

2021 Final Year Project Definition Form

Project Title:

Design and development of an inventory management system within the IOT development and manufacturing space.

Company details:

Energy and Combustion Services (Pty) Ltd.

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Kloof, KZN 3610

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www.enerserv.co.za

Company background:

ECS is an engineering company that specialises in data analytics and measurement and verification work for energy intensive industries. Our main domain of operations is in the mining sector. Recently a division of ECS (Energy and Combustion Services Technology Solutions Development) have started to embark in designing and manufacturing bespoke IOT devices to collect and process said data. These typically vary in complexity from basic data loggers to edge IOT devices with embedded artificial intelligence.

Project description:

Due to the increasing complexity of products developed and a drive to outsource manufacturing. A robust inventory management system needs to be implemented/developed. Core requirements are:

- No double entry of information should be required.*
- The system needs to be able to produce a BOM (Bill of materials) report.*
- The BOM needs to be easily adapted as later hardware versions are produced.*
- Stock on hand reports need to be created.*
- The system needs to be easy to use.*
- The system needs to make use of barcodes, or something similar, to streamline data capturing and updating.*
- Cost of development vs Cost of implementing a COTS (Commercial of the shelf) system needs to be calculated.*
- A framework for optimum order quantities needs to be created.*

Industry mentorship:

Andreas Conrads - Engineering Specialist

Industry mentor contact details:

Mr Andreas Conrads

andreas.conrads@enerserv.co.za

0724424524

Project topic application process:

Student applications should include:

- A brief description of yourself, including your interests. (CV)*

- *A brief motivation why you think this would be a good project for you.*
- *Any other previous projects or materials (personal or academic) that you think would be advantageous.*
- *Your contact details.*

Please send applications via email to the student mentor by 8:00am on Friday the 5th of March

Any other relevant information:

- *An interest in software development would be advantageous.*
- *Being able to do site visits at our development office in Kloof (Durban) would be hugely advantageous.*
- *Weekly to bi-monthly feedback sessions with the industry mentor are expected.*