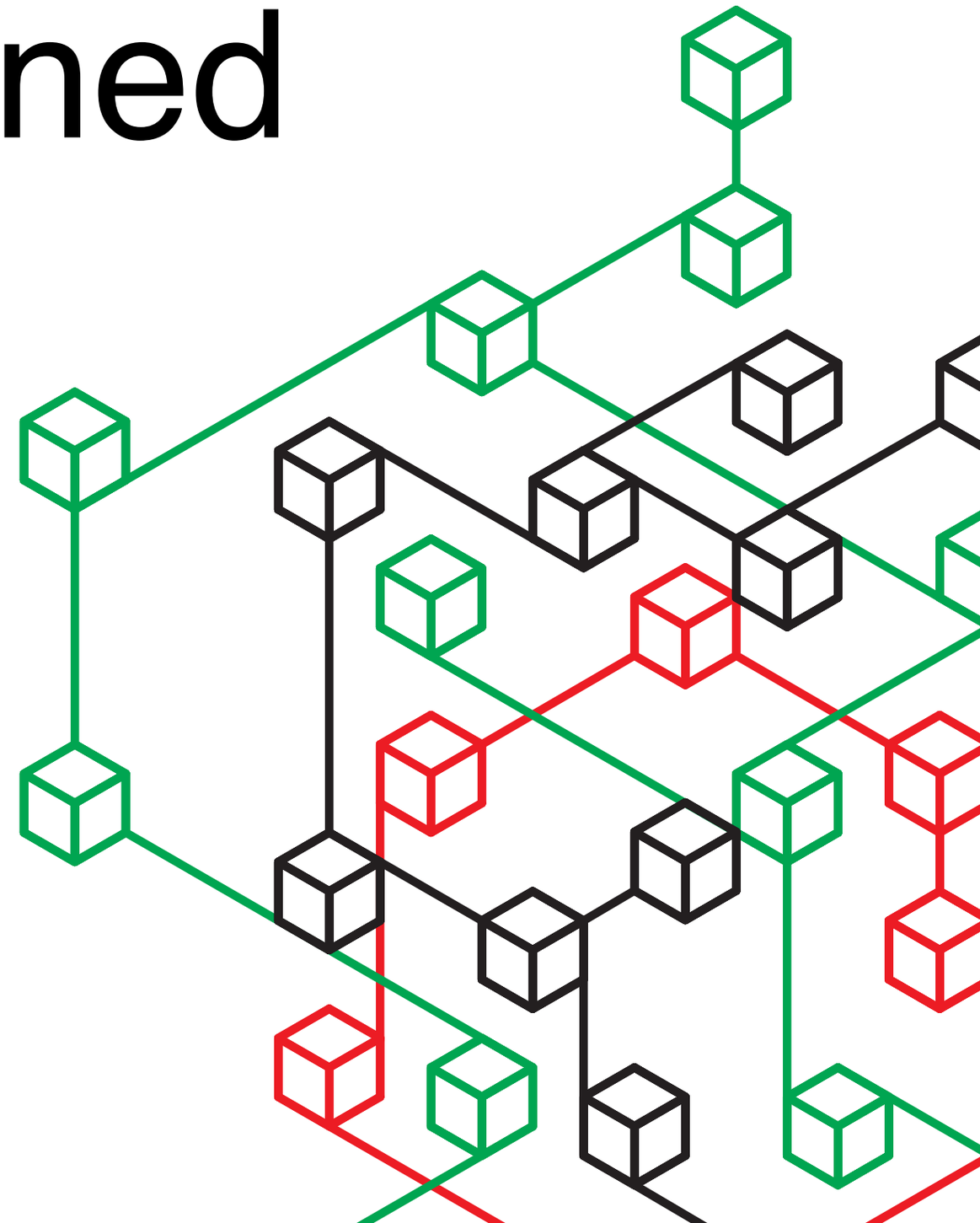
Code Quality
Lessons Learned



Bryan Helmkamp
Philly ETE
April 11, 2016


CODE CLIMATE

75,000+ Repositories

60,000+ Developers

1,500+ Organizations

Six questions

1. What is code quality?

leg·a·cy code

/ˈlegəsē kōd/

- Noun.
  - Code written by someone else; *or*
  - Code written by you, more than two weeks ago

Code quality has
many meanings.

Code Quality

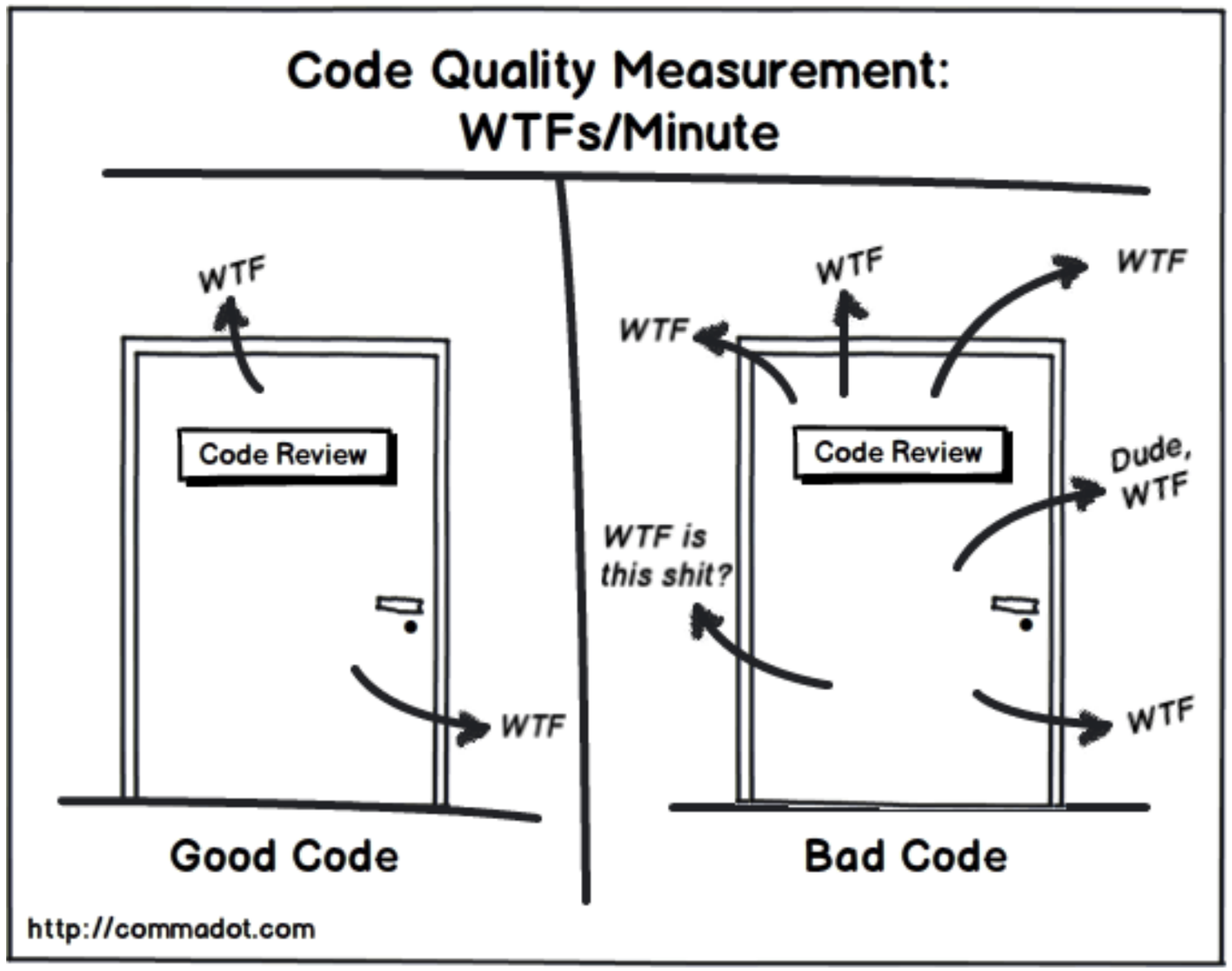
- Simple
- Well-tested
- Bug free
- Clear
- Refactored
- Documented
- Extensible
- Fast

Make sure you're team is on the same page about your goals.

Any code less decomposed than mine is a mess. Any code more decomposed than mine is over-engineered.

—Unknown

2. What's the best way to measure complexity?


Code Quality Measurement:
WTFs/Minute
WTF
Code Review
WTF
Good Code
WTF
WTF
WTF
WTF
Code Review
Dude,
WTF
WTF is
this shit?
WTF
Bad Code
http://commadot.com

Code Metrics

- Cyclomatic complexity
- ABC metric
- Lines of code (LOC)

ABC Metric

$$\sqrt{A^2 + B^2 + C^2}$$

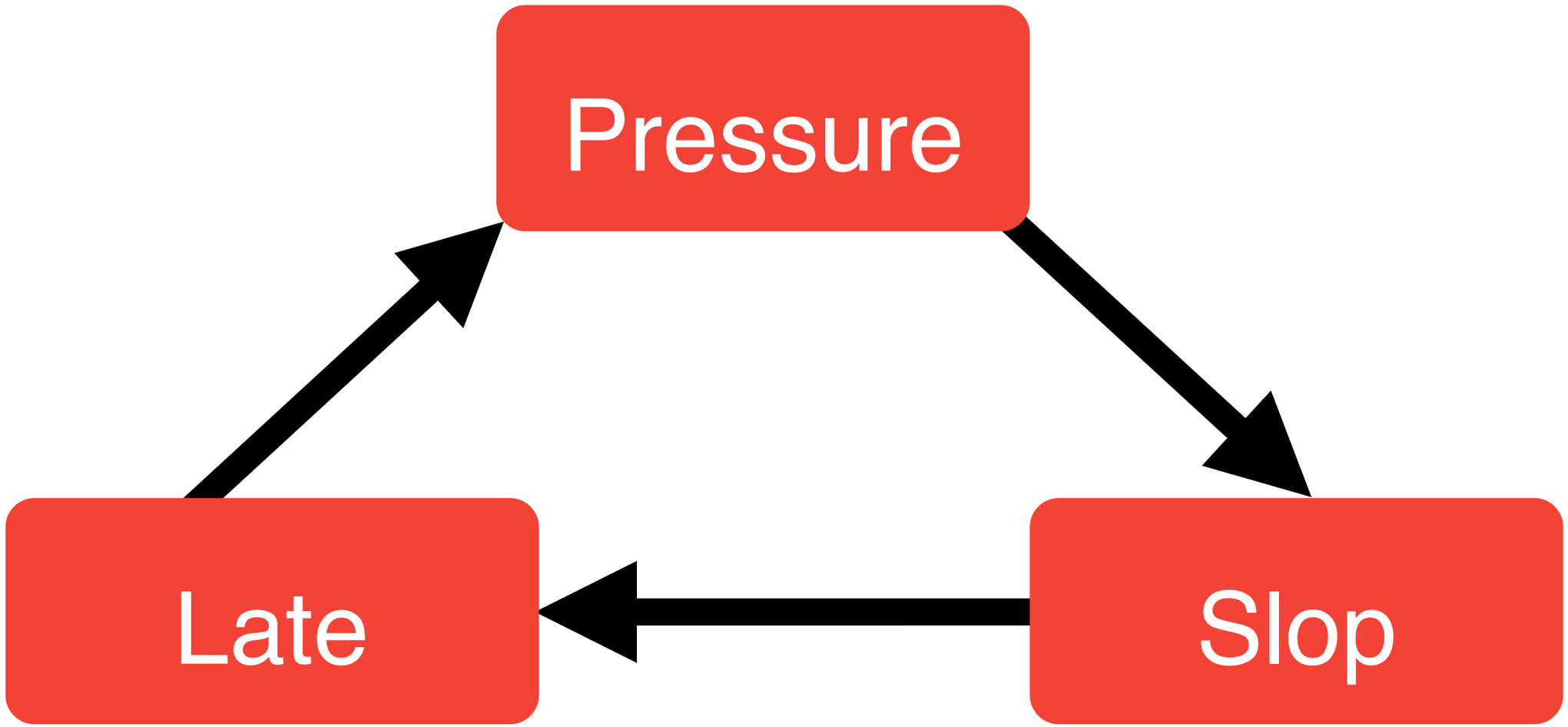
Use a metric that resonates for your team.

If you can’t decide, use Lines of Code.

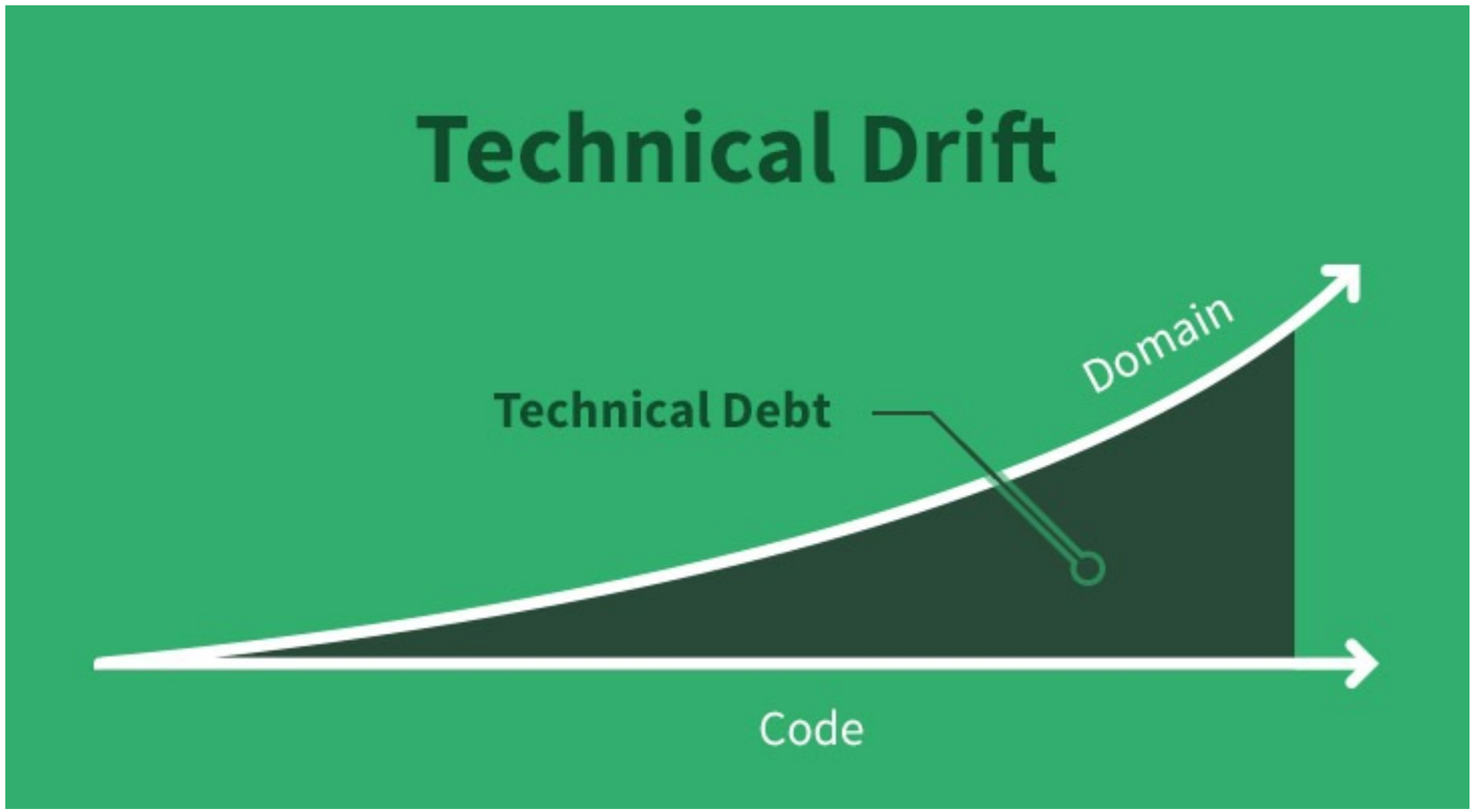
(And get back to work.)

3. Why are older projects harder to maintain?

Sloppy code is
self-reinforcing.

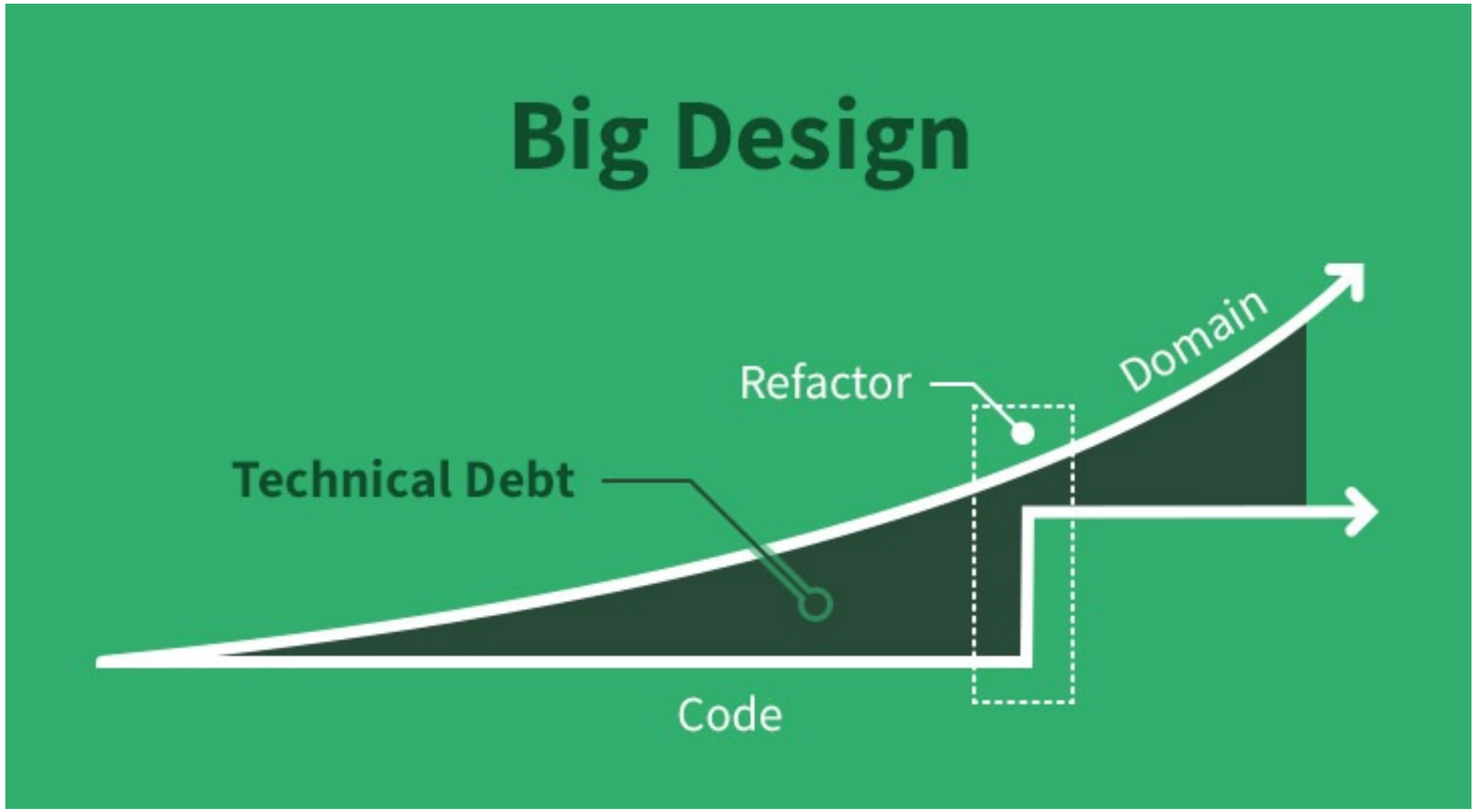

Pressure
Late
Slop

Technical Drift

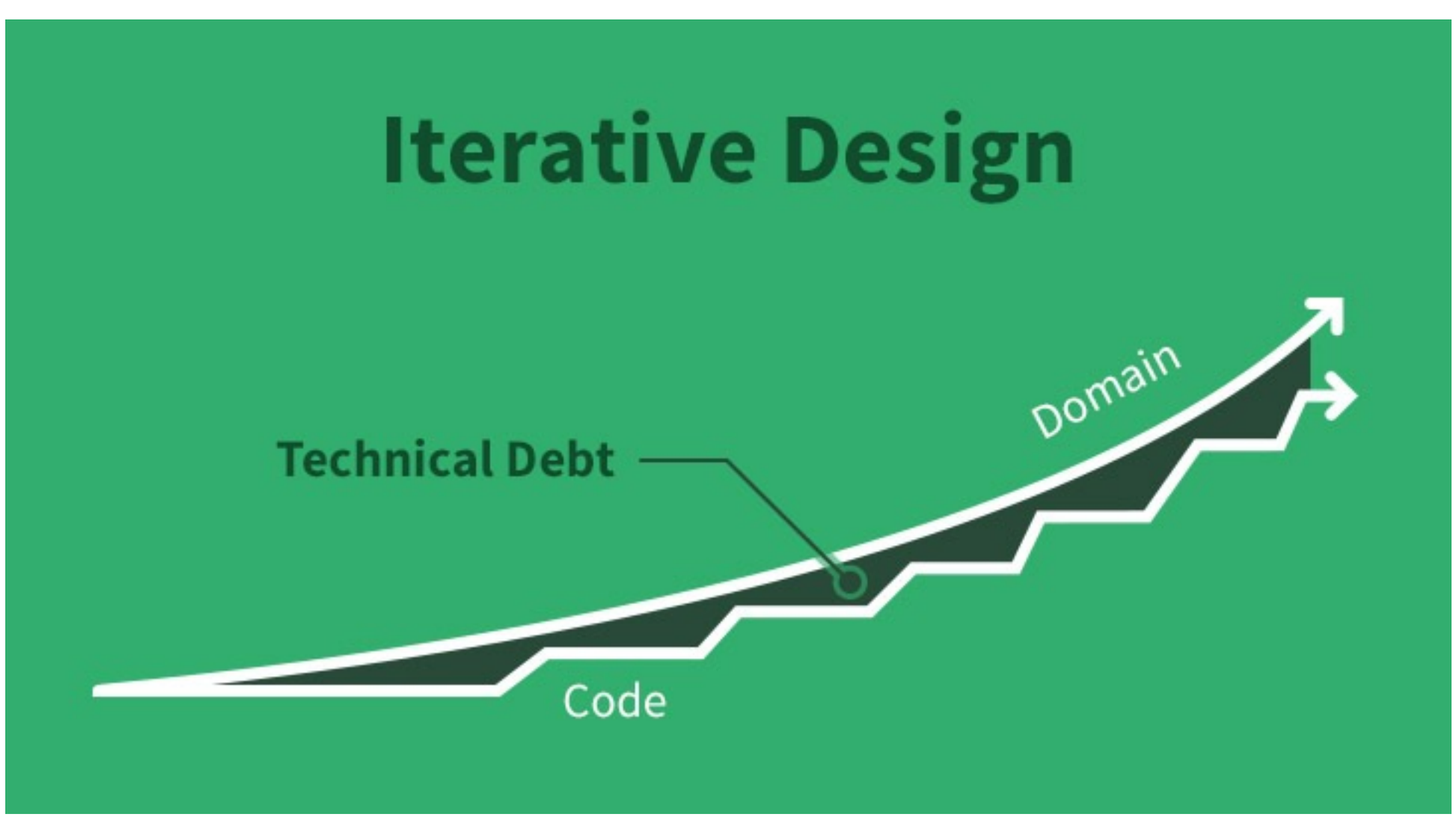


Code quality is a moving target.

Big Design

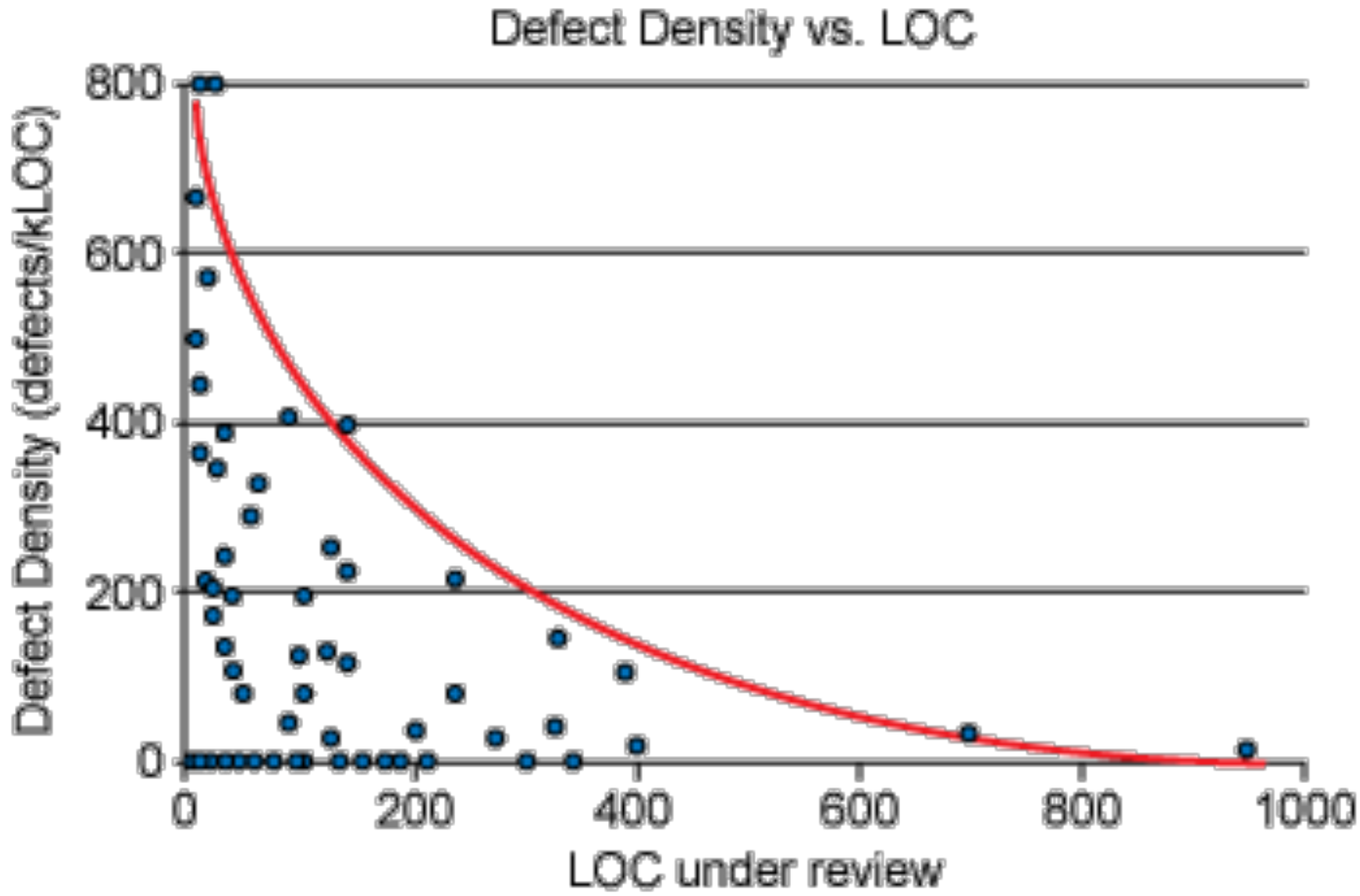


Iterative Design



https://www.flickr.com/photos/thomashawk/14165032149

4. What's the optimal size for a pull request?



http://www.ibm.com/developerworks/rational/library/11-proven-practices-for-peer-review/

Fewer issues are found
in larger pull requests.

(Not because larger PRs have fewer issues.)

Keep pull requests under 400 LOC.

We are more receptive to feedback from pedantic robots than pedantic people, and robots are more reliable.

—Brandon Keepers, GitHub

5. When is sloppy code not a problem?

Proving a hypothesis

Patrick McKenzie
@patio11

Follow

OH “@alinajaf: There are two types of bootstrapped startups in the world: those with integration tests and those with revenue.”

RETWEETS 32

LIKES 25

9:29 AM - 3 Jul 2013

Build the first one to throw it away.

Omega Mess

Code that only has inbound dependencies and does not change.

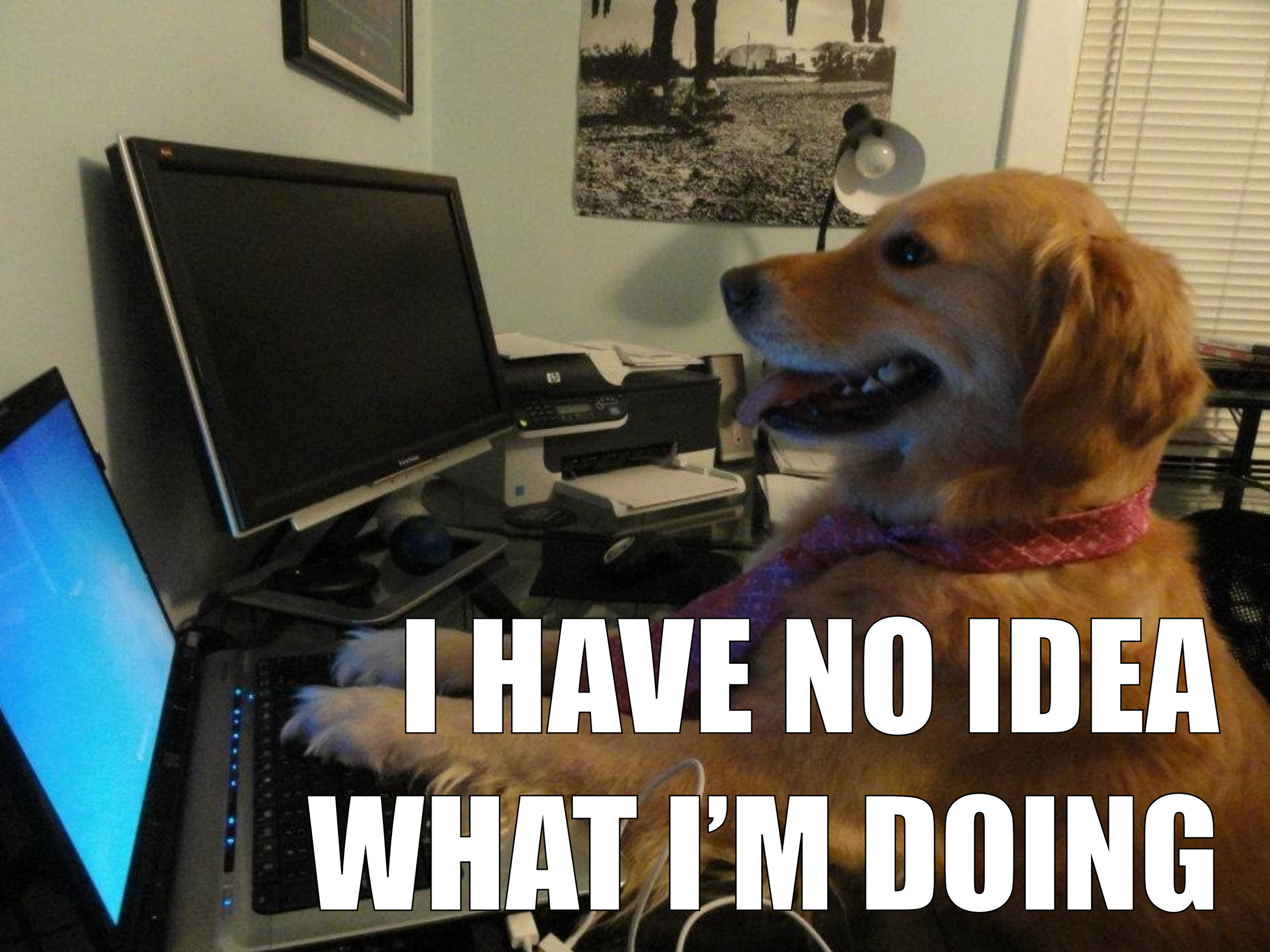
h/t @sandimetz

6. What is the biggest enemy to clean code?

Apathy?

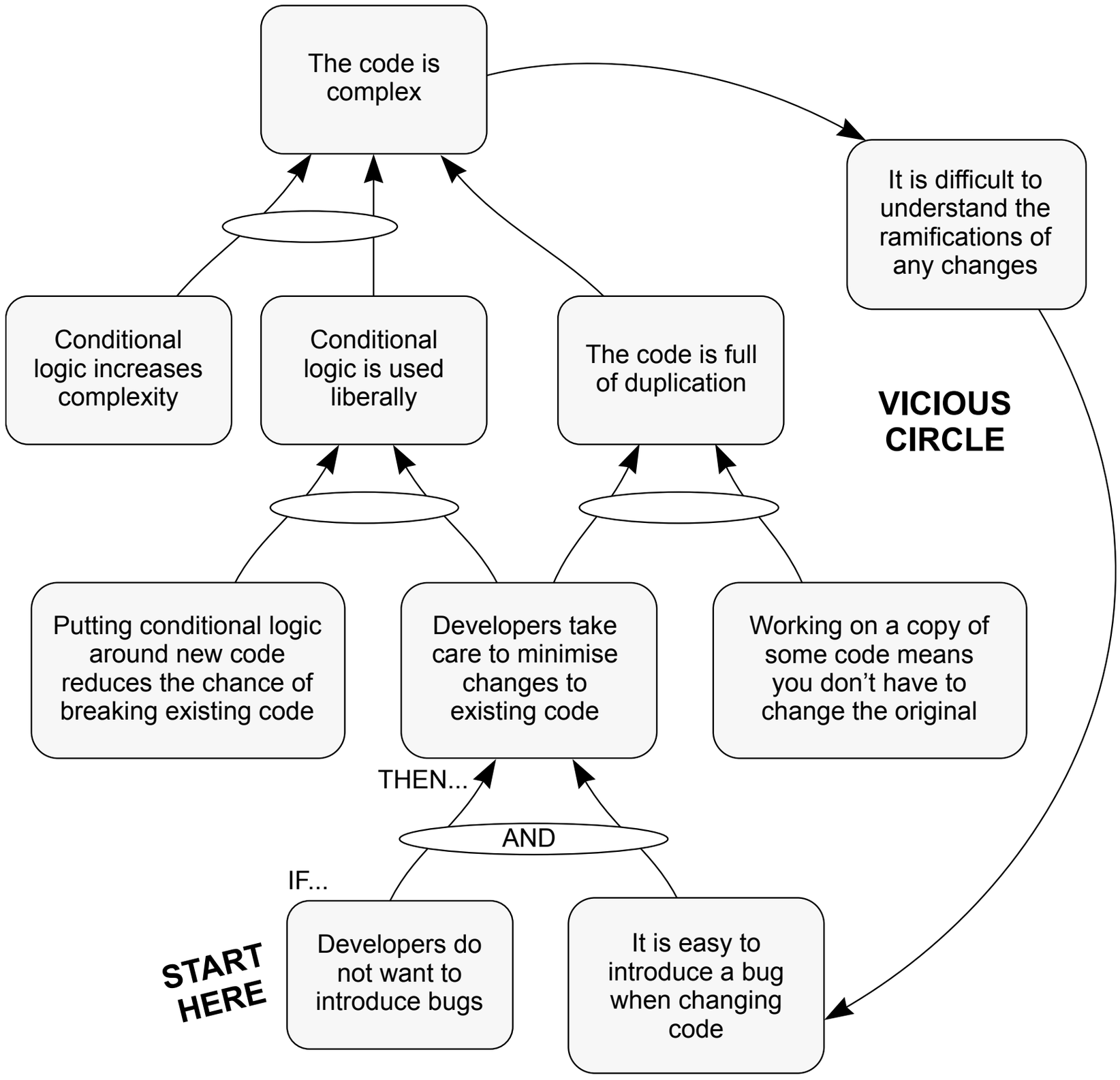

Welcome to
Emo
ONTARIO
Scenic Waterfront Park
SUPER TRUCKS AT EMO
SPEEDWAY AUG 6 AT 7 PM

Ability?


I HAVE NO IDEA
WHAT I'M DOING

Changing requirements?


HA HA!
BUSINESS



http://blog.davidpeterson.co.uk/2011/04/why-do-agile-projects-fail-so-often.html

Fear

Reducing Fear

- Automated testing
- Operational metrics
- Code review
- Static analysis
- Pair programming

“

Hope is not a plan.

Thank You.

Questions?

https://codeclimate.com