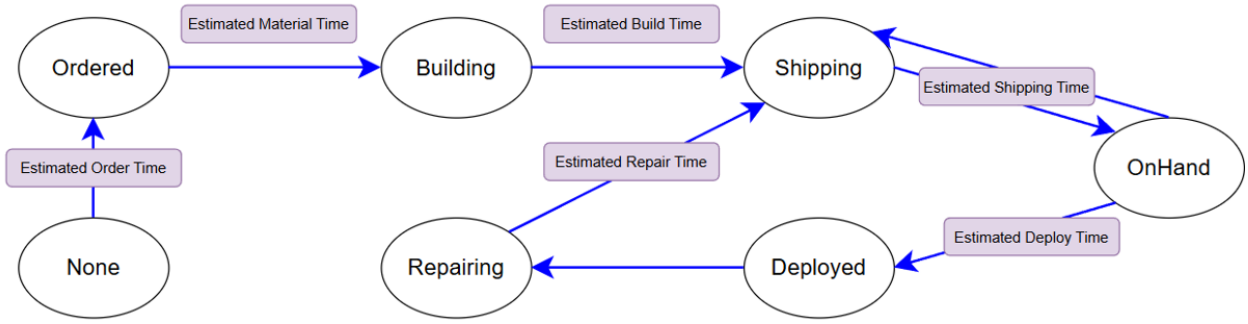
## Project Background

Qualcomm is the connected processor company for the intelligent edge with leadership in wireless connectivity, RF front-end, high-performance, low-power computing, multimedia, and on-device intelligence. Within the Test Base Station Project, we design internal, custom, integrated cellular call flow test boxes that rival or exceed capabilities of external third-party solutions. The project has over 200 Engineers worldwide and has deployed over $200 million of equipment for 5G wireless verification. The team supports a product portfolio that includes 3G, 4G, 5G, and V2X products. Customer support is provided for this product portfolio of over 2000 systems leveraged on a daily basis throughout the global company.

## Project Description

To support our modem feature development, Qualcomm has deployed thousands of Internal Test Equipment (ITE) globally. There's potentially high impact whenever test equipment goes down and requires maintenance. To this end, we would like to provide a Service Level Agreement (SLA) with Expected Repair Times for each component.

The components used for TE repair can come from various stages of the pipeline: Ordered, Building, Shipping, Repairing, OnHand, Deployed. The goal of this project is to build a dashboard so we can visualize the number of components and the estimated time for each stage of the pipeline:




Most of the required data already exists in various Databases and can be processed to come up with estimated times for each stage. Frontend development will be done in React & Typescript, and backend development using Python3.

## Desired Skill Set

- Web Interface design experience or interest
- React & TypeScript development experience or desire to learn
- Python3 programming experience
- Git source control experience
- Linux command line experience or desire to learn
- Experience with JIRA and/or a modern bug tracking system.
- Basic familiarity with SQL, Databases

## High Level Goals / Priorities

- Backend: read data from various data sources
- Backend: process data to come up with number of components and estimated times for each stage of the pipeline
- Frontend: build a dashboard to display the full pipeline, with the ability to display component details for each stage upon user interaction

## Preferred Team Size

A three-person team would likely be ideal.

## Location

The Qualcomm TBS project will provide support mostly locally from the Qualcomm Boulder office. Remote work is the expectation with possibilities of on-site for key needs or discussions.

## Resources

Qualcomm intends to open a remote development environment with sufficient compute and virtual desktop portables for all required development.

### Development Environment

1. Windows VM for general purpose / productivity applications
2. Linux based Virtual Machines for development
3. Qualcomm Internal enterprise GitHub repository for source control and Continuous Integration workflow
4. Python3 for backend development and unit testing
5. React Web framework for front-end development
6. Dockerized build environment
7. Deployment in Kubernetes cluster for service

## Contact

Email Kevin Wolver at kwolver@qti.qualcomm.com for high level project questions. If selected, other engineers will be made available for guidance, leadership, and mentoring.

## Background

TBS = Test Base Station