

Technical information management: phase 1 report

Document Subject

This document introduces and looks at technical information file management issues raised by the DCC project.

Audience

This document is for COMPANY management.

Related files

[Proposal for document control center project](#), [DCC project status_v2 slides](#), raw data [Survey Matrix](#), & Jira ticket

Author & date

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Introduction

A summary investigation for a Document Control Center (DCC) began in June 2021. Driven by the stunning resulting data, the DCC project morphed into matching some of the many technical information management (TIM) problems with solutions.

The best case outcome is to accelerate the TIM process evolution towards solving information management problems for our customers.

Overview

The investigation centered on a Productivity Survey where I individually interviewed over 20 stakeholders. The interviews lasted between 15-minutes and 2-hours discussing document issues, resulting in a ~62k transcribed-word data set. A qualitative analysis of the first 20 respondents' answers produced 600 phrases and 12 requests. See [Appendix](#) for details:

- Question 1. "I am trying to <fill in the blank> "but" <fill in the blank>, "because" <fill in the blank>.
- Question 2. "How do you feel?"
- Question 3. "What are your perfect world requests?"

The survey responses showed:

- Performance blocks and gaps due to apparent ad hoc or non-strategic processes.
- Challenges to morale and confidence due to these performance blocks and gaps.
- Perfect world responses are mostly based on how things have worked better in their past experience, in more mature companies.

The Productivity Survey revealed a lack of systematic, integrated technical documentation processes within and across groups. We continue to receive problem cases submitted through specific requests or word of mouth. These problem cases add value to the Productivity Survey results.

The first phase of this investigation is complete with a qualitative analysis of the survey results. The next step is a collaborative, quantitative analysis of Problem Cases mapped to the survey and TIM workflows.

Productivity Survey

This section discusses the survey results to shine light on the core discoveries.

Survey results

The survey is designed so the respondents talk first about problems, then how they feel, and finish with ideas about what a perfect COMPANY documentation world would be like.

Here are a couple of common problem scenarios:

- “the keyword doesn't bring up the file.”
- “it's not documented anywhere.”

Here are a couple of prevalent feeling statements:

- “Wasted my time.”
- “Concerned; our customers and internal teams don't know how to interpret the data.”

Here are a couple of popular perfect world wishes:

- Easy internal **searches** for relevant, up-to-date documents.
- **Uniform look and feel** across COMPANY: easy to collaborate style guides and templates.

See [Appendix for more Survey Responses](#).

Extended survey results

The survey results also gave rise to Problem Cases, which give short specific causes and effects in individual workflows. The Problem Cases we collected to-date include:

- Release notes cloud deployment and hotfix updates.
- Cloud release process needs quality gating and automation.
- OpenSync—technical requirements document.
- Deployment runbooks.
- Proposed ARB presentations.
- API documentation.
- OpenSync external documentation.
- WorkPass setting scenarios.
- Expert technical knowledge needs to be shared .
- Security standards need to be part of training.
- Deprecation changes announcements and processes.
- Storing and sharing white papers.

See [DCC project problem cases](#) document and “perfect world” in [Proposal for a technical information management project](#) response table.

Summary

Over the next few weeks, we plan on deepening the current survey transcriptions analysis while also transcribing and distilling late-comer responses. This is to better understand TIM problems in order to categorize needed solution types.

The scale alone of the ~62k-word survey dataset (transcribed to date) warrants a rigorous review of the transcriptions for integrity, accuracy, and completeness.

In harmony with the Capability Maturity Model¹, the proposed next phase of our work will:

1. Map the [problem cases](#) to TIM communication workflows to quantify the survey analysis.
2. Audit, analyze, and qualify technical documents.
3. Refine COMPANY performance requirements such as a “single source of truth” solution and enhanced search and retrieval capabilities for technical information.

¹ [Capability Maturity Model Integrated \(CMMI\)](#)

Appendix

The tables below list initial surveyees and example response sets.

The examples summarize our qualitative analysis of ~ 300's statements captured in the Productivity Survey results.

Surveyees

Surveyee Position
1. Director of OpenSync Integration Engineering
2. Director of DevOps
3. Sr. Director, Product Management
4. COMPANY Cloud Architect
5. TAM Director
6. Wi-Fi Systems Architect
7. Project /Program Manager
8. Cloud SW Engineer
9. Principle Data Lead
10. VP of Engineering
11. Technical Solutions Manager
12. Sr. Director of Customer Success
13. Director of Services and Technical Support
14. Senior Technical Architect/ Product Management
15. Cloud Engineering Program Manager/Jira admin
16. Release Engineer - Manager
17. Delivery Manager for OpenSync
18. VP of Customer Success
19. Director of Information Technology
20. Release Engineering/Project Manager
21. Technical Account Manager
22. Head of Data Protection
23. Wi-Fi Engineer

Survey responses

Q 1: “I am trying to *<fill in the blank>* “but” *<fill in the blank>*.”

The following are 14 quote-samples that represent 100’s of defined problems beginning with “I am trying to...”:

- “Search for something with a known keyword, but the keyword doesn't bring up the file, even if that word is in the title.”
- “Get engineers to write documentation, but engineers resist.”
- “Get tech and product documents for my 17-dashboard product, but I was astounded that there are no documents for my product.”
- “Have my team answer questions from customers, but it's not documented anywhere.”
- “To create documentation that represents our Cloud architecture for the various projects that we have, but we have a lot of technical debt.”
- “Train me and my team on OpenSync, but there are many doc locations: OS.io, pdfs by email, ShareFile, etc.”
- “Design and create a solution for a use case, but the use cases and requirements are not clear.”
- “Document process for operations and tools to automate across deployments, but It's hard to find runbooks when looking across Confluence spaces.”
- “Use information from past Architecture review board presentations, but we only know of zoom recording.”
- “Store documents, but I am not certain where to store and version.”
- “Create a process for a PRD to create a TRD, but they changed critical parts and simply wholly replaced the best effort template.”
- “Set up a document management process to manage all the OpenSync documents, but I know the whole thing will be replaced because there are so many broken pieces in the workflow today.”
- “Use Confluence to generate a set of Release Notes source of truth for customers, but Hotfixes notices are a problem because notices blast out to everyone.”
- “We need a comprehensive document set for every release, like Microsoft has, but we don't have a plan to create a doc set.”

Q 2: “How do you feel?”

The following are quotes representative of Plumian feelings after talking about the problems they just described, answering the question, “How do you feel?”:

- “Time wasted and frustrated.”
- “It's tragic and creates wasted time but I just go on.”
- “Concerned; our customers & internal teams don't know how to interpret the data.”
- “Worried and uneasy.”
- “Sad because we are still at a startup stage.”
- “Inefficient, published information cannot be found.”
- “Frustrated and unmotivated.”

- “Chaotic and tired.”
- “Nervous and frustrated.” “ It’s like we’re doing the wrong job.”
- “Frustrated. I cannot unravel overly complex diagrams and describe what we do.”
- “Overwhelmed and disempowered.” “Blocked.”
- “Wasted my time.” “Hesitant, as in less confident.”
- “Not proud.”
- “Frustrated.”

Q 3: “Perfect World” requests

The following are a representative set of the most common Plumian “perfect world” requests.

Type	COMPANY Requests
Tool	1. One tech info repository for finalized tech documents; a <u>single source of truth</u> location. (Atlassian, Keynote, & Google: legacy files) <ul style="list-style-type: none"> • Easy internal searches for relevant, up-to-date documents. • Easy to store and access finalized documents/videos. • User-types and categories. • Reminders to update • File dependencies to replace previous versions for portal subscribers.
Process	2. Updates and bugfix requests are in one place.
Process	3. Control & version numbers for published materials.
Process	4. Mandatory onboarding and update training .
Process	5. Mandatory InfoSec policy awareness.
Process	6. Documents have workflow approval processes per team.
Tool	7. Easy to collaborate with internal and external authors. <ul style="list-style-type: none"> • Treat internal doc sharing/collaboration separately from doc control (of final versions) & external sharing.
Process	8. Uniform look and feel across COMPANY: easy to collaborate style guides and templates.
Tool	9. Self-serve external-facing portal : <ul style="list-style-type: none"> • Secure user types and categories. • Customer documentation page. • Changes are easy to announce to user-subscribers. • Analytics for accessed content and online pages. • Able to recall, amend, or archive published files.
Tool	10. (would be nice) A chatbot for questions.