

Agile + DevOps **EAST**

A TECHWELL EVENT

K4

Keynote

Thursday, November 8th, 2018 8:30 AM

Empathy-Driven Development

Presented by:

Andrea Goulet

Corgibytes

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Andrea Goulet

Andrea Goulet is the CEO of Corgibytes, a software development shop dedicated to maintaining and modernizing software applications and has been named by LinkedIn as one of the Top 10 Professionals in Software Under 35. She's the founder of LegacyCode. Rocks and hosts a podcast dedicated to changing the way we think about legacy code. You may recognize her from prominent industry publications such as the First Round Review, Hanselminutes, Software Engineering Daily, and more. Andrea is a sought after keynote speaker is currently working on her first book: *Becoming Technical: Build an Amazing Career in Tech Starting at Square Zero*. In her spare time, Andrea enjoys blogging about the intersection of social science and software. She loves watching her kids explore the world and is a sucker for a good physics documentary. You can recognize her by the JavaScript tattoo on her wrist.



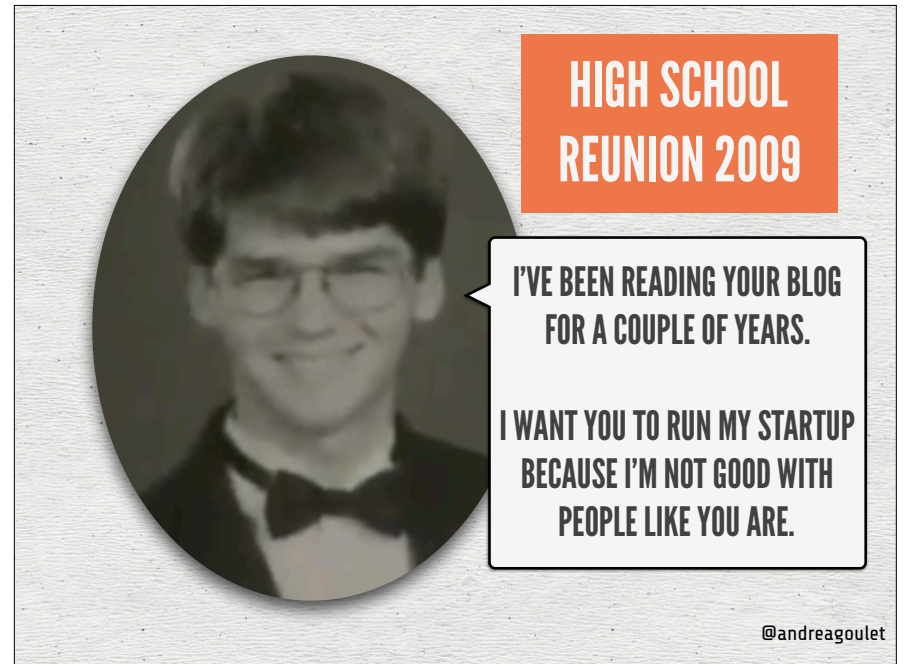
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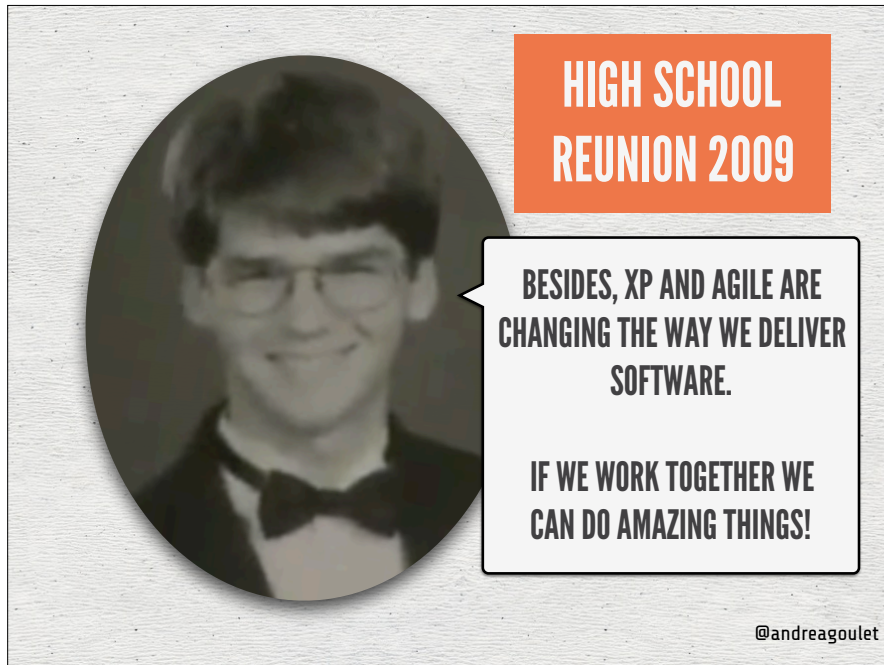
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**A FEW YEARS LATER, SCOTT
ASKED ANOTHER QUESTION...**

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I SAID YES AGAIN...



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**IF I HADN'T FALLEN IN LOVE
WITH THE GUY, I PROBABLY
WOULD HAVE QUIT.**

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BUT I DIDN'T.

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CORGI BYTES
old code new tricks

**WE TRANSFORM SLOW, SLUGGISH, SLOPPY
SOFTWARE SYSTEMS INTO CODE THAT:**

- GENERATES REVENUE
- LOWERS OPERATING COSTS
- REDUCES RISK

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**OUR STRONG FOCUS ON
COMMUNICATION AND EMPATHY
IS CRUCIAL ON THESE PROJECTS**

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**HOW CAN WE MAKE SURE WE'RE
USING EMPATHY AT EVERY STAGE
IN THE DEVELOPMENT PROCESS?**

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QUESTIONS FOR TODAY'S TALK

1. WHAT IS EMPATHY?
2. WHY DOES EMPATHY MATTER?
3. WHAT IF WE IGNORE EMPATHY?
4. HOW DO WE PRACTICE EMPATHY?

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WHAT IS EMPATHY?

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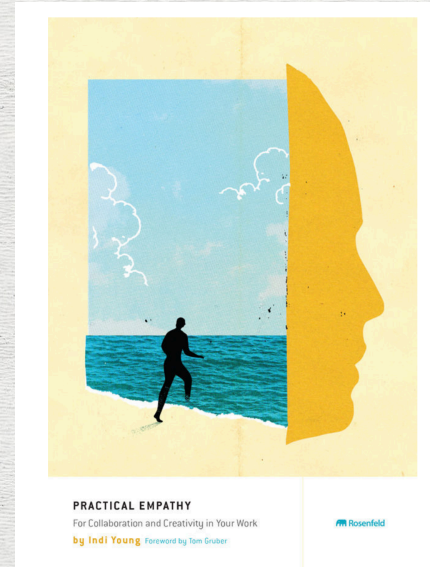
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“EMPATHY IS AT THE HEART
OF REAL RATIONALITY.”

-GEORGE LAKOFF

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EMPATHY IS A SKILL.
DEVELOPED BY LISTENING & UNDERSTANDING
APPLIED BY PERSPECTIVE TAKING

Source: Practical Empathy by Indi Young

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SIX TYPES OF EMPATHY

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MIRRORED EMPATHY

**STIMULATION OF MIRROR NEURONS IN YOUR BRAIN
THAT CAUSES YOU TO ACT LIKE OTHER PEOPLE.**

USEFUL FOR ESTABLISHING RAPPORT.

Source: Practical Empathy by Indi Young

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EMOTIONAL EMPATHY

**REFERRED TO “AFFECTIVE EMPATHY” IN PSYCHOLOGY
LITERATURE. YOU FEEL WHAT SOMEONE ELSE IS
FEELING – LIKE LOSING YOURSELF WITH A
CHARACTER IN A BOOK OR A MOVIE.**

Source: Practical Empathy by Indi Young

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EMPATHETIC CONCERN

**UPON SENSING EMOTIONAL EMPATHY, YOU CONSIDER
YOUR RESPONSE AND ACT UPON YOUR FEELINGS.**

Source: Practical Empathy by Indi Young

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PERSONAL DISTRESS

**SEEING DISTRESS IN ANOTHER CAUSES A SHARP
MOMENT OF THE SAME DISTRESS.**

Source: Practical Empathy by Indi Young

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SELF-EMPATHY

**TURNING YOUR PURPOSEFUL DISCOVERY INWARD TO
LEARN HOW YOUR OWN MIND REASONS AND REACTS**

Source: Practical Empathy by Indi Young

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COGNITIVE EMPATHY

**PURPOSEFULLY DISCOVERING THE UNDERLYING
THOUGHTS AND EMOTIONS THAT GUIDE SOMEONE
ELSE'S BEHAVIOR.**

A RATIONAL AND ANALYTICAL PROCESS.

Source: Practical Empathy by Indi Young

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**CORGIBYTES DEFINES EMPATHY AS:
PROACTIVE PERSPECTIVE TAKING
AND PROBLEM SOLVING.**

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**WHY DOES EMPATHY
MATTER?**

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**EMPATHY IS THE FASTEST WAY
TO BUILD TRUST ON A TEAM**

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LEGACY CODE

CODE WITHOUT TESTS

- Michael Feathers

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LEGACY CODE

CODE WITHOUT TRUST

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LEGACY CODE

CODE WITHOUT CONTEXT

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LEGACY CODE

CODE WITHOUT COMMUNICATION ARTIFACTS

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SOFTWARE ARCHAEOLOGY



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SOFTWARE ARCHAEOLOGY



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SOFTWARE ARCHAEOLOGY



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SOFTWARE ARCHAEOLOGY



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SOFTWARE ARCHAEOLOGY

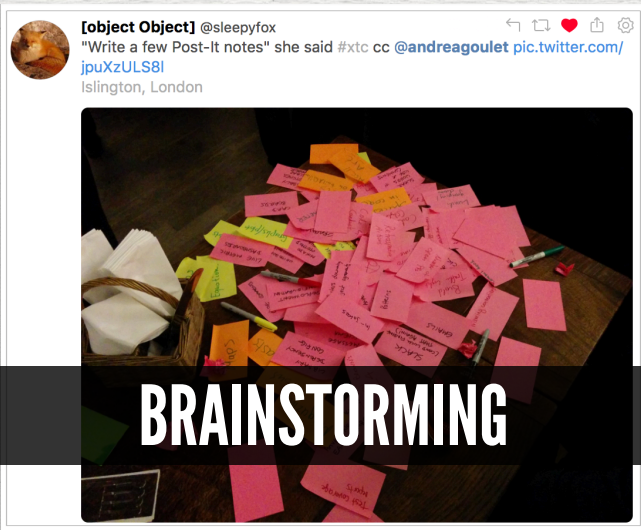


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ARE WE INTENTIONALLY
LEAVING ARTIFACTS TO HELP
PEOPLE WHO COME AFTER US?

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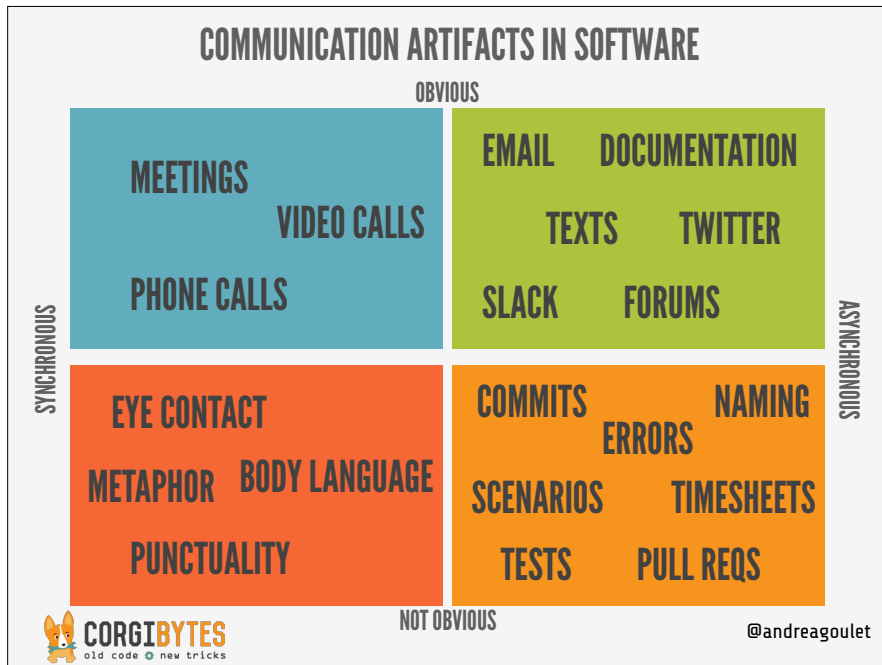
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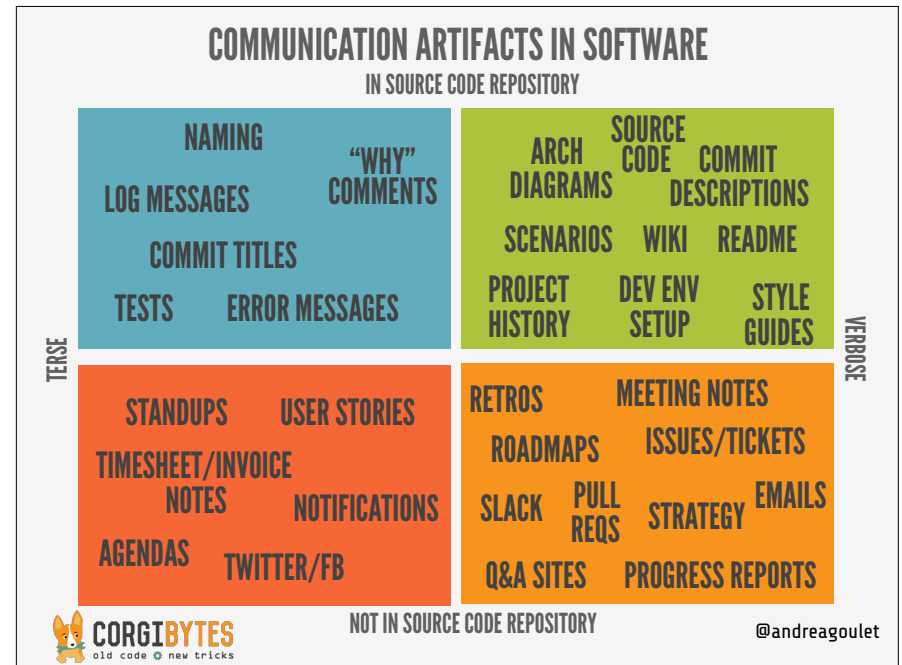
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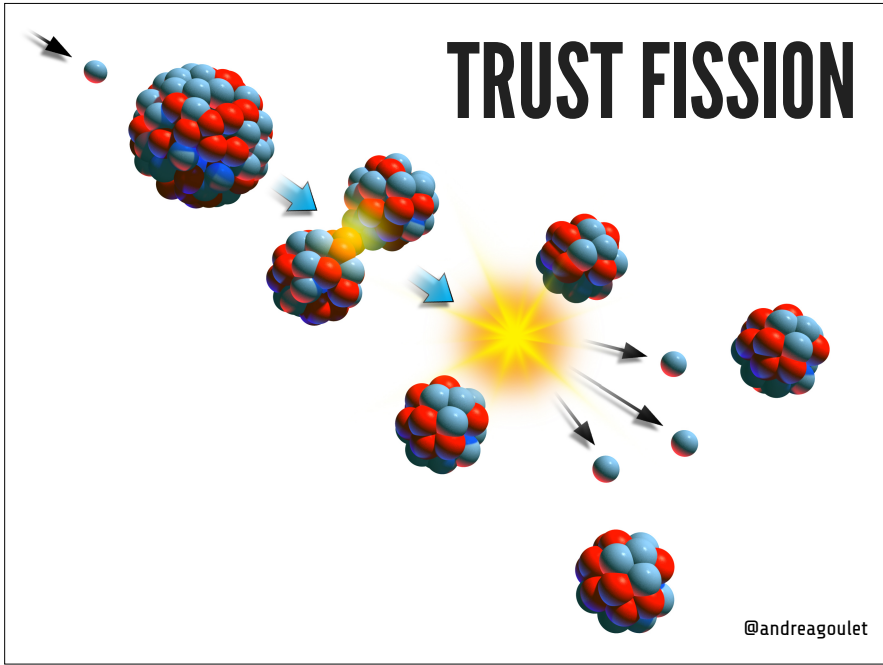
**EVERY ARTIFACT YOU
DELIVER BUILDS TRUST**

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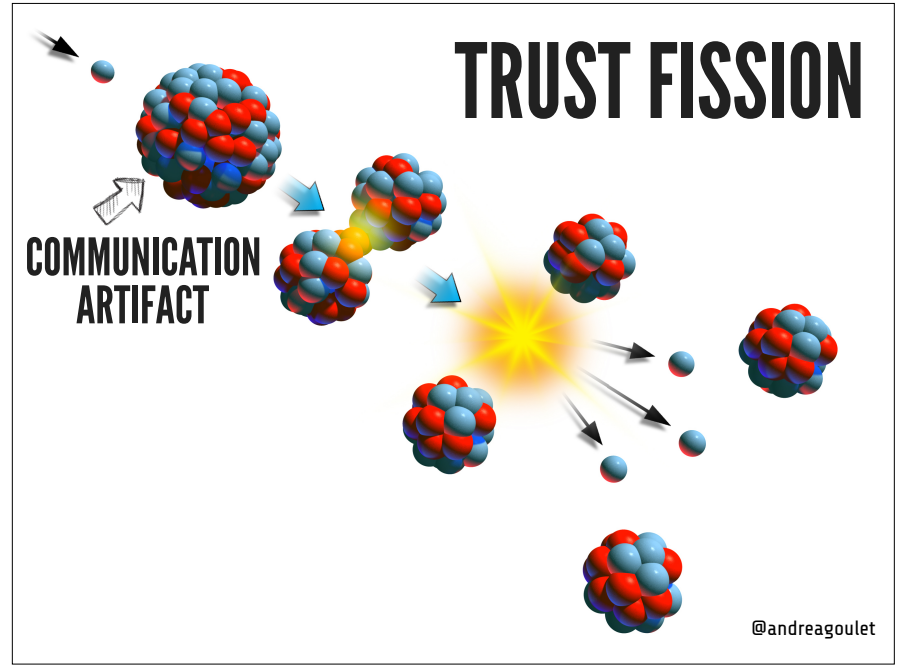
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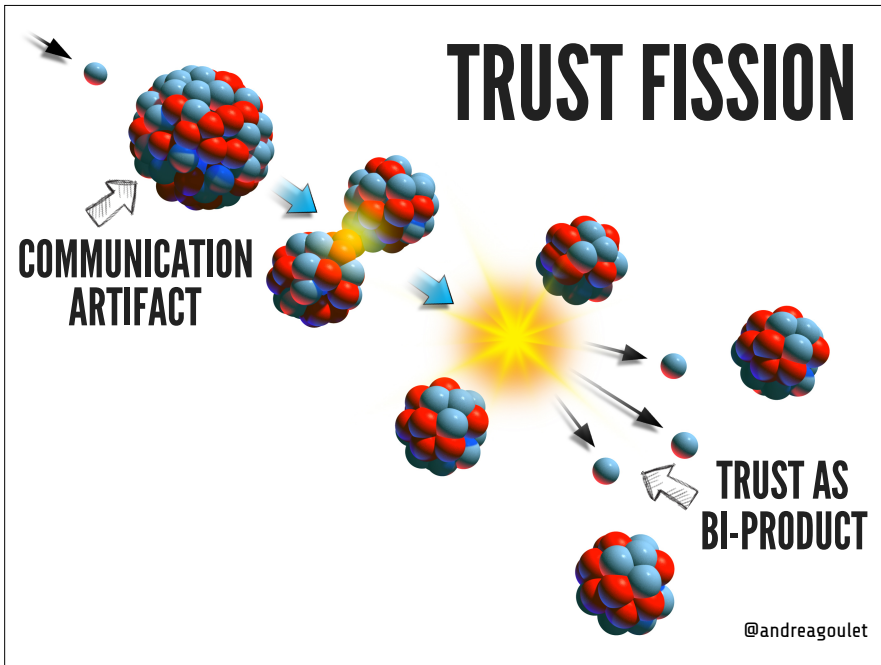
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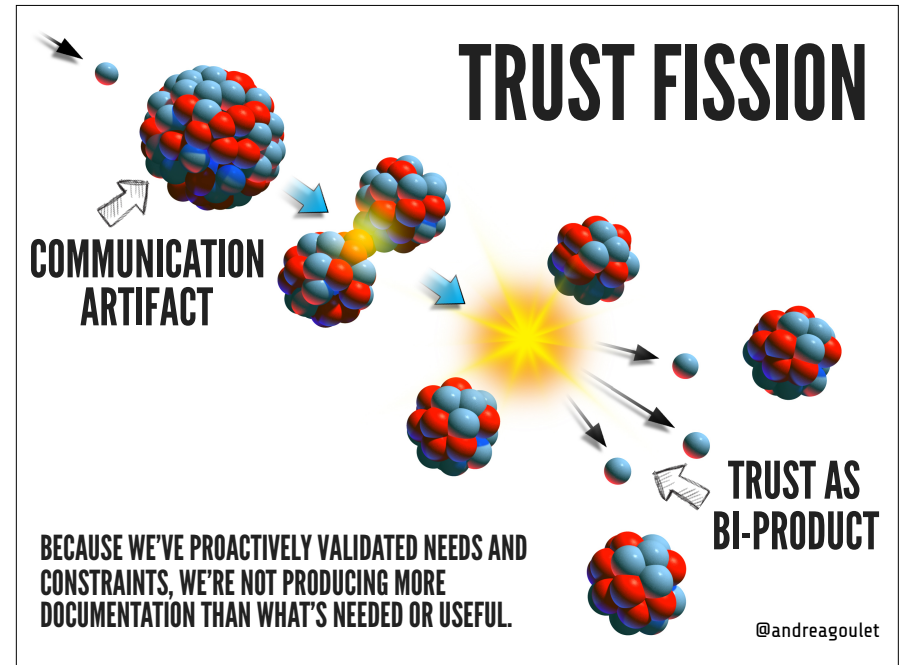
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**WHAT HAPPENS IF WE
IGNORE EMPATHY?**

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HERO CULTURE

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THE PROBLEMS WITH HEROES

-Daniel Kimble

1. BEING A HERO IS ADDICTIVE
2. NOT EVERYONE CAN BE A HERO
3. HEROES HIDE DEEPER PROBLEMS
4. HEROES INEVITABLY CREATE BURNOUT
5. HEROES SPAWN INFORMATION HOARDING & TURF-BUILDING
6. HEROES DISEMPOWER AND DON'T SCALE

Source: <https://www.linkedin.com/pulse/six-ways-your-companys-hero-culture-killing-dan-kimble-mba/>

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ARE YOU REWARDING HEROIC ACTS?

- STAYING LATE
- WORKING OVERTIME
- NOT TAKING VACATION
- SACRIFICING FAMILY
- NOT ASKING FOR HELP
- WORKING ALONE
- FIGHTING FIRES
- WORKING WEEKENDS
- GHOSTING HOURS
- PUSHING THROUGH PAIN
- BEING A MARTYR
- SEEKING NINJA/10X DEVS

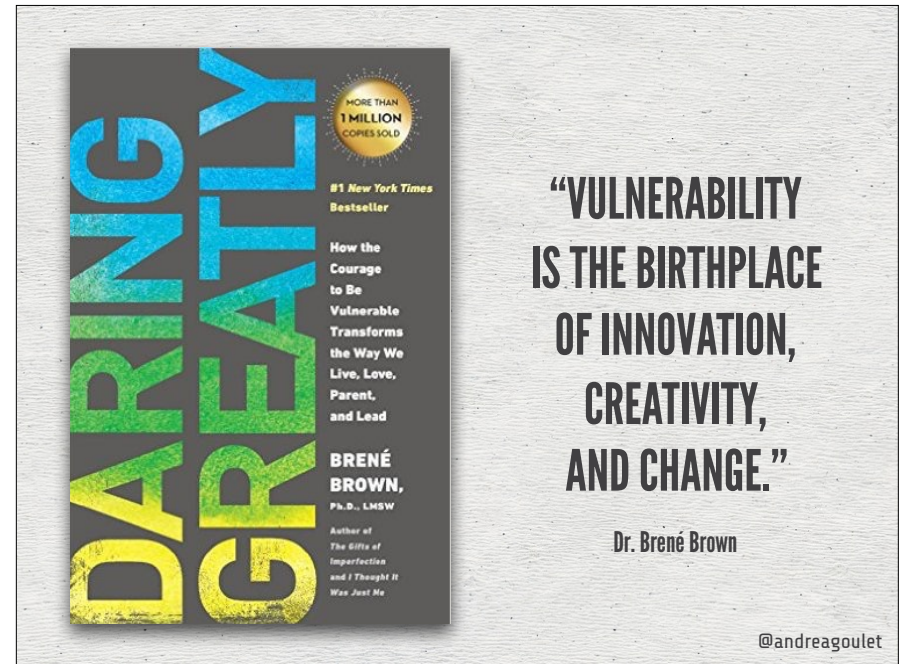
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SHAME & BLAME

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**WHAT PREVENTS TRUST AND
VULNERABILITY?**

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SHAME

**“THE INTENSELY PAINFUL FEELING OR EXPERIENCE
OF BELIEVING WE ARE FLAWED AND THEREFORE
UNWORTHY OF LOVE AND BELONGING. THRIVES ON
SECRECY, SILENCE, AND JUDGEMENT.”**

-Brené Brown

Source: Brown, Brené. Daring Greatly: How the Courage to Be Vulnerable Transforms the Way We Live, Love, Parent, and Lead

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BLAME

**“THE DISCHARGING OF PAIN ONTO ANOTHER
PERSON. INVERSELY RELATED TO ACCOUNTABILITY.”**
-Brené Brown

Source: Brown, Brené. Daring Greatly: How the Courage to Be Vulnerable Transforms the Way We Live, Love, Parent, and Lead

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HOW DO WE PREVENT SHAME & BLAME?

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EMPATHY

**“EMPATHY IS THE ANTIDOTE TO SHAME.
SHAME CANNOT SURVIVE EMPATHY.”**
-Brené Brown

Source: Brown, Brené. Daring Greatly: How the Courage to Be Vulnerable Transforms the Way We Live, Love, Parent, and Lead

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LESS DIVERSITY

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DIVERSITY IS GOOD FOR BUSINESS

“GENDER AND ETHNIC DIVERSITY ARE CLEARLY CORRELATED WITH PROFITABILITY, BUT WOMEN AND MINORITIES REMAIN UNDERREPRESENTED....COMPANIES IN THE FOURTH QUARTILE ON BOTH GENDER AND ETHNIC DIVERSITY ARE MORE LIKELY TO UNDERPERFORM THEIR INDUSTRY PEERS ON PROFITABILITY”

-McKinsey

Source: <https://www.mckinsey.com/business-functions/organization/our-insights/delivering-through-diversity>

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ACHIEVING DIVERSITY AND INCLUSION REQUIRES CONSCIOUS EFFORT AND EMPATHY

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WHO ARE YOU OVERLOOKING?

- WOMEN
- PEOPLE OF COLOR
- PEOPLE WITH DISABILITIES
- PARENTS
- LGBTQI+
- PEOPLE IN POVERTY
- WHO ELSE?



Sarah Mei @sarahmei

But that's not where agile came from, nor eXtreme Programming. They came from homogenous teams composed of individuals largely on the upward side of important power dynamics.

We don't need to totally bin them, but we do need to reimagine them.

5h

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BIAS

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BIAS IN MACHINE LEARNING & AI

"ANY TIME YOU HAVE A DATASET OF HUMAN DECISIONS, IT INCLUDES BIAS – WHOM TO HIRE, GRADES FOR STUDENT ESSAYS, MEDICAL DIAGNOSIS, OBJECT DESCRIPTIONS, ALL WILL CONTAIN SOME COMBINATION OF CULTURAL, EDUCATIONAL, GENDER, RACE, OR OTHER BIASES."

–ROMAN YAMPOLSKIY

Source: <https://www.techrepublic.com/article/bias-in-machine-learning-and-how-to-stop-it/>

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BIAS IN MACHINE LEARNING & AI

- **POKÉMON GO: FEWER POKÉMON IN BLACK NEIGHBORHOODS**
- **LINKEDIN: HIGH-PAYING JOBS DISPLAY LESS FOR WOMEN**
- **GOOGLE: FACE RECOGNITION TAGS BLACK FACES AS GORILLAS**
- **CRIME PREDICTION: FALSELY FLAGS BLACK DEFENDANTS**
- **CREDIT SCORECARDS: ENTIRE REGION LABELED "AT RISK"**

Source: <https://www.techrepublic.com/article/bias-in-machine-learning-and-how-to-stop-it/>

Source: <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>

Source: <https://www.mckinsey.com/business-functions/risk/our-insights/controlling-machine-learning-algorithms-and-their-biases>

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BIAS IN MACHINE LEARNING & AI

**“AN EFFECTIVE TECHNIQUE [FOR REDUCING BIAS] IS A
“PRE-MORTEM” EXERCISE DESIGNED TO PINPOINT THE
LIMITATIONS OF A PROPOSED MODEL AND HELP EXECUTIVES
JUDGE THE BUSINESS RISKS INVOLVED IN A NEW ALGORITHM.”**

-McKinsey

Source: <https://www.mckinsey.com/business-functions/risk/our-insights/controlling-machine-learning-algorithms-and-their-biases> @andreagoulet

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**WE ARE RESPONSIBLE FOR
IDENTIFYING POTENTIAL BIAS IN
OUR SOFTWARE AND HELPING
OTHERS UNDERSTAND ITS IMPACT**

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**IF TDD CAN BE DISTILLED
INTO RED, GREEN, REFACTOR**

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**EMPATHY-DRIVEN
DEVELOPMENT CAN BE
DISTILLED INTO
AUDIENCE & ACTION**

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AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS			

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STEP 1: IDENTIFY INDIVIDUALS

1. **START WITH THE GROUP**
2. **NARROW TO AN INDIVIDUAL**

**“WE CAN PUT OURSELVES IN THE SHOES OF ONE PERSON.
WE CAN’T PUT OURSELVES IN THE SHOES OF MANY.”**

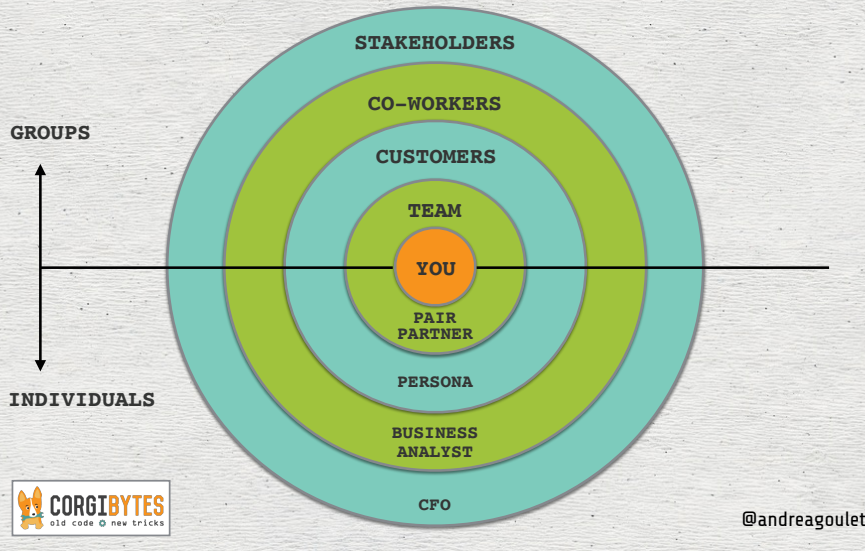
– SAM HORN

Source: <https://samhornpop.wordpress.com/tag/the-empathy-telescope/>

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WHOSE PERSPECTIVE DO WE NEED TO CONSIDER?



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STEP 2: CONSIDER CONTEXT

1. WHAT'S THEIR ENVIRONMENT?
2. HOW ARE THEY FEELING?
3. WHAT ARE THEY LIKELY TO DO?
4. WHAT HAVE THEY TRIED IN THE PAST?

**IF YOU DON'T KNOW THE ANSWER TO THESE QUESTIONS,
RESEARCH INSTEAD OF MAKING ASSUMPTIONS.**

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STEP 3: DEFINE THEIR NEEDS

1. **WHAT'S THEIR PREFERENCE?**
2. **HOW DO THEY LIKE TO RECEIVE INFO?**
3. **WHAT DOES SUCCESS LOOK LIKE TO THEM?**
4. **WHAT WILL REDUCE THEIR STRESS?**

**IF YOU DON'T KNOW THE ANSWER TO THESE QUESTIONS,
RESEARCH INSTEAD OF MAKING ASSUMPTIONS.**

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LISTENING SESSIONS

- **HELP THE SPEAKER FEEL SAFE ENOUGH TO TRUST YOU WITH THEIR INNER REASONING. AVOID SHAME AND CRITICISM. JUST LISTEN.**
- **GOAL IS TO UNDERSTAND DEEPER LEVEL PROCESSES (NOT TO GIVE FEEDBACK)**
- **LISTEN FOR 3 COMPONENTS (REASONING, REACTIONS, GUIDING PRINCIPLES)**
- **LET THE SPEAKER LEAD THE CONVERSATION**
- **FOLLOW PEAKS & VALLEYS (HIGH LEVEL & DEEP TOPICS)**

Source: Practical Empathy by Indi Young

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THINGS TO AVOID IN LISTENING SESSIONS

- **“FEELING” QUESTIONS (IT’S NOT A THERAPY SESSION)**
- **ASKING ABOUT PROPOSED SOLUTIONS**
- **MAKING ASSUMPTIONS (ASK CLARIFYING QUESTIONS)**
- **USING THE WORD “I” (KEEP THE FOCUS ON SPEAKER)**
- **SWITCHING TOPICS ABRUPTLY**
- **SHAME, BLAME, NAME CALLING, JUDGEMENT**
- **INJECTING YOUR OWN OPINION**

Source: Practical Empathy by Indi Young

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QUESTIONS FOR EXPLORING INTENT


- **WHAT WERE YOU THINKING WHEN YOU MADE THAT DECISION?**
- **TELL ME YOUR THINKING THERE.**
- **WHAT WAS GOING ON IN YOUR HEAD?**
- **WHAT WAS ON YOUR MIND?**
- **HOW DID YOU REACT?**

Source: Practical Empathy by Indi Young

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AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE

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STEP 4: WHAT'S THE BEST ACTION?

1. **WHAT'S THE IDEAL SOLUTION?**
2. **WHAT WOULD MAKE THE BIGGEST IMPACT?**
3. **IF YOU HAD NO CONSTRAINTS, WHAT ACTION WOULD YOU TAKE?**

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STEP 5: WHAT'S FEASIBLE?

- 1. WHAT CONSTRAINTS DO YOU HAVE?**
- 2. WHAT'S POSSIBLE GIVEN THOSE?**
- 3. WHAT'S THE NEXT BEST ALTERNATIVE?**
- 4. WHAT'S THE LEAST YOU CAN DO THAT WILL ADD VALUE?**

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STEP 6: CREATE ARTIFACTS

- 1. EXECUTE FEASIBLE ACTIONS**
- 2. THINK THROUGH VARIOUS CHANNELS**
- 3. NOT COMPLETE UNTIL THIS PART IS DONE**

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**TECHNICAL EMPATHY MIGHT FEEL
SLOW AND BURDENSOME AT FIRST
(JUST LIKE TDD).**

**OVER TIME AND WITH PRACTICE, THIS
PROCESS WILL BECOME INTUITIVE.**

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LET'S LOOK AT AN EXAMPLE

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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE
USER					



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE
USER					



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE
FREELANCE ARTIST (MALIK)					



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE
FREELANCE ARTIST (MALIK)					
CUSTOMER SUCCESS MANAGER (TIARA)					



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE
FREELANCE ARTIST (MALIK)					
CUSTOMER SUCCESS MANAGER (TIARA)					
DEVELOPER (YOU)					



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE
FREELANCE ARTIST (MALIK)	USING THE APP, ON THE GO, FEELING DISTRACTED				
CUSTOMER SUCCESS MANAGER (TIARA)	RESPONDING TO SUPPORT TICKET, PRESSURE TO REPLY & RESOLVE QUICKLY				
DEVELOPER (YOU)	FIXING A BUG, SIX MONTHS SINCE YOU'VE LOOKED AT THE CODE				



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE
FREELANCE ARTIST (MALIK)	USING THE APP, ON THE GO, FEELING DISTRACTED	RESOLUTION, CLEAR ACTIONS TO TAKE			
CUSTOMER SUCCESS MANAGER (TIARA)	RESPONDING TO SUPPORT TICKET, PRESSURE TO REPLY & RESOLVE QUICKLY	ACCURATE INFORMATION THAT'S EASY TO REFERENCE			
DEVELOPER (YOU)	FIXING A BUG, SIX MONTHS SINCE YOU'VE LOOKED AT THE CODE	MINIMAL CONTEXT SWITCHING, EASY TO UNDERSTAND PROBLEM & EDGE CASES			



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE
FREELANCE ARTIST (MALIK)	USING THE APP, ON THE GO, FEELING DISTRACTED	RESOLUTION, CLEAR ACTIONS TO TAKE	VALIDATE FRUSTRATION, SECOND PERSON, ACTIVE VOICE, LINK TO A VIDEO TUTORIAL		
CUSTOMER SUCCESS MANAGER (TIARA)	RESPONDING TO SUPPORT TICKET, PRESSURE TO REPLY & RESOLVE QUICKLY	ACCURATE INFORMATION THAT'S EASY TO REFERENCE	REFERENCE CODE IN ERROR MESSAGE, UPDATE RESPONSE LIBRARY		
DEVELOPER (YOU)	FIXING A BUG, SIX MONTHS SINCE YOU'VE LOOKED AT THE CODE	MINIMAL CONTEXT SWITCHING, EASY TO UNDERSTAND PROBLEM & EDGE CASES	FIX ALL THE BUGS, INCLUDING EDGE CASES		



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE
FREELANCE ARTIST (MALIK)	USING THE APP, ON THE GO, FEELING DISTRACTED	RESOLUTION, CLEAR ACTIONS TO TAKE	VALIDATE FRUSTRATION, SECOND PERSON, ACTIVE VOICE, LINK TO A VIDEO TUTORIAL	VALIDATE FRUSTRATION, SECOND PERSON, ACTIVE VOICE, DOCUMENT IDEA OF TUTORIAL	
CUSTOMER SUCCESS MANAGER (TIARA)	RESPONDING TO SUPPORT TICKET, PRESSURE TO REPLY & RESOLVE QUICKLY	ACCURATE INFORMATION THAT'S EASY TO REFERENCE	REFERENCE CODE IN ERROR MESSAGE, UPDATE RESPONSE LIBRARY	CREATE ISSUE TO DOCUMENT REFERENCE CODE IDEA	
DEVELOPER (YOU)	FIXING A BUG, SIX MONTHS SINCE YOU'VE LOOKED AT THE CODE	MINIMAL CONTEXT SWITCHING, EASY TO UNDERSTAND PROBLEM & EDGE CASES	FIX ALL THE BUGS, INCLUDING EDGE CASES	FIX EDGE CASES WHEN THEY ARISE	



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COMMUNICATION ARTIFACT: WRITING AN ERROR MESSAGE FOR A BOOKKEEPING APP

AUDIENCE			ACTION		
INDIVIDUAL	CONTEXT	NEEDS	BEST ACTION	FEASIBLE ACTION	ARTIFACTS TO CREATE
FREELANCE ARTIST (MALIK)	USING THE APP, ON THE GO, FEELING DISTRACTED	RESOLUTION, CLEAR ACTIONS TO TAKE	VALIDATE FRUSTRATION, SECOND PERSON, ACTIVE VOICE, LINK TO A VIDEO TUTORIAL	VALIDATE FRUSTRATION, SECOND PERSON, ACTIVE VOICE, DOCUMENT IDEA OF TUTORIAL	WELL-WRITTEN ERROR MESSAGE, WIKI UPDATE
CUSTOMER SUCCESS MANAGER (TIARA)	RESPONDING TO SUPPORT TICKET, PRESSURE TO REPLY & RESOLVE QUICKLY	ACCURATE INFORMATION THAT'S EASY TO REFERENCE	REFERENCE CODE IN ERROR MESSAGE, UPDATE RESPONSE LIBRARY	CREATE ISSUE TO DOCUMENT REFERENCE CODE IDEA	GITHUB ISSUE
DEVELOPER (YOU)	FIXING A BUG, SIX MONTHS SINCE YOU'VE LOOKED AT THE CODE	MINIMAL CONTEXT SWITCHING, EASY TO UNDERSTAND PROBLEM & EDGE CASES	FIX ALL THE BUGS, INCLUDING EDGE CASES	FIX EDGE CASES WHEN THEY ARISE	SELF-REVEALING CODE, TESTS, COMMIT MESSAGE, GITHUB ISSUE, JOURNAL ENTRY



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EMPATHY ALGORITHM

```
1 function produce(communicationArtifact)
2   individuals := Individual.mightFindValue(
3     communicationArtifact)
4
5   audiences = new AudienceList()
6   for each individual in individuals
7     context := determineContext(individual)
8     needs := determineNeeds(individual, context)
9
10    audiences.add(individual, context, needs)
11  end
12
13  constraints := determineConstraints()
14
15  actions := new ActionList()
16  for each audience in audiences
17    bestAction := determinePotentialActions(
18      audience)
19    feasibleAction := determineRealisticActions(
20      audience, constraints)
21    extraArtifacts := determineAdditionalArtifacts(
22      canDo - communicationArtifact)
23
24    actions.add(bestAction, feasibleAction, extraArtifacts)
25  end
26
27  deliver(actions.format())
28
29  for each extraArtifact in actions.extraArtifacts
30    produce(extraArtifact)
31  end
32 end
33
```

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KEY TAKEAWAYS

- EMPATHY IS A TECHNICAL TOPIC
- EMPATHY IS A SKILL YOU CAN DEVELOP THROUGH PROACTIVE PERSPECTIVE TAKING AND PROBLEM SOLVING
- WITHOUT EMPATHY, WE GET AN UNDESIRABLE CULTURE THAT MAKES IT DIFFICULT TO DELIVER QUALITY SOFTWARE
- EMPATHY DRIVEN DEVELOPMENT = AUDIENCE & ACTION
- INVOKE CURIOSITY, RESPECT, AND LISTENING TO VALIDATE ASSUMPTIONS OR WHEN YOU DON'T HAVE ENOUGH DATA.

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