



AI-Driven Innovation in Medical Technologies Webinar Series

Patent Eligibility Challenges for AI-Related Inventions

February 19, 2026



Panel



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AI-Driven Innovation in Medical Technologies Webinar Series

- Episode 1: Patent Landscape and Trends (January 22, 2026) – Available On Demand
- Episode 2: Patent Eligibility Challenges (February 19, 2026)
- Episode 3: Patent Monetization (April 21, 2026)



Overview

- Typical Patentability Issues with Medtech AI
- Comparison of Eligibility Requirements in Major Patent Offices
- Recent USPTO Developments
- Strategies and Observations

Typical Patentability Issues with MedTech AI



Typical Issues with MedTech AI Inventions

- Patent applications that include a mix of AI/ML and life science concepts can experience “more” rejections
 - In the USPTO:
 - Section 101 – Subject matter eligibility (abstract idea, law of nature)
 - Section 112 – Written description, enablement
 - Section 103 – Obviousness
- Patent applications may include claims directed to an AI improvement, an application to a particular field, or some combination

Typical Issues with MedTech AI Inventions

- Overlap of natural laws (medical conditions, treatment effects), abstract ideas (software concepts), and technology (new devices)
- Questions of technical contribution/effect or technical problem/solution (improvements to a computer)
- AI inventions often result in significant improvements in accuracy, speed, efficiency, and resulting medical or technical benefits

Typical Issues with MedTech AI Inventions

- Often, medical software and AI-integrated inventions do not involve hands-off automation or control, but provide recommendations or rely on intervention by external parties (e.g., clinician, patient)
- Many aspects of medical diagnosis and treatment, and many use cases of medical-related software, are influenced by non-technological sources (e.g., regulation, insurance, markets, etc.)

International Comparison of Patent Eligibility Requirements

United States – Section 101

- **Section 101**

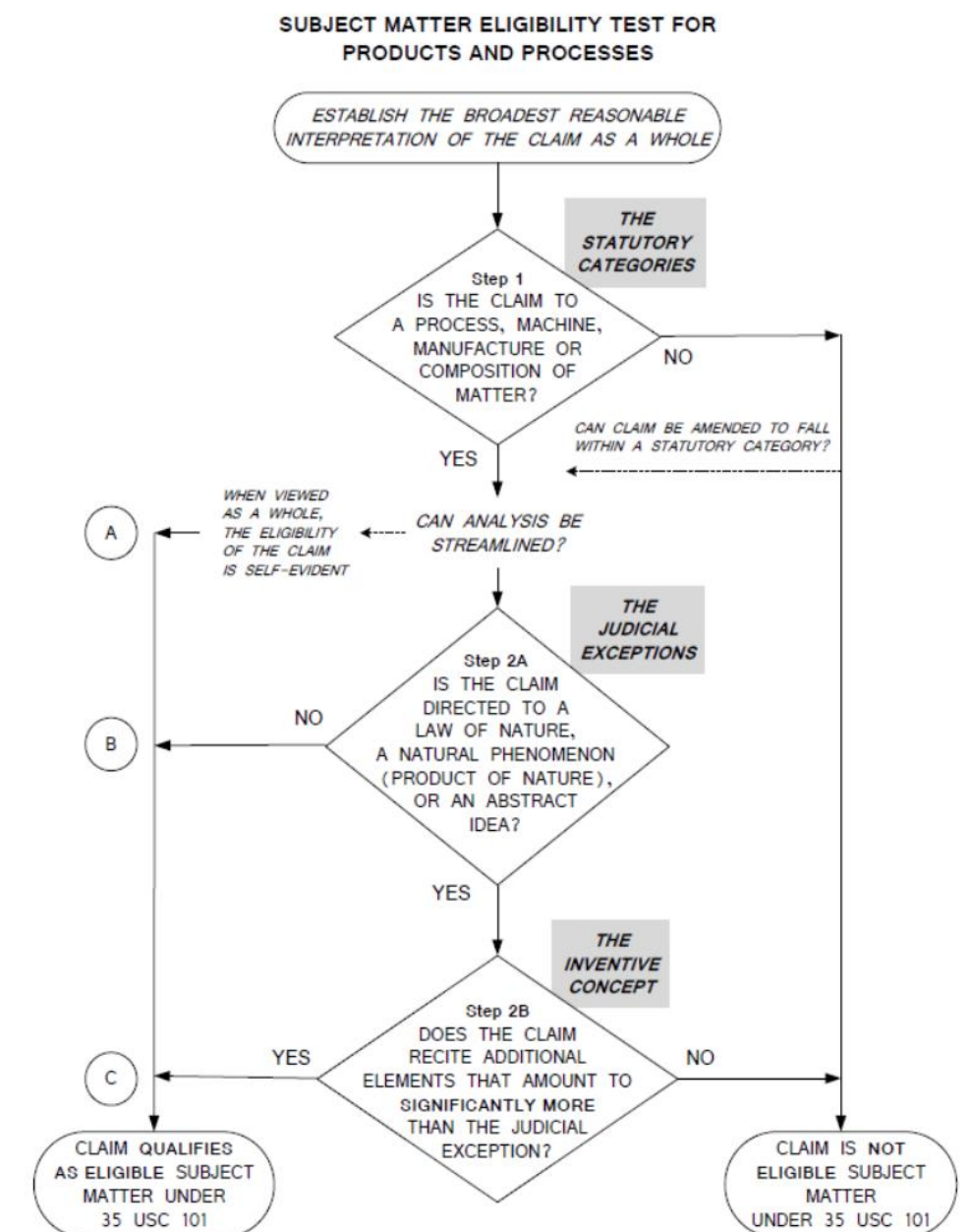
- “Whoever invents or discovers new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof...”
- Judicial exceptions: Law of Nature, Natural Phenomenon (e.g., product of nature), Abstract Idea (e.g., mathematical concepts, human activity, mental processes)

- **“Directed to” Judicial Exception?**

- Step 2A Prong 1: Does not “recite” judicial exception *or*
- Step 2A Prong 2: Integrates judicial exception into “practical application”

- **“Significantly More” than Judicial Exception?**

- Step 2B: Claim “as a whole” provides an “inventive concept”



United States – Section 101

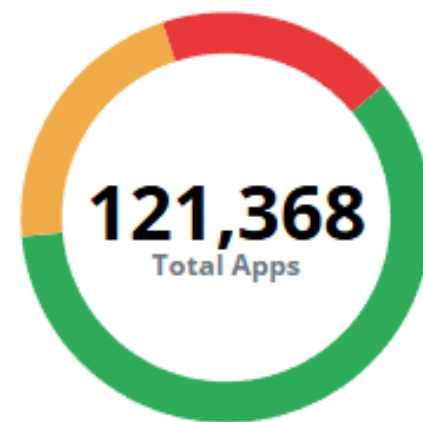
- **Medical Subject Matter**
 - Characterized as mental processes, natural phenomena, or human activity (business methods)
 - Many invalidations since Mayo v. Prometheus (2012), especially involving diagnostics and life sciences inventions
- **AI Subject Matter**
 - Characterized as mental processes, mathematical algorithms, or generic data analysis
- **Risks with Medical-Related AI Patents**
 - Often characterized as an improvement to the “abstract idea” or “judicial exception” - versus an improvement to the functioning of a computer, technology, or technical field



United States – Section 101

Results of SLW Medtech Patent Landscape Search (November 2025)

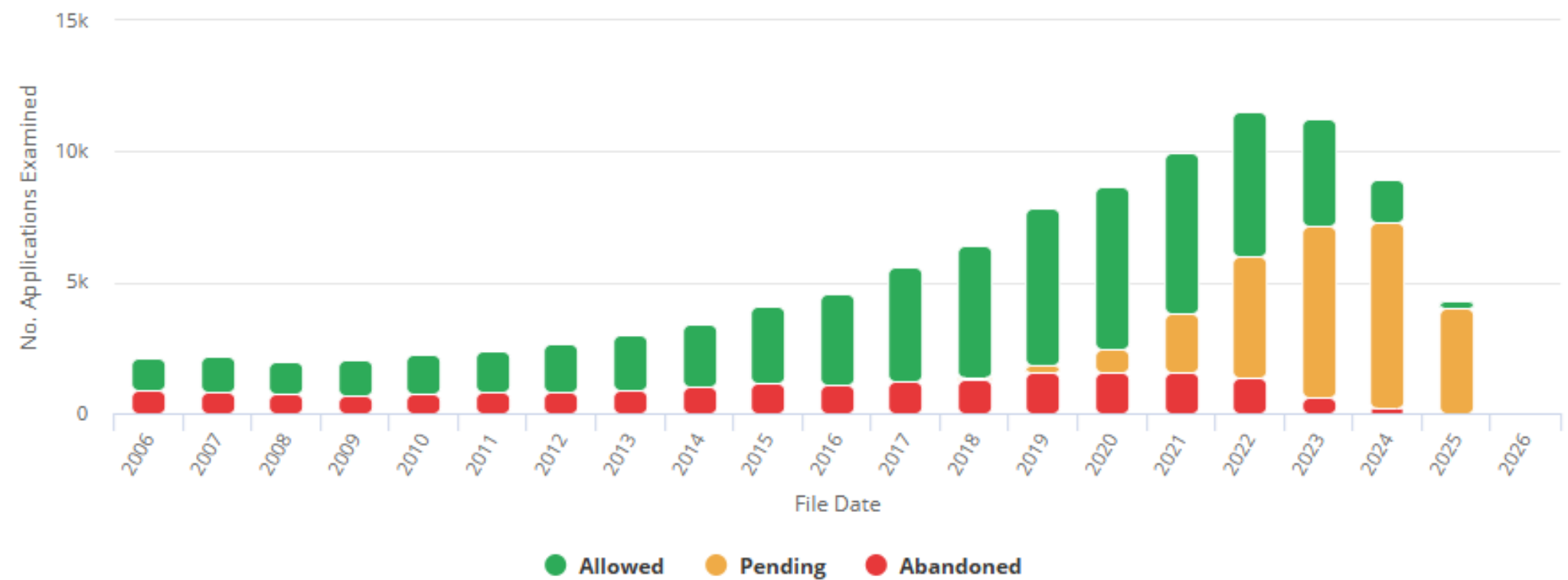
Overview



● Allowed	72,395
● Pending	26,042
● Abandoned	22,931

Analysis only includes published applications

Status of Applications Matching Query (by File Date)



Source: www.AcclaimIP.com

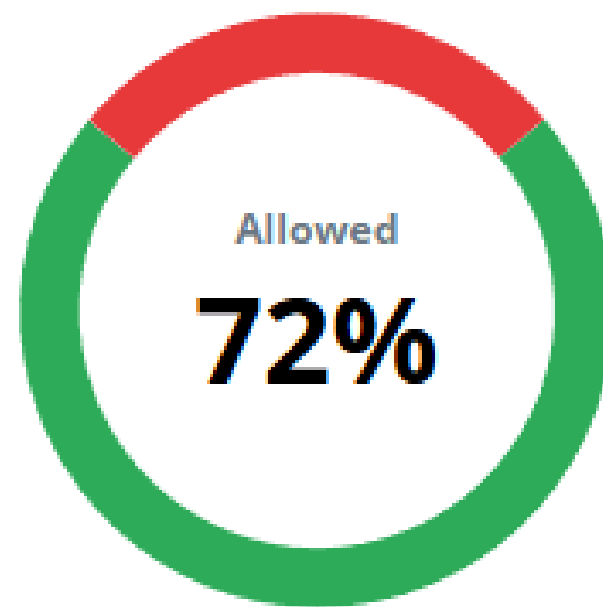
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United States – Section 101

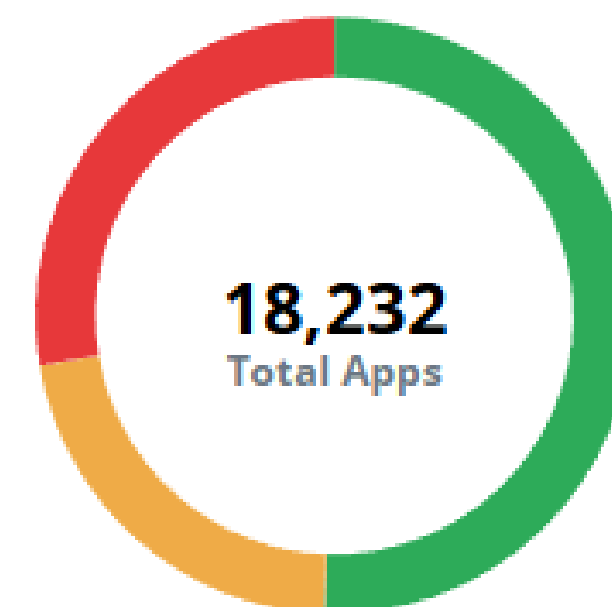
Results of SLW Medtech Patent Landscape Search (November 2025)

Allowance Rate



Includes B2 grants and published apps

101 Patentable Subject Matter



Applications with 101 rejections

● Allowed	9,213
● Pending	3,973
● Abdn.	5,046

Source: AcclaimIP



Europe

Two-Step Test

Eligibility

- Low hurdle, fulfilled by any technical means or any hardware (e.g., computer-implemented method)

Inventive Step

- Examiners must identify which claim features contribute to "technical character", and only these features count towards inventive step
- Problem-solution approach for computer-implemented inventions: features of the claim are assessed as to whether they contribute to the solution of a technical problem

Europe

Technical Character and Effects

- Examiners must identify which claim features contribute to "technical character", and only these features count towards inventive step
- Example: AI invention involving a neural network classifying patient data (biomarkers, images) for disease diagnosis.
 - Classification algorithm (neural network, training): Mathematical/non-technical "as such."
 - Medical features (disease categorization, clinical outcomes): Non-technical (medical purpose).
 - If AI components (neural network, SVM, etc.) and the medical features (biomarkers, imaging parameters) are examined separately, both elements can be known in the art, thus obvious when combined without an inventive contribution specific to the technical problem
- To overcome separate evaluation, claim technical effects with specific implementation choices (improved speed/quality, reduced false positives, specific hardware control, etc.)

China

Two-Step Eligibility Test

- Step 1: Assess technical features.
 - Excluded under Article 25 if consisting of abstract algorithms, business rules, or mental activities without any technical features
- Step 2: Determine technical solution.
 - AI or Software Inventions: Must provide a new technical means (technical solution) to solve a technical problem and achieve a technical effect.

Eligible: AI algorithms will be deemed as a technical solution if the steps concerning the algorithm are closely related to the technical problem to be solved

Ineligible: Algorithm-only claims without technical features (e.g., a mathematical modelling method based on an abstract algorithm)



China

Examination Guidelines Effective January 1, 2026

- Updated Patent Application Guidance for AI-Related Claims
- Exclusions for violating laws, social morality, or public interest
 - Algorithms that make decisions based on discriminatory criteria
 - “Must comply with national laws” – preventing unlawful collection or use of data
- Requirement of detailed disclosures for AI inventions
 - Must provide technical disclosure of AI models, training processes, and data relationships
 - Improvements to the deep learning, model construction, or training process

Korea

AI Inventions – Based on Computer-Related Invention Standards

- Enablement
 - Specifically described to make a person skilled in the art clearly understand a specific means, a technical problem, a solving means, etc., and thereby easily carry out the AI related invention
- Eligibility
 - AI or Software Inventions: “a creation of technical ideas utilizing a law of nature.”

Eligible: controls a device, implements a necessary controlling process, or implements information processing based on the technical nature of the subject

Ineligible: applies laws other than a law of nature, artificial determination, belongs to mental activity of a human, or suggests simple information

Japan

AI Inventions – Based on Software Invention Standards

- Eligibility
 - AI or Software Inventions: “creations of technical ideas utilizing a law of nature”
 - Software criteria: Is information processing by the software concretely realized by using hardware resources?

Eligible: Computer program product; an AI method or system that solves a technical problem or achieves a concrete technical effect

Ineligible: Data or algorithm *per se*; Directed to economic laws, mental activities, mathematical formulas, or the mere presentation of information



Australia

AI Inventions – Based on Computer-Implemented Guidelines

- Full Federal Court decision in *Aristocrat v Commissioner of Patents*
 - Favorable to patent eligibility, AU Patent Office sought special leave to appeal the decision to High Court (which was denied February 5, 2026)
- Eligibility
 - Patentable if what is claimed “as a matter of substance” meets the requirements for a manner of manufacture, not a mere scheme, abstract idea, or mere information
 - Contribution of the claimed invention is technical in nature
 - Solves a technical problem within a computer or outside a computer
 - Results in improvement in the functioning of a computer, irrespective of the data being processed
 - Produces an artificial state of affairs
 - An interdependence of physical features (beyond a generic computer) which enable the invention to work



Canada

AI Inventions – Based on Computer-Related Invention Standards

- Identification of “Actual Invention”
 - Actual invention – the element or combination solving the problem
- Physicality + Manual/Productive Arts
- Draft Revisions to Manual of Patent Office Practice (2025)
 - *Eligible*: Neural network improving computer (fewer arithmetic operations); algorithm with physical inputs (medical device sensor data)
 - *Ineligible*: Abstract algorithm on generic computer without physicality.



Comparison of Jurisdictions

Patent Office	Eligibility Test	AI-Specific Examination Guidelines?
United States (USPTO)	<ul style="list-style-type: none">• Step 2A Prong One (claim does or does not recite abstract idea)• Step 2A Prong Two (claim does recite abstract idea, but “additional elements” integrate the alleged abstract idea into a practical application)• Step 2B (significantly more than abstract idea)	Yes – 2024 and 2025 guidance (Subject Matter Examples) 2025 - Section 101 Examiner “Reminders” Memorandum
Europe (EPO)	<ul style="list-style-type: none">• Inventive step requires “technical contribution” to solve “technical problem”• “Technical effect” serving “technical purpose”	Yes – 2018, 2024, 2025 guidance
China (CNIPA)	<ul style="list-style-type: none">• “Technical Features that form a “Technical solution”• Avoidance of “mental activities”	Yes – 2020, 2024, 2026 guidance

Comparison of Jurisdictions

Patent Office	Eligibility Test	AI-Specific Examination Guidelines?
Korea (KIPO)	<ul style="list-style-type: none"> • Technical implementation with “repeatable effect” 	Yes – 2020 (revised often)
Japan (JPO)	<ul style="list-style-type: none"> • Creation of technical ideas using laws of nature, based on technical field or software implementation 	Yes – 2019, 2024 AI case examples, discussed in software guidance
Australia (IP Australia)	<ul style="list-style-type: none"> • Modifies computer functionality or controls a “technical process” • Concrete, technical result rather than a “mere scheme” or business method 	Yes - discussed in computer-implemented invention guidance
Canada (CIPO)	<ul style="list-style-type: none"> • “Physicality” • Improved computer functionality 	Yes – discussed in computer-implemented invention guidance

Comparison of Jurisdictions

Patent Office	Methods of Medical Treatment Eligible?	Methods of Medical Diagnosis Eligible?
United States (USPTO)	Yes	Yes (unless directed to abstract idea or natural law)
Europe (EPO)	No (prohibition on methods, not devices or systems)	No (unless directed to device or computer data processing)
China (CNIPA)	No (prohibition on methods, not devices or systems)	No (unless directed to device or computer data processing)
Korea (KIPO)	No (unless performed by computer/AI, no direct treatment steps)	No (unless directed to device or computer data processing)
Japan (JPO)	No (unless performed by device or product)	No (unless directed to samples, or to device or computer data processing)
Australia (IP Australia)	Yes	Yes
Canada (CIPO)	No (prohibition on methods, not devices or systems without treatment steps)	Yes (if demonstrating physicality, such as use of a physical device for testing or measurement)

Recent USPTO Developments and Observations



USPTO – Eligibility Examples

USPTO Subject Matter Examples – “Example 49” – July 2024

Summary of Example:

- A personalized medicine application of a computer-implemented machine learning model (MLM). Method claims directed to treating fibrosis after microstent implant surgery in glaucoma patient

USPTO Guidance:

- Claims to a generic outcome and action are ineligible.
- Claims to a particular treatment/prophylaxis are eligible.



USPTO – Eligibility Examples

[Claim 1] A post-surgical fibrosis treatment method comprising:

- (a) collecting and genotyping a sample from a glaucoma patient to provide a genotype dataset;
- (b) identifying the glaucoma patient as at high risk of post-implantation inflammation (PI) based on a weighted polygenic risk score that is generated from informative single-nucleotide polymorphisms (SNPs) in the genotype dataset by an eZAI model that uses multiplication to weight corresponding alleles in the dataset by their effect sizes and addition to sum the weighted values to provide the score; and
- (c) administering an appropriate treatment to the glaucoma patient at high risk of PI after microstent implant surgery.

[Claim 2] The method of claim 1, wherein the appropriate treatment is Compound X eye drops.

Claim 1

- Treatment of a claim limitation that can be categorized as a law of nature or abstract idea.
- Distinguishes between a particular treatment/prophylaxis limitation, which renders a claim eligible, and a generic treatment step, which does not render a claim eligible.
- Addresses the difference between an improvement to the abstract idea v. an improvement to the functioning of a computer or another technical field.

Claim 2

- Demonstrates a “particular treatment” limitation that integrates the abstract idea into a practical application of the abstract idea.



USPTO – Eligibility Examples

[Claim 1] A post-surgical fibrosis treatment method comprising:

- (a) collecting and genotyping a sample from a glaucoma patient to provide a genotype dataset;
- (b) identifying the glaucoma patient as at high risk of post-implantation inflammation (PI) based on a weighted polygenic risk score that is generated from informative single-nucleotide polymorphisms (SNPs) in the genotype dataset by an eZAI model that uses multiplication to weight corresponding alleles in the dataset by their effect sizes and addition to sum the weighted values to provide the score; and
- (c) administering an appropriate treatment to the glaucoma patient at high risk of PI after microstent implant surgery.

[Claim 2] The method of claim 1, wherein the appropriate treatment is Compound X eye drops.

Possible issues:

- Divided Infringement?
- Enforceability / Detectability?
- Point of Novelty?
- Enablement?



USPTO – Examination Changes?

Examiner Memorandum – Reminders on evaluating subject matter eligibility of claims under 35 U.S.C. 101.


- Directed to Technology Centers 2100, 2600, 3600, which include Art Units most likely to encounter AI software
- Refers to Example 39 (training the neural network) and Example 47 (training the neural network with specific mathematical calculation)



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

MEMORANDUM

DATE: August 4, 2025
TO: Technology Centers 2100, 2600, and 3600
FROM: Charles Kim 
Deputy Commissioner for Patents

SUBJECT: Reminders on evaluating subject matter eligibility of claims under 35 U.S.C. 101

Examiners in software-related arts, including Artificial Intelligence (AI) and Machine Learning, often encounter challenges in evaluating whether the claims are directed to a judicial exception when analyzing claims for subject matter eligibility. This memorandum provides important reminders pertaining to the United States Patent and Trademark Office's (USPTO's) subject matter eligibility guidance, articulated in the Manual of Patent Examining Procedure (MPEP), to aid examiners in these evaluations. Specifically, this memorandum provides guidance on the

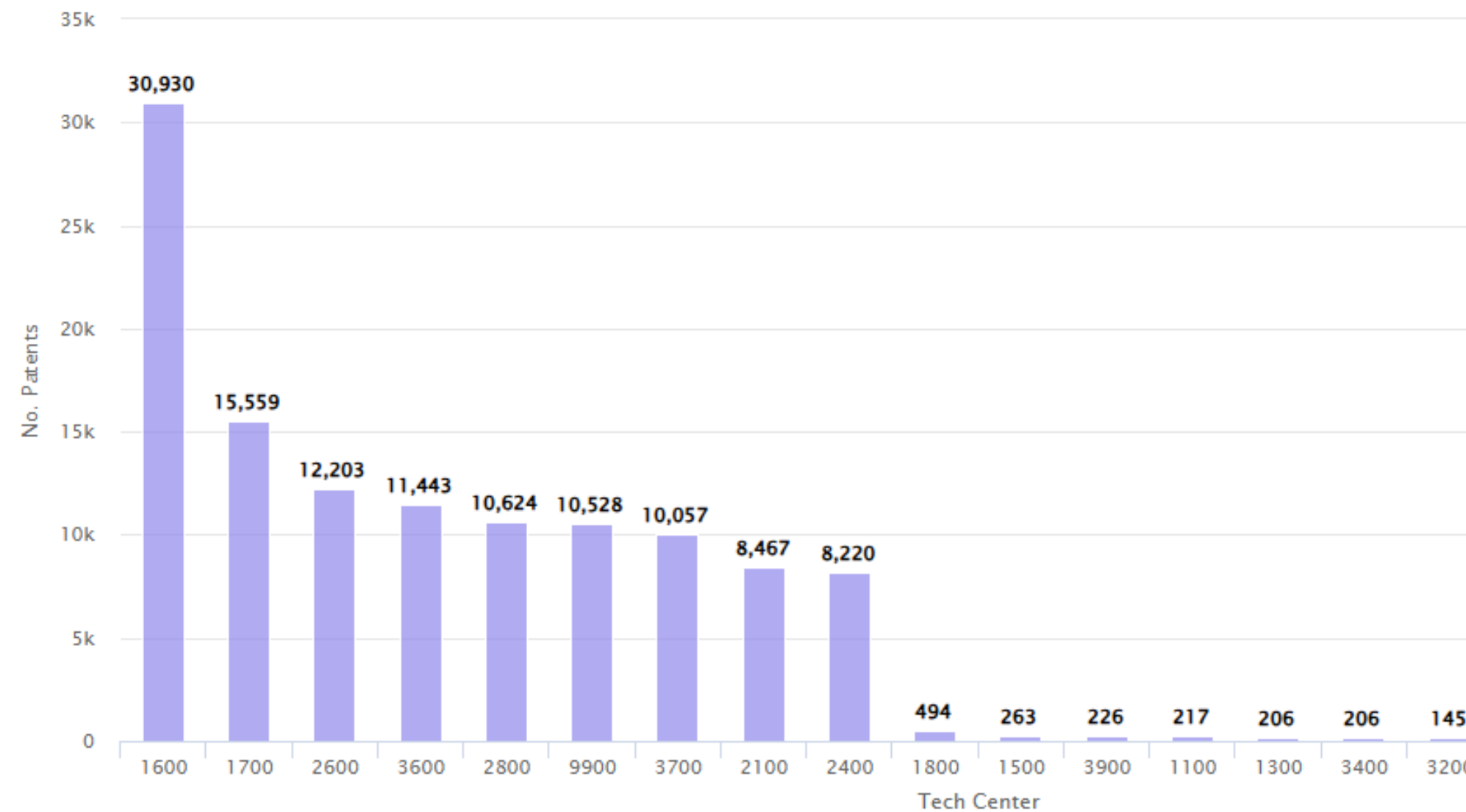


USPTO – Examination Changes?

Results of SLW Medtech Patent Landscape Search (November 2025)

Chart by US Tech Center

Includes US Cases Only





USPTO – Examination Changes?

Revised MPEP Section (MPEP 2106)

- Based on precedential decision issued in *Ex Parte Desjardins* (Sept. 26, 2025)
- Claims to a method of training a machine learning model were directed to improvements in the machine learning technology itself
- Improvement in technology or a technical field



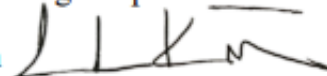
United States Patent and Trademark Office

Office of the Commissioner for Patents

MEMORANDUM

DATE: December 5, 2025

TO: Patent Examining Corps

FROM: Charles Kim 
Deputy Commissioner for Patents

SUBJECT: Advance notice of change to the MPEP in light of *Ex Parte Desjardins*

On September 26, 2025, the United States Patent and Trademark Office (USPTO) issued an Appeals Review Panel decision in *Ex Parte Desjardins*, Appeal No. 2024-000567 (PTAB September 26, 2025, Appeals Review Panel Decision) vacating the Board's new ground of rejection under 35 U.S.C. § 101. The decision was designated precedential on November 4, 2025.

USPTO – Examination Changes?

- The following paragraph is added to the end of MPEP § 2106.04(d), subsection III:

In *Ex Parte Desjardins*, Appeal No. 2024-000567 (PTAB September 26, 2025, Appeals Review Panel Decision) (precedential), the claimed invention was a method of training a machine learning model on a series of tasks. The Appeals Review Panel (ARP) overall credited benefits including reduced storage, reduced system complexity and streamlining, and preservation of performance attributes associated with earlier tasks during subsequent computational tasks as technological improvements that were disclosed in the patent application specification. Specifically, the ARP upheld the Step 2A Prong One finding that the claims recited an abstract idea (i.e., mathematical concept). In Step 2A Prong Two, the ARP then determined that the specification identified improvements as to how the machine learning model itself operates, including training a machine learning model to learn new tasks while protecting knowledge about previous tasks to overcome the problem of “catastrophic forgetting” encountered in continual learning systems. Importantly, the ARP evaluated the claims as a whole in discerning at least the limitation “adjust the first values of the plurality of parameters to optimize performance of the machine learning model on the second machine learning task while protecting performance of the machine learning model on the first machine learning task” reflected the improvement disclosed in the specification. Accordingly, the claims as a whole integrated what would otherwise be a judicial exception instead into a practical application at Step 2A Prong Two, and therefore the claims were deemed to be outside any specific, enumerated judicial exception (Step 2A: NO).

field. Second, if the specification sets forth an improvement in technology or a technical field, the claim must be evaluated to ensure that the claim itself reflects the disclosed improvement, i.e., that is, the claim includes the components or steps of the invention that provide the improvement described in the specification. The claim itself does not need to explicitly recite the improvement described in the specification (e.g., “thereby increasing the bandwidth of the channel”). See, e.g., *Ex Parte Desjardins*, Appeal No. 2024-000567 (PTAB September 26, 2025, Appeals Review Panel Decision) (precedential), in which the specification identified the improvement to machine learning technology by explaining how the machine learning model is trained to learn new tasks while protecting knowledge about previous tasks to overcome the problem of “catastrophic forgetting,” and that the claims reflected the improvement identified in the specification. Indeed, enumerated improvements identified in the *Desjardins* specification included disclosures of the effective learning of new tasks in succession in connection with specifically protecting knowledge concerning previously accomplished tasks; allowing the system to reduce use of storage capacity; and the enablement of reduced complexity in the system. Such improvements were tantamount to how the machine learning model itself would function in operation and therefore not subsumed in the identified mathematical calculation.

Open Questions

- Possible effects on prosecution (Examiners or appeals board)?



USPTO – Examination Changes?

- The second paragraph of MPEP § 2106.05(a), subsection I, is revised to add new examples xiii and xiv to the list of examples that may show an improvement in computer functionality:

xiii. An improved way of training a machine learning model that protected the model's knowledge about previous tasks while allowing it to effectively learn new tasks; *Ex Parte Desjardins*, Appeal No. 2024-000567 (PTAB September 26, 2025, Appeals Review Panel Decision) (precedential); and

xiv. Improvements to computer component or system performance based upon adjustments to parameters of a machine learning model associated with tasks or workstreams; *Ex Parte Desjardins*, Appeal No. 2024-000567 (PTAB September 26, 2025, Appeals Review Panel Decision) (precedential).

Open Questions

- What is the difference between improvement in a “technology” or an improvement in a “technical field”?
- Should Applicants pursue claims that focus on the improvement in training, executing, inferencing with the machine learning model?
- What type of evidence is needed to show “improvement”?



USPTO – Examination Changes?

Rule 132 “Subject Matter Eligibility” Declarations

- Submitted as separate document
- Example: Testimony “on how one of ordinary skill in the art would interpret the disclosed invention as improving technology and the underlying factual basis for that conclusion”

Possible Examples:

- Whether impossible for claimed invention to be performed in human mind?
- Whether claimed invention is suitable for unconventional treatment or prophylaxis?
- Expert testimony required? Corroborated with “objective evidence” such as information from scientific literature?

MEMORANDUM

To: All Patent Applicants and Patent Practitioners

From: John A. Squires 
Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office

Subject: Best Practices for Submission of Rule 132 Subject Matter Eligibility Declarations (SMEDs)

Date: December 4, 2025

I. Introduction

This memorandum addresses the best practice for submitting Subject Matter Eligibility Declarations (SMEDs) under 37 CFR 1.132 to address subject matter eligibility (SME) rejections in U.S. patent prosecution. Specifically, it supports the proposition that SMEDs should be submitted as separate documents and not combined with declarations or testimony addressing other issues, such as obviousness (e.g., secondary considerations or motivation to combine). Further, attached as [Appendix A](#) is a memorandum distributed to the USPTO Examining Corps, which is intended to alert (and remind) the Examiners that applicants voluntarily may submit SMEDs pursuant to existing Rule 132 (SMED Examiner Memo).



United States – Case Law Developments

AI VISUALIZE, INC. v. NUANCE COMMUNICATIONS, INC (Fed. Cir., April 4, 2024) - Ineligible

- Patents titled “Method and system for fast access to advanced visualization of medical scans using a dedicated web portal”.
- Federal Circuit: “asserted claims are directed to converting data and using computers to collect, manipulate, and display the data....But ‘converting information from one format to another . . . is an abstract idea.’”

RECENTIVE ANALYTICS, INC. v. FOX CORP. (Fed. Cir., April 18, 2025) - Ineligible

- Patents titled “Systems and Methods for Determining Event Schedules”. Using machine learning technique to “optimize an overall television rating across the first plurality of live events and the second plurality of live events”
- Federal Circuit: “This case presents a question of first impression: whether claims that do no more than apply established methods of machine learning to a new data environment are patent eligible. We hold that they are not.”



United States – Case Law Developments

POWERBLOCK HOLDINGS V. IFIT (August 11, 2025) - Eligible

- Patents titled “Weight selection and adjustment system for selectorized dumbbells including motorized selector positioning”, 2007 priority date.
- Federal Circuit: “In the context of this rather simple mechanical invention...claim 1 goes beyond claiming the ‘broad concept’ of automating a known technique and provides a sufficiently ‘specific manner of performing’ automated weight stacking.”

US PATENT NO. 7,679,637 LLC, v. GOOGLE (January 22, 2026) - Ineligible

- Patents titled “Time-shifted web conferencing”, 2007 priority date.
- Federal Circuit: “Even if we were to narrow the district court’s characterization of the claims, however, we would still conclude the claims are directed to the patent-ineligible abstract idea of allowing asynchronous review of presentations, rather than any specific technological improvement, because they do not ‘describe how the alleged goal of [asynchronous review] is achieved.’”

See also: Longitude Licensing v. Google (April 30, 2025, nonprecedential) (e.g., “Claim 32 of the ’365 patent merely uses a computer to adjust parameters... without explaining how this result is achieved”)

Strategies for AI Medtech Inventions



Strategies for Patent Drafting

- Discussion of technical problem, technical solution, technical effects
- Explaining the “how”, especially if AI is used to obtain the result
- USPTO “Track 1” Prioritized Examination
- AI-based vetting of claims for prior art, eligibility concerns



Strategies for Patent Prosecution

- Cite MPEP sections, Revised Examiner guidance
- Rule 132 Declarations
- Use of Method claims to emphasize medical treatment use cases?
- *Ex parte* Appeals of Section 101 rejections



Summary & Wrap-Up

- Divergence between USPTO guidance and ongoing examination
- Divergence between USPTO and Federal Circuit
 - Federal Circuit: specific, detailed implementation information ("how-to")
 - USPTO: Improvement to technical field and technology
- Eligibility decreasing in importance as AI prior art space expands?



Thank you



These materials are for general informational purposes only. They are not intended to be legal advice, and should not be taken as legal advice. They do not establish an attorney-client relationship.

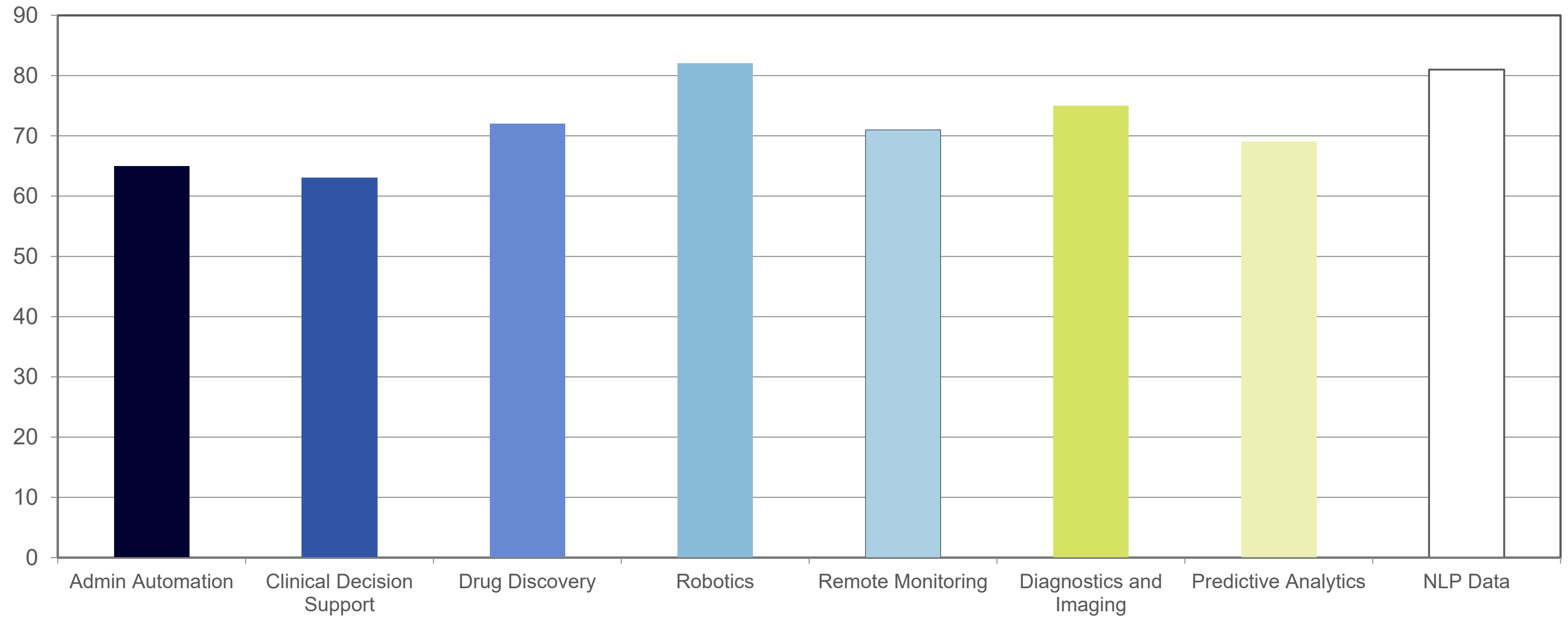
Reference – US Prosecution Statistics
From SLW January 2026 Presentation

Data Set: US AI/Medtech-related Patent
Applications from 2005-2025



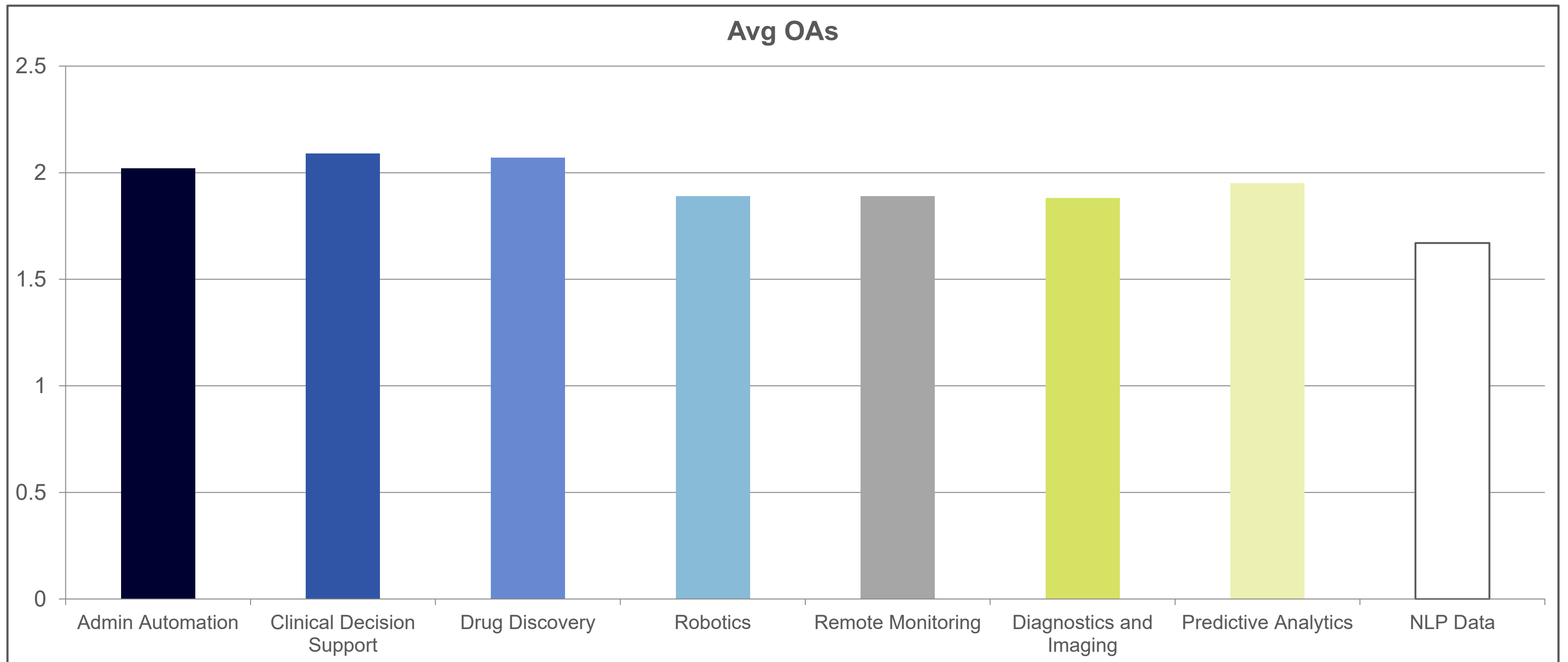
Allowance Rate

Allowance Rate



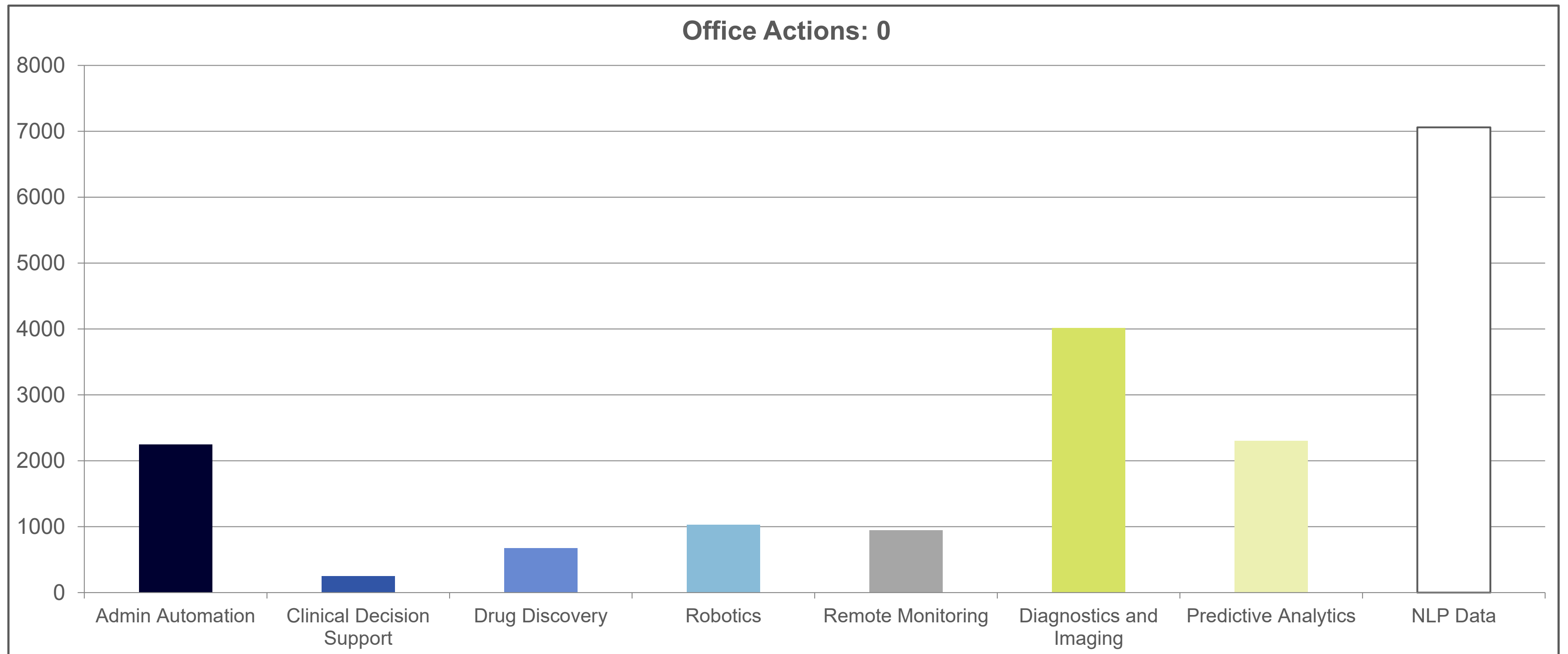


Average Number of Office Actions to Allowance



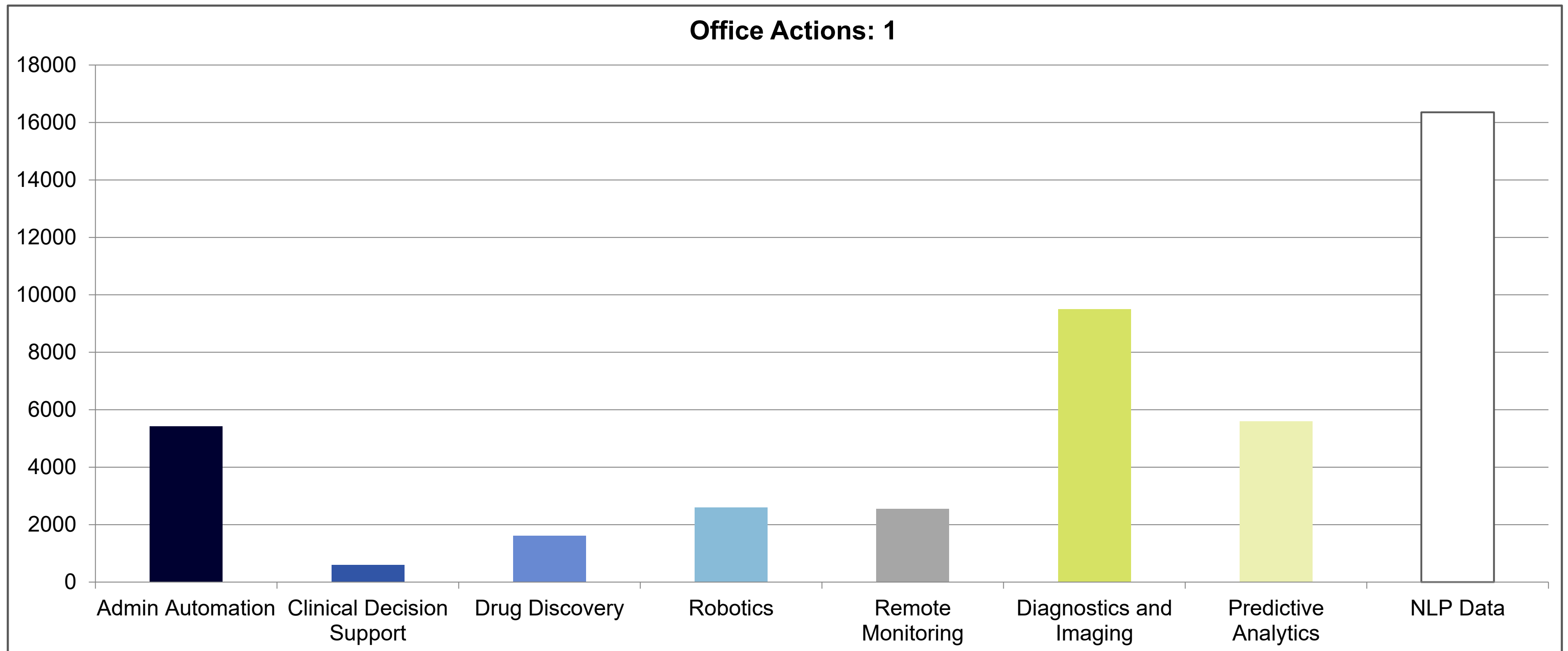


Distribution of Office Actions to Allowance



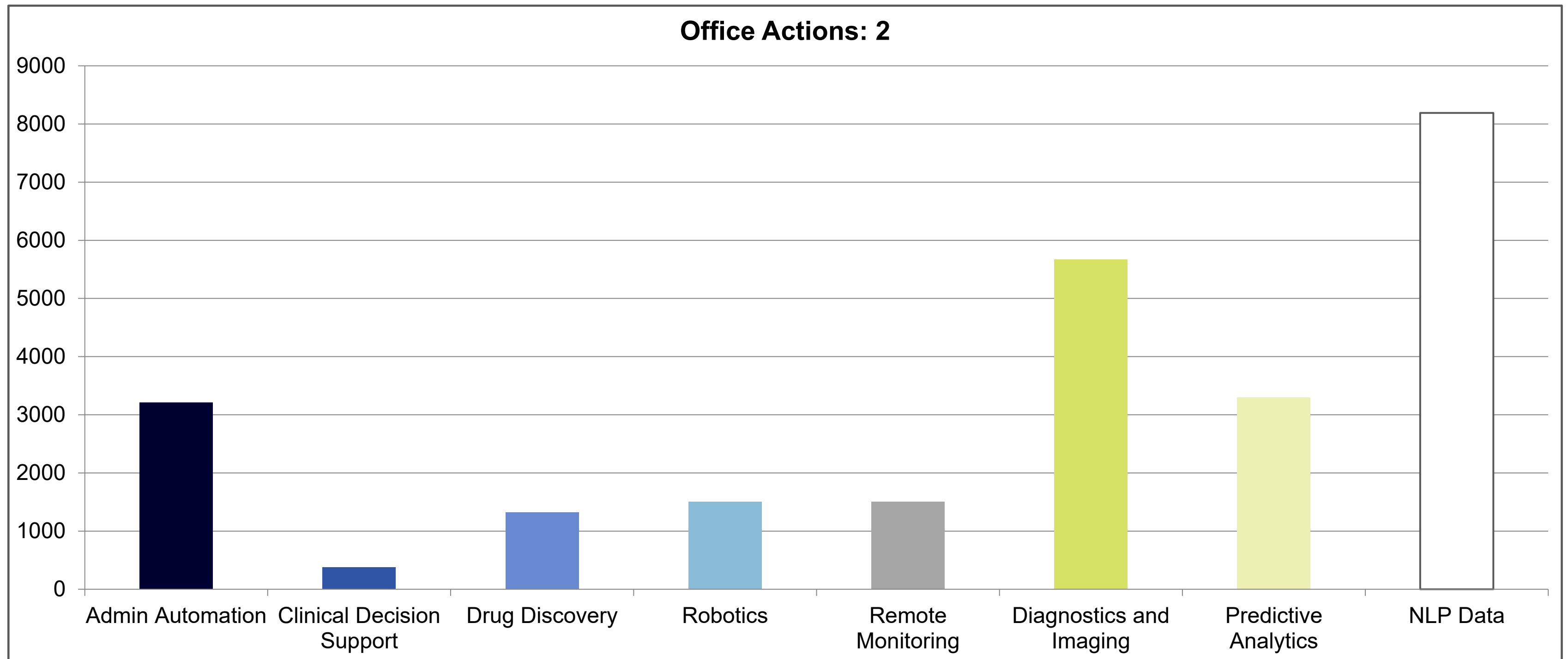


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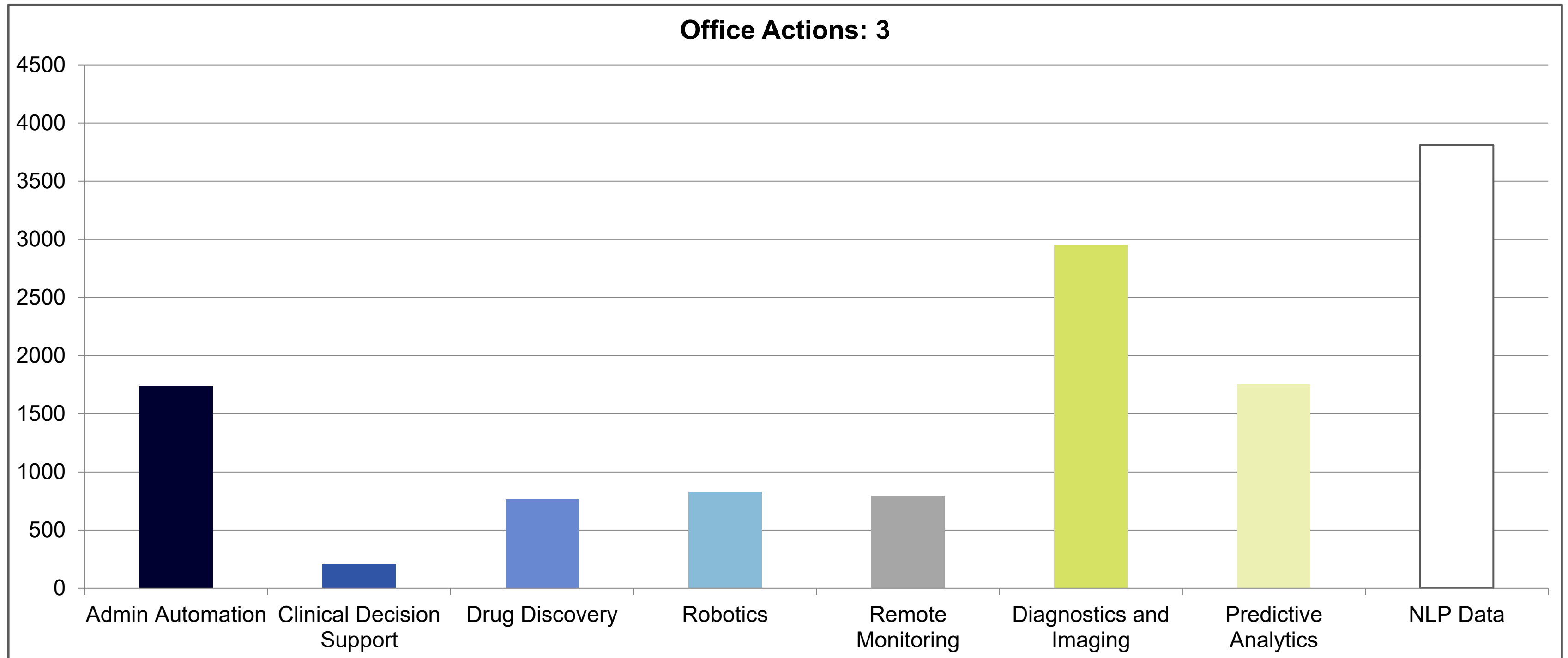


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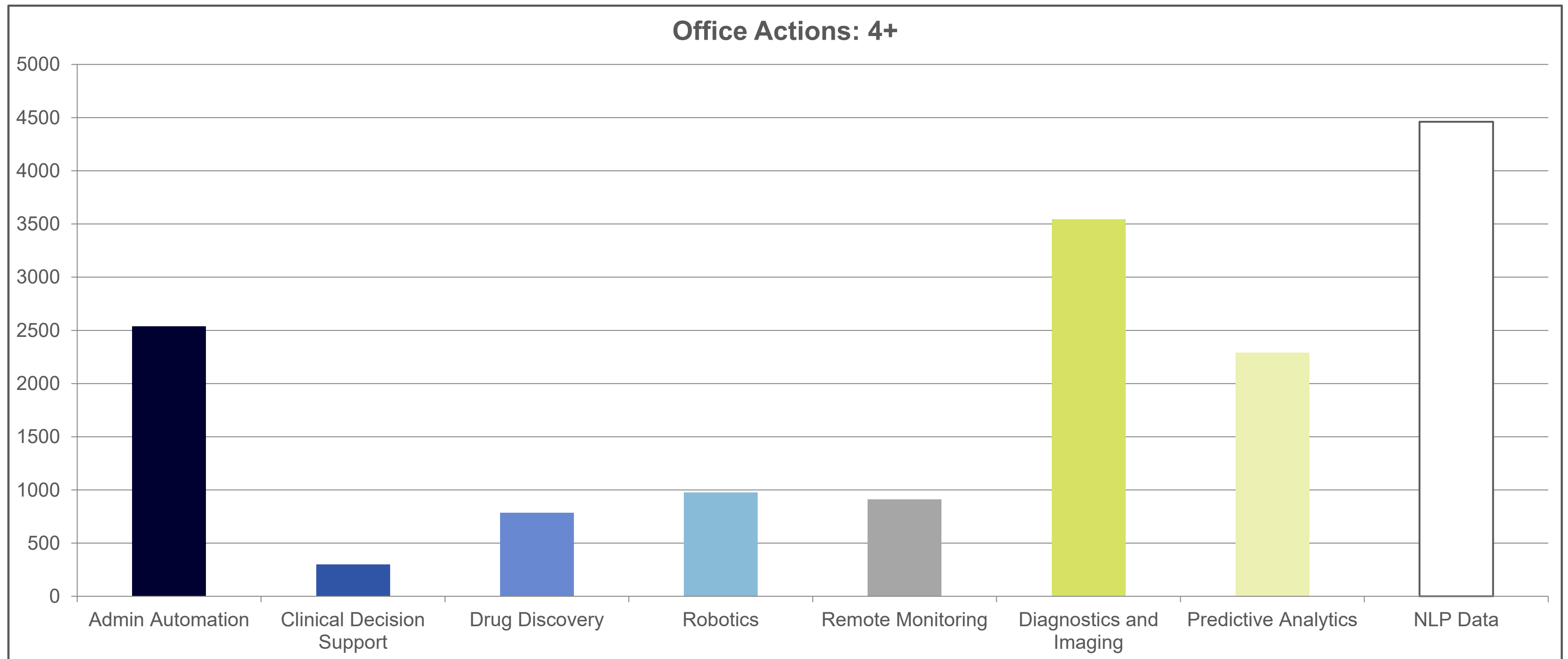


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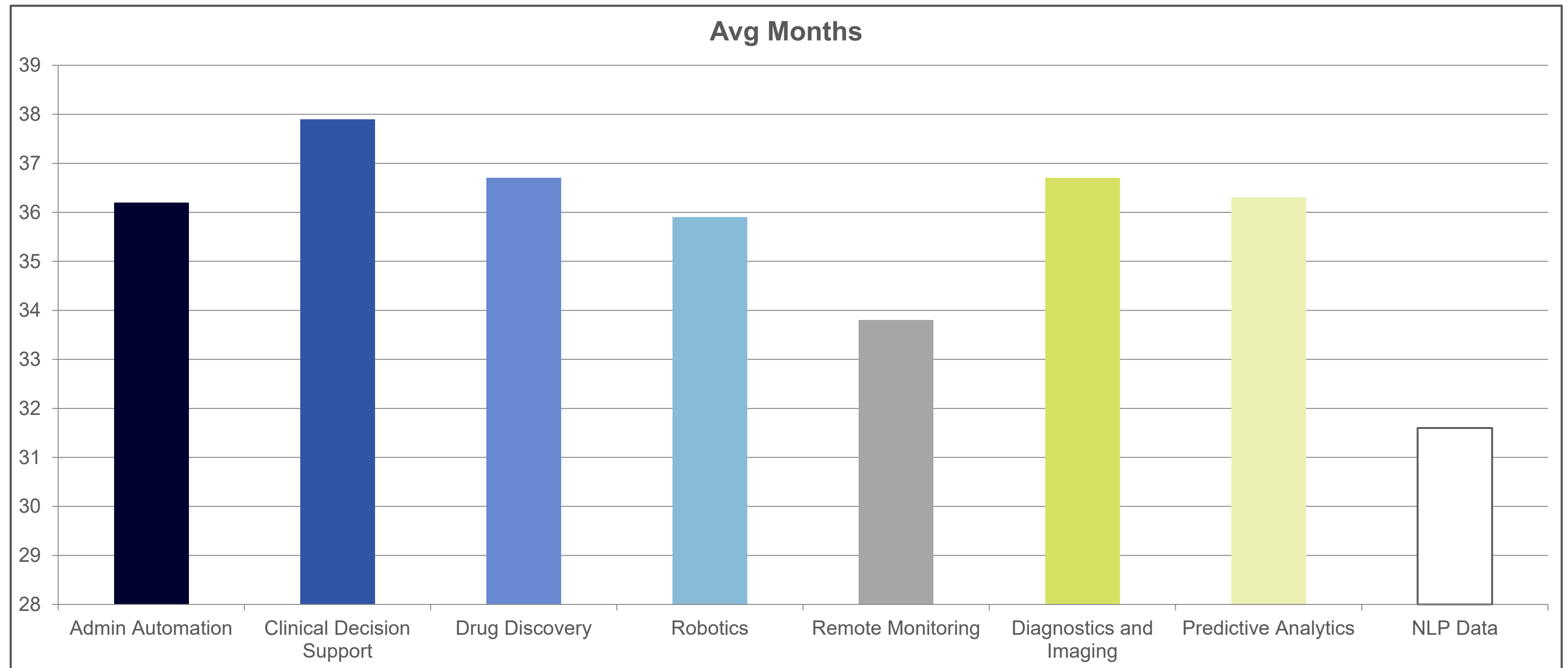


Distribution of Office Actions to Allowance



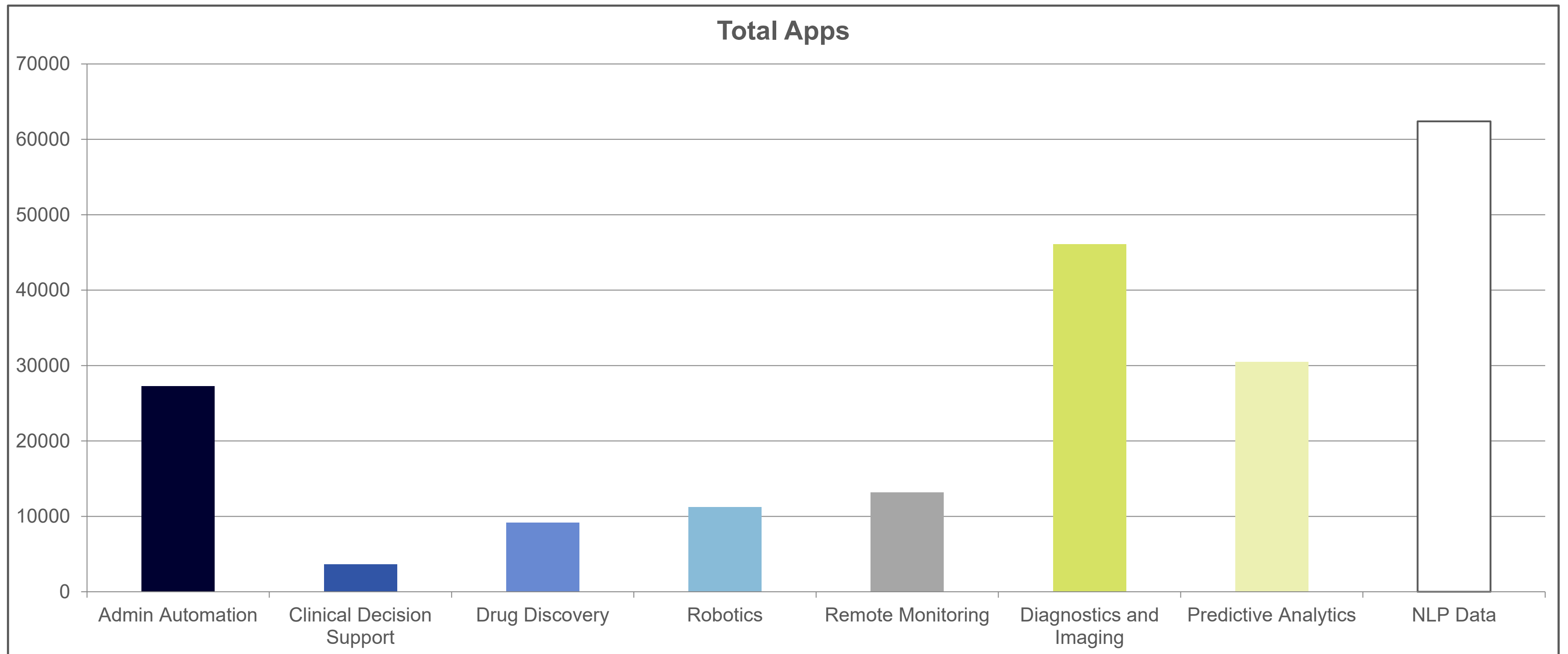


Average Time to Disposition (Months)



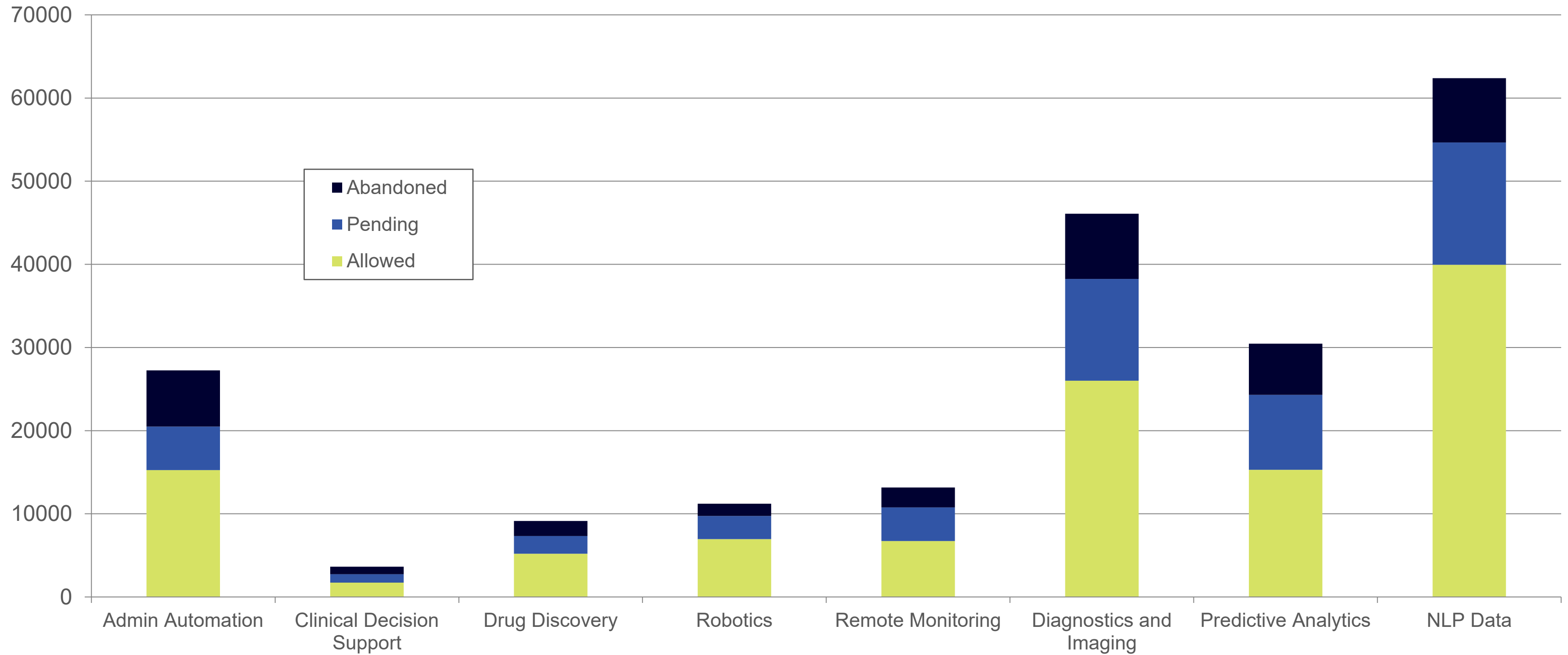


Total Applications





Allowed vs Pending vs Abandoned





Average First Claim Length (Word)

