Medacta International

MANAGEMENT REPORT

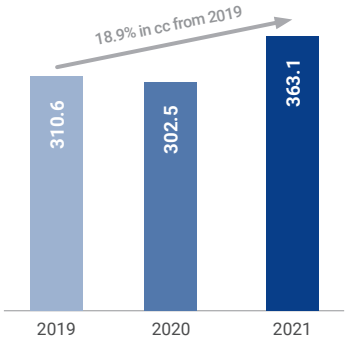
INDEX

2021 KEY FINANCIAL FIGURES

REVENUES

EUR 363.1M

21.4% before FX effects from prior year[1]
18.9% growth in constant currency from 2019

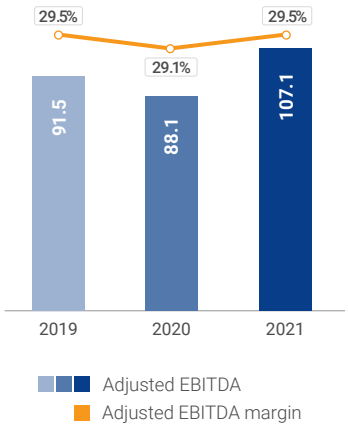


[1] Is calculated as the difference between the current and historical period results translated using the current period exchange rates.

ADJUSTED EBITDA[2]

EUR 107.1M

29.5% Adjusted EBITDA margin[3]



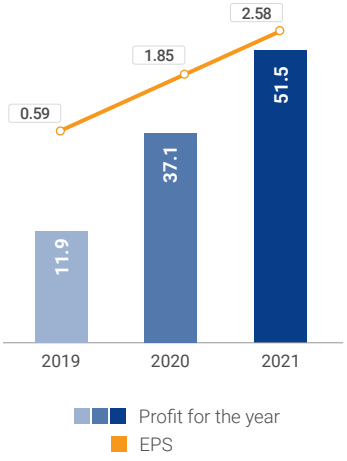
[2] Is calculated as EBITDA, adjusted for non-recurring items: provisions on litigations and extraordinary legal expenses.

[3] Adjusted EBITDA margin, is calculated as adjusted EBITDA as a percentage of Revenue for the period.

PROFIT FOR THE YEAR

EUR 51.5M

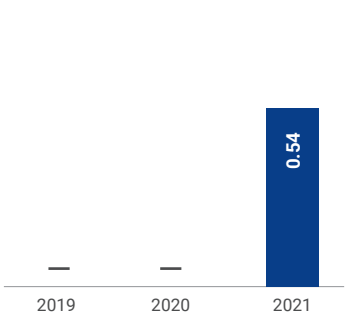
EUR 2.58 EPS[4]



[4] In the years ended December 31, 2019 and 2020, there is no effect of dilution, and diluted earnings per share equals basic earnings per share.

DISTRIBUTION DECLARED PER SHARE[5]

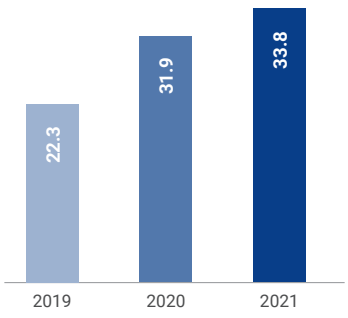
CHF 0.54



[5] Is calculated by dividing the total distribution declared equal to CHF 10.7M by the number of outstanding ordinary shares.

ADJUSTED FREE CASH FLOW[6]

EUR 33.8M

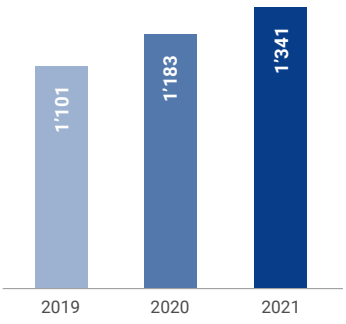


[6] Adjusted Free Cash Flow is calculated as IFRS cash flow from operating activities plus IFRS cash flow from investing activities and adjusted for certain non-recurring items.

YEAR-END EMPLOYEES TOTAL

1'341

158 new jobs added in 2021



2021 HIGHLIGHTS*

- Medacta's year-end revenue increased by 21.4% from 2020 and by 18.9% from 2019 at constant currency, to Euro 363.1 million;
- Adjusted EBITDA grew to Euro 107.1 million, corresponding to 29.5% margin;
- Profit for the year was equal to Euro 51.5 million, 14.2% on revenues;
- Adjusted Free Cash Flow was Euro 33.8 million, up 5.8% compared to prior period;
- Continued strategic salesforce expansion in all key markets and new product launches to sustain the future growth;
- The Board of Directors is proposing a distribution of CHF 0.54 per share;
- Outlook FY 2022: We are targeting revenue in the range of Euro 400 million to Euro 414 million at constant currency, and Adjusted EBITDA margin equal to 29% within a range of 100 basis points, subject to any unforeseen events.

REPORTED PERFORMANCE MEASURES

(Million Euro)	31.12.2021	31.12.2020
Revenues	363.1	302.5
Gross Profit	261.2	214.3
Profit for the year	51.5	37.1
Distribution proposal to the AGM 2022 (in CHF)	10.7	-
Alternative Performance Measures:		
EBITDA	99.2	86.5
Adjusted EBITDA*	107.1	88.1
Adjusted EBITDA margin*	29.5%	29.1%
Free Cash Flow	2.0	25.4
Adjusted Free Cash Flow**	33.8	31.9

(Million Euro)		
Total Assets	489.3	441.9
Total Equity	226.4	164.7
Equity Ratio	46.3%	37.3%
Number of employees	1'341	1'183

* Adjusted in 2021 for provisions on litigations (EUR 4.9 million), extraordinary legal expenses (EUR 3.0 million). The reconciliation is provided in the "Alternative Performance Measures" section of the Management Report.

** Adjusted for extraordinary legal expenses (EUR 3.0 million), for the settlement of the legal claim with MicroPort (Euro 5.9 million), extraordinary tax payment (EUR 18.3 million) and non-recurring investments (EUR 4.6 million). Please see the "Alternative Performance Measures" section of the Management Report for the reconciliation of the "Adjusted Free Cash Flow".

* **Alternative Performance Measures:** This section and other sections of this Annual Report, contain certain financial measures of historical performance that are not defined or specified by IFRS, such as "constant currency", "EBITDA", "Adjusted EBITDA" or "CORE EBITDA", "Adjusted and Normalized EBITDA", "Free Cash Flow", "Adjusted Free Cash Flow", "Adjusted and Normalized Free Cash Flow", "Net Debt" and "Leverage". Reconciliation of these measures as well as "CORE" financial measures is provided in the "Alternative Performance Measures" (APM) section of this Annual Report on page 19. These Alternative Performance Measures (APM) should be regarded as complementary information to, and not as a substitute for the IFRS performance measures. For definitions of APM, together with reconciliations to the most directly reconcilable IFRS line items, please refer section headed "Alternative Performance Measures" of this Annual Report.

SHARE INFORMATION

The registered shares of Medacta Group SA are traded on the International Reporting Standard of SIX Swiss Exchange and are part of the Swiss Performance Index.

NUMBER OF SHARES

Share capital (in CHF)	2'000'000
Number of registered shares outstanding *as of December 31, 2021*	19'989'993
Nominal value per registered share (in CHF)	0.10
Number of treasury shares *as of December 31, 2021*	10'007

2021 DATA PER SHARE

(Swiss Francs)	**31.12.2021**
2021 High (in CHF)	173.00
2021 Low (in CHF)	85.80
Closing price (in CHF)	142.00
Market capitalization (in CHF million)	2'840

2021 RELATIVE SHARE PRICE DEVELOPMENT

Index base 100 calculation
Source: Refinitiv

LETTER TO SHAREHOLDERS

Dr. Alberto Siccardi

Francesco Siccardi

Dear Shareholders,

During a year still affected by the COVID-19 pandemic, we were able to deliver strong top-line growth, margin expansion, and solid cash flow. Our 21.4% revenue growth in 2021 and 18.9% since 2019, the pre-COVID year, proves our remarkable gain of market share once again. During the year, we continued executing our strategy based on three pillars of innovation, medical education, and international salesforce expansion, preparing our future growth.

OUR ACHIEVEMENTS

In 2021, we continued to develop and introduce into the market new products and solutions with the aim of improving patient well-being and facilitating the work of medical professionals, healthcare administration, as well as logistics staff. In 2021, innovation continued and over 50 new products across all our business lines were registered.

NextAR™ is our Augmented Reality Surgical Platform that empowers the surgeon's vision with unique real-time surgical guidance superimposed onto the operative field to make data-driven decision-making. NextAR is the first platform to offer Augmented Reality solutions for both joint replacement and spine procedures. Currently, all the applications are in Limited Market Release to build a Reference Center Network. In line with our philosophy of healthcare sustainability, a single hardware with limited capital investment and per-case disposable cost is able to host different applications, with additional economic benefits for the healthcare systems. Therefore, NextAR may be the optimal solution worldwide, and particularly for the U.S. Ambulatory Surgery Centers ("ASCs").

In the Hip business line, we further enhanced the AMIS technique with the comprehensive AMIS Bikini offering. We expanded our Hip Revision Platform and, with regard to new technologies, we introduced personalized solutions with 3D preoperative planning and intraoperative verification (MyHip Planner and MyHip Verifier) as part of our MySolutions Personalized Ecosystem. In the Knee business line, we continued our focus on Kinematic Alignment, a technique that is becoming more and more interesting and in demand by the market, with our MyKA Platform. We introduced SensiTiN hypoallergenic implants and new revision options, together with the MyKnee-R patient-matched solution, a game-changing technology to streamline total knee revision surgeries. In the Shoulder business line, we introduced stemless and revision humeral implants, in addition to SensiTiN implant options, and in our Sportsmed business line, we further expanded our indications in arthroscopic knee, shoulder and hip surgery. In the Spine business line, we further demonstrated our commitment to personalized and minimally invasive procedural solutions by expanding the MySpine offering and our cervical and MIS platforms.

In 2021, medical education returned to a normal situation, with a significant increase compared to 2019. Decentralized marketing and educational activities proved to be very effective at engaging surgeons and supporting customer acquisition. We further strengthened our M.O.R.E. in Touch program, a series of webcasts including eLearning Classes, eLearning Centers, live surgery specimen demonstrations, and web-based "Meet the Expert" exclusive events, hosted by Medacta TV. We launched a new platform for remote proctoring activities empowered by augmented reality.

In 2021, more than 150 new jobs were added across all geographies, including significant salesforce expansion, and we continued to invest strategically in additional surgical instruments to serve new customers.

STRONG GROWTH IN ALL REGIONS AND BUSINESS LINES*

In 2021, revenue increased 21.4% at constant currency and 20.0% on a reported currency over the prior year, at EUR 363.1 million, with positive contributions from all business lines and geographies. The growth was driven by significant carry-over and customer acquisition, in addition to normalization of surgical activities, which were limited by further pandemic restrictions throughout the year. Currency development had a negative impact with a headwind of 1.4%, mainly due to the strengthening of the Euro against the US Dollar, the Swiss Franc and the Japanese Yen, only partially compensated by the Euro weakening against the Australian Dollar.

From 2019, revenue increased 18.9% at constant currency.

In terms of trend by business line, revenue from our Hip products increased to EUR 179.3 million, or 17.8% on a constant currency basis; the growth was driven by the AMIS strategy supported by the roll-out of new products. From 2019, Hip revenue grew 10.7% at constant currency. Revenue from our Knee offerings were EUR 131.1 million, an increase of 24.8% on a constant currency basis; the good momentum was generated by MyKA Platform, Efficiency single-use instruments and GMK Sphere medially-stabilized knee. From 2019, Knee revenue increased 19.7% at constant currency. Our Extremities business line reported an increase in revenue of 35.4% on a constant currency basis to EUR 19.0 million; the growth was driven by the acquisition of new customers through the completeness of the Medacta Shoulder System, supported by personalized solutions like MyShoulder and NextAR, and the expansion of the Sportsmed product offering. From 2019, Extremities revenue increased 98.5% at constant currency. Revenue from our Spine offering grew by 20.4% on a constant currency basis to EUR 33.8 million, driven by the expansion of MIS Platform and MySpine offering that was enlarged to include new indications such as deformities. From 2019, Spine revenue increased 38.2% at constant currency. All the business lines benefitted from significant salesforce and marketing expansion.

In terms of geographic trend, revenue in Europe registered an increase of 21.2% on a constant currency basis to EUR 156.4 million. All countries registered a solid growth despite COVID-19 restrictions in Q1 and Q4. From 2019, revenue in Europe increased 14.2% at constant currency. Revenue in North America increased to EUR 109.2 million, or 21.9% on a constant currency basis, thanks to customer acquisition, salesforce expansion and increased activity level in ASCs, which was limited by hospital staffing shortages and COVID-19 restrictions. From 2019, revenue in North America increased 20.7% at constant currency. Revenue in Asia Pacific grew by 17.5% on a constant currency basis to EUR 84.9 million, mainly driven by the attainment of new customers, despite pandemic restrictions in Australia in 2H. From 2019, revenue in Asia Pacific increased 28.4% at constant currency. Revenue in RoW were EUR 12.6 million, a growth of 50.3% on a constant currency basis, thanks to increased purchases from stocking distributors and the creation of new distributors in the Middle East and Latin America. From 2019, revenue in RoW increased 6.7% at constant currency.

GROSS PROFIT PERFORMANCE *

The Gross Profit was EUR 261.2 million compared to EUR 214.3 million in the previous year. The Gross Profit margin was equal to 71.9% compared to 70.8% in 2020. The change was primarily due to a positive leverage impact, partially compensated by expected price reductions in certain countries, negative geographic mix, and currency development.

STRONG EBITDA MARGIN *

The Adjusted EBITDA amounted to EUR 107.1 million (EUR 88.1 million in 2020), corresponding to a margin of 29.5% compared to 29.1% in 2020. This increase reflects primarily the leverage on fixed costs from higher sales volumes.

SOLID BALANCE SHEET

Medacta's balance sheet remains robust, with total assets increasing to EUR 489.3 million and an equity ratio of 46.3% at the end of the reporting period (37.3% in 2020). The Adjusted Free Cash Flow generated in 2021 amounted to EUR 33.8 million (EUR 31.9 million in 2020), after significant investments in new instruments and development to sustain the future growth of Medacta.

REMARKABLE STOCK PRICE GROWTH AND PROPOSAL OF DISTRIBUTION

The Medacta stock price experienced impressive growth in 2021, equal to 62% compared with 23% of the SPI Swiss Performance Index.

The strong economic and financial results of the year and the robust balance sheet allow to reward our shareholders. Therefore, our Board of Directors is proposing to the Annual General Meeting the distribution of CHF 0.54 per share, half of it to be distributed as dividend out of available earnings and half of it to be distributed out of accumulated reserves from capital contribution.

OUTLOOK

In 2022, we will continue to prioritize our future growth through a further expansion of our international salesforce, with a focus on the US market. In addition, we remain committed on product innovation with several full market releases expected during the year, starting from the shoulder application of our NextAR Augmented Reality Surgical Platform.

We are targeting 2022 revenue in the range of EUR 400 million to EUR 414 million at constant currency and Adjusted EBITDA margin to be equal to 29% within a range of 100 basis points. The persistent impact of the COVID-19 pandemic and hospital staffing shortage, which was still strong in some geographies in the first months of this year, together with inflation, supply chain and geo-political issues, may negatively affect our performance.

THANKS

We would like to thank all our employees for their commitment, resilience, and performance, and to our customers and suppliers for their collaboration and support in this challenging time.

Sincerely,

Dr. Alberto Siccardi
Chairman of the Board of Directors

Francesco Siccardi
Chief Executive Officer

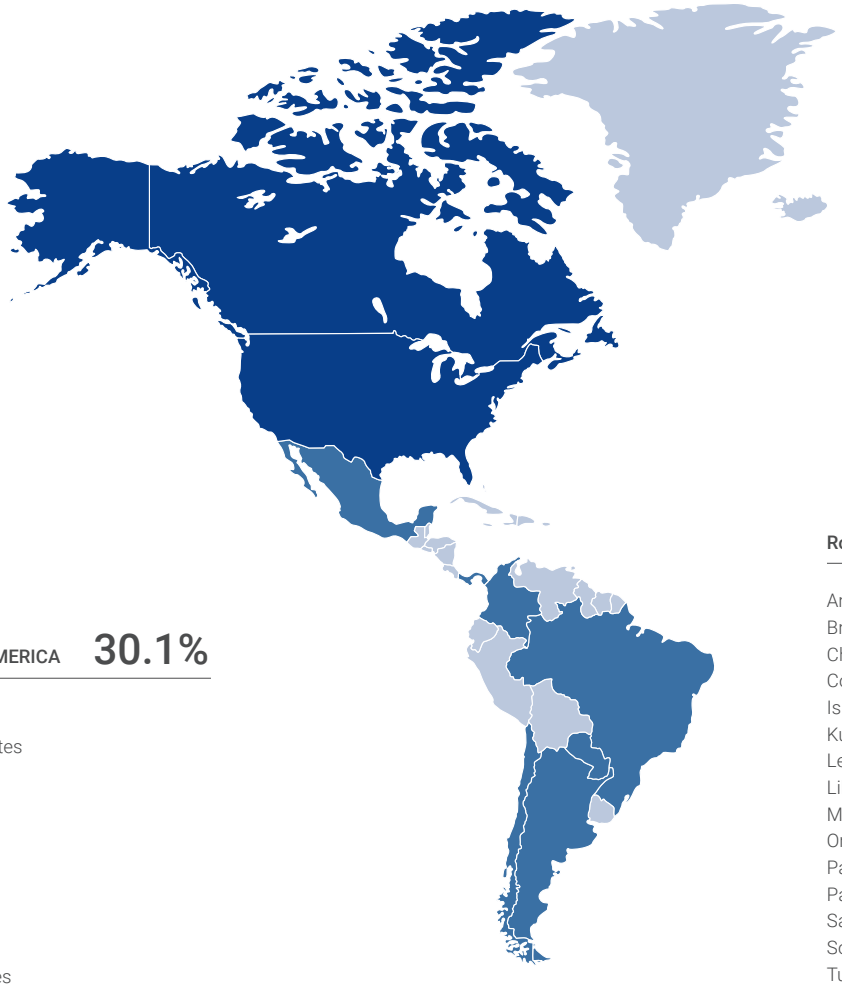
* **Alternative Performance Measures:** This section and other sections of this Annual Report, contain certain financial measures of historical performance that are not defined or specified by IFRS, such as "constant currency", "EBITDA", "Adjusted EBITDA" or "CORE EBITDA", "Adjusted and Normalized EBITDA", "Free Cash Flow", "Adjusted Free Cash Flow", "Adjusted and Normalized Free Cash Flow", "Net Debt" and "Leverage". Reconciliation of these measures as well as "CORE" financial measures is provided in the "Alternative Performance Measures" (APM) section of this Annual Report on page 19. These Alternative Performance Measures (APM) should be regarded as complementary information to, and not as a substitute for the IFRS performance measures. For definitions of APM, together with reconciliations to the most directly reconcilable IFRS line items, please refer section headed "Alternative Performance Measures" of this Annual Report.

1. MANAGEMENT COMMENTARY*

CORPORATE INTRODUCTION

We are an international company specialized in the design, production and distribution of innovative orthopaedic products and the development of accompanying surgical techniques for joint replacement, spine surgery, and sports medicine. Established in 1999 in Switzerland, we have grown considerably from our origins as a manufacturer of hip and knee replacement products into a global business. We are currently active in targeted regions of countries that together represent the majority of global orthopaedic revenue, according to Orthoworld.

Today, our primary focus is on our high-volume Hip and Knee business lines (which generated 49.4% and 36.1%, respectively, of our reported revenue in 2021), complemented by our offerings in Shoulder, Spine and Sports Medicine ("Sportsmed") business lines. Our products and surgical techniques are supported by an extensive program of surgeon education and engagement initiatives, enabling our offerings to be used to the best advantage of both the patient and surgeon. All our products and surgical procedures are designed to improve patient well-being, facilitate the work of our surgeons and increase the sustainability of the healthcare system by improving efficiency while reducing healthcare costs. Our success to date is evidenced by our financial profile, with a constant currency revenue CAGR of 13.2% between 2016 and 2019 and despite the impact of the COVID-19 pandemic, in 2021 we recognized an increase in revenue of 18.9% at constant currency from 2019, leading to revenue of EUR 363.1 million, an Adjusted EBITDA margin of 29.5% and an Adjusted EBIT margin of 18.4% for the year ending December 31, 2021.



NORTH AMERICA **30.1%**

Canada
United States

RoW **3.4%**

Argentina
Brazil
Chile
Colombia
Israel
Kuwait
Lebanon
Libya
Mexico
Oman
Panama
Paraguay
Saudi Arabia
South Africa
Tunisia
UAE

Branches
Distributors

* **Alternative Performance Measures:** This section and other sections of this Annual Report, contain certain financial measures of historical performance that are not defined or specified by IFRS, such as "constant currency", "EBITDA", "Adjusted EBITDA" or "CORE EBITDA", "Adjusted and Normalized EBITDA", "Free Cash Flow", "Adjusted Free Cash Flow", "Adjusted and Normalized Free Cash Flow", "Net Debt" and "Leverage". Reconciliation of these measures as well as "CORE" financial measures is provided in the "Alternative Performance Measures" (APM) section of this Annual Report on page 19. These Alternative Performance Measures (APM) should be regarded as complementary information to, and not as a substitute for the IFRS performance measures. For definitions of APM, together with reconciliations to the most directly reconcilable IFRS line items, please refer section headed "Alternative Performance Measures" of this Annual Report.

Our products and surgical techniques are characterized by innovation. We are a pioneer in developing new offerings on the basis of our minimally invasive surgical techniques, in particular our Anterior Minimally Invasive Surgery ("AMIS") technique for hip replacements, which involves an anterior approach to the hip and has been carried out in over 480'000 cases worldwide since 2004.

We believe that education is an indispensable tool for transforming innovation into concrete benefits for patients, surgeons and healthcare systems. For our surgeon customers, we have introduced a range of training and technical support initiatives through our M.O.R.E. Institute. Since its founding in 2004, the M.O.R.E. Institute has become a global education platform tailored to the needs of the individual surgeon, with courses addressing each of our business lines and no limit on the number of interactions that customers can benefit from. We have introduced the MyPractice Development Plan to further support surgeons in their patient education efforts and improve patient understanding and experience of our products and techniques.

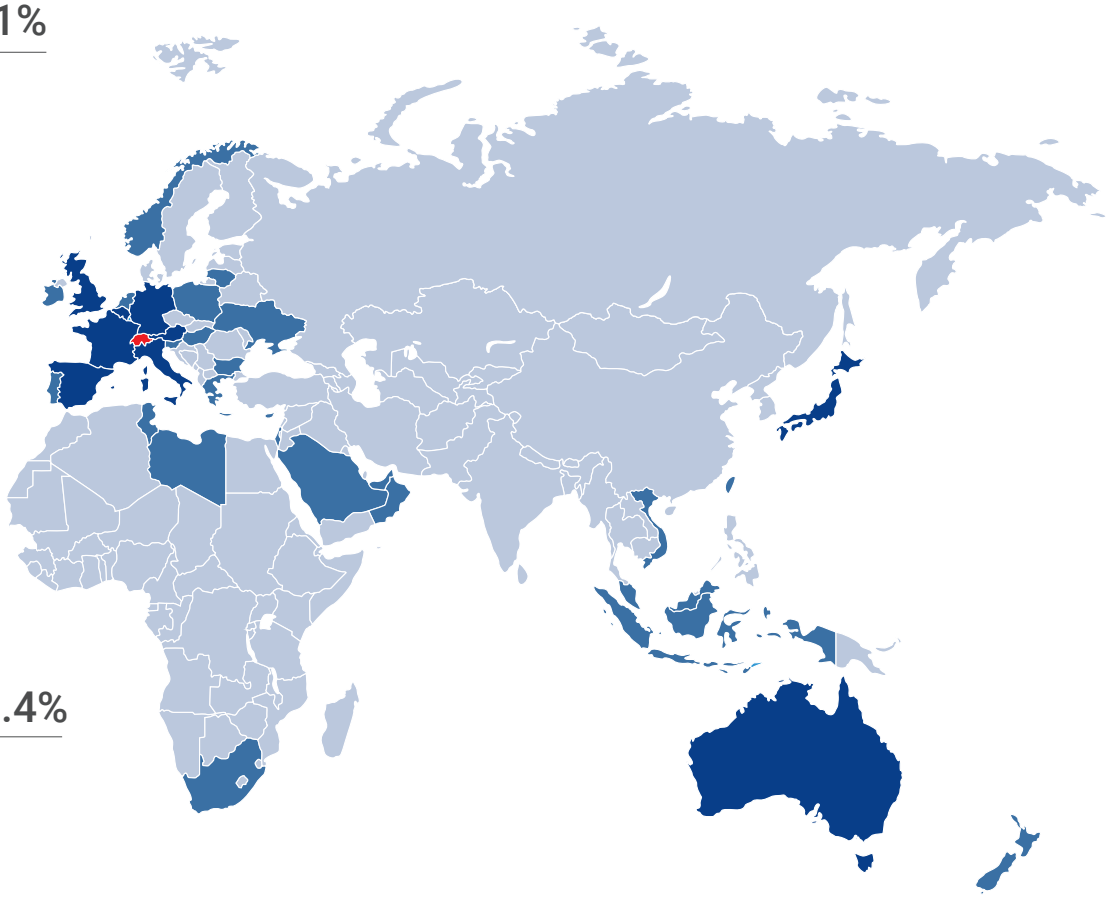
Our headquarters and well-invested and high-quality manufacturing facilities are in Castel San Pietro, Switzerland and Rancate, Switzerland, where we have 713 employees in the aggregate as of December 31, 2021. Our sales organization is spread over 12 branches and we serve through Stocking Distributors 33 additional countries, with an international sales reach that extends to the attractive markets of Europe, North America and Asia Pacific, where we generated 43.1%, 30.1% and 23.4% of our revenue, respectively, for the year ending December 31, 2021. Our experienced salesforce are instrumental in achieving international acceptance and adoption of our products and techniques.

EUROPE **43.1%**

Austria
Belgium
Bulgaria
Cyprus
France
Germany
Greece
Hungary
Ireland
Italy
Lithuania
Netherlands
Norway
Poland
Portugal
Slovenia
Spain
Switzerland
Ukraine
United Kingdom

ASIA PACIFIC **23.4%**

Australia
Indonesia
Japan
Malaysia
New Zealand
Taiwan
Vietnam



BUSINESS PERFORMANCE

EXECUTIVE OVERVIEW

Our 2021 performance was still impacted by the COVID-19 pandemic, nevertheless, the Group was able to deliver strong top-line growth, margin expansion, and solid cash flow results. Significant carry-over and customer acquisition, in addition to normalization of surgical activities, resulted in 21.4% revenue growth at constant currency (20.0% reported) in 2021, with positive contributions from all business lines and geographies. In the first semester 2021 we witnessed a general recover of elective procedures as the impact of the COVID-19 pandemic eased in most geographies, delivering 35.4% revenue growth at constant currency (31.7% reported). This strong performance was limited by further pandemic restrictions occurred during the second semester due to the highly transmissible Delta and Omicron variants which along with staffing shortages at hospitals, resulted in further deferrals of elective surgical procedures. Although our 2021 performance was limited by the pandemic resurgence, we were able to close our second semester growing our top-line by 10.1% at constant currency, when compared to the same prior year period which benefited from pent-up demand.

In 2021 profitability returned to pre-COVID levels, with our Adjusted EBITDA margin at 29.5%. This result reflects primarily the leverage on fixed costs from higher sales volumes partially compensated by negative price trends in almost all markets and higher research and development ("R&D") spending on maintenance and post market surveillance projects. The 2021 Adjusted Free Cash Flow amounted to EUR 33.8 million, 5.8% higher than 2020 thanks to the increase in CORE operating profit only partially offset by an increase in investing activities in instruments to sustain the Group's growth. Based on the solid results achieved in 2021, the Board of Directors decided to propose to the Annual General Meeting a distribution of CHF 0.54 per share.

Despite the ongoing challenging environment, Medacta delivered a strong year of financial results. Our people, products and our cultural values give us confidence in maintaining this momentum of record-level results.

SALES VOLUME, PRICING AND GEOGRAPHICAL MIX

Our revenue increased by EUR 60.6 million, or 20.0%, from EUR 302.5 million in 2020 to EUR 363.1 million in 2021 on a reported currency basis (21.4% on a constant currency basis), with positive contribution from all business lines and geographies. Pricing pressure from governmental healthcare systems and geographic and product mix sales had a negative effect on our global selling price. In addition, our revenue growth was partially affected by an exchange rate headwind equal to 1.4%. Specifically, during 2021 the EUR strengthened against USD and JPY (i.e. among our largest currency exposures) negatively impacting revenue translated into EUR from our operations in those countries and only partially compensated by the EUR weakening against AUD.

We analyse sales by four geographies, Europe, North America, Asia Pacific and RoW and by the following product categories: Hip, Knee, Spine and Extremities.

(Million Euro)	31.12.2021	% of total	31.12.2020	% of total	Reported Growth	Constant Currency Growth
Hip	179.3	49.4%	153.1	50.6%	17.1%	17.8%
Knee	131.1	36.1%	106.2	35.1%	23.4%	24.8%
Extremities*	19.0	5.2%	14.3	4.7%	33.0%	35.4%
Spine	33.8	9.3%	28.9	9.6%	16.9%	20.4%
TOTAL REVENUES	**363.1**		**302.5**		**20.0%**	**21.4%**

* Extremities include Shoulder and Sportsmed revenues.

Revenue from our Hip products increased by EUR 26.2 million, or 17.1%, from EUR 153.1 million in 2020 to EUR 179.3 million in 2021 on a reported currency basis (17.8% on a constant currency basis); the growth was driven by the AMIS strategy supported by the roll-out of new products. Revenue from our Knee offerings increased by EUR 24.8 million, or 23.4%, from EUR 106.2 million in 2020 to EUR 131.1 million in 2021 on a reported currency basis (24.8% on a constant currency basis). The good momentum was generated by MyKA Platform, Efficiency single-use instruments and GMK Sphere medially-stabilized knee.

Our Extremities business line, which includes Shoulder and Sportsmed, reported an increase in revenue by EUR 4.7 million, or 33.0%, from EUR 14.3 million in 2020 to EUR 19.0 million in 2021 on a reported currency basis (35.4% on a constant currency basis). Extremities product offerings growth was driven by the acquisition of new customers through the completeness of the Medacta Shoulder System, supported by personalized solutions like MyShoulder and NextAR, and the expansion of the Sportsmed product offering.

Revenue from our Spine offerings increased by EUR 4.9 million, or 16.9%, from EUR 28.9 million in 2020 to EUR 33.8 million in 2021 on a reported currency basis (20.4% on a constant currency basis). Group full year Spine performance results are primarily driven by the expansion of MIS Platform and MySpine offering that was enlarged to include new indications such as deformities.

All the business lines benefitted from significant salesforce and marketing expansion.

We also monitor the development of our revenue in key geographies based on the location of our customers as invoiced, as set forth in the table below.

(Million Euro)	31.12.2021	% of total	31.12.2020	% of total	Reported Growth	Constant Currency Growth
Europe	156.4	43.1%	129.3	42.7%	21.0%	21.2%
North America	109.2	30.1%	92.7	30.6%	17.8%	21.9%
Asia Pacific	84.9	23.4%	72.0	23.8%	17.9%	17.5%
RoW	12.6	3.4%	8.5	2.9%	48.0%	50.3%
TOTAL REVENUES	**363.1**		**302.5**		**20.0%**	**21.4%**

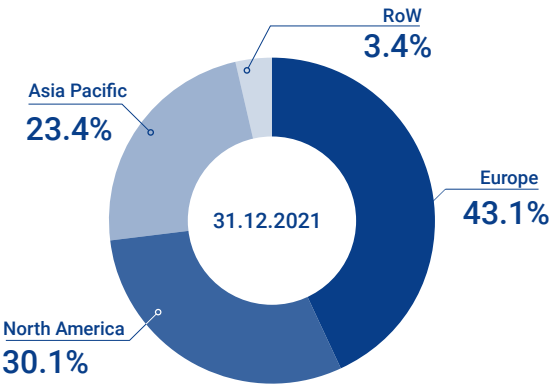
Revenue in Europe increased by EUR 27.1 million, or 21.0%, from EUR 129.3 million in 2020 to EUR 156.4 million in 2021 on a reported currency basis (positive 21.2% on a constant currency basis). The 2021 growth rate in Europe outpaced our reported Group-wide average revenue growth rate by 1%. All our European countries registered a solid growth despite COVID-19 restrictions in Q1 and Q4. As a percentage of our total revenue, revenue generated in Europe was higher than the prior year at 43.1% in 2021 (compared to 42.7% in 2020).

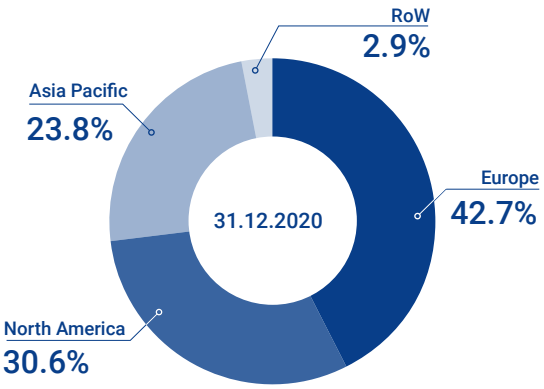
Revenue in North America increased by EUR 16.5 million, or 17.8%, from EUR 92.7 million in 2020 to EUR 109.2 million in 2021 on a reported currency basis (21.9% on a constant currency basis). The revenue generated in U.S., increased by EUR 16.2 million, or 17.6%, from EUR 92.2 million in 2020 to EUR 108.5 million in 2021 on a reported currency basis (21.7% on a constant currency basis). North America's performance was substantially in line with our strategy: we reported an increased level of activities in Ambulatory Surgery Centers (ASCs) which was limited by hospital staffing shortages and COVID-19 restrictions. However, our reported revenue in North America was affected by a negative headwind from the exchange rate. Specifically, during the course of 2021, the EUR strengthened against the USD by an average of 3.4% (compared to the average 2020 exchange rate), negatively impacting revenue translated into EUR. As a percentage of our total revenue, North America decreased to 30.1% (compared to 30.6% in 2020).

Revenue in Asia Pacific increased by EUR 12.9 million, or 17.9%, from EUR 72.0 million in 2020 to EUR 84.9 million in 2021 on a reported currency basis (17.5% on a constant currency basis). This result was mainly driven by the attainment of new customers, despite pandemic restrictions in Australia which affected the second semester. The Australian market contributed to this performance with an increase of EUR 9.4 million, or 22.8% (16.9% on a constant currency basis) while in the Japanese market revenue increased by EUR 4.0 million, or 14.2% (21.7% on a constant currency basis). Our reported revenue in Asia Pacific was partially sustained by a positive tailwind from the exchange rate. Specifically, in the course of 2021, the EUR weakened against the AUD by an average of 5.1% (compared to the average 2020 exchange rate), positively impacting revenue translated into EUR from our Australian operation. This positive translation impact was partially offset by the strengthening of the EUR against the JPY by an average of 6.1% (compared to the average 2020 exchange rate). As a percentage of our total revenue, Asia Pacific decreased to 23.4% in 2021 (compared to 23.8% in 2020).

Revenue in RoW area increased by EUR 4.1 million, or 48.0%, from EUR 8.5 million in 2020 to EUR 12.6 million in 2021 on a reported currency basis (50.3% on a constant currency basis). This region is covered by third-party distributors that we engage in certain non-core markets. The strong growth in RoW is sustained by both new distributors started in new markets and the expansion in markets where Medacta has already presence with existing stocking distributors. In particular, in 2021 Medacta expanded in the Middle East and Latin America. As a percentage of our total revenue, revenue from RoW increased to 3.4% in 2021 (compared to 2.9% in 2020).

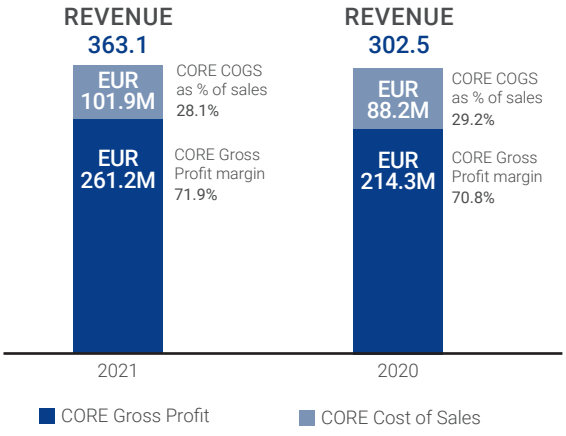
The graphics below provide an overview of our revenue by geography for the year December 31, 2021 and 2020.





COST OF SALES AND GROSS PROFIT

Our Gross Profit as a percentage of revenue increased from 70.8% in 2020 to 71.9% in 2021. Overall, this increase was mostly attributable to a positive leverage impact from the depreciation of surgical instruments, partially compensated by top-line erosion from declining price trends, geographic mix and negative currency development.



CORE EBIT PERFORMANCE*

(Thousand Euro)	31.12.2021	31.12.2020	Delta	Delta %
CORE Research and Development expenses	(11'306)	(6'829)	(4'477)	65.6%
CORE Sales and Marketing expenses	(132'555)	(110'069)	(22'486)	20.4%
CORE General and Administrative expenses	(50'937)	(45'212)	(5'725)	12.7%
CORE Other income	1'536	1'181	355	30.0%
CORE Other expenses	(1'301)	(2'252)	951	-42.2%
CORE OPERATING EXPENSES (OPEX)	**(194'563)**	**(163'181)**	**(31'382)**	**19.2%**
CORE OPERATING PROFIT (EBIT)	**66'684**	**51'075**	**15'609**	**30.6%**

* For a reconciliation of our CORE results to our reported IFRS figures, please see the "Alternative Performance Measures" section of this report.

CORE Research and development expenses

Expensed research and development costs are mainly related to base research, maintenance projects, depreciation and amortization expenses (including impairments), business expenses and other non-capitalized expenses. During 2021, we continued investing in research and development, and in particular in certain long-term research initiatives, to support our strategy of broadening our product portfolio. Our CORE research and development costs that were expensed increased by EUR 4.5 million, or 65.6%, from EUR (6.8) million in 2020 to EUR (11.3) million in 2021.

In 2021, depreciation and impairment increased by EUR 1.9 million, following the completion of key projects before the new European Medical Devices Regulation fully entered into force in the first semester 2021, that were fully developed between the end of 2020 and the first semester of 2021. As a consequence of the registration of all these new products we recognized a significant increase of post product release surveillance and maintenance projects for approximately EUR 1.3 million. Also wages and salary increased due to the absence of government subsidies obtained in 2020 for EUR 0.2 million.

CORE Sales and marketing expenses

Our CORE sales and marketing expenses increased by EUR 22.5 million, or 20.4%, from EUR (110.1) million in 2020 to EUR (132.6) million in 2021. CORE Sales and marketing expenses as a percentage of total revenue remained largely stable at 36.5% in 2021 compared to 36.4% in 2020.

In 2021 Medical Education came back to normal level with significant increase compared to 2019. Decentralized marketing and educational activities proved to be very effective at engaging surgeons and supporting customer acquisition. The increased number of travels, education, congresses and marketing expenses was equal to 0.6% weight on sales and is mainly reflecting the 2021 periodic lifting of travel restrictions. Wages and salaries increased but at a lower pace than revenue contributing to an increase in EBIT margin by 1.0%, compensated by an increase in commissions, driven by higher mix in turnover made through external agents versus direct salesforce. Currency development had a positive impact in our operational costs, primarily due to USD and JPY which weakened respectively by 3.4% and 6.1% from prior period.

CORE General and administrative expenses

Our CORE general and administrative expenses increased by EUR 5.7 million, or 12.7%, from EUR (45.2) million in 2020 to EUR (50.9) million in 2021. CORE general and administrative expenses as a percentage of total revenue decreased to 14.0% in 2021 from 14.9% in 2020. This decrease reflects primarily the leverage on fixed costs from higher sales volumes. In particular, wages and salaries, depreciation and other fixed costs increased but at a lower pace than revenue contributing to a positive contribution in CORE EBIT margin by 0.9%. This positive result was partially offset by the impact of COVID-19 consumable investments made to supply offices and manufacturing plants with masks, gloves, sanitizers and other equipment.

CORE Other income and expenses

Our CORE other income increased by EUR 0.4 million, or 30.0%, from EUR 1.2 million in 2020 to EUR 1.5 million in 2021. CORE other income as a percentage of total revenue remained largely stable at 0.4%. Our other expenses decreased by EUR 1.0 million, from EUR (2.3) million in 2020 to EUR (1.3) million in 2021 largely as a result of lower write-offs and loss on sale of tangible assets.

FINANCIAL INCOME AND COSTS

Our financial income decreased by EUR 2.6 million, or 53.2%, from EUR 5.0 million in 2020 to EUR 2.3 million in 2021, mainly due to the reduction of unrealized exchange gain in the amount of EUR 2.0 million. Our financial costs decreased by EUR 8.8 million, or 61.0%, from EUR 14.5 million in 2020 to EUR 5.6 million in 2021 primarily as a result of decreased exchange losses for EUR 10.5 million. Interests and bank charges are in line with prior period, with the average cost for financial debts being around 1.1%.

INCOME TAXES

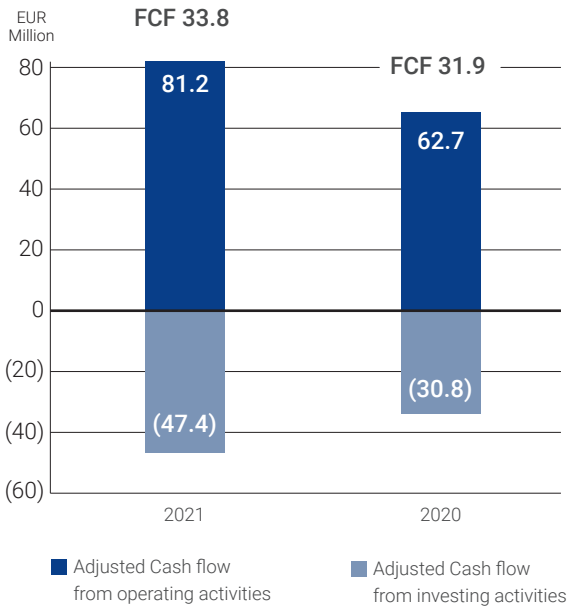
The Group effective tax rate is substantially in line with prior period at 7.1%. The 2021 total reported tax is equal to EUR 3.9 million, increased by EUR 1.1 million from EUR 2.8 million in the previous year. The 2021 Group's average tax rate is at approximately 17%. Starting from 2020, the Swiss tax reform provided the possibility to obtain a special tax deduction from taxable profits for qualifying profits arising from patent rights ("Patent Box deduction"). The Patent Box deduction had a positive impact in 2021 of around EUR 3.5 million (around EUR 2.3 million in 2020), lowering the effective tax rate by about 6.3% (5.7% in 2020). In addition, in 2021 we recognised a positive impact amounting to EUR 0.9 million due to the settlement of previous years' taxes accrued in excess and a positive impact amounting around EUR 1.4 million related to the Swiss tax reform which will enact a lower tax rate, from 17.3% to approximately 15.0% starting from January 1, 2025. The combination of these positive impacts further reduced our effective income tax rate by 4.5%.

ADJUSTED FREE CASH FLOW

The Adjusted Free Cash Flow increased from EUR 31.9 million in 2020 to EUR 33.8 million in 2021 as a result of the surge in CORE Operating Profit partially offset by an increase in investments in surgical instruments to sustain the Group's growth.

Adjusted for abnormals, 2021 cash flow from operating activities was equal to around EUR 81.2 million, compared to EUR 62.7 million as of December 31, 2020. The Adjusted cash flow from operating activities is composed of the reported cash flow from operating activities equal to EUR 54.1 million, adjusted by non-recurring legal costs for EUR 3.0 million, the 2021 MicroPort settlement payment of EUR 5.9 million and extraordinary tax payment of EUR 18.3 million made to settle accrued income taxes referred to FYs 2017 and 2018. The positive result from prior year is primarily driven by the increase in CORE operating profit.

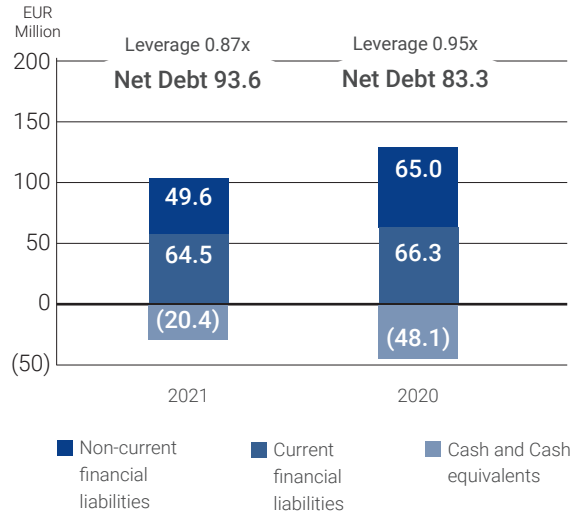
Reported cash flow from investing activities as of December 31, 2021 amounted to EUR 52.0 million mainly reflects net investments in surgical instruments, for EUR 35.0 million and in the research and development of new implants and instruments, for EUR 6.3 million. In 2021 cash flow from investing activities has been adjusted for the investments made to create new offices in our Rancate site for approximately EUR 4.6 million, decreasing the cash flow from investing activities to EUR 47.4 million. The previous year Adjusted cash flow from investing activities equal to EUR 34.2 million was adjusted by the cash paid to create new offices in our Rancate site for approximately EUR 3.4 million.



CAPITAL STRUCTURE

Group Net Debt in 2021 was equal to EUR 93.6 million, compared to EUR 83.3 million as of December 31, 2020. The increase of Group Net Debt is mainly due to the material reduction of our reported Free Cash Flow that reduced by EUR 23.4 million, due to the extraordinary payments made to settle the accrued income taxes referred to FYs 2017 and 2018 and the MicroPort settlement for a total amount of EUR 24.2 million.

Despite the increase in Group Net Debt, our leverage ratio decreased from 0.95 in 2020 to 0.87 in 2021. The improvement in our leverage ratio is primarily due to the additional EUR 19.0 million of Adjusted EBITDA generated during the year.



1.1 ALTERNATIVE PERFORMANCE MEASURES

The financial information provided in the selected sections of the 2021 Annual Report, including "Highlights Year 2021", "Letter to Shareholders", "Management Commentary" and elsewhere in this document, include certain Alternative Performance Measures (APMs) which are not accounting measures defined by IFRS. The Group believes that investor understanding of Medacta's performance is enhanced by disclosing core measures of performance (i.e. CORE or Adjusted), since they exclude items which can vary significantly from year to year. Therefore, the CORE results exclude effects related, for example, to extraordinary legal expenses, release of prior-year provisions, one-time tax duty and other one-time items that may vary significantly over periods.

These APMs should not be considered as alternatives to the Group's Consolidated Financial results based on IFRS. These APMs may not be comparable to similarly titled measures disclosed by other companies. The definitions of the main KPI disclosed in the Annual Report are reported at the end of this section.

CORE RESULTS

The following tables provide the reconciliation of the CORE results with the Consolidated Financial Statement as of December 31, 2021 and 2020. In addition to the CORE ratios we did not identify any normalization for the December 31, 2021 results. Management assessed that due to the pervasive nature of COVID-19, it would not be appropriate to include new APMs as it might not provide reliable or useful information to the market.

2021 CORE RESULTS RECONCILIATION

December 31, 2021 (Thousand Euro)	IFRS	Provision on Litigations[1]	Legal costs[2]	CORE[3]
Revenues	363'126	-	-	363'126
Cost of Sales	(101'879)	-	-	(101'879)
GROSS PROFIT	**261'247**	**-**	**-**	**261'247**
Research and Development expenses	(11'306)	-	-	(11'306)
Sales and Marketing expenses	(132'555)	-	-	(132'555)
General and Administrative expenses	(58'844)	4'941	2'966	(50'937)
Other income	1'536	-	-	1'536
Other expenses	(1'301)	-	-	(1'301)
OPERATING PROFIT (EBIT)	**58'777**	**4'941**	**2'966**	**66'684**

OPERATING PROFIT (EBIT)	**58'777**	**4'941**	**2'966**	**66'684**
Depreciation and Amortisation	40'436	-	-	40'436
EBITDA	**99'213**	**4'941**	**2'966**	**107'120**
EBITDA MARGIN	**27.3%**			**29.5%**

[1] Provision on litigations are mainly related to the accrual for MicroPort. Refer to Note 6.25 "Litigations", paragraph "MicroPort matter".

[2] Legal costs incurred in 2021 are related to the extraordinary expenses incurred by the Group on litigations, refer to Note 6.25 "Litigations".

[3] References to "Adjusted" are th+A1e equivalent to "CORE" references (i.e. Adjusted EBITDA and CORE EBITDA are interchangeable).

2020 CORE RESULTS RECONCILIATION

December 31, 2020 (Thousand Euro)	IFRS	Provision on Litigation[1]	Legal costs[2]	Release of tax Provision[3]	CORE[4]
Revenues	302'492	-	-	-	302'492
Cost of Sales	(88'236)	-	-	-	(88'236)
GROSS PROFIT	**214'256**				**214'256**
Research and Development expenses	(6'829)	-	-	-	(6'829)
Sales and Marketing expenses	(110'069)	-	-	-	(110'069)
General and Administrative expenses	(47'472)	(840)	3'100	-	(45'212)
Other income	1'809	-	-	(628)	1'181
Other expenses	(2'252)	-	-	-	(2'252)
OPERATING PROFIT (EBIT)	**49'443**	**(840)**	**3'100**	**(628)**	**51'075**
OPERATING PROFIT (EBIT)	**49'443**	**(840)**	**3'100**	**(628)**	**51'075**
Depreciation and Amortisation	37'016				37'016
EBITDA	**86'459**	**(840)**	**3'100**	**(628)**	**88'091**
EBITDA MARGIN	**28.6%**				**29.1%**

[1] Combined effect due to the income recognized for the partial release of the provision on litigation accrued for MicroPort in 2019 and the accrual made on the patents litigation.
[2] Legal costs incurred in 2020 on litigations.
[3] Income related to the release of the Provision for the Canton tax accrued on parking.
[4] References to "Adjusted" are the equivalent to "CORE" references (i.e., Adjusted EBITDA and CORE EBITDA are interchangeable).

ADJUSTED FREE CASH FLOW RECONCILIATION

(Thousand Euro)	31.12.2021	31.12.2020
CASH FLOW FROM OPERATING ACTIVITIES (IFRS BASIS IN ACCORDANCE WITH IAS 7)	**54'061**	**59'592**
Adjustments for:		
Legal costs	2'966	3'100
Settlement of legal claims	5'922	-
Incremental taxes paid in 2021[1]	18'254	-
ADJUSTED CASH FLOW FROM OPERATING ACTIVITIES	**81'203**	**62'692**
CASH FLOW FROM INVESTING ACTIVITIES (IFRS BASIS IN ACCORDANCE WITH IAS 7)	**(52'042)**	**(34'193)**
Adjustments for:		
Rancate investments[2]	4'603	3'410
ADJUSTED CASH FLOW FROM INVESTING ACTIVITIES	**(47'439)**	**(30'783)**
ADJUSTED FREE CASH FLOW	**33'764**	**31'909**

[1] In 2021 Medacta International SA paid income taxes for a total amount of CHF 24'846 thousand (EUR 22'990 thousand) out of which CHF 19'728 thousand (EUR 18'254 thousand) are related to the settlement of 2017 and 2018 fiscal years.
[2] In 2021, Medacta invested EUR 4'603 thousand in creating new offices in our Rancate site. This investment was completed in 2021.

KPI DEFINITIONS

CORE

In accordance with the directives of the Swiss Stock Exchange, the Group adopted the reporting of Alternative Performance Measures (APM), which facilitates the assessment of the underlying business performance but may differ from IFRS reported figures. The 'CORE' (i.e. Adjusted) figures used in this document exclude extraordinary legal expenses, legal provisions, release of prior-year provisions, one-time tax duty and other one-time items that may vary significantly over periods. A reconciliation table of the reported and CORE ratios with additional descriptions is provided on paragraph 1.1 "Alternative Performance Measures" of this report.

EBITDA

EBITDA is a non-IFRS measure that represents profit or loss for the period before finance costs, finance income, income taxes, depreciation and amortization. EBITDA margin is defined as EBITDA divided by revenues, expressed as a percentage. We define EBITDA as profit / (loss) for the period before net interest expense, income taxes, depreciation and amortization.

ADJUSTED EBITDA (I.E., CORE EBITDA)

Represents EBITDA before additional specific items that are considered to hinder comparison of the trading performance of the Group's businesses either year-on-year or with other businesses. Management considers Adjusted EBITDA to be a key measure of financial performance and believes that this measure provides additional useful information for prospective investors on performance and is consistent with how the business performance is measured internally. Adjusted EBITDA margin is calculated as Adjusted EBITDA divided by revenue, expressed as a percentage.

CONSTANT CURRENCY

The Group has presented certain information that it refers to as "constant currency", which is a non-IFRS financial measure and represents the total change between periods excluding the effect of changes in foreign currency exchange rates. The Group believes that the reconciliations of changes in constant currency provide useful supplementary information to investors in light of fluctuations in foreign currency exchange rates. Furthermore, the Group believes that constant currency measures provide additional useful information on the Group's operational performance and is consistent with how the business performance is measured internally. In calculating constant currency figures, the current period amount is translated at the foreign currency exchange rate used for the previous period to get a more comparable amount.

OPEX

Opex include the sum of Research and Development expenses, Sales and Marketing expenses, General and Administrative expenses, Other income and expenses. In the Management Report commentary "CORE" operative expenses are adjusted for specific items (reconciled in the tables above) in order to enhance the understanding of the Group's performance.

EQUITY RATIO

The equity ratio is calculated dividing Total Equity by Total Assets.

NET TRADE WORKING CAPITAL

Net Trade Working Capital is capital invested in the Group's operating activities. The variation in Net Trade Working Capital is an indicator of the operational efficiency of the Group. Net Trade Working Capital is the sum of trade receivables, trade payables and inventory.

FREE CASH FLOW

Free Cash Flow is used to assess the Group's ability to generate the cash needed to conduct and maintain our operations. It also provides an indication of the Group's ability to generate cash to fund dividend payments, repay debt and to undertake merger and acquisition activities. Free Cash Flow (post investing activities) is calculated as IFRS cash flow from operating activities plus IFRS cash flow from investing activities. The Adjusted Free Cash Flow is calculated as Free Cash Flow adjusted for certain non-recurring items that management believes are not indicative of operational performance.

NET DEBT

Net Debt is used as a metric to indicate the overall debt situation of the Group and is measured by netting the non-current and current financial liabilities with our cash and cash equivalents.

LEVERAGE

Leverage ratio is used to assess our ability to meet our financial obligations and is calculated as Net Debt divided by EBITDA adjusted.

2. THE MEDACTA GROUP IN BRIEF

Medacta was established in 1999 by Alberto Siccardi, our founder, chairman and former CEO, whose own journey as a patient convinced him of the importance of pioneering a new approach to joint replacement. In 2000, we inaugurated our headquarters, manufacturing facility and research and development site at Castel San Pietro, Switzerland. During the early years, we primarily sold total knee and total hip replacement implants in selected European markets. The first hip replacement procedure using our innovative AMIS technique was carried out in 2004, and it has since been performed in over 480'000 cases.

Medacta is a unique company in its field: it is founded by a patient

In 2004, we created the M.O.R.E. Institute with the purpose of educating and engaging with our customer surgeons, initially with a focus on how to optimally employ the AMIS technique. Following the initial success of our Hip business line, the first knee replacement using our GMK Primary System was performed in 2006. Subsequently, we expanded our efforts to the development of personalized patient solutions, and the first knee surgery using our patient-matched MySolutions technology took place in 2009. Few years later, we launched our GMK Sphere, a total knee implant designed to deliver maximum functional stability, which has since been implanted in more than 100'000 cases, achieving 10 years of successful clinical experience.

In 2009, we expanded into the spine segment of the orthopaedics market. Our team of engineers collaborated with expert international surgeons to develop specific and innovative solutions for the treatment of various degenerative spine conditions and spine deformities. In 2010, the first of our spine products was implanted in the U.S. To complete our portfolio, in 2016 we took the strategic decision to invest in a new Sportsmed business line. Our engineers, together with an international team of surgeons specialized in sports medicine, developed specific and innovative products for the treatment of ligament, tendon and muscular injuries of the knee, hip and shoulder.

In April 2019, the year of our 20th anniversary, we became a publicly listed company, officially entering the SIX Swiss Exchange. The 9th M.O.R.E. International Symposium that we held in Lugano, Switzerland, was the perfect occasion to celebrate these milestones.

In 2020, our commitment to developing highly innovative solutions led us to receive FDA-clearance for our NextAR Knee, the first FDA-cleared augmented reality surgical platform for total knee replacement.

2.1 VISION

Our vision is to improve the care and well-being of orthopaedic and spine surgery patients around the world through our experience and passion. With our surgical innovations and medical education programs, we strive to enable a healthy and active lifestyle for every patient, strongly focusing on healthcare sustainability.

2.2 MISSION

Our mission is to transform the patient experience by developing advanced surgical approaches, implants, and instruments through responsible innovation. With this goal in mind, we focus on increasing our collaboration with surgeons and universities worldwide, constantly investing in medical education, innovative technologies, and personalized solutions.

IT'S TIME TO ACCELERATE

In 2021, our employees showed resilience, maturity, and adaptability to a new world where traditional approaches are no longer possible, accelerating innovation and providing the best possible service for healthcare professionals and patients.

The health and safety of our employees, customers and patients have always been our number one priority, and throughout 2021 we continued to assess and mitigate any risks, taking all the actions needed to limit the impact of the pandemic. The headquarters and most branches maintained remote working for the first two quarters, adhering to all Government guidance and more. We confirmed investments in Research & Development and accelerated our innovation process, registering over 50 new products across all our business lines.

"During another year heavily impacted by the limitations and the uncertainties of the pandemic, we protected our employees and our business while continuing to deliver strong results, sustained by the launch of new products, the hiring of salesforce and our medical education programs," says Francesco Siccardi, CEO of Medacta. *"More than ever, the values at the heart of our culture have allowed us to remain successfully focused on our long-term value creation strategy based on innovation, medical education and healthcare sustainability."*

Francesco Siccardi | CEO of Medacta

3. ASSETS TO COMPETE

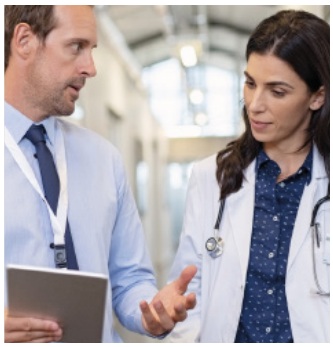
The orthopaedics market is characterized by continuous technological changes, frequent new product introductions and evolving industry standards resulting from technological advances and scientific discoveries. Our assets to compete in such a complex environment remain: innovation, education and healthcare sustainability.

3.1 INNOVATION

Innovation is of paramount importance at Medacta and is expressed in the originality of our surgical techniques, products and technologies. Innovation is the foundation of all our projects and the basis of our growth strategy. Our innovation began with minimally invasive techniques and has evolved into personalized solutions for every patient. We firmly believe in a responsible innovation, which is guaranteed by our M.O.R.E. Excellence Clinical Program, enabling us to responsibly introduce innovative products into the market.

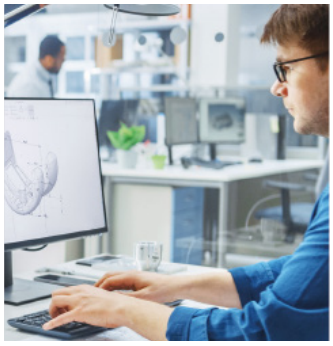
PILLARS

For us, innovation is based on three pillars: a strong and continued collaboration with surgeons, continuous investments in long-term and short-term research and development (R&D) and the adoption of cutting-edge technologies.



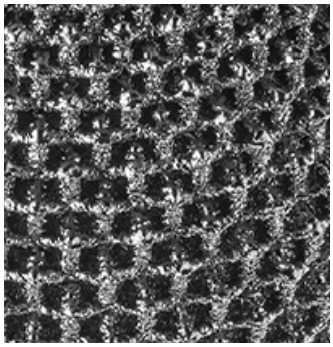
STRONG AND CONTINUED COLLABORATION WITH SURGEONS

Listening to surgeons, identifying patient requirements, and designing new solutions enables us to proactively respond to unmet clinical needs. We collaborate on a regular basis with internationally recognized surgeons, leading universities and hospital research institutions on innovative surgical techniques and the evolution of our products and methodologies. A successful example of this collaboration is our GMK Sphere, a total knee implant designed to deliver maximum functional stability with the goal of increasing total knee arthroplasty (TKA) patient satisfaction during activities of daily living and decreasing postoperative knee pain. The development of this innovative device has been possible thanks to the knee anatomy and kinematics studies by Prof. Freeman and Prof. Pinskerova.



RESEARCH AND DEVELOPMENT

Our R&D team is divided into three business units: Joint, Spine and Sportsmed. We have a range of research resources available in-house, including the MyBody database, 3D printing capabilities and facilities for prototype development. To reduce infection and patient remittance rates, we have expanded our research and development focus to surface technology with the development of antibacterial treatment for our implant portfolio. We carry out research on specific projects in collaboration with international centers, in particular university centers. We also have developed a proprietary augmented reality surgical platform providing efficiency and precision in computer-assisted surgery: NextAR Augmented Reality Surgical Platform.



CUTTING-EDGE TECHNOLOGIES

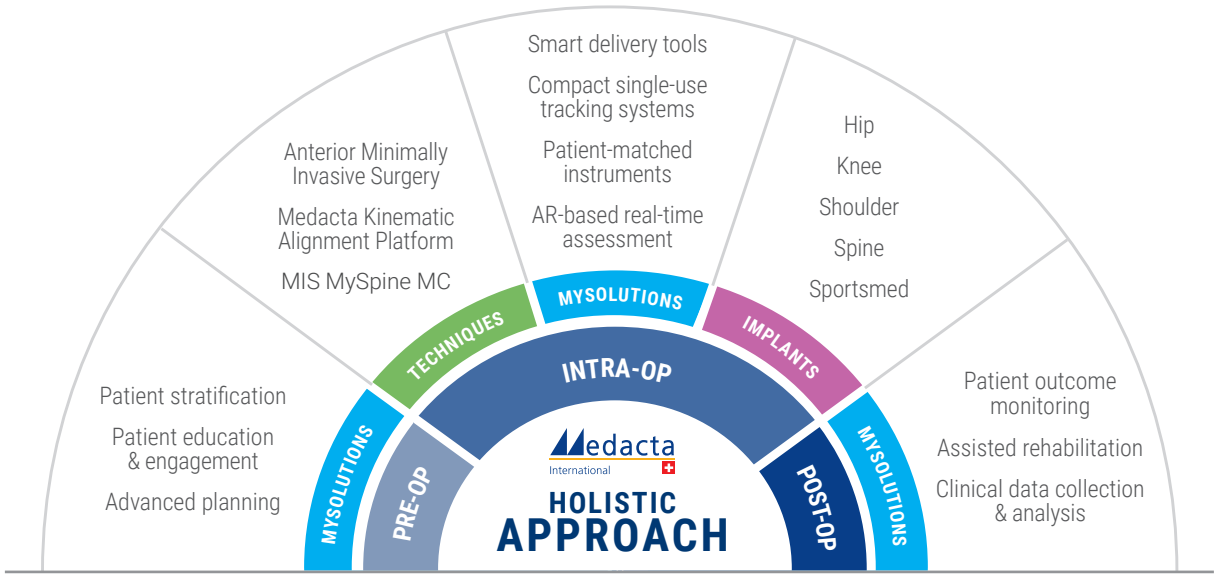
The development of our product pipeline is further supported by our research into and development of big data, cutting-edge manufacturing, smart robotics, navigation and surface technology, which together are characterizing our new generation of product offerings. We have developed a three-dimensional advanced structure, 3D Metal, based on 3D printing technology of the proven Titanium-Aluminum-Vanadium alloy, which enables direct structural connection with the bone. The architecture of the outer surfaces consists of interconnecting pores and resembles cancellous bone. We are also further developing our manufacturing capabilities through the use of 3D printing, which facilitates implant fixation and increases production speed and efficiency at lower costs.

MINIMALLY INVASIVE TECHNIQUES

Since our founding, we have recognized that minimally invasive surgery offers a range of benefits for patients, surgeons and healthcare systems, including short hospitalization, reduced postoperative pain, immediate muscle tone preservation, reduced risk of dislocation and shorter rehabilitation time. Hence, we have developed new offerings on the basis of minimally invasive techniques. For example, in 2004 we have introduced the AMIS technique for hip replacements, which – together with our range of targeted AMIS education initiatives, dedicated implants and instruments, and complementary services and tools – offers a holistic approach to hip procedures and improved patient outcomes. With over 480'000 procedures performed worldwide, AMIS represents an easily reproducible technique that delivers significant benefits to patient well-being, while optimizing costs and efficiency for the surgeon. We also offer MIS MySpine MC, which is a patient-matched 3D printed solution for surgeries that use the midline cortical approach. It allows for posterior lumbar fusion to be carried out in a minimally invasive, muscle-sparing way, resulting in shorter operating times and a substantial reduction of both radiation exposure and cost.

PERSONALIZED SOLUTIONS

The patient's well-being is at the heart of our vision and, therefore, it is of paramount importance in our activities. Considering that each patient is different and has specific needs and expectations, it is fundamental for us to improve the entire patient experience through a personalized journey. Technological advances have allowed us to develop a high-tech, seamlessly integrated system to empower the surgeon experience, enabling potentially better outcomes for the patients. MySolutions Personalized Ecosystem enables us to offer surgeons patient-matched surgical guides, advanced planning and verification software, as well as an augmented-reality-based surgical platform that can be used for the different anatomical regions. To improve the patient experience and help them feeling never alone we set up a patient optimized pathway tool, and to let surgeons record and measure their clinical outcome we offer a validated web-based archiving and analyzing system. Together with our comprehensive implant portfolio and surgical techniques, MySolutions Personalized Ecosystem empowers our holistic approach to personalized medicine.



AUGMENTED REALITY

The crown jewel of MySolutions is NextAR, our Augmented Reality (AR) Surgical Platform. AR is the use of displays, cameras, and sensors to overlay digital information onto the real world. In the surgical sector, augmented reality can project three-dimensional representations of the patient's anatomy and surgical plan into the surgeon's field of view and guide them to reach the target for each surgical step, helping them to improve accuracy and patient outcomes.

MYSOLUTIONS PERSONALIZED ECOSYSTEM

Every patient is different. At Medacta we look beyond the ordinary, and this has led us to design an advanced network of digital solutions to improve patient outcomes and healthcare efficiency – the MySolutions Personalized Ecosystem.

In a world where technology advances very fast, MySolutions Personalized Ecosystem embodies our vision to never stop improving the experience for patients, surgeons and care facilities. This platform is constantly evolving and is based on cutting-edge technologies fine-tuned in collaboration with an international network of expert surgeons. Patient engagement, personalized 3D planning, precise execution and efficient case management are the pillars which guide us in building and improving this advanced platform.

PATIENT ENGAGEMENT

PERSONALIZED 3D PLANNING

PRECISE EXECUTION

EFFICIENT CASE MANAGEMENT

MySolutions Personalized Ecosystem is designed around the patient needs and expectations, with the aim to delivering value throughout the entire patient journey. This platform is based on patient-matched surgical guides, advanced planning and verification tools, augmented reality-based personalized execution, patient optimized pathway and clinical data collection and analysis.

PRE-OP

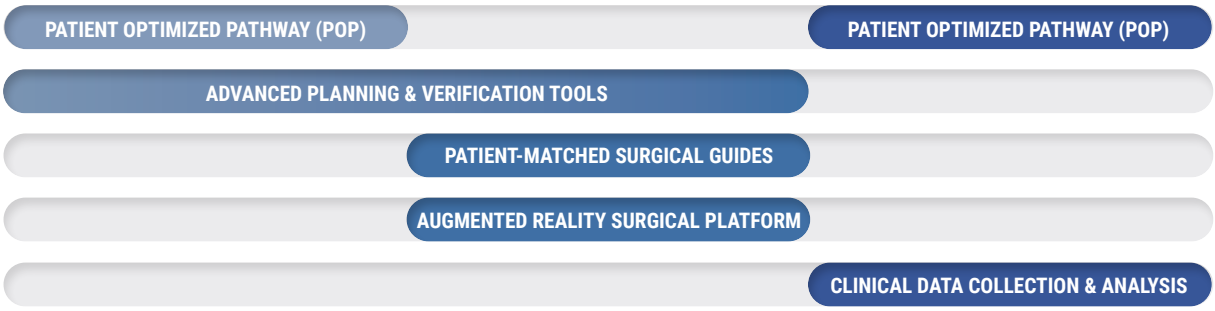
Engage and **educate** your patients, create **tailored plans** based on **advanced 3D analysis** and **collaborate** dynamically with medical teams.

INTRA-OP

Improve the **efficiency** and **accuracy** of surgery with **3D printed patient-matched** guides and unique augmented reality **real-time surgical guidance**.

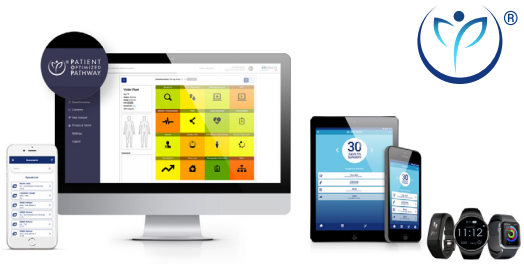
POST-OP

Communicate and **stay connected** with your **patients** with advanced education and monitoring tools, and **record** and **analyze** clinical outcomes.



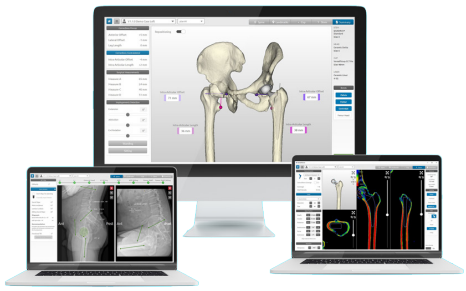
PATIENT OPTIMIZED PATHWAY (POP)

Optimize safe and efficient communication with patients, in order to improve their satisfaction with the overall treatment experience through the POP application. An easy-to-use interactive tool designed to support patient education, preparation, rehabilitation, and monitoring, before and after surgery.



ADVANCED PLANNING AND VERIFICATION TOOLS

Design the optimal surgical strategy based on each patient's unique anatomy and biomechanics. Enhance confidence and reproducibility using semi-automated 3D planning and non-invasive intraoperative assessment of implant positioning.



PATIENT-MATCHED SURGICAL GUIDES

Improve accuracy and operating room (OR) efficiency with our award-winning 3D printed patient-matched guides based on more than 10 years of clinical evidence.

CLINICAL DATA COLLECTION & ANALYSIS

Exploit meaningful insights into outcomes using MyClinicalData, our platform for data collection and analysis .

AUGMENTED REALITY SURGICAL PLATFORM

Empower your vision with NextAR, our Augmented Reality Surgical Platform. A unique real-time surgical guidance superimposed onto the operative field to enhance precision and enable data-driven decision-making. This innovative solution can increase efficiency with limited capital investment and per-case disposable cost.

NEXTAR™
AUGMENTED REALITY SURGICAL PLATFORM

3.2 EDUCATION

We believe that education is an indispensable tool for transforming innovation into concrete benefits for patients, surgeons and healthcare systems. For our surgeons, we have introduced a range of training and technical support initiatives through our M.O.R.E. Institute. Since its founding in 2004, the M.O.R.E. Institute has become a global education platform tailored to the needs of the individual surgeon, with courses addressing each of our business lines. We provide our surgeons with personalized, structured and accessible education on our technologies and procedures, which increases surgeon loyalty and ensures that our offerings are used to the best advantage of the patient and the surgeon. We also provide our surgeons with ongoing support and proctoring as they master the use of our technologies and procedures, and create an interactive and supportive community in which they can learn and share experiences with other surgeons.

With the M.O.R.E. Institute the surgeon is never alone when discovering new technologies

Medical education is a fundamental pillar of our long-term value-creation strategy, and despite the current challenging situation due to COVID-19, our commitment has not changed, with more than 1'500 surgeons attending educational Learning Centers, with scientific sessions in-person or online.

400th
AMIS LEARNING CENTER

200th
KNEE LEARNING CENTER

100th
SPINE LEARNING CENTER

Our systematic approach to customer development through education is a key factor of our success, allowing us to cultivate a strong partnership between us and our surgeon customers and facilitating the widespread adoption of our products and surgical techniques. We believe that our customer engagement and education initiatives contribute significantly to our customer retention, surgeon acceptance and use of our offerings. Moreover, we believe that our close partnership with surgeons benefits us in developing and refining our products and techniques. As a result of our focus on customer engagement, we remain continuously connected with surgeons and stay up-to-date with and influence the latest advancements in the orthopaedic field. We dedicate a considerable amount of resources to develop and cultivate our surgeon relationships. There is a learning process involved for surgeons to become proficient in the use of advanced products, and it is critical to the success of our commercialization efforts that enough surgeons are educated and trained in the use of our products. As we increase the scale of our business, we expect to continue to dedicate significant resources to our customer engagement and education initiatives.

In 2021, we extended our commitment to online educational activities, introduced last year due to pandemic limitations, with over 3'850 surgeons attending our marketing initiatives and education programs. The M.O.R.E. in Touch program, a series of webcasts discussing current topics in orthopaedic, was greatly enhanced with the staging of several eLearning Classes, eLearning Centers, the launch of live surgery specimen demonstrations, and web-based "Meet the Expert" exclusive events. These online events have been hosted by Medacta TV, which is our streaming platform providing access to many hours of medical education, supporting the scientific community and assisting surgeons in continuing their work while discussing and developing ideas to move forward the orthopaedic industry.

In 2021, we were able to organize many in-person events, such as M.O.R.E. Learning Centers as the 1st M.O.R.E. Spinopelvic summit in Australia, which highlights our commitment to bringing the medical community even closer, despite being in a time of physical distancing.

MEDACTA UNDERSCORES ITS CONTINUOUS GLOBAL COMMITMENT WITH THE 1ST M.O.R.E. SPINOPELVIC SUMMIT IN AUSTRALIA

The 1st M.O.R.E. Australian Spinopelvic Summit, held May 28-29, 2021 in Hobart, Tasmania, Australia represents an expansion of Medacta's International ongoing commitment to continuous medical education. This event gathered an Australian faculty with international guests to discuss personalized patient solutions for Total Hip and Spine surgery.

"It's a very interesting format promoting hip and spine surgeons to share their experiences in order to better understand the relationships between these anatomical structures and explore how to optimize mutual treatments for improving patient outcomes," says Francesco Siccardi, CEO of Medacta.

"Today we look at this synergy in a very complete and holistic way with our MySolutions Personalized Ecosystem of advanced technologies. Surgeons are at the center of our patient-specific solutions and we are committed to providing them with continuous support to allow their patients to come back to a healthy and active lifestyle" concludes Francesco Siccardi.

1st M.O.R.E. AUSTRALIAN SPINOPELVIC SUMMIT
28th - 29th MAY 2021
Hobart, Tasmania, Australia

3.3 HEALTHCARE SUSTAINABILITY

Our products and surgical procedures are designed to improve the patient well-being, facilitate the work of our surgeons and increase the sustainability of the healthcare system by improving efficiency while reducing surgical costs.

Our AMIS technique with its dedicated instrumentation, from the AMIS Mobile Leg Positioner to the AMIS MBOOT single-use insert pad, covers every aspect of the procedure with the aim of streamlining, simplifying and facilitating reproducibility of the anterior approach.

Sustainability is at the heart of our vision and is supported by our innovation and medical education

Furthermore, our patient-matched technology (i.e. MyKnee, MyHip, MyShoulder and MySpine), which is part of our MySolutions Personalized Ecosystem, facilitates accurate implant positioning and OR efficiency through advanced 3D preoperative planning and patient-specific instruments, with potential benefits both for the surgeon and the patient.

To further enhance the healthcare sustainability in knee procedures, we have developed single-use instrumentation (i.e. the GMK Efficiency system), which offers several benefits in terms of logistics and personnel costs to hospitals and, in particular, outpatient surgical centers. The GMK Efficiency system requires no additional preoperative sterilization, optimizing logistics for the surgeon and the hospital, and eliminating any delays due to unavailable or non-sterile equipment. It also has the potential of reducing infection risks, because of its single-use nature and the fact that it is delivered terminally sterile. For continuous environmental responsibility, we completely offset the total amount of CO_2 connected to GMK Efficiency. Through active support for environmental sustainability projects initiated by Swiss Climate, the Medacta GMK Efficiency instrumentation was awarded the "CO_2 neutral" certificate. Furthermore, as there is no need for washing or sterilization, GMK Efficiency can save more than 400 liters[1,2,3] of clean water for each total knee arthroplasty performed. In addition, such single-use instrument sets have a positive impact on our operating cash flow, as the production of these instruments is classified as inventory (as opposed to capital expenditures) and, thus, the return on the investment is realized more quickly. Procedures that combine patient-specific instrumentation with single-use instrumentation have proved to save time in the OR and simplify the OR scheduling.[4,5,6,7]

The NextAR Augmented Reality Surgical Platform, with its smart delivery tools, may improve efficiency in computer-assisted surgery by offering a compact solution that avoids the need for a bulky external detection platform. With a limited upfront capital investment and per-case disposable cost compared to other technologies, this translates into greater efficiency in the operating room, which is particularly relevant for Ambulatory Surgery Centers (ASCs).

GMK® Efficiency
SINGLE USE INSTRUMENTS
IN KNEE REPLACEMENT

[1] Getinge 46 Washer Disinfector – Service instructions;
[2] Recommendations for Cleaning, Decontamination and Sterilization of Medacta International Orthopedic Devices
[3] Priorclave North America Report, 2013
[4] Dell'Osso G, Celli F, Bottai V, Bugelli G, Citarelli C, Agostini G, Guido G, Giannotti S Single-Use Instrumentation Technologies in Knee Arthroplasty: State of The Art, Surg Technol Int. 2016 Apr 27;XXVIII. pii: sti28/727
[5] Attard, Andre, Gwenllian Fflur Tawy, Michiel Simons, Philip Riches, Philip Rowe, and Leela C Biant. 2019. "Health Costs and Efficiencies of Patient-Specific and Single-Use Instrumentation in Total Knee Arthroplasty: A Randomised Controlled Trial." BMJ Open Quality 8 (2): e000493.
[6] Tawy, Gwenllian F, and Leela C Biant. 2020. "Improving Intra-Operative Efficiency of Total Knee Arthroplasty with Patient-Specific and Single-Use Instrumentation." Journal of Orthopaedic Experience & Innovation, September.
[7] Tyler D. Goldberg, MD, John A. Maltry, MD, "Logistical and Economic Advantages of Sterile-Packed, Single-Use Instruments for Total Knee Arthroplasty", The Journal of Arthroplasty 2019.

ENABLING SOLUTIONS FOR OUTPATIENT CARE AND SAME-DAY SURGERY

For those seeking surgery in a same-day setting, we have created same-day surgery solutions, with the aim of achieving the best outcomes at the lowest cost in the outpatient setting.

Thanks to the introduction of Medacta's value proposition, the products suitable for same-day surgery and outpatient care, such as AMIS, GMK Efficiency, NextAR – Augmented Reality Surgical Platform, MyKnee, MyShoulder and MySpine MC, and the dedicated educational opportunities, such as the Learning Center visit, and the Reference Center visit, it is possible to share best practices and learn about the safe and effective use of our products in a same-day surgery setting, as well as to observe the complete process that a patient goes through when having surgery at a same-day surgery facility. This includes the admission/check-in process, the surgical procedure, the PACU (Post-Anesthesia Care Unit), and the discharge to home.

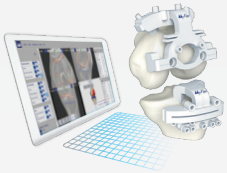
"*The medical landscape is changing by the day. To keep pace with the times and to be able to offer increasingly effective and beneficial solutions to the patients, surgeons and hospitals, our outpatient initiatives combine the company's innovations with tailored medical education programs and the suite of patient support services, enabling outpatient care and same-day surgery*," says Francesco Siccardi, CEO of Medacta.

PRODUCTS SUITABLE

AMIS Experience

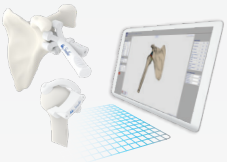
GMK Efficiency

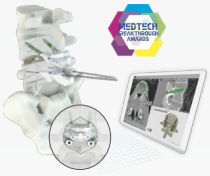
NEXTAR



MyKnee

MyShoulder





MySpine MC

WAITING ROOM

OPERATING ROOM

PACU (Post-Anesthesia Care Unit)

DISCHARGE

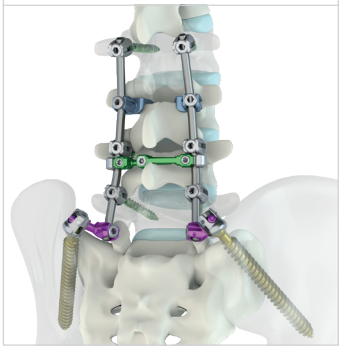
4. PRODUCTS AND BUSINESS LINES

4.1 OVERVIEW

We have grown considerably since our foundation in 1999, largely driven by our innovative and attractive product mix, surgical techniques and technologies, that differentiate us from our competitors. The cornerstone of our business has been our activities in the Hip and Knee business lines, where we have an established presence. More recently, we have leveraged the know-how we gained from the Hip and Knee business lines to develop new products and techniques in our Spine, Shoulder and Sportsmed business lines, in order to offer surgeons and patients the benefit of Medacta design, innovation and training across a wider range of orthopaedic indications. To further expand our product portfolio, our pipeline consists of a range of new products and product enhancements focused on personalized medicine, across all of our business lines. Our products are complemented by a wide range of instruments and technologies, that can enhance the patient experience throughout the entire patient journey.

JOINT

SPINE



SPORTSMED

M.O.R.E. EXCELLENCE CLINICAL PROGRAM

One of our main strategies have been and will continue to be the responsible introduction of innovative products into the market, which we achieve through extensive research and development followed by limited market release and continuous post-market surveillance.

The M.O.R.E. Excellence Clinical Program enables us to responsibly introduce innovative products to the marketplace by defining the steps and milestones applicable to Medacta products ahead of their full release, following the receipt of initial regulatory approvals (e.g., receipt of the CE mark in Europe). Within this program, we typically release new products on a restricted basis to conduct voluntary clinical programs in order to further document their efficacy. Driven by an internal risk analysis, the duration and scope of each of our clinical programs can vary depending on a number of factors, including the degree of innovation behind the relevant product, the specific indications of the device and the possible adverse events described in scientific literature. To the fullest extent possible, our clinical programs follow the guidelines recommended by independent organizations, such as the Orthopedic Data Evaluation Panel or the Beyond Compliance Program.

Following the full market release of our products, we continuously monitor and assess the performance of our implants by way of our post-market surveillance program, which channels all data to a dedicated group of internal experts. These experts, in consultation with other internal or external experts and resources (as needed), assess the data and issue a specific report with a comprehensive analysis to ensure the system performance is fully understood and the risks are carefully evaluated. Moreover we sponsor, support and participate in clinical post-market studies conducted by leading international experts to continuously improve our knowledge, and make these results available to the scientific community through peer-reviewed publications.

4.2 JOINT PRODUCTS AND TECHNOLOGIES

Our joint business unit is composed of three business lines: Hip, Knee and Shoulder, with the first two contributing 49.4% and 36.1%, respectively, to our revenues for the year ending December 31, 2021.

NEXTAR: AUGMENTED REALITY SURGICAL PLATFORM

An innovative solution that features advanced planning tools, revolutionary tracking system, and augmented reality to potentially improve surgery accuracy and efficiency in surgical procedures, with limited upfront capital investment and cost per case compared to other technologies.

AUGMENTED REALITY

The perception of real-life environments can be enriched with useful information, measured in real-time by the system and displayed on NextAR Smart Glasses worn by the surgeon. This is superimposed on the operative field of view in a highly intuitive way, enabling enhanced decision making and optimizing surgery.

ADVANCED PLANNING

The protocol is based on CT derived images. These enable an accurate and personalized plan to optimize implant positioning and joint balancing. NextAR case management is cloud-based and leverages the MySolutions Personalized Ecosystem, accessible from any device.

SMART DELIVERY TOOLS

NextAR TS (Tracking System), which is made up of two infrared single-use modules, enables real-time instruments guidance and accurate implant positioning without compromising procedural flow or OR logistics.

NEXTAR™

AUGMENTED REALITY SURGICAL PLATFORM

With our NextAR Platform we wanted to take another step forward in personalized medicine, improving accuracy in computer-assisted surgery. Efficiency in the operating room is crucial for surgeons and hospitals, and NextAR has the potential to provide significant benefits to healthcare systems around the world. We are proud to have developed an extremely versatile platform, with a single, compact hardware that applies to both joint and spine applications. NextAR perfectly fits in Medacta's vision and in our sophisticated MySolutions Personalized Ecosystem, focused on delivering advanced personalized solutions that support the surgeon's care of each patient.

Francesco Siccardi | CEO of Medacta

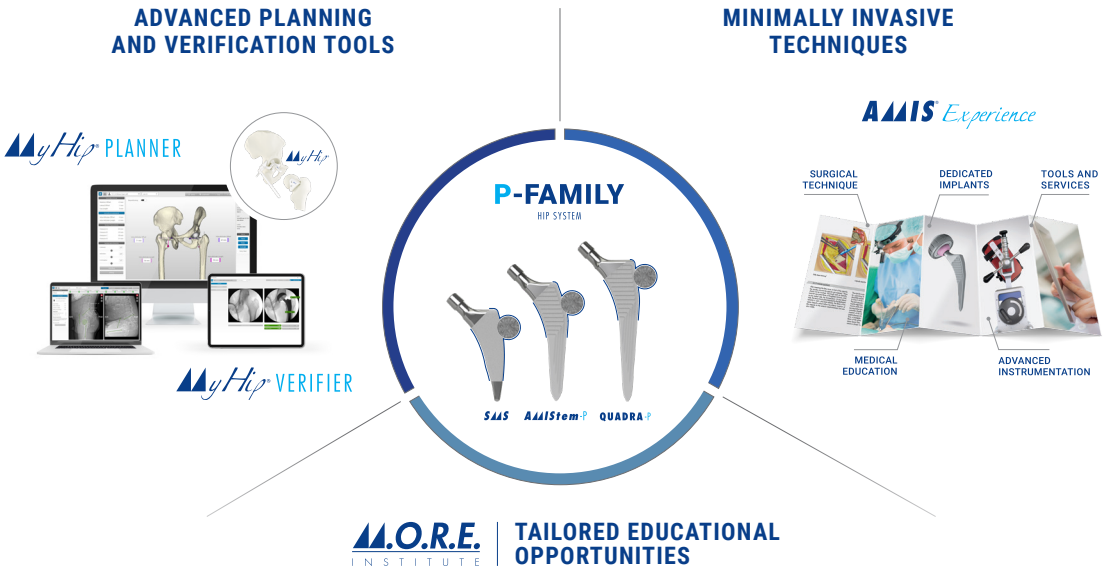
HIP

Since our founding in 1999, we have focused on developing new and improved products, technologies and methodologies for the hip segment of the orthopaedic market. In the intervening years, we have become a pioneer in developing new offerings for hip replacement patients on the basis of our minimally invasive surgical techniques, supported by our extensive surgeon training and education initiatives. We offer a wide portfolio of implants which can be used for primary procedures (i.e. first-time hip replacements), as well as revision procedures (i.e. repeat hip replacements), and have been designed to reach the highest standards of implant performance. We offer femoral hip implants and acetabular hip implants, grouped into those fixed with cement and those fixed without.

Personalized solutions and tailored education program for THA

The majority of our implants are cementless, relying on biological fixation of the bone to the surface of the implant. Our cemented implants use acrylic cement to quickly establish solid attachment. In collaboration with expert surgeons, we have also developed a range of instruments that are specifically designed for our implants and techniques in order to reduce errors and the learning curve. The Medacta P-Family Hip System, the core of our hip offering, is a comprehensive system of tapered rectangular stems, which includes Quadra-P, AMIStem-P, and SMS. While preserving the characteristics which are important to the success of existing systems, the P-Family was developed incorporating innovative key features aiming to bring solid clinical performance to the current landscape of total hip arthroplasty (THA). A state-of-the-art coating (MectaGrip) on the proximal portion, designed to enhance initial stability, due to its high coefficient of friction, and long-term fixation, thanks to its open and interconnected pores which create a favorable environment for bony fixation. Progressive neck lengths, offering to the surgeon a better tool to restore the native hip joint biomechanics in a broader patient population. Different lengths and canal-filling dimensions, as well as comprehensive size range, giving surgeons the ability to match an implant to the patient's current bone morphology. The overall hip portfolio is further enhanced by innovative technologies that deliver a personalized approach to hip replacement. As part of our MySolutions Personalized Ecosystem MyHip provides 3D printed patient-matched guides allowing for more accurate positioning and sizing of the hip implant, MyHip Planner empowers the surgical decision-making process through a 3D preoperative planning tool with advanced analytical features and, MyHip Verifier allows for intraoperative non-invasive assessment of implant positioning.

Our hip implants can be used with a variety of surgical techniques. However, we encourage all surgeons using our hip implants to perform the AMIS technique which potentially delivers several advantages for the patient.[8,9,10,11] The AMIS technique, with over 480'000 procedures performed worldwide, is a surgical technique involving an anterior approach to the hip that has been fine-tuned to minimize soft tissue damages, pain and recovery times, reducing the dislocation rate and providing excellent patient satisfaction scores. By following both an intermuscular and an internervous path, the AMIS technique potentially reduces the risk of damage to periarticular structures and can improve overall patient outcomes.



[8] Laude F. Total hip arthroplasty through an anterior Hueter minimally invasive approach. Interact Surg (2006) 1: 5-11.
[9] Dora C. Minimalinvasive Zugänge an der Hüfte. Orthopäedie Mitteilungen 6/07, 574-576.
[10] Vasina PG, Rossi R, Giudice GM, Palumbi P. Hip arthroposthesis through the anterior minimally invasive approach. Sphera 2010;6(12) – Speciale Ortopedia.
[11] Jayankura M, Roty M, Potaznik A, Rooze M, Cermak K, Remy P, Gillard B, Biltiau N, Schuind F. Isokinetic and isometric muscle strength recovery after total hip arthroplasty implanted by direct anterior approach. Podium presentation at the 10th Annual Congress of the EFORT, Vienna, Austria, June 3-6, 2009.

MYHIP PLANNER AND MYHIP VERIFIER

MyHip Planner and MyHip Verifier are two personalized solutions which are intended to be used in primary total hip replacement for patient-matched 3D preoperative planning and intraoperative verification. Designed to predict and minimize surgical complexity, as well as to improve overall surgical outcomes and patient satisfaction, these applications can be used as stand-alone tools or together, and are intended to deliver a personalized approach to THA, optimizing the surgical experience.

A streamlined protocol assists the surgeon when executing a 3D anatomical assessment of the anatomy and planning for the optimal implant and functional position within the hip joint. This helps anticipate potential intraoperative complications, such as femoral fracture and leg length inequality, or detect potential risks of implant failures, such as impingement, reduced range of motion (ROM) and overall joint instability. MyHip Planner eases and empowers the critical decision-making process in defining the optimal surgical strategy for each patient.

MyHip Verifier is an easy-to-use, non-invasive surgical platform that uses intraoperative fluoroscopic images to assist the surgeon in verifying patient-matched implant positioning. Engineered to seamlessly integrate into the surgeons' existing workflow and preserving operating room efficiency, MyHip Verifier empowers intraoperative fluoroscopy by providing a real-time numerical evaluation of the actual influence of implant positioning on the patient's anatomy.

MyHip® PLANNER

PLAN THE PATH TO SUCCESS

3D preoperative planning
software for THR

MyHip® VERIFIER

VERIFY YOUR ACCURACY

Intraoperative verification
software for THR

AMIS is complemented by a unique package of supporting products, including dedicated implants, specially designed instruments and the AMIS Mobile Leg Positioner (a patented surgical table extension which allows for a simple and reproducible procedure), as well as a specifically-trained sales force.

Our AMIS offering has been further enhanced over years with new packages that allow surgeons to take the anterior approach to the next level, such as the comprehensive AMIS Bikini offer. The bikini incision features a short, oblique skin incision within the inguinal skin fold, resulting in an aesthetically pleasing cosmetic scar that can be narrower and lighter in color, and remains hidden when wearing a bikini.[12,13,14,15] This technique may also help lessen wound healing concerns in obese patients or patients with a large abdomen pannus.[12,13,14,15]

As part of the AMIS Experience platform, surgeons can experience the AMIS Bikini as an advanced technique within our tailored and comprehensive AMIS Educational Program, taking advantage of the support of a network of world-renowned experts as well as of a dedicated set of instruments specifically designed to optimize and simplify the bikini approach procedure and facilitate the soft tissue preservation. We believe that the AMIS Education Program, developed with the aim of optimizing and standardizing the implementation of the AMIS technique, has contributed to making the AMIS technique a preferential and easily reproducible primary total hip replacement surgical method for surgeons worldwide.

Our education opportunities are designed to master the AMIS approach from the simplest primary hip arthroplasties to the most complex cases, such as no capsular release, bikini incision and revision THA.

Complementing the P-Family, our cementless stem portfolio includes MasterLoc and MiniMAX. With a tapered wedge femoral stem design, the MasterLoc Hip System is available in three versions (standard, lateralized and lateralized plus), which allow for an easier and more effective management of the patient's anatomy, completely independent from the leg length. This distinctive feature helps achieve good restoration of the hip joint biomechanics in nearly all patients. MiniMAX is an anatomical cementless stem engineered to provide the best fit and fill following the natural shape of the femoral canal.

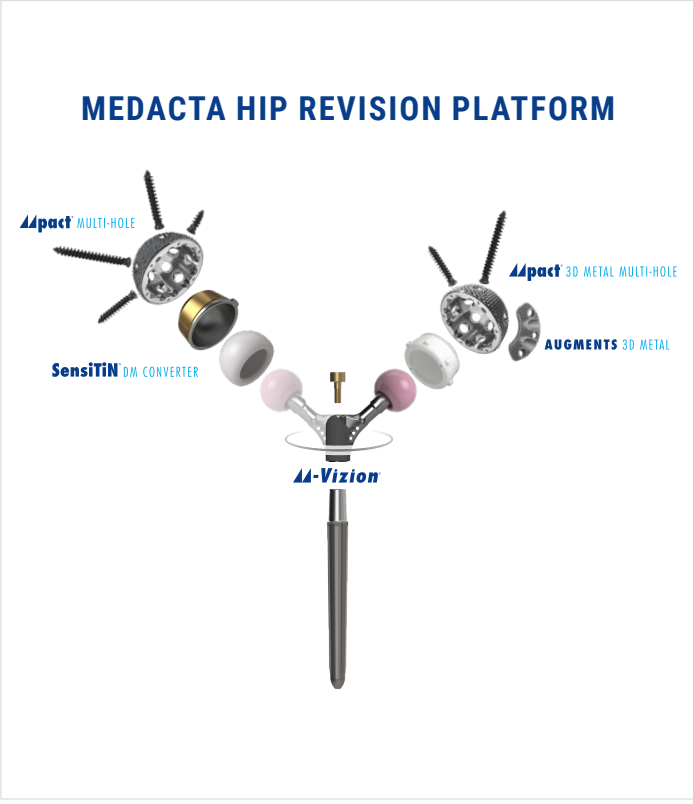
[12] Menzies-Wilson, Richard & Mahalingham, Karuppiah & I, Tamimi & Field, Richard. (2019) "Retrospective cohort study comparing the functional outcomes of direct anterior approach hip arthroplasty. Oblique "bikini"vs longitudinal skin incision ".
[13] Menzies-Wilson, Richard & Mahalingham, Karuppiah & I, Tamimi & Field, Richard. (2019)." Functional Outcomes of direct anterior approach hip arthroplasty: Oblique 'bikini' versus longitudinal skin incision. 10.1177/2210491719890883.
[14] Leunig, Hutmacher, Ricchiardi, Impellizzeri, Rüdiger, Naal. (2018)" Skin crease 'bikini' incision for the direct anterior approach in total hip arthroplasty: a two- to four-year comparative study in 964 patients. Bone Joint J.
[15] Manrique, MD, Paskey, BS a, Tarabichi, MD, Restrepo, MD, Foltz, PhD Hozack, MD. (2019) "Tota l Hip Arthroplasty Through the Direct Anterior Approach Using a Bikini Incision Can Be Safely Performed in Obese Patients". J Arthroplasty

On the acetabular side, our solutions include – among others – Versafitcup and Mpact System. Versafitcup is a complete system of elliptical cementless acetabular cups that share the same instrumentation, offering stability, as well as load and stress distribution. The Mpact System consists of hemispherical cementless acetabular cups that provide different solutions according to the patient needs and can be used in primary and revision hip replacements. Mpact Two-Hole and Mpact Multi-Hole are also available with 3D Metal, an advanced structure, manufactured utilizing our in-house technology based on state-of-the-art metal 3D printing, designed to mimic the bone structure and improve the long-term stability of our implants. A recent enhancement to the Mpact System for primary and complex hip revision procedures, the Iliac Screw Mpact 3D Metal, is a cementless acetabular ultra-porous titanium shell with a modular polyaxial iliac screw. It provides surgeons with a comprehensive and versatile range of options to address a variety of complex hip cases, from difficult revisions to severe dysplasia.

We also offer a comprehensive cemented portfolio with femoral and acetabular solutions that allow surgeons to address the unique needs of patients with a synergistic AMIS friendly design.

Besides the Iliac Screw Mpact 3D Metal, in 2021 we announced the first surgeries utilizing AMIS-K Long, a Charnley-Kerboull long cemented stem, and 3D Metal B-Cage, a cutting-edge, anatomical reinforcement cage to bridge acetabular bone loss or fractures, after each of the items received CE marking. These new products, alongside the M-Vizion Modular Femoral Revision Stem, further broaden the Medacta Hip Revision Platform.

The M-Vizion Femoral Modular Revision System, the core of the Medacta Hip Revision Platform, allows surgeons to feel more confident in the OR when undertaking femoral revision cases. Introduced to the market in 2017 on a restricted basis and expanded in late 2020, with a broader range of options, the M-Vizion was developed with the support of surgeon experts in the global orthopaedic community. Known for delivering maximum stability and versatility, and for providing a simplified and streamlined procedure, in 2021 the M-Vizion has been fully released into the market with positive preliminary results. The Medacta Hip Revision Implant Portfolio, uniquely compatible with the AMIS technique, is supported and complemented by a complete range of dedicated instruments to facilitate the removal of failed implants and cement.



The tailored educational offering on revision hip replacement is expanding in parallel with the product portfolio. With an international network of expert surgeons, the M.O.R.E. Institute is at the forefront of education on revision techniques and products with personalized high-level educational pathways supporting surgeons with focused activities as they master revision.

KNEE

Together with the MySolutions Personalized Ecosystem, we have developed a complete range of implants, instruments and techniques for knee replacement. We believe that our offerings in the Knee business line provide surgeons with an innovative, effective approach to partial, total, and revision knee replacement. The Knee business line is also a perfect example of our commitment to providing personalized solutions.

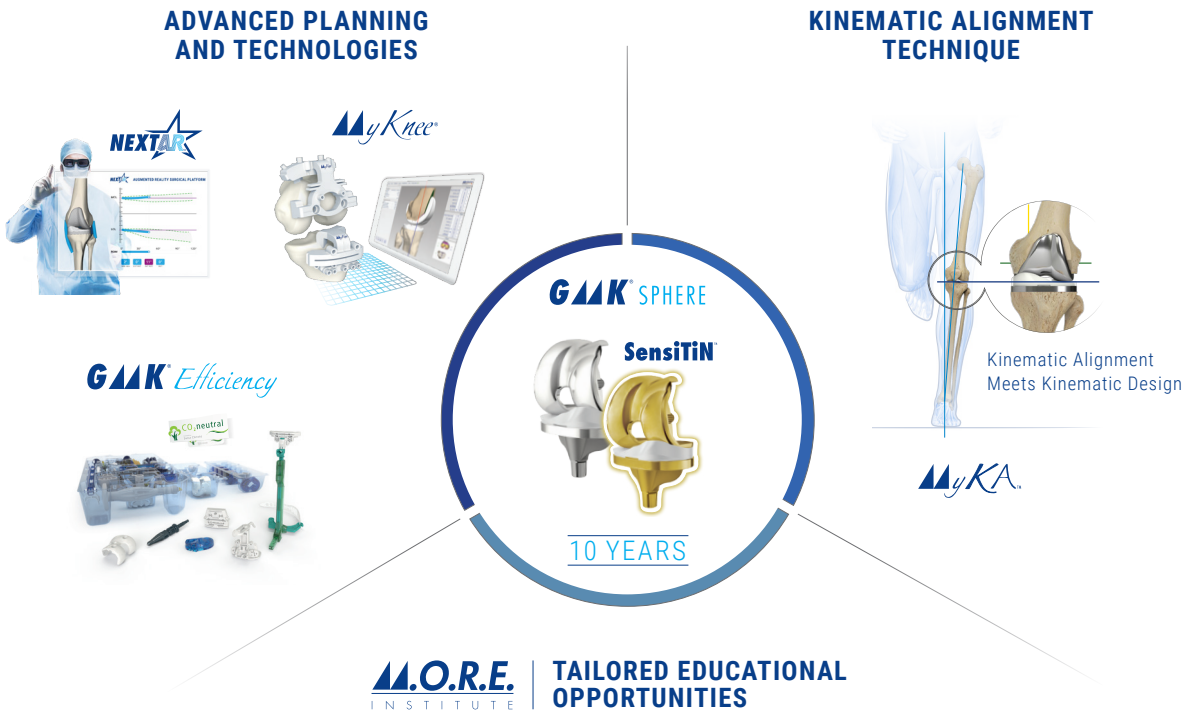
Personalized solutions and tailored education program for TKA

GMK Sphere, the core of our knee portfolio, is a Medially Stabilized Knee designed to provide maximum functional stability while also restoring natural knee motion, with the purpose of improving patient comfort during everyday activities and reducing postoperative knee pain. GMK Sphere has shown the potential to improve functional and patient-reported outcomes also when combined with MyKA Platform (Kinematic Alignment Platform), a personalized technique with the goal of restoring knee function and improving patient satisfaction by tailoring the position of the implant to each individual patient. The evidence and the interest of the market for this technique are constantly growing and Medacta is leading the way in collaboration with the biggest experts worldwide.

The orthopaedic community has welcomed this innovative implant, and surgeons have chosen it for more than 100'000 patients throughout the world. GMK Sphere is backed by a strong educational network of over 100 international experts, and 10 years of successful clinical experience. To provide surgeons with the possibility of tailoring the implant choice to the patient's needs, we have developed advanced material options: MectaGrip, a plasma-sprayed titanium coating to achieve primary stability and secondary fixation[16] in cementless applications, and SensiTiN, a ceramic-like coating to offer a hypoallergenic solution. With the ever-increasing incidence of metal hypersensitivity cases, we expect the usage of the SensiTiN option to grow in the coming years.

Additionally, we developed enabling technologies part of our MySolutions Personalized Ecosystem platform, such as MyKnee 3D printed patient-matched guides and NextAR Augmented Reality Surgical Platform, to improve accuracy and precision, while preserving healthcare sustainability. Both MyKnee and NextAR offer a powerful synergy with GMK Efficiency single-use instruments set. The GMK Efficiency system requires no additional preoperative sterilization and instrument management, optimizing logistics for the surgeon and the hospital, making it the perfect solution for both large hospitals and ambulatory surgical centers.

The GMK Efficiency system is also available as part of our Efficiency KneePack, a kit including all the components needed to implant the GMK Sphere using a patient-specific single-use instrument set and is delivered sterile in a single, lightweight box allowing to save time in the OR and simplify the OR scheduling. This solution has been particularly suitable in light of the COVID-19 pandemic and will continue to offer an efficient and effective solution in the coming years.



[16] Data on file: Medacta

NEXTAR KNEE

The first FDA-cleared Augmented Reality Surgical Platform for total knee replacement, NextAR Knee, has been CE-marked in 2021.

NextAR Knee makes preoperative 3D planning efficient and precise, offering smart delivery tools for accurate and personalized surgery. Augmented Reality adds intelligence to the surgery, and visualizing the surgical guidance superimposed onto the operative field allows surgeons to stay focused on what matters: the patient.

NextAR Knee allows direct tracking of the collateral ligaments and a 3D analysis of soft tissue behavior throughout the whole range of motion during surgery, bringing patient-specific ligament balancing to the next level.

With limited upfront capital investment required by clinics and hospitals, as well as economic benefits to the healthcare system through OR efficiency, this platform will be an optimal solution particularly for U.S. ambulatory surgery centers (ASCs).

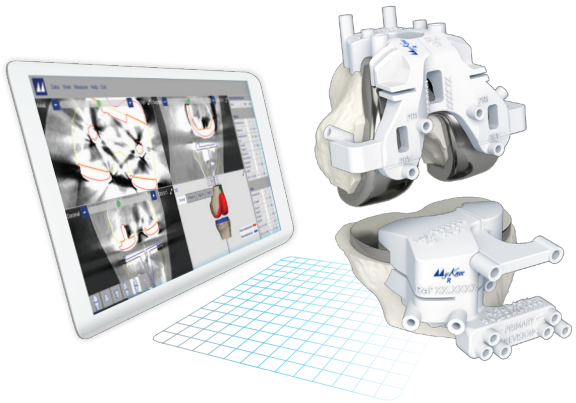
NEXTAR™

AUGMENTED REALITY SURGICAL PLATFORM

In 2021, we extended the personalized medicine concept to total knee revision surgeries unveiling the unique and innovative MyKnee R patient-matched 3D printed solution, the newest addition to our MySolutions Personalized Ecosystem, a game-changing technology to streamline total knee revision surgeries. Starting from a CT scan, MySolutions engineers create a 3D reconstruction of the patient's joint where a failed primary implant has been positioned. This reconstruction is then used to accurately plan the positioning of a new prosthesis, ranging from a minimum level of constraint to semi-constrained and fully constrained solutions. The plan can be easily replicated intra-op by means of the patient-matched MyKnee R guides.

MyKnee® R

The Game-Changer in Revision TKA



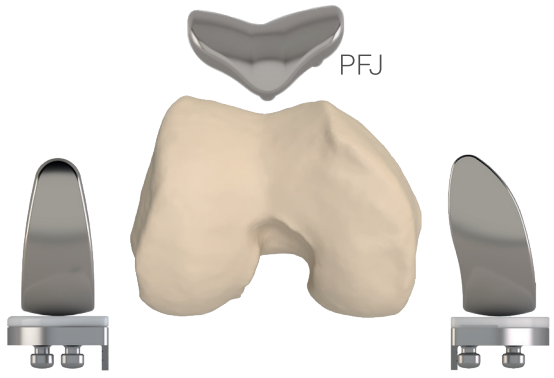
For total knee arthroplasty we offer GMK Sphere and GMK Primary which are part of the comprehensive GMK System ranging from GMK UNI for unicompartmental procedures to GMK Hinge for revision surgery. In particular, the system allows for a very easy transition from GMK Sphere and GMK Primary to a semi-constrained (GMK revision) or a fully constrained (GMK Hinge) solution and allows for a combination of GMK Sphere with revision options like wedges and stems.

For partial knee replacement (i.e., a surgery that replaces only one part of a damaged knee), we offer GMK UNI and MOTO Partial Knee System. Both options allow surgeons to treat osteoarthritis localized on the medial or lateral compartment of the knee. MOTO PFJ has been CE marked and FDA cleared and will complete our partial knee portfolio in 2022, allowing for the treatment of osteoarthritis localized in the patello-femoral compartment of the knee.

Moto®

PARTIAL KNEE SYSTEM

Moving forward in partial knee



In 2021, our partial knee portfolio was further enriched with our SensiTiN coating for low metal ion release, which had already been introduced for the primary and revision implants. With the SensiTiN-coated partial knee implants, the Medacta Knee System is now even more complete, allowing for treatment of a larger number of patients.

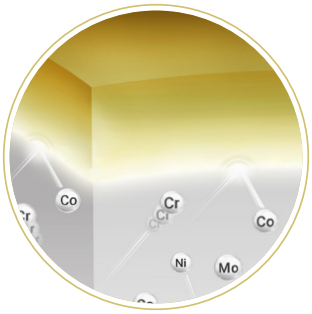
SensiTiN™

ENHANCED COATING TO REDUCE METAL ION RELEASE

PARTIAL

MOTO

GMK UNI



TOTAL

GMK SPHERE

GMK PRIMARY

REVISION

GMK REVISION

GMK HINGE

Regarding material technology, we have also recently received CE mark and FDA clearance for GMK Sphere tibial inserts in E-CROSS, a highly crosslinked UHMWPE (ultra-high molecular weight polyethylene) blended with Vitamin E, a powerful antioxidant that improves oxidation resistance. Faithful to our goal of innovating responsibly, we have added this material to our knee portfolio, leveraging the good clinical outcomes observed over many years. This new generation material further improves the already excellent performance in terms of wear resistance of the GMK Sphere inserts without compromising the mechanical properties. It will be added also to our MOTO Partial Knee System in the upcoming months.

Finally, our knee revision offering consists of GMK Revision and GMK Hinge, which have been designed to preserve the joint functionality without dramatically altering its anatomy and kinematics, even in cases of severe ligament instability or massive bone defects. We have recently further expanded our knee revision portfolio with 3D Metal Femoral Cones. 3D Metal is an advanced structure, manufactured utilizing 3D printing technology, designed to mimic the bone structure and improve the long-term stability of our implants. Developed upon the clinical success of 3D Metal Tibial Cones, the Femoral Cones can be used for structural support in areas of bone deficiencies that may compromise implant fixation.

Our knee offering is supported by Medacta's M.O.R.E. Institute, which offers surgeons targeted help through a strong education network as they seek to incorporate new technologies.

SHOULDER

In 2016, we decided to enter the shoulder market, leveraging the know-how we gained from the Hip and Knee business lines to develop new products and techniques in the Shoulder business line.

Since the first successful surgery in December 2016, performed by Ralph Hertel, MD, in Bern (CH), we have recently announced the milestone of 10'000 Medacta Shoulder System devices implanted worldwide. This promising achievement has been reached in less than 5 years, including the responsible introduction of our innovative system ahead of its full market release, according to the plan of action of the M.O.R.E. Excellence Clinical Program.

Tailored platform for individual patient needs and personalized educational opportunities

The Medacta Shoulder System, designed with the support of a group of international expert surgeons, is a modular solution that features a broad range of options, wide-ranging sizes, adjustable offsets, and innovative designs, both in the anatomic and reverse configuration. This modularity allows for conversion of a total anatomic shoulder replacement into a reverse shoulder replacement without the need to revise all the components. This is aimed at avoiding full revisions of the shoulder implant if disease progression requires conversion to a reverse configuration. The Medacta Shoulder System offering is always in expansion, and it has recently been enriched by a series of new options: stemless metaphysis, long humeral diaphysis and SensiTiN enhanced coating. With the introduction of the new options, the Medacta Shoulder System now offers a complete solution to manage many diverse patient anatomies and pathologies with respect to the humeral side: stemless metaphysis, short stem, standard stem, long stem.

Medacta's innovation is reflected on the Medacta Shoulder System's design. Proximal fixation in the standard and short stems is achieved by means of Medacta's proprietary MectaGrip technology, a plasma-sprayed titanium coating which enhances initial stability due to its high coefficient of friction and potential long-term fixation, in conjunction with hydroxyapatite.

The Medacta Shoulder System, besides being FDA cleared, CE marked and approved by MHLW for use in Japan, is now available worldwide through a large network of distributors.

In order to facilitate an accurate positioning of the implants, Medacta has created MyShoulder, a system providing complete 3D preoperative planning and 3D printed patient-matched guides, developed on the basis of the success of the Medacta Patient-Matched Technology, which is part of the MySolutions Personalized Ecosystem.

MyShoulder technology is FDA-cleared, CE-marked and approved by MHLW for use in Japan.

NEXTAR SHOULDER

In 2021, we announced the introduction into the market of NextAR Shoulder, the first CE-marked and FDA-cleared Augmented Reality surgical application with intraoperative guidance for total shoulder replacement.

Prior to surgery, the surgeon uses a 3D virtual model of the patient's shoulder to choose the best implant and position to restore the patient's unique anatomy. NextAR Shoulder enhances the preoperative implant-bone preparation with unique intraoperative orientation assessments, allowing surgeons to track real-time positioning.

During the operation, the surgeon uses the NextAR Smart Glasses to visualize surgical guidance in real-time directly on the operative field, enabling them to remain focused on the patient for an optimal user experience. With this process, the NextAR Shoulder platform allows for exceptional precision and control, ultimately translating to enhanced efficiency in the operating room.

NextAR Shoulder is designed to improve efficiency and precision in total shoulder replacement, while supporting the advancement of personalized surgery with limited upfront capital investment required by clinics and hospitals, as well as economic benefits to the healthcare system through OR efficiency.

NEXTAR™

AUGMENTED REALITY SURGICAL PLATFORM

4.3 SPINE PRODUCTS AND TECHNOLOGIES

Our development of products for the fast-moving spine market started in 2009, when our engineers collaborated with a team of expert international surgeons to develop a complete and flexible portfolio of spine products that includes implants and ancillary instruments. Our spine systems are designed to embrace minimally invasive techniques and open surgeries in order to treat degenerative spine diseases, deformities, trauma, and tumors. Our current range of spine products, implants and instruments complement one another, creating comprehensive platforms for most spine stabilization and fusion applications. Within our spine offering, we have leveraged our expertise both in minimally invasive techniques and in patient-matched technologies to offer optimum results to patients. Most of our spine products are FDA-cleared and CE-marked, and are also approved for use in Japan and Australia.

Since inception we have been providing spine implants which are pre-sterilized and ready for implantation. We strongly believe that pre-sterile implants can increase the efficiency of healthcare systems, reduce the risk of contamination, save time and reduce costs. These aspects are extremely important especially during COVID-19 time recovery.

Building on our proprietary MySolutions Personalized Ecosystem technology, we have developed MySpine to offer surgeons a patient-matched 3D printed screw placement guide, resulting in accurate positioning of the screws, reduced X-ray dosage and reduced time and costs.

MIS MySpine MC, used in the midline cortical approach, allows posterior lumbar fusion to be carried out in a minimally invasive, muscle-sparing way, resulting in shorter operating times and a substantial reduction of radiation exposure, while increasing efficiency compared to conventional free-hand or navigated lumbar fusion surgery. The goal of MIS MySpine MC is to maximize the fusion rate and the predictability of clinical outcomes, thus positively impacting patients' well-being.

In deformity surgeries, MySpine is intended for long construct fixation and designed to treat challenging spine anatomies like scoliosis and congenital malalignment; MySpine S2AI is the most recent addition to the MySpine platform and has been developed to complete the treatment of challenging spine anatomies and reinforce the fixation for long constructs, overcoming the limits of a potentially insufficient lower spine fixation. MySpine Cervical fills and complements the MySpine platform, introducing a solution for accurate cervical screw placement that allows for extended constructs relying on strong bone fixation for cervico-thoracic segments.

To complement the Medacta Spine portfolio, in 2021 we developed NextAR Spine, an innovative application for accurate screw positioning in spine surgery, as part of our Augmented Reality Surgical Platform.

Versatile spine portfolio and tailored educational opportunities

CERVICAL


M.U.S.T. Mini


Mecta-C Stand Alone


Mecta-C System

DEFORMITY


M.U.S.T.


MySpine


MySpine S2AI

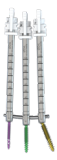
MIS SOLUTIONS


MectaLIF Anterior

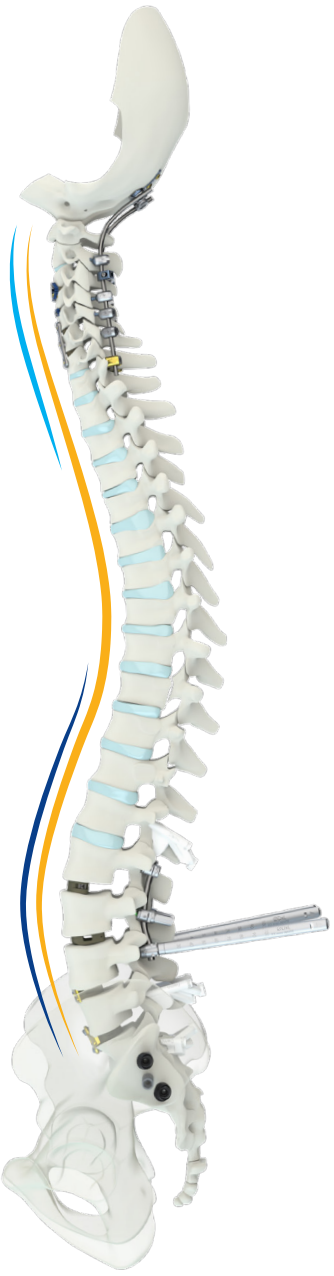

MectaLIF System


M.U.S.T. SI


M.U.S.T. MC


M.U.S.T. LT


MySpine MC



NEXTAR SPINE

NextAR Spine assists the surgeon in precisely locating the anatomical structures in either open, mini-open or percutaneous spine procedures for the safe placement of spine implants.

During the surgery, the system tracks the patient's anatomy, continuously updating its position on patient-specific 3D x-ray images. The surgeon, empowered by the NextAR Smart glasses, can visualize the parameters that accurately help position the implants, by selecting among real-time (3D Direct) and preoperative planning (3D-3D) approaches.

NextAR Spine has the goal of improving efficiency and precision in spine surgery, delivering personalized planning with limited upfront capital investment required by clinics and hospitals, as well as economic benefits to the healthcare system through OR efficiency.

AUGMENTED REALITY SURGICAL PLATFORM

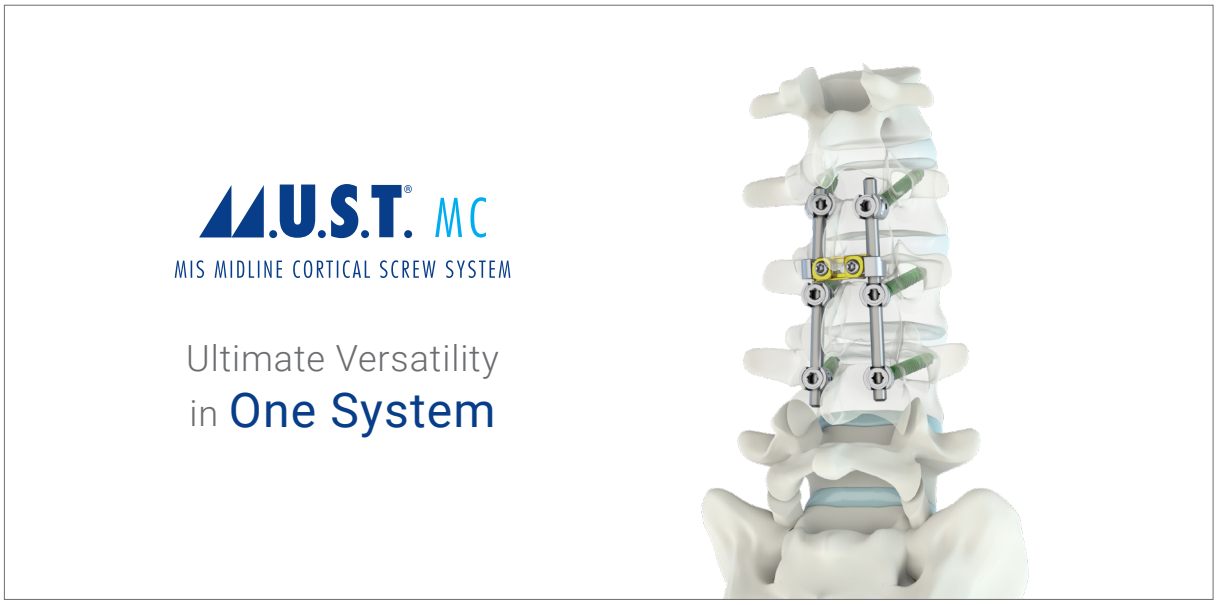
REAL-TIME INTRAOPERATIVE FEEDBACK
WITHIN THE SURGEON'S LINE OF SIGHT

In 2021, we further demonstrated our commitment to innovation and personalized solutions by expanding our cervical and MIS solutions.

The cervical platform is an end-to-end 360° solution with improved flexibility, stability and accuracy designed for posterior fixation and anterior cervical discectomy and fusion (ACDF). The integrated platform is comprised of three components: Mecta-C Stand Alone, M.U.S.T. Mini, and MySpine Cervical.

The MIS platform is based on two minimally invasive approaches: midline (M.U.S.T. MC) and percutaneous (M.U.S.T. LT).

M.U.S.T. MC (Midline Cortical) is a complete and flexible system which stabilizes and facilitates fusion of the thoraco-lumbar spine and the sacrum, featuring MySpine MC, a dedicated retractor and distractor systems offering superior performance in muscle tissue manipulation and vertebral distraction/compression maneuverers. This complete platform is further integrated by the cortical/cancellous screw threads, recently registered worldwide, which differentiate bone purchase, enhancing the posterior fixation.

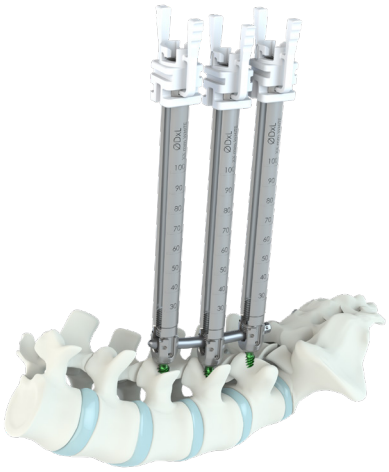


M.U.S.T. LT (Long Tab Screw System) is a minimally invasive solution for posterior spine fixation in the percutaneous approach. This versatile solution gives the surgeons freedom of choice between fast locking screws, applicable in an extensive range of degenerative cases, and an extended reduction capacity, a crucial aspect in lumbar spondylolisthesis or thoracic kyphosis restoration. The absence of Nickel, Cobalt and Chromium makes M.U.S.T. LT a unique solution within the M.U.S.T. pedicle screw system, providing full spine fixation with 100% Titanium alloy constructs.

M.U.S.T. LT

MIS LONG TAB SCREW TECHNOLOGY

MIS versatile Solution for
Percutaneous Fixation



In order to provide complete solutions in spine surgical treatments, we also offer MyBalance, the newly added solution in our advanced planning platform, specifically designed to assist the surgeon through all the steps of an accurate surgery planning and evaluation of the patient's sagittal balance, to provide personalized treatment.

MyBalance

SAGITTAL BALANCE PLATFORM

Advanced
Personalized Planning

4.4 SPORTSMED PRODUCTS AND TECHNOLOGIES

Our Sportsmed business line, started in 2016, aims to provide minimally invasive procedures in order to allow patients to quickly return to their daily activities. Our engineers collaborate with an international team of expert surgeons to create specific and innovative products for the treatment of ligament, tendon and muscular injuries of the knee, hip and shoulder.

In 2021, we obtained multiple worldwide registrations and further expanded our indications in arthroscopic knee, shoulder, and hip surgery.

A full line of innovative new products for knee, shoulder and hip treatments

KNEE PORTFOLIO

The Medacta Anatomic Ribbon Surgery (M-ARS), launched in 2017, is an innovative surgical technique to reconstruct the anterior cruciate ligament (ACL), designed to distribute forces in a more natural, anatomical way, and supported by specific instruments and dedicated extra-articular implants. In order to facilitate ACL reconstructive surgery, we are now able to offer an extensive portfolio of extra-articular (FairFix Adjustable Button) and close to the joint-line fixation options (MectaScrew Interference Screw Family).

We not only offer a standard instrument portfolio, but also innovative solutions for Quadriceps Tendon harvesting procedures (MectaQTH) and innovative coated guide pin designs which will potentially reduce metal flaking and metal debris. We also provide single-use sterile kits for standard ACL reconstruction procedures, as well as for the specific M-ARS Anatomic Ribbon repair.

SHOULDER PORTFOLIO

In our suture anchor portfolio, we are heavily expanding our material, sizing and indication offerings. With the MectaLock Suture Anchor Family, we can now provide a non-absorbable PEEK and a new composite material option. Different anchor sizes are available, from knotted anchor designs for arthroscopic shoulder labral repair to knotless options for shoulder lateral row cuff repair. For surgeons who prefer soft anchor designs or are looking for solutions for the medial row repair, we offer two different knotted All-Suture Anchor designs with MectaLock All-Suture and SnugFit All-Suture. To facilitate suture management in arthroscopic labral and rotator cuff repairs, the comprehensive Medacta FastShuttle Suture Passer Family is also able to supply multiple state-of-the-art single-use and reusable instruments.

With the newly launched PowerSuture Family, we are now able to provide an extensive suture portfolio. With PowerKnot High Strength Suture, we are entering a limited market release phase with a strong tensile strength suture potentially offering an improved knot grip and a useful Running Direction Indication (RDI) feature to alleviate the challenging suture management in arthroscopic shoulder surgeries. In addition to PowerKnot, we launched the Medacta PowerSuture line, offering a full line of different suture and tape diameters, as well as multiple Whip Stitch Loop suture and Tapes, Passing Loops and double-armed suture options.

HIP PORTFOLIO

We have recently extended our product line to include hip arthroscopic procedures as well. Alongside many anchors (MectaLock Suture Anchor Family) and suture management (FastShuttle Suture Passer Family) shared with the shoulder product line, we launched MectaFlip, the unique-on-the-market intra articular minimal invasive expander.

In 2022, many new products are expected to get product registration or to be ready for limited market release.

MEDACTA ANNOUNCES LIMITED MARKET RELEASE FOR MULTIPLE PRODUCTS FOR ITS SPORTS MEDICINE DIVISION

In 2021, Medacta started the limited market release for several new products.

With the launch of SnugFit All-Suture Anchor, we are able to offer already a second generation soft anchor design, currently indicated for Shoulder Rotator Cuff Repair. The feedback makes us very positive. Medacta Sports Medicine will continue its early evaluation of the SnugFit All-Suture Anchor, with an anticipated commercial release of the entire SnugFit portfolio in Q2 2022 including additional indications for Shoulder and Hip instability repair.

We have also seen some important product additions in our arthroscopic knee segment. With FairFix Adjustable Button, we launched an attractive one-size-fits-all extracortical fixation system indicated for knee ligament refixation. This is only the beginning of our FairFix Family Button portfolio. In the upcoming years, we are planning to add multiple button options. Our already existing MectaScrew Interference Screw Family has seen some material additions in 2021, and now Medacta is able to offer a full bag of interference screws for multiple indications in ACL ligament reconstruction.

We are also about to start the limited market release for several new diameter and material options for our MectaLock Family of Anchors. We are therefore able to propose a new anchor option for the lateral row rotator cuff repair.

With the limited market release, together with more products moving into full market release and many products already in our pipeline, you will see a rapid expansion of our Sportsmed division.

M.O.R.E.
INSTITUTE

The surgeon is never alone
when discovering new technologies