

BIG ORTHO MOVES FROM THE HARDWARE STORE TO THE APPLE STORE

Michael Pearson Berger, MBA
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The orthopedic industry is on the forefront of a new frontier in healthcare, driven predominantly by forces around innovation. Emerging technologies that were considered a novel idea a decade ago are now viably connecting the human body with digital health applications. Those technologies are advancing orthopedic device commercialization from the traditional hardware store model to a modern Apple store strategy.

INNOVATION STRATEGY

“Our innovation focus has also shifted, moving much more aggressively toward enabling technology around the implant, such as robotics, mini robotics, informatics and operating room efficiency. Although the implant will always be at the center of what we do, our goal is to provide a complete ecosystem that is both customer and patient centric.” – Zimmer Biomet

Most companies in the orthopedic device industry depend on new technological advances: it is necessary for them to develop new products that are both innovative and cost effective. The orthopedic device industry is now, more than ever, strategically focused on innovation with the business objective of gaining market share, financial growth, and competitive advantage. This is a significant shift from recent strategies that centered on making efficiencies around hardware to lower manufacturing costs and increase margins. Given the advancement of consumer innovation, the modern healthcare system is now primed and ready to clinically apply technology, for example, in the form of data analytics, personalized patient health, and predictive medicine through artificial intelligence.

Big Ortho is in a position to make an impact on the way healthcare is delivered. Orthopedic innovation has primarily advanced in the design and material aspects of implant hardware for fracture fixation and spine, hip, and knee arthroplasty. Medical device implants currently in research and development is expected to integrate advanced wireless in-body communication, powering, in vivo data exchange and storage, and nanosensors applied to diagnostics, infection and disease detection, therapeutics, and patient monitoring.

Big Ortho has been increasing its focus on robotics to assist surgical device implantation. In 2017, Stryker was the first orthopedic company to release an FDA-cleared robotic implant device, the Cementless Mako Total Knee with Triathlon® Tri-tanium®. Over just a few years, image-guided techniques have improved implant positioning, alignment, and balancing, whereas 3D imaging and scanning techniques have assisted implants by pre-simulating complicated procedures.



GLOBALIZATION STRATEGY

“We deliver innovative solutions to today’s healthcare challenges to advance patient care and deliver clinical and economic value to healthcare systems throughout the world.” – Johnson & Johnson

The United States is the largest producer of medical devices and is credited with many first-to-market innovations. Our nation’s companies, however, are no longer as dominant in the global medical device space compared with other countries. Competition is increasing due to new entrants, emerging industrial nations, and product substitutions.

There is a demand for medical devices in developing nations where there is rapid growth in health care. The booming orthopedic device landscape in India correlates with the country’s rapidly expanding healthcare sector and economy. Growing infrastructure and high-tech manufacturing capabilities is providing opportunity for medical device companies in this regional market to meet the demand of India’s population.

Global supply chains and leaner manufacturing processes, in addition to developments in 3D printing which are lowering manufacturing costs, are enabling competitive pricing and wider profit margins. With respect to the threat of substitutes, the major substitutes that are entering the market are due to advancements in 3D printing. 3D printing uses both new technology, new materials, and more efficient processes, enabling new entrants to market with a competitive manufacturing advantage given lower capex.

Stryker is an example of a Big Ortho company that has sought a stronger global presence in the marketplace, particularly in trauma and extremities. In November 2019, that company acquired Wright Medical at \$4 billion to accomplish this goal. “This acquisition enhances our global market position in trauma and extremities, providing significant opportunities to advance innovation, improve outcomes and reach more patients,” Stryker Chairman and CEO Kevin Lobo said in a statement.

DePuy Synthes’s diversification extends into the European and Japan markets, strengthening their trauma, spine, and CMF market position. In addition, their leadership position in Asia-Pacific adds to their portfolio. As a result, the breadth of their global presence diversifies revenue streams reducing geographic concentration risk.

INVESTMENT STRATEGY

“Our disciplined approach to business development drives our growth and future innovation. Mergers and acquisitions have long been a priority for our capital allocation and an accelerator of long-term performance. Our ability not only to acquire the right businesses but also to integrate them quickly to drive growth is a strength.”
– Stryker

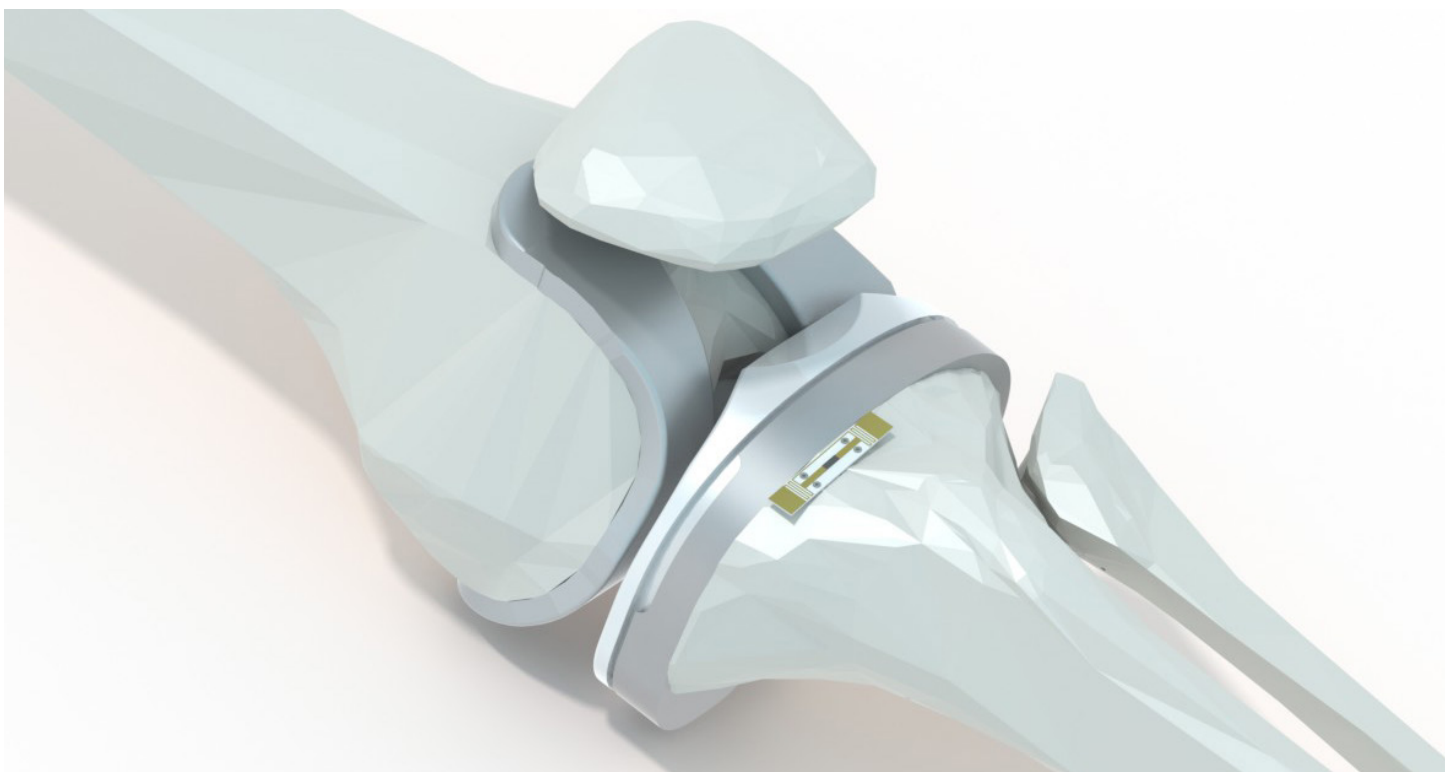
Big Ortho is currently classifying innovation investment into a range of buckets: data, robotics, artificial intelligence, biologics, virtual/telemedicine, and wearable/implantable sensors. Johnson & Johnson is investing in the healthcare digital revolution by designing mobile apps for managing joint pain and

diabetes. The company’s partnership with Alphabet’s life sciences arm, Verily, is said to produce a digital surgery platform that combines visualization, robotics, advanced instrumentation, machine learning, and cloud-based connectivity.

Small companies often lay the foundation for innovative work in the medical device field. These companies have flexibility and close ties to researchers, and they do not stand to lose much by developing a new product that replaces existing technologies. Due to the time and risk involved in designing successful high-tech products, large, well-funded medical product manufacturers tend to buy the small companies or develop alliances with them. As a result, larger companies are often the chief suppliers (either directly or indirectly) of most breakthrough medical devices.

The majority of innovation investments are through merger and acquisition deals of smaller companies that have cleared, commercialized, and proven a market demand and revenue stream for their technologies. Organizations within the industry are now having to adopt novel valuation techniques to assess acquisition targets, due to improving end markets, new product launches, and continued strong sector fundamentals.

Big Ortho companies, such as Johnson & Johnson, are making additional investments to foster early-stage startups through innovation centers and incubators located across the globe that provide lab space, resources, and guidance. Smith & Nephew’s InVentures program provides a collaborative pathway for physicians and surgeons who have innovative concepts, solutions to clinical problems, and ideas for product improvement.



PARTNERSHIP STRATEGY

“Patient-focused innovation, and strong partnerships. remain key to an even better, more impactful future.”
– Medtronic

“J&J will re-gain orthopedic market share and leverage Amazon, Google partnerships.” – Johnson & Johnson

Big Ortho can no longer afford a wait-and-see approach when it comes to innovation. Big Tech companies – including Amazon, Apple, Google, and Microsoft – are launching initiatives in various health care segments with strategies that drive disruptive change by capitalizing on consumers’ focus on personal health and wellness.

Orthopedic device companies are taking note of the best practices of Big Tech, such as Apple, to achieve market success and sustainable growth. In turn, Big Tech is utilizing Big Ortho to translate product ideation into regulatory clearance and healthcare market commercialization.

Current and future generations of consumer devices are physically connecting the user and generating real-time diagnostics that monitor several health parameters in an effort to prevent disease. Based on current and emerging trends, it won’t be long until wearable devices migrate to implantable devices.

There are some initial collaborative research initiatives taking place today. Within the last two years, Johnson & Johnson and Zimmer Biomet announced a partnership deal with Apple Health to study clinical data analytic applications using the Apple Watch and iPhone interface. This provides mutual opportunities to converge respective med tech and consumer tech IP, and translate product ideation into successful healthcare market commercialization.



MARKETING STRATEGY

“Our audience base is changing dramatically. It’s not solely the physician anymore. There are many more influencers within the buying journey. We now have a multitude of channels and mechanisms by which we can deliver a message, and that’s become more central to our strategy.” – Rob Clark, Medtronic

“The value proposition is not just about clinical; it’s about patient experience and economic benefits. The role of marketing is fundamentally to understand customer insights and unmet needs and be able to articulate that internally and to the market.” – Rajit Kamal, Johnson & Johnson

Healthcare is now patient-driven and patient-centric based on clinical needs to create value for patients. Given this reality, healthcare marketing communication is shifting strategy from direct-to-physician to direct-to-patient. Social media has created new marketing channels for which messages can be delivered to patients. Also, these channels can help the orthopedic industry obtain greater understanding of customer insights and unmet needs.

Patient-driven advertising campaigns are aligning health brands with today’s consumer environments. Patients are now more informed. Products and services are being positioned based on real-world insights into the lifestyles of patients and the general population. The patient-driven strategy appeals to the consumer’s pain points and emotional triggers, which engages an increased awareness of each product’s benefits and value propositions. That engagement establishes brand loyalty and drives demand.

Given growing synergies between Big Ortho and Big Tech, we will see more focus on direct-to-patient marketing through global cobranded campaigns that employ digital and social media platforms. Marketing strategies will follow the example of tech giants, such as Apple, who have been most successful in disrupting their own markets.

ABOUT THE AUTHOR

Michael Berger is a marketing professional who specializes in strategic planning. He is a 2019 graduate of the University of Pittsburgh’s Katz Graduate School of Business where he earned a Master of Business Administration in Healthcare.