



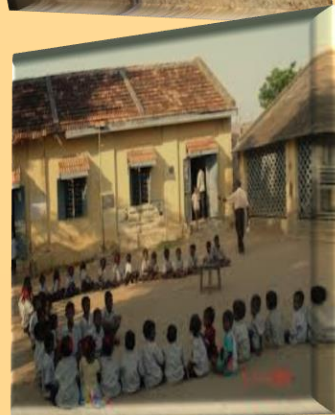
# **A REPORT ON ORIENTATION PROGRAM OF VISHWAKARMA YOJNA: PHASE-V AN APPROACH TOWARDS RURBANISATION**

**Date: 5<sup>th</sup> August, 2017**

Venue: Auditorium, B0 Wing,  
Gujarat Technological University



*Gujarat Technological University,  
Ahmedabad, Gujarat*



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This report is prepared on the basis of the project work of IDP/UDP conducted for the students of Degree and Diploma Engineering Colleges affiliated to Gujarat Technological University. Gujarat Technological University has completed Vishwakarma yojana projects till now four Phases. The input for the report comes from the records, notes, documentation, and individual observation of the coordinators. It does not purport to be reproduce in any type of debates. None of the messages conveyed in this report may in any way be interpreted as stating an official position of Gujarat Technological University.



## FORWARD



Vishwakarma Yojana Project in its 5<sup>th</sup> year has till date carried out the work of Rurbanisation in Villages through the students of Civil and Electrical Engineering (Diploma & Degree) of affiliated colleges of GTU. Students work towards the development of social & Physical infrastructure in these villages as a part of their Final Year IDP/UDP. I am sure this project work will enhance their skill set and provide life long learning to them. Also these villages will really have “**Suvidha Saher ki, Atma Gaon ki**”

It is good learning for the students under this project and congratulations for choosing the same.

**Prof. (Dr.) Navin Sheth**  
**Vice Chancellor,**  
Gujarat Technological University,  
Website: <http://gtu.ac.in/>

## ACKNOWLEDGEMENT



The aim of the Vishwakarma Yojana is to study village life with respect to the delivery of basic needs and then to re-imagine, redesign, rejuvenate and strengthen the community life. Any research work without direct relevance to the society will not normally lead to great Engineering Research. The students are required to re-imagine & redesign the infrastructure and make sure that the soul of the village is supported by the new architecture.

I would like to express my gratitude to the visionary and forward looking Vice Chancellor of Gujarat Technological University, **Prof. Dr. Navin Sheth**, Hon'ble Vice Chancellor who always encourages us and guides our team with passion.

**Prof. (Dr.) Indrajit Patel**  
**Honorary Director,**  
**Vishwakarma Yojana Project**  
Gujarat Technological University



#### ABOUT GUJARAT TECHNOLOGICAL UNIVERSITY

Gujarat Technological University (GTU) is India's most innovative affiliating type University established by Government of Gujarat vide Gujarat Act No. 20/2007. The University, caters to the entire field of engineering, architecture, urban planning, business studies (MBA), Computer Applications (MCA) and pharmacy in Gujarat.

Gujarat Technological University (GTU) is the largest technological University in western India with 450,000 students including foreign students from 31 countries, spread over 486 colleges in Gujarat. It is a state University with 17,500 Faculty Members in Engineering, Architecture, Pharmacy, Management, Computer Sciences, and Hotel Management discipline. 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.

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 patents. Its programs for student start-up development and its programs for dissemination of knowledge about IPR are well-known all over the country. Its Policy Documents for Student Start-up Development and Skill Development Mission are being used by universities all over India.

#### ABOUT VISHWAKARMA YOJANA PROJECT

Vishwakarma Yojana is one of the initiatives towards rural urbanization of villages by Government of Gujarat. The vision of Vishwakarma Yojana is to reduce and remove the rural-urban divide through infusion of urban patterns and services in rural systems to ensure provision of quality lifestyles and livelihood options while keeping the basic rural soul intact. By studying the village life with respect to delivery of basic needs, the main aim is to reimagine, redesign, rejuvenate and strengthen the community life. By floating the ideas for village development, we can help community, stakeholders to think for right path of development in context of rural urbanization.

Gujarat Technological University is allotted important and prestigious project of Vishwakarma Yojana by the Government of Gujarat through Commissionerate of Technical Education from year 2012-13. The aim of the project is to provide urban amenities in rural areas but maintain the rural soul intact. The project provides "Design to Delivery" solution for development of villages in 'Rurban' areas.

The main objective of the project is to study the present status and to conduct techno-economic survey of all selected villages of the state. It ascertains the existing basic and public amenities, essential commodities & other infrastructural facilities. Subsequently a



report is prepared on adequacy of the available resources considering the population of the village and the future need of the village with consultation of Local revenue authorities, TDO and DDO. A projected development plan a ready to execute document is prepared to define the targets. All this makes it a successful "Planned" Rurbanization.

**"Vishwakarma Yojana"** provides the benefit of real world experience to engineering students and simultaneously apply their technical knowledge in the development of infrastructure for rural development. Under this scheme, the villages of "Rurban" area will be adopted by various engineering colleges under Gujarat Technological University. They would study the identified villages and make recommendations to achieve integrated and comprehensive development through technology application and project preparation & management.

The project is divided into three parts:

- Techno-economic survey of villages,
- Development document preparation (Plan and estimate of proposed development by finding Gap analysis)
- Detailed Project Report with development strategies and action plan.

Detail Project reports are included in the village developmental work that are under taken as per the need of the village in particular;

- ✓ Physical infrastructure facilities (Water, Drainage, Road, Electricity, Solid waste Management, Storm Water Network, Telecommunication & Other),
- ✓ Social infrastructure facilities (Education, Health & Sanitation),
- ✓ Socio- Cultural (Community Hall, Library, Recreation Facilities & other)
- ✓ Sustainable infrastructures (Rain water harvesting, Biogas plant, Solar Street lights, Eco sanitation, Waste to Energy & Other)
- ✓ Repair & Maintenance of existing Public Buildings for overall development of villages.
- ✓ Smart Village Survey
- ✓ Ideal Village Survey
- ✓ Smart Village Design for the Village Development

Students of Gujarat Technological University are getting real work experience and simultaneously applying their technical knowledge in the development of infrastructure in rural development. Application of technical knowledge and practices with modern technology is a distributive and participatory process bringing about cascading changes in the lifestyles of its participants. The contribution and the hard work put by the GTU Students has made this project go on a smooth sail and indeed will be a huge success.



WORKSHOP PROGRAM SCHEDULE

Sr. No	Date/Day/ Time	Venue	Participants (Nodal Officers/ Students) from
1	5 <sup>th</sup> August,2017 / Saturday/ 11:00 to 13:00	Gujarat Technological University, Chandkheda	A.D. PATEL INSTITUTE OF TECHNOLOGY – RAJKOT B. BIRLA VISHVAKARMA MAHAVIDYALAYA D.A. DEGREE ENGINEERING AND TECHNOLOGY G H PATEL COLLEGE OF ENGINEERING & TECHNOLOGY, V.V.NAGAR GANDHINAGAR INSTITUTE OF TECHNOLOGY – GANDHINAGAR HASMUKH GOSWAMI COLLEGE OF ENGINEERING INSTITUTE OF TECHNOLOGY AND MANAGEMENT UNIVERSE, VADODARA IPCOWALA INSTITUTE OF ENGINEERING AND TECHNOLOGY,DHARMAJ NSIT , JETALPUR PARUL INSTITUTE OF ENGG. & TECHNOLOGY (DIPLOMA STUDIES),VADODARAR PARUL INSTITUTE OF TECHNOLOGY (DEGREE),VADODARA PARUL POLYTECHNIC INSTITUTE,(POLYTECHNIC),VADODARA R. C. TECHNICAL INSTITUTE, SOLA, AHMEDABAD RMS POLYTECHNIC SAL INSTITUTE OF TECHNOLOGY AND ENGINEERING RESEARCH,AHMEDABAD SHREE SWAMINARAYAN INSTITUTE OF TECHNOLOGY,GANDHINAGAR SHRI SATSANGI SAKETDHAM RAM ASHRAM GROUP OF INSTITUTIONS, VADASMA SIGMA ENGINEERING COLLEGE MATAR SIGMA ENGINEERING COLLEGE,VADODARA SILVER OAK COLLEGE OF ENGINEERING AND TECHNOLOGY,AHMEDABAD SITE (POLY),VAODARA VADODARA INSTITUTE OF ENGINEERING,VADODARA SPCE ENGINEERING COLLEGE, BAKROL.
2	5 <sup>th</sup> August,2017 / Saturday/ 14:00 to 16:00	Gujarat Technological University, Chandkheda	ATMIYA INSTITUTE OF TECHNOLOGY & SCIENCE(DEGREE), RAJKOT ATMIYA INSTITUTE OF TECHNOLOGY & SCIENCE(POLYTECHNIC), RAJKOT BALAJI ENGINEERING COLLEGE, JUNAGADH BHAGWAN MAHAVIR COLLEGE OF ENGINEERING AND TECHNOLOGY BHGARDI COLLEGE OF ENGINEERING AND TECHNOLOGY, RAJKOT C. K. PITHAWALA COLLEGE OF ENGINEERING & TECHNOLOGY, SURAT DARSHAN INSTITUTE OF ENGINEERING AND TECHNOLOGY-RAJKOT DR S & S S GHANDHY COLLEGE OF ENGINEERING & TECHNOLOGY(POLYTECHNIC),SURAT DR S & S.S GHANDHY GOVERNMENT ENGINEERING COLLEGE SURAT (DEGREE) GOVERNMENT ENGINEERING COLLEGE,GODHRA LAXMI INSTITUTE OF TECHNOLOGY, SARIGAM(DEGREE) LAXMI INSTITUTE OF TECHNOLOGY, SARIGAM(POLYTECHNIC) NEO TECH ENGINEERING OM ENGINEERING COLLEGE,JUNAGADH OM INSTITUTE OF TECHNOLOGY,PANCHMAHAL S.N.PATEL INSTITUTE OF TECHNOLOGY & RESEARCH CENTRE, UMRAXH, BARDOLI. SARVAJANIK COLLEGE OF ENGINEERING & TECHNOLOGY, SURAT SHRI LABHUBHAI TRIVEDI INSTITUTE OF ENGINEERING AND TECHNOLOGY VIDHYADEEP INSTITUTE OF ENGINEERING AND TECHNOLOGY,OLPAD,SURAT VVP ENGINEERING COLLEGE, RAJKOT



INAUGURATION OF THE WORKSHOP



Gujarat Technological University has taken initiative to develop the students' skills and hence as a part of the same, Vishwakarma Yojana(VY) project has been introduced. This project is now in its Fifth Phase to understand Project and Scope of work of Students & nodal officers, GTU has planned to organize orientation program for students & Nodal officers with the support GTU VY section and participating institutes. Main objective of this program was to provide all the information of Vishwakarma Yojana, details of Techno-Economic Survey and other necessary details of the Project.

**Ms. Darshana Chauhan** welcomed all invitees on behalf of Gujarat Technological University. She welcomed all the participants and Faculty members. She described how the Hon'ble Vice chancellor **Prof. Dr. Navin Sheth**, Registrar **Mr. Bipin J. Bhatt** and Honorary Director **Dr. Indrajit Patel** are giving constant support and motivation to lead the project. She has briefed about how this project has started, in earlier phases how and what way students has given their inputs , where students faced some challenges and how the Institute wise Village allotment needs was done, Details of project report formatting, strategy of visiting the village and many other administration processes were given to the participants. She gave various guidelines to students & Nodal officers for the process to be done throughout the year.



TECHNICAL SESSION OF THE WORKSHOP

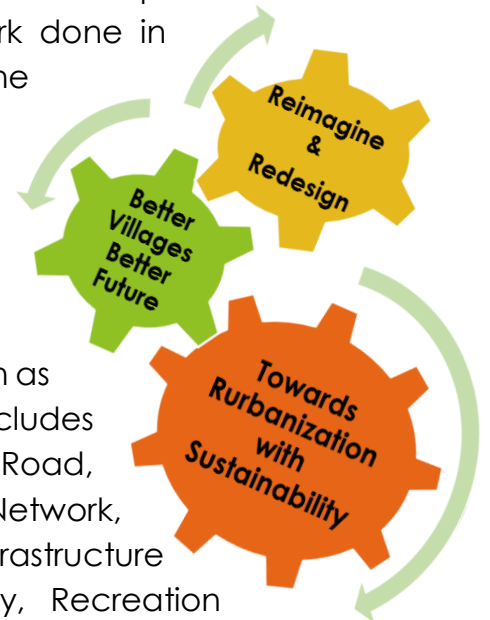


**Technical Session:**

Prof. Jagruti Shah, from BVM Engineering College, as an Expert took over the next session and welcomed all the participants on behalf of GTU. She briefed students for concept of Rural and Urban India by sharing broader view of Rural & Urban India.

She asked students about their concept for developed Villages. She gave some glimpse of ideal villages of Gujarat. She explained overall concept of Vishwakarma Yojana. She also briefed for the work done in Phase-I by Students of respective Institutes. Aim of the project is to provide urban amenities in rural areas and maintaining the rural soul. This will help in developing villages in sustainable manner, reduce migration from villages and prevent the cities from the urban pressure.

She also described all the objectives to students such as developmental work in villages that could be undertaken as per the need of the village, which in particular includes Physical infrastructure facilities (Water, Drainage, Road, Electricity, Solid waste Management, Storm Water Network, Telecommunication & Other), Social & Socio cultural infrastructure facilities (Education, Health, Community Hall, Library, Recreation Facilities & other) and renewable infrastructure facilities (Rain water harvesting, Biogas plant & Solar Street lights) for sustainable development.





She explained in detail over all action plan and methodology of work by Degree & Diploma students. She also discussed all the issues faced by students in Phase-I & II and gave solution for the same. She said rural development can be richer and more meaningful only through the participation of citizens of development. Just as implementation is the touchstone for planning, people's participation is the centre-piece in rural development. People's participation is one of the foremost pre-requisites of development process both from procedural and philosophical perspectives. Mrs. Jagruti Shah explained roadmap of work to be done by students in each semester. She also explained in detail the work separately, chapter wise. She gave guidance to all the participants for techno-economic survey work. She explicated Survey form and defined all the parameter of Survey.

She shared various developments in villages of Gujarat with live case studies such as the waste water network, model of village Khintla, Surendranagar for Low cost network and resource utilization. She gave brief details of Root Zone Technology for Liquid Waste Management. For Solid waste management, TAPI-Model, adoption will be the best solution for economic boost up and clean village philosophy. She explained concept of village sustainable system with all these examples. She covered all the amenities from grass root level to developed town level for village development.

She shared various guidelines and norms for physical as well as social infrastructure facilities. She also addressed students for different workshop and training Program which will be planned to help students for all technical guidance by GTU.

She said that all the proposal are designed by keeping the following parameters in mind built landscape into a cohesive whole, Water charging / reuse as integral part of the design process, Major thrust into local / regional spaces, Low energy intensive, Low maintenance and Creation of sustainable environments, In tune with Sun / wind / water / soil, Introduce alternate energy sources, generate an effective reuse & recharging the water basin, introduce separate systems of distribution network for raw water and drinking water, drainage to be treated with root zone technology and reuse the treated water for Sustainable Development. At the end of the presentation, students and nodal officers asked various questions and solutions were given for the same. Discussion was very much helpful to students and nodal officers to fill technical gap as well as to share their views.



NODAL OFFICERS GUIDELINES IN TECHNICAL SESSION OF THE WORKSHOP



As Prof. Parth Danani, Silver Oak College of Engineering said with it as a poetry mode for making the students more motivated towards working for the vishwakarma yojana a project



Prof. Ratansharan Panchal, GCET, V V Nagar guided the students differences between Vishwakarma Yojana & PMMS, and how to carry both activities simultaneously & how to represent Vishwakarma Yojana project as a part of their final examination.



As Prof. Bhaskar Bhatt, Sarvajanic College of Engineering explained about the how vishwakarma yojana project has been started and it is a good learning for the student



GROUP PHOTOGRAPH OF THE ALL PARTICIPATED COLLEGES OF THE NODAL OFFICERS



COLLEGE PARTICIPATION IN WORKSHOP

Sr. No	Name of the Institute	No. of students attended	Name of the Taluka/ District
1	A.D. PATEL INSTITUTE OF TECHNOLOGY	7	RAJKOT
2	ATMIYA INSTITUTE OF TECHNOLOGY & SCIENCE(DEGREE)	14	RAJKOT
3	ATMIYA INSTITUTE OF TECHNOLOGY & SCIENCE(POLYTECHNIC)	15	RAJKOT
4	B. BIRLA VISHVAKARMA MAHAVIDYALAYA	4	ANAND
5	BALAJI ENGINEERING COLLEGE	10	JUNAGADH
6	BHAGWAN MAHAVIR COLLEGE OF ENGINEERING AND TECHNOLOGY	12	SURAT
7	BHGARDI COLLEGE OF ENGINEERING AND TECHNOLOGY	12	RAJKOT
8	C. K. PITHAWALA COLLEGE OF ENGINEERING & TECHNOLOGY	15	SURAT
9	D.A. DEGREE ENGINEERING AND TECHNOLOGY	13	AHMEDABAD
10	DARSHAN INSTITUTE OF ENGINEERING AND TECHNOLOGY	6	RAJKOT
11	DR S & S S GHANDHY COLLEGE OF ENGINEERING & TECHNOLOGY(POLYTECHNIC)	15	SURAT
12	DR S & S.S GHANDHY GOVERNMENT ENGINEERING COLLEGE SURAT (DEGREE)	17	SURAT
13	G H PATEL COLLEGE OF ENGINEERING & TECHNOLOGY	6	ANAND
14	GANDHINAGAR INSTITUTE OF TECHNOLOGY	6	GANDHINAGAR
15	GOVERNMENT ENGINEERING COLLEGE	9	GODHRA
16	GOVERNMENT POLYTECHNIC COLLEGE	0	GODHRA
17	HASMUKH GOSWAMI COLLEGE OF ENGINEERING	14	AHMEDABAD
18	INSTITUTE OF TECHNOLOGY AND MANAGEMENT UNIVERSE	9	VADODARA
19	IPCOWALA INSTITUTE OF ENGINEERING AND TECHNOLOGY	0	DHARMAJ
20	LAXMI INSTITUTE OF TECHNOLOGY(DEGREE)	6	VALSAD
21	LAXMI INSTITUTE OF TECHNOLOGY(POLYTECHNIC)	9	VALSAD
22	NARAYAN SHAHSTRI INSTITUTE OF TECHNOLOGY	4	JETALPUR



23	NEO TECH ENGINEERING	15	VADODARA
24	OM ENGINEERING COLLEGE	10	JUNAGADH
25	OM INSTITUTE OF TECHNOLOGY	12	PANCHMAHAL
26	PARUL INSTITUTE OF ENGG. & TECHNOLOGY (DIPLOMA STUDIES)	3	VADODARA
27	PARUL INSTITUTE OF TECHNOLOGY (DEGREE)	16	VADODARA
28	PARUL POLYTECHNIC INSTITUTE, (POLYTECHNIC)	15	VADODARA
29	R. C. TECHNICAL INSTITUTE, SOLA	10	AHMEDABAD
30	RMS POLYTECHNIC	15	VADODARA
31	S S AGARWAL COLLEGE OF ENGINEERING AND TECHNOLOGY	5	NAVSARI
32	S.N.PATEL INSTITUTE OF TECHNOLOGY & RESEARCH CENTRE	10	SURAT
33	SAL INSTITUTE OF TECHNOLOGY AND ENGINEERING RESEARCH, AHMEDABAD	20	AHMEDABAD
34	SARVAJANIK COLLEGE OF ENGINEERING & TECHNOLOGY	5	SURAT
35	SHREE SWAMINARAYAN INSTITUTE OF TECHNOLOGY	22	GANDHINAGAR
36	SHRI LABHUBHAI TRIVEDI INSTITUTE OF ENGINEERING AND TECHNOLOGY	19	SURAT
37	SIGMA ENGINEERING COLLEGE	21	VADODARA
38	SIGMA INSTITUTE OF ENGINEERING	14	VADODARA
39	SILVER OAK COLLEGE OF ENGINEERING AND TECHNOLOGY	15	AHMEDABAD
40	SITE (POLY)	12	VADODARA
41	SPCE ENGINEERING COLLEGE		BAKROL.
42	VADODARA INSTITUTE OF ENGINEERING	6	VADODARA
43	VIDHYADEEP INSTITUTE OF ENGINEERING AND TECHNOLOGY, OLPAD, SURAT	20	RAJKOT
44	VVP ENGINEERING COLLEGE	15	RAJKOT
	<b>TOTAL STUDENTS PARTICIPATED IN WORKSHOP</b>	<b>483</b>	

Prof. (Dr.) Indrajit Patel  
Ms. Darshana Chauhan





ESTD - 2007

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