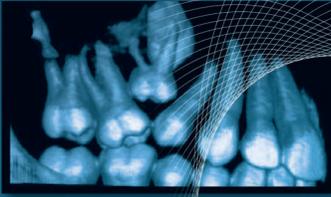


# X-RAY VISION

## Digital dentistry expands to dental institutes



*"In cases where complex, multi-faceted dental surgical procedures are required, the ability to predetermine the best possible outcome is the key."*

— David Keynan,  
DentalCare

*DentalCare has streamlined its operations, improved quality and lowered costs by using the Objet Eden 3D Printer.*

DentalCare is considered one of largest national dental CT and X-ray institute networks, pioneered digital technology by integrating their CT and 3D printing solutions. That enabled DentalCare to lead the market and fulfill dentists' orders of any type or complexity without compromising the high quality of its products.

### The Challenge

DentalCare provides a variety of dental and orthodontic services to clinics for treatment planning and assessment. Services include CT images, ICAT and digital panoramic (16-bit) images, and digital 3D printed models. Business with such a broad spectrum of services and positive signs from the market, DentalCare found itself in an optimal position for growth.

Nevertheless, in order to expand, DentalCare needed to streamline its business, putting in place a system for throughput without compromising its high standards or expanding its staff and facilities.

Complex, multi-faceted surgical procedures require the ability to predetermine the best possible outcome. Dental modeling – made possible by advanced 3D printing systems, enables dentists to evaluate several different treatment scenarios before deciding on a plan that ensures a patient's needs are met. DentalCare might be involved in oral and maxillofacial surgery, dental trauma, oral pathology, dental reconstruction, correction of dental deformity and dental implants.

### At a Glance

#### Challenges

- Produce faster throughput while retaining high quality
- Create highly detailed and accurate models
- Minimize patients' discomfort

#### Solution

- The Objet Eden 260V™ 3D Printer

#### Results

- Skyrocketing daily production yield of technicians
- Increase in quality and precision with faster production
- Reduced operating costs and increased business opportunities

DentalCare wanted to optimize the outcome of comprehensive reconstructive oral procedures, while at the same time minimize invasiveness and patient discomfort its 3D printed models are widely used due to their accuracy, fast build time and ease of sterilization. They are also highly resilient, enabling drilling and fixing of screws and model plates. Additionally, the support removal process preserves thin and delicate structures, and eliminates an after-production step that can degrade the model surface, making it possible to build complex dental models of anatomical structures.

The fine-detail printing, adequate layer thickness and smooth surface output make Objet 3D Printers suitable for all dental solutions provided by DentalCare.

### The Solution

The Objet Eden260V 3D Printer DentalCare to create multiple, real-scale dental models quickly to identify the most suitable solutions for each dental case. With the Objet 3D printed models, DentalCare has an easy to use, fast and clean solution. Models produced on the Objet Eden260V are durable, with exceptionally fine details and an outstanding surface finish – all necessary for ensuring the high degree of accuracy required by the high standards of DentalCare.

### The Results

With a variety of in-house CT scanning and user-friendly conversion tools, DentalCare technicians turn traditional CT images into digital, manufacture-ready dental models in very short time. DentalCare then prepares and triggers case-manufacturing orders on the Objet Eden260V 3D Printer while moving on to the next case-orders. The job of the technicians has become much easier, and their daily production yield has skyrocketed.

Going digital enabled DentalCare to increase the quality and precision of its products, providing more modern dental solutions.

The 3D printing models yield per technician leapfrogged dramatically in a very short time, enabling DentalCare to offer its dental customers appliances and models quickly and at competitive prices. The system gave DentalCare the freedom to regulate its prices and stay ahead of its competitors.

DentalCare's investment has been returned rapidly through increased business, dental models processing, rationalized production and reduced operation costs. The system capabilities continue to create new business opportunities and power growth to outstrip the competition.

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