



Tanzania Ministry
of Water

Pump it Up!

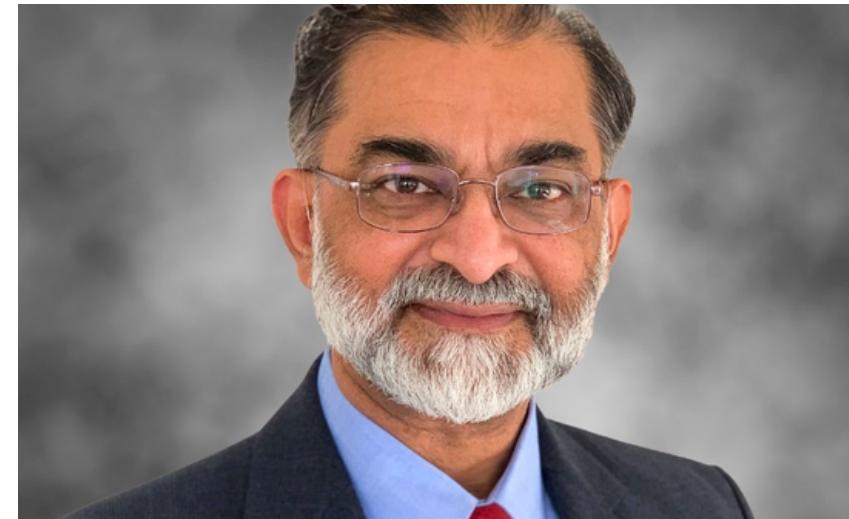
Tanzanian Water Wells



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Agenda

01

Business Understanding

02

Data Overview

03

Modeling

04

Recommendations

05

Further Research

Part 1:

Business Understanding





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2 in 5

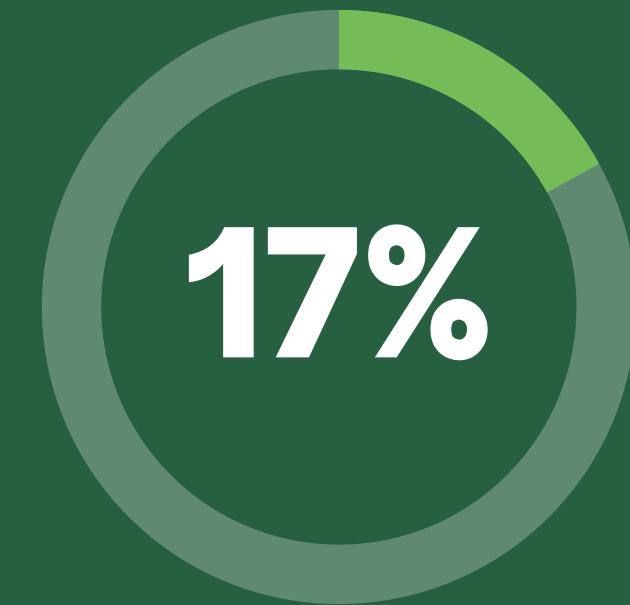


**40% of Tanzanians do not have
access to clean water**

Business Understanding



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According to Camfed Tanzania ,
only 17 percent of girls are
enrolled in secondary school.

Stakeholder



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Water

Problem

Effect of Source
Type/Water
Quality on
Functionality

Goal

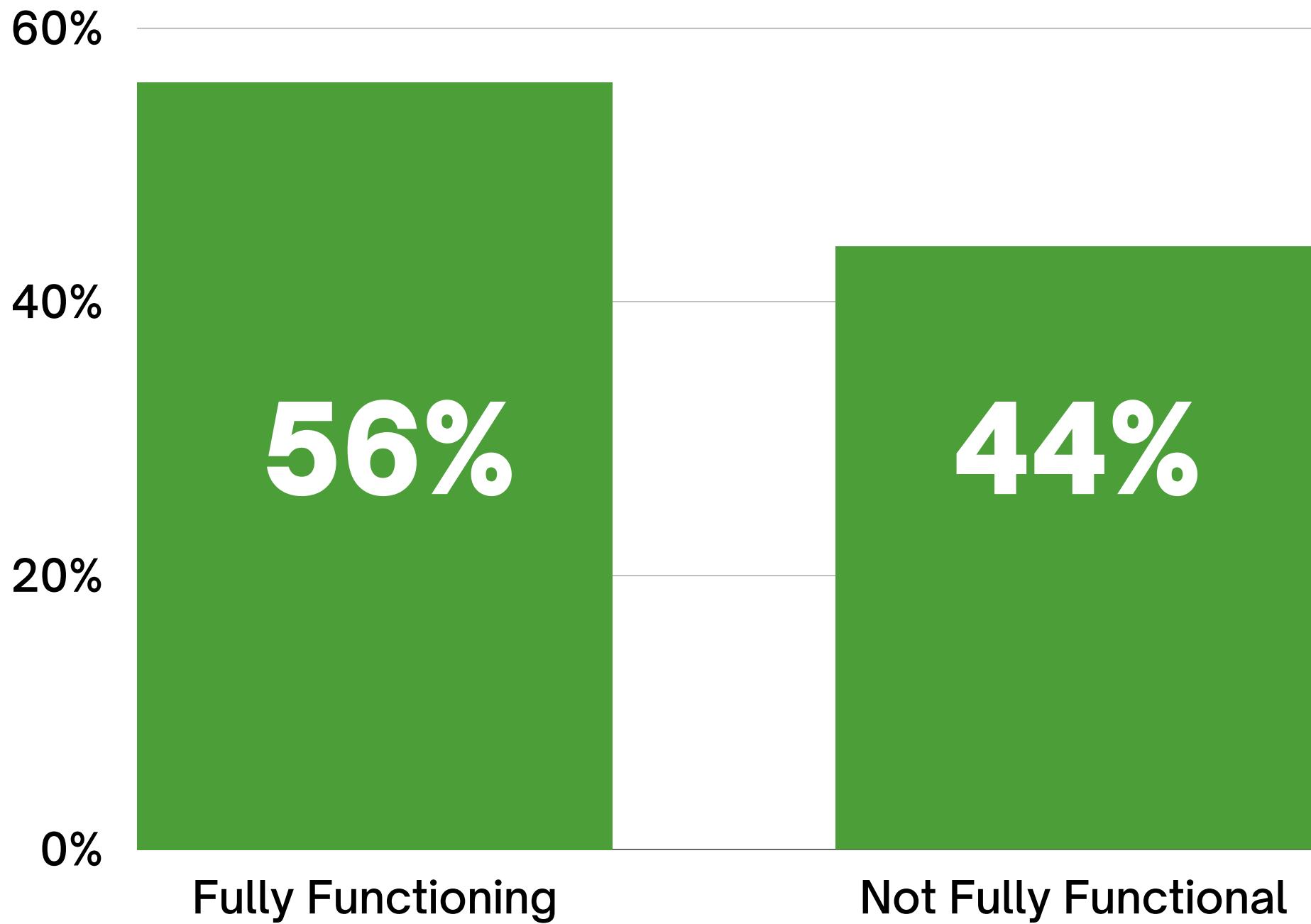
Recommend
Allocation of
Resources to
increase
funcionality of
wells

Business Understanding



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**56% of Wells are
Fully Functioning**



Business Understanding

A photograph showing four young children at a manual hand pump in a rural, lush green environment. A boy in a white shirt and brown skirt is on the left, operating the pump handle. A girl in a patterned dress is behind him. A girl in a blue and white shirt and purple skirt is in the center, holding a yellow cloth. A boy in a tan shirt and shorts is on the right, holding a green bucket. Several plastic jerry cans (yellow, green, orange) are on the ground nearby. The background is dense green foliage.

Part 2:

Data Overview



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Source Data:

- Taarifa Waterpoints Dashboard
- 2003 - 2013
- 38,691 Data Points



Data Overview



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Target Predictors:

- Source Type
- Water Quality
- Water Point Type
- Construction Year



Allison Danis
PHOTOGRAPHY

Data Overview

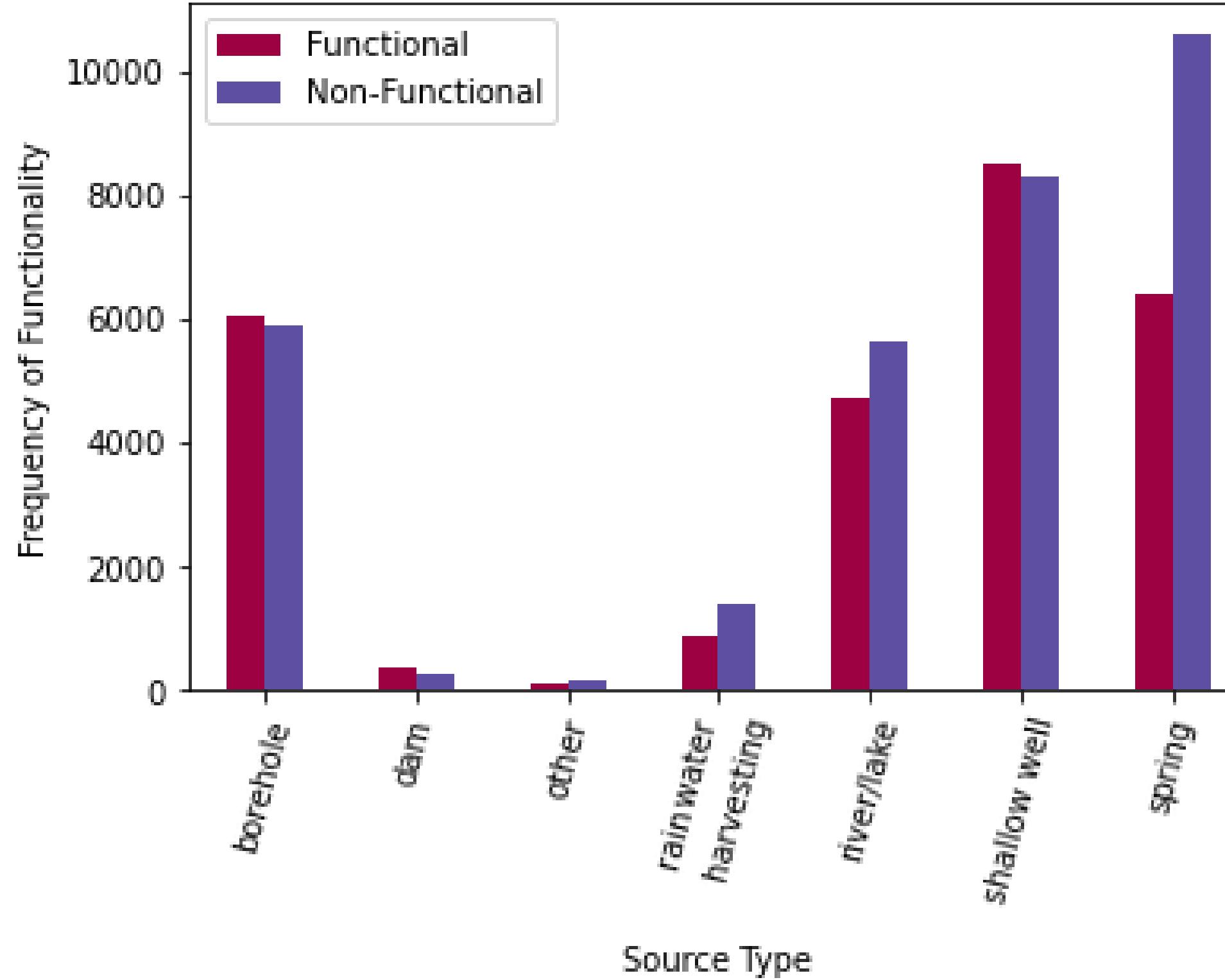
A photograph of a man and a young child standing in a dense field of tall green plants, likely corn. The man, on the left, is wearing a dark t-shirt with a colorful graphic design featuring stylized leaves in yellow, orange, and red on a black background. He is looking down at the child. The child, on the right, is wearing a white shirt and is also looking down. A white bucket sits on the ground to the right of the man.

Part 3: Modeling



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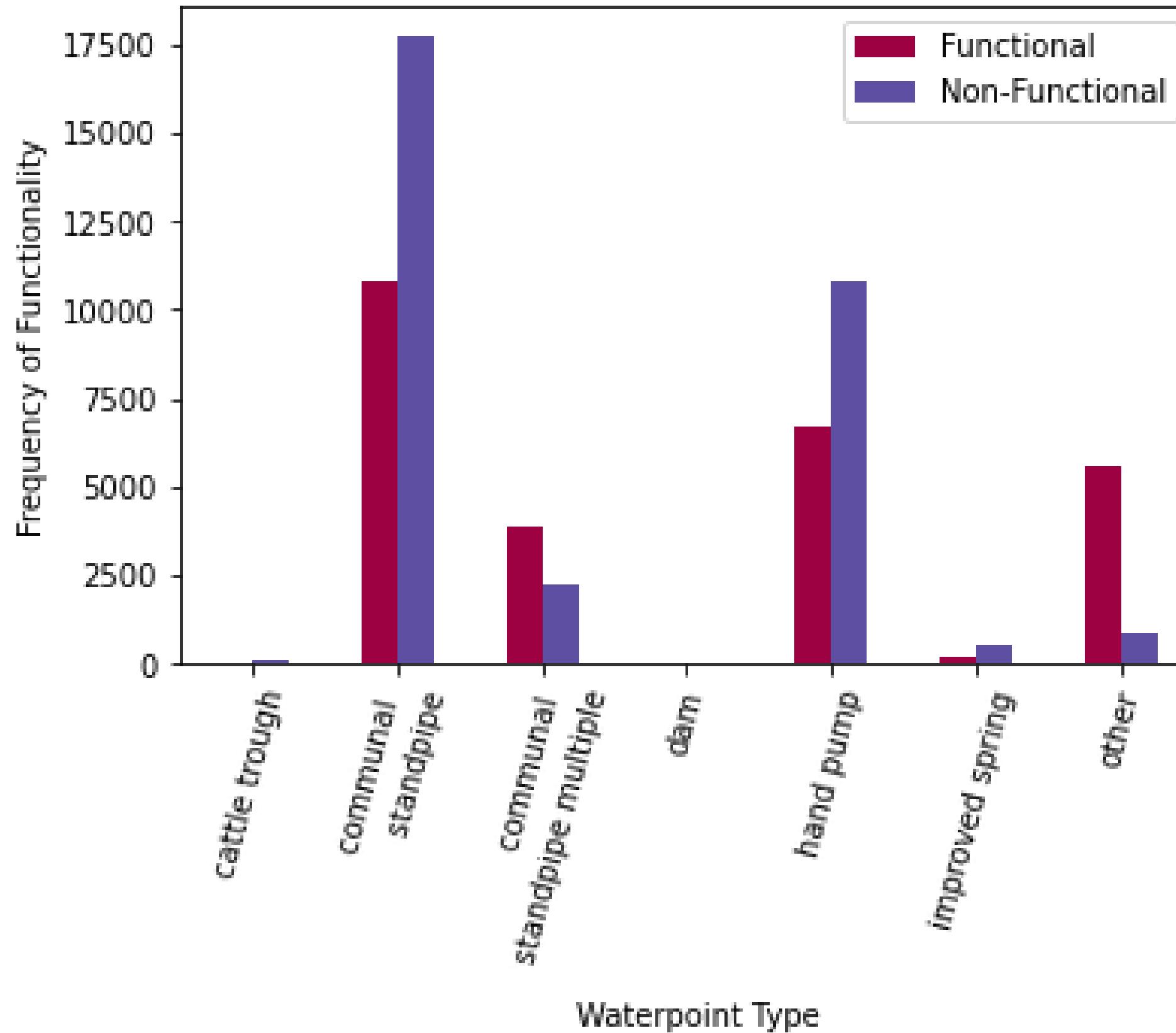
Functional Status vs Source Type





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Functional Status vs Waterpoint Type



Modeling



Modeling Process:



- Predict relationship between source type and water quality
- Metrics Used: Precision & Recall



Part 4: **Recommendations**

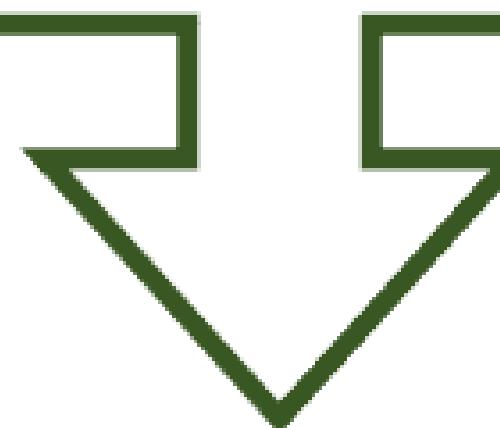
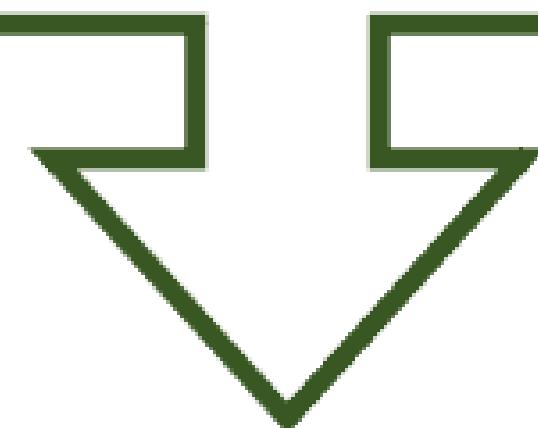
Recommendations

**Fluoride Water
Quality**

**2.58X less likely to
fail**

**Improved Spring
Water Point**

**1.93X less likely to
fail**



Part 5:
Next Steps





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Next Steps:

Further exploration

Educational Effect

Further Resolution



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Contact Us

For any questions or
clarifications on our report.

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