Technical Writing for Portuguese Product Companies

Joaquim Baptista [1]

1) Knowledge management consultant, Portugal

px@acm.org

Abstract

The economic crisis in Portugal stimulated the creation of product companies that sell worldwide. Over time, these companies accumulate a capital of knowledge (technical, domain, user) that benefits from governance and engineering by dedicated professionals, traditionally called technical writers.

Technical writers have the ability to learn, organize, and transform knowledge, using a rare combination of technical, language, abstraction, and people skills. There is a growing practice of technical writing in Portuguese companies, and professional communities of writers, but University-level training is mostly absent.

Sophisticated Portuguese product companies would benefit from further investment in knowledge management practices, using senior talent to systematically audit, retain, and improve knowledge capital.

Keywords: technical writing, knowledge management, product company, Portugal

1. Context

The economic crisis in Portugal spurted a tendency for internationalization in Portuguese companies. New companies, often immersed in the so-called startup culture, start with the intention to sell abroad, sometimes almost exclusively. The core of these companies is often a single software product, initially created by a small core team of passionate developers.

Over time, product companies hire more people with an ever-widening range of roles and skills. These new people and roles impose their own forces onto the growing product:

- Marketing wants new flashy features that lure buyers and differentiate the product from the competition.
- Services people want to foster an impression of professionalism in front of customers, and may take shortcuts to do so.
- Support people want to solve problems quickly and close tickets, especially when a customer is shouting over the phone.

- Developers want to protect the architecture and stability of the product, but at the same time they must deal with the questions and requirements asked by customers and other teams.

2. Problem

How do all the different people access the knowledge needed for their tasks? What started as a non-issue when the company was a small team grows in complexity as the company and the product grow.

One particular issue that stresses the knowledge of the company is the emergence of the sophisticated user, who tries to use the product in ways that go beyond the experience of the typical company employee. The company as a whole struggles to meet the unexpected demands of these users. As a result, the company feels a growing need to capture and structure its own knowledge, including both implicit knowledge (in people's heads) and explicit (in documents and other media).

3. Typical methods

Product companies typically employ a combination of the following methods to capture and disseminate knowledge:

- Marketing creates demos and short articles that show off new flashy features. However, these typically avoid any hint of complexity to avoid scaring potential buyers.
- Services people create and deliver training, including classroom training with exercises, in-depth video tutorials, or step-by-step tutorials. These will not cover all possible usage scenarios, and students struggle to recall the training and to apply the training to their specific needs.
- After explaining parts of the product to customers and new employees, developers write technical information for technically minded people, including themselves. Developers also write a user guide (or embed the guide into the product), but the result is often not helpful enough for the actual users.
- Developers improve usability and user experience, therefore trying to incorporate more domain knowledge in the product [Armour 2004]. The ultimate objective is to make the product so simple that neither training nor manual is needed. This strategy can only succeed if the product does not grow functionality over time.

- Management adopts social tools that go beyond email to streamline communication and capture conversations. However, useful conversations require community building and curating the resulting knowledge. People stop using the social tools if questions are left unanswered.

4. Solution

Given enough time, the growing complexity of product and company limits the effectiveness of naïve solutions. The solution is to dedicate people to the task of engineering the flow of knowledge of the company. Traditionally these professionals have been called technical writers, but also technical communicators, information developers, and knowledge managers, among other titles.

Technical writers have the ability to learn, organize, and transform knowledge. Their set of skills includes the following:

- Interview people, typically developers and users.
- Develop models of users and user tasks.
- Learn by using the product, and advocate improvements on behalf of users.
- Organize knowledge into a coherent whole.
- Filter and transform the knowledge into the needs of specific user profiles.
- Devise a maintainable documentation set for delivering the knowledge that fulfills the business objectives.
- Write clear and objective text that fulfills a specific purpose, for example guiding a user to complete a task.
- Create effective media, catering for future change.
- Update the information deliverables, balancing priorities and resources with the need to keep the documentation set useful and coherent.
- Collaborate with other writers to maintain tone, style, and structure.
- Use professional tools that enable and streamline all of the above.

The documentation set may include online help, guides, tutorials, illustrations, videos, demos, lessons, web sites, and so on, but also forums, wikis [Baptista 2010], or even training [Baptista 2004]. The correct mix depends on the business priorities but also on the resources available.

5. Issues

Reference technical writing books [Hackos 1994] describe guidelines for short-term consulting projects in great detail. Content strategy [Halvorson 2009] provides guidelines for consultants that must maintain large sites. However, there is a scarcity of reports of the long-term processes required to maintain mature evolving products, such as [Colwell 2005].

Product companies typically sell to a global market, with most of their revenue coming from abroad. Therefore, they develop most communication materials in English, and sometimes translate to other languages.

While employees can often write a document in English, there are two problems looking forward: maintaining the document over time, as changes and additions appear and as features creep; and collaborating with several writers to maintain the document, while preventing the result to resemble patchwork.

Translation often exacerbates any issues by penalizing inefficient processes that recreate knowledge as needed while benefiting from efficient processes that reuse knowledge as much as possible. These processes benefit from tools outside the mindset of the office productivity software.

Writing teams seldom have the luxury to have enough manpower to polish materials into perfection. Most of the times, teams have to settle with some soft of bare minimum, and then wisely applying extra resources to areas where they will matter the most. Even a team of one must allocate its resources wisely.

Since technical writing is a little known area in Portugal, writers can easily receive unrealistic requests. For example, create a two-minute video that magically explains away the complexity of a 10-year-old product, or write a short guide for a domain that befuddles users, developers, and management.

While most functional areas can get away with understanding their part of the problem, writers must face the full complexity facing the company, or at least its users. This complexity can be overwhelming.

There is no formal training in technical writing in Portugal, although you can find people that enjoy writing and communicating. Most practitioners transitioned from other professional areas, although you can also find people that received training abroad. Junior practitioners lack the training and experience to tackle difficult problems, while senior-level skills are rare.

6. Practice in Portugal

Conversations within the community of technical writers in Lisbon have shown a surprising diversity of knowledge governance scenarios. These mature companies based on a software product have unique challenges that require unique technical and human solutions:

- Nokia Siemens Networks (and now Coriant) employs as many as 40 writers working in several separate products. In general, writers are part of a well-defined process that streamlines production. They also tried embedding writers in agile teams.
- Altitude Software has a documentation team with 3 to 6 writers, which became responsible for developing user guides, online help, training lessons, and illustrations [Baptista 2014]. They use wikis and XML-based tools [Baptista 2008] to promote reuse and limit the cost of localization.
- AnubisNetworks (now a Bitsight company) uses the product manager to manage the documentation as a part-time effort. Developers and marketing write most documents, but the product manager adds oversight and consistency.
- SISCOG uses a full time writer to maintain online helps, and a part-time writer to improve marketing materials. SISCOG is now investing in tools and processes to promote reuse.
- VisionBox started a writing team of 3 to impose consistency and control over the documents created by developers. They are considering wikis for documentation.
- OutSystems has a growing team of technical writers that emphasize user experience and video-based training.
- Feedzai is struggling to start a writing team to build on the documentation created by developers.

7. Recommendations

Sophisticated product companies accumulate significant intellectual capital, and therefore have sophisticated knowledge needs. These companies would benefit from bringing in senior talent that can audit the current situation of knowledge management and propose improvements. These improvements may reassign responsibilities, change processes and workflows, introduce new tools, and hire or train new skills.

Larger companies may justify a permanent senior position for knowledge management, with a corresponding team. Smaller companies may use consultants to identify needs, structure

deliverables, introduce tools, and train people to create the deliverables. Companies may also use consultants to create some deliverables, and then train people to maintain them.

Companies may also use experienced writers, acting as editors or consultants, to set up and contribute to a framework that enables other professionals to share their knowledge in a way that resonates with the culture and needs of each company or community. Such a framework requires a mix of tools, practice, and training, but also governance, writing, and editing.

Consolidating and optimizing the existing intellectual capital enables companies to leap forward, by doing more business, or by tackling harder problems.

8. Acknowledgements

The author wishes to thank the "Technical Writers @ Lisbon" for motivating this article and generously sharing their knowledge, and the anonymous reviewers for their helpful suggestions.

9. References

Armour, P. G., *The Laws of Software Process: A New Model for the Production and Management of Software,* Auerbach Publications, Florida, 2004.

Baptista, J., Just-in-time training workshops. *STC Management SIG News 8, 2* (2004), 14-16.

Baptista, J., Pragmatic DITA on a budget, in *Proceedings of the 26th annual ACM international conference on Design of communication* (Lisbon, Portugal, September 22-24, 2008). ACM, New York, NY, USA, 193-198.

Baptista, J., The birth of a company-wide wiki, in *Proceedings of the Workshop on Open Source and Design of Communication* (Lisbon, Portugal, November 8, 2010). ACM, New York, NY, USA, 7-10.

Colwell, R. P., *The Pentium Chronicles: The People, Passion, and Politics Behind Intel's Landmark Chips,* Wiley-IEEE Computer Society Pr., 2005.

Hackos, J., *Managing Your Documentation Projects.* John Wiley & Sons, Inc., New York, NY, USA, 1994.

Halvorson, K., *Content Strategy for the Web,* New Riders Publishing, Thousand Oaks, CA, USA, 2009.