CISCO NETWORK DESIGN

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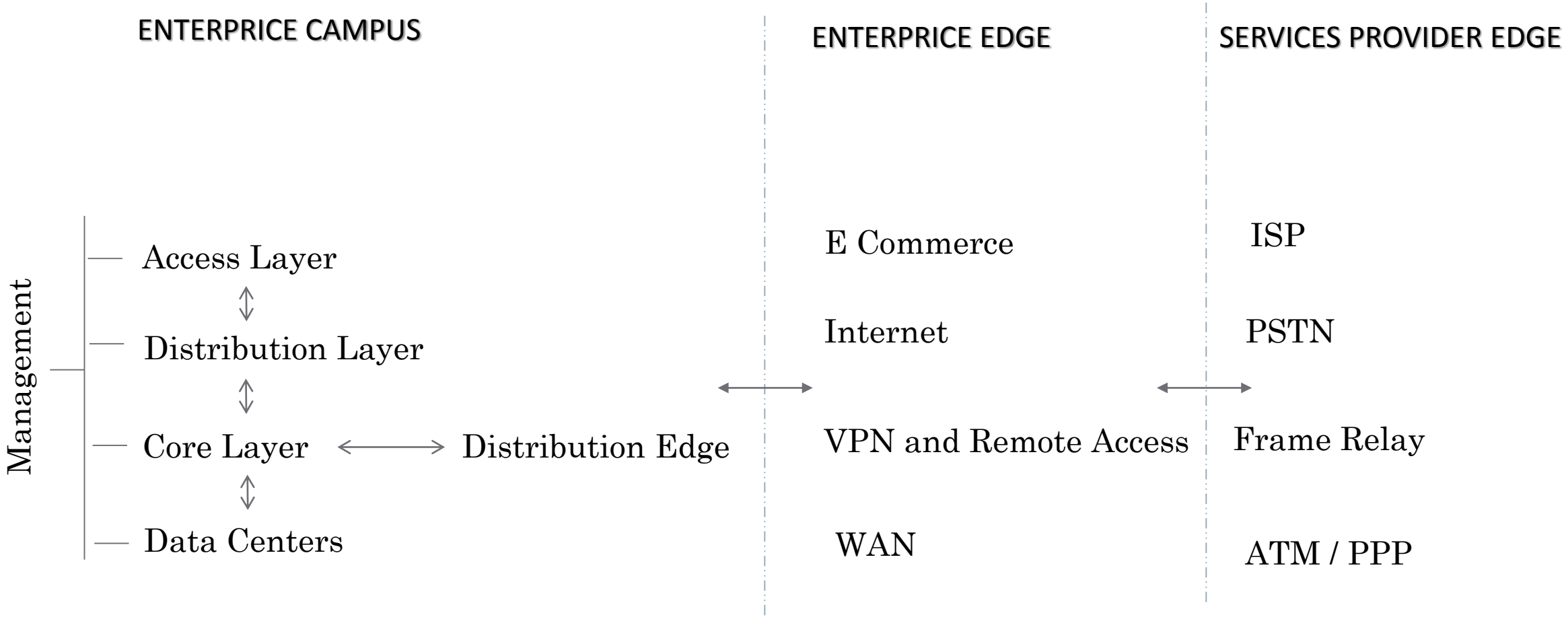
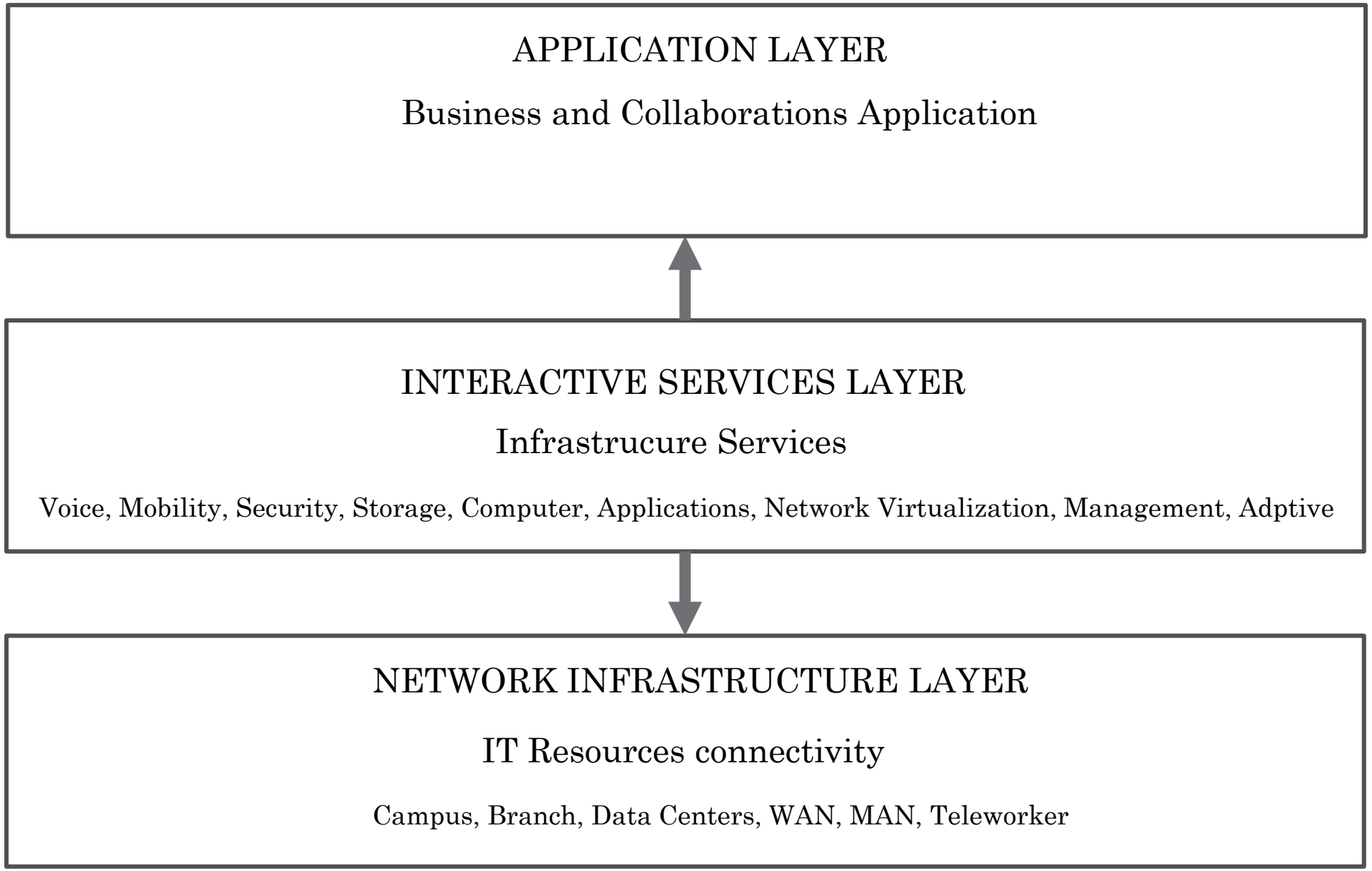
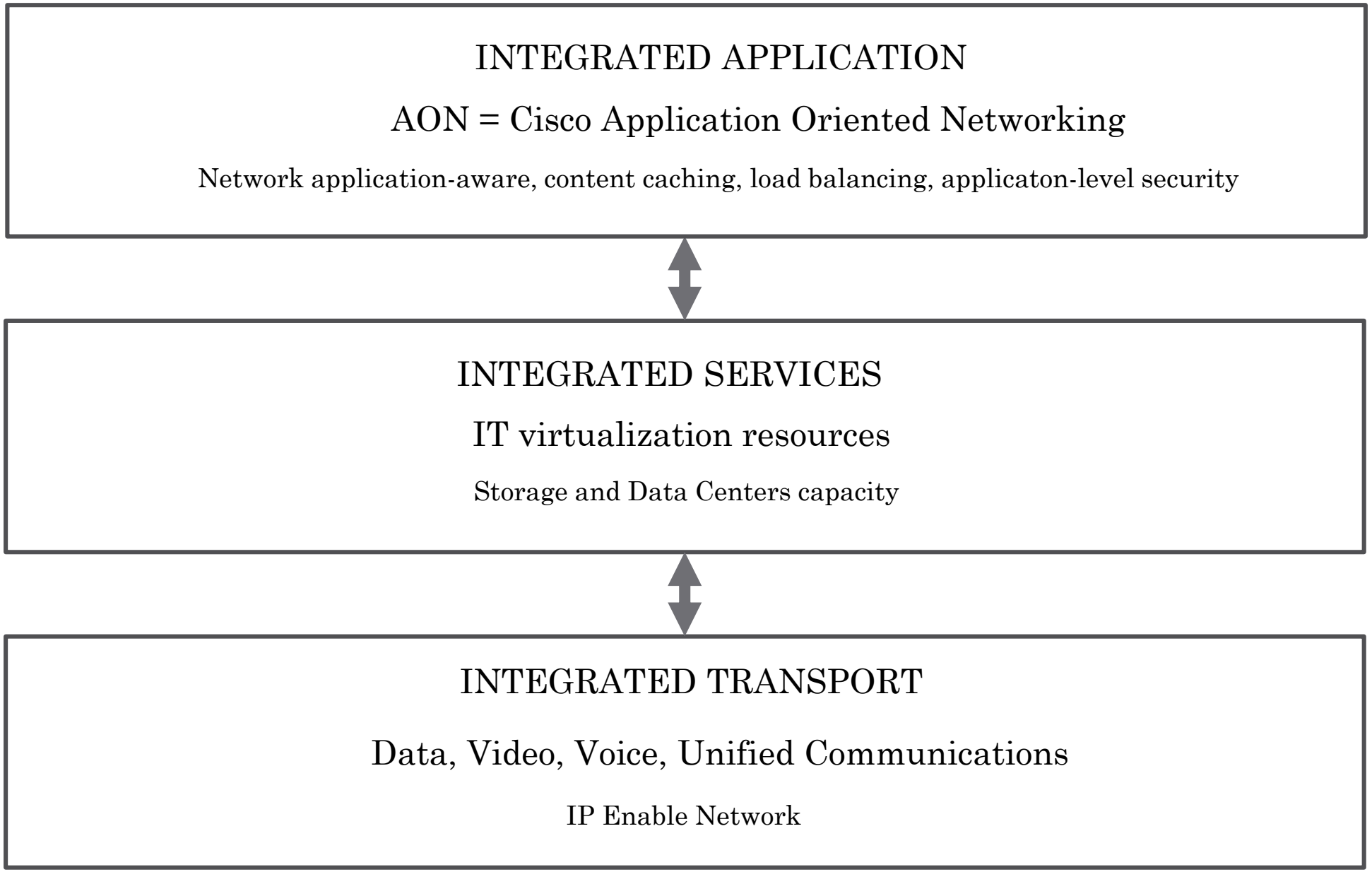
ENTERPRICE COMPOSITE NETWORK SAFE BLUEPRINT



SONA FRAMEWORK LAYER



IIN INTEGRATED INTELLIGENT NETWORK



PPDIOO Cisco Lifecycle Services

1^ phase: PREPARATION

2^ phase: PLANNING

3^ phase: DESIGN

4^ phase: IMPLEMENTATION

5^ phase: OPERATION

6^ phase: OPTIMIZATION

ITIL INFORMATION TECHNOLOGY INFRASTRUCTURE LIBRARY

Framework of IT High Quality Services Management

Business requirement and Processes IT

1^ Service Strategy

2^ Service Design

3^ Service Transition

4^ Service Operation

5^ Continual Service Improvement

FCAPS categories

1^ categories: FAULT

2^ categories: CONFIGURATION

3^ categories: ACCOUNTING

4^ categories: PERFORMANCE

5^ categories: SECURITY

FCAPS management task

Type of Management	Examples of Management Tasks
Fault management	Use network management software to collect information from routers and switches. Send an e-mail alert when processor utilization or bandwidth utilization exceeds a threshold of 80 percent. Respond to incoming trouble tickets from the help desk.
Configuration management	Require logging of any changes made to network hardware or software configurations. Implement a change management system to alert relevant personnel of planned network changes
Accounting management	Invoice IP telephony users for their long distance and international calls.
vPerformance management	Monitor network performance metrics for both LAN and WAN links. Deploy appropriate quality of service (QoS) solutions to make the most efficient use of relatively limited WAN bandwidth, while prioritizing mission critical traffic.
Security management	Deploy firewall, virtual private network (VPN), and intrusion prevention system (IPS) technologies to defend against malicious traffic. Create a security policy dictating rules of acceptable network use. Use an Authorization, Authentication, and Accounting (AAA) server to validate user credentials, assign appropriate user privileges, and log user activity.

TMN TELECOMMUNICATION MANAGEMENT NETWORK

CMIP: Defines management services exchanged between peer entities

GDMO (Guideline for Definition of Managed Objects): Provides templates for classifying and describing managed resources.

ASN.1(Abstract Syntax Notation One)**:** Provides syntax rules for data types, such as those found in an MIB.

OSI Model: Defines the seven-layer OSI Reference Model.

The principles of TMN are incorporated into a telecommunications network, sending and receiving information and managing network resources.
Telecommunications networks are made up of switching systems, circuits, terminals, etc.
In TMN terminology, these resources are referred to as network elements (NEs).
TMN enables communication between operations support systems (OSS) and NEs.