



What Iter did for Edwards

● Introduction

Edwards is the global leader in the manufacture of sophisticated vacuum products and abatement systems. These are integral to manufacturing processes of semiconductors, flat panel displays, LEDs and solar cells, scientific instruments as well as use in a wide range of R&D applications. Edwards vacuum product are also used within many industrial processes including power, pharmaceutical, chemical, glass and coating applications as well as steel and other metallurgy.

Among Edwards' customers are the world's top semi-conductor manufacturers, customers that are in dynamic and fluctuating markets. They rely on Edwards' service business to quickly remanufacture products globally through its service centres.

Having worked with Tim Richardson and his team previously, Edwards was confident they could build the model needed to develop their service business. Tim's core aim was to define a new shape for Edwards' complex service supply chain, support key stakeholders in managing the process and oversee a full implementation.

● Customer Challenge

Edwards' fundamental objective was to balance its unpredictable market cycles with high-growth and consistent revenues through a range of new enhanced service offerings. The fragmented service supply chain was a key barrier to delivering this growth.

Despite a product portfolio of 36,000 SKUs supporting the service business across its 83 global locations, the role, use and ownership of inventory across the service supply chain lacked a clear strategy and operating model.

Tim and his team mapped out a set of complex, interrelated issues to help build their strategy. These ranged from inconsistency around customer expectations to a reactive, firefighting approach to meeting customer needs. The firefighting was made worse by local, parochial objectives and the confusion between the Sales and Operations teams of where responsibilities began and ended.



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● **Our Approach**

We set out to define and implement the operational structures and processes to deliver three principles:

The required service from the service supply chain:

The first objective was to understand differing requirements in terms of speed, flexibility and criticality of service across different market segments and between current and legacy products.

Using internal and external research, we revealed gaps in Edwards' perceived service levels and customers' actual expectations. An iterative consultative process helped segment market requirements and form the basis of a new supply chain design.

A modelled future supply chain:

Building a cohesive, shared understanding of the Edwards' service supply chain was achieved by creating value stream maps of the service operation. These covered demand management and S&OP, through to order execution and the supply chain replenishment processes. Projecting an unconstrained view of the ideal supply chain state was key in breaking current thinking and establishing an ongoing reference point for success.

A profiled inventory holding strategically located in a distribution network:

Modelling the supply was delivered through a set of integrated inventory and distribution models for the deployment and resupply of inventory across Edwards' global sites.

This approach gave Edwards the strategic understanding of best practice and the art of the possible. Working with an internal cross-functional team who shared the decision making ensured ownership of the supply chain resided with Edwards once fully operational.



Tim provided us with a clear vision and were excellent in their support in turning the vision into a robust, well-managed project plan for improvement. This programme of activity has significantly improved the service we provide to our customers and the guidance and support of Tim & the Team were critical in delivering this.

Andy Peake, Global Manager, Supply Chain Service Business, Edwards.



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● **The Solution**

The three core elements of the designed and implemented solution were:

A service supply chain redesign

A segmented service supply chain that met the differing market needs. For example, in the semiconductor market, the service model was based on swap-out and remanufacture. This involved reducing locally held stock and creating global distribution centres in Japan and South Korea, adjacent to the manufacturing plants, using rapid air-based resupply.

However, for the general vacuum market for runners and repeaters, single distribution centres in Europe and North America were created. In Asia, import/export tariffs and challenges to meet service agreements meant that multiple new distribution centres were necessary. In each case, a mixed sea/road resupply approach was adopted.

Inventory re-profile

Statistically aligning inventory at an SKU level to support the service required to be delivered from the new structure and resupply approach, using historical usage patterns to deliver a consistent level of service for the future. This required a net investment for the service supply chain work as designed. This was a major cultural shift, showing that senior leadership recognised the wider opportunity that an efficient supply chain would deliver.

Creating a global service supply chain organisation

A global Service Supply Chain Manager was appointed to oversee local execution and global control and management. Again, this was a cultural step-change for the business, an acknowledgement of the critical importance of a well managed service supply chain

The new central organisation provided the major change management, which included responsibility for strategy evolution, demand management, inventory profiling and network resupply. Local organisation were brought under regional control and managed routine order fulfilment, local stock integrity and purchases. Creating a coherent supply chain operation gave confidence to the sales force and aligned objectives with the operational team.



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● **Benefits**

The major benefits of Tim's two year journey with Edwards were:

- An agreed and objective codification of the market requirement from the service supply chain.
- A major improvement in service performance of 10%, with no long-term increase in stock levels and a significant reduction in obsolescence.
- A service supply chain that enabled growth and is increasingly able to mitigate the impacts of the volatile semiconductor market.
- A flexible organisational structure with the best mix of central control and local autonomy able to adapt quickly to changes in market dynamics.

More significantly, a clear control of the overall service supply chain was established that effectively met the needs of internal and external customers.