

From Idea to Asset: The MedTech IP Pathway



Understanding Intellectual Property in Medical Device Innovation

Agenda:

- 1. The Importance of Intellectual Property**
- 2. The IP Journey in Medical Device R&D**
- 3. IP Management and Enforcement**
- 4. Benefits of IP for Medical Device Companies**
- 5. Examples of how IP Impacts Revenue and Share Growth**



1. The Importance of Intellectual Property





Definition and Significance

1. Understanding Intellectual Property

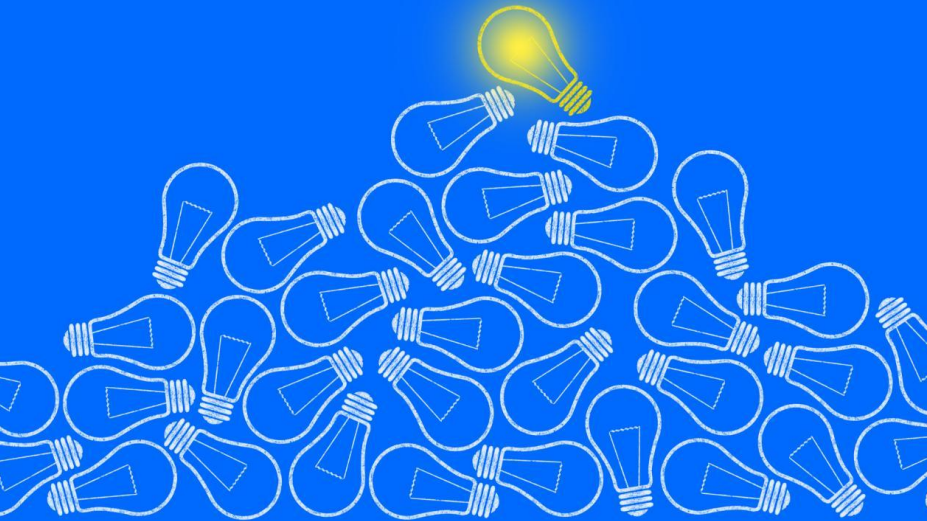
Intellectual Property includes creations of the mind like inventions, designs, and artistic works that receive legal protection.

2. Importance for Medical Device Companies

For medical device companies, IP is vital for protecting innovations and ensuring a competitive edge in the market.

3. Fostering Market Growth

IP supports market growth by safeguarding innovations and encouraging the development of new technologies.



2. The IP Journey in Medical Device R&D



Ideation and Conceptualization



1. Beginning the IP Journey

The journey of intellectual property starts with a novel idea that can lead to innovative solutions.

2. Biomedical Engineering Concepts

Engineers conceptualize transformative medical devices, such as stents, AI and Imaging.

3. Comprehensive Documentation

Documenting ideas with sketches, notes, and preliminary research is essential during ideation.

Research and Development



1. Invention Disclosure

Implement a formal process where engineers document every “unique” moment. This creates a paper trail for ownership.

2. Freedom to Operate (FTO) Search

Before spending millions on a prototype, perform an FTO analysis to ensure you aren't infringing on existing patents. It's better to pivot now than to get sued later.

3. Provisional Patents

File early and often. In a "first-to-file" world, securing a priority date is critical while you refine the device's technical specs

Manufacturing: The "How-To" Shield



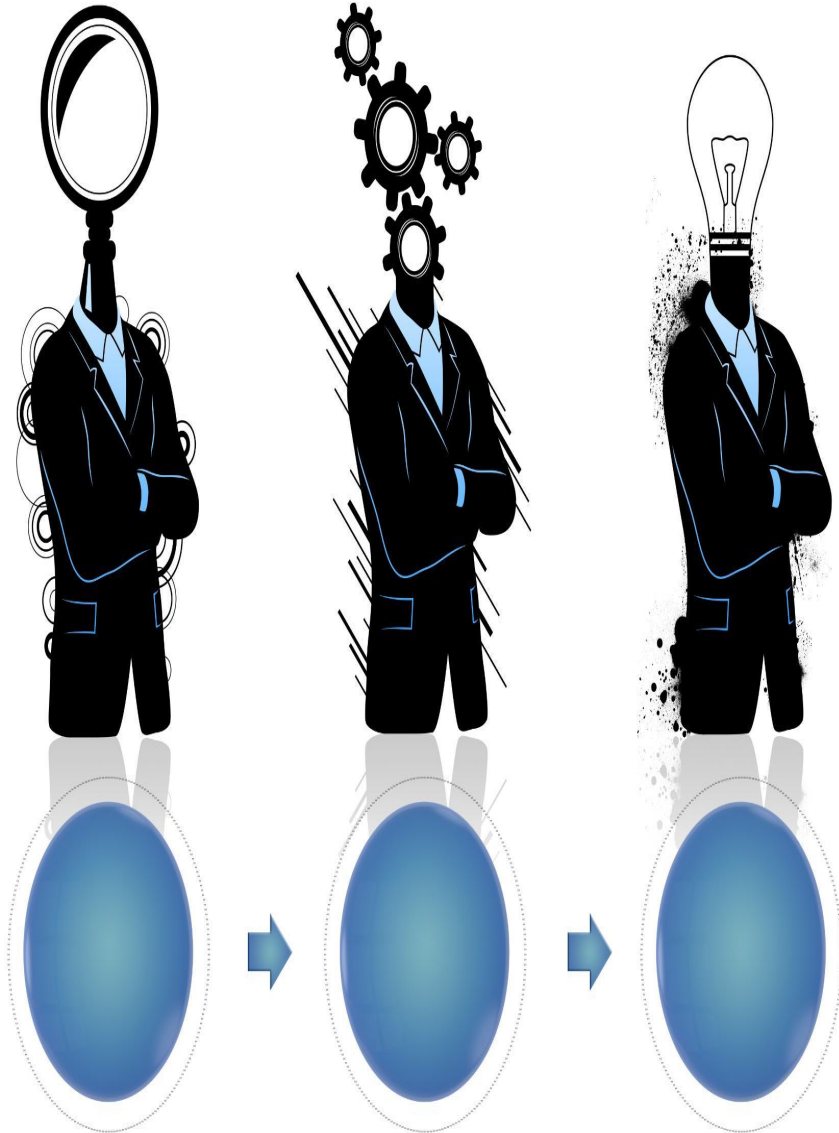
1. Manufacturing Process Patents

Protect the specific way the device is made (e.g., a unique 3D printing technique or Surface Treatments)

2. Contractual Protections (NNNs)

Use **Non-Use, Non-Disclosure, and Non-Circumvention** contracts with third-party vendors to prevent them from becoming your future competitors

Sales & Marketing: Brand and Market Share



1. Trademarks

Brand name, logo, and even the device's specific "look and feel" (Trade Dress) of the device become your most valuable assets.

2. Public Disclosure Risks

Review brochures to ensure they don't leak "unclaimed" technical secrets.

3. Monitoring & Enforcement

The sales team is frontline intelligence. First to see "knock-offs" at trade shows or in hospitals. Establish a pipeline for them to report suspected infringements to legal.

Patent Application Process



1. Initial Filing and Examination

The initial filing involves submitting the patent application to comply with the formal requirements. This is the first step in safeguarding an invention.

2. Substantive Examination

Substantive examination scrutinizes the application for novelty, inventive step, and industrial applicability before moving forward.

3. Publication of Application

Publication allows the public to view the invention's details, inviting potential objections or challenges.

4. Final Review and Grant

The final review involves granting the patent once all criteria are met, securing exclusive rights for the inventor.

Patent application stages

Stage	Europe (EPO)	United States (USPTO)	Japan (JPO)
A1	Publication of the application 18 months after priority, including search report if available.	Application published 18 months after priority date.	Unexamined application published (Kokai) 18 months after filing or priority.
A2	Issued if the search report is not ready at A1 publication.	Not applicable.	Not applicable.
A3	Search report published separately if not included in A1.	Not applicable.	Not applicable.
B1	Patent granted and published after successful examination.	Granted patent when there was no prior A1 publication.	Granted and examined patent, first publication after grant.
B2	Granted patent republished with amendments or corrections.	Granted patent when there was prior A1 publication.	Granted patent republished with corrections or amendments

4. Benefits of IP for Medical Device Companies





Competitive Advantage



1. Intellectual Property Protection

IP protection prevents competitors from copying innovative products, safeguarding a company's unique offerings in the market.

2. Market Dominance

Exclusivity through IP allows companies to establish market dominance, creating a competitive landscape favorable to them.

3. Premium Pricing Strategy

With a competitive advantage, companies can charge premium prices for their exclusive products, maximizing profitability.

Revenue Generation



1. Licensing Intellectual Property

Licensing IP allows companies to generate additional revenue streams without manufacturing products themselves, enhancing profitability.

2. Revenue Streams from Licensing

Companies can generate lucrative income streams by licensing their technologies to third-party manufacturers, thereby increasing their revenue potential.

Attracting Investment



1. Importance of IP Assets

Secured IP assets are crucial in attracting investors as they indicate a company's dedication to innovation and growth.

2. Funding Opportunities

Start-ups with strong IP portfolios tend to attract more funding opportunities, leading to greater business growth.

3. Partnerships and Collaborations

Companies with robust IP portfolios often secure valuable partnerships that enhance their market positioning

5. IP Portfolio Impacts Revenue and Share Growth



Revenue Protection Through Market Exclusivity

Strong patents deter competitors, enabling companies to maintain premium pricing and market share.

Intuitive Surgical (da Vinci)

- **Over 3,000 patents** globally protect the core robotic surgical technology.
- **Revenue growth:** From ~\$2.2B in 2012 to over **\$7.1B in 2023**.
- **Stock performance:** Share price increased from ~\$18 in 2012 to **\$350+ in 2023**, largely driven by IP-backed dominance in robotic surgery.



Licensing and Royalty Income

A robust IP portfolio allows companies to generate **non-operating revenue streams** through licensing.

Boston Scientific

- Generated **over \$500 million** in 2015–2020 from patent litigation settlements and license agreements.
- Acquired companies like **BTG** and **Neuromod** partly due to their patent strength, expanding revenue channels





Enhanced Valuation and M&A Leverage

IP is often a key driver in **valuation during acquisitions**, especially for early-stage medtech firms

Auris Health (acquired by J&J)

- Acquired for **\$3.4 billion** in 2019.
- Auris held more than **150 patents** related to robotic endoscopy.
- The **major valuation multiplier was its IP**, not commercial revenue



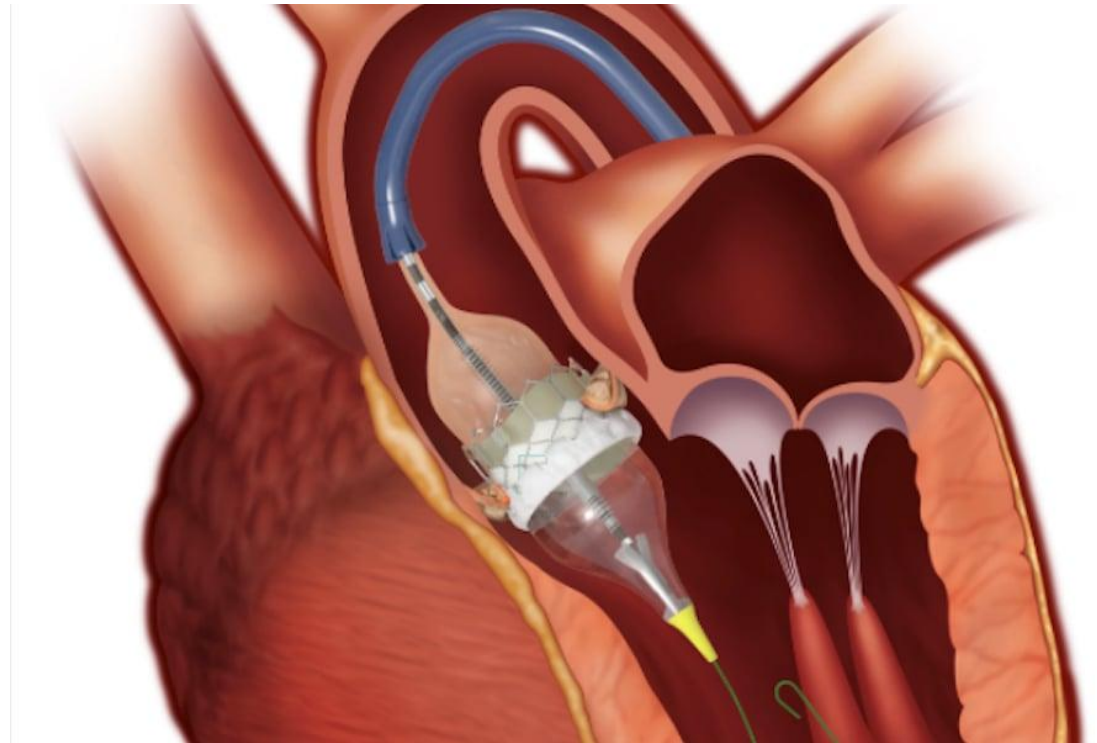


Competitive Differentiation Fuels Market Share

Owning protected innovations helps sustain first-mover advantage and fend off fast followers

Edwards Lifesciences

- Holds key patents in **TAVR** (Transcatheter Aortic Valve Replacement).
- Revenue from TAVR segment: **\$3.5B in 2023**, comprising ~60% of total revenue.
- Successfully **defended IP in lawsuits against competitors** (e.g., Medtronic), protecting share.





Investor Confidence and Capital Access

IP portfolios **improve investor perception**, reducing perceived risk and increasing access to funding.

Shockwave Medical - (acquired by J&J)

- Acquired for **\$13.1 billion** in 2024.
- Portfolio of **over 100 patents** in intravascular lithotripsy.
- Revenue grew from **\$67M in 2019** to **\$730M in 2023**
- Investors: **BlackRock, Vanguard Group, etc'**

