



THE INDUSTRY'S PARADIGM SHIFT CONTINUES

LEADERS TAKE A LOOK AT THE PAST AND
SHARE THEIR APPROACH FOR THE FUTURE

Everyone wants to know what the future entails. Even more, everyone wants to design the future to cater to their needs and heart's desires. Yet we don't live in a fairytale; there is no genie granting three wishes. We all live in the real world and face what the future holds on a minute to minute basis and need to work with the hand life decides to deal. While we might not be able to dictate all elements of the future, we can predict and prepare for what might be ahead by carefully considering past events, by analyzing the current landscape and by noting trends gaining in strength. As professionals in the dental laboratory industry, we have become accustomed to a quickly changing environment. It has been shocking and difficult for some to catch on and catch up, and others are excitedly leaping off the cusp into even more significant change and industry revolution. No matter a dismal or joyous outlook on the future, it's imperative to be cognizant of what has happened, what is happening and what is likely to happen. The future of your success is reliant upon it.

A LOOK BACK

Ten years ago many people predicted where the lab industry would be in terms of materials, technology and lab consolidation. Some of those predictions have played out as expected. Some have been surprising. Most predicted advances in **technology**, although the pace and quantity might have been a bit surprising.

Tom Bormes, founder of Preat Corporation, predicted a move from traditional hand-produced to digital production and he was right. The dental laboratory was always in the labor business but the move to digital over the past decade reduced labor costs and improved consistency with the laboratory coming out ahead.

When Tom Leonardi, Dentsply Sirona Group Vice President, Global Prosthetics, came to the laboratory side of the industry in 2011 he was stunned at how much digital technology was already sitting in the lab space. He was surprised that dentists were wondering whether or not it was time to embrace digital dentistry but in the meanwhile labs have been incorporating new technology for them since the early 2000s.

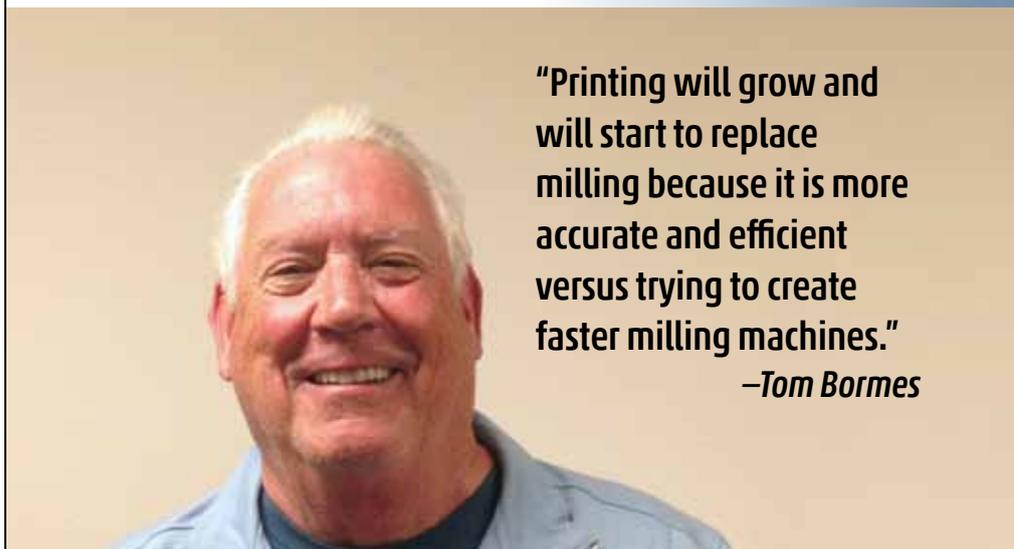
The pace and absorption of technology have also impacted labs' **business model**. Paolo Kalaw, CEO at nimbyx and Evident Healthcare Software, remembers talking about the outsourcing model ten years ago and was nearly blown off the stage. Yet, it did happen and much more rapidly than anticipated.

The most commonly cited area of the industry that soared bigger and faster than projected was the introduction of zirconia into the market. Kalaw knew that the shift to all-ceramic and the decreased use of metal alloys would leave its mark, but he still marvels at how fast zirconia has taken over in a conservative industry.

Norman Weinstock, consultant, agrees. "Ten years ago there was an article asking my thoughts on where the industry would be in ten years," said Weinstock. "I looked at what I wrote and I was pleased that my predictions were pretty much spot on. I predicted that the areas of CAD/CAM, 3D printing, implants and dentures would grow and that lab and manufacturer consolidation would continue. I was wrong in that I thought acrylic materials would play a major role in prosthetic dentistry and that hasn't happened, but at the time I didn't know about zirconia and the influence it would have."

A LOOK FORWARD

There are many different elements that will play a role in the evolution of the industry in the next five years. Some of those are customer changes, insurance pricing, advanced materials and equipment trends. Out of all of these, the growth of **Dental Service Organizations** (DSOs) is commonly pointed to



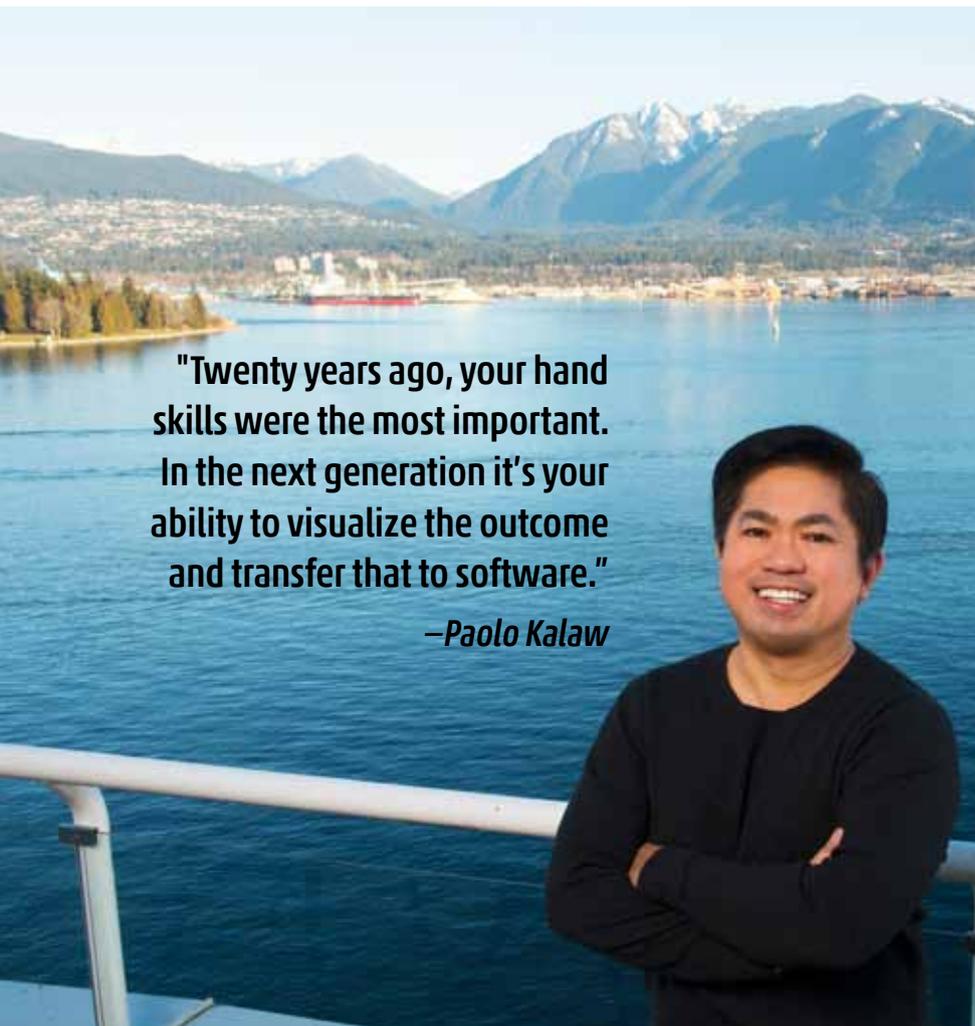
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—Tom Bormes



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as the game changer. The growth of DSOs has and will continue to grow very rapidly and it's not just the 800-office operations. Weinstock points out that there is an emerging phenomenon called a mini-DSO comprised of 5-30 dental offices that have banded together with one entity controlling everything. The consolidation of dental practices is expected to go through a similar natural evolution as dental manufacturers and labs.

Bormes concurs that the growth of DSOs is only going to accelerate. The average dental school graduate is overcome with debt and is forced to take a job immediately to create some degree of financial security and start to pay off debt. Their answer lies within DSOs and the segmenting of the dental market will be much more significant than it has been in the past. DSOs will have greater purchasing power and will place pressure on labs for lower fees; that, in addition to the mass product quantity, will have a significant impact on the smaller lab. High-production labs will need to grow more rapidly to meet the needs of a DSO.

"Although consolidation presents difficulties in the short-term, for a growing industry like the U.S. lab market, it stems from greater productivity and efficiencies," said Leonardi. "It's just in the hands of more efficient and productive labs and ultimately that's a benefit as it indicates a healthy industry with process improvement and greater productivity. This is a normal process and has been experienced by many industries over time. DSOs may accelerate this trend, because they are usually managed by sophisticated procurement processes and will look to labs with technology for lower costs as well as those similarly structured."

Consolidation is also prompted as equity companies continue to invest into acquiring and merging laboratories. "When I was in Chicago I met with six laboratories," said Weinstock. "None were for sale but they are now considering it knowing what the benefits are and where the market is going. Labs have older owners that need exit strategies and many labs have second generation owners looking to be a part of something bigger rather than compete against the larger companies on price."

Kalaw believes that the biggest changes won't be driven as much by DSOs and consolidation as by the needs of **the new generation** of dentists and dental technicians. "The new generation of dentists' requirements and expectations are significantly different from the generation of dentists that are near retire-

ment,” said Kalaw. “Higher debt, increased pressure, as well as limited training in dental school will play into the relationship factor in the lab business. On the lab side, younger owners are digitally savvy and have the ability to produce high-quality products with less staff while twenty years ago, your hand skills were the most important. In the next generation it’s your ability to visualize the outcome and transfer that to software.”

The big question that still remains is if dentists will board the technology bandwagon. Bormes doesn’t predict a large trend of dentists going digital. “A dentist only earns when they are wet-fingered producing dentistry,” said Bormes. “If we have them working digitally to produce that restoration, and it’s inferior to the skills and productivity of the technician, we are putting a \$20 per hour person in a \$10 per hour job. Today’s digital dental laboratory can produce a superior restoration at a lower cost than in office. The only advantage to in-office digital production is the same day restoration at a higher fee.”

Another popular trend that is on the verge of explosion is **3D printing**. While in the past the consensus seemed to be that 3D printers were unreliable, too expensive and inaccurate, the market is quickly gaining traction with new, improved and more affordable options. Some of the tabletop printers are providing a way for lab owners to dip their toes in the water without the consideration of a major investment. And the idea is growing.

“I still believe that a major factor in the next ten years will be 3D printing, eventually replacing CAD/CAM as the predominant manufacturing system for dental laboratories,” said Weinstock. “It’s a lot easier to use additive technology versus subtractive. Zirconia starts as a powder and is refined and cleaned up and made into discs and then it’s milled back to a powder — not very efficient. With additive technology you start with a powder until it’s used up and there’s no waste.”

With an aging U.S. population in need of dentures, 3D printing can be an affordable solution. “When I started in the industry 55 years ago I was doing sales at Dentsply,” said Weinstock. “I was told by a friend that I wasn’t going to have a long career since eventually no one will need dentures. Today I can tell you there are more denture teeth being sold than ever. The cost of a denture has gone up over the last ten years while the cost of a crown has gone down. I never would have guessed that dentures would be a more profitable item.”

“Printing will grow and will start to replace milling because it is more accurate and efficient versus trying to create faster milling machines,” said Bormes. “One of my favorite quotes is when Henry Ford started developing the automobile and asked people what they wanted; they all said faster horses. Consider what he accomplished instead.”

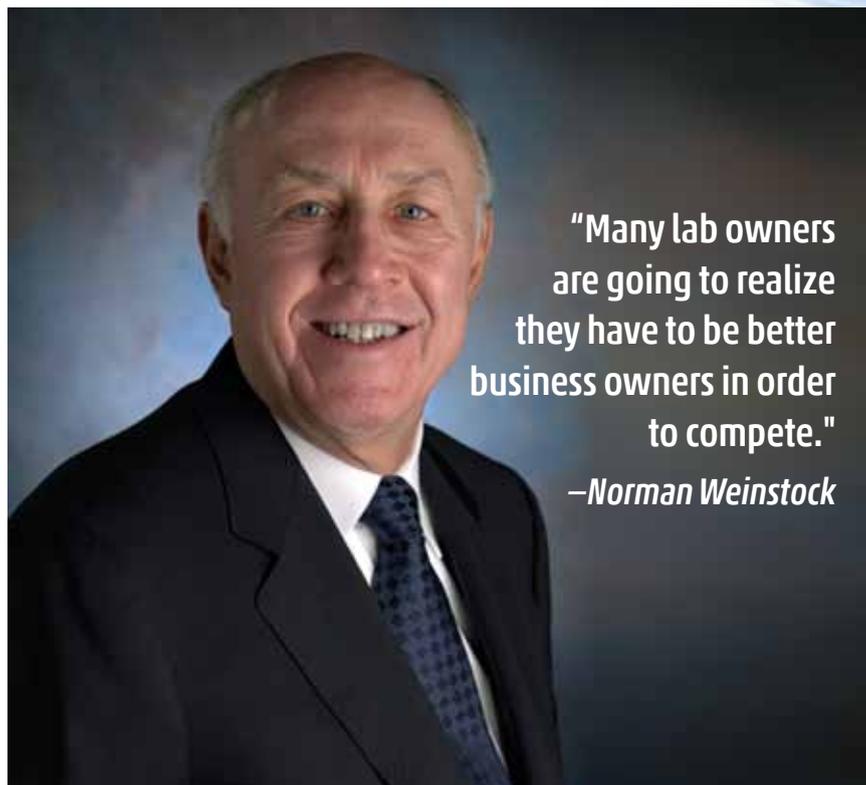
A FRESH LOOK

What would the industry experts do if they could design the future?

Bormes encourages lab owners to participate in activities that provide new and diverse client contacts including both industry and non-industry events. He also recommends differentiation by featuring implants and high-end esthetics. Above all, he encourages laboratory owners and their personnel to totally change their role and become an educator, advisor and facilitator for the dentist. He would focus on developing aids for his dentists by providing courses on how to sell services and products.

“As more and more designs come from software and scanners, theoretically the day will come when all crowns will be the same,” said Bormes. “This creates a demand upon the laboratory to change their role and differentiate their services and products. They need to communicate their skills to the market. The dental

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lab industry cannot control how many crowns or dentures are going to be rendered by dentistry. So for us to grow we need to help them grow. I do believe that technicians often worry that someone who is more computer-savvy will replace them but I think that it will be the opposite. If you don't understand occlusion and the curves of Spee and Wilson, all of the computer skills in the world won't allow you to design a good digital restoration."

Leonardi encourages lab owners to be even better positioned for the future by incorporating metrics and efficiencies now. "If you break down your value streams and main processes you can measure against those metrics and become more efficient," said Leonardi. "You also need to own the relationship with your dental customer. As the world becomes flat and smaller and more digital it's easier for clients to switch from provider to provider. Show your expertise, educate and bring the added value that only a true 'laboratory partner' can provide."

Lastly Leonardi believes owners should consider the outcome of potentially increased regulatory compliance in the U.S. lab market. While there is some uncertainty if and when this would occur, it is evident that for most industries compliance is increasing and it's important to be ready if regulatory bodies do become more active in the traditional lab space.

Kalaw would be a consultant for dentists to help them be successful and treat patients appropriately as opposed to focusing only on building a seven-layer crown with marvelous translucency. "Middlemen labs are still going to exist but the demand is to operate as a business opposed to a handcraft facility," said Kalaw. "The value attributed to being a handcraft business isn't as valued by dentists as it was before. Dentists now

seek a solid business relationship with labs because it's already a forgone conclusion that the product is going to be good."

Weinstock predicts that in order to be successful in the future, the dental laboratory owner needs to be knowledgeable in implantology, removable prosthetics and 3D technology, be a teacher for dentists and have better business acumen.

"There is a need for more knowledgeable lab managers and technicians," said Weinstock. "Many lab owners are going to realize they have to be better business owners in order to compete. I've looked at financial statements and some owners don't even know what their EBITA is and that they are losing money. That's a real problem but it's a fact. There are a lot of elements that need to be changed in the laboratory space in order to succeed in the future."

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