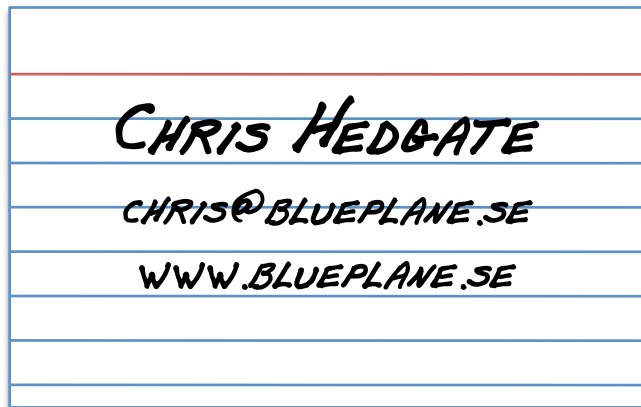




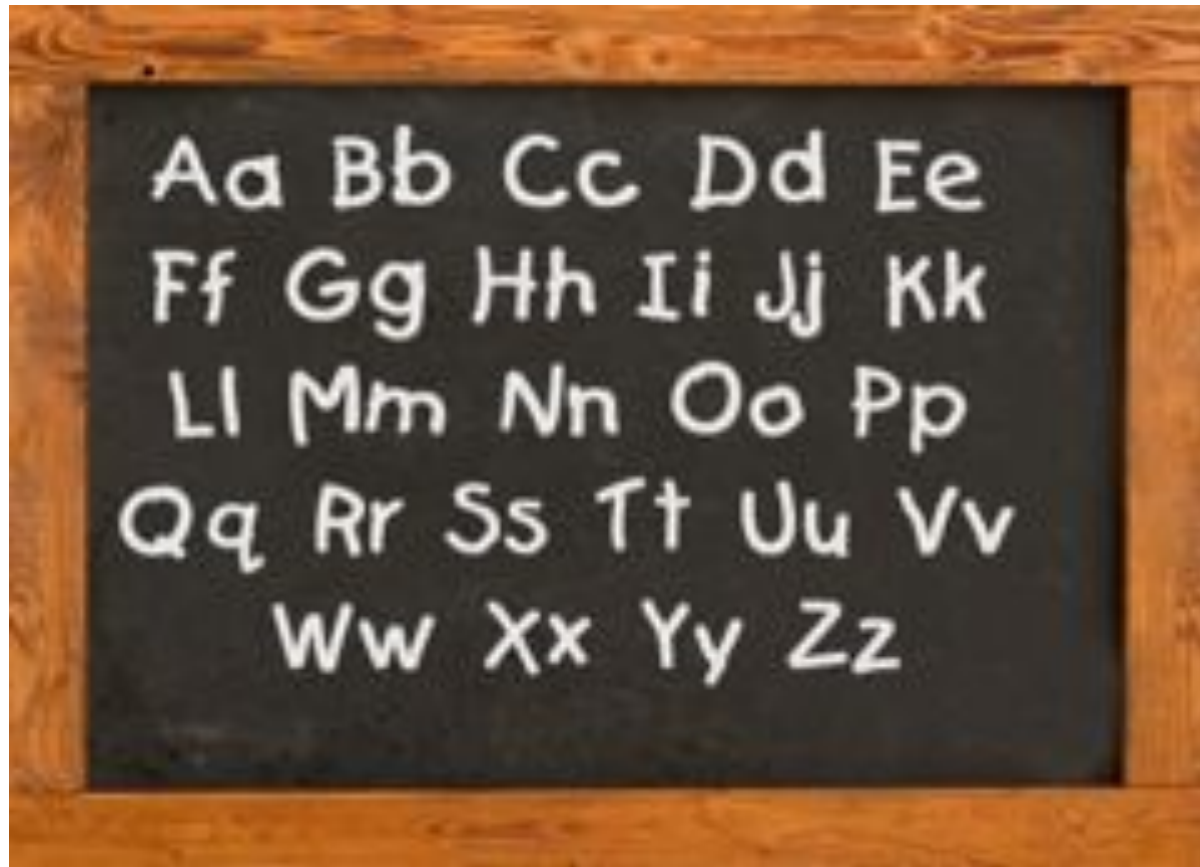
FROM GOOD TO GREAT DEVELOPER



'GOOD TO GREAT' MATTERS!

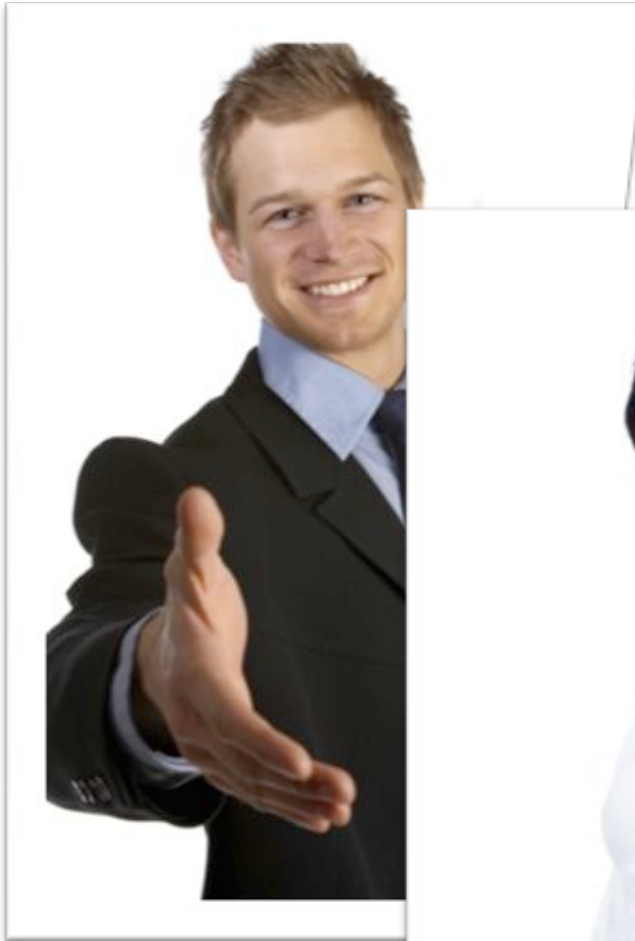


WE ARE DOING IT WRONG!



THANK YOU!

QUESTIONS?



REED, GREAT D



THE BOSS!



REED'S INSIGHTS



TOTAL COST OF SW DEV

DEVELOPMENT + MAINTENANCE

TOTAL COST OF SW DEV

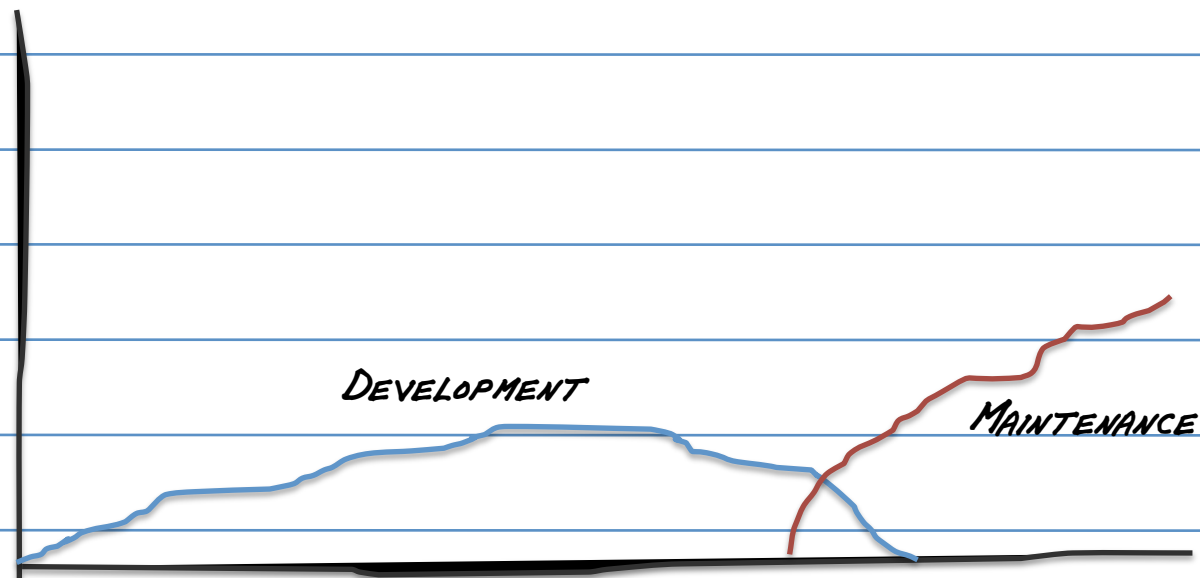
DEVELOPMENT

+

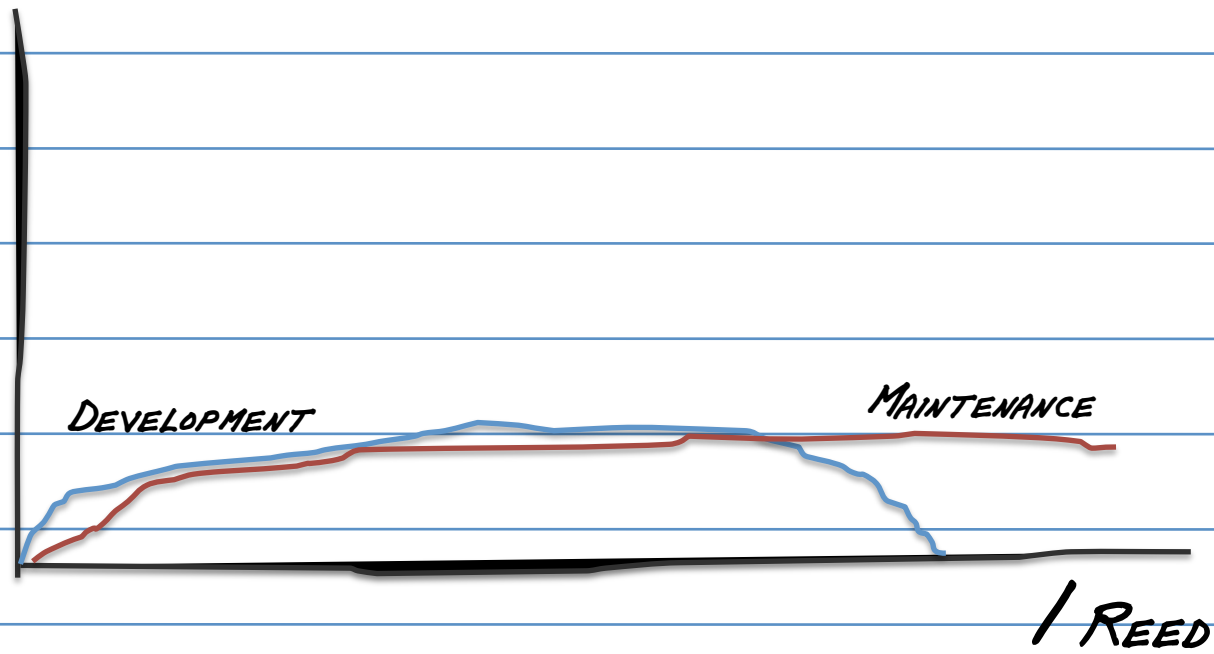
MAINTENANCE

/ REED

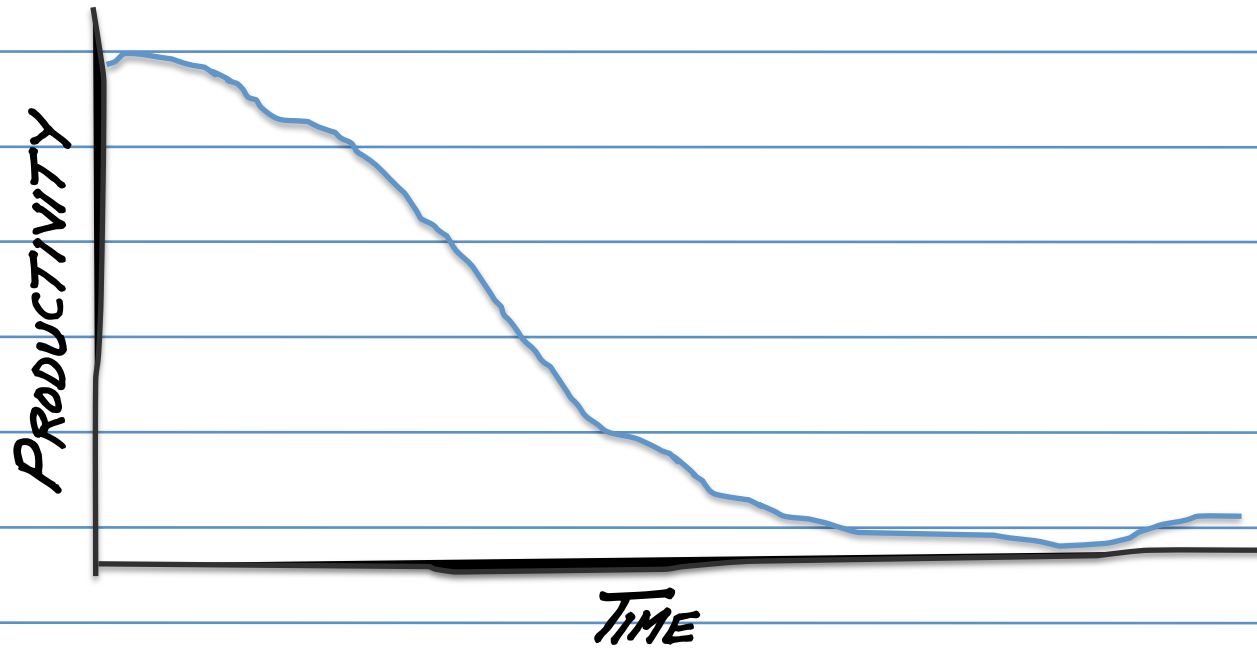
CODE LIFE CYCLE



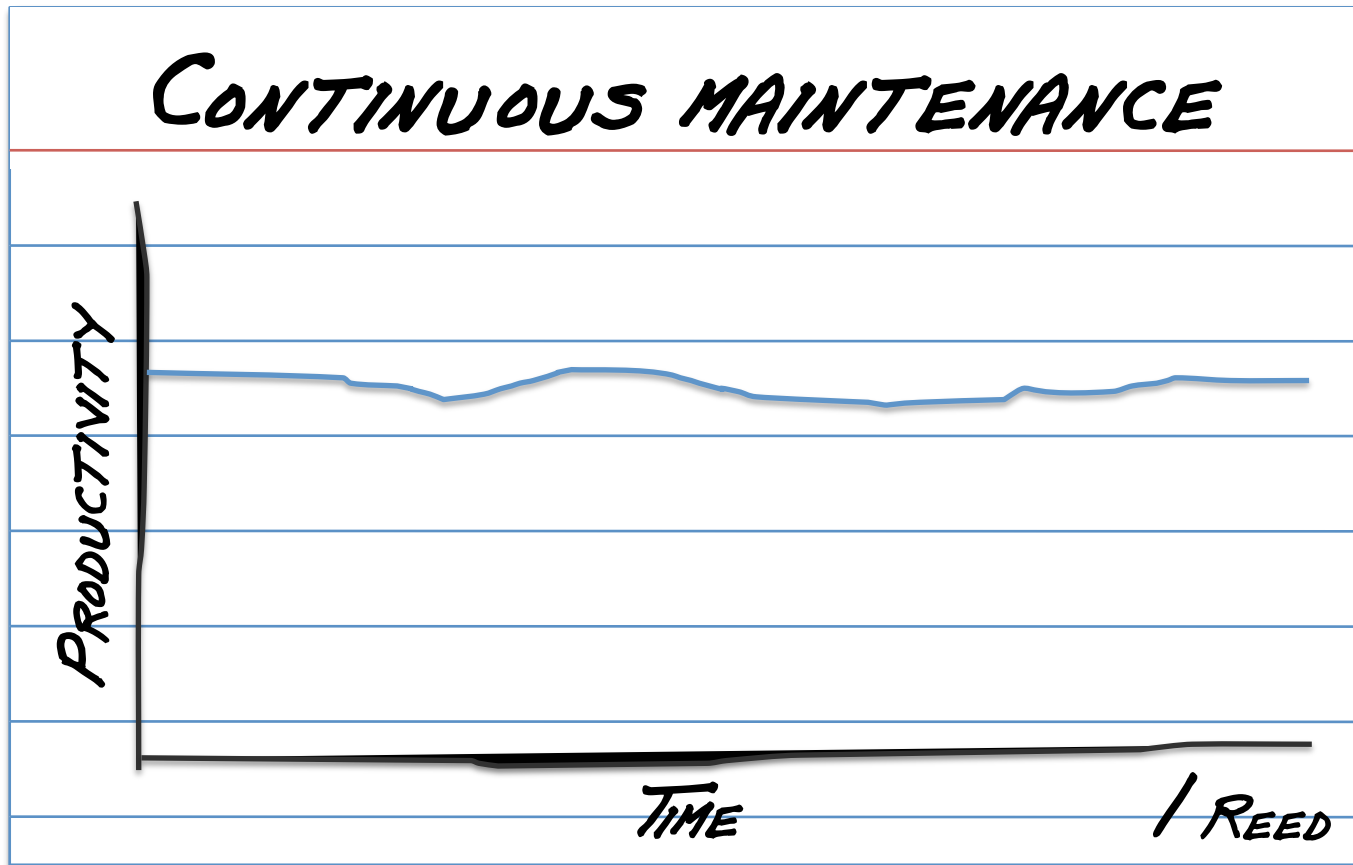
CODE LIFE CYCLE



NO MAINTENANCE...



CONTINUOUS MAINTENANCE





REED'S TWO
GUIDING PRINCIPLES

BASIC PRINCIPLE

*EXISTING CODE MUST BE
CONTINUOUSLY MAINTAINED
AND IMPROVED*

COROLLARY PRINCIPLE

**ALL CODE MUST BE
EASY TO MAINTAIN!**

CODE MAINTENANCE...

UNDERSTAND + MODIFY

COROLLARY PRINCIPLE

***ALL CODE MUST BE
EASY TO UNDERSTAND
AND SIMPLE TO MODIFY***

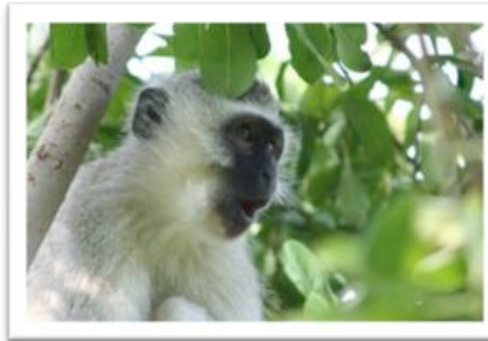
LOADSAPICS.COM

[LoadsAPics](#)

[Most viewed](#)

[Top ranked](#)

Top ranked pics



MOST DOWNLOADS

IN ORDER TO FIND GREAT

PICTURES TO DOWNLOAD

AS A VISITOR

I WANT TO SEE THE MOST

DOWNLOADED PICTURES

```
public void showPicturesSorted(  
    int age,  
    Comparator<Picture> sortAlgorithm)  
    throws NotOldEnoughException {  
    verifyUserIsOldEnough(age);  
    List<Picture> allPictures = findAllPictures();  
    sortPictures(allPictures, sortAlgorithm);  
    view.setPicturesToShow(allPictures);  
}
```

TOP RANKED PICTURES

```
controller = new PictureListingController(view);  
controller.showPicturesByRank(age);
```

```
controller = new PictureListingController(view);  
controller.showPicturesSorted(  
    age,  
    new AverageVoteComparator());
```

MOST VIEWED PICTURES

```
controller = new PictureListingController(view);  
controller.showTopPictures(age);
```

```
controller = new PictureListingController(view);  
controller.showPicturesSorted(  
    age,  
    new ViewsComparator());
```

MOST DOWNLOADED PICTURES

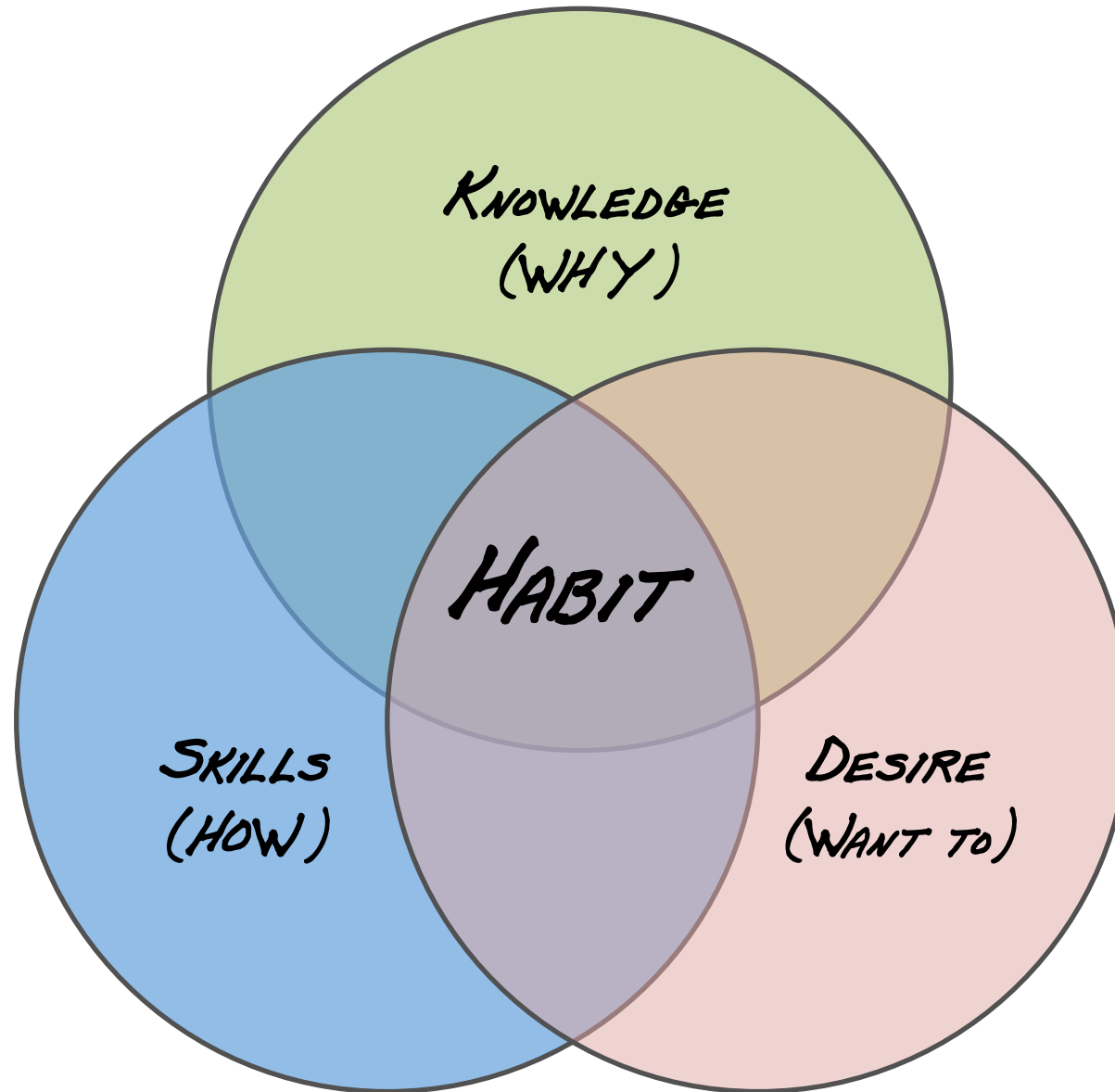
```
controller = new PictureListingController(view);  
controller.showPicturesSorted(  
    age,  
    new DownloadsComparator());
```

*CONTINUOUS CODE
MAINTENANCE IS
A HABIT*



“WHY IS IT JUST ME...?”





FAILURE?



TDD gives us
inconsistent design

TDD
does not work!

We try to
use TDD

Mgmt. puts time
pressure on us

We learn TDD

We want to
use TDD!

TDD should
improve design

Unit testing doesn't affect bug count

Unit testing does not work!

Unit tests mostly for simple code

Complex code is bug-prone

Unit testing is hard

Coverage >80%

Too many bugs!

DRIVERS: STAND UP!



FOUR STAGES OF COMPETENCE



GOOD TO GREAT

1. INSPIRE WITH ATTITUDE

2. USE SIMPLE TOOLS

3. INVOLVE PEOPLE

REED'S ATTITUDE

SIMPLIFY,

IMPROVE,

MODIFY

REED'S ATTITUDE

NEVER LEAVE CODE IN
WORSE SHAPE THAN HOW
YOU FOUND IT

REED'S SIMPLE TOOLS

NAME THINGS

REED'S SIMPLE TOOLS

ELIMINATE

DUPLICATION

PAIR PROGRAMMING



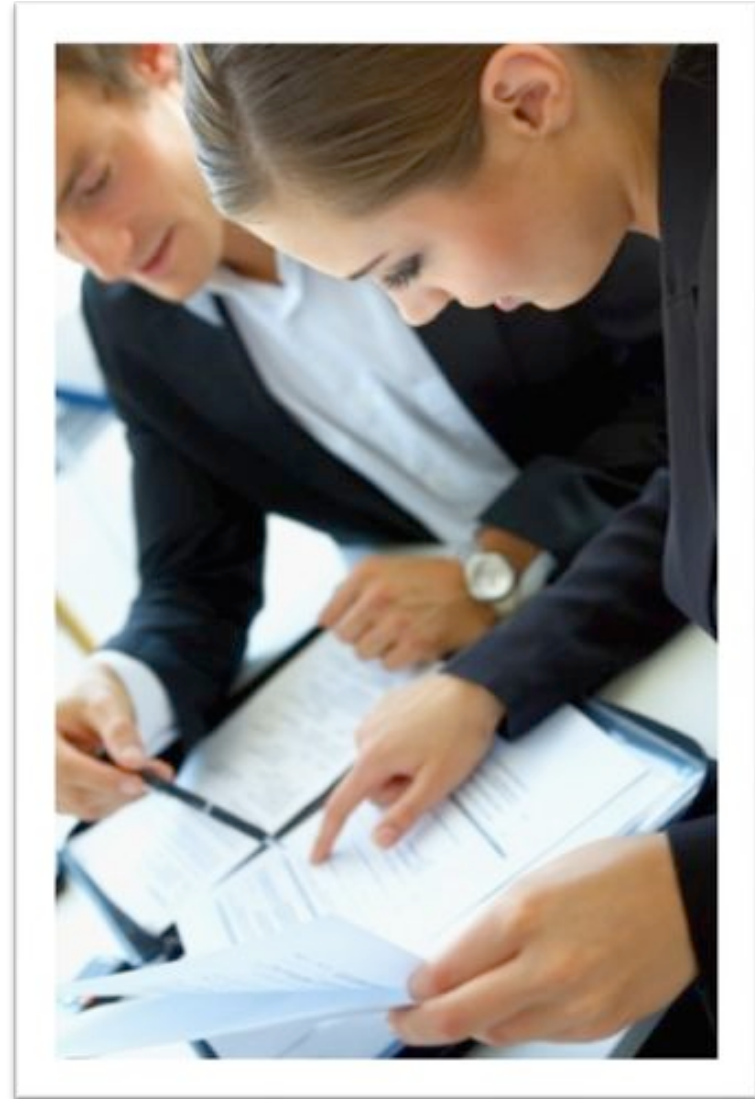
STUDY CIRCLES



REFLECT AND DISCUSS



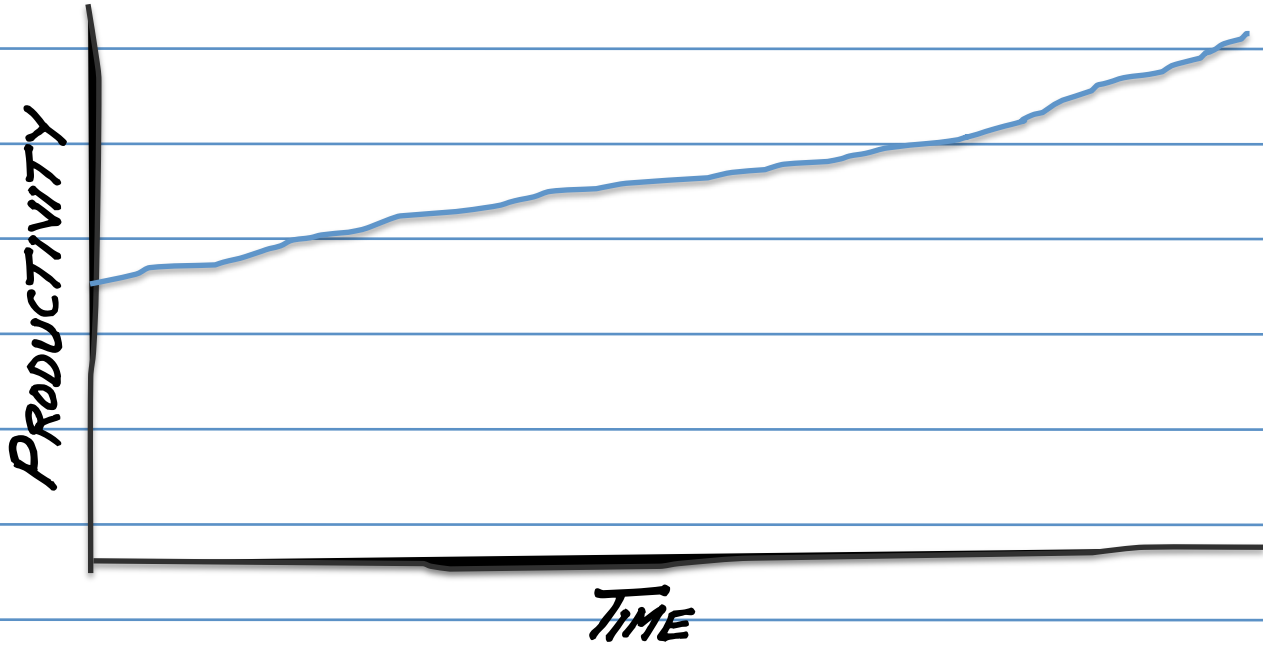
ACTION!
START DOING
COLLECTIVE CODE
REVIEWS



*THINK ABOUT
HOW TO GUIDE THE TEAM!*



GREAT TEAM



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plane
blue

