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# Medical Device Industry Update

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# Medical Device Industry Update

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- This session will share some key trends and challenges within the Medical Device Industry and seek to discuss some of the potential implications for companies in the plastics industries that seek to serve medical-device customers.

# There are many facets to the medical device industry

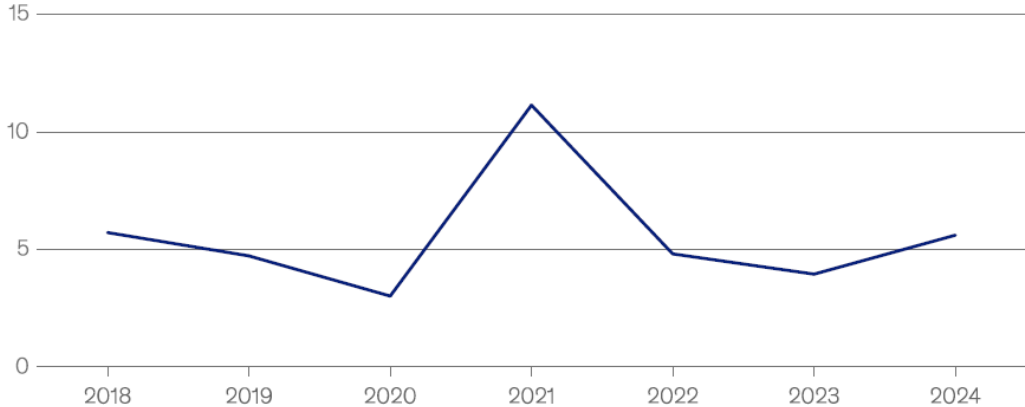
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- Types of Products
  - Implants (pacemakers, knees, hips, neuro stimulators, plates)
  - Surgical and minimally invasive interventions
  - Diagnostics
    - Imaging
    - Tissue based
    - Digital
    - Monitoring equipment
  - General consumables (syringes, catheters, etc)
- Therapeutic Areas
  - Cardiology
  - Orthopedics
  - Neurology
  - Endoscopy
  - Urology
  - Endocrinology
  - Dental
  - Vision

# Much “normality” has returned post COVID

Medtech growth rates are starting to stabilize to prepandemic levels.

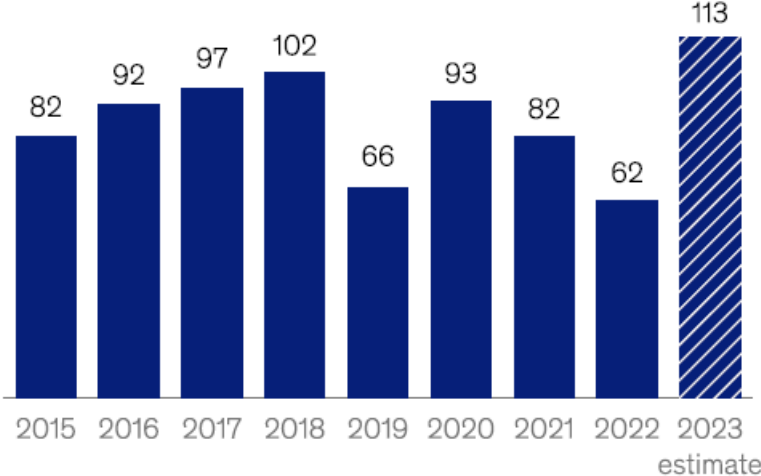
Top 20 global medtechs' organic revenue growth rate, year over year,<sup>1</sup> %



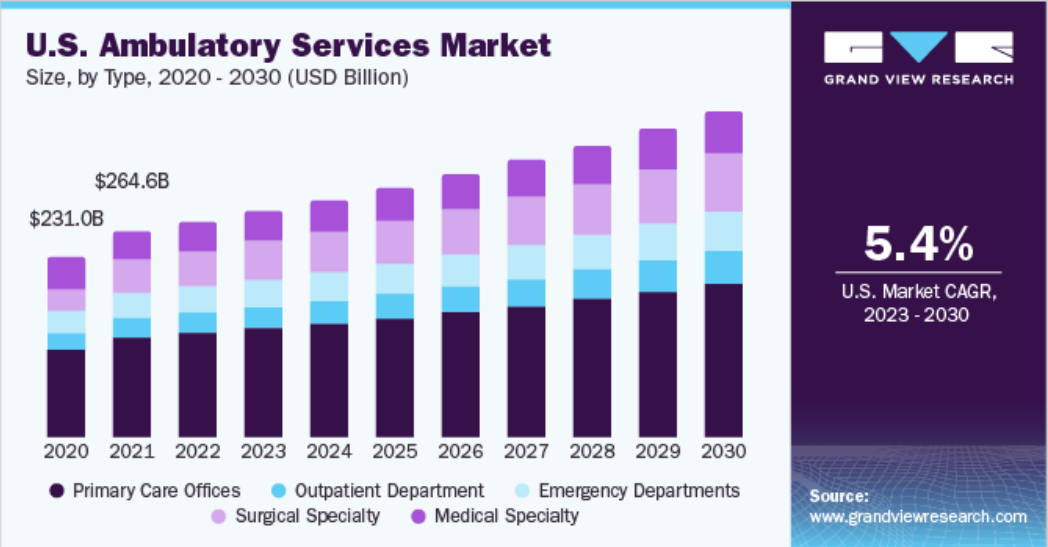
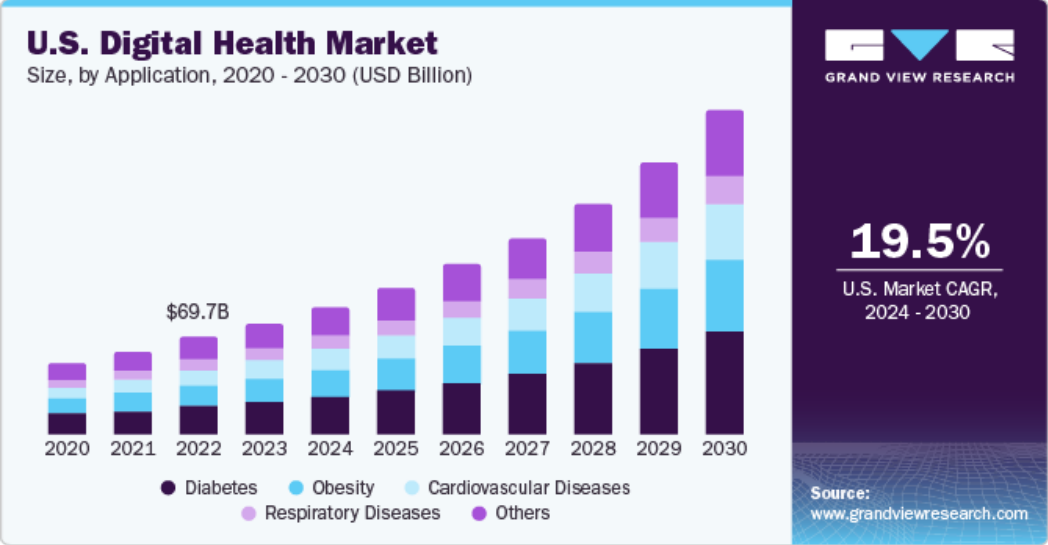
<sup>1</sup>Growth rate is based on the weighted average of revenues of the top 20 global medtechs. Top 20 is defined by the largest publicly traded medtech companies globally by market cap, as of Nov 2023; 2024 projected organic growth rate is based on S&P Capital IQ analyst consensus for revenue. Source: S&P Capital IQ, S&P Global Market Intelligence, Nov 22, 2023

Source: McKinsey & Co.

Novel FDA approvals,<sup>1</sup> number



# But it also permanently accelerated some key trends



# These with other trends to create a time of relatively high change for the industry

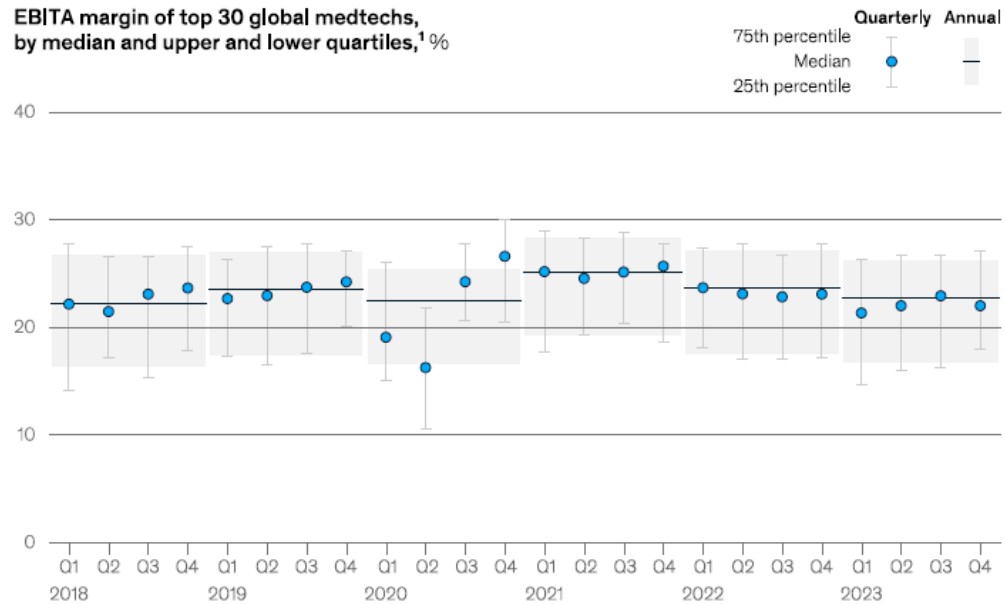
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- Digital health
- Alternative sites of care
- Health care value imperative
- Supply chain disruptions
- Cost increases
- Increasing regulatory complexity
- China market dynamics

- Profitability/margin pressures
- Digitally-driven innovation
- Rethinking regional strategies
- Sustainability strategies

# Profit Pressures

Profit margins for global medtechs have not improved since 2018 and remain lower than they were in 2021.



<sup>1</sup>Top 30 global medtechs, based on 2022 sales with data available from 2018 to the current Q4 estimate for 2023. Source: S&P Capital IQ, S&P Global Market Intelligence, Nov 15, 2023

Source: McKinsey & Co.

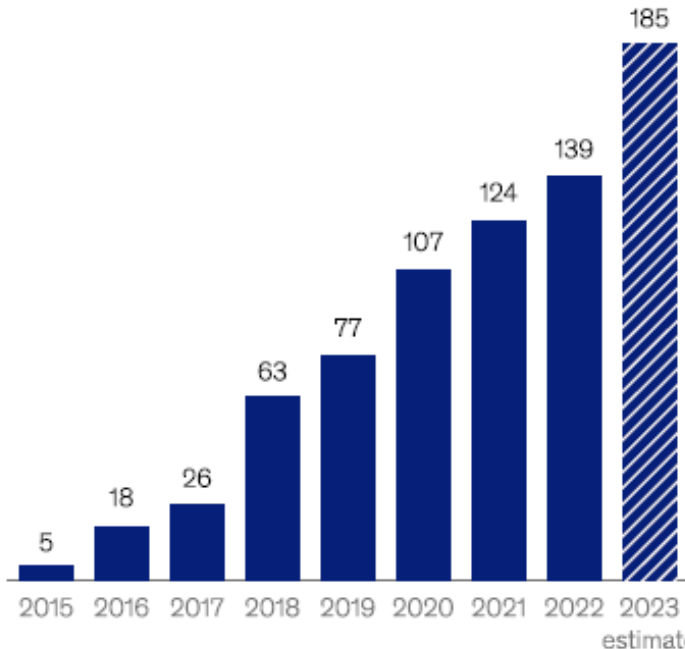
Medtech next 12 months, P/E multiples<sup>1</sup>



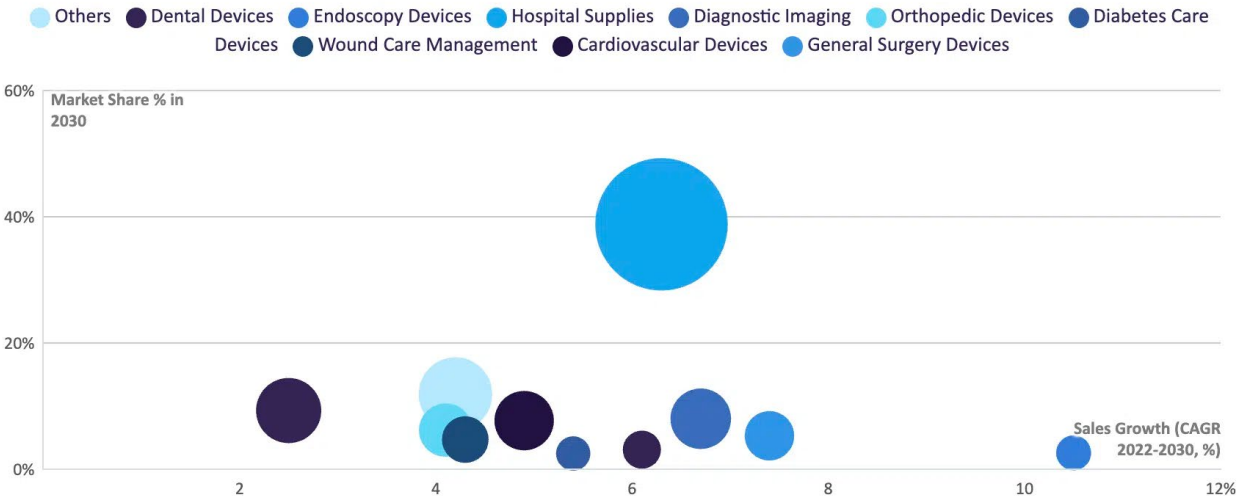
<sup>1</sup>Median top 30 medtech companies, by market cap. Source: S&P Capital IQ, S&P Global Market Intelligence, Dec 15, 2023

# Digitally-driven Innovation – Transition to MedTech

All FDA approvals, AI/ML-enabled,<sup>2</sup> number



Top 10 Market Segments in 2030 by Market Share & Sales Growth (2022 - 2030)



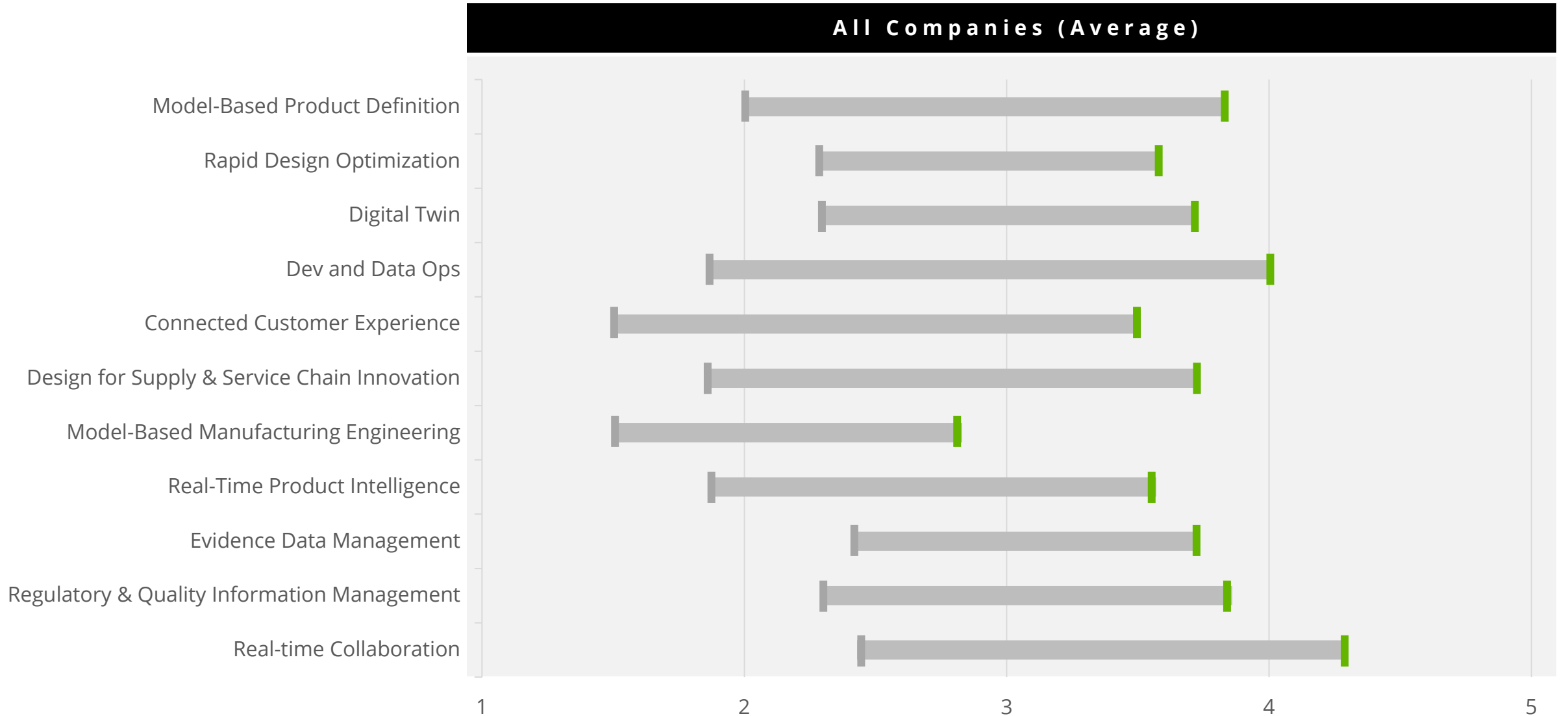
Published: July 2022 • Source: GlobalData Medical Intelligence Center



# Digital Development Capability Level of Maturity

Current Level

Target Level\*





## Evaluating China's market strategy and operations becomes crucial, amid policy changes, anti-corruption campaign and pricing pressure

### What we see in the market:

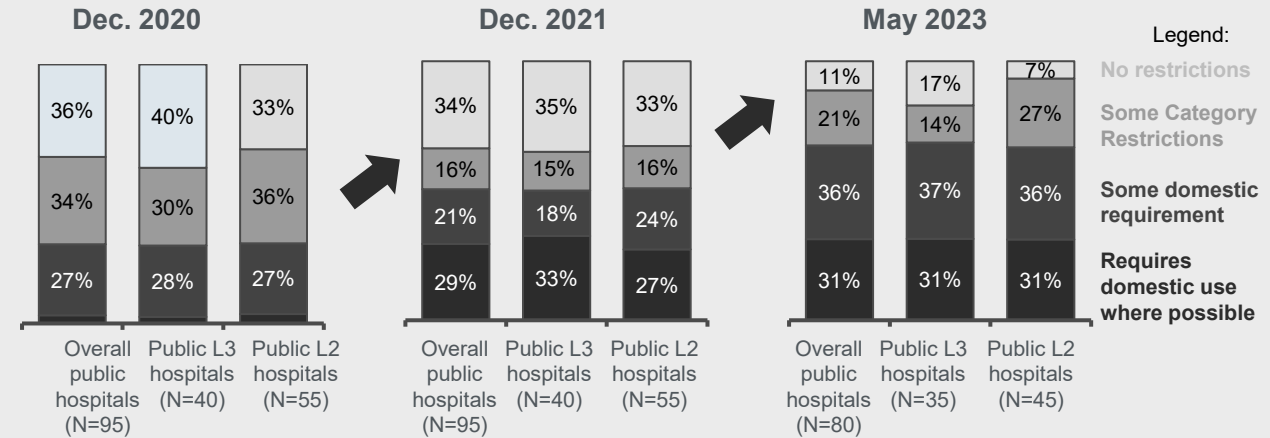
- Several headwinds challenge MedTechs in China as the Chinese government seeks to control healthcare costs and support its local industry.
- The healthcare payment reform continues - the NHTA is aiming for a full rollout of DRGs/DIP by 2025. Each province must introduce access and negotiation mechanisms for high-value devices and consumables, and reimbursement standards tailored to local budget and healthcare needs.
- The Chinese government continues to push “Buy China” policy and localization of medical devices (Made in China 2025 and Notice 551).
- VBP is targeting an increasingly broad array of medical devices to create price compression. A survey shows significant increase in expected adoption of VBP from 51% in Dec 2021 to 86% in May 2023.
- Additionally, the current anti-corruption campaign targeting the healthcare industry is pushing physicians toward lower-priced products.
- Several MedTech companies are actively taking initiatives in China which follow the government’s agenda - BD inaugurated its innovation center in Hangzhou and Fresenius expanded localized manufacturing sites in Nanchang in 2023.

Sources: 1) Industry publications 2) L.E.K Hospital Priorities Survey 3) Industry publications  
 Notes: NHTA - National Healthcare Security Administration; DRG - Diagnosis Related Group; VBP - Volume-based procurement

## Sentiment and restrictions continue to increase for ‘Buy-China’

### Restrictions on the use of imported medical device products<sup>2\*</sup> Percent of respondents

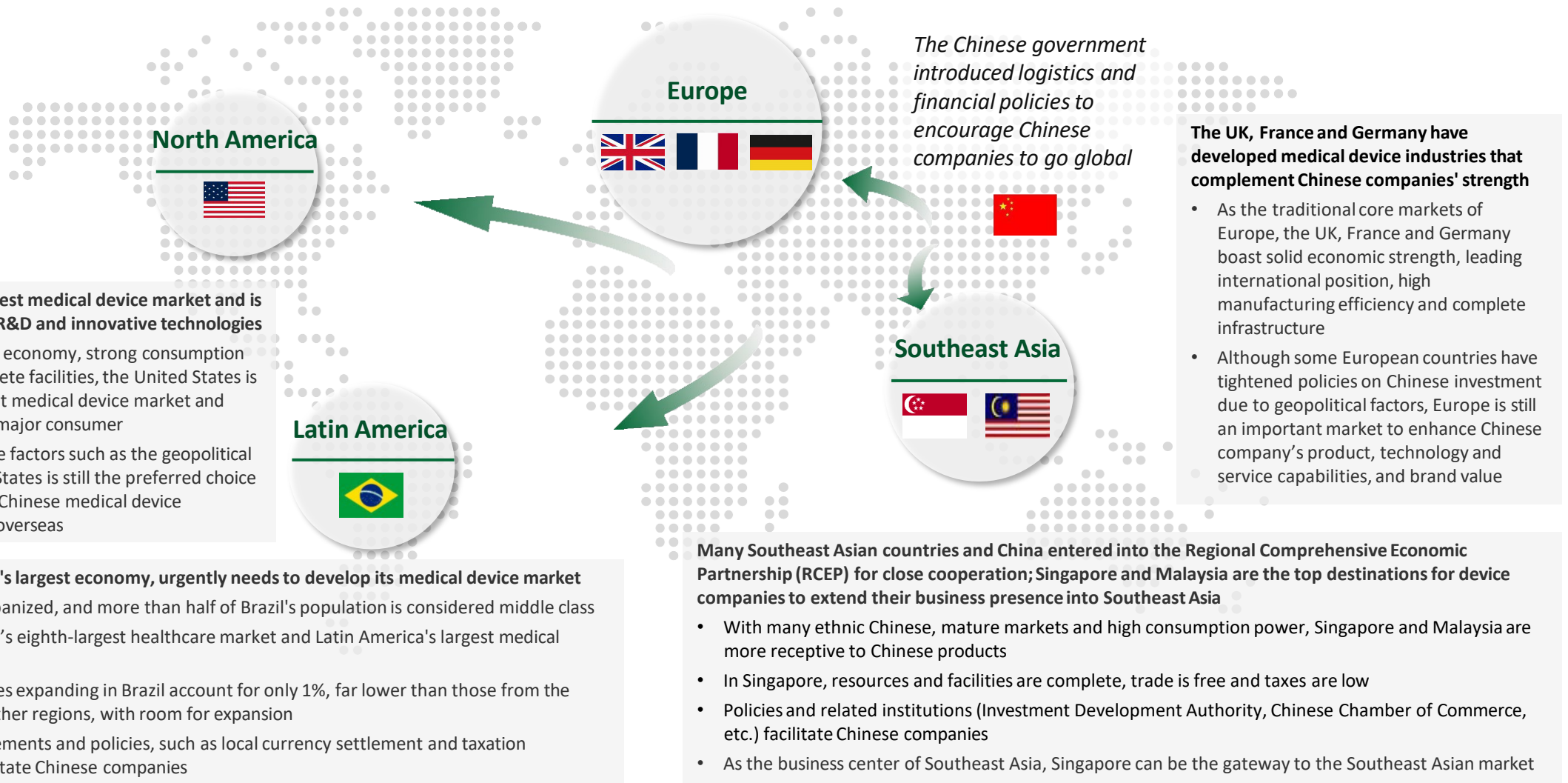
\*Q: Which of the following statements best describes your hospital’s attitude towards the use of imported MedTech/ products



### Why it matters:

- China continues to be a key market for MedTech companies and is expected to grow from \$46B in 2022 to more than \$70B by 2027.
- However, the ongoing headwinds and evolving market landscape in China require a more nuanced and careful strategy, along with monitoring of the critical developments, including anti-corruption campaign and market access reforms.
- Companies must continue to focus on innovation to show clear differentiation to remain competitive in the Chinese market and explore partnerships as they re-assess their operating and go-to-market strategies.

# At the same time, Chinese companies are being encouraged to grow globally

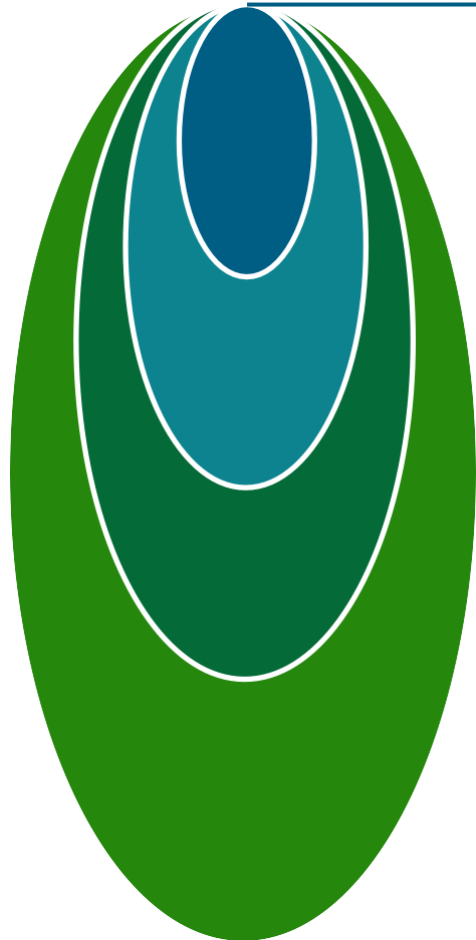


# Some common themes from sustainability benchmarking in MedTech

<u>DIMENSION</u>	<u>TAKEAWAYS</u>
Sustainability strategy & priority topics	<ul style="list-style-type: none"><li>• Generally, sustainability initiatives are prioritized in three areas:<ul style="list-style-type: none"><li>• Decarbonization, including reducing GHG emissions, increasing the use of renewables, and implementing energy efficiency measures</li><li>• Reducing waste (including material use reduction, circularity, packaging reduction)</li><li>• Reducing water use</li></ul></li></ul>
Climate risk assessment	<ul style="list-style-type: none"><li>• Most companies have either completed a TCFD-aligned climate scenario analysis or plan on completing one in the next 12-18 months</li></ul>
Principal risks & opportunities	<p>Principal common risks and opportunities identified:</p> <ul style="list-style-type: none"><li>• Acute physical risk (incl. hurricanes, flooding, extreme heat &amp; drought)</li><li>• Policy &amp; legal (transition risk)</li><li>• Resource efficiency and energy sourcing identified as principal transition opportunities</li></ul>

# Life Sciences is an important area for Chemicals of Concern

Adjacent industries should consider the need to proactively address CoCs given their prominence and potential impact to current operations based on anticipated global regulatory changes



## Pharmaceuticals & Medical Devices

- Highly-regulated with numerous CoC risks, thus greater need for proactive management
- Immediate impacts to current formulations and on market products, manufacturing processes and equipment, R&D portfolios, and third-party supplier sources
- Downstream implications to patient trust and maintaining market access (especially for medically required products)

## Specialty Products

- Similar risk exposure for products more strictly regulated, such as baby formula, cosmeceuticals, and vitamins

## Food & Beverage

- TiO2 bans already exist requiring reformulation of common foods (e.g., coffee creamers, baked goods, chewing gums, hard-shell candies, puddings, frostings, dressings, and sauces)
- PFAS bans could impact many manufacturing operations including equipment and processes, materials/ingredients used in synthesis of major products, and processes for controlling industrial waste and environmental emissions

## Consumer Goods

- Similar PFAS-related risk exposure as Food & Beverage industry
- TiO2 restrictions could be a consideration for cosmetics, feminine care, oral care, and personal care products

NNO



# MedTech leaders spend their R&D \$ more effectively to drive growth

## % of R&D Budget Allocation

	Top Performers on Revenue from New Products **	Average of Other Companies
Front End Innovation Research (technology and market understanding)	14%	8%
Product Development	75%	66%
Sustaining Engineering	11%	26%

**\*\*Revenue from New Products (based on products introduced in the prior 3 years)**  
 -Top Performers: 26%  
 -Average of Others: 6%-8%

**Average Sustaining Spend By Product Type Category**  
 -High Volume Disposables: 28%  
 -Mechanical Implantable and Reusables: 20%  
 -Integrated Electronics: 17%

**\*Source: Deloitte & AdvaMed 2022 Medtech Innovation and Product Development Benchmarking Study**

# To respond to these shifts, Medical Device companies and their suppliers need to start thinking *Exponential Innovation*



## DEVELOP DIGITAL PRODUCTS AND SERVICES

- Products and Services that are ready to compete in a **data-driven, connected and patient centric** health care system
- Shifting from selling improved features to **leading through evidence-driven-demonstration of outcomes**
- Integrated data-generating technologies and analytics that create **closed-loop real-world feedback** on market satisfaction and offering improvement opportunities



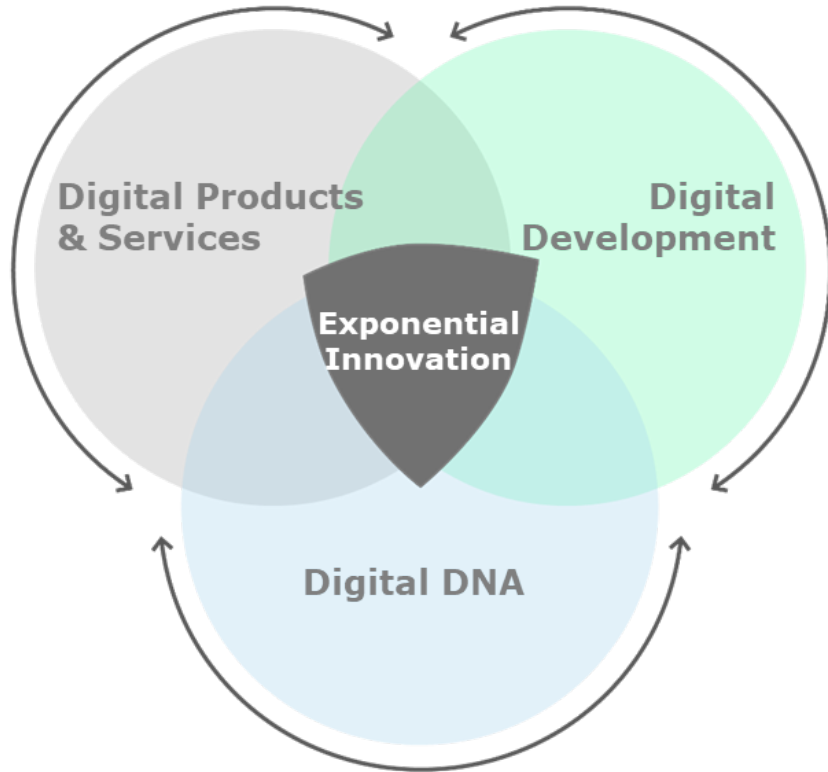
## DEVELOP PRODUCTS DIGITALLY

- **Hyper speed and scalability** through integrated **simulation, digital twins and additive manufacturing** capabilities
- **Faster time to revenue** through accelerated evidence generation using **seamless data integration and AI**
- **Hyper efficient** quality and compliance management through process automation



## DIGITAL DNA

- **Agile ways of working** and support systems that move and adapt at the **pace of digital change**
- **Intelligent augmentation and experiential learning** systems that optimize **high-skilled workforces**
- **Mission-focused, real-time collaboration** across internal capabilities and with ecosystem partners

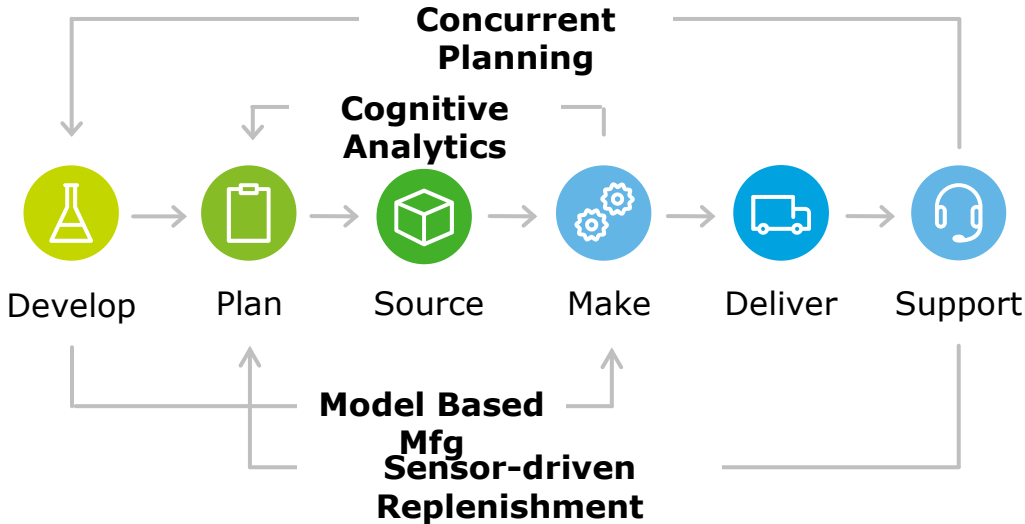


# The same is true about thinking about supply chains

Supply chains are not linear; to respond to demand signals and distributions in real-time organizations need to transition from Traditional Supply Chains to Digital Supply Networks

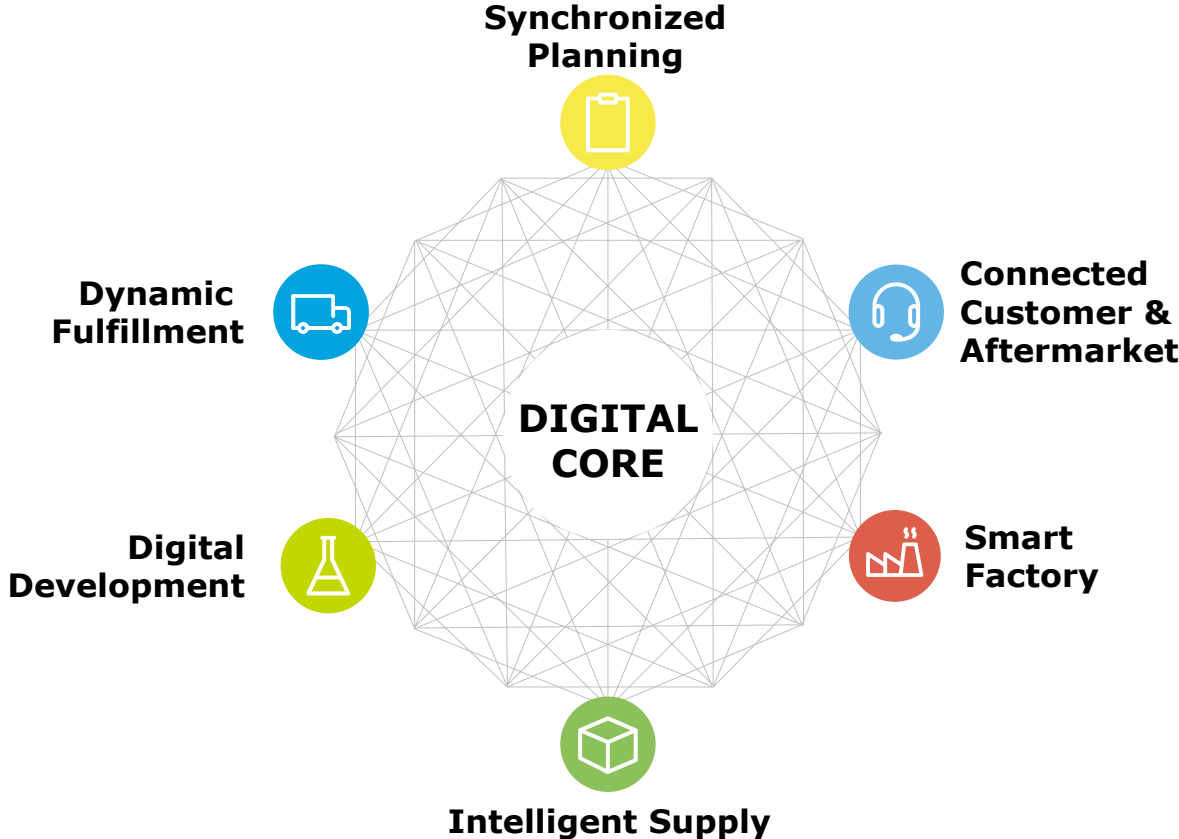
## TRADITIONAL SUPPLY CHAINS

Linear & sequential flow of product & information where each step is dependent on the preceding step



## DIGITAL SUPPLY NETWORKS

Real-time visibility into each node of the supply chain network powered by an interconnected flow of information







## **Douglas Billing**

Managing Director,

MedTech Innovation and Product Development

Doug leads the MedTech Innovation and Product Development (I&PD) practice within Deloitte. He has over 30 years of experience in Medical Device innovation strategy, product & solution development, operational scale-up and merger integration. He has successfully worked in and with multinational corporations and technology startups to help them successfully conceive, create and commercialize market leading products and solutions. Doug has led leading MedTech clients through global transformations and scale-up of I&P capability across all functions (R&D, Digital Development, Quality, Clinical, Marketing, Regulatory, Manufacturing, Supply Chain and Procurement) resulting in faster and more sustainable realization of growth and profitability objectives. These programs have included integration of leading edge I&PD operating model practices such as digital engineering, agile, design thinking and innovation networks.