

CAD/CAM

international magazine of dental laboratories

interview

“Thinking
cloud native
has raised the bar”




case report

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CAD/CAM workflow in
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feature

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Magda Wojtkiewicz

Managing Editor



Shaping the future: CAD/CAM innovations transforming dental laboratories

In this issue of **CAD/CAM magazine**, we dive into the transformative impact of CAD/CAM technologies on dental laboratories and explore how these advancements are redefining the workflow and precision of laboratory-based dental solutions. In light of digital dentistry becoming an essential element in both laboratories and dental offices we bring you insights into how innovation in this area is streamlining processes, enhancing collaboration and pushing the boundaries of what is possible in the field of dental prosthetics.

This issue presents a close look at recent developments in Europe's dental prostheses and digital dentistry markets, showcasing how consolidation and growth in these areas are driving change. In these segments, industry competitor Dentsply Sirona is leading the charge with DS Core, a cloud platform crafted specifically to enable smarter workflows and seamless collaboration for dental professionals. Nobel Biocare's new FastMap technology also represents a leap forward, introducing dentistry's first navigated photogrammetry tool for unprecedented accuracy in digital implantology.

In our interview with Manfred Müller and Niels Plate from Dentsply Sirona, we discuss the company's vision of a cloud-native future and how it is setting new benchmarks for laboratory capabilities and efficiency. Complementing this, Dr Fernando Gérman's user report provides practical guidance on how conventional dental

practices can benefit from digitalisation, offering valuable tips for dental professionals aiming to enhance their collaboration with laboratories.

We also present case reports that demonstrate the reliability and adaptability of CAD/CAM workflows, including Dr Paola Ochoa's work on aesthetic cases and Dr Frank Heldenbergh's insights into same-day zirconia restorations. These reports exemplify how CAD/CAM technology enables more predictable outcomes in diverse clinical scenarios.

In this issue, we also feature an article on cutting-edge research into CAD/CAM biomaterials. In their investigations, Dr Katharina Pippich and her team tested the biocompatibility of these for applications in bone tissue engineering—an area of future growth in restorative and reconstructive dentistry.

I hope that this issue of **CAD/CAM magazine** serves as a comprehensive guide for your laboratory's journey into the digital era, offering the latest tools, insights and innovations to help you enhance your practice and improve patient outcomes.

Sincerely,

Magda Wojtkiewicz
Managing Editor



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The European dental prostheses market is set to experience an increase in value, primarily propelled by the rising demand of the ageing population.

Resurgence and consolidation in Europe's dental prostheses and digital dentistry markets

A report on market recovery, growth drivers and industry trends

Donna Santos & Dr Kamran Zamanian, Canada

When COVID-19 affected the European dental prostheses and digital dentistry markets—including in countries such as Austria, Belgium, France, Germany, Italy, Luxembourg, the Netherlands, Portugal, Scandinavia, Spain, Switzerland and the UK—the market value declined by more than 30%.^{1,2} Both markets have since stabilised, nearly reaching pre-pandemic levels in 2023 after experiencing a surge in demand in 2021 and 2022.^{1,2} This surge was driven by the reopening of numerous dental practices, the resumption of regular dental services.

Population in Europe

The growth of the dental prostheses market is primarily being driven by the ageing population, who are more commonly affected by edentulism and periodontal disease.^{3,4} Currently, an estimated 20% of Europeans

is aged 65 or older, a figure projected to reach around 30% by 2050.⁵ According to Eurostat population statistics, Germany has the largest population aged 65 and over in Europe, followed by Italy and France.⁶ The Robert Koch Institute, a key public health authority in Germany, reported that this demographic is expected to grow by 29% by 2030.⁷ Based on WHO records, the European countries with the highest proportion of elderly people, showing significant growth from 2015 to 2022, include Portugal, Austria, Italy, Spain, Germany, and France.⁸

Periodontal disease and edentulism

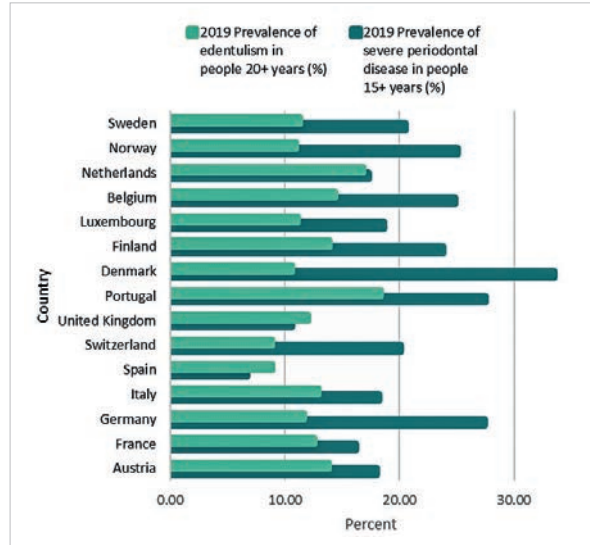
Another factor influencing the demand for dental prostheses is the prevalence of periodontal disease. Among European countries, Italy has the highest prevalence of periodontal disease among people aged 15

and over (18.2%),⁹ while Germany ranks first for individuals aged 15 and over, at 27.4%,¹⁰ followed by Portugal at 18.4%.¹¹ However, periodontal disease prevalence in the ageing population has significantly decreased in countries like France and Germany, tempering overall demand for dental prostheses. In terms of edentulism, the Netherlands has the highest percentage among those aged 20 and over, at 16.8%, followed by Portugal at 13.1%.¹²

Growth of the dental prostheses and digital dentistry markets

Despite improvements in oral health, the European dental prostheses market is projected to grow modestly each year to an anticipated valuation of €18 billion by 2030.² Among the market segments, crowns and bridges are expected to show the fastest growth compared with inlays, onlays, veneers and dentures. As modern dentistry continues to shift towards digitisation, driven by stable demand for dental prostheses, the use of CAD/CAM and specifically 3D-printing technology is anticipated to soar.¹⁵

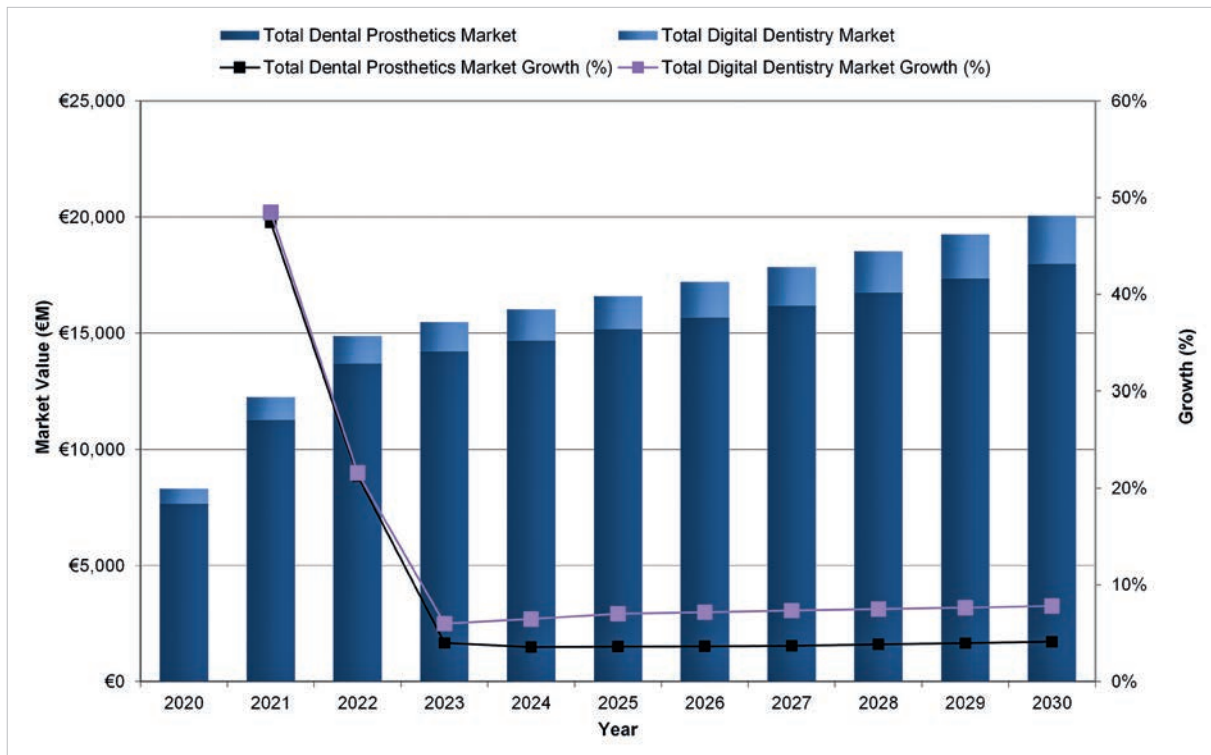
The expansion of CAD/CAM technology is likely to contribute significantly to the growth of digital dentistry, and projections indicate a market valuation exceeding €2 billion by 2030.¹⁶ The CAD/CAM device market is expected to lead this growth, followed closely by the 3D printer market.



Prevalence of edentulism and severe periodontal disease by country in Europe in 2019.^{13,14} (Source: © iData Research)

Consolidation of dental laboratories and clinics

In digital dentistry, dental laboratory and clinic consolidation is a major driver of growth alongside the strong demand for dental prostheses. Consolidation has increased access to capital for small and medium-sized laboratories, including in-house laboratories within clinics, enabling them to integrate digital workflows.



Total dental prostheses and total digital dentistry markets in Europe between 2020 and 2030. (Source: © iData Research)

Some noteworthy mergers and acquisitions involving pan-European consolidators between 2021 and 2023 include:

- *Oakley Capital*: On 10 August 2023, Oakley Capital, a leading pan-European private equity investor, acquired the laboratory operations of European Dental Group, a pan-European provider of oral care services. Having achieved rapid expansion of its European clinic platform and concurrently established a European laboratory business, the company made the strategic decision to separate and divest its laboratory operations, including Excent, Flemming and Artinorway Group. This translates to a network of 5,000 clinics supported by 70 laboratories throughout Europe.
- *Colosseum Dental Group*: In August 2021, the pan-European Colosseum Dental Group, which is part of Jacobs Holding, acquired Curaeos, which had 186 dental clinics and 54 dental laboratories across Europe. This strategic move enabled Jacobs Holding to enhance its global presence, comprising 800 clinics and a team of over 13,000 professionals. During the same year, Colosseum further expanded its international footprint by acquiring Mirò Dental Medical Center in Italy, adding 19 clinics to its portfolio. In June 2022, Colosseum continued its growth with the acquisition of Kliniek Tandheelkunde Sneek, a provider of dental services in the Netherlands.
- *Corus Dental*: In August 2022, Corus Dental, a pan-European dental laboratory consolidator headquartered in Barcelona in Spain, strengthened its influence in the dental prostheses market in Scandinavia through the acquisition of Nordentic, a notable industry participant in the dental prostheses market in the region. This strategic move expanded Corus Dental's portfolio to 63 laboratories and over 1,500 employees, enabling the company to cater to the needs of over 12,000 dental practices across Europe.
- *Avedon Capital Partners*: Avedon Capital Partners acquired Ketterling Dental-Technik in June 2023. Avedon is a private equity investor catering to small to medium-sized companies located in Belgium, the Netherlands, Luxembourg and Germany. In 2019, Avedon teamed up with Maxident, Crossmill, Hamm Dental and B u. T Dentaltechnik to form the DELABO.GROUP. In an effort to increase its reach in the dental industry, the DELABO.GROUP acquired a number of dental laboratories in Germany from January 2022 to April 2023. These include Dental Labor Kanzler + Trompeter, Gerling Dental-Labor, Huiss Dental-Labor and Dental-Labor Schiewe in January 2022, followed by Keller Dental-Labor in March 2022, Hans Plewe laboratory in April 2022, Walsdorff Zahntechnik in August 2022, Hesse Dentallabor in September 2022, Reitt & Meyer Labor in January 2023 and BIEMADENT Zahn-technisches Labor in April 2023.

Aside from these consolidations, there were significant merger and acquisition activities involving notable participants in the dental industry in Europe from 2021 to 2023. Sun European Partners, United Clinics, Dentalum Group, Adagia Partners and Bencis Capital Partners were among the entities involved in these transactions.

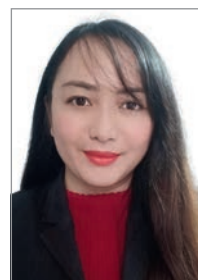
Closing thoughts

The European dental prostheses market is set to experience an increase in value, primarily propelled by the rising demand of the ageing population. However, this growth is being tempered by the continuous efforts of each country to improve its dental hygiene, resulting in relatively modest market growth. Conversely, digital dentistry is expected to experience robust growth, predominantly fuelled by the shift to digitisation and increased use of digitally fabricated dental prostheses. Additionally, the ongoing consolidation of dental laboratories and clinics is set to have a substantial impact, notably increasing demand, especially in markets such as CAD/CAM devices, including 3D printers. These consolidation activities are expected to provide expanded access to capital funds for small to medium-sized dental laboratories and in-house dental laboratories, thereby playing a significant role in reshaping the dynamics of the dental prostheses and digital dentistry markets.



Editorial note: Please scan the QR code for the list of references.

about



Donna Santos is a research analyst at iData Research, specialising in the dental industry. She is responsible for spearheading research projects on dental prostheses and digital dentistry. She has years of experience as a marketing analyst and has a bachelor's degree in engineering and a postgraduate diploma in data analytics.



Dr Kamran Zamanian is the CEO and founding partner of iData Research. He has spent over 20 years working in the market research industry, focused specifically on medical devices used to support the health of patients all over the globe.

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