APPENDICES

Appendix 1 Compared Wikis (from Louridas 2006)

The first generally recognised ‘wiki’ application, WikiWikiWeb, was created by American computer programmer Ward Cunningham in 1994. Wiki software originated from older version control systems used for documentation and software in the 1980s. By the mid-1990s these generally had web browser interfaces. However, they lacked the ability to easily create links between internal pages without writing HTML. Later, MediaWiki appeared, where links were marked in edited source code with double square brackets. Page names thus did not interrupt the flow of English. Writers could author their pages in ordinary English, with the linking of particular words and phrases afterward. This proved to be the critical change that allowed ordinary authors of English to write wiki pages, and non-technical users to read them. This policy was extended to other natural languages, avoiding the use of unusual-looking text or awkward capitalisation that violates the language’s own rules. Over the next 10 years, many more wiki applications were written, in a variety of programming languages. After 2005, increasing consolidation and standardisation was implemented: many less-popular wiki applications were gradually abandoned, and fewer new applications were created. Relatively few of the wiki engines currently in use were created after 2006. (facts based on wikipedia; Louridas 2006; Prilla and Ritterskamp 2010)

Wikipedia provides a definition of wikis and wiki features that can be summarised as follows;

- web applications (a type of content management system); allows people to add, modify, or delete content in collaboration with others; text is written using a simplified markup language or a rich-text editor and a web browser; have little implicit structure, allowing structure to emerge according to the needs of the users

- a single page in a wiki website is referred to as a "wiki page", while the entire collection of pages, […] interconnected by hyperlinks, is "the wiki"; essentially a database for creating, browsing, and searching through information [and allows for emergence of] non-linear, evolving, complex and networked text, argument and interaction

- a defining characteristic of wiki technology is the ease with which pages can be created and updated. Generally, there is no review before modifications are accepted. Many wikis are open to alteration by the general public without requiring registration of user accounts. Many edits can be made in real-time and appear almost instantly online. This can facilitate abuse of the system. Private wiki servers require user authentication to edit pages, and sometimes even to read them.

- WYSIWYG editing (usually by means of JavaScript or an ActiveX control)

- users can supply an edit summary when they edit a page; this is a short piece of text summarising the changes. It is not inserted into the article, but is stored along with that revision of the page, allowing users to explain what has been done and why; similar to a log message when making changes to a revision-control system, versions are automatically indexed and stored

- navigation: links; tags; history; search; browse; search: full text search; security: "Wikis are generally designed with the philosophy of making it easy to correct mistakes, rather than making it difficult to make them. Thus, while wikis are very open, they provide a means to verify the validity of recent additions to the body of pages. The most prominent, on almost every wiki, is the "Recent Changes" page—a specific list numbering recent edits, or a list of edits made within a given time frame. Some wikis can filter the list to remove minor edits and edits made by automatic importing scripts ("bots")

- change log; revision history; ‘patrolled revision’ which requires review before going live; authorization lets an admin decide who has RO or WO access; or who may delete content

- four basic types of users: reader, author, wiki administrator and system administrator

In addition to that the page http://www.wikimatrix.org/ which allows the user to compare 142 wikis (for an example see Appendix 1) lists further features that characterise contemporary wikis: (1) Preview; (2) Revision Diff; (3) Page Index; (4) Plugin Systems; (5) Unicode Support; (6) Right-to-Left Support; (7) Interface Languages (15-140 supported languages); (8) Discussion Pages; (9) Namespaces; (10) Page Redirection; (11) Wiki Farming; and (12) Structured Data.
Appendix 3 Wiki functionalities (Lykourentzou et al. 2012)

Table 1. Main features of the wiki platforms.

<table>
<thead>
<tr>
<th>Feature category</th>
<th>ID</th>
<th>Wiki feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic</td>
<td>1a</td>
<td>Version handling</td>
<td>Feature to enable handling of the changes performed among page versions. Includes version tracking and version comparison.</td>
</tr>
<tr>
<td></td>
<td>1b</td>
<td>Discussion</td>
<td>Feature to enable discussions among the wiki users. May include flat (comments) or threaded discussion (forums) formats.</td>
</tr>
<tr>
<td></td>
<td>1c</td>
<td>Multilanguage support</td>
<td>Feature that offers support in various languages.</td>
</tr>
<tr>
<td>2. Syntax-</td>
<td>2a</td>
<td>Basic text formatting editor</td>
<td>Simple editor that formats text based on the wiki syntax.</td>
</tr>
<tr>
<td>formatting</td>
<td>2b</td>
<td>WYSIWYG editor</td>
<td>Rich text editor that supports the WYSIWYG functionality.</td>
</tr>
<tr>
<td></td>
<td>2c</td>
<td>Wiki syntax to HTML</td>
<td>Script to automatically transform text written according to wiki syntax to HTML format.</td>
</tr>
<tr>
<td>3. Structure</td>
<td>3a</td>
<td>Taxonomy</td>
<td>Categorisation of the wiki content based on a taxonomy.</td>
</tr>
<tr>
<td></td>
<td>3b</td>
<td>Folksonomy</td>
<td>Feature that allows users to add categorisation tags on the wiki content.</td>
</tr>
<tr>
<td></td>
<td>3c</td>
<td>Ontology</td>
<td>Feature that uses an ontology to add structure to the wiki content.</td>
</tr>
<tr>
<td></td>
<td>3d</td>
<td>Document structure editor</td>
<td>Feature that allows wiki users to collaboratively edit the structure of the wiki content.</td>
</tr>
<tr>
<td></td>
<td>3e</td>
<td>Automatic ontology extraction</td>
<td>Feature that automatically extracts the ontology of the wiki content based on a set of naming conventions that the wiki pages follow.</td>
</tr>
<tr>
<td>4. Search-</td>
<td>4a</td>
<td>Full text search</td>
<td>Search throughout the wiki content (title and content of the wiki pages).</td>
</tr>
<tr>
<td>navigation</td>
<td>4b</td>
<td>Tag supported navigation</td>
<td>Navigation based on the tags placed on the wiki content.</td>
</tr>
<tr>
<td></td>
<td>4c</td>
<td>Semantic querying</td>
<td>Semantic search and reasoning facility.</td>
</tr>
<tr>
<td>5. Security</td>
<td>5a</td>
<td>Access permission levels</td>
<td>Feature providing support of different access levels to the wiki user groups.</td>
</tr>
<tr>
<td></td>
<td>5b</td>
<td>LDAP authentication</td>
<td>LDAP password protection.</td>
</tr>
<tr>
<td>Feature category</td>
<td>ID</td>
<td>Wiki feature</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>----</td>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>6. Visualisation</td>
<td>6a</td>
<td>User activity</td>
<td>Feature providing visualisation of the user activity and whereabouts.</td>
</tr>
<tr>
<td></td>
<td>6b</td>
<td>Comment visualisation</td>
<td>Feature providing visualisation of the user comments.</td>
</tr>
<tr>
<td></td>
<td>6c</td>
<td>Workflow depiction</td>
<td>Feature providing visualisation of the workflow of the business procedures stored in the wiki.</td>
</tr>
<tr>
<td></td>
<td>6d</td>
<td>Source code highlighting</td>
<td>Feature allowing the highlighting of specific parts of the source code inserted as content in the wiki.</td>
</tr>
<tr>
<td>7. Personalisation</td>
<td>7a</td>
<td>Personalised views of the system</td>
<td>Feature to allow personalised views of the system through different templates/skins.</td>
</tr>
<tr>
<td></td>
<td>7b</td>
<td>Personal user pages</td>
<td>Users are allowed to create their own pages inside the wiki system.</td>
</tr>
<tr>
<td>8. Complex document support</td>
<td>8a</td>
<td>SAP business objects</td>
<td>Feature to allow handling of SAP business objects.</td>
</tr>
<tr>
<td></td>
<td>8b</td>
<td>Open Office documents</td>
<td>Feature to allow handling of Open Office or similar commercially licenced documents.</td>
</tr>
<tr>
<td></td>
<td>8c</td>
<td>Tables</td>
<td>Feature to allow handling of tables inside the wiki.</td>
</tr>
<tr>
<td></td>
<td>8d</td>
<td>Bibliographic references</td>
<td>Feature to allow management of bibliographic references.</td>
</tr>
<tr>
<td></td>
<td>8e</td>
<td>Narrative experience recording</td>
<td>Feature to allow the recording of user experiences in formats other than text (audio, video etc.).</td>
</tr>
<tr>
<td>9. Computing capabilities</td>
<td>9a</td>
<td>Algorithm support</td>
<td>Feature to allow the use of algorithms (e.g. Monte Carlo, forecasting, optimisation, decision tree analysis).</td>
</tr>
<tr>
<td></td>
<td>9b</td>
<td>Business queries</td>
<td>Feature to formation of business queries (e.g. on SAP models).</td>
</tr>
<tr>
<td></td>
<td>9c</td>
<td>Source code management</td>
<td>Feature to allow the handling (e.g. compiling, executing, debugging) of the stored source code/scripts.</td>
</tr>
<tr>
<td>Feature category</td>
<td>ID</td>
<td>Wiki feature</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----</td>
<td>-------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>9d</td>
<td>IDE integration</td>
<td>Integration of wiki functionality to the IDE of the developer.</td>
</tr>
<tr>
<td></td>
<td>9e</td>
<td>Web services support</td>
<td>Feature to allow the customisation of the wiki content, in order to utilise capabilities offered by other websites (such as Digg, Flickr, Windows Live, etc.).</td>
</tr>
<tr>
<td></td>
<td>9f</td>
<td>Real-time tracking</td>
<td>Feature to allow real-time recording of user activity (e.g. web-based procedural actions).</td>
</tr>
<tr>
<td>10. Special pages</td>
<td>10a</td>
<td>Sandbox</td>
<td>A wiki page intended to allow users practice on the wiki editing.</td>
</tr>
<tr>
<td></td>
<td>10b</td>
<td>Term glossary</td>
<td>A wiki page containing a glossary of terms used by the wiki content.</td>
</tr>
<tr>
<td></td>
<td>10c</td>
<td>Help pages</td>
<td>One or more wiki pages dedicated to offering technical guidance on the use of the wiki platform.</td>
</tr>
<tr>
<td>11. Other</td>
<td>11a</td>
<td>Notification mechanism</td>
<td>Mechanism (e.g. RSS, email) to notify users regarding content changes that have occurred.</td>
</tr>
<tr>
<td></td>
<td>11b</td>
<td>Multi-page handling</td>
<td>Feature to allow handling (e.g. add/replace text) of several pages at once.</td>
</tr>
<tr>
<td></td>
<td>11c</td>
<td>Automatic permanent link transformation</td>
<td>Feature to allow the automatic transformation of certain wiki links to permanent links.</td>
</tr>
<tr>
<td></td>
<td>11d</td>
<td>Content rating</td>
<td>Feature to allow users to rate the content.</td>
</tr>
<tr>
<td></td>
<td>11f</td>
<td>Cross-page versioning</td>
<td>Feature to allow versioning among multiple pages.</td>
</tr>
<tr>
<td></td>
<td>11g</td>
<td>Conflict detection or/and resolution</td>
<td>Feature that enables the detection or/and the resolution of conflicts (for instance the concurrent modification of the same page) – e.g. through page locking.</td>
</tr>
<tr>
<td></td>
<td>11h</td>
<td>Ticket system</td>
<td>Feature to allow page handling through the use of tickets.</td>
</tr>
</tbody>
</table>
Appendix 4 Survey questions

1. In our company and in projects where we work with other organisations, we use wikis for
   - technical documentation
   - issues tracking
   - internal workflow
   - quality management
   - process management
   - software design
   - reference information
   - setup information
   - configurations
   - specifications
   - requirement specifications
   - instructions (e.g., for using/testing/installing software
   - listing of software versions
   - software development operations
   - other

2. In our company (or in projects with customers from other organisations) we use wikis to gather information on
   - design requirements
   - requirement descriptions
   - testing
   - other

3. In our company (or in projects with customers from other organisations) we use wikis for
   - project management progress
   - meeting agendas
   - status reports
   - standards and practices
   - other

4. In our company we use wikis for posting general information about
   - employee schedules
   - vacation schedules
   - personal/project blogs
   - corporate information
   - collaborative pages as complement to formal intranet pages
   - best practices
   - innovative methods
   - utilised processes
   - corporate policies, guidelines and procedures
   - HR information
   - insurance information
   - expense reimbursement
   - time off
   - other

5. In our company (or in projects with customers from other organisations) we use wikis to
   - create work product drafts
   - hashing out ideas
   - remote collaboration
   - business brainstorming
   - customer support information sharing
   - local help information with how-to’s
   - systems requests
   - software downloads
   - product information
   - other

6. For how long are you using wikis in your company?
   - less than 12 months
   - 1 to 5 years
   - more than 5 years

7. How many people contribute to the wiki?
   - everyone the content is relevant for
   - half of the people the content is relevant for
   - more than half of the people the content is relevant for
   - less than half of the people the content is relevant for
   - other

8. Using wikis in your company and in projects where you work together with other organisations: How often do you add content to existing pages?
   - Never
   - Rarely
   - Sometimes
   - Often
   - Always

9. How often do you add new pages?
   - Never
   - Rarely

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10. How often do you make comments on existing pages?
- Never
- Rarely
- Sometimes
- Often
- Always

11. How often do you integrate ideas that have been posted onto existing pages?
- Never
- Rarely
- Sometimes
- Often
- Always

12. How often do you reorganise a set of pages?
- Never
- Rarely
- Sometimes
- Often
- Always

13. How often do you reorganise/ add categories?
- Never
- Rarely
- Sometimes
- Often
- Always

14. How often do you reorganise/ add metadata?
- Never
- Rarely
- Sometimes
- Often
- Always

15. How often do you rewrite whole paragraphs?
- Never
- Rarely
- Sometimes
- Often

16. How often do you roll back others’ writings?
- Never
- Rarely
- Sometimes
- Often
- Always

17. Has the wiki helped you earn respect/improve your status?
- Strongly disagree
- Disagree
- Neutral
- Strongly agree
- Agree
- Not applicable

18. Information in the wiki is of immediate relevance to my work
- Strongly disagree
- Disagree
- Neutral
- Strongly agree
- Agree
- Not applicable

19. Keeping information in the wiki updated makes my work easier
- Strongly disagree
- Disagree
- Neutral
- Strongly agree
- Agree
- Not applicable

20. By putting in relevant information, disseminating my work would be easier
- Strongly disagree
- Disagree
- Neutral
- Strongly agree
- Agree
- Not applicable
21. Information sharing with the wiki has helped my company to improve work
   - Strongly disagree
   - Disagree
   - Neutral
   - Strongly agree
   - Agree
   - Not applicable

22. Sharing information with the wiki has increased collaboration efficiency
   - Strongly disagree
   - Disagree
   - Neutral
   - Strongly agree
   - Agree
   - Not applicable

23. Information accuracy is supported by the wiki
   - Strongly disagree
   - Disagree
   - Neutral
   - Strongly agree
   - Agree
   - Not applicable

24. Information represents what I need to know about the real world
   - Strongly disagree
   - Disagree
   - Neutral
   - Strongly agree
   - Agree
   - Not applicable

25. Information in the wiki is relevant for me
   - Strongly disagree
   - Disagree
   - Neutral
   - Strongly agree
   - Agree
   - Not applicable

26. Information in the wiki represents states that are relevant for my work
   - Strongly disagree
   - Disagree
   - Neutral
   - Strongly agree
   - Agree
   - Not applicable

27. Information in the wiki is up-to-date
   - Strongly disagree
   - Disagree
   - Neutral
   - Strongly agree
   - Agree
   - Not applicable

28. Information in the wiki is understandable
   - Strongly disagree
   - Disagree
   - Neutral
   - Strongly agree
   - Agree
   - Not applicable

29. I can adapt the wiki to my information needs (e.g., add tables/columns and require new information)
   - Strongly disagree
   - Disagree
   - Neutral
   - Strongly agree
   - Agree
   - Not applicable

30. I can combine information from various sources easily in the wiki
   - Strongly disagree
   - Disagree
   - Neutral
   - Strongly agree
   - Agree
   - Not applicable

31. The wiki supports decision making
   - Strongly disagree
   - Disagree
   - Neutral
32. Which processes are not wiki supported
- requirement specification
- project progress
- documentation management
- issue tracking
- manuals
- other ________

33. How is information shared/ edited/ commented on in non-wiki processes
- e-mail
- face-to-face
- documents (e.g., PDF)
- other information systems
- other ________

34. What is most inconvenient when working with non-wikis
- information is not arranged clearly
- authoring is less visible
- less version accuracy
- less easy to edit/ access
- less flexible (e.g., for adding metadata; sharing)
- less up-to-date
- other ________

35. What is most inconvenient using wikis
- takes too much time to contribute
- not easy to use
- too much irrelevant information
- information is hard to find
- others can change my stuff
- not flexible enough
- other ________

36. Thank you very much for your patience and for helping me with gathering data.
If you have additional comments or questions, you can put them here or contact me:
elha09ab@student.cbs.dk
Appendix 5 Interview Questions (examples)

**Interview questions:**

<table>
<thead>
<tr>
<th>Question</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>For what kind of information is the wiki used?</td>
<td></td>
</tr>
<tr>
<td>Where do you turn to for information?</td>
<td></td>
</tr>
<tr>
<td>What do you use Jira/Confluence for?</td>
<td></td>
</tr>
<tr>
<td>How long does it take you to find the information you need?</td>
<td></td>
</tr>
<tr>
<td>Do your colleagues use the wiki the same way you do?</td>
<td></td>
</tr>
<tr>
<td>Who determines information accuracy?</td>
<td></td>
</tr>
<tr>
<td>What is information quality and how would you ensure it?</td>
<td></td>
</tr>
<tr>
<td>Do you tag? Do you edit content?</td>
<td></td>
</tr>
<tr>
<td>Who sets standards, rules and practices?</td>
<td></td>
</tr>
<tr>
<td>Do you see alternatives for the way information retrieval, sharing, storing, distributing, and detecting information needs is done?</td>
<td></td>
</tr>
<tr>
<td>Where was it difficult to use the wiki and why?</td>
<td></td>
</tr>
<tr>
<td>Have there been incidents where you got frustrated using wikis?</td>
<td></td>
</tr>
<tr>
<td>Have there been incidents where you got frustrated using other communication channels?</td>
<td></td>
</tr>
<tr>
<td>Related to cross disciplinary setting: In the project, how many people with different professional backgrounds are working together?</td>
<td></td>
</tr>
<tr>
<td>How do you collaborate on the wiki?</td>
<td></td>
</tr>
<tr>
<td>Are there problems in understanding what they/you mean?</td>
<td></td>
</tr>
<tr>
<td>Can you always find information others have shared on the wiki?</td>
<td></td>
</tr>
<tr>
<td>Do you use email/other communication channels for information sharing?</td>
<td></td>
</tr>
<tr>
<td>Do you write/label/structure pages on the wiki differently when you anticipate the audience stemming from the same professional group as yourself?</td>
<td></td>
</tr>
<tr>
<td>(documenting for oneself 0%; documenting for similar others (similar=one project) &gt;75%; similar=one profession + similar task or similar project)</td>
<td></td>
</tr>
<tr>
<td>≤75%; documenting for dissimilar others &lt;30%)</td>
<td></td>
</tr>
<tr>
<td>Do employees from other companies use different wikis or no wikis at all?</td>
<td></td>
</tr>
<tr>
<td>Do you know/use all wiki features?</td>
<td></td>
</tr>
<tr>
<td>What is the most relevant feature for you? Do you add/edit categories?</td>
<td></td>
</tr>
<tr>
<td>Do you often comment on pages? Do you track back versions?</td>
<td></td>
</tr>
<tr>
<td>What is the purpose of the wiki (documentation/archive/information sharing/best practices..)?</td>
<td></td>
</tr>
<tr>
<td>How would you define wiki management? Tasks, responsibilities? Is this a role that will be popular?</td>
<td></td>
</tr>
<tr>
<td>If someone else changes/edits something you have posted - what do you think about this?</td>
<td></td>
</tr>
<tr>
<td>What is your opinion about the email update feature?</td>
<td></td>
</tr>
<tr>
<td>Do you use the search function? Or browse/navigate content?</td>
<td></td>
</tr>
<tr>
<td>Thoughts about security?</td>
<td></td>
</tr>
<tr>
<td>What do you think about the quote: “Wikis should make it easy to correct mistakes, rather than making it difficult to make them.”?</td>
<td></td>
</tr>
<tr>
<td>What types of users (reader, author, wiki administrator and system administrator) are you mostly?</td>
<td></td>
</tr>
<tr>
<td>Do the category labels always tell you what the pages are about?</td>
<td></td>
</tr>
<tr>
<td>Is it important for you to see the author of content?</td>
<td></td>
</tr>
<tr>
<td>What is the purpose of the wiki (documentation/archive/information sharing/best practices..)?</td>
<td></td>
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<td>What is your opinion about the email update feature?</td>
<td></td>
</tr>
<tr>
<td>Do you use the search function? Or browse/navigate content?</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix 6 Participant observation notes:

**Tuesday:**

I get introduced to the wikis in use. There are two wikis: confluence and Jira in the project context. In Confluence I can find relevant user stories and software requirements which my work is based on. My task is mostly to write test cases. First I get tasks assigned via Jira where I also can log my progress on a specific task and where tasks are linked to the kanban board which is integral for the daily stand up meeting. Then, starting my tasks I have to find out what the software is supposed to do and how exactly it has been implemented to do so. I find information about that on confluence where developers (from my own company- SuperConsult) or project owners from the company that is our customer at the moment (Danish Business Authority) wrote pages about this. Then I continue analysing the requirements for my tests and start designing test scenarios. Afterwards I write the test cases down into the Jira which has a special function for test cases. In Jira I have administrative rights so that I can give other users the right to watch and edit (also in my test cases). The test cases get linked to the scrum board (which also resides in Jira), to other Jira tasks (for example the developers tasks of developing a software component or system integration relevant to what is tested in that case) and to confluence pages that my case and the functionalities tested are based on; and confluence pages that show my task progress and the project’s progress for project owners.

Previously, I was introduced to SuperConsult’s internal wikis (GoogleDocs and GooglePages) and some other groupware which are not wikis (e.g., itinerant and eazyproject). Other ICT used are mail; e-calendar (where everyone can chose to see other employee’s schedules); internally used Google sites etc.

that there are two distinct wiki functions in the case setting being:

1) a platform for information sharing: confluence is used to share project related information, best practices and guidelines within the project setting where two (sometimes more) companies work together; google pages are used by SuperConsult to share information on software development and thereby contributes to SuperConsults larger KM.

2) a process management tool: Jira was used in the PO-project with 2 and more companies to monitor and facilitate the operational flow an issue tracking; google docs for SuperConsult internally to see who is assigned to which project and to track progress in other projects;

**Thursday:**

I read up upon the project I am assigned to on Confluence and start to execute tests some other employee has written before. I write bug solving tasks for developers on Jira and some question cases on Jira where all developers are invited to clarify the question. Within few minutes I have several useful answers to my question on the comment thread at the bottom of the Jira page.

**Monday:**

I attend a workshop where all projects involved with the Danish Business Authority participate (around 30 people) we talk about work flow process and its reflection in Jira and also the overall project process reflected (in some projects) in Confluence. During this workshop employees evaluate the advantages and disadvantages of the currently used task flow and discuss if there should be different flows for different tasks or if the flow should be more profession directed, as there are different specialists involved. As a result a group with two representatives from every company is built to meet further and design an improved process with all the steps. The steps are also supposed to be statuses in Jira and visible on the kanban board. Screenshot of steps see Appendix.

I volunteered to be one of the representatives so I attended two more meetings with the ‘process group’ during the next four weeks.

**Wednesday:**

I have to accomplish a task and write a manual about it. I create a wiki page for the manual. One day later the wiki management person had moved all the hierarchy of pages around.

**Thursday:**

I have to test a new application and need specific links. The project is not so formal as other projects so there is no Jira space or Confluence page regarding the project information. I create a space in Jira to structure my task and share information with the project lead. The project lead shares information only via email. Sometimes there are more than eight addressees on the mailing list and sometimes only three. In the mails links and permission dependencies are discussed.

**Friday:**

I have to read all the mails through again to find links. I cannot verify having received the right link so I have to send a mail request to all, asking for the right links.

I assign the Jira page I made regarding that project, in order to inform the other project members about it and with hope that they use it as a platform for information sharing. Communication continues to happen via email and as I can see on the Jira log later, no one visits the page.
Appendix 7 survey statistics

In our company and in projects where we work with other organisations, we use wikis for:

<table>
<thead>
<tr>
<th>Wiki Use</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical documentation</td>
<td>100.0</td>
</tr>
<tr>
<td>Internal workflow</td>
<td>42.9</td>
</tr>
<tr>
<td>Process management</td>
<td>33.3</td>
</tr>
<tr>
<td>Reference information</td>
<td>23.8</td>
</tr>
<tr>
<td>Configurations</td>
<td>23.8</td>
</tr>
<tr>
<td>Requirement specifications</td>
<td>28.6</td>
</tr>
<tr>
<td>Listing software versions</td>
<td>33.3</td>
</tr>
<tr>
<td>Issues tracking</td>
<td>71.4</td>
</tr>
<tr>
<td>Quality management</td>
<td>38.1</td>
</tr>
<tr>
<td>Software design</td>
<td>76.2</td>
</tr>
<tr>
<td>Setup information</td>
<td>14.3</td>
</tr>
<tr>
<td>Specifications</td>
<td>25</td>
</tr>
<tr>
<td>Instructions</td>
<td>25</td>
</tr>
<tr>
<td>Software development operations</td>
<td>68.8</td>
</tr>
<tr>
<td>Setup information</td>
<td>0</td>
</tr>
<tr>
<td>Technical documentation</td>
<td>0</td>
</tr>
<tr>
<td>Internal workflow</td>
<td>12.5</td>
</tr>
<tr>
<td>Process management</td>
<td>25</td>
</tr>
<tr>
<td>Reference information</td>
<td>25</td>
</tr>
<tr>
<td>Configurations</td>
<td>25</td>
</tr>
<tr>
<td>Requirement specifications</td>
<td>25</td>
</tr>
<tr>
<td>Listing software versions</td>
<td>25</td>
</tr>
<tr>
<td>Issues tracking</td>
<td>0</td>
</tr>
<tr>
<td>Quality management</td>
<td>0</td>
</tr>
<tr>
<td>Software design</td>
<td>0</td>
</tr>
<tr>
<td>Setup information</td>
<td>0</td>
</tr>
<tr>
<td>Specifications</td>
<td>0</td>
</tr>
<tr>
<td>Instructions</td>
<td>0</td>
</tr>
<tr>
<td>Software development operations</td>
<td>0</td>
</tr>
</tbody>
</table>

In our company (or in projects with customers from other organisations) we use wikis to

<table>
<thead>
<tr>
<th>Wiki Use</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create work product drafts</td>
<td>18.8</td>
</tr>
<tr>
<td>Hashing out ideas</td>
<td>25</td>
</tr>
<tr>
<td>Business brainstorming</td>
<td>25</td>
</tr>
<tr>
<td>Customer support information sharing</td>
<td>25</td>
</tr>
<tr>
<td>Systems requests</td>
<td>25</td>
</tr>
<tr>
<td>Product information</td>
<td>25</td>
</tr>
<tr>
<td>Remote collaboration</td>
<td>0</td>
</tr>
<tr>
<td>Local help with how tos</td>
<td>0</td>
</tr>
<tr>
<td>Software downloads</td>
<td>0</td>
</tr>
<tr>
<td>Technical documentation</td>
<td>0</td>
</tr>
<tr>
<td>Internal workflow</td>
<td>0</td>
</tr>
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<td>Instructions</td>
<td>0</td>
</tr>
<tr>
<td>Software development operations</td>
<td>0</td>
</tr>
</tbody>
</table>

83
In our company we use wikis for posting general information about:

- Vacation schedules: 17.0%
- Corporate information: 41.7%
- Best practices: 41.7%
- Utilised processes: 33.3%
- HR info: 8.3%
- Employee schedules: 16.7%
- Expense reimbursement: 8.3%
- PS/project blogs: 5.6%
- Coll pages complementing intranet: 8.3%
- Innovation: 8.3%
- Policies, guidelines & procedures: 8.3%
- Time off: 5.6%
- Insurance information: 8.3%

In our company (or in projects with customers from other organisations) we use wikis to gather information on:

- Design requirements: 57.1%
- Requirement descriptions: 26.0%
- Testing: 42.9%
In our company (or in projects with customers from other organisations) we use wikis for:

- Project management progress: 26.3%
- Meeting agendas: 15.8%
- Status reports: 21.1%
- Standards & practices: 73.7%
- Other: 10.5%

For how long are you using wikis in your company:

- Less than 12 months: 5%
- 1 to 5 years: 30%
- More than 5 years: 65%
How many people contribute on average/approximately to the wiki

Using wikis in your company and in projects where you work together with other organisations:
How often do you add content to existing pages
How often do you add new pages

- Always: 36.4%
- Often: 9.1%
- Never: 40.9%
- Sometimes: 13.6%

How often do you make comments on existing pages

- Often: 40.9%
- Always: 18.2%
- Never: 22.7%
- Sometimes: 9.1%

How often do you integrate ideas that have been posted onto existing pages

- Always: 45%
- Often: 20%
- Never: 15%
- Sometimes: 15%
How often do you reorganise a set of pages

How often do you reorganise/add categories
How often do you reorganise/add metadata

- Never: 55%
- Sometimes: 14%
- Rarely: 32%

How often do you rewrite whole paragraphs

- Often: 13.6%
- Sometimes: 40.9%
- Never: 36.4%
- Rarely: 9.1%
How often do you roll back others' writings

- Rarely: 40.9%
- Never: 59.1%

Has the wiki helped you earn respect/improve your status

- Strongly agree: 11.1%
- Agree: 47.6%
- Neutral: 47.6%
- Disagree: 11.1%
- Strongly disagree: 5.5%

Information in the wiki is of immediate relevance to my work

- Agree: 47.6%
- Neutral: 4.7%
- Strongly agree: 47.6%
Keeping information in the wiki updated makes my work easier

By putting in relevant information, disseminating my work would be easier

Information sharing with the wiki has helped my company to improve work processes
Information in the wiki represents states that are relevant for my work

- 66.7% strongly agree
- 22.2% agree
- 11.1% neutral

Sharing information with the wiki has increased collaboration efficiency

- 66.7% strongly agree
- 23.8% agree
- 9.5% neutral
Information accuracy is supported by the wiki

- 42.9% not applicable
- 14.3% neutral
- 35.7% strongly agree
- 7.1% agree

Information represents what I need to know about the real world

- 53.0% strongly agree
- 5.9% disagree
- 11.7% neutral
- 29.4% agree
Information in the wiki is relevant for me

- Strongly agree: 23.8%
- Neutral: 9.5%
- Agree: 66.7%

Information in the wiki is up-to-date

- Strongly agree: 19.0%
- Neutral: 9.5%
- Agree: 66.7%

Information in the wiki is understandable

- Strongly agree: 86.0%
- Neutral: 4.7%
- Agree: 3.3%
I can adapt the wiki to my information needs (e.g., add tables/ columns and require new information)

- **Strongly Agree**: 19.0%
- **Agree**: 4.8%
- **Neutral**: 9.5%
- **Disagree**: 66.7%

I can combine information from various sources easily in the wiki

- **Strongly Agree**: 23.8%
- **Agree**: 28.6%
- **Neutral**: 42.9%
- **Disagree**: 4.8%

The wiki supports decision making

- **Strongly Agree**: 21.0%
- **Agree**: 47.4%
- **Neutral**: 5.3%
- **Disagree**: 26.3%
Appendix 8 (i) Information repository on Confluence

- Fælleskomponenter - definition og succeskriterier
- Deploy-proces
- Plan
- CaseManager (SAG)
- Sector9
- Text manager
- Person & Organisation (Entitetsindeks)
- Offentliggørelseskomponent
- Test & QA
- Adgang til fælleskomponenter på de forskellige miljøer
- Proces
  - Flow
    - Oplæg til Flow (Ej gældende)
    - Task Flow
  - Proces for implementering af User Storie
  - Retrospectives
    - Retrospective 14. marts 2014
    - Retrospective d. 28. februar 2014
  - Sprintrapporter
  - Procesdag 11. marts 2014
- Udviklerguides
- File Lists
- Projekt Mobil app 2
- Beskedfordeler punkter til 1. møde
Appendix 8 (ii) Information repository on Jira

Realisering af ny målarkitektur Regnskab 2.0 - SCRUM board

Plan Mode
- Manage your backlog:
  - Create and prioritize stories in your backlog
  - Estimate in story points or time
- Plan your product development with epics and versions:
  - Use epics to track related stories across sprint and versions
  - Assign stories to versions; track release progress
  - Quickly drag-and-drop stories to epics or vice versa
  - Filter by epics and versions for targeted view of backlog

Create and launch development sprints:
- Plan multiple sprints in advance
- Start a sprint, then go to Work mode to move stories through workflow

Learn more about Plan mode and Work mode

Appendix 8 (ii) Information repository on Jira
Appendix 9 Access restrictions (Confluence screenshot)

No Permission

You cannot view this page due to inherited restrictions.
Page level restrictions have been applied to a parent of the current page. These restrictions limit access to certain user(s) or group(s) and apply to all pages underneath the parent.

Appendix 10 Process flow restructuring examples

2. Beskrivelse af Defectflow

- En USER STORY består af 1 til mange TASKS
- En USER STORY består af 1 til mange TESTCASES
- En USER STORY består af 0 til mange FEJL, som er oprettet som task (labels = FEJL)
- En TASK er tilknyttet til 1 USER STORY
- En TESTCASE er tilknyttet 1 USER STORY
- En TESTCASE består af 1 til mange TESTCASE EXECUTION INSTANCES
- En TESTCASE EXECUTION INSTANCES er tilknyttet 1 TESTCASE
Appendix 11 View options (Confluence screenshot)
### Additional Appendix: Appendix 12 Definitions of Data-Information-Knowledge

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
<th>Year</th>
<th>Author(s)</th>
</tr>
</thead>
</table>
| Data                     | "Data (its) pure form can be received, stored, processed and transmitted by humans or computers. Data do not have an inherent discrete meaning.

"Data is the meaningful representation of experience. It is a fundamental facet of communication."

Data is how to represent things and communicate about them. Contrary to some treatments this approach highlights the fact that data do not mean anything.

Data consists of a number of significant elements (i.e., nouns and of itself, it does not have meaning. It is computer process a computer generally starts out by looking for data represents a set of information or event (of which several fit)."
| 2005                      | Myburgh                                                                                                                                  |      |                                                                            |
| Information              | "Information is the meaningful representation of data communicated for a specific context and with the purpose of influencing or informing others.

"Information is a fundamentally communicator-unique people"

"What part of an individual's knowledge which can be communicated, which has meaning and which can be understood by another individual."

"I refer to two distinct dichotomies: (a) that which people know and is accumulated through understanding, interpreting, analyzing and making meaning of what is experienced and observed, as well as what others have communicated.”

"The knowledge of events, processes, and ideas in the world can be communicated or described in the form of data and information."

"Knowledge is the organized, meaningful, and coherent representation of the relationships between data and information."

"Knowledge is the pattern that appears and generally provides a high level of predictability as to what is classified as whether or not the pattern can be learned."

"Knowledge is an examinable record."  

"To study information [... is to study human behavior in the context of data creation and use, where the data is abstracted into an examinable record."
| 2005                      | Myburgh                                                                                                                                  |      |                                                                            |
| Information vs Data      | "Information is data that has been given meaning by way of, or an understanding of what is perceived, and data is how we represent things and communicate about them. Contrary to some treatments this approach highlights the fact that data do not mean anything."

"Data in their pure form can be received, stored, processed and transmitted by humans or computers. Data do not have an inherent discrete meaning."

"Data is how to represent things and communicate about them. Contrary to some treatments this approach highlights the fact that data do not mean anything."

"Data consists of a number of significant elements (i.e., nouns and of itself, it does not have meaning. It is computer process a computer generally starts out by looking for data represents a set of information or event (of which several fit)."
| 2006                      | Geisser                                                                                                                                  |      | Gelston & Gelston, "The anatomy of knowledge"; Gelston & Gelston, 2006 [7]. |
| Information vs Knowledge | "Information is knowledge that is meaningful, organized, and coherent representation of the relationships between data and information."

"Knowledge is the organized, meaningful, and coherent representation of the relationships between data and information."

"Knowledge is an examinable record."  

"To study information [... is to study human behavior in the context of data creation and use, where the data is abstracted into an examinable record."
| 2005                      | Myburgh                                                                                                                                  |      |                                                                            |
| Information Management   | 3 ways of development towards contemporary information management..." The anatomy of knowledge... available at http://www.mypage.com."

"Knowledge is an examinable record."  

"To study information [... is to study human behavior in the context of data creation and use, where the data is abstracted into an examinable record."
| 2006                      | Geisser                                                                                                                                  |      | Gelston & Gelston, "The anatomy of knowledge"; Gelston & Gelston, 2006 [7]. |
| 2002                      | Wilson                                                                                                                                  |      |                                                                            |
| 2005                      | Myburgh                                                                                                                                  |      |                                                                            |
| 2004                      | Bellinger et al.                                                                                                                        |      |                                                                            |
| 2002                      | Schögl                                                                                                                                  |      |                                                                            |
| 2005                      | Schögl                                                                                                                                  |      |                                                                            |
| 2002                      | Wilson                                                                                                                                  |      |                                                                            |

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**Elke Hartvig**  
**Master’s Thesis (MSc Information Management)**  
**September 2014**

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Note: The table above includes definitions of data, information, and knowledge, with references to various authors and years. The definitions are organized to show the evolution of understanding from data to information to knowledge, highlighting the interplay between these concepts in the context of information management. This appendix is an excerpt from a larger work, possibly a thesis or a research report, indicating a comprehensive exploration of these terms within the field of information management.
Appendix 13 Quotes from interviews (February - July 2014)

“It’s so cumbersome that I have to log in into all the wikis we use. And if I want to see content about a project I’m not currently assigned to, but which entails essential information for me too I have to find a person that can give me the information directly. I comment directly on the page and then the people who get email notifications when something happens also see my input.”

Interviewpees were asked how act when something on the wiki is unclear or when they have a question not directly related to a wiki page: “I comment directly on the page and then the people who get email notifications when something happens also see my input because it is relevant for them.”

The page on which they have written something earlier or a page they just follow because it is relevant for them - these people...
will answer the question. I also look at who edited the page last time (its written with the small letters right beneath the headline) and then i can send that person an e-mail.”

“I usually just need to read what others have commented on and then often it is the case that someone already asked my question before.”

Are you more likely to contribute when you feel that others contribute as well? (Reciprocity expectation and if that leads to more contribution?)

“I don't even think about others when I write something. I am so focussed on my work. Besides, I would not have the time or energy to ‘monitor’ what others do: to wait if they write or to see how much others write.”

“I think everyone writes as much as they need or have to and they don’t have time to wait.”

“The wiki is a tool for work. When I have to work then I want to get that done. When I need to ask something on the wiki (comment) then I’ll do it without time wasted and when my task is to write a manual then I’ll do that as well as I can. Why should I write less because others write less?”

Asked about switching between email/ other communication channels and the wiki:

“I think you can’t avoid it. Sometimes it would obviously be easier and more useful to have everything collected in the wiki. But then people ask you directly for some information by mail and for that moment its faster to just reply the mail. You don’t start creating a wiki page and then send a link to that page, when someone just asks you quickly for a link. But then three weeks later you have to find that link again and then it takes time.”

“When its the ‘norm’ of doing things more informal at a specific project then people go with it. When it is part of the project to write everything in the wiki people do it. But usually someone has to make a rule up front, how and where information is shared.”

Is the wiki an archive; a document storage or facilitating daily operations:

“It’s definitely facilitating operations. I put my reports on it and others have to comment on them. So its really making a process possible.”

“The wiki is where we put all the important documents. Then we can find them again when we need them and can open them and have all the information.”

“The wiki can tell us all about how the development of this product was planned and supposed to happen from the beginning. Sometimes, I use it to look back like how the plan was one year ago, to remind myself what this project was supposed to be about, how the priorities have been formulated.”