



— SINCE 2005 —
IMPLANTS
2023
International conference on innovation
for orthopedic implants and orthobiologics

MARKETS • TECHNOLOGIES • STRATEGIES
Avicenne's Insights
**WORLDWIDE ORTHOPEDIC
MARKET & TECHNOLOGY
2026 OUTLOOK AND KEY TRENDS**

— BY **ALI MADANI** —

MARCH 9, 2023 • LAS VEGAS – TREASURE ISLAND HOTEL & CASINO
6:30 PM - 9:30 PM CONFERENCE & NETWORKING DINNER



CONFERENCE FOUNDED
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DETAILS OF THE 5-PART CONFERENCES:

development strategy, acquisition target research, market & technology monitoring, etc... to increase the revenues and profitability of his clients or to sustain strategic changes.

Ali is the author of the following best-selling reports:

- The Worldwide Orthopedic and Spine Contract Manufacturing Market Report and Top 100 supplier profiles
- European & Worldwide Orthopedic Market: hip, knee, shoulder and player strategies
- The Worldwide 3D printing market for orthopedics & Top 80 player profiles

Ali Madani's Conferences have featured among the presentations most highly rated by participants. Come and benefit from Avicenne's latest market research based on 30 years' experience and extensive business connections with all parties; Orthopedic companies, Contract Manufacturing Organizations, Surgeons, PE funds, etc.. For 30 years, Ali has worked on more than 350 orthopedic cases, due diligence,



Part 1 Worldwide orthopedic market trends & dynamics

Where are we going in the short and long term?
What are the risks & opportunities for the implant and instrument end-user markets?
Why are some players growing faster?
At what level will MDR inhibit innovations and what are the risks for stakeholders?



- Geographies: USA, Europe (18 countries, 5+13), China, Japan, Australia, South Korea
- Major player analyses: Zimmer Biomet, Depuy Synthes, Stryker, Smith & Nephew, Medtronic, Nuvasive, Globus
- Major challenger analyses: Aesculap, Medacta, Corin, Microport, Lima, Amplitude, Link, Exactech, Enovis, Menix, United, and many others
- Reasons why some players are growing faster: product range extension Vs rationalization, more new products, more services to surgeons, etc.
- Drivers & barriers: inflation, price erosion per area, regulatory pressure, particular case of MDR in Europe, Quality and Regulatory issues, dealing with innovation and costs in Orthopedics

Part 2 Innovation & new technologies for implants, instruments & surgical techniques

What are the most promising innovations in orthopedics and what is their added value?
3D Printing: which technology / equipment supplier will be dominant? Is 3D printing the right option for the implant Contract Manufacturing business?
Robotics: how are robotic-assisted and navigation surgeries changing the nature of the industry - Will robotics be a game changer in the next 5-10 years or just an add-on in the product line – a 'must have'? How can CMOs adapt?



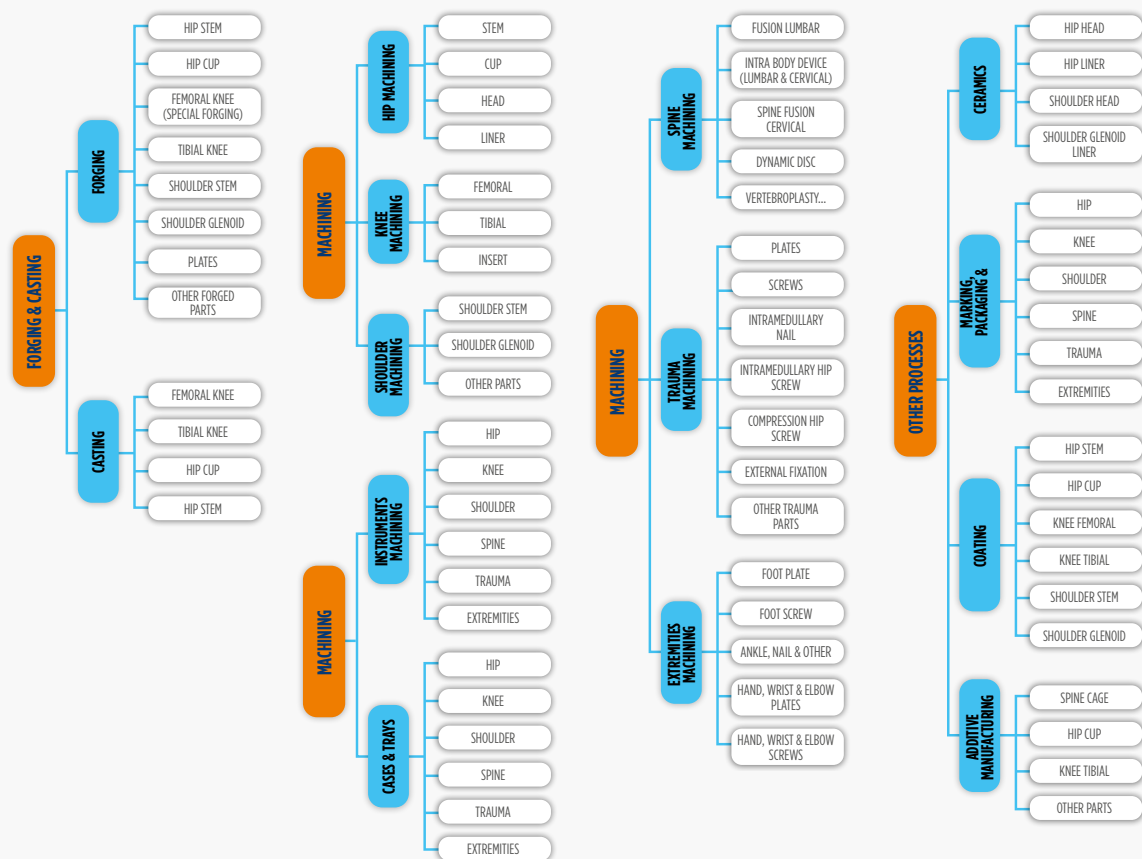
- Alternative products or treatments to implants: Can cartilage repair or other miracle cures slow down the use of prostheses?
- The Holy Grail of Mini-Invasive Solutions: Innovations that have paved the way - short hip, expandable interbody cage, etc.
- Innovation and new products as differentiating factors, cases studies: dual mobilities, MIS surgeries, 3D printing, etc.
- Robotic-assisted surgeries with analyses of Mako, Rosa, Navio, Velys, Omnilife, Think Surgical, Mazor, Tanvi, etc. Forecasts to 2026
- How are robotic-assisted and navigation surgeries changing the nature of the industry by requiring new know-how and technologies? Will robotics be a game changer in the next 5-10 years or just an add-on in the product line – a 'must have'? How can CMOs adapt?
- Additive Manufacturing usage, market penetration and OEM player strategies: Stryker, Lima, AK Medical, Zimmer Biomet, Depuy Synthes, Smith & Nephew, Adler, 4Web, Exactech, etc.
- Additive Manufacturing CMO strategies: Lincotek, RMS surgical, Norman Noble, C&A Tool, FMI, Precision ADM, Tangible, etc.
- Additive Manufacturing equipment supplier analysis: Arcam, EOS, ConceptLaser, SLM, 3D Systems, etc.
- Is Additive Manufacturing the right option for the implant Contract Manufacturing business? Analysis of different products & players for reconstructive implants, standard cages, special cages and customized implants
- Additive Manufacturing Forecasts for 2026 and by main products used
- Single-use instruments, smart implants & instruments. Moving toward a mass market?
- Chrome-Cobalt: Will it disappear or not? What are the alternatives and when will they be available?
- Biological products: What are the unmet needs? Bioresorbable cements with acceptable mechanical properties? Abundant allografts? Development of cements with new antibiotics, etc.

Part 3

Orthopedic Contract Manufacturing market, player strategies & dynamics

What are the Contract Manufacturing volume & value, and trends to 2026?

- Orthopedic companies manufacturing strategies, in-house & contract manufacturing: Stryker, Depuy Synthes, Zimmer Biomet, Smith & Nephew, Medtronic.
- % of contract manufacturing for: implant forging, casting, machining & finishing, instruments, cases & trays, ceramics, coating, 3D printing and packaging.
- Number of components manufactured in-house vs contract-manufactured by player: hip stems, hip cups, LF plates, LC plates, Knee femoral, knee tibial, head, liner, insert, lumbar Universal Systems, Cervical plates, screws & cages, trauma plates, split of instruments for hip, knee, spine, trauma, coating for hip stems, cups, femoral & tibial knees, split of cases & trays.
- Forging Contract Manufacturing 2021 market shares & CMO-OEM relationships
- Forging Contract Manufacturing 2012-2026
- Casting contract Manufacturing 2021 market shares & CMO-OEM relationships
- Casting Contract Manufacturing 2012-2026
- Additive Manufacturing in-house and contract manufacturing 2015-2026
- Hip & knee Machining Contract Manufacturing 2021 market shares & CMO-OEM relationships
- Hip & knee Machining Contract Manufacturing 2012-2026
- Spine, trauma, extremities and shoulder implants Contract Manufacturing 2021 market shares & CMO-OEM relationships
- Spine, trauma, extremities and shoulder implants Contract Manufacturing 2012-2026
- Instruments for knee, hip, spine: segmentation, life cycle, number of pieces, Average Sale Price, main components
- Instruments Contract Manufacturing 2021 market shares & CMO-OEM relationships
- Instruments Contract Manufacturing 2012-2026
- Cases & trays Contract Manufacturing 2021 market shares & CMO-OEM relationships
- Cases & trays Contract Manufacturing 2012-2026
- Ceramics Contract Manufacturing 2021 market shares & CMO-OEM relationships
- Ceramics Contract Manufacturing 2012-2026
- Coating Contract Manufacturing 2021 market shares & CMO-OEM relationships
- Coating Contract Manufacturing 2012-2026
- Marking, Packaging, Sterilization Contract Manufacturing 2021 market shares & CMO-OEM relationships.



Source : Avicenne 2022

Part 4 Orthopedic Contract Manufacturing Key trends

What are the Contract Manufacturing headwinds, tailwinds and key trends?

What kind of risks and opportunities do the new giant entrants, like Jabil and Heraeus, induce for the existing players?

Who will be the winners and what levers will be used?

Deep dive into the top 20 Contract Manufacturers



- Top 20 contract manufacturers ranking and M&A activity: Tecomet, Viant, Orchid, Avalign, Intech, etc.
- Analysis of Top 20 contract manufacturers, 21-100 and beyond: concentration
- Contract manufacturing by origin of orders
- Orthopedic Contract Manufacturing concentration by acquisition, comparison between COGS (Cost of Goods Sold) spending from the Majors and the Top 20 CMO revenues
- Outsourcing trend and outsourcing rate over the long-term
- Ortho facility disinvestment history and the Jabil case: a breakthrough deal
- Analysis & details of the Depuy-Jabil deal: a major disruptive event in the contract manufacturing market
- Risk of manufacturing shifting to Low Labor Cost countries
- 2012-2026 contract manufacturing and in-house production by value: implants, instruments & cases
- Supply chain and contract manufacturing: how can the collaboration between OEMs and contract manufacturers yield innovation? How is the ongoing market concentration affecting their relationships?

Part 5 Impact of inflation, FX rate, and Covid-19 on the orthopedic market & Contract Manufacturing business

How inflation, FX rate and Covid-19 impacted the orthopedic market and contract manufacturing.

How will the industry react to raw material inflation, rising labor costs, etc.?

- Inflation in different geographical areas and impact on the end-user orthopedic market: USA, Europe, Australia, Japan, etc.
- Impact on the contract manufacturing market: case of major CMOs and challengers
- 2020 COVID-19 and comparison with 2008 crisis
- Analysis of Majors' activity in 2021 & 2022: Zimmer Biomet, Depuy Synthes, Stryker, Medtronic spine & biologics, Smith & Nephew
- Analysis of Challengers' activity in 2021 & 2022: Globus, Nuvasive, Aesculap, Amplitude, Seaspine, Orthofix, Alphatec, Link, etc.
- Analysis of Major Contract Manufacturers' activity in 2021 & 2022: Tecomet, Orchid, Viant, Avalign, Intech, Marle, etc.
- Orthopedic end-user markets by country: USA, Germany, France, Italy, Spain, UK, other countries
- Impact of inflation, Covid-19 & FX rate on contract manufacturing revenues in 2020, 2021 & 2022 projects and backlogs, company profitability. Scenarios and the conditions necessary to achieve them.

WHEN

→ 6:30 pm, **Welcome reception at Las Vegas, Treasure Island Hotel & Casino**

→ 6:45 pm to 8:45 pm
Ali MADANI's Conference

→ 8:45 pm to 9:30 pm
Cocktail reception and networking dinner

Register online:
<https://tutorials.implants-event.com/>
Fee: € 240 (VAT included)

Proceedings: a downloadable copy of the presentations will be distributed to all registrants.

ALI MADANI • SPEAKER & CHAIRMAN

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