Project Plan

Project Specifics

Project Name: Changing Practice – A sustainable way to help George Go Green.
Project Lead: Joshua Lowe
Project Supervisor: Michael Vonk (Chief Executive Officer)
Project Supervisor Contact Details: Michael.Vonk@westerncape.gov.za
Area/Institution: George Regional Hospital
Population Served: 703,039
Local Partner(s): George Regional Hospital, Western Cape Department of Health, Reonet (Energy efficiency contractor)
Start Date: 06/02/2023 **Estimated Duration:** 6 Months
Health Theme: Planetary Health and Sustainability
Anticipated Beneficiaries: Directly benefitting patients, hospital staff, the general public and the Western Cape government. Indirectly benefitting the environment and global society through reduced emissions.

Introduction

The Intergovernmental Panel on Climate Change (IPCC) has reported that achieving a "middle-of-the-road" greenhouse gas emissions scenario with good uptake of greenhouse gas mitigation strategies globally is expected to see a 1.5° increase in global temps by 2100 and up to 6° inland in the Western Cape. Extreme weather causing droughts and floods will cause poorer health outcomes and contribute to the loss of arable land. Large scale migration of people is expected as families attempt to find better living conditions and food security. The resultant strain on existing healthcare infrastructure and additional disease burden will place even greater demands on a strained health system.

It is therefore vital to reduce emissions that the hospital generates indirectly through the production of the electricity it uses (referred to as scope 2 emissions). Whilst developing alternative energy sources such as renewables requires significant investment and time, striving to achieve energy efficiency simultaneously can reduce the hospitals carbon footprint the electricity demand that contributes to "load shedding" and will save the hospital money. This goal has been emphasised through George Hospitals pledge to Global Green & Healthy Hospitals (GGHH). An international network of healthcare organisations dedicated to reducing their environmental footprint and promoting public and environmental health. Case Studies published within this network have identified two major avenues for energy efficiency intervention. Building efficient infrastructure and developing energy efficient practices. George Hospital has recently entered a long-term contract with Reonet to review their infrastructure and make widespread capital investment to achieve greater efficiency savings. However, there is an opportunity to encourage energy efficient practice amongst staff through raising awareness, changing behaviours, and identifying new energy efficient ways of working.
Taking a behavioural change approach this project will improve the efficiency of energy usage in the hospital without affecting health service operations. This will look to reduce both peak energy demand and total energy usage in the short-term. Thus, enabling the hospital to maximise the benefits gained from infrastructural improvements in the mid-term. This will directly address action point 6 of the GGHH Energy Goal through the creation of occupant education and an awareness program to shape energy saving behaviours.

Overall Project Goal (and Indictors)
The goal is to support George Hospitals in meeting the South African Governments environmental ambitions to achieve Net Zero by 2050. This will be achieved by improving energy efficiency to reduce the hospitals carbon footprint and make cost savings for the hospital through reduced utility bills.
Outcomes (and Indicators)
Outcome 1 = Reduction in average peak power demand. **Indicator =** 5% reduction in peak kilovolt ampere (KVA) measured by the hospital site on LiveWire when compared to baseline figures outlined by Reonet energy audit. **Outcome 2** = Reduction in total daily power used **Indicator =** 5% reduction in daily kWh measured by the hospital site on LiveWire when compared to baseline figures outlined by Reonet energy audit. **Outcome 3 = Increased frequency of energy saving behaviours.** **Indicator =** Line Managers report a reduction in wasteful energy activities in their work areas when surveyed. **Outcome 4 = Increased awareness of impact of individual behaviours on the environment.** **Indicator =** A recorded improvement in awareness of energy sustainability behaviours in evaluation interviews amongst a sample of staff members when compared to baseline awareness of key energy waste behaviours captured within individual interviews.
Outputs (and Indicators)
Output 1 = Altered ways of working to reduce energy costs for the hospital. **Indicator =** Adjusted times of operation for high energy demand activities such as the waste disposal machine to reduce monthly electricity expenditure. **Output 2 =** Reduction in energy wasteful behaviours exhibited by hospital staff. **Indicator =** Interview feedback that reports a reduced frequency of energy wasteful behaviours observed when compared to baseline interview accounts. Example behaviours include; lights left on in unoccupied or well-lit rooms, unattended computers left on at the end of the day, reduction in use of active air conditioning when windows and doors can be used to regulate temperature and airflow. **Output 3 =** Increase in the number of people aware of their impact on energy usage and the environment. **Indicator 1 =** 75% of staff attending a new waste + sustainability training session**.**
Activities
Weeks 1-4: Defining project scope, engagement and discussions with Michael Vonk (Project Supervisor, Chief Executive Officer) and Jade Engel (Deputy Director of HR & Facilities) and formalising project plan.

Weeks 5-6: Interviews with staff, establishing baseline quantitative and qualitative variables. Creating energy efficiency training materials, creating sustainability awareness campaign materials. Identifying opportunities for new ways of working.
Weeks 7-8: Deliver pilot training session and awareness campaign materials, collect feedback and develop iteratively. Explore implementation of new ways of working amongst key stakeholders.
Weeks 8-12: Scale up awareness campaign, expand energy efficiency training for all new staff members to attend. Continue feedback collection and iterative development cycles. Work alongside the relevant managers and support staff to implement new ways of working where opportunities for more energy efficient practices have been identified.
Weeks 13-16: Identify and train key stakeholders to maintain sustainability efforts, prepare with marketing templates, general strategy, and opportunities for further development.
Weeks 17-20: Gather evaluation data – Repeat Interviews, collect LiveWire data to compare with baseline measurements.
Weeks 21-24: Write up project evaluation and handover in full.

Inputs

- A Waste Management Advocate/Trainer – Who specifically
- Awareness campaign materials (Fast Facts and George Hospital Eco News Bulletin)
- Release schedule for campaign materials.
- 5x Biweekly 30-minute Waste Management Training Sessions.
- Trained Sustainability Champions
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- Earth Day Awareness Event

Quality Improvement Tools

I will follow the Plan-Do-Study-Act quality improvement framework to guide the project. This will allow for the inclusion of feedback from staff in the development cycle. Guiding the development of effective communications within the awareness campaign. It also sets the intention for continuity of the project after the conclusion of the fellowship by ensuring further actions are identified following the evaluation of project outcomes.
I will also maintain a RAID log to track key Risks, Assumptions, Issues and Dependencies enabling the identification of mitigating factors and improving the likelihood of the project succeeding

Budgeting

R2000 - Awareness campaign promotional materials
R900 – Printed George Goes Green banner.

Sustainability

Achieving buy-in and upskilling key stakeholders will enable an effective handover of responsibilities at the end of the project. The development of templates for producing new material and guidance on developing campaign content alongside a release template release schedule will minimise the initial additional workload of the new responsibility.
Energy efficiency training will be integrated into the waste management training planned by another fellow to minimise additional workload. The effective delivery of this training will still rely on stakeholder buy-in, capacity and capability. A waste management/sustainability champion needs to be identified to

ensure continuity of this training programme. Discussions are planned to take place to consider further integration into a wider induction and hospital orientated training for all members of staff as this is not currently in place.

Risks to project

Limited buy-in from key stakeholders is a major risk to this project as it may present a barrier to qualitative data collection, effective circulation of campaign materials and prevent the establishment of a new training presentation into routine practice. It would also present a barrier to onboarding staff to ensure the sustainability of the project. This will be mitigated through spending time in different areas of the hospital to raise the profile of fellows' presence in the hospital, build rapport with staff and identify champions to support the implementation of the project.

The projects' ability to change ways of working to reduce energy demand is dependent upon the level of integration with the hospitals systems and processes. As changing highly integrated aspects of work such as the time a waste management system is operated may complicate operations up and downstream the waste management process due to the timing of waste collection by domestic staff and by waste disposal contractors. Challenges such as these will need to be mitigated on a case-by-case basis and involve a full cost-benefit analysis that considers the complexity of the work required and resources available. Support from well-established staff with knowledge of formal and informal routine practice will be required to provide expert insight and help minimise unexpected issues.

Lack of staff resources poses a risk to the sustainability of the project once the fellowship has ended as staff may not have the capacity to take on the additional workload to maintain the awareness campaigns.

This will be mitigated by minimising the additional workload required to sustain the project. This involves the creation of template documents, digital assets, clear forward-looking goals and a plan to enter into the next PDSA cycle.