

OPEN-SOURCE PROJECT TOOLS FOR CORPORATE PROJECTS?

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Can the corporate
world learn something
from successful Open
Source projects?

CAN WE SUCCEED?



Efficient communication is (obviously)
the key to successful teamwork...

photo: www.imageafter.com

OPEN SOURCE PROJECTS

timezones

cultures

english?

chaotic

egos

meetings?

no boss

divas

...many are successful!

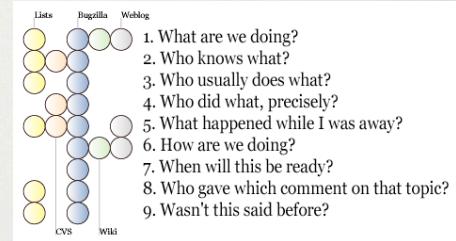
CORPORATE PROJECTS

- structure
- rules
- same office, same language
- meetings!
- the boss!
- bullet points
...many fail!

WHY?

THE QUESTIONS

1. What are we doing?
2. Who knows what?
3. Who usually does what?
4. Who did what, precisely?
5. What happened while I was away?
6. How are we doing?
7. When will this be ready?
8. Who said what on that topic?
9. Wasn't this said before?



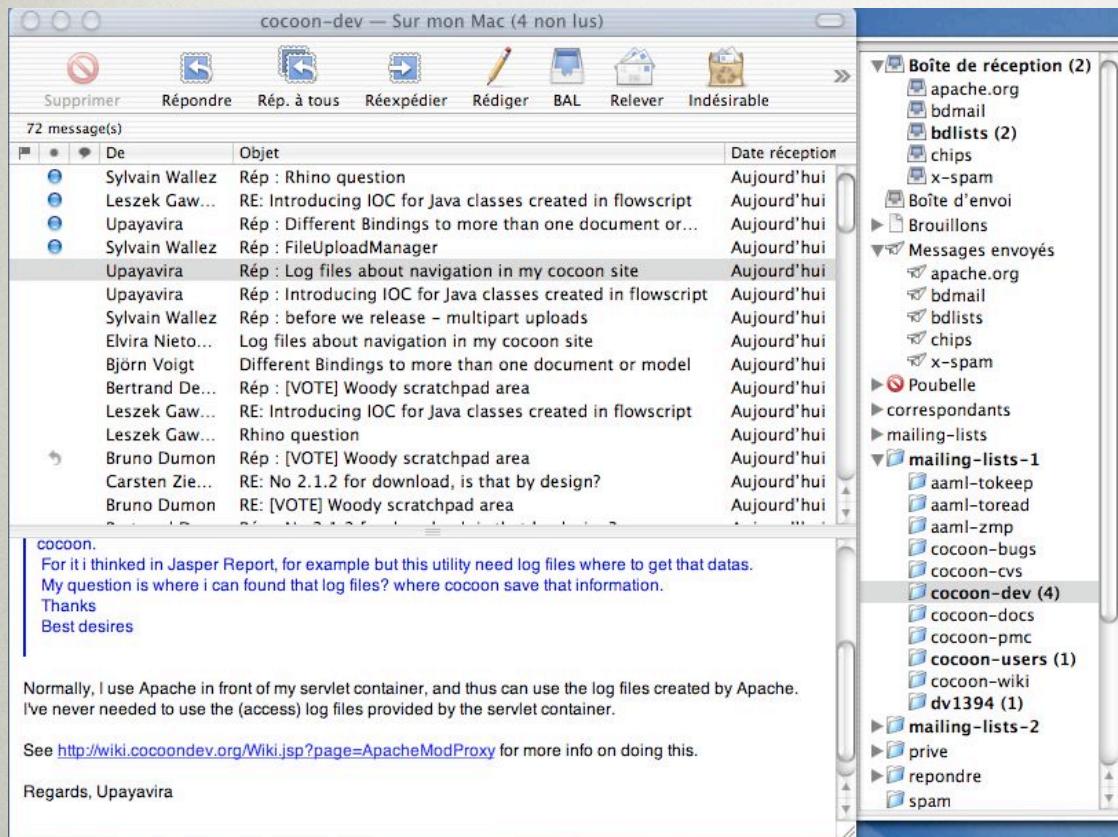
SELF-SERVICE



Team members need *self-service* answers.

THE TOOLS

MAILING LISTS AND ARCHIVES



The default tool...

Not much structure

Too much information

Archives help

SOURCE CODE REPOSITORY

```
$ cvs log status.xml    1.156      (cziegeler 25-Sep-03): Fixing release of Source in the
                               (cziegeler 25-Sep-03): </action>
RCS file: /home/cvs/cod 1.154      (antonio 25-Sep-03): <action dev="AG" type="update">
Working file: status.xml 1.155      (antonio 25-Sep-03): Update lib commons-lang to 2.0,
head: 1.158                1.154      (antonio 25-Sep-03): </action>
----- 1.151      (sylvain 24-Sep-03): <action dev="SW" type="add">
revision 1.158            1.151      (sylvain 24-Sep-03): New event-handling system for Wo
45          48      A quick refresher about
date: 2003/09/28 05:01:05; author: a 46          49
Update status.xml           47          50      note: User view of thes
----- 48          51
revision 1.157            49          52      slide: CVS
50          53
date: 2003/09/26 14:46:23; author: b 51          54      TODO screenshots: commi
YAPT presentation tool sample added 52          55
----- 53          56      slide: Bugzilla
54          57
slide: Part One: Tools           55          58      img_rightHalf: bugzillal
56          59
note: LittleText                 57          60      Structured author and c
----- 58          61
slide: CVS                       59          62      Simple workflow ("assign
60          63
'000 screenshots: commit/mer   61          64      Task history ("comments
62          65
slide: Bugzilla                  63          66      Attachments
64          67
'000 screenshots: task lists   65          68      Powerful queries.
66          69
slide: Wiki                      67          70      slide: Wiki
68          71
'000 screenshots: Wiki links   69          72      img_rightHalf: wiki-sho
70          73
slide: Weblogs                   71          74      Easy content creation.
72          75      Easy linking.
73          76
'000 screenshots: stories, a   74          77      Fully open.
75          78
----- 76          79
slide: Part Two: analysis       77          78
note: LittleText                 78          79
----- 79
What does each tool bring?     79
```

Stores all revisions of all code

Traceable code, differences

Log messages, what changed

ISSUE TRACKER

Bug#: [86168 alias: bz-template](#)

Product: Bugzilla

Component: User Interface

Status: NEW

Resolution:

Assigned To: myk@mozilla.org (Myk Melez)

QA Contact: mattyt-bugzilla@tpg.com.au

URL: <http://www.template-toolkit.org/>

Summary: Bugzilla should use template pages instead of hard-coded HTML

Status Whiteboard:

Keywords: meta

Attachment	Type	Created	Flags	Actions
Fix Makefile.PL of Template Toolkit 2.06	patch	2002-01-11 08:34:44	none	Edit
Create a New Attachment (proposed patch, testcase, etc.)			View All	

Bug 86168 depends on: [80183](#) [88602](#) [98707](#) [103778](#) [103953](#) [110012](#) [124274](#) [170213](#) [190212](#) [80183, 98602, 98707, 103778, 103953, 110012, 124274, 170213, 190212] [Show dependency tree](#) [Show dependency graph](#)

Bug 86168 blocks: [100089](#) [104690](#) [100089, 104690] [Show dependency tree](#) [Show dependency graph](#)

Votes: 5 [Show votes for this bug](#) [Vote for this bug](#)

Additional Comments:

Leave as NEW
 Accept bug (change status to ASSIGNED)
 Resolve bug, changing [resolution](#) to [FIXED](#)
 Resolve bug, mark it as duplicate of bug # [\[\]](#)
 Reassign bug to [myk@mozilla.org](#)
 Reassign bug to owner and QA contact of selected component
 Commit

[View Bug Activity](#) | [Format For Printing](#)

Description:

One page per issue

History, decisions

Not only for bugs!

Powerful search and classification

Dependencies, critical paths

ISSUE DEPENDENCIES

Bugs that [bug 86168](#) depends on

([view as bug list](#))

- [80183 \[Bugzilla 2.16, jake@bugzilla.org\]](#) - configurable index page (using Template Toolkit).
 - [37339 \[Bugzilla 2.16, jake@bugzilla.org\]](#) - Bugzilla sidebar, containing info in footer.
 - [76484 \[Bugzilla 2.16, jake@bugzilla.org\]](#) - Allow multiple QuickSearch forms in a single document.
- [98602 \[Bugzilla 2.16, myk@mozilla.org\]](#) - Templatize createattachment.cgi.
- [98707 \[Bugzilla 2.16, gerv@mozilla.org\]](#) - query.cgi redesign/templatisation.
- [103778 \[Bugzilla 2.16, myk@mozilla.org\]](#) - templatize buglist.cgi.
- [103953 \[Bugzilla 2.16, gerv@mozilla.org\]](#) - Templatise enter_bug.cgi.
- [110012 \[Bugzilla 2.16, gerv@mozilla.org\]](#) - Spank show_bug.cgi hard - templatize and combine.
- [124274 \[Bugzilla 2.16, myk@mozilla.org\]](#) - RFE: make link names in "Actions" footer customizable.
 - [140435 \[Bugzilla 2.16, gerv@mozilla.org\]](#) - Templatise GetCommandMenu.
- [170213 \[Bugzilla 2.18, gerv@mozilla.org\]](#) - Make all static HTML files into page.cgi pages.
- [190212 \[---, justdave@bugzilla.org\]](#) - Templatize all administrator-facing pages in Bugzilla.
 - [119485 \[Bugzilla 2.18, myk@mozilla.org\]](#) - Templatise editusers.cgi.
 - [92905 \[Bugzilla 2.16, bbaetz@acm.org\]](#) - editusers.cgi errors in apache errorlog: fetchrow failed.
 - [148147 \[Bugzilla 2.18, preed@sigkill.com\]](#) - Templatize whineatnews.pl.
 - [190196 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - editproducts.cgi needs templatizing.
 - [190220 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - templatize editcomponents.cgi.
 - [190222 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - templatize editgroups.cgi.
 - [190223 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - templatize editkeywords.cgi.
 - [190224 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - templatize editmilestones.cgi.
 - [190226 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - templatize editversions.cgi.

Answer “why is this not done?”

Show critical paths

PROJECT WIKI

Your trail: [Main](#) | [Generator](#) | [Developing Components](#) | [Components](#)

Writing Pipeline Components

Writing Pipeline Components

This page describes common information needed to write generators, transformers and serializers.

Using the sitemap, you describe how pipelines should be assembled. The resulting pipeline always has the following structure: one generator, zero or more transformers, and one serializer. The only exception to this rule are readers, which implicitly combine the generation and serialization step and thus also prevent you from declaring transformation steps (within that pipeline). The generator could also be an aggregator, which is just a special type of generator.

These components (generator, transformer(s) and serializer) are put together in what is usually called a "SAX pipeline". In this pipeline, SAX events are propagated. SAX-events are events corresponding to what appears in an XML document: "start element", "characters" and "end element" being the most important. A generator will start generating SAX events. The transformer that follows the generator will receive these events and can react on them, producing new SAX-events itself. The SAX-events generated by the transformer will then be received by the next transformer, which will then again start generating new events, and so on. At the end, the SAX-events are consumed by the serializer which will convert the SAX-events to some binary stream. This could be an XML document, but also a HTML document, an image, or a PDF file. The following picture shows this concept.

```
graph LR; generator[generator] -- events --> transformer1[transformer 1]; transformer1 -- events --> transformer2[transformer 2]; transformer2 -- events --> ...[...]; ... -- events --> serializer[serializer]
```

While Cocoon sets up the pipeline, it will assign a "consumer" to each generator and transformer. The consumer is where the SAX-events should be sent to, thus the next component in the pipeline. The consumer of the generator will be the first transformer, the consumer of the first transformer will be the second transformer, and so on. Finally the consumer of the last transformer will be the serializer. The serializer itself does not have a consumer, but an output stream to which it can write its bytes. All the consumers must implement the SAX "ContentHandler" interface. This interface contains methods for each of the SAX-events. The SAX-events are then propagated in the pipeline by calling ContentHandler-methods on the consumer (= the next component in the pipeline).

To give an idea of the different SAX-events, the ContentHandler interface is displayed here:

```
Package org.xml.sax;
public interface ContentHandler {
    public void setDocumentLocator (Locator locator);
    public void startDocument () throws SAXException;
    public void startPrefixMapping (String prefix, String uri) throws SAXException;
    public void endPrefixMapping (String prefix) throws SAXException;
    public void startElement (String namespaceURI, String localName,
        String qname, Attributes attrs) throws SAXException;
    public void endElement (String namespaceURI, String localName,
        String qname) throws SAXException;
    public void characters (char []ch, int start, int length) throws SAXException;
    public void ignorableWhitespace (char []ch, int start, int length) throws SAXException;
    public void processingInstruction (String target, String data) throws SAXException;
    public void skippedEntity (String name) throws SAXException;
}
```

Note that there is also another SAX event interface, the LexicalHandler. That interface is used to pass on less

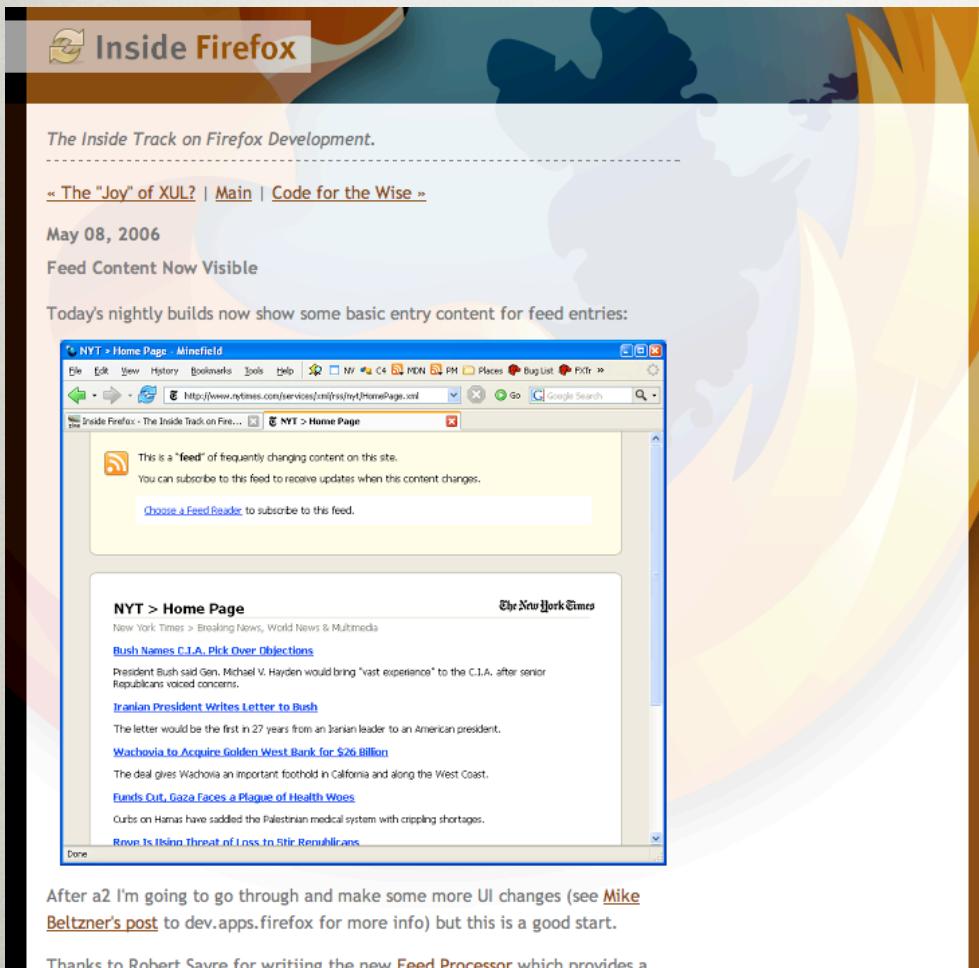
Collaborative
editing

Traceable
writing

Centralized
content

Potentially
chaotic

PROJECT BLOG



After a2 I'm going to go through and make some more UI changes (see [Mike Beltzner's post](#) to dev.apps.firefox for more info) but this is a good start.

Thanks to Robert Sayre for writing the new [Feed Processor](#) which provides a

Chronological
posts, news,
articles

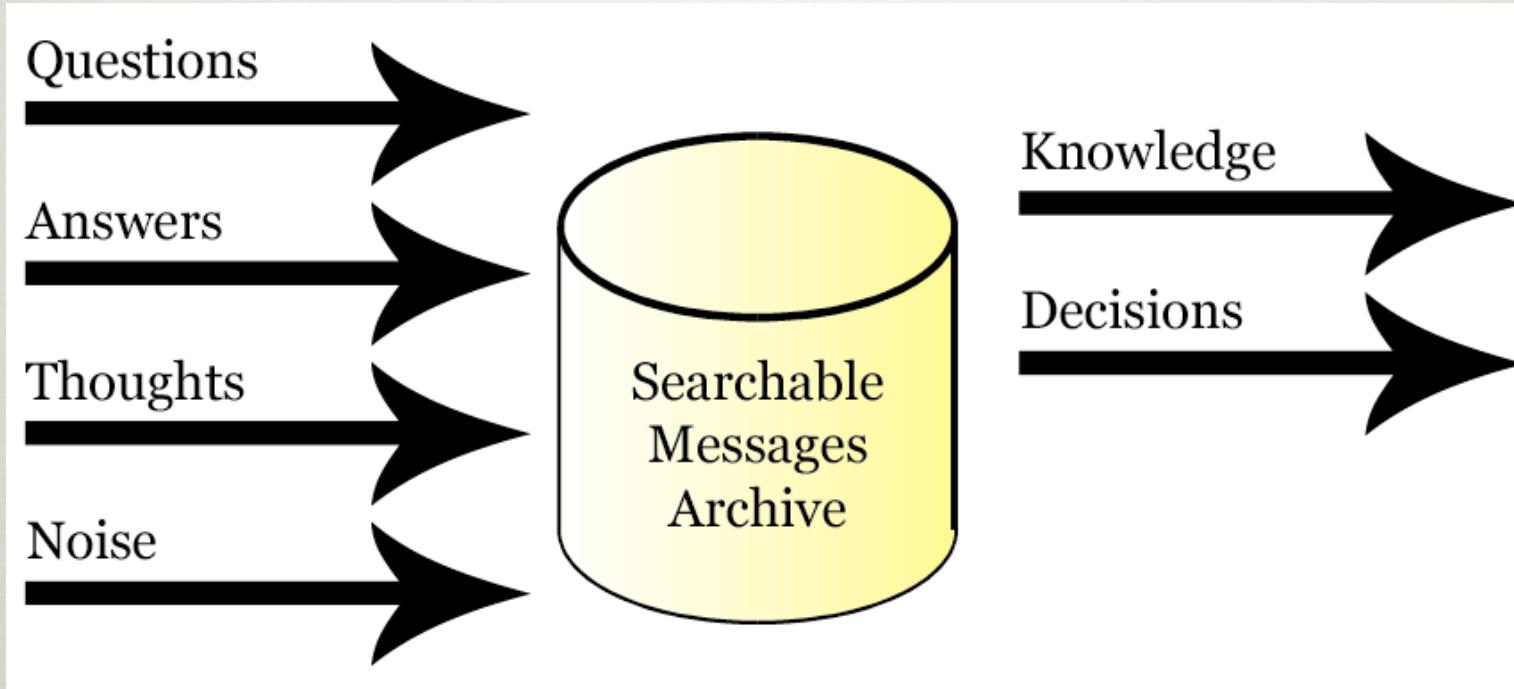
Categories, search

Central source of
news, gossip, stories

RSS feeds,
broadcasting

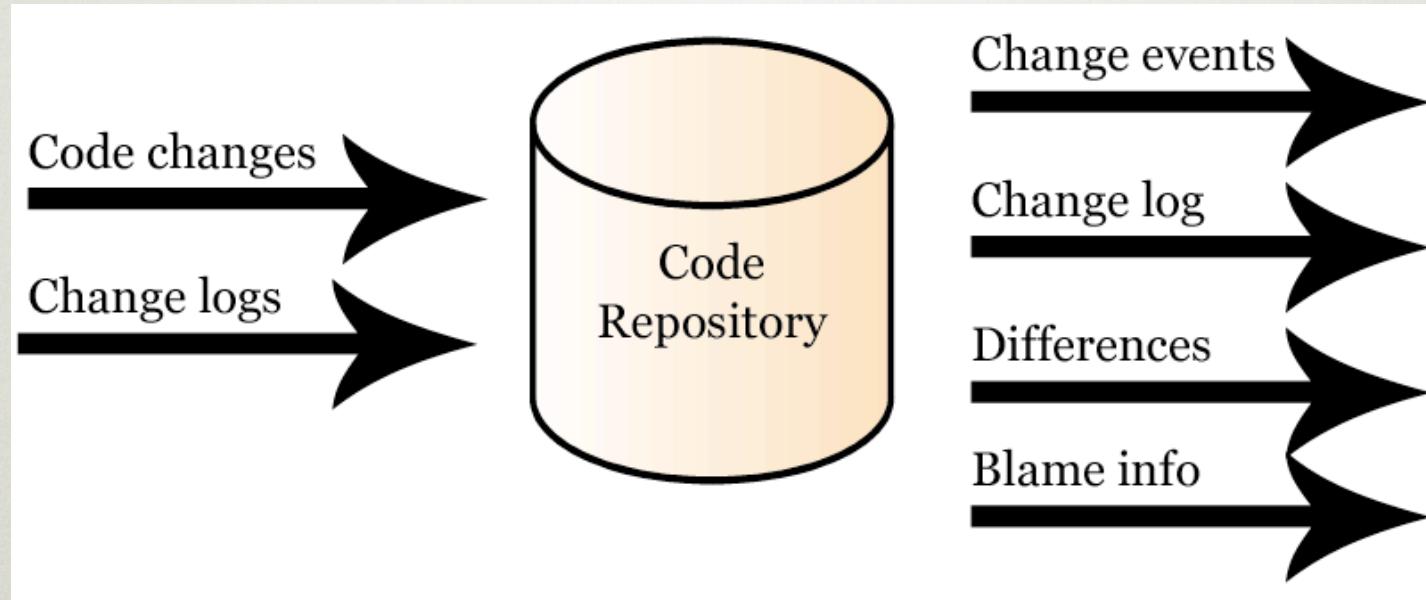
**WHAT DOES
EACH TOOL BRING?**

MAILING LISTS AND ARCHIVES



Lists require *lots* of discipline to be useful.
Searching is often hard.

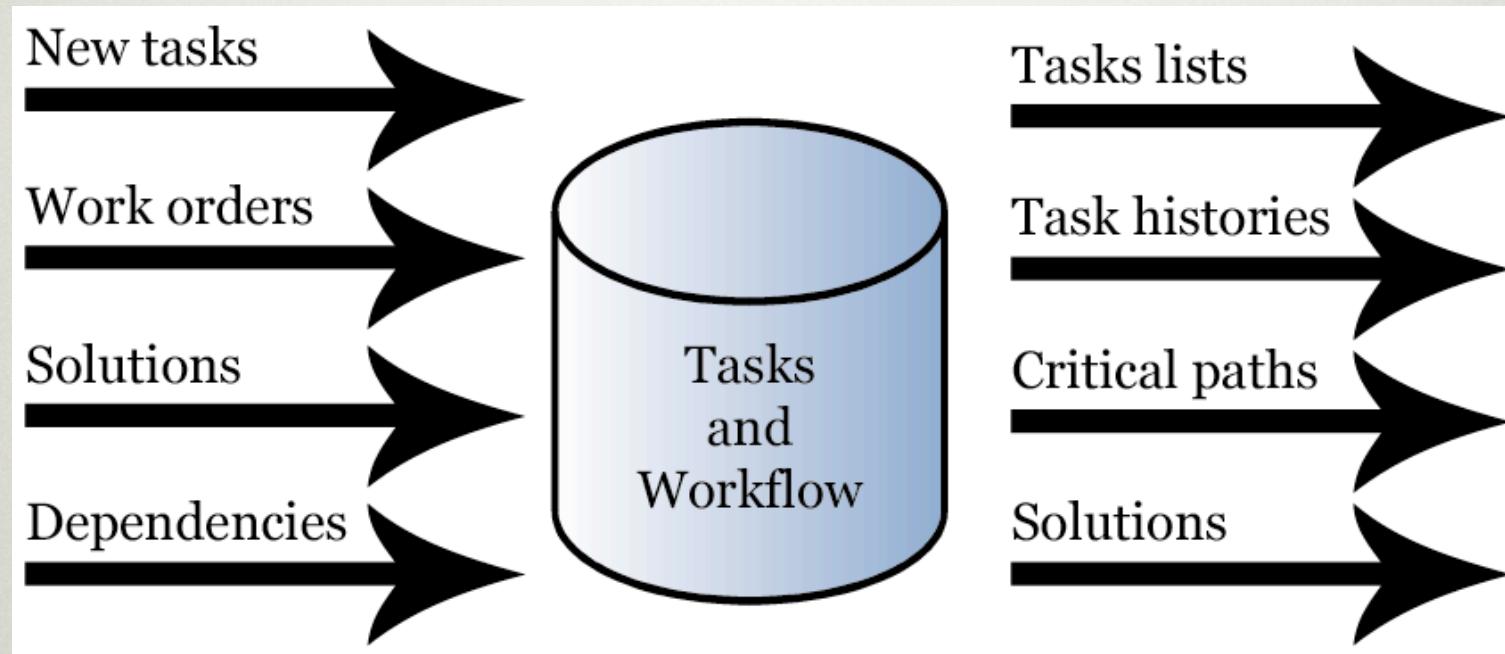
SOURCE CODE REPOSITORY



Adds a lot of value to simple checkout
and commit operations.

Tells the story of the code in detail.

ISSUE TRACKER

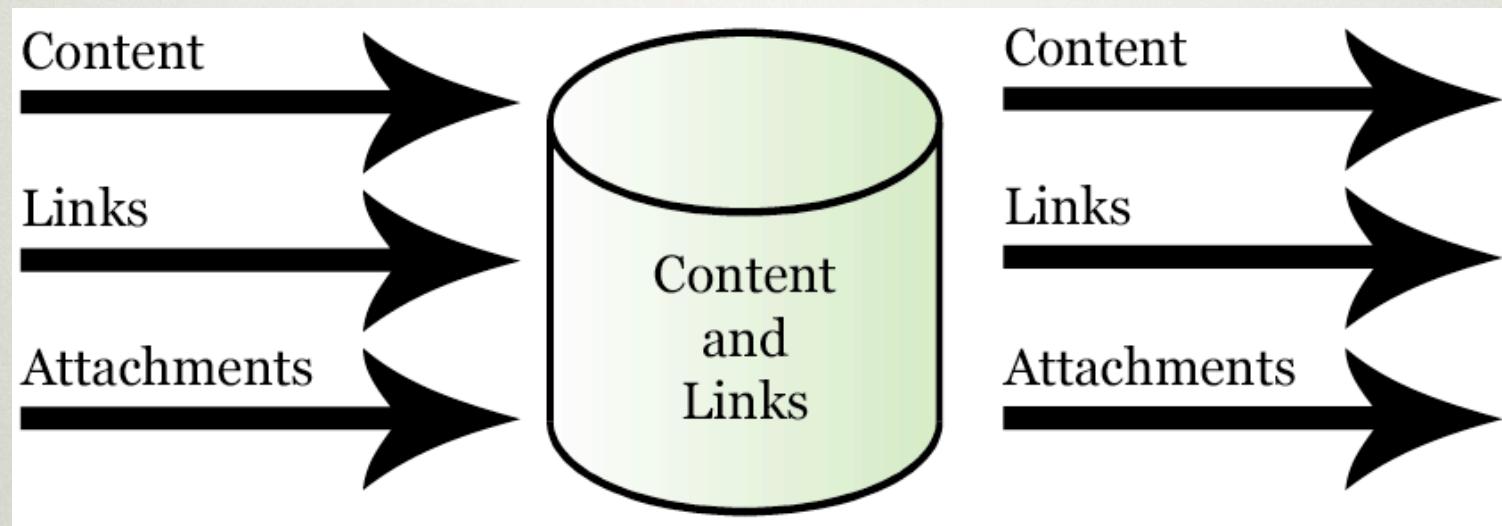


Structuring and classification add a lot of value.

Gives each issue a unique ID.

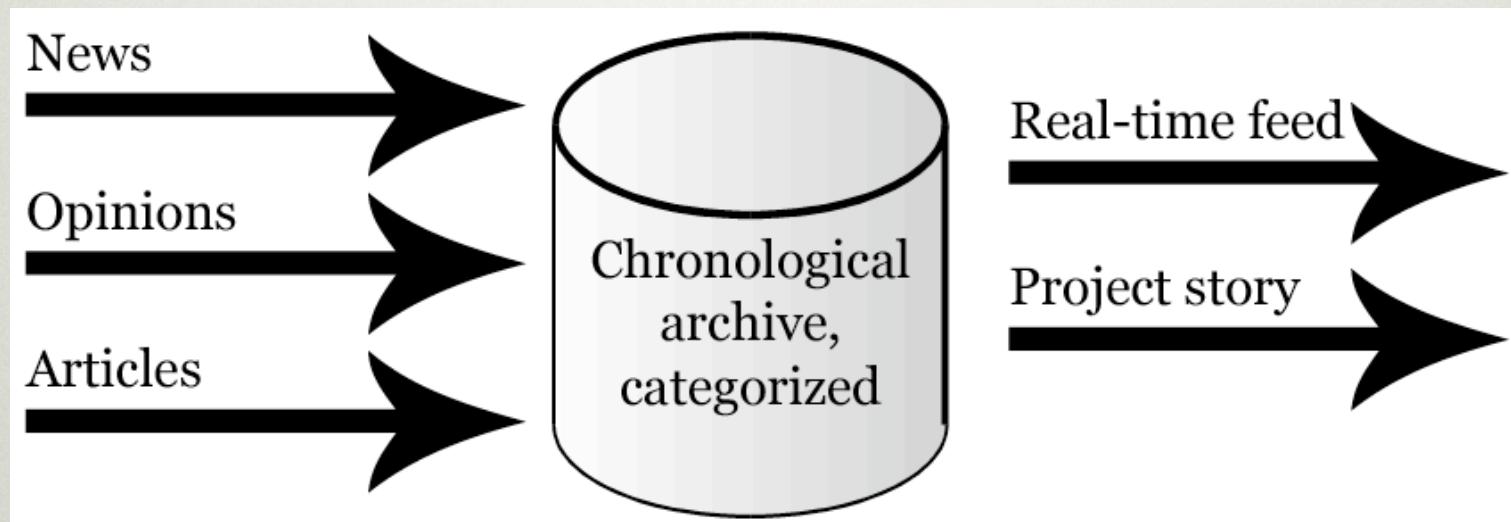
Very detailed story of the project, knowledge base.

PROJECT WIKI



Does not add much value to the content.
Needs discipline to stay useful.
Strong linking features.

PROJECT BLOG



The best way to disseminate news.

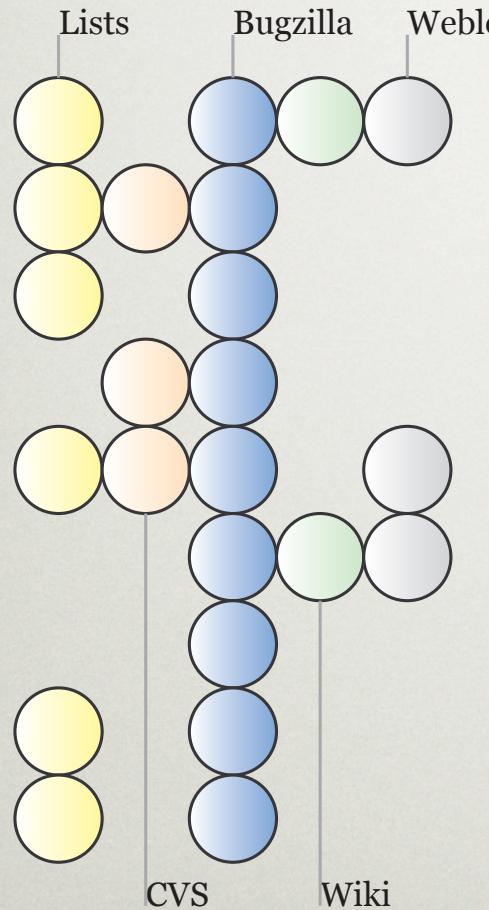
Celebrate milestones.

Leave space for Random Thoughts.

Does your customer subscribe?

ANSWERS?

ANSWERS



1. What are we doing?
2. Who knows what?
3. Who usually does what?
4. Who did what, precisely?
5. What happened while I was away?
6. How are we doing?
7. When will this be ready?
8. Who said what on that topic?
9. Wasn't this said before?

EXAMPLES

Apache HTTP Server
Mozilla, Firefox
Linux
Open Office
etc., etc...

Using *public* instances of these tools...

COUNTER-EXAMPLES

Let's have a show of hands...

WHAT NOW?

START SMALL...

```
$ cvs log status.xml 1.156      (cziegeler 25-Sep-03):      Fixing release of Source in the
1.156      (cziegeler 25-Sep-03):      </action>
RCS file: /home/cvs/coc/1.154      (antonio 25-Sep-03):      <action dev="AG" type="update">
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----- 1.151      (sylvain 24-Sep-03):      <action dev="SW" type="add">
revision 1.158 1.151      (sylvain 24-Sep-03):      New event-handling system for Wo
date: 2003/09/28 05:01:05; author: a 46      49      A quick refresher about
Update status.xml      lide: Part One: Tools 47      50      note: User view of thes
----- 48      51
revision 1.157      lide: LittleText 49      52      slide: CVS
date: 2003/09/26 14:46:23; author: b 50      53      TODO screenshots: commi
YAPT presentation tool sample added 51      55
----- 52      56      slide: Bugzilla
revision 1.156      lide: CVS 54      57
date: 2003/09/25 16:57:44; author: c 55      58      img_rightHalf: bugzilla
<action dev="CZ" type="add" fixes- 56      59      Structured author and c
services.com> 57      60
      Fixing release of Source in the 58      61
----- 59      62      Simple workflow ("assi
lide: Bugzilla 60      63      Task history (*comments
----- 61      64      Attachments
lide: Wiki 62      65      Powerful queries.
----- 63      66      img_rightHalf: wiki-sh
lide: Weblogs 64      67      Easy content creation.
----- 65      68      slide: Wiki
lide: Stories, i 66      69
----- 67      70      Fully open.
lide: Part Two: analysis 68      71      img_rightHalf: wiki-sh
----- 69      72      Easy linking.
lide: LittleText 70      73      Fully open.
----- 71      74      slide: Weblogs
that does each tool bring? 72      75
----- 73      76
74      77
75      78
76      79
```

A source code repository and issue tracker bring the most value.

Bugs that bug 86168 depends on

([view as bug list](#))

- [80183 \[Bugzilla 2.16, jake@bugzilla.org\]](#) - configurable index page (using Template Toolkit).
 - [37339 \[Bugzilla 2.16, jake@bugzilla.org\]](#) - Bugzilla sidebar, containing info in footer.
 - [76484 \[Bugzilla 2.16, jake@bugzilla.org\]](#) - Allow multiple QuickSearch forms in a single document.
- [98602 \[Bugzilla 2.16, myk@mozilla.org\]](#) - Templatize createattachment.cgi.
- [98707 \[Bugzilla 2.16, gerv@mozilla.org\]](#) - query.cgi redesign/templatisation.
- [103778 \[Bugzilla 2.16, myk@mozilla.org\]](#) - templatize buglist.cgi.
- [103953 \[Bugzilla 2.16, gerv@mozilla.org\]](#) - Templatise enter_bug.cgi.
- [110012 \[Bugzilla 2.16, gerv@mozilla.org\]](#) - Spank show_bug.cgi hard - templatize and combine.
- [124274 \[Bugzilla 2.16, myk@mozilla.org\]](#) - RFE: make link names in "Actions" footer customizable.
 - [140435 \[Bugzilla 2.16, gerv@mozilla.org\]](#) - Templatise GetCommandMenu.
- [170213 \[Bugzilla 2.18, gerv@mozilla.org\]](#) - Make all static HTML files into page.cgi pages.
- [190212 \[---, justdave@bugzilla.org\]](#) - Templatize all administrator-facing pages in Bugzilla.
 - [119485 \[Bugzilla 2.18, myk@mozilla.org\]](#) - Templatise editusers.cgi.
 - [92905 \[Bugzilla 2.16, bbaetz@acm.org\]](#) - editusers.cgi errors in apache errorlog: fetchrow failed.
 - [148147 \[Bugzilla 2.18, preed@sigkill.com\]](#) - Templatize whineatnews.pl.
 - [190196 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - editproducts.cgi needs templatizing.
 - [190220 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - templatize editcomponents.cgi.
 - [190222 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - templatize editgroups.cgi.
 - [190223 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - templatize editkeywords.cgi.
 - [190224 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - templatize editmilestones.cgi.
 - [190226 \[Bugzilla 2.18, justdave@bugzilla.org\]](#) - templatize editversions.cgi.

THE RULES

If you're working on something,
it must be an issue from our tracker.

If something's not in the source
code repository, *it doesn't exist.*

CODA

CONCLUSIONS

These tools work!
Self-service answers are the key.
You can start small.
Don't forget *openness*.

LINKS

<http://www.bugzilla.org/>

<http://www.atlassian.com/software/jira/>

<http://www.nongnu.org/cvs/>

<http://subversion.tigris.org/>

<http://www.ezmlm.org/>

