



2022 Interim Presentation

Sep 2022

Strictly Private and Confidential



Agenda

Business Highlights

Product Pipeline Update

Commercialization

Financial Review

Appendix

Business highlights

In 1H2022, we received **2** NMPA approvals for our flagship products, completed enrollment for **3** registrational clinical trials and obtained the **1st** bidding order ^{Note 2} for Toumai®

Product



Laparoscopic

- **Toumai®1st Generation** received **NMPA approval** in Jan 2022
- **Toumai®2nd Generation** completed enrollment of registrational clinical trial covering indications including **gynecologic, thoracic and general surgery**
- **Toumai®** completed the **world's longest-distance 5G ultra remote surgery** in Jun 2022
- **Toumai® single-arm** completed **research clinical trials**

Orthopedic

- **Honghu (TKA)** received **NMPA approval** in Apr 2022
- **Honghu**^{Note 3} is the **first and only** Chinese-developed surgical robot received **FDA clearance**
- **Honghu** submitted **CE application** in Mar 2022
- **Honghu (THA)** completed **FIM surgery** in Aug 2022

Natural orifice

- **Trans-bronchial surgical robot** completed **FIM clinical trial** in Mar 2022

Panvascular

- **R-ONE®** completed **multicenter registrational clinical trial** enrollment in May 2022

Percutaneous

- **Mona Lisa™** completed **registrational clinical trial** and submitted **NMPA application**



Financing

- Included in **Hang Seng Composite Index** in Mar 2022
- In preparation of China A-Share initial public offering

Commercialization



Hospital coverage

- **Toumai®**
Collaborated with **~30 hospitals**
Completed **~800** validation trials and training surgeries
- **Honghu**
Collaborated with **~20 hospitals**
Completed **~300** validation trials and training surgeries
- **DFVision®**
Penetrated **~40 hospitals** and completed **~300 surgeries**

Surgeons training

China Market

- Deployed **~30 training centers**, incl. self-owned and co-developed with hospitals
- Trained **200+ doctors**
- Completed **~800 training operations**
- World's 1st 5G remote surgery training centre**

US market

- Establishing a **professional commercial team**; Trained **surgeons from four hospitals**

Others



- **Five foundation technologies**: robot ontology, control algorithms, electrical engineering, image-based navigation and precision imaging
- **~ 1,200 employees** – largest surgical robot industrialization team
- **4 R&D centers** – Shanghai, Shenzhen, Singapore and Boston
- **689 patents** granted or in application globally

Note: ¹ as of August 31, 2022

² subject to Deployment Permit

³ registered name in the US is SkyWalker™

Agenda

Business Highlights

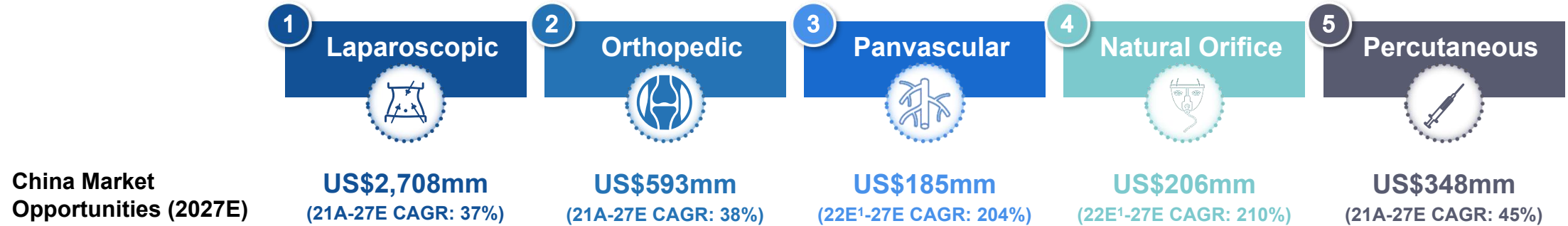
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Only surgical robot company world-wide covering all 5 major and fast-growing surgical specialties



Major Global / Domestic Listed Peers²

Overview of Surgical Specialties Coverage

	1 Laparoscopic	2 Orthopedic	3 Panvascular	4 Natural Orifice	5 Percutaneous
 MEDBOT™	✓	✓	✓	✓	✓
Intuitive Surgical	✓			✓	
CMR Surgical	✓				
Stryker / Mako		✓			
Medtronic / Mazor	✓	✓			
Zimmer Biomet / Rosa		✓			
Siemens			✓		
Johnson & Johnson		✓		✓	
WEGO (威高)	✓				
TINAVI (天智航)		✓			

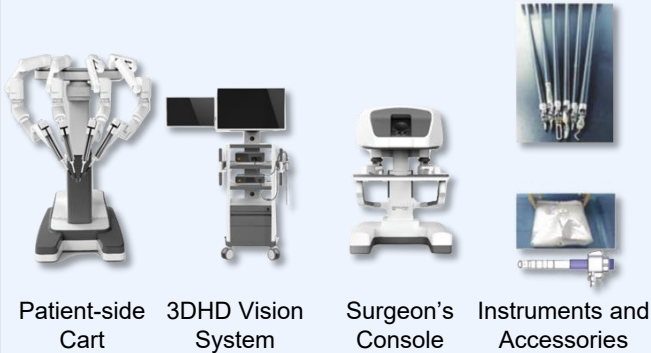
Source: Frost & Sullivan analysis







Notes: ¹ Expect to have first commercialized surgical robot product in that year; ² Refers to peers with market cap of over US\$1bn

Laparoscopic surgical robot

Flagship product – Toumai® Laparoscopic Surgical Robot

Toumai® 1st Generation



-  **Four robotic arms** compatible with highly complex surgeries
-  **Reduce surgical wounds, incidences of post-surgical complications for faster recovery**
-  Robotic arms with **high degrees of freedom**
-  **Tremor-filtered instrument movement**
-  Immersive **3DHD visualization**
-  **Reduced surgeon fatigue** through natural hand-eye alignment

Toumai® 1st Generation

Toumai® 2nd Generation

Toumai® Single-arm

- 2018 Completed the design
- 2018 Admitted to NMPA Green Path
- May 2021 The first Chinese-developed surgical robot that had completed registrational clinical trial for complex urologic surgeries
- Jan 2022 Obtained NMPA approval
- Jun 2022 Completed the world's longest-distance 5G ultra remote surgery



- Jan 2022 Completed patient enrollment for registrational clinical trial in gynecologic, thoracic and general surgeries



- 2023E Expected to obtain NMPA approval
- Dec 2021 Completed the First human clinical trial of single port laparoscopy cholecystectomy
- 2H 2022E Commence registrational clinical trial



First of its kind completed with a Chinese-developed laparoscopic surgical robot

RALRP¹
(removal of the entire prostate)

Dongfang Hospital in Shanghai
(Nov 2019)

RAPN²

Zhejiang Provincial People's Hospital in Hangzhou
(Dec 2020)

Extraperitoneal RALRP¹

Zhongshan Hospital in Shanghai
(Dec 2020)

RAPN² adopting a retroperitoneal approach

Zhongshan Hospital in Shanghai
(Dec 2020)

Single-port RAPN²

Zhejiang Provincial People's Hospital in Hangzhou
(Dec 2020)

Note: ¹ Robot-assisted laparoscopic radical prostatectomy;
² Robot-assisted partial nephrectomy

Laparoscopic surgical robot (cont'd)

Toumai® 2nd generation – registrational clinical trials



First and only domestic laparoscopic surgical robot to conduct clinical trial on all **4 indications**

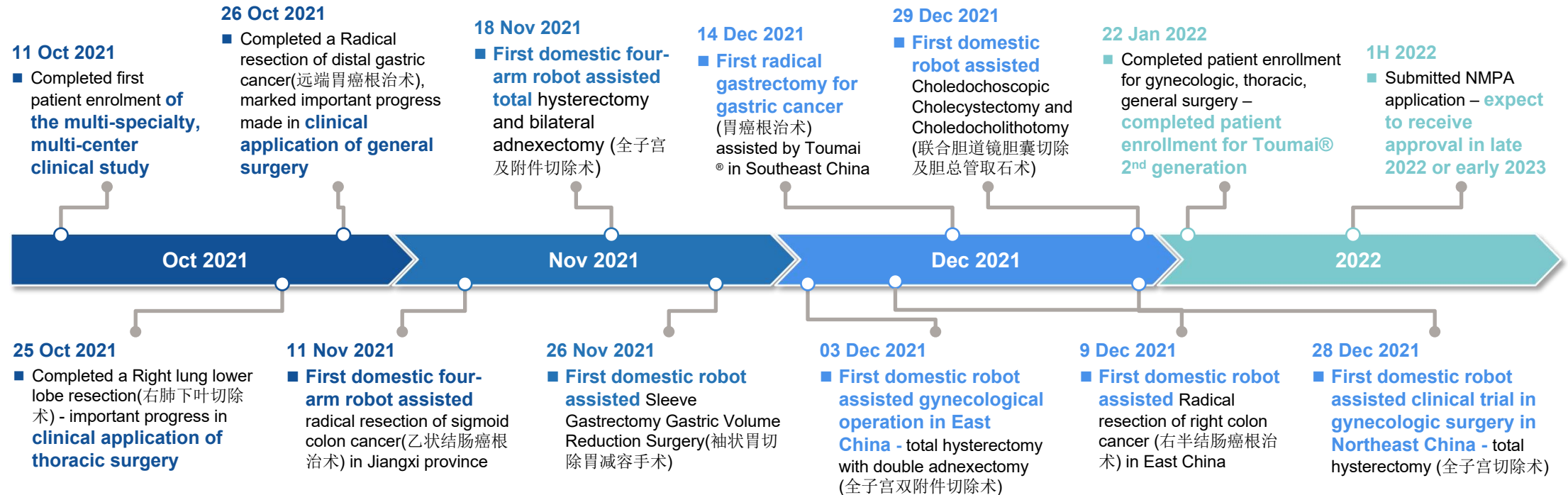


2nd globally & 1st domestic laparoscopic surgical robot to accomplish **all** types of **complex** surgeries



Full application of clinical specialties in **thoracic, laparoscopic and pelvic cavity surgeries**

Clinical trial centers coverage



Laparoscopic surgical robot (cont'd)

Toumai® – 5G ultra remote surgery

★ Doctors working together 5,000 km apart ★



In July 2022, established the first 5G ultra-long-distance precise minimal invasive procedure training center with 301 Hospital

World's longest distance 5G ultra remote surgery

The first **4-arm Laparoscopic Surgical Robot** to conduct **remote controlled surgery**

- ✓ Multiple advanced technologies to ensure long distance viability
- ✓ High quality medical resources to lower tier regions

Laparoscopic surgical robot (cont'd)

Flagship product – DFVision® 3D Electronic Laparoscope

- The first Chinese-developed 3D electronic laparoscope admitted to the **NMPA Green Path** in Apr 2019
- The first surgery completed with **Chinese-developed** 3D electronic laparoscope in China in Oct 2019
- **DFVision® - I** received **NMPA approval** in Jun 2021
- **DFVision® - II** is expected to receive NMPA approval in 1H 2023

Light weight

- **DFVision®**'s dual objective lenses are placed at the tip of the borescope
- **Easier for surgeons to manipulate precisely**, particularly in small surgical fields

Stereo visualization

- The natural depth of field allows the surgeon to have **intuitive observation**

3D

3D electronic laparoscope

Image processor (3DHD vision system)

HD

High-definition, real-time image transmission

- Strong image transmission and processing capabilities
- High magnification feature enables surgeons to **zoom in the view smoothly, observe minute blood vessels clearly** and **operate with greater precision**

2nd generation improvements

- Support touch screen for easier control
- Support ultrasonic imaging for better efficiency
- Higher FPS and lower latency

Commercialization Progress



Kicked off **marketing campaigns** for **DFVision®** in 2H 2021



Penetrated in nearly 40 hospitals and promoted product awareness among target hospitals and surgeons



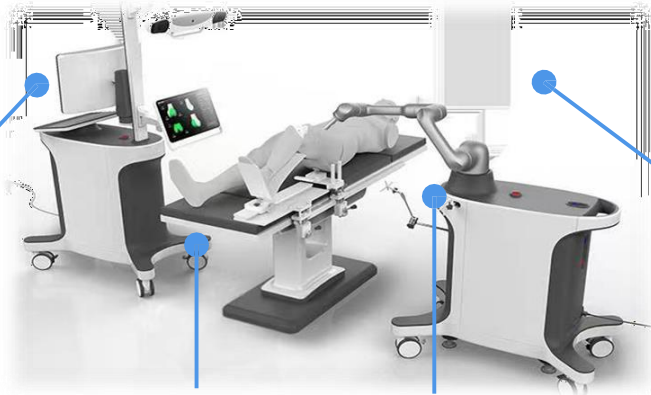
To **help surgeons gain familiarity** with the product and **collect feedbacks**

Orthopedic surgical robot

Flagship product – Honghu Orthopedic Surgical Robot

The only Chinese-developed joint replacement surgical robot with a self-developed robotic arm.

 The first and only Chinese-developed surgical robot received FDA clearance



3D image-based preoperative plan to define the optimal implant size according to the patient's anatomy



Significantly **decreased radiation exposure** and improved **cost-efficiency**



Precise bone cutting and implant placement to reduce surgical complications and facilitate patients' recovery



Innovative and novel navigation and positioning to optimize postoperative outcome

May
2020



Green Path

Entered the NMPA **Green Path** in May 2020

Jan
2021



Patient enrollment

Patient enrollment for **Honghu's** registrational clinical trial for TKA completed in Jan 2021

Mar
2022



Overseas Registration

Submitted CE application in Mar 2022

Apr
2022



Registration approval

Received NMPA approval in Apr 2022

Jul
2022



Overseas Registration

Received FDA clearance in Jul 2022

2H
2022



Indication expansion

Completed FIM surgery for total hip arthroplasty (THA)



Natural Orifice Surgical Robot



Robot-assisted natural orifice surgery

Surgery application

- Natural orifice surgical robots refer to robots that deliver surgical instruments to the target anatomy through natural pathways of the human body and control them for diagnosis or surgery
- Natural orifice surgical robots are applied in natural orifice transluminal laparoscopic surgeries, such as



Bronchoscopy
(examination of
the lungs)



Colonoscopy
(examination of
the bowel)



Gastroscopy
(examination of
the stomach)

Competitive landscape

- Globally there are only 3 FDA approved natural orifice surgical robots
- In China, there is no NMPA approved natural orifice surgical robots



Product



Features /
Technology



Indication
application



Clinical status

Trans-bronchial Surgical Robot



- Leverage the power of flexible robotics which uses a camera and tools to enter the lungs through their natural airways
- Precisely guide a biopsy instrument to those hard-to-reach nodules

Trans-bronchial diagnosis and treatment

- Completed **FIM clinical trial** in Mar 2022
– **First clinical trial completed by domestic trans-bronchial surgical robot**
- Expected to commence registrational clinical trial enrollment in 2H22.

Panvascular Surgical Robot

R-ONE® Vascular Interventional Surgical Robot



Robot-assisted panvascular surgery

Surgery application

- Panvascular surgical robots are used to treat diseases of the vasculature or related organs in the heart, the brain or the peripheral vascular system
- Panvascular robots not only move surgeons outside the operating room, but more importantly achieve better precision and controllability of operations

Competitive landscape

- Globally there are only 4 panvascular surgical robots approved by FDA or obtained CE Marking
- In China, there is no NMPA approved panvascular surgical robots



Product

R-ONE® Vascular Interventional Surgical Robot (“R-ONE®”)



CE Marking



Features / Technology

- Designed to operate with precision and perform specific movements
- Facilitate and enhance the interventional procedures performed on the patient



Indication application

Coronary angioplasty



Clinical status

- **CE Marking (2019)**
- **China:**
 - Completed the registration clinical trial enrollment in May 2022 - **first surgical robot completed a multicenter clinical trial for vascular intervention in China**
 - Expect to obtain NMPA approval in 2023



Percutaneous Surgical Robot

Mona Lisa Robotic Transperineal Prostate Biopsy System



Robot-assisted percutaneous surgeries

Surgery application

- Percutaneous surgical robots are indicated for percutaneous surgeries, which are primarily procedures to collect tissue samples for diagnostic purposes, such as the detection of early-stage lung cancer, breast cancer and prostate cancer

Competitive landscape

- Globally there are 7 leading percutaneous surgical robots approved by FDA or obtained CE Marking
- In China, there are 7 NMPA approved percutaneous surgical robots



Partner/
Product



Features /
Technology



Indication
application



Clinical status

iSR'obot™ Mona Lisa Robotic Transperineal Prostate Biopsy System ("Mona Lisa")



CE Marking

FDA approval

- Real-time 2D ultrasound images displayed on the monitor during the biopsy procedure
- The surgeon manually inserts the needle into the prostate to collect the biopsy cores

Transperineal prostate biopsy¹

Expect to cooperate with Toumai®, providing integrated solutions in urology

- FDA approval & CE Marking (2017)
- China:
 - Completed the registration clinical trial enrollment in May 2022 - **First prostate biopsy surgical robot completed the multi-center clinical trial in urology in China**
 - Submitted NMPA application
 - Expect to obtain NMPA approval in 2023



Note: ¹ A diagnostic procedure in which the surgeon passes the biopsy needle through the perineal skin and into the prostate

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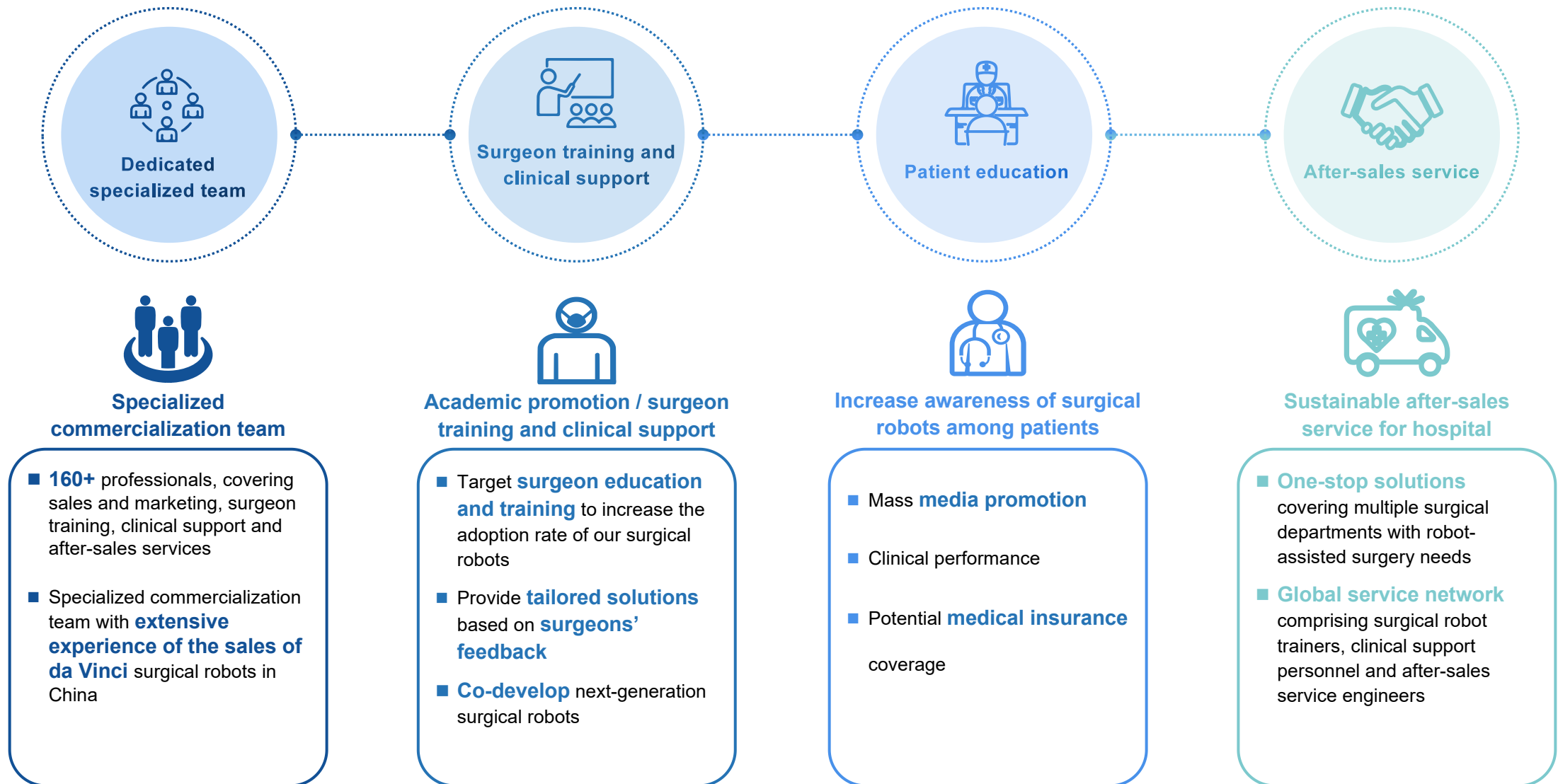
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Experienced team and well-planned strategies for commercialization



Clear global vision and established footprint



Note: ¹ Including shares held by MicroPort MedBot and ESOP ² As of June 30, 2022

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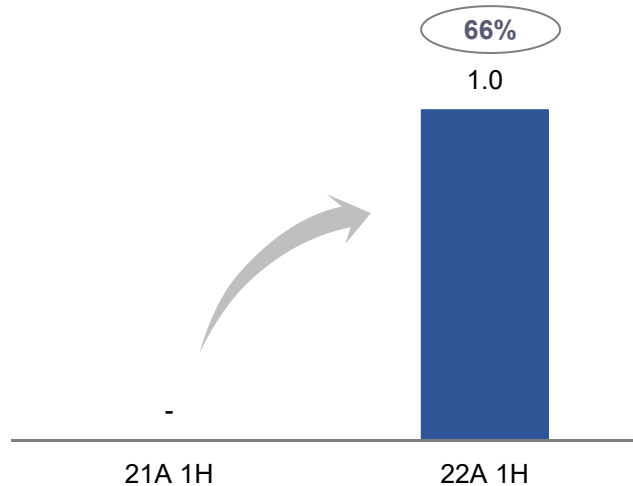
Breakthrough in the pandemic, continuous funding and adequate cash

Breakthrough in the pandemic

From the sales of DFVision, which was approved by NMPA in 2021
Clinical validation projects proceeded though facing challenges from pandemic

Revenue

(RMB million)

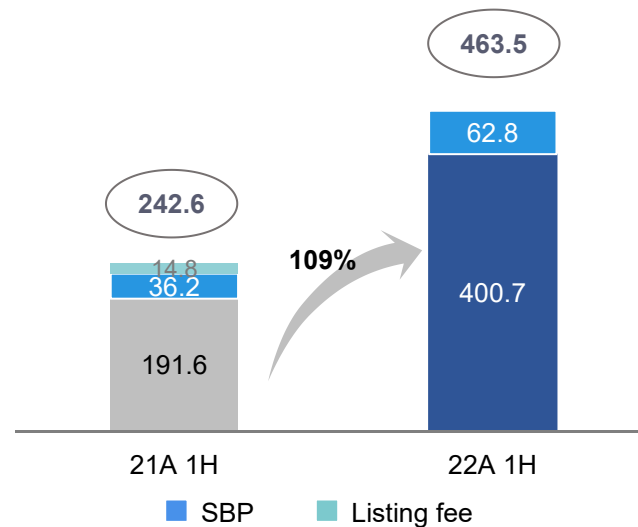


Continuous funding future

Net loss of 463.5m with oper. performance loss 400.7m, YoY 109%, over 70% of which invested in R&D

Operating performance

(RMB million)



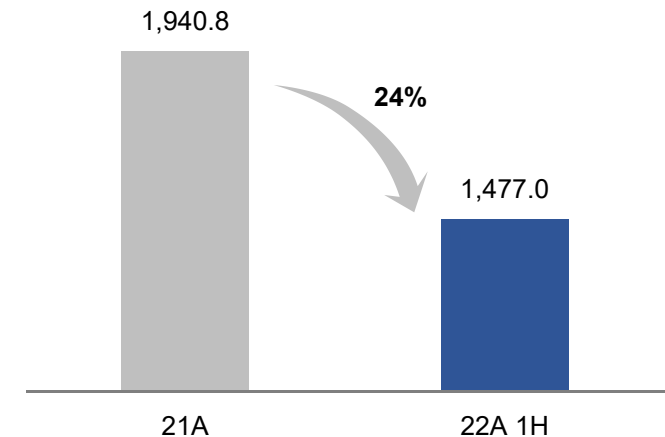
Adequate cash

1,477.0m at Jun end 2022, adequate to reach for commercialization

Net cash used in operating activities (287.6m);
Supply chain build-up (90.1m) and strategic partnership investment (70.2m)

Cash Balance

(RMB million)



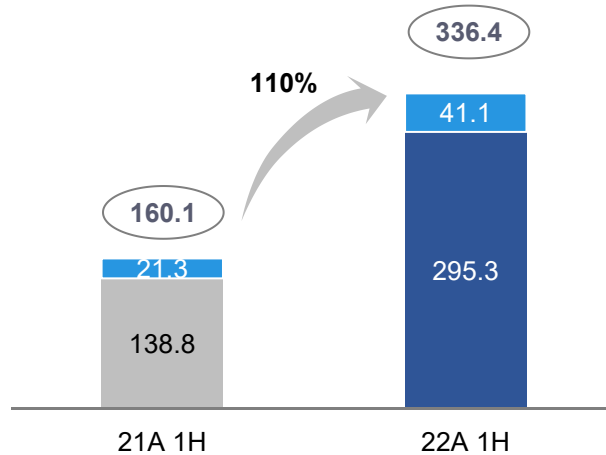
Investment on future – Operating Expenses

Invest for sustainable growth

R&D Cost

(RMB million)

■ SBP



R&D 336.4m, +176.3m / 110% YoY, on-going and new projects

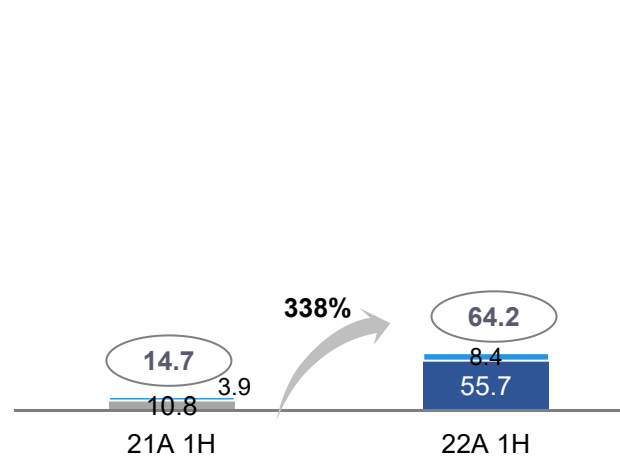
- Personnel costs +93.1m, incl. SBP +20.1m
- Consumable +43.8m

Prepare for sales ramp-up

S&M Expenses

(RMB million)

■ SBP



S&M 64.2m, +49.5m / 338% YoY

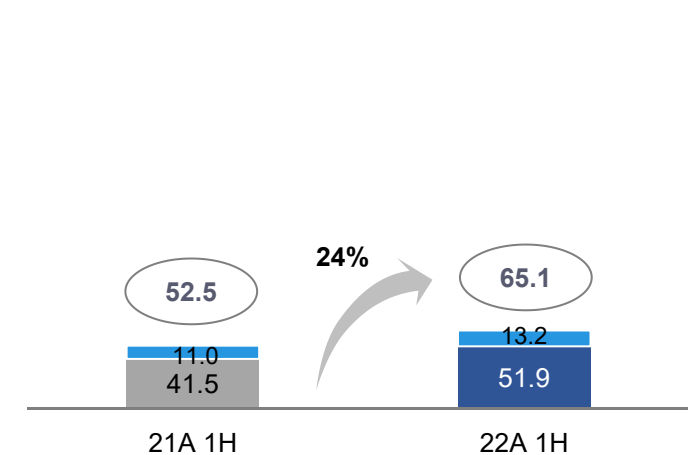
- The expansion of specialized commercial team
- Expenses for training surgeons and clinical validation

Support overall business growth

Administrative Expenses

(RMB million)

■ SBP

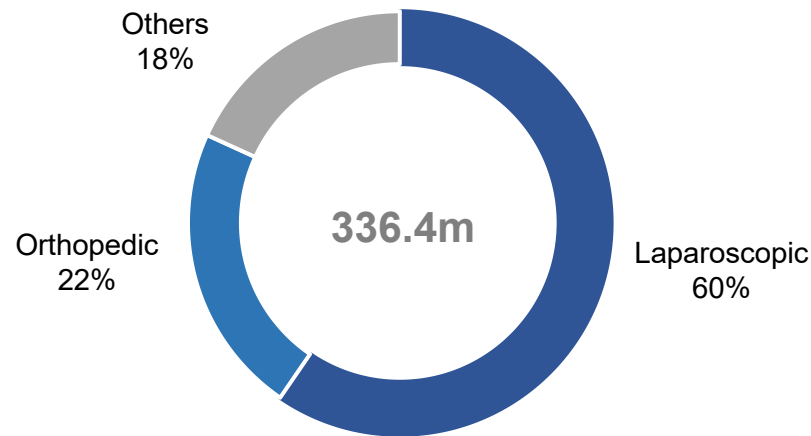


G&A 65.1m, increased by 24% YoY

- Increase of mgt & admin staff costs
- Office rental expenses

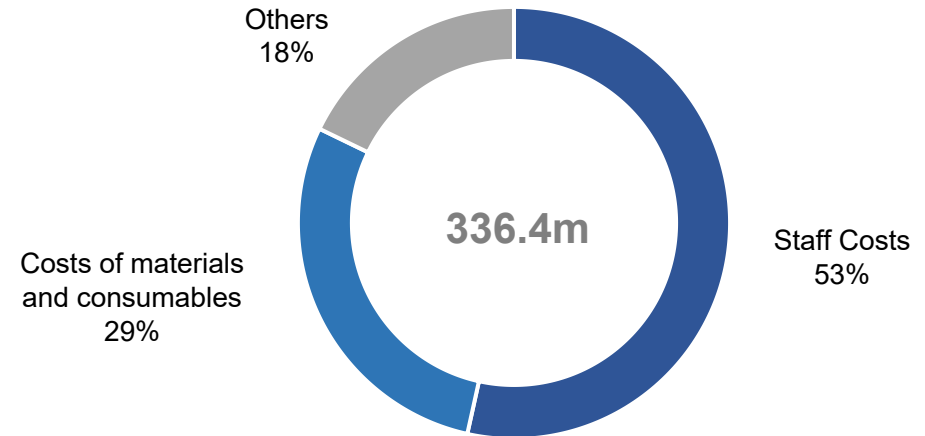
Research and Development Cost

Fund pipeline products



- **Laparoscopic:** **Toumai@1st** received NMPA approval; **Toumai@2rd** completed registration clinical trial; **Single-arm** completed research clinical trials
- **Orthopedic:** received NMPA approval and FDA clearance
- **Others:** Natural orifice and other products

Invest in foundation technologies



- Staff Costs, the largest surgical robot R&D team in China
- Cost of materials and consumables, 4 R&D centers, foundation tech platform and cutting-edge technology progression

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Financial Statement – P&L

Unit: RMB'000	22A 1H	21A 1H	Var.
Revenue	1,048	-	
Cost of sales	(357)	-	
Gross profit	691	-	
Other net income	16,290	15,758	3%
Selling and marketing expenses	(64,160)	(14,657)	338%
Administrative expenses	(65,139)	(52,471)	24%
Research and development costs	(336,411)	(160,072)	110%
Net gain/(loss) on financial instruments carried at fair value through profit or loss (FVPL)	9,525	(5,196)	-283%
Other operating costs	(616)	(14,774)	-96%
Loss from operations	(439,820)	(231,412)	90%
Finance costs	(5,558)	(705)	688%
Share of losses of equity-accounted investees	(18,123)	(10,443)	74%
Loss before taxation	(463,501)	(242,560)	91%
Income tax	-	-	
Loss for the year	(463,501)	(242,560)	91%
Attributable to:			
Equity shareholders of the Company	(459,052)	(241,965)	90%
Non-controlling interests	(4,449)	(595)	648%
Loss for the year	(463,501)	(242,560)	91%
Loss per share (RMB)			
Basic and diluted (RMB)	(0.48)	(0.27)	78%

Financial Statement – Balance Sheet

Unit: RMB'000	30 Jun 2022	31 Dec 2021	Var.
Non-current assets			
Property, plant and equipment	434,893	361,000	20%
Intangible assets	3,150	3,074	2%
Goodwill	1,482	1,482	0%
Equity-accounted investees	180,320	123,537	46%
Financial assets measured at FVPL	146,111	136,586	7%
Other non-current assets	52,402	71,979	-27%
Total Non-current assets	818,358	697,658	17%
Current assets			
Derivative financial assets	-	8,958	-100%
Inventories	193,902	109,881	76%
Trade and other receivables	42,819	24,955	72%
Pledged deposits	6,417	9,607	-33%
Cash and cash equivalents	1,476,974	1,940,825	-24%
Total Current assets	1,720,112	2,094,226	-18%
Current liabilities			
Trade and other payables	309,815	181,510	71%
Loan from related parties	20,000	-	
Lease liabilities	51,836	52,863	-2%
Provisions	96	96	0%
Contract liabilities	32	-	
Total Current liabilities	381,779	234,469	63%
Non-current liabilities			
Lease liabilities	156,111	151,813	3%
Deferred income	15,551	14,951	4%
Contract liabilities	70	102	-31%
Provisions	397	397	0%
Total Non-current liabilities	172,129	167,263	3%
NET ASSETS	1,984,562	2,390,152	-17%

Unit: RMB'000	30 Jun 2022	30 Jun 2022	Var.
CAPITAL AND RESERVES			
Share capital	958,594	958,594	0%
Reserves	1,033,169	1,434,548	-28%
Total equity attributable to equity shareholders of the Company	1,991,763	2,393,142	-17%
Non-controlling interests	(7,201)	(2,990)	141%
TOTAL EQUITY	1,984,562	2,390,152	-17%

Thanks!



微创机器人
(视频号)



微创机器人
(服务号)



Medbot Surgical
(订阅号)