USPTO Quality Metrics Analysis

An Interactive Qualifying Project
For the United States Patent and Trademark Office

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Abstract

The United States Patent and Trademark Office is working to improve its position as a "world-class" patent system. The goal of this project was to assist the USPTO by evaluating their current quality metrics on patent examinations. To analyze the quality metrics, our team collected data through an analysis of external and internal surveys, annual reports, focus groups, and employee interviews. Our team identified key quality issues and made recommendations for the development of new metrics to monitor quality improvement.

Acknowledgements

Throughout this project, we have worked with many others that have contributed to our project greatly. We would first like to give a big thanks to our sponsors at the USPTO, Martin Rater and Daniel Sullivan. They helped us design our project in addition to providing internal resources essential to our work. Without their attentive guidance and enthusiasm to help us out, our project would not have been as successful as it was. We would also like to thank all of the USPTO employees who participated in the brainstorming sessions, interviews, and surveys. Their eagerness to participate made collecting the necessary data effortless and straightforward. We would also like to thank our advisors and ID 2050 Instructor, Professor James Hanlan, Professor Paul Davis, and Professor Ingrid Shockey for their support and feedback over the past two terms.

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Executive Summary

The USPTO promotes innovation in our society. Innovation helps the U.S. grow as a world leader where inventors are free to create their own original work. How well the U.S. grows as a world leader depends to a significant degree on how well patent applications are examined. Various adverse consequences result when a patent examiner is examining not producing high quality work. For example, legal action can take place and patent legitimacy may be challenged in court. Non-thorough examinations can harm the USPTO by causing public outcry and placing negative media attention on the Patent Office. Most importantly, patents have a significant impact on suppliers as well as applicants. If applicants aren't receiving quality examinations, then their economic well-being may suffer severe consequences. Therefore, patent examinations may result in life-altering decisions. Thus maintaining consistent quality examinations are a top priority for the USPTO.

The USPTO would like an assessment of their quality assurance practices. Our goal was to conduct this assessment by evaluating their current quality metrics and create recommendations for the development of new and more effective metrics based on our findings. To accomplish our goals, we have identified three objectives:

- Research the processes, standards, and appropriateness of the current quality metric components;
- Identify and propose areas for potential improvement of the USPTO quality monitoring;
- Provide recommendations for the development of new metrics based on previously identified problem areas.

To meet each objective, our group carefully outlined various methods to collect data. These methods included archival research, focus groups, interviews with, and surveys of numerous employees at the USPTO, and a gap analysis of current practices in place at the USPTO.

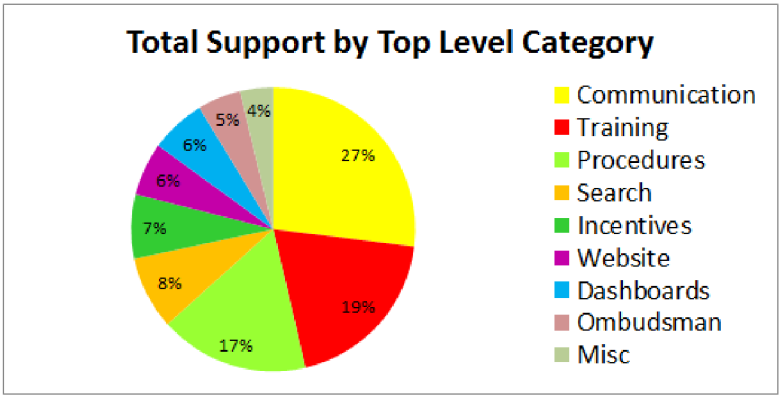

Figure 1 – Total Support by Top Level Category, N = 163

From all the data we collected, we came up with four main claims. Our first claim is that examiners need better communication between applicants and other examiners. Figure 1 shows that communication received 214 votes as an area in need of improvement, or 27% of the total number of votes during the focus groups. Improving communication also received a lot of positive feedback from the surveys and interviews. Our second claim is that examiners need more as well as better training. Figure 1 shows training received 154 votes as an area in need of improvement, or 19% of the total number of votes during the focus groups. Improving training also received positive feedback from the surveys and interviews. Our third claim is that examiners need better examination procedures. Figure 1 shows procedures received 135 votes as an area in need of improvement, or 17% of the total number of votes during the focus groups. Improving procedures was an idea frequently brought out from interviews. Our last claim is that different motivational approaches from Supervisory Patent Examiners (SPEs) produce better quality examination from examiners. Improving feedback from SPEs was also an idea frequently brought out from interviews.

We came up with eleven recommendations based on the areas in which we felt the USPTO should consider forming new metrics. The first three recommendations are proposed solutions to perceived problem areas based on our communication claim. The next four recommendations are proposed solutions to perceived problem areas based on our training claim. The next two recommendations are proposed solutions to perceived problem areas based on our procedures claim. Finally, the last two recommendations are proposed solutions to perceived problem areas based on our review and feedback claim. These recommendations include:

- Have examiners respond to the applicant's inquiries and questions within the 24 hour requirement;

- Encourage examiners to initiate first contact with applicants;
- Promote collaborative searching. If an examiner is having trouble with searching, then they ought to seek help from either another examiner or a small division put in place to decrease the search time;
- Implement mandatory training for examiners based on their specific art units;
- Implement more hands-on, engaging courses at the Patent Training Academy;
- Implement optional writing training for examiners to improve writing and grammar skills, and have SPEs suggest the training to examiners they feel best need the training;
- Implement more legal training for examiners and have those courses continually update to match the updating court cases and law changes;
- Have a team re-evaluate the current times allotted to examine patents for specific art units to see if those art units need more time for examining;
- Educate examiners on their Ombudsman program to help the USPTO and its applicants use the program to its fullest potential;
- The USPTO should implement a feedback approach to examiners, rather than giving them errors for inappropriate office actions;
- Do not promote monetary incentives; instead have SPEs exhibit respect for their examiners as a way to incent the examiners to produce higher quality work.

In addition to our eleven recommendations, we also have a series of research questions for the USPTO to consider for future projects. These questions include:

- How can examiners be motivated to respond to applicants faster?
- How could examiners be proactive in communicating with the applicant?
- How could search collaboration increase?
- How can the training concerns expressed by examiners be addressed?
- How can feedback be translated into learning?
- How should the issue of time allowed for examiners continue to be addressed?
- How should awareness of the nature of the Ombudsman program be improved?
- How would incentives that avoid side-effects work?

Our last deliverable was a rubric based on our gap analysis and recommendations. This rubric took each recommendation we proposed and outlined the possible actions needed to accomplish each recommendation. The rubric is ranked on a scale from 0-5, where 0 is the problematic state and 5 is the ideal state for the USPTO to be in. Also outlined in the rubric are columns for the current state the USPTO is in and the future state where we feel the USPTO should be in to maintain a reputation as a world class patent system. We also weigh each recommendation's priority on a scale from High to Low, where High means that

recommendation should be considered for fixing right away and Low means that recommendation should only be fixed after the higher priority suggestions are accomplished.

Our results will help the USPTO become a world class patent system by increasing their customer service through examiner improvements. In return, improved examiners will ultimately lead to increased quality in examination. An increase in quality examination means the USPTO can review more cases without reexamination, thus promoting innovation even more in our society.

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Chapter and Section Numbers	Section Name	Primary Author(s)	Primary Editors(s)
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	Abstract	Elora Borkowski	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
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	Table of Contents	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
	List of Figures	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
	List of Tables	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
1.0	Introduction	Olivia Bennett, Elora Borkowski, Arthur Fulgoni, Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni, Andrew Weiler
2.1	US Patent and Trademark Office Profile	Elora Borkowski	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
2.2	Patent Quality Stakeholders	Elora Borkowski	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
2.3	USPTO Management's Role in Quality Assurance	Elora Borkowski	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
2.4	The Science of Metrics	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
2.5	The Current USPTO Evaluation Process	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
2.6	ISO 9001, Quality Management System	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler

2.7	Quality Monitoring and Improving Customer Satisfaction	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
2.8	Challenges Facing the USPTO's Process	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
2.9	Rubrics and Competitive Value Analysis	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
2.10	Gap Analysis	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
2.11.1	Study on the Quality in the Patent System in Europe	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
2.11.2	Study on Consistency Management	Elora Borkowski	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
2.12	Summary	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
3.1	Objective 1: Research Current Quality Metric Components	Olivia Bennett, Elora Borkowski, Arthur Fulgoni, Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni, Andrew Weiler
3.2	Objective 2: Identify and Propose Areas of Improvement	Olivia Bennett, Elora Borkowski, Arthur Fulgoni, Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni, Andrew Weiler
3.3	Objective 3: Provide Recommendations to Develop New Metrics for the USPTO	Olivia Bennett, Elora Borkowski, Arthur Fulgoni, Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni, Andrew Weiler
3.4	Locating Participants	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
3.5	Estimated Timeline	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
4.1	Data Collection Methods Overview	Elora Borkowski,	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
4.2	Archival Research	Elora Borkowski	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
4.2.1	External Customer Survey Overview	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
4.2.2	Limitations	Andrew Weiler	Olivia Bennett, Elora Borkowski,

			Arthur Fulgoni
4.2.3	SharePoint Site	Elora Borkowski	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
4.2.3.1	External Quality Survey Report	Elora Borkowski	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
4.2.3.2	Internal Quality Survey Responses	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
4.2.3.3	Quality Composite Analysis	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
4.3	International Patent Office Research	Elora Borkowski	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
4.3.1	JPO	Elora Borkowski	Olivia Bennett, Arthur Fulgoni, Andrew Weiler
4.3.2	EPO	Arthur Fulgoni, Elora Borkowski	Olivia Bennett, Andrew Weiler
4.3.3	SIPO	Olivia Bennett, Elora Borkowski	Arthur Fulgoni, Andrew Weiler
4.3.4	KIPO	Andrew Weiler, Elora Borkowski	Olivia Bennett, Arthur Fulgoni
4.4	Brainstorming Sessions Overview	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
4.4.1	Data Analysis Overview	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
4.4.2	Conclusive Results and Limitations	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
4.5	SPE, RQAS, and SRQAS Interviews Overview	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
4.5.1	Data from Interviews	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
4.6	SPE, RQAS, and SRQAS Surveys Overview	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
4.6.1	Limitations	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
4.7	Solution Graph Overview	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
4.8	Gap Analysis Overview	Arthur Fulgoni,	Olivia Bennett,

		Andrew Weiler	Elora Borkowski
4.9	Findings	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
4.9.1	Examiners Need Better Communication between Applicants and Other Examiners	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
4.9.2	Examiners Need More as well as Better Training	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
4.9.3	Examiners Need Better Examination Procedures	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
4.9.4	Different Motivational Approaches from Supervisory Patent Examiners Produce Better Quality Examination from Examiners	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
4.10	Conclusion	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
5.1.1	Response Time	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
5.1.2	Outreach	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
5.1.3	Internal Patent Examiner Collaboration	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
5.2.1	Implementation of Specific Art Training for Examiners	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
5.2.2	Implementation of Hands-On Training for Examiners	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
5.2.3	Implementation of Writing Courses for Examiners	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
5.2.4	Implementation of Legal Courses for Examiners	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
5.3.1	Evaluation of Time Allotment in Art Units	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
5.3.2	Educate the USPTO on	Olivia Bennett	Elora Borkowski,

	Ombudsman Program		Arthur Fulgoni, Andrew Weiler
5.4.1	Approaching Examiners with Feedback to Improve Quality	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
5.4.2	Do Not Promote Monetary Incentives	Olivia Bennett	Elora Borkowski, Arthur Fulgoni, Andrew Weiler
5.5	Rubric for USPTO	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
5.6	Final Conclusions	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
	Bibliography	Arthur Fulgoni	Olivia Bennett, Elora Borkowski, Andrew Weiler
	Appendix A	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
	Appendix B	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni
	Appendix C	Andrew Weiler	Olivia Bennett, Elora Borkowski, Arthur Fulgoni

Table of Contents

List of Figures

List of Tables

Chapter 1: Introduction

The United States Patent and Trademark Office (USPTO) was established over 200 years ago as a way to promote innovation in our society (USPTO, 2014). To promote innovation, the USPTO offers patent applications to inventors who seek to protect their inventions. A patent, by definition, is a property right granted to an inventor for a certain amount of time that ensures public disclosure of the invention (USPTO, 2014). As the number of patent applications per year rises over 600,000, the USPTO has identified a need to improve examination quality to increase customer satisfaction (USPTO Annual Report, 2013). At the core of this project, improving examination quality will help maintain and grow the USPTO's position as a "world-class" patent system.

During the patent application process, USPTO patent examiners reject or grant patents. If a patent application is granted, an inventor is issued a patent that lasts for 20 years from the filing date. The exclusive patent rights allow the inventors to profit, if applicable, and prohibits unauthorized usage of that specific invention.

Once the examiners finish reviewing an application, an internal USPTO office, the Office of Patent Quality Assurance (OPQA), works with examiners to measure and evaluate the examination process. This evaluation relies on a set of metrics, which are designed to identify examination quality and build a feedback process for managers to apply to examiners. The metrics used by the OPQA produce information useful for making management decisions and help the USPTO become a stronger leader in the global patent field.

Over the past four fiscal years, there has been no evaluation of how the current quality metrics are affecting overall customer service quality. Recognizing this as an issue, the USPTO asked our project team to conduct an analysis of their current quality metrics. To understand and evaluate the current quality metrics, our team researched the performance of the current metrics through the OPQA's internal and external quality surveys, and interviews and surveys with USPTO employees. Based on the data, our team performed a gap analysis comparing current practices of the USPTO's metrics to practices of what applicants and examiners wanted to see. In addition to the gap analysis, a rubric was created to show our recommendations to the USPTO. Recommendations included ideas such as adding more training for examiners and changing time allotments per art unit to increase quality in examinations. Increasing quality in examinations will lead to improvements in customer service, which will help the USPTO grow as a "world-

class" patent system.

Chapter 2: Literature Review

This chapter presents our research on the USPTO. We examined USPTO quality metrics in addition to those of other global patent offices. Our review included an exploration of best practices from stakeholders to explain room for improvement to the current metrics. We also explored some of the concepts that we worked with in detail, including rubric designs, gap analysis, and operational quality metrics. We explained these concepts in detail further in our literature review. We begin our research with a background of the agency and its operations.

2.1 US Patent and Trademark Office Profile

Adjacent to the nation's capital, the USPTO is home to over 10,000 patent examiners, legal counsel, supervisors, and directors. The office operates under the Department of Commerce for the U.S. Federal government. First created by the United States Patent Act of 1790, the USPTO's mission is for:

> *"Fostering innovation, competitiveness and economic growth, domestically and abroad by delivering high quality and timely examination of patent and trademark applications, guiding domestic and international intellectual property policy, and delivering intellectual property information and education worldwide, with a highly skilled, diverse workforce" (Academy, 2014).*

This detailed mission statement of promoting and supporting innovation in our society suggests that the USPTO strives to provide its clients with the best quality of customer satisfaction possible. The office reviews hundreds of patent applications each day that directly protect intellectual property. Protecting inventors' work can improve profitability on the idea and ensure originality. To ensure that the USPTO carries out its job fully, the USPTO houses a specialized Office of Patent Quality Assurance (OPQA). The OPQA measures the quality and effectiveness of each patent examination. The OPQA takes into account all aspects of a patent examination using quality-assessment metrics.

2.2 Patent Quality Stakeholders

In the scope of this project, the key stakeholders include applicants, patent examiners, and the agency as a whole. In the first stage, an inventor or lawyer completes a patent application hoping to have their work granted protection. If the patent is challenged, the applicant may bring

negative media attention with them. For example, Google, a main stakeholder with over a thousand patents, submits patents frequently to the USPTO (Rosoff, 2012). The patent office must conduct an examination of all patents in order to ensure consistency. If the patent office does not do a thorough job of examining the patent and the patent is challenged legally, there would be serious negative repercussions, harming the images of both the USPTO and the applicant, Google. The USPTO, therefore, strives to sustain a good image for the agency while also providing the best quality service for their customers.

2.3 USPTO Management's Role in Quality Assurance

In addition to the OPQA, the USPTO is further broken into fifteen different management departments. As shown in Figure 2 (below), a Commissioner directs the patent office and oversees the Director of the OPQA. Within the OPQA, each field-specific office is made up of well-trained scientists called Review Quality Assurance Specialists (RQAS). The RQAS are responsible for reviewing patent applications (Academy, 2014).

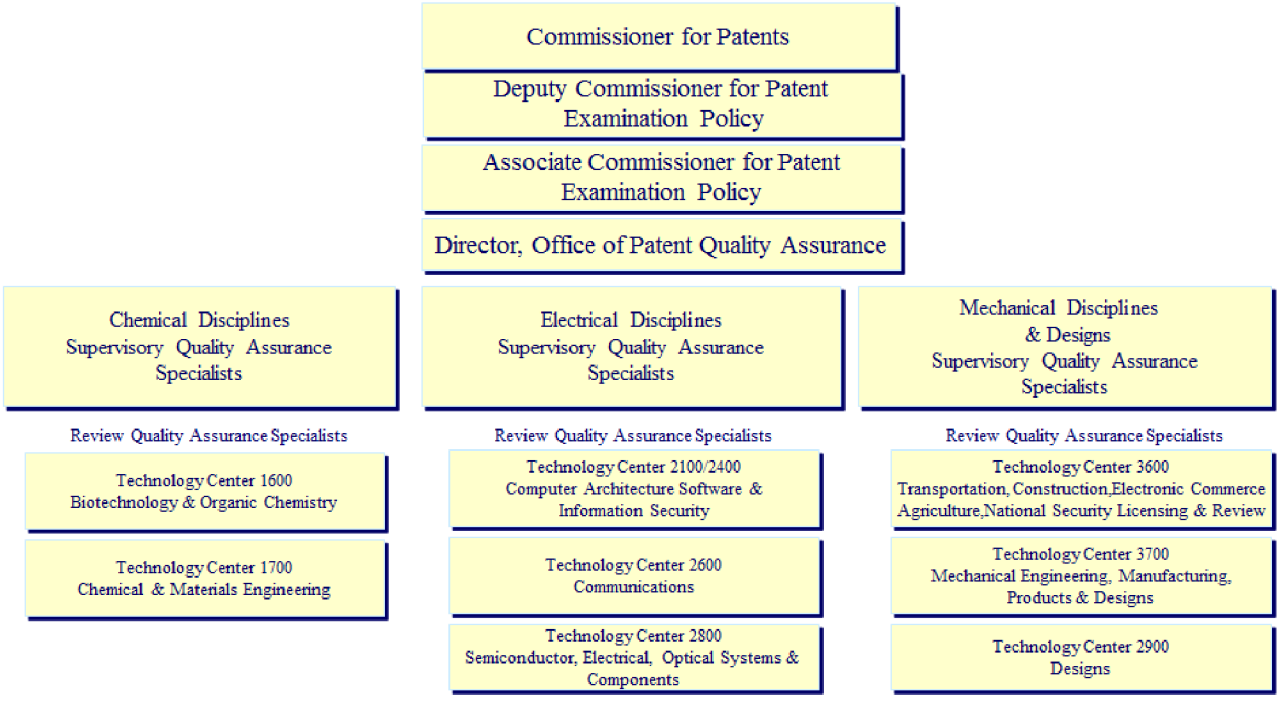

Figure 2 - Management of the USPTO (Academy, 2014)

The USPTO structures itself into eight departments solely dedicated to reviewing patent applications. The other seven departments focus on quality assurance, which is essential to our project.

2.4 The Science of Metrics

To ensure that stakeholders' goals are met, the USPTO uses a system of metrics that represent all viewpoints and concerns, and are used to analyze patent quality. Quality metrics require the agency to determine how to characterize each metric. Mohamed Askar, professor of management in the Brennan School of Management at Dominican University, defines metrics as a series of pieces of information collected through a well-defined process. Metrics often take the form of a numerical, yes/no, or short answer data set (Askar, 2009). They include a method of analysis, defining how to take the measurements and convert them into business tools and performance indicators. These indicators can be used to support management decisions and aid in identifying issues that merit intervention.

Askar (2009) also explains how metrics are created and used. He sees metrics as best designed through a three-step process:

1. Identify a problem area;
2. Collect information about the problem;
3. Formulate a monitoring system.

A metric framework like this will create a structure for collecting information, making it repeatable, and guiding collection to a monitoring process. It may take multiple metrics to provide the background necessary to help describe an area of concern. When all the information is collected, analysis is added to aid in understanding the issue as a whole. The analysis defines the method used to convert metrics to decisions.

In some situations, collecting information about a process can be difficult. Guidelines exist to help guide metric development. The metric must meet the needs of the analysis, be standardized, and most importantly have a collection difficulty in proportion to the priority of the business question. For example, surveys and forms may not be ideal since they require time and effort to be conducted. Once viable metrics are either identified or established, analytics may be performed.

Metrics can achieve multiple management goals. Askar indicates that metrics can be used for measuring financial goals, meeting regulatory thresholds, outlining project requirements, ensuring employees are working towards all project goals, quality assurance, and many other uses. Any system where complex process monitoring is required will benefit from a metric based process (2009).

2.5 The Current USPTO Evaluation Process

Analyzing quality systems can help to produce more effective quality measurement. The USPTO provided documents that discuss the current processes in use. According to the 2011 report defining the metrics adopted for the enhancement of patent quality, a set of seven metrics are used in the quality assurance process:

1. Final Disposition Compliance Rate;
2. In-Process Compliance Rate;
3. First Action on the Merits of Search Review;
4. Complete First Action on the Merits Review;
5. Quality Index Report (QIR);
6. External Quality Survey;
7. Internal Quality Survey.

These guidelines are combined to create a holistic view of the quality of the patent process, starting from the moment the application is assigned to an examiner and ending after the response from the Office is sent to the applicant.

Each metric is collected from randomly selected applications and serves a distinct role in the OPQA's quality system. Most of the metrics compare the actions of the examiner to the defined best practices within the USPTO. There are also multiple surveys of the examiners and applicants conducted to collect and measure the experience. The speed and progress of examination is also taken into account, noting where applications move backwards in the examination or move too slowly. The composite quality metric gives an annual summary based on all metrics collected in a year. It is expressed as a percentage of the 5-year quality goal and designed to give a quick, comprehensive overview of patent quality. The USPTO's metrics consider many perspectives of the patent examination process; however their list may not be fully inclusive.

2.6 ISO 9001, Quality Management System

In addition to internally derived metrics, there are global standards that set best practices. Founded in 1947, the International Organization for Standardization (ISO) was the original management system standard that has expanded to the ISO 9000 family; which includes standards for applications. These include, but are not limited to:

- ISO 9001 - sets out the requirements of a quality management system;
- ISO 9000 - covers the basic concepts and language;
- ISO 9004 - focuses on how to make a quality management system more efficient and effective (iso.org, 2014).

These standards provide guidelines for companies who want to guarantee that their products and services meet their customer's requirements, and that their quality is improving on a consistent basis. With their rich history as being the first management system standard in the world and over 1.2 million organizations already certified with them, the ISO is highly regarded as one of the top quality management systems and is considered the standard of standards.

Since its introduction in 1987, the ISO 9001 has evolved over the years and a new, updated version of the standard is released every seven years. Dr. Nigel Croft, the foremost expert in quality management and conformity assessment, explains why the ISO 9001 needs to be updated for the modern age. He claims that,

> *Technology has changed the world and ISO 9001 needs to move with the world without making huge radical changes… and make the system up to date for the organizations who are moving forward in high-tech organizations but at the same time not make it obsolete or unusable for those small businesses in developing economies who aren't as technologically advanced (Croft, 2014).*

Every ISO standard is systematically reviewed from ISO's members asking questions ranging from "Is this standard still being used?" to "Does it need to be brought up to date?" The changes made are modernized for high-tech organizations, but still relevant for low-tech organizations. This idea of updating the system, while still keeping familiar aspects, creates an easier transition into the new system and incorporates a sense of unity with a standard that can be used for both high-tech and low-tech organizations.

Despite all of its reverence, there is some debate about the value and benefit of adopting the ISO standards. Any criticisms with the ISO 9001 are "not related to the standard itself but to the way organizations are doing what is in the standard," says Dr. Croft, and "it is overall a good

standard, but there are concerns about the way it is being understood, implemented, and audited" (Croft, 2014). According to Yehuda Dror, there are many common myths about the ISO that may deter companies and organizations from implementing these standards; however they are only myths and should be ignored. He continues by saying benefits for implementing ISO standards "enhances companies' understanding and control of their processes" and that customers are almost requiring companies to register with the ISO as a sign that they can be trusted (Dror, 1995). This complements another study done by David Levine and Michael Toffel which claims companies that adopt the ISO 9001 standard increase sales and employment more rapidly than do companies which have not adopted the standard (Levine & Toffel, 2008). With both of these studies, it is clear that there is a benefit to adopting ISO standards, and companies that do implement these standards achieve a higher level of success and overall increase of quality with running their business operations.

2.7 Quality Monitoring and Improving Customer Satisfaction

Monitoring service quality is an important way for agencies and organizations to handle customer transactions well. Depending on how soundly a transaction goes determines a customer-company relationship. Oscar Alban, Principal Global Market Consultant for Witness Systems and quality monitoring expert, notes that "89 percent of consumers quit doing business with a company because of one bad customer experience (up from 59 percent in 2007)," (Alban, 2012). With a large number of consumers leaving a company from just one bad experience, it makes it worthwhile for companies to improve customer satisfaction. Alban and John Ragsdale, Vice President of Research for the Technology Services Industry Association, both agree that an important element to improve customer satisfaction is monitoring agent interactions. When developing the best practices to frequently monitor agent interactions, Alban proposes to divide the agents of the organization into three groups and then give a set number of monitoring evaluations for each group per month, as outlined in Table 1 below (Ragsdale, 2007):

Group Name	Description	Number of Evaluations
New	30 days out of initial training	10 per agent per month
Veterans	Anyone over 30 days in good standing	6 per agent per month
Problems	Any agent who is performing below minimum performance standards and is now on a performance-warning status. Track the agent for 30 days or for the 'probationary' period. At the end of the period they either move back up to the Veteran group or may be counseled out of the organization	10 per agent per month for the duration of the probationary period

Table 1 - Groups for Monitoring Agent Interactions (Ragsdale, 2007)

This system helps organizations stay consistent in quality monitoring when hiring new employees, for example. Another key step to helping organizations stay consistent and improving quality monitoring is through effective coaching. Both Alban and Elizabeth Winter, Founder of Contact Professionals Alliance, agree that without support and guidance, agents "cannot master complex skills or develop the insights and expertise to easily and successfully deliver the best customer experience" (Winter, 2012). The combination of monitoring agent interactions and effective coaching helps agencies and organizations improve customer satisfaction and prevent them from losing business.

2.8 Challenges Facing the USPTO's Process

Stakeholders, such as Google who hold over a thousand patents, often face a long wait for a patent application to be processed. The current process at the USPTO takes over two years from filing to completion of an application (USPTO, 2014). Experts in the patent field claim the waiting time degrades customer satisfaction. Mark A. Lemley, a specialist in intellectual property at Stanford Law School, explained that the USPTO currently holds a backlog of just under 1 million patent applications. With a large number of backlogged applications, Lemley suggested the patent review process grows into a, "mass-production business," (Bloomberg, 2009). He notes the USPTO must avoid this at all costs to keep true to the original intent of the establishment of the patent office.

One of the important problems the OPQA is working to solve is consistency among patent examinations, especially those from the same art. The OPQA has conducted studies showing consistency strongly correlates to applicant satisfaction (Rater, 2014). Achieving consistency on a complicated and qualitative analysis, like patent examination, requires strong communication between examiners to ensure that they all work by the same guidelines. LeeAnne Kryder, a professor of Business Communication at University of California at Santa Barbara, explains the consistency through the following example: grading papers. Her primary method is to separate her analysis into multiple sections, and then use a rubric to strictly analyze each. She also has a system of self-reporting to manage the grading expectation of students (Kryder, 2003). We investigated the possibility of expanding this to include patents.

2.9 Rubrics and Competitive Value Analysis

A rubric is defined as "a guide listing specific criteria for grading or scoring academic papers, projects, or tests" (Merriam-webster.com, 2014). Rubrics can be seen as a kind of competitive value analysis (CVA). CVAs are used to compare competing products. For example, they can be used to decide which of five laptops would be the best for a given user. A CVA includes many details that would like to be obtained in the product. Webcam, full size keyboard, 17" screen, and touchscreen are examples of valid features to put in a laptop CVA. Each of these features is also given a rank or importance value. This allows the user to decide which features are most important. The touchscreen can be assigned an importance of 4, while the webcam may receive an importance of 1 (Corniani, 2012). This kind of rubric design is a good option for organizations because they allow a backwards comparison of products: to rate one laptop based on the qualities of four other laptops. Often organizations are rating their product based on their competitor's products to gain a sense of what they can do better or where they are falling behind. For example, the USPTO would find their two year processing time is much longer than the average time it takes another patent office to process an application, indicating they are falling behind other patent offices in this area (Kryder, 2003). We explained more specifically how we used the rubric in the methods chapter.

2.10 Gap Analysis

Another tool that helped us identify and solve issues is a gap analysis. Gap analysis is defined as "a technique that businesses use to determine what steps need to be taken in order to move from their current state to their desired, future state" (Businessdictionary.com, 2014). The three steps needed to conduct a gap analysis are:

1. Identify the Future State;
2. Analyze the Current Situation;
3. Identify How to Bridge the Gap (Mindtools.com, 2014).

To further explain these three steps, the first step identifies the actions needed to achieve your goal. The second step identifies what is already being done currently within the system. The final step identifies what objectives are needed to reach the goal from the current situation. Table 2 (below) illustrates an example of gap analysis.

Future State	Current Situation	Next Actions/Proposals
Answer 90 per cent of calls within 2 minutes.	Approximately 50 per cent of calls are answered within 2 minutes.	1. Develop a call volume reporting/queue modeling system to ensure that there are enough staff during busy periods. 2. Recruit any additional people needed. 3. Develop a system that allows callers to book a call back during busy periods.

Table 2 – Example of Gap Analysis (Mindtools.com, 2014)

With these three steps, we identified any gaps there may have been in patent examination quality. We explained more specifically on how we intend to use the gap analysis in the methods chapter.

2.11 Case Studies

To better understand the process of patent application acceptance and rejection, we looked at case studies that focused on factors that influence the patent examination process.

1.Study on the Quality in the Patent System in Europe

A study by Scellato *et. Al.* (2011) examined the quality of the patent system in Europe. They conducted a survey with companies familiar with multi-national patent applications and asked them to rate the quality of the European Patent Office (EPO) and four other patent offices (the USPTO being among them) on a scale ranging from 1 to 4, where a rating of 1 would indicate the lowest quality and 4 being of the highest quality. According to this survey, the EPS achieved the highest overall rating of 2.90 and the USPTO attained an overall rating of 2.40, less than the middle average value of 2.5, with the results summarized in the table below (Scellato, 2011).

	Overall		(A)		(B)		(C)	
Answer Options	% of 3 and 4	Rating Average	% of 3 and 4	Rating Average	% of 3 and 4	Rating Average	% of 3 and 4	Rating Average
European Patent System	77%	2.90	81%	2.93	77%	2.88	75%	2.88
USPTO (U.S.A.)	44%	2.40	51%	2.49	41%	2.36	46%	2.45
JPO (Japan)	68%	2.74	72%	2.74	63%	2.71	69%	2.74
SIPO (China)	33%	2.19	26%	2.11	37%	2.23	30%	2.17
KIPO (Republic of Korea)	39%	2.33	38%	2.35	452%	2.37	36%	2.30

Table 3 - Perceived quality of the EPO, USPTO, and other patent systems around the world. Overall ratings and ratings based on different aspects of the quality of patent systems: (A) Timeliness, (B) Strong compliance with legal requirements for patentability, (C) Cost effectiveness (Scellato, 2011).

From Table 3, there is plenty of room for improvement within the USPTO in terms of patent examination quality. Scellato *et. Al.* propose four measures to help improve the quality of patent examination:

1. Increase efforts to maintain the skills of patent examiners
2. Randomly select patent applications for review of search quality, and randomly select granted patents for review of quality of examination
3. Provide preliminary opinions on patentability in order to encourage early amendment or withdrawal

4. Intensify the exchange of information among National Patent Offices (NPOs) and the European Patent Office (EPO) (2011).

As we explored the problems facing the patent examination process for the USPTO, we kept the measures proposed by this study in mind. We found that similar solutions were also necessary to help improve quality at the USPTO.

2.Study on Consistency Management

A study by Moisés Castelo Branco *et. Al.* (2013) examined the IT department of a bank to uncover inconsistencies in business process modeling. Business process modeling (BPM) is used to visually represent a business's plan to complete a goal, such as a project. Figure 3 (below) shows a sample BPM for planning a trip. This visual representation shows how the process should work, but Branco *et. Al.* decided to look at the spaces in-between the steps to identify where inconsistency can occur.

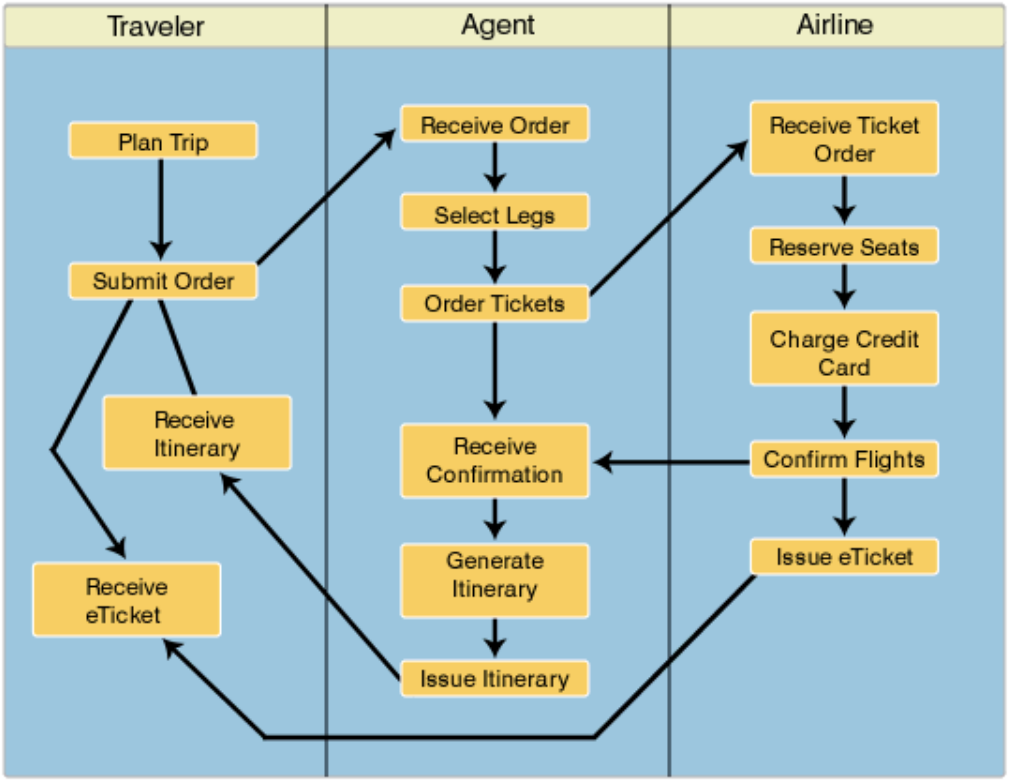

Figure 3 - Business Process Model for the Steps Needed in Planning a Trip.

Before analyzing the IT department of the bank, they first outlined and explained their plan to define the consistency properties as:

1. Model Coverage Differences- how the BPM's differ in tasks. For example, one BPM may have "Receive eTicket" listed as a step, but the other trip BPM omits this step;
2. Behavior Differences- how a task is implemented differently;
3. Information Density Differences- how the level of detail for each task differs;
4. Matching the Models- making sure to use the same terminology throughout all BPM's;
5. Checking Consistency- checking rules and appropriateness of each BPM according to the overarching company's intentions;
6. Diagnosing Causes of Inconsistencies- defines potential reasons for inconsistencies. Reasons may be located outside of the BPM. For example, an employee is out for a day and their task is not completed;
7. Fixing Inconsistencies- the best way to fix the inconsistencies is to work with stakeholders individually and receive their feedback on the changes (Branco *et. Al.*, 2013).

After defining their steps, the authors conducted their study to answer their question of, "How do people manage consistency of related business- and IT-level process models in practice?" (Branco *et. Al.*, 2013). They answered the question through artifact research, semi-structured interviews, and electronic surveys.

The findings concluded that inconsistency exists in several areas. First, the authors identified that all BPM's of the study were created in the same process, but the BPM's are maintained separately to adapt to the needs of stakeholders, which creates inconsistencies between BPM's. The next finding revealed that the stakeholders need a way to define what they see as inconsistency in all BPM's across the business. The last important finding suggested that all identified inconsistencies should be addressed and solved in a timely manner rather than pushed to the backlog.

Branco *et. Al.'s* case study on consistency demonstrates similar ideas to our project at the USPTO. The focus on consistency provides a good outline of ways to measure consistency in our project. Using their suggested measures for consistency, we applied each idea to the steps in the patent examination process. We kept their work in mind as we continued our project.

2.12 Summary

This research into the basics of the USPTO quality metric systems has created a foundation for our methodological design to move forward. Organizations across the globe use an ISO 9001 quality management certification system to be recognized as using best practices.

We have found room for improvement with patent examination quality in the USPTO, compared to the EPO and other patent offices around the world. Developing a system of metrics using best practices ensures consistency and high quality examination procedures for every patent that is viewed. Failure to do this negatively impacts future innovations and policy-making. This project analyzed and developed recommendations for new quality standards that directly affect patent examination.

Chapter 3: Methodology

Our goal was to conduct an assessment of the current quality metrics used by the USPTO and create recommendations for the development of new and more effective metrics based on our findings. To accomplish our goals, we have identified three objectives:

- Research the processes, standards, and appropriateness of the current quality metric components;
- Identify and propose areas for potential improvement of the USPTO quality monitoring;
- Provide recommendations for the development of new metrics based on previously identified problem areas.

This chapter will detail the strategies we proposed to complete our objectives.

3.1 Objective 1: Research Current Quality Metric Components

To accomplish objective one, we conducted archival research to analyze administrative records from the USPTO in addition to other patent offices, such as the Japanese Patent Office (JPO), the Chinese Patent Office (SIPO), the Korean Patent Office (KIPO), and the European Patent Office (EPO). The records helped to identify the status of the current quality metric components set by the USPTO. Using the data we collected, we better understood how the USPTO metrics work in comparison to those of other patent offices.

We conducted a gap analysis of the current quality measures set in place at the USPTO. This helped us to determine what is currently being and not being measured in quality assurance practices. By conducting a gap analysis of the current composite metrics of the USPTO, we were able to determine the current state of quality, and compare it to the level of quality they hope to achieve. Our analysis revealed areas where the current quality methods need to be improved. We then identified possible improvements to the current quality assurance practices of the USPTO.

3.2 Objective 2: Identify and Propose Areas of Improvement

To gain insight from USPTO employees on the current metrics, our team observed and reviewed focus groups. A focus group consists of a carefully selected group of people called together for the purpose of focusing on a well-defined problem or issue and kept on focus by a skilled monitor. The monitor, or monitors, of the group then use the feedback given by the individuals of the focus group in order to make further decisions on a particular topic

(Conducting Focus Groups, n.d.).The aim of the focus group is to find out more about the attitudes and beliefs on a particular topic. These particular focus groups consisted of employees of the OPQA department, technology center directors, and patent examiners from different art units. These groups provided their input on the current quality metrics set in place, as well as how they can improve their interactions with the patent applicants.

In addition to focus groups, our team interviewed 51 USPTO workers, including six OPQA quality leads, Review Quality Assurance Specialists (RQAS), OPQA managers, Senior Patent Examiners (SPEs), and OPQA director. Interviews suited our second objective best by giving our team one-on-one time with USPTO staff. Participants shared their perceptions, thoughts, and ideas of the current quality metrics. Our interviews used expert Philip Burnard's (2005) interviewing method of semi-structured, rather than structured or unstructured interviews. Semi-structured interviews use predetermined questions, but also leaves room for additional questions that may arise. Developing a semi-structured interview was challenging, but a leading expert in the interviewing field, Rowley, explains,

> *For a novice researcher, a semi-structured interview based on an interview schedule that centres on around six to 12 well-chosen and well-phrased questions to be delivered mostly in a set order, but with some flexibility in the questions asked, the extent of probing, and question order, is a good starting point. (Rowley, 2012)*

Ideas for specific questions to ask during our interviews primarily came from expanding on the top suggestions brought out from the focus groups. We then used the ideas and developed questions to gain feedback during our interviews on the prevalent quality issues. In addition to our original questions, we snowballed ideas during the interviews to get a better feel for what worked and what did not, and also received new ideas to start asking people. This helped us tremendously when trying to whittle down the suggestions to form the most important ones to base our conclusions on.

As a supplement to our interviews, we also administered a survey to each participant at the end of the interview. Surveys act as an effective method for determining necessary data for important research questions (AAPOR- Best Practices, n.d.). We were able to obtain background information through synthesizing the data collected in our focus groups as well as other documentation in order to form our survey questions. These responses revealed thoughts, attitudes, and facts about the perceived problems within the metrics in place at the USPTO.

When surveys are conducted and all necessary precautions are taken in order to produce accurate, unbiased results, the survey data serves as a reliable information tool. Using these surveys paired with Burnard's and Rowley's suggestion of semi-structured interviews, our team has the necessary information to evaluate current quality metrics.

3.3 Objective 3: Propose Recommendations to Develop New Metrics for the USPTO

The methods used for objectives one and two provided our team with a significant amount of data to sort through. The best way to separate our information is to design a specific collection system based on each data source. For example, we created a specific data set for interviews by splitting it based on ideas. This provided a clear representation of the data collected and allowed us to easily see any commonalities within the data to form claims based on our analysis.

The research collected was then synthesized into indicators for a rubric. The rubric contained a specific list of key features and components recognized as best practices of the USPTO's metrics. The rubric is an ideal method because it not only outlines the ideal practices but also helps us to identify potential new metrics. In the literature review, we found that a competitive value analysis (CVA) is a standard way of comparing systems and products. We intend to adapt the CVA to fit the USPTO's direct needs. The CVA was designed backwards in order to make a rubric that looks at all the features of quality systems and compares them to the USPTO. The findings from our rubric gave way to the identification and proposal of new metrics. From our findings and through our rubric, we developed and produced the most helpful recommendations possible for the USPTO.

3.4 Locating Participants

In order to interview unionized patent workers, interview questions must be approved by the Patent Office Professional Association (POPA) and follow their interview policy guidelines outlining appropriate methods for conducting an interview (popa.org, 2014). With the limited time given, it is not in our best interest to pursue this method. To avoid having to go through the POPA, we interviewed non-unionized management in the Patent Office, such as directors and middle-level managers. We had access to eighteen non-unionized, recently promoted managers,

as well as veteran managers. This gave us first-hand knowledge and experience from patent examiners who were recently promoted. With the abundance of USPTO managers and employees at the campus, we used a convenience sampling for interviewing patent managers. Convenience sampling is "a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher" (explorable.com, 2014). With this sampling, we got a multitude of interviews accomplished and gained valuable insight from patent workers.

3.5 Estimated Timeline

While at the USPTO, our team followed a strict schedule. Figure 4 (below) shows the timeline for each task to be completed. Each row represents a key phase in the project, and the highlighted region indicates when we executed this phase. In the middle, the red line stood as our arrival time at the USPTO.

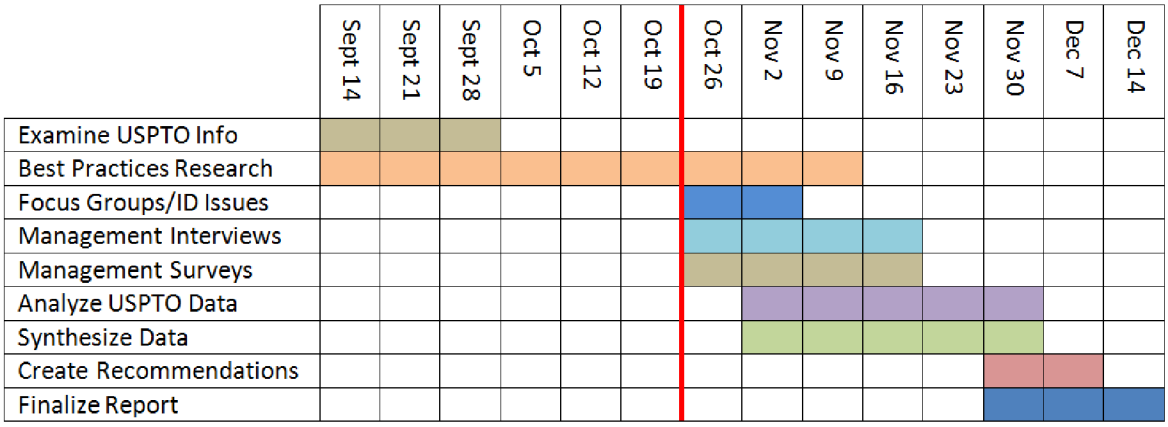

Figure 4 – Gantt Chart, Project Timeline

Before arrival, our team focused on gathering background material on the USPTO. Once we arrived, our team began working on the USPTO metric analysis. Starting with the second week after our arrival, we began critical analysis of the USPTO's methods and quality practices through a survey and interviews. We discuss the specifics of our survey and interviews in the next chapter. As we completed the critical analysis, we generated a rubric and recommendations to give to the USPTO. We discuss our data and findings in the next chapter.

Chapter 4: Data and Analysis

The team conducted its research as outlined in our methodology chapter. Our data yielded a full evaluation of the current quality metrics and prepared us to give recommendations on potential new metrics. The first step in our data collection was to conduct archival research. Next, our team looked at other leading global patent offices' performance metrics to gain a better understanding of how they compare to the USPTO.

At the office, our team participated in and examined results from focus groups based on USPTO employee's ideas on the current metrics and the examiners role in improving customer satisfaction. Using the focus groups as a basis, our team interviewed and surveyed select participants for input on improvements to the current quality metrics. Using these suggestions in addition to the archival research, our team conducted a gap analysis on the USPTO's best practices.

Our team collected and synthesized all data in order to construct a rubric as a deliverable for the executives of the USPTO. The rubric is based on our conclusions and recommendations section in the next chapter and focuses on what the USPTO can do to improve their current metrics.

4.1 Data Collection Methods Overview

During the proposal stages, our team identified data collection methods for our project. As mentioned above, our methods included archival research, international patent office research, a gap analysis, focus groups, semi-structured interviews, and surveys. We continuously built upon each data collection method to create the next method and made sure to listen to feedback from USPTO employees and our sponsors.

Our first method of archival research helped us to determine a starting point for potential improvements to the current metrics at the USPTO. It helped us gain insight into the background of the USPTO and their current practices. It also showed us how the external stakeholders, such as attorneys, view the USPTO and what they would like to see for metric improvements.

Second, the research our team did on different international patent offices served as an addition to archival research. The research showed how productive the international offices are based on the number of applications they receive and review in a year. We then took the statistics

and compared them to the corresponding USPTO statistics to measure how the USPTO is performing.

The third method of focus groups was used to identify current quality issues and potential improvements from USPTO employees. Employee feedback strengthened our project by giving us feedback from those who encounter the USPTO metrics daily. The focus groups also provided consistent results that shaped our interview and survey questions.

Once our team moved to the interview and survey stages, we focused more on the consistent issues we saw through our archival research and focus groups. We gained feedback from employees that directly determined what ideas we planned to utilize for potential recommendations to the metrics.

The methods described above collectively led to a graph our team created. The graph represents the top ideas related to how important and difficult they are to implement. This graph served as the main focus for our team to determine the recommendations for the metrics given to the USPTO executives.

4.2 Archival Research

Once our team started working at the USPTO, our sponsors provided us with access to several archival resources that our team spent three weeks sorting through. The resources consisted of numerous reports, such as Quality Composites, Internal Quality Surveys, fiscal year data in the OPQA's SharePoint site and an external customer survey conducted by the USPTO. Together, the reports and survey results helped our team understand how the metrics are performing and to create suggestions to improve these metrics.

4.2.1 External Customer Survey Overview

One of the first sources we looked at was a survey created by the OPQA. The overall purpose of this survey was to get responses from customers in three Technology Centers (Mechanical, Electrical, and Chemical) on how they felt about the level of quality in the examination process. The survey was administered to 300 frequent filers (patent attorneys) in 2013. Frequent filers are applicants that file at least six patent applications per year. One question from the survey we focused on was, "Do you have any suggestions on how to improve measuring quality?" Data collected was used to supplement the brainstorming sessions

(discussed later in the chapter) and improve our interview and survey questions given to the Supervisory Patent Examiners (SPEs) and quality reviewers (RQAS). We tallied common suggestions from the responses and grouped them accordingly. We found 60 recurring ideas from the survey with 10 ideas individually receiving a recognition rate of more than 5.7% (5.7% of respondents stated or alluded to a given suggestion). The top 10 responses are shown in Table 4.

Percent Recognition	Suggestion description
17.7%	Monitor/Publish the number of pre-appeals/appeals/reversals/subsequent decisions/abandonment/other QIR data (and maybe on a per examiner basis). Look for steps backwards, number of steps, steps that corrected issues, etc.
9.0%	Monitor the number of interviews conducted/post interview outcomes (i.e. allowances). Also note if a SPE was involved and if the examiner instigated the interview
8.7%	More Substance/Clearer information
8.3%	Need to do better first search/Better art is found after first action on the merits
8.3%	Prior art citations without explanations/Action by Cut and Paste/Broad references to prior art/measure the amount of original examiner writing vs. copy-paste
8.3%	Consistency needs improvement
6.0%	Junior examiners/inexperienced examiners need more oversight
6.0%	Examiners seem to not understand legal issues
5.7%	Examiner Rejects Everything, don't respond to reason. Job title should be "Patent Rejecter"
5.7%	Primary examiners should have their work reviewed more often

Table 4 – Top 10 Suggestions, N = 300

After the individual ideas were tallied and summarized, they were sorted into three categories: Data, Qualitative, and Themes. Data items are responses pertaining to numerical measurements and suggestions that propose a process that could easily be implemented in a system of quantitative metrics. Qualitative items are responses that are not numerical in nature and may not easily be included in a system of metrics. The themes category states a problem without suggesting how to measure or monitor it. It serves as a way for the USPTO to track complaints. All of our collected and summarized data is available in Appendix A-3 "External Survey Data".

4.2.2 Limitations

There are some limitations to this data. Most obviously, it should be recognized that the source of this feedback is entirely one sided. Only external customers are included in this survey. Customers may not fully understand how the USPTO works internally, the current measures in place, and the impact of certain changes. This is the reason the suggestions from this survey were used more as a supplemental force rather than a driving force in creating the interviews. When creating interview questions, we considered the suggestions that would be most feasible for the USPTO to implement and disregarded the rest. We also considered these limitations when designing other parts of the project so that all our sources could collectively have as few limitations as possible.

4.2.3 SharePoint Site

The SharePoint site provided our team with several data collections from fiscal years 2011-2014. The data included metric reports through an external quality survey report, internal quality survey responses, quality index reports, quality composite analysis, and a search review. After sorting through the information, the most common idea from all fiscal years, consistency, was recorded. The consistency idea called for more consistency in examinations with different examiners. Incorporating this idea into our surveys and interviews, our team formed questions to gain employee feedback on the consistency issue.

4.2.3.1 External Quality Survey Report

Every six months, the Office of Patent Quality Assurance publishes an external quality survey. The report summarizes the statistical findings from the survey in addition to comparing to statistics from previous years. On average, the survey was administered to over 2,500 of the "top-filing" firms (External Quality Survey FY14, 2014).

The most recent fiscal year (FY14) revealed that customer rankings reflect similar results as in past years on the quality of "good" and "excellent" patent examinations, displayed in Figure 5. FY14 reported a 51% satisfaction rate through the survey. This data suggests that the USPTO does well in customer satisfaction but has room for improvement.

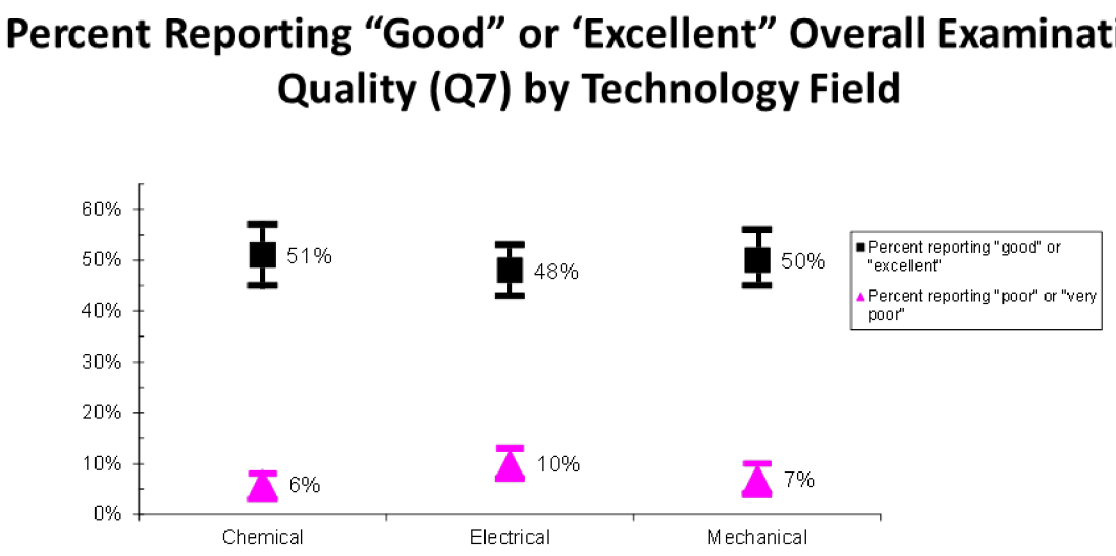

Figure 5 – Percent Reporting "Good" or "Excellent" Overall Examination Quality (Q7) by Technology Field

The final important finding stated that, for every customer who rated the overall examination quality as "poor" or "very poor," there were five or more customers who rated quality as "good or excellent" (External Quality Survey FY14, 2014). The ratings suggest that the USPTO is performing well but could improve in certain areas to achieve better examination quality.

Comparing to other fiscal years, the statistics stayed relatively consistent throughout all eight surveys over the past four years. Examiners were seen to lack consistency throughout examinations. This lack of consistency provides differences in the examination quality. Since all work should be of the same quality, consistency proved to be an important issue. The recurring issues of consistency and enhancing examinations provided enough evidence for our team to work the ideas into the questions for our interviews and survey.

4.2.3.2 Internal Quality Survey Responses

The Internal Quality Surveys (IQS) are used in order to assess examination quality. The surveys are given to 750 randomly selected patent examiners out of 6,000+ examiners at the USPTO. Questions ask the examiners to rate the internal factors of the available resources, training, and more of the USPTO. The examiners rated their satisfaction levels with various internal factors such as the tools available to perform work, training opportunities, and training

effectiveness. These examiners are also asked to rate the external factors that relate to the examination process, such as interactions with applicants or attorneys.

Similar to previous years, the 2014 fiscal year survey results showed that examiners were satisfied with the tools provided to complete their work. The survey also asked whether examiners were satisfied with the training options that were available to them. Of the training options available, there was a 55% satisfaction rate with technical training, 50% satisfaction rate with legal training, and a 41% satisfaction rate with professional development. This suggests that improvements to examiner training should be made in order to improve quality in examinations. When asked about the effectiveness of training, although the percentage values were slightly higher, the results still indicated that only about half of examiners felt satisfied. This suggests that the courses at the Patent Training Academy (PTA) need to be improved. After closer inspection, more specific training courses that apply to a particular art field should be considered to aid in improving effectiveness. Training could also be improved through the delivery of content, such as training taking on a more engaging, hands-on approach, rather than through lecture slides, to have the examiners retain the knowledge learned. Overall, only 9.8% of examiners rated internal factors that impact quality as poor, whereas 59.9% rated it as good or excellent. This suggests that, although dissatisfaction is low, there is still room for more good or excellent ratings of the current internal factors at the USPTO.

Also similar to past years, the ratings for external factors that affect qualities, such as clarity of claims and interactions with attorneys, have remained relatively similar in past years. When asked about the clarity of translations for foreign applications, only 48% of examiners found this to be favorable. This suggests that there needs to be an improvement in the communication between the examiner and applicant, as the applicant may have inaccurately translated their application. Since the percentage values for satisfaction and favorability in the past fiscal years have remained relatively consistent, our team has been able to identify the quality issues that need to be addressed.

4.2.3.3 Quality Composite Analysis

The Quality Composite is used by the USPTO as a tool to compare current and past performances. The comparison is a chart that compares the current performance and achievements to the desired level of performance. There are seven component metrics that make up the Quality Composite. All metrics are weighted differently in order to generate the total

Patent Quality Composite Score. Each metric is created to show a percentage progression towards each desired goal, or stretch goal. The stretch goal is the expected goal for the upcoming fiscal year. The seven metrics are the Final Disposition Compliance Rate, the In-Process Compliance Rate, the FAOM Search Review, the Complete FAOM Review, the Quality Index Report (QIR), the External Quality Survey, and the Internal Quality Survey. Each metric is assigned a value from 0 to 100 that represent the achievement for that year. This number is used to compare the current level of achievement and success with the stretch goal. The desired progression for each metric is based on FY09, which is also known as the base period. The progress from the end of FY09 through FY15 is all cumulative from the base period. This ensures that the composite will also reflect any poor performances, as well as progress. An example of how the composite measures each component is shown in Figure 6 (below).

- **Example** – Final Disposition Compliance Rate
  - ✓ FY15 stretch goal is 97%
  - ✓ Baseline measure (FY09 level) was 94.4%
  - ✓ Total distance (range) between baseline and goal is 2.6%
    - 97.0 – 94.4 = 2.6
  - ✓ FY11 actual was 95.4%
  - ✓ Total net progression at end of FY11 reporting period was 1.0%
    - Actual FY11 (95.4%) – Baseline (94.4%) = 1.0%
  - ✓ % progression towards stretch goal: 38.5%
    - Net Progression (1.0) / Desired Progression (2.6) = 38.5%

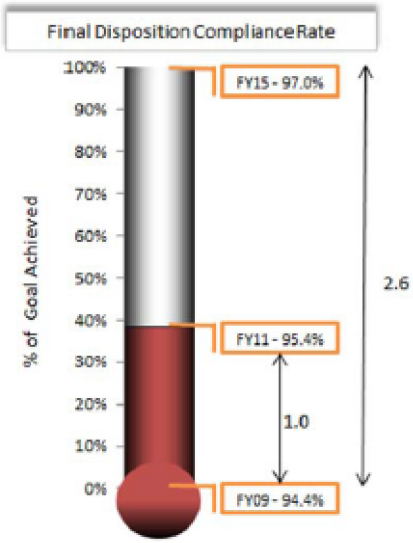

Figure 6 – Final Disposition Compliance Rate Example

Comparing the fiscal year reports, the USPTO Patents Quality Composite current level scores have stayed about the same or increased slightly, indicating an upward trend in success. From the first year the information was collected, the quality composites have reported Patent Quality Composite Scores of 72.4 in FY12, 71.9 in FY13, and 75 in FY14.

4.3 International Patent Office Research

While planning the best methods for our data collection, the USPTO Sponsors suggested that we look into other global patent offices' practices. Our team researched the Japanese Patent Office (JPO), the State Intellectual Property Office (SIPO), the Korean Intellectual Property

Office (KIPO), and the European Patent Office (EPO). Specifically, we examined the volume of domestic and international patents compared to the quality metric practices of each office.

Before researching statistics of the individual patent offices, our research uncovered the Trilateral Co-operation. The group was established in 1983 and consists of the USPTO, JPO, and EPO. The three patent offices met regularly to work toward a more unified global patent system (Trilateral Co-operation, 2014). The last meeting in 2014 resulted in the offices striving to become "world-class" patent systems through the service they provide to their customers and internal workings.

Individually, the volume of customers and examined applications vary significantly. Table 5 – Comparing the Number of Patents Received and Current Backlog of the Five Major Patent Offices (IPWatchdog, 2014) (below) shows the number of applications received per year and the current backlog time at each office (IPWatchdog, 2014):

Patent Office	Approximate Number of Patent Applications Received Per Year	2014 application Backlog in Months
USPTO	>600,000	18
JPO	350,000	34
EPO	260,000	18
SIPO	500,000	22
KIPO	180,000	14.8

Table 5 – Comparing the Number of Patents Received and Current Backlog of the Five Major Patent Offices (IPWatchdog, 2014)

Based on the data above, the USPTO is the leader when it comes to the number of patent applications processed in 2014. The average backlog time for the USPTO is not as low as KIPO, but KIPOs application volume per year is significantly less. However, the application volume of the USPTO is close to SIPO as is the backlog. Performing in similar ways, the offices showed the degree of successful performance of top patent offices.

4.3.1 JPO

Though the metrics are unavailable to the public, the JPO has indicated in its Annual Report of 2013 that the number of applications being approved through reexaminations is

increasing in their office (JPO Annual Report, 2014). Accepting more applications through reconsideration shows that the JPO is spending less time examining new applications. If all examiners examine applications in the same manner, fewer reexaminations would occur and less consistency issues would arise. Using this idea of consistency issues, our team created survey and interview questions that focused on consistent practices.

4.3.2 EPO

The European Patent Office receives 265,690 patent filings in a year, 205,084 of those filings being international patents (EPO Annual Report, 2014). Compared to the number of applications received in total, the 60,000 remaining applications come from Europe. The low number of European applications suggests that European applicants are likely to file with other global offices, such as the USPTO, in addition to the EPO. Also, on average 4.5% of all granted patents were opposed for the FY13 (EPO Annual Report, 2014). This low opposition rate suggests to us that either the examination process at the EPO operates with high quality, or the applications coming in are high quality and are likely to be granted.

4.3.3 SIPO

In China, the State Intellectual Property Office received approximately 120,000 international patent applications. According to their Annual Report of 2013, 81.8% of customers were satisfied with their examination results (SIPO Annual Report, 2014). Due to unpublished metrics, our team was unable to discover what promotes consistent and efficient examinations at SIPO, but we recognize their strong practices.

4.3.4 KIPO

In 2013, 188,915 patents were filed at the Korean Intellectual Property Office. Within the Examination Quality Assurance Officers (EQAO), each reviewer reviews six patent applications per examiner per year. The EQAO evaluates the applications based on the five quality index metrics of:

1. Average score of examination evaluation;
2. Customer survey score;
3. Revocation-remand rate of appeal against decision of rejection;
4. Claim reduction rate with respect to decision for registration;

5. Rate of accepting the ground for refusal (KIPO, 2014).

By publishing the exact metrics used, our team was able to compare KIPO to the USPTO metrics. Though not all the metrics are similar, they helped us gain an understanding of how another other global office operates and conducts their examinations; in addition to showing that they have an office similar to the USPTO's OQPA.

4.4 Brainstorming Sessions Overview

When we arrived at the USPTO, we started working on analyzing the ideas generated in a series of seven brainstorming sessions. Chartered by Deputy Under Secretary Michelle Lee, these sessions consisted of 163 randomly selected employees from all parts of the USPTO. These included examiners, supervisory examiners, call center representatives, quality assurance staff, and others. In the sessions, three questions were asked:

- Putting yourself in the role of our customer, what are some new or improved work products or services we could provide that would serve our customer better?
- Thinking freely of your interactions with other businesses—what could the USPTO do to improve the overall patent customer experience?
- What are the most important aspects that contribute to a quality examination, what are some ideas to improve those aspects, and are there ways to make those aspects more transparent to applicants?

These questions generally asked about customer experience. After each question was shown, participants were given a fixed amount of time to generate responses to the questions. Each participant sat at a table with 5-8 other participants to collaboratively discuss each idea generated. Every idea generated by each table was written onto boards. When the brainstorming period ended, each table shared their ideas with the other tables. At the end of the session, participants were allowed to vote for five ideas from any table and any question that they saw best for the USPTO to take action on.

4.4.1 Data Analysis Overview

A total of 163 participants created 405 ideas across all tables and sessions. 794 votes were cast, indicating a participation of 4.87 votes per attendee. We entered all of the ideas and votes into a spreadsheet and then began our analysis.

The first step of our analysis was to place all the ideas into broad categories. We found 8 overall categories, plus miscellaneous, displayed as a pie chart in Figure 7. Listed with the number of votes that went into each, there are:

- Communication, 214 or 27%
- Training, 154 or 19%
- Procedures, 135 or 17%
- Search, 66 or 8%
- Incentives, 58 or 7%
- Dashboards, 50 or 6%
- Website, 48 or 6%
- Ombudsman, 39 or 5%
- Miscellaneous, 30 or 4%

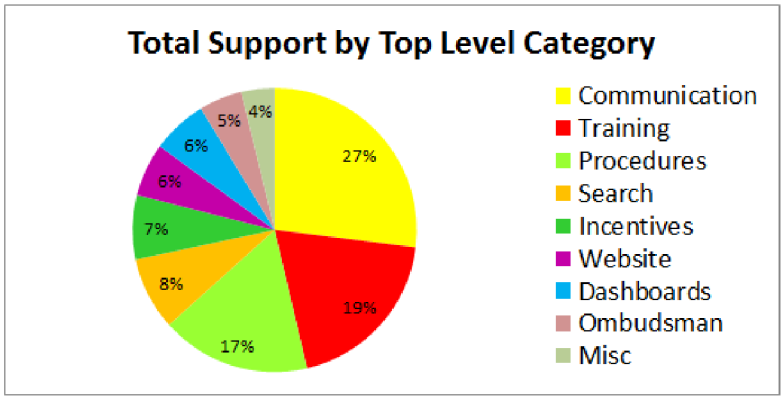

Figure 7 – Total Support by Top Level Category, N = 163

We broke these categories down further into 29 individual recurring issues. Appendix A-4 "Totals by Category" shows how each individual issue makes up the broader categories. This is also the numerical summary of all suggestions for the project. Appendix A-1 "Categories and Friendly Descriptions" explains what each of the individual issues are. The column "In phase 1" indicates if the idea came from the brainstorming sessions. Appendix A-2 "Brainstorming Data" shows the full raw data that was transcribed from the brainstorming session boards.

4.4.2 Conclusive Results and Limitations

The primary motivation for becoming involved in the brainstorming sessions was to gain exposure to the quality issues in the USPTO. This portion of the project produced just that: a list of 29 recurring quality issues. These items are the keystone for our project. They set the original list of the 29 criteria to which we pay special attention when analyzing how the OPQA conducts their quality assurance. These quality issues also set the list of issues we ask about in our interviews and survey. Since we have the voting, idea count data, and raw data, we can also establish a preliminary understanding of which issues are the most important to the average USPTO employee. For the bulk of this data, please refer to Appendix A-4 "Totals by Category".

We noticed some interesting findings (limitations) when looking at the data. We know that the individual idea that was suggested more often and received the most votes was "More Specific Types of Internal Training". This tells us that employees think that the single best way

to improve the USPTO's customer satisfaction is to give more training for specific tasks or concepts. The second most voted on suggestion was "General Internal Training", followed by "Internal Incentives". Looking at this data and considering examiners - by far the most common USPTO employee - it becomes apparent that examiners think the solutions should involve getting time for non-examining activity or receiving bonuses. These suggestions point out the limitations of the data collected in these sessions: the data is skewed to benefit the average USPTO employee: examiners. Thus, whenever we use the brainstorming data and whenever we say the average USPTO employee, it is important to remember how the opinions of examiners bias the results.

4.5 SPE, RQAS, and SRQAS Interviews Overview

After reviewing the brainstorming sessions and the external customer surveys, we set out to conduct 51 half-hour, semi-structured, 2 on 1 interviews with people who could provide specific insight to our project. 18 of the interviews were with SPEs and 33 of the interviews were with quality assurance employees (RQAS and SRQAS). In order to prepare for these interviews, a list of roughly 25 questions was created. These questions were based on the findings from the brainstorming sessions and external customer surveys. The question list can be seen in Appendix B-1 "Interview Questions". The question list was separated into two lists: one for SPEs and one for RQAS/SRQAS based on the content of the questions and the relevance of the suggestions to each group. The list was revised during the interview period to better target recurring quality ideas employees identified.

4.5.1 Data from Interviews

The data received from the interviews consists of the responses given to us by the SPEs and RQAS on various questions. Our goal was to find common ideas in these responses to help reinforce our claims. As we conducted more interviews, we uncovered more common ideas. For example, improving writing training and providing specific art training were universally praised by both SPEs and RQAS, while improving the search tools and providing training to lawyers and pro se were received negatively. We grouped these common ideas based on the topic on which the question was derived from. There were also differences of opinion by the different groups on certain topics. For example, a majority of the SPEs were in favor of having a collaborative

searching element to examination, while the RQAS were more mixed on the subject. These responses gave us insight into the topics featured on the survey, as well as giving us new perspectives and even specific suggestions on how to improve quality in these areas.

4.6 SPE, RQAS, and SRQAS Surveys Overview

A survey was also given with each interview. Recalling the suggestions from the brainstorming sessions, a survey was created to collect numerical data on how much each of the suggestions was liked. The survey featured a reduced set of 19 suggestions taken from the original 29 frequent suggestions made in the brainstorming session and external customer survey. This reduced set is identified in Appendix A-1 "Categories and Friendly Descriptions" by the column "in surveys?" The ideas were rephrased into survey appropriate descriptions and added to a table. Adjacent to each suggestion is a field to enter the "Importance" and the "Difficulty". The table can be viewed in Appendix B-2 "Survey". The rationale for these rankings was a desire to create a priority measure for each suggestion. Together, importance and difficulty describe what level of priority the USPTO should place on an objective. The important and easy concepts should be addressed first, as they present the highest marginal utility. Subsequent measures yield diminishing marginal utility, before reaching those of the lowest priority which yield less positive benefit. We asked each of the subjects we interviewed to complete the survey before the interview, not only because the survey is a productive starting point for introducing the topics in the interviews, but also because we wanted numerical feedback that was immediately useful.

The survey helped us identify outliers in the suggestions. Appendix A-6 contains the summary of surveys. The suggestions we found the most important were improving consistency and writing training. When factoring in difficulty, the highest priority improvements were response time and improvements in specific training. On the opposite end of the spectrum, the Ombudsman-related suggestions were unsupported. These results factored heavily into our recommendations.

4.6.1 Limitations

One of the purposes of interviewing and surveying SPEs and quality staff was to provide a balance to our summary previously dominated by examiners and external customers. To ensure

a balance, we set up the survey to be bound within the suggestions of the examiners but leave the ultimate decision of whether to implement up to managers and quality staff.

4.7 Solution Graph Overview

One of the data visualizations produced is the solutions graph. It is a three dimensional 'bubble' chart featuring all numerical traits of the 20 'phase 2' suggestions. The solutions graph is in Appendix A-5. Each suggestion is represented by a bubble. Each bubble has its radius proportional to the sum of the number of times an idea was written down in a brainstorming session plus the number of votes it received. The axes on the chart and placement of the bubbles correspond to importance and difficulty of the suggestion. The placement axes are arranged such that suggestions with a low priority descend towards the bottom left corner (red), while suggestions with a high priority ascend to the top right corner (green). This visualization makes it easy to see priority and the dynamic of difficulty, importance, and examiner enthusiasm for each suggestion.

4.8 Gap Analysis Overview

In order to make useful, actionable suggestions from our research, we performed a gap analysis, which can be found in appendix C-1. As described in the literature review, this process examined the current quality practices of the USPTO combined with the results of brainstorming sessions and interviews for desirable features, and then verified whether there was coverage for these features in the USPTO's quality practices. The gap analysis bridges the gap between the current state and desired state of the USPTO by proposing actions the USPTO needs to take to achieve their desired state.

4.9 Findings

With the combined results of the gap analysis, solutions graph, and responses from the interviews, we made claims based on our data and findings. In this section, we state our claims and go into detail about the data that support these claims.

4.9.1 Examiners Need Better Communication between Applicants and Other Examiners

The most supported category from the brainstorming sessions was communication, which received 214 votes or 27% of the total number of votes. A common idea we found in the external surveys provided by the USPTO was that customers experienced a high level of inconsistencies when dealing with the application process. We confirmed this in our interviews, where OPQA reviewers indicated that there are inconsistencies between examiners, especially between different art fields. Additional ideas expressed by customers included wanting more outreach from examiners and increasing the response time from examiners to applicants. With all of these findings, we can claim that better communication between patent examiner and applicant is needed at the USPTO.

One suggestion that many SPEs and RQAS were favorable on was bringing back the practice of collaborative searching. Many even recalled the days before electronic searching, where examiners would primarily do their searching in a room filled with small draws of previous patents. It would be common to see multiple examiners in the room at one time helping each other out with searching. It was easier to share ideas and brainstorm with each other, which made it easier to find relevant art and improve searching. Most SPEs and RQAS like the idea of collaborative searching, however there were concerns that examinations should be done by only one examiner. If there were more examiners on one application, then it would just be wasted resources. However, the idea of collaborative searching is different from the idea of having two examiners examine the same application. We found support for utilizing the brainstorming and sharing ideas aspect of collaborative searching to help examiners in need of searching guidance. With this finding, we can claim that better communication between examiners is needed within the USPTO.

4.9.2 Examiners Need More as well as Better Training

Another highly supported category from the brainstorming sessions was training, which received 154 votes or 19% of the total number of votes. Based on our surveys and interviews, training was easily the suggestion with the most positive feedback. The most common ideas from the interviews included having more specific training for patent examiners, making sure examiners have a better understanding of their particular art fields, and inexperienced or junior

examiners need more oversight from SPEs. Another common suggestion was to improve the courses at the PTA. Approaches to improve the training courses included having more engaging and hands-on learning, having more legal training, constantly updating the training to match the updating court cases and technology, offer more writing courses to help improve with writing and grammar skills for examiners, and more ways to evaluate whether the training being conducted is effective. With all of these findings, we can claim that examiners need more as well as better training at the USPTO.

4.9.3 Examiners Need Better Examination Procedures

Another category supported from the brainstorming sessions was procedures, which received 135 votes or 17% of the total number of votes. One concern derived from our interviews was that the metrics do not reflect good performance from examiners. For instance, quality metrics will negatively reflect certain office actions, such as allowances, regardless of whether or not this was the correct office action taken. Another suggestion was to adjust the "allotted" time to examine a patent. The theory is that, if you allow more time for a patent examiner to examine a patent, it will improve the quality of that examination. However, allowing more time to examine will reduce productivity, which in turn will reduce revenue. It is important to find the right balance to optimize both quality and productivity. Another suggestion is to give more time to those examiners with more complicated technologies in their art fields. However, about half of the RQAS feel that the current amount of time to examine does not need to be changed. The RQAS say that the amount of effort put into quality will stay the same regardless of how much time is added.

Other topics include the Ombudsman program and the searching procedures. The Ombudsman program is a small division in the USPTO consisting of three employees and they "enhance the USPTO's ability to assist applicants or their representatives with issues that arise during patent application prosecution" (USPTO.gov, 2014). Some common suggestions for the Ombudsman program brought out by the brainstorming sessions include giving the Ombudsman the power to take action in the examination directly and allow the Ombudsman to mediate discussions. However, the Ombudsman program received a lot of negative feedback from our surveys, and during our interviews, which included speaking with a senior Ombudsman representative; we found that this was due to a lack of understanding on the program itself by

employees. The topic of Ombudsman is in the lower left quadrant of the solution graph as a result of this, which means that it would not be beneficial for the USPTO to pursue changing. With the combination of our solution graph results and speaking with a senior Ombudsman representative, we decided not to change the Ombudsman program in any way, but only recommend that the employees be more educated on the Ombudsman program's presence and resources. The topic of search was met with more mixed responses, some felt that it needed improvement and others felt that the current system is fine. Some common suggestions include improving search tools, adopting an Early Search procedure, and bringing back collaborative searching. With all of these findings, we can claim that examiners need better examination procedures.

4.9.4 Different Motivational Approaches from Supervisory Patent Examiners Produce Better Quality Examination from Examiners

Through our interviews, we found that SPEs need to adopt different approaches to communicate with and motivate examiners. By using more effective motivational approaches with the examiners, office morale will improve, and, among many things, better quality examinations will be produced. Our interviews with SPEs drew us to four main ideas about how to motivate and communicate with their examiners.

Many supervisors were in agreement with the idea that, in order to motivate examiners, it is crucial to treat examiners with respect, and to be more appreciative of the work they produce. We found that many of the SPEs feel that treating examiners with respect and praising them for good work will positively impact the work they complete.

The SPEs were also asked how they felt about monetary incentives, and whether they felt this approach would help to improve quality. Although many SPEs agreed that money definitely acts as a motivator, many supervisors also recognized that monetary incentives might not be the best option for the promotion of quality assurance.

We also asked the SPEs and RQAS what they thought the current quality issues at the USPTO were, and also how the OPQA and the SPEs currently deal with these issues. Many of the SPEs suggested that they would like to see the standard practice of giving examiners an "error" for poor quality work and bad practice be changed to a feedback-based approach. SPEs suggested that this often occurs with newer examiners who are not as experienced, and often do

not fully understand the areas in which they failed. On the opposite side, SPEs also discussed how they gave their examiners constructive feedback on their work that displayed bad practices, instead of just marking them with an error. This, in turn, allows the examiner to be more receptive to the feedback and criticisms when they know there is no punishment.

4.10 Conclusion

From all of our data collected and synthesized, we came up with four main claims:

1. Examiners Need Better Communication between Applicants and Other Examiners;
2. Examiners Need More as well as Better Training;
3. Examiners Need Better Examination Procedures;
4. Different Motivational Approaches from Supervisory Patent Examiners Produce Better Quality Examination from Examiners.

From these claims, we were able to focus on those policies whose improvement would prove most beneficial. In our next chapter, we provided recommendations to the USPTO to consider applying metrics to ensure improvement in those areas.

Chapter 5: Conclusions and Recommendations

In this chapter, our team has made conclusions based on the data we collected and analyzed. From these conclusions, we have proposed recommendations for the development of potential new metrics. Based on our claims, we were able to narrow our recommendations for the USPTO to four main categories: Communication, Training, Examination Procedure, and Review and Feedback. Our recommendations provided the USPTO with items that have been identified as needing extra attention and further investigation.

5.1 Communication

5.1.1 Response Time

Some examiners believe they have 48 hours to respond to applicant's inquiries, even though the standard practice is 24 hours.

While analyzing external surveys given to customers to evaluate the USPTO, we found that applicants are dissatisfied with the current response time, and that examiners perceive the acceptable response time to be much longer than the current standard. In our interviews, managers reported that slow response times from examiners is due to a misunderstanding of standard practices. Examiners believe they have 48 hours to respond to applicant's inquiries, however, the standard response time is 24 hours. Examiners need to respond to the applicant's inquiries and questions within the 24 hour requirement. Slow response times force applicants to wait for answers about any questions they have about their patent's examination, ultimately leading to a decline in customer satisfaction. By having a quicker response time from examiners, there will be a heightened level of customer service satisfaction.

5.1.2 Outreach

Examiners should initiate more contact with applicants through email and interviews.

In order to improve the communication between the examiner and applicant, outreach during the application process should be increased. Examiners should be more inclined to initiate contact with the applicant during the application process, either through email or interviews. By having more frequent contact, examiners can give more updates to the applicant about the patent, or to identify a problem in the early stages of examination. We found this problem through

analyzing the external customer surveys and confirmed its importance through our interviews with various SPEs. Customer satisfaction would increase if examiners were attentive to the concerns of their applicants and were willing to help them to understand potential issues that may arise during examination.

5.1.3 Internal Patent Examiner Collaboration

The USPTO should promote more collaborative searching among examiners.

The USPTO should promote more collaborative searching between examiners to help ensure more consistent and sufficient practices. By having examiners engage in collaborative searching, this will allow for examiners to share ideas, and learn and gain from each other's experiences. From the brainstorming sessions and interviews with SPEs, a frequent suggestion stated that collaborative searching would increase quality and the level of consistency by having examiners develop similar practices during the examination process. Before electronic searches were available, examiners would do their searching from a room that contained draws filled with previous patents. It would not be uncommon to find multiple examiners in these rooms at the same time. While searching together, examiners were able to share ideas and brainstorm, which would make it easier to find art during these searches. We are not recommending having two examiners examine one application. It will still be one examiner with one application, but if that examiner is having trouble with searching then they ought to seek help from either another examiner or a small division put in place to decrease the search time. Collaborative searching puts forth the concept of "two heads are better than one", which prompts more learning from other examiners by sharing searching experiences, thus increasing the consistency in their practices and decreasing the search time.

5.2 Training

5.2.1 Implementation of Specific Art Training to Examiners

Training for examiners should be more specific to each art unit in order to help assure that examiners will have more expertise in their specific field.

To improve quality through training, there should be an emphasis on specific training along with general training. After analyzing USPTO internal surveys, the training courses

offered were identified as areas in need of improvement. Through the brainstorming sessions, our team found that participants recommended that training should be more specific, as they felt examiners would gain more from an art-specific training. USPTO managers also felt that more specific training would be a better use of the examiner's time, as they would be learning about their own specific art field rather than getting general art training. More specific training will assist in increasing the knowledge of the examiner's own art field and will allow for the examiner to do faster, higher quality work. This training will be mandatory, as every examiner would benefit from the knowledge gained from these courses. The training will apply specifically to the examiner, and will focus only on the material needed to study in their particular art unit.

5.2.2 Implementation of Hands-On Training for Examiners

Examiner training needs to be more active and hands-on to improve examination skills.

Current training at the USPTO is carried out through a series of long, informative lectures. However, the feedback that we have obtained through interviews and surveys has suggested that the delivery of the training needs be changed to get the most out of each session. Examiner training needs to take a more engaging, hands-on approach, rather than only through the form of a lecture. Interviews and surveys with managers have suggested that a more active, firsthand approach would be much more beneficial to examiners. Interviews have also suggested that a more hands-on approach to training will better prepare examiners for the patents they will see while they are working. Examiners will find that they are taking more away from their active training sessions and will be better prepared when working on examinations that they may face in the future. By being better prepared for patent examinations, fewer errors will be made, ultimately improving quality.

5.2.3 Implementation of Writing Course for Examiners

The USPTO should implement more writing training to produce more clear and concise Office Actions.

The goal of adding more writing courses at the USPTO is to help examiners write clearer examination decisions and communicate their ideas properly. Through brainstorming sessions, participants suggested that writing courses would be beneficial for examiners, particularly for

writing concise Office Actions. Through the survey and matrix, increasing writing training was one of the highest suggestions for the USPTO to pursue. Additionally, the writing courses would help English as a Second Language (ESL) examiners learn the nuances of the English language to improve their own writing and understanding of the language. Writing courses will offer examiners an opportunity to improve their writing skills and will teach them what to include in their Office Action explanations. This will help the examiners to better convey their message, which will be better understood by SPEs and applicants. Improved communication between examiners, supervisors and applicants will ultimately improve customer satisfaction; as well as internal USPTO consistency and understanding. We recommend the USPTO provides writing training to the examiners in the form of persuasive writing classes. This training will be optional, as not every examiner will need writing training. We recommend that SPEs reach out to those examiners who could use additional training. This way it does not put the examiner down and hinder their chance for learning.

5.2.4 Implementation of Legal Course for Examiners

Legal training is necessary to keep examiners informed on current laws and changes that apply to examinations.

The USPTO should implement more legal training courses to increase the legal knowledge of examiners. During the examination process, examiners incorporate laws and legal restrictions into their examination explanations. We have concluded from our interviews that some examiners do not fully understand the laws used as references when an examination decision is made. This leads to poor communication and incorrect Office Actions. Interviews with managers also confirmed that examiners frequently reference laws incorrectly in their writings. Through the brainstorming sessions, it was suggested that continuous legal training should be available to examiners. This is partly due to the fact that laws are constantly changing with time and it is difficult to always be aware of these changes. To fix this, the legal training course will need to be part of recurring practice in order to ensure that all examiners are up-to-date on their understanding of the laws. If all examiners are aware of current laws, it will lead to consistent practice between examiners, which will promote customer satisfaction and reduce the number of cases to be reexamined.

5.3 Procedures

5.3.1 Evaluation of Time Allotment in Art Units

The USPTO should implement a team or a process that evaluates the current allotted times for each art unit's examinations.

Each specific art unit is allotted a particular amount of time to examine patent applications in that particular art field. This time has been allotted based on standards set over 20 years ago. Since then, technology has changed dramatically, causing some art departments to feel that they need additional examination time. Assessing if each art unit is provided the appropriate amount of time to conduct their examinations will ensure that each art unit is given enough time to carry out quality procedures. We recommend an evaluation to see if the times allotted for examination are still viable for today's technologies. This evaluation should be based upon the complexity of the technology and the difficulty of conducting art searches for that art unit. The theory is: Increasing an examiner's examination time will improve the quality of examination. However, allowing more time for an examination reduces productivity, which will ultimately reduce profits. The latter half of this theory is why we are not recommending giving more time to examination across all art units. Instead, we are proposing to re-evaluate the current times to see if specific art units need more time. This will help ensure that every patent will be subjected to high quality examination.

5.3.2 Educate the USPTO on the Ombudsman Program

The USPTO should educate examiners on the Ombudsman program.

At the USPTO, the Ombudsman program consists of three USPTO employees who work to support applicant's questions during the examination process. Through the brainstorming sessions, USPTO employees presented the idea that the Ombudsman should play a bigger role in the examination process. This was described as making the Ombudsman "teethier," implying that there should be more of an impact and intervention from the Ombudsman during examinations. We talked to a representative of the Ombudsman program, and received a negative reaction towards the idea of giving the Ombudsman more power in the examination process. Through interviews and surveys, it was discovered that there was a frequent occurrence of our interviewees who were not aware of the actual role of the Ombudsman presently. Once

interviewees were informed of the Ombudsman's current role, and whether they should play a bigger role in the examination process, there was a strong objection to this. It was believed that this could lead to confusion about who the examiner should look to as their boss, who they should look to when they have questions, etc. Additionally, SPEs found that this takes power and credibility away from the examiner, which shouldn't happen. From the lack of understanding with USPTO employees, it is very apparent that there should be more awareness of the Ombudsman's role and the resources they provide. Educating examiners on the Ombudsman program will help the examiners understand the USPTO as a whole and help them recommend the program to applicants when needed. While we do not recommend changing the role of the Ombudsman, we do recommend educating examiners on the program to help the USPTO and its applicants use the program to its fullest potential.

5.4 Review and Feedback

5.4.1 Approaching Examiners with Feedback to Improve Quality

The USPTO should implement a feedback approach to examiners, rather than giving them errors for inappropriate office actions.

Errors the OPQA gives to the TCs are consistently fought with seemingly little regard to quality issues. After asking managers how they deal with quality issues that are seen among their examiners, managers suggested that they prefer to give more constructive feedback to examiners, as opposed to harsh judgment. A feedback-based environment makes the examiners more receptive to criticisms. Another point the managers made was to not weigh errors as heavily as they currently do.

From the brainstorming sessions, we gained insight into how errors affect examiners. Since the quality metrics evaluate examiner performance, examiners strive to have an impeccable performance review. In order to ensure a good performance record, this may guide the examination to a point where the examiner continuously fights their supervisor over their error. Although undoing the rejection, also known as making an allowance, would be the correct action in this case, the examiner will receive a reduced quality mark. Therefore, the examiner will continue to fight their incorrect rejection to avoid receiving the allowance penalty. Furthermore, this prolongs the examination process and reduces customer satisfaction.

From the manager's responses in interviews, we found that implementing a feedback-based environment could serve as a potential recommendation. We began asking about this error v. feedback approach in our remaining interviews. Responses suggested this process would work by taking the decisions, either from the in-process examination or decision, which reflect poor quality practices, and use the experience to give the examiner feedback. The examiner in turn will feel less defensive, and more open to feedback and criticisms.

5.4.2 Do Not Promote Monetary Incentives

Incentives should not be used in order to promote examiners to produce higher quality work.

At the USPTO, incentives are given in order to promote or increase a desired behavior, with one of those behaviors being the increase of quality in examinations. It is important to look at this aspect of the work area to determine if this factor is contributing to the current quality practices at the USPTO. We decided to look at the potential effects of monetary incentives and how it could be beneficial to the examiner. After suggesting it through our surveys and interviews, we found that using money as an incentive may improve quality of work for some employees. However, this is not the case for all examiners. For some, it may negatively impact their work performance. Monetary incentives pose an issue when trying to heighten the quality of work. As an employee, the examiner should be constantly working to maintain a high level of quality. The incentive then becomes a reward for examiners meeting the expectations of their job, rather than rewarding exceptional behavior.

5.5 Rubric for USPTO

Our last deliverable was a rubric based on our gap analysis and recommendations. This rubric took each recommendation we proposed and outlined the possible actions needed to accomplish each one. The rubric is ranked on a scale from 0-5, where 0 is the problematic state and 5 is the ideal state for the USPTO to be in. Also outlined in the rubric are columns for the current state the USPTO is in and the future state where we feel the USPTO should be in to become a world class patent system. We also weigh each recommendation's priority on a scale from High to Low, where High means that recommendation should be considered for fixing right away and Low means that recommendation should only be fixed after the higher priority suggestions are accomplished. We rated the current state of the USPTO and most of the rankings

fall between a 2 or a 3. While this is not a problematic state, it is not an ideal state either. In order for the USPTO to become a world class patent system, it should rank in at either a 4 or a 5. In combination with our recommendations and guidance from our rubric, we feel that the USPTO can achieve world class status and become the leader in its industry.

5.6 Final Conclusions

Our project has helped us gain an understanding of the USPTO's patent system and current quality metrics. We have carried out various methodologies that helped us gain data essential to our project. With our data, we developed a series of recommendations for the USPTO with ideas for potential new metrics. Based on the long timeline of changing and implementing new metrics, our team recommends the USPTO to research the following questions:

- How could examiners be motivated to respond to applicants faster?
- How could examiners be proactive in communicating with the applicant?
- How could search collaboration increase?
- How can the training concerns be addressed?
- How can feedback be translated into learning?
- How should time continue to be addressed?
- How should the Ombudsman be broadcasted?
- How would incentives that avoid side-effects work?

Our results will help the USPTO become a world class patent system by increasing their customer service through examiner improvements. In return, improved examiners will ultimately lead to increased quality in examination. An increase in quality examination means the USPTO can review more cases without reexamination, thus promoting innovation even more in our society.

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	A	B	C	D	E	F	G	H	I	J
1	**Category**	**Qualified Name**	**Abreviation**	**In Phase 1?**	**In Surveys?**	**In Interviews?**	**In Phase 3?**	**Yay or Nay?**	**Long Name**	**Description**
2	Communication	Call Handling	CH	Yes	No	No	No		Call Handling	Adjust the procedures of call handling within the external facing call center. Prevent forwarding people three or four time before they reach the correct person
3	Communication	Consistency	C	Yes	Yes	Yes	Yes	Yay	Consistency in office action and communication	Produce and apply guidelines for producing a more consistent
4	Communication	Contact Info	CI	Yes	Yes	Yes	No		Post Contact Info	Post more contact information on the website or on the application materials
5	Communication	Email	E	Yes	Yes	Yes	Yes	Yay	Email Communication	Allow Email to be used for applicant-PTO correspondence. Loosen email restrictions in general. Also use to initiate more contact
6	Communication	Ignoring Arguments		No	No	Yes	Yes	Complicated	Ingoring the Applicant in appeals	There has been a lot of concern with examiners not accurately reading the application and the appeals
7	Communication	Internal Communications	IC	Yes	No	No	No		Better Internal Communications	Increase the communication between business units and other stakeholders within the office
8	Communication	Interview	I	Yes	Yes	Yes	Yes	Yay	More/Better Interviews	Insert/recommend interviews in various steps of the applications process, such as before or after the First Action. Also have more customer service like call backs to prompt the applicant to express concerns
9	Communication	Pure Communication Skill	CS	Yes	No	No	No		Pure Communication Skill	Do something to increase the communication skills for all examiners
10	Communication	Self-Claim Invention	SC	Yes	Yes	Yes	No		Encourage Self-Claiming Invention	Increase clarity in examiner's understanding of invention. Require a plain English paragraph from inventor indicating what they think is the unique feature.
11	Communication	Speedy Response	SR	Yes	Yes	Yes	Yes	Yay	Speedy Response to Communications	Ensure a more prompt response to calls, queries, letters, status, etc. Implement and Enforce a new 24 hour limit
12	Communication	Surveys	S	Yes	No	No	No		Conduct more Surveys	Have the applicant complete (more) surveys after the Final.
13	Dashboards	Applicant Dashboard	AD	Yes	Yes	Yes	No		Applicant Dashboard	Create an online dashboard where the applicant can track the progress and time till decision of his/her application
14	Dashboards	Internal Dashboard	ID	Yes	Yes	Yes	No		Internal Dashboard	Have a better internal dashboard for monitoring the status of a patent and examining who is responsible for it (employee locator). View PALM data in real time.
15	Incentives	Applicant Incentives	AI	Yes	Yes	Yes	No		Applicant Incentives	Use monetary tiers to provide different levels of service. Use monetary rewards and penalties for specific applicant actions.
16	Incentives	Internal Incentives	II	Yes	Yes	Yes	Yes	Nay	Use more Internal Incentives	Use awards/bonuses to encourage examiners to follow certain time consuming behavior
17	Incentives	Respect the Examiner		No	No	Yes	Yes	Yay	Respect the Examiner	Treat examiners with respect to best incentivise behavior
18	Ombudsman	Mediator Ombudsman	MO	Yes	Yes	Yes	Yes	Nay	Make the Ombudsman a sideline coach	Obligate the Ombudsman to follow the applicants concern until both parties are happy. Also allow the Ombudsman to mediate discussions.
19	Ombudsman	Teethy Ombudsman	TO	Yes	Yes	Yes	No		Give the Ombudsman a serious control factor	Give the Ombudsman the power to take action in the examination directly, as opposed to handing a ticket off to a SPE
20	Procedures	Automation	A	Yes	No	No	No		Automation	Increase the amount of software automation, self-serve processes, reminders, and application validation.
21	Procedures	CPC/Other Offices	CPC	Yes	Yes	Yes	No		Work more with CPC/Other Offices	Better work-sharing and foreign search
22	Procedures	Metrics =/= Performance	M≠P	Yes	Yes	Yes	No		Disconnect the quality metrics and Performance evaluations	Use other methods to evaluate performance. The quality metrics negatively reflect certain actions such as continued examinations, which, while being general undesirable, may have been the correct course of action. in a case. Thus, it is possible to blame an examiner for working with a poor quality application. See Error vs Feedback
23	Procedures	Feedback not Errors		No	No	Yes	Yes	Yay	Remove error penalties from feedback	Examine the issues with quality feedback being fought over errors rather than being treated as feedback
24	Procedures	OPQA decides Training		No	No	Yes	No		OPQA decides Training	OPQA Decides what training to recommend to examiners
25	Procedures	Review vs. Other Quality		No	No	Yes	No		OPQA does more Review vs. Other Quality Work	Adjust the balance between reviewing and other quality work to favor reviewing
26	Procedures	Timing Adjustments	T	Yes	No	No	Yes	Complicated	Make Timing Adjustments to examinations	Both in general and in specific cases, allow more time to complete examination. Create procdure to detect when to adjust a time
27	Search	Crowd Sourcing	CS	Yes	Yes	Yes	Yes	Yay	Collarative Search	Leverage the experience of multiple examiners to conduct a search
28	Search	Early Search	ES	Yes	No	Yes	No		Early Search	Push to begin searching earlier
29	Search	Search Software	S	Yes	Yes	No	No		Search Software	Invest in more/better software to aide in search
30	Training	External Training	ET	Yes	No	No	No		External Training	Provide more trainings for Lawyers and Pro-SE's on general and specific application processes
31	Training	General Internal Training	GT	Yes	Yes	Yes	Yes	Nay	General Internal Training	Conduct more training in general

	A	B	C	D	E	F	G
1	**Session**	**Question**	**Votes**	**Percentage**	**Idea Category**	**Sub Category**	**Idea Text**
2	5	1	9	35%	Communication	Call Handling	Consolidate call centers: have support from each area of office.
3	7	1	6	21%	Communication	Call Handling	Improved call center navigation. Frustration reaching correct area of PTO.
4	1	2	5	17%	Communication	Call Handling	Direct customer to the right place the first time and follow-up
5	5	1	4	15%	Communication	Call Handling	Improve customer service centers: remove the run-around.
6	1	2	3	10%	Communication	Call Handling	Stay with applicant through process of answering questions
7	4	1	2	7%	Communication	Call Handling	Calls rerouted to a primary and/call center
8	4	1	2	7%	Communication	Call Handling	Assignment of which customer service department is responsible for addressing questions (Trainings for managers/examiners)
9	3	2	1	5%	Communication	Call Handling	Better, more knowledgeable helps lines. Examiner quick guides for help lines for rioting calls and soft skills
10	5	2	1	4%	Communication	Call Handling	Improved customer service by changing culture
11	2	2	0	0%	Communication	Call Handling	Calls recorded for customer service
12	2	2	0	0%	Communication	Call Handling	Pleasant hold music
13	3	2	0	0%	Communication	Call Handling	Enhanced help desk services
14	5	2	0	0%	Communication	Call Handling	Concierge service
15	7	1	0	0%	Communication	Call Handling	Improve call center (wait time, education, more humans on phone)
16	7	2	0	0%	Communication	Call Handling	Reaching a person who will own problem from beginning to end to avoid being rerouted to different areas
17	7	2	0	0%	Communication	Call Handling	Caller's case ID information automatically forwarded with the problem
18	7	2	0	0%	Communication	Call Handling	Email "Help Desk"-track incoming emails rather than just phone calls and facilitate routing to right person
19	3	2	5	23%	Communication	Consistency	consistency of examination within Art Area/TC
20	3	1	1	5%	Communication	Consistency	Consistency of examination: claim interpretation, case law i.e. 101, multi-office (i.e. EPO, PTO, JPO)
21	2	3	0	0%	Communication	Consistency	Standardized/continuity of Office Actions
22	4	1	0	0%	Communication	Consistency	Consistent approach from all AU's in TC on volatile issues like 101, 112-F, etc.
23	5	2	7	27%	Communication	Contact Info	transparency of status in public pair: contact box
24	1	1	5	17%	Communication	Contact Info	Provide attorneys with opportunities for upfront contact at the examiner level
25	3	1	3	14%	Communication	Contact Info	Make it easier to contact examiners: voicemails make clear hot to contact examiners, list alternate contact, guaranteed response time
26	3	2	3	14%	Communication	Contact Info	Provide complete contact list for Application and specifications for various patent related issues.
27	4	2	3	11%	Communication	Contact Info	update call list/contacts.
28	3	2	2	9%	Communication	Contact Info	Have three separate contact numbers for applicants beginning/during/after examination
29	5	1	2	8%	Communication	Contact Info	Send Pro-Se applicants a list of information telephone numbers.
30	7	2	2	7%	Communication	Contact Info	provide different contact numbers on office action for specific issues: IT problems/procedure/examiner finance
31	5	2	1	4%	Communication	Contact Info	Patents specific hotline, consolidated help desk
32	2	1	1	3%	Communication	Contact Info	Pro SE contact in each A.U. or W.G.
33	5	1	0	0%	Communication	Contact Info	Points of contact-clearer list
34	5	1	0	0%	Communication	Contact Info	List of master internal telephone numbers/central help desk (get back to customers faster)
35	7	1	0	0%	Communication	Contact Info	Applicant's direct phone number in application for examiners to respond to
36	7	1	0	0%	Communication	Contact Info	Resource list for examiners to provide customers with correct person for their problem
37	7	2	0	0%	Communication	Contact Info	Footprint contact list (Who did what in the case?)
38	5	1	7	27%	Communication	Email	Send status emails to customers.
39	1	1	8	27%	Communication	Email	Allow email (confirmed on transmittal). Make easy to attach to interview summary
40	4	2	3	11%	Communication	Email	clarify limits on email communication: increase interaction and create applications
41	4	2	3	11%	Communication	Email	change email communication policy (check box in application to allow/authorize email communication).
42	7	1	1	3%	Communication	Email	Permit e-mail between PTO and Applicants
43	1	2	0	0%	Communication	Email	More personal communication/email is preferred over phone
44	2	2	0	0%	Communication	Email	give email authorization at filling to facilitate communication

	A	B	C	D	E	F	G
1	**Session**	**Question**	**Votes**	**Percentage**	**Idea Category**	**Sub Category**	**Idea Text**
45	5	2	0	0%	Communication	Email	Loosen restrictions on emails/communication
46	2	2	2	7%	Communication	Internal Communica	Make stakeholder interaction critical
47	1	2	0	0%	Communication	Internal Communica	More communication between B.U.
48	4	2	10	37%	Communication	Interview	poll customers randomly at the end of the prosecution.
49	2	1	5	17%	Communication	Interview	Required interview after FOAM to be offered to applicant.
50	4	1	4	15%	Communication	Interview	Pre-appeal interview
51	4	1	4	15%	Communication	Interview	Allowable subject matter triggers interview by examiner
52	5	3	3	12%	Communication	Interview	Interview before first action
53	2	1	3	10%	Communication	Interview	Interviews: Streamline scheduling, substantive summaries
54	4	1	2	7%	Communication	Interview	Interviews : SPE as a resource in DR, improve process (like pre-Ombudsman)
55	2	1	2	7%	Communication	Interview	Pre- 1st action interviews
56	4	2	1	4%	Communication	Interview	112 interviews with 1st Office Action.
57	2	2	1	3%	Communication	Interview	Feedback survey for after interviews/interactions: More data reward/discipline examiners, quantify stakeholder interaction, improvements in process
58	1	3	0	0%	Communication	Interview	More interviews
59	2	1	0	0%	Communication	Interview	Require A.F. interviews
60	2	1	0	0%	Communication	Interview	“Have I provided you with excellent customer service?” “Have I addressed all your concerns?”
61	2	2	0	0%	Communication	Interview	Interviews: Less Contentious/Educate Empower examiners to deescalate tension
62	4	1	0	0%	Communication	Interview	Expand first action interview pilot program and have more training for the program
63	4	1	0	0%	Communication	Interview	Require applicant interviews before FAOM of set tie after FAOM
64	4	1	0	0%	Communication	Interview	Reducing stigma of having SPEs sit in on primary interviews
65	4	2	0	0%	Communication	Interview	More external/internal focus sessions
66	4	2	0	0%	Communication	Interview	Resolve more issues via telephone/interviews
67	5	1	0	0%	Communication	Interview	Hold more interviews
68	5	2	0	0%	Communication	Interview	Train examiners to make suggestions in interviews
69	5	2	0	0%	Communication	Interview	Allow more primaries to assist in more interviews
70	7	1	0	0%	Communication	Interview	More mandatory and complete interview summary
71	5	2	9	35%	Communication	Pure Communicatio	Train our employees to practice good customer service.
72	3	2	7	32%	Communication	Pure Communicatio	Enhanced communication skills
73	4	1	4	15%	Communication	Pure Communicatio	Require intro writing class for all examiners
74	3	3	1	5%	Communication	Pure Communicatio	understand the invention
75	2	3	1	3%	Communication	Pure Communicatio	Willingness of both parties to understand basis for arguments of others
76	2	2	0	0%	Communication	Pure Communicatio	Try to relate during interaction
77	3	3	0	0%	Communication	Pure Communicatio	better communication with the applicant
78	4	1	0	0%	Communication	Pure Communicatio	Clear and reasonable rejections
79	4	1	0	0%	Communication	Pure Communicatio	Office Action clarity
80	4	3	0	0%	Communication	Pure Communicatio	Clarity of rejection
81	7	3	0	0%	Communication	Pure Communicatio	Less jargon in communications
82	7	3	9	31%	Communication	Self-Claim Invention	Up front- clear concise application filed: better filing quality, have applicant state what they think is the unique feature.
83	4	3	6	22%	Communication	Self-Claim Invention	Ability to understand applicant inventions
84	2	1	0	0%	Communication	Self-Claim Invention	Applicant complain that examiners don’t understand the invention
85	1	2	5	17%	Communication	Speedy Response	Prompt response to queries, letters, and petition’s status
86	4	1	0	0%	Communication	Speedy Response	Change 24 return phone call
87	4	2	0	0%	Communication	Speedy Response	Call back in 24 hours
88	2	2	9	31%	Communication	Surveys	Survey after disposal of application
89	3	1	1	5%	Communication	Surveys	survey for customers, elicit feedback during prosecution.
90	4	2	1	4%	Communication	Surveys	end of phone call survey.
91	4	2	0	0%	Communication	Surveys	General feedback from the customer
92	7	2	0	0%	Communication	Surveys	Yelp for patents (rate the claims)
93	7	2	0	0%	Communication	Surveys	More surveys
94	4	2	6	22%	Communication		CRM- Customer Relation Management
95	2	2	6	21%	Communication		One stop shopping for questions (triage)
96	1	3	5	17%	Communication		Effective communication at multiple levels.
97	4	3	4	15%	Communication		Call out attorneys on their practices leading to bad quality
98	4	1	2	7%	Communication		Improve WebEx interactions, usability

	A	B	C	D	E	F	G
1	**Session**	**Question**	**Votes**	**Percentage**	**Idea Category**	**Sub Category**	**Idea Text**
99	4	1	2	7%	Communication		Completeness of the record for the public
100	4	3	2	7%	Communication		Improve ability to submit multimedia files to examiners
101	2	1	2	7%	Communication		Trigger of auto reviews/reassignment/new voice if procedural or communication is unsatisfactory
102	5	2	1	4%	Communication		Tailored output for different levels of user sophistication (e.g. XML)
103	5	2	1	4%	Communication		Stratification of users (e.g. Attorneys, Pro Se, paralegal, etc.)
104	5	3	1	4%	Communication		Better communication within the office
105	4	3	1	4%	Communication		Clear record of searching and consulting
106	2	2	1	3%	Communication		personalized responses/interactions
107	1	1	0	0%	Communication		Better customer-friendly IDS generator from relevant art of family members
108	1	2	0	0%	Communication		Standardized feedback SOP
109	1	3	0	0%	Communication		System/merits to provide to applicants for improvements
110	1	3	0	0%	Communication		Make the process transparent to applicant/applicant participates in appeals
111	1	3	0	0%	Communication		Providing information to examinees about other related applications and search/quality contacts in other TCs
112	2	1	0	0%	Communication		More collaboration at beginning of exam process. (harder to do with dispersed workforce)
113	2	1	0	0%	Communication		Supplemental actions/Means for clarifying examiner's office actions
114	4	1	0	0%	Communication		Office hours for the public
115	4	1	0	0%	Communication		Make stakeholder interaction a critical interaction for all
116	4	2	0	0%	Communication		Give specific suggestions to move the case forward
117	4	2	0	0%	Communication		Give suggestion to solve related issue
118	4	2	0	0%	Communication		Gain understanding of customers business
119	4	3	0	0%	Communication		Expand duty to disclose: point out good art
120	4	3	0	0%	Communication		More clear property rights to public
121	4	3	0	0%	Communication		Patent term information transparency
122	4	3	0	0%	Communication		Search transparency: increase ability for applicants to view examiner considered references
123	7	1	0	0%	Communication		PTO to provide data to customers for import/exports (customers don't see enforcement of their patents)
124	7	3	0	0%	Communication		Increase interaction between Junior and Primary examiners
125	2	2	10	34%	Dashboards	Applicant Dashboar	Applicant dashboard: Timelines, resources on prosecution procedure, PAIR streamlined experience
126	5	2	8	31%	Dashboards	Applicant Dashboar	An improved tracking system for the customer.
127	5	2	7	27%	Dashboards	Applicant Dashboar	transparency of status in public pair: status bar
128	1	2	3	10%	Dashboards	Applicant Dashboar	Send status of application to applicants
129	1	2	2	7%	Dashboards	Applicant Dashboar	Particularized position in PA1 (example: Amazon package status)
130	3	1	1	5%	Dashboards	Applicant Dashboar	Transparency of Data: customer should be able to look up the status of their cases on USPTO.gov. 1t act indicator tool should be updated more accurately.
131	5	1	1	4%	Dashboards	Applicant Dashboar	Interactive public pair/Status Bar: (e.g. showing how cases reassigned).
132	2	2	1	3%	Dashboards	Applicant Dashboar	Dominos pizza time to deliver/UPS tracking
133	1	1	1	3%	Dashboards	Applicant Dashboar	No interim status/notifications when patent is first submitted
134	1	3	1	3%	Dashboards	Applicant Dashboar	Report on Pre-appeal review stats.
135	2	1	0	0%	Dashboards	Applicant Dashboar	Online time table to approximate FAOM
136	4	2	0	0%	Dashboards	Applicant Dashboar	Detailed application tracking
137	5	1	0	0%	Dashboards	Applicant Dashboar	Improve pair- applicant dashboard
138	7	1	0	0%	Dashboards	Applicant Dashboar	Dashboard/estimate of first action time
139	7	1	0	0%	Dashboards	Applicant Dashboar	Details about when examiner will start working on application/response
140	7	2	0	0%	Dashboards	Applicant Dashboar	Dashboard for status
141	1	2	7	23%	Dashboards	Internal Dashboard	Employee locator enhancements: specific designation, Super AU (who reports to who), case should always belong to someone, even in reexamination, status code directory
142	7	2	4	14%	Dashboards	Internal Dashboard	Color code (PALM): Pre-examination, etc.
143	1	1	2	7%	Dashboards	Internal Dashboard	Examiners: Get PALM data in real time, fix TCE in PALM, connect eDan/PALM real time, global WTA, telephone directory, collect fee, SharePoint
144	1	1	1	3%	Dashboards	Internal Dashboard	Consolidate search notes in PAIR/eDan
145	1	1	1	3%	Dashboards	Internal Dashboard	Get all PACM data real time

	A	B	C	D	E	F	G
1	**Session**	**Question**	**Votes**	**Percentage**	**Idea Category**	**Sub Category**	**Idea Text**
146	7	3	5	17%	Incentives	Applicant Incentives	Gold plated patent: team examinations
147	7	2	4	14%	Incentives	Applicant Incentives	Super fast track for fee. Examiner dedicated for x amount of time until complete.
148	7	3	4	14%	Incentives	Applicant Incentives	incentive for applicants to file full, complete, peer-reviewed disclosures.
149	5	3	2	8%	Incentives	Applicant Incentives	Applicant traveling on drafting
150	4	2	1	4%	Incentives	Applicant Incentives	Incentive for early express abandonment.
151	3	1	0	0%	Incentives	Applicant Incentives	applicant pays for examiner travel.
152	4	2	0	0%	Incentives	Applicant Incentives	Incentive for filing response earlier
153	5	2	0	0%	Incentives	Applicant Incentives	Pay for different levels of access
154	7	2	0	0%	Incentives	Applicant Incentives	Refunds/Pro-rated fees
155	3	2	0	0%	Incentives	Applicant Incentives	file five applications, get one free
156	2	2	10	34%	Incentives	Internal Incentives	On the spot awards
157	3	3	6	27%	Incentives	Internal Incentives	split production awards.
158	2	1	7	24%	Incentives	Internal Incentives	Payment for enhanced examination (QEM).
159	2	2	6	21%	Incentives	Internal Incentives	Provide incentives for holding interviews and providing good feedback
160	1	2	5	17%	Incentives	Internal Incentives	Reward good practices (i.e. act fast, get a price break)
161	1	3	4	13%	Incentives	Internal Incentives	Monetary Incentives for EXRs? For quality examination.
162	7	3	3	10%	Incentives	Internal Incentives	Reward for accepting challenges: difficult cases, transfers
163	4	3	1	4%	Incentives	Internal Incentives	Positive reinforcements of jobs well done: maybe bill boards on concourse level
164	3	2	0	0%	Incentives	Internal Incentives	Bonuses
165	7	2	0	0%	Incentives	Internal Incentives	Profit sharing: Rating examiners by customers for bonuses; bad reviews suggest need for examiner training.
166	3	2	0	0%	Incentives		refunds/discounts.
167	3	2	6	27%	Misc		Stakeholder interaction criticized element on PAP
168	4	2	6	22%	Misc		amend examiner PAPs with suggestions that are implemented.
169	5	3	3	12%	Misc		Improvements to patent systems (PALM, OACS, RAM, PAIR, IFW)
170	4	2	3	11%	Misc		hold paralegals to the same customer service standards.
171	4	3	3	11%	Misc		112 for overly broad claims
172	4	2	2	7%	Misc		set more core hours for examiners and SPEs
173	7	1	2	7%	Misc		Mobile technology for PTO IT systems such as public/private pair and learning modules.
174	3	1	1	5%	Misc		interface elaboration of stage of prosecution.
175	5	3	1	4%	Misc		Pre-screening 01
176	4	2	1	4%	Misc		make everyone special.
177	7	2	1	3%	Misc		quit overreacting and giving credibility/importance to blogs, studies, etc.
178	7	2	1	3%	Misc		Focus on problems where they exist: not everything is office-wide
179	2	1	0	0%	Misc		More consistencies among TCs in office actions
180	2	2	0	0%	Misc		Office hours for in-person interviews
181	2	2	0	0%	Misc		Better understanding of services available outside Alexandria Campus
182	2	2	0	0%	Misc		Internal customer --> Issue quality passed review document
183	3	1	0	0%	Misc		adequate ADS
184	4	1	0	0%	Misc		More work schedule transparency
185	4	1	0	0%	Misc		Improve quality tracker in Specialized Medical Devices (SMD)
186	4	3	0	0%	Misc		Compact prosecution
187	5	1	0	0%	Misc		Beef up pro bono, use law students
188	5	1	0	0%	Misc		Expand Pro Se Art Unit
189	5	2	0	0%	Misc		Better printing of patent application
190	5	2	0	0%	Misc		Optional suspension
191	7	1	0	0%	Misc		Pre-action
192	7	1	0	0%	Misc		Elevator speech
193	7	2	0	0%	Misc		Stand behind work
194	7	2	0	0%	Misc		Advertise on TV (During NFL games?)
195	7	3	0	0%	Misc		Duty to disclose
196	7	3	0	0%	Misc		Focus on positive (tell examiners what is good and why)
197	2	1	12	41%	Ombudsman	Mediator Ombudsm	Examiner is not listening: Expand Ombudsman program to mediate interviews in certain cases (i.e. upon request)
198	2	2	1	3%	Ombudsman	Mediator Ombudsm	Second pair of eyes/opinions after RCE
199	1	3	1	3%	Ombudsman	Mediator Ombudsm	Ability to get second opinion

	A	B	C	D	E	F	G
1	**Session**	**Question**	**Votes**	**Percentage**	**Idea Category**	**Sub Category**	**Idea Text**
200	2	2	0	0%	Ombudsman	Mediator Ombudsm	ombudsman expansion- ombudsman keep records of both examiners complaints with ombudsman complaints with attorneys who file examiners complaints that are determined to be without merit. Mediator runs interference for examiner for meritless complaints.
201	7	1	8	28%	Ombudsman	Teethy Ombudsmar	True Ombudsman Program: with teeth/ownership, less numbers, independent
202	7	2	0	0%	Ombudsman	Teethy Ombudsmar	Ombudsman-Give ability to resolve problems
203	3	1	7	32%	Ombudsman		Ombudsman program: whole process could be improved, he overlap of people to call, should be one main number to call
204	1	1	5	17%	Ombudsman		Practice Specialists/Ombudsman. Someone to call, active link in office action
205	1	1	3	10%	Ombudsman		Ombudsman: When questions are fielded through SPE's, are we collection these centrally for future analysis?
206	1	1	2	7%	Ombudsman		Shine light to TC level about Ombudsman calls
207	3	1	3	14%	Procedures	Automation	Automated system of reminders
208	2	3	1	3%	Procedures	Automation	Automatic claim number/language dependency checks
209	7	1	1	3%	Procedures	Automation	Automate change of address
210	2	2	0	0%	Procedures	Automation	Electronic reminders
211	2	3	0	0%	Procedures	Automation	Automated check of specifications and Drawings
212	2	3	0	0%	Procedures	Automation	Flag in EDAN indicating same inventor/same time possible D.P.
213	5	3	0	0%	Procedures	Automation	Better automated tools for applicants
214	5	1	5	19%	Procedures	CPC/Other Offices	Improve work-sharing with international patent office.
215	4	3	4	15%	Procedures	CPC/Other Offices	View foreign patent search records
216	5	3	2	8%	Procedures	CPC/Other Offices	Improved work sharing (use work of other office and no duplication of work)
217	1	1	0	0%	Procedures	CPC/Other Offices	More information and opportunity about integration of CPC into USPTO's examination
218	1	2	0	0%	Procedures	CPC/Other Offices	Our own take on CPC-more USPTO involvement
219	7	3	10	34%	Procedures	Metrics =/= Perform	Accountability: remove counts
220	7	3	5	17%	Procedures	Metrics =/= Perform	Decouple stats & awards: encouraging bad behavior
221	7	3	2	7%	Procedures	Metrics =/= Perform	Patent grant isn't equivalent to the quality often
222	7	2	1	3%	Procedures	Metrics =/= Perform	Stop using numbers to totally define what we do.
223	1	1	5	17%	Procedures	Timing Adjustments	Turn around time on decisions typically take months, How can we speed this up?
224	4	1	4	15%	Procedures	Timing Adjustments	More time to examiners under AFCP 2.0 program
225	5	3	2	8%	Procedures	Timing Adjustments	After 3 RCE's, examiners should be able to require appeal or ABN
226	7	3	2	7%	Procedures	Timing Adjustments	Time, some dockets/AU need more time, train SPEs & primaries about variety of stylistic variation of junior examiner to permit speed v. quality balance.
227	3	3	1	5%	Procedures	Timing Adjustments	provide adequate time
228	5	3	0	0%	Procedures	Timing Adjustments	Limit number of claims or more time for larger number of claims
229	7	2	0	0%	Procedures	Timing Adjustments	Spend as much time as necessary to get the job done and allow extra time
230	7	2	0	0%	Procedures	Timing Adjustments	Set realistic timeframes for patent prosecution
231	7	3	0	0%	Procedures	Timing Adjustments	More time for LIEs to review and communicate clearly with examiners
232	3	3	6	27%	Procedures		Quality aspect of PAP is burdensome and is of no consequence- Abolish , for juniors, return Office Action until correct. primaries who sign crap for juniors should have their sig authority revoked. for primaries who do a poor job anyway, they should be under scrutiny with possibility of sig authority being removed. it.
233	2	1	7	24%	Procedures		Petition to challenge the sufficiency of rejection.
234	7	2	6	21%	Procedures		Raise SPE-to-Junior ratio.
235	4	3	5	19%	Procedures		Hire SPE's from same art areas
236	3	1	4	18%	Procedures		proper routing of applications
237	2	1	5	17%	Procedures		Clear office actions, standardized format, search report with examiner understanding of invention.
238	7	2	5	17%	Procedures		Examiner introduction to applicant: personal report, open format (brief), examiner expectation, applicant expectation.
239	5	3	4	15%	Procedures		art units broken down into smaller components. (class/subclass).
240	4	3	4	15%	Procedures		Put more quality into PAP and give it teeth

	A	B	C	D	E	F	G
1	**Session**	**Question**	**Votes**	**Percentage**	**Idea Category**	**Sub Category**	**Idea Text**
241	4	3	3	11%	Procedures		Automated text analysis for formal issues: -For examiners and applicants and benefit e-filings
242	7	1	3	10%	Procedures		Better screening of new hire examiners: psychological evaluation, longer interviews during hiring, personality test, writing test, aptitude test (TC specific), reading comprehension test
243	7	3	3	10%	Procedures		applicants provide better IDS- state relevance of references.
244	3	3	2	9%	Procedures		quality component should begin at fully succeed (not outstanding).
245	5	1	2	8%	Procedures		better self-management of processes.
246	5	1	2	8%	Procedures		direct interaction with Office of the Chief Information Officer (OCIO).
247	5	3	2	8%	Procedures		If a SPE goes on detail, AU's should not be combined
248	2	3	2	7%	Procedures		Proper classification (maybe classify apparatus instead of method of use: mechanical)
249	7	1	2	7%	Procedures		allowance and amendments without approval. Then they discuss with client.
250	3	1	1	5%	Procedures		Compact Prosecution: fax application proposed amendment, call application if only 112 issues remain.
251	3	3	1	5%	Procedures		share QIR data with examiners. encourage them to use estates
252	3	3	1	5%	Procedures		adequate review of office actions. Reviewer shares responsibility
253	5	1	1	4%	Procedures		Ensure that attorneys counsel application on international filing before nonpublic request.
254	5	1	1	4%	Procedures		MPEP working to clarify inventor ship. i.e. 3rd party can't change inventor ship.
255	4	1	1	4%	Procedures		Conference all Office Actions
256	4	1	1	4%	Procedures		Limit official notice: review non-conventional Office Actions
257	4	3	1	4%	Procedures		Smaller art units
258	4	3	1	4%	Procedures		One page abstract including the inventive concept
259	4	3	1	4%	Procedures		Peer review
260	4	3	1	4%	Procedures		FY goals be made available at beginning of FY-not at mid year
261	2	1	1	3%	Procedures		More eyes on substantive actions
262	2	2	1	3%	Procedures		Partial refund of fees if accept express abandonment
263	2	3	1	3%	Procedures		How to Address: Team examination, Emphasis criteria of pertinent prior art
264	7	1	1	3%	Procedures		Amend after final
265	7	3	1	3%	Procedures		Examiner do complete search up front of inventive concept rather than just searching claims
266	1	2	1	3%	Procedures		Provide a quality product by: Focus dockets, manage dockets proactively, provide more information on docket manager, better transfer and disputer res. System
267	1	2	1	3%	Procedures		One check for all services per case: Fee schedule up front
268	1	3	1	3%	Procedures		Timeliness & Quality: Especially in fast developing technologies. Published search logic/areas on patents
269	1	3	1	3%	Procedures		Looking at downstream office action in related applications
270	1	1	0	0%	Procedures		Handle AIA-FITF issues at the TC level
271	1	2	0	0%	Procedures		If there are minor issues, misunderstandings, initiate first action/clarification interview outside first action interview program
272	1	3	0	0%	Procedures		Compact Prosecution
273	1	3	0	0%	Procedures		Rigorous significant reviews
274	2	1	0	0%	Procedures		standardize level of detail in Office Action
275	2	2	0	0%	Procedures		Send interview/survey via email to facilitate accountability
276	2	3	0	0%	Procedures		Required Quality Enhancement Meetings
277	3	1	0	0%	Procedures		Hotellers: require hotellers to be on campus once a quarter (if requested) to attend personal interviews. (use satellite offices)
278	3	1	0	0%	Procedures		no more form paragraph for argument is moot.
279	3	2	0	0%	Procedures		make examiners find out information requested by application.
280	4	1	0	0%	Procedures		Reduce Exparte appeal pendency at BPAI
281	4	1	0	0%	Procedures		Written record (can you duplicate examiner search)
282	4	1	0	0%	Procedures		Include application (attorney/agent) to be a part of pre-appeal conference
283	4	2	0	0%	Procedures		Notify examiners of customer response of their experience
284	4	3	0	0%	Procedures		Record private parit, become publish information after case allowed
285	4	3	0	0%	Procedures		Dedicated SPE resources

	A	B	C	D	E	F	G
1	**Session**	**Question**	**Votes**	**Percentage**	**Idea Category**	**Sub Category**	**Idea Text**
286	5	1	0	0%	Procedures		Bridge gap between Patent Legal and Patent Operations (e.g. AIA, court denies)
287	5	1	0	0%	Procedures		Limit the number of RCE's
288	5	1	0	0%	Procedures		Better petition decision process
289	5	3	0	0%	Procedures		SPE's should be placed where familiar with art
290	5	3	0	0%	Procedures		Quality enforceability
291	7	2	0	0%	Procedures		Decrease administrative meetings for SPEs
292	7	3	0	0%	Procedures		Policy/memos etc. from commissioners office-provide quality resource in each TC who can provide initial feedback like a TEAR
293	7	3	0	0%	Procedures		Applicant ID inventive concept
294	5	3	9	35%	Search	Crowd Sourcing	Crowd-sourcing (e.g. we use collective knowledge to get everything).
295	4	3	5	19%	Search	Crowd Sourcing	Crowdsourcing prior art
296	3	1	1	5%	Search	Crowd Sourcing	third party search (crowdsourcing) detail
297	5	2	5	19%	Search	Early Search	initial search/ initial interview.
298	5	3	1	4%	Search	Early Search	Automated preliminary search for examination
299	5	3	0	0%	Search	Early Search	Preliminary searches
300	7	1	9	31%	Search	Search Software	Claim construction: Google or Mathematica help
301	2	3	3	10%	Search	Search Software	Find prior art faster: software and technology
302	7	3	2	7%	Search	Search Software	Provide better search tools to examiners-many examiners prefer Google over PTO's tools
303	2	3	1	3%	Search	Search Software	improve search techniques
304	4	3	0	0%	Search	Search Software	Search (Good first search) concept search not just claims
305	7	3	0	0%	Search	Search Software	Liberalization of search tools used to improve the processes
306	2	3	8	28%	Search		Repository of useful art and reason why its useful
307	2	3	4	14%	Search		Important aspects of quality: appropriate + clear claim interpretation and search
308	4	3	3	11%	Search		Guidance at Category 1 error on searching
309	2	1	3	10%	Search		Improve Search Quality: focus more on NPL searches, STIC search history
310	2	3	3	10%	Search		Pay an examiner just for doing searching
311	1	3	3	10%	Search		Good references from good initial search.
312	3	3	2	9%	Search		make citations clear and office actions on how they read on claim limitations.
313	4	3	2	7%	Search		External access to patent family: Applicant can better link apps to provide better docketing and counting of related cases
314	5	2	1	4%	Search		Alternate search product
315	4	1	1	4%	Search		Send a copy of search report with the Office Action
316	2	3	0	0%	Search		Initial search strategy to find best prior art
317	2	3	0	0%	Search		Comprehensive FAOM (Drawings, etc.)
318	4	3	0	0%	Search		Good references
319	4	3	0	0%	Search		Don't fall in love with a reference. Renew search and find a more applicable reference after an amendment
320	7	1	0	0%	Search		Improved patent research system better East/West: PTO Preliminary searches/provide search reports (like phase I PCT for national application), Better non-compliance notification, More time for interviews,
321	7	1	8	28%	Training	External Training	CBT for attorneys about: how to file patent, list of attorneys, help for Pro-Se applications.
322	2	1	5	17%	Training	External Training	train the applicant (Pro SE)
323	5	1	3	12%	Training	External Training	Continuing education for public. ,(not just attorneys, but also inventors).
324	7	3	3	10%	Training	External Training	NPL training: work with Google
325	5	1	2	8%	Training	External Training	More concise instructions for customer to understand what they need to do.
326	5	2	2	8%	Training	External Training	Patent/trademark for dummies.
327	4	2	2	7%	Training	External Training	Require practitioners to learn about USPTO to practice.
328	2	1	1	3%	Training	External Training	Application writing boot camp
329	7	1	1	3%	Training	External Training	CBT's for public on patents and trademarks
330	7	1	1	3%	Training	External Training	QAS point person to answer "simple" questions (what type of petition? Fees? Entity type)
331	7	1	1	3%	Training	External Training	Quality in= Quality out, education of attorneys CLE-like

	A	B	C	D	E	F	G
1	**Session**	**Question**	**Votes**	**Percentage**	**Idea Category**	**Sub Category**	**Idea Text**
332	1	1	1	3%	Training	External Training	Attorney/Applicant: texting enhanced PAIR access, forms update timely, better training break apart papers (training on what is what), simplify options/get rid of special interests
333	4	2	0	0%	Training	External Training	Document parallel between applying for a loan and applying for a patent application (case study optimization)
334	5	1	0	0%	Training	External Training	Instructions on how to use EFS (contact? Who? Status?)
335	5	1	0	0%	Training	External Training	Explain the difference between different trademark, copy rights, and patents
336	7	1	0	0%	Training	External Training	Suggestions of allowable subject matter
337	7	2	0	0%	Training	External Training	Pro Se help (tutorials, how to's)
338	3	3	6	27%	Training	General Internal Tra	Proper training for Se
339	3	3	6	27%	Training	General Internal Tra	proper training early and often
340	2	1	6	21%	Training	General Internal Tra	Educate internal stakeholders to better serve customers (e.g. Products and Services)
341	2	3	5	17%	Training	General Internal Tra	dedicated trainer in each AU/WG
342	2	3	5	17%	Training	General Internal Tra	Good examiner certification
343	1	3	5	17%	Training	General Internal Tra	Knowledgeable well-trained examiners.
344	5	3	2	8%	Training	General Internal Tra	Subject matter expert
345	7	3	2	7%	Training	General Internal Tra	quality search report review (synonyms), more training (be sure to search NPL)
346	1	1	2	7%	Training	General Internal Tra	Training on new practices/policies
347	1	2	2	7%	Training	General Internal Tra	More basic training/webinars
348	4	1	1	4%	Training	General Internal Tra	SPE & Ombudsman training
349	7	1	1	3%	Training	General Internal Tra	Increase examiner knowledge in all areas of office)pre/post exam) using pamphlets, how-to, centralized resource
350	1	2	0	0%	Training	General Internal Tra	Better examiner training on customer service at USPTO Training Academy and throughout career
351	1	2	0	0%	Training	General Internal Tra	More examiner/Applicant “outside” interactions (state of Art, field trips, etc.)
352	2	2	0	0%	Training	General Internal Tra	Well trained 2nd level contact
353	2	3	0	0%	Training	General Internal Tra	improve coaching an mentoring for primaries (PAP)
354	2	3	0	0%	Training	General Internal Tra	Simulating prosecution for examiners from an outside perspective
355	3	3	0	0%	Training	General Internal Tra	post training on web
356	7	2	0	0%	Training	General Internal Tra	Consistency in trainings
357	1	2	15	50%	Training	Specific Internal Tra	Adding “bigger picture” training to examiners
358	1	3	11	37%	Training	Specific Internal Tra	Refresher academy for primaries
359	3	2	5	23%	Training	Specific Internal Tra	Understand “big picture”
360	5	3	5	19%	Training	Specific Internal Tra	training for T3S.
361	3	2	4	18%	Training	Specific Internal Tra	Claim drafting training.
362	5	3	4	15%	Training	Specific Internal Tra	Subject matter training at Patent Academy.
363	5	3	4	15%	Training	Specific Internal Tra	Mentorship program for examiners as needed.
364	3	3	3	14%	Training	Specific Internal Tra	improve search engine tools and training.
365	4	3	3	11%	Training	Specific Internal Tra	Board decision database for training purposes
366	7	3	3	10%	Training	Specific Internal Tra	cross training to improve each department’s understanding of the work of other departments.
367	5	3	2	8%	Training	Specific Internal Tra	More visits to manufacturing plants
368	1	3	2	7%	Training	Specific Internal Tra	Clear Office Action- train old examiners too.
369	1	3	2	7%	Training	Specific Internal Tra	Focus on the outliers rather than training for all examiners
370	3	3	1	5%	Training	Specific Internal Tra	revise quality tracker so coaching and mentoring language is less harsh
371	4	1	1	4%	Training	Specific Internal Tra	Improve examiner's ability to cite relevant prior art
372	4	3	1	4%	Training	Specific Internal Tra	Art unit technical training
373	2	3	1	3%	Training	Specific Internal Tra	training on the art itself
374	2	3	1	3%	Training	Specific Internal Tra	Training on the legal aspects of patents outside of examination
375	7	3	1	3%	Training	Specific Internal Tra	CIP-tell examiner new ways
376	1	3	1	3%	Training	Specific Internal Tra	More technical/art training w/ college level seminars
377	2	3	0	0%	Training	Specific Internal Tra	Trainings in how to effectively addressing Issues
378	4	2	0	0%	Training	Specific Internal Tra	Train examiners in importance of job
379	4	3	0	0%	Training	Specific Internal Tra	Define/Describe claim interpretations (more time to examiners)
380	4	3	0	0%	Training	Specific Internal Tra	Constant emphasis to examiner understanding of the full patent process and how they fit into this process and the importance of their role
381	5	1	0	0%	Training	Specific Internal Tra	Productive interview training

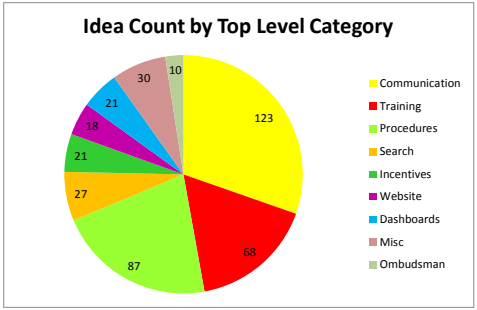
	A	B	C	D	E	F	G
1	**Session**	**Question**	**Votes**	**Percentage**	**Idea Category**	**Sub Category**	**Idea Text**
382	3	3	10	45%	Training	Writing	Teach examiners how to write better
383	1	3	1	3%	Training	Writing	Well-written explained or completed office action
384	2	1	0	0%	Training	Writing	Stronger writing skills for examiner (verbal-> writing)
385	2	3	0	0%	Training	Writing	clear reasoning for art appreciation
386	2	3	0	0%	Training	Writing	clear written products-legally sufficient and understandable
387	4	1	0	0%	Training	Writing	Writing sample required before hiring
388	7	1	0	0%	Training	Writing	Writing classes
389	4	1	11	41%	Website	More Online Resour	Pro SE: website resources, hotline, FQA's Definitions, Template, Application process for specific art areas, Pro Se Class, other times
390	7	2	2	7%	Website	More Online Resour	Online help for basic questions: how to write a claim/what form to use/live chat.
391	7	3	2	7%	Website	More Online Resour	Site history search
392	4	2	1	4%	Website	More Online Resour	Interactive amendment and applicant data sheet window.
393	4	3	1	4%	Website	More Online Resour	SharePoint for shared art
394	7	2	1	3%	Website	More Online Resour	anticipate questions the customer may have before they occur.
395	2	1	0	0%	Website	More Online Resour	Offer Day-in-the-life of an examiner
396	2	1	0	0%	Website	More Online Resour	Better general online search tool for customer (non-patent depository)
397	2	3	0	0%	Website	More Online Resour	Internal art/technology glossary/wiki
398	3	2	0	0%	Website	More Online Resour	improve MPEP web searching capabilities
399	4	2	0	0%	Website	More Online Resour	Work schedule transparency: schedule available on USPTO.gov, list when interviews to be held, Lync status publically valuable
400	5	2	8	31%	Website	Navigation Changes	Improve website navigation: subject-specific guidance.
401	3	2	6	27%	Website	Navigation Changes	Improve USPTO website to make it easier to search and find information.
402	1	1	7	23%	Website	Navigation Changes	More intuitive website, Especially PRO SE's. Make easier to find contact info
403	5	1	4	15%	Website	Navigation Changes	Make website easier to navigate.
404	1	2	1	3%	Website	Navigation Changes	User friendly websites- contact lists one step
405	1	1	0	0%	Website	Navigation Changes	Maybe separate links for attorneys, applications, Pro SE, FAQ's
406	1	1	4	13%	Website		Continuing overhaul of internal and external website (provide 15 minute CBT on different call centers)

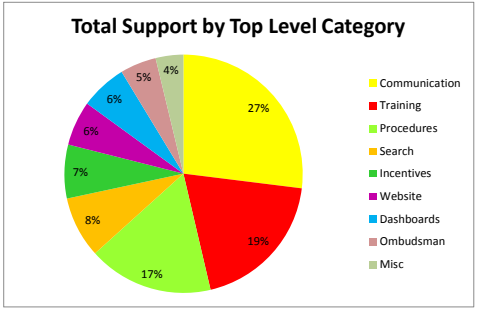
IC CE	IC ME	IC EE	Total IC	% Mentioned	Category	Idea
9	6	38	53	17.7%	Data	Monitor/Publish the number of pre-appeals/appeals/reversals/subsequent decisions/abandonment/other QIR data (and maybe on a per examiner basis). Look for steps backwards, number of steps, steps that corrected issues, etc.
9		18	27	9.0%	Data	Monitor the number of interviews conducted/post interview outcomes (i.e. allowances). Also note if a SPE was involved and if the examiner instigated the interview
10		16	26	8.7%	Qualitative	More Substance/Clearer information
	1	24	25	8.3%	Qualitative	Need to do better first search/Better art is found after first action on the merits
3	3	19	25	8.3%	Qualitative	Prior art citations without explanations/Action by Cut and Paste/Broad references to prior art/measure the amount of original examiner writing vs. copy-paste
13	3	9	25	8.3%	Themes	Consistency needs improvement
5	4	9	18	6.0%	Qualitative	Junior examiners/inexperienced examiners need more oversight
9		9	18	6.0%	Themes	Examiners seem to not understand legal issues
		17	17	5.7%	Qualitative	Examiner Rejects Everything, don't respond to reason. Job title should be "Patent Rejecter"
9		8	17	5.7%	Themes	Primary examiners should have their work reviewed more often
1		14	15	5.0%	Qualitative	103 (obviousness) rejections should be revised/need to be explained better. Often examiners find all the elements of the claim independently across 4-8 references, neglecting the synthesis element. Alice and KSR are applied too broadly
1	5	9	15	5.0%	Themes	Reading/writing/literacy problems, often the examiner does not understand the claims/what the applicant is arguing
		14	14	4.7%	Qualitative	The examiner ignores the applicant's arguments in pre-appeals/appeal
5	3	6	14	4.7%	Data	Monitor Responsiveness/time to return call
7	1	6	14	4.7%	Qualitative	Restriction needs improvement
1		12	13	4.3%	Themes	Metrics/performance measures are encouraging bad behavior/Get Rid of counts system
3	1	9	13	4.3%	Themes	Willing to wait longer if better/allow more time (esp. for AFCP 2.0)
10		3	13	4.3%	Qualitative	Examiners don't know their art
		12	12	4.0%	Qualitative	Examiner should suggest ways to fix claims
1	2	8	11	3.7%	Qualitative	Need a better after final program (AFCP 2.0)
7		4	11	3.7%	Themes	Applicant should be able to lodge complaints that can take counts away from examiners
11			11	3.7%	Qualitative	Rejections should negatively impact examiners
		10	10	3.3%	Data	Monitor the number of refused/denied phone conversations/interviews, esp. to clarify final actions and esp. for Hotellers
	1	9	10	3.3%	Data	Specifically the number of RCE's/Monitor the number of Allowances without an RCE/The Average number of RCE's per application
	6	4	10	3.3%	Data	Monitor Pendency/examination time should be faster or more options for accelerated examination should be made available
		9	9	3.0%	Themes	Examiners forcing the application to RCE on purpose
		8	8	2.7%	Qualitative	Obviousness criteria should be reviewed/Obviousness rejections are not explained/no rational
		8	8	2.7%	Themes	examiner unavailable to communicate with/difficult to reach
		8	8	2.7%	Data	Monitor regression from a final action. Final actions are made too early/with new issues enclosed
8			8	2.7%		RCEs Need to be done sooner
		7	7	2.3%	Themes	It often takes escalation to a phone interview/appeal/pre-appeal brief in order to fix problems with poor examination
		6	6	2.0%	Themes	Its too expensive to appeal
6			6	2.0%	Themes	The examiners and metrics are fine as is/do nothing
		5	5	1.7%	Data	Monitor the amount of original examiner content in a series of appeals/rejections
2	1	2	5	1.7%	Themes	Conduct quality examinations earlier/second person reviewing
5			5	1.7%	Qualitative	Apply Appropriate art/too many low quality searches
5			5	1.7%	Qualitative	Feedback from customers after each office action
		4	4	1.3%	Qualitative	The examiner bases his action on opinion of the art
		4	4	1.3%	Themes	Measure the quality of rejections as well as allowances
		4	4	1.3%	Themes	101 is overused and unexplained. Alice is being applied too broadly
4			4	1.3%	Themes	Rewards for good examination
		3	3	1.0%	Qualitative	Overkill on Restrictions
		3	3	1.0%	Themes	Examiners forget the Big Picture
		3	3	1.0%	Themes	Lack of familiarity with MPEP/Office procedures
2		1	3	1.0%	Qualitative	The sample office actions/templates are bad
		2	2	0.7%	Qualitative	Examiners trying to fool their SPEs/Do really stupid things just to sneak in an allowance
		2	2	0.7%	Qualitative	Audit the search
		2	2	0.7%	Qualitative	Make request for alternate examiner an option
		2	2	0.7%	Qualitative	Examiner does not look for new prior art after the claims are amended/appeals
1		1	2	0.7%	Themes	Need a better ombudsman
2			2	0.7%	Themes	Create a quality control department
2			2	0.7%	Themes	Improve Customer Satisfaction
2			2	0.7%		Flexibility
		1	1	0.3%	Qualitative	Board can make reversals
		1	1	0.3%	Qualitative	Provide alternative to PDFs
		1	1	0.3%	Qualitative	Monitor the exchange/quantity of appeal briefs and examiner's answers
1			1	0.3%	Data	Measure the amount of time spent in oversight/having the SPE review materials
1			1	0.3%		Visual thinking approach
		1	1	0.3%	Themes	Increase personal commitment
		1	1	0.3%	Qualitative	Electronic survey/feedback option
Sample siz	300					

Total Ideas	405
Total Votes Cast	794
Total Attendance	163
Votes/Attendee	4.871166

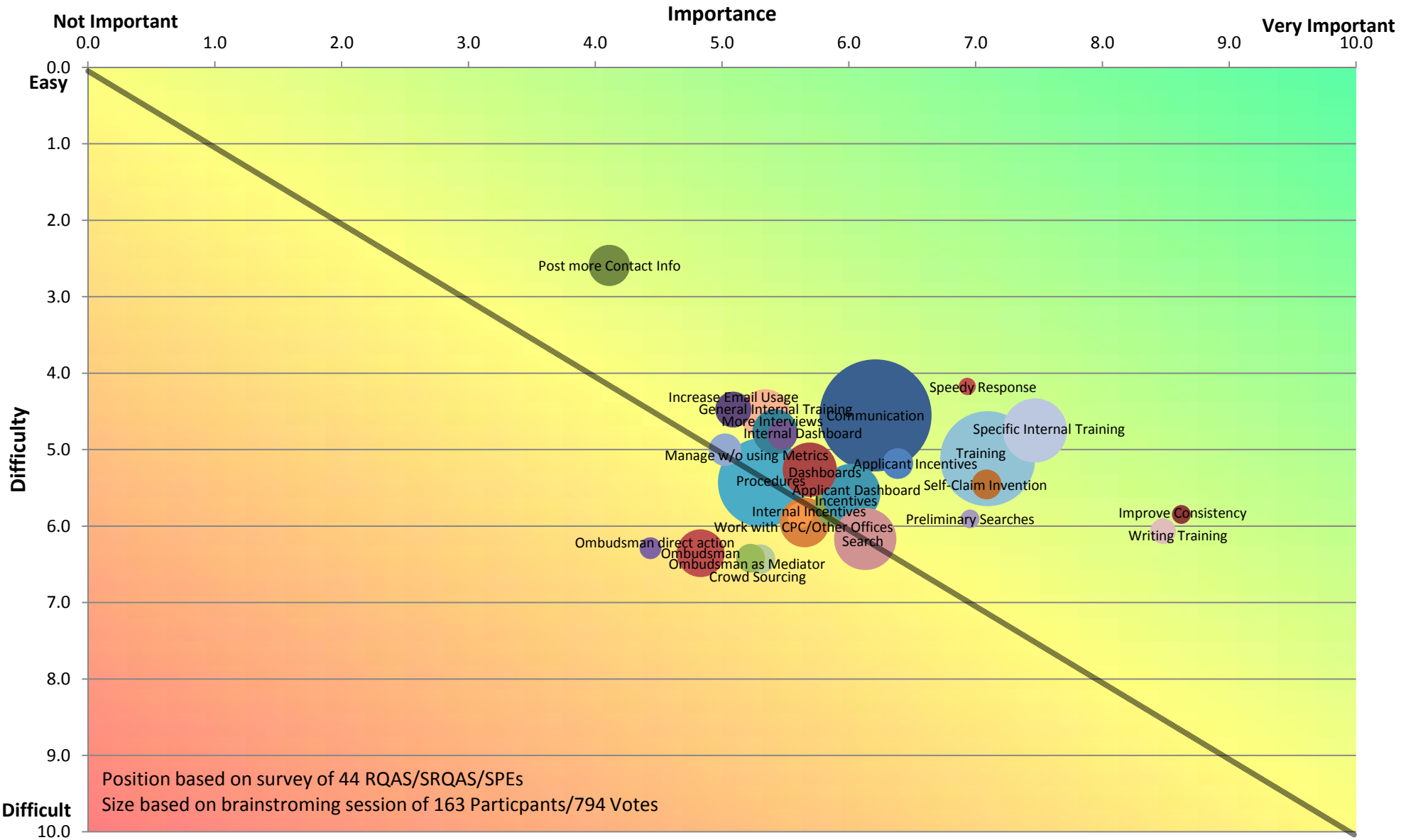
Totals by Category

Category	Idea Count	Q1	Q2	Q3	Total Votes	Q1 Support	Q2 Support	Q3 Support	Total Support
Communication	123	82	99	33	214	38%	46%	15%	27%
Interview	23	20	12	3	35	57%	34%	9%	16%
Call Handling	17	23	10	0	33	70%	30%	0%	15%
Contact Info	15	11	18	0	29	38%	62%	0%	14%
Pure Communication Skill	11	4	16	2	22	18%	73%	9%	10%
Email	8	16	6	0	22	73%	27%	0%	10%
Self-Claim Invention	3	0	0	15	15	0%	0%	100%	7%
Surveys	6	1	10	0	11	9%	91%	0%	5%
Consistency	4	1	5	0	6	17%	83%	0%	3%
Speedy Response	3	0	5	0	5	0%	100%	0%	2%
Internal Communications	2	0	2	0	2	0%	100%	0%	1%
Training	68	34	30	90	154	22%	19%	58%	19%
Specific Internal Training	25	1	24	45	70	1%	34%	64%	45%
General Internal Training	19	10	2	31	43	23%	5%	72%	28%
External Training	17	23	4	3	30	77%	13%	10%	19%
Writing	7	0	0	11	11	0%	0%	100%	7%
Procedures	87	50	15	70	135	37%	11%	52%	17%
Metrics =/= Performance	4	0	1	17	18	0%	6%	94%	13%
Timing Adjustments	9	9	0	5	14	64%	0%	36%	10%
CPC/Other Offices	5	5	0	6	11	45%	0%	55%	8%
Automation	7	4	0	1	5	80%	0%	20%	4%
Search	27	14	6	46	66	21%	9%	70%	8%
Crowd Sourcing	3	1	0	14	15	7%	0%	93%	23%
Search Software	6	9	0	6	15	60%	0%	40%	23%
Early Search	3	0	5	1	6	0%	83%	17%	9%
Incentives	21	7	26	25	58	12%	45%	43%	7%
Internal Incentives	10	7	21	14	42	17%	50%	33%	72%
Applicant Incentives	10	0	5	11	16	0%	31%	69%	28%
Website	18	26	19	3	48	54%	40%	6%	6%
Navigation Changes	6	11	15	0	26	42%	58%	0%	54%
More Online Resources	11	11	4	3	18	61%	22%	17%	38%
Dashboards	21	7	42	1	50	14%	84%	2%	6%
Applicant Dashboard	16	3	31	1	35	9%	89%	3%	70%
Internal Dashboard	5	4	11	0	15	27%	73%	0%	30%
Ombudsman	10	37	1	1	39	95%	3%	3%	5%
Mediator Ombudsman	4	12	1	1	14	86%	7%	7%	36%
Teethy Ombudsman	2	8	0	0	8	100%	0%	0%	21%
Misc	30	3	20	7	30	10%	67%	23%	4%





Solutions Matrix: What should the PTO Do?



Category	Idea Count	Total Votes	Total Support	Mgr: Importance	Mgr: Difficulty	Mgr: Std Dev	High:Low	High-Low	Mgr: No Votes	Composite Priority
Communication	123	214	27%	6.2	4.6	2.88	107:60	+47	13	89.2
Improve Consistency	4	6	3%	8.6	5.8	2.38	34:1	+33	1	18.8
Post more Contact Info	15	29	14%	4.1	2.6	2.68	5:24	-19	3	-54.1
Increase Email Usage	8	22	10%	5.1	4.5	2.68	11:15	-4	3	-4.9
More Interviews	23	35	16%	5.4	4.8	2.56	1:1	0	6	4.2
Self-Claim Invention	3	15	7%	7.1	5.5	2.87	26:7	+19	0	15.9
Speedy Response	3	5	2%	6.9	4.2	2.56	7:1	+18	0	3.5
Dashboards	21	50	6%	5.7	5.3	2.50	3:2	+8	15	27.1
Applicant Dashboard	16	35	70%	5.9	5.7	2.63	7:4	+6	6	31.6
Internal Dashboard	5	15	30%	5.5	4.8	2.32	5:4	+2	9	2.4
Incentives	21	58	7%	6.0	5.6	2.62	15:8	+14	11	47.8
Internal Incentives	10	42	72%	5.7	6.0	2.58	10:9	+1	7	32.3
Applicant Incentives	10	16	28%	6.4	5.2	2.67	20:7	+13	4	15.3
Ombudsman	10	39	5%	4.8	6.4	2.69	5:9	-12	29	21.6
Ombudsman as Mediator	4	14	36%	5.2	6.4	2.53	5:6	-2	14	11.7
Ombudsman direct action	2	8	21%	4.4	6.3	2.84	1:3	-10	15	2.6
Procedures	87	135	17%	5.3	5.4	2.61	22:31	-9	17	63.6
Work with CPC/Other Offices	5	11	8%	5.6	5.9	2.40	5:6	-2	5	9.8
Manage w/o using Metrics	4	18	13%	5.0	5.0	2.79	12:19	-7	12	0.2
Search	27	66	8%	6.1	6.2	2.52	17:10	+14	9	84.9
Crowd Sourcing	3	15	23%	5.3	6.4	2.59	11:14	-3	5	12.1
Preliminary Searches	3	6	9%	7.0	5.9	2.43	23:6	+17	4	10.6
Training	68	154	19%	7.1	5.1	2.48	75:16	+59	11	198.0
General Internal Training	19	43	28%	5.3	4.5	2.39	1:0	+12	7	-3.2
Specific Internal Training	25	70	45%	7.5	4.8	2.27	26:15	+11	3	92.7
Writing Training	7	11	7%	8.5	6.1	2.24	37:1	+36	1	36.6

Reference Calculation Cells	
Std Dev 1st Quart	2.44
Average Std Dev	2.57
Std Dev 4th quart	2.68
Survey Total	46

Appendix B-1: Interviews

OPQA Supervisory RQAS Questions

1. Were there any issues that stuck out to you on the survey?
2. What do you see as the common quality issues?
    a. What are you doing right now about these issues?
    b. What do you want to see done about these issues?
    c. What success are you seeing with your current approaches?
3. Would you like to see OPQA have some direct weight on deciding what training is conducted? Do you think working with the TC is sufficient?
    a. Do you find training effective in improving examination quality? (Examiners suggest lack of specific types of training is a #1 issue in quality)
    b. How do you feel about the current involvement of OPQA in designing training sessions?
    c. Do you have any ideas on how to conduct writing classes for those that need it?
4. Can you give an idea of how much time you take to review the responses examiners produce? What are some of the things you focus on? (Do you focus on the substance of the writing and the detail in the explanation of the prior art cited?)
5. How do you feel about the current quality matrix? (i.e. the system of checking off any issues found while reviewing such as improperly referenced prior art, then letting the math compute the impact of it)

Extra Supervisory RQAS Questions

6. How do you feel about the current balance between reviewing cases and doing other quality work in the OPQA?
7. Do you think the current amount of time allotted for examination should be changed? How do you feel about the biweeks/PAP?
8. Do you think the current ombudsman program should be changed? How? (Attaching Ombudsman to a TC, Giving more power to intervene in examination, etc.)
    a. If the ombudsman program is expanded, do you foresee abuse of this system, i.e. by attorneys who will use it to bully the office into allowing applications?
9. Do you think publishing more or more detailed quality information will increase quality?
    a. Will transparency, both within the PTO and with the public, motivate better examinations?
10. There has been a lot of concern with examiners not accurately reading the application and the appeals. Many applicants have complained that the examiner seemed to not respond to arguments, simply using his/her original argument until a SPE became involved. Have you observed this?
11. Would you support more training in understanding the legal issues of the patent application process for...
    a. Pro SE's
    b. Attorneys
    c. Examiners

    (Both sides report the other side has a lack of understanding of legal issues)

Appendix B-1: Interviews

SPE Questions

1. What factors do you find motivate examiners?
2. How do you choose/encourage training for your examiners.
    a. Are there ways training is not fulfilling what your examiners need
    b. Do you use quality data to aid in choosing training
3. Do you think the current amount of time allotted for examination should be changed? How do you feel about the biweeks/PAP?
4. What do you do with quality data from OPQA that you receive? Do you use it to supplement performance/PAP data.
5. Would you support…
    a. Starting the search early (Preliminary Searches)
        i. How do feeling about the early action initiative?
    b. Using more search tools to look for prior art
    c. Crowdsourcing the search
6. Would you support more writing training for examiners?

Extra SPE Questions

7. Can you give an idea of how many interviews your examiners conduct with their applicants? Do you feel this is appropriate? Did you know that customers and PTO employees both rank more interviews as a #2 issue in quality and satisfaction?
8. How do you encourage customer-examiner communication? (Customer-examiner communication ranked overall as the most important issue in quality)
9. Do you use the quality measures to adjust each of your examiner's practices? (Twist: Did you know examiners and customers both note that metrics seem to driving examination into incorrect procedures and practices?)
10. Can you give an idea of how much time you take to directly review the responses your examiners produce? What are some of the things you focus on? (Do you focus on the substantivity of the writing and the detail in the explanation of the prior art cited?)
11. There has been a lot of concern with examiners not accurately reading the application and the appeals. Many applicants have complained that the examiner seemed to not respond to arguments, simply using his/her original argument until a SPE became involved. Have you observed this?

Appendix B-2: Survey

Survey

Please rate the following suggestions by two categories. Rate the Importance of each suggestion on a scale of 0-10, with 0 representing not important at all and 10 representing it should be a highest priority objective. Rate the Difficulty of each suggestion on a scale of 0 to 10, with 0 representing a minor change and 10 representing a need for totally reorganizing the PTO. You may give multiple items the same rating, and you do not have to rate every item.

Importance	Difficulty	Suggestion
		Create and apply guidelines for producing more consistent office actions across an art unit
		Post more contact information on the website or on the application materials
		Allow Email to be used for applicant-PTO correspondence. Loosen email restrictions in general.
		Insert/recommend interviews in various steps of the applications process, such as before or after the First Action. Also have more customer service like call backs to prompt the applicant to express concerns
		Increase clarity in examiner's understanding of invention. Require a plain English paragraph from inventor indicating what they think is the unique feature.
		Ensure a more prompt response to calls, queries, letters, status, etc.
		Create an online dashboard where the applicant can track the progress and time till decision of his/her application
		Have a better internal dashboard for monitoring the status of a patent and examining who is responsible for it (employee locator). View PALM data in real time.
		Use monetary tiers to provide different levels of service. Use monetary rewards and penalties for specific applicant actions.
		Use awards/bonuses to encourage examiners to follow certain time consuming behavior
		Obligate the Ombudsman to follow the applicants concern until both parties are happy. Also allow the Ombudsman to mediate discussions.
		Give the Ombudsman the power to take action in the examination directly, as opposed to handing a ticket off to a SPE
		Add more effort to work-sharing and foreign search
		Do not use the quality metrics as an evaluation of examiner performance, as these metrics describe quality, which may not be the proper action in some cases.
		Have a collaborative search process that involves additional people in the office
		Invest in more/better software to aide in search
		Conduct more training in general without focusing on specific topics.
		In contrast to general training, increase the availability of training in specific areas only.
		Train examiners to better translate their thoughts about an application into coherent, clear reasoning the applicant can understand. Some examiners in particular need this training.

Appendix C-1: Gap Analysis

Current State	Future State	Next Actions/ Proposals
Based on surveys, examiners believe they have 48 hours to respond to applicant's inquiries. However, the standard response time is 24 hours.	Examiners need to respond to applicant within 24 hours.	1. Enforce 24 hour policy on examiners.
Examiners are not allowed to use email and do not reach out to applicants enough.	Examiners initiate more contact with applicants through email and interviews.	1. Allow examiners to communicate with applicants via email. 2. Encourage examiners to conduct more interviews with applicant.
Examiners work in isolation during examinations.	USPTO should promote collaborative searching among examiners.	1. Encourage examiners to reach out to other examiners during examination process.
Training for examiners is generalized.	Training for examiners should be specific to each art unit.	1. Implement specific art training into USPTO Training Academy for current examiners. 2. New examiners must take courses in their specific art unit.
Training is delivered to examiners through lectures.	Training needs to be more active and hands-on for examiners.	1. USPTO Training Academy must deliver training in a more interactive way to engage the examiners.
Examiners do not participate in writing training.	Examiners should implement more writing training to develop concise Office Actions	1. USPTO Training Academy must implement writing courses. Example is of persuasive writing courses. 2. Promote writing courses through SPEs reaching out to examiners who they feel could benefit from the courses.
Examiners are not fully informed of legal changes.	Legal training must continuously be offered to examiners.	1. USPTO Training Academy must implement legal training courses. 2. Legal courses must be recurring to keep up with changing laws that affect examiners and their work.
Current time allotments are not sufficient for certain art units.	USPTO should develop a team or process to evaluate the appropriateness of art unit's examination times.	1. Designate a team to evaluate the current time allotments for specific art units. 2. Use the team's evaluations to change time allotments when necessary for specific art units.

Appendix C-1: Gap Analysis

Examiners are not informed on the Ombudsman program	USPTO should educate examiners on the role of the Ombudsman.	1. Implement Ombudsman information in training for all new and current examiners.
Errors the OPQA gives to the TCs are consistently fought with seemingly little regard to quality issues.	USPTO should implement a feedback approach for examiners rather than errors approach.	1. Use SPEs to promote a comfortable work environment where errors are weighted less heavily. 2. Examiners learn from feedback given by SPEs.
Incentives are used to promote quality work from examiners.	Incentives should not be used to promote higher quality work.	1. Promote high quality work through awards rather than by monetary incentives.

Appendix C-2: Rubric

Current State	Future State	Priority	5 Idealist	4 Pragmatic	3 Upper bound of current	2 Lower bound of current	1 Lapsing	0 Dystopian
Communication								
Some examiners think they have 48 hours to respond to applicant's inquiries, even though the standard is 24.	Examiners need to respond to applicant within 24 hours.	Priority: **Moderate** Suggestion received consistent positive feedback.	Examiners respond at earliest possible convenience	Within 24 hours (New requirement)	Within 48 hours	Within 72 Hours	Respond within in one week	Missing/no responses
Examiners are not allowed to use email and do not reach out to applicants enough.	Examiners initiate more contact with applicants through email and interviews.	Priority: **Moderate** Email portion was disliked, interviews received mixed-positive feedback	Examiner initiates more than one interview.	Examiner initiates one interview	One Interview per application	N/A	N/A	No Interviews
Examiners work in isolation during examinations.	USPTO should promote collaborative searching among examiners.	Priority: **Moderate** Generally mixed-positive feedback	System in use to organize collaboration	Some collaboration	Contact limited to SPE	Minimal contact	Contact only when absolutely necessary	No contact/ Working in isolation
Training								
Training for examiners is generalized.	Training for examiners should be specific to each art unit.	Priority: **High** Training is consistently regarded as the number one attention needed area	Training is completely customized for an art unit and SPEs recommend and require training for specific examiners	Training is completely customized for an art unit and voluntary for examiners	Training has some specificity	Training for examiners is generalized.	Extra independent studying of art is encouraged	No art training is available

Appendix C-2: Rubric

Training is delivered to examiners through lectures.	Training needs to be more active and hands-on for examiners.	Priority: **High** Training is consistently regarded as the number one attention needed area	Training consistently involves examination of a sample application	Training utilises hands-on learning whenever appropriate	Hands-on training is available in a few courses	Certain training courses are practice based	Training includes practical examples in lectures	Training is lecture only
Examiners do not participate in writing training.	Examiners need more writing training to develop concise Office Actions	Priority: **High** Training is consistently regarded as the number one attention needed area	Voluntary writing training is made available and is recommended by SPEs	Voluntary writing training is made available	Few courses on improving writing are available	One course on improving writing is available	Writing counsel available by request	No writing training or resources
Examiners are not fully informed of legal changes.	Legal training should continuously be offered to examiners.	Priority: **High** Training is consistently regarded as the number one attention needed area	Legal training is offered with continuous courses for constant law changes	Legal training is offered with courses that do update as major aspects of law changes	Legal training is available (minimal substance in course)	Legal help is available by request	Legal knowledge attained through own research	No legal training or resources
Procedures								
Current time allotments are not sufficient for certain art units	A team or process to evaluate the appropriateness of art unit's examination times is in use.	Priority: **Moderate** A consistent issue that never seems to be permanently addressed	Evaluation is a process that is conducted regularly and time is adjusted dynamically	Evaluations is conducted as appropriate and conclusions are applied	Evaluations are conducted quasi-frequently and limited conclusions are applied	Some evaluation is conducted and limited conclusions are applied	Some evaluation is conducted and the conclusions are not used.	20 year old times are continued to be used, no evaluation is conducted
Examiners are not informed on the Ombudsman program	USPTO should educate examiners on the role of the Ombudsman.	Priority: **Low** No changes to the program are required, low effort measures could solve any current misunderstandings	USPTO employees are educated on and direct applicant to the Ombudsman. A	USPTO employees have knowledge of Ombudsman program and know what it	USPTO employees have some knowledge of the Ombudsman, but not sure	Ombudsman during examination, but employees have little awareness of role	Employees have minimal knowledge of Ombudsman role/ program not utilized	Employees do not know the role of the Ombudsman/ no use of program

			cohesive process exists to ensure notes from the ombudsmen are considered	means when they get a note. Applicants are able to use it as needed	what to do if they receive a note from the ombudsman		during examination	during examination
Feedback and Review								
Errors the OPQA gives to the TCs are consistently fought with seemingly little regard to quality issues.	USPTO must implement a feedback approach for examiners rather than errors approach.	Priority: **Moderate** Interviews showed a large amount of concern that the current review process may not be effective in invoking changes to improve quality.	SPE's give feedback to examiners in a way that promotes quality and makes them know their value	SPE's give feedback to examiners on their errors and provided small suggestions to improve	Errors and feedback are used to evaluate an employee's performance	Errors outweigh the work of an employee	Upper administration evaluates employee based on errors	Errors define the value of an employee
Incentives are used to promote quality work from examiners.	Incentives should not be used to promote higher quality work.	Priority: **Moderate** Although increasing the amount of incentives received huge support from examiners, Interviews quickly pointed out the faults in this logic	No quality based monetary incentives	Uses more awards than monetary incentives	Monetary incentives and awards used equally	Monetary incentives and small amount of awards used	Monetary incentives are used to promote quality	Monetary incentives heavily used and the only option to improve quality