AI-Driven Innovation in Medical Technology – Licensing, Valuation, and Monetization

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Overview

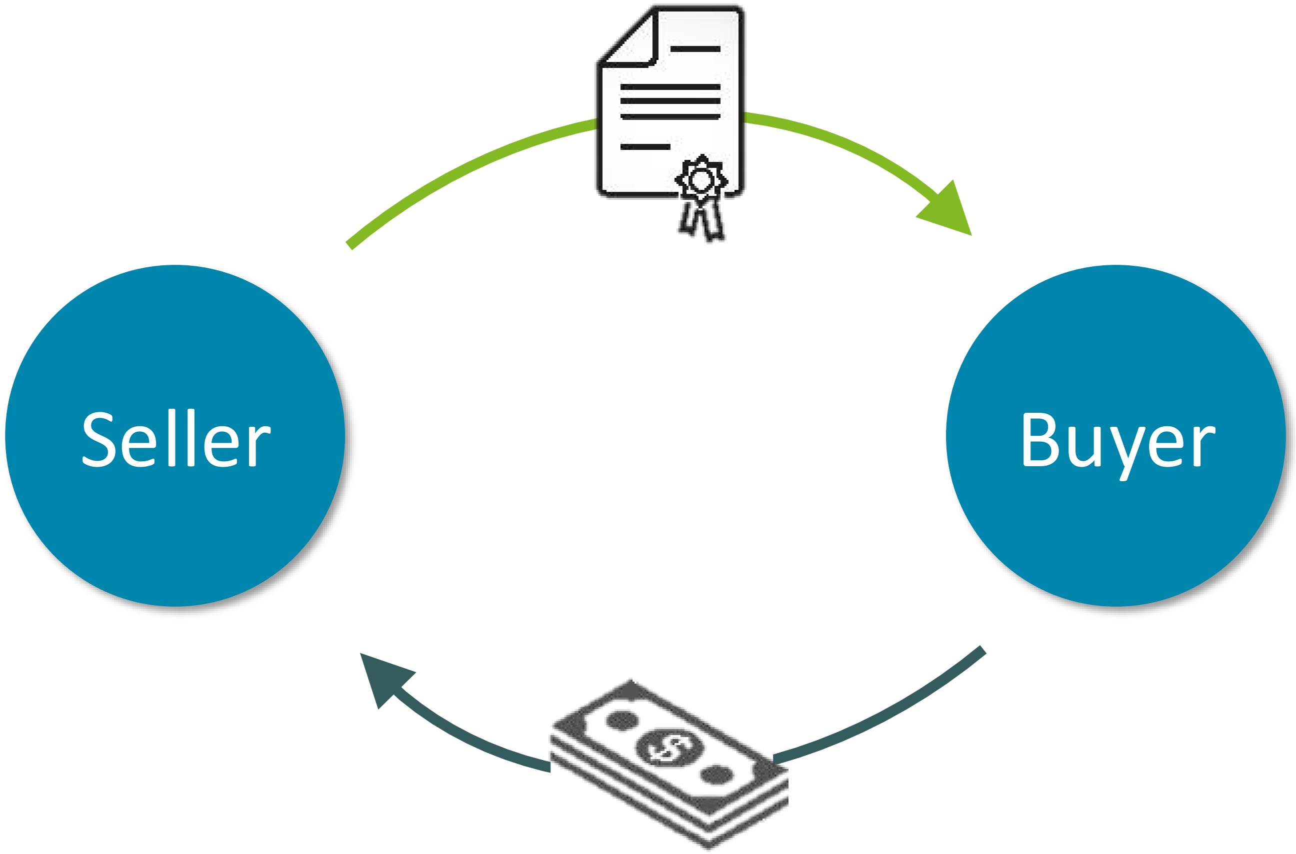
AI impact in the market for patents

AI impact on patent strategy

- Identifying infringed patents
- Finding focused claim sets
- The Holy Grail…

Part I: AI and the Market

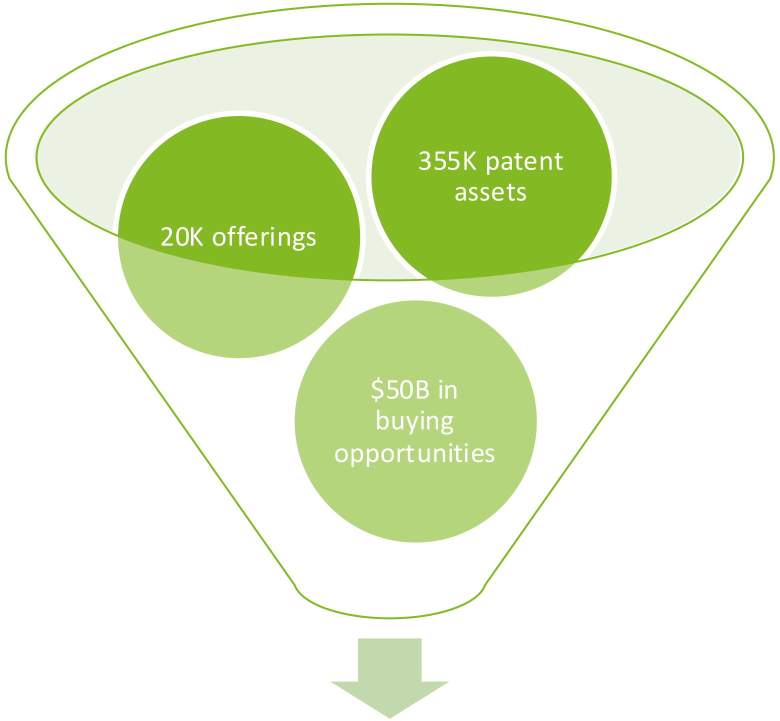
What's the Secondary Patent Market?



Deal Flow

~2000 deals per year hit the market

The ROI Patent Market Report



ROI Patent Market Report

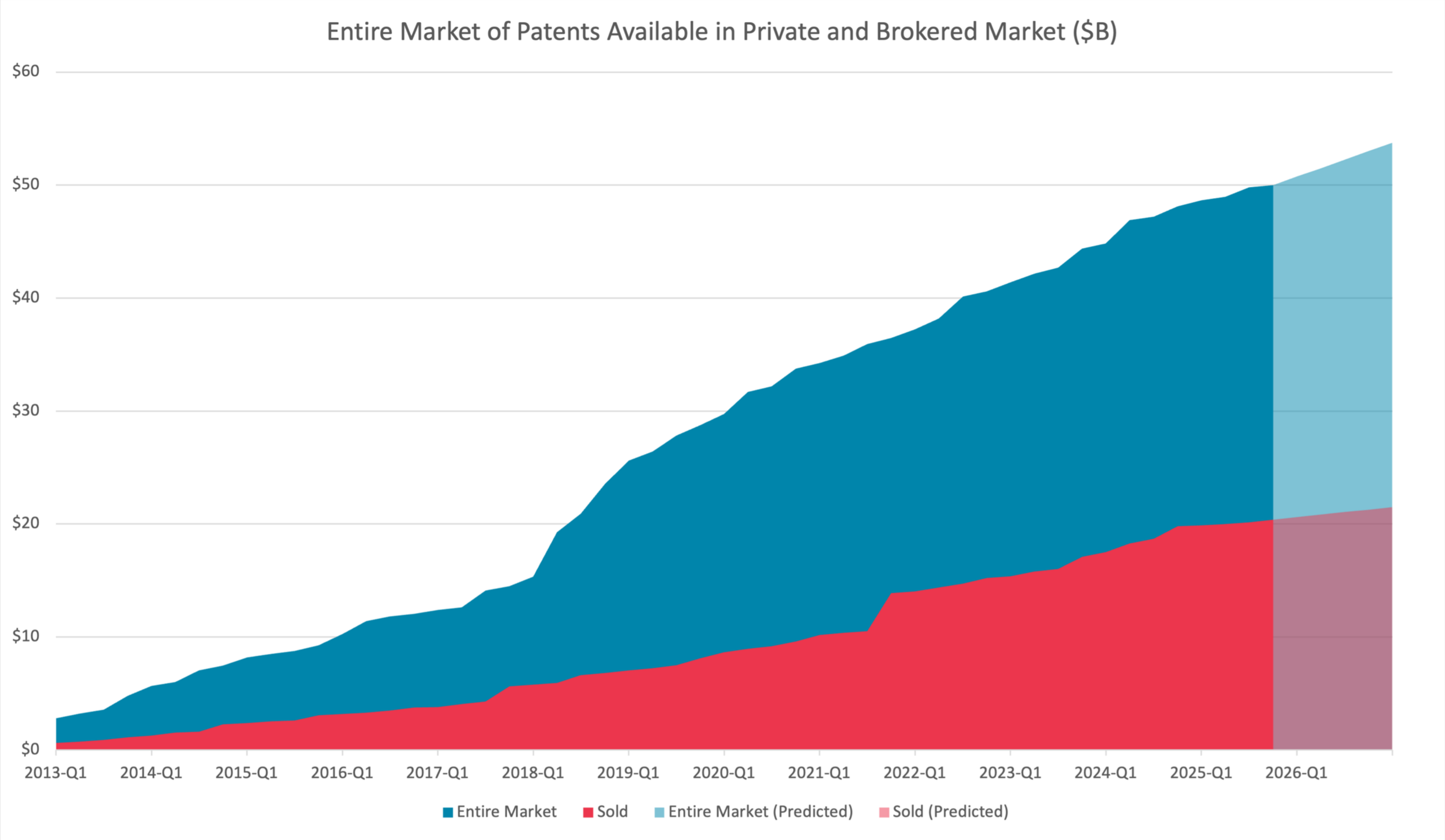
RICHARDSON OLIVER INSIGHTS

2026 is our 14th annual report with a new release time: Q3 2026. You are getting early access today

"ROI's brokered patent market report continues to be one of the year's most read and anticipated pieces amongst IAM's subscriber base of global IP executives and professionals"

- Joff Wild, Editor in Chief of IAM

$50B in Patents on the Secondary Market



Median Asking Prices

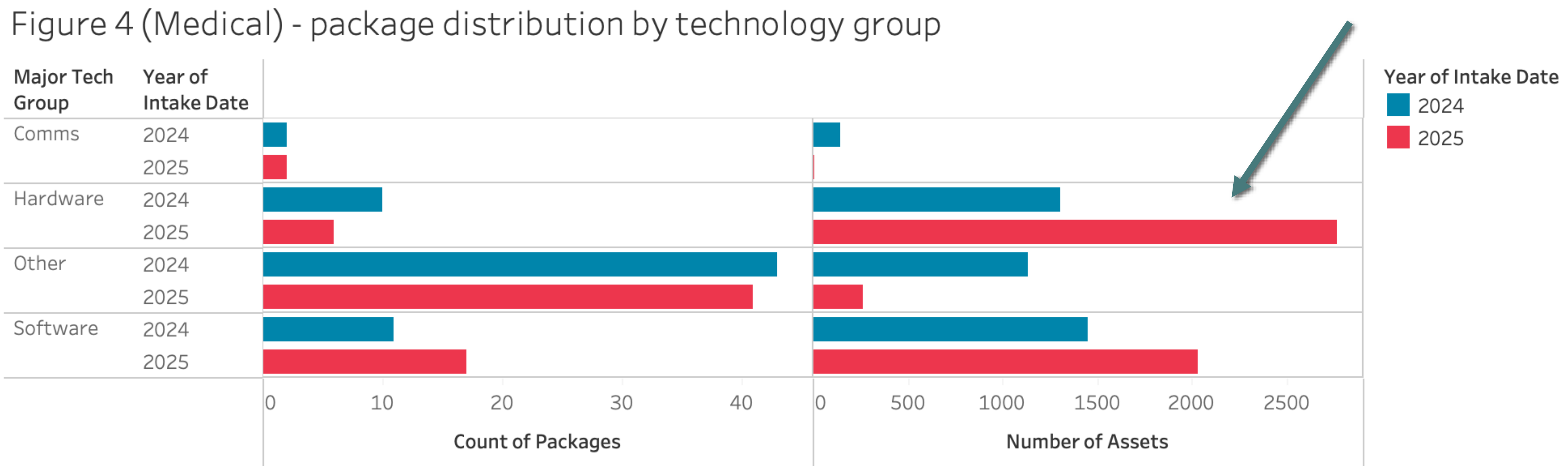
	2021	2022	2023	2024	2025
Median Price per Asset ($K)	$125K	$100K	$117K	$150K	$122K
Median Price per US Issued ($K)	$177K	$170K	$200K	$250K	$169K
Median Price per Family ($K)	$325K	$250K	$325K	$325K	$283K

*Excludes auctions but not resales from defensive aggregators. Also excludes packages where prices were more than $5M per asset

Package Distribution by Technology within Medical

Medical technologies account for far fewer assets than software and some other sectors, but there are still thousands of medical technology-related patents on the secondary market

Overall, the market is growing



Massive Growth in AI-Related Packages in 2025

Figure 4b - rise of ML and AI packages

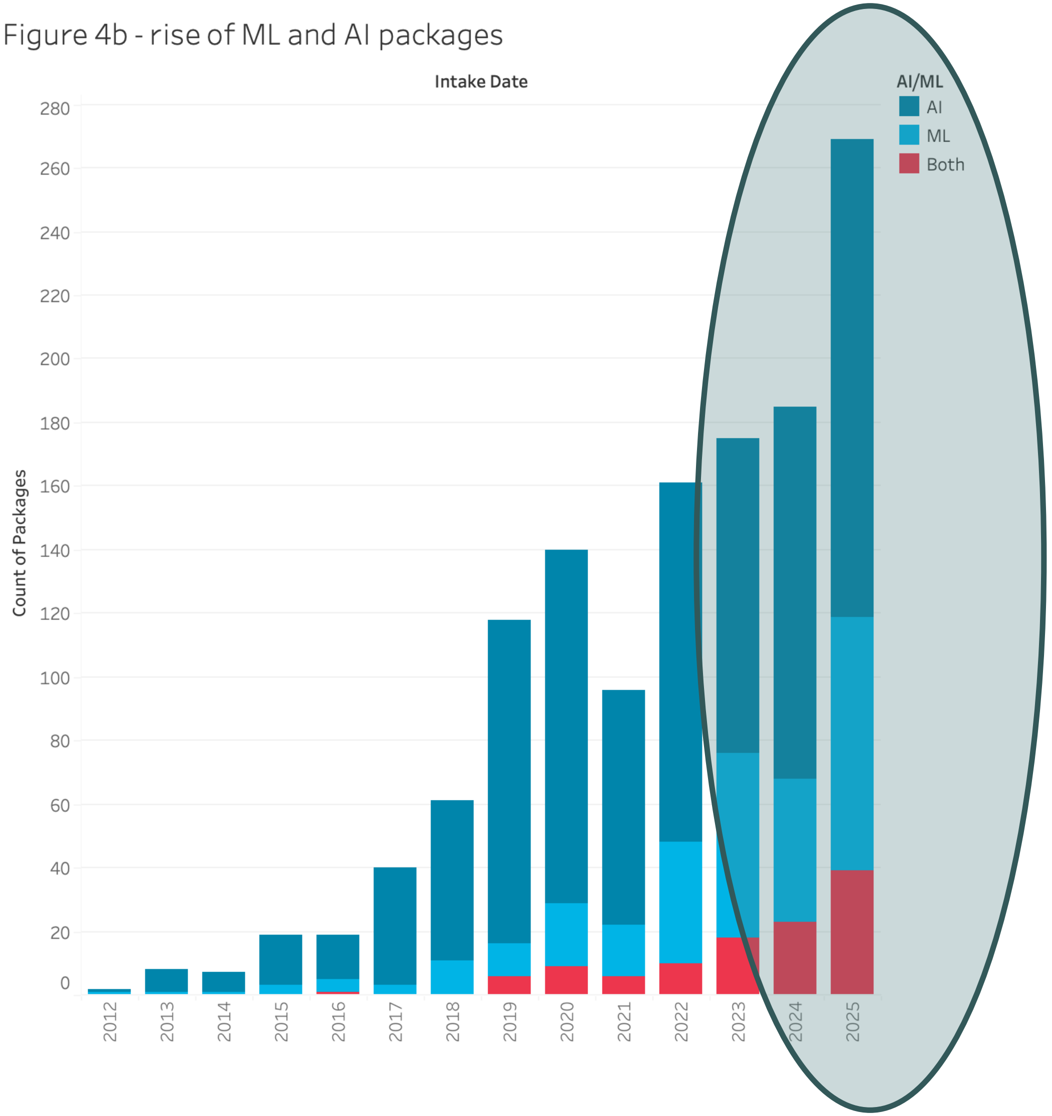
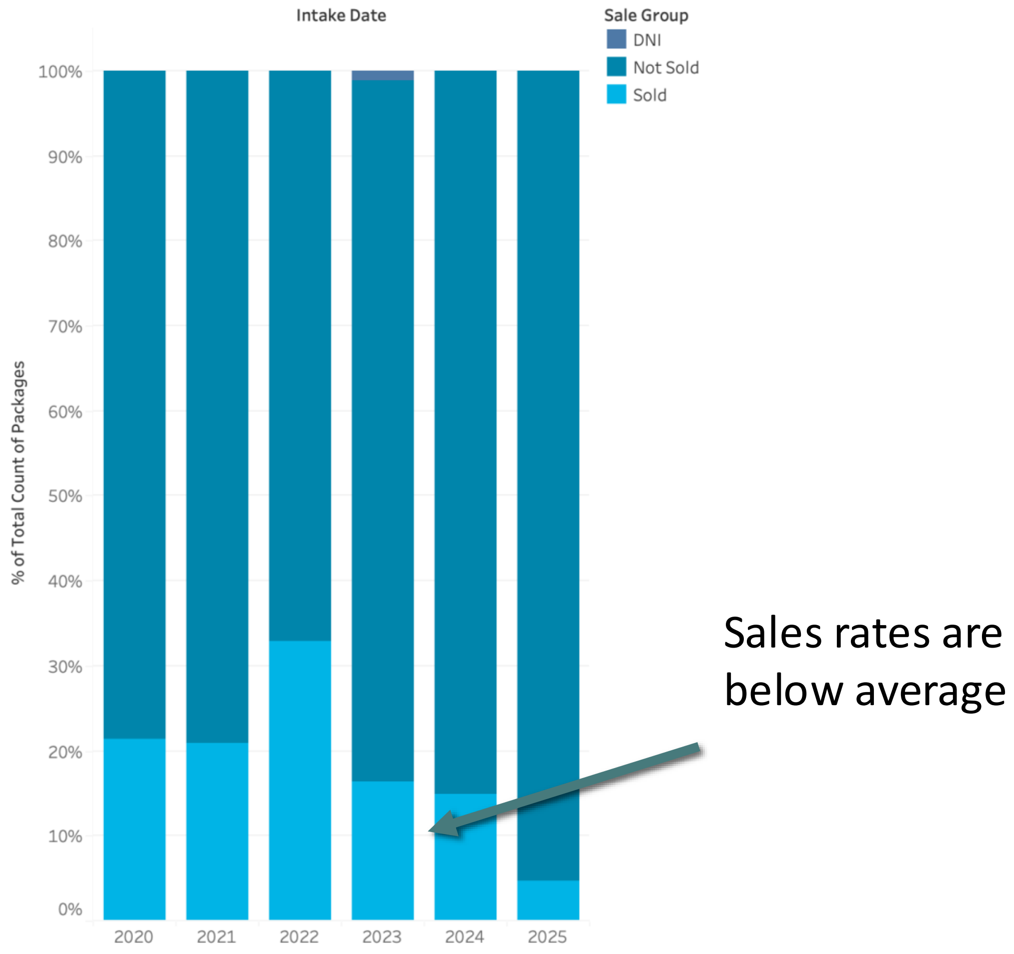


Figure 4c - rise of ML and AI package sales rates (excluding IP3)



Industry Responds with SAIL Foundation

Shared AI License

- Field of use license to AI foundation models and the enabling software and services
- Each member licenses relevant patents to all other members
- Royalty free

ANTHROP\C
Genentech
Roche
IBM
Microsoft
Meta
ebay
TD Bank
block
Figma

sailfoundation.com

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Looking for a patent broker? Active brokers are listed at

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Part II: AI in Patent Strategy

What Problems Can AI Help With? (Didn't Say "Solve")

Filtering portfolios

Developing portfolios

The Holy Grail…

Do LLMs Work at All – Can You Find Interesting Patents?

Problem: find patents that target XYZ company

- Common problem in high tech, less so in medical, but can still happen

Today's solution?

- Keywords, patent ranking and eyes on patents

Problems with the solution

- Expensive
- Time consuming
- Soul-sucking work

Can LLMs help?

Yes, but

- They are probabilistic
- They hallucinate
- They can be finicky and annoying

Managing LLM Shortcomings – Can You Find Interesting Patents?

Solution space:

- Limit how much you ask a model to do – “control the surface”
- Reduce context pollution
- Accept that probabilistic models mean repeated runs
  - It’s not calculating a single correct answer. It’s choosing one likely answer from many possible ones, so repeated prompts yield different results
- This is a moving target, so measure everything

Solution: LLM picks strongest fit patents against a specific target company

LLM runs

- 250 families
- Single prompt populated with family information
- Local model: gpt-120B
- Each prompt independently run > 50 times
  - 160M tokens processed
  - 20,000 scores generated

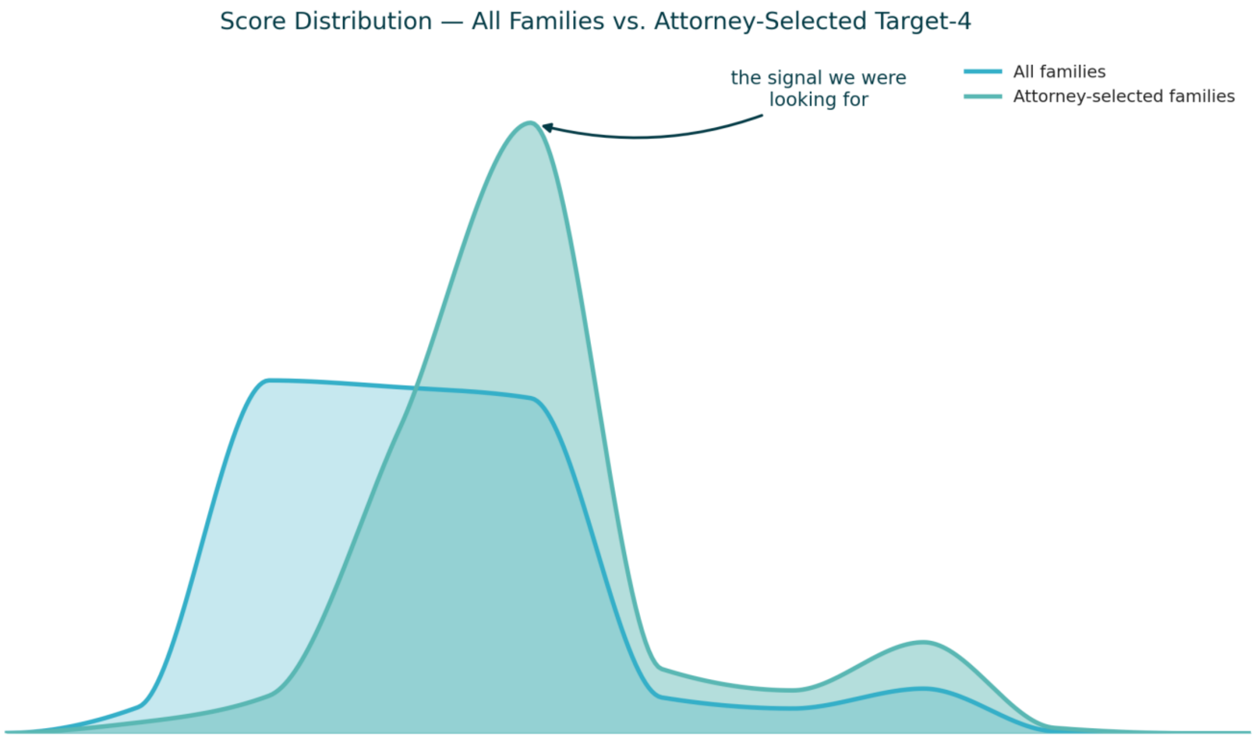
Lawyers make their picks but don’t tell the LLM

LLMs Surface the Attorney-Selected Families

Distribution of the runs by the likelihood that the family reads on the target's products

Clear signal — attorney-selected families cluster toward the top of the score range. 3x as likely to be in the high-score band

Four passes through the portfolio are sufficient for the attorney-selected families signal to reach $p \le 0.05$



Clear signal: not subtle and not chance *($p < 10^{-25}$)*

Can LLMs Mine for New Claim Sets?

Opportunity: pending patent applications open for new claim sets that read on company XYZ's products

Problem: claims must be

- Spec supported
- Distinct from existing claims
- Relevant to XYZ's products

Today's answer

- Attorney's read the spec, find target product docs, brainstorm ideas

But

- Expensive
- Slow
- Hard to scale

Can LLMs help?

Yes, but

- They are probabilistic
- They hallucinate
- …

LLMs Find Interesting Claim Sets

What's different?

- Model drafts claim themes, not just ranking patents
- Hallucinations become more annoying
  - More than 100 defects or phantom products identified

Working principles

- Control the surface – constrain the target products to a fixed taxonomy
- Ground outputs – every theme cites paragraphs in the spec
- Run multiple models and keep what converges

Solution: LLM finds all themes, removes duplicates, then ranks the best fit

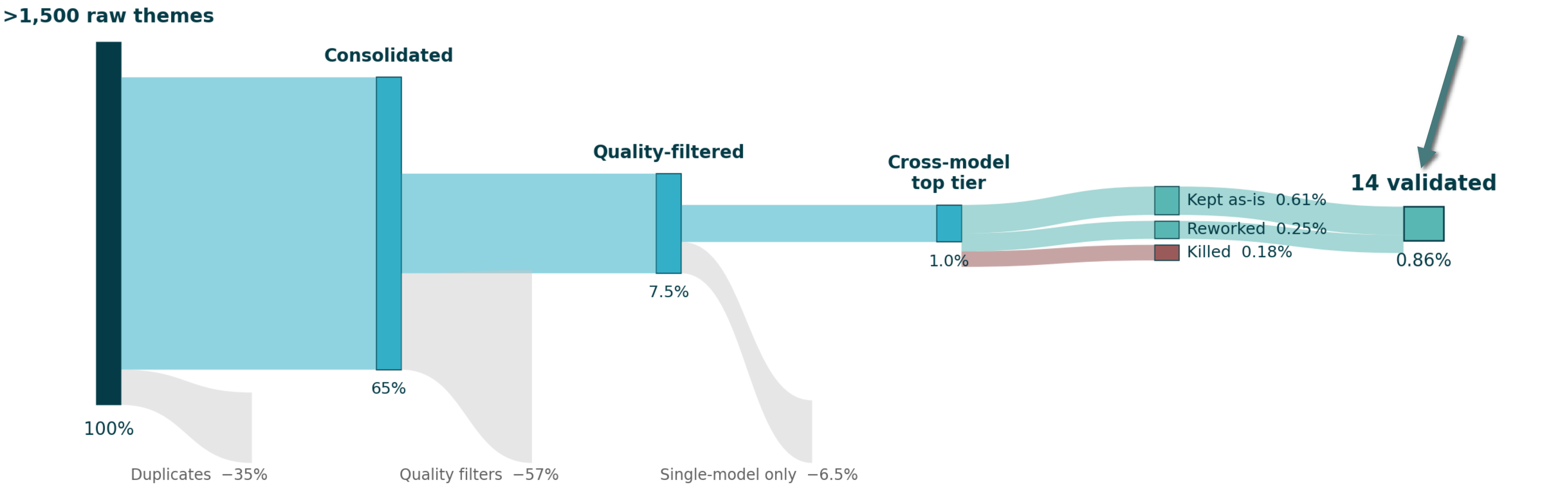
LLM runs

- More than 100 families
- Multi-stage prompt
  - Extract technical substance
  - Catalog existing claims
  - Propose new distinct claim themes
- Four passes on the primary model, plus two error-correction passes
- More than 2,500 LLM calls

Humans select from the highest-ranked results

LLMs Can Find New Claim Sets

Automated filters do the heavy lift. Attorneys do the last mile.



Percentages are of >1,500 raw themes. Automated filters in blue · attorney-review outcomes in teal · spec-defect kills in rust. Reworked themes rejoin the validated set.

Product Manager FTO Guide: The Holy Grail*

*Well, almost

LLMs for Product Manager FTO Guidance

Problem: product manager wants to launch a new product and wants to understand FTO

Today's answer

- Attorneys read claims, map to product specs, write memos per family or family group

Problems

- Expensive
- Slow
- Does not scale well
- Relies on institutional knowledge/history
- Updating analysis is difficult

LLM solution

- Ingest all patent claims and extracted claim elements
- Per family, select the broadest product-relevant claim
- Group elements into design dimensions (e.g., package material, pH)
- PM enters the product spec by product-dimension, LLM does element-by-element mapping

Screening a new product takes minutes rather than weeks

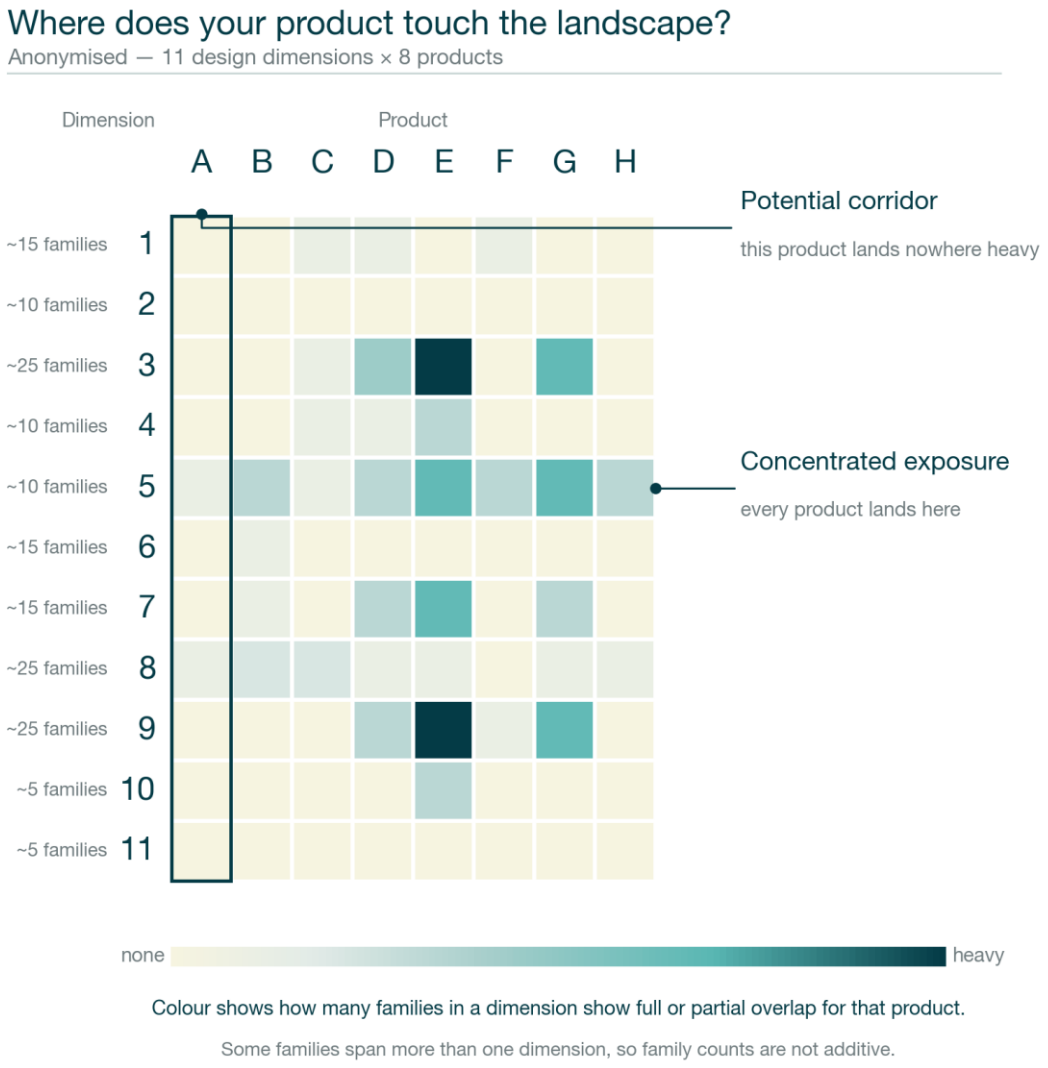
Using LLMs to Help Build the Design Space

Product manager workflow

- Enter a natural language description of the product characteristic for each dimension
- Frontier model runs the scripts and presents the results
  - Each claim evaluated against the whole product spec

Constrained results

- Created a test bed of more than a dozen products
- LLMs evaluate each claim element against each product dimension
- Verdict using a fixed decision tree – not an LLM doing that
- Some unusual families require human review



Observations on Using LLMs

You can now do work you could not imagine affording

LLMs produce a lot of information, much of which is not very interesting. Need to manage that differently than we did before

Need to encourage people to try new things. Current API pricing models discourage people from trying

Harnessed LLMs produce better results for the same cost

Rerunning prompts and voting on results are established solutions to LLM problems. Reduced errors is not eliminated errors

Corollary: the confidence in your answer dictates how many runs you perform

Multiple runs usually give a more consistent answer, but that answer might still be wrong

Not all models are the same

Small models are fast and very helpful – extraction is amazing

BUSINESS SENSE • IP MATTERS

ROL Group has over 60 years of IP strategy and execution experience. We ask the business questions first. We blend in-house and large law firm experience to create clear steps for success.

We guide companies through unique IP challenges—like buying and selling patents, developing licensing programs, defending against patent assertions, and creating a value-driven IP portfolio. We give direction to businesses that share our passion for new ideas, creative problem solving and forward motion.

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