Strategic market research for the Orthopaedics industry

Overview of Avicenne Medical

July 2016
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- Our activity & examples of missions
- Our team
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- Our network contacts
- Benefits to collaborate with AVICENNE
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Our story
AVICENNE has always been involved in the major deals & events in the Orthopaedics Industry

Foundation of AVICENNE
1992

DePuy-Landanger deal
1997

IMPLANTS: 1st edition
2005

LISI entering orthopaedics
2007

CARLYLE-Marle deal
2009

APAX-Amplitude deal
2011

AXA PE–LIMA deal
2012

IMPLANTS: 11th edition
2015

TECRES AAP Biomaterials deal
2016

Charlesbank-TECOMET deal
2014

Keensight-Menix deal
2013

Biomaterials deal
2015
Our activity
We are active in all the main orthopaedics segments
Our activity

We are active in all the main contract manufacturing services
## Strategic market research & due diligence: example of missions 1/2

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<td>Reimbursement procedures, trends and impact on the target business</td>
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<td>Outsourcing strategies and trends of orthopaedic companies</td>
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<td>Risks and opportunities of relocation of the implants to BRIC countries</td>
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<td>Selection and understanding of criteria for OEMs to choose their Contract Manufacturers</td>
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<td>Strategic &amp; operational recommendations: Ways to maximize value</td>
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<td>(AXA PE, now Ardian)</td>
<td>Competitive advantages of the company in Italy, Germany, Spain, Portugal, USA, Australia, South Korea and Japan in terms of products, market shares, image, etc.</td>
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<td>Analysis of the company distribution channels</td>
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<td>(APAX Partners)</td>
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<td>Future strategic area target analysis: USA &amp; Japan</td>
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<td>Other countries target analysis: Brazil, Middle East, India</td>
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<td>Distribution channel analysis: distribution by agents, company sales force, distributors</td>
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<td>Business Plan forecasts: current products</td>
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<td>Business Plan forecasts: new opportunities and build-up scenario</td>
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<td>Opportunities &amp; risks of acquisition</td>
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Strategic market research & due diligence: example of missions 2/2

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<tr>
<td><strong>LISI Group entering orthopaedics</strong></td>
<td>2011 WW</td>
<td>Strategic advice to diversify in orthopaedics. Goal: To reach 100 M US$ in revenues in 5 years</td>
<td>Analysis of orthopaedics contract manufacturing by segment: Forging, casting, machining, coating, etc. Drivers and limiters for each segment and focus on several opportunities Analysis of the dental implants market worldwide and opportunities in this field Contract manufacturer acquisition opportunities analysis in Europe and the USA Business Plan scenarios: presentation &amp; restatements Road map for 5 years</td>
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<tr>
<td><strong>Confidential</strong></td>
<td>2016 WW</td>
<td>Finding appropriate targets for acquisition and strategic analysis of risks and opportunities</td>
<td>Selection of 15 to 30 acquisition targets with defined criteria: Serving the Orthopaedics OEMs in various areas Capabilities in innovation with strong R&amp;D and quality departments Prototype, metrology, testing, machining, cleanroom class III, packaging, competencies Financial perimeter: 10 M US$ - 100 MUS$ revenues, level of profitability, etc. Analysis of the risks, complications and obstacles Final selection of the appropriate targets Open channels of communication with the targets</td>
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<tr>
<td><strong>Medtronic</strong></td>
<td>2007 to 2011 Europe</td>
<td>Strategic market research</td>
<td>Quarterly market shares tracking in 14 European countries for different spine products Perimeter: Stabilization, Dynamics, Orthobiologics &amp; Vertebroplasty with 13 sub-segments in detail Tracking of devices sold by unit &amp; value Product portfolio assessment of the players Forecasts and trends to identify the future high growth products</td>
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<tr>
<td><strong>TECRES AAP Biomaterials</strong></td>
<td>2016 WW</td>
<td>Strategic Due Diligence for the buyer (TECRES &amp; Keensight Capital)</td>
<td>Product portfolio assessment for AAP biomaterials &amp; TECRES Size and Forecast of the global orthopaedics cement market In-house Manufacturing &amp; outsourcing strategies of the orthopaedic companies Segmentation, sizing and dynamics of Vertebroplasty cements &amp; instruments Understanding the competitive advantages of each company Strategic &amp; operational recommendations for the merger Proposal for an appropriate communication strategy with the Industry</td>
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## Examples of our customized client projects

### Orthopaedics

- **2016**: Strategic due diligence for the merger Tecres and aap Biomaterials to build the independent worldwide leader in bone cement and biomaterials for orthopaedics and spine
- **2015**: Strategic due diligence for Teknimed an orthobiologics supplier, for an European private equity buyer
- **2014**: Strategic due diligence for Menix group acquired by Keensight Capital
- **2013**: Strategic analysis for Charlesbank Capital concerning TECOMET deal
- **2012**: Strategic & commercial due diligence for LIMA group in Italy for AXA Private Equity
- **2012**: Commercial due diligence for In’tech Medical in France & USA for a Private Equity
- **2011**: Strategic due diligence for leading orthopaedics company in France for Apax Partners
- **2009**: Build-up strategy after acquisition of leading European implants supplier for Carlyle Group
- **2008**: Diversification strategy building for an aerospace group to enter in the orthopaedics contract manufacturing market: target 100 M$ in 5 years for LISI Group
- **2006**: Strategy to growth market shares and build-up for the European leading Orthopaedics contract manufacturers: for ATS Stellite
- Many other confidential surveys currently under NDA

### Surgeon surveys

- Surgeon’s usage and preferences for certain orthopaedics product designs in Germany, Spain and UK
- Surgeon survey in USA & Europe concerning the hip dual mobility cups usage and trends
- Advantages & risks of launching a new total knee system

### Technology Watch

- European Image guided Surgery Platforms & Modules
- Orthopaedic patents watch focus on 4 segments: hip, knee, trauma & orthobiologics
- Patient Specific Cutting Guides for knee joint replacements
- Additive Manufacturing: The new challenge to manufacture orthopaedics implants and instruments
Our team

Foundation of the company
1992

Orthopaedics
main activity

Head Quarter
Paris

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Ali MADANI
Paris

Christophe PILLOT
Paris

Jean-Philippe SALVAT
Paris

Amir YASSARI
Vienna
Why partner with us?

Survey Methodology

- Entire supply chain & all players: OEMs, Contract Manufacturers
- All product types: implants, instruments, cases & trays, biologics, cements, ceramics
- All manufacturing services: forging, casting, machining, coating, packaging, sterilization
- OEM & Contract Manufacturer direct interviews with decision makers thanks to strong links with CEOs, R&D, Marketing, Sales...
- Cross-checking of information thanks to our tried & tested operating models
- 20+ years of historical data on the Orthopaedics & Contract Manufacturing markets
- Companies & markets; continuous tracking
- Highly detailed segmentation

Operating Models & Cross-checking of information

Worldwide coverage

- Developed countries
- Western Europe
- BRICS countries
- Latin America, Middle East, Asia...
- Other countries

Implants
- Hip
- Knee
- Spine
- Extremities
- Trauma

Contract Manufacturing
- Implants
- Instruments
- Cases, trays
- Biologics

CONTACT

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Our methodology
Direct interviews with companies

- Conferences & exhibitions
- 33,000+ decision makers in 7,000+ companies
- 100s of interviews each year
Our methodology

**Phase 1**
- Interviews with main companies
- Conferences
- Exhibitions
- Project expertise

**Phase 2**
- Markets operating model
- Historical analysis
- Cross checking of information
- Forecasts and heavy trends

**Phase 3**
- Quality control
- After sales services
- Draft presentation
- Q&A
- Final document
- Strategic recommendations, interview details

**Phase 4**
- Markets operating model
- Historical analysis
- Cross checking of information
- Forecasts and heavy trends
Our methodology

Our contact network

- Surgeons database connections
- Updated daily
- 25 years of experience

33,000+ qualified contacts

Our Orthopaedics database:
33,000+ qualified contacts

- Europe 10,400+ contacts
- New database BRIC, Eastern Europe, Latin America
- Contract Manufacturers 7,500+ contacts
- USA 18,900+ contacts
- Example: 7,600+ decision makers for Spine segment

33,000+ qualified contacts
Our contacts at different levels

Orthopaedics MAJORS
- Corporate Marketing
- Corporate R&D
- Marketing Strategic Corporate
- Marketing Director
- R&D managers country
- Sales Director
- Sales country
- Sales country

CHALLENGERS OR CONTRACT MANUFACTURERS
- CEO
- R&D Director
- Marketing Director
- Quality Director
- Export Director
- Sales Director
- Internal sales or Agent
- Internal sales or Agent

CONTACT

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Our customers


Apax Partners, AXA PE now Ardian, Argos Sodlitic, Banque Lazard, Carlyle Group, Charlesbank Capital, Clayton, Dublier & Rice, European Capital, Goldman Sachs, Keensight Capital, LBO France, Permira, Piper Jaffray,Pragma Capital, Rothschild Five Arrows, Simuval, Warburg Pincus, Zurmont Madison...

Arthur D. Little, AT Kearney, Bain, KPMG Strategy, LEK Consulting, McKinsey & Company, OC&C Strategy, Oliver Wyman, Roland Berger...
Benefits to collaborate with AVICENNE

Strategic & operational consultancy in Orthopaedics industry since 1992 and strong links with the main decision makers

Guaranteed Confidentiality - a Key Value

Worldwide coverage of the whole chain:
- OEM, Surgeons, Contract Manufacturers but also research laboratories
- Areas:
  - Europe: France, Germany, UK, Italy, Spain, Switzerland, Belgium, Austria, The Netherlands, Portugal, Nordic countries, Eastern Europe
  - USA, Canada
  - Japan, Australia, South Korea,
  - Brazil, Russia, India, China, Latin America, Middle East

Clear Methodology, clear results and clear recommendations
Services M & A

1. Information Memorandum: Analysis
2. Direct interviews with main customers, suppliers, surgeons, …
3. Data Room Assistance, Management presentation, Q&A issues
4. Business plan & Forecasts
5. Strategic analysis of risks and opportunities for the Merger & Acquisition
6. Analysis of potential of growth based on existing business
7. Growth based on build-up strategy
8. Quick flash services for urgent & fresh information
9. ... also: Finding New Management team, targets for build-up,…
Appendices

International conference
IMPLANTS 2016
12th edition

Our annual reports
(multi-client)

Patents watch

Orthopaedics

Contract Manufacturing

Spine
AVICENNE off the shelf market reports

“Worldwide orthopaedic Contract Manufacturing market report 2015-2020 & Top 100 supplier profiles”
July 2016 3rd edition

- OEMs strategy for outsourcing & home-made
- Detailed markets & sizing for:
  - Forging: hip stem, hip cup, femoral knee...
  - Casting: femoral knee, tibial knee, hip cup...
  - Hip, knee, spine & trauma and instruments machining & finishing
  - Cases & trays: hip, knee, spine, trauma
  - Coating: stem, cup, femoral, tibial
  - Ceramics: hip heads, hip liner
  - Cleaning & packaging...
- Additive Manufacturing for orthopaedics products: trends, developments and players.
- Top 100 Contract manufacturers detailed profiles

Available immediately

“European Orthopaedics Market 2013-2018”
November 2014 14th edition

- First publication in 1993
- Yearly updated
- Hip, knee, shoulder
- Based on 80+ interviews
- 810 pages & 1550+ graphs & exhibits detail the European Market in Germany, France, Italy, Spain, UK, and other countries

Available immediately

“Trends, Developments & Dynamics of the European Spine Market”
September 2011 6th edition

- First publication in 2000,
- Yearly up-date,
- Universal Fusion Systems, cages, Disc prosthesis...
- 70+ interviews of spine companies, distributors & surgeons,
- 400 pages & 300+ graphs detailing the European market in Germany, France, Italy, Spain, UK, Belgium, Switzerland and in other countries.

Available immediately

“Orthopaedics patent watch”
Yearly edition

- Focus on 4 segments: hip, knee, trauma and orthobiologics,
- Report published each 2 months,
- More than 50 patents presented by number registration and with scheme & diagrams,
- One shot:
  - To identify the new products & R&D trends,
  - To follow your competitor’s strategic development choices.

Available immediately

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Implants conference

The international meeting on innovations & solutions for orthopaedic implants & Orthobiologics June 7th, 2016
Paris - 12th edition

Founded and chaired by AVICENNE since 2005

http://www.implants-event.com/implants-2016-conference/
Contract manufacturing product segmentation:
11 segments & 40 sub-segments

Source: Avicenne 2016
Reasons to outsource your market research to Avicenne with its 20+ years’ experience and expertise

- You can achieve higher quality standards
- You benefit from our up-to-date knowledge and tools (operating models, database, etc.)
- You get an objective third party view
- Working with us, you will expand your in-house market research capabilities
- You can reduce Time to Market
- Together, we manage Project Timelines...
- ...and control Project Costs
- We will maintain Confidentiality
- You can achieve higher quality standards

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