

- *Cell manufacture and project orientation*
- *Design for manufacture*
- *Concurrent engineering*
- *Innovation and creativity*
- *Millennium products*

• The Company

Spembly Medical Ltd, based in Andover, Hampshire was established in the 1940's and has 60 employees. Turnover for the site is £5m, and for the Group, £30m.

Spembly designs, manufactures and markets a range of medical instruments principally for the surgical destruction of unwanted, often malignant, tissue. The established product range centres upon instruments for cryosurgery (the application of extreme cold) and ultrasonic surgery, in which Spembly is a world-wide leader. Pain management, which involves the technologies of cryo-analgesia, is also an important area of company business. Spembly is part of Integra Life Sciences Corporation, based in New Jersey, a world-wide manufacturer and supplier of products in the field of neurosurgery.

• Background

Spembly has been a Department of Trade and Industry (DTI) Inside UK Enterprise (IUKE) scheme host company since 1998. The decision to join was based on a desire to share with other companies Spembly's working practices, and how these have improved from the traditional 1980's culture, when skills were not shared, ISO 9000 was just a badge on the wall and departments felt isolated.

Customer focus has been the main culture change over the last three years, where the management style has changed from functional to project orientation. The end result is an understanding that the object is to ship a quality product on time to the customer and not just to complete your part of the process.

• Cell Manufacture and Project Orientation

The introduction of a 'design for manufacture' culture, including a change from batch to real time manufacture, a move from monthly to weekly to daily output, and more detailed specifications, has been the driving force behind innovation and product quality. The changes that have been implemented and the benefits obtained include:

- *Project teams dedicated to instruments*
shortened lines of communication and support
- *Responsibility for project owned by team*
team building and employee problem solving encouraged
goal to ship an instrument to a customer not to the next department
- *Build centred around a single unit not batch*
shortened lead times
greater flow of product
- *Work cells designed to support manufacture*
stock around cell
tool and documentation where it is needed

Project management techniques, including the creation of Project Champions, together with real management ownership of ISO 9000 procedures, have also driven the quality initiatives.

A system of cellular manufacturing is now operated, where cells are designed to fully support a product, with the emphasis on flow and ease of manufacture. Critical path analysis is applied to flow, bottlenecks are analysed and all processes are challenged to ensure that they add value. The advantages of cell manufacturing that have been experienced by Spembly include:

- *Reduced Working Time*
- *Reduce Response Time*
- *Increased Ownership*
- *Reduced Costs*

- **Concurrent Engineering**

Spembly was determined to reinvent, from top to bottom, the way they did things. The introduction of concurrent engineering techniques was typical of the new capabilities acquired in the course of developing and bringing the microsurgical handpiece to market. It involves:

- *Structured stage-gated process*
- *Implement tasks simultaneously*
- *Identify & fully specify all tasks*
- *Assign responsibilities*
- *Hold regular reviews*
- *Identify problems & attack them*
- *Share information*
- *Work as a team & 'live' the project*

And the benefits to be obtained are:

- *Increased communication*
- *Greater understanding*
- *Ownership & involvement*
- *Shared success..... shared problems*
- *Improved quality*
- *Compressed development cycle*
- *Innovative ideas & solutions*

As Managing Director, Patrick Sparkes, commented, "It is important to regard key customers as part of the development team, to scan widely for the best new technical solutions, to nurture a dynamic culture of innovation, so that people don't just follow the process but actually 'live it', and to listen to users, including older, existing users to gain actionable feedback".

A culture of "Try it and see if it works" with problem solving techniques, empowering employees, removing the fear element of getting it wrong and encouraging ownership at all levels is at the heart of a desire to see 'continuous improvement'.

- **The Results**

As a result of introducing concurrent engineering, Spembly has the following results:

- *Unique gas socket design*
- *Patented gas engine*
- *Novel probe design*
- *Modern manufacturing processes*
- *Documentation complete at product launch*
- *Ownership*

- **Ownership**

In addition, Spembly was a finalist in the Management Today Innovation Awards for innovation in product design for its ultrasonic microsurgical handpiece for neurosurgeons. The objective of the awards was not to recognise excellence in the design of specific products, nor to laud their financial impact on market introduction, but to take a holistic look at how companies innovate, using individual projects to provide a 'window' on the management of the development process.

The judges were particularly impressed by the linkages between development and the senior management team, how the culture and environment of the firm supported innovation and the way in which the project had allowed Spembly to develop new capabilities, such as software tools.

Success in the Management Today awards and the knock-on benefit to staff morale encouraged the company to apply for Millennium Product status for two of its products. Launched by the government in 1998, and run in conjunction with the Design Council, Millennium Products was the nationwide search for the country's most innovative products and services.

- **The Future**

Spembly is very conscious that fast change can often create hidden problems. Therefore, there is an active policy to keep reviewing what has been achieved and to revisit the goal. In 1995 the goal was very easy to communicate, the need for improvement was obvious, but now that backorders are virtually zero and rework/customer returns are extremely low, it is vital to not let complacency creep in.

Spembly continues to use the DTI's IUK scheme to visit or re-visit other host companies, and from this there is always some new angle on an old way of working. As Patrick Sparkes said, "Having a tangible goal is vital, something that people can strive for, that they will be proud to achieve. Spembly's tangible goal was to achieve recognition by the IUK scheme and be invited to join"

Having been acquired by Integra LifeSciences, its first acquisition outside the USA, Spembly's new goal is to be the best within the new company. Specific targets to achieve this will be to:

- *Have better customer service*
- *Have better sales response*
- *Have the best turn around times for repairs and servicing.*

If it can achieve this, and all of those can be objective, with realistic targets set, then Spembly will be the natural choice for spearheading further growth into the European market and thus further investment for new products and services.

Like a new product, this goal is treated as a project, and many of the concurrent engineering techniques can be applied.

Spembly will also continue to look for public recognition of its achievements, such as the Management Today sponsored award, or the Queen's Award for Enterprise. These naturally allow processes to be benchmarked, and lead to improvement activities.