Lavasa A Smart City

MY CITY TECHNOLOGY LTD

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What, exactly, is a Smart City?

The term “Smart City” has no common or universal definition. It is often associated with the wide application of technology to municipal operations and all types of local service delivery. This is a misnomer. A “Smart City” is one that has been intelligently planned, laid out and maintained sustainably, often in ways that minimize life-cycle costs. A “Smart City” is one that has processes in place to make service delivery better, faster and cheaper. Many times, the application of a new technology will provide this edge, but sometimes it is a low-tech solution that best meets the “better, faster, cheaper” test.

As Lavasa’s technology partner, MyCity Technologies Ltd. helps the city make these decisions; but technology alone does not make Lavasa (or any city) smart.
What are the solutions to rapid urbanization in developing Asia & Africa? Especially India:

• Strategy for redeveloping & revitalizing existing mega cities

• Strategy for more effectively managing and regulating satellite townships and subdivisions developed on the periphery of existing cities

• Strategy for improving the quality of rural life to stem the tide of persons moving to cities

• Strategy for building new medium-sized cities to take the development, housing, environmental, food supply and infrastructure pressure off existing mega cities
Master Plan: Lavasa Integrated with Landscape

12,500 acres of development across on plotted land, with apartments, Retail, Hotels, Event and Convention Centres, Education, Information Technology, Biotech Parks & Recreation Facilities, built in phases.
Key Strategies

- "Livable" Smart Cities
  - Master Land Use Planning, New Urbanism (enforced) & GIS
  - Applying the right technologies; building infra upfront
  - Manage to an integrated and measureable community sustainability matrix, near India’s most productive corridor
  - Manage to agreed-upon performance outcomes

- Identify & place economic drivers in advance
  - Aggressive use of public-private partnerships springing from the economic planning
  - A business plan that replaces real estate revenues after first sales with operations and consumer revenues

- Governance questions must be resolved sooner rather than later
Impetus on higher institutional activity to stimulate future residential demand

Every sq. ft. of Non-residential development is expected to lead to approximately 2 sq. ft of residential demand

Initial plotted supply to subsidiaries & associates catalyzes economic development

Economic drivers generate significant residential demand
Lavasa – Infrastructure

- Road Network
- Water Treatment Plant
- Sewage Treatment Plant
- Telecommunication
- Power Transmission Lines
- Gadle Dam
Lavasa – Education & Healthcare

Apollo Hospital (Operational)

Ecole Hoteliere Lavasa

Educomp School

Ashiana

Christ University

Apollo Pharmacy
Lavasa – Hospitality

Fortune Select Hotel

Mercure

Ekaant – The Retreat

Novotel

Waterfront Shaw
Lavasa – Real Estate

Promenade

Villa Street

Villa

Retail & Hostel

Villa Cluster

Lakeside Apartments
Different Revenue Sources for Lavasa Corporation, Ltd.

- Villas and Apartments
- Assisted housing
- Retail
- Commercial
- Institutional plot sales
- Transportation Hubs, Parking
- PMC

Real Estate

- Tourism – Water sports, Adventure sports
- Hospitality – Hotels, Service apartments, Convention center, Spa & Clubs
- Leisure – Edutainment park, Amusement park, Golf course
- Education – Residential school, Colleges, Professional & Executive education
- Various business SPVs – Hostel, Retail, Laundry etc
- Infrastructure SPVs – Water, Power, Sewage, E-governance
- R&D – Corporate Research Ctr.
- TECHNOLOGY COMPANY
- Lavasa Lease Housing Agency

SPVs

CMS

- Municipal services
- Common area maintenance
- Transit and Parking Fees
- Services to SPVs
- Internal services to LCL
- Misc. revenue, e.g., licenses, plan review fees, fines etc.
Lavasa Corporation Ltd has collaborated with technology leaders like Wipro Limited and Cisco Systems to plan, implement and manage Information and communication technology (ICT) services across Lavasa Hill City. The strategic partnership is intended to focus on providing integrated and effective solutions for enhancing Technology leadership within the hill city.

The company founded as a result of this venture is named MyCity Technology Limited.
Mandate – Create a Smart City

- Lavasa: an E-City
- E-Governance (& integrated service systems)
- E-Learning
- E-Health Care
- E-Commerce
- E-Homes

Safe, Aware, Interactive, Efficient
Strategic Partners & Relationship

- Lavasa
- Tata Teleservices Limited
- Microsoft
- Tyco
- Airtel
- Enablence
- Tata Sky
- BE
- R&M
- Wipro
- Cisco
e-Governance in a Smart City

- Asset Management
- License and Permits
- Security Management
- Property Leasing Handover
- Transport & Parking Management
- Unified Billing
- Life Cycle Cost Management
- Customer Call Center
- Document Management
- Performance Management
- Language Support
- Citizen Portal
- Visitor Management
- Waste Management
- Security Management
- Smart Metering
- Land Management
- Water Management
- Corporate Social Responsibility
Our Infrastructure – Fiber from Pirangut

42 Km Fiber Infrastructure from aggregation point of SPs at Pirangut to Lavasa
Our Infrastructure – GPON Network

- 180km fiber network for Dasve
- GPON Architecture
- 10 year sustenance and scalability

All Services on ONE Network
Our Infrastructure – Telecom Towers

- 5 Telecom Towers
- For Mobile, Internet and Radio Trunking
- IBS for local coverage improvement.

Seamless connectivity across Lavasa City
Our Infrastructure - GIS

- All Infrastructure, Buildings, Utilities data mapped on GIS
- Enable location based management of services

Geographical Information System For Planning And Management Of Organization and Resources
Master Plan: Dasve
Intranet GIS Website – construction status, utility, environment, city management services, etc., can be viewed online.
GIS in Citizen Contact Centre

[Map of an area with various locations such as Pullman Hotel, Connector, Promenade, etc., and a small window showing request status with categories: Pending (7), Closed (3), Resolved (155), Open (52).]

- CCC Ticket No: 20111003001
- Name of Caller: Gautam (Le Monte)
- Caller Comments: Tata Photon Internet connection required
- Caller Phone Number: 07360892
- Caller Email ID: gautamset08@gmail.com
- Type of Caller: Tenant
- Call Category: IT
- Call Sub Category: Other
- Call Received By: Ranjit Dhote
Original Road Alignment (Using 3D GIS)

The road design created a situation where deep cuts and heavy fill seemed inevitable. This situation involved high cost and deprives access to precious flat land.
Revised Alignment Based on GPS Track Log

• Based on GPS logs and site observation it was decided to avoid large cut and fill by not linking the two roads.
• Instead they were converted into dead-end streets.
Smart Home

Wi-Fi Enabled Home

Living Room Light Automation

Digital Security

IP Based Wireless Door Bell

iPad or Android Pad to Operate Home

Video Door Phone, Light Automation & Intrusion System
Wi-Fi Internet Services

Centrally administered Seamless Wi-Fi Internet access at Hospitality and Commercial Establishments:

- Ekaant The Retreat
- Hotel Mercure
- Fortune Select Dasve
- Lavasa International Convention Center
- Will be extended to other properties and the Promenades
- Creation Public and Private Hot Spots.
Citizen Contact Center

Citizen Contact Center For Receiving And Handling Large Volume Customer Care Requests
Video Conferencing

A portable Video Conferencing System for Citizen And Commercial Establishments.
Tele Presence:

- A state of art Telepresence facility to improve interaction and information exchange.
- LCL has 5 sets of high end Telepresence equipment from Cisco, installed between Vikhroli (Mumbai) office and Lavasa Town Hall, LEC and LICC and can be used as a Public Room.
Digital Information

- Interactive information system
- Public Kiosks
- Digital Signage

Public Information System – Kiosks and Signage
Telemedicine:

A desktop based Telemedicine solution from CISCO is commissioned at Apollo Lavasa Hospital. This patient desk will help the Apollo hospital at Lavasa to leverage the experts/doctors available in Apollo hospitals outside Lavasa by allowing a real time interaction and data exchange.
Security & Surveillance

- UVSS with LPR and Driver Image
- Command Center
- City Security & Surveillance
- Critical Installation access control

Security & Surveillance To Monitor Activity Real Time
Smart Parking and Traffic Management

Efficient Parking and Traffic Management and Intelligent City Bus Service for Citizens
Technology Supported Transport

SKYBUS
Lavasa E-bus
Smart Metering

- Metering data collection management
- Prepare and distribute collection route map
- Power cut control management
- Data processing and repurposing for interconnection with other key business systems

- Collection of individual household metering data
- Command sending to cut off/on switch
- Sending/receiving of data routing/multi-hop system
- Store collected data

Smart Metering For Centralized Utility Monitoring
Integrated Building Management System

- High Speed Internet / Wireless
- Ambient Music / TV
- HVAC
- Visitor management
- Interactive media
- Access
- Lighting
- Elevator
- 24/7 Monitor
- Fire
- Video surveillance
- Energy
Lavasa Cashless Cards

Lavasa will have a Prepaid Payment System - An experience of Shopping with easy and secure forms of payment.

- Single card acceptable at all outlets at Lavasa.
- Single card for multiple uses such as access card, identity card and payments.
- A basket full of loyalty benefits.
Environmental Initiatives – Water
Dasve Dam
Satellite Images of Village Dasve

Landuse/Landcover Classification of Dasve Around Lavasa, Pune

Legend:
- Vegetation
- Dense Vegetation
- Barren Land
- Water Body
- Sand/Gare Soil
- Shrubs
- Built up

Apr 2002

Landuse/Landcover Classification of Dasve Around Lavasa, Pune

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Apr 2009
Master Plan: Mugaon
Lavasa - 2007

Dasve

Promenade Site

Convention Centre Site

Water Treatment Plant Site

Dasve Dam Site

Town & Country Club Site
Dasve Town

Promenade

Lavasa International Convention Centre

Dasve Dam

Dasvino Town & Country Club
Lavasa Tie-ups

Hospitality
- FORTUNE HOTELS
- Mercure
- LAKESHORE
- Ekaant
- The Waterfront
- DASVINO
- xthril
- pullman
- NOVOTEL
- Oakwood
- Comfort Inn
- Eaton
- Hockey Australia
- Langham Place
- FALDO Academies
- FALDO Design
- Days Inn
- TexKare Cleaners
- Radisson

Tourism & Leisure
- STEVE REDGRAVE ROWING ACADEMY
-坏minton Academy

Sports Academies

Retail
- Café Coffee Day
- HomeTown
- bambooos
- SUBWAY
- Pizza Vala

Education
- Sunshine Coast Institute of TAFE
- Oriental Octopus
- Christel House
- The Preschool Specialist
- Euro Kids
- FUN

Corporate
- Ashiana
- Union Bank
- Clockwork
- THE TIMES GROUP
- CITIZEN

Passionate Developers

City Services
- STRATA GLOBAL GROUP
- Whistling Thurst Services

Institutional
- arc
- MY CITY TECHNOLOGY LTD

2000 rooms
2 million visitors
Restaurants and Shops
Vision for 10,000 students
Can you have Smart Buildings if they are not supported by Smart Cities?

Is it possible to have either Smart Buildings or Smart Cities without a quantifiable method for measuring & achieving urban sustainability?

What are the non-technology elements that make successful Smart Cities?

If Smart Buildings require Smart Cities (E-Cities), then who will pay for the new infrastructure required to support Smart E-Cities?

Who would invest in public infrastructure, except via limited “Build-Operate-Transfer” BOT schemes, since the government can seize most local infrastructure without providing compensation to the developer?

What local governance changes are required to support robust use of the “build-operate-own” model of PPPs?
Conclusions & Recommendations

• Greater use of the BOO model of PPPs
• New governance model customized to developers willing to assemble large tracts for new cities, obtain Master Plan approval and minimum quantum of investment
• Agreement regarding measurement of sustainable urban development/services
Thank You!