



Role of Support Infra & Best Practices

Sharat Chandra

Infrastructure Management from a Shared Services Provider point of view

Safe harbor

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Agenda



Infrastructure Management

- Key Drivers
- Current Ecosystem
- Ground Realities – Entry Barriers

Best Practices

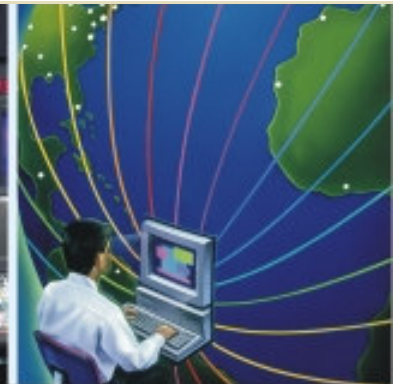
Key Components

- Active & Passive Components – Commonalities & Differences

What works & what does not

Value Proposition

Infrastructure Management



Infrastructure Management – 360° View



Management of Passive and Active Infrastructure (selectively):

- Energy and Functional Environment
- Equipment and usage status
- Enhancement, Co-location Expansion readiness

Documentation and Process Management (of Field activities)

Site Access Management

- From site acquisition management to access planning; security assessment; service log management

Assistance Program for Telecom Carriers

- To increase the profitability
- Gain competitive advantages by taking care of non-core business and facilitating new services

Changing Landscape – Current Imperatives

Infrastructure sharing is an opportunity and a challenge
– inevitability of insufficiency,
usability of the unknown

Too much too soon brings forth the relevance of documentation
– Archived and Current

INFRASTRUCTURE MANAGEMENT

Site Acquisition continues to be the single most challenge faced by incumbent and new carriers

As Networks grow – expansion of capacity & functionality demands a fresh look at how & how much
– aside from where?

Key Drivers



Semi urban and rural are areas unattractive to Carriers

✦ *Helps mobile services penetrate through cost reduction; ensuring early payback*



Will enable operators to launch cost effective 3G services

✦ *By reuse of 3G sites and rolling out common infrastructure*

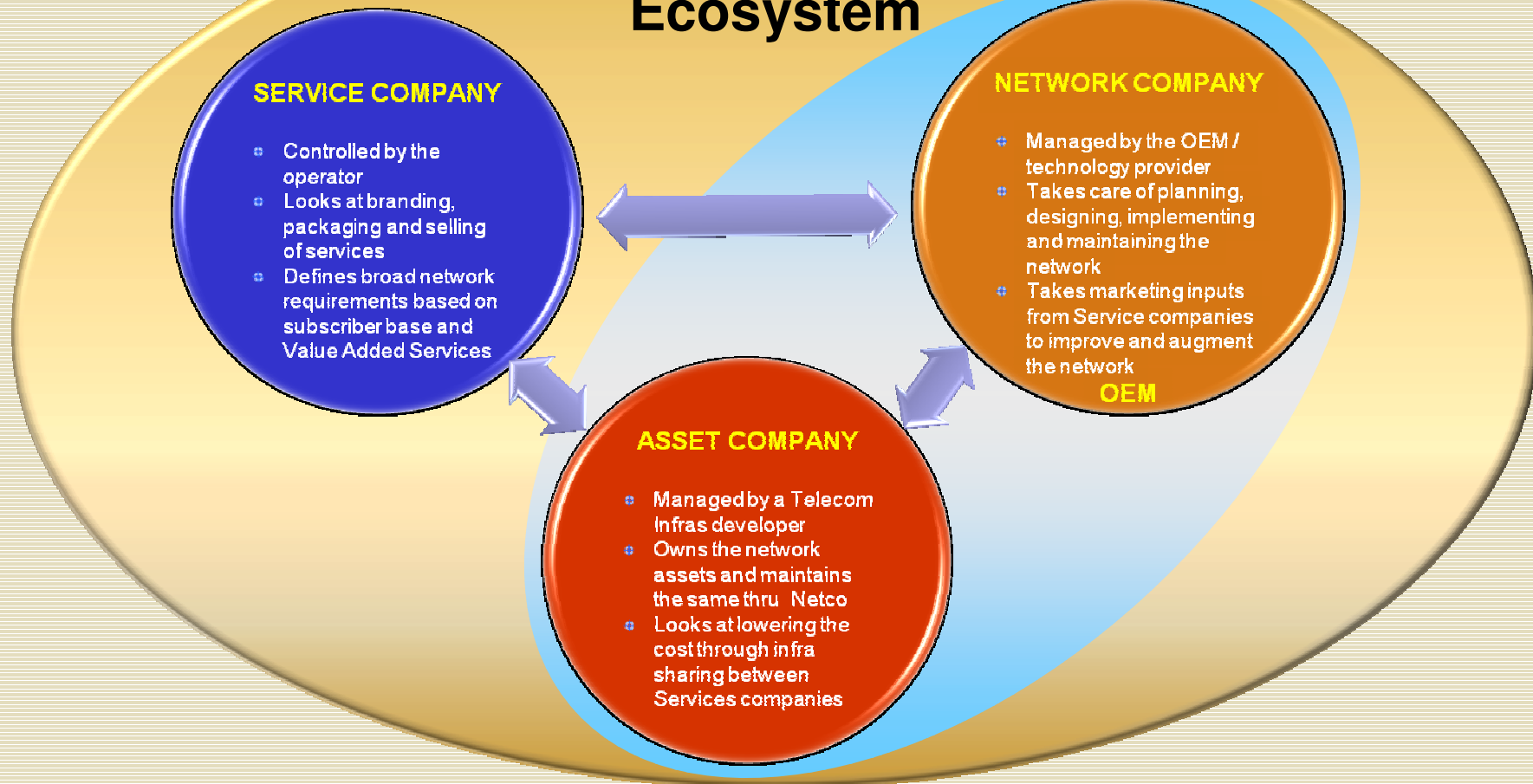


Sharing of antennas and backhaul

✦ *Will enable reduction of tower cost by making use of lighter designs*

Current Ecosystem

The Mobile Services Ecosystem



The emerging ecosystem will let the stakeholders focus on their core areas leading to efficient utilization of resources and a healthy, responsive network

Ground Realities - Entry barriers

The business involves a thorough knowledge and background in telecom infrastructure rollout

is limited to a few players in the country

Longer payback period and the high risk associated with the industry

is a major deterrent for new players

The industry is already heading for a major consolidation phase

weaker players will exit at a little or no premium with emphasis on initial capital recovery

Pricing levels scrounging the pit

Existing players will need volume and a ready portfolio of > 5000 sites for long term survival

Best Practices



COST EFFICIENT DESIGNS

- ✦ Tubular towers and monopoles to lower input cost / site to avoid any price increase

INNOVATIVE ENERGY FRIENDLY SHELTER DESIGNS

- ✦ To lower air conditioning cost energy OPTX

REMOTE MONITORING SYSTEM

- ✦ To reduce trucking expenses; a major component of Opex cost / site

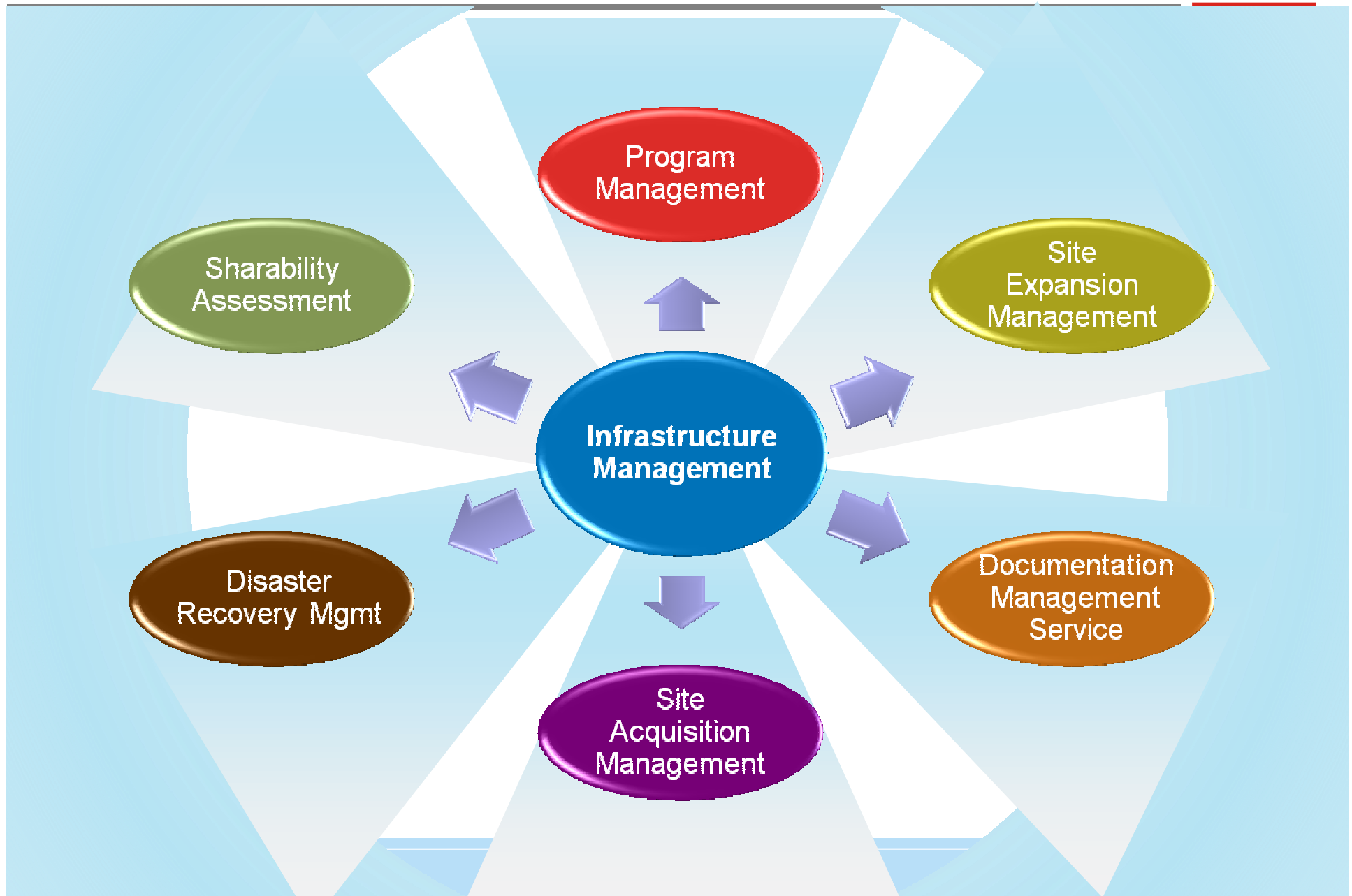
RENEWABLE ENERGY SOURCES TO FEED THE SITE

- ✦ Wind energy and solar energy adaption the key to success

Key Components



Infrastructure Management – Key Components



Infrastructure Management for Carriers & OEMs



Program
Management

Site
Expansion
Management

Sharability
Assessment

Documentation
Management
Service

Disaster
Recovery Mgmt

Site
Acquisition
Management

★ *Planning*

- Scope of work assessment
- Risk Assessment
- Cost Benefit Analysis
- Responsibility matrix development
- Creating a base line plan

★ *Scheduling*

- Allocate Resources
- Assigning tasks & responsibilities
- Reporting template creation

★ *Monitoring & Controlling*

- Tracking & measurement
- Conduct periodic review meetings as agreed
- Performance analysis and correction

★ *Managing & Reporting*

- Key Reports Generation
- Publish on the Project Web Site

Active & Passive Components - Commonalities and Differentiators



Managed &

Operations

Maintenance

A C T I V E

Core

- Upgrade mgmt
- Database mgmt
- Configuration mgmt
- Capacity Mgmt
- Help desk & Escalation Mgmt.
- Inventory Mgmt
- Swap Mgmt
- Transmission n.w Audit
- Performance Measurement
- Fault Analysis and MIS
- Alarm Management

Field

- KPI Measurement
- Fault Mgmt& Trouble shooting
- Logistics Mgmt
- 3rd Party Mgmt
- Warehouse Mgmt
- Logistics
- Acceptance Test
- Planned Expansion Audit
- Optimization

Preventive

- Warranty Mgmt
- AMC Mgmt
- Routine Preventive Checks
- Pre- Monsoon and Winter Preventive Maintenance

Corrective

- Repair & Return Management
- Resolution Mgmt
- Fault Mgmt

P A S S I V E

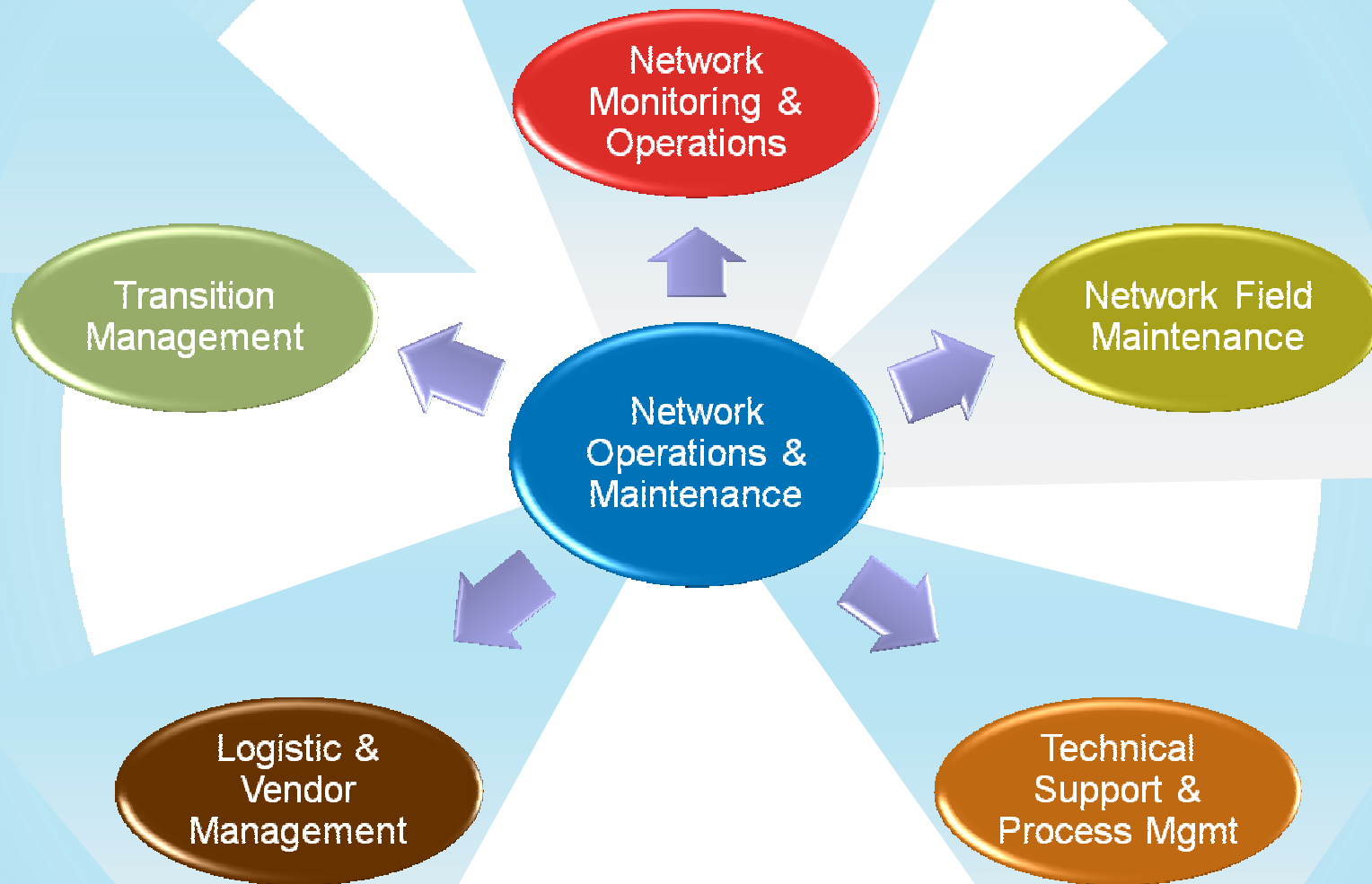
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- Inventory Mgmt
- Fault Analysis and MIS

- KPI Measurement
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- Logistics Mgmt
- 3rd Party Mgmt
- Warehouse Mgmt
- Inventory Mgmt
- Acceptance Test

- Warranty Mgmt
- AMC Mgmt
- Power Utilisation Audit
- Telecom Infr Audit
- Site Repair, Painting and Upkeep
- Replacement

- Repair & Return Management
- Resolution Mgmt
- On-site repairs

Operations & Maintenance – Need and Delivery



Network Operations & Maintenance offerings



Network
Monitoring &
Operations

Network Piece
Maintenance

Logistic &
Vendor
Management

Technical
Support &
Process Mgmt

Transition
Management

★ *Network Monitoring & Escalation Management*

★ *Upgrade/capacity Management*

★ *Database Management*

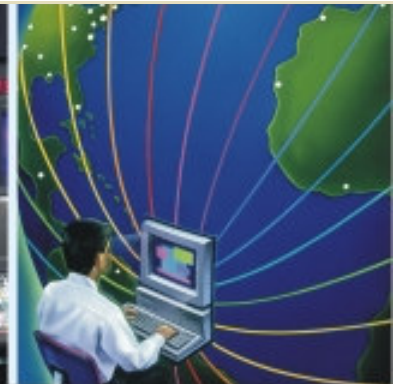
★ *Configuration Management*

★ *KPI Measurement*

★ *Fault Management & Trouble shooting*

★ *Backup Management & Recovery Support*

What works & What does not



What works



SHARED

**Infrastructure
Outsourcing**

An established phenomenon
with measurable benefits

Fees

Enables Operators to enjoy
benefits of shared Capex from
day one

.....and what doesn't



The energy expenses per site are still on actual basis

efforts are on to cap it to give operator predictable cash outflows

Industry still coping with the ways to handle the inventory related issues

linked with various site designs based on expected tenancy at site

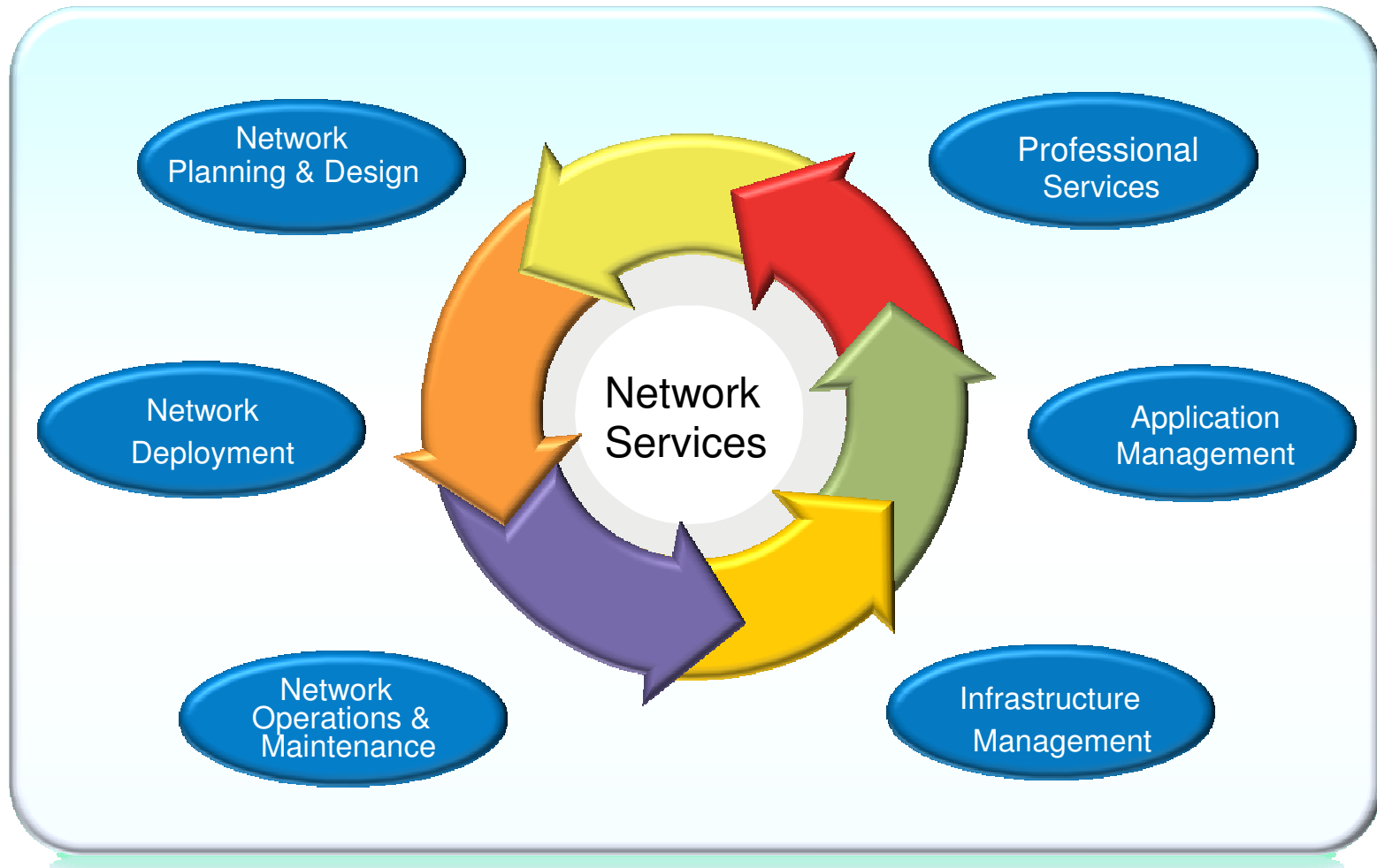
.....and what doesn't



Old ways to manage O&M - Competency profile

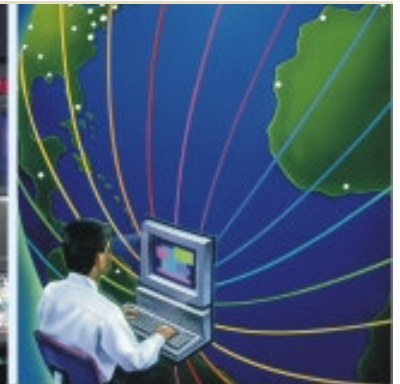
<i>CLUSTER ENGINEER</i>	<i>ENGINEER</i>	<i>TECHNICIAN</i>
<ul style="list-style-type: none">+ BE or Diploma in Electrical engineering with 2+ years experience in passive infra O&M+ Responsible for 1 cluster (50 sites)+ Corrective Maintenance+ MIS support+ Site asset update and spare control+ Energy consumption tracking+ Ensure Site Security+ Knowledge Sharing+ Self initiated Escalation assessment+ Capex movement plan	<ul style="list-style-type: none">+ Trained on I&C of active components+ Track and optimize Energy opex+ Spare management+ Asset movement management+ Manage local issues	<ul style="list-style-type: none">+ Suitable experience and training to independently manage, all cluster activities including additional sites+ Can be trained for active component I&C+ Track and optimize energy opex+ Spare management+ Asset movement management

Network Services – Core Capabilities



Services aligned with Life cycle for OEMs and Carriers

Value Proposition



Infrastructure Management - Value Proposition



- ✦ Long Standing experience in building Infrastructure at global levels
- ✦ Seasoned Project Management abilities
- ✦ Shortened time to deliver
- ✦ Efficient Sourcing Means
- ✦ Technology & Vendor Agnostic pool
- ✦ Large Installed Base & Extensive Network Element Exposure
- ✦ Cost Efficiency Trough Optimization Of Processes,
Tools & balance of Onsite & Offsite Model
- ✦ Risk Sharing - KPI & SLA Based Commitments
- ✦ Ability to set up remote NOCs





Thank you

