Methodology into Enterprise Architecture

From Conception to Action and Why it isn't so different from the Big Dig

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BRKARC-2038

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Agenda

- Introduction

- Enterprise Architecture Definitions

- Translating to Outcomes

- Methodology

- Example

- Conclusion

- **Cisco Role:** Account Manager, Global Enterprise Segment

- **Segments:** Healthcare, Consulting

- **Architecture:** Ideas into ACTION

Goals of this Session

- Understand Enterprise Architecture elements and common definitions

- Develop or redesign your methodology

- Where to start

- Actionable ideas

Boston, Massachusetts
City 'Network'

Traditional Architecture

- Conflicting Processes
- Scale Problems
- Information Silos

We can't solve problems by using the same kind of thinking we used when we created them ~ Albert Einstein

Today's Landscape

Private and Public Clouds

Security

SaaS

Distributed Teams

Users

Devices

OT

Users

- High Availability
- Desire for customization
- Compliance and Security

Real-Time Information

- Distributed Data
- Self- Service
- Speed of Deployment

Enterprise

- Work from Anywhere
- Flexible capacity
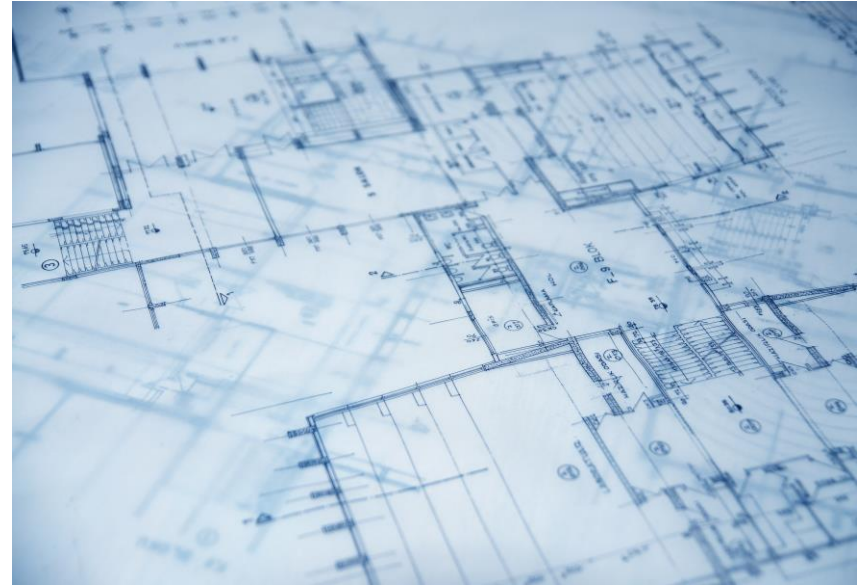- Ever expanding footprint: Cloud Apps, SAAS, OT

Important Questions

- What are the main challenges in your role today and over the next five years?

- What are your company's top priorities today and over the next five years?

- How can you drive a common direction?

- How do you combat the complexity in today's world?

Today's Architecture

Requires 'This'

What is Architecture?

What can it deliver?

Defining Architecture

- **How** do you define the phrase 'architecture'?

- **Who** defines your architecture?

- If I asked another member of your organization, **would they define architecture the same way you did?**

'Designing for IT Ops, QA, Developers, Security'

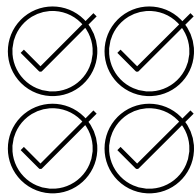'Need to be able to speak with different teams and communicate the same thing'

'The Network'

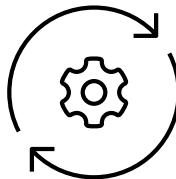# Enterprise Architecture Outcomes

IT Keep the Lights On → **Network** as the Business Enabler

Reduce Complexity

Simplify Deployments
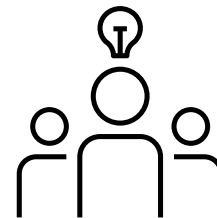
Being Perceived as Service

Customer Benefits

1 Respond to New Market Opportunities

2 Enable Quality

3 Prioritization Framework

4 Justify Investments

Architecture Frameworks for Consideration

- The Zachman Framework for Enterprise Architecture

- Federal Enterprise Architecture Framework (FEAF)

- Gartner

- The Open Group– TOGAF Framework

(and more...)

Enterprise Architecture

Definition

Organizing logic for business processes and IT infrastructure reflecting the integration and standardization requirements of the company's operating model

Foundational Elements
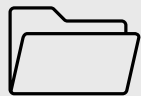
Processes

Data
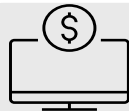
Technologies

Customer Interfaces

Underlays

Business Process Architecture

Data or Information Architecture

Applications Architecture

Technology Architecture

People

Process

Technology

Operations and Change Management

Methodology

Assessing Enterprise Architecture

| Organizational Alignment | Business Value Model | As-Is Architecture | Roadmap and Migration Plan | To-Be Architecture | Goverance |

Underlays

Business Process Architecture

Data or Information Architecture

Applications Architecture

Technology Architecture
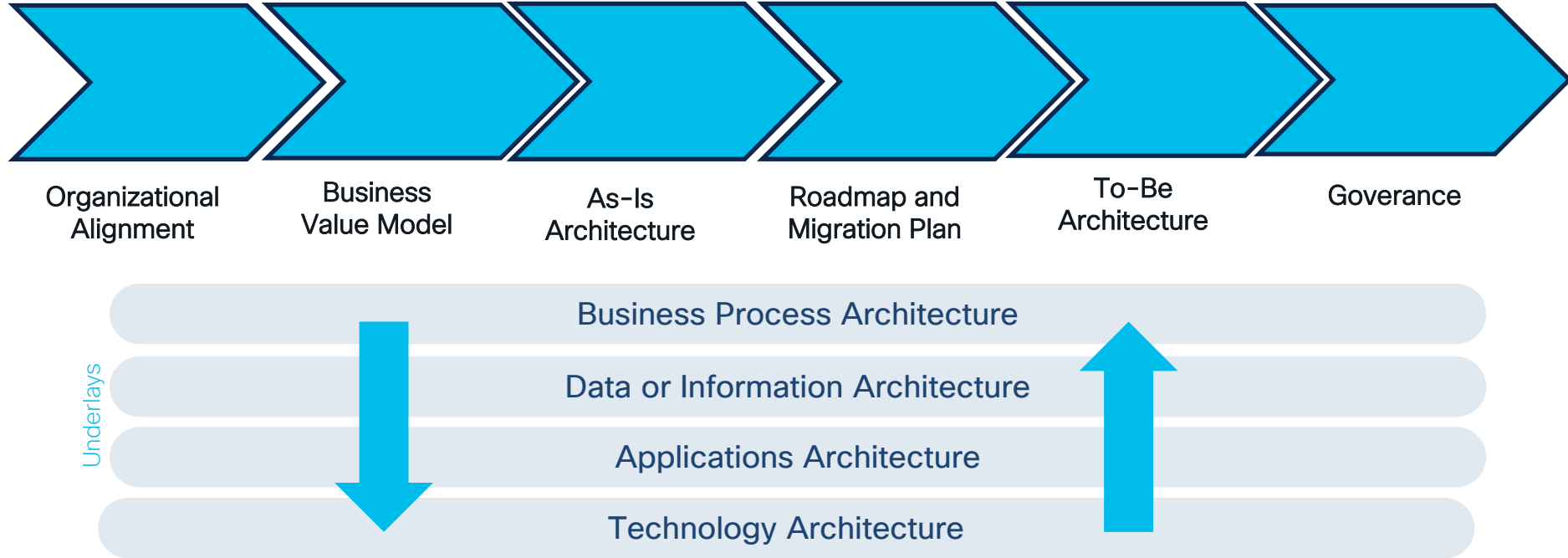
Enterprise Architecture Methodology

Organizational Alignment

Business Value Model

Kevin Wetzel
BRKARC-2037

- Align Stakeholders
- Define the Data
- Define Operating Model
- Create Framework

IT Engagement & Governance Model

- People: Create Artifacts
- Technology: Common Tooling
- Process: Create a Common Operating Language

Governance

- Performance Management
- Alignment
- Value Delivery
- Risk Management
- Resource Management
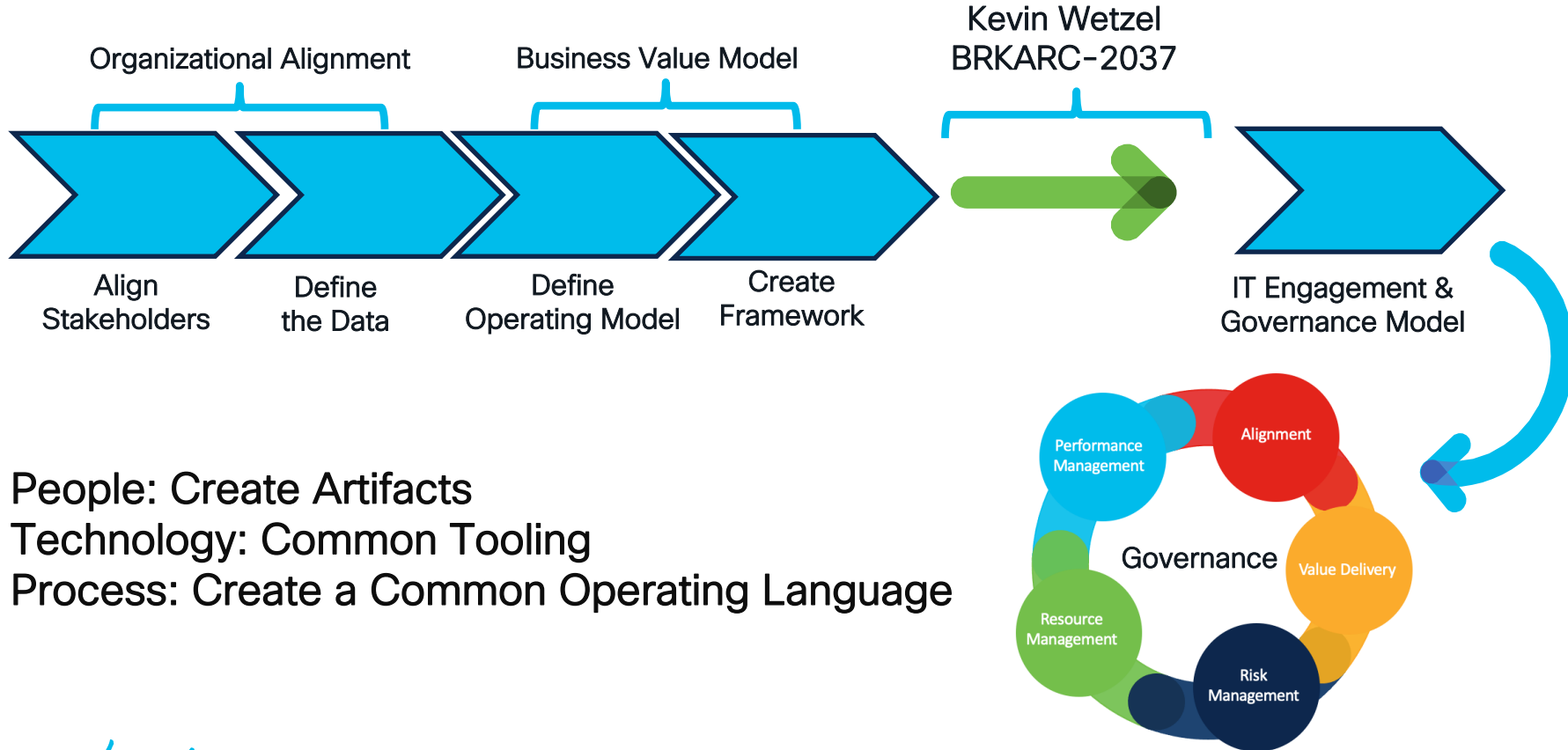
Get Started

People
Define Stakeholders

Organizational Alignment

Technology
Align Data

Process
Document Operating Model
Create Core Framework

Business Value Model

Enterprise Architecture Stakeholders
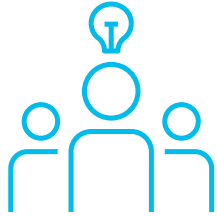
IT Steering Committee	Architects	Finance and Purchasing	Enterprise-Wide Process Owners
• AMO • Vendor Agnostic Groups • Senior Management	• Business Architects • Technology Architects • Enterprise Architects	• CFO • Procurement • Supplier Relations	• Chief of _____ • User Groups • Business Unit Leaders for Local Systems

Enterprise Architecture Data

CMDB

Repository that stores information about all hardware and software assets in your environment

Attributes

Incident Management, Escalation Engine, Reports Engine, Service Level Agreements

Hardware Inventory

Software Inventory

Contract Management

Network Discovery

Administrative Data

User Data
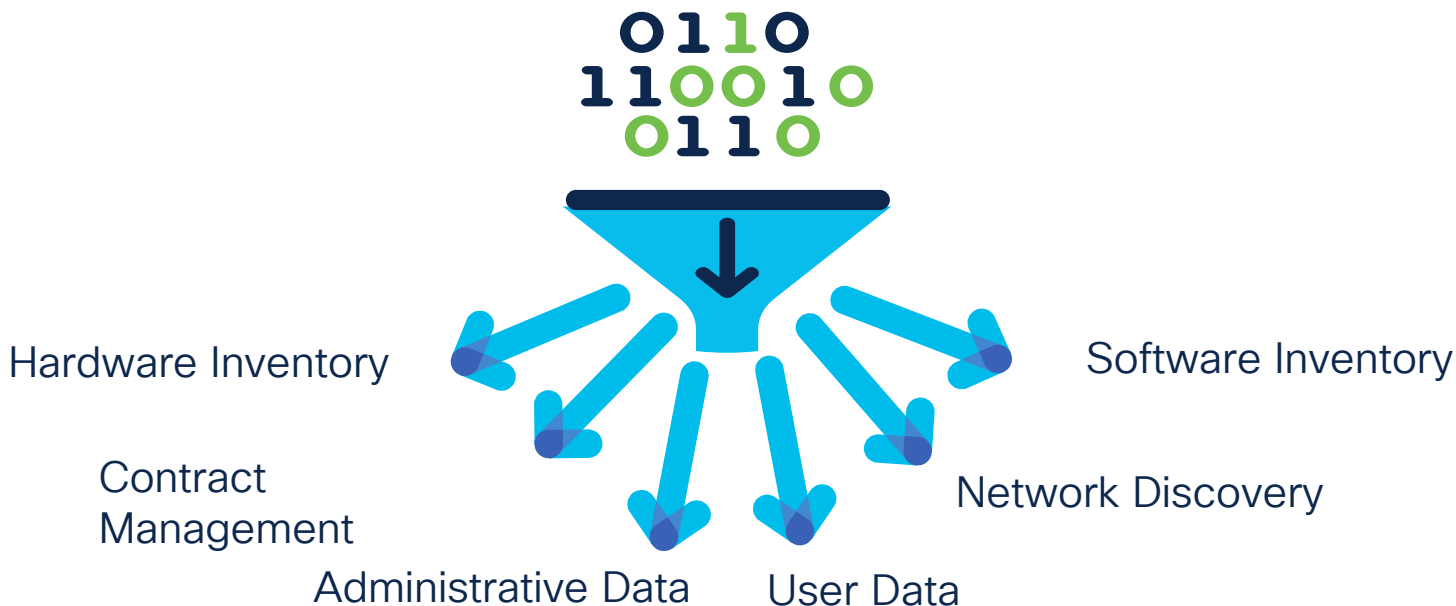
Business Operating Model for EA

Standardization and Integration

- To what extent does one business success rely on availability, accuracy and timeliness of others data?
- To what extent does the company benefit from having business units run operations the same way?

Unification

- Centralized management and process design
- Centrally mandated data bases
- Centralized IT organization

Coordination

- High integration with little standardization of processes
- Data is shared across the portfolio
- Business units release individual innovation

Replication

- Autonomy to business units
- Run operations in standardized fashion
- Growth through Acquisitions

Diversification

- Independence with Shared Services
- Few Common Customers or Business Practices
- Shared IT services for economies of scale

Source: MIT–CISR Framework   #CiscoLive   BRKARC-2038

Core Framework

Company Mission	Organizational Guiding Mission	Business Goals	Business Differentiators

Key Customers		Key Linking or Automation Technology	Middleware
Stakeholders		Shared Data	Business Information
		Core Business Processes	Business Applications
		Core Technology Stack	Network Systems / Network Services / Applications / Security Services / Workloads
			Technical Infrastructure

Desired Customer Experience	Future State

Example: The "General Hospital"

The 'General Hospital'

- 10 Hospital System
- Multiple Specialties
- Individual IT and OT Networks
- Limited Resources

Stakeholders

- CIO/CIDO
- Network Engineers
- Developers
- Patients and Providers
- Cloud Architects
- PMO
- Security

Operating Model

[Unification]

- Organizational Alignment
- Centralized IT Systems
- Centralized Data Management

Enterprise Architecture Data
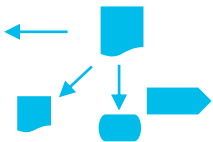
- Network Design
- Dependencies for patient care
- Home Grown Patient Apps
- Lifecycle Management of IT
- OT Network Design

Core Framework

- Patient Centric
- Operational Capabilities
- Management Tools

Core Framework: The General Hospital

Company Mission	'Provide exceptional care through multiple channels'

Business Goals	Digital Transformation	Operational Efficiency	Mission Success	Cybersecurity Modernization

Key Customers

Patient	Provider
Research	CXO
Staff	Developers

Key Linking or Automation Technology	Splunk	Terraform	Ansible

Shared Data	CRM Records	Sensors	ERP	Cloud Data Base

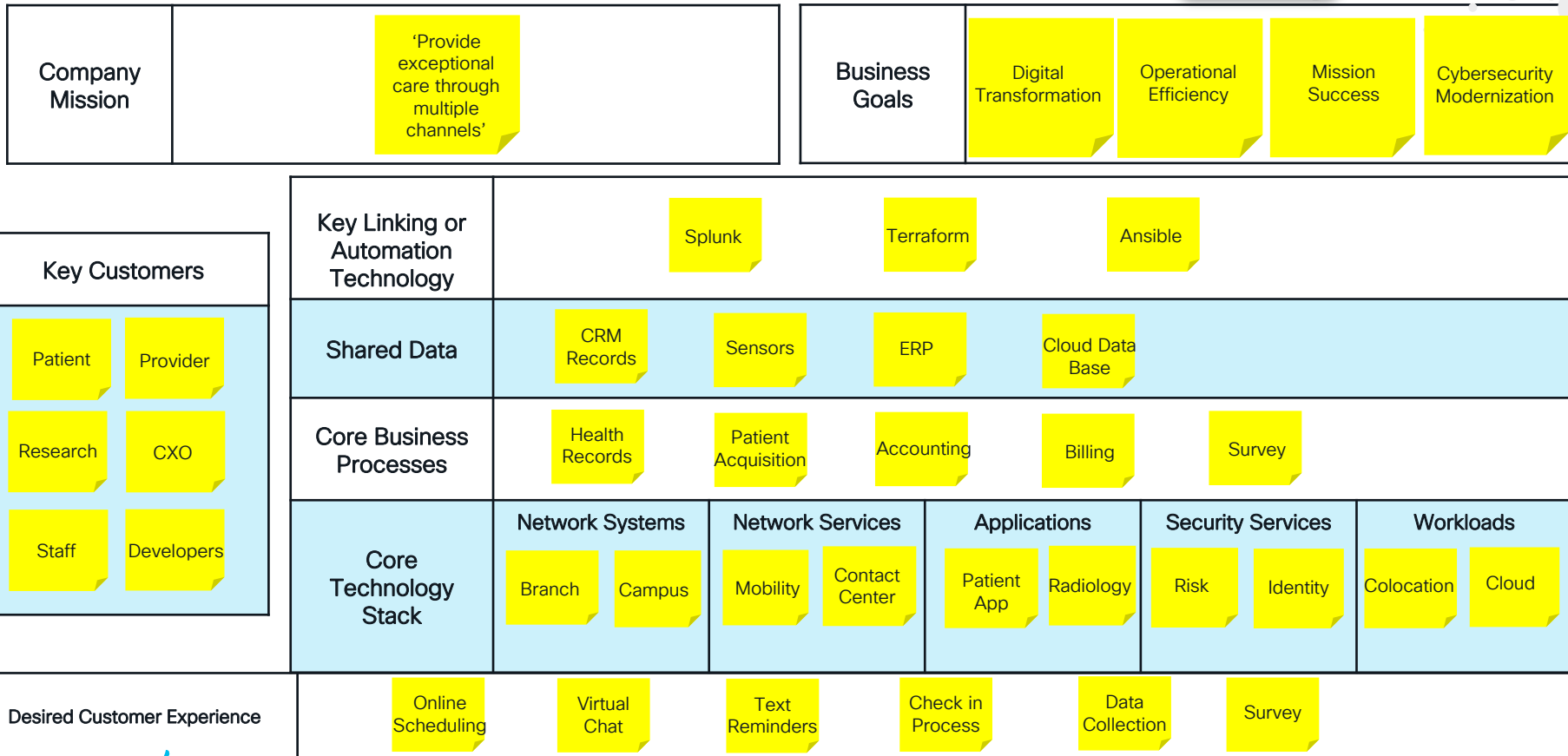| Core Business Processes	Health Records	Patient Acquisition	Accounting	Billing	Survey

Core Technology Stack	Network Systems		Network Services		Applications		Security Services		Workloads	
	Branch	Campus	Mobility	Contact Center	Patient App	Radiology	Risk	Identity	Colocation	Cloud

Desired Customer Experience	Online Scheduling	Virtual Chat	Text Reminders	Check in Process	Data Collection	Survey

Digital Mission Roadmap (Example)

Immediate (Now)	Short Term (6 – 12 Months)	Medium Term (1 – 2 Years)	Long Term (3 – 5 Years)
3. Network Access Control	2. Short Term Analog to Digital Migration Plan (CTP)	6. Real Time Data, Application, and Network Analytics	1. Long Term Analog to Digital Migration Plan
4. Next Generation Collaboration Services	5. Software Defined Data Center (SDDC)	7. Software Defined LAN (SD-LAN)	9. Software Defined Service Oriented Architecture
16. Cloud Governance Policies / Plan	12. Enterprise Remote Access Architecture	8. Next Generation Multicast Architecture	10. Zero Trust Architecture
17. New Capability Enablement Plan	14. Identity Management Solution	11. Cross Domain Architecture	15. Cloud Security Architecture
18. Cloud Application Assessment and Migration Plan		13. Automation Architecture and Frameworks	

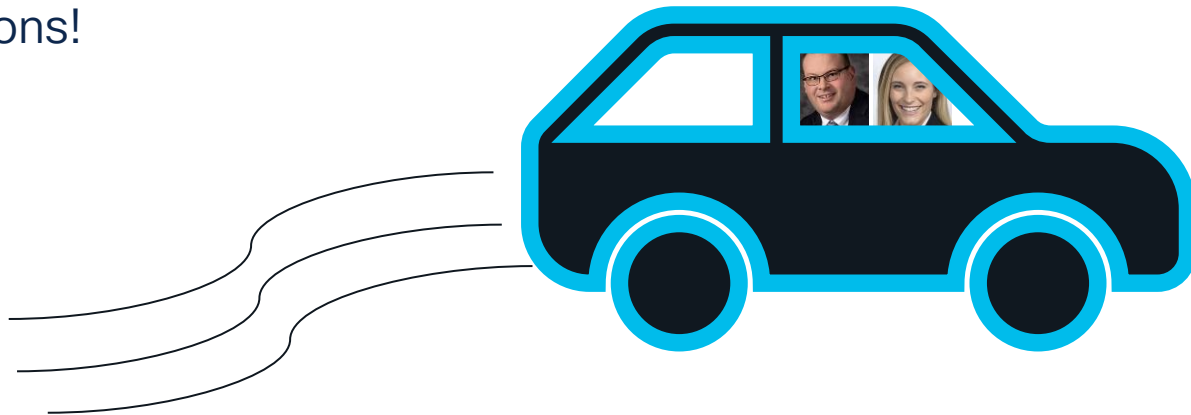🟢 Digital Transformation   🔵 Operational Efficiency   🟠 Mission Success   🔴 Cyber Security Modernization

What's Next?

Architecture is not defined overnight

- Document your Operating Model

- Encourage Architecture Reviews and use your resources

- Ask the Right Questions!

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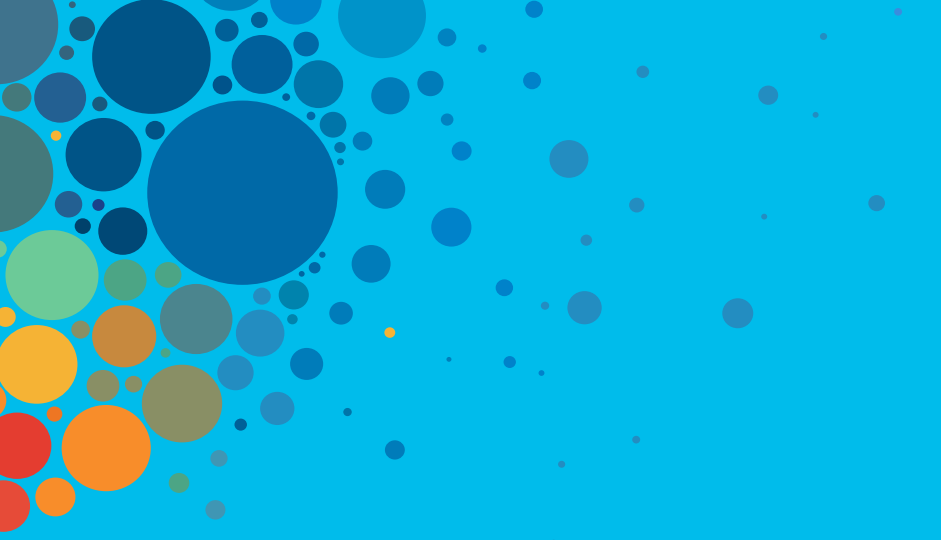
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