

## **Eccel Technology Ltd Partnership Custom Design Process**

### **Stage 1: Production of a Product Design Specification.**

This stage will be charged at £350 per day plus expenses incurred, such as travelling costs, and will be billed in full day increments in advance.

Typically, this process only requires 3 man-days, but if the design is complex or information required from the customer is limited and requires more assimilation effort by Eccel, it can require longer and cost more. This stage is vital to success. A good specification leads to a good product, produced on time with desired performance outcomes.

The deliverables of this stage will be to:

- Produce an accurate agreed functional specification for the hardware and software design for the project.
- Produce an accurate financial cost and time required quotation for the development of a small number of prototypes by Eccel Technology Ltd. (Stage 2 below).
- Produce an approximate financial costing for the supply by Eccel Technology Ltd of the final units in the volumes requested by the Customer.
- Requirements from you our partner must include but are not limited to:
- Full description of connection requirements to the PCBA we will design, including current and voltage input and output specifications on the device inputs and outputs, and any specific interface details such as communication protocols required.
- Specification of functionality of the software we will design for the MCU(s) on the PCBA.
- Specification of range requirement, if passive RFID is a function of the PCBA, and/or RF connectivity to the PCBA is required.
- Specification of performance in terms of power consumption and battery life (if applicable).
- Details of any other electronics and/or software that is required of the PCBA, for example sensor interface and processing, RF communications such as BluetoothLE or UHF MODEM etc.
- Packaging requirements including overall product dimensions and enclosure requirements such as encapsulation, IP rating, operating environmental temperatures and humidity, vibration and shock endurance etc. Labelling requirements and any approvals required such as FCC, CE (RED) etc. Details of production test requirements.

Eccel must fully understand the customer's requirements for the finished product. Eccel Technology will deliver the requirements set out and agreed in the specification so it is critical that customers engage with this stage of the process in order to receive a product with the functionality and design requirements they expect.

### **Stage 2: Feasibility and Scoping**

For new applications which require a lot of additional functionality over current Eccel standard products or which operate in unknown environments, a feasibility study is conducted. This stage is charged like Stage 1 at £350 per day plus any expenses incurred. The feasibility and scoping work typically takes 1-2 days, although if environments or applications are very complicated this may take longer.

If the application is deemed feasible, Eccel will conduct a scoping exercise to determine the expected total development price of the project which is then communicated to the customer.

This is done to ensure that the project costs can be met by the customer. A price to purchase materials for developed prototypes is also disclosed to the customer at the end of this stage.

### **Stage 3: Software and hardware development and production of a prototype(s) for customer test and acceptance**

This stage will be accurately quoted in stage 2 above. It will be billed 100% in advance of work commencement. Costs for this stage will depend upon the complexity of the development and range from under £5K to £50K+ depending on project complexity. Timescales can vary between 1-12 months, again according to the complexity of the development.

#### **Stage 4-Prototype revisions and finished design specification**

After the customer has received and evaluated the prototype(s) delivered by Eccel any changes that are required to be made will be incorporated into a finalised product design specification. Changes may be small changes to firmware, or perhaps small hardware changes to either enhance functionality or replace components which are difficult to source.

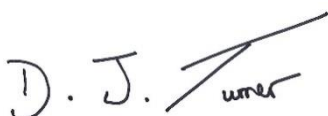
Any changes required to specification will be charged at £350 per day until a final specification is arrived at.

At this stage a meeting will be held between Eccel and the customer. The objectives of this meeting will be:

1. The customer communicates any required changes to specification for the final product from the prototype whether hardware or software. A timescale for changes is agreed to fit the customer requirements and Eccel design capacity and a plan is signed off.
2. Eccel discusses the cost of the bill of materials for production with the customer and highlights any potential concerns over component sourcing so that these can be discussed. Re-design options are explained if this is believed to be the best solution and a lead time for components is agreed.
3. Further meetings are held until the final design specification is formally signed off.
4. A production plan, including lead time and prices is then agreed and initial orders are placed for manufacture. Eccel provides a full manufacturing quotation to the customer at this stage to cover various unit price quantities as requested.

#### **Stage 5: Delivery of production units to customer order requirements**

This will be quoted provisionally in stage 2, and accurately in stage 4 above. Customers will receive a quotation for the requested number of units including lead time.



Managing Director

Darren Turner, 25<sup>th</sup> February 2022