

Rewriting not recommended

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www.haun-online.de/accu/



Rewriting of **Applications**

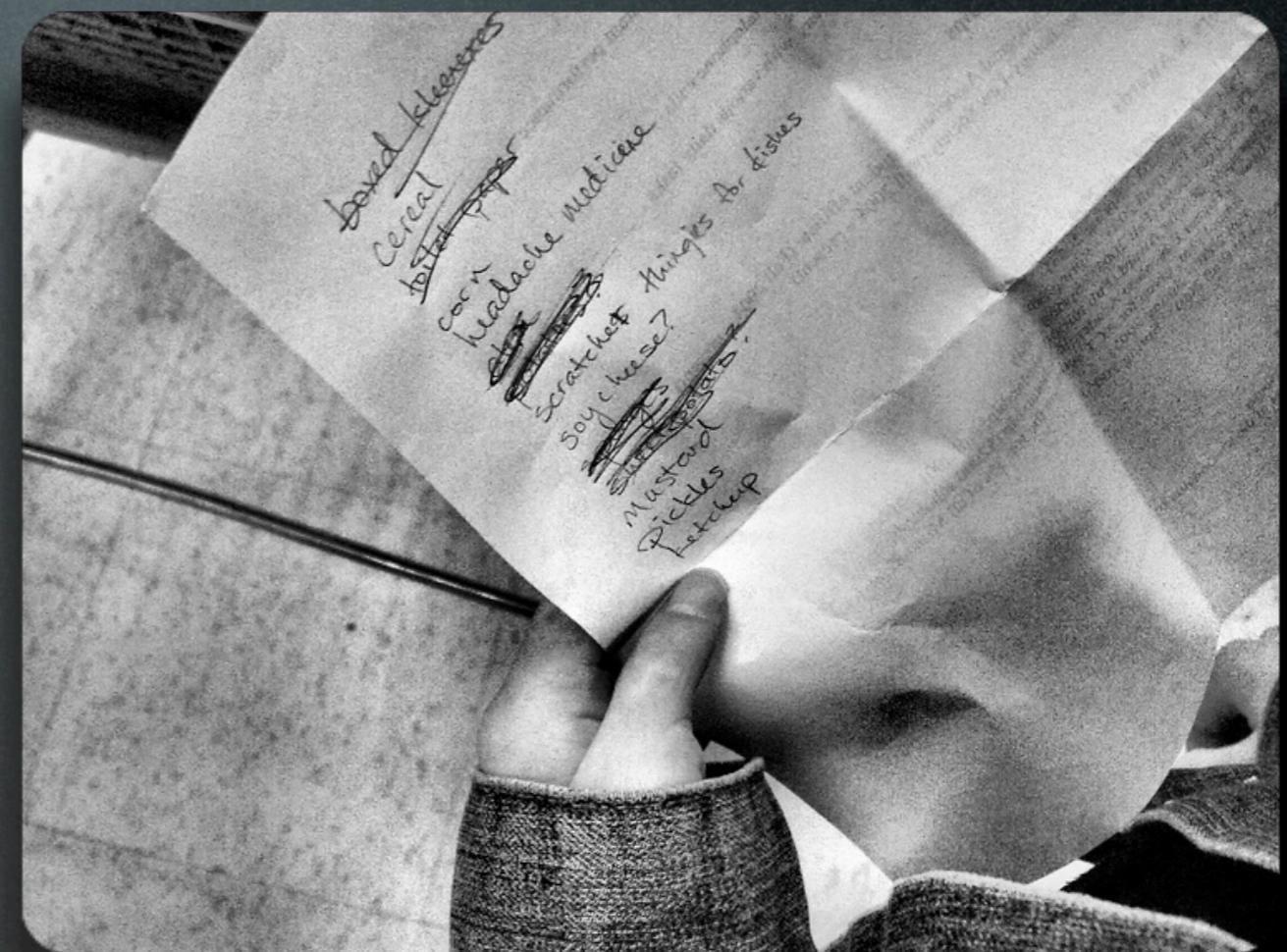
Vita

- Electronic Cash
- PDAs & Smartphones
- Service Level Management
- Document Conversion
- Open Source CMS



Agenda

- Motivation
- Don't do it!
- Remedy
- Prevention



Why do we want to rewrite something?

- **Rational:**

Problems with the **architecture**

- **Irrational:**

Programmer's **Ego**

Motivation: Architecture

- Started out with a clean design
 - Change requests after initial release
- Loss of clarity
- Solution(?): Rewrite!



Motivation: Architecture

Ideally:

- "Nicer" architecture
- Easier to maintain
- Learned from mistakes



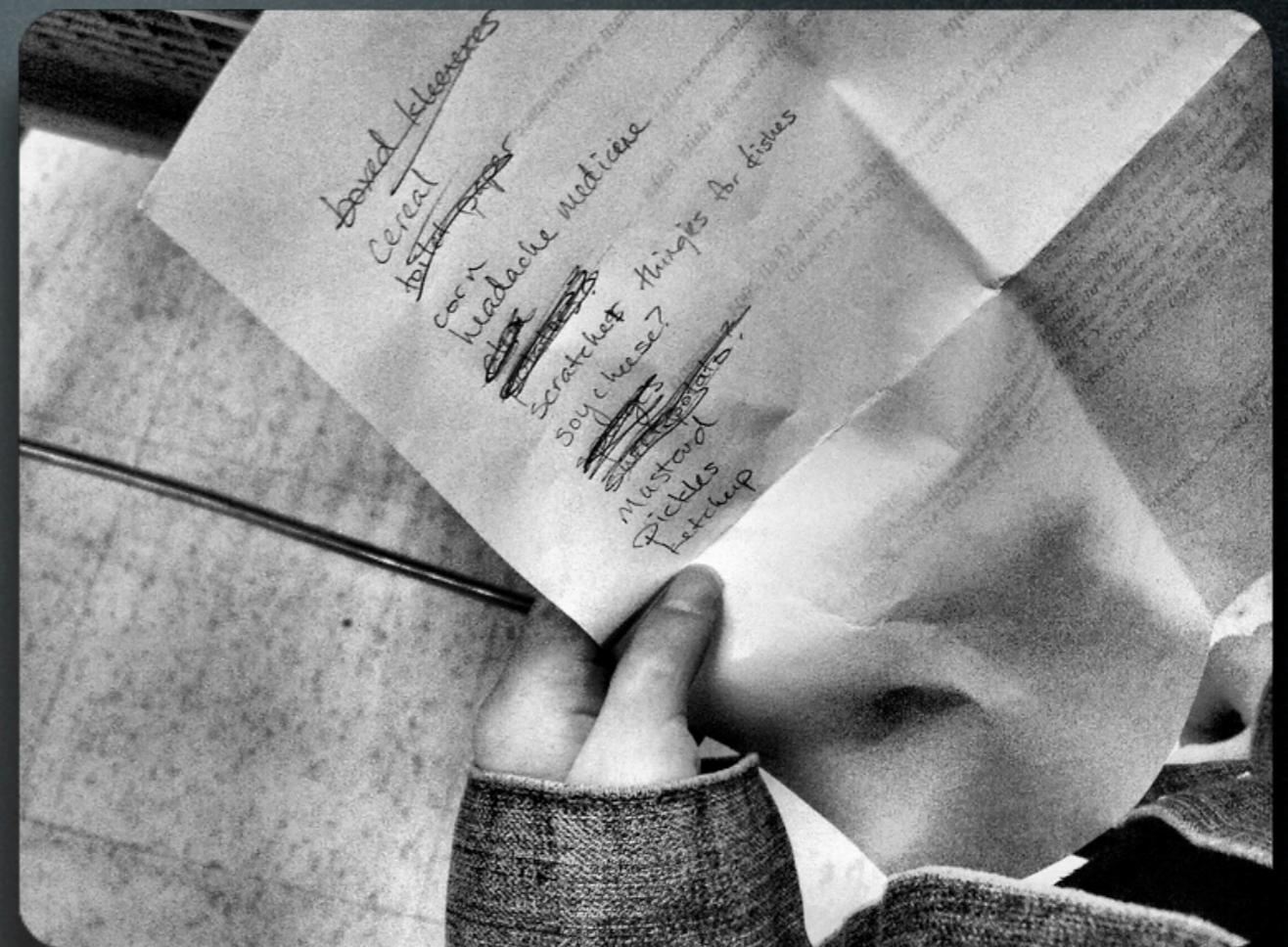
Motivation: Ego

- Old code just isn't "sexy"
- Having to maintain other people's code
- Personal preferences vs. existing code



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Rewriting takes (more) time

- What do you ship in the meantime?
- Losing customers, market share, and money



Netscape.com - Netscape 6

File Edit View Search Go Bookmarks Tasks Help

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DJIA	10,546.00	+75.80
Nasdaq	2,880.49	-23.89
S&P 500	1,348.97	+7.20
AOL	43.97	+1.07
Portfolio Total:	0	

Quote
 Symbol Name
Quotes delayed 20 mins.
* Indicates Hi or Lo movement.
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business **personal finance** **small business** **shop** **tech** **fun**

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Stock Quotes by SALOMON SMITH BARNEY
 Quote
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CBS MarketWatch: Retail surge helps Dow
Reuters: Telecoms, Drugs Drag FTSE 100 Lower
ZDNet: Vote (again) for president online
Get a leg up on your career with tools and advice.

Free Agents: Your career. Your choice.
Printers & More: Accessorize your office with new hardware and software.
Nine to Five: Office gift giving made easy.

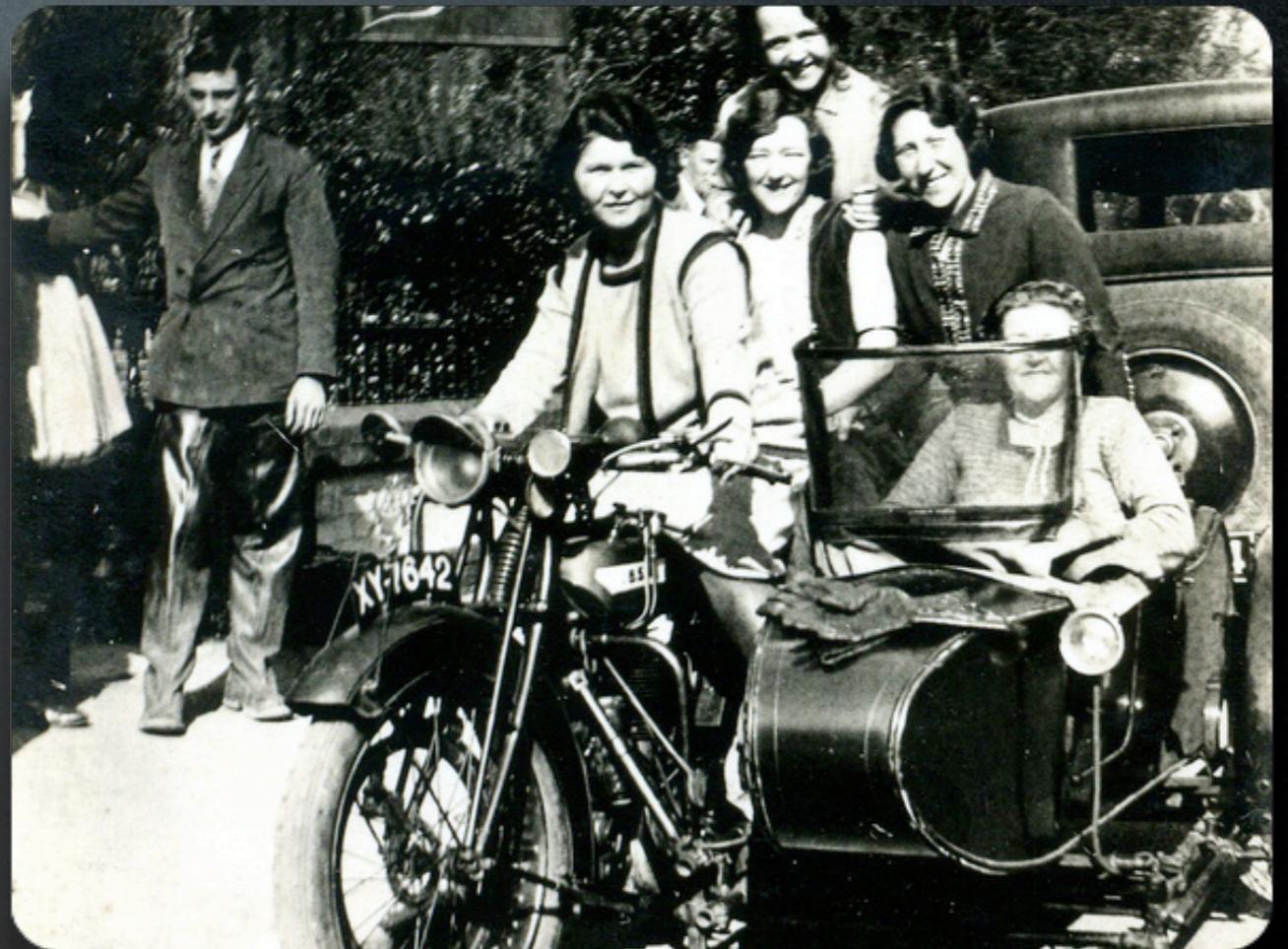
B2B Or Not: Instant access to the largest market in business e-commerce.
Know Thine Enemies: Research your competition with a D & B business background report.
Cash IQ: Get 'smart' money to help build your small business.

more business >

Document: Done Business Tech Fun Interact

How do you avoid a standstill?

- Two teams?
 - ▶ Where do all these people come from?
 - ▶ "Moving Target"



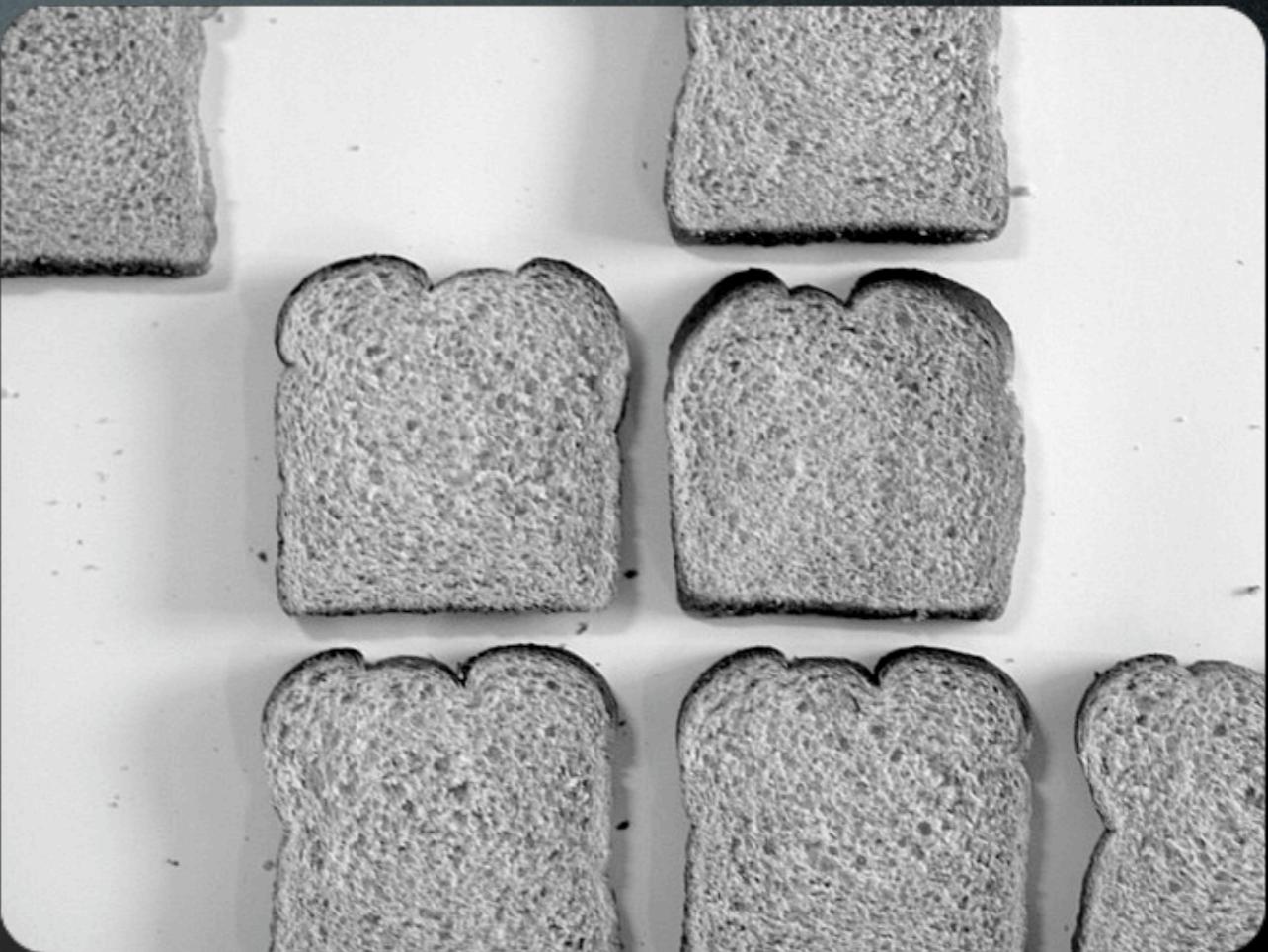
How do you avoid a standstill?

- Putting the old application in "Maintenance Mode"?
 - ▶ What's a bug?



Losing details

- Reinstating the original functionality
 - ▶ Do you really have everything documented?
 - ▶ Workarounds for real-world problems



No software is an island

- Software doesn't exist in a vacuum
- Compatibility with 3rd-party applications
- Your software as a part of a process



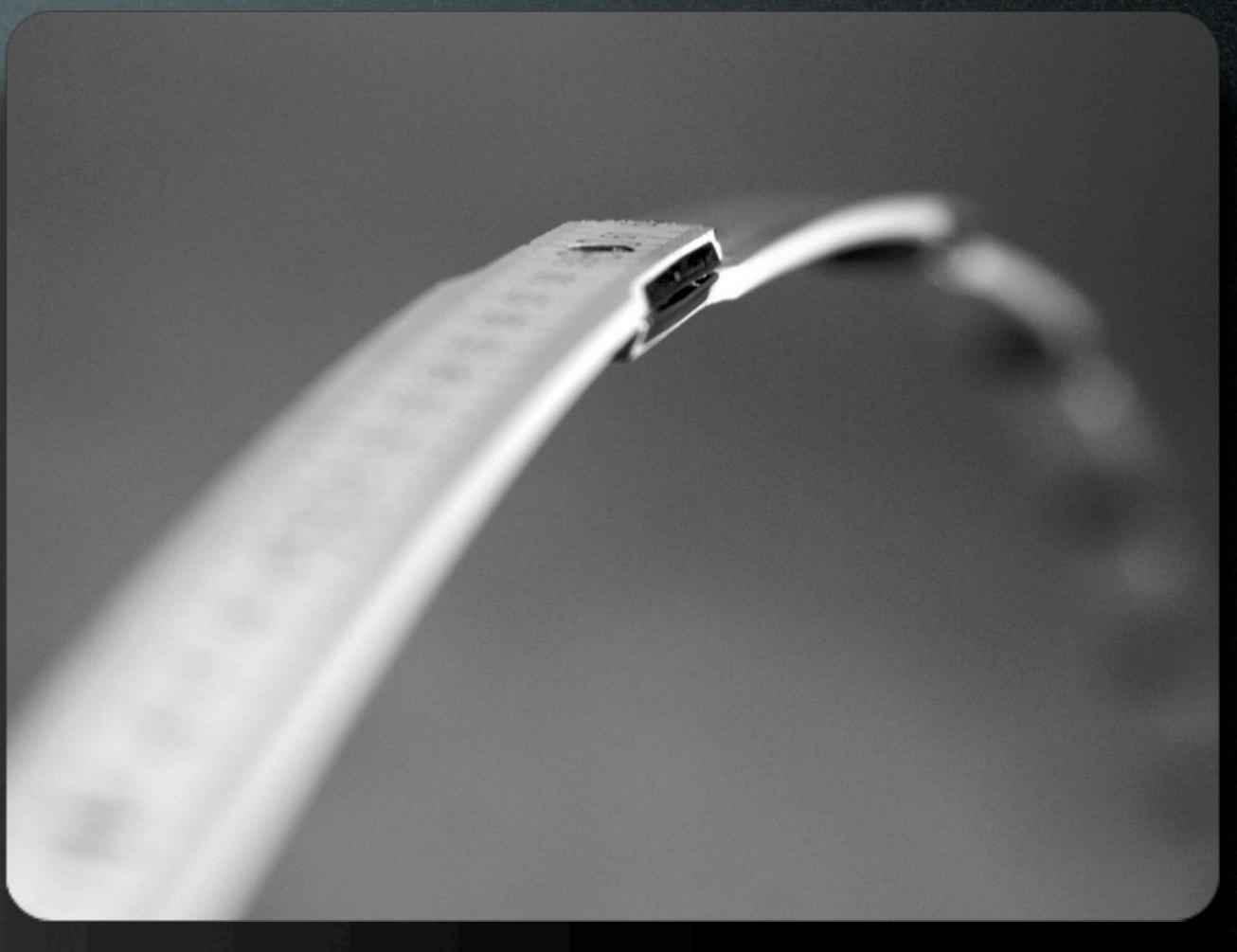
Can it really only get better?

- Sometimes there isn't a better solution
- Old mistakes
 - ▶ Environment,
Time pressure
- New mistakes
 - ▶ Learning process



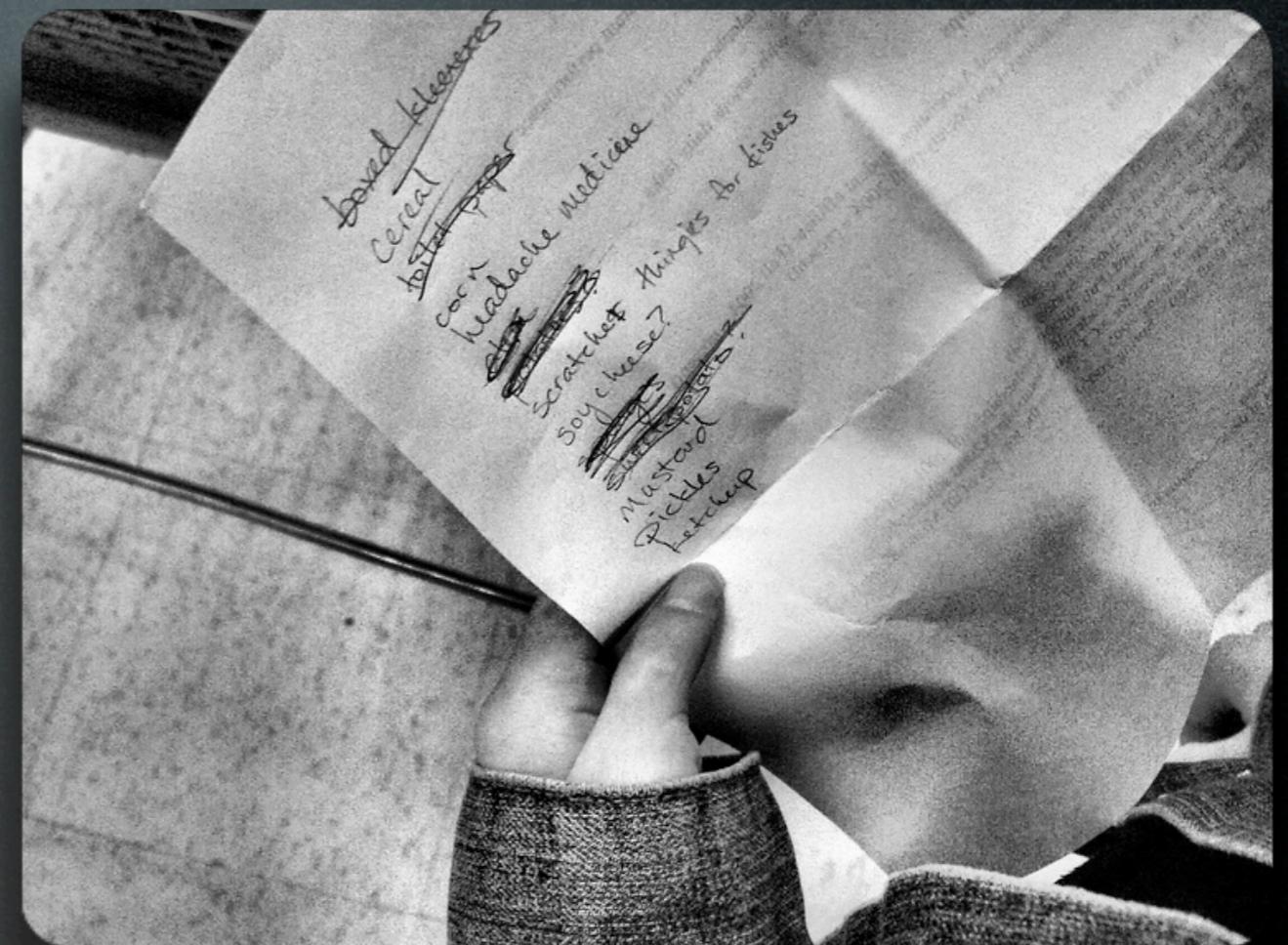
Exceptions?

- Change of technology
- In-house tools
- Refocussing



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Personally I believe that some systems just require some love, and radical refactoring, to breathe new life into them.

-- Tim Penhey

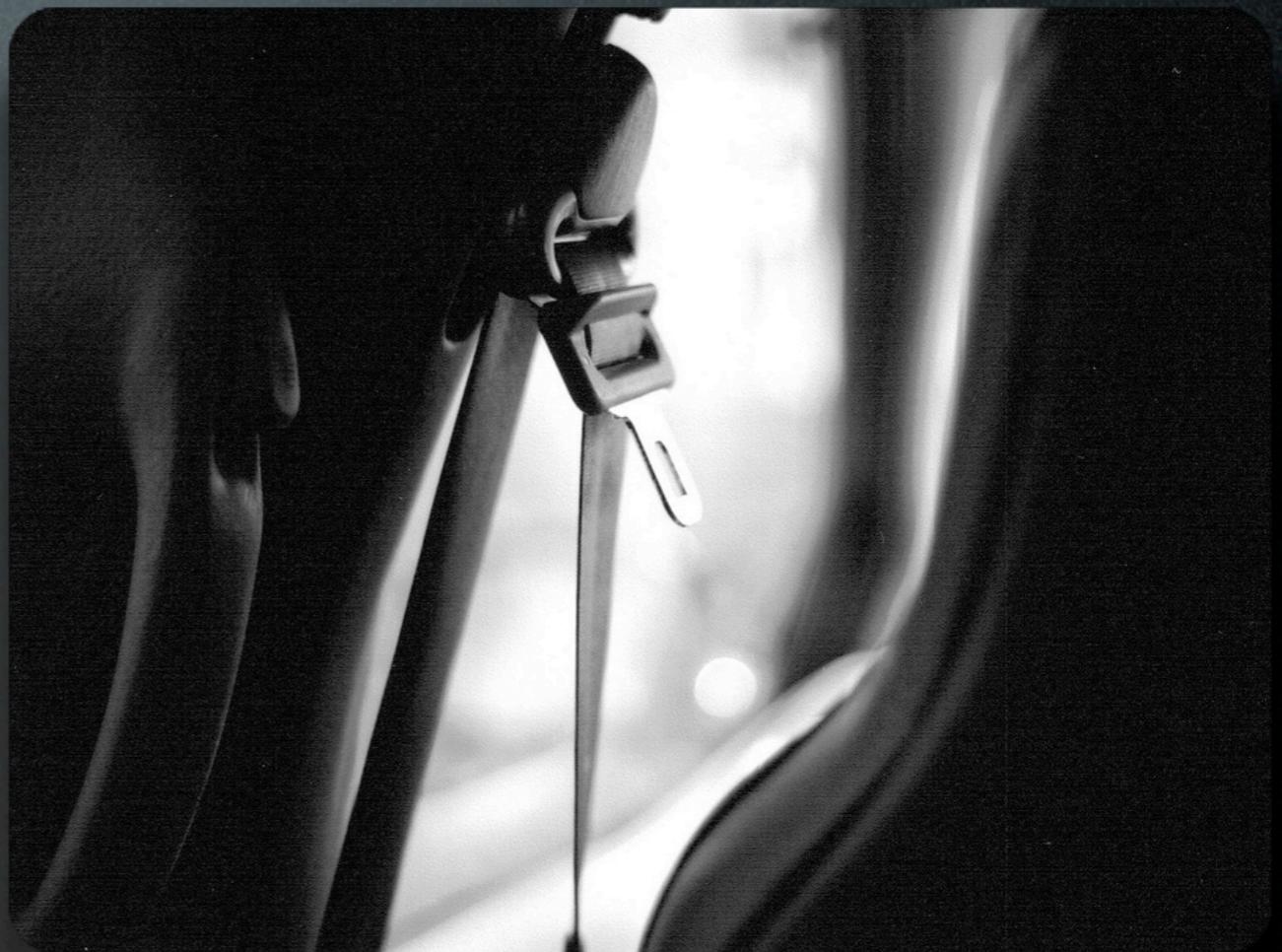
Refactoring

- (Re-)Identify modules
- Identify problematic areas of the code
 - ▶ Bottlenecks
 - ▶ Cluttered code



Refactoring: Tests

- Unit / Component Tests!
 - ▶ For every bug
- ➡ Benefits for current development
- Rewrite modules, one after another



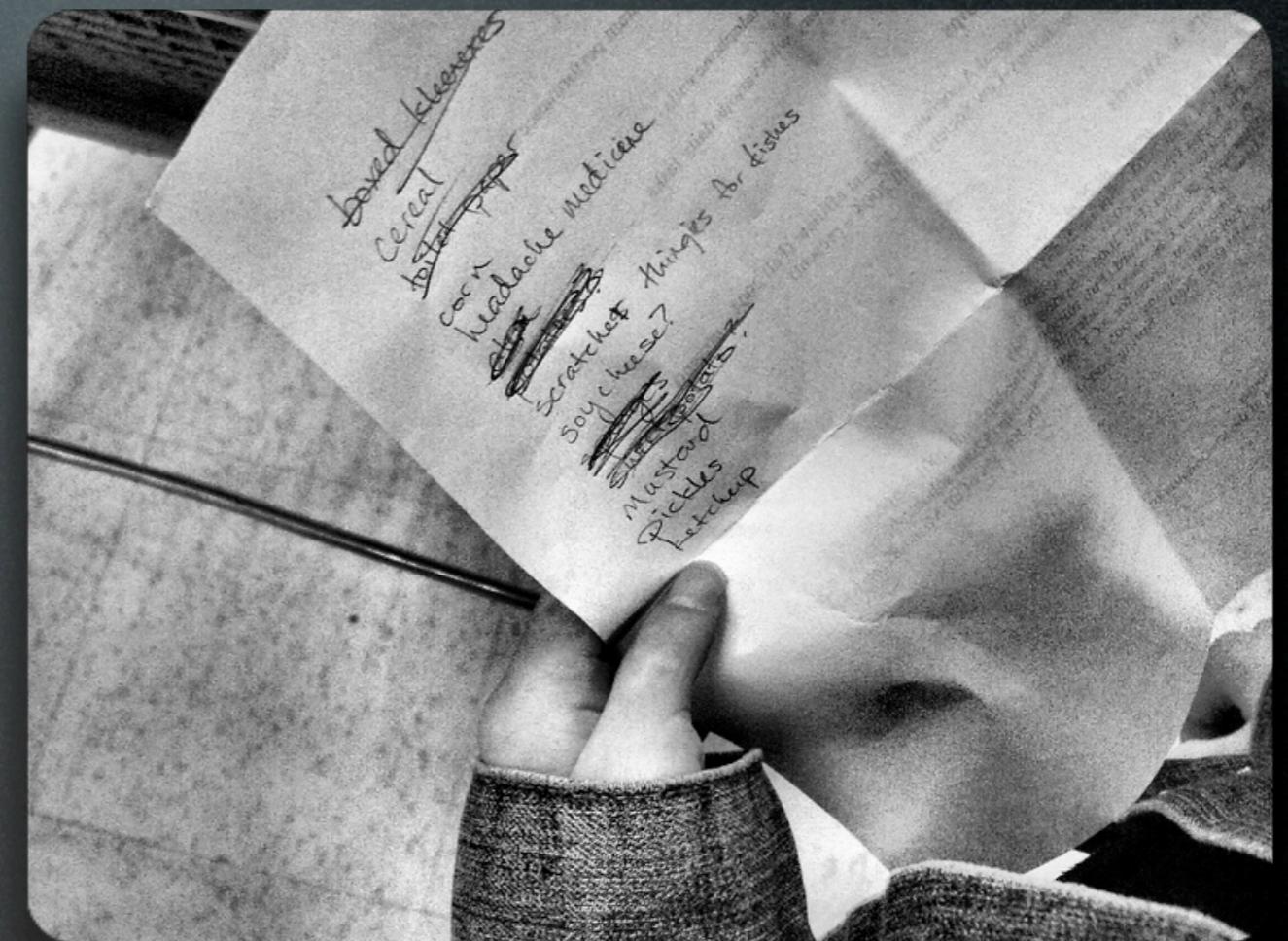
Benefits and side-effects

- Better understanding of the current system
- Better estimates for changes / fixes



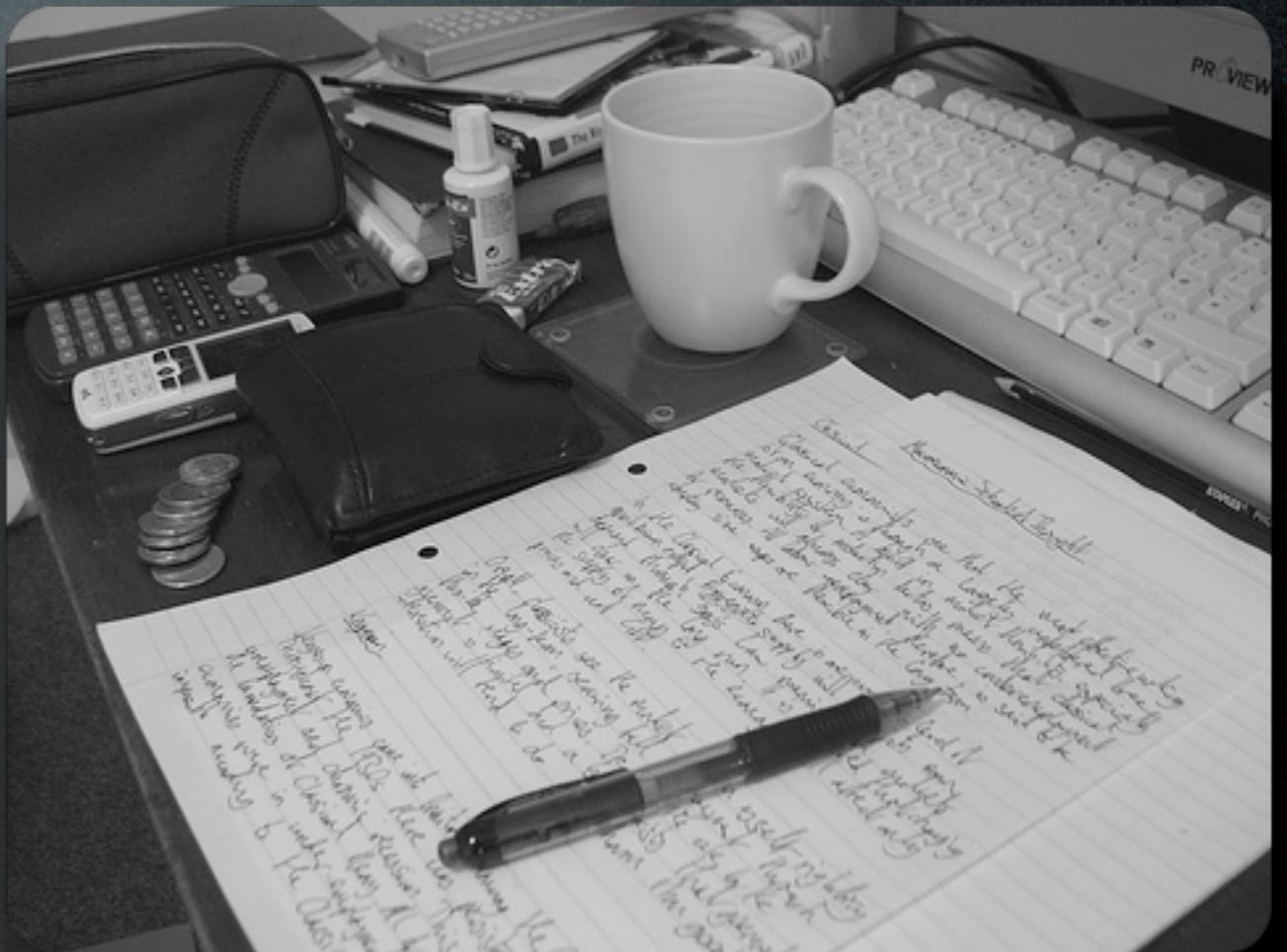
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Specifications?

- Better specifications?
 - ▶ Yeah, sure ...
- Can't do without them but get away from fully-fledged specifications
- Be flexible!
 - ▶ TDD, Agile



Planning is an important learning exercise, (...) Plans, on the other hand, are overrated.

-- Mary Poppendieck

Rotting Code

- How did that happen?
 - ▶ Pressure,
Lack of time?
 - ▶ Incompetence?
- Cause study
 - ▶ What can you do
about it?



More communication!

- Internal (project)
- With customers / users
- Development
 ↔ Marketing
 ↔ Customers



To summarize ...

Risks

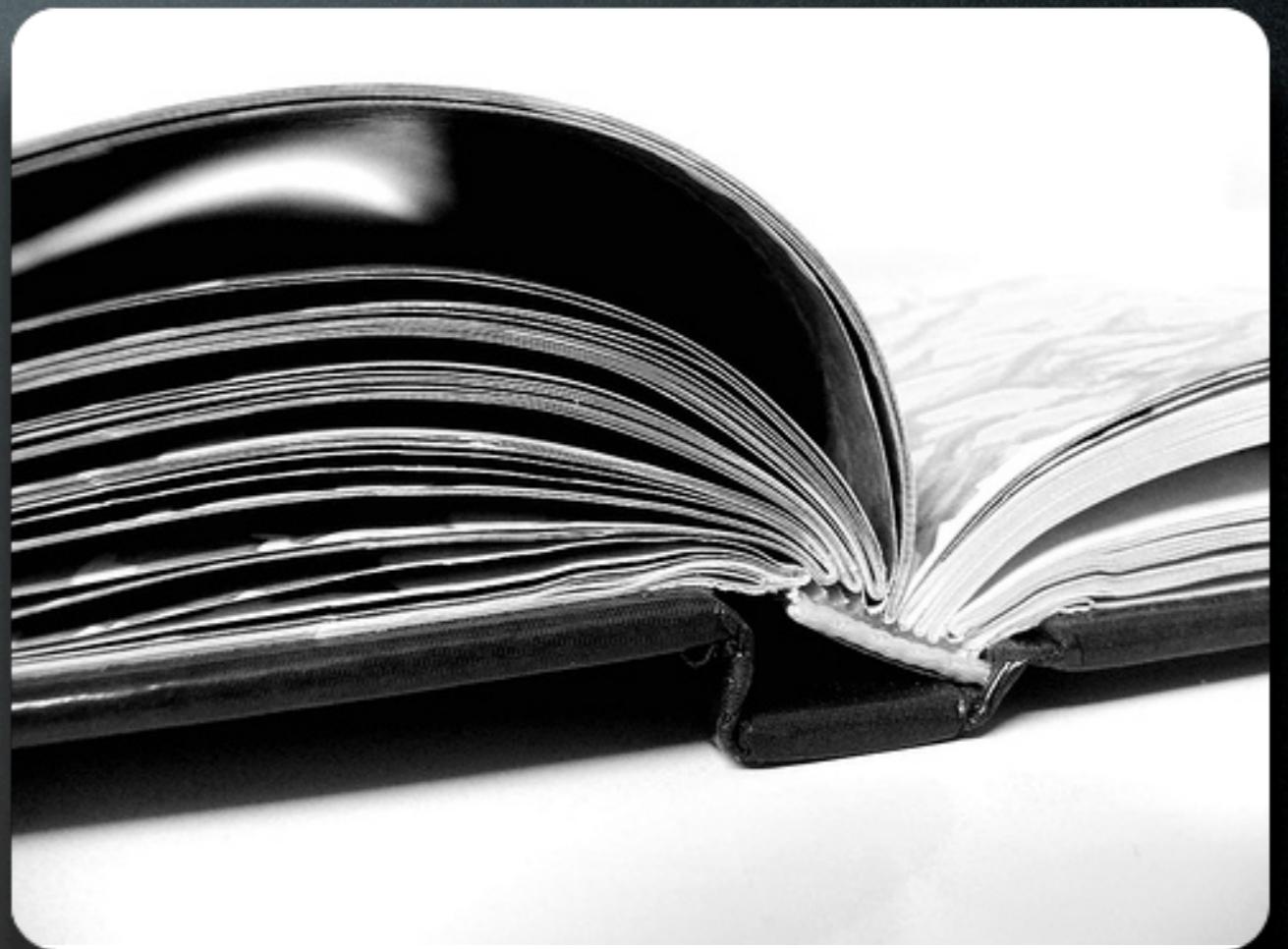
- Loss of ...
 - ▶ Customers / Market Share / Money
 - ▶ Functionality
 - ▶ 3rd-party applications
- repeating old mistakes
- new architecture, new mistakes

Remedies

- Refactoring instead of Rewriting
- Test Driven Development, Agile
- Cause studies:
 - ▶ What went wrong the last time?
- Improve communication

Resources

- Joel on Software
(Book and website)
- Agile Software
Development
- Lean Software
Development



P.S. Keywords are links.

Credits

- Photos via flickr.com, thanks to: Hopkinsii, striatic, paul goyette, Kazze, adrenalin, ikelee, Auntie P., Regorio, frozenchipmunk, Kevin Labianco, fallsroad, photo.bugz, tim_d, lagiuspo, Nathan James, ladyphoenixx_1999, Grim Reaper With A Lawnmower, re-Verse, amuk2006, Pathfinder Linden, Gigglejuice, manuki



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