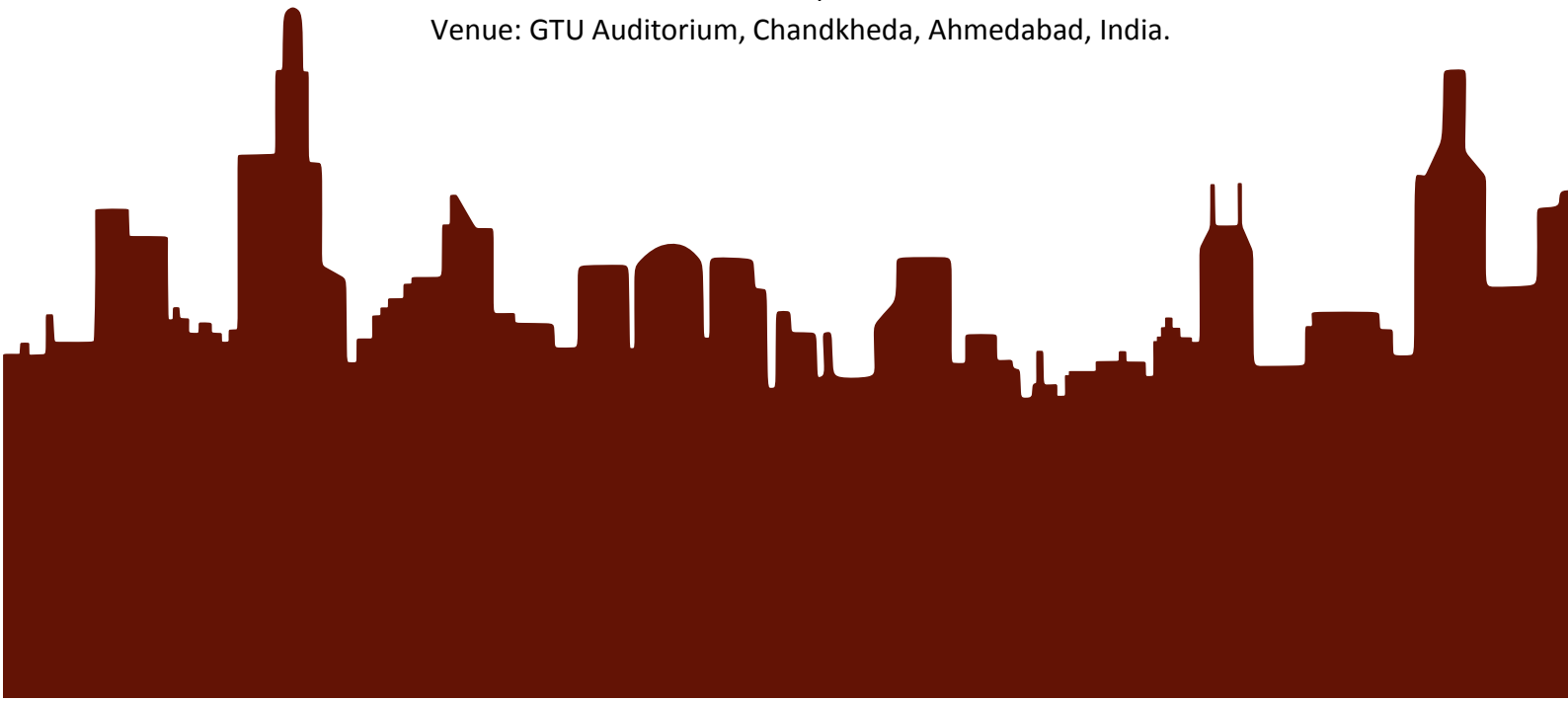# GTU Graduate School of Smart Cities Development

Inaugural Workshop Report

Gujarat Technological University

Date: 18th April, 2015
Venue: GTU Auditorium, Chandkheda, Ahmedabad, India.

GTU Graduate School of
Smart Cities Development
Inaugurated by

Hon'ble Minister Shri M. Venkaiah Naidu
Minister of Urban Development, Government of India

18th April, 2015 at GTU Auditorium, Chandkheda, Ahmedabad

Knowledge Partners

Gujarat International Fincnace-Tech City

Gujarat Infrastrucutre Development Board

Gujarat Energy Reearch & Mangment Insitutue

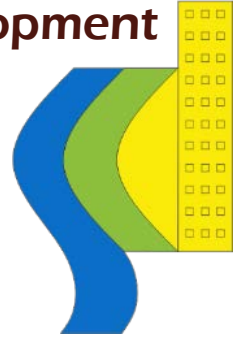*(Awaiting formal confrimation from the following.)*

CMAI Association of India

Microsoft Corporation

IBM

Graduate School of Smart Cities Development

Disclaimer

Foreword

The urban India is continuously showing rapid growth, with expansion in economy, spatial extent and population. This has led to enormous pressure on infrastructure & services, poor quality of life in urban areas and deteriorating environment.

Indian civilization has always been alive to nature's sustainability, even as it has developed over many millennia. Government of India has decided to develop 100 Smart Cities, which will make the urban areas more livable in terms of employment, education, health, recreation, and development. We believe that this will be done according to the basic genius of our way of thinking and living.

Graduate School of Smart Cities Development is one of the initiatives by Gujarat Technological University. It will contribute to the nation's Smart City Mission. The Graduate School will work with the researchers at GTU and outside so that the concepts of smart city development not only develop a few hundred smart cities in the world but it also helps cities and towns to manage themselves in a way, which improves the quality of life everywhere.

The smart development goal can only be achieved if all stakeholder of the smart city are involved and give their contribution. The Graduate School will contribute by imparting education, related to smart cities development. The Graduate School will also be involved in the research, consultancy and capacity building activities to support the governments at all levels.

We are grateful to Hon'ble Shri M. Venkaiah Naidu for inaugurating GTU's Graduate School of Smart Cities Development. We are thankful to all the associated organization and personnel for their contribution and expect their continued support as we work collaboratively to contribute towards a better future for urban India.

Akshai Aggarwal,
Vice Chancellor,
Gujarat Technological University,
Chandkheda, Ahmedabad-382424, Gujarat, India.
Website: http://gtu.ac.in/

Acknowledgement

Date: April 20, 2015

I would like to express my deepest appreciation to Hon'ble Minister Shri M. Venkaiah Naidu, Minister of Urban Development, Government of India for taking time out of his busy schedule and coming to inaugurate GTU graduate School of Smart Cities Development (SSCD). His august presence in the inauguration even has provided great inspiration and encouragement to us.

I would like to express my gratitude to the visionary and forward looking Vice Chancellor of Gujarat Technological University, Hon'ble Dr. Akshai Aggarwal, who always encouraged us and guided our team with passion. Furthermore I would also like to acknowledge with much appreciation the crucial role of the workshop management team. A special thanks goes to the team working at the core, Naresh Jadeja, Vimal Sharma, Vikrant Vala, Darshana Chauhan, and Gopal Bhatt, who helped in assembling all the parts together to a very successful end.

My thanks and appreciation also goes to the learned speakers at the workshop. The workshop would not have been so enlightening and informative to the participants without the excellent presentations and speeches of the distinguished speakers. Last but not least, many thanks to the participants for their keen interest in the workshop.

--

Prof. Shri Rajnikant Patel - MS (USA), MBA (USA)
Honorary Director, Graduate School of Smart Cities Development, and
Advisor, Research & Consultancy Services Cell,
Gujarat Technological University,
Chandkheda, Ahmedabad-382424, Gujarat, India.
Contact No.: (+91) (79) 23267587 | Mobile No.: (+91) 9374071706
Email Id: gtu-rcsc@gtu.edu.in | smartcities.gradauateschool@gtu.edu.in
Website: http://smartcities.graduateschool.gtu.ac.in/ | http://gtu.ac.in/

Contents

List of Figures

Inaugural Workshop Program Schedule

Inaugural Workshop of
Graduate School of Smart Cities Development
Gujarat Technological University

Date: Saturday, 18th April, 2015
Venue: GTU Auditorium, Chandkheda, Ahmedabad

**Hon'ble Minister
Shri M. Venkaiah Naidu,
Govt. of India**.

Final Program Schedule

09.30 – 10.30	Registration and Tea/Coffee with snacks	
INAUGURAL SESSION *(10.30 – 11.45)*		
10.30 – 10.35	Lightening of lamp	Dignitaries on Dias
10.35 – 10.40	Welcome to Guests	**Shri J C Lilani** Registrar, Gujarat Technological University.
10.40 – 10.55	Context Setting of the Workshop	**Dr. Akshai Aggarwal** Hon'ble Vice Chancellor, Gujarat Technological University.
10.55 – 11.10	Key Note Speaker	**Prof. N K Goyal,** President, CMAI Association Of India, New Delhi. (GTU Knowledge Partner)
11.10 – 11.20	Guest of Honor	**Ms. Mona Khandhar-IAS** Secretary, UD&UHD, Govt. of Gujarat, Gandhinagar.
11.20 – 11.25	Introduction of Chief Guest	**Prof. T. Harinarayana,** Director, GERMI - PDPU, Gandhinagar. (GTU Knowledge Partner)
11.25 – 11.40	Inauguration & Address by Chief Guests	**Hon'ble Minister Shri M. Venkaiah Naidu** Minister of Urban Development, Government of India, New Delhi.
11.40 – 11.45	Vote of Thanks	**Prof. Shri Rajnikant Patel** Hon. Director, Graduate school of Smart Cities Development, GTU.
11.45 - 12.15	**Tea/Coffee Break**	
TECHNICAL SESSION *(12.15 - 13.45)*		
12.15 - 13.45	Panel Discussion	**Strategic Options For Fast Smart Cities Development** **Chairperson**: **Prof. Rajnikant Patel**, Hon. Director, Graduate school of SCD, GTU

		Members 1: Ms. Swati Buch, General Manager, GIDB, Gandhinagar. (GTU Knowledge Partner) **Members 2**: Dr. Rajul K. Gajjar, Dean, GTU and Principal, VGEC, Ahmedabad **Members 3**: Mr. Nilesh Purey, Vice President, ICT, GIFT City, Gandhinagar. (GTU Knowledge Partner) **Members 4**: Prof. T. Harinarayana**,** Director, GERMI - PDPU, Gandhinagar. **Members 5:** Prof Saswat Bandopadhyay, CEPT University, Ahmedabad. **Members 6:** Dr. Debasis Sarkar, HOD, PDPU, Gandhinagar. **Members 7**: Prof. Sejal Patel, HOD, CEPT University, Ahmedabad. **Members 8**: Prof. Dr. K. N. Sheth, Director, SPCE, and Dean, GTU. **Member 9:** Prof. Dr. O P Vyas, Indian Institute of Information Technology, Allahabad
End of Panel Discussion with Question-Answer Round		
Summary of Workshop Discussions		
End of workshop with Networking Lunch		

GTU Graduate School of Smart Cities Development

Inaugural Workshop Report

Background

Gujarat Technological University (GTU) is a technological university established by Government of Gujarat vides Act No. 20/2007. GTU is the largest State Government University with more than 4,50,000 students including international students and 17,500 faculty members spread over in more than 486 colleges in Gujarat in disciplines of Engineering, Architecture & Planning, Pharmacy, Management, Computer Application and Hotel Management & Catering Technology.

The Innovation Council of GTU is well known in the country for its initiatives in grass root innovation work by its engineering students for solving problems of SME industrial units located throughout Gujarat. Intensive innovation efforts have resulted in many patentable outcomes. Its programs for student start-up development and its programs for dissemination of knowledge about IPR are well-known all over the country. It's Policy Documents for Student Start-up Development and Skill Development Mission are being used by universities all over India.

GTU has fourteen Post-graduate Research Centers, including Center for Infrastructure, Transport and Water Management, Center for Environmental and Green Technologies and Center for Environment and Energy Efficiency. It has sixteen Research Groups and three Boards for studies and Research.

Smart Cities Initiatives in India

Government of India has decided to develop 100 Smart cities. Developed nations and MNCs are partnering with Indian Governments for developing smart cities in India. USA has signed MoU with India for developing three cities, namely, Allahabad, Ajmer and Vishakhapatnam, as smart cities. As per the pacts, the U.S. will assist the cities in project planning, infrastructure development, feasibility studies and capacity building. The State Governments for their part will provide resources like technical information and data related to smart cities planning; staff, logistical and travel support and budgetary resources. Similarly Kyoto, Japan is assisting Varanasi in UP to develop it as a smart city. The city of Surat has tied up with Microsoft India for developing smart applications for Surat. Other similar partnership are under progress in India.

Such potential smart cities development, calls for leading academic Universities/institutes like GTU to get involved for Studies, Capacity Building, Training Courses, Research, Consultancy etc. to act as effective resource centers for Smart Cities Development.

GTU's Journey so far in contributing to smart cities development

GTU has been working on smart cities since 13th July 2010, when GTU had an invited talk of the Executive Director of GIFT City at Aryabhatt Hall, LDCE, Ahmedabad.

GTU established Post-graduate Research Center for Infrastructure, Transportation and Water Management, (which works on solid waste management, and other infrastructure needs of our cities),

Center for Financial Services and Center for Governance Systems in Businesses, Industries, Universities, Hospitals, NGOs and Governments and 11 other centers.

On 1st August 2014, a call was given to the colleges to take up a study of Smart City technologies in Plexus (GTU's e-newsletter for Colleges). Colleges from Rajkot, Surat and Ahmedabad took the opportunity and started working on smart cities development.

A Seminar on "Smart Cities-Quo Vadis?" was organized on 30th August 2014 at GTU which turn out to be a great success. GTU has established a Research group on 'Smart Cities for the Next Generation' on 9th January 2015. It consist of 41 Professors from Colleges all around the state.

GTU's Vice-Chancellor outlined a plan for developing smart city technologies through GTU students by collaborative work at the 61st Foundation Day of the Institution of Electronic and Telecommunication Engineers at Ahmedabad on 2nd November 2014.

About GTU Graduate School of Smart Cities Development (SSCD)

Gujarat Technological University has set up the Graduate School of Smart Cities Development so that a resource center for the nation can be created which understands the requirement of the cities and citizens and helps in the smart development by producing required resources. The School will work for Capacity Building, Training Courses, Research, Consultancy etc. to act as an effective resource center for Smart Cities Development.

Vision of SSCD

"To become a national resource center in smart cites development by developing as a point of confluence for Industry, Academia and Government and help developing policies and plans at various Governmental levels."

Objectives of SSCD

To achieve the vision of becoming a focal point for smart development in India, the objectives of the school are laid out into three different groups.

Academic Objectives

- One year full time post graduate diploma course on smart cities development.
- Conducting short certificate courses on related topics for developing skilled workforce.
- E-courses on various aspects of organization of and life in smart cities.

Research Objectives

- To work with universities and research institutions across the globe to develop new technologies.
- To conduct research on the requirements of the city and citizens and help determine the best of technologies being used across the world in collaboration with GSSCD RESEARCH PARTNERS.
- To develop strategies for development, which enhances cultural strength of our diverse society in the area, where the smart city is located.

Consulting & Advisory Objectives

- Organizing Seminars / workshops /symposium in India.
- Capacity building and training by training municipal engineers and managers, government officers and industrial workers, required for smart cities.
- Advisory functions to government and industry.
- Techno management consultancy

Administration

Administration of the Graduate School is at two distinct level;

1. Board of Management for administration of the Graduate School.
2. Board of Advisors for advising as expert resource person.

Board of Management (BOM)

The Board of Management headed by GTU Vice Chancellor as Chairman. Other members of the Board are including Advisor (RCSC), Registrar, Chief Account Officer, and GTU Deans of Engineering, Research, Management, Pharmacy, Directors/ Principals of Colleges, Financial Expert and other industry experts as selected by the Vice Chancellor. Shri Rajnikant Patel, GTU Advisor (RCSC) will act as first Hon Director of the Graduate School until regular full time appointment is made.

Board of Advisors (BOA)

Board of Advisors is also headed by GTU Vice Chancellor as the Chairman. Each Knowledge Partner have one representative as permanent member of the BOA. Expert Faculty Members in Smart Cities from GTU and from other reputed institutions are invited to join the Advisory Board. In addition other experts from business, industry, research and academia are planned to be appointed, by the GTU Vice Chancellor, as member on the Board.

Knowledge Partners

GTU seeks to involve industries and the society in all its Post-graduate research centers and schools in order to ensure that its studies and research have a relevance to the needs of the society and the industries. Accordingly it is planned to have knowledge partners from industry and from cities to avail of their real life experience.

Following organizations are the Knowledge partner of SSCD.

1. Gujarat Infrastructure Development Board (GIDB)
2. Gujarat International Finance Tec-City (GIFT City)
3. Gujarat Energy Research & Management Institute (GERMI)
4. CMAI Association of India*
5. Microsoft India*
6. IBM India*

* Subject to formal confirmation

Research Partners

Research Center for Infrastructure, Transportation and Water Management (CITWM) at Gujarat Technological University is research partner of Graduate School of Smart Cities Development (SSCD). The center will conduct research activities for the graduate school. The Graduate School has also invited engineering colleges and research institutes to become Research Partner with the graduate school. By this the graduate school is attempting to make only one of its kind network of expert from various domain having similar interest of contribution in smart cities development.

CITWM

Inauguration Workshop of Graduate School of Smart Cities Development (SSCD)

Gujarat Technological University organized inaugural workshop of Graduate School of Smart Cities Development on April 18, 2015 at GTU Chandkheda Campus in Ahmedabad. Shri M Venkaiah Naidu Hon'ble Minister of Urban Development, Govt. of India was invited as chief guest of the event. The Graduate School of Smart Cities Development was inaugurated by Hon'ble Minister Shri M Venkaiah Naidu.

Inaugural Session

The Inaugural session involved welcome speech by Hon'ble Registrar of GTU Shri J C Lilani; Context Setting of the Workshop by Hon'ble Vice Chancellor of GTU Dr. Akshai Aggarwal; Key Note speech by Prof. N K Goyal**,** President, CMAI Association of India (GTU Knowledge Partner); Speech by Guest of Honor Ms. Mona Khandhar-IAS**,** Secretary at UD&UHD, Govt. of Gujarat; Introduction of Chief Guest Prof. T. Harinarayana**,** Director, GERMI – PDPU (GTU Knowledge Partner); Inauguration & Address by Chief Guests Hon'ble Minister Shri M. Venkaiah Naidu, Minister of Urban Development, Government of India; and Vote of Thanks by Prof. Shri Rajnikant Patel, Hon. Director, Graduate school of Smart Cities Development.

Welcome Speech

By Shri J C Lilani, Registrar, Gujarat Technological University.

The workshop was inaugurated by lighting the lamp with Saraswati Pujan by all the dignitaries followed by a welcome speech by Shri J C Lilani, Registrar of Gujarat Technological University. Shri J C Lilani mentioned that this was an historical event at Gujarat Technological University. He said that the role of GTU in smart cities mission will be to contribute research, capacity building and policy development related to smart cities. He asked Government of Gujarat, Industries and Research organization to get involved in the initiative at GTU to make our Hon'ble Prime Minister Shri Narendra Modi's vison of smart cities into a reality.

Figure 9: Welcome speech by Shri J C Lilani, Registrar, GTU

Figure 1: Context Setting of the Workshop by Dr. Akshai Aggarwal Hon'ble Vice Chancellor, GTU.

Context Setting of the Workshop

By Dr. Akshai Aggarwal Hon'ble Vice Chancellor, Gujarat Technological University.

Hon'ble Vice Chancellor of GTU, Dr. Akshai Aggarwal in his inaugural remarks described the activities which GTU has been doing since many years in the field of Smart Cities. He mentioned that the objective of smart cities would be to enable its citizens to work efficiently, use the citizens' competence optimally and to facilitate a great quality of life for its citizens. A Smart City will be required to be managed very well through transparent processes. It will have to inculcate a feeling of pride in the city among its citizens so that citizens are motivated to maintain civic discipline and behave responsibly.

He defined the role of the University and the Graduate School in the development of the Smart Cities of India. He also mentioned about the issue of change management, which the School has to study so that it may be implemented efficiently in smart cities. He concluding by saying that the Graduate School for Smart Cities Development at Gujarat Technological University will work for the development of the smart cities sector in India and the world.

Click here to see the online video of Dr. Akshai Aggarwal's Full Speech.

Key Note Speech

By Prof. N K Goyal, President, CMAI Association of India, New Delhi. (GTU Knowledge Partner)

Figure 17: Key Note Speech by Prof. N K Goyal, President, CMAI Association of India, New Delhi.

Prof. N K Goyal started off by giving compliments to NDA Government and Hon'ble Prime Minister of India for vision on Smart Cities in India. He then complemented GTU Vice chancellor for this initiative of opening graduate school of smart cities development which very well aligned with the vison of Hon'ble Prime Minister.

He explained the desperate need of the smart cities due to increasing population and pressure on the existing urban infrastructure. As described by him the challenges for smart cities development are proper application of ICT, sustainable urban planning, climate change, environmental matters, non-renewable resources, social and economic development, increasing populations, efficient city infrastructures, Governance & Funding etc. He mentioned that adopting the concept of smart cities from already developed smart cities would be helpful to us but emphasis should be given on independent thinking to develop strategy as per Indian situation.

Guest of Honor

Ms. Mona Khandhar-IAS Secretary, UD&UHD, Govt. of Gujarat, Gandhinagar.

Ms. Mona Khandhar started with congratulating GTU for the very futuristic initiative by accessing the requirement and initiate the process by opening graduate school of smart cities development. She further stated that the developmental journey of our country's growth was essentially an Incremental

Figure 25: Speech by Guest of Honor, Ms. Mona Khandhar-IAS, Secretary at UD&UHD, GOG

growth in the previous government as against the vision of new government of exponential growth. The vison of India's urban development is not only limited to development 100 Smart Cities development but it also includes affordable housing, smart infrastructure, Inclusive land use planning, smart urban transport and smart waste management in all urban areas.

She pointed out the need of preparedness not only at bureaucratic or governmental levels but also at community level to get transformed, to get skilled and to enhance our capabilities. Therefore community involvement in developments becomes a vital factor. She mentioned that the city cannot become smart city without smart waste management and a city cannot be a zero waste city merely by a government resolution but it also needs transformation of urban community by changing behavioral patterns and participation of people in making the city clean.

She emphasized on the role of Information & Communication Technologies (ICT) in smart cities development. Further she mentioned about the importance of education and skill development in smart urban development. Lastly she said that the city have to be livable. She explained this by giving an example that if a city is able to attract the richest person of the city into the public places, it will be called as a livable city.

Click here to see the online video of Ms. Mona Khandhar's Full Speech.

Introduction of Chief Guest

By Prof. T. Harinarayana, Director, GERMI - PDPU, Gandhinagar.

Figure 33: Introduction of Chief Guest by Prof. T Harinarayana Director, GERMI - PDPU, Gandhinagar.

Prof. T. Harinarayana, Director, GERMI - PDPU, Gandhinagar introduced Hon'ble Minister Shri M Venkaiah Naidu as following:

Hon'ble Minister Shri Muppavarapu Venkaiah Naidu from Nellore district of Andhra Pradesh, is a prominent leader of the Bharatiya Janata Party and has also served as the National President of the party from 2002 to 2004. Currently he is serving the nation as Union Minster for Urban Development, Parliamentary Affairs, and Housing & Urban Poverty Alleviation. Earlier, he was the Union Cabinet Minister for Rural Development in the Atal Bihari Vajpayee government.

After graduating from V.R College, Nellore, he obtained the law degree from Andhra University, Visakhapatnam. Right from my college days, He was deeply interested in the welfare of the common man, particularly the farmers and the down trodden sections of the society. He was immensely inspired by the selfless sacrifice and the principled politics of the leaders who had fought during the freedom struggle and also those who had valiantly opposed the emergency.

15 •

Both as a student leader and in public life he gained prominence as a brilliant orator, who vigorously championed the cause of the farmers, rural people and development of the backward areas. He was imprisoned for several months during the dark days of emergency, for having fought for preservation of fundamental rights and freedom of the countrymen. Besides being an avid reader, he published several articles on subjects of public and political interest, democratic decentralization and on other important issues of national concern.

Inauguration & Address by Chief Guests

By Chief Guest Shri M. Venkaiah Naidu, Union Minister for Urban Development, Parliamentary Affairs, and Housing & Urban Poverty Alleviation.

Inaugural Session in Progress

Shri M. Venkaiah Naidu started with expressing his happiness of being in Gujarat and admired the leaders from the land of Gujarat, namely, Mahatma Gandhi, Sradar Vallabhbahi Patel, Shri Morarji Desai and Shri Narendra Modi.

He showed the concern about rapid urbanization in India and low quality of life of urban people due to lack of infrastructure and proper services. He said, "Migration driven urbanization over the last few decades have result in a serious mismatch between the demand and supply of social, physical, economical and Institutional infrastructure, adversely affecting the quality of life."

Figure 41: Inaugural address by the Chief Guests Shri M. Venkaiah Naidu, Hon'ble Minister for Urban Development, Parliamentary Affairs, and Housing & Urban Poverty Alleviation, Government of India

Stating the need of smart urban development, he said, "The need Urbanization is a serious socio-economic transformation process which needs to address in all seriousness so as to enable orderly chain which is conducive to the needs of economic development of our country besides enabling people to fulfill their aspiration in urban areas. Managing this urbanization needs serious studies in

16 •

understanding the various aspects associated with it so that this change management can be properly handled."

Defining smart cities in Indian context, he said, "The overreaching objective of our government led by Hon'ble Shri Narendra Modi is to enable inclusive development under the smart city initiative intended to ensure qualitative improvement in basic infrastructure in urban areas to enhance the quality of urban life besides ensuring better spatial planning to make the cities in more inclusive nature and enabling responsive urban governance thorough citizens for better delivery of services. Effective public transportation, assured supply of utilities like water & electricity, sanitation, energy conservation, increased use of renewable energy sources, technology based governance, information services, integrated land use, proper planning, advance planning, environment conservation, ICT are the other components of making our cities smart."

The Minister said that besides earlier stated requirements, we also need innovative technologies, smart leadership, renewable energy sources, emissions reduction & environment conservation to make the city livable, citizen involvement, People-Public-Private investment for resources generation and water harvesting & Water conservation techniques for smart cities development.

He also mentioned that there will be an Innovative process of selecting aspirant of smart cities which is going to take place. He said "The criteria for selection of smart cities will be capacity of the city decided by its population, revenue generation, expenditure, employment opportunities, spatial planning, rating of sanitation & waste-water management, rating of water supply, rating of power supply, rating of solid waste management, rating of public transportation, rating of health care facilities, rating of educational facilities, creditworthiness, boldness to levy taxed, etc."

The minister complemented Gujarat Technological University for starting GRADUATE SCHOOL OF SMART CITIES DEVELOPMENT and said "I am glad that the GTU has come out with the initiative of setting up a graduate school of smart cities development in the context of central government initiative for urban development. I am sure as the course content of various programs of this school will be finalize, it will cover all this aspects of urban transformation and change management."

Lastly, the minister inaugurated the website of GTU graduate school of smart cities development.

Click below to see the online video of Hon'ble Union Minister Shri M Venkaiah Naidu's Full Speech.

Vote of Thanks

By Prof. Shri Rajnikant Patel, Hony. Director, School Smart Cities Development, GTU.

Figure 50: Vote of Thanks by Prof. Shri Rajnikant Patel, Hony. Director, School Smart Cities Development, GTU

Prof. Rajnikant Patel thanked Hon'ble minister for accepting the invitation for inauguration of Graduate School of Smart Cities Development at GTU. Prof. Patel acknowledged Hon'ble Vice Chancellor of GTU, Dr. Akshai Aggarwal this visionary initiative by him. He complemented Hon'ble Prime Minister Shri Narendra Modi to provide GTU a visionary Vice Chancellor. He also thanked all other dignitaries on dais. Prof. Patel appreciated the efforts put in by the management team to make the event successful.

Technical session

The technical session consisted of panel discussion on strategic options for smart cities development followed by a question answer round.

Panel Discussion

Following dignitaries were present on dais for panel discussion for Strategic Options for Smart Cities Development

- Prof. Rajnikant Patel, Hon. Director, Graduate school of SCD, GTU;
- Ms. Swati Buch, General Manager, GIDB, Gandhinagar. (GTU Knowledge Partner)
- Dr. Rajul K. Gajjar, Dean, GTU and Principal, VGEC, Ahmedabad
- Mr. Nilesh Purey, Vice President, ICT, GIFT City, Gandhinagar. (GTU Knowledge Partner)
- Prof. T. Harinarayana, Director, GERMI - PDPU, Gandhinagar.
- Prof Saswat Bandopadhyay, CEPT University, Ahmedabad.
- Dr. Debasis Sarkar, HOD, PDPU, Gandhinagar.
- Prof. Sejal Patel, HOD, CEPT University, Ahmedabad.
- Prof. Dr. K. N. Sheth, Director, SPCE, and Dean, GTU.
- Prof. O P Vyas, IIIT Allahabad.

The members of the panel were experts from very diverse fields which resulted in a very interesting discussions. Each member expressed their opinion on smart cities and defined what smart cities are. The key points raised were that rather than replicating the smart cities development model of any developed country, emphasis should be given on looking at the smart cities concept in Indian context, innovative thinking for smart development, role of ICT in Smart Cities, Renewable energy, etc.

Figure 57: Panel Discussion on Smart Cities Development by (From left to right) Prof. Dr. K N Sheth, Prof. O P Vyas, Dr. Rajul K Gajjar, Prof. Sejal Patel, Mr. Nilesh Purey, Prof. Rajnikant Patel(Session Chairman), Ms. Swati Buch, Prof Saswat Bandopadhyay, Prof. T. Harinarayana & Dr. Debasis Sarkar.

Glimpses of the workshop

The inaugural ceremony commenced with lighting of the lamp by Hon'ble Minister Shri M. Venkaiah Naidu.

Hon'ble Minister Shri M. Venkaiah Naidu presented with a token of appreciation to for blessing the even with his presence.

An articulated speech at the inaugural function of GTU SSCD by the Hon'ble Minister Shri M. Venkaiah Naidu.

Launching of the website for GTU Graduate School of Smart Cities Development by Hon'ble Minister Shri M. Venkaiah Naidu.

(From Left to Right) Dr. Askhai Aggarwal, Hon'ble Vice Chancellor of GTU; Shri M. Venkaiah Naidu, Hon'ble Minister of Urban Development, Govt. of India; Ms. Mona Khandhar-IAS,Secretary, UD&UHD, Govt. of Gujarat; & Prof. N K Goyal, President, CMAI Association Of India, New Delhi.

Panel discussion members (From left to right) Prof. O P Vyas, Prof. Sejal Patel, Dr. Rajul K Gajjar, Mr. Nilesh Purey,Prof. T. Harinarayana, Prof. Dr. K N Sheth, Prof. Rajnikant Patel, Prof Saswat Bandopadhyay, Ms. Swati Buch, & Dr. Debasis Sarkar.

In audience (Front row - From right to left) Hon'ble Vice Chancellor of Gujarat University Dr. M N Patel, Dr. K N Sheth, Dr. Rajul K Gajjar, Dr. Rupesh Vasani, Dr. S O Junare, Dr. Jagdish Joshipura and (left most) Mr. Jaxay Shah .

In audience (Front row - From right to left) Shri Naresh Jadeja, Dr. R H Rajput, Shri Vikarant Vala, (second from left) Ms. Almas Juneja, (Left most) Smt. Shakuntal Aggarwal.

20

Glimpses of the workshop

Glimpses of the workshop

--- End of Document ---