JetBRAINS

SURVEYS

PRODUCT ANALYTICS AND RESEARCH METHODS

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COLLECTING DATA FROM INDIVIDUALS

IN PERSON

TELEPHONE

MAIL

PAPER

WEB

COLLECTING DATA FROM INDIVIDUALS

~~IN PERSON~~

~~TELEPHONE~~

~~MAIL~~

PAPER

WEB

SURVEYS

INTERNAL

Special projects

HR

Administration

EXTERNAL

Product Surveys

Localization Surveys

Campus Ambassador Program Surveys

Surveys at Events

EXAMPLES

1. TeamCity Global Survey

2. Localization Survey for Chinese and Japanese Customers and Potential Users

3. Campus Ambassador Program surveys

5. Jetbrains Night in Munich survey

6. To be continued…

EXTERNAL SURVEYS

100+
SURVEYS

6+
LANGUAGES

10K+
RESPONDENTS

20+ PRODUCT AND LOCALIZATION SURVEYS

70+ SURVEYS AT EVENTS

10+ CAMPUS AMBASSADOR PROGRAM SURVEYS

TOOLS

WORKFLOW

I. PREPARATION   **II.** COLLECTION   **III.** ANALYSIS

% ?   % ?   % ? t

QUESTION: Which survey stage is the most difficult / important?

WORKFLOW

TIME SPAN: 1-3 MONTH

PREPARATION	COLLECTION	ANALYSIS
60%	**15%**	**25%**

t

DRAFT
DISCUSSION

WEB DRAFT
DISCUSSION

WORKFLOW: CHALLENGES

TIME SPAN: 1-3 MONTH

!!!!!!!!
PREPARATION

!!!
COLLECTION:

!!!!
ANALYSIS

60%

15%

25%

t

DRAFT
!!!!
DISCUSSION

WEB DRAFT
!!!
DISCUSSION

WORKFLOW: CHALLENGES

TIME SPAN: 1-3 MONTH **+ 1-2 MONTH**

!!!!!!!!
PREPARATION

!!!
COLLECTION

!!!!
ANALYSIS

60%

15%

25%

t

DRAFT
!!!!
DISCUSSION

WEB DRAFT
!!!
DISCUSSION

Forewarned, forearmed; to be prepared is half the victory.

Miguel Cervantes
Spain
1547 // 1616

www.wordsandquotes.com

SURVEY WORKFLOW CHALLENGES

1. SURVEY PREPARATION STAGE:

- Setting goals

- Survey content

- Survey structure

- Question formulation

- Respondents motivation

2. DATA COLLECTION STAGE:

- Validity issues

3. DATA ANALYSIS STAGE:

- Cleaning data

CHALLENGES:
SURVEY PREPARATION

CHALLENGES: SURVEY PREPARATION

SETTING GOALS
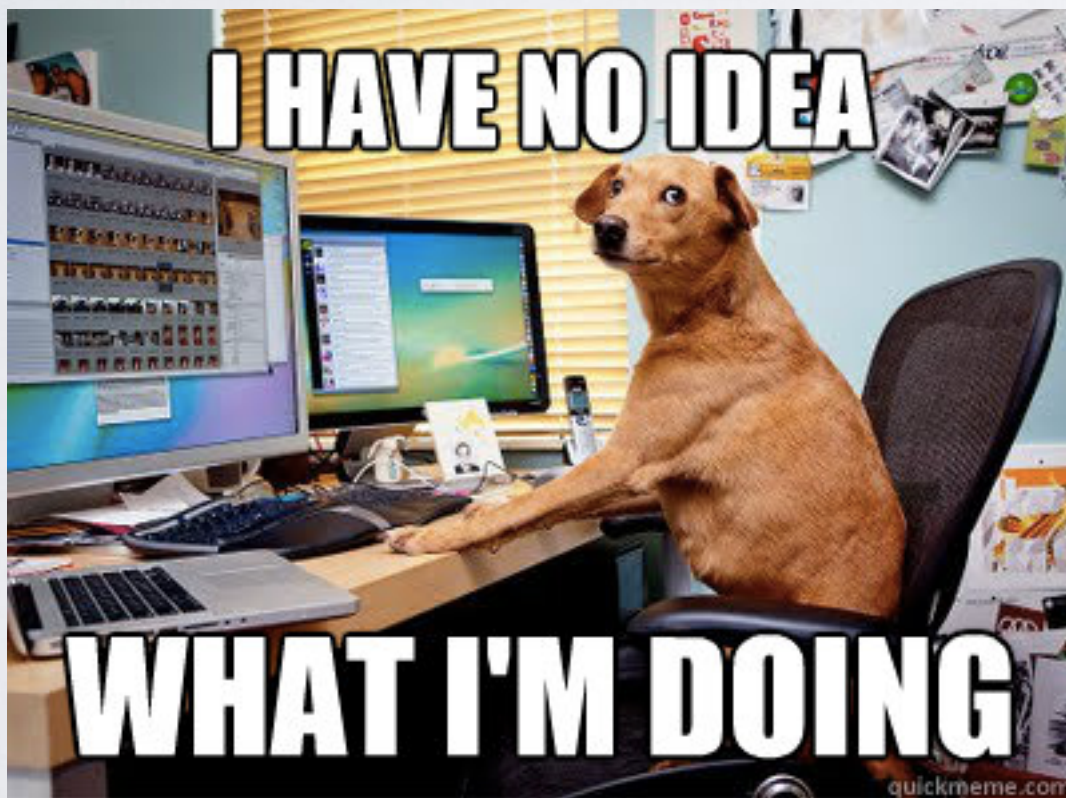
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- PROBLEM TO SOLVE

- QUESTIONS TO ANSWER

- ASSUMPTIONS TO TEST

CHALLENGES: SURVEY PREPARATION
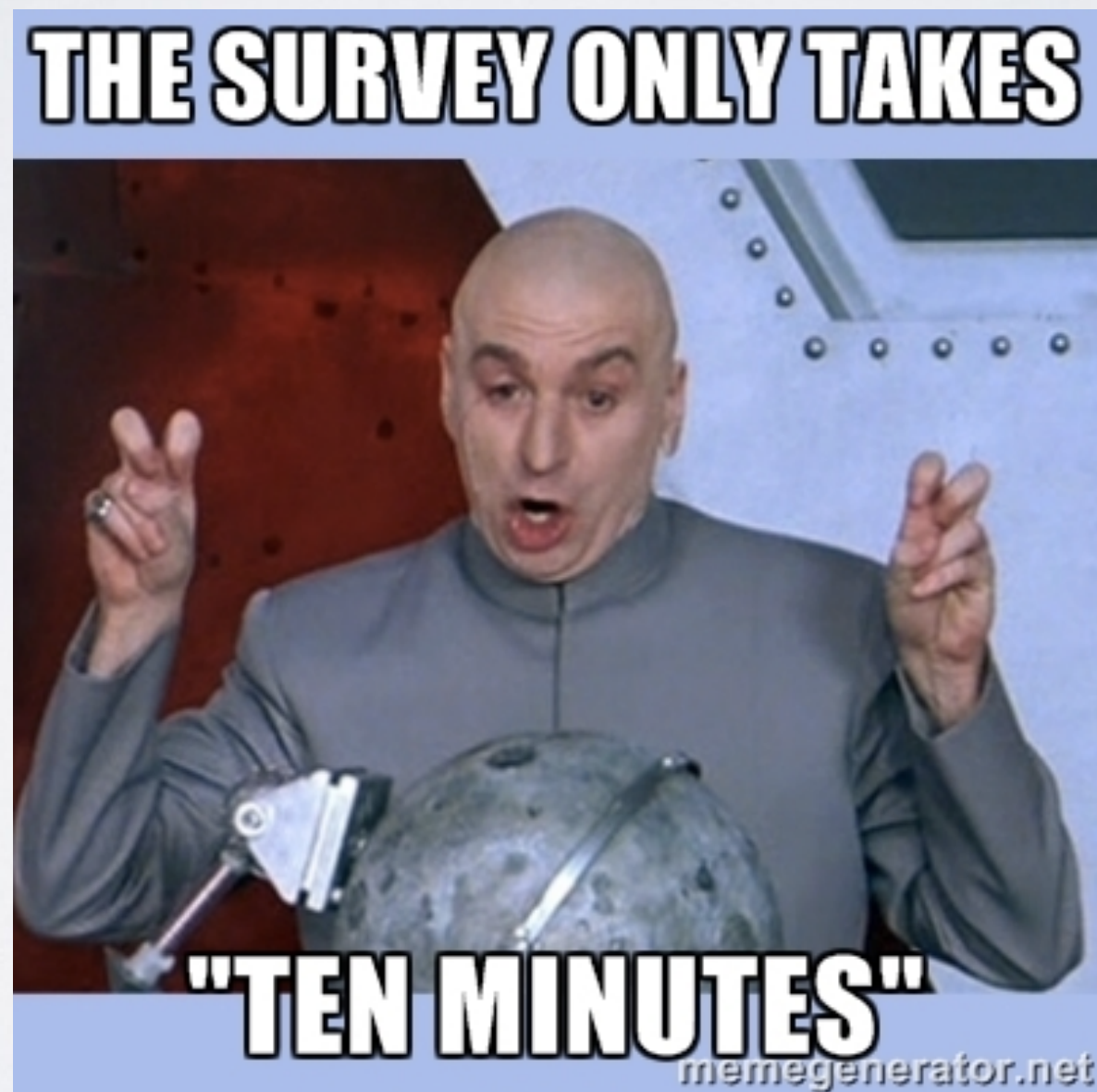
SURVEY LENGTH

Source

CHALLENGES: SURVEY PREPARATION

SURVEY LENGTH
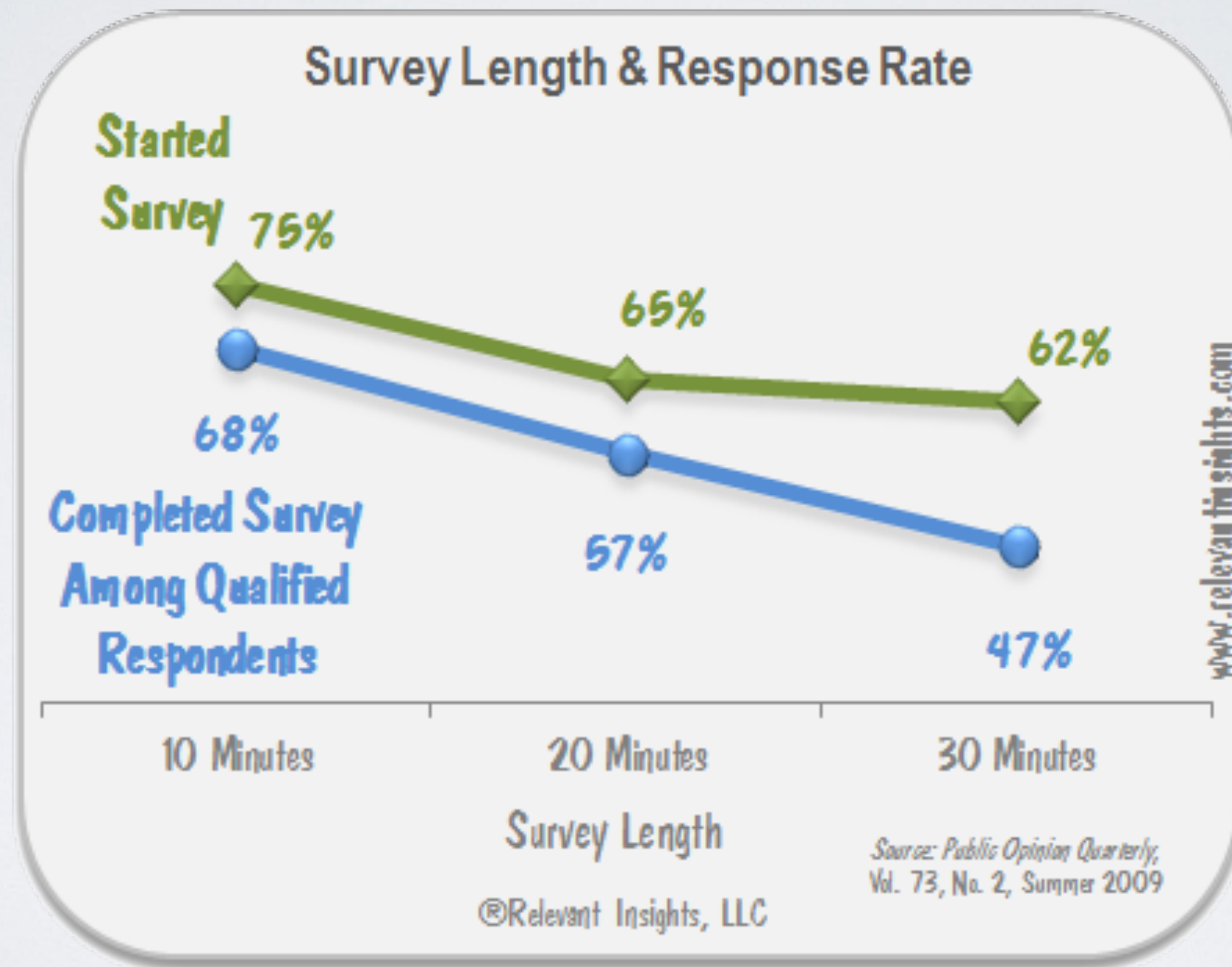
Source

CHALLENGES: SURVEY PREPARATION

SURVEY CONTENT

1. CONCISE (Read "as short as possible")

2. STRUCTURED (Question blocks)

3. LOGICAL (General => Specific)

4. POLITE

Angry respondent

CHALLENGES: SURVEY PREPARATION

SURVEY STRUCTURE

1. **WELCOME PAGE (Who? What for? How long? Prize, Confidentiality)**

2. **MAIN QUESTIONS**

3. **FACTUAL QUESTIONS (Name, Email, Age, Company size)**

4. **FINAL PAGE ("Thank you", Winners announcement, Contacts)**

CHALLENGES: SURVEY PREPARATION

QUESTIONS FORMULATION
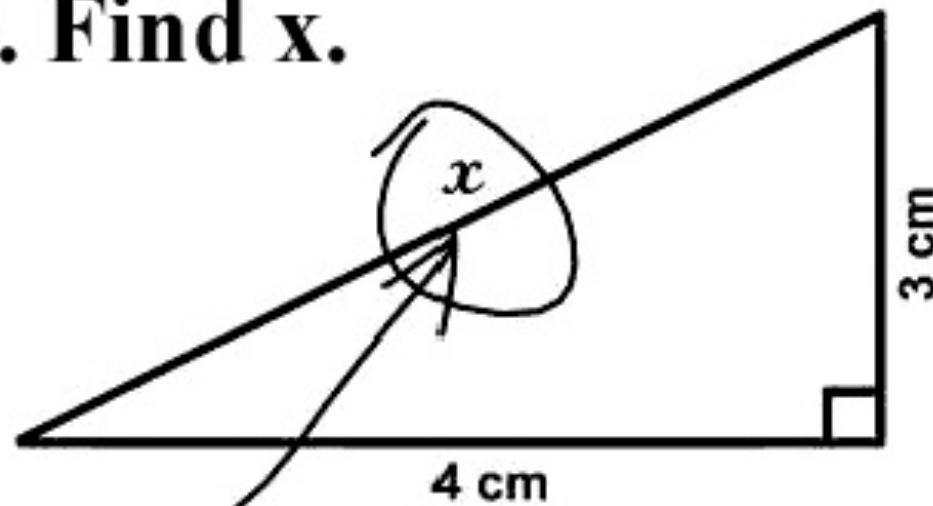
Source

QUESTIONS FORMULATION RULES

1. **USE SIMPLE WORDING: NOT SLANG, NOT TOO FORMAL**
   - What makes you choose PhpStorm over its competitors? (Support: Amazing / Agree / Disagree / No way)

   - Please rate the following attributes of PhpStorm in comparison to its competitors (Support: Five-star rating grid)

2. **USE WORDS PEOPLE INTERPRET THE SAME WAY**
   - Last year / Last month / Recently

   - Whole year 2014 / 30 days from now

QUESTIONS FORMULATION RULES

3. **AVOID ATTITUDE EXPRESSIONS / JUDGMENTS:**
   - Do you like PhpStorm?

   - What do you feel about PhpStorm? Do you like it, dislike it or you don't have any opinion?

4. **ASK ONE THING AT A TIME:**
   - How likely are you going to buy PhpStorm and PyCharm?

   - How likely are you going to buy PhpStorm?

QUESTIONS FORMULATION RULES

5. **AVOID DESIRABLE ANSWERS. ASK IN THIRD PERSON:**
   - Did you experience problems while using PhpStorm?

   - Some customers claimed they faced problems while using our PhpStorm, some are completely satisfied with it. What about you?

6. **AVOID AGREE / DISAGREE QUESTIONS:**
   - PhpStorm should be a free product. (Totally agree / Rather agree / Neither agree nor disagree / Rather disagree / Totally disagree)
   - Some customers think that PhpStorm should be a free product but others think it should be paid. Which one is closest to your opinion? (Free / Paid)

QUESTIONS FORMULATION RULES

7. **FOREWARN SATISFICING**

    Fancy way of saying that respondents try to meet the lowest threshold of acceptability for an answer, rather than making the time to give the best response. (Qualtrics)

    - **RANDOMISE ANSWER CHOICES**

    - **AVOID "DON'T KNOW" RESPONSE OPTION**

    - **LIMIT NUMBER OF RESPONSES**

✳For each of the statements below, please rate how well they describe the MAIN Continuous Integration tool you use:

	Doesn't describe at all	Doesn't quite describe	Neutral	Describes somewhat	Describes perfectly
Actively used by developers in my organization	○	○	○	○	○
Actively used by build maintainers in my organization	○	○	○	○	○
Actively used by management in my organization	○	○	○	○	○
Easy to get started with	○	○	○	○	○
Easy to configure and maintain	○	○	○	○	○
Easy to use/Intuitive	○	○	○	○	○
Visually attractive	○	○	○	○	○
Stable and robust	○	○	○	○	○
Fast performance	○	○	○	○	○
Is best in the industry	○	○	○	○	○
Overloaded with features	○	○	○	○	○
Not enough out-of-the box functionality	○	○	○	○	○
Has good support	○	○	○	○	○
Has good documentation	○	○	○	○	○
Has an active community	○	○	○	○	○
(For testing purposes) Please rate this statement "Describes somewhat"	○	○	○	○	○
Affordably priced	○	○	○	○	○
Good value for money	○	○	○	○	○
Covers the current needs of my team	○	○	○	○	○
Provided by a company I trust	○	○	○	○	○
Enterprise-level	○	○	○	○	○
Actively evolving	○	○	○	○	○

*For each of the statements below, please rate how well they describe the MAIN Continuous Integration tool you use:

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Actively used by management in my organization	○	○	○	○	○
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Easy to configure and maintain	○	○	○	○	○
Easy to use/Intuitive	○	○	○	○	○
Visually attractive	○	○	○	○	○
Stable and robust	○	○	○	○	○
Fast performance	○	○	○	○	○
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Overloaded with features	○	○	○	○	○
Not enough out-of-the box functionality	○	○	○	○	○
Has good support	○	○	○	○	○
Has good documentation	○	○	○	○	○
Has an active community	○	○	○	○	○
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Covers the current needs of my team	○	○	○	○	○
Provided by a company I trust	○	○	○	○	○
Enterprise-level	○	○	○	○	○
Actively evolving	○	○	○	○	○

(For testing purposes) Please rate this statement "Describes somewhat"   ○   ○   ○   ○   ○

26

QUESTIONS FORMULATION RULES

8. **BE CAREFUL WITH OPEN-ENDED QUESTIONS**

9. **GIVE MUTUALLY EXCLUSIVE ANSWER CHOICES**

10. **NEVER ASK ABOUT VERY SPECIFIC TIME PERIODS FOR ROUTINE EVENTS**
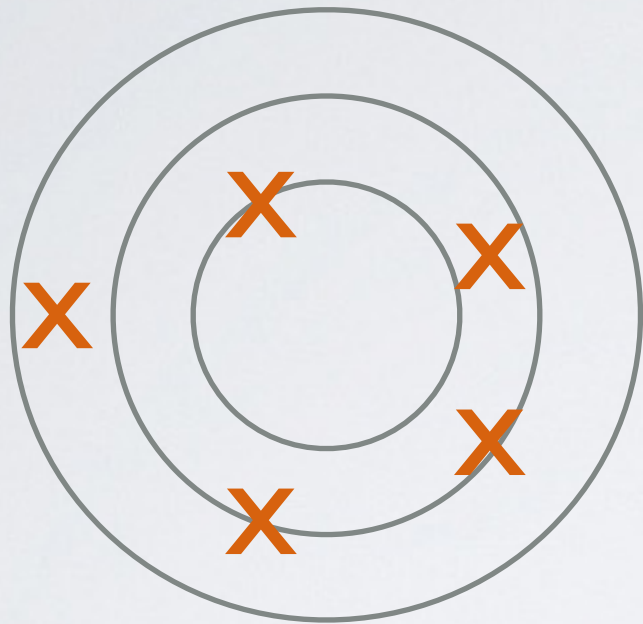
11. **USE LABELED, UNIPOLAR, ODD SCALES**
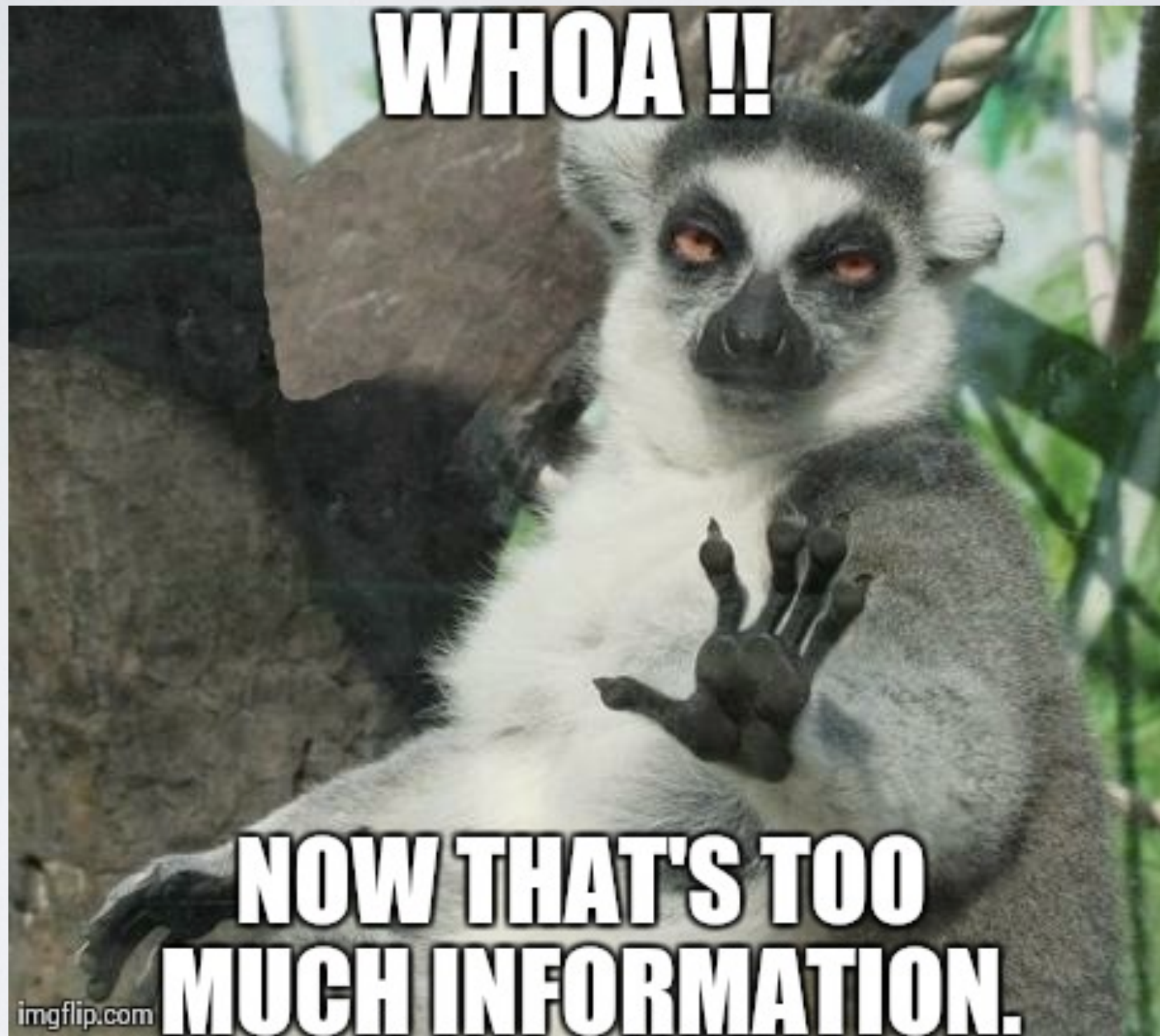
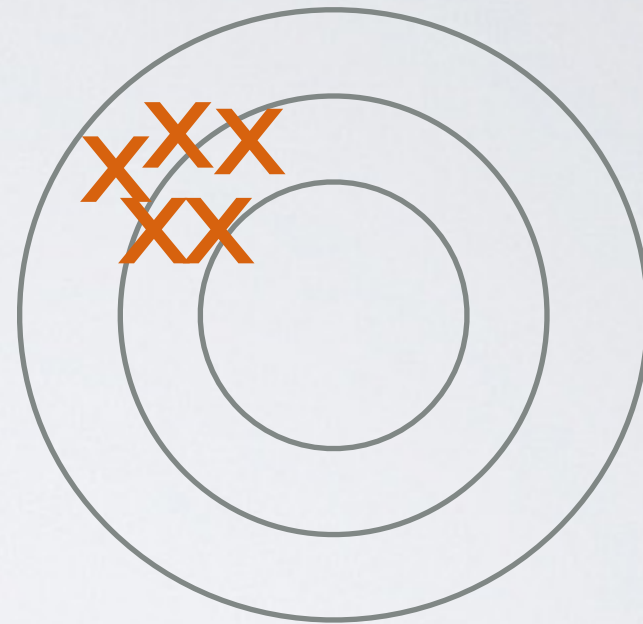Source

WHY DO WE NEED TO DO THIS ALL?

BECAUSE ERRORS

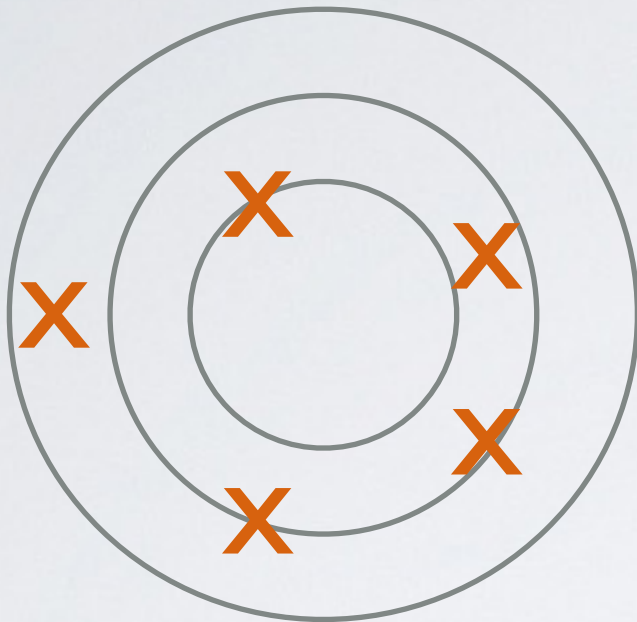| NON-OBSERVATION	OBSERVATION / MEASUREMENT	PROCESSING
COVERAGE SAMPLING NONRESPONSE	SURVEY INSTRUMENT RESPONDENT	CODING EDITING ADJUSTMENT

MEASUREMENT ERRORS

VARIANCE

BIAS
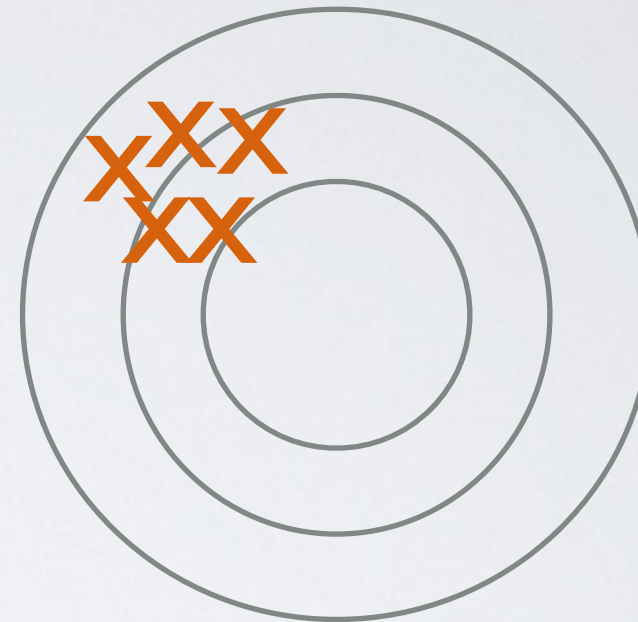
How many times did you use PhpStorm **last week**?

Do **you like** programming with PhpStorm?

MEASUREMENT ERRORS

VARIANCE

BIAS

How many times did you use PhpStorm **for the last 7 days**?

Do **you like, dislike** UI of PhpStorm or **you don't have any opinion about using it**?

CHALLENGES: SURVEY PREPARATION

RESPONDENTS MOTIVATION

CHALLENGES: SURVEY PREPARATION

RESPONDENTS MOTIVATION

1. Free upgrades and licenses

2. Product discounts

3. Amazon certificates

4. KaKao Gift Mobile Vouchers for Starbucks Coffee (Asia example)

CHALLENGES: SURVEY PREPARATION

LAST-MINUTE CORRECTIONS

SURVEY PREPARATION

CHALLENGES:
DATA COLLECTION

CHALLENGES:
DATA COLLECTION

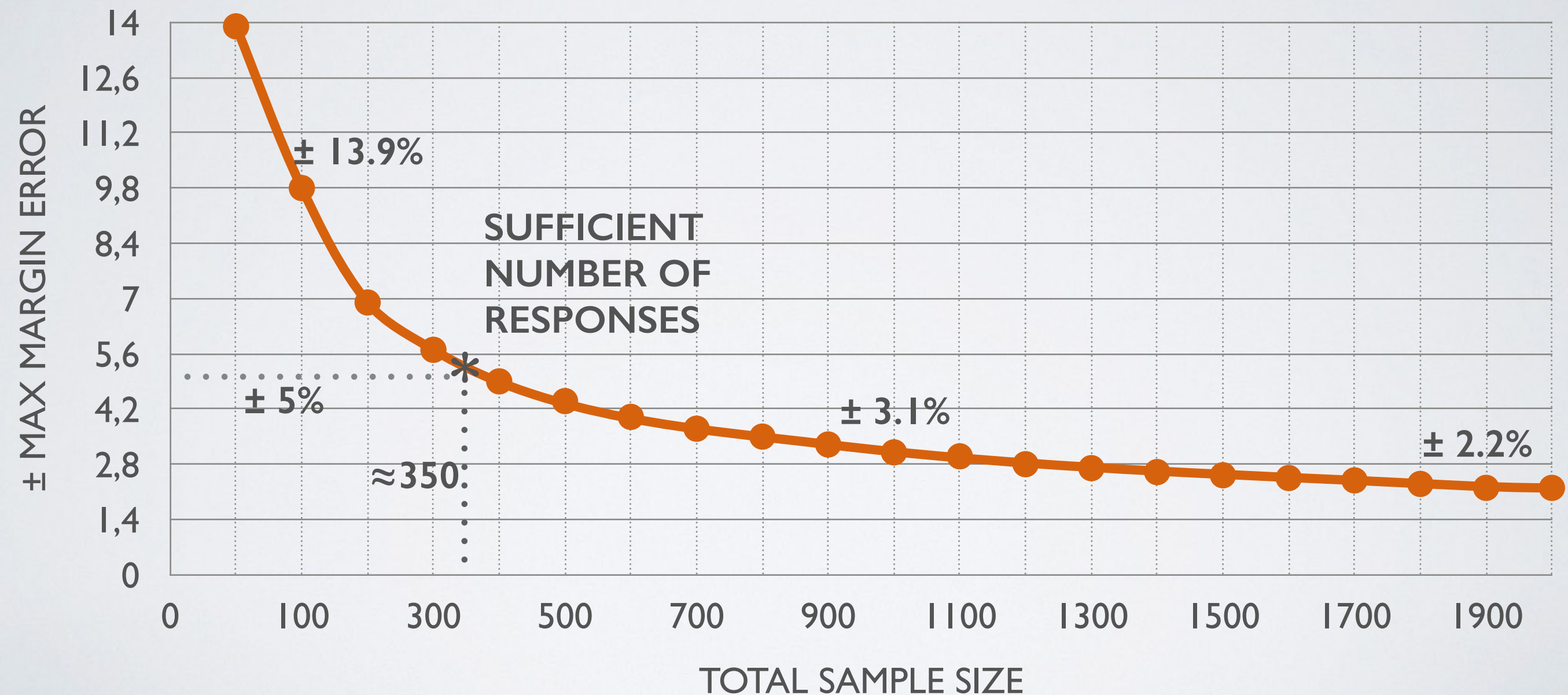## NUMBER OF RESPONSES

CHALLENGES:
DATA COLLECTION

QUESTION: How many responses are enough to get significant results?

CHALLENGES:
DATA COLLECTION

≈ 350 RESPONSES

CHALLENGES:
DATA COLLECTION

NUMBER OF RESPONSES

± 13.9%

SUFFICIENT NUMBER OF RESPONSES

± 5%

≈350

± 3.1%

± 2.2%

± MAX MARGIN ERROR

14
12,6
11,2
9,8
8,4
7
5,6
4,2
2,8
1,4
0

0   100   300   500   700   900   1100   1300   1500   1700   1900

TOTAL SAMPLE SIZE

CHALLENGES:
DATA COLLECTION

IMPORTANT!

MIN 350 RESPONSES PER SURVEY PATH
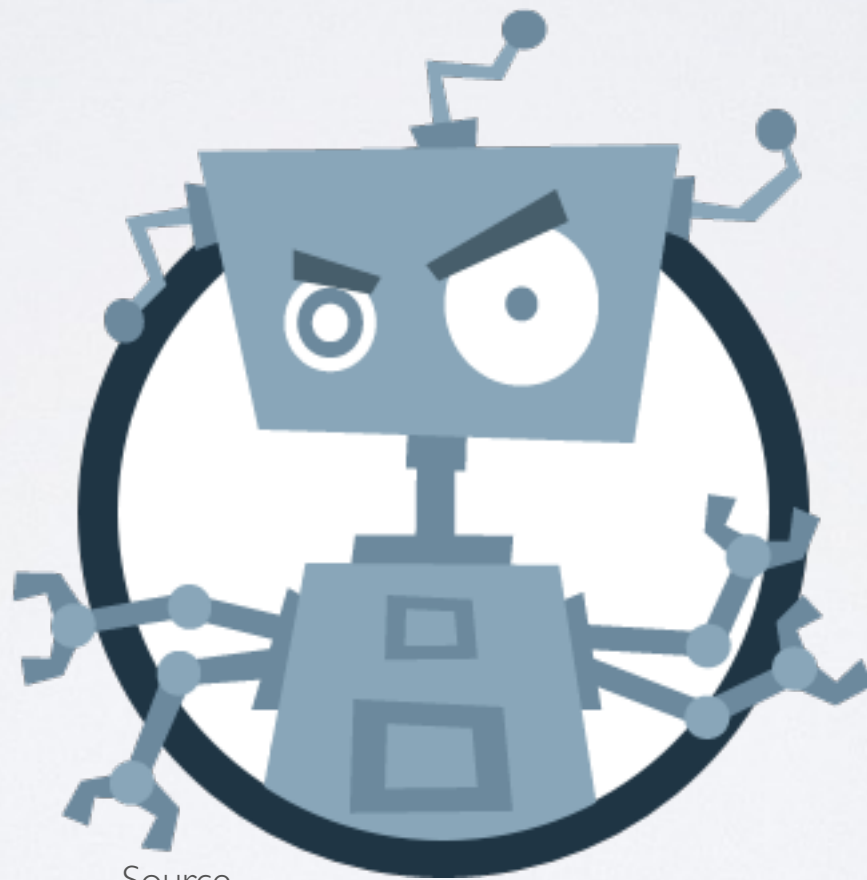
CHALLENGES: DATA ANALYSIS

CHALLENGES: DATA ANALYSIS

CLEANING DATA

1. Complete responses

2. No duplicates (email / responses)

3. Adequate survey filling time

CHALLENGES: DATA ANALYSIS. CLEANING DATA

WAIT! BUT HOW ABOUT BOTS?

Source

CHALLENGES: DATA ANALYSIS. CLEANING DATA

SURVEY PROTECTION

- RECAPTCHA

- DUPLICATE PROTECTION

CHALLENGES: DATA ANALYSIS. CLEANING DATA

STILL, LOOKS SUSPICIOUS!

CHALLENGES: DATA ANALYSIS. CLEANING DATA: EXAMPLE

1. **TeamCity Global Survey**

2. **2 samples:** SMM and LinkedIn

3. **LinkedIn: 40% respondents from India**

CHALLENGES: DATA ANALYSIS. CLEANING DATA: EXAMPLE

QUESTION: What would you do?

EXAMPLE:
TEAMCITY GLOBAL SURVEY

1. Extract all Indian respondents

2. Compare answers (t-test):

   - Age

   - Role in team

   - Use of Ci tools

   - Proficiency level

   - etc

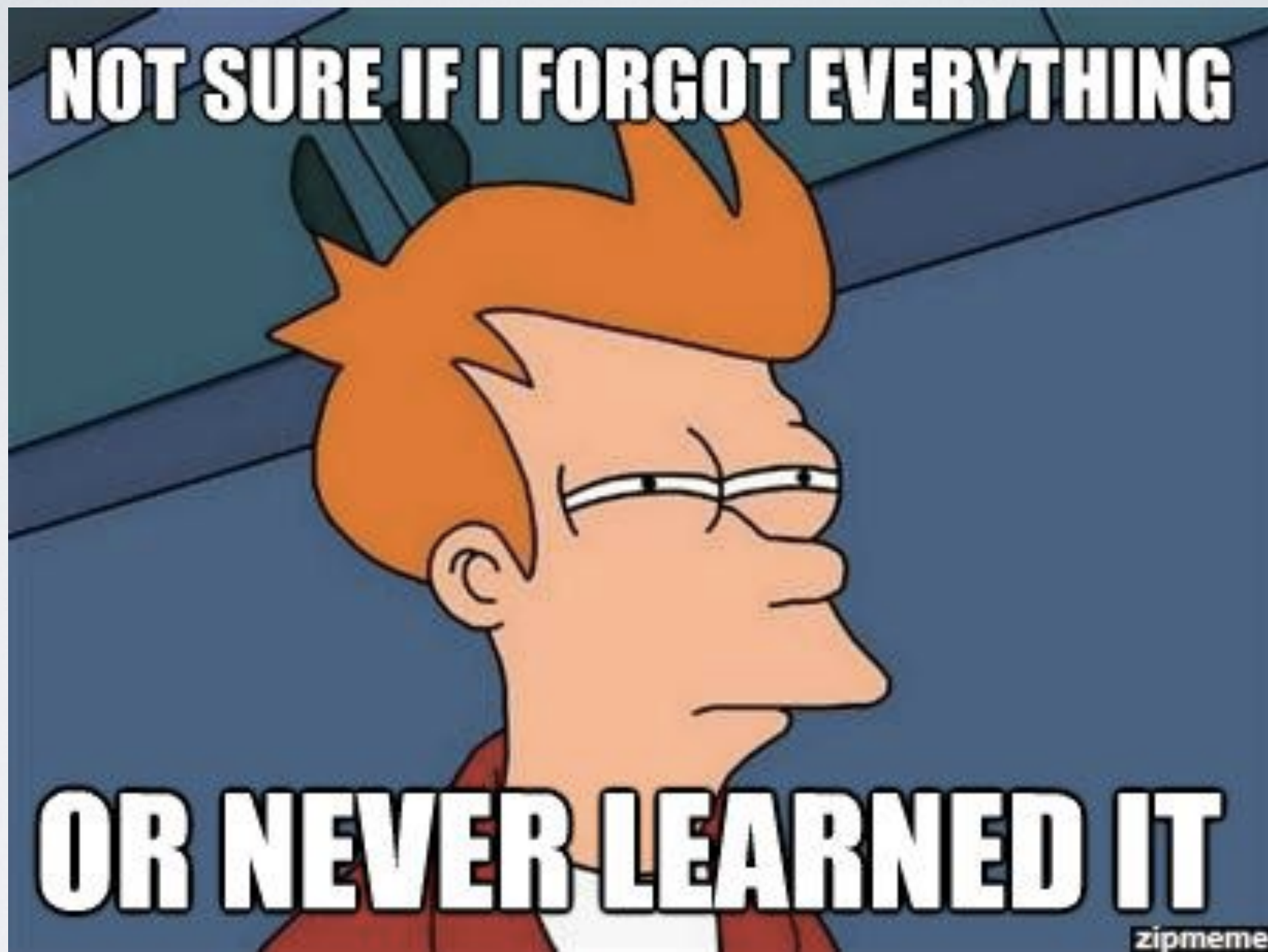# SURVEY WORKFLOW CHALLENGES

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- Question formulation

- respondents motivation

2. DATA COLLECTION STAGE:

- Validity issues

3. DATA ANALYSIS STAGE:

- Cleaning data

Source

OTHER TIPS?

TEST. TEST. TEST.

SURVEYS

PRODUCT ANALYTICS AND RESEARCH METHODS

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