

How business owners are use intellectual property to stay one step ahead of innovation in AI

Lexology/IAM Masterclass

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 LEXOLOGY

 IAM


Marks&Clerk

1. Introduction
2. Which geographies are seeing the highest growth in AI patent applications and what this means
3. Which industries are seeing the highest growth in AI patent applications and what this means
4. What we can learn from patent filing trends across technologies
5. The steps businesses need to take to protect their IP within AI
6. The potential impact of AI regulation on patent filing trends

The leading experts in Europe for ML

- Global Intellectual Property Firm
- Offices across the UK, Europe, Asia and Canada
- Patents, TM, Litigation
- Software/Electronics team – around 28 partners / 70 practitioners in total
- We're the leading European experts advising on AI/ML inventions
- We file and prosecute more applications in the field of AI¹ than anyone else in Europe
- Our market leading success rate demonstrates our understanding of the key issues²

1. *As defined by WIPO Technology Trends 2019*
2. *66% vs. an average of 53% for EP applications closed in 2022*

Insights from our annual AI Report

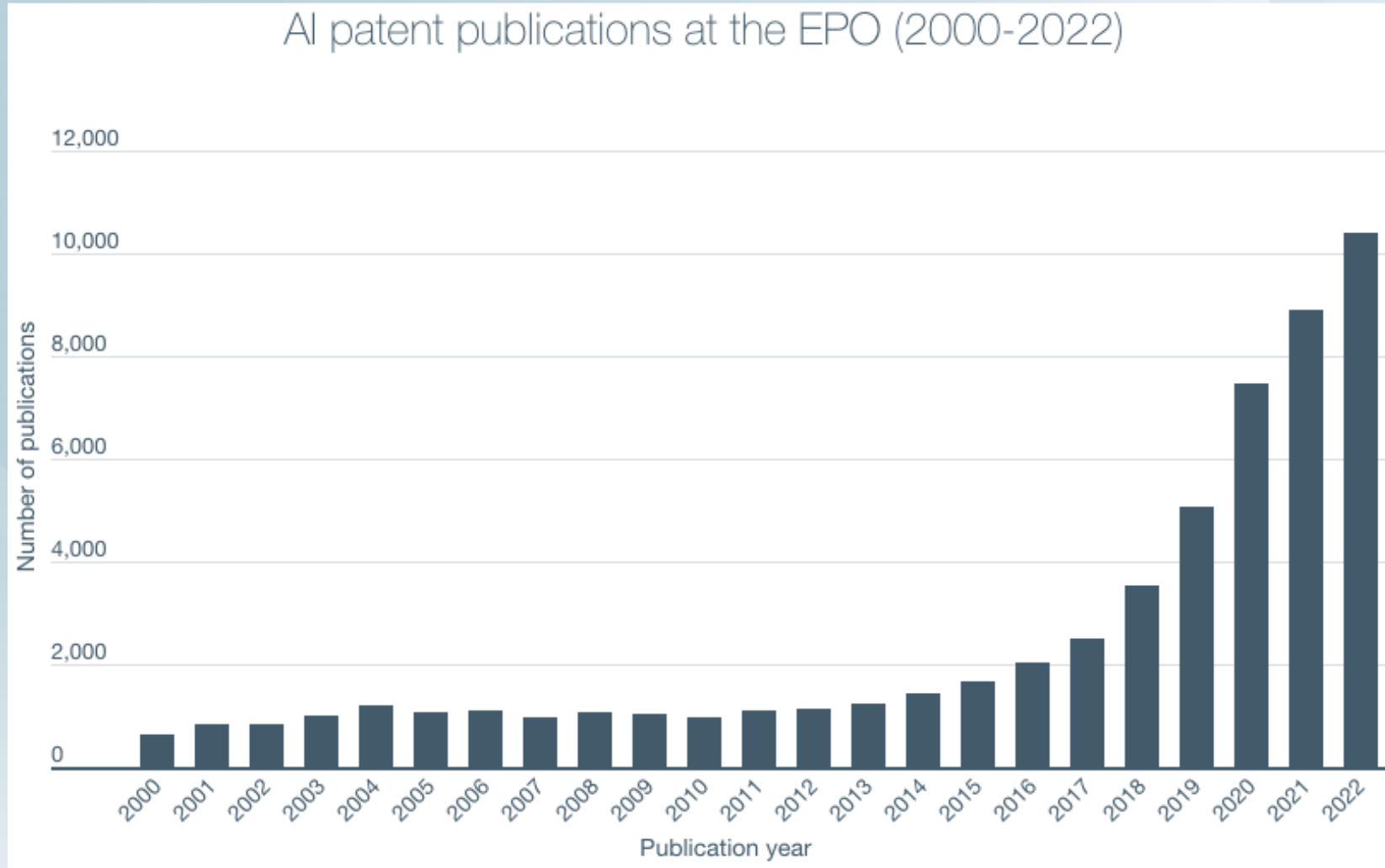
- Our 3rd annual AI report has just been released
- Analysis of all AI patent applications filed at the EPO since 2000
- Based on WIPO's definition of AI
- What are the key trends and what impact will they have

1. Introduction

Patents can be obtained for software, including for AI

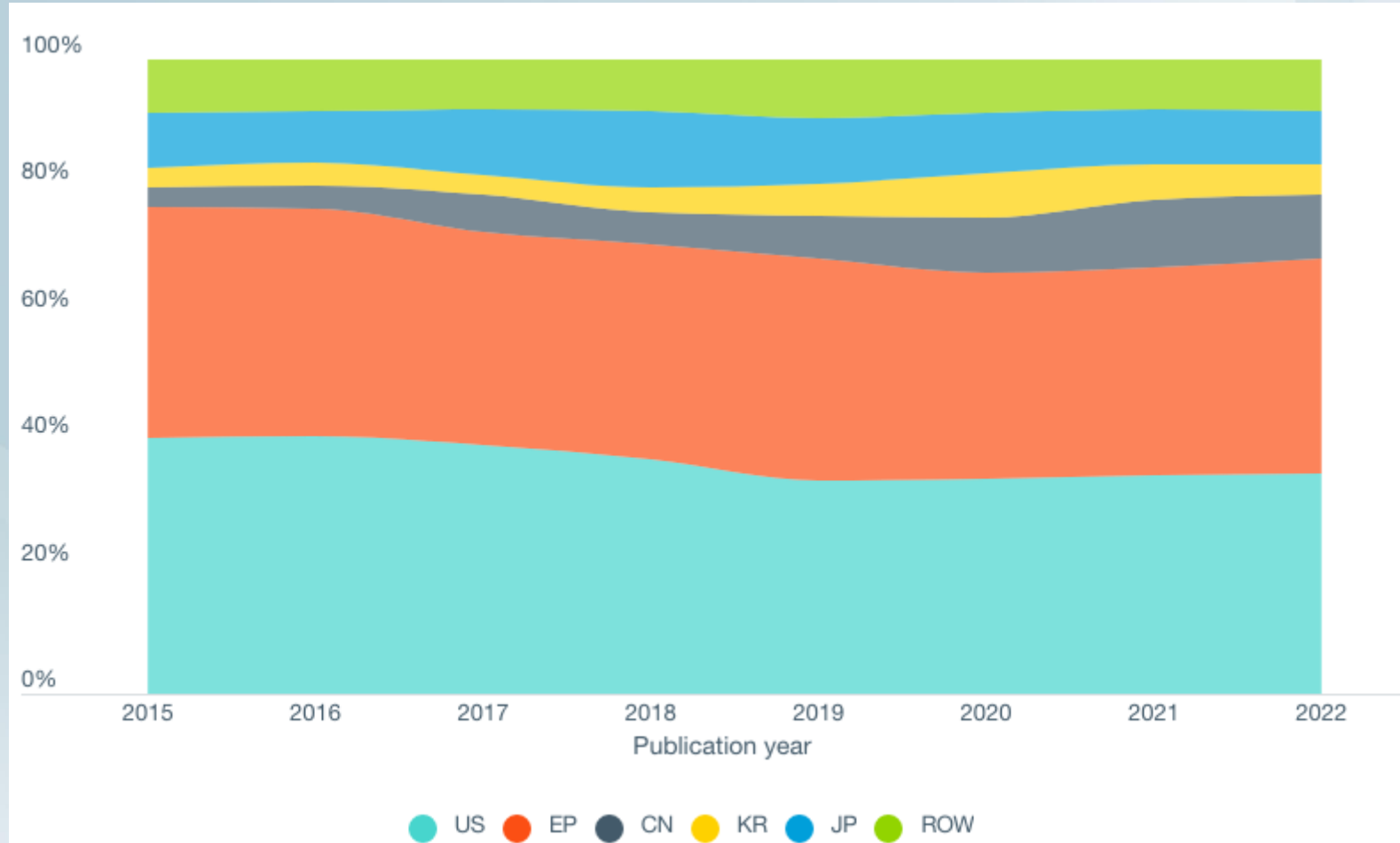
- AI patents protect new inventions that use AI or improve field of AI itself
- Can't protect everything and rules vary in different countries but generally...
- Can normally protect
 - Controlling hardware, signal processing, security/compression/encoding, processes for making things, medtech, bioinformatics, lots of others
- Can be more difficult to protect
 - Business methods (how to sell more), abstract ideas ("just maths")

Is AI Patentable?

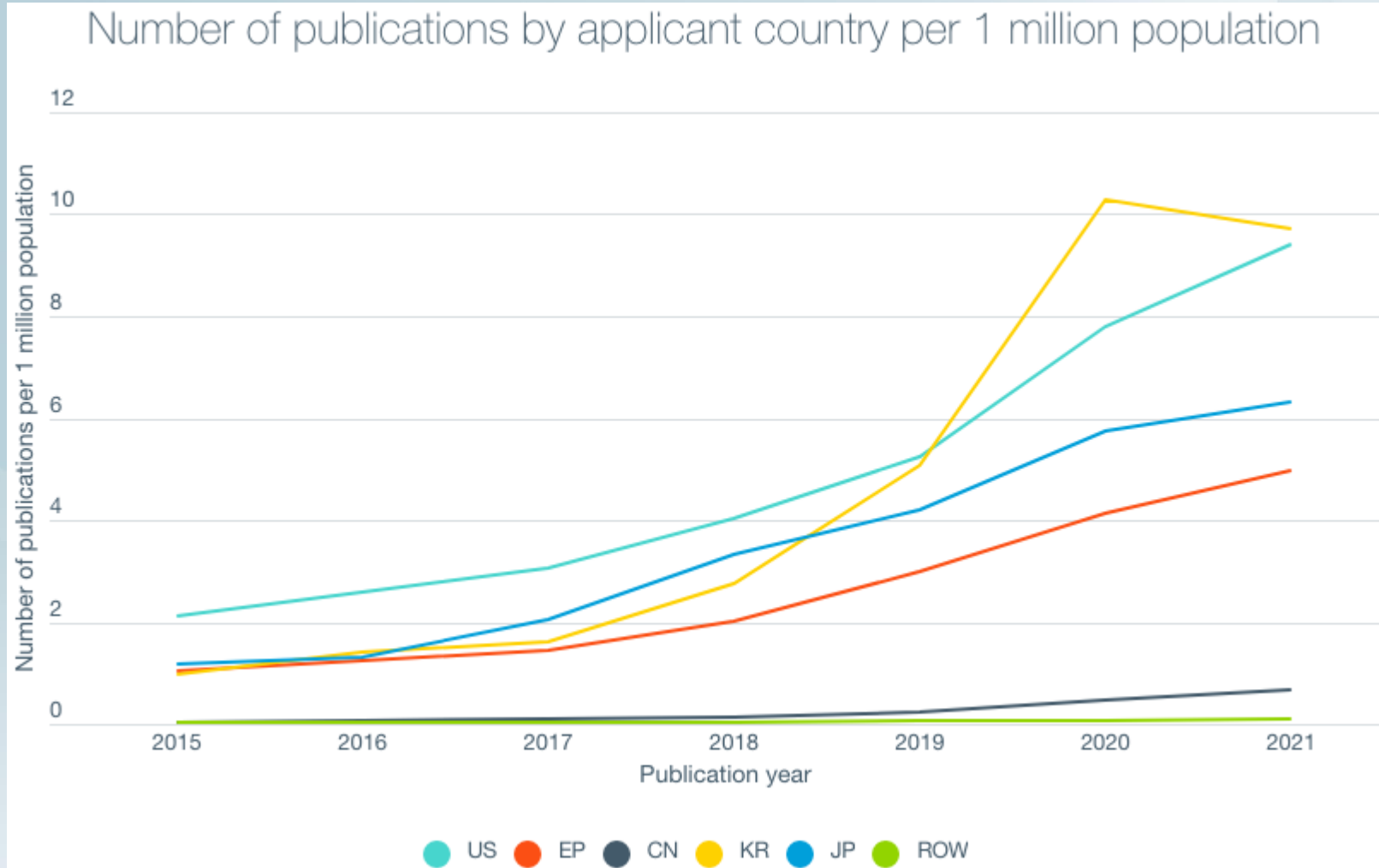


2. Which geographies are seeing the highest growth in AI applications

Publications by applicant country

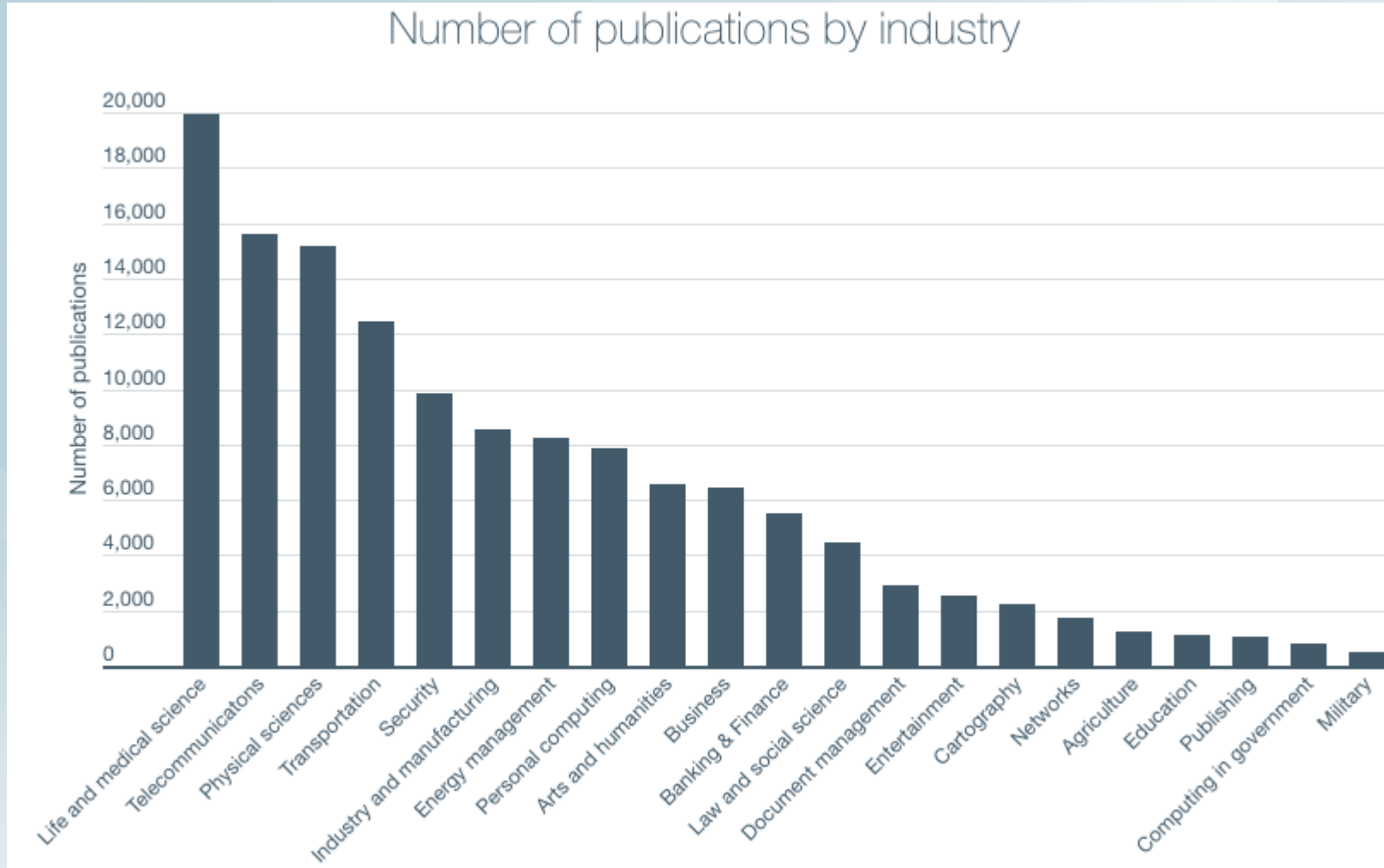


Per Capita numbers

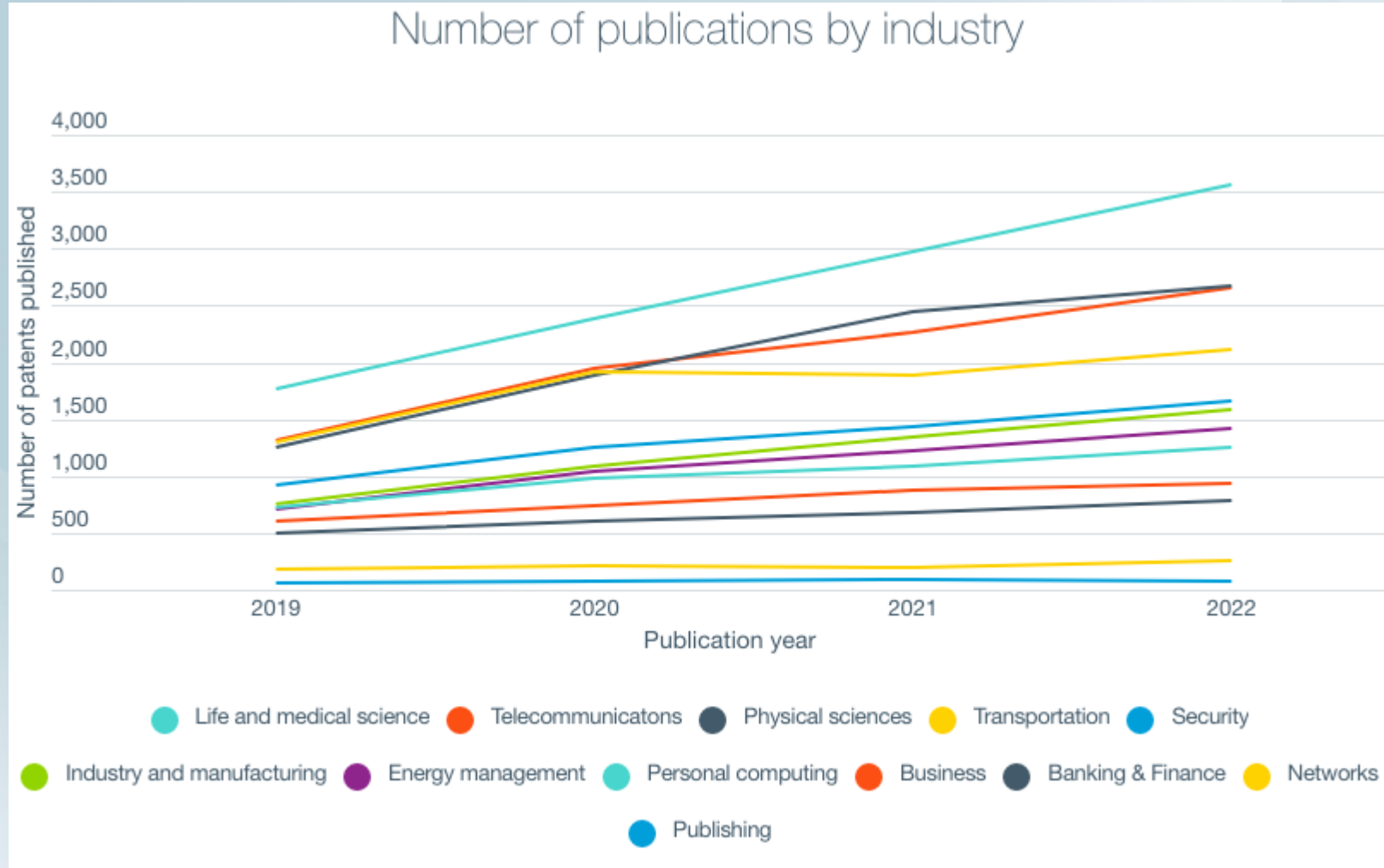


3. Which industries are seeing the highest growth in AI applications and what this means

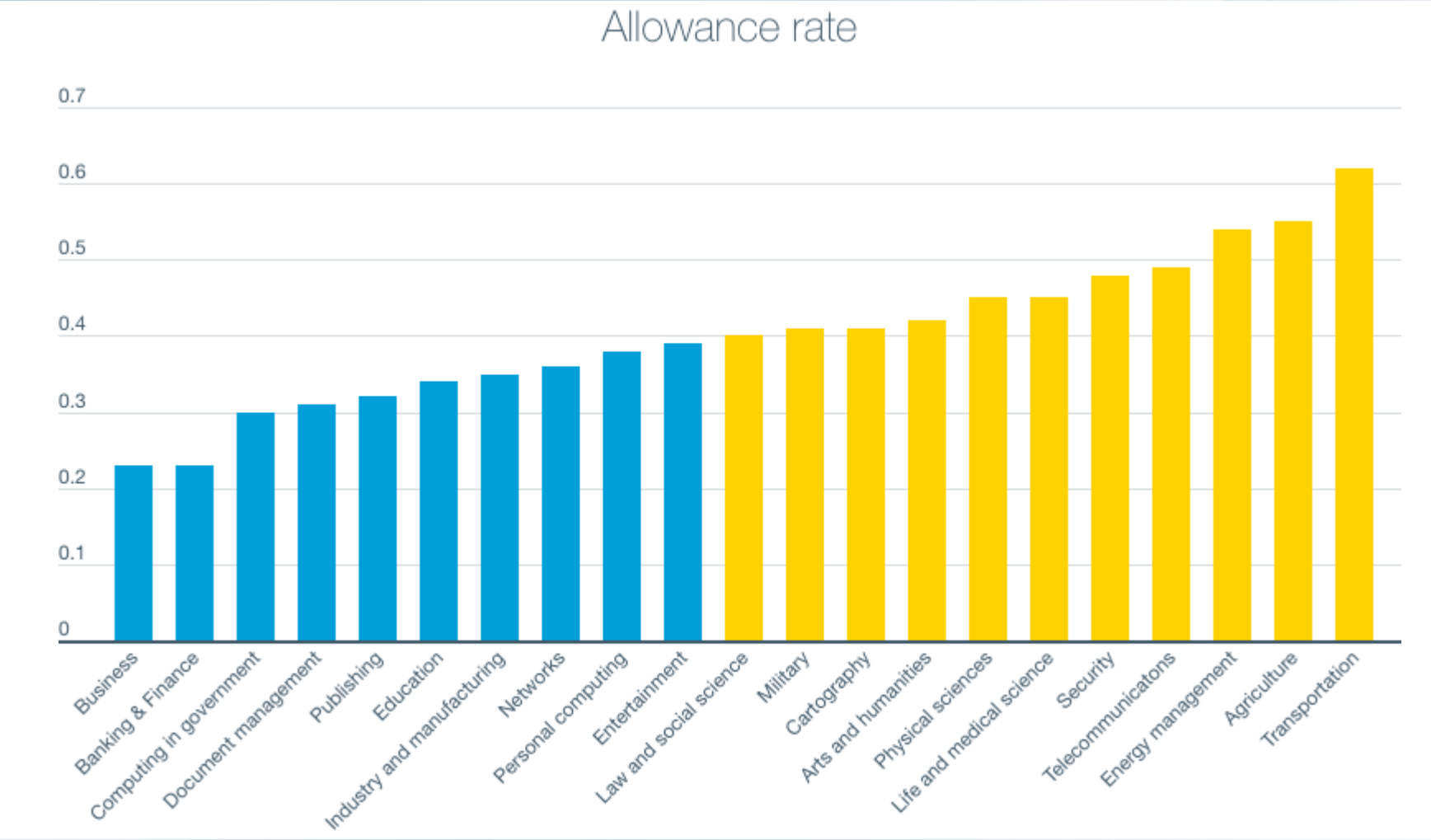
Number of AI European patent application publications by industry



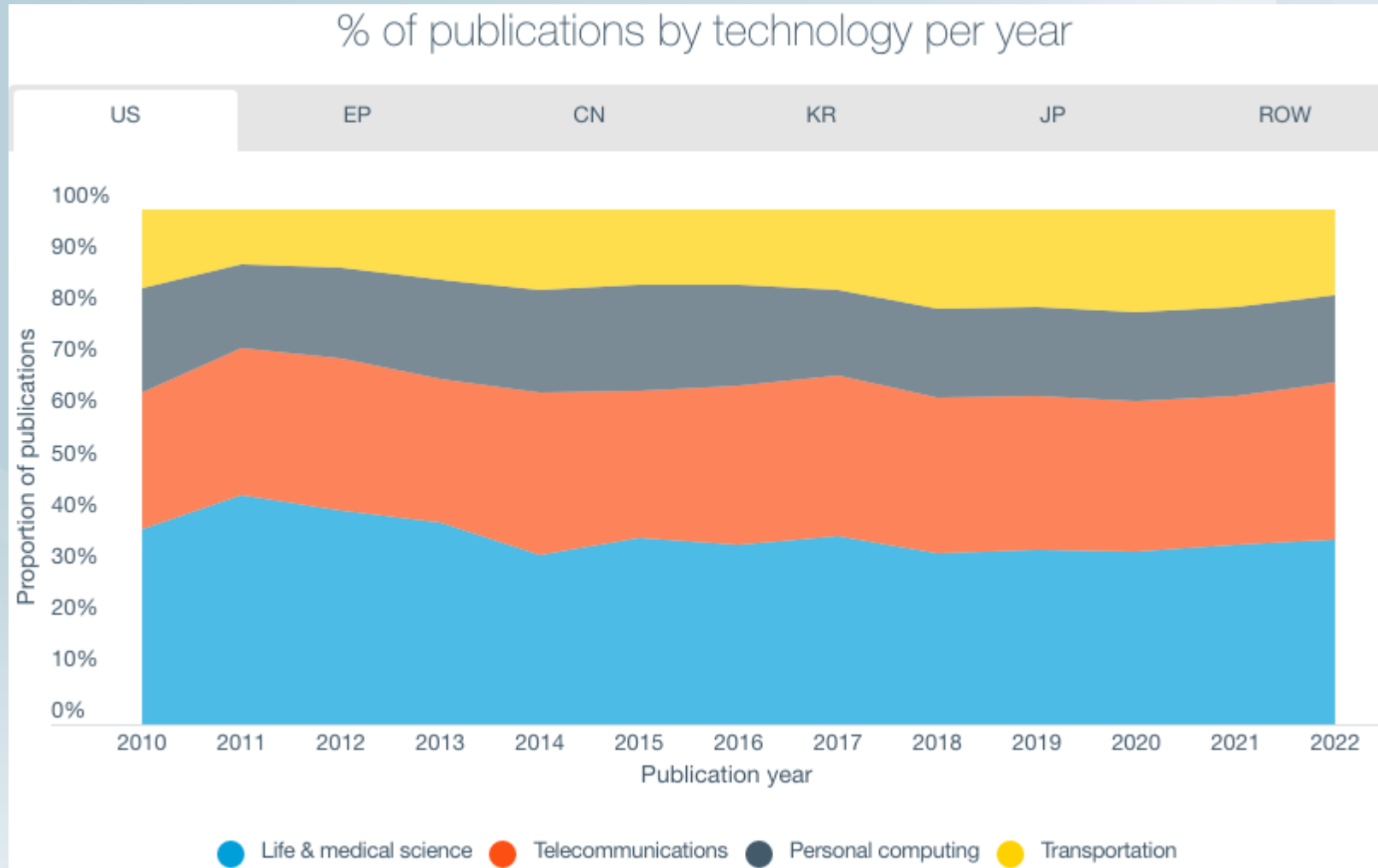
Number of AI European patent application publications by industry sector per year



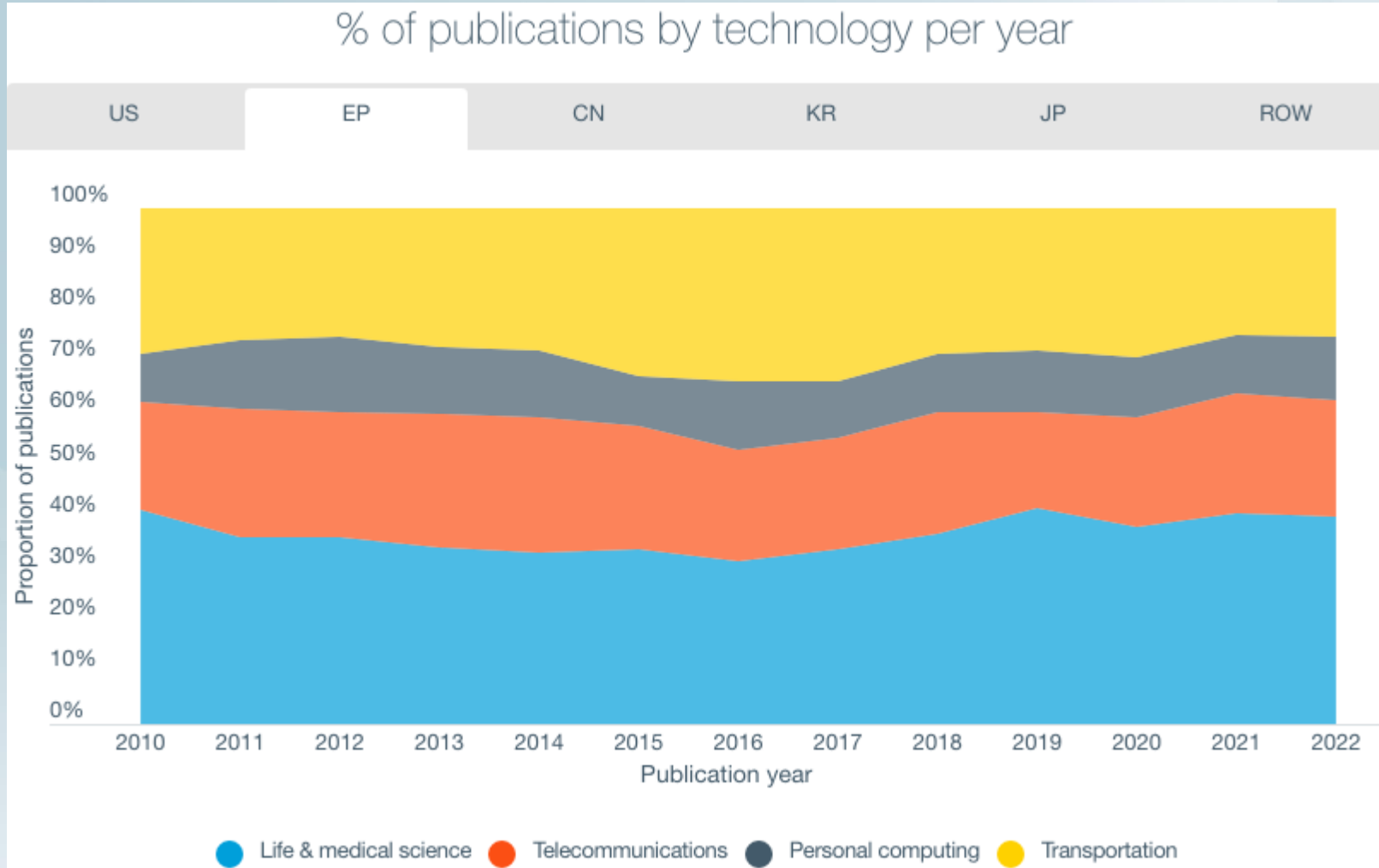
Allowance rate by industry



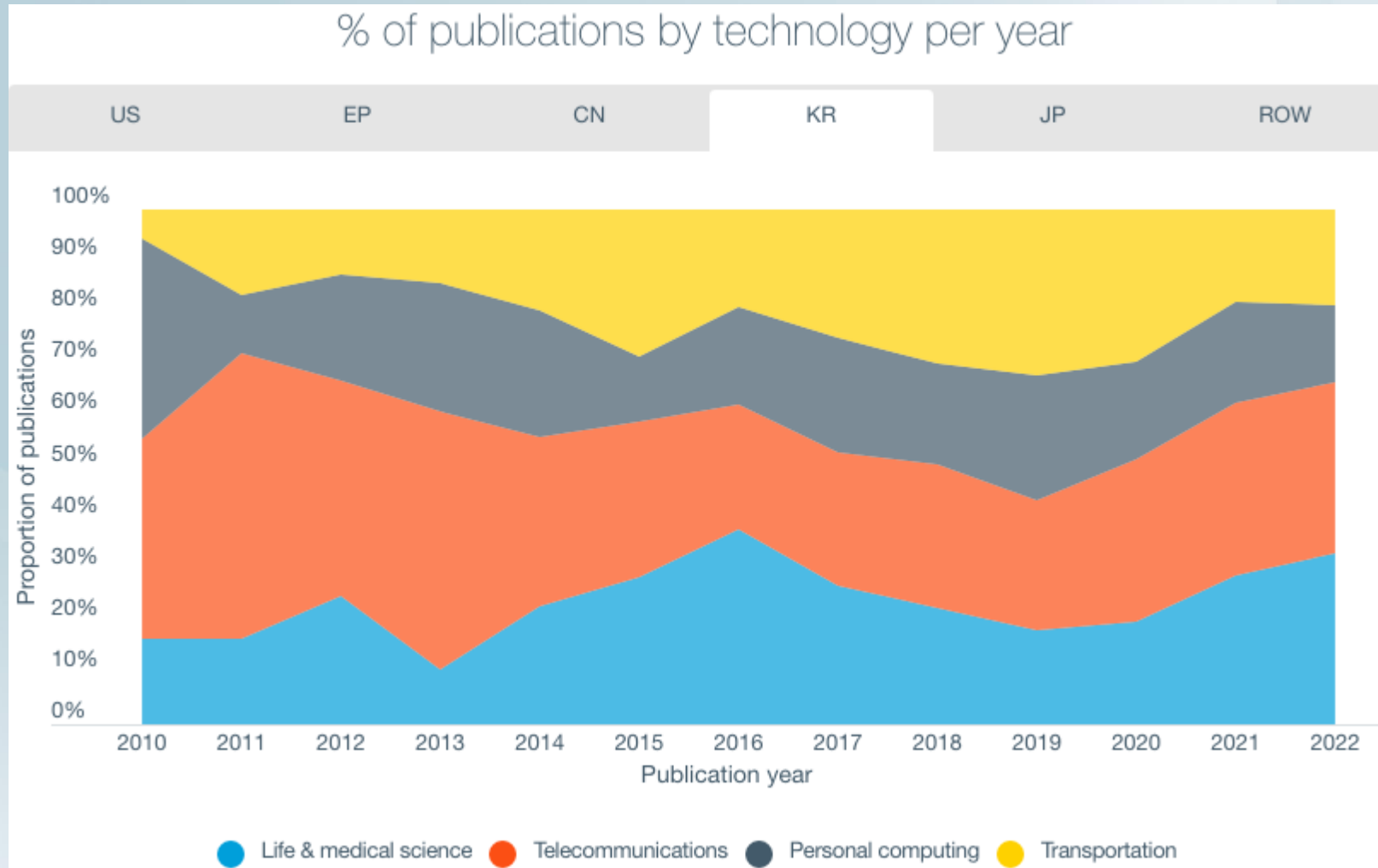
Industry proportions per year for applicant country US



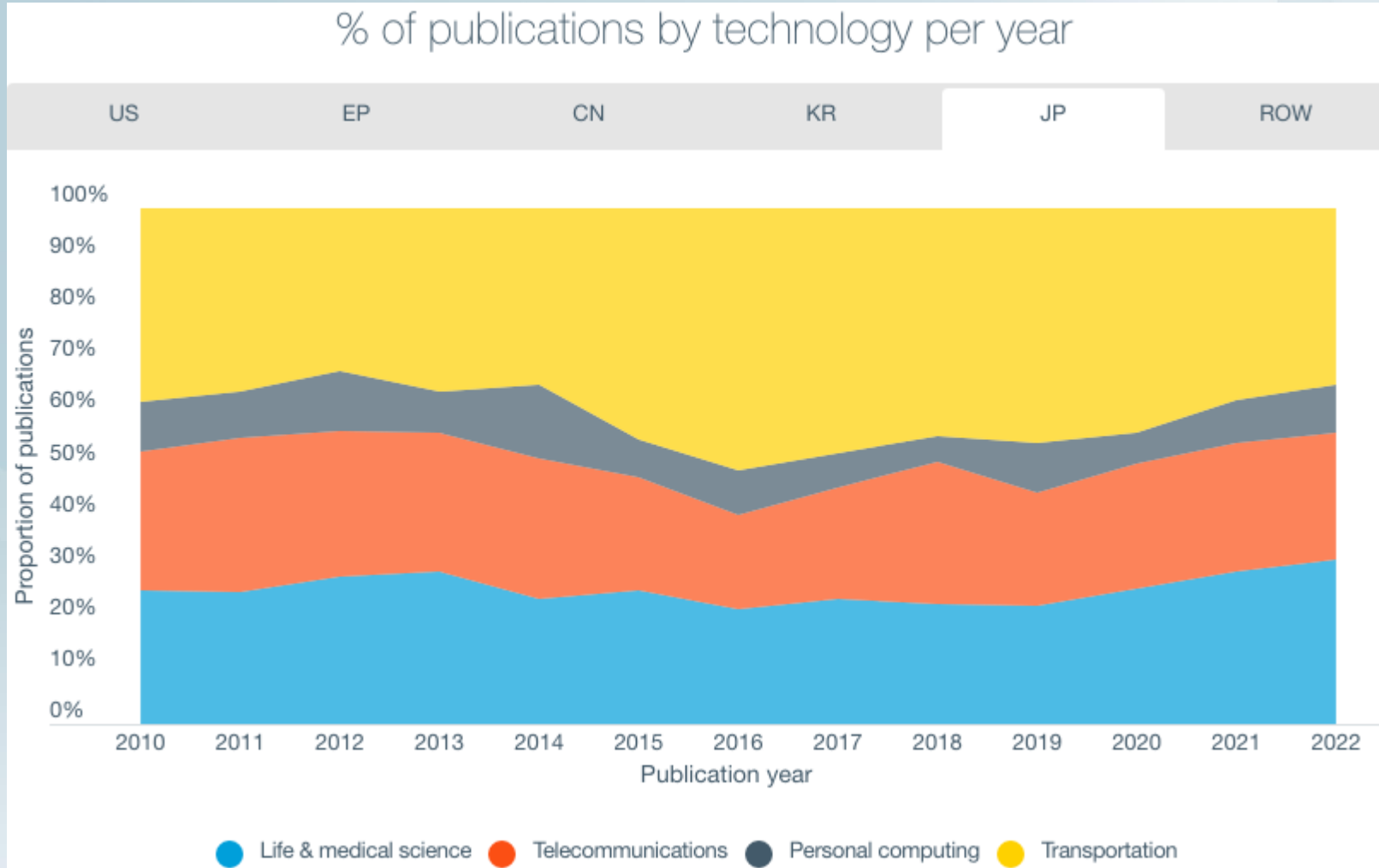
Industry proportions per year for applicant country Europe



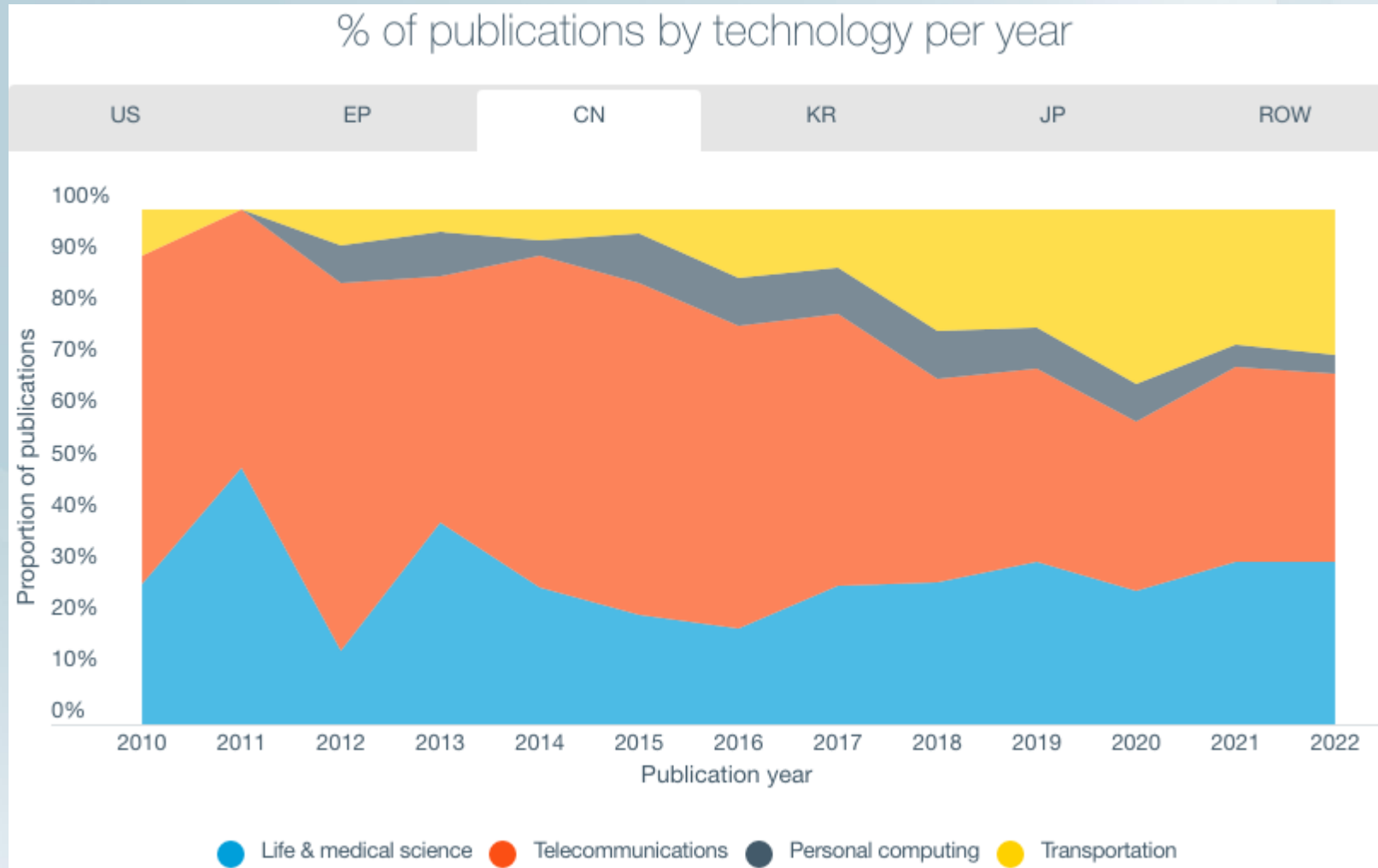
Industry proportions per year for applicant country Republic of Korea



Industry proportions per year for applicant country Japan

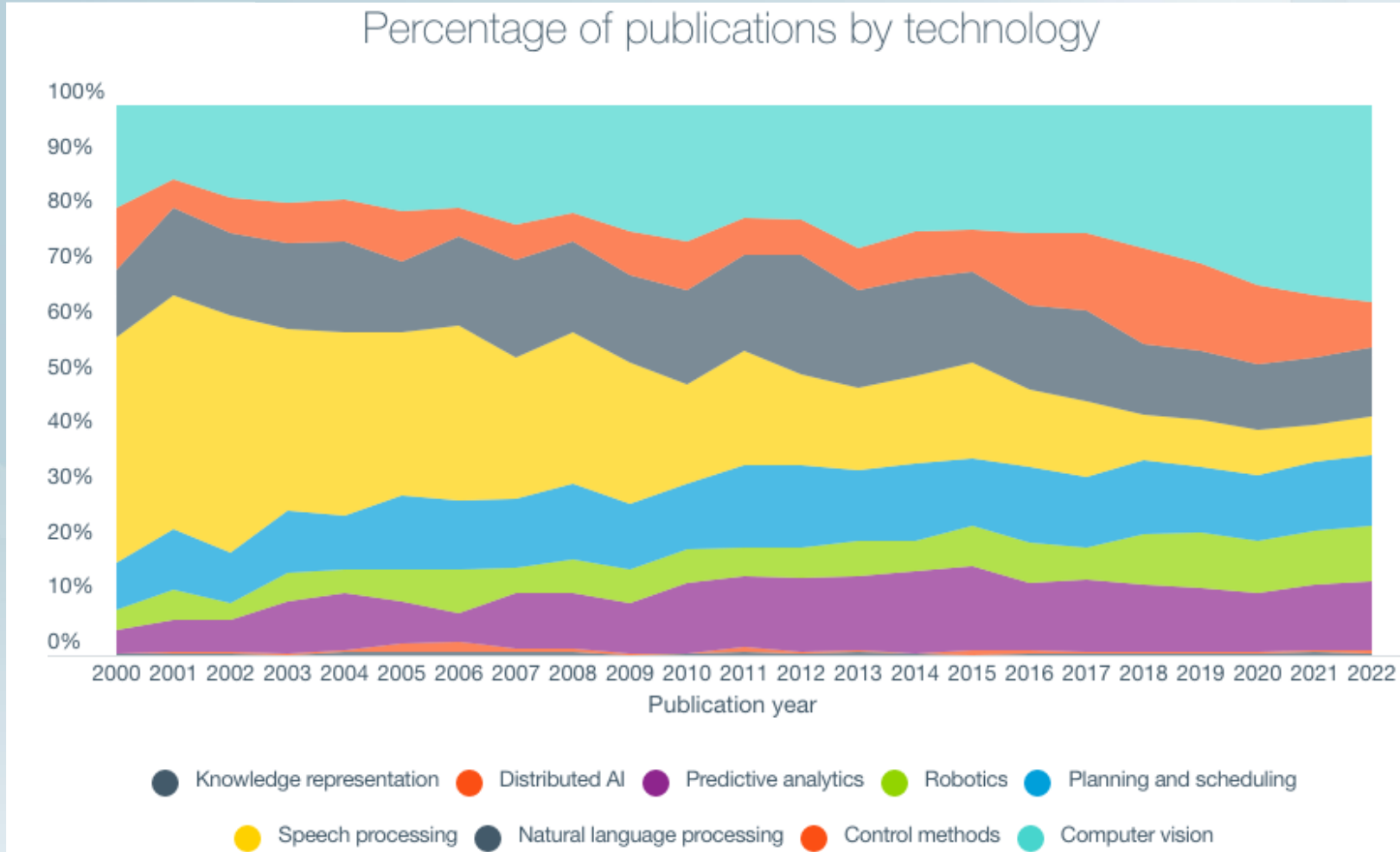


Industry proportions per year for applicant country China

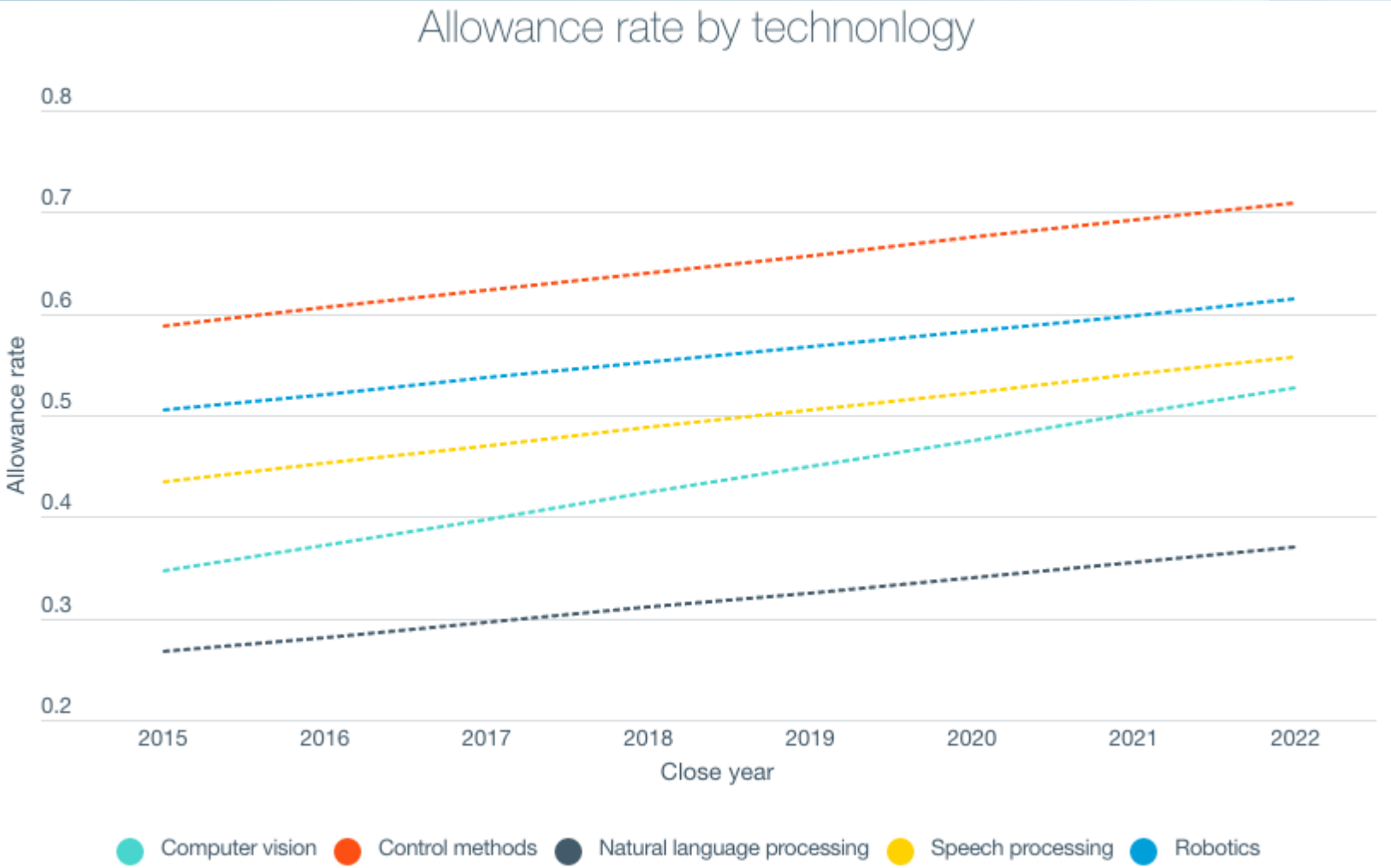


4. What we can learn from patent filing trends across technologies

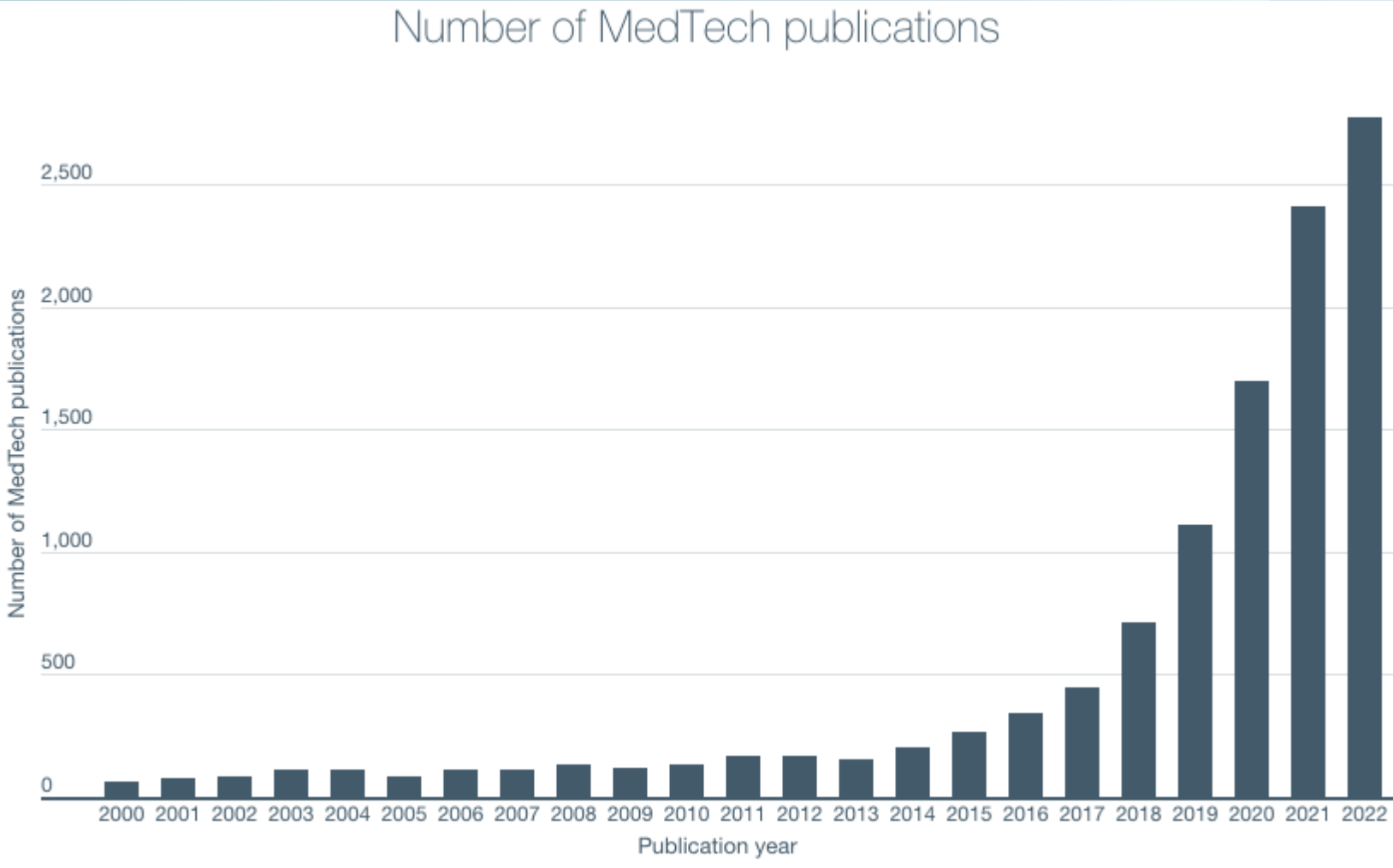
Technology trends for EP applications



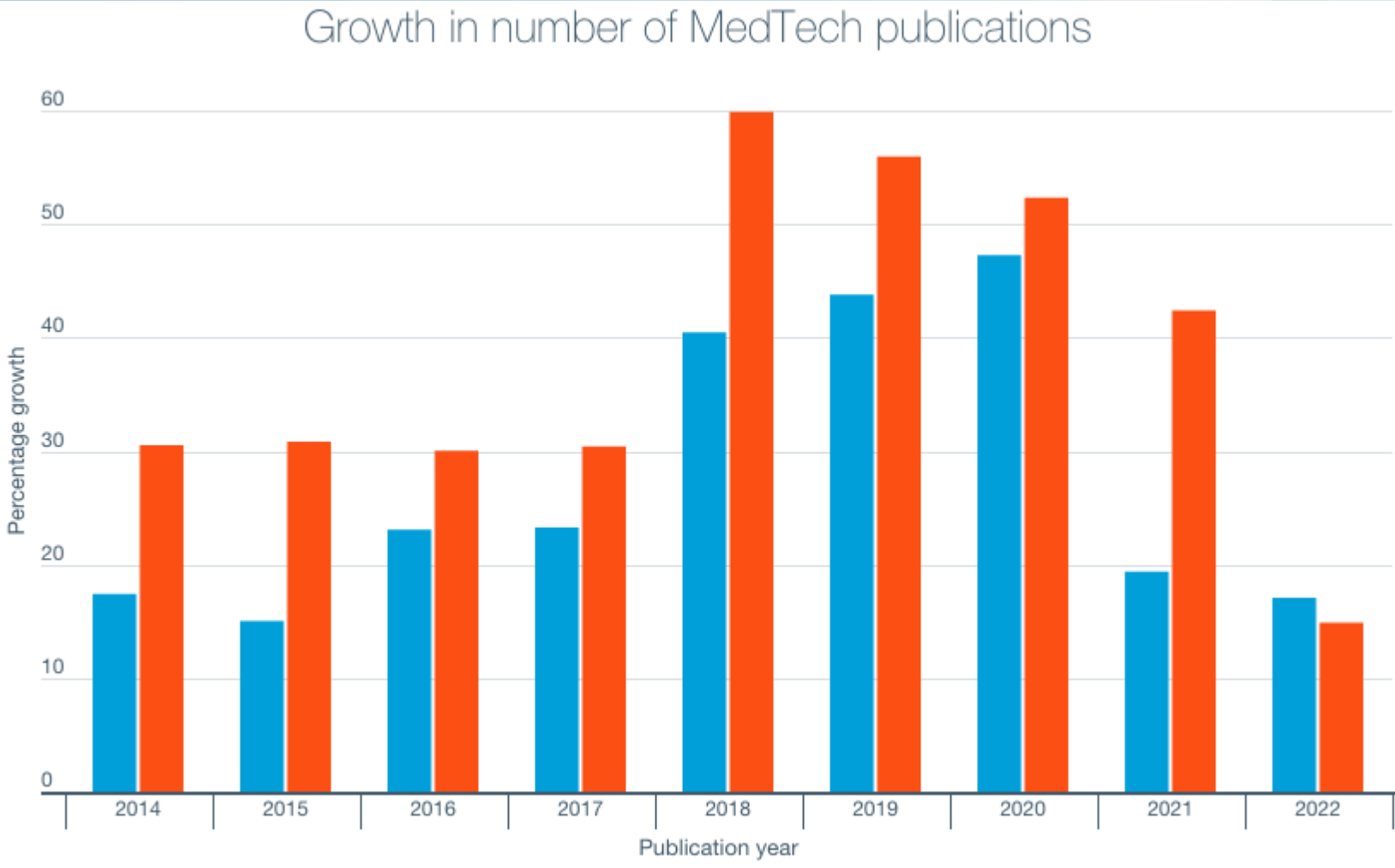
Technology trends for EP applications



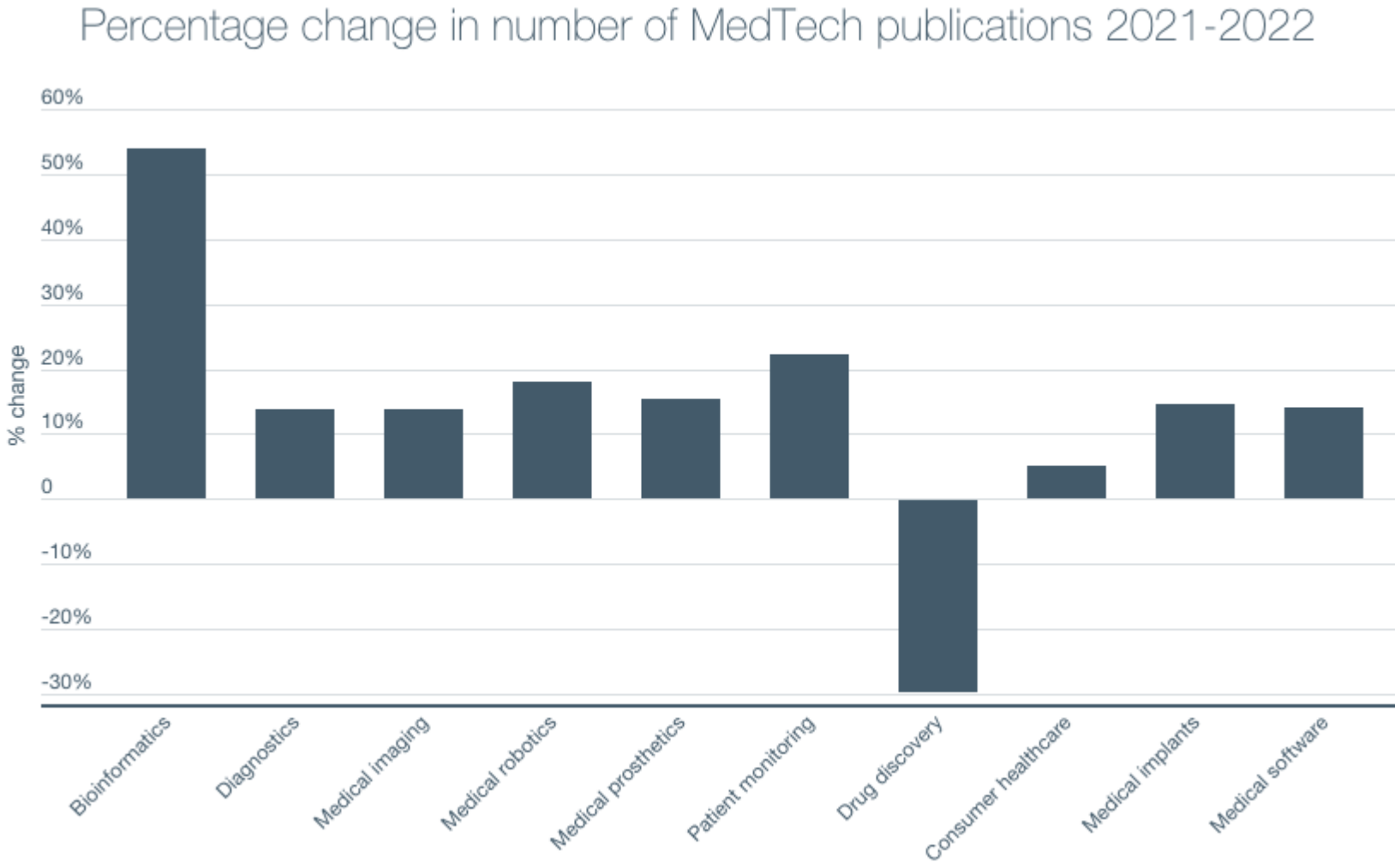
Technology trends for EP applications: MedTech



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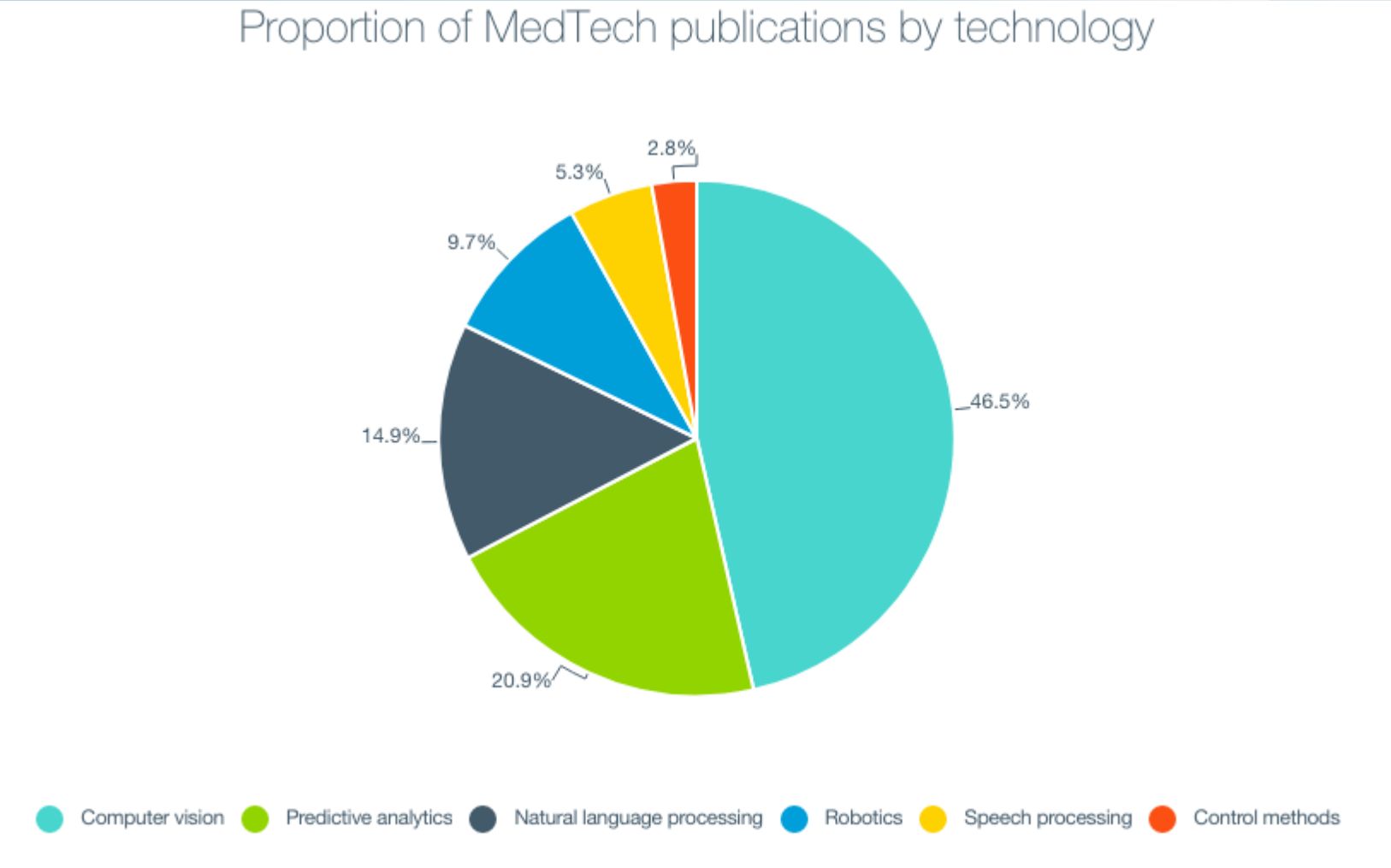
Technology trends for EP applications: MedTech



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Proportion of MedTech publications by technology

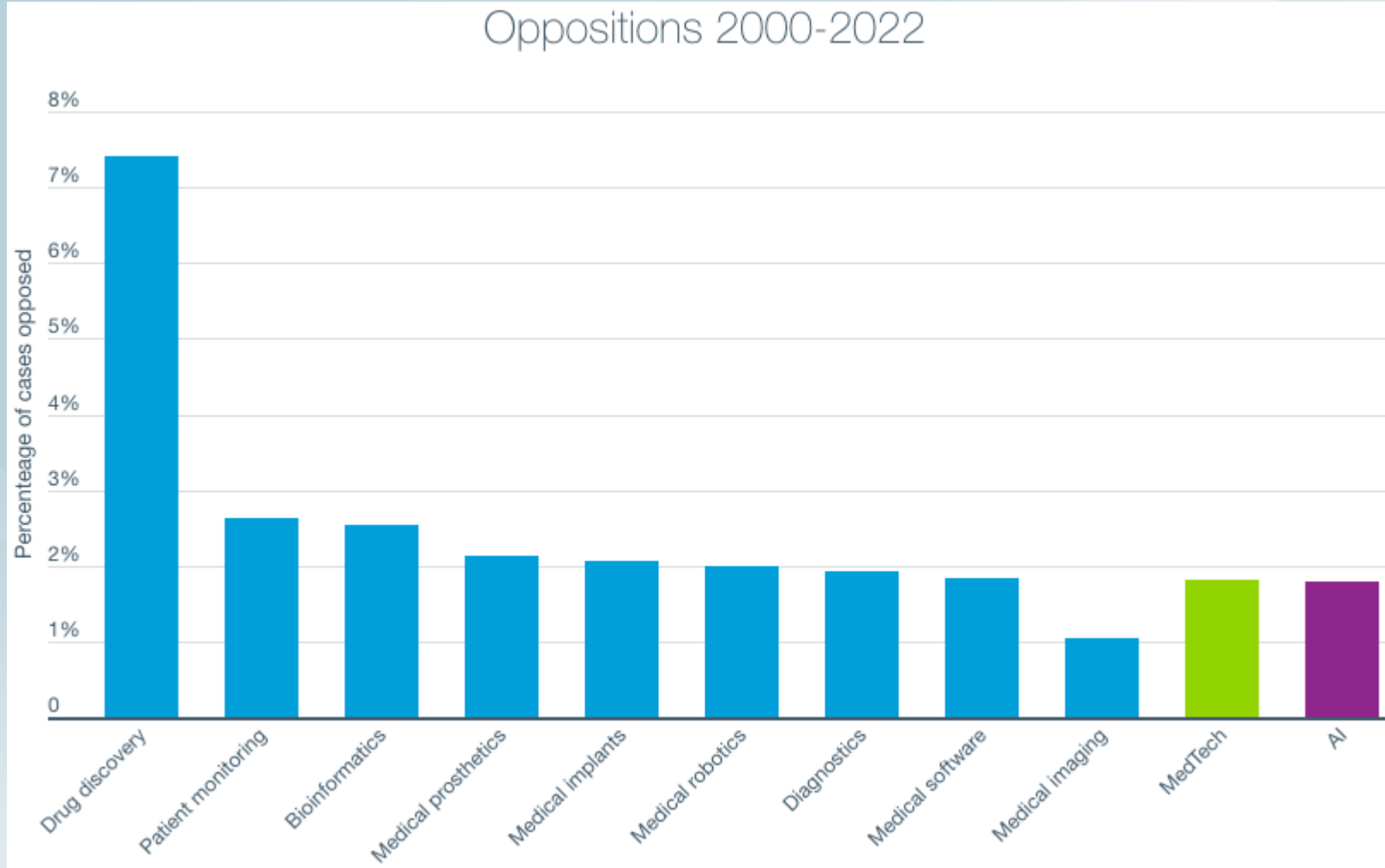


Looking ahead...

- AI filings outside of Europe
- Regulation
- Generative AI
- Multi-modal models
- Hardware innovations



Looking ahead...



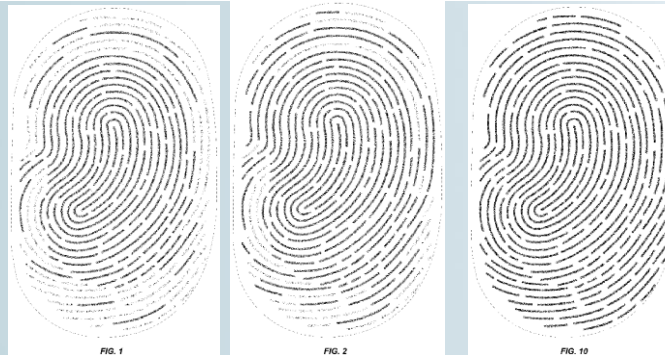
5. Steps Businesses need to take to protect their IP within AI

Which IP rights are right for AI?

Different rights support different aspects and strategies

- Designs
- Copyright
- Database rights
- Trade Secrets

(12) **United States Design Patent** (10) Patent No.: US D966,321 S
Butcher et al. (45) Date of Patent: ** Oct. 11, 2022

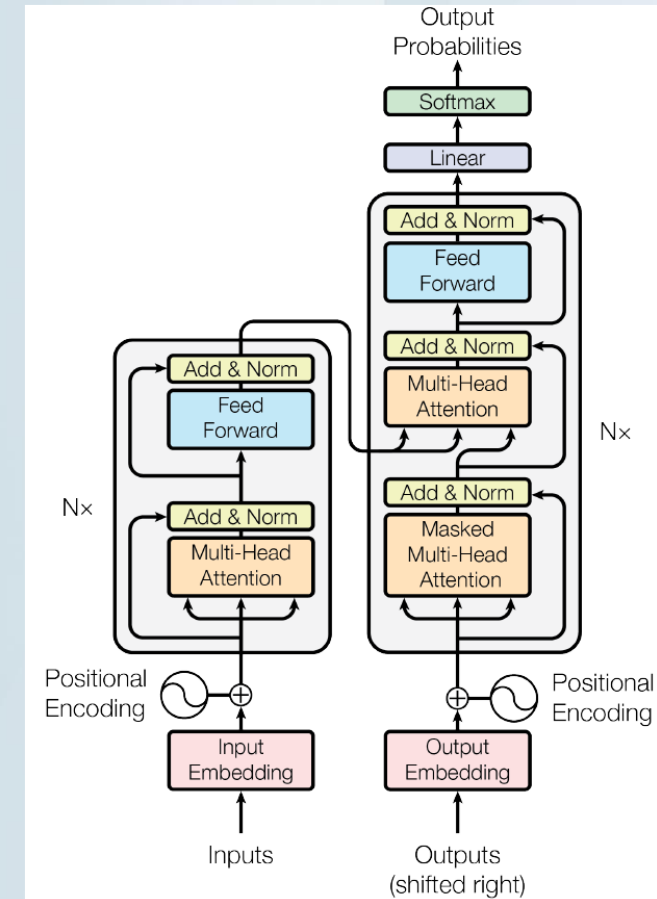


GPT-4 Technical Report

We are committed to independent auditing of our technologies, and shared some initial steps and ideas in this area in the system card accompanying this release.² We plan to make further technical details available to additional third parties who can advise us on how to weigh the competitive and safety considerations above against the scientific value of further transparency.

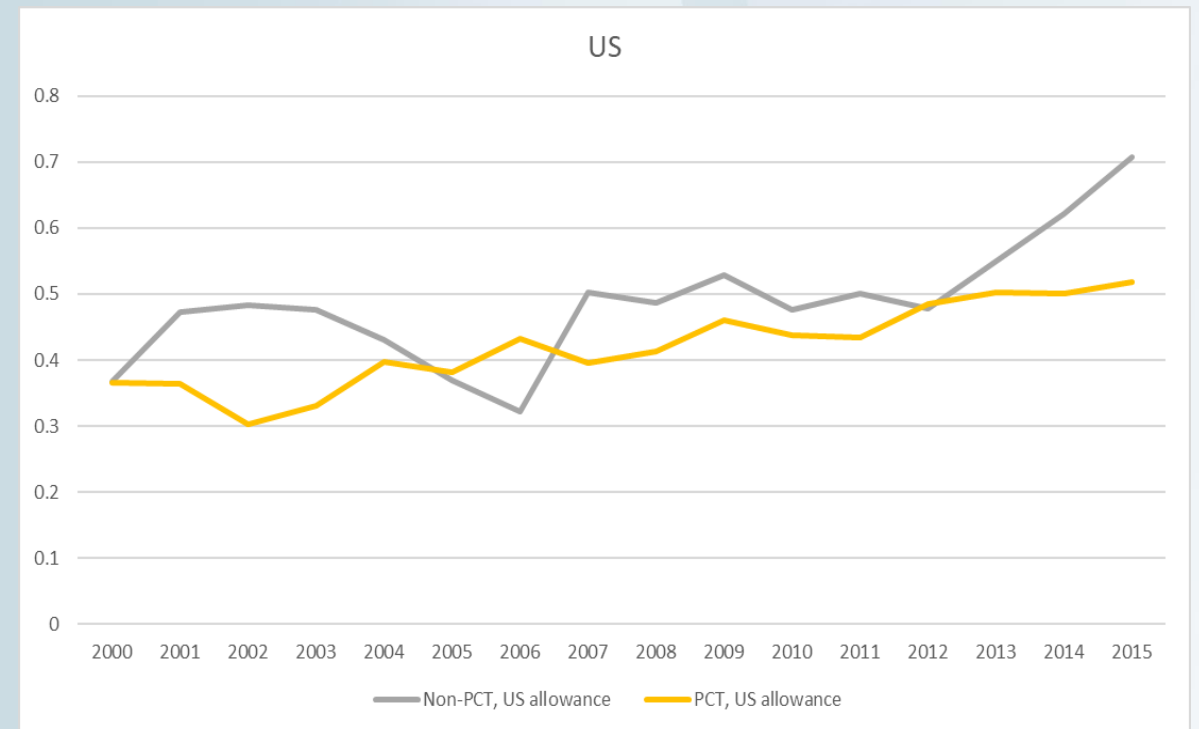
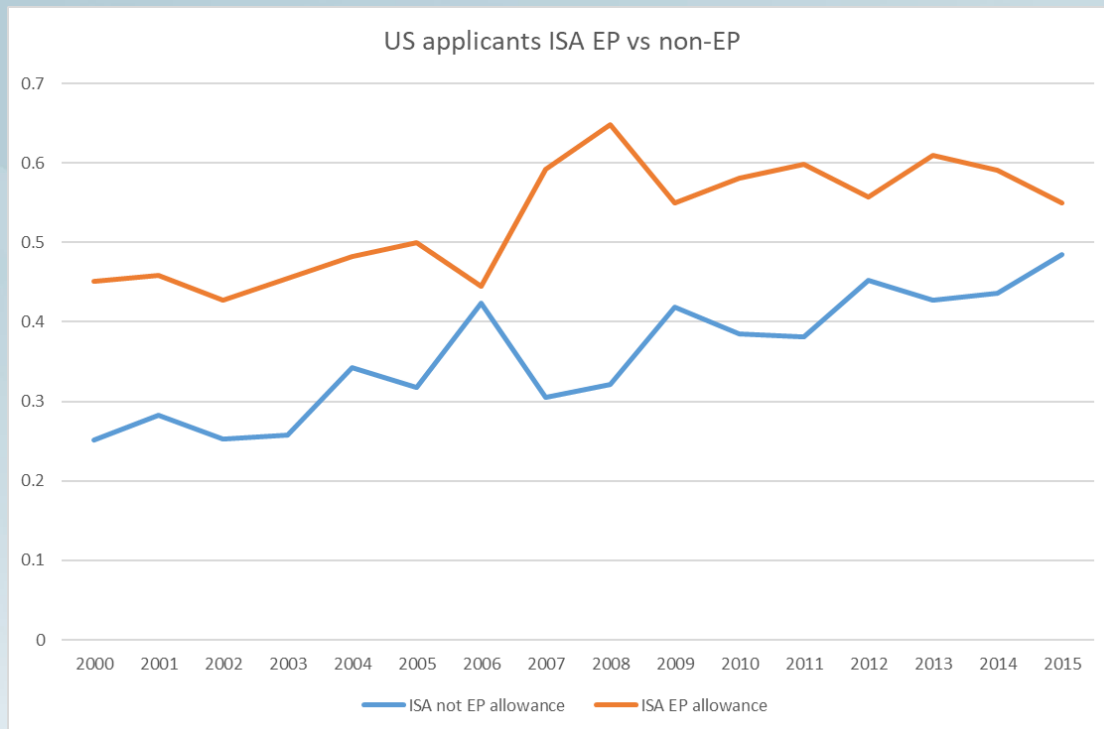
Patent protection for AI

- AI patents have many different uses:
 - Monopoly rights/licensing
 - Freedom To Operate
 - Supporting Open Source licensing
 - Demonstrate innovation
 - Obtain investment
- Other considerations:
 - Regulatory barriers
 - Access to training data/foundation models



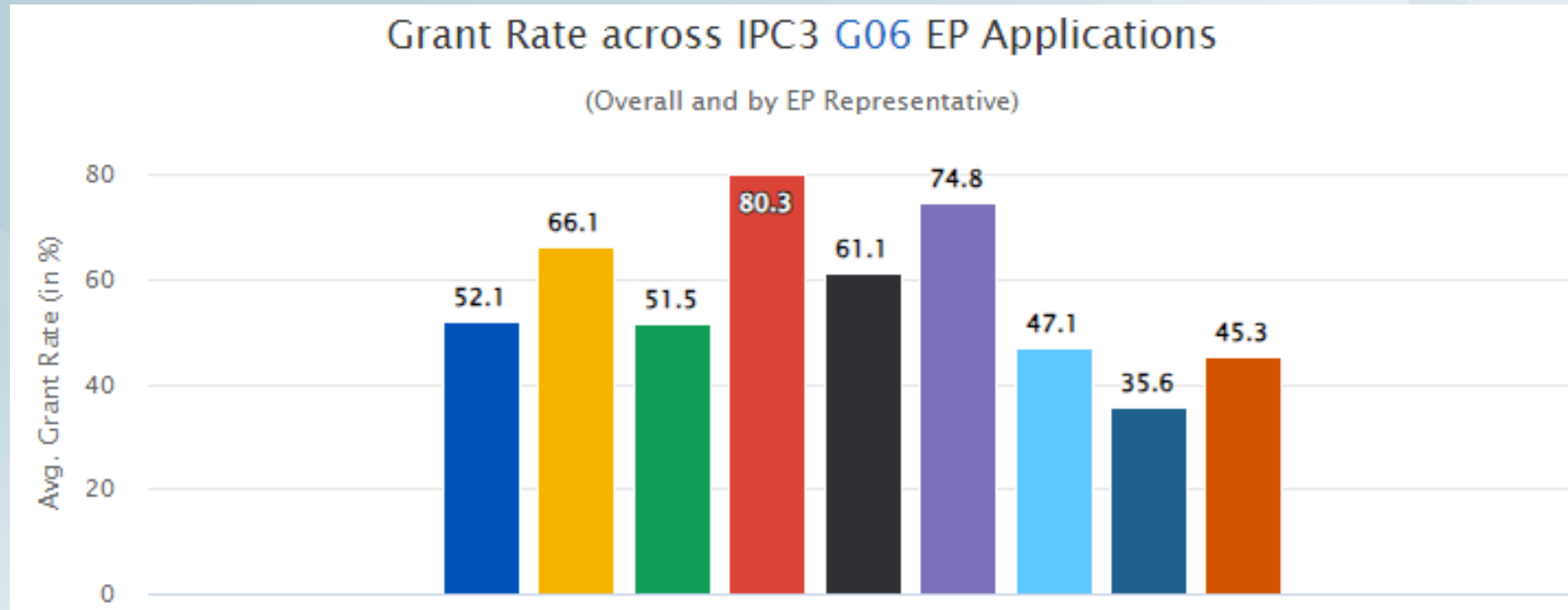
Consider jurisdictions at outset

Using EPO as ISA makes a big different in allowance rate for US applicants



It matters who handles your applications

Marks & Clerk have the highest allowance rate of any EP firm in IPC code G06N (2017-2023) (ipQuants)



AI innovation moves quickly – patents do not!

- Compared to innovation, patent systems can be slow
- Need fast grant?
 - US - not cheap but very fast
 - EP – free, not as fast as US but faster than normal
 - PPH – use grant in other countries
 - Other jurisdictions have options
- Want to slow things down?
 - Patent pending good enough?
 - Need to extend your runway?
 - Crystalize product features?
 - Lots of opportunities to defer costs, too

6. The potential impact of AI regulation on patent filing trends

AI regulation

- Different regulatory frameworks are evolving in different regions - companies may need to vary approach from region to region
- This may mean different patent claims are needed for different regions for example
- We may also see an increase in the proportion of applicants from regions where regulation is less strict





- EPO Legal Board of Appeal confirmed that a machine cannot be an inventor – a request to refer to the EPO Enlarged Board of Appeal (the highest legal judicial authority of the EPO) was considered not to be warranted
- UK Court of Appeal also determined that an AI-based machine cannot be an inventor. Leave to appeal this decision to the Supreme Court was granted in August 2022, the case was heard in March 2023, and a decision is now awaited
- Impact on patent filing trends remains to be seen

Thank you

To learn more, visit marks-clerk.com or contact today's panel:

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