Sify to invest in over 200 MW of green power
AGENDA

1. GLOBAL DATA CENTER INDUSTRY
2. INDIA - GLOBAL EPICENTER, TRENDS & DRIVERS
3. DATA CENTER POWER - CHANGE IN PROFILE
4. OUR DATA CENTER JOURNEY & ROADMAP
5. sify® A VIBRANT PARTNERSHIP
GROWTH/COLOCATION MARKET SIZE BY REGION: 2024

North America
CAGR: 6.4%
Market Size: US$23.4 billion

EMEA
CAGR: 11.1%
Market Size: US$17.2 billion

South East Asia
CAGR: 12.9%
Market Size: US$3.5 billion

APAC
CAGR: 12.2%
Market Size: US$28 billion

Source: Cushman & Wakefield, Structure Research
BIG MARKET SHIFT DRIVING IT

Enterprises That Will Close Their Traditional Data Centers

Percentages of Respondents

Today 10%

2025 80%

Source: Gartner (February 2019)
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One of the fastest growing DC market
CENTRAL TO A DIGITAL MARKET

Data Centers to Power Up Indian Economy

- Data Centers would be classified as infrastructure assets from April 2022.

- India’s data center market is anticipated to reach USD4.6 billion by 2025, according to a report by NASSCOM.

- The Indian data center market currently houses an estimated 445 MW of critical IT capacity.

- In 2021, government introduced ‘Hyperscale data center scheme’ worth INR12000 crore (USD160.3 million) to facilitate the installation of data centers in the country.

- The Data Center Policy 2020 will drive ease-of-doing business and facilitate capacity building.
PROVING ITS SPURS

Data center provides boost to digital economy during lockdown

Increased data growth

- **14%** rise in daily data consumption—average 270 Petabytes (PB) during pre-lockdown to average 308 PB post - lockdown (during March 22nd-28th)
- **12%** rise in data usage in Andhra Pradesh and Bihar
- **7%** increase in data consumption in Maharashtra, highest data consumer
- **16%** more time spent by smartphone users over pre-COVID-19 period
- **80%** rise in subscriber base of a leading, OTT player, during first month of lockdown
- **24%** recovery in digital payments in June over April, as online spend picks up
- **1.5 mn** schools and ~40,000 colleges across the country depend on online education during lockdown

Impact of COVID-19 on digital economy

- **Work from office** disrupted
- **Captive servers** became inaccessible
- **Homes** became work, education and recreation centers
- **Data centers** recognised as essential services
- **Data security** became priority
- **Growing trend** of on-premises data centers migrating to co-location/cloud/hybrid solution

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THE CATALYSTS OF CHANGE

India will be an early adopter of 5G

A HOTBED OF TECHNOLOGY ADOPTION DRIVEN BY LOWEST ENTRY COST

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THE DIGITAL MARKET OPPORTUNITY

India is among the top countries globally on key aspects of digital adoption

- 1.2 billion people with unique digital identity
- 560 million internet subscriptions
- 354 million smartphone devices
- 0.1 percent cost per Gb of data in terms of average per capita monthly income
- 8.3 Gb/month data consumption per data subscriber
- 17 hours/week time spent on social media

Source: Govt. of India and MeitY 2020
THE FEATURE-RICH FUTURE

MEGA TRENDS

Augmented Reality
Urbanization Solutions for public
Convergence and connectivity
Smart is the new green
Smart city Initiative India
Future of Mobility

Smart Cards
Cashless Solutions e-payments and Gateways
Smart Security
Social Trends-Gen Y Geo socialization
Automation
Data Driven solution Big Data & Analytics
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# How will we build and operate data centers in the future?

## A LOOK AT DATA CENTER TRENDS – AND WHERE WE’RE HEADED NEXT

<table>
<thead>
<tr>
<th>Location</th>
<th>Structures</th>
<th>Energy Efficiency</th>
<th>Renewables</th>
<th>Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Today</strong></td>
<td>Near fiber networks&lt;br&gt;Data centers are constructed in areas with dense fiber networks</td>
<td>Cloud and on-premise&lt;br&gt;Hybrid-cloud, the mix of cloud and on-premise solutions, witnesses widespread adoption</td>
<td>Air-based cooling&lt;br&gt;Cold and hot air are redirected to keep equipment at the right temperature</td>
<td>Plugged in and RECs&lt;br&gt;Many data centers are plugged into the grid, balancing dirty energy with RECs</td>
</tr>
<tr>
<td><strong>Tomorrow</strong></td>
<td>Cool, Stable Climates&lt;br&gt;Climates, like the Nordic region, allow data centers to cool efficiently and save energy</td>
<td>Smaller and larger&lt;br&gt;Mega data centers benefit from economies of scale, micro data centers benefit latency and portability</td>
<td>Liquid and AI-assisted cooling&lt;br&gt;New cooling materials and AI-assistance emerges</td>
<td>Big tech buys renewables&lt;br&gt;FAMGA can afford to buy large amounts of RE for its centers</td>
</tr>
<tr>
<td><strong>Future</strong></td>
<td>Small and off-shore&lt;br&gt;Small, offshore data centers add new capacity quickly</td>
<td>No data centers at all&lt;br&gt;Data storage and computational resources are crowd sourced through P2P device networks</td>
<td>Reusing excess heat&lt;br&gt;Residual heat is recycled and redirected to communities</td>
<td>RE farms and data centers work together&lt;br&gt;Tech helps smaller buyers and producers connect</td>
</tr>
</tbody>
</table>

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EARLY SIGNS

GLOBAL GREEN DATA CENTER MARKET 2021-2025

Market growth will ACCELERATE at a CAGR of 19.48%.

Incremental growth ($B) 2020 2025
76.59

Growth Contributed by EUROPE
39%

Growth for 2021
15.51%

The market is FRAGMENTED with several players occupying the market.

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SIFY’S JOURNEY: 25 YEARS OF TRANSFORMATION

- **1995 - 1999**  
  - **Consumer Facing ISP**
  - First private ISP in India

- **2000 - 2005**  
  - **Shift to an Enterprise Services Company**
  - Launch of MPLS & Data Center services in India

- **2006 - 2012**  
  - **Full-Fledged Transformation into an Enterprise Services Provider**
  - Launch of Cloud services

- **2013 - 2017**  
  - **Converged ICT Services Provider**
  - Launch of private and hybrid cloud services

- **2018 - 2020**  
  - **Cloud@core**
  - Launch of complete end-to-end digital ICT services

- **2021 -**  
  - **Digital@core**
  - Launch of Digital transformation services

From revolutionizing consumer internet in the 90s to driving adoption of digital ICT services
Data center presence

Data Center Investments

CAPEX investment in DCs (Rupees Million)

- 2016-17: 775
- 2017-18: 456
- 2018-19: 1055
- 2019-20: 5031
- 2020-21: 2413
- 2021-22: 806 (Until Dec 2021)

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# SYNERGIES IN THE PARTNERSHIP

## ASSETS
- 11 Pan-India DCs with >80 MW capacity
- On track to add 200 MW in next 4 years
- “Cloud Connect” data superhighway
- 49 on-net data centers
- Enterprise and Hybrid Multi Cloud
- Enterprise Cloud grid fabric

## STRENGTHS
- 60+ renewable energy development specialists
- 1GW+ in delivery. 2 GW+ in pipeline
- Strong track record of renewable energy delivery
- Global network of GIG & Blueleaf Energy supporting Vibrant Energy

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Roadmap to **231MW** renewable energy for Sify

- **67MWp / 45MWac solar**
  - Maharashtra
  - COD in 1Q 2022

- **60MWp / 40MWac solar**
  - Maharashtra
  - COD in 2023-2024

- **42MWac wind**
  - Maharashtra
  - COD in 2023-2024

- **51MWp / 35MWac solar**
  - Maharashtra
  - COD in 2023-2024

- **11MWac wind**
  - Maharashtra
  - COD in 2023-2024

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VIBRANT, GIG’s India Renewable Investment Platform

GIG is a part of Macquarie Group which focuses on renewable energy investment

Blueleaf Energy is GIG’s APAC onshore renewable energy investment platform, operating on a standalone basis

Vibrant Energy is Blueleaf Energy’s India renewable energy investment platform, operating on a standalone basis
MACQUARIE GIG AT A GLANCE

- US$28+ billion of capital committed or arranged
- 11+ GW of operational projects
- 35+ GW in development
- Supported 3.9 GW of renewable energy projects with PPAs
- 450 renewable energy experts

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Thank you