Education Department
Government of Gujarat

India's 1st State Level Hackathon involving State Government Departments & all Universities

SMART GUJARAT for NEW INDIA
HACKATHON '17

September 26, 2017

Student Startup and Innovation Policy
Government of Gujarat, Gandhinagar
Creativity and problem solving are two critical facets of innovation & start-ups. Given a platform, young minds across universities are capable of applying their creative minds to become problem solver and innovators. Having seen dozens of such mavericks across our higher learning campuses in recent time, Education Department, Government of Gujarat has taken path breaking measures to create an end to end ecosystem through Student Start-up & Innovation Policy, SSIP. “Smart Gujarat for New India” Hackathon initiative is one of such intervention where we are trying to harness creative potential of vast pool of young students who will apply their skill sets to attempt in solving challenges posed by more than 16 departments of Government of Gujarat.

In the National Hackathon 2017, organized by MHRD, teams from Gujarat had delivered outstanding performance with over 8 national awards including three 1st prizes and 5 runners up awards. As a part of national initiatives and with support from education department, GTU & GU hosted regional Hackathon program in Ahmadabad on 1st/2nd April where 450 students in 51 teams from 13 States participated and worked on challenges posed by Dpt. of Space Science/ISRO. To carry forward the legacy ahead and towards contributing for the call of Hon. PM Shri Narendra Modi for involving young minds to solve challenges of the nation, Gujarat is the 1st state in the country to host a state level Hackathon this year. The program is unique in its nature as it involves over 16 departments of Government of Gujarat (GOG) and students across all the universities in the state.

In the process of sourcing the problem statements, SSIP cell at education department closely worked with nodal officers from different Government departments designated for the purpose and arranged 4 workshops in July-September 2017 and worked together to define problem statements related to different departments. Faculty experts were assigned to assist each department to better articulate each problem definition so that participating students get crux of the challenges and have clarity on deliverables with boundary conditions. Participating departments of GoG also did thorough process internally to source digital challenges. In this process around 200 challenges have been scouted which have been posted on a web portal at http://www.gujarathackathon.cteguj.in/ so that students can go through it and submit their proposal for particular challenge that they feel they can attempt to solve using their skill sets. Each team applying for the program would consist of minimum 5 students with minimum 2 girls with a faculty mentor who would be guiding them. Concerned department of GoG also is assigning mentors who will mentor the potential teams at different stages.

We have made systematic efforts to take the concrete message of the program to every university and institutes. Within very short span of declaring the program opening the registration for teams to apply for the program, we have received over 7000 student’s intent of participation across departments by now.
Such overwhelming response reemphasizes the hunger for creative problem solving and innovation of our young students. SSIP is making systematic efforts to give them all possible handholding support so that they develop some of the innovative solutions which can be deployed at grassroots level.

After launching of the program students will work on the challenges and submit final proposal/Proof of concept by 31st Dec 2017. In January-February 2018, Regional rounds and Grand finale of the Gujarat Hackathon will be organized. During this program best teams will work nonstop 36 hours for creating final proof of concept (POC) and present to jury. Best teams will also be given awards/appreciations based on their performance/solution. SSIP will make efforts to create best possible incentives to the teams so that they can attempt their best. The below awards will be given away as follows:

- Award prize to First/Second/Third team in the overall Hackathon
- Best all girls team
- Citation for Institution having maximum participation: First/Second/Third
- Departments Awards for solutions picked up by them

Best teams will get opportunity to participate in MHRD Hackathon in Feb. 2018 at national level. Education Department is trying to co-create with all possible stakeholders involving government departments, mentors, academia, sartorial experts and other ecosystem stakeholders.

Our objective is to nurture talent and give them exposure to real life challenges so that they can orient their approach to become innovators. This will lead to make the academic system more entrepreneurial too and some of these teams may get further assistance under SSIP to take their ideas ahead. Universities and Institutes will derive insights from this over all exercise at heuristic level and innovate at pedagogy level to enable students to innovate.

I am confident that “Smart Gujarat for New India” Hackathon will be a new milestone in open innovation model not only in Gujarat but also in whole nation. Rich co-creation, system approach & academia-governance linkage will add new flavour and efficiency to existing innovation efforts in the state. I congratulate all the stakeholders involved in this process for fine-tuning the idea and making spirited efforts in executing this with inclusion and efficiency. I wish all the participants all the best and confident that each of them will make unique efforts utilizing their skill and even surprise each of us through the impact of their innovation.

Ms. Anju Sharma, IAS,
Principal Secretary, Higher & Technical Education,
Government of Gujarat
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<td>Farmers are always confused to ask any query related to farming. Farmers can ask query in their own language/images/voice/video. There should be dynamically updateable different topic. Farmer can submit their query in any of form like text/images/voice/video. Authenticated Users should update topic only. Application user should be verified first time by OTP. There should be manual or partially automated consult expert forwarding system for requested query. Every topic has multiple experts and there should be provision to forwarding query by their district. If any query attended by expert than that should not repeated. Expert can also answer the query using hand held device. There should be frequently asked question which is updated by authenticated users. There should be option for language (English/Hindi/Gujarati). Admin login to manage name and areas of experts. Farmer App and Expert App.</td>
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**Topics Example:**

Crop->cotton->Pest Query-> \{ASK\}
Crop->wheat->Plant Disease query-> \{ASK\}

**Input by Authenticated User:** Topic Name (3 Level Min), Other needed information

**Input by Verified User:** text, images, voice, video (as Query)

**Environment:** Android

**Authenticated User:** State Agri. Uni. Extension, State Agri. Departments, Expert Team

**Permissions:** Expert will get query of own selected topic. Needed required action for privacy and confidentiality.
**What Exact Problem is being Solved?**

Majority farmers will receive solution from trusted source directly.

**Users**

Farmer, stakeholder of Agriculture, Agriculture Experts

**Expected Outcomes**

End user can easily download. GUI, navigation of topic and Ask Query page should be user-friendly. Solutions should be Notifiable. Authenticated user should be able to view geo-location of plotted query. Authenticated user can view and manage necessary data from their portal.

**Impact**

Farmer will get primary solutions from hand held device which is given by trusted source.
Name of the Department : Agriculture & Cooperation Department

Problem ID : GH02

Problem Statement : Centralized handheld Information Tool for Farmers

Challenge Description : A farmer will be able to get all relevant information on specific subjects around his village/block/district. Subject and contents should be dynamically updatable from the authenticated users. There should be n-Level of dynamic subject with their contents under any specific subject. Data transaction should be maintained through proper API. There should be option for language (English/Hindi/Gujarati) and easy search functionality.

**Input:** Parent Subject, Name of Subject, Content, notifiable, other required parameters

**Environment:** Android

**Subject hierarchical example:**

Crop -> Wheat -> Care -> Contents
Crop -> Wheat -> FAQ -> Question -> Contents
Input -> Seed -> Crop -> Variety -> Contents

There should be Crop, Input, Scheme, News etc.

**Authenticated User:** State Agri. Uni. Extension, State Agri. Department

**Permissions:** Assigned Authenticated User to subjects. Only those can update.
<table>
<thead>
<tr>
<th>What Exact Problem is being Solved?</th>
<th>Majority farmers will receive information from trusted source directly.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users:</td>
<td>Farmer, Student, stockholder of Agriculture</td>
</tr>
<tr>
<td>Expected Outcomes:</td>
<td>End user can easily download. GUI and navigation of subject should be user-friendly. Notifiable subject should notify to end user about update.</td>
</tr>
<tr>
<td>Impact:</td>
<td>Farmer will able to get information from hand held device which is published by Agricultural Department or Universities.</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Climate Change Department</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Problem ID</td>
<td>GH03</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Traffic Management based on air pollution monitoring system</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Current scenario: We have static information i.e. raw data regarding air pollution</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>To reduce traffic or divert the traffic in order to balance the air pollution level</td>
</tr>
<tr>
<td>Users</td>
<td>General Public</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Machine learning based air pollution level prediction system</td>
</tr>
<tr>
<td>Impact</td>
<td>Reduce the air pollutants which will results in to good health</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Education Department</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Problem ID</td>
<td>GH04</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Student dropout analysis for school education</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Right to education is key concern for government and at school level, drop out ratio is high due to poverty and social, economic reasons. If government have drop out student analysis on following different categories, it will be very useful in framing different policies.</td>
</tr>
<tr>
<td></td>
<td>• School wise</td>
</tr>
<tr>
<td></td>
<td>• Area wise</td>
</tr>
<tr>
<td></td>
<td>• Gender wise</td>
</tr>
<tr>
<td></td>
<td>• Caste wise</td>
</tr>
<tr>
<td></td>
<td>• Age/standard wise</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Drop out analysis will help to reduce the drop out and ensure education to all.</td>
</tr>
<tr>
<td>Users</td>
<td>Education department</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web portal</td>
</tr>
<tr>
<td>Impact</td>
<td>No</td>
</tr>
</tbody>
</table>
Name of the Department : Education Department

Problem ID : GH05

Problem Statement : Employment registration at university exit

Challenge Description with context : Any graduate leaving university need to register at employment office. While providing degree certificate at convocation, common application made for degree certificate and employment registration.

Furthermore, colleges and universities can provide their placement data to employment office for records.

What Exact Problem is being Solved? : Employment office does not have precise data regarding private employment. This will help to generate information at source.

Users : Students, Universities, Employment office.

Expected Outcomes : Web portal connecting university and employment office.

Sample data required : Yes.

Information fields required for employment registration.
Name of the Department : Education Department  
Problem ID : GH06  
Problem Statement : Pre-admission orientation for professional courses  
Challenge Description with context : After completing high school and before admission there is a gap of more than one month where students are idle and waiting for the admission confirmation.

There should be online course wise guidance for students aspiring different courses suggesting MOOCs, online resources, tutorials and many more based on pre-requisite of different courses.

What Exact Problem is being Solved? : This will make better use of student’s ideal time and will orient them towards their degree course.

Users : All students seeking admission in professional courses and knowledge provider organizations, MOOC providers.

Expected Outcomes : One-way web site or mobile application can be made which suggest course/branch wise learning resources.

Sample data required : No
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Education Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH07</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Mobile location based student attendance</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Smart phone is very common for all college going students. Location based application can be made which check for the student attendance based on location. Furthermore, attendance data can be saved on server and analytics can be provided as and when required. GPS/ IoT/ WiFi login range or many other solutions can be opted. Automatic message can also be sent to parents regarding student presence in the institute day to day.</td>
</tr>
<tr>
<td>What Exact Problem is</td>
<td>Student attendance can be assured more effectively.</td>
</tr>
<tr>
<td>being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>All academic institutes, Universities.</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Mobile application with server connectivity having administration module, student module and parent module.</td>
</tr>
<tr>
<td>Sample data required</td>
<td>No</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Education Department</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Problem ID</td>
<td>GH08</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>College/ university Interface for pass out students</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Pass out students who are employed and may be in different cities have tough time when they need assistance from their college or university as they cannot come personally. They need to apply for transcripts, mark sheets of final year, duplicate mark sheet, degree certificates and many more. An interface must be designed so that aspirant can apply online, their required data can be filled online, can be checked and verified, and required documents can be delivered to them at their registered address with nominal charge.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Students can avail university services remotely.</td>
</tr>
<tr>
<td>Users</td>
<td>All university students</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web portal with money transaction facility</td>
</tr>
<tr>
<td>Sample data required</td>
<td>No</td>
</tr>
</tbody>
</table>
Name of the Department : Education Department
Problem ID : GH09
Problem Statement : Expert communities/Forums for knowledge and skill sharing

Challenge Description with context : When students, research persons and faculties working on different skill areas there are always lots of doubts and questions need to be addressed at learning level. People are also not aware of different experts working in same areas and hence don’t get benefit of each other’s expertise.

Different technology wise and skill set wise online forums/communities must be developed where one can post queries and get answers. One can also learn from previously asked questions. This can be done at university level so online group can be formed of persons having same work domain.

What Exact Problem is being Solved? : Virtual knowledge and expertise sharing and Resource person identification can be done.

Users : All professionals working at university level

Expected Outcomes : Web portal and mobile application version of same.

Sample data required : No
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Education Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH10</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Education facilitation for “Divyang” students</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Physically disabled students have many challenges to reach at school/college and to learn. Different interfaces can be designed for differently disabled students. Requirement for different disability should be identified and based on that courses can be designed. For example, blind student should have brail or voice based learning, those who cannot walk can have postal/ Distance learning courses designed from primary to college level. Their evaluation pattern can also be designed differently.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>It will provide better opportunities to “Divyang” students and same ground level to compete with normal students.</td>
</tr>
<tr>
<td>Users</td>
<td>Education department, Universities</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web/Mobile application</td>
</tr>
<tr>
<td>Sample data required</td>
<td>No</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Education Department</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Problem ID</td>
<td>GH11</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>A suggestion/idea (with solution or prototype) submission interface (Idea Bank)</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Today’s youth is full of innovative ideas. And those ideas need to be stored for current and future development. State level interface can be developed where category wise idea can be stored and saved for reference. Any person can submit idea online at such interface. An idea bank can be established where ideas can be deposited. Later idea may be developed / implemented by other agency but credit remains with the person who initiated the idea. Every month best idea can be rewarded so citizens can be motivated.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Government receives ideas and prototypes throughout year for Hackathon kind of event.</td>
</tr>
<tr>
<td>Users</td>
<td>All citizens</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web portal</td>
</tr>
<tr>
<td>Sample data required</td>
<td>No</td>
</tr>
</tbody>
</table>
Name of the Department : Education Department
Problem ID : GH12
Problem Statement : Laboratory (Hardware/software) resource usage analysis

Challenge Description with context : Most of the government agencies have state of the art laboratory setups with latest software and hardware. A server based application can be developed which maintains the log of usage of different hardware and software and give detail analysis.

What Exact Problem is being Solved? : Such analysis will be useful while purchasing new resources and give in sight on the present usages of resources.

Users : All government agencies and purchase departments
Expected Outcomes : Server based application for intranet.
Sample data required : No
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Education Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH13</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Online merit based hostel admission</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Hostels always have limited seats for admission compared to total number of students admitted in college or university. An online transparent process can be designed which considers merit, gender, reservations and distance of home town of student from the institute. Online admission procedure can be defined based on above parameters.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Transparency in admission procedure.</td>
</tr>
<tr>
<td>Users</td>
<td>Students, College administration</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web based application</td>
</tr>
<tr>
<td>Sample data required</td>
<td>No</td>
</tr>
</tbody>
</table>
Name of the Department : Education Department
Problem ID : GH14
Problem Statement : Career Dendrogram

Challenge Description with context:
In order to realize the goal of demographic divide, every citizen of the country needs to be educated for job, be it a scientist, a doctor, engineer or whatever to meet not only the needs of our society but also the other societies elsewhere in the world. Every student aspires to become a great person and self-reliant, but their passion and likings are diverse. In order to cater to the aspirations of the students and facilitate them to aim it high, they are required to be informed about the number and type of jobs this country has in the future years, as also the number of business persons, entrepreneurs, workforce in all areas of employment. A national database of actual requirement of workforce, category-wise by both Government and Industry, the type of educational or skill qualification required, nature of job, eligibility criteria, salary and perks, career development /progression in every field / sector of employment is urgently required.

As each individual nurtures different desires to become in their life, there is a need for career dendrogram, so that one can put forth a concerted efforts to become the best in his vocation and excel in life rather than make umpteen number of mistakes of wrong selection of course of education or career and repent later and go on trying different things losing his precious time/life.

What Exact Problem is being Solved? : Career guidance at early stage of selection of career
<table>
<thead>
<tr>
<th><strong>Users</strong></th>
<th>All students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expected Outcomes</strong></td>
<td>Informative web site/ Mobile application which provides authentic data on job trends, articles and future trends.</td>
</tr>
<tr>
<td><strong>Sample data required</strong></td>
<td>No</td>
</tr>
</tbody>
</table>
Name of the Department : Education Department  
Problem ID : GH15  
Problem Statement : Auto update on research agencies and grant/help available for research in different sectors  
Challenge Description with context : There are many Governmental and Non-Governmental sources of grants for undertaking research in Colleges and Universities. Lack of information in one platform about the institution granting funds, criteria of selection, norms and stipulations, time period, purpose for which grants are available, last date, eligibility criteria for all the grants available at International, National levels and local and subject-wise details, is inhibiting several potential researchers from availing the grants for undertaking research projects. 

Provision of such a platform would be useful in enabling healthy competition among researchers and also for the best utilization of funds for research programs. 

What Exact Problem is being Solved? : Compiled and synchronized information is available from single access point. 

Users : All research persons. 

Expected Outcomes : Central Web portal where research agencies and research persons can interact 

Sample data required : No
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Education Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH16</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Open Data for Universities</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Pan-university data bank is required for accessing course details, comparison of courses, facilities and faculty, admission, tracking student mobility, viewing results, evaluation and certification, verification of certificates, joint online courses (MOOCs). This will help both student and faculty communities for self-improvement through comparison and emulations. Lack of information is leading to self-gloryification and inbreeding among University and College student and faculty members.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Provides level playing grounds for all the students and faculties by Pan-University data bank.</td>
</tr>
<tr>
<td>Users</td>
<td>All students and faculties</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web portal where universities and colleges can feed information and students/faculties can see</td>
</tr>
<tr>
<td>Sample data required</td>
<td>No</td>
</tr>
</tbody>
</table>
Name of the Department : Education Department
Problem ID : GH17
Problem Statement : Knowledge platform for sharing the project works taken up by the students in Technical/Higher Educational Institutes and Universities throughout the country.

Challenge Description with context : Many good initiatives by students in the form of project is presently going unnoticed because of lack of awareness. If a common knowledge platform (with a facility for plagiarism) is created to bring all project works taken up at various levels by the students in Technical / Higher Educational Institutes and Universities throughout the country, then it will be a great source of knowledge and also will help the student community to take up unique/innovative project works.

What Exact Problem is being Solved? : Provision of Knowledge platform in which the entire data base of all the projects taken up by all Technical/Higher Educational Institutes/Universities throughout the country by interlinking will be extremely useful.

Users : Students, Colleges, Universities, Companies

Expected Outcomes : Web portal
Sample data required : No
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Education Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH18</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Interlinking of Campus placement in Technical institutes/Higher Educational Institutes and Universities</td>
</tr>
</tbody>
</table>

**Challenge Description with context**

As on today, in our country we are not having any master data base regarding campus placement in technical institute and Universities throughout the country. By mapping the entire placement details throughout the county, the percentage of un-employability can be identified in various fields of education. This will help the policy makers to come out with appropriate solution through framing of policies for tackling the un-employability in the country.

**What Exact Problem is being Solved?**

Provision of common platform in which the entire data base of campus placement of all technical institutes/Universities throughout the country by interlinking it will be extremely useful for the Government/Policy makers to come out with appropriate solutions.

**Users**

Colleges, Universities, Companies, Government agencies

**Expected Outcomes**

Web portal

**Sample data required**

Yes
Name of the Department : Education Department
Problem ID : GH19
Problem Statement : Interlinking of School education, Higher education and Technical education at all levels throughout the country.

Challenge Description with context : As on today in our country we are not having any master data base regarding students at various levels, without which framing policies with regard to education and upliftment of student community will be difficult.

Provision of common platform in which the entire data base of school education, higher education and technical education are interlinked, which will help the government to identify the grey areas where actual concentration is needed. Further, the percentage of students entering various fields of education and percentage of student drop outs also can be identified and also State/District wise drop outs can be identified and thereby these places can be targeted for improvement.

What Exact Problem is being Solved? : Better policy forming with help of data analysis
Users : Government agencies
Expected Outcomes : Web portal
Sample data required : Yes

https://data.gov.in/catalog/institutions-aishe-survey
https://data.gov.in/catalog/institutions-aishe-survey
https://data.gov.in/catalog/teaching-staff-aishe-survey
https://data.gov.in/catalog/teaching-staff-aishe-survey
https://data.gov.in/catalog/student-enrolment-aishe-survey
https://data.gov.in/catalog/student-enrolment-aishe-survey
https://data.gov.in/catalog/enrolment-school-education
https://data.gov.in/catalog/faculty-wise-enrolment-higher-education
https://data.gov.in/catalog/gross-enrolment-ratio-ger
https://data.gov.in/catalog/gross-enrolment-ratio-ger
https://data.gov.in/catalog/gross-enrolment-higher-education-and-distance-education
https://data.gov.in/catalog/current-enrolment-across-different-education-level-higher-education
https://data.gov.in/catalog/school-education-institutions
https://data.gov.in/catalog/school-education-institutions
https://data.gov.in/catalog/national-institutions-higher-education
https://data.gov.in/catalog/growth-higher-education-system
https://data.gov.in/catalog/institutions-school-education
https://data.gov.in/catalog/number-schools-0
https://data.gov.in/catalog/number-schools-0
https://data.gov.in/catalog/number-recognised-educational-institutions-higher-learning-all-india-and-state-wise
https://data.gov.in/catalog/number-students
https://data.gov.in/catalog/technical-industrial-arts-and-craft-institutes
https://data.gov.in/catalog/expenditure-education-centre-and-state-governments
https://data.gov.in/catalog/gross-budgetary-support-education-sector-twelfth-plan
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Education Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH20</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>One Point Student Verification through Mobile Application</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>The working model should provide integration between National Academic Depository, Digital Locker &amp; Instant Aadhaar (Aadhaar Portal). This App will provide the link between Aadhaar Number &amp; Roll Number and the students should update the data of “Aadhaar Number” along with “Roll Number” on National Academic Depository (It is like Linking roll. no. with Aadhaar No.). This will help in Verification of AICTE Approved Institutes, Verification of Students and Message service for students like job alert etc.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Availability of such an Application would be useful (Design and Development) for Integration of Biometric details (Aadhaar instant App.) and Digital locker information (Digilocker App.)/National Academic Depository (MHRD) of students record on a single mobile App.</td>
</tr>
<tr>
<td>Users</td>
<td>Students, College, University, Government agencies</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Mobile application</td>
</tr>
<tr>
<td>Sample data required</td>
<td>No</td>
</tr>
</tbody>
</table>
Name of the Department: Education Department

Problem ID: GH21

Problem Statement: Prediction of Admission & Jobs in Engineering & Technology /Management/Pharmacy with respect to demographic locations

Challenge Description: AICTE grants approval for establishment of new technical institutions and starting of new courses in the field of Engineering and Technology, Management, Pharmacy, Architecture etc. At present the criteria for grant of approval for such courses is based mainly on infrastructure available as per the minimum norms prescribed by AICTE (Approval Process Handbook). However due to lack of information on employment potential for the proposed courses AICTE is giving approval and the students pass out from such Institutions/Branches of Engineering/Management/Pharmacy etc. remain unemployed. At present, there is no mechanism available to find out how to estimate/forecast employment potential for any branch(s)/course(s) in Engineering/Management/Pharmacy etc. on short term and long-term basis by correlating data from various sources and formulating computer program/application using neural networks OR any other programming tools.

Development of Application Software to estimate/forecast employment potential of Graduates/Post Graduates in different branches/courses on short term and long-term basis by correlating data from various sources could be useful for granting approval along with infrastructure and other facilities.

What Exact Problem is being Solved?: Predictions of jobs can be done and based on that courses and intake can be approved

Users: Universities, UGC/AICTE, Education department
Expected Outcomes: Application using algorithms to estimate/forecast employment potential for any branch(s)/course(s)

Sample data required: No
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Education Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH22</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Digital library of Research Projects submitted to various funding agencies.</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Colleges allot a number of research projects, over a period of time, many of which may be duplicate or similar. How to avoid this? Also, how to make better use of the project reports which are currently stored as hard copies.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Duplicity can be avoided. Resources shared online can be used effectively.</td>
</tr>
<tr>
<td>Users</td>
<td>Students, Colleges, Universities</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web Portal</td>
</tr>
<tr>
<td>Sample data required</td>
<td>No</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Education Department</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Problem ID</td>
<td>GH23</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Science Fair Management</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Education department regularly organizes science fair for schools. Submitted projects do not have any repository or database for further analysis or use. Many times, same projects are presented at different levels. If repository or database is maintained, good projects can be explored at higher level. Can also be provided grant or aid for further development.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Better management of science fair can be achieved and submission of duplicate projects can be avoided.</td>
</tr>
<tr>
<td>Users</td>
<td>Education department, Universities</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web/Mobile application</td>
</tr>
<tr>
<td>Sample data required</td>
<td>No</td>
</tr>
</tbody>
</table>
Name of the Department : Education Department
Problem ID : GH24
Problem Statement : Identification of meritorious students in primary education

Challenge Description with context : Gujarat government has nearly 90 lac students studying in primary education across state. They are in different cities and villages across state. There is no mechanism to identify bright students who are performing well in study, sports or other activities. Web portal can be designed to acquire date about such students and can be analyzed on different parameters.

What Exact Problem is being Solved? : Such identified students can be provided with extra resources or special attention can be given to their upbringing.

Users : Education department, Universities
Expected Outcomes : Web portal
Sample data required : No
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Education Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH25</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Aadhar enabled Mid-Day Meal/ student attendance at school/Aanganvadi</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Government spends lots of money on education and meal of every student. But some time those are not utilized properly due to lack of strict monitoring. If student attendance at school and Mid-Day Meal is monitored through bio metric and Aadhar enabled service then fake submission of student data can be avoided.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Better utilization of government resources and better policy making.</td>
</tr>
<tr>
<td>Users</td>
<td>Education department, Universities</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web/Mobile application</td>
</tr>
<tr>
<td>Sample data required</td>
<td>No</td>
</tr>
</tbody>
</table>
Name of the Department: Energy & Petroleum Department

Problem ID: GH26

Problem Statement: Communication system between consumers and utility offices for power interruption

Challenge Description with context: When interruption occurred on the distribution feeder and sustain for the long duration, especially during the peak load period or in odd night hours, all the affected consumers continuously approach the sub division consumer care centre or the central consumer care centre to know the reasons of interruption and approximate time for the restoration of the power supply. In such circumstances, the local land line phone or the mobile phone may find actively engaged. Consequently, the affected consumers/general public habituated to directly contact the technical staff and if not satisfactorily replied then they may get the negative impression for the utility. The problem persists if the severe fault occurred and restoration of power takes more time. In such circumstances, the people use to call sub division engineers and to higher officials as well at any point of time.

- Consumer dissatisfaction
- Possibilities of probable accident as the consumer calls require to be attended by the technical staff while working with the electrical system.
- Quality of the work suffers and duration for the restoration of power may get lengthen.

The current process to handle the communication during the activities for the restoration of power supply is as below.

- The attendant of the consumer care centre attends the phone call of the consumers and the general public whenever the power interruption occurs.
• The attendant gets the information regarding the interruption from the technical staff/substation staff. Until he gets the information he may not be assure about the fault and hence cannot satisfactorily replies the consumers

• Prompt feedback actions are not designed for the transfer of the information.

• The attendant of CCC is not highly trained to communicate with general public.

In the event of dissatisfaction of the consumer, they may contact the sub division engineers or the higher officials eventually during odd hours.

What Exact Problem is being Solved?

• The affected consumers have the tendency to approach the CCC dispassionately whenever the interruption occurs.

• The attendant at the CCC may not aware of the reason/s of interruption and not in a position to reply each call. Even he is in contact with the working technical staff.

• The technical staff have the priority for the restoration of the power, must not to inform the general consumer. They are to work with live electricity and such disturbing activities may cause accident.

Attending the consumer call during the odd hours is not the part of the job profile of the engineers and it may happen that in case of not attending the phone calls by them results into strict actions by the higher officials.

Users : All the consumers and the employees of the utility.

Expected Outcomes : • Define and design information and feedback system preferably a mobile application which shall be useful to handle the situation during the process of restoration of power supply.
• The access of the application is with the sub division engineers and viewing power with the higher officials in the hierarchy.

• Sub division engineer gathers the details of the interruption, affected villages/consumers, valuable consumers etc. and probable time for the restoration of power supply from the technical staff.

• He/She shall define a message, narrating all the details regarding the interruption (if the interruption persists for longer duration) and upload the informative message using mobile app.

• The contact number database of the affected consumers may be availed from the LT/HT consumer master or from the other external source.

• The affected consumers shall be defined on the basis of address mentioned in the LT/HT consumer master like /Landmark/village/town/city etc.

• The uploaded message in the application is to be delivered to all the affected consumers and the higher officials.

Impact :  • Affected Consumers

• Technical Employees of the utility

• Monitoring engineers and higher officials
Name of the Department: Energy & Petroleum Department

Problem ID: GH27

Problem Statement: GIS-GPS base new connection estimate generation by using their Mobile/web base application

Challenge Description with context: On-line registration for new connection demand in prescribed form along with GEO Co-ordinates of prospective connection locations. System will verify the documents and Check feasibility of the connections from nearest feasible network. The system will prepare feasibility report and generate estimate/Firm Quotation as per norms and will appear in mobile App / Web.

GIS- Geographical Information System

GPS- Global Positioning system

Generate one or more link-node calculation networks for each project, starting from the registered source network.

Analyze the distribution network around the potential work site to trace which valves need to be closed and which customers it will affect

What Exact Problem is being Solved?: GIS based Decision Support System which will provide various online services to consumers/prospective consumers, a handy tool to the utility staff to assist in their field work and a platform to the management to analyze, plan and implement various business requirements

The Mobile App will provide various facilities to DISCOMs employees for GPS mapping of electrical network on base map, updates of network, tracking of pending connections applications, release of connections, decision making for network strengthening, feeder bifurcation, creation of new substation, complaint resolving, connection checking,
viewing of updated circulars, rules, regulations etc.

Users : All Power Distribution Utilities

Expected Outcomes : Applicant get immediate generate estimate for new connection through e-services.

Impact : 
Name of the Department : Energy & Petroleum Department
Problem ID : GH28
Problem Statement : House electrification and renewable power generation guide for public

Challenge Description with context : Mobile App guide for general public for house electrification. Due to lack of knowledge, inefficient wiring is done by contractors, earthwire is not run in the wiring, earth wire capacity and P and N wire capacity switch capacity are inadequate, lack of safety device causes safety hazards, accidents, fire etc.

The renewable energy and especially for roof top solar system, more and more people are interested in the same and very much eager to know about possibilities at their premises and the benefits on the investment. For the convenience of that, there should be a common man friendly web based Mobile App which can calculate the load, space requirement, Total Average Cost of system, availability of Central and State Govt. Subsidy in Rs., financial investment and payback period on the investment.

Importance of earthing, earthwire, and safety device and its location and maintenance will improve quality of wiring and will address the issues related to safety hazards.

What Exact Problem is being Solved? : Home Electrification
- Size of house- Nos of Bedroom, Hall, kitchen etc to be filled by user
- Appliances auto proposed by the system-room wise- selection by the user from system proposed
- Auto load calculations by system
- Nos of Circuits to be proposed by systemsselection by the user from system proposed
- Calculation of size of wire from selection of circuit and selection of appliances
• Selection of size of earth wire from the selection of Nos of electronic appliances, and nos of LED bulbs
• Selection of capacity of switches
• Selection of safety devices like ELCB, MCB and its ratings
• Main earthing suggestions with specifications and drawings
• Suggestions of periodical maintenance of earthlings, safety devices and appliances.
• Selection of efficient appliances

Renewable Energy Generation.

• Access to consumers to know required information regarding installation of Solar Rooftop System.

Information Expected: Required capacity of SPV, Space required, Cost of System, Govt subsidy, Amount to be invested, Return on investment and Payback period

Users : All Power utilities and almost public.
Expected Outcomes : Android/IOs/Windows base Mobile,
Impact : General public, and Power Utilities
Name of the Department : Energy & Petroleum Department

Problem ID : GH29

Problem Statement : Tariff benefit to consumer at the time of excess power generation in system.

Challenge Description with context : There is difference prices for every power generators with respected to time and locations. There are instances where low cost power is available but actual demand in is not available. To meet this, tariff benefit pass to the consumers in their bill by shifting their use of load in low cost power generation period.

TOD - Time of Day Billing

Central level of generation monitoring and requirement of demand. Meter should be capable to measured energy and transfer 15 min interval data to central server.

What Exact Problem is being Solved? : Consumers will get tariff benefits for shifting their non-critical load in low tariff period. Utility broadcast information of low tariff period. By implementing above practice, we can able to reduce our peak demand and make flatten demand curve.

Users : Utility and consumers

Expected Outcomes : There will be web & mobile base mechanism which easily pass information to consumers for use of power in low tariff period and available surplus power in grid.

Impact : Interested all consumers who wants dynamic tariff benefits
Name of the Department: Energy & Petroleum Department

Problem ID: GH30

Problem Statement: Consumer Friendly Mobile app for Energy Bill Calculator

Challenge Description with context: Most of the consumers of electricity are getting their bill after a month or two months and they just pay the bill without much understanding. It is important to understand your electricity bill and see where you can save on it. By using energy efficient devices and habits, you can reduce your electricity bill by a reasonable amount. If a mobile app is prepared for all the consumers of India with utility wise tariff data and facilitated to know the approximate bill details for a desired period, it will be helpful to the consumer, utility and the nation to save electricity, time and money.

Even one step ahead to this, if the app can be designed to calculate the consumption appliance wise it helps consumers in understanding how much they are spending per appliance at home. It is also important to understand the appliance wise contribution to the total electricity bill. In a bid to help people understand the same, an online electricity bill calculator Mobile App is required to be developed to help people understand how much they spend on various appliances every month and how they can save by doing various activities.

What Exact Problem is being Solved?

- To use the app, consumer needs to select Utility (DISCOM), state, district from drop down menu. Once consumer login with his consumer no, the App should show consumer’s required details like 1 ph / 3ph, LT /HT connection, contracted load.
- Select the period for which billing is required and enter the Reading of Meter. This shall give Unit Consumption and amount of various components of your electricity bills.
- This shall give how much consumer is paying per unit (1 kWh) of electricity bill.
• The App should give approximate usage of appliances based on how much hours the various appliances like lights, air conditioner, refrigerator, tube light, computer, set top box, fan, etc. are used normally in houses.

This shall give approximate value of savings if switch from inefficient to efficient appliances. The tool shall be built with latest tariff data available from all the state electricity boards in India.

Users : Consumers
Expected Outcomes : Android/IOs/Windows base Mobile,
Impact : • Access to consumers to know regarding his energy consumption and load pattern.
Name of the Department : Energy & Petroleum Department

Problem ID : GH31

Problem Statement : Public feedback information and Suggestion for Power Utility Services

Challenge Description with context : Mobile App for general public to submit their feedback, suggestions to improve performance of any power Utility.

This can be achieved by systematic strategy in three steps.

- Obtain the feedback and suggestions on customer related subject from the customers regularly
- Analysis of the Feedback and suggestions received to improve the performance

Planning and implementation towards performance improvement with fixing up the responsibility to concern officer

Suggestions, poor workmanship, attitude of employees, power interruptions prone locations and unsafe locations can be up loaded with its photo image and geo-locations through mobile App.

What Exact Problem is being Solved? : Activity List

- Name of User, mobile No, address to be registered by user
- Nature of suggestions-In different category
- Various types of suggestions like
  - Snapping of live conductor and lying unsafe on road
  - Utility wiring is open and unsafe
  - Underground cable is open
  - Poles are stacked on road in unsafe manner
  - Miss use of Government / Utility material
  - Ground clearance is low
  - Illegal construction under/near the line
• All will be uploaded with image and geo-locations
• Action taken by department to be uploaded by utility/gov. department
• Tracking of status of suggestions
• Feedback from user regarding utility/gov. actions
• Feedback from users regarding employees
• On the base of feedback from users, employees/office performance can be reviewed
• Appreciation by utility/gov. department for good suggestions
• Various types of suggestions for improvement of services in
  o Power Quality and Reliability
  o Billing
  o Administrative
  o New Connection
  o Material Quality
  o Others Innovative suggestion
  o Safety tips

Contact Us

Users : All Power utilities, all government departments and public.

Expected Outcomes : Android/IOs/Windows base Mobile app,

Impact : General public, Utility and all Gov. departments
Name of the Department: Energy & Petroleum Department

Problem ID: GH32

Problem Statement: Stratification of energy usage and energy conservation

Challenge Description with context:
Smart home- A smart house, is a home that incorporates advanced automation systems to provide the inhabitants with sophisticated monitoring and control over the building’s functions. For example, a smart home may control lighting, temperature, multi-media, security, window and door operations, as well as many other functions.

Generally, the consumer doesn’t know which electrical equipment in his/her house consuming how much energy and how to control the consumption and reduce the bill.

What kind of smart home solution can be developed to help consumers to understand their daily/weekly electricity usage and empower them to manage it more efficiently? What kind of apps and smart customer interfaces could help customer to visualize their electricity usage more easily and simply?

At present customer is only able to know the energy bill by the end of month/two month, and if electricity bill is higher than the average and meter is accurate then consumer didn’t know due to which reason electricity bill came higher. The electricity available at the click of switch but home owner (customer) have no idea how much electricity each appliance uses and how they can manage them to save on cost.

Most consumers didn’t be familiar with of the consumption pattern of each equipment and which Equipment plays major role in their electricity bill and their equipment efficiency and performance. If consumer get to know their equipment daily/weekly/monthly consumption pattern then he can came to know the efficiency.
of equipment and can do planning maintenance of it. Using data analytics and smart devices is it possible to inform to home owner about electricity usage of their appliances.

What Exact Problem is being Solved?

- Communications network that connects the key electrical appliances and services, and allows them to be remotely controlled, monitored or accessed.
- Smart sensors and smart switches to measure and control the electric power.

Users: The consumers of the utilities.

Expected Outcomes:

Impact: The consumers of electric distribution utility.
Name of the Department : Energy & Petroleum Department

Problem ID : GH33

Problem Statement : Developing a custom CMS for Website www.getcogujarat.com using AngularJS and MySQL or any other suitable DB

Challenge Description with context : There is a working version of GETCO website. Challenge is to develop a new version of the website using Angular JS and MySQL (or any other DB). New website may have most of CMS features including admin login with HTML editor (creditor or alternative can be used)

Currently there is a static website which needs an website developer or expert even for slightest change in the site

What Exact Problem is being Solved? : CMS for Website www.getcogujarat.com using AngularJS and MySQL or any other suitable DB

Users : Site Administrator
        Site managers

Expected Outcomes : 

Impact : CMS based website
Name of the Department : Energy & Petroleum Department

Problem ID : GH34

Problem Statement : Linux Based SMS sending system using USB dongle and SIM card for GETCO

Challenge Description with context : There is need of designing a Linux based SMS gateway. The gateway will read only two parameters named “mobile number” and “message” and will send to given mobile number.

Additional Hardware: Any 2G/3G/4G USB dongle should be used as a hardware modem.

OS: Any server friendly Linux flavor (recommended latest version)

SMS: Short messaging service, can be accessed by using AT commands or other means.

The system will be utilized for multiple application where a SMS notification is required.

As there is only one medium of sending emails is currently available second medium is highly required. Both the system developers and system users are facing problem.

What Exact Problem is being Solved? : The process could be easily broken down to two or three stages.

- Initialize modem
- Get message details (using MySQL query)
- Send message
- Wait (few seconds/minutes configurable)

Above sequence will constantly looped forever

Users : Server Administrators: setup of the system

System developer: will use and integrate in their applications

Users: will get notifications for various applications

Expected Outcomes :
Impact:

- Directly: 2-5
- Indirectly: 1000-10,000 variable
Name of the Department : Energy & Petroleum Department

Problem ID : GH35

Problem Statement : Non-Disturbing Hacking of GETCO website, showing security loopholes and roadmap for correction

Challenge Description with context : Students will try to get access to the GETCO web server and various applications are hosted on GETCO server.

Instructions:
• Students are allowed only try to access the server
• Success or failure will be demonstrated to the judges with the logics, steps, tools and technique/process.
• GETCO IT and Security team will strictly monitor the process.
• Students will provide as much as details about servers and server platforms.
• Proof of Access should be provided (on request)

Only URL Links will be provided as a challenge resource (as under)

1. www.getco.co.in/
2. www.getco.co.in/gst/
3. www.getco.co.in/gicms/

Warning:
• Students will not make any change (in any case).
• Judges may ask to put certain data/files to successful candidates as a Proof of Access, until no files/data will be uploaded by the students.

HACK : White Hat Hack (here),
Don’t be notty, Notties will be in ...!!!

Government websites are always soft target of hackers. Both the success and failure will teach new lessons to all of us.
What Exact Problem is being Solved? : Imagine that all the services are hosted on single server. The server might be behind Hardware and/or software firewall.

Users : • Server manager  
         • Site manager  
         • IT/Network/Security managers

Expected Outcomes :

Impact : Student : as an ethical hacker  
         GETCO IT/security TEAM: first line to last line defense.
Name of the Department: Energy & Petroleum Department

Problem ID: GH36

Problem Statement: Employees efficiency improvement and 360 Degree Performance Evaluation

Challenge Description with context: Mobile App based day to day office activities management tracking system is not available. As a result public work suffers, efficient and inefficient employees cannot be discriminated. Performance evaluation of employees is not possible on facts. It is evaluated on the base of personal relation in most of the cases.

The evaluation of the performance of the staff is a vital factor of the organization. Normally, the evaluation process involves the pyramid type hierarchy; where the evaluator at the upper level enjoys the supremacy. But, his approach at the upper level and below level may differ, which never gets accounted for.

A 360-degree evaluation is the process, where the below level staff can also submit their opinion for the evaluator to get the real ultimate picture of the performance of the person.

Daily routine activities i.e.

Activity-1, Activity-2, Activity-3 .... and so on, activities can be created by concern head or assistant.

Auto-rating of the performance of the staff, which involves the normal parameters, like presence, time of resume and depart, jobs discharged etc

What Exact Problem is being Solved?

Activity List

i. Head will create a task- creator name auto generated.
   a. Assign task may be to a Single Person with name of person or to Multiple Persons with name of all persons.
ii. The employee will respond to tasks within timelines; any task out of time line will be considered as a poor response.

iii. The employees may ask for further time limits with justification.

iv. Approved responses, raise a query or extend time limits.

v. Define task final status: Completed- date and time of completion will be auto-generated.
   - Completed within time frame - Good
   - Incomplete and time over - Not Good
   - Completed with time limit extension - Satisfactory
   - Left incomplete with approved justification

vi. Performance Note (i.e., Good, Not Good, Satisfactory)

Additional Finicality

- Update today’s attendance status. (i.e., will be late, on tour at ______ for work of ______ etc.)

Employees location tracking

Users : All government organizations

Expected Outcomes : Android/IOs/Windows base Mobile app,

Impact : All Government Organization
Name of the Department : Energy & Petroleum Department

Problem ID : GH37

Problem Statement : Power Complaint Tracking, monitoring and resolving system

Challenge Description with context :
- Manual entry of all complaint will be eliminated (A step towards paperless system and digital India campaign)
- Complain will be attended based on fault priority so that unbiased transparent system will be generated
- Consumer satisfaction due to step by step update about their complaint will be much higher
- Manual entry of all complaint in Registers
- No priority kind of thing - Influence of staff and local people on priority
- No receipt or unique code given to the consumer for record. No trace of steps taken towards complain by consumer

What Exact Problem is being Solved? : All entries of complain (call or personal visit) will be logged to one common database which up keeps the record of the complaint and also monitor the status of complain.

Consumer will get e-receipt with unique no. for the complaint logging and on resolved complain.

Consumer can view the action taken report on the complaint and also can view the Delegation of power (DOP) and time frame within which the utility is assured to provide a solution.
Assignment of work to the concern line staff based on the priority also maintained in the same database.

Users : Maturity based on strictness on implementation by higher authority up to staff level

Impact : All kind of consumers of all group
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Energy &amp; Petroleum Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH38</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Tool for energy meter data analysis for improvement of power system</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Energy meter data is acquired from Automatic Meter Reading (AMR) enabled meters at 66 / 11kV Substation Feeders, DTRs, High Tension (HT) Consumers and Selected Low Tension (LT) Consumers at regular intervals or real-time data using on-demand polling. This data will be used to monitor the distribution parameters, for accurate billing purposes and generate exceptional and Management Information System (MIS) reports for analysis, decision making, planning, monitoring, and managing the business activities correctly. MDAS – Meter Data Accusations System, MDM – Meter Data Management System. The MDAS deals with acquiring data that will be used by MDM for Storage, Management and generation of Reports. Sometime meter data is not acquired due to communication problems. The system will capture, extract, analyze and integrate the data on common data structure from meters of various manufacturers at Substation feeders, DTRs, HT Consumers, and select LT Consumers. There will be point out un metered energy by energy accounting form data collected from meters.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Tool for meter data like value of Voltage, Current, Power factor, frequency, Energy Demand and use of energy. Tool/System for improvement of quality of power supply and reduce energy loss.</td>
</tr>
<tr>
<td>Users</td>
<td>Power Distribution Utility</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Energy &amp; Petroleum Department</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Problem ID</td>
<td>GH39</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Watchdog tool for monitoring and maintenance of Data Server room</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Main objective is to monitor two parameters for server room that is Mains Power supply and temperature. The system can be hardware, software or a combination of both. Ultimate goal is to monitor the given parameters with notification via email/SMS/android app etc...</td>
</tr>
<tr>
<td></td>
<td>Notification frequency: Daily and Event based (i.e. power fail resume, temp high, temp normal, etc.)</td>
</tr>
<tr>
<td></td>
<td>SMS: to send SMS you just have to insert the message and mobile number in to specific table. Exiting SMS sending system will work</td>
</tr>
<tr>
<td></td>
<td>Server rooms are unmanned and unattended during holidays. In such cases this solution is helpful and will alert the concern person before UPS battery drains.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>This simple looking Idea will not only prevent the entire server system going down but also help all the customers including departmental ones.</td>
</tr>
<tr>
<td>Users</td>
<td>All who are monitoring server setup</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Best fit with solution</td>
</tr>
<tr>
<td>Impact</td>
<td>Directly : 2-5</td>
</tr>
<tr>
<td></td>
<td>Indirectly : 1000+</td>
</tr>
</tbody>
</table>
Name of the Department : Energy & Petroleum Department

Problem ID : GH40

Problem Statement : Developing inventory system work inside any intranet homepage

Challenge Description with context : There are numbers of Inventory software available. There will be a Java applet or HTML5 API or any other alternative. The applet /program will be placed inside the homepage of Intranet, so every time someone visits intranet client machine data will be captured and saved to database for Inventory purpose.

Few essential parameters are :-
  • Client IP address (real IP address of client)
  • Client MAC address
  • Computer Name and Domain name
  • Logged on user
  • RAM/HDD or any other parameters...

What Exact Problem is being Solved? : Developing and Java servlet based (or other suitable ways) inventory system that can be put and hide inside any intranet homepage

  • Intranet user may be using different Hardware / OS / browsers / versions.
  • Every browser has its own security regarding java/Flash/APIs
  • There should be adequate reports to showcase collected inventory
  • Special Notification/Reports in case of abnormalities in user login IP address, Domain change, Antivirus etc.

Users :

Expected Outcomes : Inventory manager
IT Manager

Impact : 5000+
Name of the Department: Energy & Petroleum Department
Problem ID: GH41
Problem Statement: Booking system for Guest house and Colony Quarter

Challenge Description with context:

**Guest House**
- At present allocation of guest houses/hostels at power stations is done manually.
- Today, there is no mechanism to know about the status of rooms.
- The lack of information about availability creates difficulty for visits/allocation of rooms.
- Availability of rooms is not known.

**Colony Quarter**
- At present allocation of quarters is carried out by quarter allotment committee manually.
- Request for change/requisition of quarter is also done manually.
- Request for maintenance/complain with respect to civil/electrical etc. is done manually in complain register.
- IR issues are there because of manual intervention.
- The users/visitors have to intimate and inquire on phone about the same.
- Concurrence from competent authority has to be taken.
- Employees will raise request for allocation/change in quarter.

Quarter allotment committee to perform allocation/change and maintenance of quarters.

What Exact Problem is being Solved?
- An online system will display availability of rooms as per eligibility.
- Proper visits can be planned with advance booking/intimation.
- A system to take care of billing with respect to lodging & boarding.
- Need to an online system for request of allotment/change of quarter.
A system to maintain priority/wait list for allocation/change of quarter.

<table>
<thead>
<tr>
<th>Users</th>
<th>Visitors and Employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Outcomes</td>
<td>Web/Android</td>
</tr>
<tr>
<td>Impact</td>
<td>2000+</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Energy &amp; Petroleum Department</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Problem ID</td>
<td>GH42</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Staff vacancies and requirement monitoring system</td>
</tr>
</tbody>
</table>

**Challenge Description with context**

In a big organization like Power utilities, every a month or two, employee/s are retired from service or get promotion, which leaves vacancies behind for the table-field work. These vacancies are not being filled up prior to relieving the employee. This creates problem to the organization as well as the public/consumer whose service is held-up or delayed due to non-availability of concerned person or sufficient employee due to vacancies. Here the term vacancy is related to all the posts from smaller to bigger cadre of position in an organization e.g. from a post of peon to the post of Director.

1. Every Organizations have an HR wing who monitors the date of retirement /Promotion and initiates a process of recruitment / promotion.
2. The process is not being done in an advance way so as to fill-up the vacancy at least some days prior to the date of retirement and simultaneously with the date of promotion from one cadre to other.
3. If this issue is resolved, the organization’s performance is not suffered and public can get timely services.
4. This can be done by preparing mobile app open for all consumers, Staff, monitoring Officers; Govt. who can take follow-up for the same if timely action is not taken at any stage of process.

**What Exact Problem is being Solved?**

To get desired result, a mobile application can be designed to monitor the process at every level. Details of the input are as under
1. List out unit wise, cadre wise data of sanctioned, filled up and vacant posts
2. Find out month wise, cadre wise, unit wise data of retirement of employee.
3. Prepare a data of no. of posts need to be filled up through new recruitment with due date and time period for filling up post
4. Prepare a data of no. of posts need to be filled up through promotion in sequential manner with a resultant vacancy in every cadre with a time period of filling up post.
5. Data can be taken from HR wing
6. Put a time line for every step of process
7. Generate a notification to higher authorities for delay occurs at any stage.
8. Generate a flag for taking action for not obeying time schedule
10. Generate a flag for advance initiation of process for future vacancies based on historical data of time take for process.

Users : Whole organization/ unit/ consumers of that unit who get service form that unit.

Expected Outcomes :

Impact :
<table>
<thead>
<tr>
<th><strong>Name of the Department</strong></th>
<th>Energy &amp; Petroleum Department</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem ID</strong></td>
<td>GH43</td>
</tr>
<tr>
<td><strong>Problem Statement</strong></td>
<td>Accurate daily Load forecasting</td>
</tr>
<tr>
<td><strong>Challenge Description with context</strong></td>
<td>Daily Load forecasting is an important component for power system energy management system. Precise load forecasting helps the electric utility to make unit commitment decisions, reduce spinning reserve capacity and schedule device maintenance plan properly. Also it helps an electric utility to make important decisions including decisions on purchasing and generating electric power, load switching, and infrastructure development. But there is always gap between actual load and forecasted load. Short-term load forecasting several factors should be considered, such as time factors, weather data, possible customers’ classes, the appliances in the area and their characteristics including age, the economic and demographic data and their forecasts, the appliance sales data, and other factors.</td>
</tr>
<tr>
<td><strong>What Exact Problem is being Solved?</strong></td>
<td>An accurate and convenient short-term load forecasting (STLF) system, which helps to increase the power system reliability and reduce the system operation cost. In the modern electricity market, the energy trade and the spot price establishment are based on a precise load forecasting result.</td>
</tr>
<tr>
<td><strong>Users</strong></td>
<td>Utility and power generators</td>
</tr>
<tr>
<td><strong>Expected Outcomes</strong></td>
<td>Web</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td>Distribution utilities and power generators.</td>
</tr>
</tbody>
</table>
## Problem ID
GH44

### Problem Statement
Material testing and inspection app

### Challenge Description with context
Mobile App based material testing and inspection activities system is not available. As a result Inspection work suffers due to sometimes non-available of various IS standards, various applicable test, methodology of testing, testing upper and lower limit values, lack of inspection knowledge etc.

IS : Indian Standards
GTP : Guaranteed Technical Parameters

Following sub problems are required to be resolved through mobile App.

- Testing Procedure and Testing formats differ manufacture to manufacture
- Indian Standards are not available with manufactures
- The inspector have to remain dependent on manufacturer for Specifications

Previous testing record is not available

### What Exact Problem is being Solved?

### Activity List
- Calibration of reports of all equipment and their due date of calibration to be checked
- Material wise IS standard could be viewed
- Material wise IEC standard could be viewed
- Material Technical Specification and GTP could be viewed
- Material wise testing methodology
  - Applicable test
  - Methodology of testing(In full details)
  - Sample criteria
  - Upper and lower limits
- Inspection report
  - Name of Inspector with designation
  - Date of inspection
  - Order No
  - Name of Material
v. Name of Company
vi. Lots
vii. Sample Lots
viii. Test Reports
   a. System Generated reports with remarks
       (Approved/Rejected Material)

<table>
<thead>
<tr>
<th>Users</th>
<th>Power utility and All government organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Outcomes</td>
<td>Android/IOs/Windows base Mobile app</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Energy &amp; Petroleum Department</td>
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<td>----------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Problem ID</td>
<td>GH45</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Ex-Employee portal</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>At present no such mechanism is available through which retired/resigned employees can communicate online with company. Ex-employees settling down at vivid locations other than company locations have to travel/follow up with company for various post separation issues like payments, pension etc.</td>
</tr>
</tbody>
</table>
| What Exact Problem is being Solved?    | • Need of a system through which ex-employees can communicate with company to a nodal officer for various issues related to terminal benefits.  
  • Statistics with respect to various issues being raised will help in introducing improvement measures.  
  • Information related to latest news/circulars can be made available online. |
| Users                                  | • All ex-employees  
  • Nodal officer of company |
| Expected Outcomes                      | Web                           |
| Impact                                 | 5000+                         |
Name of the Department: Energy & Petroleum Department

Problem ID: GH46

Problem Statement: Priority base problem resolve and maintenance requirement tool

Challenge Description with context: The maintenance requirement from consumer point of view and line staff point of view are noted verbally or on paper system. When the actual maintenance order is given the priority cannot be streamlined based on the total database. The critical requirement of maintenance may get forgotten because of paper communication or verbal communication or some time important aspect of maintenance may be left out.

If the problem got resolved, it can help the system to be improved in most efficient way. Also the maintenance which is critical can be prioritize based on the analysis given by the application. Also, the accident cases can be minimized.

→ Consumer Role – To furnish/provide the detail in prescribe way and co operate their best possible to assist the system

→ Utility Role - Get used to the app and priories the work on the basis of the analysis furnished by APP.

What Exact Problem is being Solved?: → Consumer/Staff can logged the maintenance requirement with details such as Photographs, Issues and consequences likely to happened because of the same i.e. chances of accident, power outage, energy loss, etc.

→ Consumer/staff will get e-receipt with unique no. for the maintenance requirement they stated.

→ Manager (D.E. /J.E.) can view the maintenance requirement they got by various options such as Village, Area, Consequences there by, type of applicant, etc. and thereby can decide the priority of the same and can
intimate the Consumer/staff accordingly for the same

Users: Consumer and Line staff and Field Engineers

Expected Outcomes: Best fit with problem

Impact: Maturity based on strictness on implementation by higher authority up to staff level
Name of the Department : Energy & Petroleum Department

Problem ID : GH47

Problem Statement : Designing a solution for making a hack-proof website

Challenge Description with context:
1. Objective is to develop a solution to prevent and report unauthorized access to web and database servers.
2. The solution should work even in case when an hacker succeeds administrative access of the physical web/database server...!!!
3. Any change in web site pages will be reverted back to main within few seconds if done by hacker or unknown person. Admins should be informed via email OR SMS OR android app notification in case of any change (authorized or unauthorized)

Web server : (here) APACHE and PHP servers (any version)
Database server : (here) MySQL (Any version)

What Exact Problem is being Solved? : We are looking for a thoughtful and genuine idea to prevent websites from unattended access.

Users : IT/Security managers

Expected Outcomes : Best Fit with solution

Impact :
Name of the Department: Energy & Petroleum Department

Problem ID: GH48

Problem Statement: GPS based Mobile App for Meter reading Route trace of Meter Reader

Challenge Description: Meter Reading is a key aspect of any DISCOMs. The whole revenue of the organization depends on how efficient the meter reading is. There are many cases where meter reader does not even visit the places and make the bill. In such cases revenue is affected greatly. Also, the percentage of lock/ unreachable premises also affects the revenue. The out sourced meter reading agency generally become the reason of the same. →If this got resolved the meter reading will be more efficient and the loop holes in the meter reading process can be traced out and necessary action can be taken thereby. →Also, consumer grievance related to meter reading can be avoided up to greater extent.

What Exact Problem is being Solved?: →GPS based route tracing app which will trace out the location covered and also time spend during meter reading process.

→The APP may propose to feed up the detail of the lock or un reachable premises by capturing the photographs of the same.

→Revenue Manager (Sr.Asst/DYSA) can review the activities of meter reading and can give their best inputs to improve the same.

Users: The whole management of organization and revenue staff and all kind of consumers

Expected Outcomes: Mobile app

Impact: Maturity based on strictness on implementation by higher authority up to staff level
Name of the Department : Energy & Petroleum Department

Problem ID : GH49

Problem Statement : Work Quality Check - Monitoring of quality of Electricity line erection work carried out by contractor

Challenge Description with context : Line work of Electricity Distribution Network is not being monitored properly which may lead interruption in Power supply or accidents

In Distribution Utility, the line work is being carried out through outsourced agencies across the utility in their various sub-divisions. The outsourced agencies/ Contractors carry out line work viz Erection of 11 KV line, LT line, poles, guy sets, Transformer centre, earthing system, Installation of RMU, Meters, maintenance of line, tree cutting, etc. If Poor Monitoring or supervision happens, the line work quality may not be as per the standard requirement. Which may lead to interruption or accident in power supply network.

Presently subdivision engineer carry out checking but all the time due to large volume of work, not able to complete the task. Also due to urgency of work, contractors might take undue benefit of doing cheaper quality work.

Contractors are having their labors and supervisor, if they do not carry out work as per standard and if do not check this work, the quality of work will become inferior. As the quantum of the work is very large, sometimes, situation happens where above problem occurs.

What Exact Problem is being Solved? : To eliminate the issue, a mobile app may be developed, which will enable the engineer to check or cross check the work in proper way. The
app should also with the facility of uploading of site photograph.

Steps for checking of various work should be prepared in an app. Only after completion of checking through the app, the payment to the agency should be made.

Such kind of app will enable utility to have a control on contractor’s behavior for doing cheaper work.

Users : Utility and public

Expected Outcomes :

Impact : Large for various project and routine work
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Energy &amp; Petroleum Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH50</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Real time power status monitor from domestic equipment</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>It is difficult to monitor power availability at every electrical connection. There are devices which are monitor status of power and communicate to data centre. But it is not possible to collected information from each and every area of network.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Need to develop power status information form installed domestic instruments. Like modem, power saver led light, Set top Box, Charging points, etc.</td>
</tr>
<tr>
<td>Users</td>
<td>Power Distribution company and consumers</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web</td>
</tr>
<tr>
<td>Impact</td>
<td>Utility and consumers</td>
</tr>
</tbody>
</table>
**Name of the Department**: Health and Family Welfare  
**Problem ID**: GH51  
**Problem Statement**: Digital Library for latest Health related district specific indicator of Gujarat  
**Challenge Description with context**: Different sources of data at one platform. We can easily access that for presentation in meeting and also for teaching purpose  
**What Exact Problem is being Solved?**: No any solution  
**Users**: All Health staffs  
All medical teaching faculty  
PG Student  
**Expected Outcomes**: E-library of Health-related data  
**Impact**:  
- Different health related data of state, and districts are Stored at one place so that we can advocate target related approach to improve poor indicators  
- Also it will be easily accessible, so can be present in meetings
Name of the Department: Health and Family Welfare

Problem ID: GH52

Problem Statement: Prediction of Anti Tuberculosis Drugs

Challenge Description with context: TB patients require daily drugs for at least 6 to 9 months. Thus, supply of Anti Tuberculosis Drugs becomes essential.

What Exact Problem is being Solved?: If we can predict the requirement of drugs for each TB centre, we can match the supply of drug.

Users: - Officials of RNTCP(TB project)
- Drug & Logistic dept.

Expected Outcomes: - Uninterrupted supply of drugs to TB patients will help to cure the disease

Impact: - Cure rate of TB will increase
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Health and Family Welfare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH53</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Tracking of indicators of each Severely Acute Malnourished (SAM) child</td>
</tr>
<tr>
<td>Challenge Description  with context</td>
<td>There are different indicators of SAM child &amp; accordingly management can be community based or facility based. We have to monitor each parameter of child closely.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>If we can track the indicator like height, weight, Mid upper arm circumference, edema, medical complications of each child and its progress and thus we can observe its growth and treatment.</td>
</tr>
<tr>
<td>Users</td>
<td>- Health staff (Including ASHA and ANM)</td>
</tr>
<tr>
<td></td>
<td>- UNICEF Team</td>
</tr>
<tr>
<td></td>
<td>- Health officials</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>We can track the indicators of child and watch the effect of treatment</td>
</tr>
<tr>
<td>Impact</td>
<td>Child will improve by taking good care and child deaths can be prevented</td>
</tr>
</tbody>
</table>
Name of the Department: Health and Family Welfare

Problem ID: GH54

Problem Statement: Mapping of disease (place distribution of diseases) Online portal

Challenge Description with context: Every year state experiences many epidemics of communicable diseases, which is sometimes widely distributed. Place distribution of cases is one of important task to analyse disease transmission pattern epidemiologically. Mapping of disease (eg. Swine flu) help administrator, policy maker and epidemiologist to study as well as implementation of control measures.

What Exact Problem is being Solved?: Sometimes disease spread into limited area, local area to whole state. By mapping of diseases, one can identify disease spread pattern and helps in formulation of control strategies and mobilization of resources.

Users: Health worker, Medical Officer, epidemic Medical Officer, District and State level officers, professor of Community Medicine Department, Medical College.

Expected Outcomes: With help of IT software, one can easily make up plotting of disease on map and thus can analyse and execute necessary control steps.

Impact: State level mapping of disease helps in study of pattern of diseases, prevalence, seasonal variation of disease, planning and resources mobilization to control disease.
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Health and Family Welfare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH55</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Application to maintain patient complete details (profile, Diagnosis, Lab report, scan etc.)</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Develop Windows application to store, update and delete patient complete details.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Still not done</td>
</tr>
<tr>
<td>Users</td>
<td>Data Operator, Doctor, Admin</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Automatic Diagnosis report, and automatic delivery of medicine</td>
</tr>
<tr>
<td>Impact</td>
<td>Time will be reduced</td>
</tr>
</tbody>
</table>
Name of the Department : Health and Family Welfare

Problem ID : GH56

Problem Statement : ANM (Auxiliary Nurse Midwife) E register Portal (Android)

Challenge Description with context : ANM is field (female) health worker. She works at sub centre level (upto 5000 population). She goes door to door and collect information about pregnant women, children. She is looking after antenatal intra-natal and postnatal services. Immunization services, Nutritional services. Runs subcenter level clinics and provides treatment of common ailments.

What Exact Problem is being Solved? : No any automatic system till today

Users : ANM (nurses), Supervisors, Medical Officers, Taluka Health Officers, Admin

Expected Outcomes : Can gather information easily

Impact : Monitoring of the information can be done automatically
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Health and Family Welfare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH57</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>PIU work tracker and complain tracking software</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Civil work, electric, plumbing related work in hospital and medical colleges should be done on top priorities. Current system of paper work is itself a faulty system and one cannot track his/her complain.</td>
</tr>
</tbody>
</table>

What Exact Problem is being Solved?

1. Delay in work
2. Complain registration intimation
3. Work progress tracking
4. Set accountability

Users

- All staff members of healthcare system
- Admin
- PIU officials
- PIU office

Expected Outcomes

- Decrease in delay in start up of civil work
- Increase quality of care to patient and improves working environment of hospitals, medical colleges, etc.

Impact

- Quality care to patients
- Increase efficiency of working medical & paramedical staff
- Decrease in delay of civil work activities
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Home Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH58</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Email Address Verification and tracing</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>When an email is sent to a recipient, an email goes through a number of mail servers to reach the final destination. Each time an email passes through a mail server, mail header is added with server's IP address. To trace your email source, you'll have to find email header first. Depending on type of email client you use, locating the email header may require slightly different steps but every email comes with a header so you should be able to find it.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>Any users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Application tool verifies an email address by connecting to the mail server and verifies whether the mailbox exists and an email can be received.</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
</tbody>
</table>
Name of the Department : Home Department

Problem ID : GH59

Problem Statement : Computer security Analyzer

Challenge Description with context : Security Analyzer provides a streamlined method to identify missing security updates and common security mis-configurations. Check to make sure that you have correctly installed all Windows security fixes. It will then examine many of your specific system configurations, such as guest account status, file sharing status, non-existent or trivial account passwords, which network services are turned on, etc. It will indicate which settings are potential security holes. In all cases, it offers complete explanations of the scanned items and how to fix the problems that are found.

What Exact Problem is being Solved? : Users

Users : Any users

Expected Outcomes : Application provides the computer security analyzer and report to user with necessary action to require.

Impact :
Name of the Department : Home Department
Problem ID : GH60
Problem Statement : Facial recognition system
Challenge Description with context : A face recognition system is a computer application capable of identifying or verifying a person from a digital image or a video frame from a video source. One of the ways to do this is by comparing selected facial features from the image and a face database.

It is typically used in security systems and can be compared to other biometrics such as fingerprint or eye iris recognition systems.

What Exact Problem is being Solved?

Users : Any users
Expected Outcomes : Properly designed systems installed in airports, multiplexes, and other public places can identify individuals among the crowd, without passers-by even being aware of the system.

Impact :
Name of the Department: Home Department

Problem ID: GH61

Problem Statement: Criminal identification system

Challenge Description with context: Availability of relevant and timely information is of utmost importance in conduct of business by Police, particularly in investigation of crime and in tracking & detection of criminals. Police organizations everywhere have been handling large amounts of information and huge volume of records pertaining to crime and criminals. Information Technology (IT) can play a very vital role in improving outcomes in the areas of Crime Investigation and Criminals Detection and other functioning of the Police organizations, by facilitating easy recording, retrieval, analysis and sharing of the pile of Information.

What Exact Problem is being Solved?

Users: Any users

Expected Outcomes: Secured Criminal Identification System with high accuracy.

Impact: 
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Home Department</th>
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</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH62</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Identify and Monitor any person who is active on multiple social media platform like Facebook, Twitter, Instagram etc.</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Once you connect your multiple social networks to SumAll, it’ll start pulling data and insights from your accounts, dropping the numbers into a central dashboard of analytics. You can then check up on these stats by visiting the app, or you can ask for a daily or weekly email with all the info.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Users: Suspicious users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Develop and Android Application which will work as one dashboard to identify the person. Reports come to you—no additional clicking or hunting. Choose the stats that matter—manage social media using the metrics that are most important to you</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
</tbody>
</table>
Name of the Department : Home Department

Problem ID : GH63

Problem Statement : Identify the identity of the person while accessing the blog or WebPages through a mobile

Challenge Description with context : When someone visits our blog or webpage through a mobile then the IMEI of the mobile phone should be logged. (IMEL logger script or application)

What Exact Problem is being Solved? : Any users

Expected Outcomes : Application will maintain the log details of the person who are accessing blog or WebPages using mobile.

Application will maintain the IMEI detail information of the users in log file with other relevant information with it (time at visit, time spend etc.)

Impact :

<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Home Department</th>
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</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH64</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Identify the person email id while accessing the blog or WebPages through a mobile</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>When someone visits our blog or webpage through a mobile then the configured Email ID of the mobile phone should be logged.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Users: Any users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Application will maintain the log details of the person who are accessing blog or WebPages using mobile.</td>
</tr>
<tr>
<td></td>
<td>Application will maintain the person’s configured Email Id information of the user in log file with other relevant information with it (time at visit, time spend etc.)</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
</tbody>
</table>
Name of the Department: Home Department

Problem ID: GH65

Problem Statement: To extract or get the email ID/mobile number configured in Facebook profile

Challenge Description with context: Based on the Suspicious users’ Facebook profile, find out the person’s details like Email ID / Mobile number which are to configure with his/her Facebook account.

What Exact Problem is being Solved?:

Users: Any users

Expected Outcomes: Application will give the details of person’s email id, mobile number which are configured in his / her Facebook account.

Impact: 
Name of the Department : Home Department

Problem ID : GH66

Problem Statement : Identify the person’s contact numbers while numbers are different for WhatsApp and Internet connection are different in single phone device

Challenge Description with context : In the case when the mobile number registered with WhatsApp and the mobile number used for internet connection in that mobile instrument is different then how to get the mobile number which is used for internet connection.

What Exact Problem is being Solved? : Any users

Expected Outcomes : Application will give the details of person’s phone number which used for Internet connection and different number which will be used WhatsApp number which different in one mobile phone.
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Home Department</th>
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</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH67</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Track and Identified the Source IP address of the person who have uploaded image or video uploaded on social media or Youtube</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>In the case of when any Suspicious image or video uploaded on social media or YouTube, then trace and identify the person’s source IP address with all complete details like region, country, etc.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>Any users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Application will give the details of person’s Source IP address details with other relevant details which are easy to track the person.</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Home Department</td>
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</tr>
<tr>
<td>Problem ID</td>
<td>GH68</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>How to stop getting the mobile number and contact list if any mobile is connected through Wi-Fi</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>In the case of when any user connected through Wi-Fi, then how to stop that other not able to access the person’s mobile number and other details like contact list.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Users: Any users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Application will give the details for preventing and providing the security for the mobile users details like mobile number and contact list from the hackers</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
</tbody>
</table>
Name of the Department : Home Department

Problem ID : GH69

Problem Statement : Extract the hidden friend list and other protected features from Facebook

Challenge Description with context : In the case any Suspicious person’s, how to extract the hidden friend list and other protected features using person’s Facebook account to track the person.

What Exact Problem is being Solved?

Users : Any users

Expected Outcomes : Application will give the details of the person’s Facebook account’s hidden friend list and also the protected features.

Impact :
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Home Department</th>
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</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH70</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Enlist top 10 Facebook users who liked, commented or shared the target Facebook profile’s posts along with posts</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Based on the input Facebook profile’s post find out the top 10 Facebook users who have liked, commented or shared the target Facebook profile’s posts along with post.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>Any users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Application will give top 10 person details of the Facebook users</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Home Department</td>
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<td>------------------------</td>
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</tr>
<tr>
<td>Problem ID</td>
<td>GH71</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Extract common or mutual Facebook friend’s profiles from multiple Facebook profiles</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Based on the multiple Facebook profiles, find out the common or mutual Facebook friends for the given multiple Facebook profiles to find out the persons details.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>Any users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Application will give the list of users with all available details from the Facebook.</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Home Department</td>
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</tr>
<tr>
<td>Problem ID</td>
<td>GH72</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>To recognize object or face in any CCTV footage</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Based on available Suspicious CCTV footage, identify and recognize the object or person face from the available CCTV footage.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>Any users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Application will recognize the person’s face or any other object from the given CCTV footage when any suspicious activity happened.</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
</tbody>
</table>
Name of the Department: Home Department

Problem ID: GH73

Problem Statement: A single Platform from where any Unique ID like electoral ID and other IDs can be verified

Challenge Description with context:
Using the single platform, easy to identify the persons Unique ID like electoral ID or their Ids.

One common platform where any user's any Unique ID to verified which can useful to so many different real-life day to day work.

What Exact Problem is being Solved?

Users: Any users

Expected Outcomes: Application will verify the person’s any unique Id from single platform.

Impact: 

<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Home Department</th>
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</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH74</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Speech processing tool that can recognize the language and can translate voice into text</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Whenever the any voice data is to be available then how to identify the language of the input data and also translate in to appropriate language. Sometimes some calls are trapped / recorded for inspection of terrorist activity or any other activity which to be found abnormal that time it is required to identify the language is used for conversation in the communication and also need to convert the speech into the text which can be useful later on.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>Any users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Application will first recognize the speech’s language and also then able to translate it into the voice into the text.</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
<tr>
<td><strong>Name of the Department</strong></td>
<td>Home Department</td>
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<td>----------------------------</td>
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</tr>
<tr>
<td><strong>Problem ID</strong></td>
<td>GH75</td>
</tr>
<tr>
<td><strong>Problem Statement</strong></td>
<td>Compare differ human voice samples and gives the percentage of matching for the given human voice samples</td>
</tr>
<tr>
<td><strong>Challenge Description with context</strong></td>
<td>Based on the different input human voice samples, find out the percentage of the voice matching in human voice. So different criminal cases investigation sometimes it is required to verify and compare the different human voices and to find out some conclusion based on this evidence.</td>
</tr>
<tr>
<td><strong>What Exact Problem is being Solved?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Users</strong></td>
<td>Any users</td>
</tr>
<tr>
<td><strong>Expected Outcomes</strong></td>
<td>Application will give the similarity percentage of the human voice samples using the matching criteria.</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td></td>
</tr>
</tbody>
</table>
Name of the Department : Home Department
Problem ID : GH76
Problem Statement : Capture all nearby telecom cell ids
Challenge Description with context : Based on time duration of any Suspicious activity happened, find out the way to capture all nearby telecom cell ids.
If something wrong at any place then during the investigation we require to find out the how many cells are active at that location and then we are able to find out the information which can be useful for the further investigation.

What Exact Problem is being Solved?

Users : Any users
Expected Outcomes : Application will give list of the telecom cell ids which are capture all nearby.
Impact :

Smart Gujarat for New India Hackathon 2017
Name of the Department : Home Department

Problem ID : GH77

Problem Statement : Reporting and counseling of cyber- bullying incidents

Challenge Description with context : Cyber bullying can have devastating consequences. Suicide is one. Cases of young kids committing suicide as a consequence of cyberbullying and sexting are increasingly coming to the public's attention.

Cyberbullying is the use of information technology to repeatedly harm or harass other people in a deliberate manner. According to India Legal Definitions, Cyberbullying could be limited to posting rumors or gossips about a person on the internet bringing about hatred in others’ minds; or it may go to the extent of personally identifying victims and publishing materials severely defaming and humiliating them.

What Exact Problem is being Solved?

Users : Any users

Expected Outcomes : Web portal or app for reporting and counseling of cyber- bullying incidents.

Impact :
Name of the Department : Home Department
Problem ID : GH78
Problem Statement : Giving information about cybercrimes according to IT act
Challenge Description with context : The Information Technology Act, 2000 (also known as ITA-2000, or the IT Act) is an Act of the Indian Parliament (No 21 of 2000) notified on 17 October 2000. It is the primary law in India dealing with cybercrime and electronic commerce. It is based on the United Nations Model Law on Electronic Commerce 1996 (UNCITRAL Model) recommended by the General Assembly of United Nations by a resolution dated 30 January 1997
What Exact Problem is being Solved? :
Users : Any users
Expected Outcomes : Web portal or app for giving information about cybercrimes according to IT act.
Impact :
Name of the Department : Home Department
Problem ID : GH79
Problem Statement : Providing information about nearest police station
Challenge Description with context : An app in the city to help citizens locate the nearest police station from the spot he or she is in. The `Indian Police at Your Call' app provides the names of the police stations, telephone numbers, distance from the location of the user and the time it will take to reach the police station the user wants to go to. The app also prompts the user to call any of the numbers listed with the 'Tap to call' facility. The features of the app, as could be seen after being downloaded, are citizen-friendly. It provides the police station's number, control room number as well as the SP office's number.

What Exact Problem is being Solved? : Users
Users : Any users
Expected Outcomes : Application for giving information about nearest police station
Impact :
Name of the Department : Home Department

Problem ID : GH80

Problem Statement : IP to Location Tracker

Challenge Description with context : IP to Location tracker is a non-intrusive geo IP solution to help you to identify visitor's geographical location, i.e. country, region, city, latitude & longitude of city, ZIP code, time zone, connection speed, ISP, domain name, IDD country code, area code, weather station code and name, mobile carrier, elevation and usage type information using a proprietary IP address lookup database and technology without invading the Internet user's privacy.

What Exact Problem is being Solved?

Users : Any users

Expected Outcomes : Application for giving information about location based on the input IP address.

Impact : 
Name of the Department: Home Department

Problem ID: GH81

Problem Statement: Handset location using Doppler theory

Challenge Description with context: Every mobile is different when it comes to the unique identification number which is very essential for the handset makers and the telecom operators. This unique number is called the IMEI number which stands for International Mobile Station Equipment Identity number. Every mobile phone has a unique 10 digit IMEI number which helps in distinguishing between the devices. At times, the IMEI number is required for several reasons -- getting security clearance or even simply mailing across the handset.

What Exact Problem is being Solved?

Users: Any users

Expected Outcomes: Application for giving information about location of the Handset using the Doppler theory.

Impact:
Name of the Department : Home Department

Problem ID : GH82

Problem Statement : Azimuth finder

Challenge Description with context : In the horizontal coordinate system, used in celestial navigation and satellite dish installation, azimuth is one of the two coordinates. The other is altitude, sometimes called elevation above the horizon. Today, the reference plane for an azimuth is typically true north, measured as a 0° azimuth, though other angular units (grad, mil) can be used. Moving clockwise on a 360 degree circle, east has azimuth 90°, south 180°, and west 270°. There are exceptions: some navigation systems use south as the reference vector. Any direction can be the reference vector, as long as it is clearly defined.

What Exact Problem is being Solved? : Users : Any users

Expected Outcomes : Application for giving user information using the Azimuth finder.

Impact :
Name of the Department: Home Department

Problem ID: GH83

Problem Statement: Duplicate / fake Media Profile Reporting app/website

Challenge Description with context: When one (or several) of your friends send you a message telling you they think your Facebook account has been hacked, it’s likely because they’ve received a friend request from a profile that appears to be yours. Since they’re already your friend, it seems strange to get such a request. But what your friend is seeing isn’t the result of your profile being hacked – it’s a duplicate profile.

What Exact Problem is being Solved?

Users: Any users

Expected Outcomes: An application which will find out the Duplicate / fake Media Profile

Impact:
Name of the Department: Home Department

Problem ID: GH84

Problem Statement: Windows forensics USB toolkit

Challenge Description with context: Whether you’re a corporate examiner working an intellectual property theft, or a law enforcement investigator searching for illicit images, most forensic examiners have investigated the USB device history of a computer. When examining USBs, it’s just as important to identify the user who connected the device, as it is to analyze the data that may have been transferred to or from the system.

What Exact Problem is being Solved?

Users: Any users

Expected Outcomes: An application which used as a toolkit for windows forensics USB.

Impact: 
Name of the Department : Home Department

Problem ID : GH85

Problem Statement : Fake news verification System

Challenge Description with context : Fake news is information posing as news, which has not been verified and is not true. It could be click bait, rumours, hoaxes, propaganda, or satire. Fake news and alternative facts have dominated the news cycle of late. We need a system that uses social argumentation to verify the validity of proposed alternative facts and help in the detection of fake news. We utilize fundamental argumentation ideas in a graph-theoretic framework that also incorporates semantic web and linked data principles. The argumentation structure is crowd sourced and mediated by expert moderators in a virtual community.

What Exact Problem is being Solved?

Users : Any users

Expected Outcomes : An application which used as to work as fake news verification system.

Impact :
Name of the Department : Home Department
Problem ID : GH86
Problem Statement : Fake Social Media Profile Detection system

Challenge Description with context : The social life of everyone has become associated with the online social networks. These sites have made a drastic change in the way we pursue our social life. Making friends and keeping in contact with them and their updates has become easier. But with their rapid growth, many problems like fake profiles, online impersonation have also grown. Fake profiles often spam legitimate users, posting inappropriate or illegal content. Several signs can help you spot a social media fake who might be trying to scam your business.

What Exact Problem is being Solved?
Users : Any users
Expected Outcomes : An Application detect the fake social media profile.
Impact : 

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<table>
<thead>
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<tbody>
<tr>
<td>Problem ID</td>
<td>GH87</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Estimate financial impact of cyber crime</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Crime wave' is an understatement when you consider the costs that businesses are suffering as a result of cyber crime. The annual cyber crime survey carried out in cities across the country reveals that the cost of cyber crime suffered by Indians is around Rs 34,110 crore, annually. Extracting value from the computers of unsuspecting companies and government agencies is a big business for criminals, and the scope of the loss to the victim ranges from reputational damage, loss of customer trust, financial penalties, cost of remediation and repair, to greater competition arising from the stolen information</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Any users</td>
</tr>
<tr>
<td>Users</td>
<td>Any users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>A tool to estimate financial impact of cyber crime</td>
</tr>
<tr>
<td>Impact</td>
<td>The Components Of Malicious Cyber Activity</td>
</tr>
</tbody>
</table>

In determining the components of malicious cyber activity, we start by asking what we should count in estimating losses from cybercrime and cyber espionage. We can break malicious cyber activity into six parts:

- the loss of intellectual property and business confidential information
- cybercrime, which costs the world hundreds of millions of dollars every year
- the loss of sensitive business information
• opportunity costs, including service and employment disruptions, and reduced trust for online activities
• the additional cost of securing networks, insurance, and recovery from cyber attacks
• reputational damage to the hacked company.
Name of the Department : Home Department

Problem ID : GH88

Problem Statement : How safe is this website??

Challenge Description with context : The best recommendation I can offer is to browse smart. That means you ought to always double-check the URL of your banking site, social networking site, and e-mail site before you log in. Most browsers, including Firefox, Chrome, and Internet Explorer, now include a color-change on the left side of the location bar to indicate that the site has been verified as legitimate. It's always a good idea to type in the URL by hand, and to never follow links from an e-mail. Also, checking for HTTPS instead of the less-secure HTTP is a good idea, although HTTPS isn't foolproof. But what about that link to some ostensibly hilarious video your best friend just posted to Twitter?

What Exact Problem is being Solved?

Users : Any users

Expected Outcomes : An application which will check the given website is safe or not.

Impact :
<table>
<thead>
<tr>
<th><strong>Name of the Department</strong></th>
<th>Industries and Mines Department</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem ID</strong></td>
<td>GH89</td>
</tr>
<tr>
<td><strong>Problem Statement</strong></td>
<td>One window, all clearance</td>
</tr>
<tr>
<td><strong>Challenge Description with context</strong></td>
<td>Networking all the departmental servers to a single module for all clearances. The clearances of the concerned department should directly blink to the respective nods and get cleared as per citizen’s charter.</td>
</tr>
<tr>
<td><strong>What Exact Problem is being Solved?</strong></td>
<td>This will eliminate the cumbersome process of running after every department for clearance.</td>
</tr>
<tr>
<td><strong>Users</strong></td>
<td>MSME Facilitation Desk – Rajkot</td>
</tr>
<tr>
<td><strong>Expected Outcomes</strong></td>
<td>Will enhance ease of doing business.</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td>Will attract investment.</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Industries and Mines Department</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Problem ID</td>
<td>GH90</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>AI for bank statement verification</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Now the investor has to input all the figures of amount, interest, period total etc. manually for subsidy claim. Instead of typing all manually, if the bank statement of is given access by the investor and the entries are automatically done then it will help investors in claiming the subsidy.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Now no investor wants to spend so much of time unnecessary work, results in taking help of a consultant.</td>
</tr>
<tr>
<td>Users</td>
<td>MSME Facilitation Desk</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Ease the process of subsidy claim.</td>
</tr>
<tr>
<td>Impact</td>
<td>Easy process will reduce mistakes in claim module.</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Industries and Mines Department</td>
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<tr>
<td>------------------------</td>
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</tr>
<tr>
<td>Problem ID</td>
<td>GH91</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Real time monitoring system of all public process through a single window</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Now people do not know where to go for which work. So if a single state govt. portal is made with all depts. and all the works under each dept. with real time online update of the date then it will bring in transparency and people will not have to run here and there.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>One stop solution for all govt. work and real time update of the progress of the work to the public.</td>
</tr>
<tr>
<td>Users</td>
<td>MMSE Facilitation Desk.</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Easy public services.</td>
</tr>
<tr>
<td>Impact</td>
<td>Will enhance 360 degree accountability</td>
</tr>
</tbody>
</table>
Name of the Department : Industries and Mines Department
Problem ID : GH92
Problem Statement : GPS tagged factory license and pollution certificates

Challenge Description with context : For the planning of new industries there is unified system for all data and putting on caps on individual parameters of pollution safety, water consumption versus availability, public amenities etc. So if the entire license procedures are GPS tagged and the date are analyzed automatically then it will act as a decision support system.

What Exact Problem is being Solved? : For issuing letter of recommendation for land conversion the data will help in taking quick decision.

Users : MSME Facilitation Desk
Expected Outcomes : Quick processing time for issuing clearances.
Impact : Quick processing time for setting up a factory.
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Industries and Mines Department</th>
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</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH93</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Search engine for all govt. schemes</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Now people search for a scheme in Google which generally leads to the most popular or most clicked sites. Even lead to the commercial sites and people get mislead. If a search engine is made for schemes which will search all relevant scheme of the state and provides is result by what is the scheme, who can apply, conditions and procedure of application.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Proper relevant scheme shall be at the finger tip.</td>
</tr>
<tr>
<td>Users</td>
<td>MSME Facilitation Desk.</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Proper information to people easily available.</td>
</tr>
<tr>
<td>Impact</td>
<td>Attract investment.</td>
</tr>
</tbody>
</table>
Name of the Department : Industries and Mines Department

Problem ID : GH94

Problem Statement : Aadhaar Linked Mobile app for document submission

Challenge Description with context : In all the procedure in Govt. dept. a lot of document needs to be submitted in hard copy. Instead of that an Aadhaar linked mobile app may be developed for uploading all document for the application which will reduce the tick paper file submission and also the processing time.

What Exact Problem is being Solved? : Physical touch point for document submission will be reduced.

Users : MSME Facilitation Desk

Expected Outcomes : Improve timely compliance and transparency

Impact : Easy and authentic documentation procedure.
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Industries and Mines Department</th>
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</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH95</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Electronic document Management System</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>For document verification dept. spends a lot of time and money. Instead if a system is developed where all the documents provided by the concerned departments are digitally signed and the details are digitally unified with all other departments’ module so as to verify with artificial intelligence. Many a times the papers are not properly scanned or print quality are low etc. etc.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Quick and automatic verification process will reduce process time of the approvals, clearances etc.</td>
</tr>
<tr>
<td>Users</td>
<td>MSME Facilitation Desk.</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Quick, automated and authentic govt. transaction process.</td>
</tr>
<tr>
<td>Impact</td>
<td>Faster approval, license a clearances.</td>
</tr>
</tbody>
</table>
Name of the Department : Industries and Mines Department

Problem ID : GH96

Problem Statement : Online application portal for awards or accreditation from government

Challenge Description with context : Industrialists don’t want to apply because of the huge documentation work; Too much data to be filled in application form

Most of the units are unknown to the fact that DIC inspires and facilitates units to participate in various fairs and exhibitions to give publicity to industrial products. Also organises training programs to rural entrepreneurs and assists other institutions or organization imparting training to train the small entrepreneurs

What Exact Problem is being Solved? : Units can mention it in their products of being awarded by government body and use this as a means to increase production

Spread awareness on such initiatives and motivate them

Users : Unit owners/partners/directors

Village artisans

Handicraft units

Expected Outcomes : Automation

Documents of the unit could be managed

Impact : These awarded units serve as a benchmark of growth and it reaffirms their faith in government initiatives and policies by being honored by them

Increase in production
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Industries and Mines Department</th>
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</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH97</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>MSME’s Project Report generation tool</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Most of the units don’t get the guidelines of making a project report to be able to submit it at a government body for presentation or records of their unit</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>If these units are aware about these, they could easily engage banks to deal or agree in their credit requirements</td>
</tr>
<tr>
<td></td>
<td>Various submissions could be easily tackled once the report is ready</td>
</tr>
<tr>
<td>Users</td>
<td>Unit owners/partners/directors</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>They will be able to create value of their project</td>
</tr>
<tr>
<td></td>
<td>To prepare and keep model project profiles for reference of the entrepreneurs</td>
</tr>
<tr>
<td></td>
<td>Increased participation of the unit</td>
</tr>
<tr>
<td></td>
<td>Preparedness of the unit</td>
</tr>
<tr>
<td></td>
<td>Easy reference for seniors of government bodies</td>
</tr>
<tr>
<td></td>
<td>Online Project Generation Tool</td>
</tr>
<tr>
<td>Impact</td>
<td>Go ahead could be easy in such cases</td>
</tr>
<tr>
<td></td>
<td>Ready reckoner for various officials before any discussions</td>
</tr>
</tbody>
</table>
Name of the Department : Industries and Mines Department
Problem ID : GH98
Problem Statement : Industrial Information Directory

Challenge Description with context : DIC is considered as the nodal body at district level and many a times given the work to connect with various industries/entrepreneurs/parks/estates etc. But the contact detail of the same are mostly outdated/incorrect/missing, which causes break in information dissemination.

What Exact Problem is being Solved? : The contact detail of big large industries are either missing/incorrect.

Users : DIC, Collector, individual enterprise

Expected Outcomes : Improvement will enable knowledge dissemination

Impact : Uninterrupted communication between industries
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Industries and Mines Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH99</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Application for Lubricant license to be made online</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>The current procedure is offline application form to be filed at DIC. The entrepreneur needs to dedicate time for the application process. The process needs to be digitized in current market trends.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>The current problems need to be digitized for the ease of entrepreneur to do business. The application process needs to be digitized.</td>
</tr>
<tr>
<td>Users</td>
<td>Entrepreneur in manufacturing of chemical/ use of chemicals.</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Ease in application process and government can maintain data about how many license are issued and can be monitored.</td>
</tr>
<tr>
<td>Impact</td>
<td>Time saving for entrepreneur, government</td>
</tr>
</tbody>
</table>
Name of the Department : Industries and Mines Department

Problem ID : GH100

Problem Statement : Data Mining based MoU monitoring portal for Progress review

Challenge Description with context : Many times it gets difficult for investor to reach the Government and discuss about implementation status of the project as per MoU. Government cannot expedite the process until they come to know under which stage the investor need help in approval from them.

What Exact Problem is being Solved? : Common portal for all investor who made MoU with Government for investment. Government and investor can track under which process the project is getting delayed and necessary solutions can be brought to reduce the MoU dropped.

Fetch the details of various MoU from industries website

Users : Investors having intention to invest in Gujarat.

Expected Outcomes : One stop portal for all the MoU project updates and status of their respective projects. Ease of investing in Gujarat without loss of interest.

Impact : Increase in investment in Gujarat.

Increase in GDP of Gujarat.
**Name of the Department**: Industries and Mines Department  
**Problem ID**: GH101  
**Problem Statement**: Online Industrial Interaction Platform  

**Challenge Description with context**:  
- People/stake holders are not able to communicate with Inter Industrial stake holders. So there is need of common interaction online cell/platform for data crunching.  
- Problem sharing among govt. Deptt. And &Industrialist.

**What Exact Problem is being Solved?**  
- Manual interaction between various dept. will be avoided.  
- Entire stake holder will be able to communicate through this platform for various reports or queries.  
- Stake holders get wide platform to explain problem & get the viable solutions.  

**Users**:  
- Stake holders(govt. deptt., & Industrialist  
- New Investors

**Expected Outcomes**:  
- Online Interaction Platform  
- Online Query solver blog

**Impact**:  
- Ease of interaction among industries.  
- Motivation for New Investors / Startups.
**Name of the Department**: Industries and Mines Department  

**Problem ID**: GH102  

**Problem Statement**: Industrial Import & Export Data Analysis  

**Challenge Description with context**:  
- Existing as well as New Investors are lacking information about Import & Export statistics. Due to this, new investors are not able to decide for structures.  
- Also due to lack of Import & Export data, market analysis, stakeholders are not able to assist to promote the business internationally.  

**What Exact Problem is being Solved?**:  
- Statistics of International Market  
- Detailed data analysis of Import & Export  
- Manual Data Interpretation & future market trend  

**Users**:  
- Existing/New Investors  
- Govt. body stakeholders  

**Expected Outcomes**:  
- Machine learning based Import & Export Data Analysis  
- Future prediction of products internationally  

**Impact**:  
- Increase the GDP  
- Reduces Market risk Internationally  
- Boost up Startup India vision
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Industries and Mines Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH103</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Online Helpdesk for Industrial Investors</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td><strong>Current Scenario</strong></td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>- Manual interaction with various departments for approval or reports.</td>
</tr>
<tr>
<td></td>
<td>- Suggest various startups/Incentives Policies &amp; subsidy of Govt. according to eligibility of Applicant/User.</td>
</tr>
<tr>
<td>Users</td>
<td>- Enter stack holder</td>
</tr>
<tr>
<td></td>
<td>- New Investors</td>
</tr>
<tr>
<td></td>
<td>- Govt. Body</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>- Online help desk for investors</td>
</tr>
<tr>
<td></td>
<td>- Process flow Automation</td>
</tr>
<tr>
<td></td>
<td>- Get maximum advantages of Govt. Policies for Industrial Developments.</td>
</tr>
<tr>
<td></td>
<td>- Dynamic model which represents how much subsidy an entrepreneur will receive tentative dates as per project completion.</td>
</tr>
<tr>
<td>Impact</td>
<td>- Reduces time complexity</td>
</tr>
<tr>
<td></td>
<td>- Ease of process flow which motivates new and existing investors.</td>
</tr>
<tr>
<td></td>
<td>- This will attract entrepreneur interest in setting up new unit. This process will attract interest from investors al around the world.</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Industries and Mines Department</td>
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</tr>
<tr>
<td>Problem ID</td>
<td>GH104</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Industrial setup Zone wise Recommendation for startup</td>
</tr>
</tbody>
</table>
| Challenge Description  | - New Startup/Entrepreneur does not know the location or relevant Zone for new startup so that it can progress.  
- No compiled & processed data available for existing Zone with/location wise/product category wise industrial detail. |
| What Exact Problem is being Solved? | - Product wise Zone Identification for New Startup.  
- Geographical location based proceonol Data. |
| Users                  | - New Investors  
- Concerned Govt.Deptt. |
| Expected Outcomes      | - Relevant Zone Identification portal for new startup. |
| Impact                 | - Product wise Industrial cluster formation.  
- Increases GDP  
- Reduces the risk of startup follow. |
Name of the Department: Information and Broadcasting Department

Problem ID: GH105

Problem Statement: Online Journalist Registration and Renewal

Challenge Description with context: Journalists for Information and Broadcasting, GoG have to register under GoG. In this process person has to apply with filled form along with relevant documents. Then documents will be scrutinized and person will get a card. Through this card person will get authorized entry to cover events of GoG. The process is lengthy and time consuming. Same process is required to be done for renewal for card. It requires three stage authentications.

What Exact Problem is being Solved?: Journalists don’t need to come to submit application personally. It will minimize the tedious paperwork task. The whole process will be streamlined. It will reduce the wastage of papers. It will reduce time duration to complete the task.

Users: Journalist, I & B staff

Expected Outcomes: Through this streamlined process first time will be saved from both ends. Person doesn’t need to come personally. He can track his application. Same process can be used for lost card.

Impact: It will end the process of file moving from table to table. Tracking of task.
Name of the Department: Information and Broadcasting Department

Problem ID: GH106

Problem Statement: Newspaper Attendance System for Daily, Weekly, Fortnight and Monthly issues

Challenge Description with context: All the Newspapers registered under I & B have to send physical copy of their published issue to district office and same copy to Gandhinagar Office. If any agency has successfully timely published all the issues then only it is eligible to get various advertisements from GoG. Currently this process is manual and tedious. District office collects daily issues and maintains register at their end. Agencies send same issue to Gandhinagar office via post. Gandhinagar office maintains a register at their end. End of year both register are matched to find any discrepancy. At Gandhinagar office newspapers come from all over Gujarat, probably more than 1000 different issues, which should be taken out the post cover and then marking to be done in register. This is tedious and time consuming.

What Exact Problem is being Solved?: A form of automation should be done to streamline the process. The system should automatically identify the newspaper issue and makes its attendance and store in database. An attendance report can be generated and irregular agencies can be identified.

Users: News Paper Agencies, I & B staff

Expected Outcomes: Reduce human involvement in task, generate exact record.

Impact: This process will reduce work burden of staff. Agencies will not have to send copy to Gandhinagar and money will be saved. Gandhinagar office will not have to deal with 1000 copies of newspaper daily and will get rid of “Pasti”.
<table>
<thead>
<tr>
<th><strong>Name of the Department</strong></th>
<th>Information and Broadcasting Department</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem ID</strong></td>
<td>GH107</td>
</tr>
<tr>
<td><strong>Problem Statement</strong></td>
<td>Search Engine for Press Notes, Videos and Photos</td>
</tr>
<tr>
<td><strong>Challenge Description with context</strong></td>
<td>Department is generating huge amount of information daily. This information is in form of press notes, press conference, video and photo coverage of different GoG projects and events. It also includes information like place, date, article no, Minister’s details, foreign delegation details, etc. To maintain and search the details when asked is very tedious and time-consuming task. The details are asked by different authority time by time; in such case it’s very hard to find exact data on various parameters. For example, “in Jamnagar events done by agriculture department during 1999”. If we have properly managed data then would be easy to find such information.</td>
</tr>
<tr>
<td><strong>What Exact Problem is being Solved?</strong></td>
<td>The role of Information and Broadcasting is to provide the data. If they have properly arranged and parameterized data then it will be very easy to search and find out exact data. A good form data mining and text processing can make this task easy like Google is doing these days.</td>
</tr>
<tr>
<td><strong>Users</strong></td>
<td>Parliament authorities, various GoG departments, I &amp; B staff</td>
</tr>
<tr>
<td><strong>Expected Outcomes</strong></td>
<td>Reduce human involvement in task, more relevant record can be found in few seconds.</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td>Through this process it will reduce work burden of staff. Accurate and exact information can be generated anytime.</td>
</tr>
</tbody>
</table>
Name of the Department: Labor and Skill Department

Problem ID: GH108

Problem Statement: Integrated Skill Registry System

Challenge Description with context:

i) There is no recorded database of number and types of skills sector wise.

ii) Today, there is no mechanism to effectively respond to the need of Skill Development Activities by providing single window platform to look for all skills needs of the state. This causes uncertainty and difficulty in planning the development plans.

iii) This lack of information about overall skills scenario is a potential opportunity loss.

What Exact Problem is being Solved?

i) Single window platform for Skill Registry

ii) Records all Skills available and required in Gujarat, Types, Numbers, Location, Traditional/Advance, Technical/Non-Technical and etc...

Users:

i) The DET/GSDM officials responsible for the Training and Employment in the state of Gujarat. These officials need access to actually plan the skilling activities.

ii) The applicants who looks for better employment opportunities and appropriate career choice at the time.

Expected Outcomes:

i) Open System to be accessible with certain rights by different users

ii) Skill Analytics

iii) Needful Day to Day Reporting

Impact:

iv) Permanent and Accessible information about each registered person. This information can be accessed and used by the industry and its clients with the authorization of such registered person.

v) The companies will access the profile for their reference and can request for a third
party verification on the information represented by the registered professional
Name of the Department : Labor andSkill Department
Problem ID : GH109
Problem Statement : Job Portal for ITIs Students

Challenge Description with context:

i) No portal for ITI students exists which can collaborate and exchange trainees’ employment history, profile and experiences with industries.

ii) There is a need of mechanism to provide platform to share provide employers an opportunity to find prospective manpower from ITI trainees online and trainees can update and share their profile with employers.

iii) This lack of information about such portal lacks the opportunity to provide enough employment generation.

What Exact Problem is being Solved?:

i) Online web portal probably using Open source technology.

Users:

i) The DET/GSDM officials responsible for the Training and Employment in the state of Gujarat. These officials need access to actually plan the skilling activities.

ii) The applicants who looks for better employment opportunities and appropriate career choice at the time.

Expected Outcomes:

i) Better and direct prospects of employment and easy industry-ITIs interaction.

Impact:

i) Co-curricular profile which allows students to present more than a resume, it provides potential employers with a holistic view of each student.
Name of the Department: Labor and Skill Department

Problem ID: GH110

Problem Statement: Job Fairs and Employment Management System

Challenge Description with context:

i) There is no such system in place to keep statistics on Job Fairs organized by DET and so to measure the actual outcome and effectiveness of the job fairs.

ii) A mechanism is required to determine overall skill competency and make use of existing skill parameters to work out single index showing stage overall performance in skill development and advancements.

iii) This lack of information about overall skills scenario is a potential opportunity loss.

What Exact Problem is being Solved?

i) Single window platform for Job Fair Management and Job Data

ii) Make use of Skill Survey, Existing Employment Database available with Department, Integrated various other relevant skill data to appropriately to plan and manage job fairs.

Users:

iii) Executives and Political bodies to plan out effective strategy for skill and employment development opportunities in the state.

iv) The DET/GSDM officials responsible for the Training and Employment in the state of Gujarat. These officials need access to actually plan the skilling activities.

v) Other Govt. Departmental officials to carry out skill related planning and activities.

vi) The applicants who looks for better employment opportunities and appropriate career choice at the time.

Expected Outcomes:

i) Comparative analysis and System Feedback for needful action and improvements.
ii) Reports on Employment Data

Impact:

i) gain access to a large number of candidates in a one-stop environment
ii) opportunity to meet with non-traditional candidates
iii) meet and network with other corporations
iv) Coordinate college recruiting initiatives.
v) Give presentations at colleges, attend student group meetings, and increase college awareness of the company before and after career fairs.
vi) Conduct pre-screening interviews.
vii) Maintain all pertinent applicant and interview data in the Human Resources Information System (HRIS).

viii) Assist in interviewing and selecting onsite candidates.
ix) Assist in preparing and sending offer packages.
Name of the Department : Labor and Skill Department
Problem ID : GH111
Problem Statement : Skill Gap Survey App
Challenge Description with context :
   i) To simply and advance the existing skill gap survey platform
   ii) To make available the survey in Gujarati and as well as in English
   iii) To make the survey all mobile platform compatible

What Exact Problem is being Solved? :
   i) Mobile Platform
   ii) iOS and Android

Users :
   i) Industry Partners, Companies and GIDC, Human Resource Peoples and Consultants
   ii) The DET/GSDM officials responsible for the Training and Employment in the state of Gujarat.
   iii) Other Govt. Departmental officials to carry out skill related planning and activities.

Expected Outcomes :
   i) Mobile compatible user-friendly and location-friendly mobile application
   ii) Offline Survey to be updated later with online connectivity

Impact :
   i) To estimate the current and future workforce requirement of different industry sectors
   ii) To assess the mismatch in supply and demand of skills to the industries.
   iii) To map the training capacity of skill institutes, present in the district.
   iv) To provide specific suggestions for introduction of new training trades and removal/modification of obsolete trades.
Name of the Department : Labor and Skill Department

Problem ID : GH112

Problem Statement : Linking ITI with GSDM

Challenge Description with context :

i) As of now there is no solution to connect all ITIs directly with Head office for purpose identified under GSDM.

ii) Hard to access ITI relevant information for use of GSDM

iii) Instant and on-demand communication system with ITIs Personnel for necessary information and exchange

What Exact Problem is being Solved?

i) Open Source

ii) Mobile Reporting

Users :

i) The GSDM officials

ii) ITI Staff attached with Pradhan Mantri Kaushlya Vikas Yojana

Expected Outcomes :

i) Comprehensive Management System for ITI and GSDM interaction

Impact :

i) Most preferable in decision-making process management

ii) Ease of day to day office management
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<tr>
<th><strong>Name of the Department</strong></th>
<th>Labor and Skill Department</th>
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</thead>
<tbody>
<tr>
<td><strong>Problem ID</strong></td>
<td>GH113</td>
</tr>
<tr>
<td><strong>Problem Statement</strong></td>
<td>ITI Passed out Student Tracking System</td>
</tr>
<tr>
<td><strong>Challenge Description with context</strong></td>
<td></td>
</tr>
</tbody>
</table>
  i) The department could not find any system where it can keep track and analyze the pass out students, their current status and over of implication of training  
  ii) Employment status and growth prospects of students |
| **What Exact Problem is being Solved?** |  
  i) Open Source Platform with Mobile based reporting  
  ii) Integrated web based solution for the overall planning and management ITI passed out students |
| **Users**                 |  
  i) Executives and Political bodies to plan out effective strategy for skill and employment development opportunities in the state.  
  ii) The DET/GSDM officials responsible for the Training and Employment in the state of Gujarat. These officials need access to actually plan the skilling activities.  
  iii) Other Govt. Departmental officials to carry out skill related planning and activities.  
  iv) Passed Out Students of ITI  
  v) Existing Students of ITI |
| **Expected Outcomes**     |  
  i) Integrated web based solution  
  ii) Comprehensive data and reporting |
| **Impact**                |  
  i) keep track and analyze the pass out students, their current status and over of implication of training |
Name of the Department : Ports and Transport Department

Problem ID : GH114

Problem Statement : Geo-Tagging of all Ports, Offices, Jetties, Estates/Land/Lease, and major asset class

Challenge Description with context : At present, GMB is dependent on old maps in physical format to identify and locate port limits, offices & port boundaries, warehouses, godowns, store-Civil & Mechanical, plots, Estate/land leases, fishing harbors, buoys, jetties, cranes, weigh-bridges, SBM’s. The Geo-tagging would present a clearer picture of Gujarat’s ports to showcase port sector in public domain. Today there is no consolidated data readily available digitally to Management for greater insights to actually identify various asset class of GMB like Dredgers, Piloting Boats, Patrolling Boats, Tug Boats, Jetty/Fenders/Cranes/Bollards etc. The lack of information creates hindrance in port-led development and major planning of activities.

What Exact Problem is being Solved?

Users

Expected Outcomes : 1) The Higher Management of GMB in spite frequent change of Guard may readily visualise latest situational awareness going through digital geo-tagged assets of Maritime sector across Gujarat State. 2) The geo-tagging may help in informed decision making and enabling ease of monitoring and management. 3) This will create an impact in knowledge sharing as various departments will work closely in synergized manner that would add to efficiency and effectiveness of governance through digital mechanism.

Impact :
Name of the Department: Ports and Transport Department

Problem ID: GH115

Problem Statement: Digital car vehicle and log management system

Challenge Description with context: At present Government is using manual log book management for record purpose. The car tracking management system may cater to pool management of cars, drivers and officers using support of technology. There is need of system that can monitor live cars on maps, driver’s location, to save time, energy and cost of organization for planning the management of vehicles effectively and monitor on-the-go anytime anywhere through use of proper technology. The extensive usage of Cars by government machinery to execute various works/processes may be easily monitored with creation of digital geo-logs. The automated car tracking, driver tracking, distance tracking, creation of automatic digital log register without manual interventions etc.

What Exact Problem is being Solved?:

Users:

Expected Outcomes: 1) To effectuate use of digital systems and GPS trackers etc. for least manual interruption of drivers, Officers, or Pool In charge official, 2) To better management with more transparent system with live data feeds available for viewing to all officers of GMB so that it adds upto effective and efficient monitoring and management of office car. 3) The maintenance and operations of car as well as car as an asset management can also be tracked by the means of this system as another layer.

Impact: 
Name of the Department: Ports and Transport Department

Problem ID: GH116

Problem Statement: Online Store and inventory management

Challenge Description with context: Ability to record and maintain item master list with availability of material number/code/part code as primary identifier for various material types including spares and consumables. Ability to generate material code automatically for item entry to item master as well as support manual entry. Ability to support alphanumeric material codes. Ability to capture detailed material information including the categories of data to support core material management transactions like goods receipt, goods issue etc. Ability to support item groups or categorization of material into material groups, type and location etc. Ability to support approval workflow and automatically trigger material data authorization upon material data entry. Ability to modify material details and resubmit for approval. Ability to track material authorization status pre and post approval. Ability to track changes made to material record with details of changes made, changing entity and approver of changes. Ability to reject material record and update material record status with Reasons. Ability to record whether material is moving or non-moving or obsolete delete a material record which are non-moving, obsolete. Ability to link material to vendor / supplier details. Availability of search functionality based on material numbers, wildcard entries, partial item description, warranty period, specifications, etc. Ability to display partial or full material master information to users across functional areas and restrict display of all information based on user roles/display authorization levels. Ability to support multiple Units of Measure (UoM) for an item. Ability to create catalogues for different material types, spares and miscellaneous items. Ability to capture details regarding insurance of the
materials. Ability to record multiple physical store locations, capturing individual store physical description details. Ability to record and track inventory status for Turnkey Contracts (these stocks are not held in WBSETCL stores, but materials are recognized by issuing SR and immediately transaction is completed by issuing SRV to Contractor). Ability to track and monitor stock at various store locations Central Stores, Area Stores, Sub-station Stores, at individual store level and at aggregate level. Ability to plan for inventory based on consumption pattern, present stock, procurement lead times, projected requirements etc. Ability to perform various kinds of inventory analysis like ABC analysis, XYZ analysis, Fast/Slow/Non-moving analysis, Min-Max analysis, etc. Ability to analyze inventory in terms of 'items reached re-order/ safety level' and 'critical' items and generate appropriate alerts when inventory reaches predefined re-order points. Ability to store shelf life details for items and display alerts when items reach end of life (user defined) and remains un-used. Ability to store material movement history in each store and for each item e.g. fast, slow moving and non-moving. Ability to classify inventory based on various inventory analysis like ABC Classification, etc. for various actions e.g. Stock taking, Criticality etc. Ability to classify inventory under bulk material, finished goods, capital items, job work and disposables. Ability to assign a service level to an inventory item e.g. 100% for critical items and this will be linked to re-order levels

What Exact Problem is being Solved?

Users

Expected Outcomes

1. Data entry should be made for all material accordingly our requirement
2. No material can be enter in DR without data entry
3. Material entered in Daily Receipt should be automatically entered in Purchase register as well as in respective ledger. Material entered in
Issue Note should be automatically entered in Issue register as well as in respective ledger.

4. Search of material can be made either material name wise or part no. wise

5. Daily receipt No. & Issue note No. should be generated automatically.

6. Fast moving materials should be identified differently.

7. Rare utilizing materials should be identified differently.

8. Not utilizing materials should be identified differently.

9. Out of fast moving materials, any material becomes zero balance should be indicated.

10. Out of rare utilizing and not utilizing material already in store balance, if same is purchase should be indicated.

11. Above mention reports should be generated automatically. Balance material list should be only view by all port store through inter connectivity.

12. Purchase register and Issue register of all port store should be only view by HO.

13. Store keeper can only enter the data, can view all records and can generate all reports but cannot edit quantity, rate or amount of DR & Issue note.

Impact: 

\[ \text{Impact: } \]
Name of the Department : Ports and Transport Department

Problem ID : GH117

Problem Statement : IT Assets Management System and help desk with call login

Challenge Description with context :

- Automate the check in and check out to employees, vendors, or customers
- Go to your assets with mobile computers instead of bringing them back to your PC
- Add, edit, check in, check out, and move assets or quickly do audits with the mobility allowed by Wasp Asset Software
- Complete audits and cycle counts on a mobile computer for 100% accuracy
- Track assets by site, location, serial number, or user
- Alerts give notification of overdue checkouts, expiring warranties, schedule maintenance, certification/calibration, and more
- Available in standard, professional, or enterprise version

Dynamic Dashboard

- Assignment, Assign Asset to User(s)
- Add/Update/Delete Vendors
- Add/Update/Delete Category
- Search
- Manage Users
- Manage locations/branches/departments/sub locations
- Manage Stocks (Hardware/Software)
- Find Strength against the staff and branch

The IT assets should be managed online having features like online requirement from all offices
across ports/districts, allotment of assets, transfer of assets and management of online records. The Assets management may also include management of work orders issued having outward number, management of performance bank guarantee etc. It should also support ticket management to resolve the complaint logged for maintenance and support issues related to particular asset. It should support printing and uploading of scanned documents related to particular asset so that same may be resolved with ease. Live tracking of complaint management, resolved status and various kind of reporting like asset allocation report office wise, location wise, requirement wise, pbg expiry wise, date of work order wise, resolved complaints, pending complaints etc.

What Exact Problem is being Solved?

Users:

Expected Outcomes:

1. Ease of Management of assets with tracking and allocation in single click
2. The PBG, maintenance and support, work orders, contracting becomes efficient
3. Track assets throughout their life cycle
4. Automatically discover and store IT asset data
5. Quickly alert and report on IT assets

Impact:
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Ports and Transport Department</th>
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</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH118</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Security deposits/PBG/EMD management and alert system</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>The government usually takes bank guarantees/security deposit/EMD in form of FDR/Demand Draft or Banker’s Cheque against the works/contracts or tenders. The Bank guarantees/Demand Drafts/Banker’s Cheque have validity and before expiry it should be alerted to government officials so that he can manage and quickly assess the latest status of the subjected matter. The alert and pop-up system for the effective management is requirement for all government departments.</td>
</tr>
</tbody>
</table>

What Exact Problem is being Solved?

Users

Expected Outcomes:
1. Ease of Management and tracking to avoid delay much before expiry
2. Ease of project management, proves very helpful in works/contract management
3. Efficient tool for monitoring projects

Impact:
Name of the Department: Ports and Transport Department

Problem ID: GH119

Problem Statement: Concession Pass Issue System

Challenge Description with context: Currently, the concession passes of Students and commuters are being issued through GSRTC counters and concerned institutes through web based application with central database. The pass authentication process is manual. GSRTC has implemented Electronic Ticket Machines (ETMs / Hand held devices) to the conductors. All the ETMs are equipped with RFID readers. The RFID Smart cards can be issued to the Students and commuters and ETMs can validate the same.

What Exact Problem is being Solved?

Users:

Expected Outcomes: Electronic validation of the passes.

Impact:
Name of the Department: Ports and Transport Department

Problem ID: GH120

Problem Statement: Mobile Application for Time table

Challenge Description with context:
Currently, GSRTC does not have any mobile app for time table of its scheduled operation. Mobile app with offline data of time table will provide schedule details to passengers.

What Exact Problem is being Solved?

Users:

Expected Outcomes: This mobile app may give information of schedule operation of GSRTC to passengers by offline as well as online data

Impact:
Name of the Department: Ports and Transport Department

Problem ID: GH121

Problem Statement: Mobile Application for Information on seat availability

Challenge Description with context:
Currently, GSRTC does not have any real time ticketing solution. Passengers cannot be provided with information for vacant seat position of arriving buses. Online booking is not possible after the trip sheet is prepared. Mobile app may have feature to enter the information of vacant / occupied seat position data. Public may have this application as well so GSRTC may get the information of Vacant / Occupied seat position of trips. This also can be set by the Toll-Free SMS sent to the server in a format. This will also create database and may provide information of Vacant / Occupied seat position of trips.

What Exact Problem is being Solved?

Users:

Expected Outcomes: GSRTC has installed Passenger Information Displays at bus stations of GSRTC. These displays provide information of arriving buses of bus station along with vehicle no., route, last station, Expected Time of Arrival and Expected Time of departure in Gujarati and English languages. We may also provide the Vacant /Occupied seat position of particular trip.

Impact:
<table>
<thead>
<tr>
<th><strong>Name of the Department</strong></th>
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<tbody>
<tr>
<td><strong>Problem ID</strong></td>
<td>GH122</td>
</tr>
<tr>
<td><strong>Problem Statement</strong></td>
<td>Employee Worksheet management system</td>
</tr>
<tr>
<td><strong>Challenge Description with context</strong></td>
<td>Currently, GSRTC does not have any IT solution for the attendance management of employees. Implementation of biometric figure print sensors / eye retina scanner / face recognition machines may record all administrative employee attendance and their movement. RFID Smart cards may also serve the objective of attendance recording.</td>
</tr>
<tr>
<td><strong>What Exact Problem is being Solved?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Users</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Expected Outcomes</strong></td>
<td>Management can get the work data of administrative staff for the further process.</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
<td></td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Ports and Transport Department</td>
</tr>
<tr>
<td>Problem ID</td>
<td>GH123</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Employee Attendance system of administrative staff</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Currently, GSRTC does not have any IT solution for the attendance management of employees. Implementation of biometric figure print sensors / eye retina scanner / face recognition machines may record all administrative employee attendance and their movement. RFID Smart cards may also serve the objective of attendance recording.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td></td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Management can get the attendance data of administrative staff for the further process.</td>
</tr>
<tr>
<td>Impact</td>
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<tr>
<td>Name of the Department</td>
<td>Ports and Transport Department</td>
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</tr>
<tr>
<td>Problem ID</td>
<td>GH124</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Centralized grievances redressal system</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Currently, GSRTC has many modes of grievances management system i.e., Online Application, WhatsApp, through calls on Toll-Free nos. An online application with central database may serve the purpose</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td></td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>This application will give single window solution and central MIS of Grievances.</td>
</tr>
<tr>
<td>Impact</td>
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<tr>
<td>Name of the Department</td>
<td>Ports and Transport Department</td>
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</tr>
<tr>
<td>Problem ID</td>
<td>GH125</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Integration between RTO Police And Insurance Company In Case Of Fatal Accident Case</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>In case fatal accident police, RTO and insurance company plays a role. But today they are working separately. Due to this the procedure becomes tedious and time consuming. Because of all this the victim couldn't get the benefits of insurance and has to suffers a lot.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Users:</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>To develop online portal for fatal accident in which for police, RTO and insurance company can report at any time and any place. So we get whole detail at one place and cases of fatal accident resolved easily and one can get all the benefits in time.</td>
</tr>
<tr>
<td>Impact</td>
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</tr>
</tbody>
</table>
Name of the Department : Ports and Transport Department

Problem ID : GH126

Problem Statement : Vehicle Dashboard Camera

Challenge Description with context : Now a day with the increasing population of vehicles accidents also increased. More over the offences related to over speeding, race driving and accidents are increased. Today we do not have any recording device software in car for solving this type of issues.

What Exact Problem is being Solved? :

Users :

Expected Outcomes : Software which can record one time one trip data and delete on second trip. If one can want to save it, can save it.

Impact :
Name of the Department : Ports and Transport Department

Problem ID : GH127

Problem Statement : Road Symbol Detection Software in Vehicle

Challenge Description with context : There are many symbols related to driving on roads. Some are mandatory, cautionary and informatorily. All are necessary for road users. But all road users do not follow the signs and symbols and lack of knowledge increases accident.

What Exact Problem is being Solved?

Users :

Expected Outcomes : Sensor base symbol detection system which act according to road sign and symbol automatically when vehicle is running.

Impact :
Name of the Department: Ports and Transport Department

Problem ID: GH128

Problem Statement: SOS System in Vehicle

Challenge Description with context: Now a days vehicle population increased tremendously. With the increased population problems related to vehicles like traffic jam, road accident, break down etc occurs. These problems become common in our day to day life. In case of emergency we need to contact our relatives/police/medical/fire etc.

What Exact Problem is being Solved?

Users:

Expected Outcomes: SOS software which can contact automatically particular help depending upon the requirement in case of emergency.

Impact:
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<thead>
<tr>
<th>Name of the Department</th>
<th>Ports and Transport Department</th>
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<tbody>
<tr>
<td>Problem ID</td>
<td>GH129</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Portable weight measurement device</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Today overloading of vehicles damages roads. We need to control this nuisance to save revenue using in road and its maintenance. In enforcement officials need to weigh the vehicle so he can check whether vehicle is overloaded or not. But weightment is not available everywhere and official has to suffer a lot.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td></td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Easily carrying software based weight device which can be operated by use of sensors depending on number of tyres.</td>
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<tr>
<td>Name of the Department</td>
<td>Ports and Transport Department</td>
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</tr>
<tr>
<td>Problem ID</td>
<td>GH130</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Safe distance alarming system in vehicles</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>In vehicles, there is always safe braking distance depending upon the speed of the vehicles. If it can be detected while vehicle is running we can reduce many accidents on road.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td></td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Safe braking distance depending upon the speed of the vehicles and measures front vehicles distance with the use of sensors and software.</td>
</tr>
<tr>
<td>Impact</td>
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</tr>
</tbody>
</table>
Name of the Department : Ports and Transport Department

Problem ID : GH131

Problem Statement : Mobile restriction in running vehicles

Challenge Description with context : Mobile plays a crucial role in the accidents. Mobile distracts drivers from driving and results in accidents and deaths even.

What Exact Problem is being Solved? :

Users :

Expected Outcomes : A software based jammer which can restrict voice call in running vehicles only.

Impact :
Name of the Department : Revenue Department
Problem ID : GH132
Problem Statement : Integrating of Housing Service Delivery

Challenge Description with context : The Government is based on transparent, decision-making, sensitivity and progressive government. For the betterment of administration and quick delivery of services to the citizens, the government has taken lot of initiatives. As such Revenue Department is a law based department and therefore, the software related to land and land related services have been operationalised by NIC. Other services which are scattered but related to property can be provided at one place eliminating people's hardship. The nodal point may be Sub-Registrar office where transactions of properties are being done. The services of Torrent Power, Adani Gas services, various Gas Agency and G2C services can be integrated at this office to the citizens as suggested in point no.2.

What Exact Problem is being Solved?

- a. Electricity and Light bill connection
- b. Gas Connection
- c. Municipality Tax bill registration
- d. Voter registration and Voter card changes
- e. AADHAAR registration and address changes
- f. Water Connection
- g. Solid waste Management
- h. Grievances Redressal Mechanism
- i. Birth, Death and Marriage Certificate

Users : Citizen
Expected Outcomes : Single point solution to various house related problem face by Citizen.
Impact : Macro impact as detail given in point no:2
Name of the Department : Roads and Buildings Department

Problem ID : GH133

Problem Statement : Grievance Redressal for Road maintenance (Mobile App)

Challenge Description with context :

(1) Road & Building Department of Government of Gujarat is maintaining a vast road network of more than 100000 km length of different categories and carriage width.

(2) Due to continuous movement of heavy traffic on these roads, very heavy rainfall and flood, road surface get deteriorated and pot holes or road settlements, tree falling, rain cuts, road submergence are created.

(3) Due to above problems, road users face great hardship and many villages are cut off from district/taluka, headquarters and essential services are not reaching to the villagers. Due to damages to road network, recurring expenses on wear and tear of vehicle increase and fatigue of drivers.

What Exact Problem is being Solved? :
The R&B Department is not having adequate technical manpower to look after each and every Km of this vast road network for attending repairs. So an online public grievance redressal mechanism/system is necessary for informing the concerned Executive Engineer who is incharge of District State/Panchayat road network of regarding location of problem/type of grievances.

Users :

(1) The road users i.e. villagers, transporters, private vehicle owners, state transport department, public service providers (ambulance/police vehicles etc.)

(2) The field officers of Road & Building Department to attend the grievance immediately for smooth traffic movement.
(3) The higher authorities of R&B Department to monitor and evaluate the grievance submitted by the road user.

Expected Outcomes : All the grievances will be informed to responsible officer immediately and it will be attended by the Executive Engineer immediately with optimum use of all resources i.e. man/material/machineries and thereby hardship of public will be reduced, to great extent and essential services will be restored smoothly.

Impact : Ease of hardship of road users.
Name of the Department : Roads and Buildings Department

Problem ID : GH134

Problem Statement : Real Time Progress of R&B Department Projects (Web Application)

Challenge Description with context : (1) Road & Building Department is the most important department in Government of Gujarat for providing the basic infrastructure facilities i.e. road network, buildings and bridges.

(2) The Department is executing various development projects throughout the length and width of Gujarat State under various budget heads like Mukhya Mantri Gram Sadak Yojna (MMGSY), Special Repairs (SR), Budgeted works, Central Road Fund (CRF) etc.

(3) The department’s annual budget outlay is also increasing year to year and now reached more than Rs.8000 Crore.

(4) With increasing number of works going on at various locations and particularly in interior parts of tribal districts, for easy monitoring these ongoing works on real time basis, so as to complete these basic infrastructure projects in scheduled time frame with desired quality control of works.

What Exact Problem is being Solved? : Since work of R & B Department is going on at various locations, it is difficult to track the progress of work. So an online real time GPS based web application with facility of taking pictures/video facilities is necessary for monitoring of all ongoing projects in the State.

Users : (1) The field officers & higher authority of R&B of Government.

(2) The policy planner (CM, Dy. CM, Minister, Head of the Department, Collector & DDO etc.) of all departments at Sachivalaya, Gandhinagar.
Expected Outcomes: A thorough and robust project monitoring system enable both field officers and policy maker at Sachivalaya for planning the allocation of budget fund in more efficient way and to expedite the completion of planned quality works in time, so as to give desired benefits to the citizens of State. Also further planning of the department is taken up in advance and thereby improve overall efficiency at all level.

Impact: Better management of Government resources and further planning.
Name of the Department: Roads and Buildings Department

Problem ID: GH135

Problem Statement: Forecasting of Road Submergence (Web Application)

Challenge Description with context:

(1) Road & Building Department of Government of Gujarat is committed to provide basic minimum requirements of people of Gujarat. One of the primary task of this department is to provide village connectivity to all revenue villages and their habitations with all road network to connect them with Taluka/District Head Quarters. This road connectivity ensures the services like Health, Education, Social Services, Agricultural product marketing etc. to all the citizens residing in rural areas.

(2) During very heavy rains and also in case of sudden discharge of flood water from Dams, these roads get submerged and the villages/habitations are inaccessible for many days resulting into untold hardship to villages and they cut off with all basic services.

What Exact Problem is being Solved?

With the advantages of information technology and forecast based on Satellite revolution. It is not impossible to forecast the likely occurrence of submergence of road network in advance and accordingly preparedness for coming hardship and its remedial measures to ease the hardship.

Users: The field officers of Road & Building Department & higher authority assigned to attend the problems.

Expected Outcomes: Establishment of early forecast system at State level under disaster management will help both villagers and administration to tackle the forthcoming problem of submergence of road network, thereby helping early evacuation of likely trapped villagers, livestock (cows,
buffalos, goats) and their belongings well in advance and saving their precious life.

Impact : Saving precious life and belongings of people of affected area

Flow of Work : Data will be collected from Weather Forecast Department for rainfall and discharge of water from dam by Irrigation Department. These data will be analysed by R&B Department using this web application to know submergence of road network and same will be informed to Revenue authority for further actions.
Name of the Department : Sports, Youth and Cultural Activities Department
Problem ID : GH136
Problem Statement : Mapping of Adventure Sports Sights in Gujarat (MASS)
Challenge Description with context : Gujarat has a diversity of natural resources and so adventure sights but information about such sights are not readily available.

Information regarding sight location, brief description, contact information, precaution to be taken care of, various safety gadgets to be carried with etc. are not easily available to various stakeholders.

If such problem are resolved on the digital platform that could help to promote adventurous sports and tourism across the state.

What Exact Problem is being Solved?

Users :

Expected Outcomes :

- Geographical mapping of such adventure sights
- Geographical mapping of training institute or contacts for such adventurous activities/sports.
- Information about location’s specialty, safety gadgets, training manuals, best time for visit, travel route etc.
- Mapping of adventurous sports goods manufacturer and dealer etc

Impact :
Name of the Department: Sports, Youth and Cultural Activities Department
Problem ID: GH137
Problem Statement: Sport Performance Analysis and Review System (SPARS)

Challenge Description with context: Gujarat has grown exceptionally in the field of sports. Many players have been emerged out from Gujarat in various sports and games and won medals in National and International events. Presently scientifically developed monitoring system for their training schedule, performance tracking, energy intake & expenditure is not available on the single digital platform.

What Exact Problem is being Solved?

Users:

Expected Outcomes:
- Training Track Records
- Fitness Development & Analysis
- Fitness Profile
- Medical Profile
- Past Injuries & treatment details
- Competition Participation records
- Expenditure profile in terms of:
  - Travel expenditure during competition
  - Training expenditure
  - Equipment expenditure
  - Nutritional expenditure
  - Safety measure expenditure
  - Rehabilitation expenditure

Impact:
Name of the Department: Sports, Youth and Cultural Activities Department

Problem ID: GH138

Problem Statement: Gymnastics Assessment System (GAS)

Challenge Description with context: Field of gymnastic involves precious and diligent judgments during training and competitions with respect to subjective, objective and artistic background. Many players have been emerged out from Gujarat in gymnastics and won medals in National and International events. Presently scientifically developed judgment system for their training and during competitions is not available on the single digital platform.

What Exact Problem is being Solved?

Users:

Expected Outcomes:
- Synchronization of real time movement Vs standard movement and analysis
- Virtual training modules for Technical officials
- Virtual Coaching technique.

Impact:
Name of the Department : Sports, Youth and Cultural Activities Department

Problem ID : GH139

Problem Statement : Sports Athletes Performance based Nutritional Assessment (SAPNA)

Challenge Description with context : There should be one App/Software for the Nutritional Assessment for a sports person/sports Athletes, because the only problem is for a sports nutritionist to collect the data and to calculate the nutritional requirement of each and every sports person, which is a very lengthy process, Also, if we can try to calculate the details in a software/ App, then it will give accurate details about each sports person. Also, it should show the other information, like, what other kind of nutrients a sports person has required.

The other thing is that, if the software/App can also provide the system of SPSS type, So, that to calculate the data in a form of graphs & table, so, that a sports nutritionist will be able to analyze the data and also it will be more helpful for the purpose of a research, Because, whatever the data we put it into the software, it can give us accurate result in a form of graphs/tables, like, the app/software also should work as a SPSS software does.

What Exact Problem is being Solved?

Users

Expected Outcomes : If the App will be created then the result will come out that, The Assessment Procedure will take less time for calculating the data, All the data of sports person will be saved easily in that App and The possible outcomes will be to see the exact Nutritional requirement of a sports person according to their Activity of Sports. So, it will be more beneficial and easy for a sports nutritionist to find out the Nutritional requirement of each sports person. Generally,
the researcher needs to calculate the data and
to find the result, they need to use SPSS
Software. So, if this App/Software can work in
a manner like, it gives the data analysis/result
with accuracy, So, it would be much easier and
time saver for a sports researcher/Sport
Nutritionist to collect their result and to get best
accurate result for each and every Sports
Persons/Sports Athletes

Impact :
Name of the Department: Sports, Youth and Cultural Activities Department
Problem ID: GH140
Problem Statement: Ready Reckoner in Sports

Challenge Description with context:

Now a days, sports persons has inclined toward a scientific approach regarding their diet and other nutritional supplement side by side practice regime. Instances of injuries during games are also happening frequently. Knowledge about first aid may be useful to an individual athlete/player for fast recovery from injuries & could back to the ground. Athletes/players become a victim of drug/alcohol addiction and spoil their bright sporting career.

Keeping in a view such paradigm shift of mindset and training schedule, Sports persons and their coach are looking for unique ready reckoner digital solution.

Such Solution may help them to find out the theoretical information in area of sports nutrition.

What Exact Problem is being Solved?

Users:

Expected Outcomes: There may be a digital solution which provide information on topics like;

- Concept of balanced food in sports
- Sports Supplements (macro and Micro)
- Sports Medicine
- Step wise instruction (Pictorial/ Audio-Video) for first aid in case of sports injuries
- Nutrients requirement in various Olympic sports& games
- Possible drug-food/nutrient interactions
- Monitoring drug/alcohol usage, it’s frequency, duration, route of consumption etc. and its possible
outcomes on the health and their performance

- Digital solution may serve as a Ready Reckoner for all stakeholders
- Provisions for sports nutritional counselling.

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<thead>
<tr>
<th>Name of the Department</th>
<th>Sports, Youth and Cultural Activities Department</th>
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<tbody>
<tr>
<td>Problem ID</td>
<td>GH141</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Attendance Taker by scanning faces</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>An application for taking attendance in the class room by scanning faces of the groups present in the class. It will decrease proxy attendance and also helps fellow teachers to take attendance by just scanning the class once they are entering in the class or leaving the class.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Users</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>This application will help the teachers in taking the attendance by scanning the faces and it will decrease controversy on the attendance in the school, colleges and universities, If it will be made than neither teachers nor the students will be able to blame each other. It will decrease the controversies and the attendance in the classrooms will be increased. Because the students will be knowing if they will not be present in the class they will be marked absent automatically.</td>
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</tbody>
</table>
Name of the Department: Sports, Youth and Cultural Activities Department

Problem ID: GH142

Problem Statement: Usage Survey of Public Libraries

Challenge Description with context: There are numerous grants in aid public libraries and up to town level under Directorate of Libraries. Citizen has cultivated a habit of reading and readers are utilizing such libraries to an optimum level.

It is necessary to assess reading habit, reading patterns of various age groups, professional groups and special groups like youth, women, senior citizen etc.

There may be some digital platform, which may serve as a useful tool for identification of reader's need and better selection of books for these Libraries.

What Exact Problem is being Solved?

Users:

Expected Outcomes: Digital solution for usage survey of public libraries may provide;

- Important facts and Statistics
- Language wise reading pattern
- Subject wise reading pattern
- Indicator for more popular publications and authors in particular language
- Information about publisher with cost

Impact:
Name of the Department : Tribal Development Department

Problem ID : GH143

Problem Statement : Mechanism to avoid duplication of beneficiaries of various welfare schemes

Challenge Description with context : Every year State Government gives benefits of financial assistance or assets to deprived section of the State. The number of beneficiaries under one scheme ranges from several hundred to several lakhs, for e.g. under the State sponsored pre-matric scholarship every year around 15 lakhs students are provided with scholarships amounting to Rs. 500 an onwards.

What Exact Problem is being Solved? : At present, there are 03 housing schemes under which deprived section of the State is given financial assistance for house building. These schemes are Indira AwasYojana, Sardar Patel AwasYojana, HalpatiAwasYojana, and housing scheme for individual tribal beneficiaries. At the time of giving benefit under one particular scheme, it is very difficult to check whether the beneficiary has obtained benefit under another scheme for the same purpose i.e. house building.

Users : • Government Department
• Tribal beneficiary

Expected Outcomes : • If, at the time of entering name and / or Aadhaar No. of a beneficiary, a digital solution (Data Bank) can check whether the applicant has availed such benefits in past, the duplication of beneficiary can be controlled.

Impact : • By controlling duplicate beneficiaries under various welfare schemes, huge amount of Government money can be saved and with this money the genuine beneficiaries can get benefits.
• This kind of a digital solution can be replicable for hundreds of Government schemes.
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<tr>
<th><strong>Name of the Department</strong></th>
<th>Tribal Development Department</th>
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<tr>
<td><strong>Problem ID</strong></td>
<td>GH144</td>
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<tr>
<td><strong>Problem Statement</strong></td>
<td>Online verification of caste certificates</td>
</tr>
<tr>
<td><strong>Challenge Description with context</strong></td>
<td>As per the reservation policy of the Government, for the recruitment in Government jobs and for various Government benefits, the applicants produce caste certificate to the authority. It is important to verify the genuineness of caste certificate. However, there is no such mechanism to verify the certificates on the spot.</td>
</tr>
<tr>
<td><strong>What Exact Problem is being Solved?</strong></td>
<td>At present, the applicants produce physical copy of caste certificates to the Government authority for Government jobs or benefits. It is a very lengthy process to ensure genuineness of the certificate as the copy of certificate is sent to issuing authority to match unique certificate number, photo and/or name of the certificate holder.</td>
</tr>
<tr>
<td><strong>Users</strong></td>
<td>Any Government authority for availing benefits.</td>
</tr>
<tr>
<td><strong>Expected Outcomes</strong></td>
<td>An online data bank of caste certificates which can help to verify the genuineness of caste certificates just by entering the unique certificate number or name of the certificate holder.</td>
</tr>
</tbody>
</table>
| **Impact**                 | • If, online verification of caste certificate is made possible, lot of time and money can be saved by reducing the effort.  
                              • It will be ensured that, only genuine reserved category applicants avail benefits. |
Name of the Department: Tribal Development Department

Problem ID: GH145

Problem Statement: Identification of eligible beneficiaries of various Government welfare schemes

Challenge Description with context: At present, the applicant has to approach Government authority to avail Government benefits under welfare schemes. It is possible that many deprived eligible beneficiaries may not be knowing about the benefits which they can avail, hence, it becomes difficult for the Government machinery to reach out to the deprived community.

What Exact Problem is being Solved?: If, a Central Data Bank of eligible beneficiaries under various welfare schemes can be organized, instead of waiting for the beneficiary to approach Government authority, the Government authority can approach already identified eligible beneficiary for benefits under various Government welfare schemes.

Users: • Applicants of welfare schemes
       • Government authorities


Impact: • Once the eligible beneficiaries are identified, the respective department of the Government can prepare a milestone to reach out to all the beneficiaries in a planned manner.
       • With the help of Data Bank, respective Government can reach out to each and every eligible beneficiary proactively.
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<th>Name of the Department</th>
<th>Tribal Development Department</th>
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<tbody>
<tr>
<td>Problem ID</td>
<td>GH146</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Identify developmental gaps in tribal areas</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>The Government aims at development of tribal areas in the state. There are 14 tribal districts on the eastern belt of the state. Ranging from Banaskantha to Dangs. For a need based development plan identification of developmental gaps is very important.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Various Government departments work in tribal areas for developmental activities. Similarly, local bodies also work on tribal area development. At present, state authorities as well as local bodies and various departments take up developmental activities in tribal areas in isolation, therefore, there is a possibility of lack of synergy and duplication of activities or efforts.</td>
</tr>
<tr>
<td>Users</td>
<td>Government authorities.</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Identification of developmental needs in tribal areas ranging from requirement of roads, dairy, APMC, educational facilities, health facilities, electrification etc. and centralized development plan with distinguished allotment of responsibilities amongst State authorities as well as local bodies.</td>
</tr>
<tr>
<td>Impact</td>
<td>1) If, developmental gaps of tribal areas in the State, are identified a comprehensive long term development plan can be prepared and all the Government departments and State as well as local bodies can work with a synergy for development of tribal areas in the State. 2) Convergence of funds from various sources can be made possible, if various authorities work on a common development plan.</td>
</tr>
</tbody>
</table>
Name of the Department: Tribal Development Department

Problem ID: GH147

Problem Statement: Mapping of resources in tribal areas

Challenge Description with context: If all the resources in tribal areas are tapped for developmental activities, there can be huge scope of creation of employment and economic activities.

What Exact Problem is being Solved?: Development of tribal area is the mandate of the Government. There can be many resources in tribal areas, such as easy access to labor force, availability of raw material, availability of land and so on. At present, there is no specialized mechanism for mapping of resources in tribal areas; hence, it becomes difficult to transform the resources in developmental activities.

Users: • Government authorities
• Any other entity approved by Government.

Expected Outcomes: Any digital solution which can help the Government and any other entity approved by Government to know about the resources in tribal areas and undertake economic and developmental activities accordingly.

Impact: • Accelerated economic activities in tribal areas
• Accelerated developmental activities in tribal areas
• Creation of job opportunities in tribal areas
<table>
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<th>Name of the Department</th>
<th>Tribal Development Department</th>
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<tr>
<td>Problem ID</td>
<td>GH148</td>
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<tr>
<td>Problem Statement</td>
<td>Convergence of various Government schemes</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Different departments of the State and Central Government undertake many developmental as well as welfare activities. These departments normally work in isolation, if convergence of schemes can be achieved these schemes can be complementary to each other for achieving a common objective.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Different departments of the State and Central Government undertake many developmental as well as welfare activities. <strong>Example:</strong> WASMO provides 90% financial assistance for water projects in a village, remaining 10% should be contribution from the beneficiary village. In some cases, where the villagers are not able to bear 10% contribution, some other department can make provision to sponsor 10% contribution on behalf of that particular village and thus, two different departments of the Government can achieve the object through convergence by being complementary to each other.</td>
</tr>
<tr>
<td>Users</td>
<td>Various Government authorities</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>A digital solution which can help various Government Departments to identify the scope of convergence for common objectives.</td>
</tr>
<tr>
<td>Impact</td>
<td>• Through convergence of schemes better results can be achieved for developmental activities. • Efforts of different Government departments can be complementary to each other.</td>
</tr>
</tbody>
</table>
Name of the Department : Urban Development and Urban Housing Department
Problem ID : GH149
Problem Statement : Identify available parking spaces at Bus Depots and within the City

Challenge Description with context:
- In many parts of the city there is a lack of designated parking spaces. It is occasionally seen that parking is being done by commuters on both the sides of an already narrow road. This leads to chocking of traffic in roads connecting main roads. There is a lot of chaos and difficulty is experienced by city dwellers on weekends for having parking facility near multiplexes, Malls and Key Markets. There are also a lot of people who have to travel from Vadodara to nearby industrial towns for work. A lot of small businessmen travel to Ahmedabad, Bharuch, Anand and Surat for purchase of goods for trade. Heavy pressure exists on parking requirement at Central Bus Station, Station, and prominent bus depots in the city. There is a plan to establish Zonal and Central Bus Depots with multilevel parking system and the process occurs in real-time to inform users about available vacant spaces.

What Exact Problem is being Solved?
- Requires automated parking management systems which can be used by citizens to find the available parking spots in the city/nearby area and pay parking bill for the available spots. Should also provide an option of monthly pass/ day or night reservation/ waiting list to upto 40%/25%/5% of total parking slots in each of the transport hub through mobile SMS messaging system. Once booked if the user does not come for upto 30 min of the allocated reported time the slot will get released for booking by other users. 50% charges will be deducted for non-reporting.
Users:
- General public, corporations, municipal corporations, Agencies

Expected Outcomes:
- The system should be capable of having providing information to the commuters about the available parking spaces in real time and also allow them to book their parking slots before they start from home, also they should be able to take monthly pass for parking online on the app itself. The app should also be capable of having some quota for waiting list and information about availability of parking slot and its reservation shall be possible online. The parking lot should also be capable to indicating the number of empty parking slots for commuters who drive into the Zonal & Central Bus depot without having any prior reservation. The app should also be integrated with parking management system available with major malls, multiplexes, parks, convention centers and designated parking near no vehicle entry markets.

Impact:
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<tr>
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<tbody>
<tr>
<td>Problem ID</td>
<td>GH150</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Location of Underground Utilities and Frequent Digging on roads</td>
</tr>
</tbody>
</table>

**Challenge Description**

- Underground utilities like water, drainage, power, etc. in the city are either not mapped or their actual location has not been identified/updated. Thereby, it takes a long time to troubleshoot any problem in any of the utility.
- A common issue is that of repeated digging up of a particular site on a public road by various departments as a result of lack of information or unawareness on their part of work being carried out by other departments. This creates considerable inconvenience to public/citizens and motorists. Further, lack of information/unawareness about locations of underground utilities leads to duplication of utilities and, many a times, damage to existing underground utilities.

**What Exact Problem is being Solved?**

**Users**

- General public, corporations, municipal corporations, Agencies

**Expected Outcomes**

- There should be a common database/mapping for various department so that Underground utilities like water, drainage, power can be done at the same time and repeated digging up of a particular site can be avoided

**Impact**
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<tbody>
<tr>
<td>Problem ID</td>
<td>GH151</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Identify Illegal water connection</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>• In cities households have constructed underground water storage tanks below the level of the water distribution system to illegally draw the water from distribution network. This leads to pressure drop during subsequent supply and many household don’t get enough water because of this.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>• General public, corporations, municipal corporations</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>• The illegal water connection detection system is expected to locate such illegal connections and provide visual reports to authorities for further action.</td>
</tr>
<tr>
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</tr>
</tbody>
</table>
Name of the Department : Urban Development and Urban Housing Department

Problem ID : GH152

Problem Statement : Citizens and travelers need to be informed about the location of multiple common toilets

Challenge Description with context : • Citizens and travelers come to the city for various purposes and while on the move need to have access to toilet facilities. Since, more and more Toilet Blocks shall be added the location and the facilities available at the Multiple Common Toilet need to be informed to the citizens.

What Exact Problem is being Solved?

Users : • General public, corporations, municipal corporations, tourists

Expected Outcomes : • Hence, there is a need to have a Geo-tagging of the Multiple Common Toilet Blocks to promote the availability of hygienic toilet facilities to the citizens of the city as well as to the travellers visiting the city including those who come to the city to attend various functions, events and for heritage tourism.

Impact :
Name of the Department: Urban Development and Urban Housing Department
Problem ID: GH153
Problem Statement: Automated parking management systems

Challenge Description with context:
- Smart Parking systems typically obtain information about available parking spaces in a particular geographic area and the process occurs in real-time to inform users about available vacant spaces.

What Exact Problem is being Solved?

Users:
- General public, corporations, municipal corporations, Agencies

Expected Outcomes:
- City requires automated parking management systems which can be used by citizens to find the available parking spots in the city/nearby area and pay parking bill for the available spot.

Impact:
Name of the Department: Urban Development and Urban Housing Department
Problem ID: GH154
Problem Statement: Automatic illegal solid waste dumping alert system

Challenge Description with context:
- There are many locations, where illegal waste is dumped by citizens.
- Right now door to door garbage is collected by local bodies
What Exact Problem is being Solved?
- General public, corporations, municipal corporations, Agencies

Users:
Expected Outcomes:
- The participants are expected to provide a solution for real time tracking and alert system for illegal waste dumping on map.
Impact:
Name of the Department: Urban Development and Urban Housing Department
Problem ID: GH155
Problem Statement: App to register green initiatives/ renewable and energy efficient measures with corporation

Challenge Description with context:
- Many households are using solar water heating system, roof top Solar, energy efficient appliances, rain water harvesting systems etc., the solution will be used by citizens to register their green initiatives with corporations and municipal corporations.

What Exact Problem is being Solved?

Users:
- General public, corporations, municipal corporations, Agencies

Expected Outcomes:
- The solution shall also provide detail list of green solution providers, renewable energy and energy efficient service providers/vendors etc. so that people can easily get the required information to buy the equipment. Solution is also expected to calculate energy saving potential of each initiative.

Impact:
Name of the Department: Urban Development and Urban Housing Department

Problem ID: GH156

Problem Statement: To track if beneficiary is using the house provided under AwasYojna or has rented it to someone else

Challenge Description with context:

What Exact Problem is being Solved?

Users:
- Beneficiary, corporations, municipal corporations, Agencies

Expected Outcomes:
- The solution should be able to track if beneficiary is using the house provided under AwasYojna or has rented it to someone else.

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<tr>
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<tr>
<td>Problem ID</td>
<td>GH157</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Bus Route Suggestion</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Any commuter who is not having knowledge of English or Gujarati and needs to go from one location to another within the city finds it difficult to know which bus to board. The bus route suggestion app shall suggest how a commuter can go from one location by feeding the origination and the destination.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Users</td>
</tr>
<tr>
<td></td>
<td>General public, corporations, municipal corporations, Agencies</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>The app shall inform the alternative routes and the shortest route, or direct route number with changeover bus stops. It shall also share the information about the time of the next two buses that shall arrive at a designated bus stop for a defined route chosen by the user. It will also inform how to reach to any convention or fair and the information like timing and availability of various special bus services for the same. This shall also be available for parents who are using the bus service for sending their school going children</td>
</tr>
<tr>
<td>Impact</td>
<td>The commuters can also book the ticket on these buses and enjoy these facilities.</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Urban Development and Urban Housing Department</td>
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<tr>
<td>Problem ID</td>
<td>GH158</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Drainage Management App</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Real time monitoring and tracking of man hole/chambers at the time of chock up &amp; blockage from central con trol room/helpdesk</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Users: General public, corporations, municipal corporations, Agencies</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>The solution shall automatically detect and pinpoint the exact location of the man hole/chambers blockage and generate an alert for the same and send the notification to concerned team</td>
</tr>
<tr>
<td>Impact</td>
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</tbody>
</table>
Name of the Department: Urban Development and Urban Housing Department

Problem ID: GH159

Problem Statement: Mobile application for Cycle sharing program

Challenge Description with context:
- Corporations/ municipal corporations plans to institute a bicycle sharing program in the corporations/ municipal corporations area. Bicycles shall be offered on rental basis at locations within the corporations/ Municipal Corporation's area.
- Sample Data required – Yes (Locations of cycle rental stations, number of cycles and number of users shall be provided by Corporations/ municipal corporations)

What Exact Problem is being Solved?

Users:
- General public, corporations, municipal corporations, Agencies

Expected Outcomes:
- Participants are expected to develop mobile application for cycle sharing which will be used by the citizens of city to get any relevant information about cycle sharing program, hire cycle, pay bills, etc. The payment for renting of bicycles may be made using any of the existing payment platforms and/or One Smart Card.

Impact:
Name of the Department: Urban Development and Urban Housing Department

Problem ID: GH160

Problem Statement: Various Divyang user friendly facilities are planned

Challenge Description with context:

- The City Identity Centre and shall be developed with facilities taking into consideration the special needs of Divyang users so that they can also are able to enjoy what the city has to offer.

What Exact Problem is being Solved?

Users:

- Divyang people, corporations, municipal corporations

Expected Outcomes:

- The usage needs to be easy to use for even people who do not have much education. Help button or SMS for Divyang users in case they get stuck without any help so that self help groups and local police station or patrol vehicle is informed about them and their location so that they can offer quick help.

Impact:
Name of the Department : Urban Development and Urban Housing Department
Problem ID : GH161
Problem Statement : Water leakage identification

Challenge Description with context :
• Presently in local bodies there are no systems to proceed systematically with leak detection. Only lakes are detected and most of the underground leakages goes undetected.

What Exact Problem is being Solved?

Users :
• General public, corporations, municipal corporations, Agencies

Expected Outcomes :
• The leak detection solution is expected to identify leakages in water distribution network and provide way to analyze the same.

Impact : 
Name of the Department : Urban Development and Urban Housing Department

Problem ID : GH162

Problem Statement : Building energy management system

Challenge Description with context :

• Building energy management system uses combination of sensors, smart metering system and smart distribution panel including real time monitoring etc. To improve energy efficiency of building.

What Exact Problem is being Solved?

Users :

• General public, corporations, municipal corporations, Agencies

Expected Outcomes :

• Smart building energy management system solution is expected to provide real time monitoring and management of electrical loads of building. The solution is also expected to provide functionalities to control, command and configure power sources across the building for efficient energy management.

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<tr>
<td>Problem ID</td>
<td>GH163</td>
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<tr>
<td>Problem Statement</td>
<td>SMART solutions for door to door tipper for SWM system</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>• The participants are expected to provide a solution for real time tracking of waste collection tipper vans on map. The solution should also provide route compliance report to the authorities.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>• General public, corporations, municipal corporations, Agencies</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>• Sample Date required- yes (Tipper Vans are GPS enabled, route details shall be provided by solid waste management department)</td>
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<td>Urban Development and Urban Housing Department</td>
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<tr>
<td>Problem ID</td>
<td>GH164</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Analytics for service delivery at civic centre based on time taken to serve a customer</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>• RMC needs an intelligent system which can track the no of people visiting the civic centre for any service, the time taken to serve a customer etc.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>• General public, corporations, municipal corporations</td>
</tr>
<tr>
<td>Users</td>
<td>• The system should provide reports and insights which can be used to improve service delivery at civic centres</td>
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</table>
Name of the Department: Urban Development and Urban Housing Department

Problem ID: GH165

Problem Statement: Department wise, ward wise database of contact & procedure guidance system

Challenge Description with context:

- Corporations/ municipal corporations need a solution which can be used by citizens of Corporations/ municipal corporations to identify department wise, ward wise contact of authorities for any service.
- Sample Data required—Yes (Department and ward wise contact information shall be shared by Corporations/ municipal corporations)

What Exact Problem is being Solved?

Users:

- General public, corporations, municipal corporations

Expected Outcomes:

- The solution shall also provide guidance to citizens regarding procedures, required documentation etc.

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<tr>
<td>Problem ID</td>
<td>GH166</td>
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<tr>
<td>Problem Statement</td>
<td>Low cost offline media player using Raspberry Pi/Arduino boards</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Since all the zones/public spaces are WiFi enabled, for citizen engagement kiosks/modules.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Users: General public, corporations, municipal corporations</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>There is a need for solution of low cost media player using Raspberry Pi/Arduino boards.</td>
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</table>
Name of the Department: Women and Child Development Department

Problem ID: GH167

Problem Statement: Anganwadi Performance Management System

Challenge Description with context: How we can generate demand from Anganwadi Centres for the beneficiaries of ICDS for Supplementary Nutrition and Take Home ration (THR).

What Exact Problem is being Solved?

- ICDS Gujarat having More than 60 lakhs beneficiaries and 53029 AWCs.
- Beneficiaries -6 month to 3 yrs of children, 3 to 6 years Children, Pregnant and lactating Mothers and Adolescent girls.
- Commodities (Like as Oil, Wheat, Rice, Pulses, Etc) are distributing at Anganwadi centers for providing to beneficiaries.
- How we can generate demand as bottom to top approach (from AWC- Project-District- State)?
- How many of them are getting daily benefit (Availing) the various services (SNP, PSE, Growth Monitoring) providing through AWCs

Users:

- Presence through Photographs with time stamp along with numbers.
- Generate xls sheet at server side to measure demand, supply and actual distribution at the end of month.
- Verify beneficiaries for the Take Home ration through digital mode (either biometric or face recognition)
- Presence of children for preschool education
- Presence of Children for Supplementary Nutrition at Anganwadi center.
- Concurrent evaluation for nutritional status of children at the regular interval.

Impact:

Expected Outcomes:

- Presence through Photographs with time stamp along with numbers.
- Generate xls sheet at server side to measure demand, supply and actual distribution at the end of month.
- Verify beneficiaries for the Take Home ration through digital mode (either biometric or face recognition)
- Presence of children for preschool education
- Presence of Children for Supplementary Nutrition at Anganwadi center.
- Concurrent evaluation for nutritional status of children at the regular interval.
Name of the Department : Women and Child Development Department

Problem ID : GH168

Problem Statement : Random selection of samples of THR for laboratory testing and distribution

Challenge Description with context :

• Take Home Ration are providing to ICDS beneficiaries as a form of Supplementary nutrition.
• The procurement of THR is being done through outsourcing agency and the same is being supplied at AWCs. As per the GoI guidelines, the THR should be tested before distribution to measure the desired quality.
• At present random sampling is being done by manual process and being sent to laboratory. Laboratory officials test the samples and send the report to state. After confirmation of these reports, state guides to district to use it or not as per the testing report.
• There is no particular mechanism to collect the sample from which place.

What Exact Problem is being Solved?

Users :

Expected Outcomes :

• We need have such digital system which automatically select the sample on random basis, provide information to various laboratories, concern officer of food and drug department and ICDS, collection of samples from various sites and provide the testing report to each of concern officers.
• Random Sampling of THR in District, testing of food through Food and Drug Department.
• Auto sms/email should be generated for collection of sample to Drug Inspector.
• He/she will collect the sample from particular site and send it to nearby laboratory.
• After testing, report should be sent to taluka level, District level as well as State level with description.
Name of the Department : Women and Child Development Department
Problem ID : GH169
Problem Statement : Grievance Redresser System under Food Commission

Challenge Description with context : • Under the NFSA act there should be Grievance Redresser cell to track the complaint regarding the Supplementary Nutrition as well as Take home Ration providing by each of the department.
• ICDS is providing Hot cooked meal and Take Home Ration to beneficiaries through AWCs.
• Currently, reports are being collected from districts through manual mode and being submitted to Food Commission on regular interval.

What Exact Problem is being Solved? : We need to have such digital solution which provides the reports about how many complaints received from village & districts, types of complaints along with the resolution of the complaints at all levels regarding SNP & THR. Summary of the districts should be provided so that it can be given to Food Commission through online or manual mode.

Users : 
Expected Outcomes : 
Impact :
Name of the Department: Women and Child Development Department

Problem ID: GH170

Problem Statement: Integrated System under Doodh Sanjivani Yojana for monitoring of attendance, indent and billing solution

Challenge Description with context:
- Since 2016-17 Doodh Sanjeevani Yojna is implemented in 109 blocks of 72 Talukas in 20 districts.
- Under this scheme, 6 months to 6 years children are given 100ml flavored milk 5 days a week and pregnant and lactating women are given 200ml flavored milk 2 days a week at Anganwadi centers through District Milk Union.
- The daily requirement/indent of milk supply for each AWCs is placed weekly (Friday) from block level.
- The milk is supplied at nodal AWCs/Schools at village level through District Milk Union.
- The average beneficiaries covered in the month is compiled from AWCs level to district level and forwarded to State office.
- The above reports from 20 districts is compiled for State monthly report.
- **Challenge/Issue:** To get information regarding actual quantity of milk supply and actual number of beneficiaries are covered daily at District/Block/ Anganwadi centres (AWCs)
- The milk is supplied at nodal AWCs/Schools at village level by District Milk Union through GCMMF.
- The bills for milk supply are certified at district level and given back to District milk Union. After which this bills are forward to GCMMF/maahi dairy.
- This bills are Claimed at State office for payment.
- **Challenge/Issue:** As the bills submitted by GCMMF/Maahi Dairy as and when the certification is done from each districts. So it’s difficult to compile and track.
What Exact Problem is being Solved?

Users:

Expected Outcomes: The information regarding **actual quantity of milk supply** and **actual number of beneficiaries** are covered daily at District/Block/ Anganwadi centres (AWCs) is available with help of software support.

The tracking system and data bank for information is available regarding bills of milk supply submitted from GCMMF or Maahi dairy at State office for payment and their status whether the bills are cleared or pending along with information of No Dual of bill submission information for each financial year. This will help to maintain track for information regarding amount of bills paid and still pending from each districts for each month and avoid duplication of bill submission.

Impact:
Name of the Department : Women and Child Development Department

Problem ID : GH171

Problem Statement : Transparent System for Recruitment of AWW & AWH

Challenge Description with context:

- ICDS Gujarat has 53029 AWCs, out of them 53029 AWW and 51229 AWH.
- Each month some AWW/ AWH gets retired or left the job and the status of vacant and filled position are not updated at the same times as the reports are collected through manual mode on monthly basis.
- Various Awards are being given to AWW & AWH for their best performance and achievement during the year, which is also collected through manual mode.
- Various insurance schemes are available for them from GoI as well as from state. The information about their eligibility are being provided to LIC for settlement of their insurance cases, which is a huge & tedious task.

What Exact Problem is being Solved?:

Users:

Expected Outcomes:

- An online system should be developed which provides the information about the complete HR of AWW & AWH.
- Online system should have the mechanism for transparent recruitment of AWW & AWH which is being done from Taluka Level.
- How many and types of training she had taken and when?
- Awards and Achievement should be enlisted.
- Generate alert at various levels for timely Retirement and vacant positions.

Digital measurement of Performance of AWW & AWH to select them for various awards based on the selected indicators.
Name of the Department : Women and Child Development Department

Problem ID : GH172

Problem Statement : Monitoring of Quality of Preschool Education Program

Challenge Description with context : Monitoring the effective implementation of preschool education in Anganwadi centres

What Exact Problem is being Solved? : 
- The Preschool Education is one of the important services of ICDS.
- The regular 4 hours for imparting Preschool Education is the mandate for Anganwadis as per National ECCE Policy 2013 by MWCD, New Delhi
- However, the implementation of the same is not observed in Anganwadi Centres
- There is lack of monitoring system to understand the status of implementation and monitoring data
- Lack of feedback system to stakeholders for further improving the services
- How can we generate the demand for Preschool Education?
- How can we get the data of the children who are school ready (School Readiness)?

Users :

Expected Outcomes : 
- Presence of Children for Preschool education
- The four hour as schedule program is implemented in Anganwadis
- The data on status of availability of Preschool education
- Availability of data of the children who are school ready (School Readiness)
- Data on Enrollment of 3 years’ children in Anganwadis for Preschool Education
- Data on the children enrolled in Primary Schools from Anganwadis

Impact :
Name of the Department : Women and Child Development Department

Problem ID : GH173

Problem Statement : National Crèche scheme- Monitoring of all crèches handed over to ICDS

Challenge Description with context:

- Recently MWCD, GoI has directed all the states to monitor the functioning of all Creches which was earlier operationalized through Social Justice & Empowerment Department.
- Total around 1000 Creches are in the state which are now will be monitored by ICDS. These are the Creches which is being operationalized through various NGO’s.
- Currently there is no mechanism to measure the performance of Creches and the services offered through Creches.

What Exact Problem is being Solved?

Users :

Expected Outcomes :

A digital solution should be developed which measure the performance of Creches as per the norms of the GoI and as per the requirement of state. Provide monthly reports as well as progress reports at all levels based on the requirement.

Impact :
Name of the Department : Women and Child Development Department

Problem ID : GH174

Problem Statement : Assessment of Nutritional status of pregnant and lactating women under Poshan Sudha Yojana

Challenge Description with context :• How can we analyse the nutritional status of pregnant and lactating women enrolled under Poshan Sudha Yojana?
• To track/confirm daily attendance under Poshan Sudha Yojana

What Exact Problem is being Solved? :• Women and Child Development Department, Government of Gujarat have launched pilot project in six Vikassheel Taluka of five districts namely Chhotaudepur, Mahisagar, Dahod, Valsad and Narmada.
• Approximately more than 26000 pregnant and lactating women are enrolled under Poshan Sudha Yojana.
• Under this pilot project, to improve the nutritional status of pregnant and lactating women, one full meal is provided daily at anganwadi center.
• How can we analyse the nutritional status of pregnant and lactating women enrolled under Poshan Sudha Yojana?
• How can we track/confirm daily attendance under Poshan Sudha Yojana?
• How we can generate commodity demand like wheat, rice from Anganwadi Centres for the pregnant and lactating women enrolled under PSY.

Users :• Monthly comparative xls sheet to analyze various status of nutritional indicators like weight, MUAC, Hemoglobin etc.
• To generate xls sheet on daily basis to verify the number of beneficiaries taking benefit of programme.
• To generate xls sheet at server side to measure quantity supply at the end of month.

Expected Outcomes :
Name of the Department: Women and Child Development Department

Problem ID: GH175

Problem Statement: Geographic information about working women/shelter home/short stay home

Challenge Description with context:
- We do not know the status of shelter home/short stay home/working women at the state level, and it is necessary to create an easy monitoring system for their needs and the steps to be taken for the improvement.
- The lack of technical arrangements for the discovery of the girl's original place so it has to be done manually, which is complicated and slow.
- Shelter home/short stay home/working women hostel is not interconnected.

What Exact Problem is being Solved?
Problem in identifying the status of shelter home/short stay home/working women and their residential address

Users:

Expected Outcomes:
- Mv Geography mapping of Shelter home/short stay home/working women hostel
- Mv Interconnection and integration of Shelter home/short stay home/working women hostel
- MISAAAppl Application which give detail information and situation of shelter home/short stay home/working women
- Interconnection and integration of Shelter home/short stay home/working women hostel so that we can know their residential address and send to their home
- Interlink Shelter home/short stay home/working women hostel with other state agency and institute so that we can welfare, rehabilitates and empowered them.

Impact:
Name of the Department : Women and Child Development Department

Problem ID : GH176

Problem Statement : Mapping of 215 Multi Purpose Working Women Centers operating throughout the state and its performance mapping challenge

Challenge Description with context : The centre is functioning at all district and Taluka level of the entire state. But its geographic mapping becomes difficult. As well as challenging its Center regular report and useful study

What Exact Problem is being Solved?

Users :

Expected Outcomes :
• Geographically accurate mapping of the locations of these centers so that beneficiaries can reach
• MIS for routine centralized report of activities and progress
• Perform an Impact Assessment of Centers

Impact :
Name of the Department: Women and Child Development Department

Problem ID: GH177

Problem Statement: Mapping of crime against women

Challenge Description with context: Because of the conservatism and mentality of the society, the violence of women in some areas of the state / districts continues to increase. If there is accurate information about the status of women's violence in the area, then it will be very effective improvement can be done in the area.

What Exact Problem is being Solved?: Getting details of various types of violence against women in the state, especially in case of domestic violence, sexual harassment, dowry, child marriage, sexual harassment and the extent of violence in the different area

Users:

Expected Outcomes:
- To make mapping easier by area in relation to the type of violence so that specific strategies can be prepared to prevent specific violence
- Arrangement of registration of cases of violence incurred by area and arrangements for getting 3 to 5 year trends easily
- Manage the causes and beliefs of the same violence easily
- Violence can be classified according to the area
- Different agencies, organizations can be interlinked to solve this problem

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<thead>
<tr>
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<th>Women and Child Development Department</th>
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<tbody>
<tr>
<td>Problem ID</td>
<td>GH178</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Caller’s location tracking system (Women In Distressed)</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>In present telecom service provider environment, it is difficult to track the location of distressed women caller from centralized control and command centre. There is a need for system development of track the caller location of Smart phone/basic phone users.</td>
</tr>
</tbody>
</table>

What Exact Problem is being Solved?

Users

Expected Outcomes:
- Activate nearest appropriate agency for prompt response to distressed women.
- No need to verbalize the detail address when she is in distress.
- Improve the response time for rescue operations in particularly suicide attempt caller cases.
- 181 emergency helpline can work efficiently due to reduced call length.
- Fake caller will identify easily so no need to entertain them.
- Improve the response time of rescue operations.
- Online location with lat long can be transfer to district rescue vans

Impact:
Name of the Department : Women and Child Development Department

Problem ID : GH179

Problem Statement : Agency/department feedback and follow up system

Challenge Description with context : Considering the 181 Abhayam women helpline convergence model many distressed women rescued by district level rescue van and handover to concerned agencies (Police, Shelter home, PBSC, Nari Adalat, MPWWC etc.) for long time counseling and necessary process.

In present operations scenario action taken by concerned agency is not display at centralized command and control centre. There is a need of development of online system for appropriate action taken, feedback and case closing by agency for track the progress of distressed women cases.

What Exact Problem is being Solved?

Users :

Expected Outcomes :

- Action taken by concern agency will be available at centralized command and control centre.
- Tracking the pending action and quality of response provided by district level agency.
- MIS of various type of cases handed over to agencies and issue resolved
- Extend the support to women if she require in future.

Impact :
Name of the Department : Women and Child Development Department

Problem ID : GH180

Problem Statement : Women Welfare Schemes under one canopy

Challenge Description with context : Government of Gujarat implementing a many women welfare schemes in the State. All the schemes fall under the various departments administrative control and each scheme have different criteria for selections of beneficiaries’. It is right time to develop a dedicated website where all departments’ women related updated schemes information is available for citizen.

Information regarding brief description, district level contact person, address of office and eligible beneficiary criteria etc.

If such problems are resolved on the digital platform that could help to promote women welfare scheme and awareness across the State.

What Exact Problem is being Solved?

Expected Outcomes:

• All information available under one umbrella for beneficiaries.
• All scheme related information will be easily available to women.
• Information about application forms and lists of necessary supporting documents.
• Geographical mapping of district office locations or contacts for support women welfare activities.
• Geographical mapping of such NGOs/CBOs/Shelter homes/Child Homes/Old age home etc.

Impact:
Name of the Department : Education Department – Sarva Siksha Abhiyan  
Problem ID : GH181  
Problem Statement : Mobile phone based teacher attendance  
Challenge Description with context : In order to improve the quality of education, it is required to provide accurate attendance management by eliminating impersonation using Biometrics, tracking presence through mobile location and automating the entire attendance workflow by making it fully digital.  
What Exact Problem is being Solved? : Teacher’s presence could be assured on real-time basis for classroom delivery / teaching.  
Expected Outcomes : Education Department  
Impact : Attendance related services which would cover the Aadhaar based biometric attendance of the teachers through Geo-fencing. System would also cover the overall leave management processes.
Name of the Department : Education Department – Sarva Siksha Abhiyan

Problem ID : GH182

Problem Statement : Gunotsav data analysis for developing remedial action plan

Challenge Description with context : Gunotsav is a quality assessment program to assess scholastic and co-scholastic performance of the teachers and students. Child wise assessment is being carried out through pre-printed OMR based on child tracking information to fill the gap in context of learning outcomes. The identification of gaps is essential for need based remedial action plan.

Users : Education Department

What Exact Problem is being Solved? : Remedial actions could be executed in realistic manner against specific gaps found in learning outcomes with aggregation of data

Expected Outcomes : Learning outcome related services which would give clear indications of short falls in learning.

Impact :
Name of the Department : Education Department – Sarva Siksha Abhiyan

Problem ID : GH183

Problem Statement : GPS based Vehicle Tracking System for school children

Challenge Description with context : As per provisions under SSA framework, it is mandatory for State Governments to provide transportation facilities to children in remote habitations with sparse populations or in urban areas where due to non-availability of land may not find access to neighborhood schools. Due to security related issues, such vehicles need to be tracked along with precision of CCTV Cameras in vehicles.

What Exact Problem is being Solved? : The solution would ensure safety of students, controlling driver behavior and real-time monitoring of how many students are actually getting benefitted

User : Education Department

Expected Outcomes : Centralized monitoring of transportation program which would cover real time tracking of vehicles through GPS

Impact :
<table>
<thead>
<tr>
<th>Name of the Department</th>
<th>Education Department – Sarva Siksha Abhiyan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH184</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>CCTV based monitoring / surveillance in school buses / classrooms and other public areas in school premises</td>
</tr>
</tbody>
</table>
| Challenge Description with context | The parents and teachers are seen to be strongly in favor of the use of CCTV for certain purposes, such as security and behavior surveillance. The use of CCTV in schools can be as follows:  
1. Personal safety of students, teachers and other stakeholders  
2. Occupational health and safety  
3. Behaviour monitoring  
4. Protection of building infrastructure assets and learning tools (e.g. laptops) |
<p>| What Exact Problem is being Solved? | The real-time monitoring and surveillance would provide the date, time and location of the recording. Can be really useful towards child safety and surveillance. |
| User                   | Education Department                        |
| Expected Outcomes      | Centralized monitoring services which would provide triggering alerts on misconduct with details of location and related person |
| Impact                 |                                             |</p>
<table>
<thead>
<tr>
<th>Name of the Department</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Problem ID</td>
<td>GH185</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Online Teacher Training and Assessments</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Presently, the traditional training session can involve limited number of teachers at a time and hence need to be repeated to involve more teachers. Effectiveness of the training session is significantly reduced because the same session is repeated over and over again. Cost-effectiveness is also greatly impacted due to the cost incurred for the training - TA, DA, logistical cost, office administration cost, etc.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Teachers would be enabled to take training as per their convenience, need and without the need to travel out of town/district through technology</td>
</tr>
<tr>
<td>User</td>
<td>Education Department</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>A technology-enabled platform which can be accessed by teachers through a computer, tablet or mobile phone for training</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Education Department – Sarva Siksha Abhiyan</td>
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</tr>
<tr>
<td>Problem ID</td>
<td>GH186</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Rationalization of Teachers Posts</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Redeployment of teachers is a major task for administrators to ensure there are no adverse Pupil Teacher Ratio (PTR) in school and no single teacher school in the State. Although the massive drives have been rolled out for recruitment and rationalization of teachers, the achievement is still far from the target.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>Each School would have teachers in position as per RTE Act, 2009</td>
</tr>
<tr>
<td>User</td>
<td>Education Department</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Web portal which cover services for school set-up</td>
</tr>
<tr>
<td>Impact</td>
<td></td>
</tr>
<tr>
<td>Sample Data Required</td>
<td>No</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Agriculture &amp; Cooperation Department</td>
</tr>
<tr>
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</tr>
<tr>
<td>Problem ID</td>
<td>GH187</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Tool to detect Milk Adulteration at field level</td>
</tr>
<tr>
<td>Challenge Description</td>
<td>Safety to consumer of milk is most important concern now a day. Food Safety and Standard Authority of India conducted study in 33 states of India and reported that Milk being adulterated with detergent, fat, urea and water. Beside this other adulterants are foreign fat, starch, sugar, maltodextrin, salt, sodium carbonate, sodium hydroxide, formalin, ammonium sulphate.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>At present detection of adulterant is carried out for large volume of milk at District Cooperative Milk Producers’ Union level; which does not permit detection of small volume of adulterant.</td>
</tr>
<tr>
<td>User</td>
<td>Members of 19,788 village dairy cooperative society</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Cost-effective detection of milk adulterant at village dairy cooperative society by a layman.</td>
</tr>
<tr>
<td>Impact</td>
<td>Safety of consumers of milk and good human health index upliftment by reducing adulterated milk originated health hazards</td>
</tr>
<tr>
<td>Name of the Department</td>
<td>Agriculture &amp; Cooperation Department</td>
</tr>
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<tr>
<td>Problem ID</td>
<td>GH188</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>Sex sorting of semen of Indigenous Cattle</td>
</tr>
<tr>
<td>Challenge Description with context</td>
<td>Birth ratio of 50%:50% male and female in cattle affects economics of livestock and dairy farming. Economic point of view female calves born are more advantageous as compared to male calves. Due to ban on slaughter of cattle, male cattle compete with all resources with female and in turn results in to lesser economic return to livestock owners.</td>
</tr>
<tr>
<td>What Exact Problem is being Solved?</td>
<td>At present semen doses of exotic cattle is being sorted with available technology and it has revolutionized livestock farming and dairy sector in foreign countries.</td>
</tr>
<tr>
<td>User</td>
<td>One Frozen Semen Station of Gujarat (Patan)</td>
</tr>
<tr>
<td>Expected Outcomes</td>
<td>Sexed semen technology is one way to alter the natural ratio of new born 50%: 50% to 85% or 99% Female calves. Means male calve born ratio may be decreased to 15% to 1% and Increase percentage of female calve born. As the number of female calves born increases later on production from them also going to increase which will increase economy of livestock owners</td>
</tr>
<tr>
<td>Impact</td>
<td>More financial return with similar usage of resources</td>
</tr>
</tbody>
</table>