

## Internet of things (IoT) use cases:

1. IoT based safety Gadget for child safety monitoring & notification.
2. Hazardous Area monitoring for Industrial Plant Powered by IoT.
3. IoT based Smart crop Protection System For Agriculture.
4. Real-time River water Quality Monitoring and Control System.
5. Smart-farmer - IoT Enabled Smart Farming Application.
6. Smart waste management System for Metropolitan cities.
7. personal Assistance for seniors who are self-reliant.
8. Signs with smart Connectivity For Better Road Safety.
9. Smart Solutions For Railways.
10. Industry - specific Intelligent Fire management System.



use case 4:-

IoT based 'Safety Gadget' for child  
Safety monitoring & notification.

Description:-

\* As we all know, kids are the heartbeat of every parent, and when it comes to a child need with special needs, extra careful.

\* child can also initiate emergency notification to the Parents incase of Unsece situation.

Social Impact

Improved safety index of places, Provides freedom for the children with needs.

Business Model / Impact :-

\* Selling the Product directly to the Parents (device + Monthly subscription for Tracking & Notification service).



\* Selling the product the childcare centers.

Recommended Technology Stack:

BLE, Wi-Fi, GPS, Soc's, IBM Watson IoT, Google Map Service etc.

Existing Solutions:

→ <https://trackbond.com/kids>

→ <https://www.relyon.in/gps-tracker-for-kids/>.

References:

<https://youtu.be/qhaiGUD20ZE>.

Use case 3:

Hazardous Area Monitoring for industrial plant powered by IoT.

→ The solution shall help the personnel working in hazardous areas and it shall include the following features.

\* Indoor localization / Reallocation

\* Lone worker Protection.



\* physical access controls

\* Exit counting

Social Impact:

Avoids large scale hazards in industries and saves the environment & people.

Business Model / Impact

sell BLE beacons with indoor positioning service or build indoor positioning service as service.

Recommended Technology Stack

BLE Beacons, Mobile App, cloud based indoor mapping service.

Existing Solutions:

<https://www.iiu.ac.in/resource/indoor-positioning>

positioning - increase - safety.

Reference:

<https://proximity.io/accurate-indoor-positioning>

positioning - bluetooth - beacons/-



\* Simple Solution to suite the farmer community.

Social impact:

Improve the Productivity, save lives of farmers.

Business model / Impact:

Community based solution by FAO's solution through contract farming.

Recommended Technology Stack:

Computer vision APIs, GSM Modules, Esp-8266, IBM Watson IoT platform, Android Application.

Existing solutions:

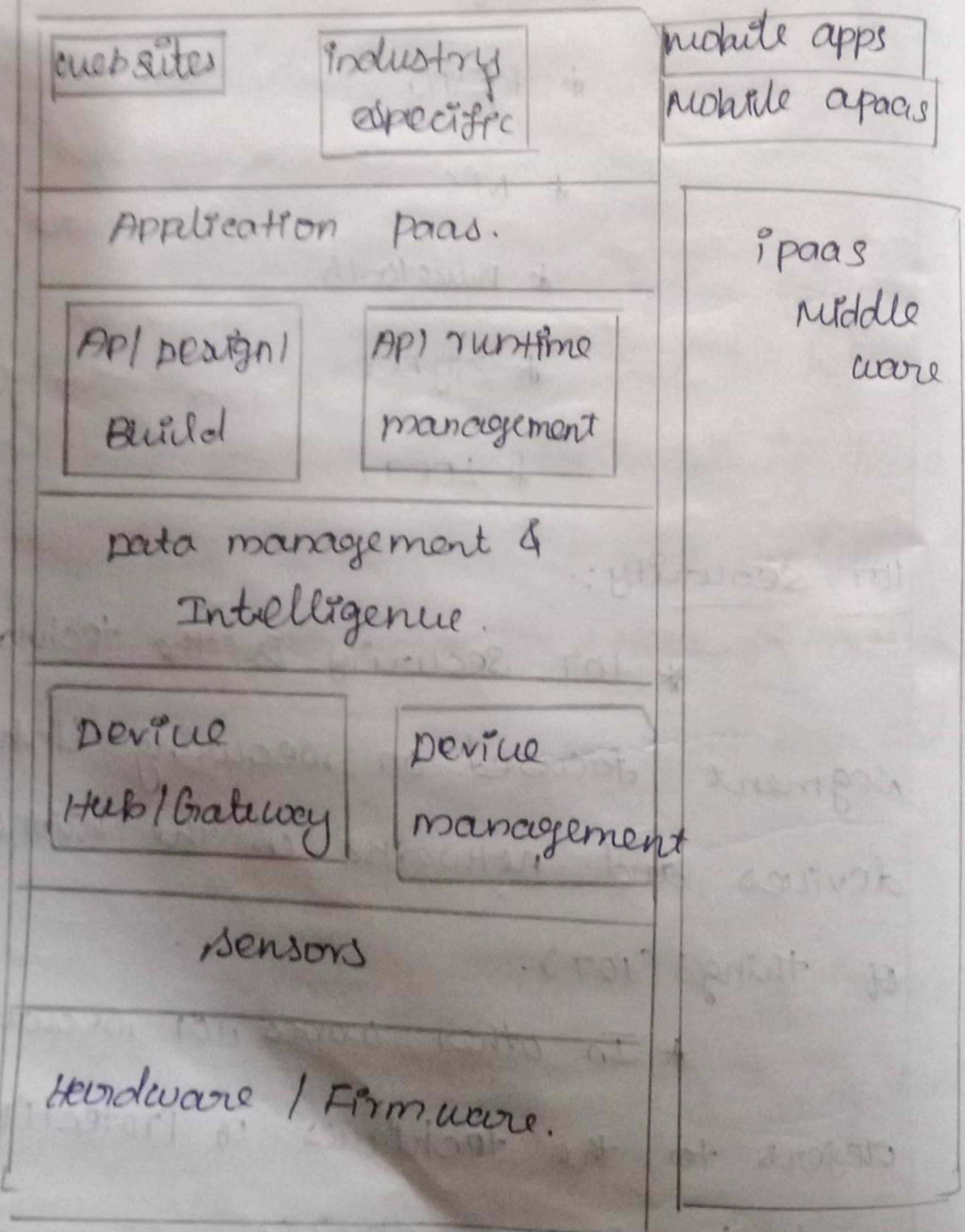
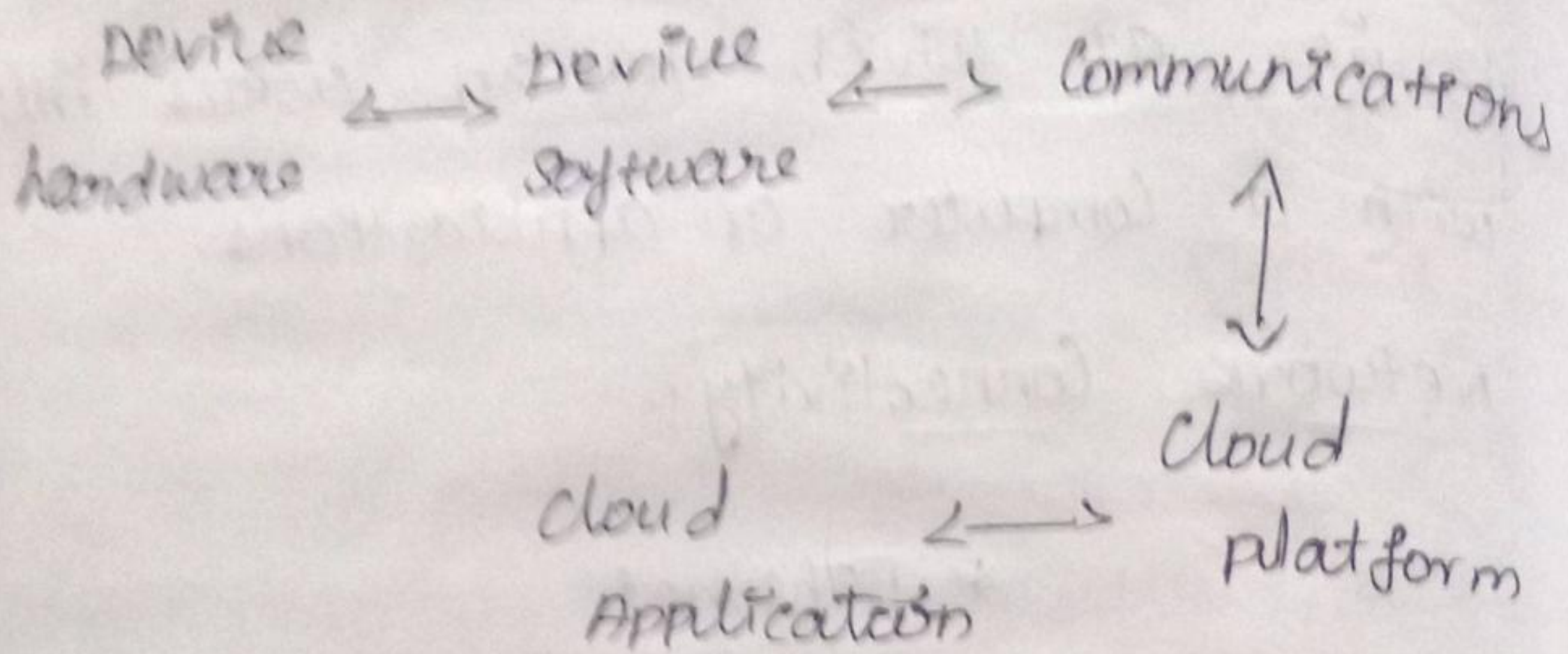
<https://www.agrivi.com/blog/top-five-strategies-to-protect-crops-from-wild-animals/>.

Reference:

<https://www.fao.org/3/cb2447en/cb2447en.pdf>.

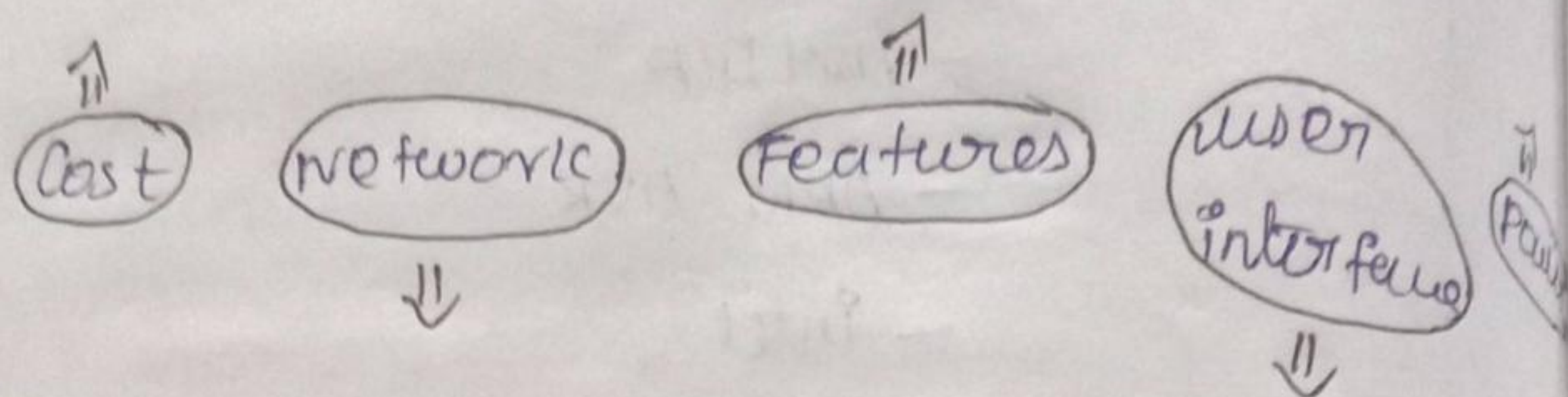


# IoT technology Stack:





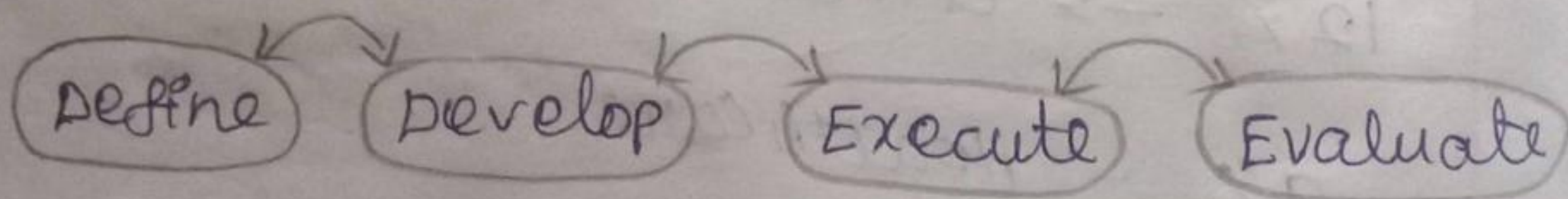
## Design Considerations:-



## other - design Considerations:-

- \* Applicability
- \* software updates
- \* Support
- \* data management
- \* data collection
- \* Analytics
- \* market Trends.

## Proof of Concept (POC)



## How to build a successful POC?

### ① Brainstorming:-

- Project analysis, improvements

HW/SW requirements, communications.