IMAGINE IOT - PROTOTYPE CHALLENGE

"Imagine IOTs for monitoring water supply to slums for health, hygiene & sanitation"

- TARGET MARKET: SOUTH EAST ASIA (INDIA, BANGLADESH, SRI LANKA & AFRICA SUB CONTINENT)
- CONTENT PROVIDER: WATER SUPPLY - MUNICIPAL CORPORATION
- USER & BENEFICIARY: NGO’S & HEALTH DEPARTMENT
- PRODUCT: DASHBOARD FOR NGO’S TO PROVIDE FEEDBACK & MONITOR WATER DISTRIBUTION
- INFRASTRUCTURE: HANA CLOUD PLATFORM / GOOGLE CLOUD PLATFORM
- PROTOCOL: DEVICE - COAP AS RFC 7252 OR EQUIVALENT
- DASHBOARD: SEMANTIC NOTATION BASED REPORTING (INTUITIVE DASHBOARD AND CHARTS)
- DESIGN PROTOTYPING: SAP TOOL - BUILD.ME
- HARDWARE PROTOTYPING: INTEL IOT PLATFORM
- DURATION FOR HARDWARE PROTOTYPEING – 5 MONTHS,
- SEED FUNDING REQUIRED: USD 25,000 FOR MVP
- ANGEL INVESTOR SOLICITED TO RAISE USD 100,000
- UNIQUE SELLING PROPOSITION: COST PERFORMANCE RATIO – MORE THAN 4 TIMES
- 4X RETURN ON INVESTMENT

World Water Day 2016, reveals that the poorest people in the world are paying the highest price for safe water READ more..
“I want to become a police officer,” says Kajal with a confidence that is not commonly found among 16-year-olds. But it’s not enough for her to realize her goal. Kajal lives in a slum in Kanpur, Uttar Pradesh, and, like all children of her age, she hopes to go to school regularly and get educated. But Kajal’s day begins with standing in a long queue for hours to get clean water for her family. So there is little for her to study to fulfill her ambition.

Kajal is not the only girl who is bearing the brunt of lack of clean drinking water in India. The burden of collecting water in a typical Indian household often falls on the shoulders of women and girls and restrains them at every stage of life. What if they could spend this time on getting educated, working and participating in the growing economy instead?

For every rupee spent on water and sanitation, there is an economic return of INR 4 as fewer children lose their lives or days at school, workdays for parents are increased and so are savings otherwise spent on healthcare, thus giving them an opportunity to lead a better life and contribute to our growing economy. Source: WaterAid India

For every $1 invested in water and sanitation, an average of $4 is returned in increased productivity.
[S. Kumar]  [Executive Engineer – Water Supply- Zone EAST]

I am responsible for distributing clean drinking water to public and private building under Municipal Corporation - Divisional Engineer (Zone – EAST). I report to Divisional Engineer and repair MIS report.

ABOUT:
- Male 40, married, 15 years’ experience, Engineering Graduate, motivated
- Managing water resource supply & distribution department
- Reports to Divisional Engineer and above ranks.

RESPONSIBILITIES:
- Responsible sourcing drinking water
- Responsible for distributing water to Public and Private building
- MIS reports

NEEDS:
- Record SUPPLY resource
- Real Time – MIS reporting

PAIN POINTS:
- Data collection & entry into MIS for historical recording

MAIN GOAL:
- Optimize distribution of drinking water

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Point of View (PoV)

As EXECUTIVE Engineer (Water supply department), I need a way to ensure daily supply of clean drinking water to public, private, residential flats, villas & slum areas so that their drinking, health, hygiene and sanitation needs are met on daily basis.

Insight associated with the need.
An efficient Real Time Monitoring systems with IOT devices installed at critical locations to monitor the flow of water from the main pumping station to end user’s storage (residential tanks); will improve the Water Supply services, multi-folds leading. We want to design a DASHBOARD for Municipal Corporation to improve water resource problem in SLUM areas. IOT based real-time monitoring solutions with Smart City integration is our project to improve water supply to SLUM areas for clean water, safe sanitation and good hygiene

Shared Accountability:
Content Provider: Municipal Corporation / Water Supply Corporation
End User: NGO’s responsible for monitoring CLEAN WATER, SAFE SANITATION and GOOD HYGENE
Government Agencies: Health Department

“The price communities pay for lacking safe water – in wasted income, ill-health, and lost productivity – is extremely high, and has a devastating impact, from the family to the national level.” Dan Jones, Advocacy Coordinator at WaterAid UK

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## UX Journey

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<th>MINDSET</th>
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| - Enter Office at 8AM  
- Read Email  
- Internal Memo  
- Call staff meeting  
- Review Demand Vs Supply expectation | - Do I get full quota today!  
- How can I manage with 80%?  
- Request for additional QUOTA! | 😊 | Email: Water Supply Quota allocated for the Zone.  
Excel Sheet  
Route Plan confirmation & coordination  
Pumping Stations – Meters and Valves  
Valves and Water meters at critical buildings  
MIS reporting |
| - Coordinate with Main Water Pumping station  
- Discuss any change in quantity plan or distribution route plan | - Will they release on Time  
- Do I need to follow-up again  
- Is it possible to get the supply faster | 😞 | - End of Day supply  
- Night shift planning |
| - Coordinate with water pipeline department  
- Check for route plan for any deviation of quantity | - should I buffer for tomorrow  
- should I give excess to slum areas  
- should I increase the pressure | | |
| - Coordinate with Zonal Pumping station  
- Discuss any change in quantity plan or route plan | - should I operate all the pumps  
- should I stop supply to few buildings on holidays  
- Should I close valves or slow the pressure | | |
| - Coordinate with field engineer  
- Program the SUPPLY of water  
- Valve opening and close time | - Do I trust all the field data  
Check the water supply to critical locations- Hospitals, Government & Clinics | | |
| | - Complain from slum!  
- Prepare MIS reporting  
- Recommendation to management | | |

5. “Imagine IOTs for monitoring water supply to slums for health, hygiene & sanitation.”
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Prototype

Designed using BUILD.ME: prototyping tool from SAP
https://standard.build.me/api/projects/f295c78c26de83640cc91d49/prototype/snapshot/latest/index.html#14774848649339841_S31

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