



KEY SERVICE:  
**FUEL CELL MANUFACTURE  
PROCESS DEFINITION**

### **WHY INVEST IN FUEL CELL MANUFACTURE PROCESS DEFINITION?**

Globally there is a critical need to develop zero emission technologies, to reduce carbon emissions from heating, transportation and other power-hungry applications. Integration of technologies from the hydrogen sector will be key to supporting this aim.

The development of a high-volume manufacturing capability for the hydrogen sector and an increase in the quality of the products produced, is an integral and crucial part of the manufacturing approach to bringing zero emission solutions to market and supporting the UK's target of becoming 'net zero' by 2050.

The implementation of high-volume manufacturing processes and systems is paramount to reducing sector costs and increasing the reproducibility of these systems, to enable them to compete and become a key component of the global energy mix.

### **WHY HSSMI?**

We specialize in supporting manufacturers scale up the production of technologies in the hydrogen sector, such as production, storage, and applications in powertrains and vehicles, where existing systems and resources aren't in place yet, or where the path to scale up is particularly challenging / complex.

We can provide an independent review of your current application and future manufacturing options or operate as an extended part of your manufacturing team. Supporting you at a strategic level in defining your overall production strategies and what that means in terms of locations, facilities and people. Going on the journey with you, from the operational level in the definition of final layouts, delivery of line balancing and supporting with RFQs for equipment purchase.

Our delivery is backed by a set of robust methods and tools cultivated from best-in-class OEMs, and the direct experience of senior leaders from the automotive sector who have overseen high-volume manufacturing systems.

### **HOW HSSMI CAN HELP**

At HSSMI we will provide you with a blueprint for your volume manufacturing capability to take your product to market.

Examples of key steps we can help define and support you on your manufacturing journey are:



### **Manufacturing strategy foundations definition**

We will work with you to define the strategic priorities and assumptions of your business that underpin the overall manufacturing strategy.

- ▶ Define your manufacturing capacity plans and scale up requirements for the business based on projected sales volumes.
- ▶ Define the manufacturing Bill of Process, Bill of Sequence, Cycle plans and high-level labour requirements.

This will provide a definition of your current and future manufacturing capability for your business that provides a baseline requirements document to deliver on the business strategy.



### **Make Vs Buy assessment**

The production of the manufacturing strategy will enable HSSMI to work with you on the definition of your business case for in-house vs supplier production opportunities.

- ▶ Review your product BOM and assess what you can produce in house vs contracted out external suppliers.
- ▶ Identify the overall CAPEX and OPEX costs for the manufacture of your product.
- ▶ Identify and conduct a high-level capability review of potential suppliers.

Finally, we will provide an assessment to you on the overall economic viability in your business for Make vs buy.



### **High level facility layout definition**

Define and develop what the concept production facility would be required by your business to meet the volume manufacturing capacities defined in the previous steps.

- ▶ Identify the key facility equipment requirements based on your business strategy and target production volumes.
- ▶ Define the spatial requirements for the overall facility. Including production areas, stores, offices, car parking, etc.

Provide a 2D facility layout with all key areas defined to meet your manufacturing business needs.



### **Facility location assessment**

We will work with you to develop the concept facility and further define key facility locations that meet your overall business strategy.

- ▶ Identify the key production and facility requirements.
- ▶ Identify potential sites that meet the definition and conduct high level searches on suitability of sites.

We will provide an assessment and recommendations for key facility locations that meet your business manufacturing needs