Applying a Methodology to Network Design
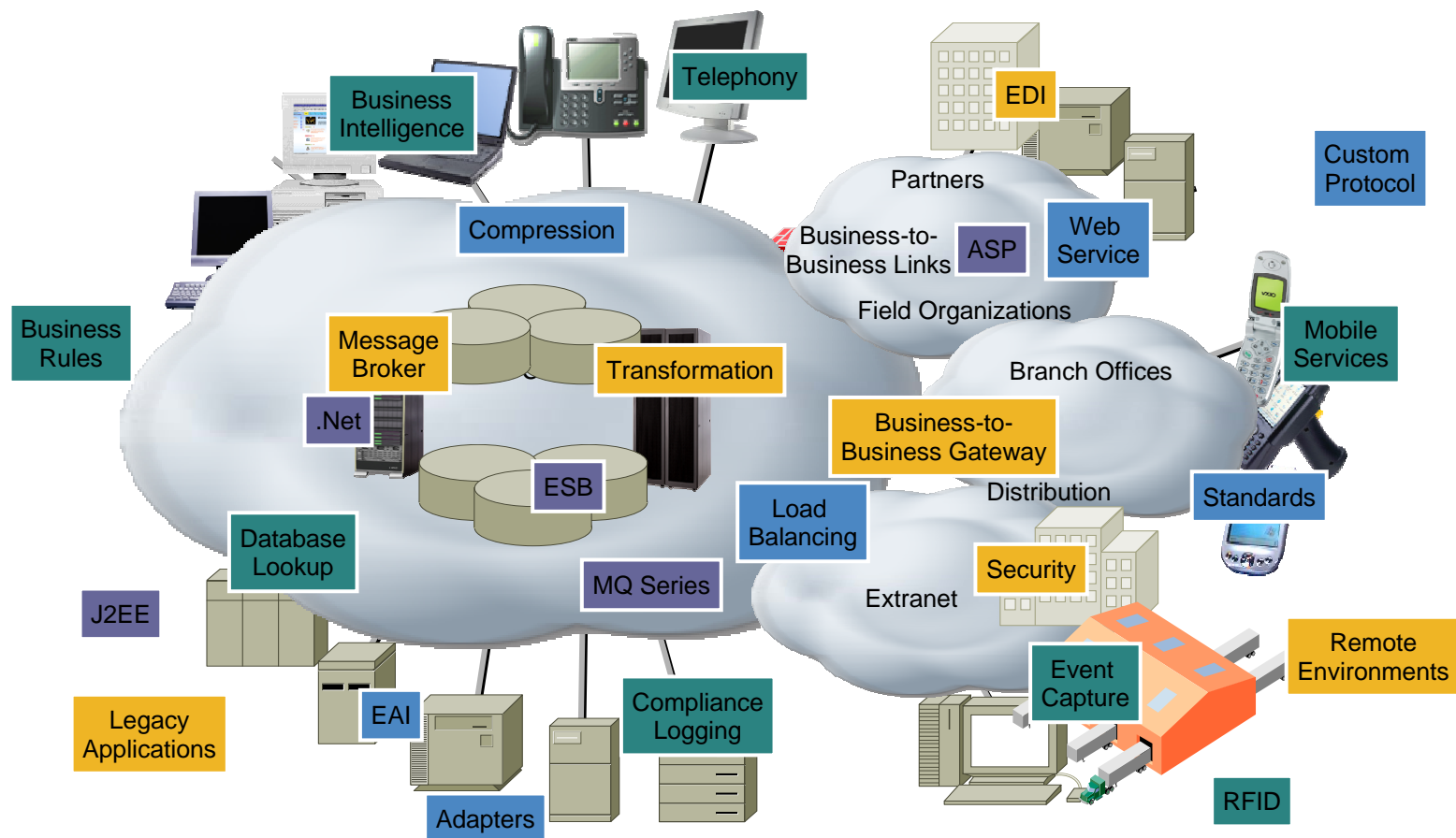
Designing for Cisco Internetwork Solutions (DESGN) v2.0

DESGN v2.0—1-1

Applying a Methodology to Network Design
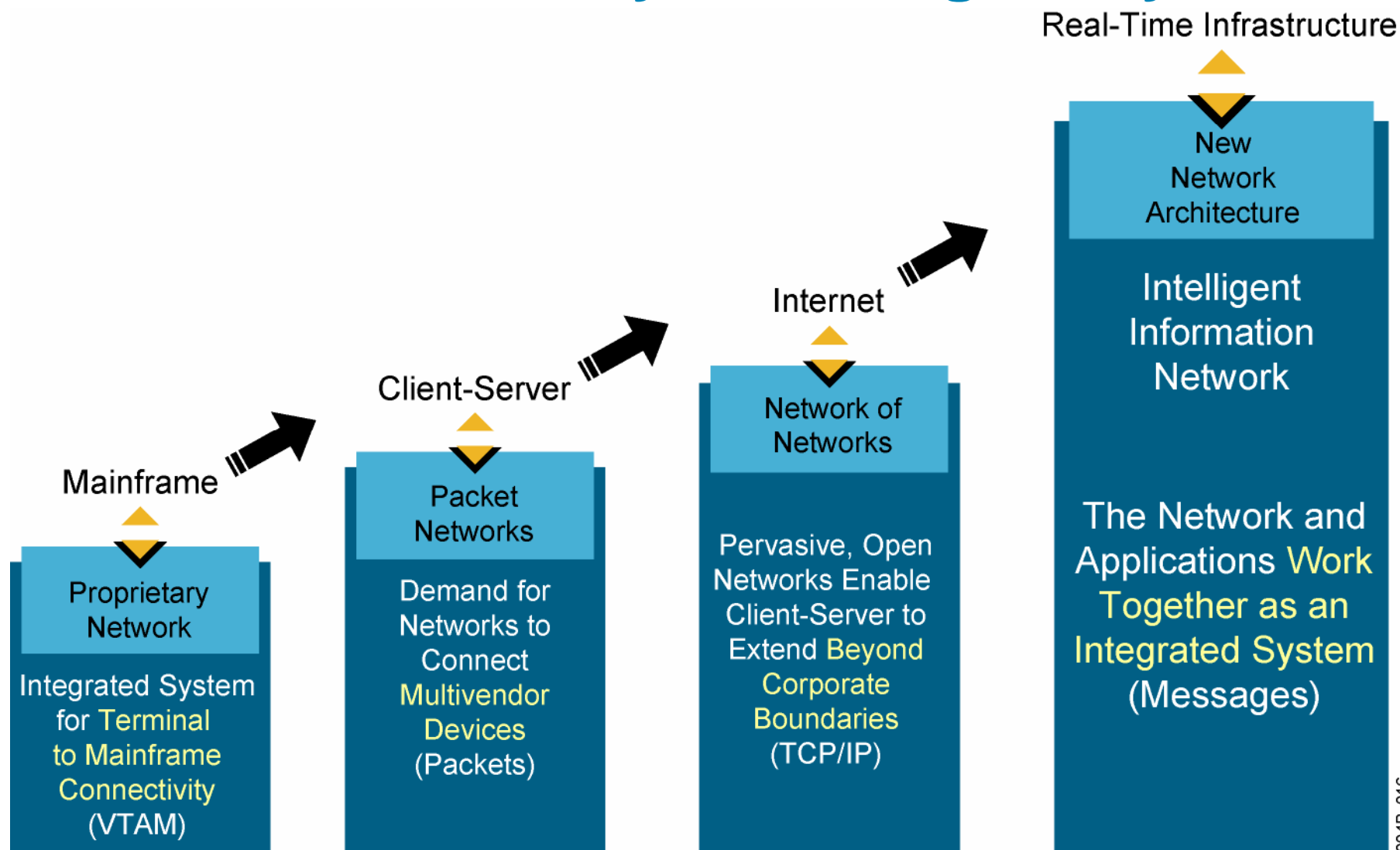
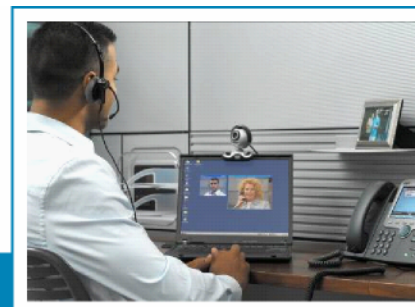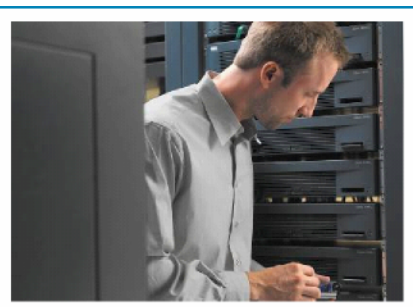**Introducing the Cisco Service-Oriented Network Architecture**

Growth of Applications

DESGN v2.0—1-2

IT Evolution—
From Connectivity to Intelligent Systems

Real-Time Infrastructure

New Network Architecture

Intelligent Information Network

The Network and Applications Work Together as an Integrated System (Messages)

Internet

Network of Networks

Pervasive, Open Networks Enable Client-Server to Extend Beyond Corporate Boundaries (TCP/IP)

Client-Server

Packet Networks

Demand for Networks to Connect Multivendor Devices (Packets)

Mainframe

Proprietary Network

Integrated System for Terminal to Mainframe Connectivity (VTAM)

004P_016

DESGN v2.0—1-3

New Business Requirements
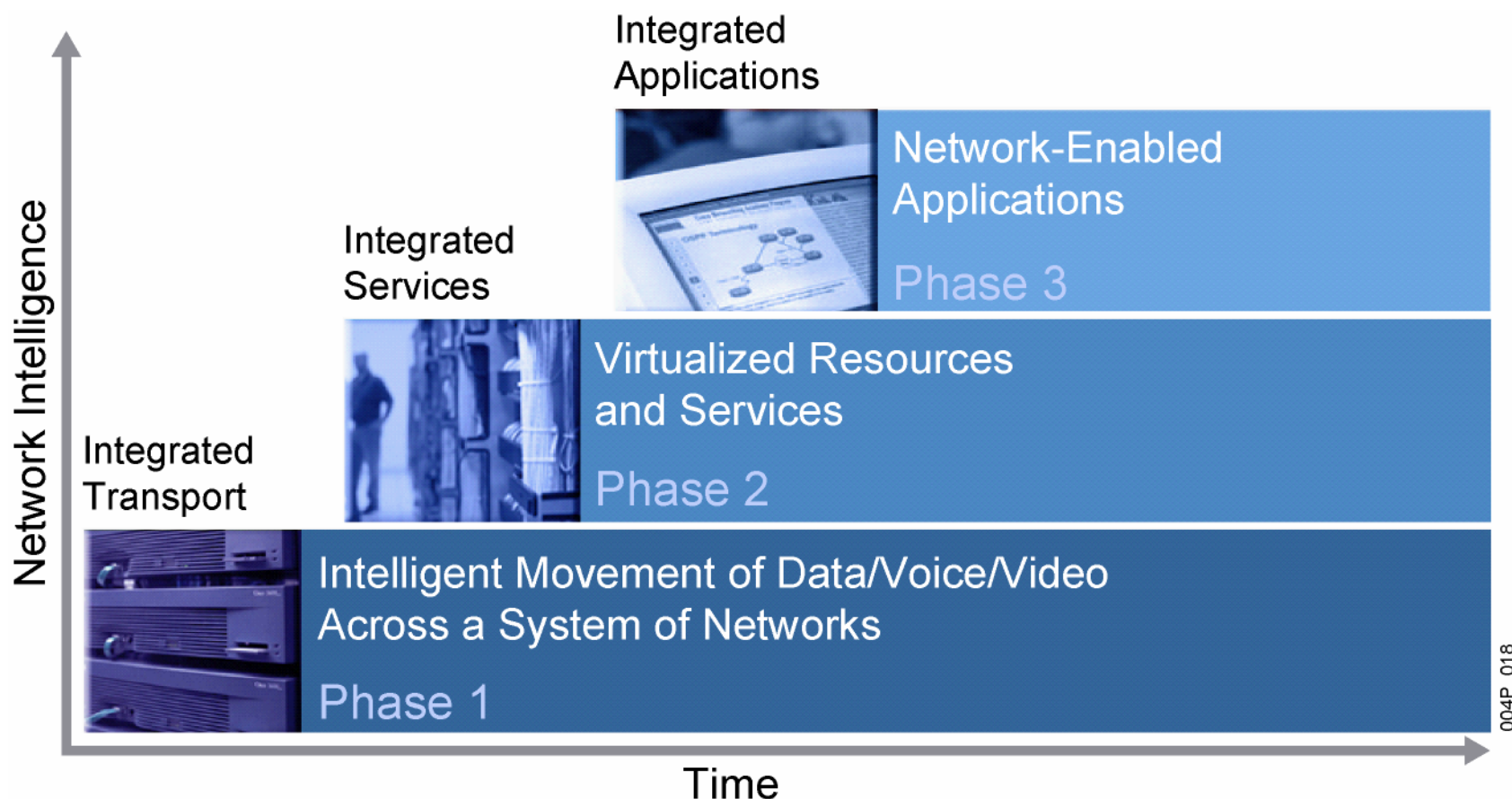

Evolve from Connectivity to Intelligent Systems

Participate Actively in Delivery of Applications and Network Services

Provide the Foundation for Transforming Business Processes

The Network Touches Everything

004P_017

DESGN v2.0—1-4

Intelligence in the Network

Integrated Applications

Network-Enabled Applications

Phase 3

Integrated Services

Virtualized Resources and Services

Phase 2

Integrated Transport

Intelligent Movement of Data/Voice/Video Across a System of Networks

Phase 1

Network Intelligence
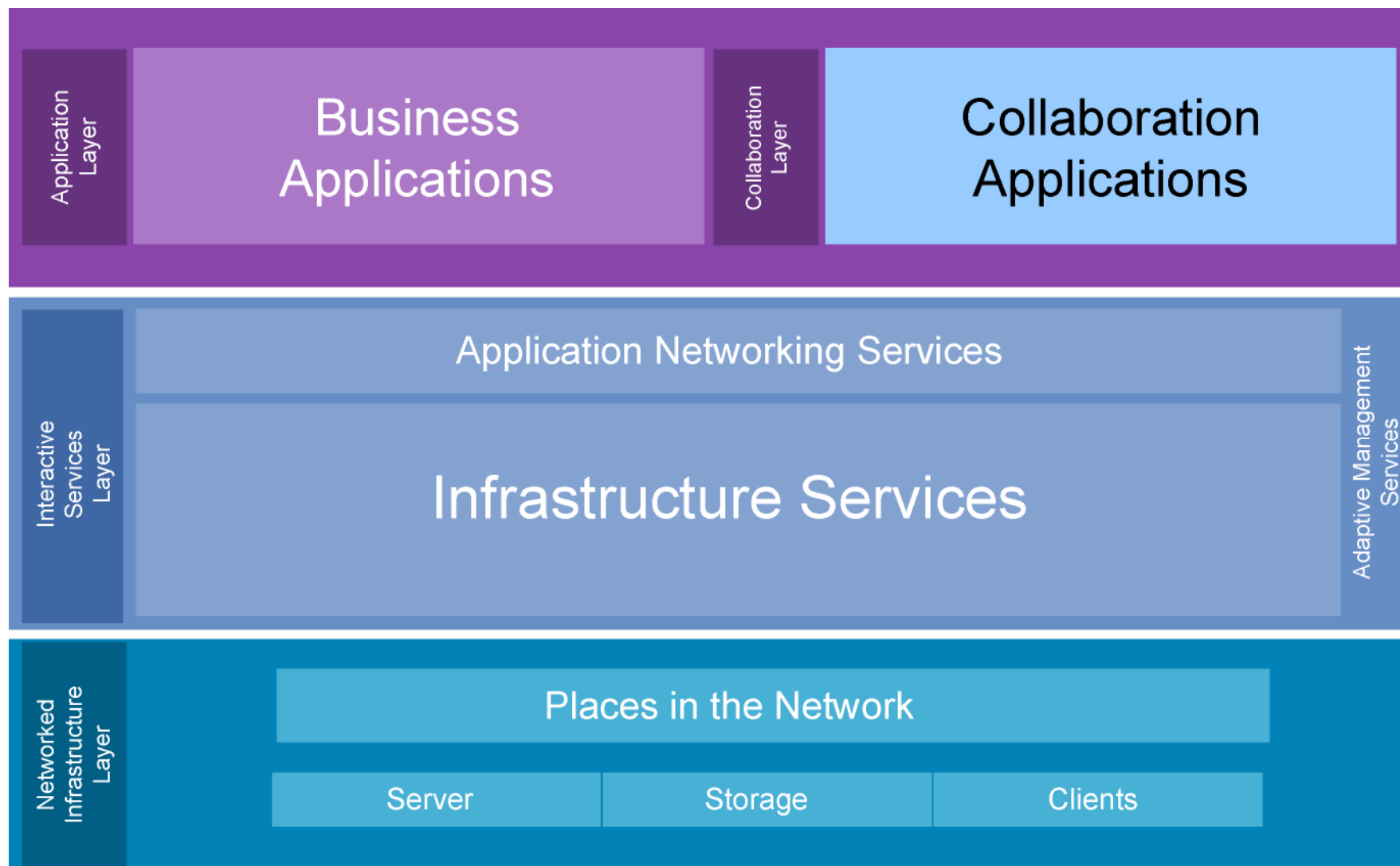
Time

004P_018

DESGN v2.0—1-5

Cisco Service-Oriented Network Architecture Framework

- SONA is an architectural framework.

- SONA brings several advantages to enterprises:

  - Outlines how enterprises can evolve toward a more intelligent network

  - Illustrates how to build integrated systems across a fully converged intelligent infrastructure
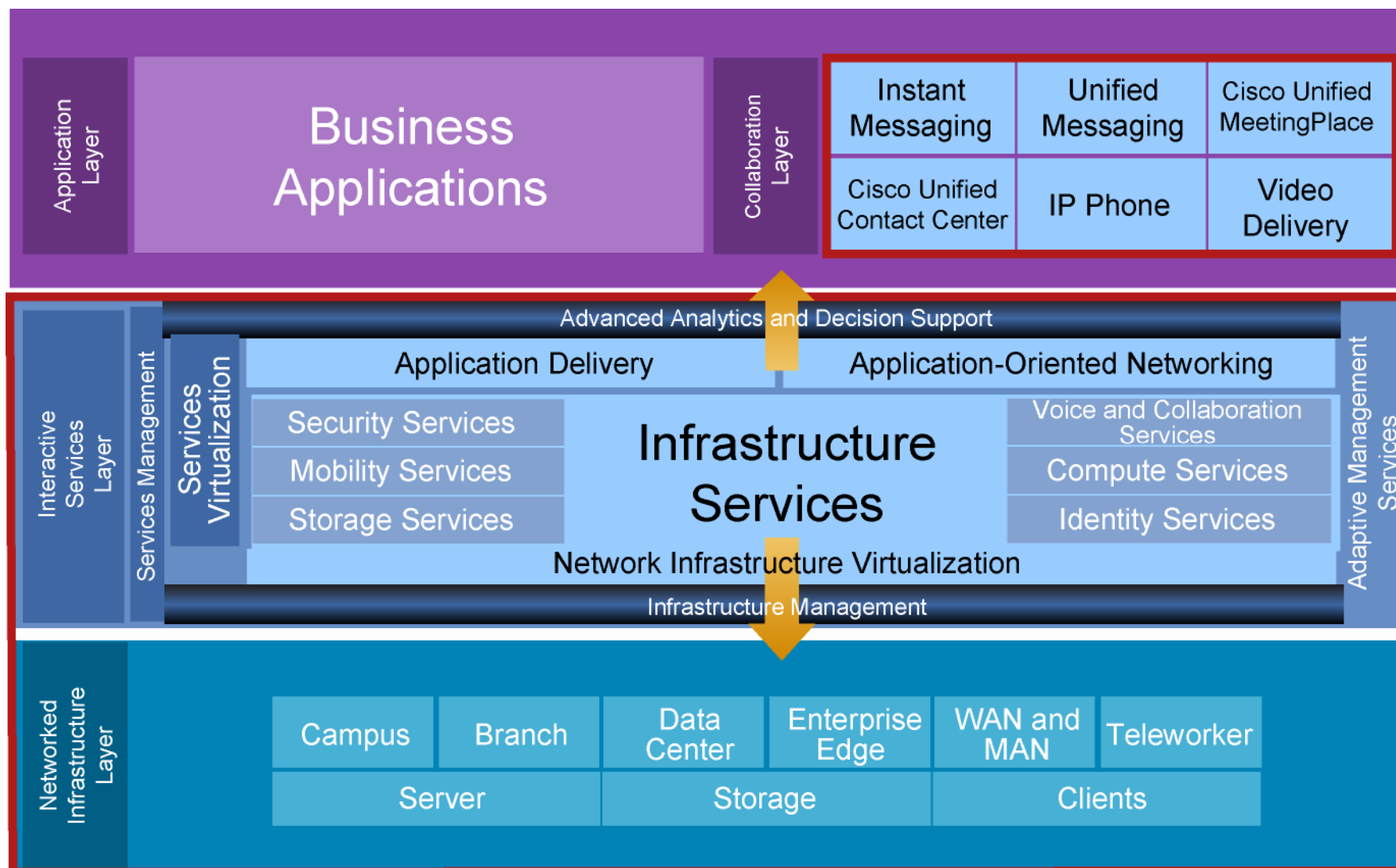
  - Improves flexibility and increases efficiency

DESGN v2.0—1-6

Cisco SONA Layers

| Application Layer | Business Applications | Collaboration Layer | Collaboration Applications |

Application Networking Services

Infrastructure Services

Interactive Services Layer

Adaptive Management Services

Places in the Network

| Server | Storage | Clients |

Networked Infrastructure Layer

DESGN v2.0—1-7

004P_001

Overview of Cisco SONA Offerings

DESGN v2.0—1-8

Benefits of SONA

	Description
Functionality	Supports organizational requirements
Scalability	Supports growth and expansion of organizational tasks
Availability	Provides necessary services reliably, anywhere, anytime
Performance	Provides responsiveness, throughput, and utilization on a per-application basis
Manageability	Provides control, performance monitoring, and fault detection
Efficiency	Provides network services with reasonable operational costs and appropriate capital investment

DESGN v2.0—1-9

Summary

- Drivers for a new network architecture include these factors:
  - Growth of applications
  - IT evolution from connectivity to intelligent systems
  - Increased business expectations for networks
- Cisco's vision of intelligence in the network aligns network and business requirements in three phases:
  - Phase 1 is integrated transport.
  - Phase 2 is integrated services.
  - Phase 3 is integrated applications.
- Cisco SONA is the enterprise framework for building intelligence in the network:
  - Layer 1 is the integrated infrastructure layer.
  - Layer 2 is the interactive services layer.
  - Layer 3 is the application layer.