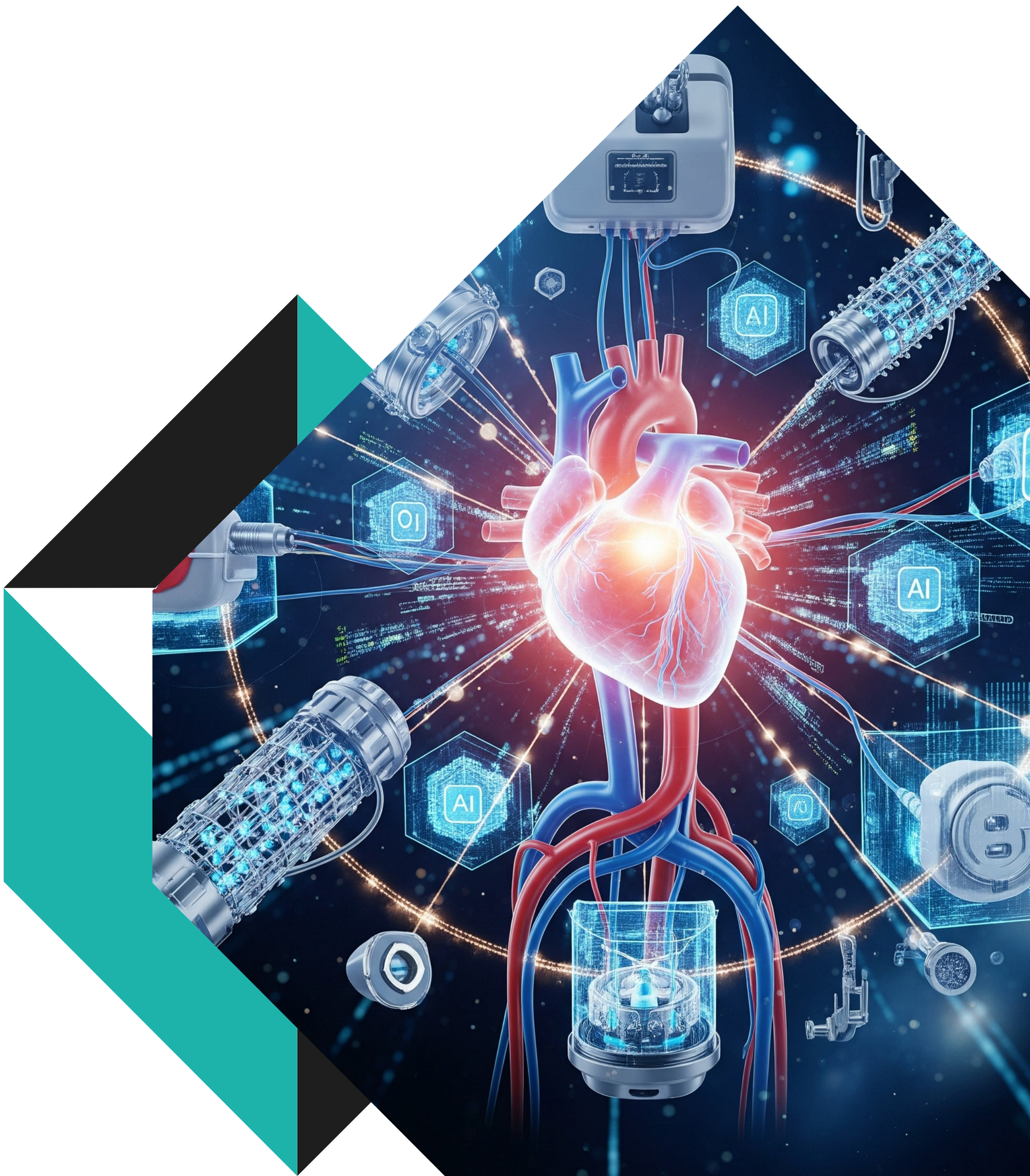
Stellarix

eBook

CardioCollab: Winning Co-Innovation Models in Cardiovascular MedTech



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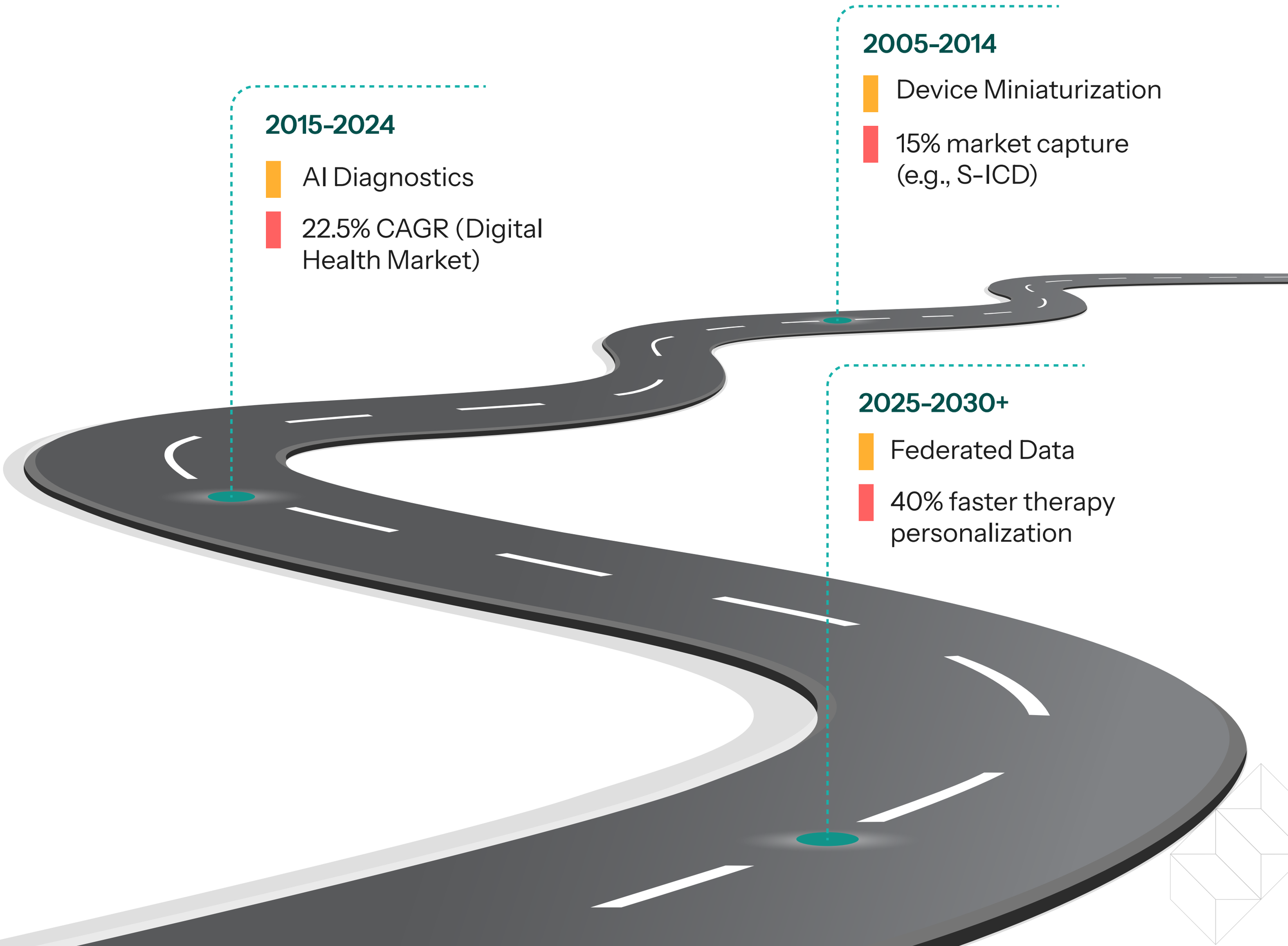
Revolutionizing Cardiac Care With Strategic Partnerships

The cardiovascular MedTech sector is experiencing a seismic shift. The approaches are shifting from device-centricity to fully integrated platforms involving real-time data, remote monitoring capabilities, and AI-driven insights. The collaborative ecosystems resulting from this shift span payers, device manufacturers, providers, and AI developers who are collectively working to simplify respective complexities. This ebook explores three disruptive economic models and partnership frameworks that are making them viable by enhancing precision, efficiency, and value-based care.

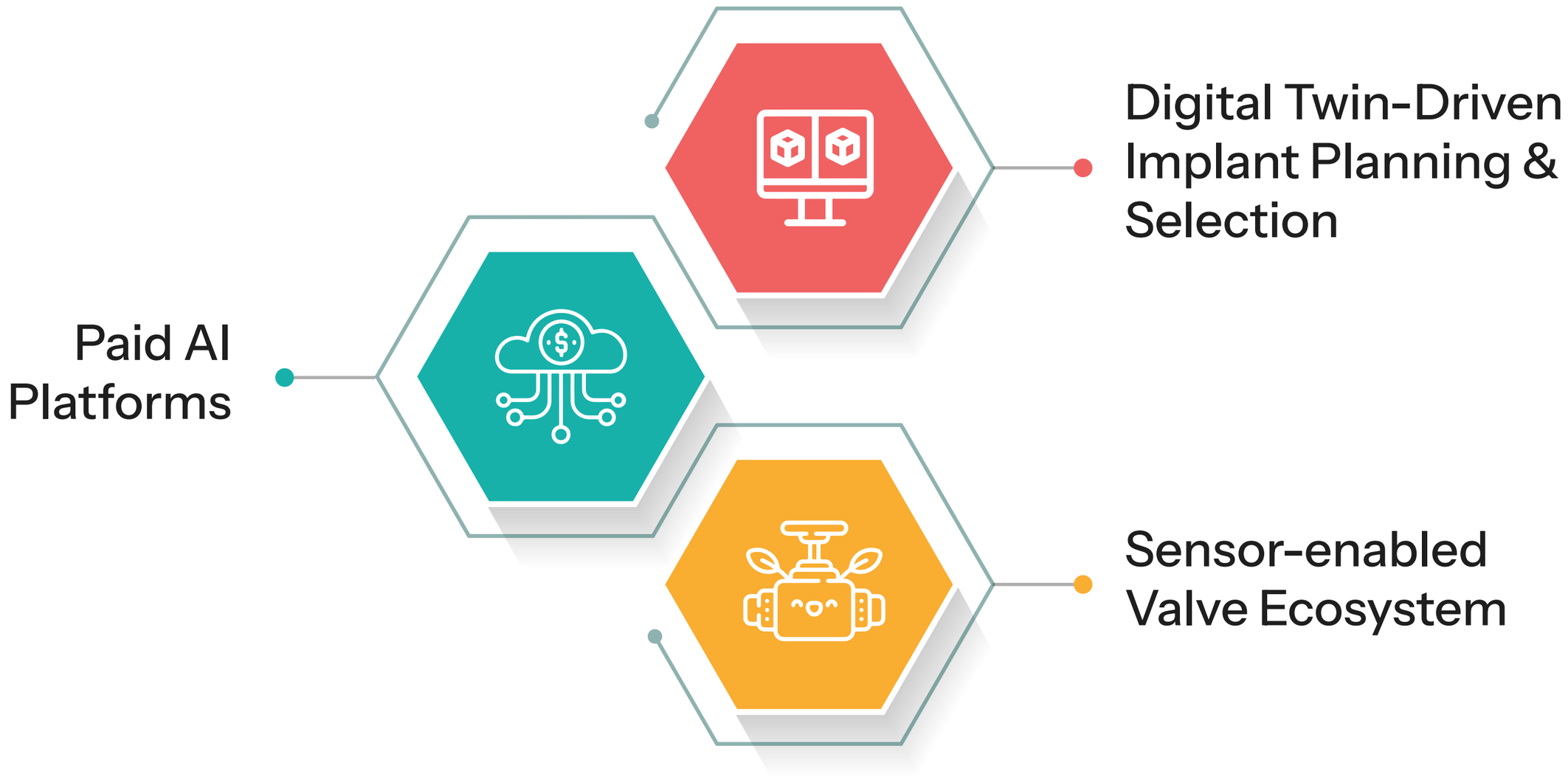
Cardiovascular Tech Evolution:
From Market Capture to Rapid Personalization

Innovation Driver

Outcome Metric



Top 3 Co-Innovation Economic Models



1 Paid AI Platforms

Concept:

Paid AI platforms for real-time imaging analysis during cardiovascular procedures

Applications:

- Realtime monitoring of stenosis stress in arteries
- Robotic surgery guidance & proctoring
- Cloud enabled Digital Twin based surgical planning & post surgery complications prevention platform

Key Partners:

Hospitals, Robotic surgery providers, imaging AI developers, Proctoring service providers, Surgery IT orchestrators, Ethical guides

Revenue Model:

Subscription licensing, or per-use fees

2 Digital Twin-Driven Implant Planning & Selection

Concept:

Patient-specific “digital twins” simulate device or valve compatibility

Applications:

- Predicting optimal valve type or size
- Virtual stress-evaluation of an implant under physiological conditions

Key Partners:

Valve manufacturers and computational modeling companies

Stage:

Juvenile phase, clinical validation ongoing.

3 Sensor-enabled Valve Ecosystem

Concept:

Implants with embedded sensors monitor valve performance and monitor patient health

Applications:

- Real-time detection of thrombosis
- Automated EHR/EMR data entry for dynamic insurance pricing

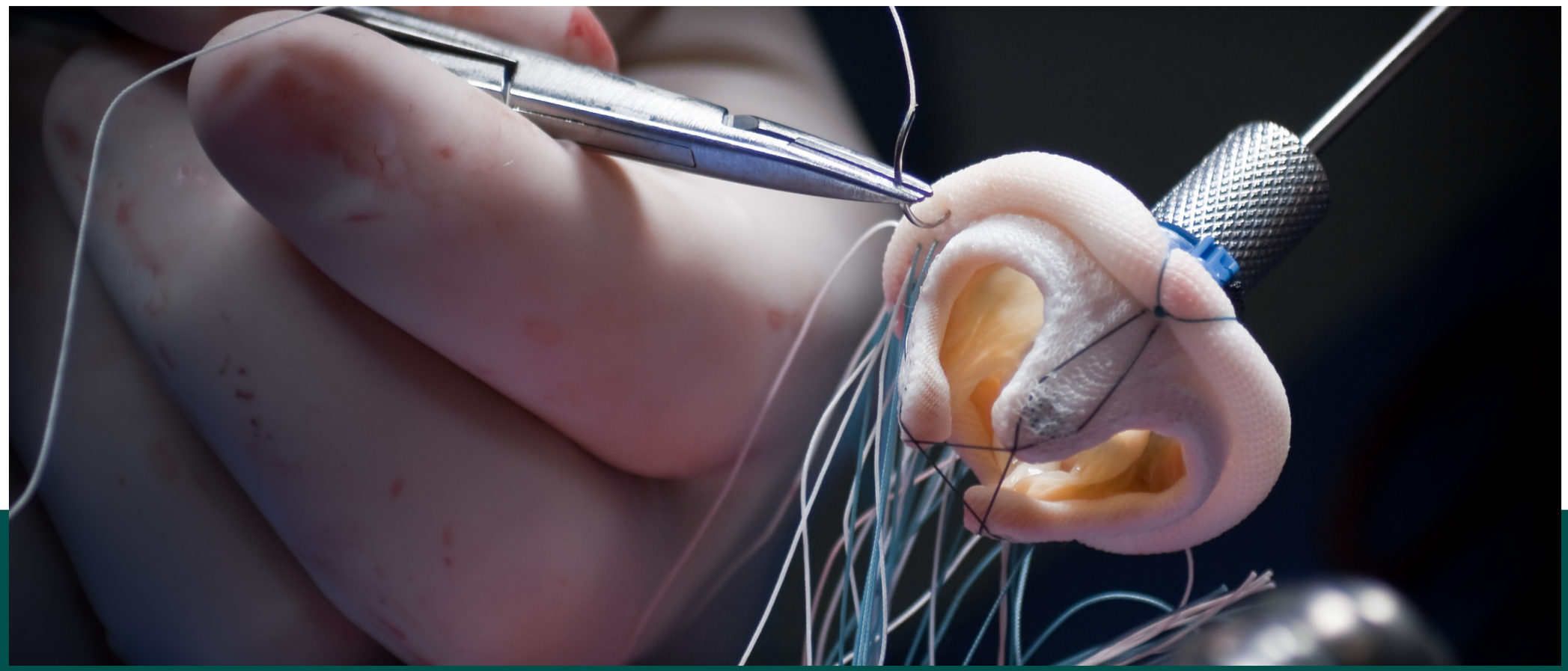
Key Partners:

EHR providers, sensor tech firms, and insurers

Revenue Model:

Early to mid-stage of commercialization

Case Studies



A. Capstan Medical's Robotic TMVR Platform

Overview:

First-in-human robotic transcatheter mitral valve replacements (February 2025) using a novel integrated system (valve, catheter, robotic controller)

Co-Innovation Model:

- **Clinical Collaboration:**

  Partnered with Hospital Clínico Universidad Católica (Chile) for procedure expertise and patient access. Dr. Gonzalo Martinez led the cases, with Dr. Santiago Garcia providing support.

- **Investor Engagement:**

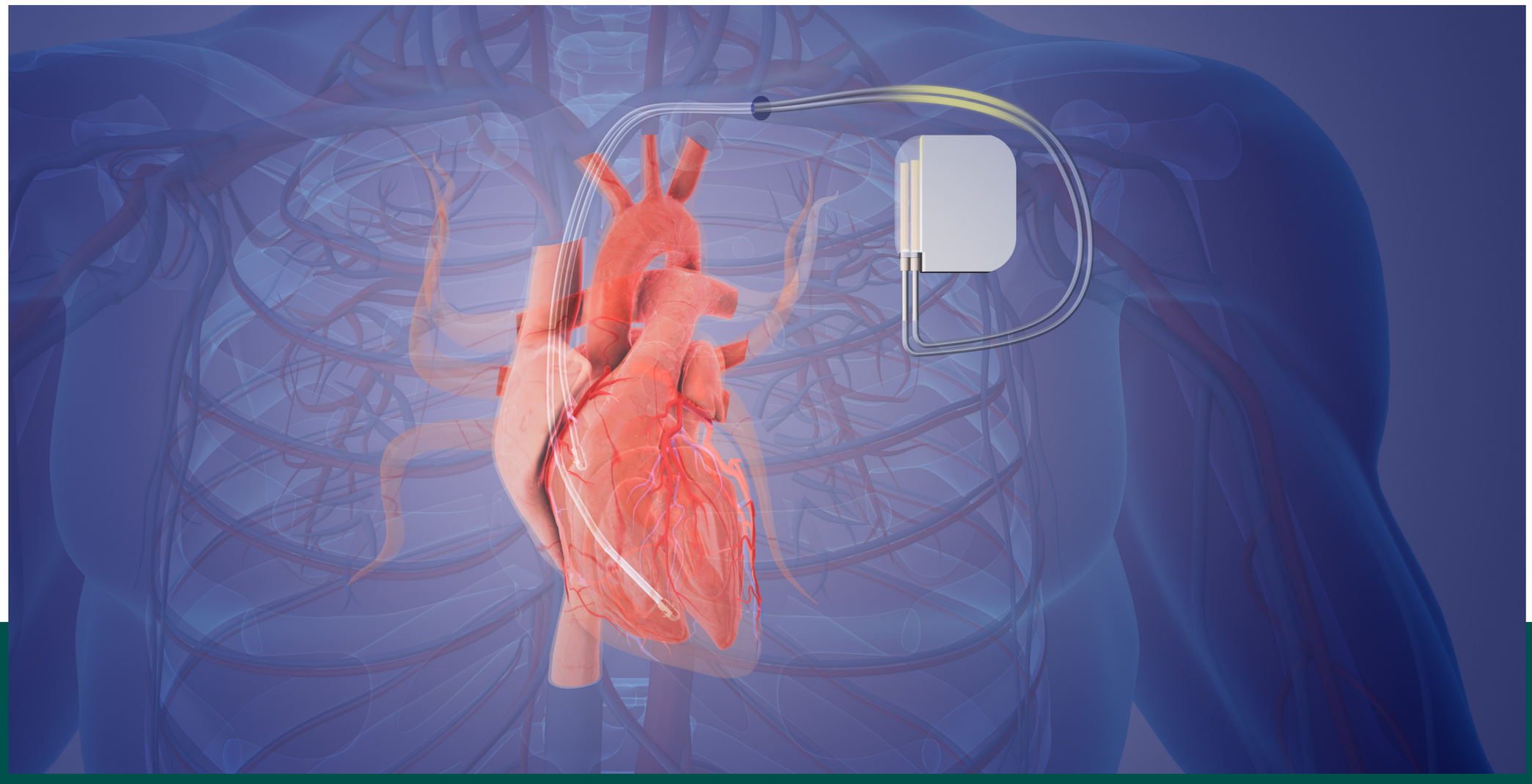
  Secured $110M Series C funding (Dec 2024) to accelerate pivotal trials targeting FDA submission by 2028.

- **Design Optimization:**

  Clinical feedback refined catheter stability and valve positioning, enabling 100% mitral regurgitation elimination in initial cases.

Impact:

- Procedural Efficiency: 90–120 min surgery time, no LVOT obstruction, patients discharged within days.
- Clinical Outcomes: 100% technical success in 2 patients; expanded eligibility for high-risk patients (80% excluded by current options).



B. Cameron Health & Boston Scientific's S-ICD System

Overview:

Development of the world's first subcutaneous ICD (no leads in heart/vessels), acquired by Boston Scientific in 2012.

Co-Innovation Model:

- **Early Clinical Trials:**

  Collaborated with EU hospitals (CE Mark 2009) and U.S. sites (IDE study: 330 patients).

- **Staged Acquisition:**

  Boston Scientific's $1.35B milestone-driven deal: $150M upfront + $150M on FDA approval (achieved 2013) + $1.05B revenue-based payouts.

- **Commercial Scaling:**

  Leveraged Boston Scientific's global sales network; post-acquisition, S-ICD implants grew to >1,300 devices worldwide by 2012.

Impact:

- **Safety:**

  45% faster arrhythmia intervention vs. transvenous ICDs; eliminated lead-related infections.

- **Market Expansion:**

  Captured 15% of the ICD market by 2015; established a new therapy class for sudden cardiac arrest.

Four Tested Partnership Frameworks

1 Risk-Sharing Consortium

- **Structure:**
  Device makers and payers (e.g., Cigna) share the costs/ROI of new technologies (e.g., sensor valves).
- **Use Case:**
  Payers cover valve costs if readmissions drop ≥20%.

2 Integrated Platform Licensing

- **Structure:**
  MedTech firm licenses AI tools (e.g., imaging analytics) to hospitals for per-procedure fees.
- **Use Case:**
  Hospital pays $200/TAVR case for AI-guided valve placement.

3 Data Exchange Alliance

- **Structure:**
  Standardized API frameworks between EHRs (Epic), sensor valves, and ER networks.
- **Use Case:**
  Valve sensor alerts ER if patient's cardiac pressure crosses threshold.

4 Co-Development Joint Venture (JV)

- **Structure:**
  Competitors pool R&D (e.g., Edwards + Abbott in digital twin modeling).
- **Use Case:**
  Shared IP in predictive valve sizing algorithms.

Our Life Sciences & MedTech Leaders



Arpit Sharma

Business Leader – Medical Devices & Diagnostics

Arpit Sharma brings over 16 years of experience across academia, market research, and strategic advisory within the medical devices and diagnostics sector. He has partnered closely with leaders in Strategy, Marketing, R&D, and Innovation across global MedTech companies and high-growth startups, advising them on business growth strategies, market entry planning, innovation roadmaps, and new technology development.

Over the course of his career, Arpit has authored and delivered more than 400 high-impact reports and executive presentations. As a thought leader, he has written extensively on emerging trends, innovation pathways, and future scenarios shaping the medical device industry.



Sandhya Saraswat

Manager – Medical Devices & Diagnostics

Sandhya Saraswat is a skilled advisor with over 11 years of experience in the Life Sciences and MedTech industries. She brings deep expertise across medical devices, diagnostics, biotechnology, and digital health, with a strong focus on emerging technologies such as surgical robotics, cardiovascular technologies, AI/ML integration in medtech, and smart wearables.

Her core capabilities include technology consulting, IP analytics, competitive intelligence, startup scouting, strategic foresight, and portfolio optimization. Sandhya has supported global clients in shaping strategic technology roadmaps, identifying innovation white spaces, & assessing opportunities across high-impact healthcare domains.

About Stellarix

Stellarix is an innovation and strategy consulting company focused on techno-commercial consulting services across industries and hierarchies. Stellarix offers consulting services to make businesses future-ready and improve goals, strategies with innovative solutions. With a strong technology background and business acumen, we caters to clients' needs through research-backed insights and profound experience.

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