Chapter 2  Review of Literature

To understand how technical communication can contribute towards achieving corporate objectives, it is essential to understand how other researchers have attributed and measured the value of technical communication from various perspectives.

This chapter presents the summary of literature published in the field of technical communication, specifically to understand its theoretical aspects as well as determining and measuring its value. The following sections take reference of relevant works that can help quantify and measure the value of technical communication, while seeking gaps and opportunities for further research. The review of literature includes research papers, professional journal articles, and case studies.

2.1 Introduction

This research proposes to study contribution of technical communication towards achieving corporate objectives in the Indian IT Industry. It works on the principle of linking the value provided by the technical communication products to the corporate objectives.

Technical communication is basically a practitioner's field, having evolved from the necessity of the providing simplified descriptions and instructions. However, for more than fifteen years, independent researchers — who are technical communicators themselves— have been attempting to study the field in a more planned way to understand its theoretical aspects.

The proposed study is about the contribution of technical communication in the field of information technology. Hence, for the purpose of the literature review, the following operational definitions are adapted.

- **Technical Communication** is a broader field of business communication, involving designing and developing communication products that transfer technical information from the experts who know it to others who need to know it.

- **Information Technology Industry** comprises of those industry sectors whose business is related to information technology.

More detailed definitions are given in section 3.6.
An extensive review of the literature is proposed at this stage, focusing on research papers, articles, reports and case studies. Following is a summary of ideas in this direction.

- Exploring Theories for Structured Technical Communication
- Establishing and Measuring Value Addition of Technical Communication

2.1.1 Exploring Theories

Technical communication is basically a practitioner’s field, which was later studied from the theoretical aspects, for the fundamental reason of satisfying the need to know “why we do it this way?” The theoretical study also brings out more efficient methods of executing technical communication projects effectively.

This section presents a summary of theoretical study, exploring theories and models for structured technical communication.

Joann Hackos is a noted lecturer, consultant and author of a number of books about technical communication. She is also a fellow and past president of the STC. She is the pioneer in the theoretical study of technical communication and has first defined the IPMM in her 1994 book, Managing Your Documentation Projects.

Hackos’s book Managing Your Documentation Projects (1994) is the first comprehensive guide to project management in technical communication / publications projects that set the industry standard. She presents clear and practical guidelines for planning, estimation, development, production, distribution and evaluation of a technical communication / publications project. She provides useful templates and checklists, derived from her extensive experience.

In the follow-up, Information Process maturity Model: A 2004 Update (2004), Dr. Hackos uses newer concepts such as Information Development to expand on the project management techniques and best practices.

She identifies many additional issues such as:

- Managing a corporate information portfolio
- Partnering with customers and developing user scenarios

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• Developing team effectiveness and collaboration
• Planning and monitoring information projects
• Managing translation and production
• Managing for quality, efficiency, and cost-effectiveness

Also in this 2004 update, she proposes a maturity model in line with the Capability Maturity Models (CMM), and acknowledges the influence of software engineering and quality management practices.

She defines five levels of maturity as described in Table 2:

**Table 2: Information Process Maturity Levels**

<table>
<thead>
<tr>
<th>Levels</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>Ad-hoc, there is no defined management or enforcement of standards</td>
</tr>
<tr>
<td>Level 2</td>
<td>Rudimentary, standards are followed to some extent, and some basic management is observed</td>
</tr>
<tr>
<td>Level 3</td>
<td>Organized and Repeatable, with project-level management, standards, processes, and design</td>
</tr>
<tr>
<td>Level 4</td>
<td>Managed and Sustainable, processes are always followed and improved, strong emphasis on quality and innovation</td>
</tr>
<tr>
<td>Level 5</td>
<td>Optimizing, quality measurements are in place and innovations are part of the process, strong commitment</td>
</tr>
</tbody>
</table>

For each level, she defines eight characteristics such as Quality Management, Cost Control, Hiring and Training, Estimating, and Scheduling.

Dr. Hackos has creatively applied concepts and theories to technical communication from her other areas of interest such as content management, interface design, and usability. Her considerable body of research work has brought technical communication research a compelling respect and seriousness.

As early as in 1995, Jean Hollis Weber looks at ethical issues in the field of technical communication in her paper Ethics in Scientific and Technical
Communication (1995). She words ethics as “Knowing and doing - taking personal responsibility for one’s actions”, which in the context of technical communication includes:

- Telling the ‘truth’
- Rhetoric - choosing your words (Loaded, discriminatory words, and sensationalizing)
- How much detail is appropriate? (Considering IP rights)
- Choosing between advocacy and objectivity

The author presents the technical communication field with a serious point of view regarding ethics and also lists the STC ethical code.

Wiley publishers realized the trend of tremendous growth in technical communication and began Wiley Technical Communication Library as early as in 1995. As a part of this library, Human Factors for Technical Communicators by Mariana Coe was published in1996.

As technical communicators’ profile grew to include development, design, and testing of technical communication products, foundation in human factors became highly essential. This book provided the much needed grounding in human factors in a comprehensive manner.

Marlana Coe is an authority in the field of human factors that encompasses the “psychology and physiology of how users access, learn, and remember information; the impact of colors, shapes, and patterns; learning styles; approaches and obstacles to problem solving; action structures; and more”.

She tackles both the multidisciplinary fields – technical communication and human factors with the help of real-life examples to illustrate the best practices of technical communication from the human factors aspect:

- Analyze users' needs and learning styles
- Get and interpret user feedback and create partnerships with users
- Select the most effective layouts, colors, fonts, and graphics
- Build better navigational infrastructures


• Develop content that gives users everything they need to quickly identify and resolve problems

• Test and improve your product’s usability

Ms Coe’s early contribution from the human factor perspective has enriched the theoretical study of technical communication to a high extent, prompting the other researchers to analyze other facets of technical communication and explore more new and novel facets.

In her study Demystifying Information Modeling (1996), Dr. JoAnn Hackos explains at length the information modeling theory along with metadata dimensions, and information types.

![Information Model](https://example.com/information-model.png)

**Figure 11: Information Model**


Dr Hackos describes metadata dimensions as: “The categories that you use to organize and label the content that you will manage in a content management system.” She further elaborates on the typical metadata dimensions: Authoring dimensions, User dimensions, and Publishing dimensions.

She then proceeds to describe the steps of information modeling.

1. Analyze your users and identify their information needs; Analyze your information and identify the information types; Match users to information types and eliminate unnecessary information types

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2. Determine a minimal number of information types; Create a hierarchy of
information types, Define how and when each information type will be
written

3. Design content units

4. Chart each Information Type with all its content units; Determine the
content unit overlaps, and ensure consistency

She further emphasizes on organizing the content units and developing the context.

Dr. Hackos’ contribution to the theoretical aspect of technical communication is
again evident here, with her clear perception about the profession and good
practical solutions to typical problems.

One of the very few research-based practical books on technical communication,
Shriver’s book Dynamics in Document Design: Creating Text for Readers (1996)\textsuperscript{53}
provides the much needed data-backed justification to every established document
design guideline. The author is an international leader in document design and
draws on research about how people interpret words and pictures. Her insights
present a real and complete image of the reader—a person trying to understand the
text, relate to graphics, and also responding to them aesthetically and emotionally.

This book is for writers and graphic designers who create the many types of
documents people use every day at home or school, in business or government.
From high-tech instruction manuals and textbooks to health communications and
information graphics, to online information and World Wide Web pages, this book
offers one of the first research-based portraits of what readers need from
documents and of how document designers can take those needs into account.

Drawing on research about how people interpret words and pictures, this book
presents a new and more complete image of the reader—a person who is not only
trying to understand prose and graphics but who is responding to them
aesthetically and emotionally.

She includes fascinating case studies documents before and after revision –
demonstrating analysis of interplay of text and pictures. A strong advocate of
usability studies from where she derives her basis of research, Shriver illustrates
interesting timeline of document design, a relatively new field.

Extensive research, decoded into simple guidelines for designers and writers, this
book addresses many issues about designing documents to make them accessible
to the reader.

In the early days of technical communication research, advocating a reader-
centered approach was not easy. However, in this simple and elegant book

Technical Communications: A Reader-Centered Approach (1998), Paul Anderson proposes systematic planning to meet the readers’ information needs. His main focus is on readers, how they read, what they read, what they want to read, and how to persuade them to continue reading.

He emphasizes on audience analysis, visual communication, and consistency in communication. Highlighting the rhetorical situation and reader-centered approach, Anderson covers reports, emails, web pages as well as conventional manuals and guides. He also touches upon collaboration between technical experts and other team members to enrich the readers’ knowledge.

Anderson’s book is designed as textbook for students of technical communication. Nevertheless his advice of keeping readers always in mind helps in disseminating the information and reassembling it in the manner easy to readers is really helpful.

Ethics, formulation of ethical guidelines and legal dimensions of ethics have always been a major aspect of any new field. In the book Ethics in Technical Communication (1999), authors Paul M. Dombrowski and Sam Dragga deal with ethics and value systems related to technical and scientific discourse. The authors deliberate on several traditional ethical theories and also emphasize that ethics is also a very much personal matter of judgment.

The book discussed issues such as source of information, manner of using it, how the meaning of technical terms shift with the value perspectives behind them; and how science and technology can be used to put forth questionable values or to serve values not apparent in the discourse.

Dr. Carol Barnum is a legend in the field of technical communication, teaching technical communication and usability. In the book Usability Testing and Research (2001), she combines her outstanding personal experience in these fields with a solid foundation of current research in the field of usability to produce a unique volume.

This book provides a comprehensive and modern perspective in the usability of technical communication. Based on the most current research in the field, she discusses user-centered design, user analysis, task analysis, and prototyping. She later describes the key steps in the process of usability testing: planning the test, preparing for the test, and conducting the test.

She emphasizes on data analysis and how to present the findings in a report format. Key concepts are highlighted and a large number of examples or case studies clearly demonstrate them.

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A complete guide to usability studies, Dr. Bamum makes a lasting contribution to the research in technical communication.

Laurie Kantner, Roberta Shroyer, and Stephanie Rosenbaum analyze online documentation in their paper Structured Heuristic Evaluation of Online Documentation (2002), from the Heuristic perspective. They present 10 evaluation criteria such as:

1. Orientation
2. Efficiency
3. Flexibility
4. Control
5. Recognition
6. Familiarity
7. Consistency
8. Readability and aesthetics
9. Context-sensitivity
10. Clarity

This paper derives heavily from usability analysis, focusing on identifying problems that may hinder the user's ability to access and navigate the information. This study is important from the aspect of quantifying the measurables and evaluating them specifically for online documentation.

In the paper Moving from Information Transfer to Knowledge Creation: a New Value Proposition for Technical Communicators (2002), Michael Hughes reviews the classical value proposition of technical communicators that focuses on information, and points out the issues with it. He then suggests a new approach that focuses on knowledge rather than information.

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He discusses knowledge dimensions, moving on to define technical communicators as creators of knowledge who make experts' tacit knowledge explicit. He uses the four layers of knowledge management:

1. Document-centered
2. Technological
3. Socio-organizational
4. Knowledge organization

He emphasizes that the technical communicators have already moved beyond level 2, and the last two layers address the technical communicator as a facilitator of knowledge creation and dissemination.

He also proposes creating organization knowledge assets as the holistic goal of technical communicators, and advocates the new perspective - Technical communicators negotiate meaning within development communities and between those communities and user contexts, and they capture the resulting consensus as knowledge assets.

A collection of essays published in 2002, the book Research in Technical Communication (2002)*, marks an important milestone in the history of literature on technical communication. The most important contribution is naturally bringing full-fledged research to the forefront of technical communication.

Being essentially a practitioner's field, research in technical communication has been very limited, and largely due to individual efforts. This book, written by many noted scholars in the field, presents an extensive range of research methods and perspectives for the field of technical communication.

The mixture of essays cover ethical issues, ethnography, user experience, usability, and cultural studies while demonstrating use of experimental and quasi experimental research. One of the most interesting essays is survey and questionnaires offering practical advice for the keen upcoming researchers.

In the comprehensive book Technical Communication (2003)^, Michael Markel covers the basic scope of technical communication. He describes what technical communication is, illustrates the role of technical communication in business, and explains the function of technical communicator.

In an interesting take, Markel presents seven characteristics of technical communication, focusing on its modern, collaborative, multi-media, user-centric

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form. It can perhaps be considered the first attempt to generalize the characteristics of the profession with a theoretical approach:

- Addresses particular readers
- Helps readers solve problems
- Reflects an organization's goal and culture
- Is produced collaboratively
- Uses design to increase readability
- Consists of words or graphics or both
- Is produced using high-tech tools

Markel's book, though simplistic, is one-of-its kind, combining theoretical aspects with practical corporate working.

In the path-breaking paper Achieving Minimalism through Interactive Multimedia (2004), Dave De Yoreo and Ben Kauffman focus on how best to use multimedia and interactivity to move technical communication from the written documentation mode to a more modern interactive simulation. They explain the principal of minimalism, developed from the work of John Carroll, who maintained that users learn more efficiently by working more with the product and less with the documentation.

The authors propose use the modern techniques of animation/multimedia and interactivity to:

- Let the user accomplish real tasks by simulating the actual operation of the software.
- Minimize front-end material
- Support error recovery by helpful tips
- Allow to develop a library of modular, independent videos that can be viewed in any order.

This paper highlights the need for integrating multimedia in technical communication models, especially for software products, enriching the field with minimalist approach.

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In 2005, Stephanie Rosenbaum, Laurie Kantner and Garett Dworman presented their paper about the results of two workshops that drew members from the information and the interaction/interface design communities together, from four different countries, to focus on effective integration of help systems into users' environments.

This study, Helping Users to Use Help: Results from Two International Conference Workshops (2005), is an important step towards recognizing why users use / not use technical communication products and attempting to find a solution. The analysis is done using usability techniques, such as creating personas and access availability. The key points from the study are guidelines and proposed research area for:

- Distinction between Help and Functionality
- Help Access Mechanisms
- Answering Real User Questions
- Help as an Element of Customer Assistance


- Take an evolutionary approach to documentation development, seeking and then acting on feedback on a regular basis.
- Documentation should be just barely good enough.
- Documentation is as much a part of the system as the source code.
- Ask whether you NEED the documentation, not whether you want it.
- Update documentation only when it hurts.

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He suggests the minimalist approach in agile documentation, and presents best practices complementing the strategic discussion.

- Prefer executable specifications over static documents
- Document stable concepts, not speculative ideas
- Generate system documentation

![Documentation through the SDLC](image)

**Figure 12: Documentation through the Software Development Lifecycle**

Agile modeling is the extreme and lean model for software development, being actively advocated by the industry since 2002. With these articles, the contemporary techniques are also extended to the technical communication.

Joann Hackos is a respected researcher in the field of technical communication, renowned for applying theoretical study to create practical guidelines.

As a follow-up to her 1994 book, *Managing Your Documentation Projects*, which is regarded as a classic, she produced another extensive volume *Information Development: Managing Your Documentation Projects, Portfolio, and People* (2006). In this book she acknowledges the paradigm shift of newer models of documentation projects, especially agile modeling and builds the documentation project around the paradigm of information development.

According to Dr. Hackos, Information Development offers a completely new look at best practices for all phases of the document development lifecycle, including:

- Managing a corporate information portfolio

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• Evaluating process maturity
• Partnering with customers and developing user scenarios
• Developing team effectiveness and collaboration
• Planning and monitoring information projects
• Managing translation and production
• Evaluating project performance
• Managing for quality, efficiency, and cost-effectiveness

2.1.2 Establishing and Measuring Value Addition

Over the past decade a number of notable and senior technical communicators across the globe have attempted to draw attention to the value aspect of technical communication. They have relied more on the professional forums to voice their concerns and their models.

This section presents a summary of articles published in professional forums like STC journals, Intercom, and IEEEPCS, emphasizing on value added by technical communication.

In 1993, STC (Society of Technical Communication) funded Judy Ramey (Professor of Technical Communication at the University of Washington) and Janice Redish (Founder and Director of the Document Design Center at the American Institutes for Research) to lead a one-year project on measuring the value added by professional technical communicators.

The project was conducted by literature search to see how other professionals measure the value they add, by surveying technical communicators and managers, and by gathering case studies.

The results of this research, Measuring the Value Added By Professional Technical Communicators: Results of a Study (1994) specifically considers the value provided to an organization by professional technical communicators. It also describes useful techniques to measure the quality of technical communication work products, such as measuring user ratings of satisfaction with information products, measuring reduction in support costs, measuring improvements of user performance. These techniques directly relate to the quality and value added by technical communicators.

Ramey, Judy (1994), Redish, Janice C. Measuring the Value Added by Professional Technical Communicators: Results of a Study. STC Proceedings 1994
This study includes the following case studies:

- A good user’s guide means fewer support calls and lower support costs; Cathy J. Spencer, General Electric Information Services, Rockville, Maryland

- A good installation guide increases user satisfaction and reduces support calls; C. Al Blackwell, SABRE Travel Information Network, American Airlines, Fort Worth, Texas

- Revising letters to veterans brings more responses and more complete responses; Reva Daniel, Dynamic Business Writing, Clinton, Mississippi

- How the process and organization can help or hinder adding value; Denise D. Pieratti, Xerox Corporation, Leesburg, Virginia

This early study was the first ever structured attempt to measure the value added by technical communicators. Note that it relied on primary data, and can be considered as the first step in understanding the concept of technical communication adding value towards corporate objectives.

In her paper Adding Value as a Professional Technical Communicator (1995)67, Janice Redish emphasizes on how a professional technical communicator can add value, which she defines as generating greater return on investment than the cost of the initial investment.

According to the author, ROI (Return on Investment) can mean bringing in more money, or increasing users' satisfaction, or it can mean reducing costs, such as the cost of supporting customers. She argues that value added is a concept that technical communicators can use in a wide range of fields.

Listing the methods of value addition, she explains:

- Looking at Costs Across Departments
- Working with Other Departments
- Measuring Value Added -- Relevant to All Our Roles
- Projections (Estimates) of Value Added
- General Perceptions of the Value of Technical Communicators' Work

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The strong focus is on linking the technical communication activities to ROI. This article can be considered as the next step in measuring value of technical communication in financial terms, and linking technical communication to financial objectives.

An early attempt at the value perspective, Johnson-Eilola and John Dan’s paper Relocating the Value of Work: Technical Communication in a Post-Industrial Age (1996)\(^{68}\) analyzes the location of “value” in technical communication contexts. Boldly declaring that the then current models of technical communication are outdated, the author proposes to update the model in the post-industrial age.

In this new projected model, according to the author, information and communication needs to be prioritized. A sincere attempt at directing attention to value, as seen by the users, this article makes its objective very clear, and succeeds in it to a certain extent.

Saul Carliner, an internationally known expert on e-learning, information design, and technical communication with extensive industry experience, first mentions corporate objectives in his article Writing Business Objectives: A Key Tool for Demonstrating the Value of Technical Communication Products (1997)\(^{69}\). He wants to make technical communication relevant to corporate objectives and lists “The Three Ways that Technical Communication Products Affect the Bottom Line” as:

- Generate revenue
- Contain expenses
- Comply with corporate, industry, or government regulations

He proposes that the technical communicators themselves write the business objectives and tackles the most difficult aspects of business objectives—what are they, when to write them, and how to write them.

This article is valuable in making the creative connection between technical communication and business objectives. The technical communicators themselves needed to awake to the fact that their function is not merely meeting mandatory regulation requirements, or reducing support calls, but can actually be raised to actively generating revenue. This article was successful in providing that strong insight.


In the extensively researched paper Demonstrating the Effectiveness and Value of Technical Communication Products and Services: A Four-Level Process (1997)\textsuperscript{70}, Saul Carliner proposes to distinguish between quality, meeting requirements, and value - the perception of how effectively a product or service meets needs.

In this article, he adapts Kirkpatrick’s four-level model for evaluating training to technical communication products and services. While considering value of technical communication products and services, he suggests four levels as described in Table 3.

Table 3: Kirkpatrick’s Four Level Model Adapted by Carliner

<table>
<thead>
<tr>
<th>Levels</th>
<th>Description</th>
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<tbody>
<tr>
<td>Level 1</td>
<td>Reader Satisfaction</td>
</tr>
<tr>
<td>Level 2</td>
<td>Reader Performance</td>
</tr>
<tr>
<td>Level 3</td>
<td>Client Results</td>
</tr>
<tr>
<td>Level 4</td>
<td>Client Satisfaction</td>
</tr>
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</table>

The author provides a very clear thought process, presents precise useful guidelines, and promotes good business practices among technical communicators, such as:

- Defining tasks and business objectives as requirements for communication products
- Significantly increasing the assessment of reader satisfaction and usability
- Initiating measurement of the business value we add
- Emphasizing outstanding customer service

He also takes a long-term pragmatic approach, concluding that technical communication products should be priced based on their value, not their printing cost; and technical communication services should be priced to align with client’s perceptions of the value of the service.

He relates pricing of technical communication products and services directly to the value they bring in to the organization, or in other words – the financial objectives of the organization.

Geoff Hart, Fellow, STC, proposes in his article Prove Your Worth! (2001)\textsuperscript{71}, to carry out real costing analysis of technical communication products. He suggests five quantitative and five qualitative measures to estimate costing Vs the value generated by technical communication activities.

Some of his quantitative measures are:

1. The income you generate, through adding cost of technical documentation in the product costing
2. The cost of technical support, which will be reduced due to availability of good technical documentation

And some of his qualitative measures are:

1. Customer satisfaction, which can bring good reviews and publicity, in addition to loyalty and image
2. Safety and efficiency, where warnings can reduce accidental damages

Though written in humorous manners, Hart's article no doubt mentions important and valid points about the worth and value of technical communication.

Deidre Murr makes a valuable 3-part presentation Using Metrics to Tell Your Story (2004)\textsuperscript{72}, to highlight the use of metrics. She insists on systematic data collection and using data to emphasize contribution of technical communication.

She explains what should be measured, how and why it should be measured, and how it should align it to what the management wants to know. A clear understanding of data and focus on data-driven fact presentation is the key of her presentation. She outlines what needs to be measured:

- What is the Quality (Value-Add) of our product?
- How effective is our product?
- What is the Productivity of our group?


• How well is our Process working?
• Are we within Budget?
• Are we on Schedule?
• What is the Cost per unit?
• Tell the story and transfer the vision

The presentation also explains investigating ROI, with 5Ws: Why prove our value, How value is measured, Who decides what to measure, What gets measured, Where to get measurements, and When to measure. She recommends identifying the business drivers that matter to the company and that the technical communicators can support/influence.

Regarding metrics, she touches the practical aspect with the guidelines of Limit yourself to 9 to 16 metrics, Use more than one metric per product, Review the metrics and data once a month with your group, On the first month, use data that are easily accessible/easy to collect, and Add data for one new metric each month.

A very practical approach with useful guidelines makes this presentation a valuable resource for Establishing and Measuring Value Addition of Technical Communication.

In the paper Demonstrating the Value You Bring to Your Organization (2004), Janice (Ginny) Redish, Fellow, Washington DC chapter, STC discusses how the technical communicators can and should demonstrate the value added to the organizational goals. It is interesting to note the confident assumption of definite value added, which needs to be demonstrated, highlighted and brought to the notice of the stakeholders. The very first line of the article mentions the respect and appreciation technical communicators want, again emphasizing the increasing importance of the technical communication.

She summarizes the techniques of demonstration as:

1. Think and speak the managers' and executives' language
2. Understand your organization and what it values
3. Figure out how you bring value
4. Also look at 'points of pain' in the organization and among the users
5. Be aware of how you are judged

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6. Get the message out in the places that matter

For the point#3, the author uses metrics of measures and that help reduce costs. In this metrics several critical points of pain are identified and addressed, that can reduce cost in different functional areas. The metrics help demonstrate a substantial ROI, in terms of reduced costs. This insightful article is a major step in asserting the contribution of technical communication towards adding value to the financial objectives of the organization.

In his STC presentation Making the Business Case for Technical Documentation (2004)\textsuperscript{74}, Mark Sangster discusses case studies of several technical corporations to suggest:

- Positioning and establishing visibility within the organization
- Demonstrating the value of good documentation
- Measuring team performance and setting goals

He also recommends a formal plan to present the business case for technical documentation. Some key points in the formal plan should include:

- Communicate with management, supporters and your team
- Objectives
- Overview of your team (structure and people) and Roles and responsibilities
- Staffing levels and Performance assessment
- Development path and action plan with Critical dependencies
- Documentation model
- Competitive information

Sangster’s study highlights the need to recognize technical documentation as an important function of the business.

Often a stumbling block for aspiring technical communicators, explaining the value they can bring to the organization is a significant issue during job search and interview. Joanna Castner, in her paper Explaining the Value of Technical

Communication on the Job Search (2005)\textsuperscript{75} makes an attempt to prove the value in the right perspective.

She begins with the line of reasoning “academics and practitioners have argued that the diversity and interdisciplinarity of the field of technical communication are strengths.” She continues her argument that “But our diversity and interdisciplinarity have also made it difficult to explain our value to others.”

She then proceeds with describing the survey she conducted with the practicing technical communicators. One of the key questions in the survey is “What strategies for explaining and/or showing your value as a technical communicator have been most effective?”

She summarizes the responses as the strategies to be followed by aspiring technical communicators:

- Show your value, and supplement your "show" with "tell".
- Work hard to build relationships with colleagues in all parts of the organization to smoothen the path of the technical communicator working to show his/her value.
- Reach out to users; meet their needs, and they will let your managers and supervisors know of their appreciation.
- Keep learning new things so you can continue to develop and show new ways to contribute to the organization.
- Show initiative and willingness to take responsibility by creating concrete examples that illustrate your ideas and how they can contribute.

She concludes the excellent article with some tips from her personal experience, making this article a worthy place in the field of technical communication.

JoAnn Hackos is a noted lecturer, consultant and author of a number of books about technical communication. She is also a fellow and past president of the STC. In a recent paper Measuring Performance in Information Development (2007)\textsuperscript{76}, she analyzes how to measure performance against benchmarks. She notes the challenges:


• External benchmarks are rarely informative enough
• Internal benchmarks may be too high level
• Aggregate costs hide cost-related details
• Data collection methods are inadequate

She further proposes to develop a detailed internal cost-tree, identify cost drivers, and collect accurate data. This article takes the approach of measuring performance by cost, for each individual project and correlates it to value.

2.2 Summary

The theoretical study of technical communication offers a number of viewpoints, focusing on why and how specific formats and methods of technical communication work. As new models are discovered or applied from related and relevant fields, technical communication is being enriched and matured, taking it to a further level where it can be critically and statistically evaluated.

Technical communication is still in the process of discovering and asserting its position in the corporate world, trying to find measures to determine its performances and value. However, much more research is needed in the direction of evolving effective and unique metrics, collecting relevant data and analyzing it from the value perspective.