New Thinking on Urban Infrastructure AT GIFT- A Smart City

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Vice President, GIFT

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Gujarat International Finance Tec - City
A Global Financial Hub
"The vision of Gujarat would be incomplete without capitalising on the in-house financial business acumen.

To tie-up with technology, to create a hub complete with infrastructure, to meet the needs of modern Gujarat, modern India and to create a space in the global financial world... that is my dream"

Shri Narendra Modi
Hon’ble Prime Minister of India
Demand For Financial Services In India

Significant Potential:

• Financial Services Sector transformed over the last decade
• Sector contributes significantly to the Indian economy
• Employs over 4 million people
• Represents around 5% of the GDP
• Estimated market capitalisation of over US$ 200 billion
• Offers distinct kinds of opportunities across several product markets

“Given India's continued economic growth, the financial sector will grow increasingly larger, with a prospect of 10 to 11 million jobs by 2020.”
“If India builds an International financial center, with suitable rules and regulations, the earnings out of financial sector exports will surpass that of IT”

Financial Services Centre’s Contribution

<table>
<thead>
<tr>
<th>Financial Hubs</th>
<th>Share Of GDP</th>
<th>Jobs Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>9</td>
<td>5.2</td>
</tr>
<tr>
<td>New York</td>
<td>10</td>
<td>5.4</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>13</td>
<td>5.5</td>
</tr>
<tr>
<td>Singapore</td>
<td>12</td>
<td>5.2</td>
</tr>
<tr>
<td>Zurich</td>
<td>10</td>
<td>4.0</td>
</tr>
<tr>
<td>Franfurt</td>
<td>5</td>
<td>5.0</td>
</tr>
<tr>
<td>Sydney</td>
<td>8</td>
<td>4.0</td>
</tr>
<tr>
<td>Tokyo</td>
<td>20</td>
<td>10.0</td>
</tr>
<tr>
<td>Dubai</td>
<td>11</td>
<td>N/A</td>
</tr>
<tr>
<td>Channel Islands</td>
<td>60</td>
<td>30.0</td>
</tr>
<tr>
<td>Luxemburg</td>
<td>30</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Source: IFSL; UK
### Categories of Major Financial Services Centers

<table>
<thead>
<tr>
<th>Participants</th>
<th>Niche/function-oriented international financial center</th>
<th>Full-scale international financial hub</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation only of foreign financial institutions allowed</td>
<td>Barcelona, Montreal, Edinburgh, Chicago</td>
<td>London, New York, Singapore</td>
</tr>
<tr>
<td>Participation of both foreign and domestic financial institutions allowed</td>
<td>Tax haven</td>
<td>Out-regional financial center</td>
</tr>
<tr>
<td></td>
<td>Bahamas, Malaysia, Bermuda, Mauritius</td>
<td>Hong Kong, Dublin, Dubai</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Limited offering</th>
<th>Full range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of sector/functions</td>
<td></td>
</tr>
</tbody>
</table>
• Purchases by Indian households and firms of IFS will be
  - Nearly $50 billion by 2015
  - Could exceed $120 billion by 2025

• More than USD 80 bn foreign exchange transactions done by Indian companies every year

• Export components of Indian industry is expected to expand three fold and reach USD 175 Bn in revenues by 2020 (Study by NASSCOM).
Govt. of India has approved GIFT Multi Services SEZ as an International Finance Services Centre.

GIFT is the only approved IFSC in India.
Activities in GIFT IFSC

1: Offshore Banking
- Foreign Currency Lending
- Taking of Deposits
- Issue of Securities
- Over the Counter (OTC) Trading in Derivatives for Risk Management and speculative purposes
- Venture Capital

2: Corporate Treasury Management
- Managing Foreign Exchange Transactions
- Hedging Operations
- Raising and Investing of Cost

3: Fund Custody, Administration and Custody
- Custody of Corporate Funds
- Trust Companies
- Asset Management
- Hedge funds
- Investment Counsellors and Portfolio Managers

4: Securities Trading
- International financial exchange
- Securities Trading
- Futures and Options Trading
- Commodities Trading

5: Insurance, Assurance and Reinsurance
- Life and Non-Life Insurance business
- Assurance Companies
- Captive Insurance
- Reinsurance and related operations

6: Others
- International Business Companies
- Back office operations
- Ship Management & Maritime Operations
- Export Finance Companies
- Companies involved in Lending activities, Trade finance activities, International Leasing, Foreign Exchange dealers, International factoring
- Representative offices
- Money Changers and brokers
DEFINING A SUCCESSFUL FINANCIAL SERVICES CENTRE

A Successful Financial Services Centre Has Six Key Building Blocks:

• Rational legal regulatory framework
• Attractive, sustainable local economy
• Stable political environment
• Highly developed infrastructure
• Strategic geographic location
• Good quality of life
GIFT - A new Thinking on Urban Infrastructure

- Globally benchmarked International Finance Centre
- Strategically located
- Central business hub 0.5 Mn direct & 0.5 Mn indirect jobs
- Targeting Financial Services & IT/ITeS sectors
- First of its kind development in scale, scope and quality
- State-of-the-art infrastructure
Strategic Location - India / Gujarat

- Centrally located in the state of Gujarat in Gandhinagar
- 12km From Ahmedabad International Airport
- On the bank of River Sabarmati
GIFT an Integrated Urban Development

Smart Business Environment:
• Benchmark office, high-rise district with landmark buildings

Integrated Residential Development:
• Well-planned residential housing projects
• Walk-to-work

Social Infrastructure:
• International Exhibition Complex
• Educational Institutes
• International and Domestic schools
• State of the Art Hospital
• Training School
• 5 star Hotels and Business Club

Technology:
• Broadband FTTP
• WiFi / Wimax
• Shared IT Services
• Global Connectivity

Overall Connectivity/Transport:
• External Connectivity includes MRTS / BRTS/ Roads
• Public-Private Modal Split 90:10

Smart Infrastructure:
• Uninterrupted and highly reliable power supply (99.999%)
• Next generation water & waste management, district cooling

Retail Cum Entertainment Hubs:
• High quality entertainment malls
• Large river front entertainment development
• Over 60% of the green Space
Development and Governance

• GIFT is the Master Developer of the City.

• GIFT Urban Development Authority (GIFTUDA) - constituted for well planned urban development of the area.

• GIFT Notified Committee - constituted for the better management at city level.

• GIFT has power distribution license for GIFT Area
GIFT: Master Plan

BUA : 62 mn.sq.ft.

Additional 22 Million to be developed after removal of height restriction by AAI

Building Use
- Commercial : 67% (42 Mn SqFt)
- Residential : 22% (14 Mn SqFt)
- Social : 11% (6 Mn SqFt)

Existing Shahpur Bridge
Bapasitaram Junction
Access Road
Processing area SEZ
Non-Processing area SEZ
Bridge under Construction
GIFT Smart Infrastructure – Physical

- Integrated infrastructure for better diversity
- Smart Technology ensuring energy conservation
- All utilities/services to be coordinated through single agency

INFRASTRUCTURE FACILITIES/SERVICES

- Roads and Transportation
- Water Systems
- ICT
- Power Generation and Distribution
- District Cooling System
- Domestic Gas Distribution
- Waste Management Systems
- Utility Tunnel
- Landscaping
External Transportation

- Grid of six Arterial Roads (Connecting to various areas of Ahmedabad and Gandhinagar)
- Metro Rail Transport System (MRTS) to GIFT
- Bus Rapid Transit System (BRTS) to GIFT
GIFT - A Transit Oriented Development
Major Internal Transport Corridor

Walkability through travellers
500 mtrs

Major Roads
- Arterial Road
- Sub-Arterial Roads
- MRTS corridor

Elevated Walkways
Multi Level Parking (MLP)

- Total Parking Requirement of GIFT City - 1.2 lakhs ECS
- No. of Car Parking in MLP – 60,000 car parks
MLP-2
SMART Transportation

Interactive road maps

Automatic vehicle location and tracking

Transit Node Management

Road condition system

Real Time Travel Response

Parking Management

Ridership analysis  Accident reporting  Vehicle emission monitoring  Safety management  Asset Management
**Water Infrastructure**

- **Raw Water from Narmada Canal**
- **Reservoir**
- **WTP**
  - **Filtered Water**
  - **Waste Water**
- **STP**
  - **Water with sludge**
  - **Waste Water**
- **RO Plant**
- **Domestic Uses**
  - **Waste Water**
- **Softening Plant**
  - **Filtered Water**
  - **Waste Water**
- **Makeup for Water Bodies**
- **Horticulture**
- **Cooling Tower**
- **Flushing Tower**

### SMART Water Infrastructure

- **Utility Monitoring**
  - Metering
  - Leak Detection
  - Controllers

### Key Points
- **Quality Water** - can be drunk from any tap
- **Storage of surface run-off & rain water**
- **Approach towards making the project water neutral**

**Drink from Any Tap**
District Cooling System

**Total Cooling Load - 2,40,000 TR**
- Efficiency through economies of scale
- Reduces energy costs
- Reduces maintenance costs
- Improves air quality and temperature control
- Reduces noise and vibration
- Conventional AC System not required

**DCS Control Centre - Smart Infrastructure**
- Monitoring District Cooling Plant System
- Simulation of cooling/energy requirements
- Analyze interface with distribution/usage for both the supply and return elements
- Evaluation of extensive economic scenarios
- Safety Management, Emergency response
Solid Waste Management

- Maximise resource recovery / minimal emissions
- Minimise impact on environment, human intervention, space requirement, impact on health hazard
- No waste visibility
- Power neutral

**Automatic Collection, Transportation and Segregation System**

1. The waste is thrown into a disposal chute
2. Computer controlled access
3. Waste sucked through pipes at a speed of 90 km/hr
4. Treatment through plasma gasification

- Monitoring E-Waste; Bio-medical, Hazardous Waste handling system
- Monitoring Central Waste Handling Facility
- Monitoring Residual Waste handling, rejects
- Safety Management, Emergency response
Power Infrastructure

- Underground cabling for power distribution within GIFT
- Substation and Distribution Automation
- Indoor Substation
  1. Gas Insulated Switchgears (GIS) substation for sub-transmission and distribution within GIFT
  2. Compact substation (CSS) in building
- Total Power Requirement - 750 MVA (from dual source)
- Emergency Power generation (Gas Based) - 150 MW
- Green Power

Reliability - **99.999%** which means outage of only 5.3 minutes/annum
Utility Tunnel Alignment

- Trunk line for Non-SEZ
- Trunk Lines in SEZ
- Connectors/ Feeders
Utility Tunnel Details

Access to Tunnel

Lighting & Ventilation

- Access to Tunnel
- Lighting & Ventilation
- DRY SECTION
- WET SECTION
- ICT Cables
- Power Cables
- DCS Blowdown
- Raw water
- Fire WTP Treated
- DCS Supply
- STP Treated
- DCS Return
- AWCS
- Control Cables
Create a **world class financial city** by offering an unrivalled business environment to global and local financial services enterprises.

Create **leading-edge** infrastructure, services and platforms and offer financial services enterprises a **significant competitive advantage to operate regionally and globally**.
GIFT ICT Vision

GIFT Occupants would have access to following ICT Services

**INFRASTRUCTURE**
- High Speed Fibre
- Network
- Diverse Local and International Connectivity
- Pervasive Wireless and Mobile Network
- Data Centres

**PLATFORMS**
- Financial Extranets
- CUG to Exchanges
- Voice
- Industry Specific Platforms
- City e-Portal
- Sensor Networks
- IPTV Internet Gateway

**SERVICES**
- Data
- Voice
- Wi-Fi
- Tier-4 Data Centres
- Business Continuity
- Security
- High Speed Internet Access
- Monitoring
Samruddhi Sarovar - An Entertainment Zone

- Samruddhi Sarovar (Master Balancing Reservoir)
- Food courts: Restaurants, Eateries, Dining
- Gathering spaces for concerts and events, Promenades
- Water sport activities
- Retail Facilities
- Walkers paradise: jogging track, viewing points
- Light and Sound show, Fountains, Water Shows
“Identify the defects before consumer noticing it.

Rectify the defect before receiving the complain.”
Central Command & Control

- C4 will take critical live feeds from all Control Centers
- C4 will take remedial actions in case of emergency
Infrastructure is being developed in phases.

Phase-I is in advance stage of implementation.
Development at GIFT……(1/2)

Roads & Street Lights

66 kV Power Receiving Station

Water Treatment Plant

District Cooling System
Development at GIFT......(2/2)

Automated Waste Collection System

Utility Tunnel
Allotment & Investment In GIFT
Allotments at GIFT City

Phase I – Allotment of around 12 mn. sq. ft. of BUA completed

- **World Trade Centre**
  - 1.0 Mn Sq Ft
- **Local Head Quarter**
  - 0.2 Mn Sq Ft
- **200 Beds Hospital**
  - 0.25 Mn Sq Ft
- **200 Beds Hospital**
  - 0.25 Mn Sq Ft
- **State Bank of India**
  - Local Head Quarter
  - 0.2 Mn Sq Ft
- **Residential Tower**
  - 0.15 Mn Sq Ft
- **Residential Tower**
  - 0.4 Mn Sq Ft
- **SANGATH®**
  - Residential Tower
  - 0.15 Mn Sq Ft
- **IL&FS**
  - 7.77 Mn Sqft
  - Commercial, Residential & Social
- **b.u. bhandari landmarks**
  - Residential Tower
  - 0.4 Mn Sq Ft
- **sterling Hospitals**
  - 200 Beds Hospital
  - 0.25 Mn Sq Ft
- **World Trade Centers Association**
  - World Trade Centre
  - 1.0 Mn Sq Ft

GIFT- A Global Financial Hub
Allotments at GIFT City – Contd...

Phase I – Allotment of around 12 mn. sq. ft. of BUA completed

ICSE School
0.1 Mn Sq Ft

Global Insurance Training Centre
0.2 Mn Sq Ft

Tier IV Data Centre
0.1 Mn Sq Ft

BSE Tower
0.5 Mn Sq Ft

Commercial, Residential, Hotel
& Shopping Mall
1.1 Mn Sq Ft
Allotments at GIFT City – Contd...

Phase I – Allotment of around 12 mn. sq. ft. of BUA completed

Business Club
0.16 Mn Sq Ft

Commercial Building
0.25 Mn Sq Ft
### GIFT — Phase-I Development
#### Investment & Employment

<table>
<thead>
<tr>
<th>Use Type</th>
<th>BUA (Mn. Sq.Ft.)</th>
<th>Investment (INR in Mn.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>7.2</td>
<td>55,000</td>
</tr>
<tr>
<td>Social</td>
<td>1.6</td>
<td>8,000</td>
</tr>
<tr>
<td>Residential</td>
<td>3.2</td>
<td>22,500</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>85,500</td>
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</tbody>
</table>

**Employment Generation in GIFT City by 2016- 30,000**

**Current Employment- 700**
Developing a modern urban infrastructure for Financial services is very CHALLENGING when the project is unconventional and state of the art infrastructure is to be implemented but, by Systematic Method, Innovative Strategies, Dedicated Team and Strong Management vision can be achieved.

*GIFT City is an example to follow*......
Thank you......