THE PATENT QUALITY COOKBOOK

IDENTIFYING PERCEPTION GAPS AT THE USPTO

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Project Background

- Required 3rd year project at WPI

- Interdisciplinary Qualifying Project (IQP)

- Washington DC is the oldest Project Center

- Dan Sullivan and Marty Rater are current sponsors for PTO

Why we are here

- Working as part of the Case Studies Team in the Quality Enhancement Initiative

- Exploring the gaps between internal and external perceptions of quality

- Creating an instruction manual for case studies

Roadmap

- Objectives

- Data sources

- Perception Gap Matrix

- Case Study Cookbook

- Bringing it all together

- Acknowledgements

- Questions?

- Sources

Objectives

– Assess the perceptions of patent prosecution

- Identify gaps to be addressed

– Develop a framework for case study analysis of the quality of patent prosecution

- Develop strategies for case studies

Our Data Sources

- Six sources of data
  - RQAS Interview
  - Internal Quality Surveys
  - 2014 Quality Brainstorming Sessions
  - External Quality Surveys
  - External Quality Survey Comments
  - Ombudsman

RQAS Interviews

- 15 RQASs Interviews

- Used open-ended questions

- Analyzed responses

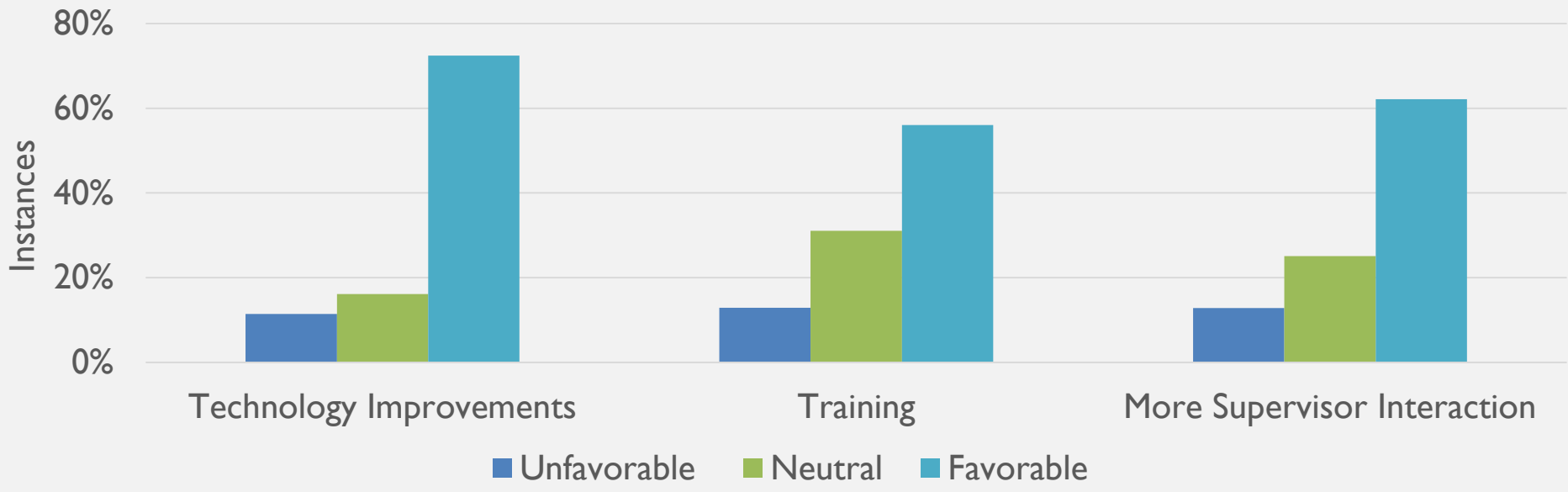- Developed categories for matrix from responses

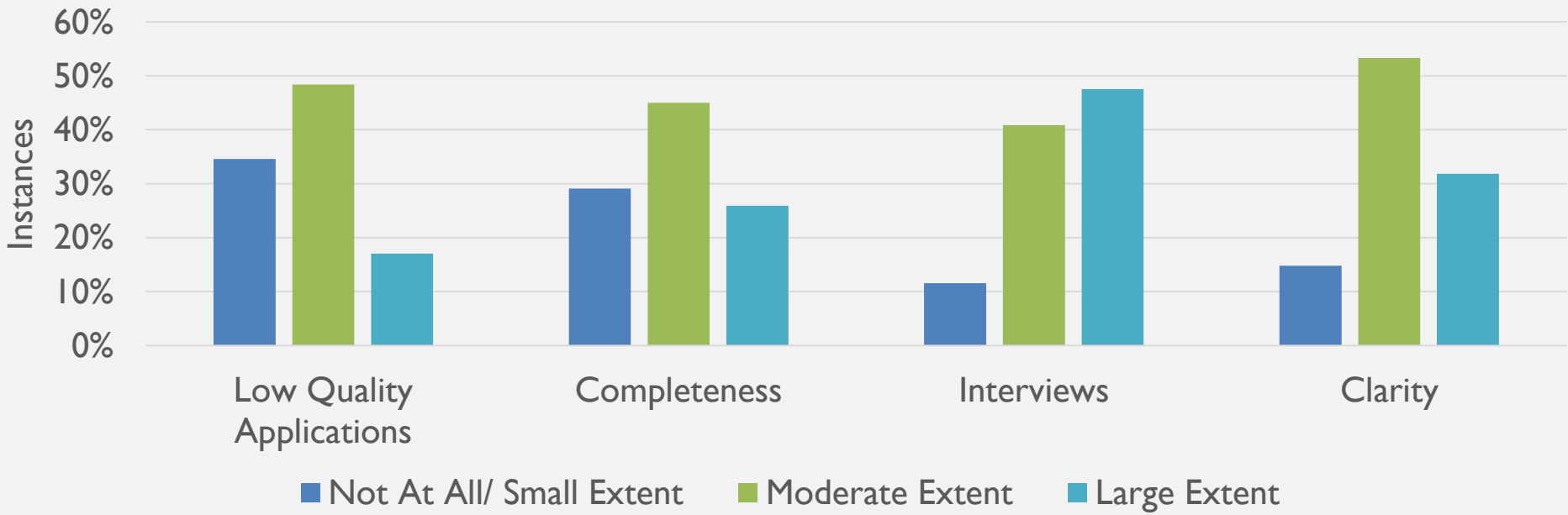# RQAS Top Categories for Improvement
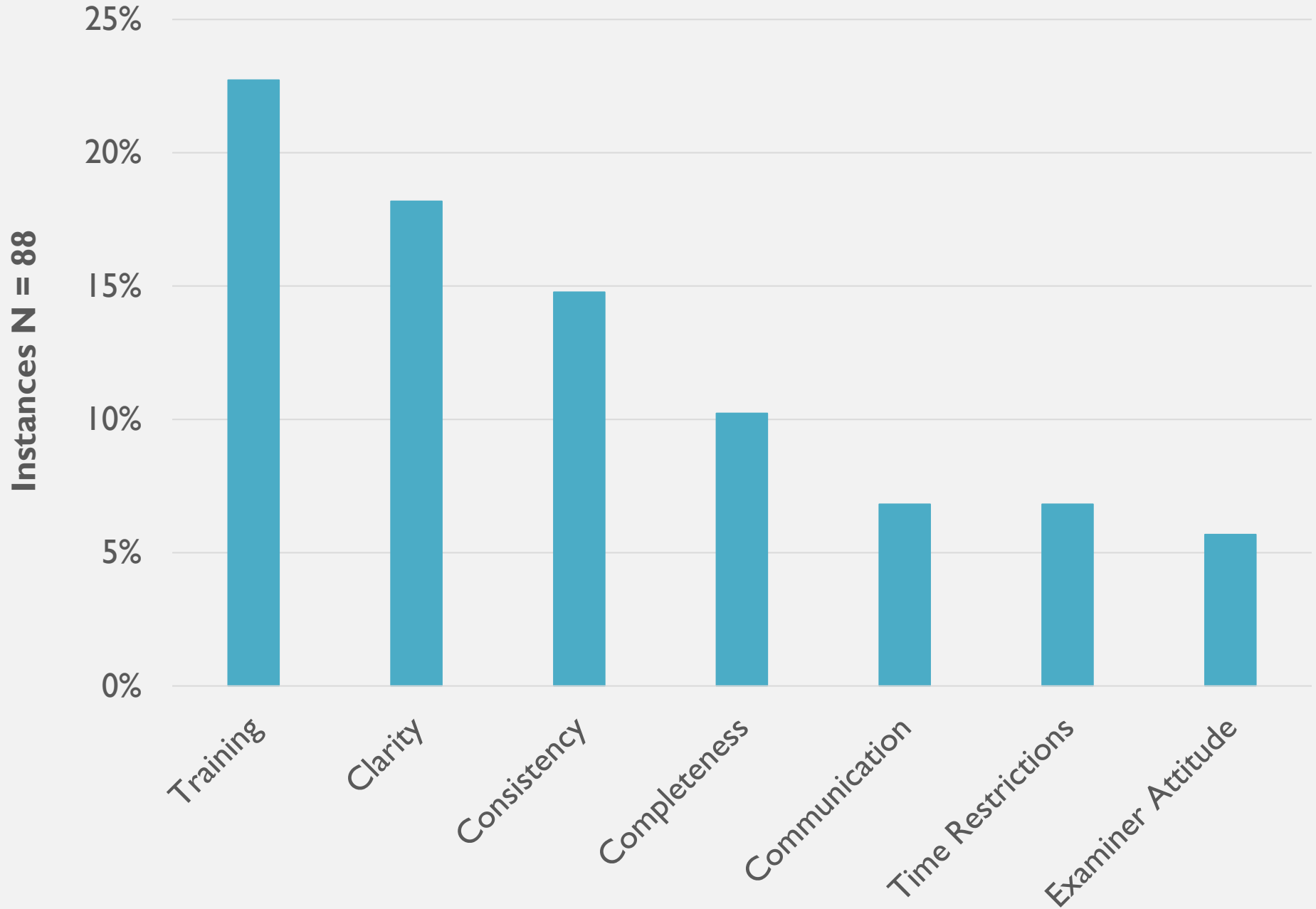
Internal Quality Surveys

- Given to 750 patent examiners by OPQA semi-annually

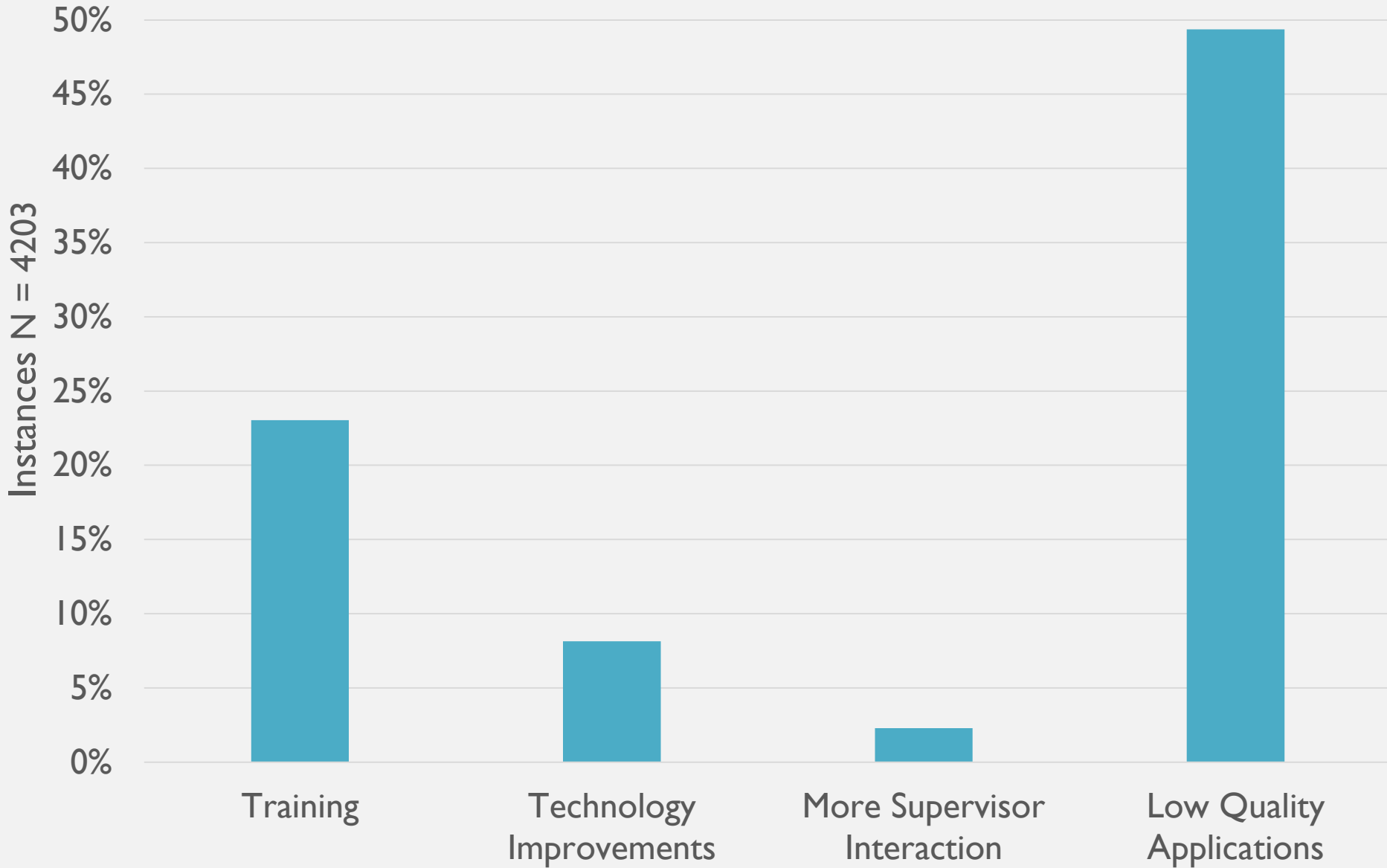- Analyzed internal and external factors

- Created categories from questions

Internal Factors Affecting Examiner Quality

**External Factors Impacting High Examiner Quality**

Internal Quality Surveys Top Categories for Improvement

2014 Quality Brainstorming Sessions

- Data collected by 2014 WPI Team

- Involved internal perspective of quality

- 6 USPTO sessions

    – Approx. 27 participants per session

    – Groups of 5-8 participants discussed 3 questions

- Focused on: "*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?*"
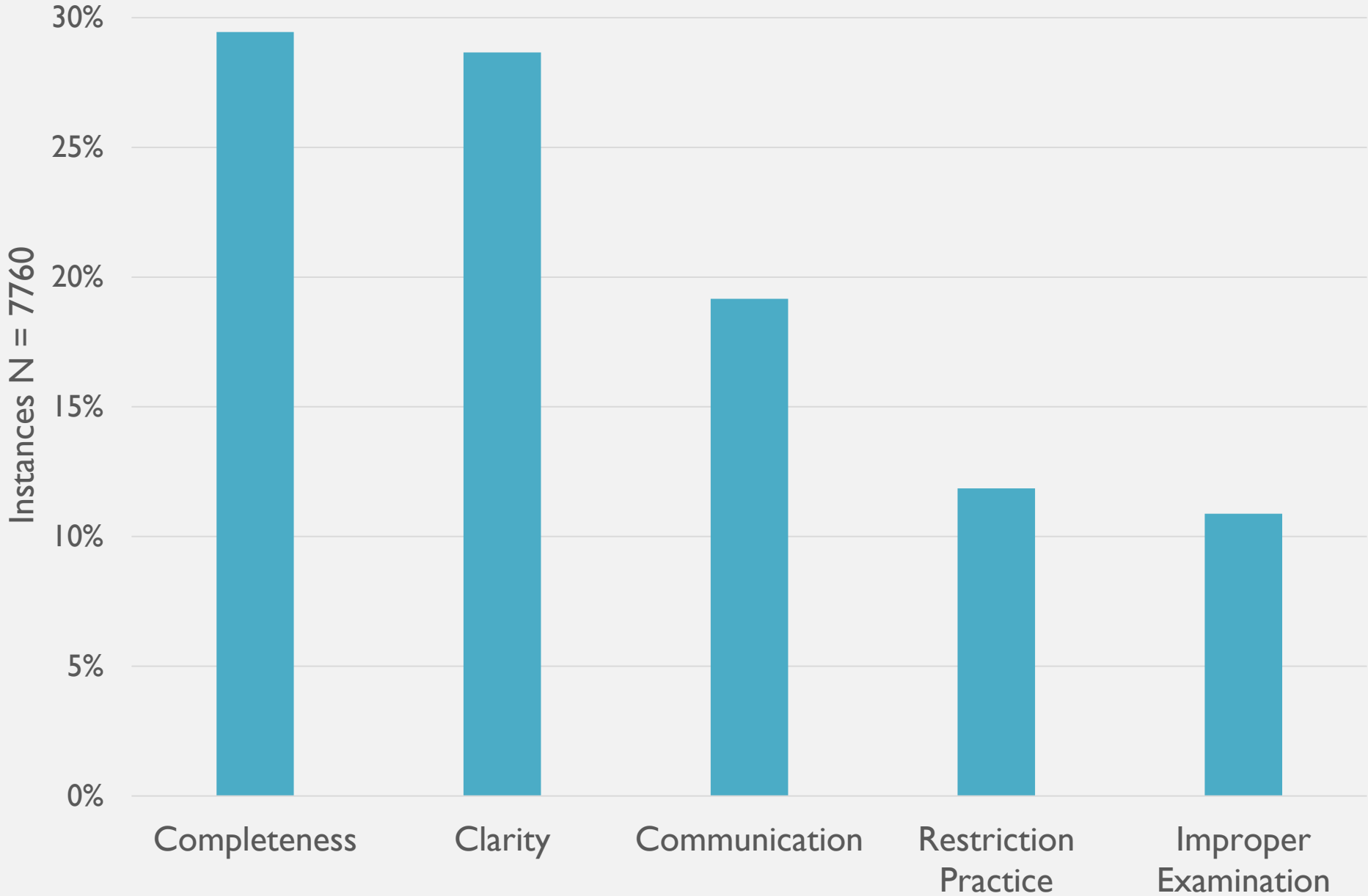
2014 Focus Group Data Top Categories for Improvement
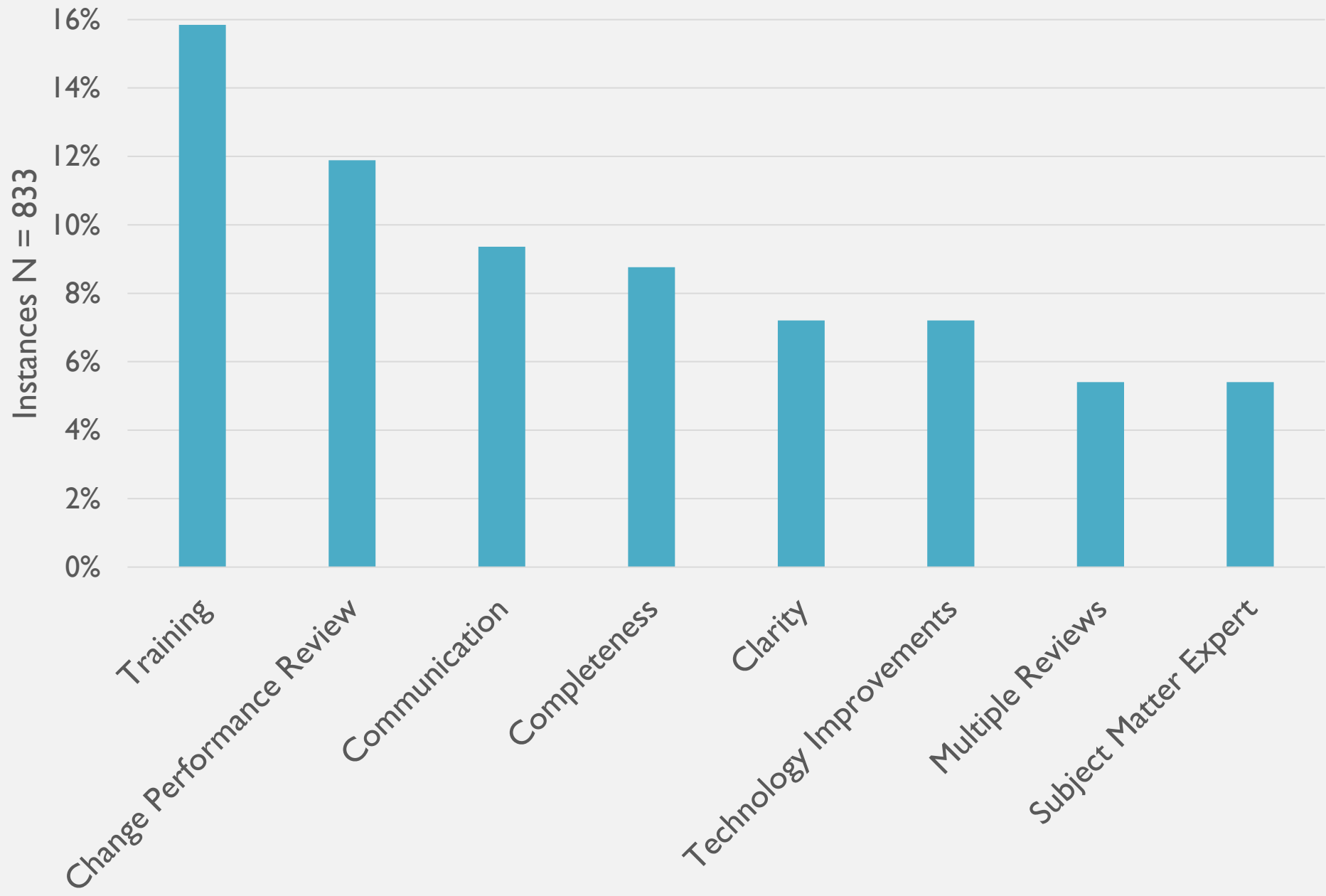
External Quality Surveys

- Given by OPQA to over 3000 frequent patent filers every six months

- Surveys conducted in FY15 Q1 and Q3

- Created categories for matrix

External Quality Survey Top Categories for Improvement

External Quality Survey Comments

External Quality Comments

- Looked at open-ended question from FY14 Q3 and FY15 Q1 and Q3:

  - "The USPTO is currently evaluating and refining its patent examination quality measures. What measures/metrics would you like to see the USPTO provide to gauge the quality of work performed by its patent examiners?"

- Randomly sampled approx. 600 responses

External Survey Comments Top Categories for Improvement
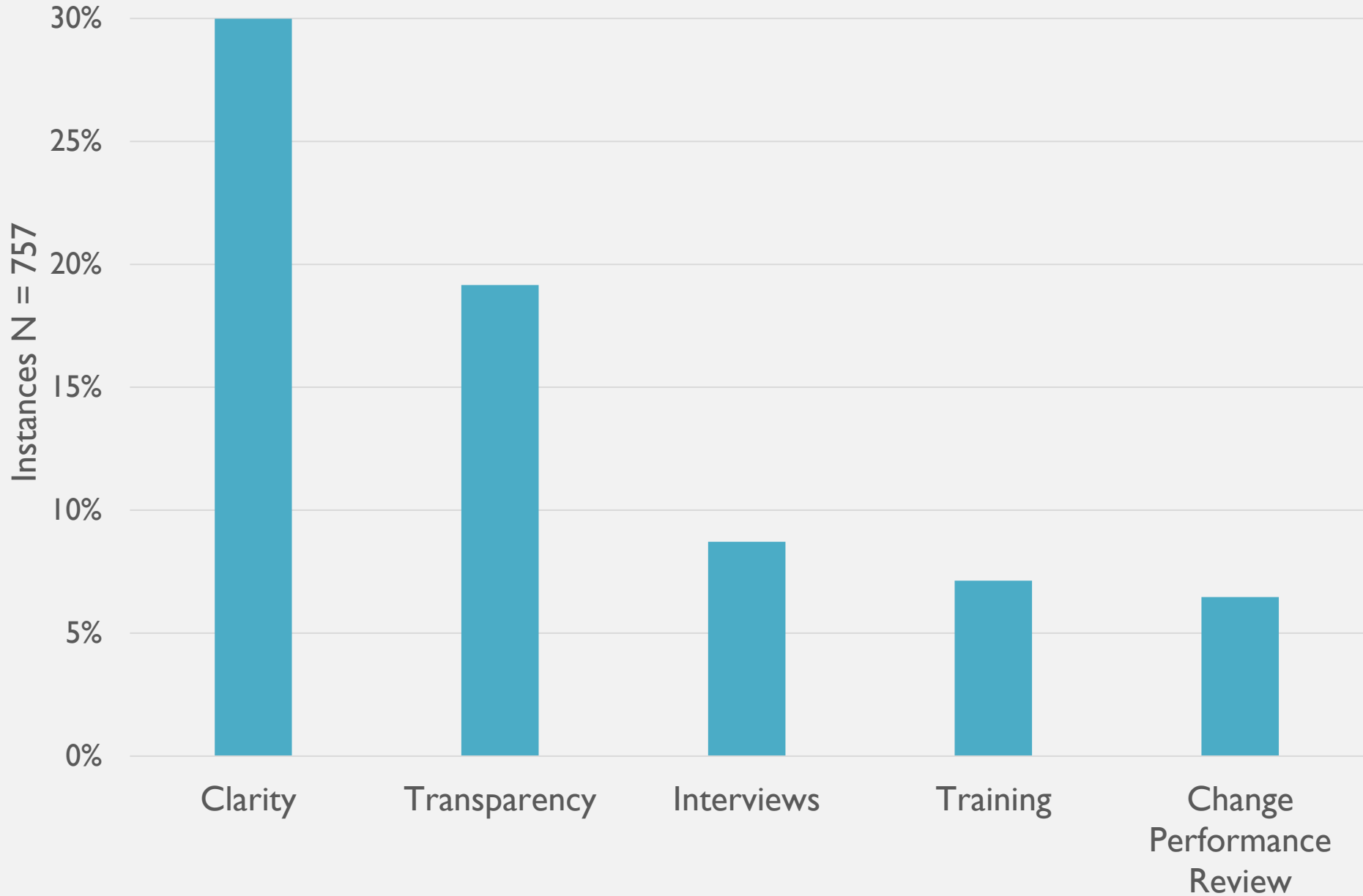
Ombudsman

- A system used to record and categorize comments from applicants with issues regarding patent prosecution

- Looked at the past four months of these comments

- Analyzed and categorized comments for matrix

Ombudsman Top Categories for Improvement

Instances N = 138

Category	Percentage
Clarity	17.4%
Improper Examination	15.2%
Communication	14.5%
Timeliness	10.1%
Examiner Attitude	8.0%
More Supervisor Interaction	8.0%
Abandonment Problems	6.5%
Interviews	6.5%
Training	5.1%
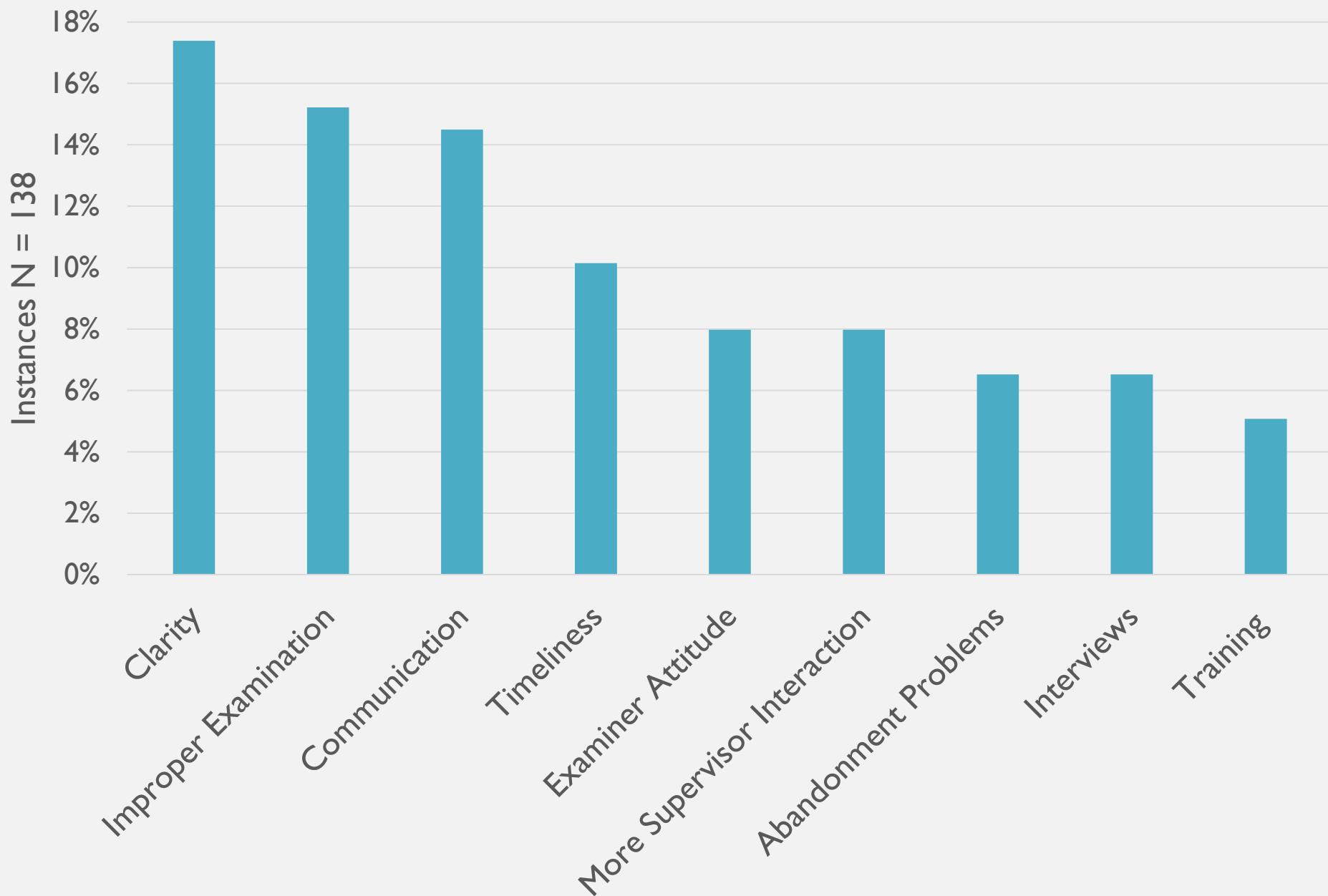
Matrix

- First of two deliverables

- Shows gaps between internal and external

- Inclusion Criterion: categories had to be mentioned by more than 5% of the respondents in at least one of the sources

| Category	Internal	External	Difference	Significant?
Transparency	8.2%	42.3%	34.1%	Yes
Clarity**	4.0%	29.8%	25.9%	Yes
Training**	23.7%	0.7%	22.9%	Yes
Change Performance Review	31.0%	14.3%	16.7%	Yes
Completeness**	11.0%	27.7%	16.7%	Yes
Communication**	1.8%	18.2%	16.4%	Yes
Timeliness	4.9%	13.1%	8.3%	Yes
Technology Improvements**	8.5%	0.3%	8.2%	Yes
Interviews**	4.0%	1.1%	2.9%	Yes
More Supervisor Interaction**	2.5%	0.5%	1.9%	Yes
Time Restrictions	10.6%	3.5%	7.1%	No
Multiple Reviews	13.7%	9.3%	4.4%	No
Consistency	13.4%	11.7%	1.7%	No
Examiner Attitude	4.6%	3.2%	1.4%	No
Low Quality Applications**	44.6%	0.0%	44.6%	--
Subject Matter Expert	13.7%	0.0%	13.7%	--
Restriction Practice**	0.0%	11.5%	11.5%	--
Improper Examination**	0.0%	10.4%	10.4%	--
Abandonment Problems	0.0%	2.6%	2.6%	--

**Percentages made using 3 sources for internal and 3 for external instead of 2 for each.

Topics for Gap Matrix Made with Four Sources
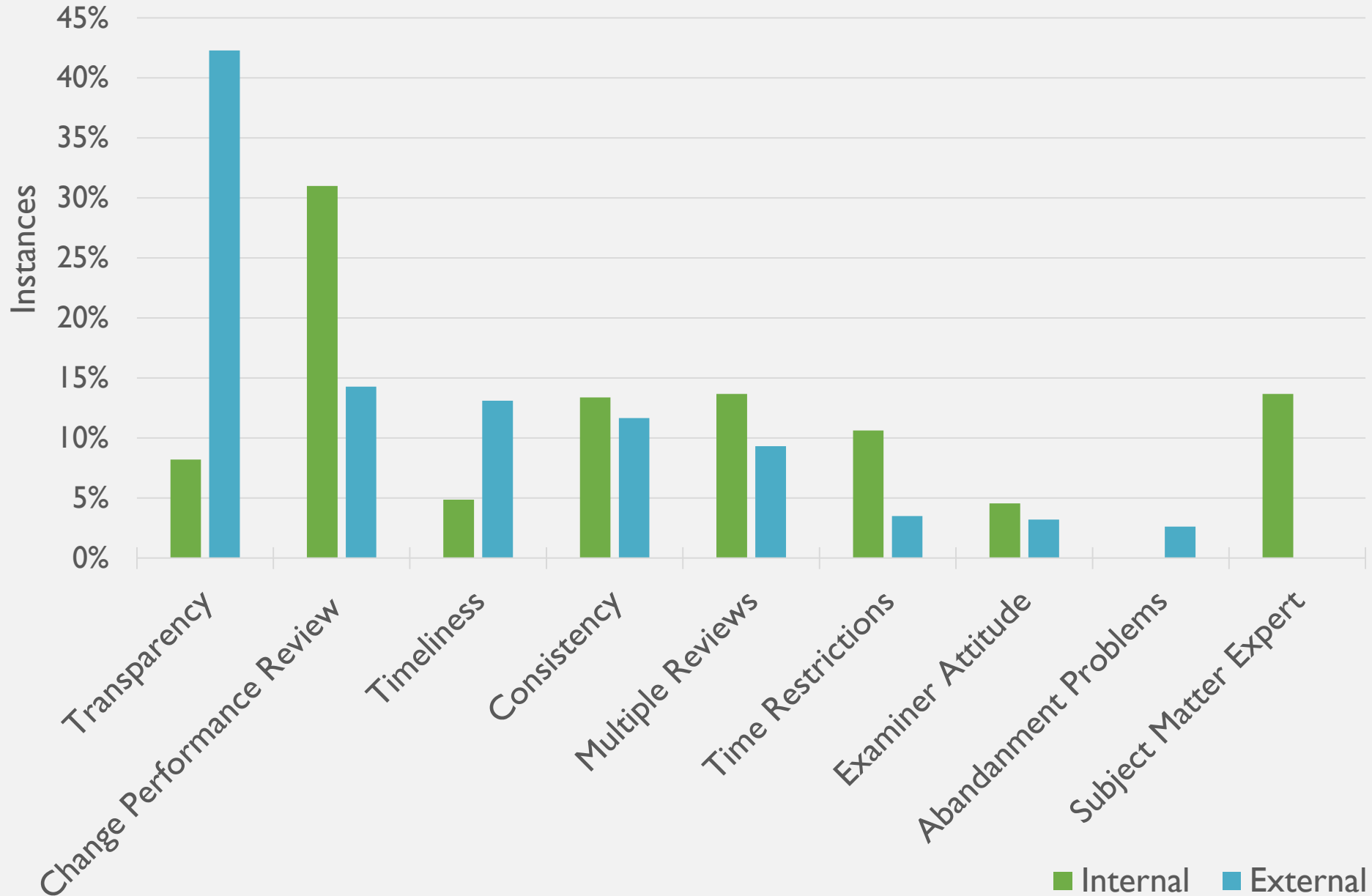
Topics for Gap Matrix
Made with Six Sources
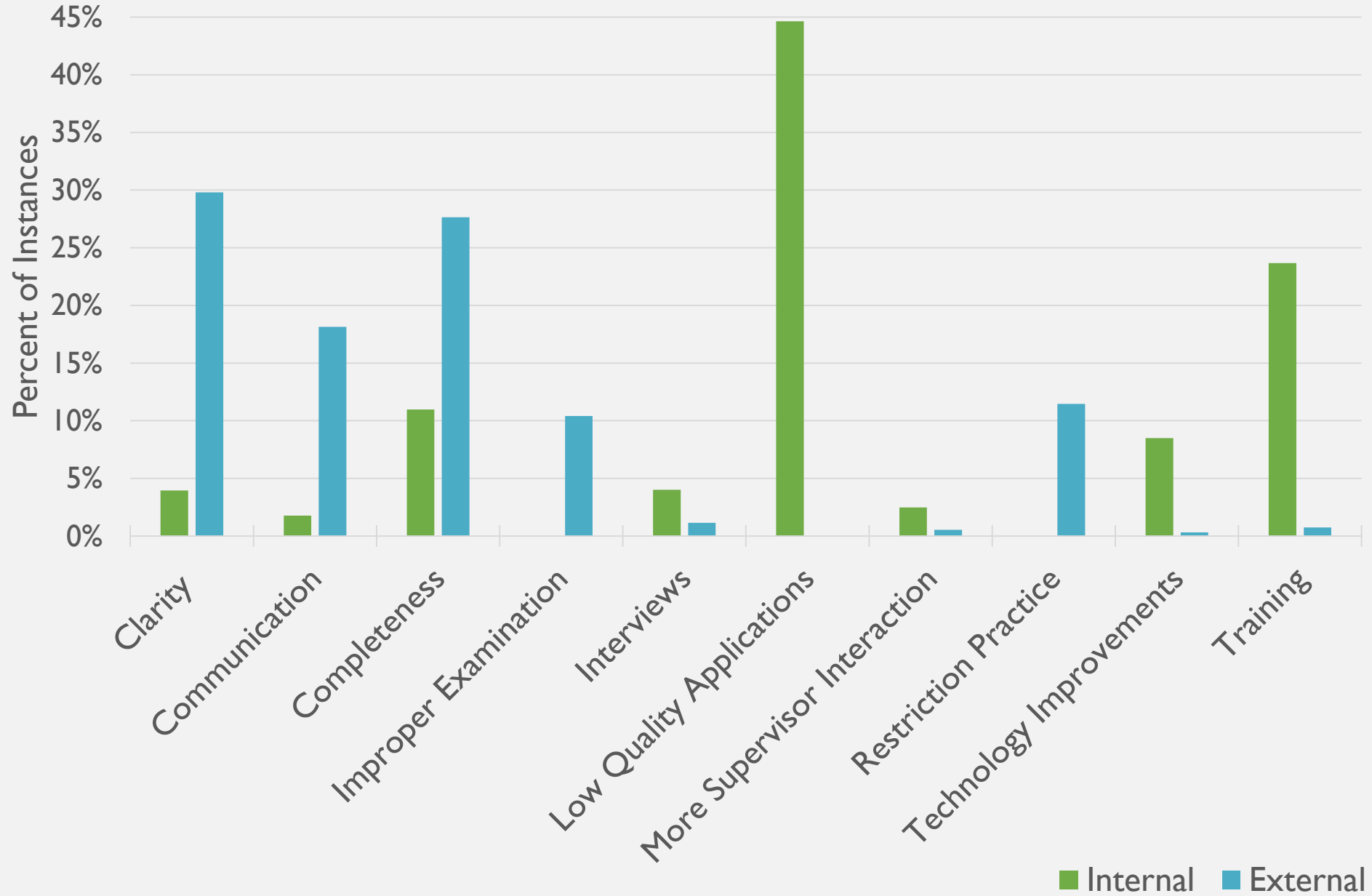
The Cookbook

- Second deliverable

- Case Studies team in early stages of development

- Tool for designing/conducting case studies

- Introduces OPQA to using case study method

Sources Used

- *Case Study Evaluations* by the Government Accountability Office

- *Case Study Research: Principles and Practices* by John Gerring

- *What Researchers Mean By... Cross-sectional and longitudinal studies* by the Institute for Work & Health
  - http://www.iwh.on.ca/at-work/81
- "Case Studies" by Colorado State University
  - http://writing.colostate.edu/guides/guide.cfm?guideid=60
- *Case Studies* by Harvard University
  - http://isites.harvard.edu/icb/icb.do?keyword=qualitative&pageid=icb.page340344
- *Preparing a case study: A guide for designing and conducting a case study for evaluation input* by Palena Neale, Shyam Thapa, and Carolyn Boyce
  - http://www.pathfinder.org/publications-tools/pdfs/Preparing-a-Case-Study-A-Guide-for-Designing-and-Conducting-a-Case-Study-for-Evaluation-Input.pdf

What is a Case Study?

- No general agreement

- Form of observational study that…
  - focuses on collection of data from a single or multiple cases
  - is used to gather data from one or more sites
  - takes place at a single point in time or over a period of time
  - used either in the study of a specific instance or generalized over a population

Cross Case and Types of Case Studies

- Cross-Case Studies

- GAO-recognized Case Studies

  – Illustrative

  – Exploratory

  – Critical Instance

  – Program Implementation

  – Program Effects

  – Cumulative

Case Study Type Priority

	Young	Middle	Old
Cross Case	Low	High	High
Critical Instance	Mid	High	Mid
Cumulative Prospective	Low	Mid	Low
Cumulative Retrospective	Very Low	Mid	High
Exploratory	High	Mid	Low
Illustrative	High	Mid	Low
Program Effects	Mid	High	Low
Program Implementation	Low	High	Low

Bringing it all Together

- Developed a chart using our matrix

- Could help prioritize public case study suggestions

- Cookbook can be used to design the case study

Importance of Perception Gaps

Importance (y-axis) / **Gap** (x-axis)
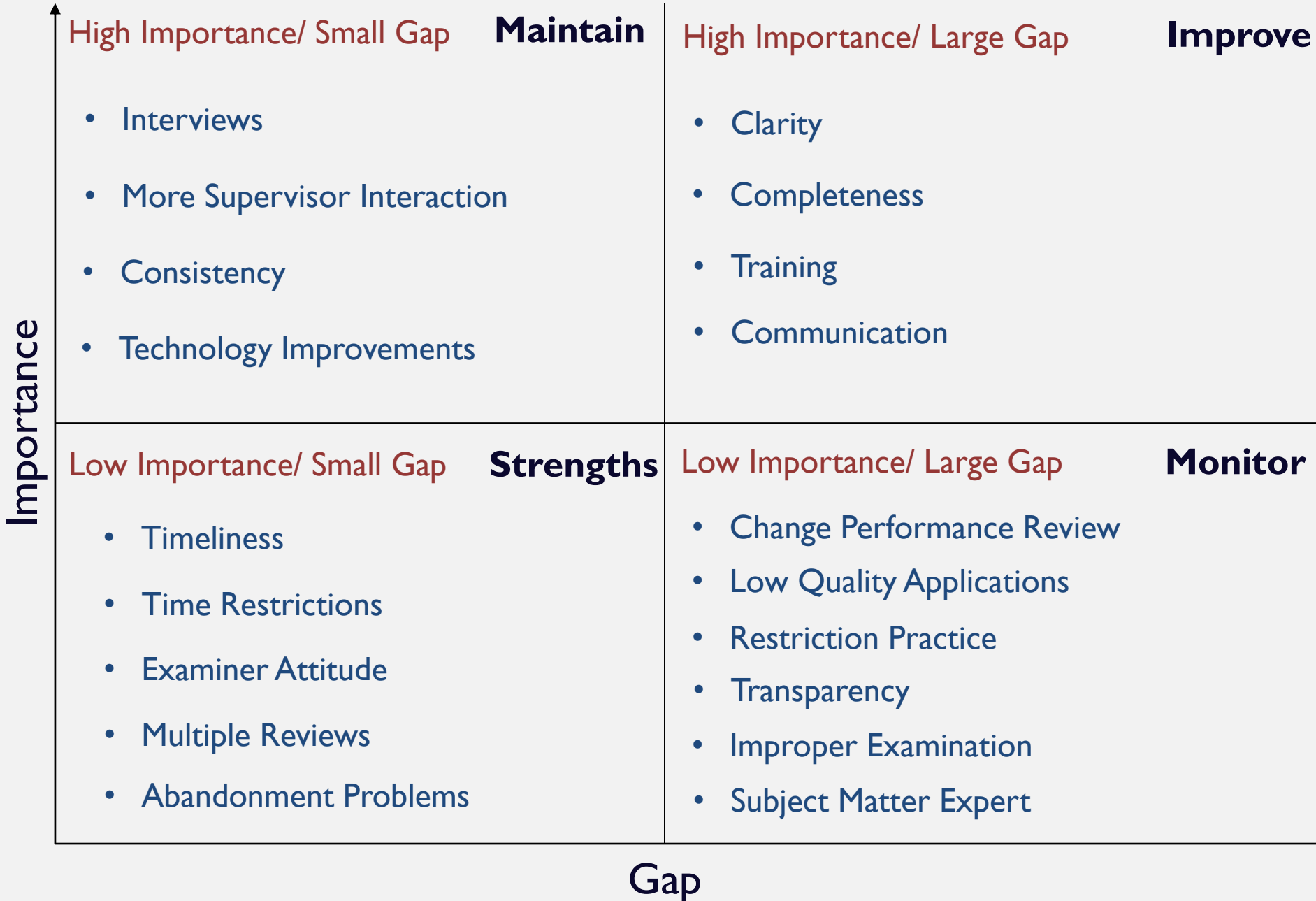
High Importance/ Small Gap — **Maintain**

- Interviews
- More Supervisor Interaction
- Consistency
- Technology Improvements

High Importance/ Large Gap — **Improve**

- Clarity
- Completeness
- Training
- Communication

Low Importance/ Small Gap — **Strengths**

- Timeliness
- Time Restrictions
- Examiner Attitude
- Multiple Reviews
- Abandonment Problems

Low Importance/ Large Gap — **Monitor**

- Change Performance Review
- Low Quality Applications
- Restriction Practice
- Transparency
- Improper Examination
- Subject Matter Expert

Acknowledgements and Thanks

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Any Questions?

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Marco, A. C., Miller, R. D., Fonda, K. K., Laufer, P. M., Dzierzynski, P., & Rater, M. (2015).
Patent Litigation and USPTO Trials: Implications for Patent Examination Quality.
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Notice of Meeting, 80 *Federal Register* 24 (05 February 2015), pp. 6475-6481.

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