



# MANAGEMENT REPORT

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## 2020 HIGHLIGHTS\*

- Medacta's year-end revenue at Euro 302.5 million, down only 2.1% on a constant currency basis, despite COVID-19 pandemic;
- Second semester reached 7.6% growth on a constant currency basis. New customer acquisitions and an uptake in demand are reflected in the rebound, limited in part by the second COVID-19 wave starting in October;
- Adjusted EBITDA of Euro 88.1 million, corresponding to 29.1% margin;
- Profit for the year equal to Euro 37.1 million, 12.3% on revenues;
- Adjusted Free Cash Flow of Euro 31.9 million, up 43% vs prior year;
- Tactical changes in marketing and medical education programs, implementing several online initiatives, allowed us to reach over 2'900 surgeons;
- Over 30 new products registered. Innovation continued, culminating with the FDA clearance of our proprietary NextAR Augmented Reality platform technology in July;
- Over 80 new jobs added, including significant salesforce expansion across all geographies;
- In light of ongoing global uncertainty caused by Covid-19 pandemic, Company proposes no dividend distribution to reinvest in future growth plan;
- Outlook FY 2021: We are targeting 2021 revenue in the range of Euro 333 million to Euro 348 million at constant currency and adjusted EBITDA margin to be largely in line with the previous year, subject to any unforeseen events, specifically from Covid-19 pandemic.

REVENUES	ADJUSTED EBITDA MARGIN <sup>2</sup>	ADJUSTED EBIT MARGIN <sup>4</sup>
<b>EUR 302.5M</b>	<b>29.1%</b>	<b>16.9%</b>
-2.1% before FX effects from prior year <sup>1</sup> -2.6% reported growth	28.6% Reported EBITDA Margin EUR 88.1M Adjusted EBITDA <sup>3</sup>	16.3% Reported EBIT Margin EUR 51.1M Adjusted EBIT <sup>3</sup>
<sup>[1]</sup> Is calculated as the difference between the current and historical period results translated using the current period exchange rates.	<sup>[2]</sup> Adjusted EBITDA margin, is calculated as adjusted EBITDA as a percentage of Revenue for the period.  <sup>[3]</sup> Is calculated as EBITDA, adjusted for non-recurring items: provisions on litigations, extraordinary legal expenses and gains realized through the release of prior years provisions.	<sup>[4]</sup> Adjusted EBIT margin, is calculated as adjusted EBIT as a percentage of Revenue for the period.  <sup>[5]</sup> Is calculated as EBIT, adjusted for non-recurring items: provisions on litigations, extraordinary legal expenses and gains realized through the release of prior years provisions.
PROFIT FOR THE YEAR	ADJUSTED FREE CASH FLOW <sup>7</sup>	YEAR-END EMPLOYEES TOTAL
<b>EUR 37.1M</b>	<b>EUR 31.9M</b>	<b>1'183</b>
12.3% on Revenues EUR 1.85 EPS <sup>6</sup>		82 new jobs added in 2020
<sup>[6]</sup> There is no effect of dilution, and diluted earnings per share equals basic earnings per share.	<sup>[7]</sup> 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.	

\* **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.

## KEY FINANCIAL FIGURES

(Million Euro)	31.12.2020	31.12.2019
Revenues	302.5	310.6
Gross Profit	214.3	223.7
Profit for the year	37.1	11.9

### Alternative Performance Measures:

EBITDA	86.5	53.3
Adjusted EBITDA*	88.1	91.5
Adjusted EBITDA margin*	29.1%	29.5%
Free Cash Flow	25.4	0.6
Adjusted Free Cash Flow**	31.9	22.3

(Million Euro)		
Total Assets	441.9	412.6
Total Equity	164.7	123.2
Equity Ratio	37.3%	29.9%
Number of employees	1'183	1'101

\* Adjusted for provisions on litigations (Euro 0.7 million), extraordinary legal expenses (Euro 3.1 million) and gains realized through the release of prior years provisions (Euro 2.1 million). The reconciliation is provided in the "Alternative Performance Measures" section of the Management Report beginning on page 19.

\*\* Adjusted for extraordinary legal expenses (Euro 3.1 million) and non-recurring investments (Euro 3.4 million). Please see the "Alternative Performance Measures" section of the Management Report for the reconciliation of the "Adjusted Free Cash Flow" beginning on page 19.



# 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	20'000'000
Nominal value per registered share (in CHF)	0.10
Number of treasury shares	0

## 2020 DATA PER SHARE

(Swiss Francs)	<b>31.12.2020</b>
2020 High (in CHF)	92.40
2020 Low (in CHF)	39.80
Closing price (in CHF)	87.60
Market capitalization (in CHF million)	1'752

## RELATIVE SHARE PRICE DEVELOPMENT

Index base 100 calculation  
Source: Refinitiv



# LETTER TO SHAREHOLDERS



Dr. Alberto Siccardi



Ing. Francesco Siccardi

Dear shareholders,

During an unprecedented year strongly conditioned by the COVID-19 pandemic, we were able to secure our business and employees, to continue serving our customers, advance innovations and prepare for our future growth, while gaining market shares and preserving our margins.

## OUR ACHIEVEMENTS

Despite the challenging market conditions, we continued executing our strategy based on innovation, medical education and healthcare sustainability. We continued to develop new products and solutions with the aim of improving patient wellbeing and facilitating the work of medical professionals, healthcare administration and logistics staff. In 2020 over 30 new products across our business lines were cleared (CE or FDA). Among them we would like to mention NextAR, our Augmented Reality-Based Surgical Platform with its first application for Total Knee Replacement. This surgical platform perfectly fits with our strategy to allow significant benefits for healthcare systems thanks to its limited upfront capital investment and reduced cost per case compared with other technologies. NextAR aims to improve surgical accuracy and efficiency via advanced 3D personalized planning tools, unique soft tissue assessment and accurate surgical execution. First surgeries were successfully performed in Australia and in the US, and the number of reference centers supporting future worldwide expansion is increasing. In the Knee business line, of particular note is the launch of our new SensiTIN coating with low metal ion release designed to reduce the exposure of patients to metallic ions. In the Hip product line we completed the renewal of our primary implant offering and expanded our revision product range. We launched two solutions for 3D pre-operative planning and intra-operative verification in primary total hip replacement, MyHip Planner and MyHip Verifier, which can deliver a personalized approach to optimize the surgical experience. In the Spine and Shoulder businesses new implants were launched to complete our portfolio, while in the Sportsmed business we have been working on the expansion of our product portfolio and initial market introduction in selected countries.

Our Marketing and Medical Education Programs continued through the year, including the implementation of tactical changes and new online initiatives designed to maintain existing customers and reach new ones. In 2020 over 2'900 surgeons attended our online and digital education programs and our Medacta TV achieved more than 22'000 visits. The "M.O.R.E. Surgeon to Surgeon" meetings together with classic Learning Centers were redesigned at national and local levels. We continued to invest strategically, resulting in significant salesforce expansion across all geographies and development of additional surgical instruments to serve new customers.

## REVENUE TREND BY REGION AND BUSINESS LINE \*

In 2020, once again, Medacta outperformed the market with revenue down 2.1% on a constant currency and 2.6% on a reported currency, over the prior year at EUR 302.5 million. Currency development had a negative impact with a headwind of 0.5%, mainly due to the strengthening of the Euro against the US dollar and the Australian dollar, only partially compensated by the Euro weakening against the Swiss Franc.

During the year, the revenue trend was strongly impacted by measures adopted by governments in response to the COVID-19 pandemic. In particular, the deferral of elective procedures had an impact on our sales in the first half of the year. In the following months, backlog recovery and continued acquisition of market share allowed us to largely compensate the first half sales decrease, although it was limited by further restrictions from the pandemic resurgence starting at the end of October.

Revenues recorded in 2020 had significant differences among product lines and geographies due to different levels of COVID-19 related restrictions and diverse momentum in pre-COVID sales growth. In the core business Medacta reported sales of EUR 153.1 million and EUR 106.2 million in the Hip and Knee lines, respectively. The product lines' growth declined compared to 2019 (Hip -6.1% and Knee

-4.1% at constant currency) because of restrictions and postponement of elective procedures in the first half, partially compensated by an effective backlog recovery between Q2 and Q3. The last few months of the year did see a pandemic resurgence mainly in Europe and North America and a subsequent slowing down of the business. The Extremities product line was able to achieve 46.6% growth rate at constant currency and reported revenue of EUR 14.3 million. The business line grew in all geographies despite the COVID-19 impact, thanks to the strong sales momentum carried over from last year and the expansion of our product portfolio, with an increase in our market share, especially in Europe. The Spine business line reported revenue for EUR 28.9 million, an increase of 14.6% at constant currency driven by newly launched products, salesforce expansion and a gain in market share, particularly in the US. In terms of geographic trend, Europe registered a negative growth of 6.0% at constant currency and reported sales of EUR 129.3 million with a significant recovery in the second half of the year. The North America market reported revenue of EUR 92.7 million, substantially unchanged at constant currency compared with the previous year (-1.0%). APAC delivered a positive performance of 9.2% at constant currency and reported EUR 72.0 million, given to a limited pandemic impact in Japan and Australia we were able to execute our strategy of growth, expanding our salesforce and gaining new customers. RoW recorded negative growth of 29.2% at constant currency and reported EUR 8.5 million due to stocking distributors reducing purchases in response to the COVID-19 pandemic.

#### GROSS PROFIT PERFORMANCE \*

The adjusted Gross Profit was EUR 214.3 million compared to EUR 226.9 million in the previous year. The Gross Profit margin was equal to 70.8% compared to 73.0% in 2019. The change was primarily due to incremental depreciation of new instruments to sustain future growth in a year with declining sales, expected price reductions in certain countries and negative currency impact.

#### STRONG ADJUSTED EBITDA OF 29.1% \*

The adjusted EBITDA amounted to EUR 88.1 million (EUR 91.5 million in 2019), corresponding to a margin of 29.1% compared to 29.5% in 2019. Management's cost containment initiatives, along with the savings in sales and marketing due to COVID-19 restrictions, allowed the Group to maintain the profitability largely in line with the prior period. Fixed costs savings derived primarily from reduced travel and participation in congresses, as well as voluntary pay cuts decided by Management contributed to preserving the Group's profitability.

#### SOLID BALANCE SHEET

Medacta's balance sheet remains robust, with total assets increasing to EUR 441.9 million and an equity ratio of 37.3% at the end of the reporting period (29.9% in 2019). The Adjusted Free Cash Flow generated in 2020 amounted to EUR 31.9 million after significant investments in new instruments and research and development to sustain the future growth of Medacta. During 2020, in a prudent effort to strengthen our balance sheet and continue to invest in our Group's future growth, and in light of uncertainty due to the pandemic, our Board of Directors decided not to propose to the Annual General Meeting any distribution of the dividend for the 2020 financial year.

#### STOCK PRICE GROWTH

The Medacta stock price experienced impressive growth in 2020, equal to 21% compared with 4% of the SPI Swiss Performance Index.

#### OUTLOOK

We will continue to monitor the evolution of the COVID-19 pandemic and impact on our reference market, while remaining committed to our future growth. Despite uncertainty remaining in some geographies, we believe Medacta is well positioned to deliver growth as a result of our global geographic presence and product mix, continued innovation with several new product introduction, hiring plans for expansion in all geographies with a focus on the US market. We are targeting 2021 revenue in the range of Euro 333 million to Euro 348 million at constant currency and adjusted EBITDA margin to be largely in line with the previous year, subject to any unforeseen events, specifically from Covid-19 pandemic.

#### THANKS

We would like to thank all of our employees that in these unprecedented times have shown and are continuing to show a high level of commitment and dedication to manage the crises generated by the pandemic and to execute our business strategy.

Sincerely,



**Dr. Alberto Siccardi**  
Chairman of the Board of Directors



**Ing. Francesco Siccardi**  
Chief Executive Officer

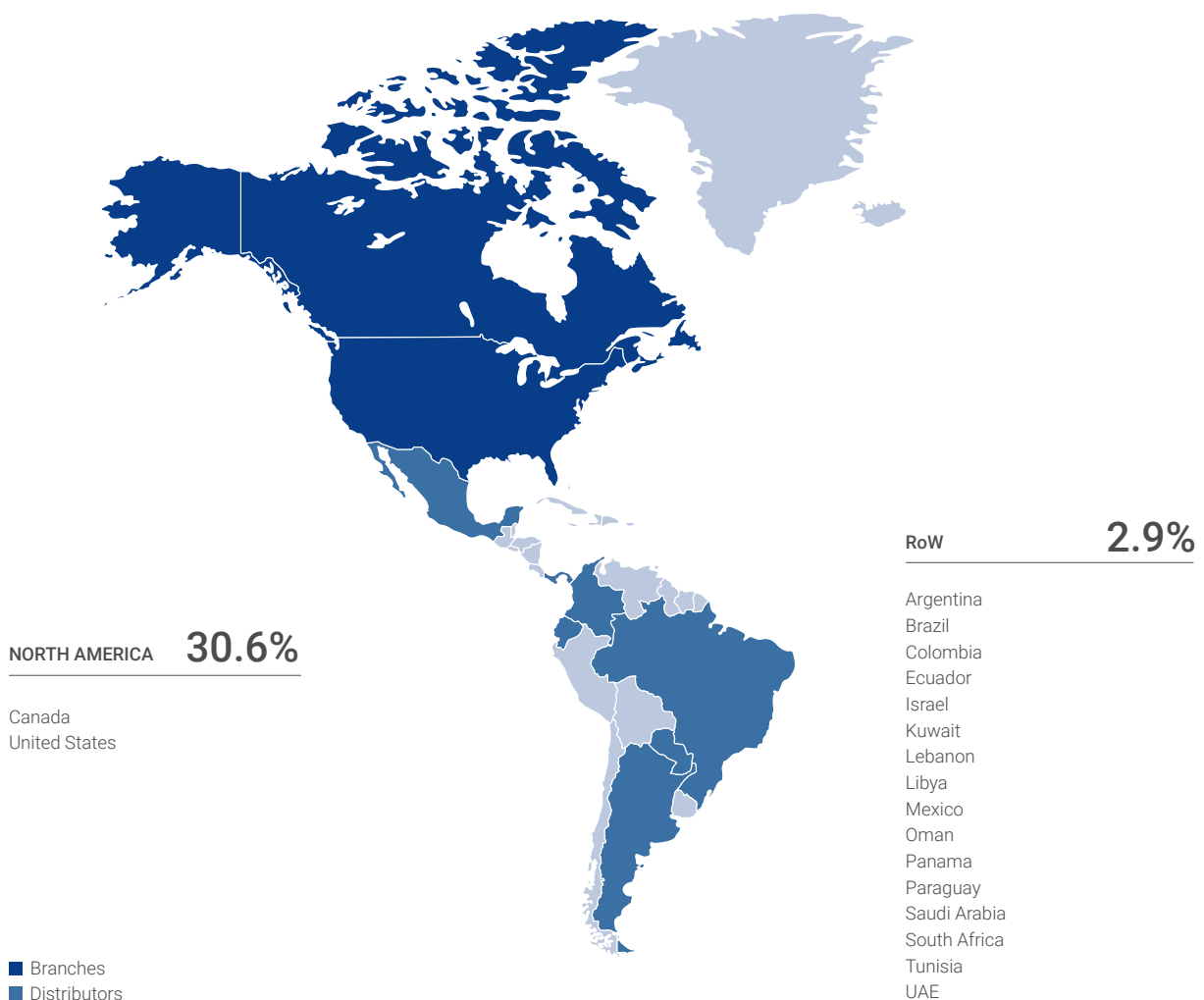
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# 1. MANAGEMENT COMMENTARY\*

## CORPORATE INTRODUCTION

We are an international company specialized in the design and production of innovative orthopedic 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 orthopedic revenue, according to Orthoworld.

Today, our primary focus is on our high-volume Hip and Knee business lines (which generated 50.6% and 35.1%, respectively, of our reported revenue in 2020), 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 9.1% between 2016 and 2020 leading to revenue of EUR 302.5 million, an Adjusted EBIT margin of 16.9% and an Adjusted EBITDA margin of 29.1% for the year ending December 31, 2020, despite the impact of the COVID-19 pandemic.



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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 430'000 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.

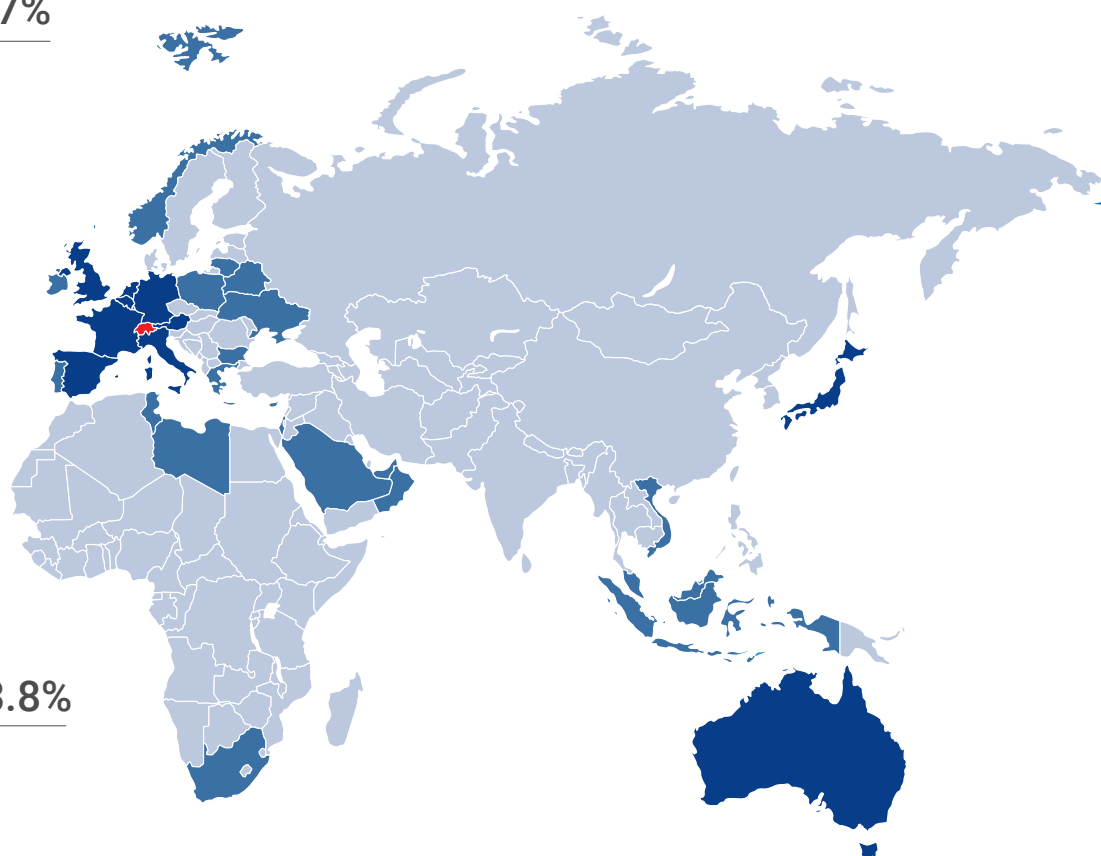
Our headquarters and well-invested and high-quality manufacturing facilities are in Castel San Pietro, Switzerland and Rancate, Switzerland, where we have approximately 620 employees in the aggregate as of December 31, 2020. Our sales organization is spread over 12 branches and we serve through Stocking Distributors 32 additional countries, with an international sales reach that extends to the attractive markets of Europe, North America and Asia Pacific, where we generated 42.7%, 30.6% and 23.8% of our revenue, respectively, for the year ending December 31, 2020. Our experienced salesforce are instrumental in achieving international acceptance and adoption of our products and techniques.

## EUROPE 42.7%

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

## ASIA PACIFIC 23.8%

Australia  
Indonesia  
Japan  
Malaysia  
New Zealand  
Taiwan  
Vietnam



■ Branches  
■ Distributors

## BUSINESS PERFORMANCE

### EXECUTIVE OVERVIEW

Our 2020 performance was impacted by the COVID-19 pandemic, nevertheless, the Group was able to gain market share and protect its profitability. The unprecedented measures adopted by governments and health care authorities in response to the pandemic caused the deferral of elective procedures and social contact restrictions which had, in the first semester, a significant negative impact on Medacta's operations and financial results. As COVID-19 rapidly started to spread throughout the world in early 2020, our net sales decreased dramatically as countries took precautions to prevent the spread of the virus. This resulted in net sales decline of 11.1% in the first semester of 2020, when compared to the same prior year period. However, in the following months, backlog recovery and continued acquisition of new customers allowed Medacta to largely compensate the first half sales decrease, although this recovery was limited by further restrictions from the pandemic resurgence starting at the end of October. As a result, our 2020 net sales declined by 2.6% when compared to the same prior year period (2.1% in constant currency).

To respond to the pandemic and soften the financial impact in our business, Management has taken prudent discretionary initiatives in cost containment, deriving primarily from a hiring freeze in the first semester, voluntary pay cuts and postponement of the implementation of the LTIP. In addition, the savings generated by the COVID-19 restrictions in travels, congresses and events along with government subsidies, allowed the Group to maintain a high level of profitability, with 29.1% of Adjusted EBITDA margin reached in 2020, and an adequate financial profile having improved our Adjusted Free Cash Flow to Euro 31.9 million (from Euro 22.3 million in 2019). Also, the 2020 Swiss tax reform had a significant benefit to our Group average tax rate that decreased to 12.5% (20.6% in 2019).

Overall, Medacta weathered the storm and carried on significant investments in innovation (with over 30 products registered in 2020), surgical instruments, and new educational programs to sustain our momentum and long-term value creation strategy.

### SALES VOLUME, PRICING AND GEOGRAPHICAL MIX

Our revenue decreased by EUR 8.1 million, or 2.6%, from EUR 310.6 million in 2019 to EUR 302.5 million in 2020 on a reported currency basis (2.1% on a constant currency basis) as a result of the global response to the COVID-19 pandemic. We recognized significant differences among geographies due to different levels of restrictions applied during the year and product lines due to diverse momentum in pre-COVID sales growth. Pricing pressure from governmental healthcare systems and local hospitals had a negative effect on our global selling price, only partially offset by geographic and product mix sales. The combination of these effects on Revenues is approximately 1.1%. In addition, our revenue growth was partially affected by an exchange rate headwind equal to 0.5%. Specifically, during 2020 the EUR strengthened against USD and AUD (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 CHF.

We analyze sales by four geographies, Europe, North America, Asia Pacific and RoW and by the following product categories: Hip; Knee; Spine and Extremities. The development of our revenue by business line is summarized in the table below:

(Million Euro)	31.12.2020	% of total	31.12.2019	% of total	Reported Growth	Constant Currency Growth
Hip	153.1	50.6%	163.9	52.8%	-6.6%	-6.1%
Knee	106.2	35.1%	111.7	35.9%	-4.9%	-4.1%
Spine	28.9	9.6%	25.3	8.1%	14.4%	14.6%
Extremities*	14.3	4.7%	9.7	3.1%	46.5%	46.6%
<b>TOTAL REVENUES</b>	<b>302.5</b>		<b>310.6</b>		<b>-2.6%</b>	<b>-2.1%</b>

\* Extremities include Shoulder and Sports Med revenues

Revenue from our hip products decreased by EUR 10.8 million, or 6.6%, from EUR 163.9 million in 2019 to EUR 153.1 million in 2020 on a reported currency basis (6.1% on a constant currency basis). Revenue from our knee offerings decreased by EUR 5.5 million, or 4.9%, from EUR 111.7 million in 2019 to EUR 106.2 million in 2020 on a reported currency basis (4.1% on a constant currency basis). The revenue decline of our core product offerings was mainly driven by the already mentioned COVID-19 related restrictions and the postponement of elective procedures particularly in the first half of the year. This

significant reduction of volumes was only partially compensated by an effective backlog recovery, sustained by both increased demand and new customers acquired. The last few months of the year did experience a pandemic resurgence mainly in Europe and North America which slowed down the speed of backlog recovery.

Revenue from our Spine offerings increased by EUR 3.6 million, or 14.4%, from EUR 25.3 million in 2019 to EUR 28.9 million in 2020 on a reported currency basis (14.6% on a constant currency basis). Group full year Spine performance results are primarily driven by newly launched products, salesforce expansion and a carry forward sales momentum pre COVID-19.

Our Extremities business line, made by Shoulder and Sportsmed, reported an increase in revenue by EUR 4.6 million, or 46.5%, from EUR 9.7 million in 2019 to EUR 14.3 million in 2020 on a reported currency basis (46.6% on a constant currency basis). Despite COVID-19 impact, extremities product offerings grew in all geographies, thanks to the strong momentum carried over by new business and expansion of product range, with an increase of our market share, especially in Europe.

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)	31.12.2020	% of total	31.12.2019	% of total	Reported Growth	Constant Currency Growth
Europe	129.3	42.7%	136.1	43.8%	-5.0%	-6.0%
North America	92.7	30.6%	95.5	30.7%	-2.9%	-1.0%
Asia Pacific	72.0	23.8%	66.9	21.5%	7.6%	9.2%
RoW	8.5	2.9%	12.1	3.9%	-29.6%	-29.2%
<b>TOTAL REVENUES</b>	<b>302.5</b>		<b>310.6</b>		<b>-2.6%</b>	<b>-2.1%</b>

Revenue in Europe decreased by EUR 6.8 million, or 5.0%, from EUR 136.1 million in 2019 to EUR 129.3 million in 2020 on a reported currency basis (negative 6.0% on a constant currency basis). Our revenue decline was primarily driven by France, Italy and Belgium while the 'DACH' (Germany, Austria and Switzerland) area recorded the smallest impact with Germany growing over the prior year. In Europe the second semester backlog recovery was limited by the COVID-19 second wave starting at the end of October. However, second semester sales rose by 6.3% in constant currency over prior period, and partially compensated the negative 17.3% growth recognized in the first semester 2020. As a percentage of our total revenue, revenue generated in Europe was lower than the prior year at 42.7% in 2020 (compared to 43.8% in 2019).

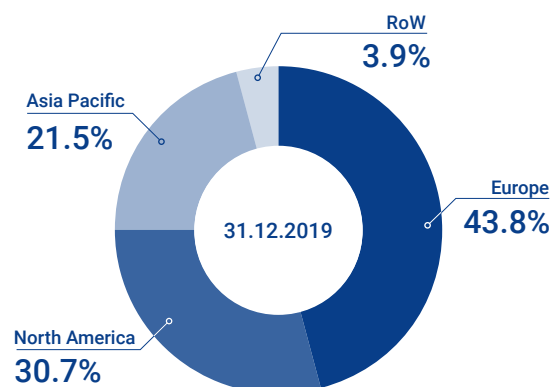
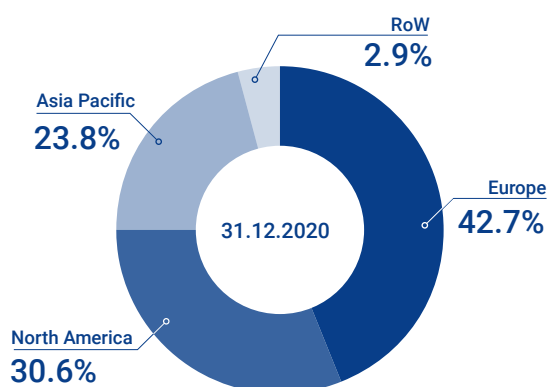
Revenue in North America decreased by EUR 2.8 million, or 2.9%, from EUR 95.5 million in 2019 to EUR 92.7 million in 2020 on a reported currency basis (negative 1.0% on a constant currency basis). The revenue generated in U.S., decreased by only EUR 2.5 million, or 2.6%, from EUR 94.7 million in 2019 to EUR 92.2 million in 2020 on a reported currency basis (negative 0.7% on a constant currency basis). North America's performance was substantially in line with the previous year. In line with our strategy, we reported an increased level of activities in Ambulatory Surgery Centers (ASCs). However, our reported revenue in North America was affected by a negative headwind from the exchange rate. Specifically, during the course of 2020, the EUR strengthened against the USD by an average of 2% (compared to the average 2019 exchange rate), negatively impacting revenue translated into EUR. As a percentage of our total revenue, North America remained largely stable at 30.6% (compared to 30.7% in 2019).

Revenue in Asia Pacific increased by EUR 5.1 million, or 7.6%, from EUR 66.9 million in 2019 to EUR 72.0 million in 2020 on a reported currency basis (positive 9.2% on a constant currency basis). The increase was largely driven by the result of the Japanese market, where revenue increased by EUR 3.5 million, or 14.3% (14.2% on a constant currency basis), thanks to both limited COVID-19 pandemic impact and the acquisition of new customers through the expansion of our salesforce. The Australian market contributed to this performance with an increase of EUR 0.7 million, or 1.8% (4.8% on a constant currency basis). In the course of 2020, the EUR strengthened against the AUD by an average of 2.8% (compared to the average 2019 exchange rate), negatively impacting revenue translated into EUR from our Australian operations. As a percentage of our total revenue, Asia Pacific increased to 23.8% in 2020 (compared to 21.5% in 2019).

Revenue in RoW area decreased by EUR 3.6 million, or 29.6%, from EUR 12.1 million in 2019 to EUR 8.5 million in 2020 on a reported currency basis (negative 29.2% on a constant currency basis). The significant reduction in volumes is primarily due to stocking distributors reducing purchases in response to the COVID-19 pandemic. As a percentage of our total revenue, revenue from RoW reduced to 2.9% in 2020 (compared to 3.9% in 2019).



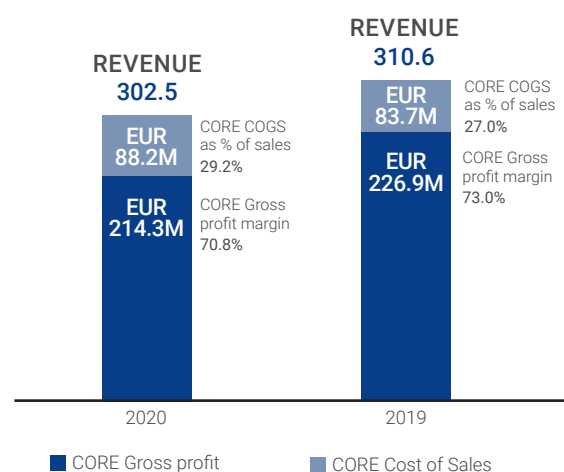
The graphics below provide an overview of our revenue by geography for the year December 31, 2020 and 2019.



#### CORE COST OF SALES AND GROSS PROFIT

Overall, our CORE gross profit as a percentage of revenue decreased from 73.0% in 2019 to 70.8% in 2020. The COVID-19 pandemic had a 1.4% effect on our gross profit mainly due to a negative impact from depreciation and amortization that increased at a higher pace than revenue, an increase in obsolete inventory charges and an increase in direct manpower. Also, the gross profit was affected by a negative currency development for 0.5% and by the aforementioned declining price trends.

Our CORE cost of sales increased by EUR 4.5 million, or 5.4%, from EUR (83.7) million in 2019, normalized for the impact of the one-time Fidelity Bonus, to EUR (88.2) million in 2020.



#### CORE EBIT PERFORMANCE\*

(Thousand Euro)	31.12.2020	31.12.2019	Delta	Delta %
CORE Research and Development expenses	(6'829)	(6'495)	(334)	5.1%
CORE Sales and Marketing expenses	(110'069)	(120'901)	10'832	-9.0%
CORE General and Administrative expenses	(45'212)	(41'761)	(3'451)	8.3%
CORE Other income	1'181	1'196	(15)	-1.2%
CORE Other expenses	(2'252)	(1'124)	(1'128)	100.3%
<b>CORE OPERATING EXPENSES (OPEX)</b>	<b>(163'181)</b>	<b>(169'085)</b>	<b>5'904</b>	<b>-3.5%</b>
<b>CORE OPERATING PROFIT (EBIT)</b>	<b>51'075</b>	<b>57'811</b>	<b>(6'736)</b>	<b>-11.7%</b>

\* 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, depreciation and amortization expenses (including impairments), business expenses and other non-capitalized expenses. During 2020, 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 0.3 million, or 5.1%, from EUR (6.5) million in 2019 to EUR (6.8) million in 2020.

In 2020, depreciation and impairment increased by EUR 0.3 million, following primarily the completion of certain key projects, that were fully developed between the end of 2019 and the beginning of 2020.

#### **CORE Sales and marketing expenses**

Our CORE sales and marketing expenses decreased by EUR 10.8 million, or 9.0%, from EUR (120.9) million in 2019 to EUR (110.1) million in 2020. CORE Sales and marketing expenses as a percentage of total revenue decreased to 36.4% in 2020 from 38.9% in 2019.

This difference is attributable to the material decrease in congresses, travel, education and marketing expenses by 3.7% weight on sales, given restrictions to face the COVID-19 pandemic. The salesforce expansion in all geographic areas, and in particular in North America and Japan increased 2020 wages and salary by 1.9%.

#### **CORE General and administrative expenses**

Our CORE general and administrative expenses increased by EUR 3.5 million, or 8.3%, from EUR (41.8) million in 2019 to EUR (45.2) million in 2020. CORE general and administrative expenses as a percentage of total revenue increased to 14.9% in 2020 from 13.4% in 2019. This increase is related to approximately 1% of the incremental cost for clinical studies and advising fees for auditing activities, tax, legal, IT and investor relations. In addition, we had an increase in other costs of 0.5% due to the combined impact of COVID-19 consumable investments made to supply offices and manufacturing plants with masks, gloves, sanitizers and other equipment and increase in depreciation of Right of Use assets.

#### **CORE Other income and expenses**

Our CORE other income equal to EUR 1.2 million, is in line with prior period. Our other expenses increased by EUR 1.1 million, from EUR (1.1) million in 2019 to EUR (2.3) million in 2020 largely as a result of write-offs and loss on sale of tangible assets.

#### **FINANCIAL INCOME AND COSTS**

Our financial income increased by EUR 2.9 million, or 140.7%, from EUR 2.1 million in 2019 to EUR 5.0 million in 2020, mainly due to gains on exchange rates realized on the translation of our foreign currency loans and on exchange gains on derivatives.

Our financial costs increased by EUR 6.4 million, or 80.0%, from EUR (8.0) million in 2019 to EUR (14.5) million in 2020 as a result of increased foreign exchange losses for EUR 7.0 million primarily related to the weakening of the USD. From the exchange losses recognized in 2020, approximately EUR 4.4 million out of the EUR 7.0 million are due to non-monetary transactions mainly related to the increase in registered capital of Medacta USA Inc by USD 50 million, through the forgiveness of trade and financial receivables held by the controlling Company, Medacta International SA and the compensation of prior year receivables and payables.

#### **INCOME TAXES**

The reduction in the Group effective tax rate, from 13.0% in 2019 to 7.1% in 2020, led to total reported taxes of EUR 2.8 million, increased by EUR 1.1 million from EUR 1.8 million in the previous year. The difference in the effective tax rate is primarily attributable to the Swiss tax reform enacted at the beginning of 2020. The reform reduced the 2020 Medacta International nominal tax rate to 17.3% (18.6% in 2019) and provided the possibility to obtain a tax deduction for qualifying profits arising from patent rights that further lowered our nominal tax rate to 12.5%.

## ADJUSTED FREE CASH FLOW

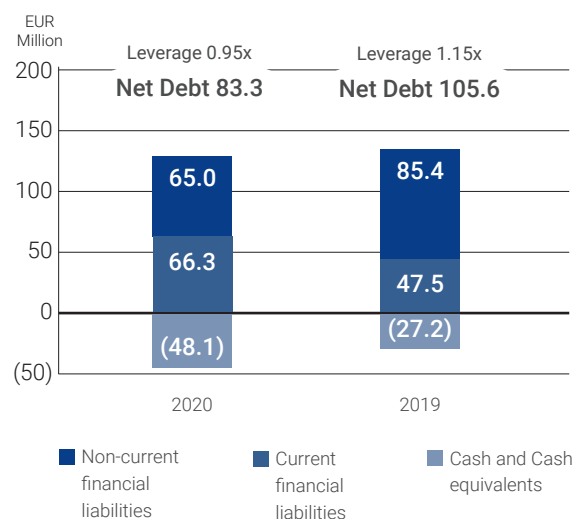
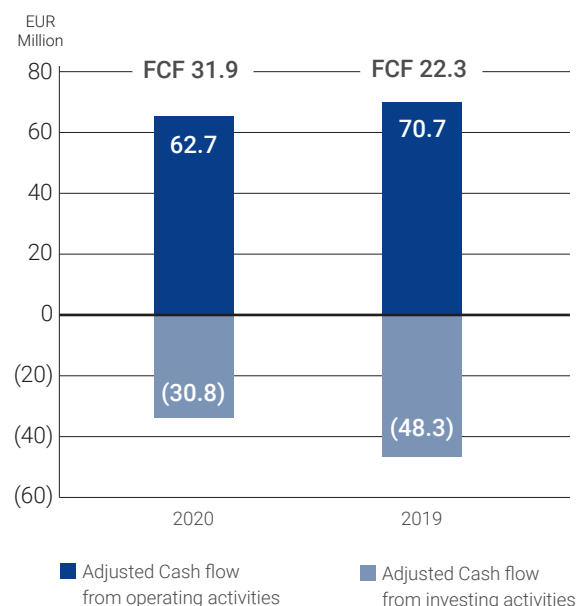
The Adjusted Free Cash Flow increased from EUR 22.3 million in 2019 to EUR 31.9 million in 2020 as a result of the combined effects of reduction in CORE Operating Profit and decrease of investments in surgical instruments mainly due to postponement of revenue growth.

Adjusted for abnormals, 2020 cash flow from operating activities was equal to around EUR 62.7 million, compared to EUR 70.7 million as of December 31, 2019. The adjusted cash flow from operating activities of EUR 62.7 million is composed of the reported cash flow from operating activities equal to EUR 59.6 million, adjusted by non-recurring legal costs for EUR 3.1 million. The decrease from prior year is primarily driven by the reduction in CORE operating profit.

Reported cash flow from investing activities as of December 31, 2020 amounted to EUR 34.2 million mainly reflects net investments in instruments, for EUR 18.4 million and in the development of new implants and surgical instruments, for EUR 8.1 million to sustain the growth of the Group. In 2020 cash flow from investing activities has been adjusted for the investments made to create new offices in our Rancate site for approximately EUR 3.4 million, decreasing the cash flow from investing activities to EUR 30.8 million. The previous year adjusted cash flow from investing activities equal to EUR 48.3 million was adjusted by the cash consideration received for the sale of non-strategic assets for approximately EUR 6.3 million.

## CAPITAL STRUCTURE

Group Net Debt in 2020 was equal to EUR 83.3 million, compared to EUR 105.6 million as of December 31, 2019. This reduction is also reflected in our leverage ratio that decreased from 1.15 in 2019 to 0.95 in 2020. The improvement in our capital structure is primarily due to the additional EUR 24.8 million reported Free Cash Flow generated during the year.



## 1.1 ALTERNATIVE PERFORMANCE MEASURES

The financial information provided in the selected sections of the 2020 Annual Report, including "Highlights Year 2020", "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 Statements as of December 31, 2020 and 2019. In addition to the CORE ratios we did not identify any normalization for the December 31, 2020 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.

### 2020 CORE RESULTS RECONCILIATION

(Thousand Euro)	IFRS	Provision on Litigation <sup>1</sup>	Legal costs <sup>2</sup>	Release of tax Provision <sup>3</sup>	CORE <sup>4</sup>
Revenues	302'492	-	-	-	302'492
Cost of Sales	(88'236)	-	-	-	(88'236)
<b>GROSS PROFIT</b>	<b>214'256</b>				<b>214'256</b>
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)
<b>OPERATING PROFIT (EBIT)</b>	<b>49'443</b>	<b>(840)</b>	<b>3'100</b>	<b>(628)</b>	<b>51'075</b>
<b>OPERATING PROFIT (EBIT)</b>	<b>49'443</b>	<b>(840)</b>	<b>3'100</b>	<b>(628)</b>	<b>51'075</b>
Depreciation and Amortisation	37'016				37'016
<b>EBITDA</b>	<b>86'459</b>	<b>(840)</b>	<b>3'100</b>	<b>(628)</b>	<b>88'091</b>
<b>EBITDA MARGIN</b>	<b>28.6%</b>				<b>29.1%</b>

[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. Refer to note 6.24 "Litigations".

[2] Legal costs incurred in 2020 on litigations, refer to Note 6.24 "Litigations".

[3] Income related to the release of the Provision for the Canton tax accrued on parking, refer to Note 6.23 "Information on the Consolidated Statement of Profit or Loss", paragraph Other income/(expenses).

[4] References to "adjusted" are the equivalent to "CORE" references (i.e., adjusted EBITDA and CORE EBITDA are interchangeable).

## 2019 CORE RESULTS RECONCILIATION

(Thousand Euro)	IFRS	IPO costs <sup>1</sup>	Stamp duty <sup>2</sup>	Fidelity Bonus <sup>3</sup>	Provisions on litigation <sup>4</sup>	Legal costs <sup>5</sup>	Sale of non-strategic asset <sup>6</sup>	CORE <sup>7</sup>
Revenues	310'623	-	-	-	-	-	-	310'623
Cost of Sales	(86'926)	-	-	3'199	-	-	-	(83'727)
<b>GROSS PROFIT</b>	<b>223'697</b>	<b>-</b>	<b>-</b>	<b>3'199</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>226'896</b>
Research and Development expenses	(7'641)	-	-	1'146	-	-	-	(6'495)
Sales and Marketing expenses	(127'087)	-	-	6'186	-	-	-	(120'901)
General and Administrative expenses	(63'940)	2'775	-	4'748	10'576	4'080	-	(41'761)
Other income	1'592	-	-	-	-	-	(396)	1'196
Other expenses	(7'008)	-	5'884	-	-	-	-	(1'124)
<b>OPERATING PROFIT (EBIT)</b>	<b>19'613</b>	<b>2'775</b>	<b>5'884</b>	<b>15'279</b>	<b>10'576</b>	<b>4'080</b>	<b>(396)</b>	<b>57'811</b>
<b>OPERATING PROFIT (EBIT)</b>	<b>19'613</b>	<b>2'775</b>	<b>5'884</b>	<b>15'279</b>	<b>10'576</b>	<b>4'080</b>	<b>(396)</b>	<b>57'811</b>
Depreciation and Amortisation	(33'733)	-	-	-	-	-	-	(33'733)
EBITDA	53'346	2'775	5'884	15'279	10'576	4'080	(396)	91'544
<b>EBITDA MARGIN</b>	<b>17.2%</b>							<b>29.5%</b>

[1] IPO Costs incurred in 2019, refer to 2019 Annual Report, paragraph "Initial public offering" of the Notes to the Consolidated Financial Statements.

[2] Stamp duty cost, refer to 2019 Annual Report, note 6.24 "Information on the Consolidated Statement of Profit or Loss", paragraph "Other income / (expenses)" of the Notes to the Consolidated Financial Statements.

[3] Fidelity Bonus to Medacta's employees, refer to 2019 Annual Report, Note 6.24 "Information on the Consolidated Statement of Profit or Loss".

[4] Provisions on litigation, refer to 2019 Annual Report, Note 6.25 "Litigations", paragraph "Microport Matter".

[5] Legal costs incurred in 2019 on litigations, refer to 2019 Annual Report, Note 6.25 "Litigations".

[6] Gain from the sale of a non-strategic portion of the building in Castel San Pietro. Refer to 2019 Annual Report, Note 6.24 "Information on the Consolidated Statement of Profit or Loss".

[7] 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)	31.12.2020	31.12.2019
<b>CASH FLOW FROM OPERATING ACTIVITIES (IFRS BASIS IN ACCORDANCE WITH IAS 7)</b>	<b>59'592</b>	<b>42'635</b>
Adjustments for:		
IPO Costs	-	2'775
Stamp Duty	-	5'884
Fidelity Bonus	-	15'279
Legal costs	3'100	4'080
<b>ADJUSTED CASH FLOW FROM OPERATING ACTIVITIES</b>	<b>62'692</b>	<b>70'653</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES (IFRS BASIS IN ACCORDANCE WITH IAS 7)</b>	<b>(34'193)</b>	<b>(42'041)</b>
Normalized for:		
Rancate investments <sup>1</sup>	3'410	-
Sale of non-strategic asset	-	(6'302)
<b>ADJUSTED CASH FLOW FROM INVESTING ACTIVITIES</b>	<b>(30'783)</b>	<b>(48'343)</b>
<b>ADJUSTED FREE CASH FLOW</b>	<b>31'909</b>	<b>22'310</b>

[1] In 2020, Medacta invested Euro 3'410 thousand in creating new offices in our Rancate site. The investment is expected to be completed in the course of 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. 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 established 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 430'000 cases. 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-specific 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 approximately 100'000 cases.

In 2009, we expanded into the spine segment of the orthopedics 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, with our team of engineers together with expert international surgeons developing specific and innovative products for the treatment of ligament, tendon and muscular injuries of the knee, hip and shoulder, supported by an international team of surgeons specialized in sports medicine.

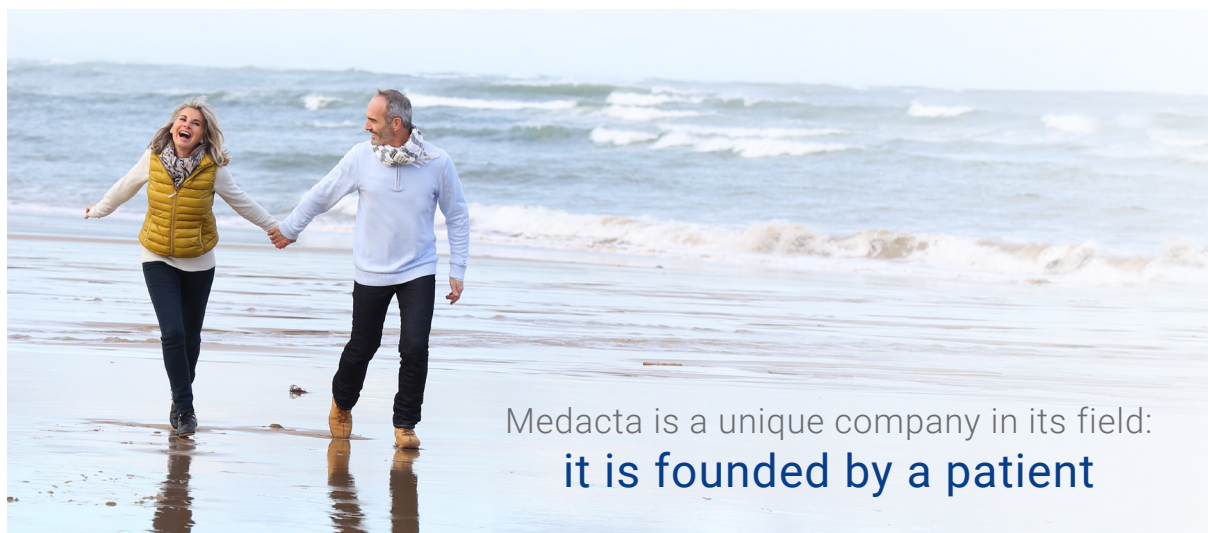
In April 2019, the year of our 20<sup>th</sup> anniversary, we became a publicly listed company, officially entering the SIX Swiss Exchange. The 9<sup>th</sup> M.O.R.E. International Symposium that we held in Lugano, Switzerland, was the perfect occasion to celebrate these milestones.

### 2.1 VISION

Our vision to improve the care and well-being of orthopedic and spine surgery patients around the world stems from our experience and passion. Our surgical innovations and surgeon education programs focus on getting patients back to their healthy, active lifestyles. While we strive for this goal, we maintain a high regard for sustainability, always considering the environmental and societal impact of the products we create.

### 2.2 MISSION

Our mission is to transform the patient experience by advancing surgical approaches, implants and instruments through responsible innovation. Our innovation began with minimally invasive techniques and has evolved into personalized solutions. Today, we continue to improve our knowledge of the human body, employ cutting-edge technologies such as 3D printing, invest in medical education, research and development and collaborate with surgeons and universities worldwide.



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



# COVID-19: A TIMELY AND EFFECTIVE RESPONSE

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In 2020 Medacta was able to navigate the COVID-19 crisis, providing the best possible service for healthcare professionals and patients, continuing innovating, protecting jobs, launching new key products and redesigning our marketing and medical education programs.

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The health and safety of our employees, customers and patients have always been our number one priority and throughout 2020 we worked very hard to assess and mitigate any risks, taking all the actions needed to limit the impact of the pandemic. We have adopted remote working in the Headquarters and in most branches, and we have respected all Government guidance and more, including social distancing, use of hand

sanitizer, daily temperature measurement and masks, amongst others. As a MedTech company compliant with Government requirements, and thanks to the swift countermeasures taken by Management, our facilities in Ticino, Switzerland, have always remained operational.

*"During a year strongly conditioned by the COVID-19 pandemic in all geographies, Medacta managed to restart growing in 2H20 recovering almost completely the 1H20 negative growth," said Francesco Siccardi, CEO of Medacta. "I am very satisfied with how we were able to protect our business and employees while continuing to serve our customers, advance innovations and prepare for our future growth, hoping to quickly overcome the pandemic."*



## 3. ASSETS TO COMPETE

The orthopedics 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 are: 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.

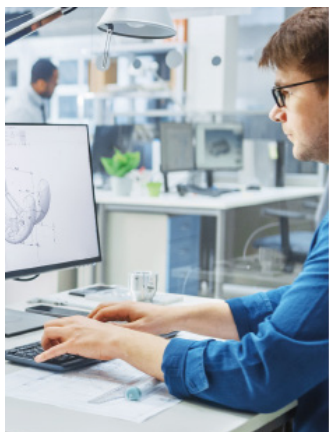
#### PILLARS

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.



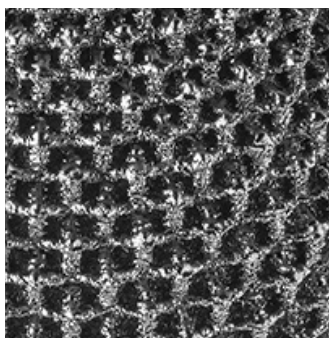
#### STRONG AND CONTINUED COLLABORATION WITH SURGEONS

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 TKA patient satisfaction during activities of daily living and decreasing post-operative 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 a proprietary augmented reality surgical platform: NextAR. We believe that this system will be a solution that provides efficiency and precision in computer-assisted surgery, with low upfront capital investment required by clinics and hospitals as well as economic benefits to the healthcare system through increased utilization rates and low cost per procedure. Another innovation in the field of robotics is our robotic leg positioner being developed for use in AMIS procedures, that enhances surgeon precision and control during surgery.



#### 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, for use in our knee, hip and shoulder implants. Our 3D Metal portfolio is based on 3D printing technology of the proven Titanium 6Al4V 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.

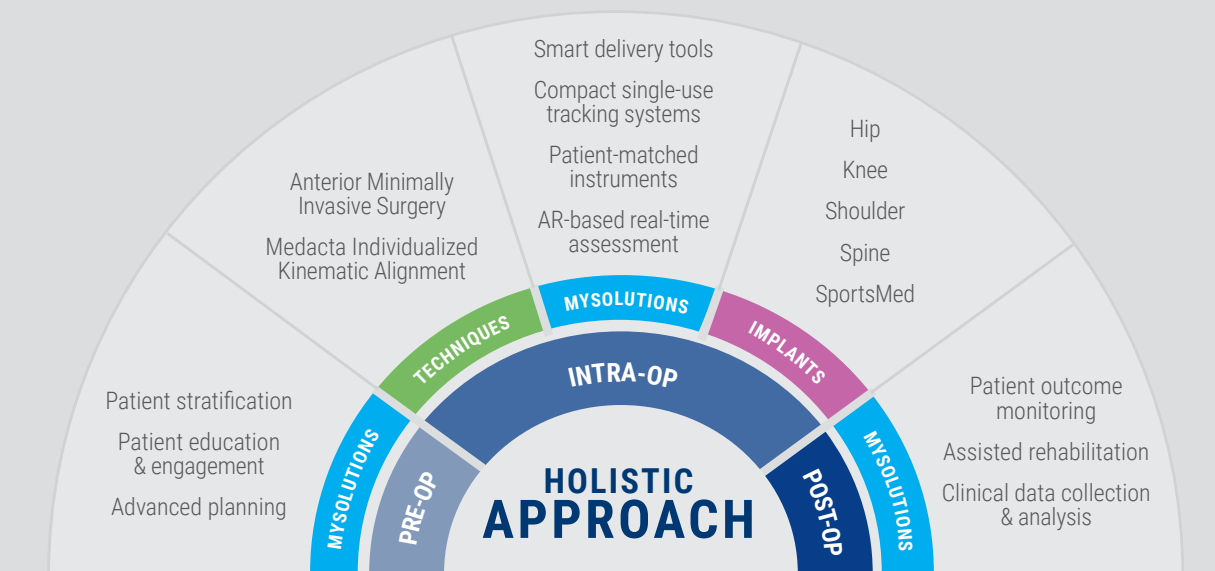


# HOLISTIC APPROACH TO PERSONALIZED MEDICINE

Our approach to personalized medicine is a holistic approach, which aims at bringing value at every step throughout the entire patient journey: pre-operative, intra-operative and post-operative.

Our personalized medicine offering is represented by our MySolutions ecosystem. Together with our comprehensive implant portfolio and surgical techniques, MySolutions empowers our holistic approach to personalized medicine.

For the pre-operative phase, we offer several tools for patient stratification, education and engagement, as well as advanced planning and analysis. In the intra-operative phase, we can provide great added value with innovative techniques, clinically proven implants and cutting-edge technologies, such as compact single-use tracking systems, patient-matched guides and AR-based real-time assessment. Finally, in the post-operative phase we collect clinical feedback, and effectively monitor the post-operative course.



## PATIENT OPTIMIZED PATHWAY (POP)

POP is a holistic solution aimed at delivering an improved and effective quality of care to our patients through optimized surgical techniques, advanced implants and instruments, and a tailored educational pathway.



It also includes a digital healthcare solution to support healthcare professionals in the delivery of patient education, information, preparation, rehabilitation, follow-up and monitoring – before and after surgery. This solution is a great tool to communicate with the patient in a simple and personalized way. Through this application, patients are followed in their post-operative course and can communicate with healthcare professionals providing information about their health status in a coded and scientifically measurable way. They also have the opportunity to watch educational videos, which can answer their questions and respond to their concerns regarding their course progression. All these aspects contribute to improving the patient's overall health status and their personal impression of the therapeutic experience as a whole.

## 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 post-operative pain, immediate post-operative muscle tone preservation, reduced risk of dislocation and short rehabilitation time. Hence, we have developed new offerings on the basis of minimally invasive techniques. For example, 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 430'000 procedures performed worldwide since its introduction in 2004, 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-specific 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.



**AMIS<sup>®</sup> Experience**  
ANTERIOR MINIMALLY INVASIVE SURGERY  
IN HIP REPLACEMENT

More than an  
**Anterior Approach**

## PERSONALIZED SOLUTIONS

Our sophisticated MySolutions ecosystem represents our personalized medicine offering and enables us to offer surgeons patient-matched surgical guides, advanced planning and verification tools, augmented reality-based personalized execution, patient pathway optimization and clinical data collection and analysis. Originally introduced as MyKnee to address an unmet need for better implant positioning in the total knee replacement market, MySolutions can now also be used in hip (MyHip, MyHip Planner, MyHip Verifier), shoulder (MyShoulder) and spine (MySpine) procedures. It also includes our augmented reality surgical platform NextAR, our POP – Patient Optimized Pathway and MyClinical Data for clinical data collection and analysis. Our MySolutions technology has resulted in significant advantages for the patient and has been widely adopted by our surgeon customers. For example, MyKnee procedures accounted for approximately 49% of total knee replacement procedures carried out using Medacta products in 2020.

**MySolutions<sup>®</sup>**

PATIENT-MATCHED TECHNOLOGY	ADVANCED PLANNING AND VERIFICATION TOOLS	AR-BASED PERSONALIZED EXECUTION	PATIENT PATHWAY OPTIMIZATION	CLINICAL DATA COLLECTION & ANALYSIS
<p>MyHip<sup>®</sup></p> <p>MyKnee<sup>®</sup></p> <p>MyShoulder<sup>®</sup></p> <p>MySpine<sup>®</sup></p> <p>MyOsteotomy</p>	<p>MyHip<sup>®</sup> PLANNER</p> <p>MyHip<sup>®</sup> VERIFIER</p>	<p>NEXTAR</p>	<p>PATIENT OPTIMIZED PATHWAY</p>	<p>MyClinicalData</p>

## AUGMENTED REALITY

Augmented reality (AR) is the core of our innovative NextAR 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, which is likely to improve accuracy and patient outcomes. Our NextAR TKA is the first FDA-cleared augmented reality surgical platform for knee surgery. We are further investing in AR product development, with the aim of extending it to hip, shoulder and spine procedures.

## LOOK BEYOND THE ORDINARY



## M.O.R.E. EXCELLENCE CLINICAL PROGRAM

One of our main strategies has 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 continual 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. As a relevant illustrative example, our GMK Sphere knee implant was fully released into the market only after a controlled program in which over 3'000 cases were evaluated during a period of more than three years. 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 carefully evaluated. Moreover we sponsor, support and participate in clinical post-market studies conducted by leading international experts to continuously improve our foundation of knowledge.

## 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. Our educational initiatives result in high levels of ongoing customer engagement: for example, in 2020, in spite of the COVID-19 pandemic, approximately 950 surgeons attended educational events and participated in more than 650 surgeon-to-surgeon visits.

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, and surgeon acceptance and use of our offerings. We believe that our close partnership with surgeons benefits us in developing and refining our product 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 orthopedics 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 2020 we significantly expanded our online educational activities. In April 2020, we launched the M.O.R.E. in Touch program, a series of webcasts and web-based events discussing current topics in orthopedics. This program, which was facilitated by the M.O.R.E. Institute, had the aim of supporting the medical community during the global pandemic. All these webinars are available on Medacta TV, which is Medacta's streaming platform providing access to many hours of medical education, completely redesigned in 2020. Despite COVID-19 restrictions, education continued through redesigned online marketing and medical education programs, with over 2'900 surgeons attending our marketing initiatives and education programs in 2020.

From the positive experience of the M.O.R.E. in Touch program, we have launched further online activities, such as online Experts Meetings, online Talk to the Expert, eLearning Class and eLearning Center.

## 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 (such as the AMIS Mobile Leg Positioner) is meant to streamline, simplify and facilitate reproducibility of the anterior approach. MyKnee, our first offering using our MySolutions technology, allows for the execution of the pre-operative 3D planning based on CT or MRI images of the patient's knee, with potential benefits both for the surgeon and the patient. Moreover, we have developed single-use instrumentation for total knee implants (i.e. the GMK Efficiency system), which offers several benefits in terms of infrastructure and personnel costs to hospitals and, in particular, outpatient surgical settings. 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.

# M.O.R.E. IN TOUCH: HOW MEDACTA STRENGTHENED EDUCATION DURING THE GLOBAL PANDEMIC

Medical education has been a fundamental pillar of Medacta's long-term value-creation strategy since its foundation, and despite the challenging situation due to COVID-19, Medacta's commitment to education has not changed.

The M.O.R.E. in Touch program featured sessions originating from many different countries worldwide, and provided surgeons with the opportunity to tune-in and engage with esteemed faculty concerning a variety of timely topics. Throughout 2020, impactful instruction, as well as interactive Q&A sessions took place on Medacta TV according to a weekly specific program.

*"In this time of physical distancing, our goal is to bring the medical community even closer. The aim of the M.O.R.E. in Touch program is to connect expert physicians from all over the world, making top-level medical education available everywhere and at any time. We are thrilled to be able to introduce this program, allowing surgeons to share their experience and expertise with a few clicks,"* said Francesco Siccardi, CEO of Medacta.

*"During challenging times, like the one we are facing right now, it is essential to be able to react quickly. With the new Medacta TV platform we want to give our contribution to the scientific community and assist expert surgeons in continuing their work, while discussing and developing ideas in order to move the orthopedic industry forward,"* concluded Francesco Siccardi.



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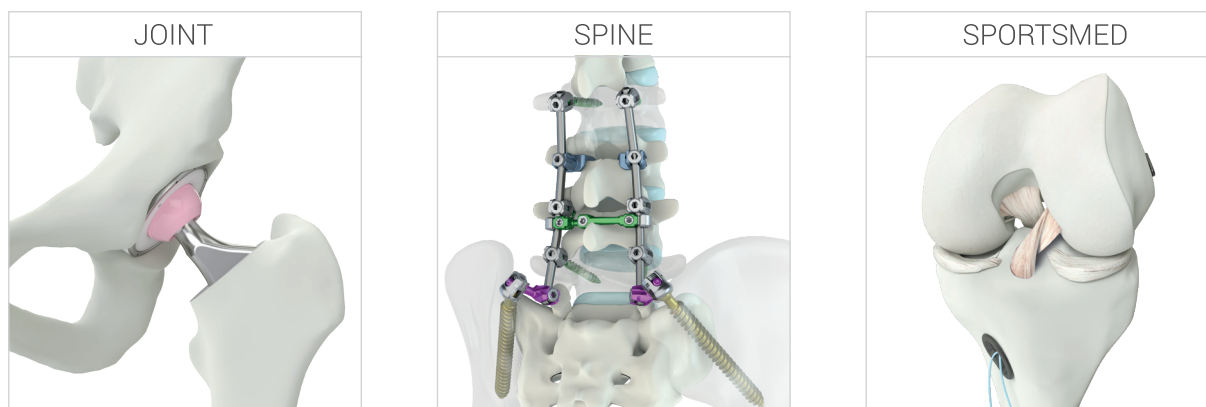
[more.medacta.tv](https://more.medacta.tv)



## 4. PRODUCTS AND BUSINESS LINES

### 4.1 OVERVIEW

We have grown considerably since our foundation, largely driven by our attractive product mix. 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 orthopedic indications.



We are pioneers in developing new and innovative products and surgical techniques that differentiate us from our competitors. 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. We are also actively developing our revision offerings (i.e. replacement of existing implants), which currently focuses on products for hip and knee revision procedures, with the aim of introducing shoulder revision offerings in 2021.

### 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 50.6% and 35.1%, respectively, to our revenues for the year ending December 31, 2020.

#### HIP

Since our founding in 1999, we have focused on developing new and improved products, technologies and methodologies for the hip segment of the orthopedics 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.

In 2004, we developed the innovative AMIS technique for hip implants in collaboration with an international group of expert surgeons. With over 430'000 procedures performed worldwide since its introduction, the AMIS technique is a surgical technique involving an anterior approach to the hip. The anterior approach addresses issues that arise with other forms of hip replacement, including soft tissue damage, pain and long recovery times, dislocations and patient dissatisfaction.

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. Our AMIS technique is complemented by a unique package of supporting products, including dedicated implants and instruments, the AMIS Mobile Leg Positioner (a patented surgical table extension which allows a simple and reproducible procedure), as well as a specifically-trained sales force. To optimize and standardize the implementation of the AMIS technique, we have developed a highly structured surgeon training protocol, the AMIS Education Program, which we believe 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.

Our hip offering is based on a comprehensive product portfolio, which includes – among others – our P-Family and our M-Vizion Femoral Revision System. These products are complemented by a wide range of instruments and technologies, which can enhance the patient experience throughout the entire patient journey.



# THE MEDACTA P-STEMS: A COMPREHENSIVE SYSTEM OF TAPERED RECTANGULAR STEMS

Medacta's P-Family Hip System is a comprehensive system of tapered rectangular stems, which includes Quadra-P, AMiStem-P and SMS. They are the evolution of successful and proven femoral stem concepts and based on the remarkable clinical heritage of the Quadra-H and AMiStem-H.



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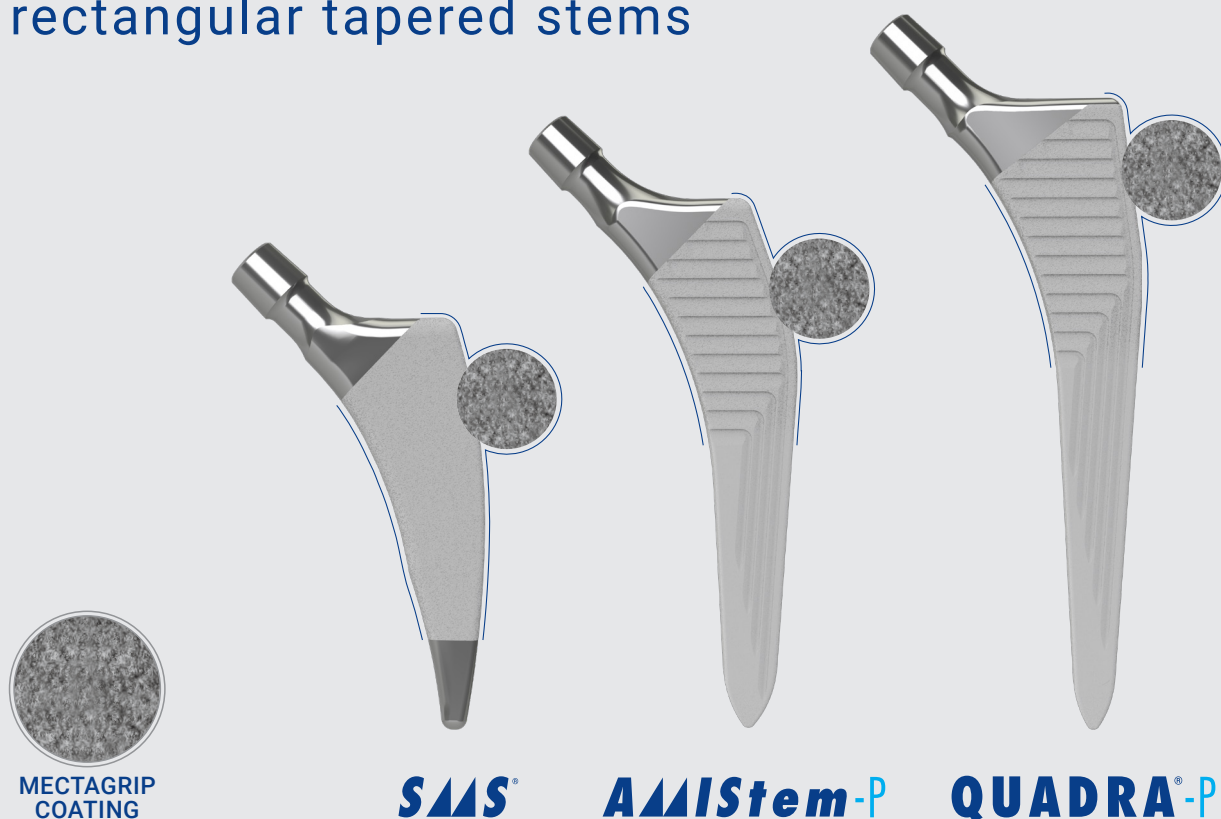
## P-FAMILY

HIP SYSTEM

While preserving the features important to the success of existing systems, the P-Family of stems were 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.

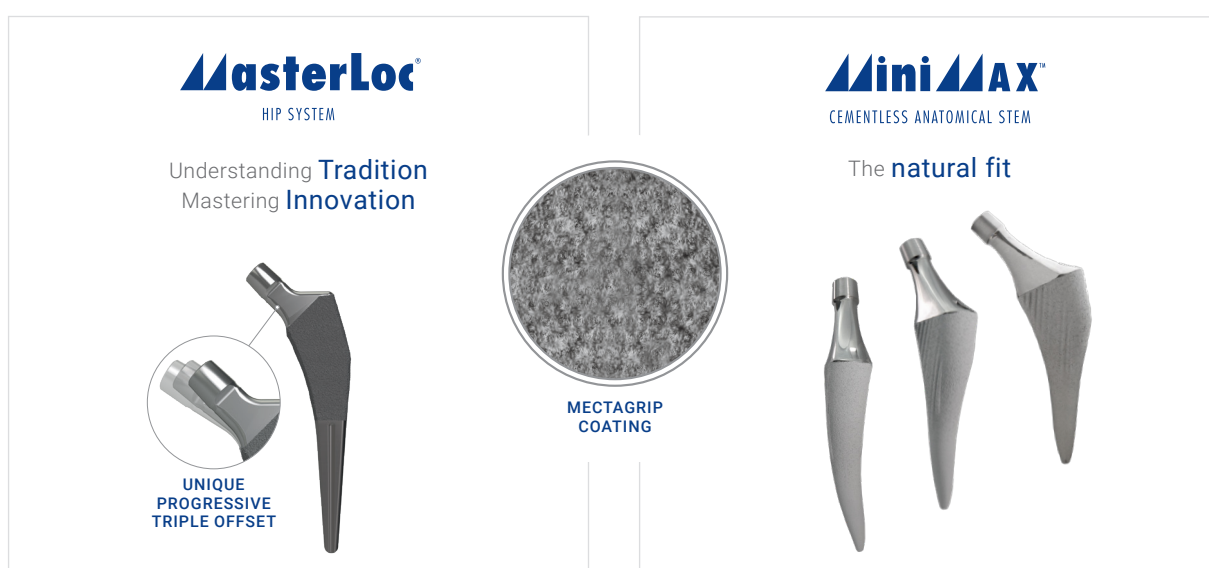
A comprehensive system of rectangular tapered stems



## HIP PORTFOLIO

We offer a wide portfolio of implants for total hip replacements. Our hip implants 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 (i.e. that mimic the anatomy of the femur) and acetabular hip implants (i.e. that mimic the anatomy of the acetabulum, which is the socket that the femoral head fits into). Our hip implants can be divided into those fixed with cement and those fixed without. 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.

Complementing the P-Family (which includes Quadra-P, AMiStem-P and SMS), 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 patient populations. MiniMAX is an anatomical cementless stem engineered to provide the best fit and fill following the natural shape of the femoral canal.



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 3D printing technology, designed to mimic the bone structure and improve the long-term stability of our implants.





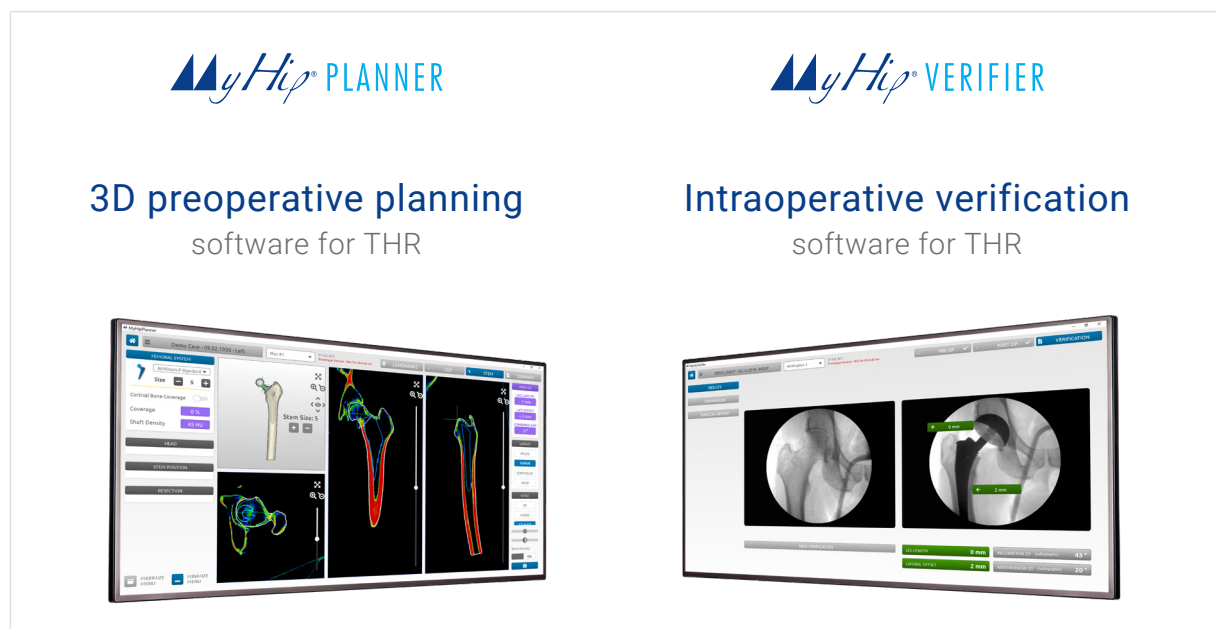
We also offer a comprehensive cemented portfolio with femoral and acetabular solutions that allow surgeons to address the unique needs of patients with a synergistic AMIS friendly design.

In 2020 we expanded our offering in hip revision arthroplasty, with the registration of our extension range for M-Vizion Femoral Modular Revision System, which is intended to be used in revision cases and in demanding primary procedures. To further complete and strengthen our hip revision portfolio, we are currently developing other hip revision devices, some of which will be launched in 2021, with the goal to develop a revision portfolio which is able to cover all the indications at both femoral and acetabular level.

To improve patient outcomes and ease of use of our implants, we have also developed the MyHip patient-specific instruments as part of our MySolutions ecosystem for personalized medicine. The MyHip 3D printed patient-specific guides allow for more accurate positioning and sizing of the hip implant. They are produced in-house by our engineers using laser sintering technology, following surgeon approval of a 3D pre-operative plan.



Besides MyHip patient-specific guides, our MySolutions offering in hip replacement includes MyHip Planner and MyHip Verifier. MyHip Planner is a surgeon-operated CT-based software that can evaluate the effects of different implant choices and positioning options on the patient's hip joint biomechanics, show them to the surgeon and hence enrich the basis for a decision on surgical strategies. MyHip Verifier is an easy-to-use, non-invasive surgical platform that uses intra-operative C-arm images to assist the surgeon in verifying patient-specific implant positioning by providing a real-time numerical evaluation of the actual influence of implant positioning on the patient's anatomy.



Our hip implants can be used with a variety of surgical techniques. However, we encourage all surgeons using our hip implants to apply the AMIS technique to optimize patient outcomes. Currently, all of the products in our hip implant range are suitable for use with the AMIS technique.

In collaboration with expert surgeons, we have developed a range of instruments that are specifically designed for our implants and techniques in order to reduce errors and the learning curve.

## KNEE

We have developed a range of knee replacement techniques, implants and instruments. We believe that our offerings in the Knee business line provide surgeons with an innovative, effective approach to total, partial, and revision knee replacements. The Knee business line is also a perfect example of our commitment to providing personalized solutions. In 2009, MyKnee was introduced as the first element of our MySolutions platform. MyKnee technology allows the surgeon to realize their pre-operative 3D planning based on CT or MRI images of the patient's knee. This is then translated into 3D printed patient-specific guides to be used during the surgery. The MyKnee procedure has been used in approximately 94'000 procedures since 2009. Currently, approximately 49% of all total knee replacements using Medacta products use the MyKnee technology.

We have also developed a comprehensive solution to achieve personalized implant positioning for total knee replacement, the Medacta Individualized Kinematic Alignment (MIKA) platform, which includes an implant particularly suitable for restoring individual alignment (our GMK Sphere), supported by dedicated technologies and a dedicated M.O.R.E. Education Program.

## KNEE PORTFOLIO

Combined with our innovative surgical techniques and instruments, our comprehensive knee portfolio enables us to offer surgeons a range of knee implants that cover a broad spectrum of knee replacement procedures, spanning total, partial, and revision knee implant systems.

For total knee arthroplasty we offer GMK Sphere and GMK Primary. GMK Sphere is an innovative implant designed to deliver maximum functional stability with the goal of increasing patient satisfaction during activities of daily living and decreasing post-operative knee pain. Since its introduction, GMK Sphere has been implanted in approximately 100'000 cases. GMK Primary is a proven and state-of-the-art solution for surgeons looking for a more traditional design.

Our GMK Efficiency system is a complete set of single-use instruments for use with GMK Sphere and GMK Primary implants. This system has been used in approximately 28% of GMK Sphere and GMK Primary cases in 2020. The GMK Efficiency system requires no additional pre-operative sterilization, optimizing logistics for the surgeon and the hospital, and eliminating any delays as a result of unavailable or non-sterile equipment. It also has the potential to reduce infection risk, because of its single-use nature and the fact that it is delivered terminally sterile. For continual environmental responsibility, we completely offset the total amount of CO<sub>2</sub> connected to GMK Efficiency. Through active support for environmental sustainability projects initiated by Swiss Climate, the Medacta GMK Efficiency instrumentation was awarded the "CO<sub>2</sub> neutral" certificate.

The GMK Efficiency system is also available as part of our Efficiency KneePack, which contains all the components needed to implant the GMK Sphere and GMK Primary using a patient-specific single-use instrument set and is delivered sterile in a single, lightweight box. This solution has been particularly suitable in light of the COVID-19 pandemic, when elective orthopedic surgeries were suspended in many parts of the world, resulting in long waiting lists. With operating room (OR) efficiency proving to be paramount in the return to a more normal practice, procedures that combine patient-specific instrumentation with single-use instrumentation have proved to save time in the OR and simplify the OR scheduling.



The graphic illustrates the Efficiency KNEE PACK, a complete solution for total knee replacement. It features three main components at the top: the GMK Efficiency instrument set (labeled with a 'CO<sub>2</sub> neutral' badge), the GMK SPHERE implant, and the MyKnee 3D planning system (showing a laptop with a 3D model of a knee). Below these, a white box labeled '5 kg' represents the KNEE PACK. To the right, the text reads: 'Efficiency KNEE PACK' and 'The ultimate solution for total knee replacement'. At the bottom right, it states: 'Everything you need in JUST ONE BOX, STERILE and READY TO USE'.

# PERSONALIZATION IS THE NEW STANDARD IN TKA

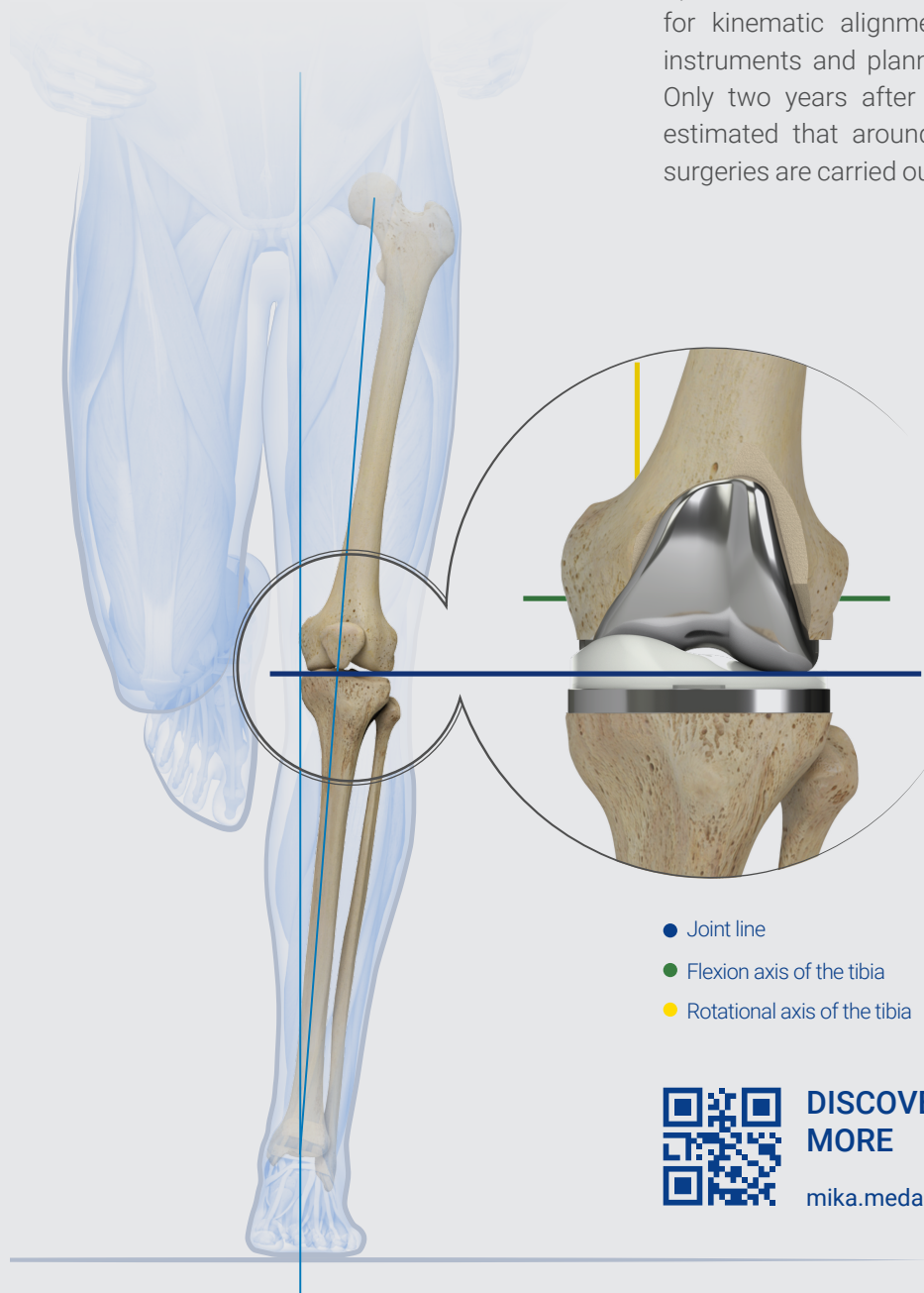
Kinematic Alignment TKA aims to personalize joint line reconstruction through anatomic resurfacing, with little to no ligament release.

**MIKA<sup>®</sup>**  
MEDACTA INDIVIDUALIZED  
KINEMATIC ALIGNMENT

The Medacta Individualized Kinematic Alignment (MIKA) platform provides surgeons with a comprehensive solution to safely and reproducibly perform Kinematic Alignment TKA, with the goal of restoring knee function and improving patient satisfaction by tailoring the position of the implant to each individual patient.

It operates by custom-positioning the knee implant to the native joint line of the knee as it was in its pre-arthritic state, while preserving the surrounding tissues and ligaments.

Medacta's unique solution includes the GMK Sphere, a total knee implant particularly suitable for kinematic alignment, as well as dedicated instruments and planning protocols for MyKnee. Only two years after the launch of MIKA, it is estimated that around 35% of all GMK Sphere surgeries are carried out with kinematic alignment.



**GMK<sup>®</sup> SPHERE**  
MEDIANLY STABILIZED KNEE




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[mika.medacta.com](http://mika.medacta.com)

In 2020, our commitment to developing highly innovative solutions led us to receive FDA-clearance for our NextAR TKA, the first FDA-cleared augmented reality surgical platform for total knee replacement. NextAR TKA is the first application of a new platform technology, which will be extended to hip, shoulder and spine procedures. It is designed with the goal to improve efficiency and precision in total knee replacement and deliver advanced personalized planning. With low 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).




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 of these options allow surgeons to treat osteoarthritis localized on the medial or lateral compartment of the knee. To complete our partial knee portfolio, MOTO PFJ will be launched in 2021, allowing for the treatment of osteoarthritis localized in the patello-femoral compartment of the knee.



**Moto®**

PARTIAL KNEE SYSTEM

Moving forward  
in partial knee



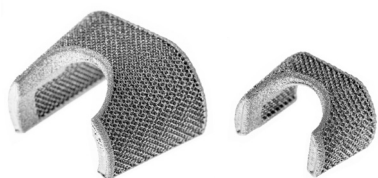
**Moto LATERAL**



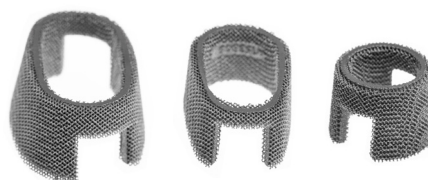
**Moto MEDIAL**

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. In 2020 we further expanded our knee revision portfolio with 3D Metal Femoral Cones.

### 3D Metal FEMORAL CONES



### 3D Metal TIBIAL CONES

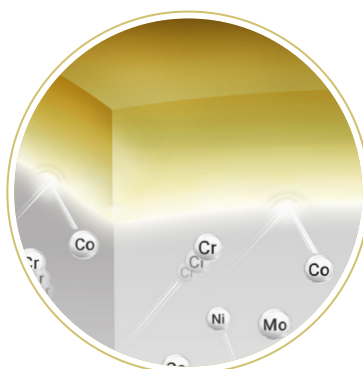


3D Metal is an advanced structure, manufactured utilizing 3D printing technology, designed to mimic the bone structure and improve the long-term stability of our implants. Developed upon the clinical success of 3D Metal Tibial Cones, the Femoral Cones can be used for structural support in areas of bone deficiencies that may compromise revision implant fixation.

In 2020 our revision portfolio was further enriched with our SensiTiN coating for low metal ion release, which had already been introduced for the primary implants. With the SensiTiN-coated knee implants, the Medacta knee system is now even more complete, allowing for treatment of a larger number of patients, from primary to complex revision cases.

## SensiTiN™

Enhanced coating to  
reduce metal ion release



Surgeons' preferred choice  
to treat patients with metal  
allergy or hypersensitivity



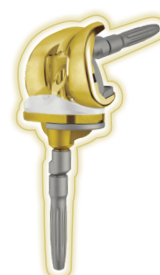
**GAAK** SPHERE



**GAAK** PRIMARY



**GAAK** REVISION



**GAAK** HINGE



## 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.

### SHOULDER PORTFOLIO

Our offering within the Shoulder business line is the Medacta Shoulder System, which was introduced in 2016 and is FDA-cleared, CE-marked and approved by MHLW for use in Japan. The Medacta Shoulder System is an innovative modular system designed with the support of a group of international expert surgeons, that offers a wide range of options for shoulder replacement. This innovative implant system has been designed to enhance shoulder mobility and improve patient well-being. Thanks to its innovative modularity, the Medacta Shoulder System can be used in the two main types of shoulder replacement procedures:

- Total anatomic shoulder replacements (in which the humeral head is replaced with a metallic head assembled on a metallic stem and the glenoid is replaced with a plastic component);
- Reverse shoulder replacements (in which the metallic ball is attached to the glenoid while the socket is on the humeral side).

Thanks to the modular design of the Medacta Shoulder System, it is possible to convert a total shoulder replacement into a reverse shoulder replacement without the need to revise all the components of the implant. This is aimed at avoiding full revisions of the shoulder implant if disease progression requires conversion to a reverse configuration. In addition, the Medacta Shoulder System offers a wide size range and an adjustable offset, meaning it can be optimized for the individual patient.

The Medacta Shoulder System is complemented by our patient-specific MyShoulder technology, which is FDA-cleared, CE-marked and approved by MHLW for use in Japan. MyShoulder allows the surgeon to realize their pre-operative 3D plan based on CT images of the patient's shoulder. This is then translated into 3D-printed guides to be used during the surgery. The MyShoulder platform is composed of two patient-matched guides and a 3D WebPlanner. The WebPlanner allows the surgeon to carry out precise pre-operative planning. The two guides, a humeral cutting guide and a glenoid pin guide, assist the surgeon, optimizing the precision and reducing the surgery time.



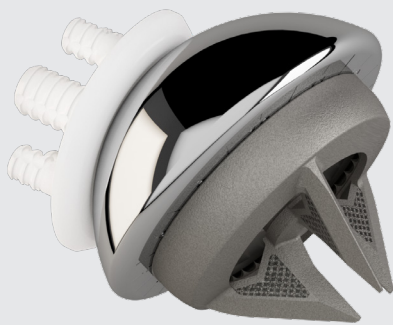
In addition to the Medacta Shoulder System, we are developing a portfolio of revision products that we expect to introduce in 2021.

# MEDACTA SHOULDER SYSTEM: MORE OPTIONS IN SHOULDER ARTHROPLASTY

In 2020 we added two new options to our shoulder portfolio: the Long Humeral Diaphysis and the Stemless Humeral Metaphysis, both of them currently in limited market release according to Medacta's M.O.R.E. Excellence Clinical Program.

The Stemless Humeral Metaphysis, which is CE-marked, is intended for use in anatomic configuration. Featuring Medacta's 3D Metal technology, it enables a minimally invasive approach at the humeral level, preserving the humeral canal.

The Long Humeral Diaphysis, FDA-cleared and CE-marked, can help surgeons facing complex cases of shoulder replacement, particularly when there is a need for primary fixation in the distal part of the humerus.



Stemless  
Humeral Metaphysis



Long  
Humeral Diaphysis

## MEDACTA SHOULDER SYSTEM



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### 4.3 SPINE PRODUCTS AND TECHNOLOGIES

Our development of products for the profitable and fast-moving spine market started in 2009, when our engineers collaborated with a team of expert international surgeons to develop solutions for the treatment of various degenerative spine conditions and spine deformities. Our current comprehensive range of spine products, implants and instruments complement one another, creating comprehensive platforms for most spine stabilization applications. Within our spine offering, we have leveraged our expertise both in minimally invasive techniques and in patient-specific 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.

Building on our proprietary MySolutions technology, we have developed MySpine to be used with our product offerings within the spine segment. MySpine offers surgeons a patient-specific 3D printed screw placement guide, resulting in accurate positioning of the screws, reduced X-ray dosage and reduced time and cost.

We offer MIS MySpine MC, which is a patient-specific 3D printed solution for surgeries that use the midline cortical approach. It 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 both radiation exposure and cost compared to conventional open lumbar fusion surgery. The goal of MIS MySpine MC is to maximize the fusion rate and the predictability of clinical outcomes, thus positively impacting patient well-being.



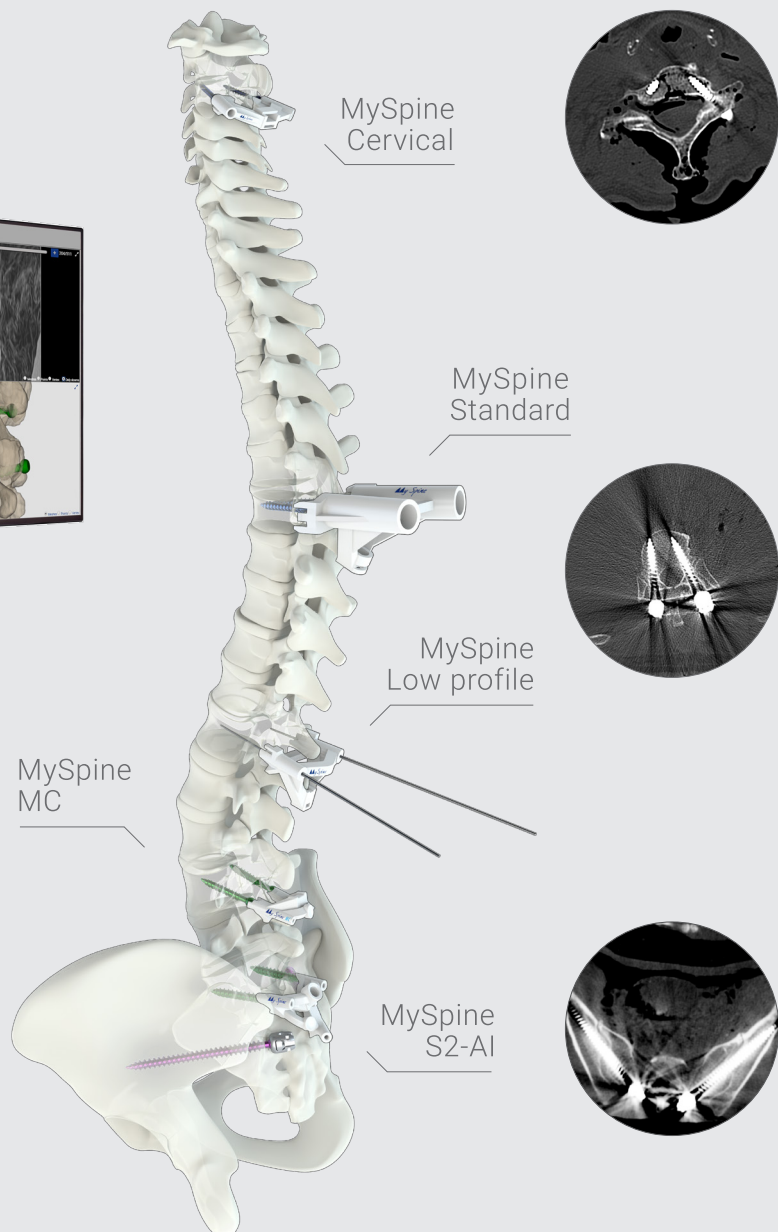
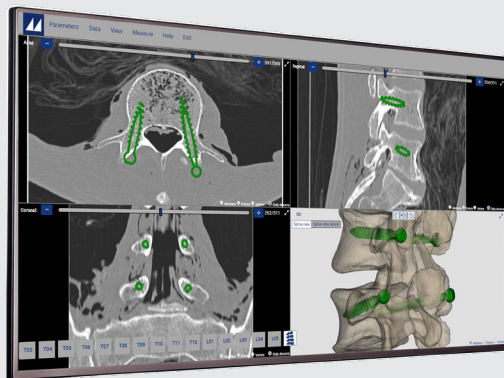
Among the innovations we introduced in 2020 within the MySpine family, there is MySpine S2AI, our patient-specific solution for S2-Alar-Iliac fixation. It is intended for long constructs and designed to overcome the limits of a potentially insufficient lower spine fixation. The S2-Alar-Iliac technique involves the treatment trajectory crossing five cortical bones resulting in strong bone fixation, while the medial entry points reduce the need of muscle dissection leading to smaller incision, reduced screw loosening, reduced pain and less dissection compared to alternative lumbosacral instrumentations (S2-Alar and Iliac screws). In 2020 we also launched MySpine Cervical, our patient-matched technology for accurate cervical screw placement that allows for extended constructs relying on strong bone fixation, and significantly reduced X-ray exposure.



# MYSPINE: A COMPLETE PLATFORM FOR PERSONALIZED MEDICINE

MySpine is a patient-specific screw placement guide, allowing surgeons to determine their pre-operative 3D planning, based on CT images of the patient's spine.

With the addition of MySpine S2AI and MySpine Cervical, the MySpine platform is now a complete and comprehensive system of 3D printed patient-matched guidance and pre-operative planning that allows for posterior spine fixation from cervico-thoracic to lumbosacral and pelvic fixation.



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[spine.medacta.com](https://spine.medacta.com)

## SPINE PORTFOLIO

We have developed a portfolio of spine products that includes implants and accompanying instruments. Our spine systems are designed to address degenerative spine conditions and other spinal deformities, such as scoliosis. Our spine products include the pedicle screw system and intervertebral cages and are available in a variety of heights, angles and footprints that allow the patient's anatomy to be taken into account, resulting in variable anatomic shaping.

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 post COVID-19 recovery.

In 2020, we received FDA clearance for the Mecta-C Stand Alone platform for anterior cervical discectomy and fusion procedures (ACDF). Mecta-C Stand Alone is indicated for use from C2 to T1 in skeletally mature patients suffering from degenerative disc disease. The platform incorporates the benefits of a modular cage-plate system with versatile screws, thus requiring no additional fixation. Mecta-C Stand Alone is offered in TiPEEK, Medacta's plasma-sprayed titanium coating that provides an added value to improve stability and increase the migration resistance. It is an indication-specific interbody fusion device, which enriches the suite of 360° cervical solutions to provide a treatment to numerous cervical spine disorders.

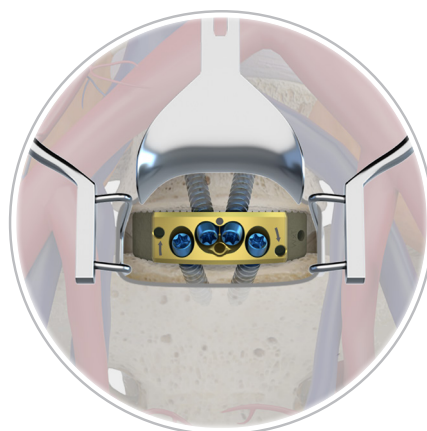


### Mecta-C<sup>®</sup> STAND ALONE

ANTERIOR CERVICAL INTERBODY FUSION DEVICE

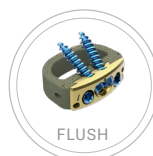


Like Mecta-C Stand Alone, also our MectaLIF Anterior Interbody Fusion Device is offered in TiPEEK. This device provides a modular design that incorporates the benefits of an anterior plate and a radiolucent cage that does not hamper the diagnostic assessment. In order to accommodate specific anatomical requirements and specific pathologies to treat, the surgeon has the ability to assemble any of the available plates intra-operatively with complete freedom of choice.



### MectaLIF<sup>®</sup> ANTERIOR STAND-ALONE

ANTERIOR LUMBAR INTERBODY FUSION DEVICE



To simplify the procedure and provide robust instruments in open surgery when treating degenerative spine pathologies, in 2020 we released the M.U.S.T. 2.0 instrumentation. The M.U.S.T. 2.0 system is the next generation of M.U.S.T. instruments that incorporates an upgraded geometrical design to support every single step of the surgery. The M.U.S.T. 2.0 instrumentation is used to implant the Medacta M.U.S.T. (Medacta Universal Screw Technology) pedicle screw system, a universal polyaxial screw, rod and connector system applicable to degenerative, deformity and trauma cases.



In order to provide complete solutions in spine surgical treatments, we also offer M.U.S.T. Deformity, a platform specifically designed to assist the surgeon in all the steps of a deformity surgery with different techniques. While challenging screw positioning is facilitated by the MySpine patient-specific technology, free hand spine anatomical alignment can be provided by our suite of specialized persuaders. The M.U.S.T. EnBloc further enriches the deformity platform, by providing the surgeon with a dedicated system for an effective recovery of the overall spine harmony.



## 4.4 SPORTSMED PRODUCTS AND TECHNOLOGIES

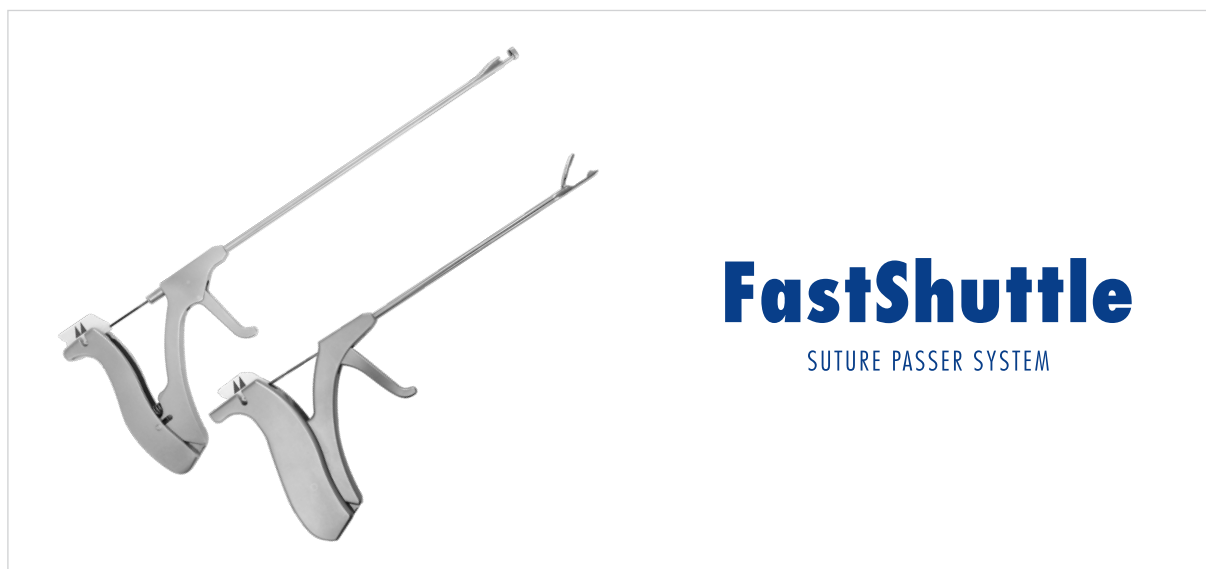
In our newly-developed Sportsmed business line, started in 2016, our engineers are working to create specific and innovative products for the treatment of ligament, tendon and muscular injuries of the knee, hip and shoulder, supported by an international team of sports medicine surgeons. The aim of our Sportsmed business line is to design minimally invasive procedures in order to allow patients to return quickly to daily activities.

### SPORTSMED PORTFOLIO

The Medacta Anatomic Ribbon Surgery (M-ARS) is an innovative surgical technique that we have developed to reconstruct the anterior cruciate ligament (ACL), supported by specific instruments and dedicated extra-articular implants. We launched M-ARS in 2017 as a surgical package that includes dedicated instruments and implants to reconstruct the ACL. It is designed to distribute forces in a more natural, anatomical way. Due to the large tendon-bone interface, it is intended to offer fast integration with little risk of necrosis of the graft and an advanced healing path process.

In addition to our M-ARS offering, in 2019 we launched MectaScrew PEEK Interference Screws for cruciate ligament re-fixation and MectaLock PEEK for shoulder and hip labral repair.

In 2020 we continued our expansion in the Sportsmed market with the introduction of many different products, such as our anchor portfolio in Titanium and PEEK, three additional implant options for cruciate ligament fixation and the FastShuttle suture shuttling device for rotator cuff repair.



We also introduced into the market our first rotator cuff anchors (MectaLock TI and MectaTap) and MectaQTH instruments to facilitate quadriceps tendon graft harvesting. The replacement of a torn graft with a quadriceps tendon has enjoyed increasing popularity recently. We obtained registrations for a resorbable Interference Screw for ligament reconstruction, an All-Suture Anchor indicated for hip and shoulder labral repair, as well as rotator cuff and biceps tendon repair, a suture passing device for hip capsular closure and our new PowerSuture product family with more than 40 new suture, tape and suture loop offerings.

In 2021, many new products are expected to get product registration or be ready for limited market release, e.g. FairFix Adjustable Button, biocomposite and osteoconductive options for anchors and interference screws, a suture shuttling device in hip and shoulder labral repair, a wider range of sterile single-use instrument solutions, and a smaller size All-Suture Anchor option additional to our MectaLock All-Suture Anchor.

# MEDACTA ANNOUNCES CE MARKING FOR MULTIPLE PRODUCTS FOR ITS SPORTS MEDICINE DIVISION

At the beginning of 2020, we received CE marking for multiple sports medicine products:

- MectaLock PEEK instability anchors for hip and shoulder labral repair,
- MectaLock Ti and MectaTap for rotator cuff repair,
- MectaScrew PEEK interference screw for ligament repair,
- Medacta Shoulder and Hip Cannula System,
- MectaQTH quadriceps tendon harvesting instrumentation,
- Medacta Hip Access KIT for hip arthroscopies.

The launch of these new products, together with many first-time surgeries all over the world, clearly show our commitment to continue developing our sports medicine portfolio, which consists of minimally invasive procedures aimed at allowing patients to return quickly to daily activities.



**DISCOVER  
MORE**

[sportsmed.medacta.com](https://sportsmed.medacta.com)

**MectaQTH**  
QUAD TENDON HARVESTING

Fast, Strong, Secure  
**MIS Harvesting**

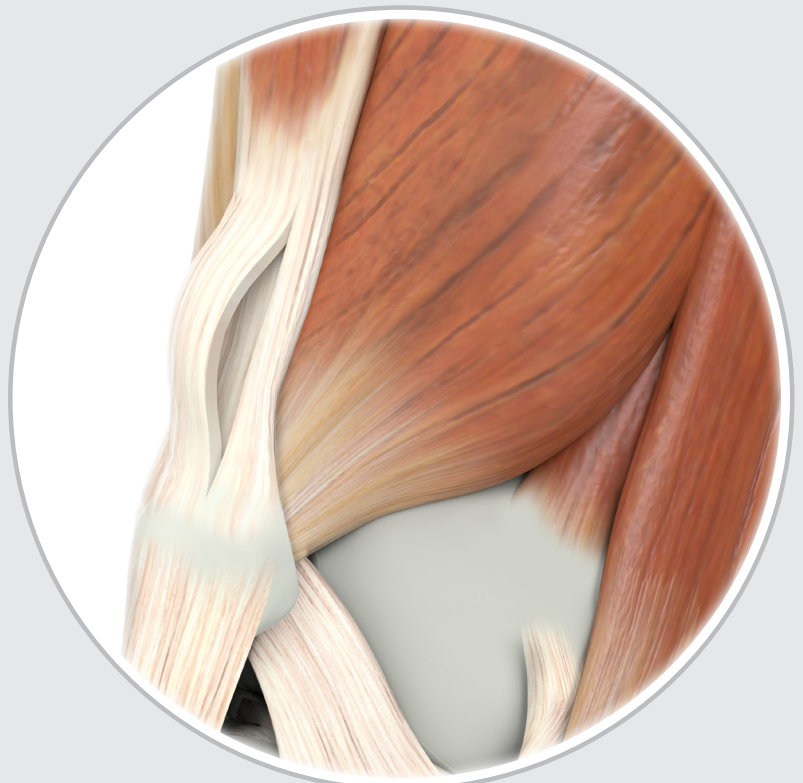


**HORIZONTAL**

**VERTICAL**



PATENT PENDING







**The surgeon is never alone**  
when discovering new technologies

