



SIPG

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Innovative Solutions for Effective Governance and Public Services

Case Title: Solving the Water Woes: A Sensor-Based Solution for Water Management

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The case studies for this series are collected from real-life cases of civil servants working in different South Asian countries. This collection initiative is an attempt to document different innovative solutions for effective governance and public services. If you know of other such instances of acts, please email us (parvez.yousuf@northsouth.edu), and we will get back to you to collect more information.

Solving the Water Woes: A Sensor-Based Solution for Water Management

Farzana Shams Riya and Hasan Muhammad Baniamin

The Problem of Manual Workload in Water Pump Management

Mr. X worked as a Sub-divisional engineer at a Medical College in Bogura District. During his stay there, he faced a problem associated with the monitoring and managing of the water pump in that campus. Many water pumps were available, but the water supply was often interrupted because there were not enough people to monitor and manage the pumps. The water levels were previously checked manually, which was time-consuming. This often caused delays in refilling the pumps. That manual water supply system caused inconvenience to the residents and put tremendous pressure on the already understaffed team.

PROBLEM

Manual workload associated with the monitoring and managing of the water pump on a medical college campus.

SOLUTION

A sensor-based water level monitoring system automated the process to ease the manual workload and optimize the water management system.

OUTCOME

The successful implementation of water sensor motors resolved the manual water supply system, bringing about a positive transformation in the campus area

The Initiative for a Smart Solution

Mr. X demonstrated his grit and innovative thinking in response to this critical issue. In order to ensure a more efficient water management approach, he introduced a sensor-based water level navigation system. This system makes monitoring easier by automating the process so that the staffs does not need to travel repeatedly. Mr. X collaborated with the Pedrollo Group, a company based in Dubai, to buy water sensor motors, each costing 1,500 BDT (USD 13). These sensors were designed to deliver real-time notifications to the personnel assigned, providing updates on current water levels and identifying pumps that required activation.

Change and Challenges

Mr. X's initiative culminated in the successful implementation of water sensor motors at the Medical College. Recognizing the system's advantages, several other medical colleges embraced it. However, in certain instances, adoption encountered resistance and challenges. For example, the sensors were delicate and easily disrupted by thunderstorms, which caused technical difficulties to implement at a large scale. In one particular case, existing pump operators opposed the system, being apprehensive about potential job loss. This resistance underscores the importance of addressing not only the technical aspects but also the human dimension in any change initiative to ensure its success.

Declarations

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[Baniamin, H. M., & Jamil, I. \(2021\). *Effects of representative bureaucracy on perceived performance and fairness: Experimental evidence from South Asia*. *Public Administration*.](#)

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