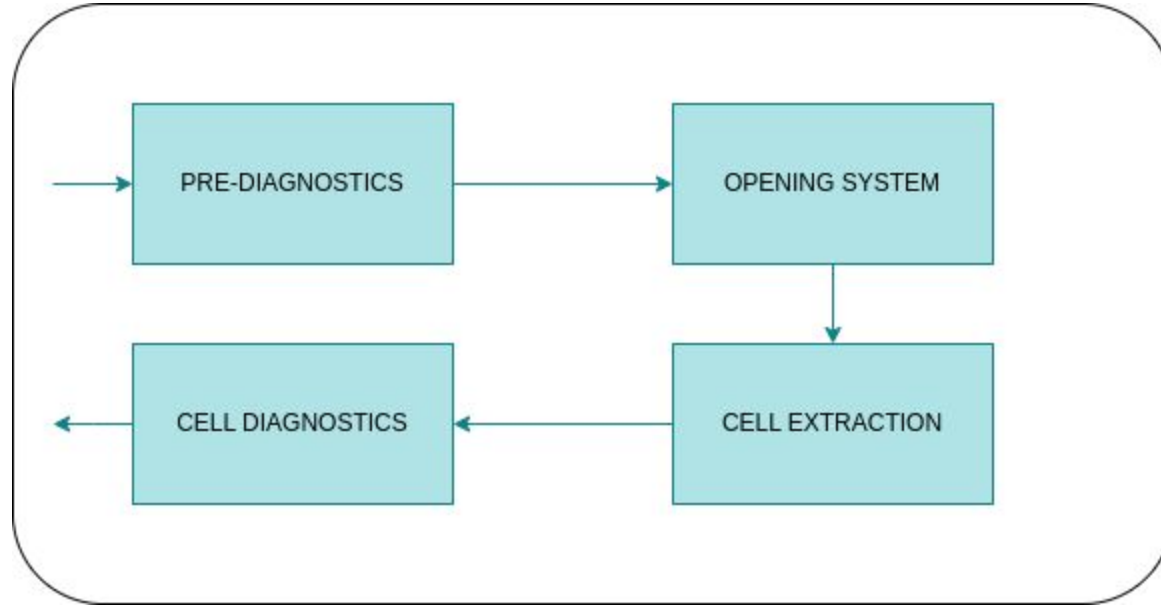


# Circu Li-ion Case Study

# Architecture Overview



# Key Components

- Robot Controller
- Computer Vision System
- Data Collection Module
- Central Database
- Machine Learning Models
- Control Center

# Features

- Modularity
  - Microservices
  - HTTP APIs
- Robust Communication
  - Messaging systems (MQTT, RabbitMQ)
  - Redundant communication channels
- Scalability
  - Kubernetes, Terraform, Serverless
- Edge computing
  - Computer vision system & ML models
  - Reduce latency

- Data Centralization
  - Images, sensor readings, logs
- Security
  - Encrypted comm between units and database
- Monitoring and Alerts
  - ELK stack/Grafana, Slack messages on errors
- Backup and Disaster Recovery

