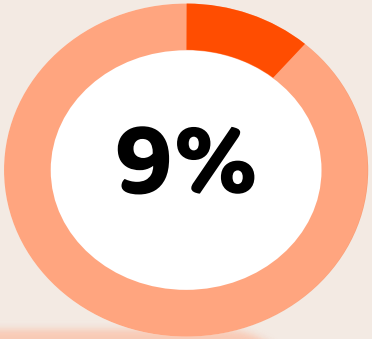
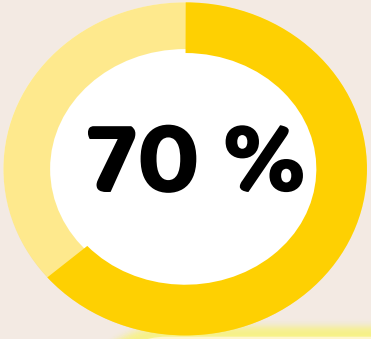
# EITINA

## Smart Medical Drainage Bag




of all hospital-acquired infections are Catheter-associated urinary tract infections (CAUTIs).




of CAUTIs are believed to be preventable. (1)

**National Clinical Guideline** suggests that taking special care of urinary drainage has been shown to markedly reduce the risk of acquiring a catheter-associated infection. (2)

(1) U.S. National Library of Medicine (2021).
(2) NCEC Draft Guidance on Infection Prevention and Control (2022).

# The Team:

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# Agile Methodology

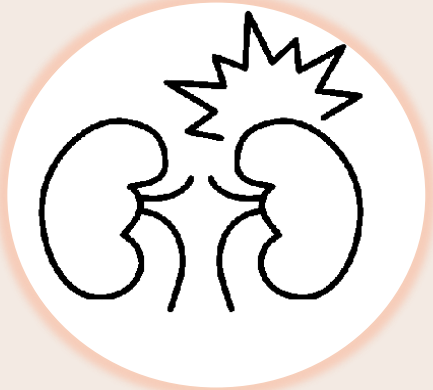
1. Requirements
2. Design
3. Development
4. Testing
5. Deploy
6. Review

# 1. Requirement

A project is required to solve these problems for individuals:

Stress and discomfort

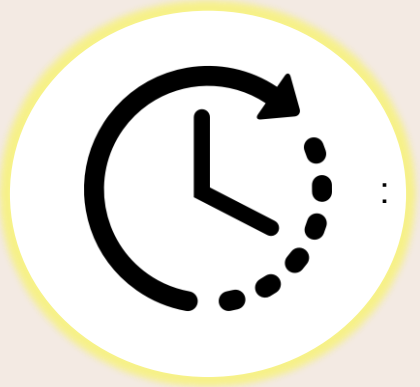
Infections



Kidney scarring

# 1. Requirement

A project is required to solve these problems for hospitals:



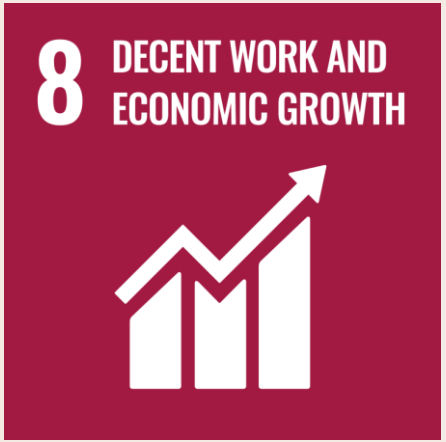
Effort and time-consuming.

Inaccurate diagnosis

Delay in emergency cases

# 1. Requirement

To achieve the sustainability development goals of 2030:

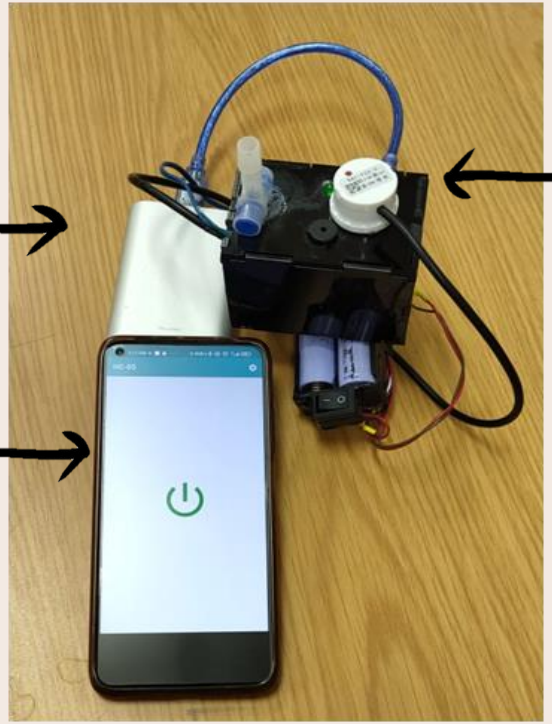


# 2. Design

alarm
level sensor
lightweight
monitoring screen
single used
Detachable
Brainstorming
valve controlled
via Bluetooth

# 2. Design

First Prototype:



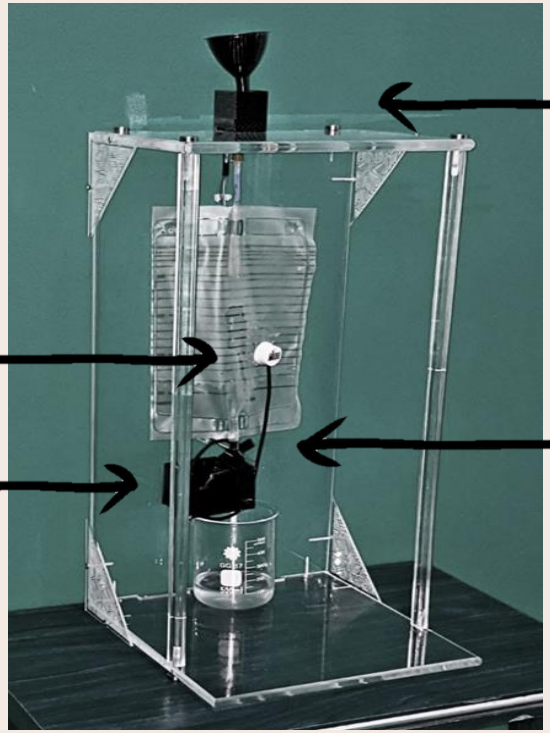
Valve

Bluetooth controlled

Level sensor

# 2. Design

Second Prototype:



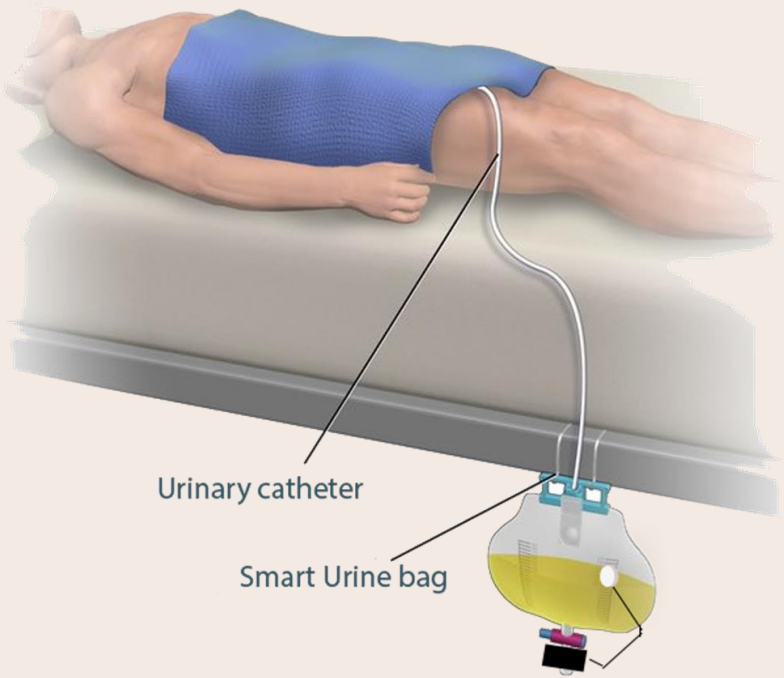
Flow sensor

Level sensor

Valve

Bluetooth control and data collecting

# 2. Design



# 3. Development of a Startup

EITINA

| Key Partners | Key Activities | Value Propositions | Customer Relationships | Customer Segments |
|---|---|---|---|---|
| Investors<br><br>Suppliers<br><br>Manufacturers<br><br>Tech partners | Development and improvement of the medical drainage system<br><br>**Key Resources**<br><br>Human resources<br><br>Infrastructure<br><br>Equipment | Improvement of medical drainage system.<br><br>Low price for high-quality product.<br><br>Ability to create various versions for customer needs. | Customer Feedback<br><br>Hospital discounts<br><br>**Channels**<br><br>Website<br><br>Medical rep | Hospitals<br><br>Patients with infectious disease<br><br>Patients that use urine bag at home |

| Cost Structures | Revenue Streams |
|---|---|
| Product Manufacturing<br>Licenses<br>Market Research<br>Website Development<br>Employees | Product Sales<br><br>Maintenance Services<br><br>Additional Services such as hospital staff product training |

# 3. Development of a Startup

Competition Analysis:

| EITINA | Volymi |
| --- | --- |
| Alarm when urine reaches a certain level. ✓ | ✓ Alarm when urine reaches maximum level (3). |
| Bluetooth controlled and data collected. ✓ | |
| Measure flow of urine in the bag. ✓ | |

(3) https://tcdlaunchbox.medium.com/volymi-an-introduction-1603f3360269

# 4. Testing

Calibration has been performed on the project to ensure the accuracy of the reading.

Known liquid amount

Compare results

Edit coding

# 5. Deploy

3rd Arab Youth Entrepreneurship Forum in Alexandria.

# 5. Deploy

The 14th Arab Robotics Championship in Doha, Qatar

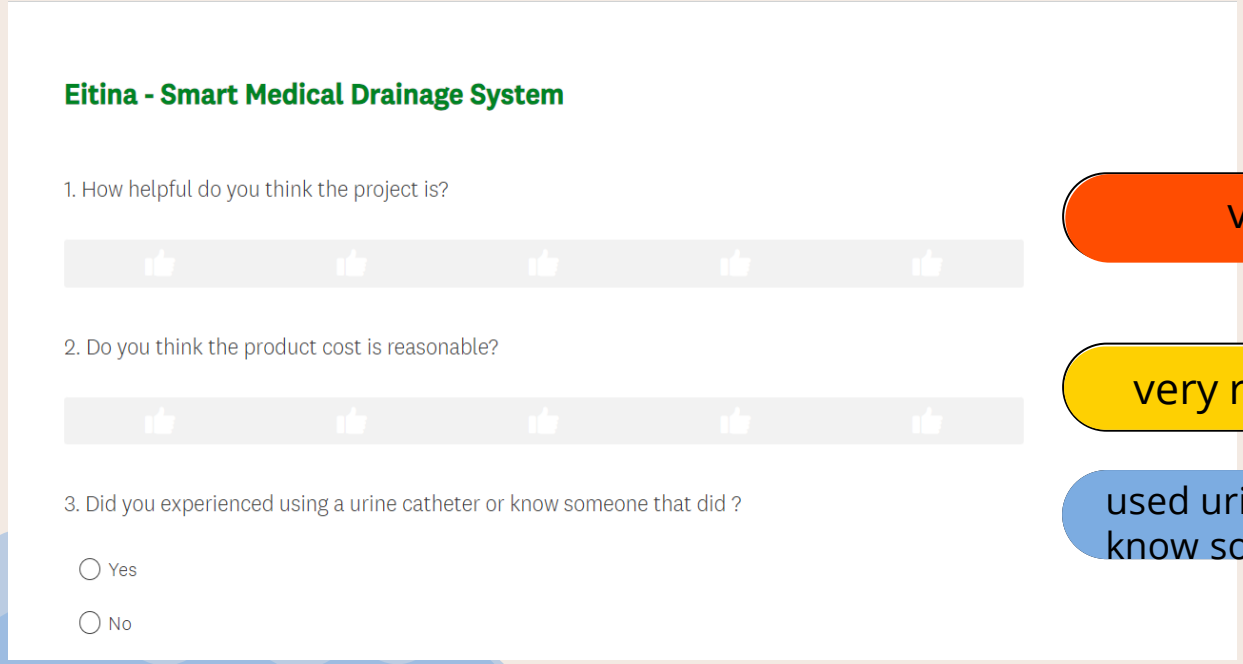
# 5. Deploy

A visit with the medical staff of Nile of Hope hospital

Hospital
Nile of Hope
Pediatric Surgeries & Congenital Anomalies
Nile of Hope Foundation shared no. 3776

# 6. Review

A survey has been conducted in both Egypt and Qatar.
Over 50 people responded.




very helpful 99%

very reasonable pricing 87%

used urine catheter or know someone who did 76 %

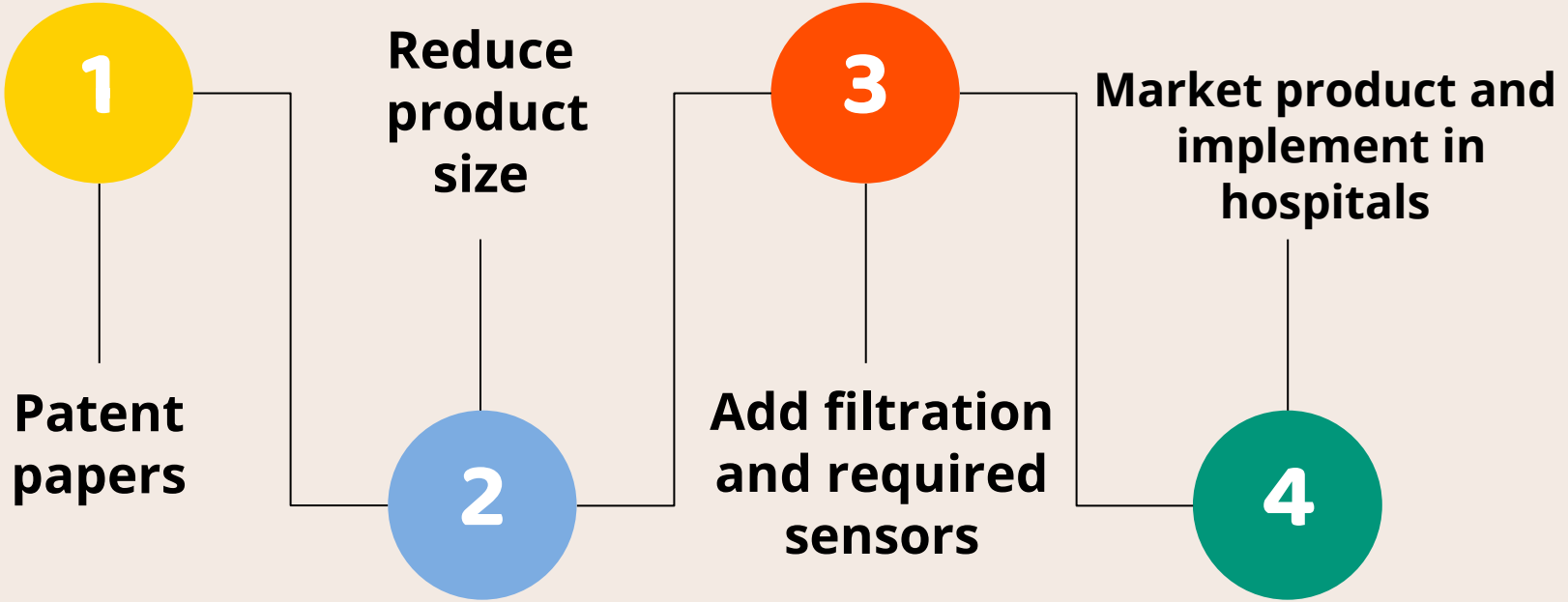
# 6. Review

“ My mother passed away due to infections of from urinary catheter.”

“ My uncle had an issue with nurses being late in emptying the urine bag he had Covid.”

“ I wish I had such product while I used the urine bag”.

# Future Work:


1
Patent papers
2
Reduce product size
3
Add filtration and required sensors
4
Market product and implement in hospitals

معاً لنشر الإعتناء

Together to spread care