The NextGen Datacenters and Beyond

Business and data center pressures

Business
- Compliance
- Security
- Growth
- Globalization
- Environmental
- Innovation

IT Infrastructure
- IT complexity
- Under utilized assets
- Integration needs
- Security and continuity
- Serve extended enterprise

Facilities
- Floor space
- Excessive heat
- Location
- Aging facilities
- Regulations
- Mergers and acquisitions

Operations
- 24x7 expectation
- Management complexity
- Lack of skilled resources
- Globalization
- Seasonal spikes
- Sourcing decisions

Changing IT infrastructure

- Service oriented architecture infrastructure
- Rapid provisioning of IT resources, massive scaling
- Dynamic service mgmt
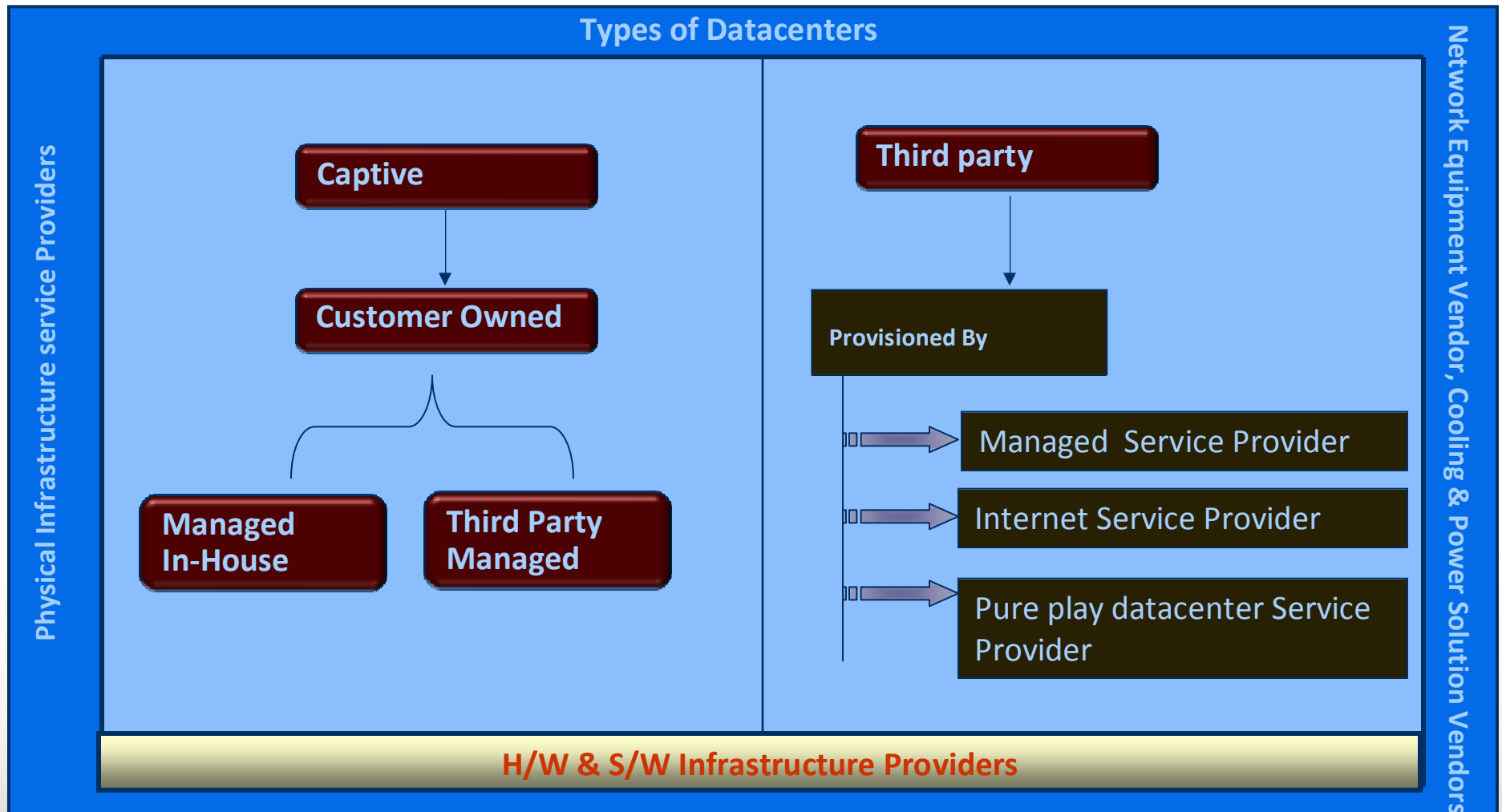- Energy saving via auto workload distribution
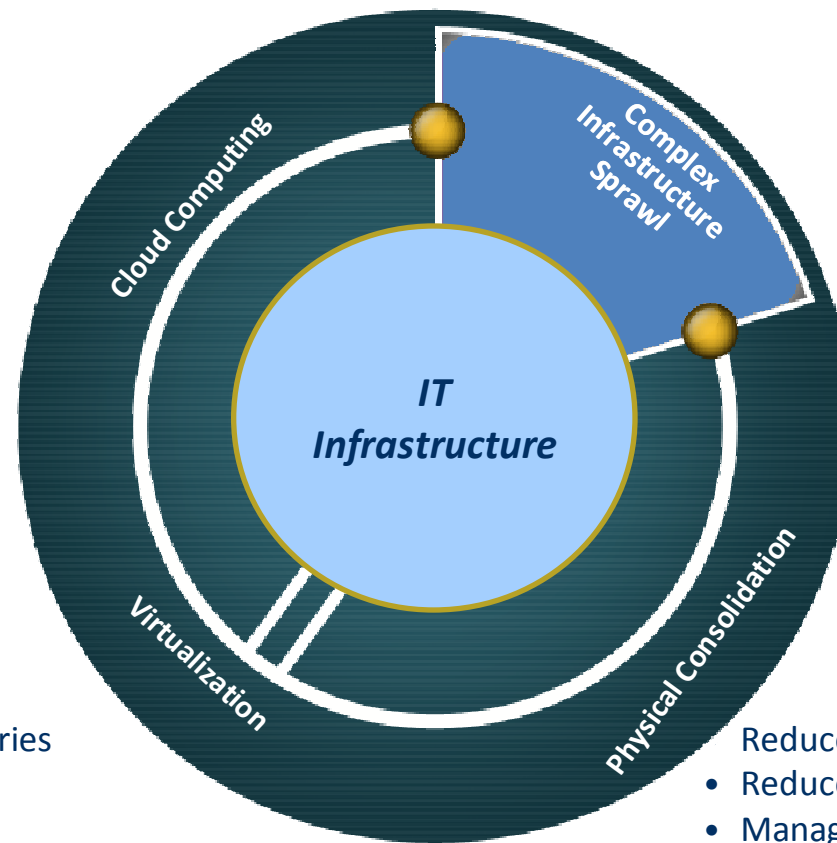
- IT assets & datacenters kept growing
- Desperate system tools
- Inconsistent processes
- Soaring IT and power costs

Cloud Computing

Complex Infrastructure Sprawl

IT Infrastructure

Virtualization

Physical Consolidation

- Remove physical resource boundaries
- Increase hardware utilization
- Reduce hardware costs
- Simplify deployments

- Reduce infrastructure complexity
- Reduce staffing requirements
- Manage fewer things better
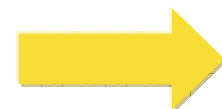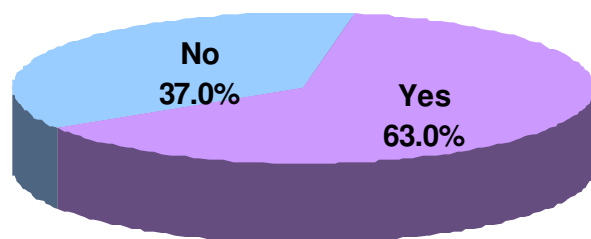- Lower operational costs
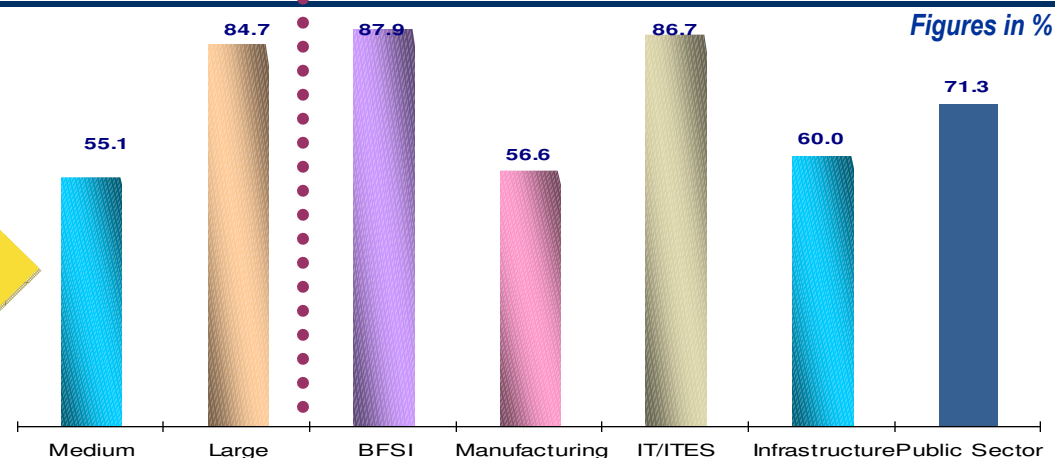
Data Center Market - Ecosystem

CMR — Insights powered by research

Types of Datacenters

Physical Infrastructure service Providers

Network Equipment Vendor, Cooling & Power Solution Vendors

- **Captive**
  - ↓
  - **Customer Owned**
    - **Managed In-House**
    - **Third Party Managed**

- **Third party**
  - ↓
  - **Provisioned By**
    - → Managed Service Provider
    - → Internet Service Provider
    - → Pure play datacenter Service Provider

H/W & S/W Infrastructure Providers

Data center Setup – Overall /Segment/ vertical wise

Current Adoption in 2010
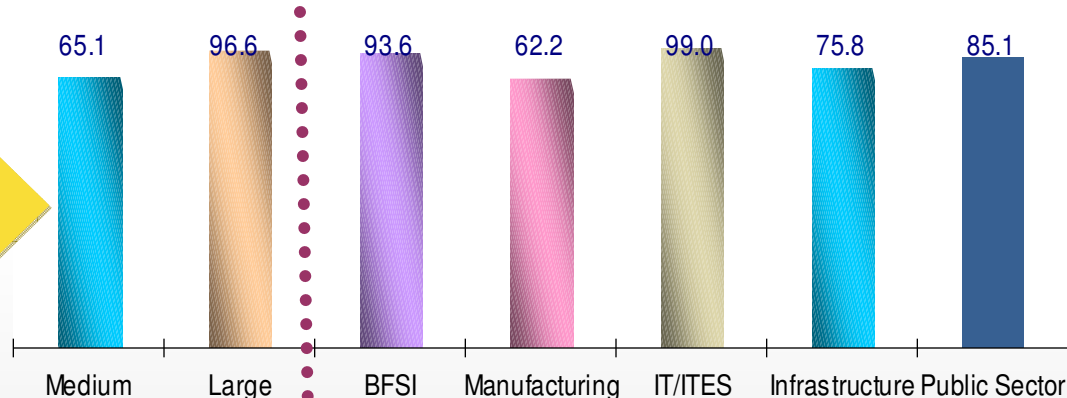
No
37.0%

Yes
63.0%

Figures in %

Base: 933

Medium	Large	BFSI	Manufacturing	IT/ITES	Infrastructure	Public Sector
55.1	84.7	87.9	56.6	86.7	60.0	71.3

Future Adoption in 2013

No
25.7%

Yes
74.3%

Base: 933

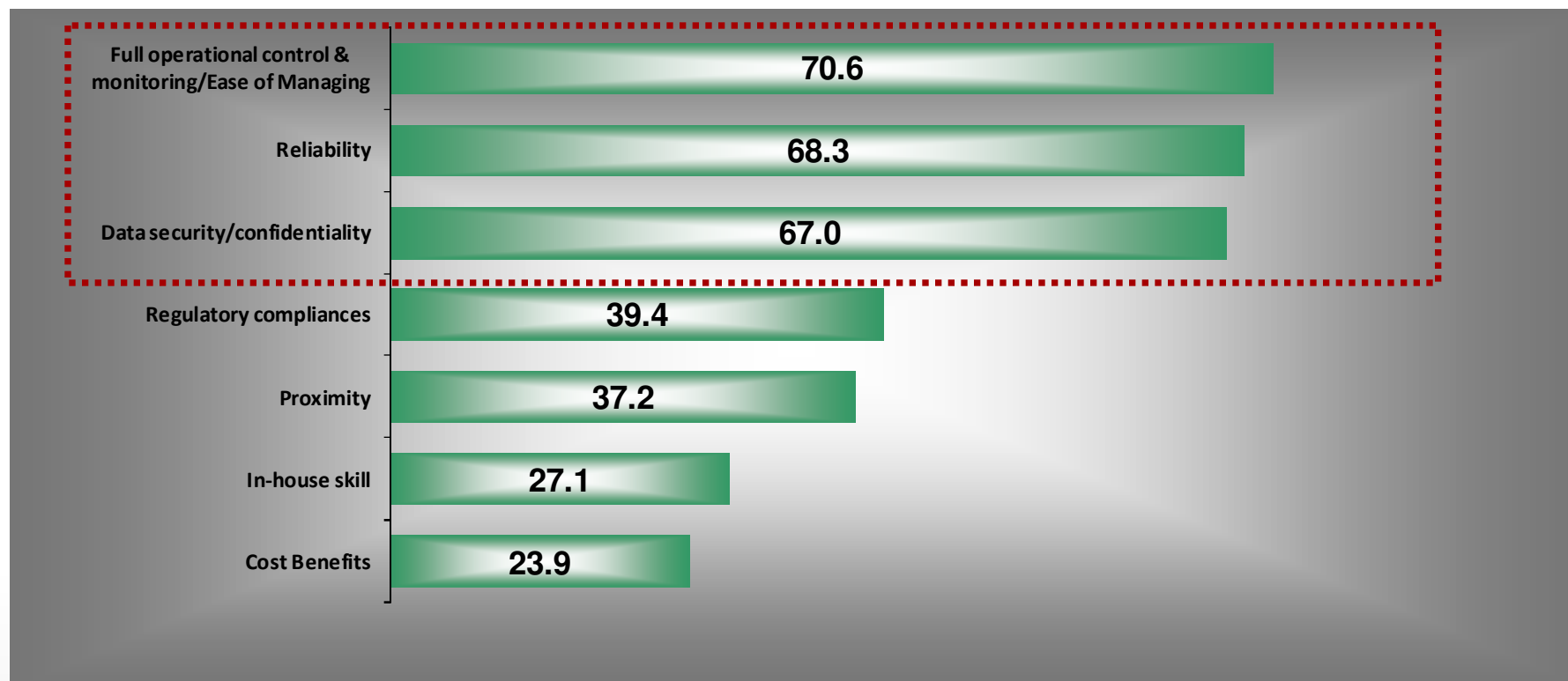| Medium	Large	BFSI	Manufacturing	IT/ITES	Infrastructure	Public Sector
65.1	96.6	93.6	62.2	99.0	75.8	85.1
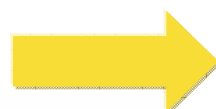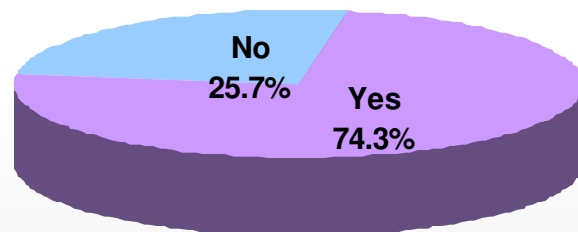
The current penetration of datacenters in India comes around 63.0%, with around 84.7% of large organizations having datacenter setup. BFSI leads the way with maximum penetration of datacenters (87.9%). Going forward, penetration level amongst large organization is going to reach almost cent % (95.6%). IT/ITES will lead the rest having 99% penetration levels dislodging BFSI from the top slot.
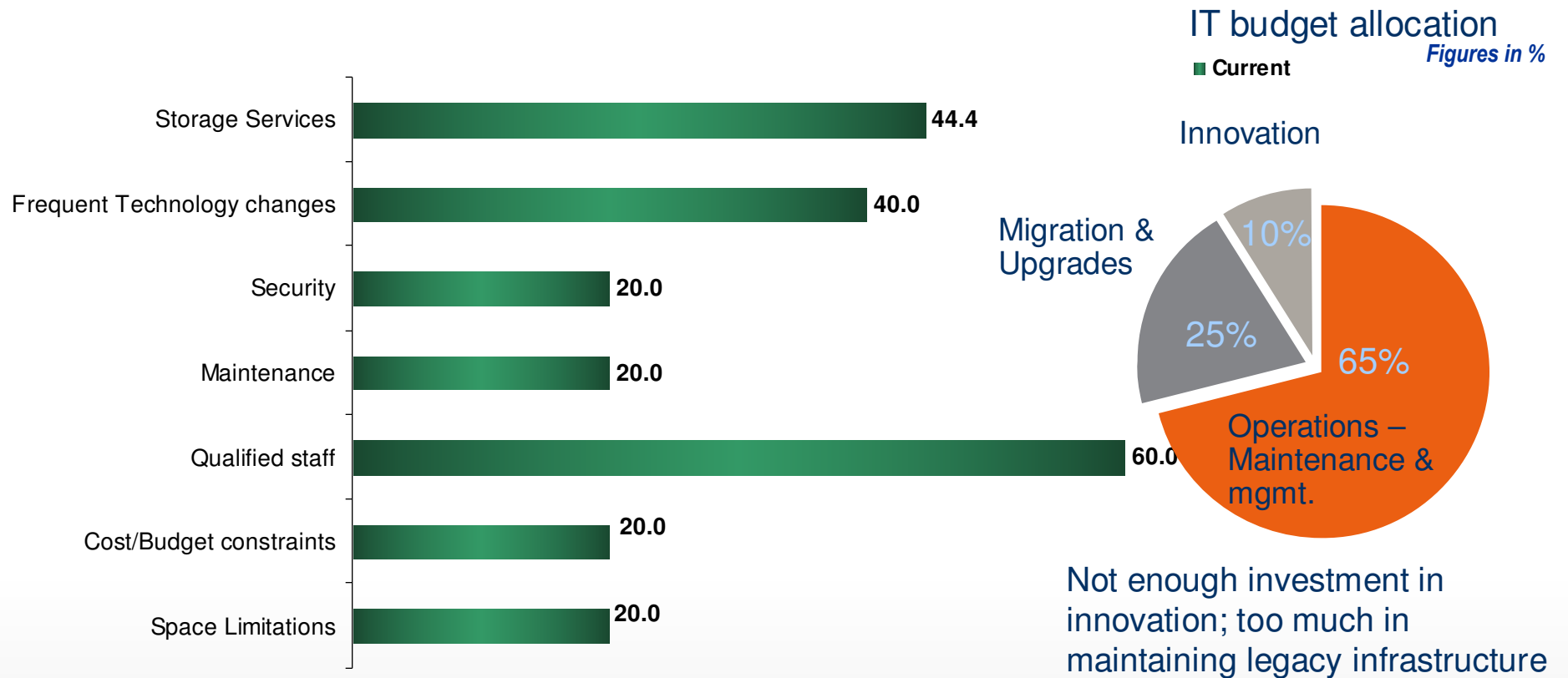
Major reasons for opting Captive Data Center

Figures in %

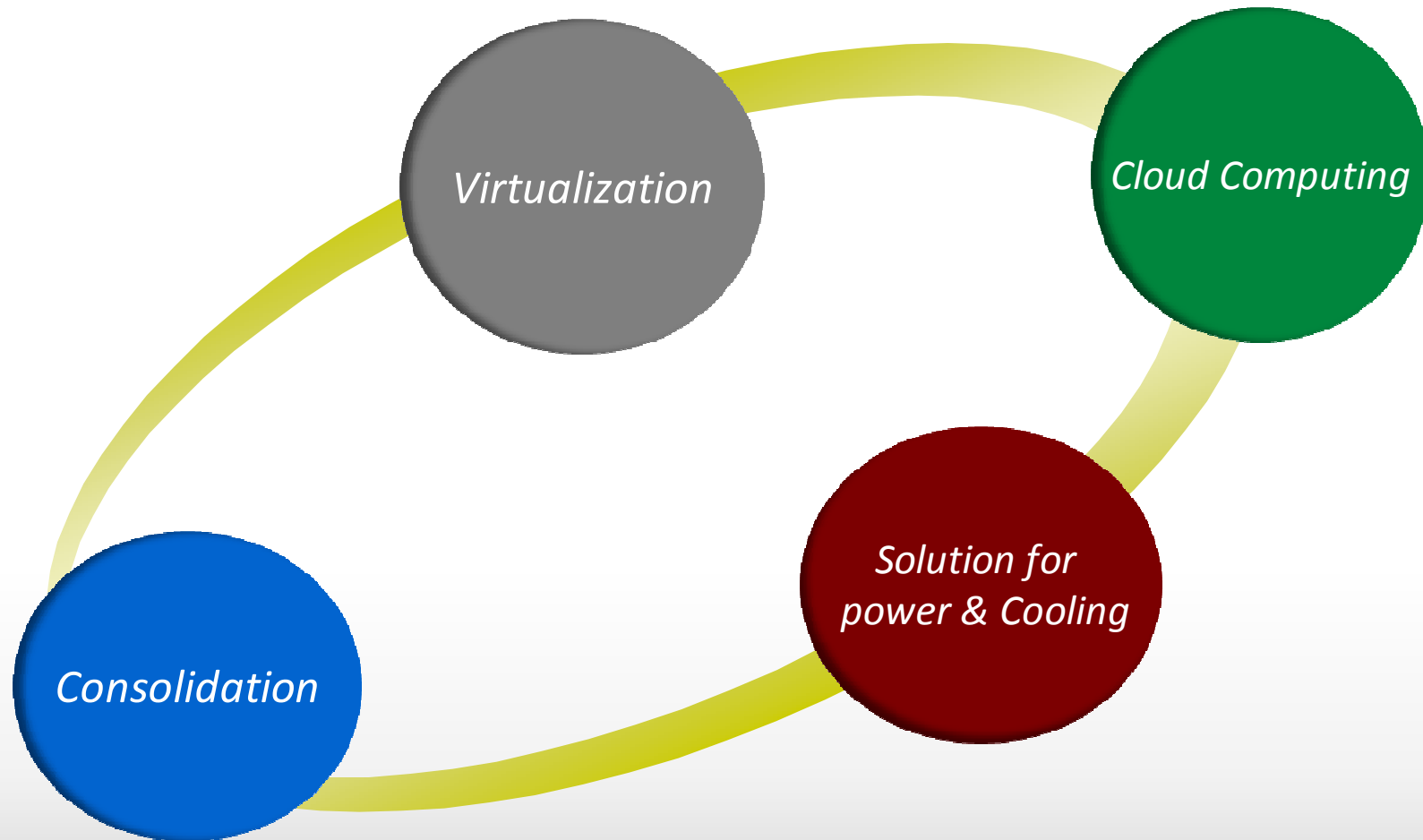| Reason	%
Full operational control & monitoring/Ease of Managing	70.6
Reliability	68.3
Data security/confidentiality	67.0
Regulatory compliances	39.4
Proximity	37.2
In-house skill	27.1
Cost Benefits	23.9

Full control and confidentiality of the data are key reasons why organizations go for captive data center units. To the extent they are willing to incur cost in the process, which is why cost benefits does not feature amongst the top most priorities of organizations.

Issues in managing Captive datacenter

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IT budget allocation
Figures in %

■ **Current**

Storage Services ——— 44.4

Frequent Technology changes ——— 40.0

Security ——— 20.0

Maintenance ——— 20.0

Qualified staff ——— 60.0

Cost/Budget constraints ——— 20.0

Space Limitations ——— 20.0

Innovation

Migration & Upgrades

10%

25%

65%

Operations – Maintenance & mgmt.

Not enough investment in innovation; too much in maintaining legacy infrastructure

Initiatives for Datacenter Optimization

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Virtualization

Cloud Computing

Solution for power & Cooling

Consolidation

Way Forward

Underlying Pillars for the Evolution of Data Centers of the Future

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Physical & Static Data Center	→	Virtualized & Dynamic Data Center

Extended Use of Virtualization

Advanced & Proactive Management

Policy Driven Automation

Self Service & Charge Back`

Organizations will need to extend their use of virtualization beyond server consolidation to create dynamic shared resource pools, across server, storage and network resources, to provide better utilization, scalability, and agility

To proactively and efficiently manage and support a highly virtualized and dynamic datacenter

Policy-driven automation will bring about the ability to respond quickly to changing business demands.

Self-service and chargeback to provide better transparency between IT and the business by providing information on the associated service levels and costs of a particular service.
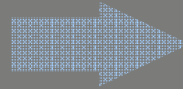
Delivering the next generation data center

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Business outcomes

Lower the cost of IT operations, provide higher quality of service, and increase speed in introducing IT change
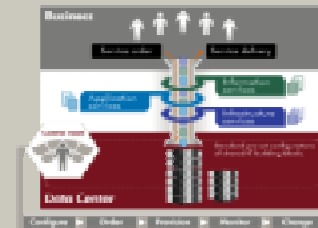
Current state
High-cost IT islands

Turn IT into a service provider

Future state
Low-cost pooled IT assets

24x7 lights-out computing environment, based on standard building blocks, automated using modular software, delivered through comprehensive services.

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