Skill India
कौशल भारत - कुशल भारत

सत्यमेव जयते
Government of India
Ministry of Skill Development
and Entrepreneurship

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Skilling in Smart Cities
April 2017

Smart Cities Mission

- ➢ **Smart Cities Mission is a flagship project by MoUD for SUSTAINABLE & INCLUSIVE development**

- ➢ **It aims to provide core infrastructure and decent quality of life to its citizens**

- ➢ **Promotes the use of 'Smart Technologies' to have smart solutions**

- ➢ **Projects in smart cities cater include best practices for Smart technological solutions, Energy and Environment, Housing and Social Sectors, Sanitation, Solid waste management, urban transport, water supply, heritage conservation…**

60 smart cities have been shortlisted across 3 phases
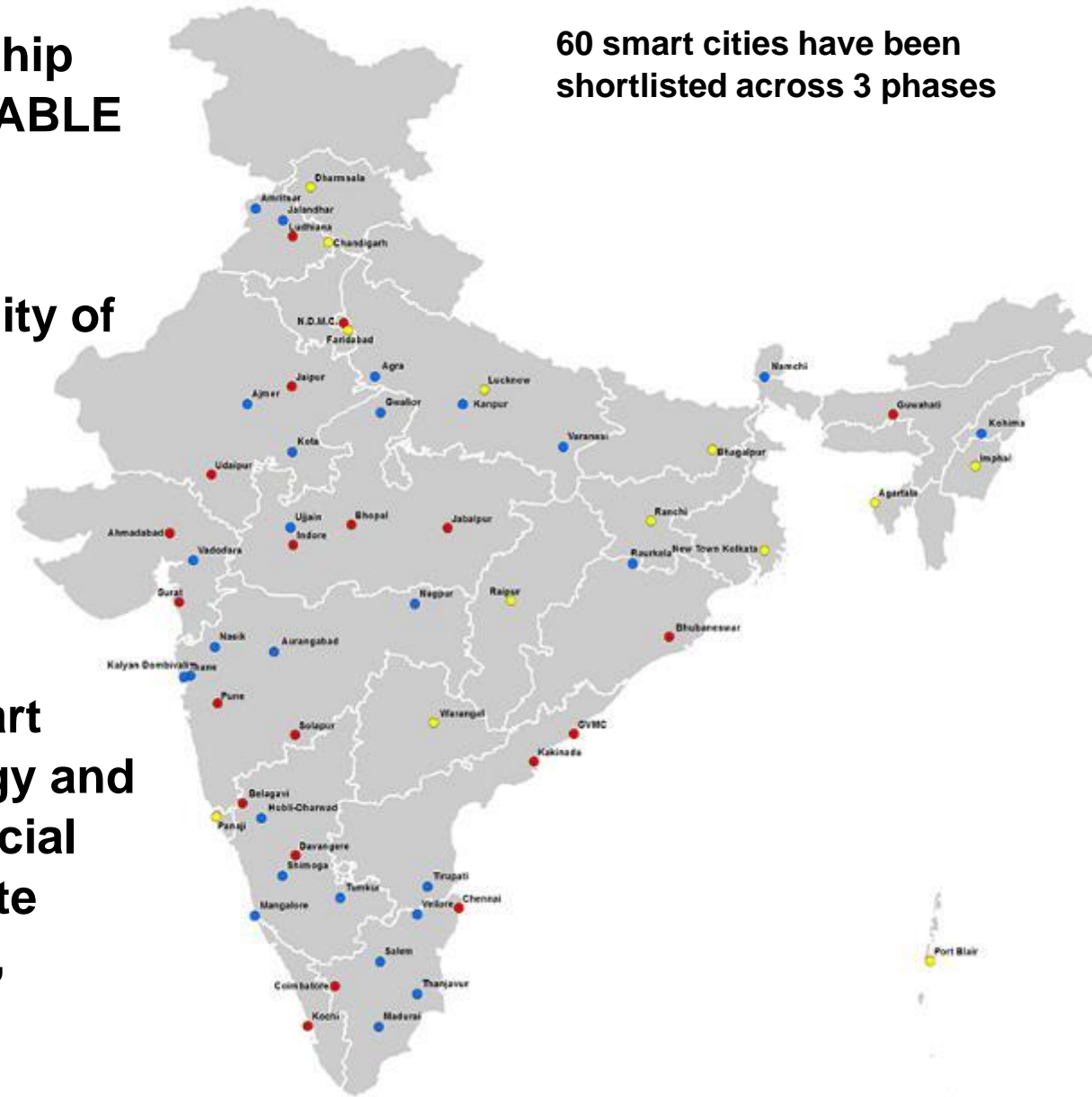
Smart Cities Mission

As per the 'Standards for Smart Cities in Smart Cities Mission' developed by Ministry of Urban Development (MoUD) with 22 indicators that 'can' be used for measuring the performance of Smart cities, 'economy and employment' is one of the key indicator. Many of the selected Smart Cities under the mission, have also incorporated in their area based or pan city proposals aspects of skill development, entrepreneurship and training and livelihood centres.

Smart Cities Mission – various kinds of projects

Energy & Environment
- Solar Energy, Renewable Energy
- Smart Metering, Efficient Use of Electricity

Sanitation and Storm Water
- Collection of solid waste
- Waste processing and reuse
- Waste disposal
- Waste to Energy
- Waste Composting

Water Supply
- 24X7 water supply
- Smart metering
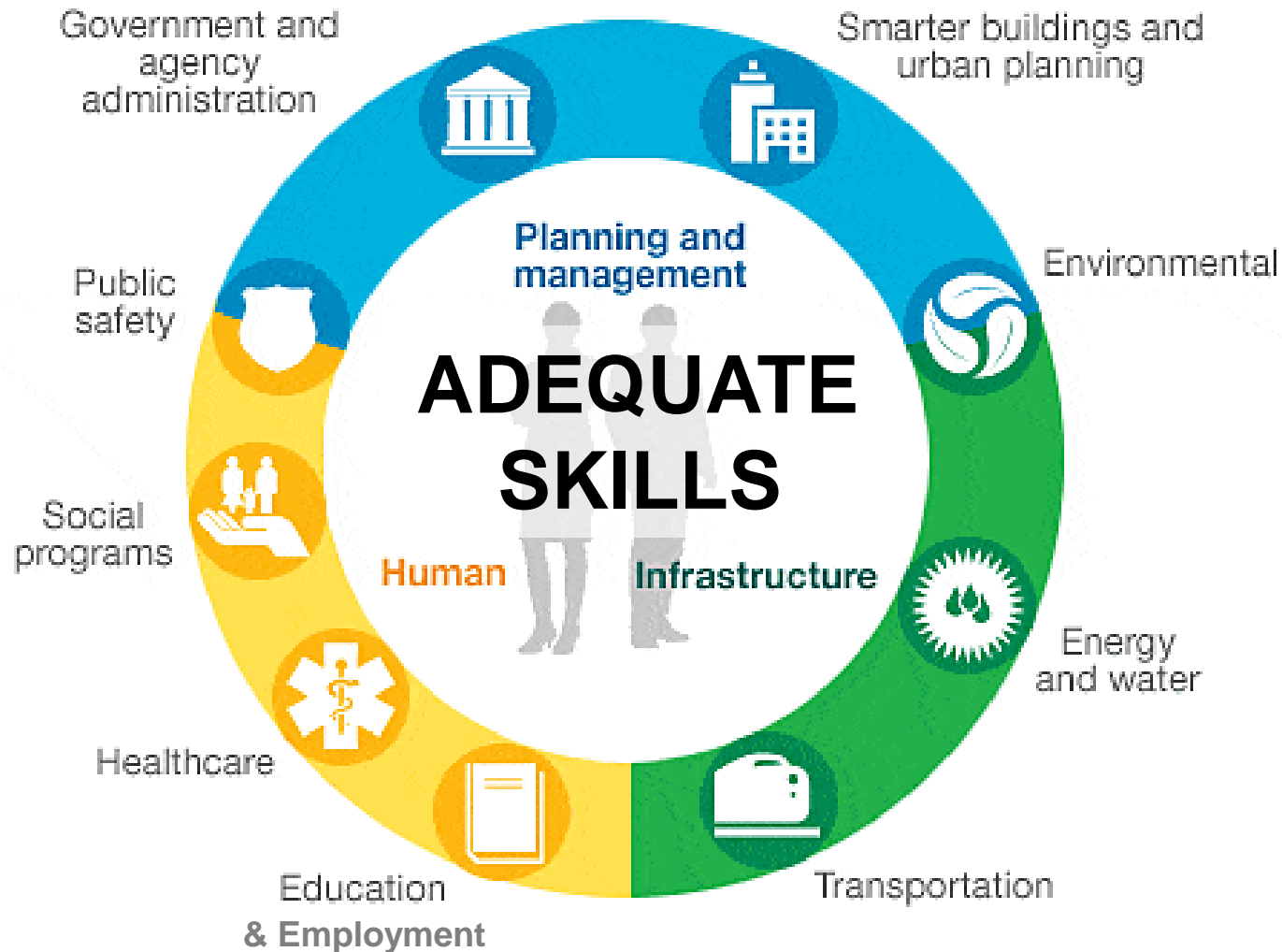- SCADA system
- Water quality

Heritage Management
- Skill development of masons and construction workers

Economic development
- Incubation centre, livelihood development, skill development centres, start up zones

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Smart Cities Mission – Need for Skill Development

Smart Cities Mission – Need for Skill Development

SMART CITY		
Improvement in		
Institutional	→ Capacity building of service providers – improving service delivery	**Smart Service Provider** **Skill Development / Capacity building of service providers (ULBs)**
Physical	→ Improved infrastructure and management practices	
Social	→ Improved social infrastructure, inclusive development	**Smart Citizenry** **Inclusive Skill Development of youth**
Economic	→ Employment opportunities for citizens, resilient economy of city	

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Skilling in Smart City

Smart City Skill Development Initiative to be a Launchpad for:

➢ **Introducing and Promoting Sustainable 'City Making' Practices in Indian Urban Context**

➢ **Leading the path for skilling in 'new emerging economies'**

➢ **Supporting 'Inclusive Development', catering to the needs of resident and floating population, unemployed youth, women and marginalized community**

➢ **Supporting other municipalities with 'best practices' in skilling**

Skilling in Smart City

Capacity Building/ Up-skilling	New Economies
Area/ Context Specific	RPLs

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Skilling in Smart City

Smart Water

- Smart Water Networks
  Distribution
  Management
  Leak Detection
  Water Quality
  Maintenance

- Smart Metering

- Flood/ Storm Water
  Management

- Waste water
  management

Challenge for the Service Provider

Water and Waste water industry has restructured – introduction of sustainable practices, energy and resource efficiency, new green technologies, GPS and GIS integration, and many more changes that require upgrading significant skills

Opportunity for the youth

New emerging industrial sector, large absorption in both public and private sector

ADEQUATE SKILLS

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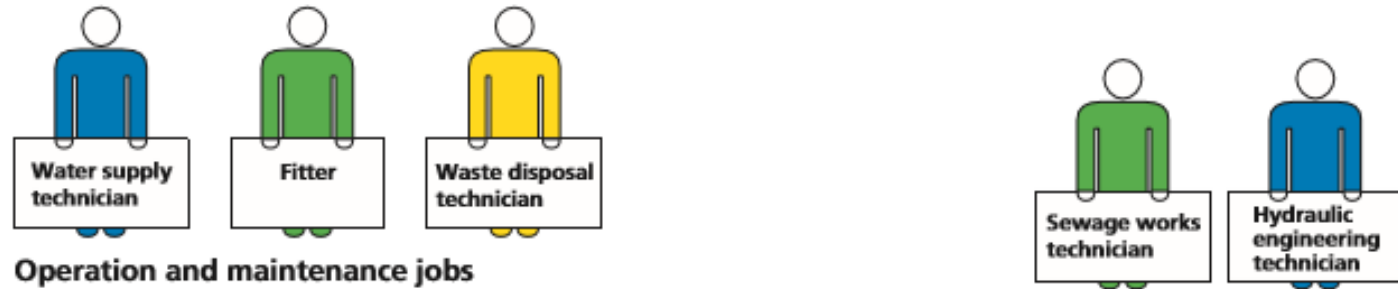
Skilling in Smart City

Smart Water

Smart Water Networks
Distribution
Management
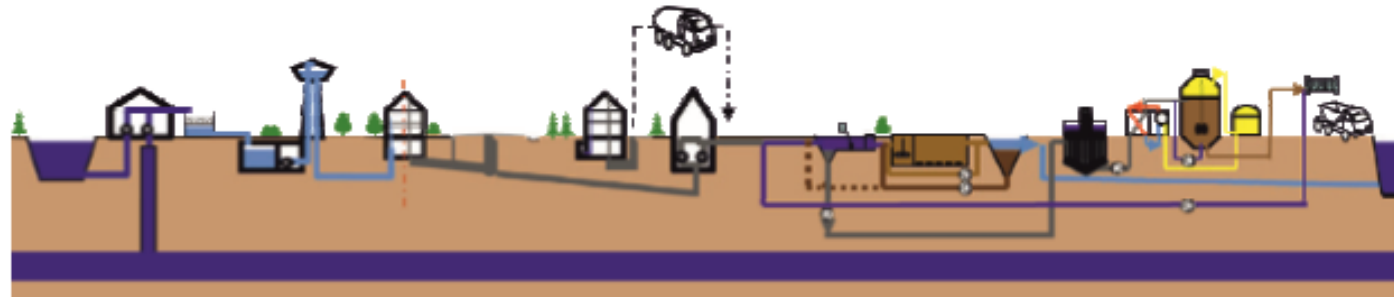Leak Detection
Water Quality
Maintenance

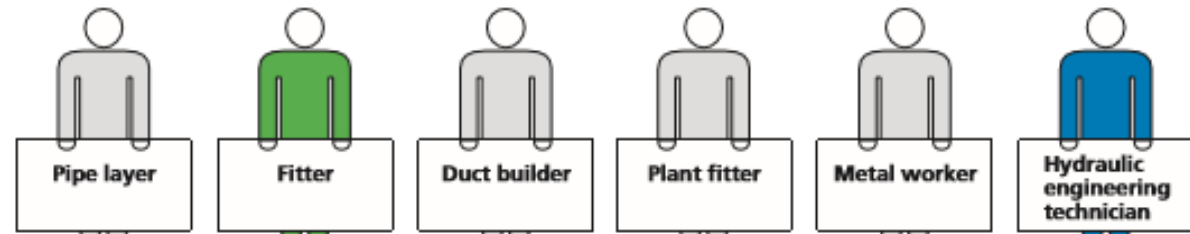**Smart Metering**

Flood/ Storm Water Management

Waste water management

Jobs at a glance

Water supply technician

Fitter

Waste disposal technician

Sewage works technician

Hydraulic engineering technician

Operation and maintenance jobs

Construction trades

Pipe layer

Fitter

Duct builder

Plant fitter

Metal worker

Hydraulic engineering technician

Water supply and disposal, waste and waters

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Skilling in Smart City

Implementation Model

ULB –SPV Smart City   MoU   NSDC

SPV led Steering Committee to oversight

Assets (ULB Owned)
Themes
Sectors
Identified

Infrastructural support, monitoring → PMKK Scheme

Operational Support, monitoring

PMKVY Scheme → Align with developed QPs, NOS, Model Curriculum

Special Projects (for specific demand)

Training Partner Selected

Implementation Model

1

ULB – Assisted by NSDC Selects

Smart City – Skill Development Themes

Map to ⇢

2

36 Sectors

NSDC recognised Sectors

Align ⇢

40 Sector Skill Councils

⇢

3

Select appropriate

NSQF

QPs

NOS

⇢ **RPLs**

Fresh Skilling / Upskilling

NSDC Aligned TPs

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Smart Cities – Capacity Building/ Up-Skilling

Smart City – Service Deliveries

Smart Water and Waste Management

Smart Environment

Smart Planning

Smart Buildings

Smart IT and Communications

Smart Security and Safety

Smart Grid

Clean Energy

Smart Mobility
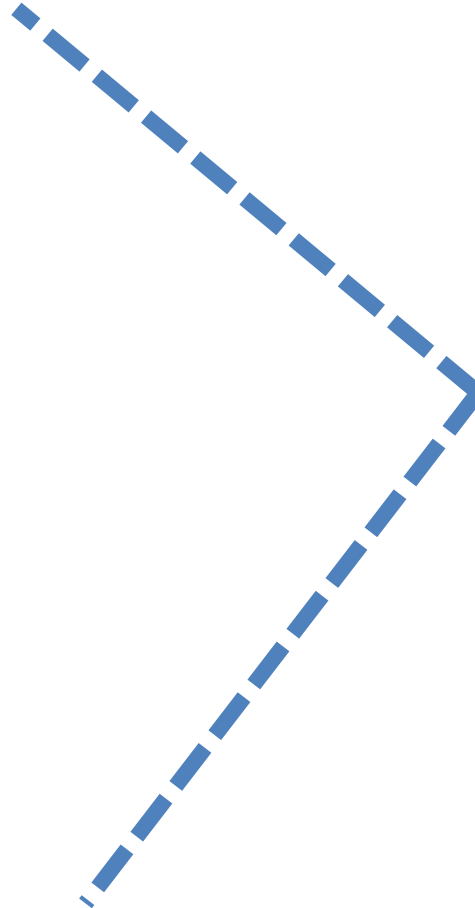
Skill Development –Up skilling

ULB's Divisions:

- **Horticulture**
- **ICT**
- **Housing**
- **Engineering**
- **Electricity**
- **Architecture**
- **Health**
- **Waste Management**
- **Transportation**
- **…**

Scale-up for other ULBs

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Smart Cities – Capacity Building/ Up-Skilling

Horticulture – Urban Agriculture, Drip Irrigation, ….., ….

1

Smart City Theme

2

Sector Skill Council/ Sectors

3

Select appropriate QPs

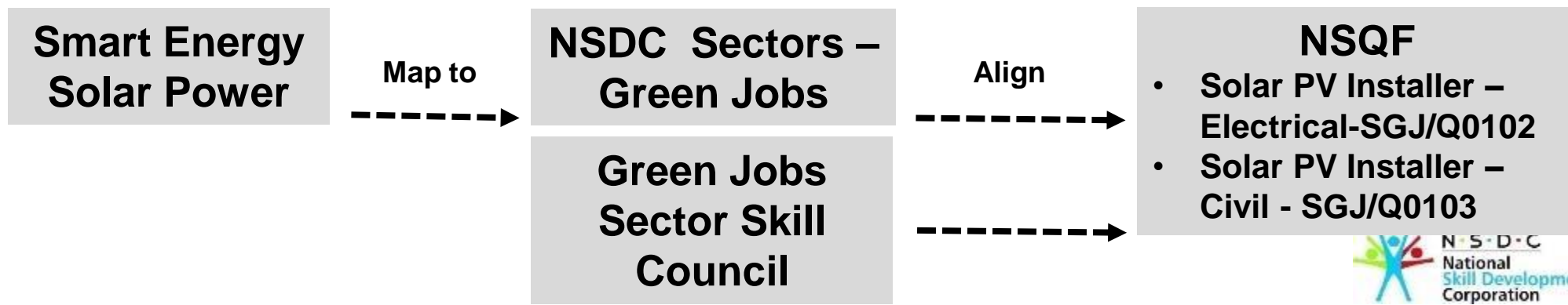| Smart Environment – Sustainable Landscaping	Map to ‑ ‑ ‑ ‑ ►	NSDC Sectors - Agriculture	Align ‑ ‑ ‑ ‑ ►	NSQF
		Agriculture Sector Skill Council	‑ ‑ ‑ ‑ ►	• AGR/Q1002 - Micro Irrigation • AGR/Q0801 – Gardener • AGR/Q0702 - Floriculturist (Protected Cultivation

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Solar, Alternate energy, alternate mobility ….., ….

Smart Energy Solar Power	Map to →	NSDC Sectors – Green Jobs	Align →	NSQF • Solar PV Installer – Electrical-SGJ/Q0102
		Green Jobs Sector Skill Council	→	• Solar PV Installer – Civil - SGJ/Q0103

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ANTHROPOMETRIC CONSIDERATIONS FOR CHILDREN (5 TO 15 YEARS)

Age (years)	Door Latch Height (B)		Reach Distance (C)	
	mm	in	mm	in
15	730	28.5	685	27
12	630	24.5	620	24.5
9	555	22	550	21.5
7	510	20	495	19.5
5	465	18.5	435	17.0

Age (years)	Hooks (D)		Shelf Height (E)		Hand wash Height (F)	
	mm	in	mm	in	mm	in
15	1575	62	1675	66	760	30
12	1385	54.5	1485	58.5	685	27
9	1220	48.0	1320	52.0	635	25.0
7	1120	44.0	1220	48.0	585	23.0
5	990	39.0	1090	43.0	485	19.0
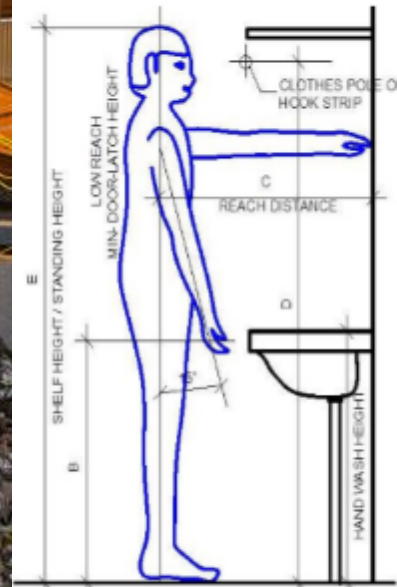
Source : architectural graphic standard

Smart – Inclusive Sanitation techniques, blue economy, waste management ….., ….

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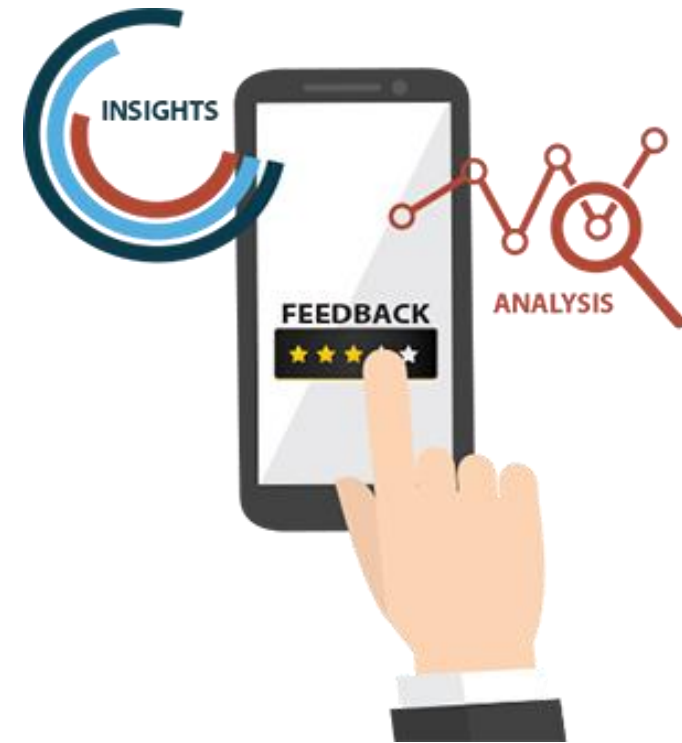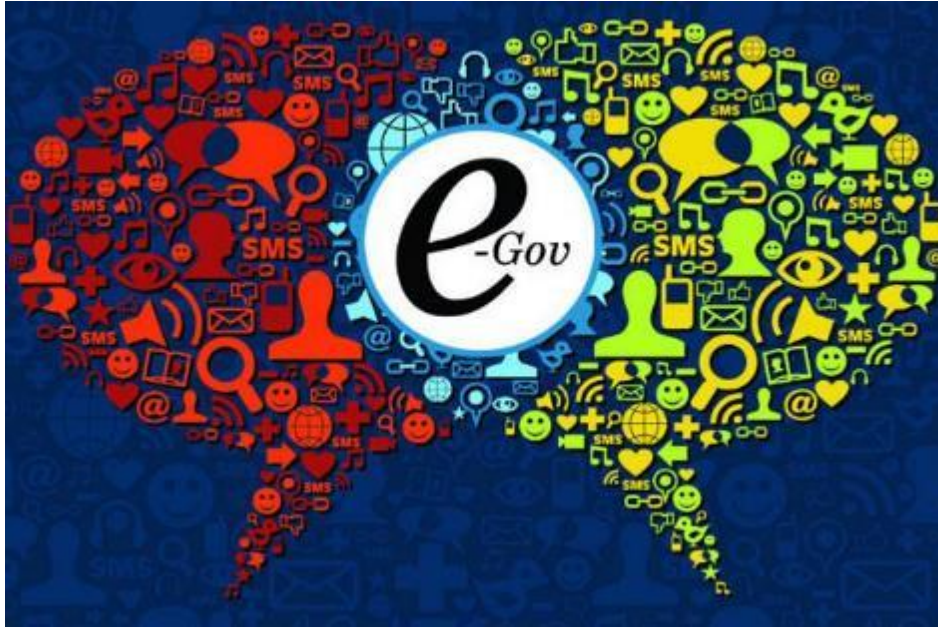
ICT, E-governance, IoTs, Communications, Citizen Centres….

Smart Cities – New Emerging Economies Skilling

Sectors that are expected to be given impetus through the smart city program:

- IT and ITes, Internet of Things
- Telecommunications
- Electronics
- ICT Manufacturers
- Infrastructure, Construction
- Energy
- Environment
- Sustainable products and processes
- Transportation – Alternate Mobility
- Tourism
- Materials
- Healthcare
- Building Automation
- Industrial Electronics

- Robotics

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Smart Cities – New Emerging Economies Skilling

Sensors market in India is one of the fastest growing in Asia-Pacific, and expected to grow at a CAGR of over 20 percent between 2015-20

- ✓ **Microcontrollers, sensors**
- ✓ **Integrated Circuits**
- ✓ **M2M Communications**
- ✓ **Wireless Technologies**
- ✓ **App Development**
- ✓ **Citizen Engagement tools**

1

Smart City Theme

2

Sector Skill Council/ Sectors

3

Select appropriate QPs

ICTs, Internet of Things (IoT)	Map to →	NSDC Sectors – Telecom, IT & ITes	Align →	NSQF

ICTs, Internet of Things (IoT) Map to ┄┄→ **NSDC Sectors – Telecom, IT & ITes** Align ┄┄→

Telecom, IT-ITes Sector Skill Council ┄┄→

NSQF
TEL/Q6205 -ICT Engineer
TEL/Q6400-Optical Fibre Splicer
TEL/Q6401 - Optical Fiber Technician
SSC/ Q 0502 – UI Developer

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Intelligent buildings, alternative technologies, surveillance…..

Skilling in Smart City

Inclusive Skilling – Women (Solar Cookers), trafficked women, PWDs, homeless

Skilling in Smart City – Collaboration with NDMC

Eye on skill development, NDMC ties up with NSDC

NDMC to come up with Skill Developing Centre at Moti Bagh

STAFF REPORTER
NEW DELHI

The New Delhi Municipal Council Smart City Limited (NDMCSCL), a special purpose vehicle formed to execute the smart city plan for the NDMC area here, signed a Memorandum of Understanding (MoU) with the National Skill Development Corporation (NSDC) on Monday.

The MoU was signed by Juhi Kumar, CEO of NDMC-SCL and Manish Kumar, Managing Director and CEO of NSDC.

Union Urban Development Minister M. Venkaiah Naidu said that smart city development focussed on employment generation and that every smart city needed to have at least one skill development centre.

Focus on training
The NSDC will also assist in setting up Pradhan Mantri Kaushal Kendras (PMKK) to impart skill training and upgradation as per stipulated norms. The NDMC is also developing a high-quality Skill Developing Centre at Moti Bagh, which will offer courses in 3D printing, automation, IT/ITES and Robotics.

Thank You