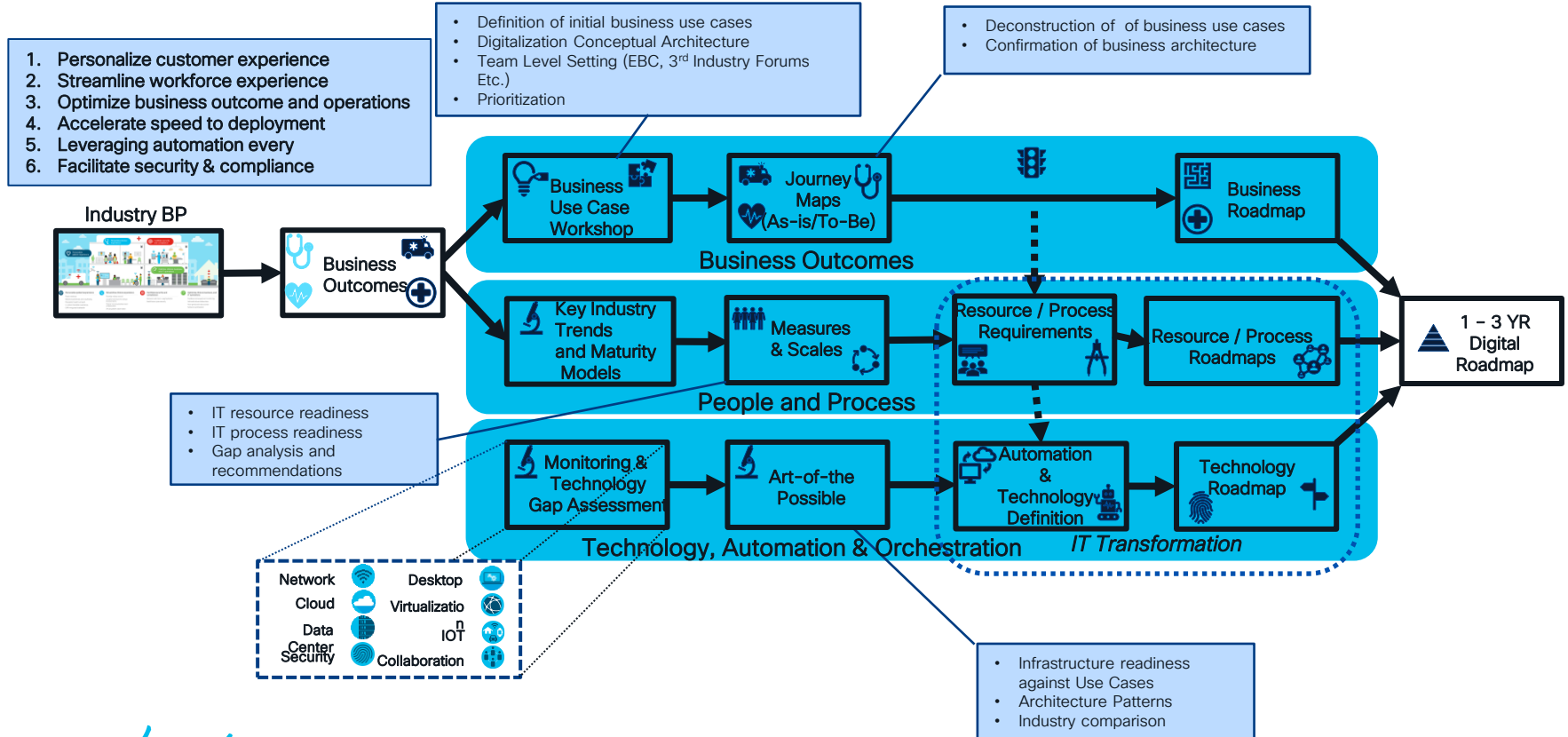
Architecture Framework Overview

Architecture Overview



Aligning to “Business Outcomes”

Aligning to Business Outcomes



Deconstructing Business Outcomes

Deconstructing
Business
Outcomes into
Technical
Solutions

Business Outcomes

Business Use Cases

Journey Maps

Service Chains

- ☐ Cost Savings
- ☐ Digitalization / Innovation
- ☐ Consumer Experience

- ☐ Operational Process
- ☐ Delivery of a Service
- ☐ A Communication Interaction

- ☐ Identifies Recipient/Consumer
- ☐ Documents each process step
- ☐ Current-state & Proposed-state

- ☐ Technical correlation of the journey map
- ☐ Spans across technology domains
- ☐ Identifies Total Cost of Ownership

Tying Back to Nurse Call Use-case

Deconstructing the use-case



- ☐ Strategic Outcome (Patient Safety/Experience)
- ☐ Strategic Outcome (Operational Efficiencies)
- ☐ Lifecycle Refresh – Spectrum phones
- ☐ Lifecycle Refresh – Network Infrastructure

- ☐ “Single Tap” of badge to engage communications
- ☐ Ability to take calls inbound from Doctors/Specialist
- ☐ Verbal commands
- ☐ Other use-cases

- ☐ Nurse - is the persona
- ☐ Workflow mapped Current State (Spectrum phones)
- ☐ Documented issues, likes, dislikes, wish-lists
- ☐ Workflow mapped End-state Vision (Vocera)

- ☐ Documented capabilities required at each workflow step
- ☐ Researched technology options to support capabilities
- ☐ Created technology service chain required for capabilities
- ☐ Compared required technology service chain to existing

Value of Understanding Service Chains

Solution Design and Support

- Complete understanding of how service is delivered
- Drives creation of validation steps for solution updates
- Foundation for troubleshooting to reduce support

Service Experience (Availability/Performance)

- Identify Key Performance Indicators
- Thresholds and Alerts
- Dashboards

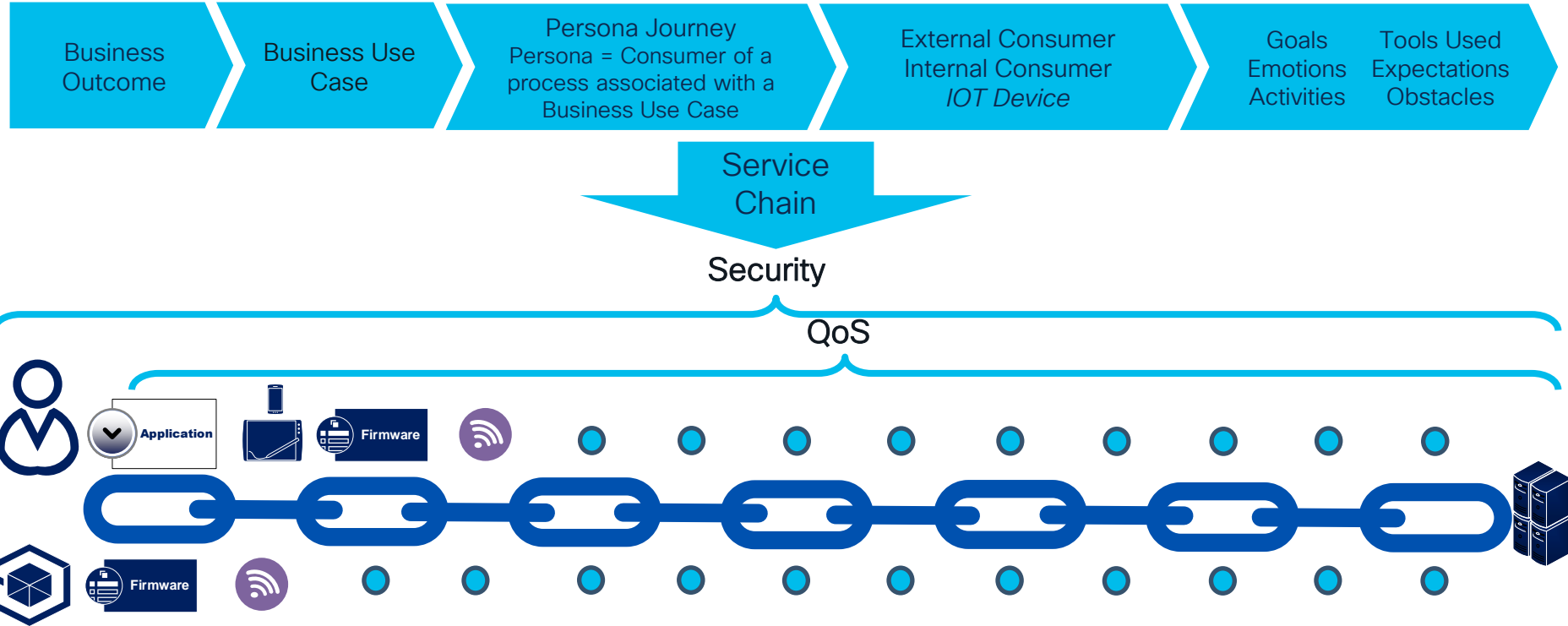
Delivering A Consumer Experience

- Generally multiple service chains are required (layered)
- Core service chains are commonly re-utilized



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Creating a Service Chain



Service Chain Illustrations

Unique to business use-case, with common layers

Common, possibly Enterprise-wide



- **Application (Vocera use-case):** (Badge, Application, Wireless Antenna, Firmware, WLAN, LAN, Switch, Router, FW, SDWAN, Firewall, DC Router, DC Switch, NIC, VM, Application, Phone System, SBC, PSTN, etc.)



- **Profile (User) Auth:** (Badge, Application, Wireless Antenna, Firmware, WLAN, LAN, Switch, Router, FW, SDWAN, Firewall, DC Router, DC Switch, NIC, VM, Application (AD, SSO, Etc.))



- **Posturing:** (Device, Application, WLAN, LAN, Switch, Router, FW, SDWAN, Firewall, DC Router, DC Switch, NIC, VM, Application/s)



- **Device Authentication:** (Firmware (Certificate), WLAN, LAN, Switch, Router, FW, SDWAN, Firewall, DC Router, DC Switch, NIC, VM, Application/s)

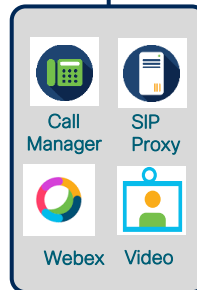
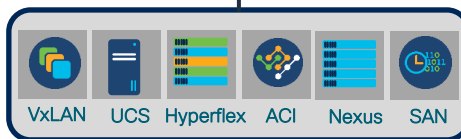
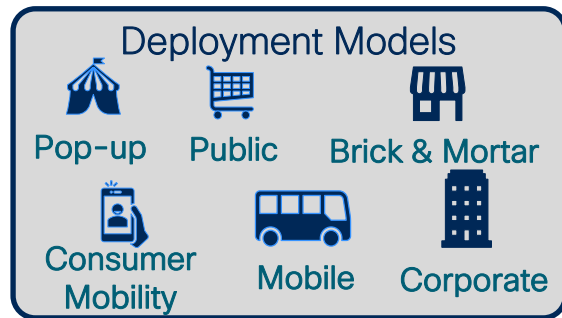
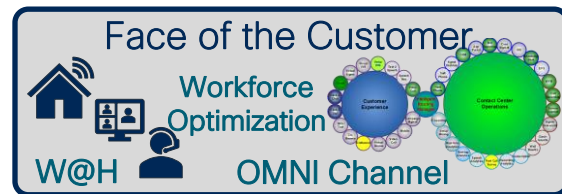


- **Network:** (Network Devices (Switches, Routers, Access Points, WLAN Controllers, Firewalls), Virtual Networks (WLAN, VLAN, SDA-VN), Protocols (IP, TCP, Boot-p, DHCP), DHCP Application (InfoBlox))



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Automation



Conclusion



“Value” of an Architecture Approach

What value can IT gain from an Architecture Approach?

- Business Sponsorship
- Service Chain Clarity
- TCO Clarity
- Increased funding for a full stack implementation
- Strengthened Business Relationships

Why is it valuable to understand Service Chains?

- Complete understanding of how service is delivered
- Drives creation of validation steps for solution updates
- Foundation for troubleshooting to reduce support



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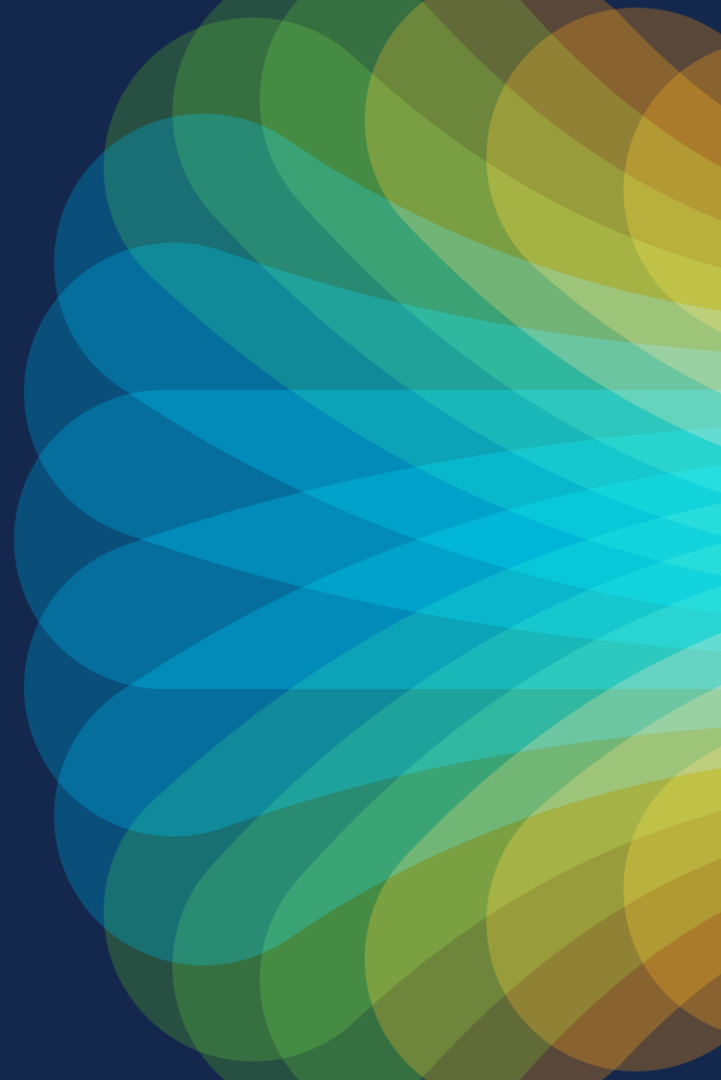


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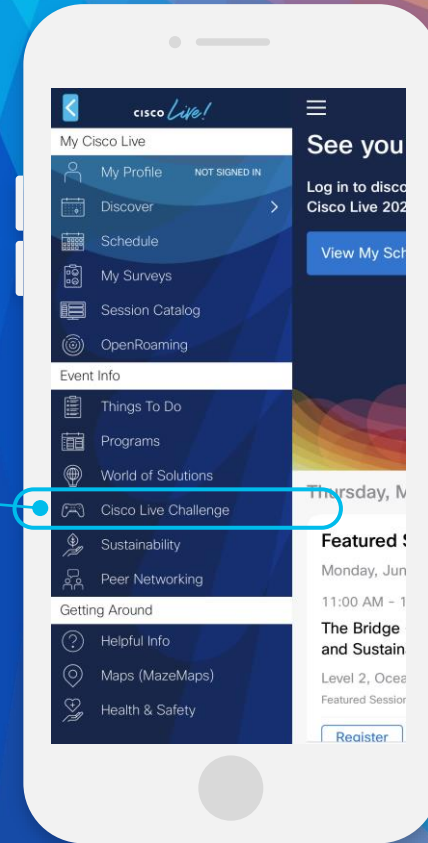
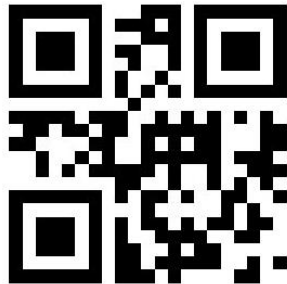


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