Moving the dental world from analogue to digital: 3Shape’s success story continues

Bernhard Møller Hansen & Mathias Dessier

Moving the dental world from analogue to digital: School—Tais Clausen and Nikolaj Deichmann was finalising his Master’s degree in Finance and Economics. At the time, Clausen was completing his master’s degree in Technology and Entrepreneurship from the Technical University of Denmark and Copenhagen Business School—Tais Clausen and Nikolaj Deichmann. At the time, Clausen was completing his master’s thesis on a groundbreaking 3-D imaging technology and Deichmann was finalising his Master’s degree in Finance and Economics. Having met through friends, they joined forces to participate in the prestigious Venture Cup business plan competition, established by McKinsey and Co., in which they finished second. Throughout the competition, they constantly considered the manner in which the technology could be commercialised and thus the idea of launching 3Shape was born.

Initially, Clausen and Deichmann approached companies in the dental industry and engaged in the idea of developing a quality-control system for hearing-aid shells and ear moulds. Similar to a dental restoration, the devices need to be custom fitted to the patient’s hearing canal and are traditionally made by taking an ear impression that is then manually sculpted, cut and used to make a mould—a time-consuming, manual procedure.

“During these first meetings, we realised that we could actually create a mass-customisation production system,” Deichmann remembered. “So instead of just checking the quality we decided to go directly for changing the workflow completely, from a manual process, where you spend hours shaping the hearing-aid shells, to a completely digital workflow.”

3Shape digitised the entire manufacturing process by introducing the 3-D scanner for hearing-aid impression taking, as well as the management software and CAD software needed to simulate the position of all the electronic components that need to fit into the patient’s ear along with the shell, taking up minimal space and using CAM software for controlling the manufacturing equipment. They developed the system for a specific hearing-aid manufacturer but retained the rights to sell the technology to others.

At the time, there were only six companies that controlled the workflow completely. In the following years, the company extended and enhanced their dental laboratory product range by continuously responding to and involving their customers from the early stages of the product development process.

“Perhaps the most important lesson we have learned is that intra-oral scanning solution, which aims to revolutionise the dental practice. The 3Shape booth was literally flooded with dentists trying to get a glimpse of the sleek and elegantly designed scanner.

One of the TRIOS 5-D scanner’s notable features is that it does not require dentists to apply impressions to other systems, as well as for appliance manufacturing.

Surprisingly, 3Shape is the only major dental company that offers easily integrable solutions. All products are designed as plug-and-play solutions and feature open interfaces for connections to third-party applications. 3Shape has won several awards for its innovation, leadership, state-of-the-art products and a clear strategy to pursue continuous growth.

Today, 3Shape’s development team consists of more than 100 developers from 11 different nationalities, with a least 50 PhDs amongst them. All their products and innovations are born from the union of cutting-edge technology with the latest trends in the industry and markets. 3Shape product managers and key developers have regular meetings with distribution partners around the world to keep each product at the top of its class. During the life cycle, the products are developed in close collaboration with partners who understand and continue to gather the needs of the customers and the market.

But even with ten years of outstanding innovation, 3Shape never stops looking ahead. The company believes that the age of fully digitised dental care is only years down the road (of course there will always be smaller, traditional dental practices).

3Shape is a privately held company headquartered in Copenhagen and boasts the largest team dedicated to scanner and software development for the dental industry. It is based in Denmark and Ukraine, has production facilities in Poland, and support offices in the US and China. Customer support and the development of plug-and-play solutions is handled by any laboratory.