Progress Report

Project Title:

Innovative ICT Enabled Co-Working Community Center Design for Rural Development

Principal Investigator:

Dr. Mahesh P K
Professor and HOD

Co-Principal Investigator

Dr. Prakash Kuravatti
Associate Professor
Electronics and Communication Engineering
ATME College of Engineering

Reporting Period:
1st June 2021 to 31st March 2022

1. TITLE OF THE PROJECT AND FILE NO.

INNOVATIVE ICT ENABLED CO-WORKING COMMUNITY CENTER DESIGN FOR RURAL DEVELOPMENT / DST/SEED/SCSP/STI/2020/372 (P1819)

2. DETAILS OF THE PROJECT TEAM

i. Principal Investigator:	
Name:	Dr. Mahesh P K
Organization	Professor and Head, Dept. of ECE, ATME College of Engineering
City (with pin code)	Mysore
Highest qualification & subject	Ph. D
Phone # & email ID	8884968896/mahesh.k.devalapur@gmail.com
ii. Co- Principal Investigator:	
Name	Dr. Prakash Kuravattii
Organization	Associate Professor, Dept. of ECE, ATME College of Engineering
City (with pin code)	Mysore
Highest qualification & subject	Ph. D
Phone # & email ID	9611754666/pkkuravatti@gmail.com

3. PROJECT DURATION: **3 Years**

3.1 DATE OF START: **1st June 2021**

3.2 SCHEDULED DATE OF COMPLETION: **31st May 2024**

4. PROJECT COST: **₹ 2,04,09,208/-**

RECURRING: **₹ 66,53,068/-**

NON-RECURRING: **₹ 1,37,56,140/-**

4.1 TOTAL SANCTIONED COST OF THE PROJECT: **₹ 2, 04, 09, 208/-**

4.2 TOTAL AMOUNT RECEIVED TILL DATE: **₹ 1,11,80,090/-**

4.3 TOTAL EXPENDITURE TILL DATE**: ₹ 1,09,79,678/-**

Approved Objectives:

Objective 1:

Reduce the urban migration from rural areas instead provide livelihood for the locals and improve their standard of living with the facilities available as in urban areas

Objective 2:

Efficient use of technology and reap maximum benefits like training on being guides or new techniques of tailoring

Objective 3:

Improve the Education and skill development training for drop out students

Activities conducted on first year project

Sl No	Name of the Activity	Conducted on	Beneficiaries From	No of Beneficiaries participated/ Trained
1	Awareness program	Month Oct 2021	Harohalli	128 Members
		Month of Nov 2021	Vajamangala	107 Members
		Month of Dec 2021	Varuna	84 Members
2	Advance Sewing Machine Training	25th Oct To 3rd Dec 2021	Harohalli and Mellahalli	36 Members
3	Computer Skill Development training	3rd March To 7th April 2022	Harohalli and Mellahalli	57 Members
4	IoT development Suit for building Management	Month of Sept to Nov 2021	Harohalli and Mellahalli	IoT development Suit for building Management is under progress to adopt for the Beneficiaries
5	Activity On Har Ghar Tiranga	12th and 13th Aug 2022	Harohalli and Mellahalli	75 Members

Detailed Reports for the each activity:

➢ Awareness Program

Awareness Program for Advance Sewing Machine Training was conducted for the Harohalli and Mellahalli beneficiaries on 5th October 2021 at Harohalli Community hall. and Awareness Program for the "Computer skills development training" was held on 14th Dec 2021 (As per 3rd quadrant of first year activates) at Mellahalli community hall, during the awareness program received good number response from the beneficiaries and explained to beneficiaries about benefits, schedule of the training program and issued the dialed training program flyers for each beneficiaries.

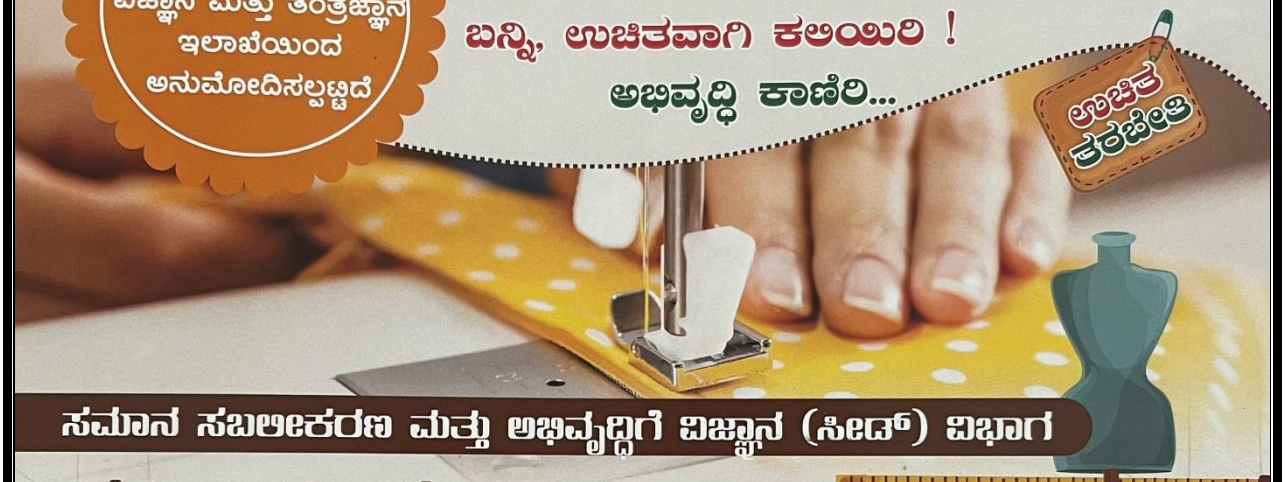
ATME
College of Engineering
13th Kilometer, Mysore-Bannur Road, Mysore - 570 028

DST@ 1971-2021
विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF SCIENCE & TECHNOLOGY

ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆಯಿಂದ ಅನುಮೋದಿಸಲ್ಪಟ್ಟದೆ

ಆಧುನಿಕ ತಂತ್ರಜ್ಞಾನ ಹೊಂದಿದ ಸಹಕಲಿಕಾ ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿ ಕೇಂದ್ರ

ಬನ್ನಿ, ಉಚಿತವಾಗಿ ಕಲಿಯಿರಿ !
ಅಭಿವೃದ್ಧಿ ಕಾಣಿರಿ...



ಸಮಾನ ಸಬಲೀಕರಣ ಮತ್ತು ಅಭಿವೃದ್ಧಿಗೆ ವಿಜ್ಞಾನ (ಸೀಡ್) ವಿಭಾಗ

ಪರಿಶಿಷ್ಟ ಜಾತಿ ಹಾಗೂ ಪರಿಶಿಷ್ಟ ಪಂಗಡದ ಅಭಿವೃದ್ಧಿಗಾಗಿ
ವಿಜ್ಞಾನ, ತಂತ್ರಜ್ಞಾನ ಮತ್ತು ನಾವಿನ್ಯತೆ (ಎಸ್.ಟಿ.ಐ.) ಕೇಂದ್ರ

ಉನ್ನತ ಮಟ್ಟದ ಅತ್ಯಾಧುನಿಕ ಹೊಲಿಗೆ ಯಂತ್ರದ ಹಂತವಾರು ಉಚಿತ ತರಬೇತಿ ವಿವರ

ಒಂದನೇ ಹಂತ

ಹೊಲಿಗೆ ಯಂತ್ರದ ಪರಿಚಯ
ಹೊಲಿಗೆ ಯಂತ್ರದ ಕಾರ್ಯಾಚರಣೆ
ಯಂತ್ರದ ವಿವಿಧ ಭಾಗಗಳು ಮತ್ತು ಅದರ ಕಾರ್ಯ
ಸುರಕ್ಷತಾ ಮುನ್ನೆಚ್ಚರಿಕೆಗಳು
ಯಂತ್ರದ ನಿರ್ವಹಣೆ

ಹೊಲಿಗೆ ತಂತ್ರಜ್ಞಾನ
ಉಡುಗೆ ಅಳತೆ ತಂತ್ರಗಳು
ಲೆಕ್ಕಾಚಾರ ಮತ್ತು ಕರಡು ಮಾದರಿ
ಮಾದರಿ ಬಟ್ಟೆಗಳಿಗೆ ಫ್ಯಾಬ್ರಿಕೇಷನ್ ಮಾಡುವ ವಿಧಾನ
ಟೈಲರಿಂಗ್‌ನಲ್ಲಿ ಬಳಸುವ ನಿಯಮಗಳು

ಎರಡನೇ ಹಂತ

ವಿದ್ಯಾರ್ಥಿಗಳ ಸಮವಸ್ತ್ರ
ಸಲ್ವಾರ್– ಸಾದಾ ಮಾದರಿ
ಸಲ್ವಾರ್– ಪಟಿಯಾಲ
ಸಲ್ವಾರ್– ಚೂಡಿದಾರ್ ಇತರೆ
ಕಮೀಜ್– ಕುರ್ತಾ , ಲೇಡಿಸ್ ಶರ್ಟ್
ಕಲಿಧರ್ ಕಟ್, ಪ್ರಿನ್ಸಸ್ ಕಟ್ ಇತರೆ..

ಶರ್ಟ್ಸ್
ಗಂಡುಮಕ್ಕಳ ಶರ್ಟ್ಸ್
ಹೆಣ್ಣುಮಕ್ಕಳ ಶರ್ಟ್ಸ್
ನೆಹರು ಶರ್ಟ್ಸ್
ಜೇಬಿರುವ ಸಾದಾ ಸರ್ಟ್ಸ್

ಪ್ಯಾಂಟ್ಸ್
ಸಮವಸ್ತ್ರ ಪ್ಯಾಂಟ್ಸ್
ಬಾಲಕಿಯರಿಗಾಗಿ ವಿಭಜಿತ ಸ್ಕರ್ಟ್ಸ್
ಪೆಡಲ್ ಪುಷರ್, ಕ್ಯಾಪ್ರಿ, ಲೇಡಿಸ್ ಪ್ಯಾಂಟ್
ಒನ್‌ಪೀಸ್ ಪ್ಯಾಂಟ್, ಫ್ಲೇರ್ಡ್ ಪ್ಯಾಂಟ್
ಬೆಲ್ ಬಾಟಮ್ ಪ್ಯಾಂಟ್
ಆನೆ ಪ್ಯಾಂಟ್, ಸಾಧಾರಣ ಪ್ಯಾಂಟ್

ಮೂರನೇ ಹಂತ

ಬ್ಲೌಸ್ (ಕುಪ್ಪಸ) /ಸ್ಕರ್ಟ್ /ಫ್ರಾಕ್
ಪ್ಲೇನ್ ಬ್ಲೌಸ್ । ಕಟೋರಿ ಬ್ಲೌಸ್। ಡಿಜೈನ್ ಬ್ಲೌಸ್ । ಸೀರೆ ಬ್ಲೌಸ್ (ಲೈನಿಂಗ್ ಜೊತೆ)। ಹಿಂಬದಿ ಬಟನ್ ಬ್ಲೌಸ್
ಪ್ಲೇನ್ ಸ್ಲೀವ್ ಬ್ಲೌಸ್, ಪಫ್ ಸ್ಲೀವ್ ಬ್ಲೌಸ್ । ಮಾಗ್ಯಾರ್ ಪ್ಯಾಟ್ರನ್ ಮತ್ತು ಫ್ರೆಂಟ್ ಫುಲ್ ಓಪನಿಂಗ್ ಸ್ಕರ್ಟ್, ಕಾಲರ್ ಸ್ಕರ್ಟ್,
ಸ್ಕರ್ಟ್ ಜೊತೆಗೆ ಫ್ರಾಕ್। ಮೇಲೆತ್ತಿರುವ ಸ್ಕರ್ಟ್, ಛತ್ರಿ ಮಾದರಿ ಸ್ಕರ್ಟ್, ಸೀರೆ ಪೆಟ್ಟಿಕೋಟ್, ಆರಿ ವರ್ಕ್ಸ್ ಹಾಗೂ ಇನ್ನಿತರೆ

ಹೆಚ್ಚಿನ ಮಾಹಿತಿಗಾಗಿ ಸಂಪರ್ಕಿಸಿ : 9611754666 / 9110872296

➢ Advance Sewing Machine Training:

Advanced Tailoring training was organized, in third quadrant from 25th October to 4th December 2022.

Very first day of the training program Principal of ATME College of Engineering inaugurated the program along with the Principle Investigator, Co-Principal Investigator, Project Coordinator, Project Assistant, Field worker, Trainer, beneficiaries of the program, and also all staff members of ATME College of Engineering, were present in the inauguration program.

All the beneficiary were allotted with individual industrial sewing machines and along with kit that includes a folder with a book, a pen, pencil, eraser, sharpener, and a scale for recording their training points, as well as a pair of tailoring scissors, a measuring tape, markers, clothes for training and other items.

Phase 1

All beneficiaries very enthusiastically participated in the training program.

Machine Operations like:

- How to use / handle carefully the sewing machine
- Different parts of machine and their functions.
- Proper maintenance and Oiling
- Stitching Techniques

Phase 2

The beneficiaries started using machines by practicing different stitching techniques.

- Dress Measurements
- Calculations and Drafting Patterns
- Method to Fold the Fabric for Patterns
- Terms used in Tailoring.

Phase 3

Beneficiaries stitched different types:

- Salwar kameez (Chudidhar)
- Gents/ Ladies Shirt
- Uniform

Trainer was observed each beneficiary while they practice and corrected their mistakes, Also cleared all doubts about stitching.

Phase- 4

The beneficiaries trained on how to sew blouses of various styles and designs. Saree fall, zigzag, lining blouses like

- Plain Blouse
- Katori Blouse
- Cut blouse with Plain Sleeve
- Cut Blouse with Puff Sleeve
- Cut Blouse with Bell sleeve
- Saree blouse with lining
- Back button blouse
- Designer Blouse
- Frock with a separate body and skirt
- Flared Skirt
- Umbrella Skirt
- Saree Petticoat

The beneficiaries learnt from starting with the introduction to the advanced electronic tailoring machine. They were all given the opportunity to utilize advanced sewing machines. They were trained to sew a variety of outfits with various designs and patterns.

As a outcome of the training programme the participants were able make to use the knowledge gained during the training as their career for their lively hood.
Finally the certificates were issued to all the beneficiaries.

https://drive.google.com/file/d/1N0EYaWcKe5l7uC7kioST1AsJOkHgryFY/view?usp=sharing – Advanced Sewing Machine Training Video

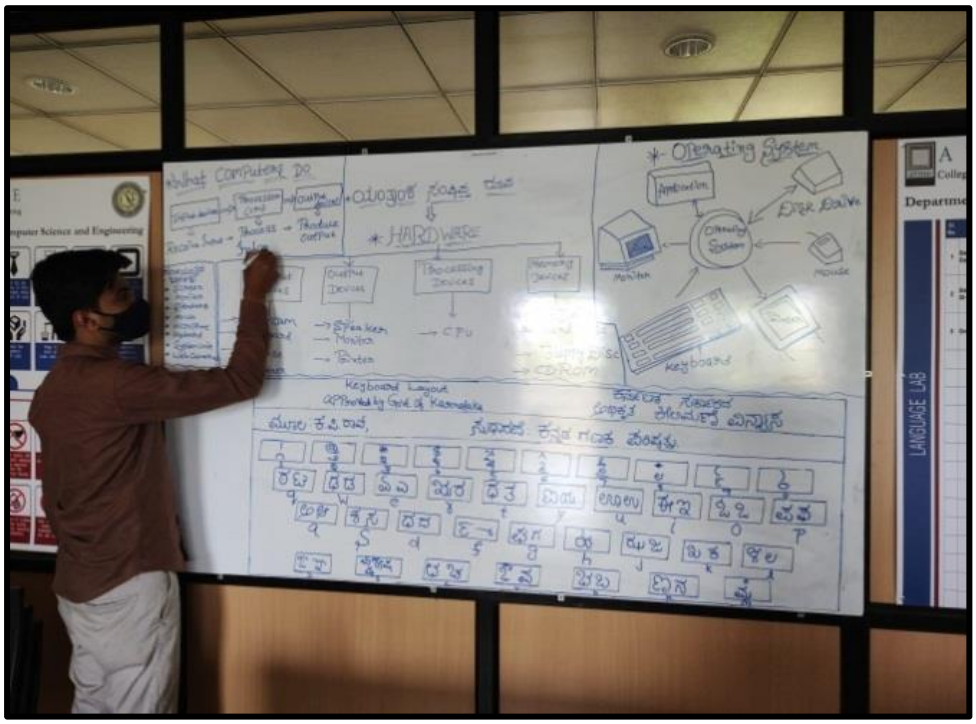
➢ Computer Skill Development Training

Computer skills development training was organized. In fourth quadrant from 3rd March to 7th April 2022.

Training program was inaugurated by Principal of ATME College of Engineering along with the principle Investigator, Co-Principal Investigator, Project Coordinator, Project Assistant, Field worker, Trainer, beneficiaries of the program, and also all staff members of ATME College of Engineering, were present in the inaugural program

Phase-1

Started with Basics of computer and Operating computer using GUI based operating system. Like: What is computer, input and output device, Hardware and software, connecting keyboard, mouse, monitor and printer. Followed by about OS, viewing files, folder, creating and renaming etc,.



- **Phase 2**

In this phase continues with usage of M.S. Office like M.S. Word, M.S. Excel, M.S. Power point, Opening and closing document, Text correction, spell check and printing. The beneficiaries improved day by day in the computer skills development program.

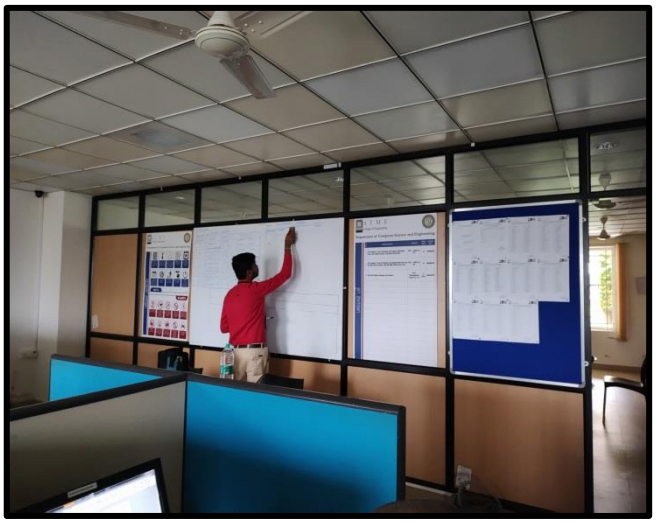
- **Phase-3**

In third week of training beneficiaries learnt about using of spreadsheet like Basic of spreadsheet, manipulation of cells, formulas and functions, editing of spreadsheet.

- **Phase-4**

In this phase the basics of computer network, concept of internet, connecting to internet and search engines and the part of communications and collaboration like Getting an email account, sending-receiving email and documentation were trained to the beneficiaries.

In addition. They have learnt how to create presentation in Power point and presented their training summary.



On completion of this training program the beneficiaries were able to use computer and interne skills. At the end of the program certificates were issued to all the beneficiaries.

https://drive.google.com/file/d/1N0EYaWcKe5l7uC7kioST1AsJOkHgryFY/view?usp=sharing – Computer Skill Development Training Video

➢ IoT development Suit for building Management

The customized IoT development and application software platform is developed to translate the ideas into prototypes for complete automated test & monitoring system for the co-working community centres. The IoT monitoring platform will help to perform predictive and prescriptive analysis from any remote location in the community center. This will empower the targeted beneficiaries with advanced digital tools knowledge.

Seat occupancy detection in Tech Hub*:* Occupancy detection system is designed to detect and deny such unauthorized access to protect and secure the systems for protecting against burglary or property damage, as well as personal protection against intruders. this system provides proper detection of intruder and provides security. By using this system, we can secure the data by detecting the intruder occupying system seats.

- **WIFI enabling to Tech Hub**

Transfer of data through modern devices connected to the Internet via IoT technology. Devices which collect consumption data and periodically send it to a central server for processing. And via internet anyone from any part of the world can monitor and control the loads through their handsets. It consists different methods like GSM communication, Real time clock, Internet of things (IoT), Automatic Meter reading etc. The goal behind the project is to have self-report in real-time, improving efficiency and bringing important information to the surface more quickly than a system depending on human intervention

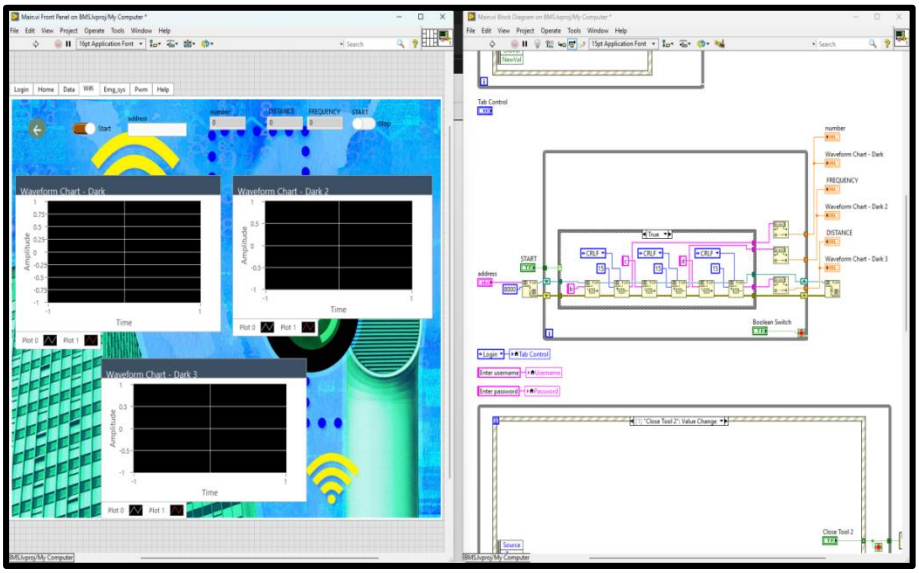


Figure 1: WIFI enabling to Tech Hub

- **GUI in Tech Hub:**

A GUI (graphical user interface) is a system of interactive visual components for computer software. A GUI displays objects that convey information, and represent actions that can be taken by the user. The objects change colour, size, or visibility when the user interacts with them. Building automation systems (BAS) are transforming from the legacy stand-alone security and safety systems to intelligent computerized network-based solutions. The modules are wired to form a network at field level, that are connected to a PC based main controller.

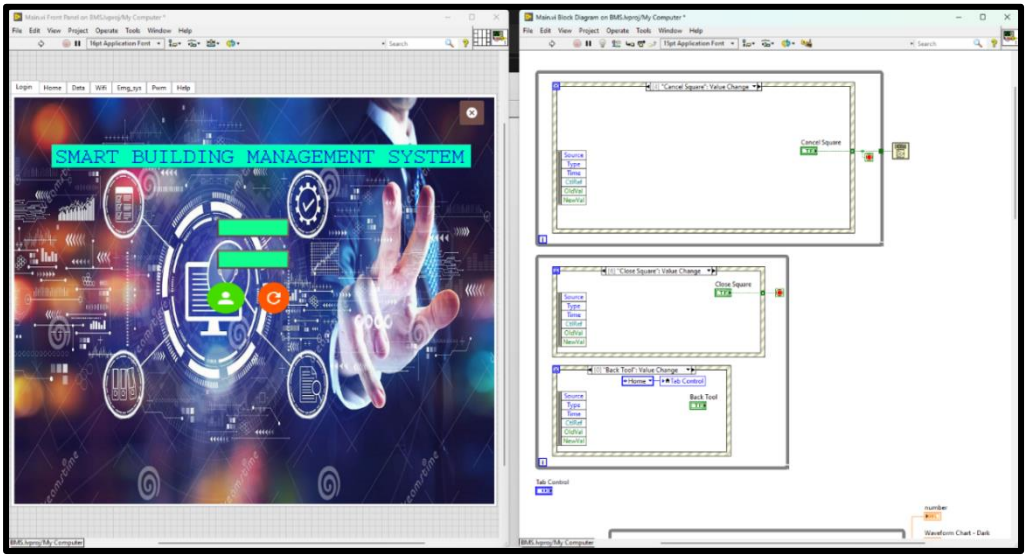


Figure 2: GUI Front panal

The design incorporates central servers for- (ii) Camera, (iii) Graphical User Interfaces (GUIs) and A local or remote workstation working as a client can access all functionalities using intranet or internet respectively. Network is used for the time critical process-alarm data exchange, and Ethernet backbone is used for high-speed Client-Server communication. Various functionalities of the BMS have been validated through hub implementation

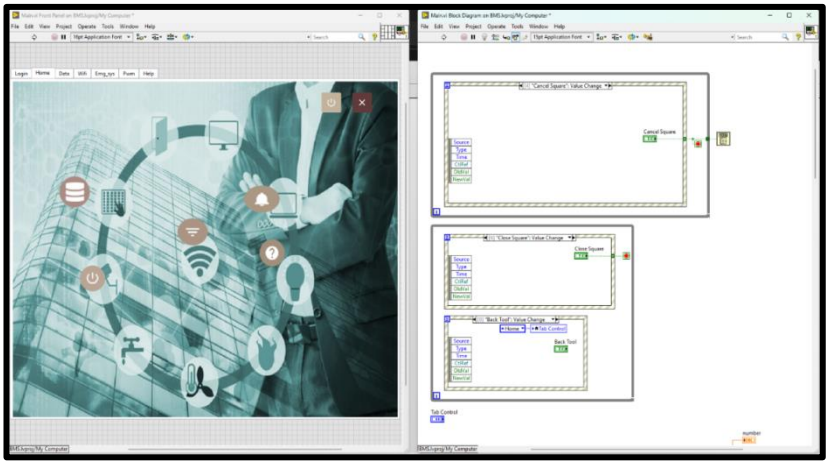


Figure 3: GUI Dashboard

- **Help Desk**

At their most basic, help desks are locations where users can request and receive assistance with technical-related problems, particularly in regard to services, and tech hub tools, platforms, and devices. In help desk it may be as simple as a single experienced employee with a deep understanding of relevant technologies and the solutions to commonly-encountered problems. In larger, more-established businesses, help desks may consist of teams of experts backed by dedicated software tools designed to help track and analyse technical issues as they arise.

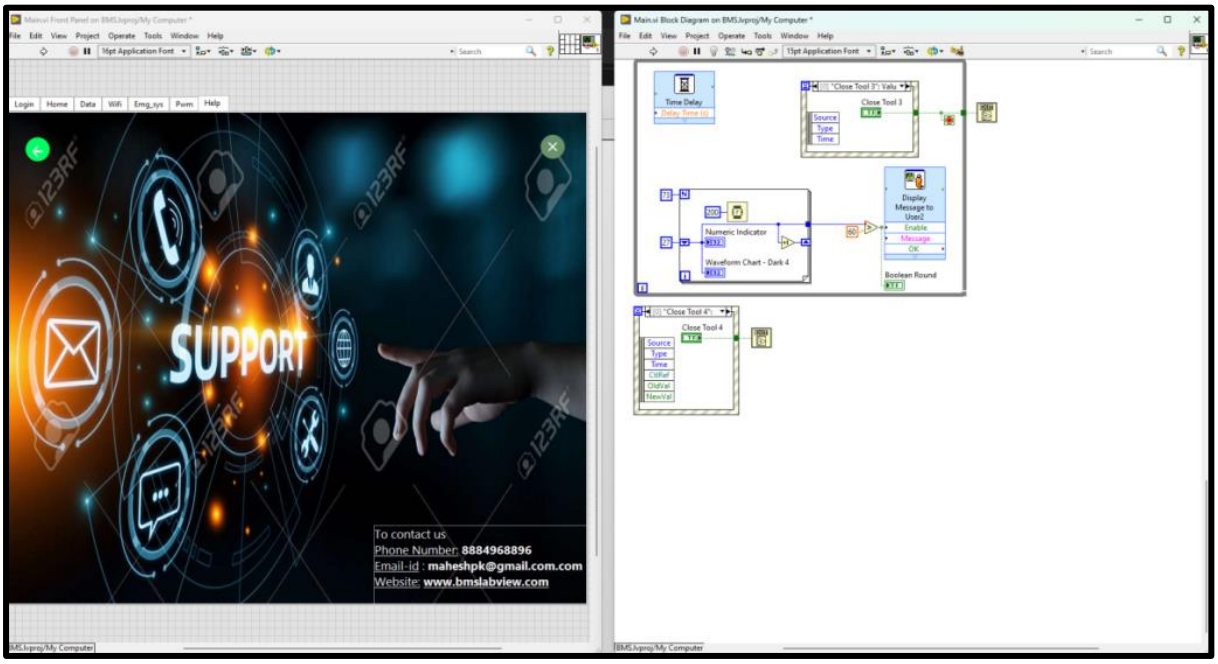


Figure 4: UI of Support desk

Thus, by the end of this work we could successfully collect the data regarding power management, human intrusion, seat occupancy and alert systems. And thus enables the database to be easily managed through GUI application. Here the data of single system or multiple systems can be acquired and secured by database administrator. The future work is to build it as mobile application.

https://drive.google.com/file/d/1tFXcLgrUQ5KpZaUykJ5XXGpT19d7jX1n/view?usp=share_link - video link for building management

➢ Community Center :

The Community center in itself will increase the awareness of sustainability among the masses; as it will be built using pre-fabricated devices and powered using solar power. Thus, reliable off-grid supply will be ensured. The building will be connected to 24*7 Internet Facility with separate locations allocated for technical skill development activities like information and techniques on tailoring, repairing agricultural kits, awareness about sustainability.

Plan- STI Hub

Community Center:

This Technology enabled community center will ensure sustainable rural livelihood promotion in tune to the particular societal requirements – room for cold storage, community-based skill development through online / offline mentoring, room for developing prototypes – translation of idea to products.

➢ Har Ghar Tiranga

As part of the DST Approved project tilted: "Innovative ICT Enabled Co-working Community Center Design for Rural Development"

Under this project we have celebrated 75th year of India's independence as "Azadi Ka Amrit Mahotsav". On this occasion Government of India has launched "Har Ghar Tiranga" programme by distributing/ displaying of National Flag for Harohalli and Mellahalli beneficiaries. The beneficiaries of this project happily participated in this activity and taken Selfie with National Flag and uploaded in the website https://harghartiranga.com. Also virtual flags was pinned on the given web link and received certificates.

Sample copies of participated photos and Certificates of the program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A T M E
College of Engineering


Mysuru, KA, India
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Lat 12.314746, Long 76.770341
08/12/2022 12:12 PM
Mysuru, KA, India
Mysuru, Mysuru, 571101, KA, India
Lat 12.314746, Long 76.770341
08/12/2022 12:14 PM


Ministry of Culture
Government of India
Azadi ka Amrit Mahotsav
CERTIFICATE
OF APPRECIATION
PROUDLY PRESENTED TO
Druva Shekar
FOR SUCCESSFULY PINNING A FLAG,
AN INITIATIVE BY THE MINISTRY OF CULTURE TO MARK AZADI KA AMRIT MAHOTSAV
HAR GHAR
TIRANGA

- **Parameters to be used for evaluation of the project output/outcomes (you may include as many parameters specific to your project**

Pre Intervention (Bench Mark)	**Anticipated Outcome (likely deliverables)**
Number of Awareness Programmes conducted	Awareness Programmes for Advanced Sewing Machine Training and Computer Skill Development training
Number of Skill development and Capacity building Programmes Conducted	Conducted Advanced Sewing Machine Training and Computer Skill Development training
Number of paper published/presented	Paper Tilted: "Iot Building Management System for Science and Technlogy Inovative Hub for Rural Development" presented on ICRTST-2022 held on 14th to 15th July 2022
Number of Reports/Manuals	1. Awareness Programmes, 2. Advanced Sewing Machine Training, 3. Computer Skill Development training, 4 Activity On Har Ghar Tiranga
Access to efficient technologies which will build long term assets	IoT development Suit for building Management -Seat occupancy detection in Tech Hub
Geographical Coverage/Number of beneficiaries/ households	93 Beneficiaries
Number of Common Facility Centres/ Permanent Structures/ Common Resources Created common facility centre for the 3 villages	Community Centre- Technology enabled co-working common community centre-constructed

OBJECTIVE WISE PROGRESS & OUTPUT/OUTCOME

Objective 1: Reduce the urban migration from rural areas instead provide livelihood for the locals and improve their standard of living with the facilities available as in urban areas

Proposed Activities	Progress Till date	Output**	Challenges/ Shortcomings
Awareness programs	Conducted on month of Oct and Dec of 2021	Awareness Programmes Conducted with 92 number of male and 227 numbers female are participates • Beneficiaries covered under the Project percentages: **Gender wise Female:** 72% and Male: 28% Age group: 15- 40 yrs -89% Above 40 yrs -11%	To make all beneficiaries to Assemble in one place at scheduled time

Objective 2: Efficient use of technology and reap maximum benefits like training on being guides or new techniques of tailoring

Proposed Activities	Progress Till date	Output**	Challenges/ Shortcomings
Advanced Sewing Machine Training	Conducted from 25th Oct to 4th Dec 2021	Advanced Sewing Machine Training conducted with 36 number of female participants • Beneficiaries directly using the facilities created are 36 • Beneficiaries covered under the Project : **Gender wise Female:** 100% and Male: NIL **Harohalli Grampanchayth:** 100% Age group: 15- 40 yrs -86% Above 40 yrs -14% • **Youth employed- total percentages** = 38%	Frequently have to remind about the schedule and timing of the training program for the beneficiaries

Objective 3: Improve the Education and skill development training for drop out students

Proposed Activities	Progress Till date	Output**	Challenges/ Shortcomings
Computer Skill Development training	Conducted from 3rd March to 7th April 2022	• Skill Development Programmes conducted with 27 number of male and 30 members of female participants • Beneficiaries directly using the facilities created are 57 • Beneficiaries covered under the Project : **Gender wise Female:** 72% and Male: 28% **Harohalli Grampanchayth:** 100% **Age group:** 15- 40 yrs -100% Above 40 yrs –NIL • **Youth employed**- total percentages=11%	Frequently have to remind about the schedule and timing of the training program for the beneficiaries

SIGNATURE:

Dr. PRAKASH KURAVATTI
CO-PRINCIPAL INVESTIGATOR:
Dr. PRAKASH KURAVATTI
CO-PRINCIPAL INVESTIGATOR
DST PROJECT (P-1819)
DEPT. OF ELECTRONICS & COMMU ATION
ATME COLLEGE OF ENGINEERING
MYSURU-570 028

Dr. MAHESH P K
PRINCIPAL INVESTIGATOR:
Dr. MAHESH P.K.
PRINCIPAL INVESTIGATOR
DST PROJECT (P-1819)
DEPT. OF ELECTRONICS & COMMUNICATION
ATME COLLEGE OF ENGINEERING
MYSURU-570 028