



Accelerating Data Center Virtualization with Cisco Services



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Data Center Services Capabilities



Architecture

End to End Architecture
VDI
ROI Models
Business Case



Application

Application Discovery
Infrastructure Mapping
Data Base Migration
Application Migration
Application Visibility



Operations & Management

Organization Design
ITIL and IT Process
Tools Architecture
Service Level Mngt



Data Center Optimization

Architecture Reviews
Risk Analysis
Availability
Performance



Storage Access

Disaster Recovery
SAN Migration
Storage Encryption
Multi Protocol SAN



Compute

Server Virtualization
P2V, V2V Migration
Virtual Machine Mgt



Networking

L2-L3 Design
L4-L7 Design
Branch Consolidation
WAN Optimization

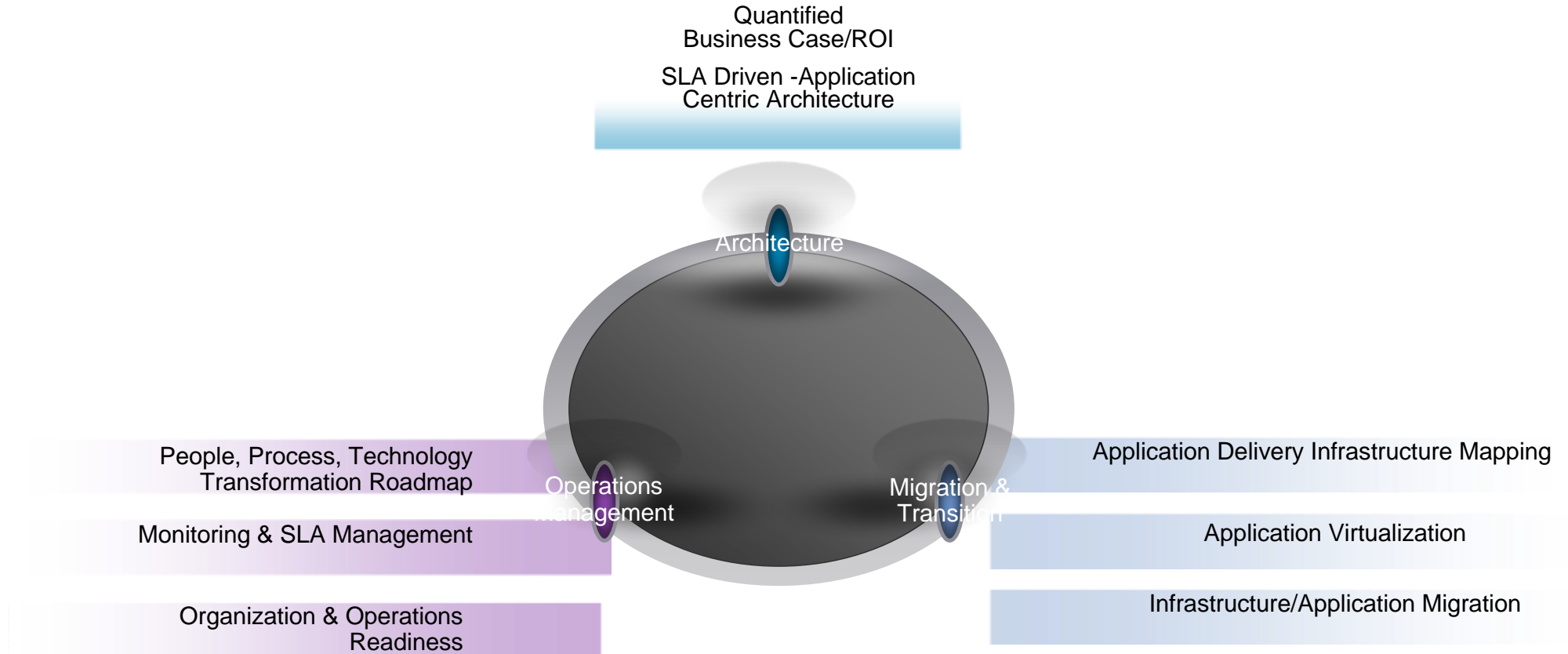


Green Data Center

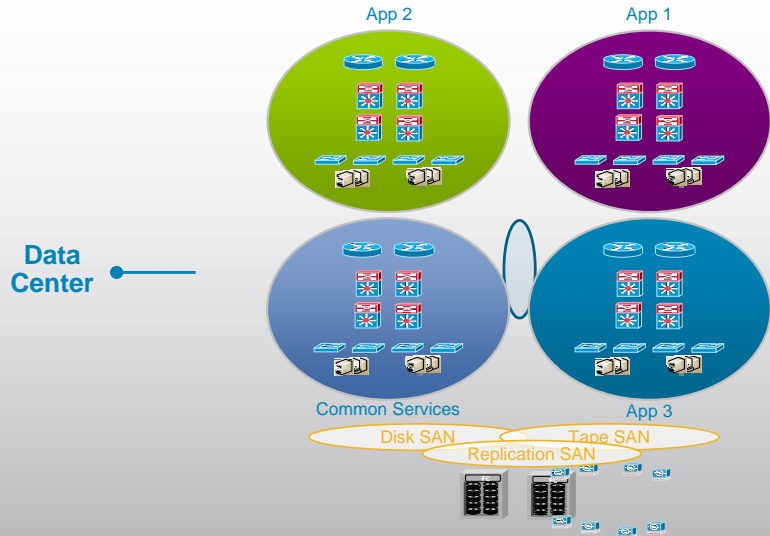
CFD Modeling
Energy Efficiency
Facilities Design

Virtualization Adoption Life Cycle

Data Center Services Enabling Steps to Success

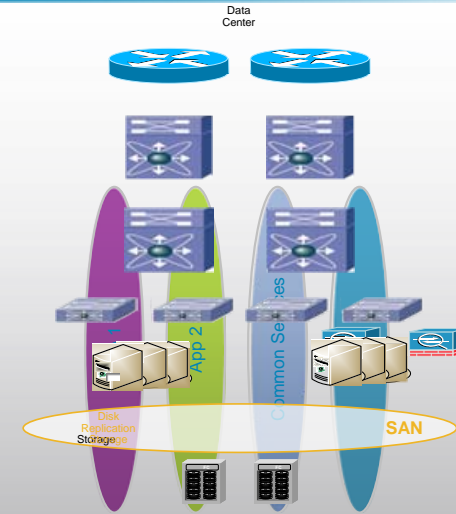


Current State Architecture



- **Physically Separated** Controlled Domain Architecture
- **Underutilized, redundant**, Infrastructure Components (Storage, Compute, Network)
- **Fractured/disparate** LOB infrastructure
- **Physical Plant Scaling Limitation** (Power, Cooling, Cabling)

Future-State Virtualized Architecture



- **Consolidated, Virtualized** Controlled Domain Architecture
- **Optimized Utilization** of Infrastructure Components (Storage, Compute, Network)
- Future Proof **Modular** Architecture to Support Growth
- **Footprint Reduction** of Physical Plant (Power, Cooling and Cabling)

Cisco Application Profiling

Application Foundation for Data Center Initiatives

Application Profiling Usage Scenarios

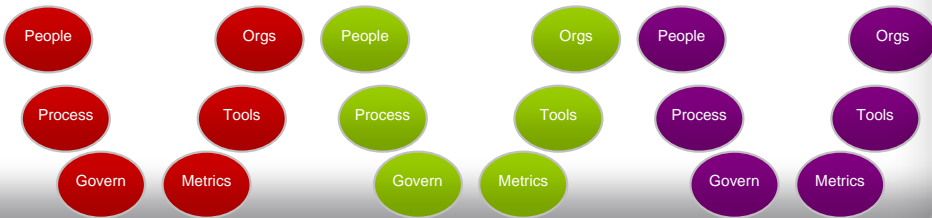
Service Components	Server and Software Inventory	Application Optimization	Application Migration	Data Center Consolidation & Migration	WAAS deployment planning	Disaster Recovery Strategy & Planning
Business Process Decomposition				✓		✓
Server and Software Discovery	✓	✓	✓	✓	✓	✓
Network Discovery and Dependency Mapping			✓	✓		✓
SAN Discovery and Dependency Mapping			✓	✓		✓
Application Transport Mapping		✓	✓	✓	✓	✓
Application Dependency Modeling		✓	✓	✓		✓

*** Application Availability & Performance Analysis**

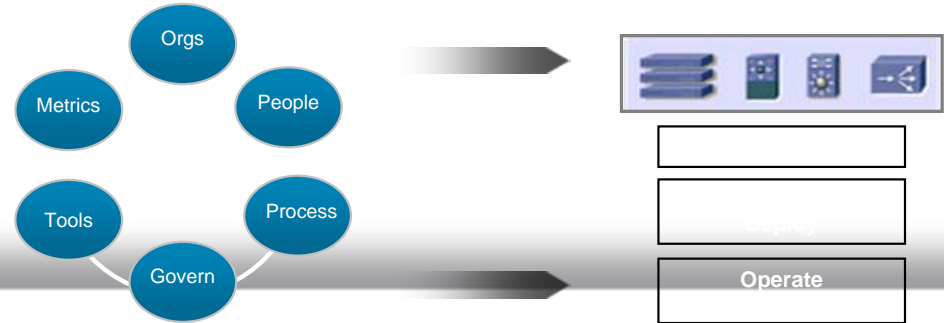
V-OMA

Enabling A Virtualization Maturity Model

Current Legacy Infrastructure Management



Future-State Virtualized Infrastructure Management



IT Organizations need to transition current infrastructure capabilities to a higher-level of maturity to prepare for virtualizations

V-OMA provides the virtualized future-state blueprint and transformation roadmap to guide customers through a successful transition

Cisco IT Case Study– Summary

	Traditional	Unified Fabric	UCS
DC efficiency	100%	130–150%	130% 170–200%
10,000 sq ft, 1 MW			
Cabling	\$2.7 million	\$1.6 million	\$1.6 million
Physical server count	720	930	1,200–1,400
VM count	7,200	9,300–10,800	12,000–28,000
VM per KW	7.2	9.3–10.8	12–28

Density Efficiencies – 47% fewer racks

Almost 4x VMs per KW

40% savings from cabling

12,000 to 28,000 VMs – in the same data center!

Notes: Assumes pre-UCS average V2P ratio of 10 to 1 and post-UCS average ratio of 20 to 1 due to the memory expansion technology. Unified fabric efficiency gains result from power optimization. UCS efficiency gains result from additional power benefits of UCS.



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