

Surveys in practice and theory 2011

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J.Boye Conference Denmark

Agenda

Introduction and getting started with surveys

Surveys in practice:

- Working on questions
- A practical survey process

Surveys in theory:

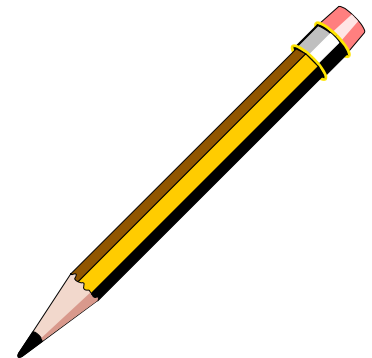
- What the experts tell us about an ideal process
- The four types of survey error
- Some tips from the experts on how to avoid error

Write down your answers to this questionnaire

1. How many surveys have you run?

NONE 1 to 5 6 to 10 more than 10

2. What is your top tip for a better survey, based on experience of writing or answering?

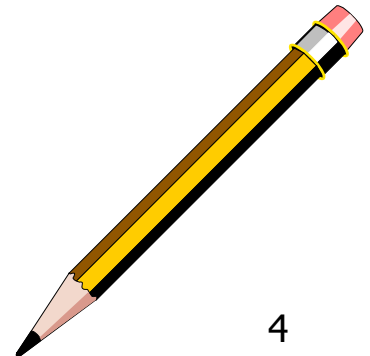


Now try it as an interview

1. How many surveys have you run?

NONE 1 to 5 6 to 10 more than 10

2. What is your top tip for a better survey, based on experience of writing or answering?

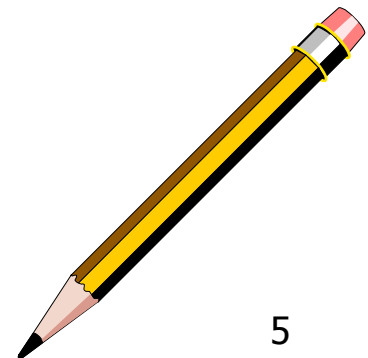


Now tell each other a story about your experience relevant to these questions

1. How many surveys have you run?

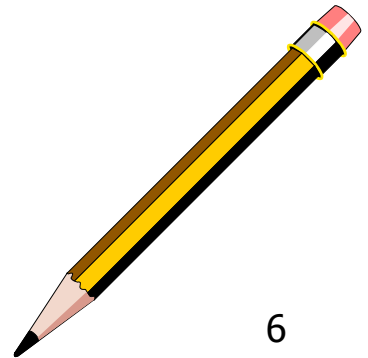
NONE 1 to 5 6 to 10 more than 10

2. What is your top tip for a better survey, based on experience of writing or answering?



Now let's share data and stories

- What numbers have we collected?
- What open answers?
- What stories?
- Which of the three little surveys was the best?



Today's example arrived in a tweet



JulieHowellIPR Julie Howell

[@cjforms](#) I couldn't do this cos it made me feel nauseous. Too much on page. Maybe u cd give [@mssocietyuk](#) some guidance svy.mk/thFdIZ

1 Nov

We support the MS Society and want to help

- MS = Multiple Sclerosis
- Julie Howell
 - Top PR person and accessibility campaigner
 - Runs the MS online community 'Jooly's Joint' (since 1995)
 - Lives with MS



MS Society and Diversity Open Survey

The MS Society has obligations under equality law to make its support and services equally accessible to all. The MS Society is also committed to working well with diversity in its strategy.

In order to understand our work with equality and diversity better the MS Society is carrying out a Diversity Review. We would be very grateful if you would spare a few minutes to complete this survey.

The information in this survey is collected anonymously. Only the MS Society's Strategic Lead for Diversity will have access to information in this form. Any information that people do choose to share will be treated confidentially.

If you would like to raise any questions directly, you would be welcome to contact the Strategic Lead for Diversity, David Lusk at volunteering@mssociety.org.uk

Definition:

Diversity - Diversity for MS Society staff and volunteers means seeking to understand the needs of people living with MS across a whole spectrum of different backgrounds and situations and providing support in appropriate ways.

[Next](#)

1. How far do you agree with the following statements:

	I Strongly Agree	I Agree	I Disagree	I Strongly Disagree	I Don't Know
I find the MS Society website is welcoming and inclusive.	☐	☐	☐	☐	☐
I find my MS Society branch welcoming and inclusive.	☐	☐	☐	☐	☐
I find MS Society staff welcoming and inclusive.	☐	☐	☐	☐	☐
I find information on MS provided by the MS Society includes issues affecting a wide range of people.	☐	☐	☐	☐	☐
I think information on MS provided by the MS Society is easy for a wide range of people to use.	☐	☐	☐	☐	☐
I find MS Society magazines reflect the experience of a wide range of people.	☐	☐	☐	☐	☐
I find the local MS Society newsletter is welcoming and inclusive.	☐	☐	☐	☐	☐
I find MS Society events are welcoming and inclusive and provide for individual	☐	☐	☐	☐	☐



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Write good questions

- Mix question types: closed and open
- Use appropriate, unambiguous language
- Avoid leading questions
- Present one question at a time
- Keep questions concise
- Keep positive; negatives are harder to understand



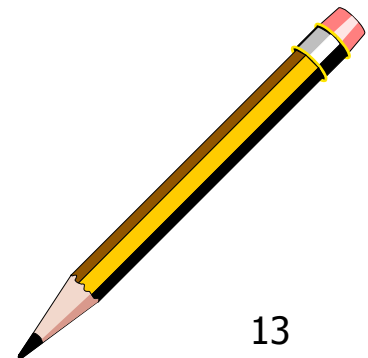
Any problems with these questions from our example?

Level 1 (easier): Find the problems

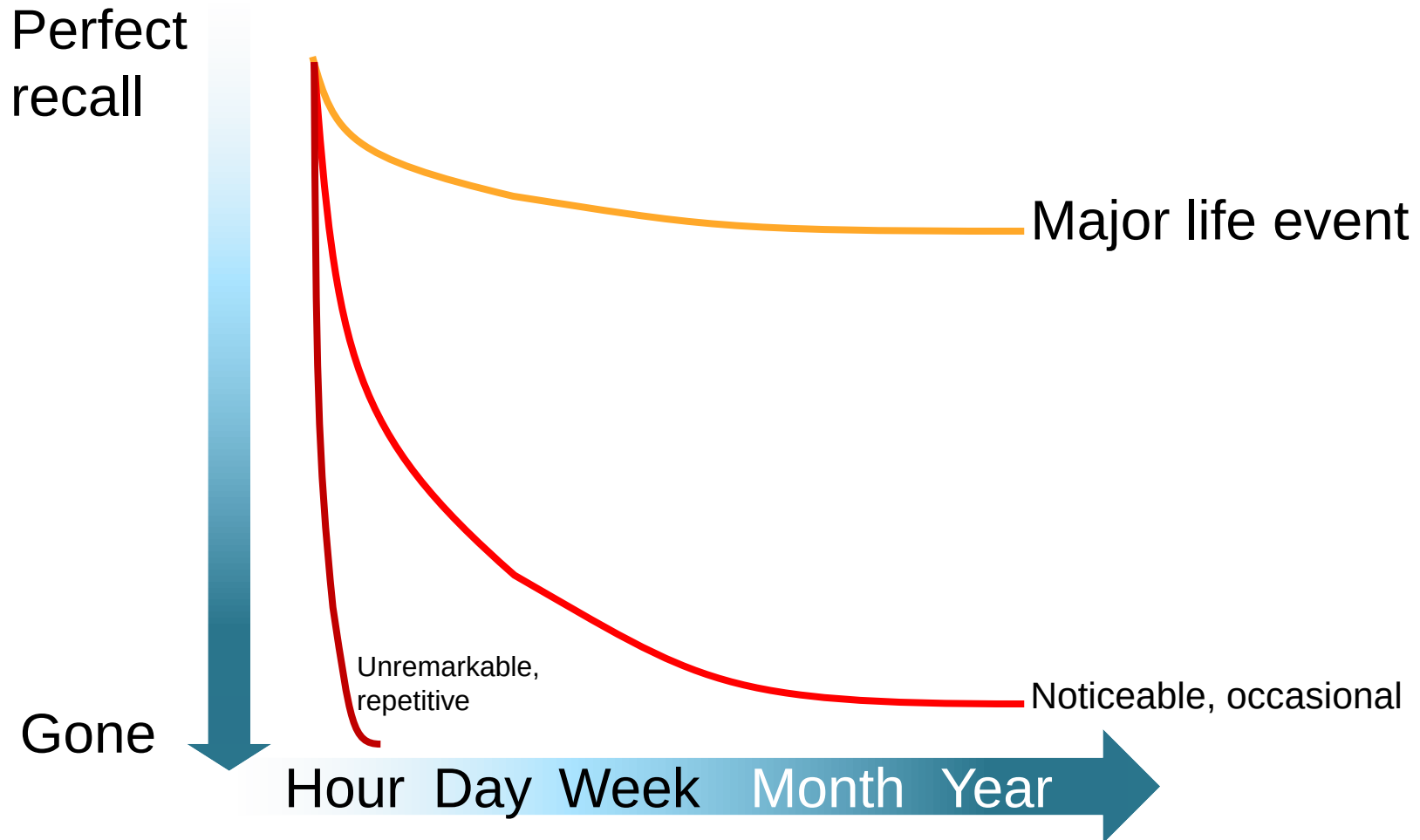
Level 2 (harder): Write better questions

I find the MS Society website is welcoming and inclusive.

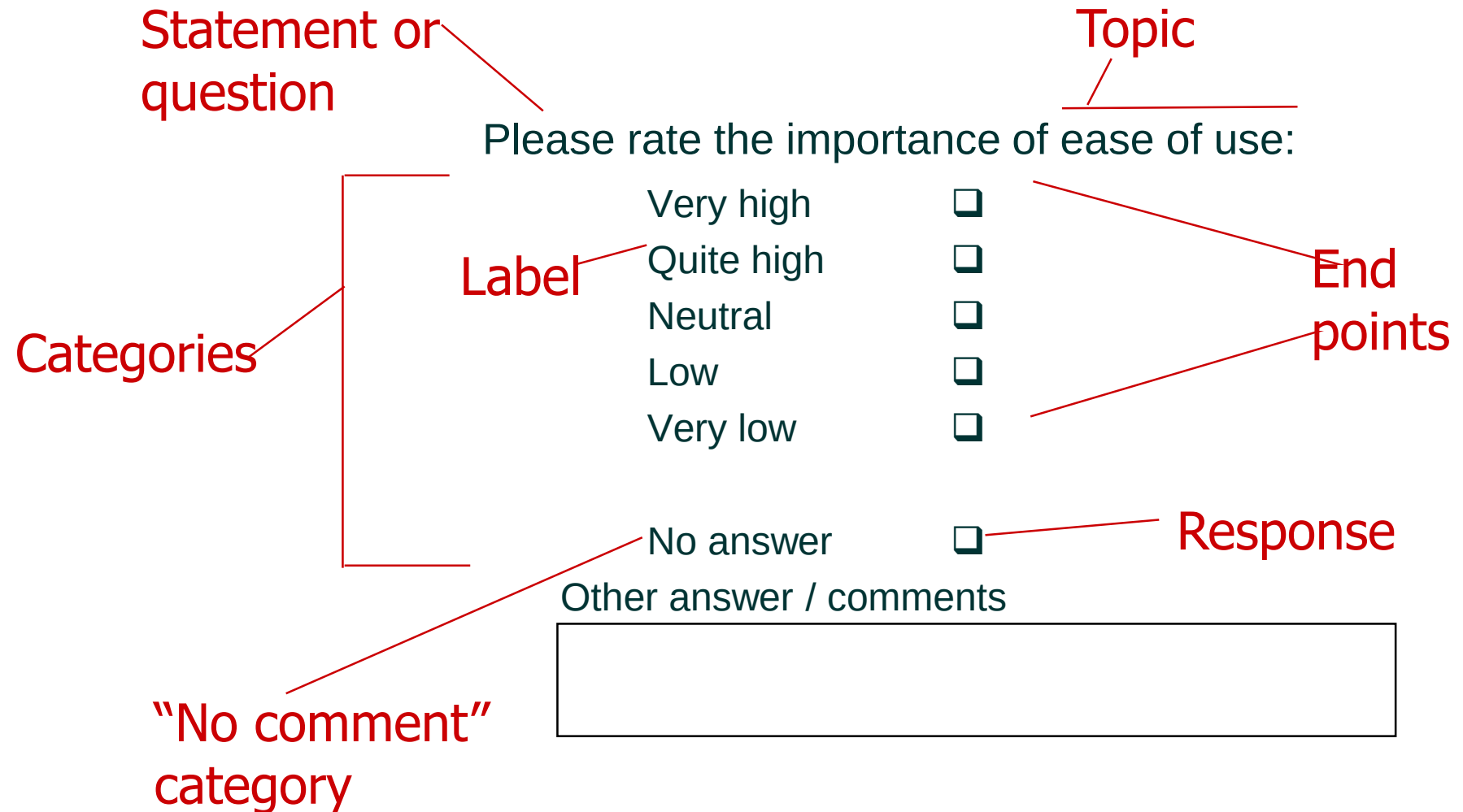
I have not experienced or witnessed discrimination in seeking help from the MS Society.



The approximate curve of forgetting



Anatomy of a range question



Likert had several different types of question in his scales

13. How much military training should we have?

- (a) We need universal compulsory military training. (1)
- (b) We need Citizens Military Training Camps and Reserve Officers Training Corps, but not universal military training. (2)
- (c) We need some facilities for training reserve officers but not as much as at present. (3)
- (d) We need only such military training as is required to maintain our regular army. (4)
- (e) All military training should be abolished. (5)

17. The United States, whether a member or not, should co-operate fully in the humanitarian and economic programs of the League of Nations.

Strongly Approve (5)	Approve (4)	Undecided (3)	Disapprove (2)	Strongly Disapprove (1)
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You can find an academic paper to support almost any number of points in a range

- Krosnick and Presser refer to ~87 papers on ranges

	Completely satisfied	Very satisfied	Quite satisfied	Neither satisfied nor dissatisfied	Quite dissatisfied	Very dissatisfied	Completely dissatisfied
Your outward journey with easyJet	☐	☐	☐	☐	☐	☐	☐
Your whole experience with easyJet on this latest occasion	☐	☐	☐	☐	☐	☐	☐

	True	False
I usually get what I want in life.	☐	☐
I need to be kept informed about news events.	☐	☐

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Not Applicable
	5	4	3	2	1	
Overall, I was satisfied with my experience in Hayward Dining Room	☐	☐	☐	☐	☐	☐

Please tell us how your experience at John Lewis compares to each of the other retailers you have visited?

	John Lewis is WORSE	About the same	John Lewis is BETTER
Supermarket	☐	☐	☐
Other local store/independent retailer	☐	☐	☐

Very Unimportant	Very Important
1	4
☐	☐
☐	☐
☐	☐
☐	☐

1. Is this OK? Tell us if you agree with us

☐ Strongly agree

☐ Agree

☐ Disagree

☐ Strongly disagree

2. Tell us more about this

1: *Please rate how well the site is organized.

1=Poor Excellent=10

1	2	3	4	5	6	7	8	9	10	Don't Know
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒

Two options that are probably OK

Best basic choice:
5 points + “no answer”

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Not Applicable
	5	4	3	2	1	
Overall, I was satisfied with my experience in Hayward Dining Room	☐	☐	☐	☐	☐	☐

1. Is this OK? Tell us if you agree with us

☐ Strongly agree

☐ Agree

☐ Disagree

☐ Strongly disagree

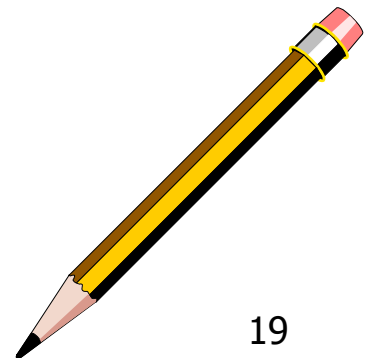
2. Tell us more about this

If you're sure the user has an opinion: 4 points + comment

Make the range more useful?

1. How far do you agree with the following statements:

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The MS Society website is welcoming	☐	☐	☐	☐	☐



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Introduction and getting started with surveys

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Surveys in theory:

- What the experts tell us about an ideal process
- The four types of survey error
- Some tips from the experts on how to avoid error

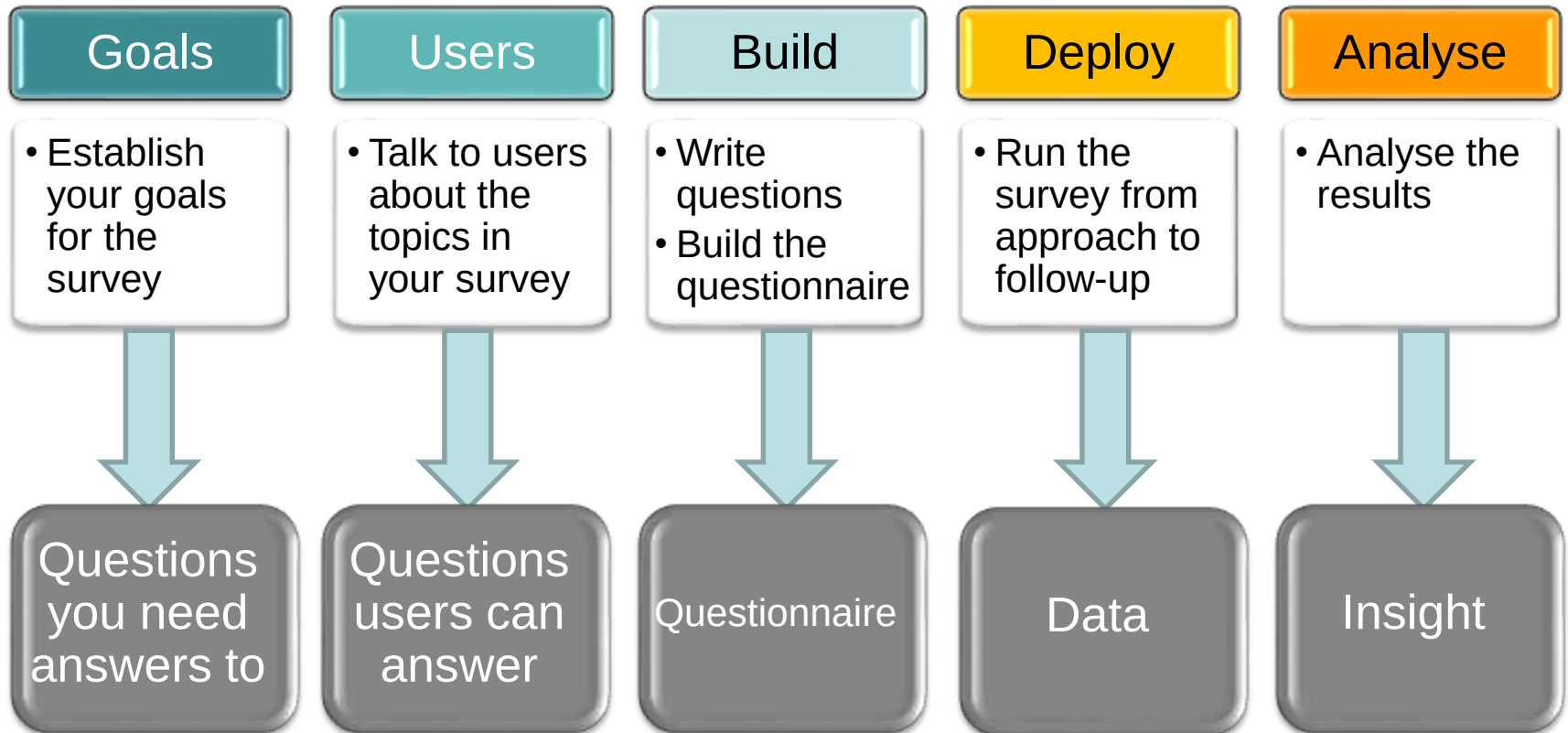
A survey is
more than
questions



© Caroline Jarrett and Effortmark Ltd

If you use this cartoon in another context,
please credit Caroline Jarrett and Effortmark Ltd.

A basic survey process



Goals

- Establish your goals for the survey

What do you want to know?
Why do you want to know?
What will you do with the answers?



Our example: MS Society on diversity.

Write a short goal for the survey

MS Society and Diversity Open Survey

Exit this survey

MS Society and Diversity Open Survey

The MS Society has obligations under equality law to make its support and services equally accessible to all. The MS Society is also committed to working well with diversity in its strategy.

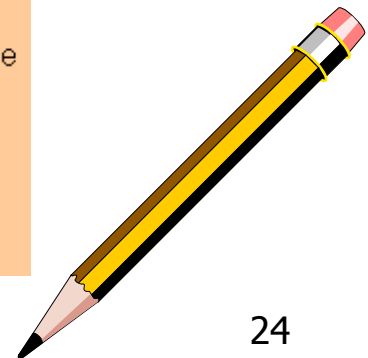
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Next



Goals

Users

- Talk to users about the topics in your survey

- Who are they?
- How will you find them?
- Do they want to answer your questions?
- Do they understand your questions?



Users

Response relies on effort, reward, and trust

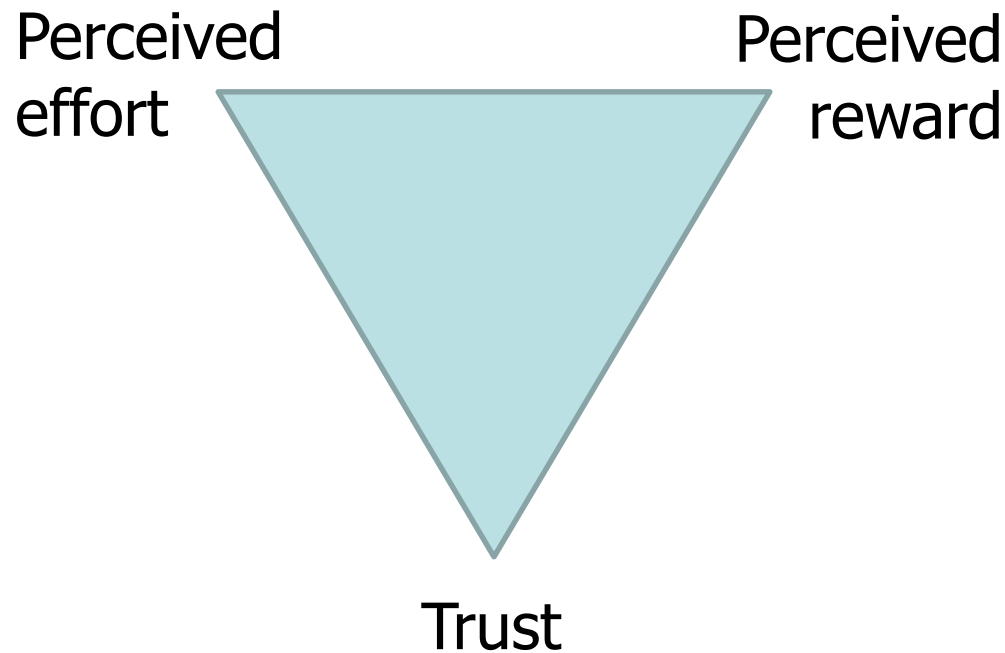
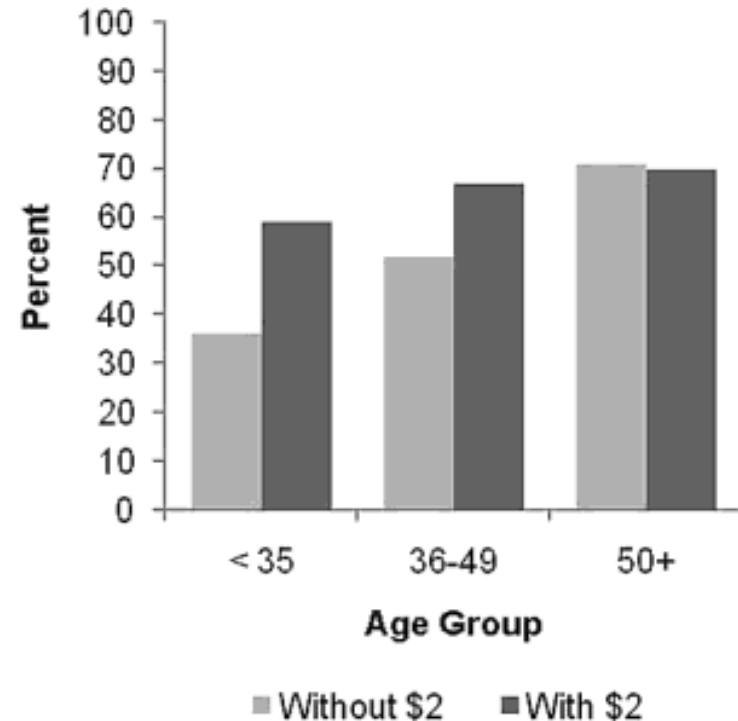


Diagram from Jarrett, C, and Gaffney, G (2008) "Forms that work: Designing web forms for usability" inspired by Dillman, D.A. (2000) "Internet, Mail and Mixed Mode Surveys: The Tailored Design Method"

A token incentive works better than no incentive or a prize draw

Figure 7.3 Effects of a \$2 incentive on the age composition of a completed sample of new driver's license holders in Washington State.

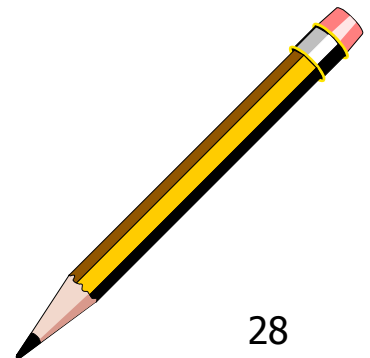


Source: *The Influence of Different Techniques on Response Rates and Nonresponse Error in Mail Surveys*, by K. J. Miller, 1996, Bellingham, WA: Western Washington University. Unpublished master's thesis.

Does your household have access to running water?



Picture credits: James Mooney, Caroline Jarrett

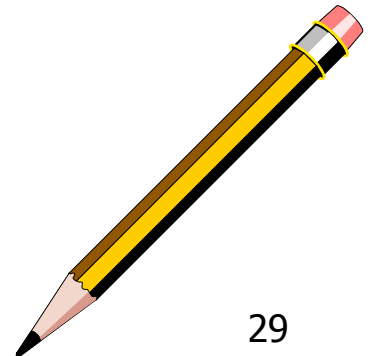


Our example: MS Society

4. Do you, yourself, identify with any equalities group?

- ☐ Yes
- ☐ No
- ☐ Don't Know

What does this question mean to you?
Any ideas about how to ask it better?

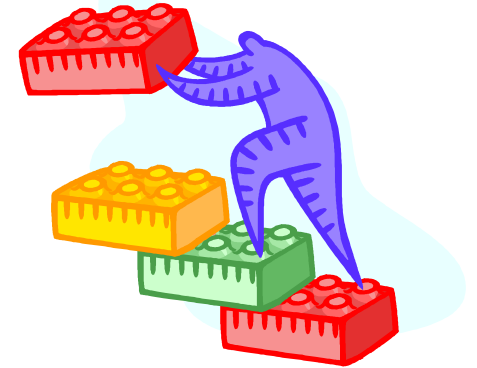


Goals

Users

Build

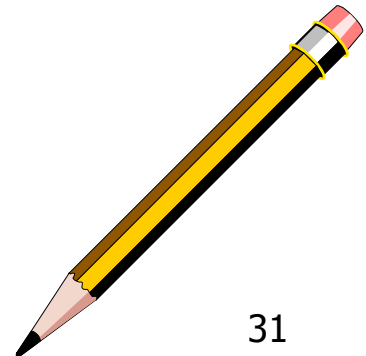
- Write questions
- Build the questionnaire



- Keep to one topic at a time
- Start with questions that are interesting
- Organize the questions to grab the user's attention
- Minimize requests for personal information

Sorting out the topics: group these ones

1. What was your total family income in 2009?
2. Do you like to play golf?
3. What is your opinion on global warming?
4. Are you married?
5. Which political party does the best job of promoting economic growth?
6. How many times have you gone bowling in the last year?
7. What is your political party preference?
8. Do you favour or oppose higher tax on fuel as a measure to reduce environmental pollution?
9. What is your occupation?
10. Please describe your favourite recreational activity.
11. How old are you?



Goals

Users

Build

Deploy

- Run the survey from approach to follow-up

- (Optional pre-notice?)
- Send the survey with token incentive
- Send a reminder message (no further incentive)
- Send a second copy of the survey
- Thank participants



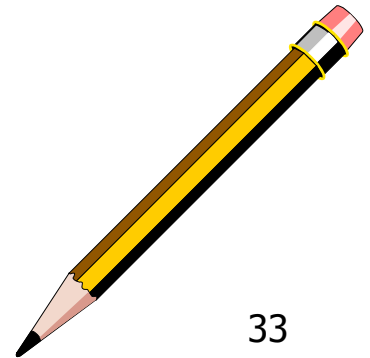
Our example:

Your views about this thank-you page

MS Society and Diversity Open Survey

Thank you for completing our survey!

Done



Goals

Users

Build

Deploy

Analyse

- Create summaries and comparisons
- Present the results

- Tidy up the data
- Decide what to do about “item non-response”
 - Remove the whole entry?
 - Use the partial entry?
 - Calculate an “inferred value”?



Analyse

Compile responses

\$	# answers	
0	62	\$250/class-up to 3 classes. \$150 for tests-up to 2
50	34	depends upon my employers contribution
100	131	\$250? initial, plus \$50? each 'renewal'
150	25	42
200	57	\$30 - unless my company agreed to pay it ;-)
250	32	don't know-I would want my emp'er to pay
300	31	\$300 first time, \$100 for renewal
500	84	Have no basis for comparison.
1000	44	\$300 for a 5-year certification
2000	17	I can't say-depends entirely on the certification
3000	8	
5000	7	

Wordle.net example: in favour of Facebook



[illegible]

Wordle from the UPA survey on certification



Analyse

Publish results - gently

- Don't surprise people with bad news
- Make sure publication is timely
- Keep reports short
- It's OK to have some gaps in the results, "more work needed"



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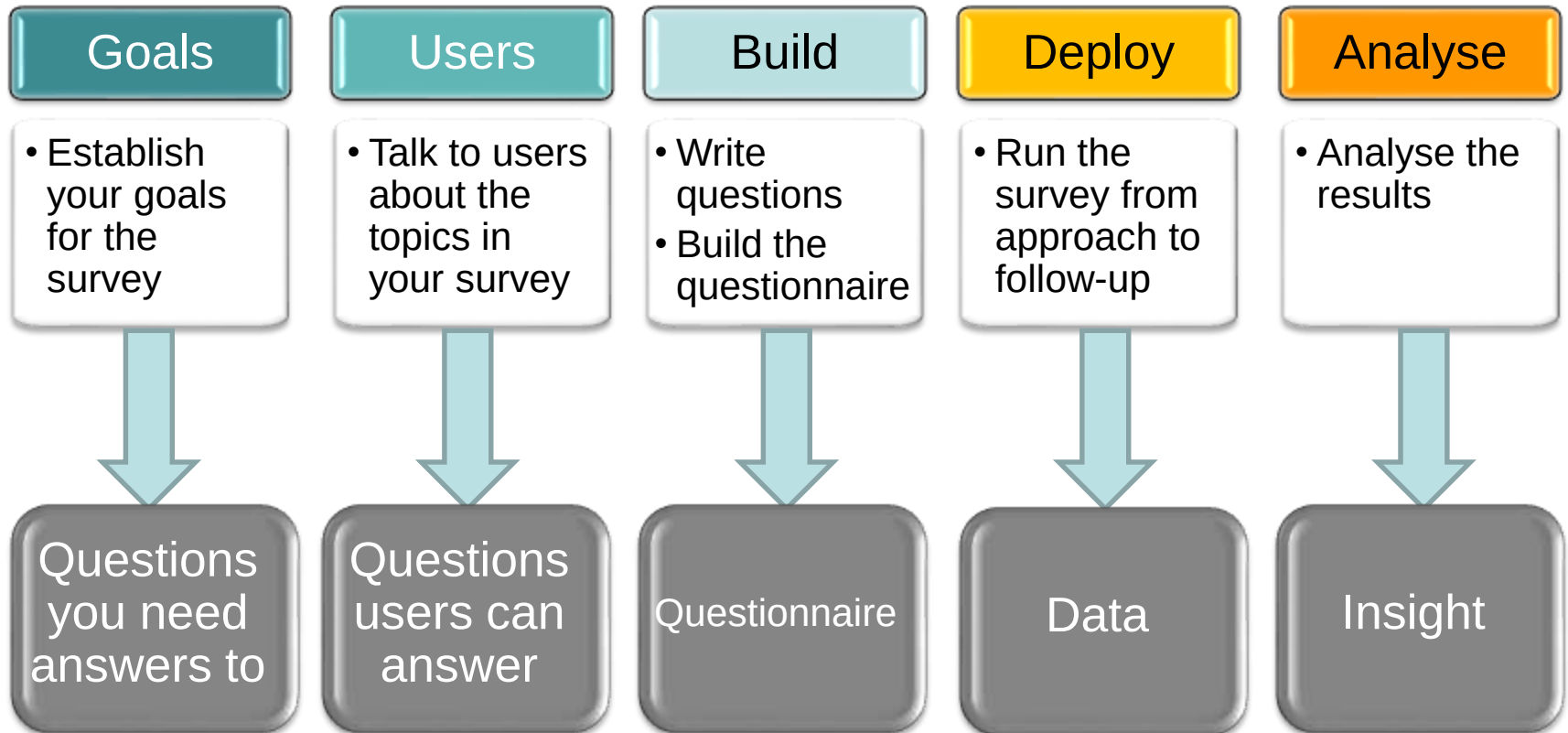
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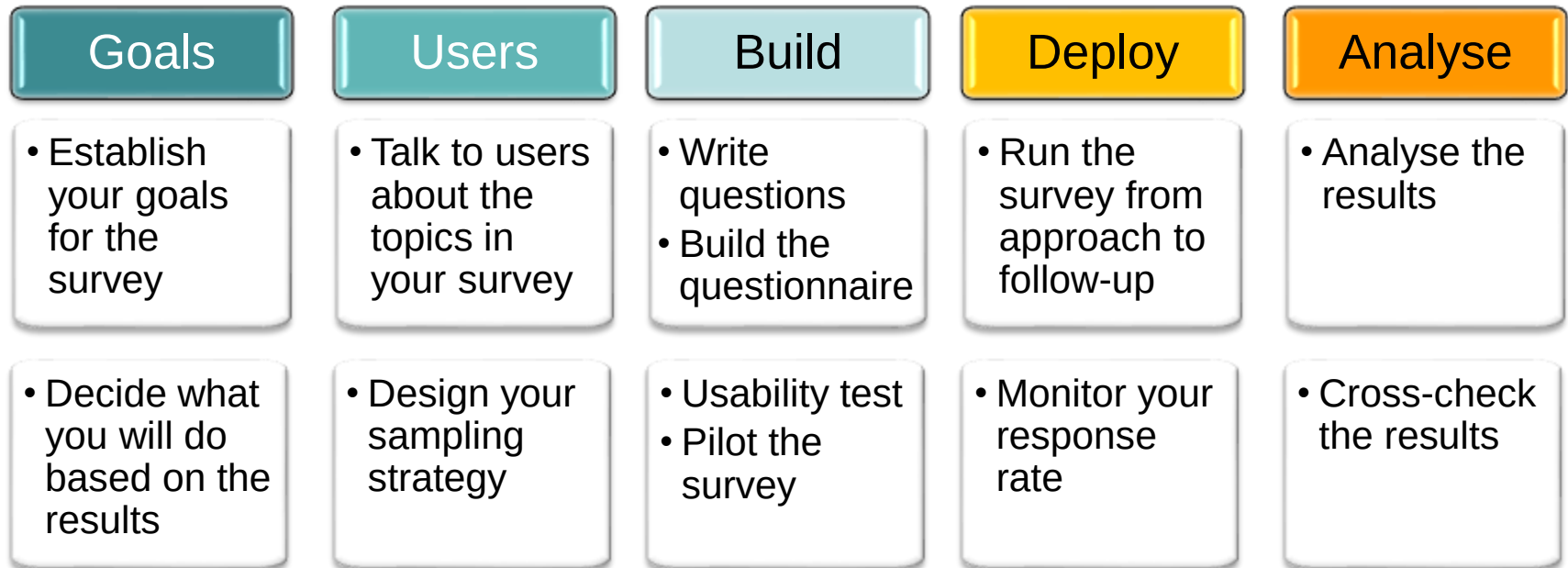
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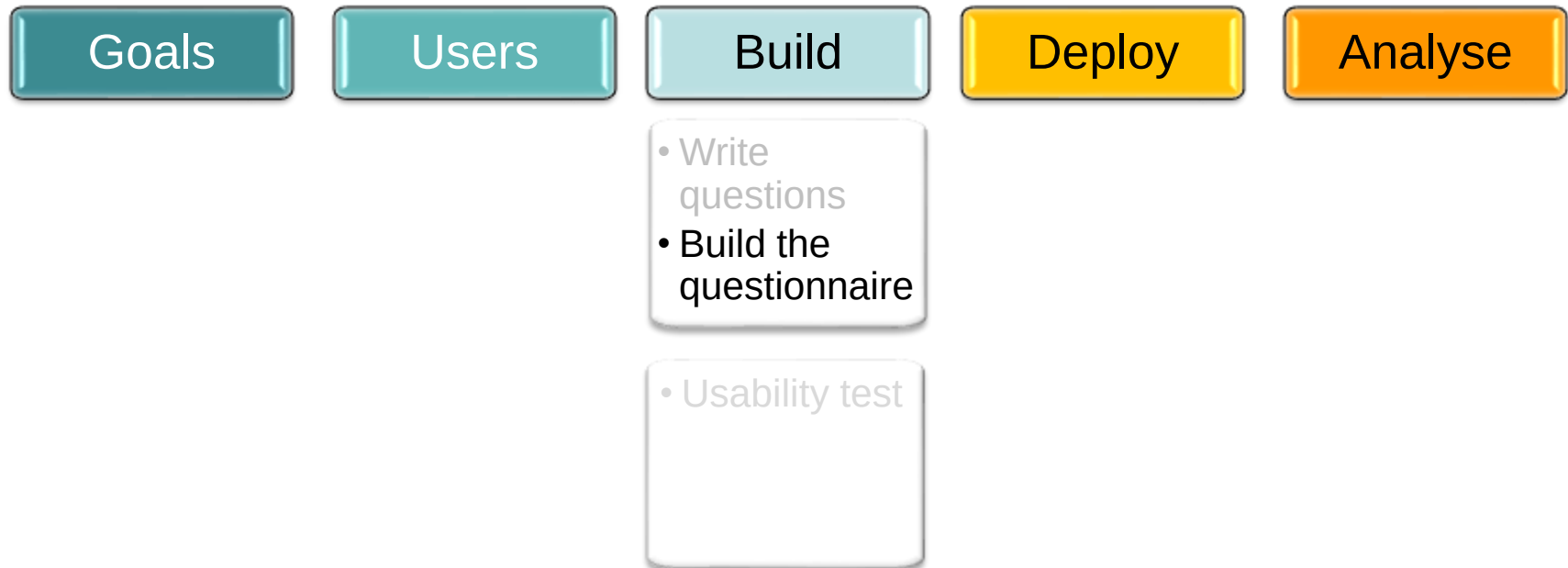
A basic survey process



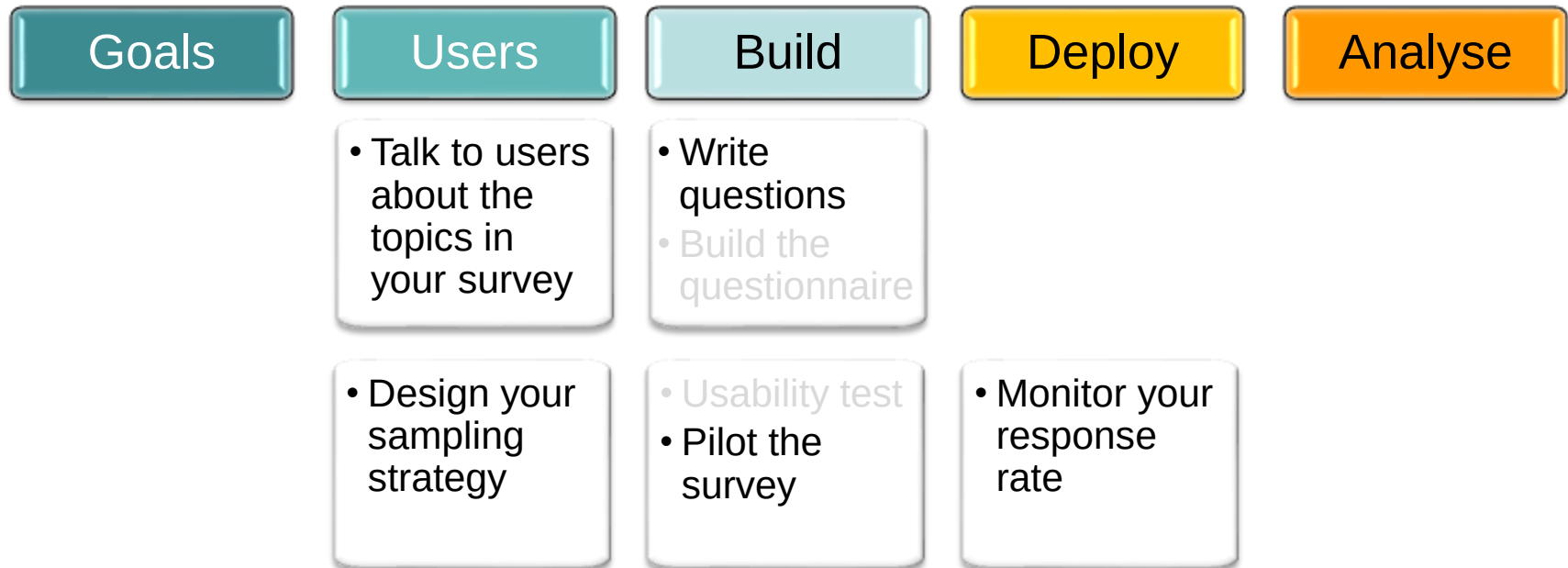
A complete process



Typically, an expert will focus on just one topic



Another example: topics discussed by Dillman et al (2008)



A tweet with a survey in it



Poll: Do you work on weekends? -
<http://poll.fm/27ocf> #smwork

5 Sep via TweetDeck ☆ Favorite ↺ Retweet ↻ Reply

Retweeted by [jnottke](#) and 15 others



Sunday 5th September

The results

Do you work on weekends? - Results

Thank you for voting!

Dismiss

Yes, always.

732 VOTES **36.29%**



Yes, sometimes.

1,016 VOTES **50.37%**



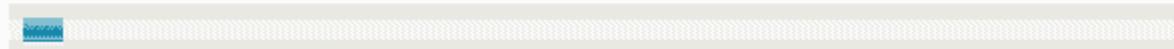
No, rarely.

199 VOTES **9.87%**



No, never.

70 VOTES **3.47%**

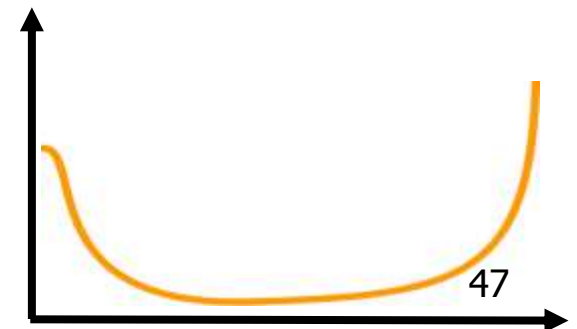


2,017 TOTAL VOTES

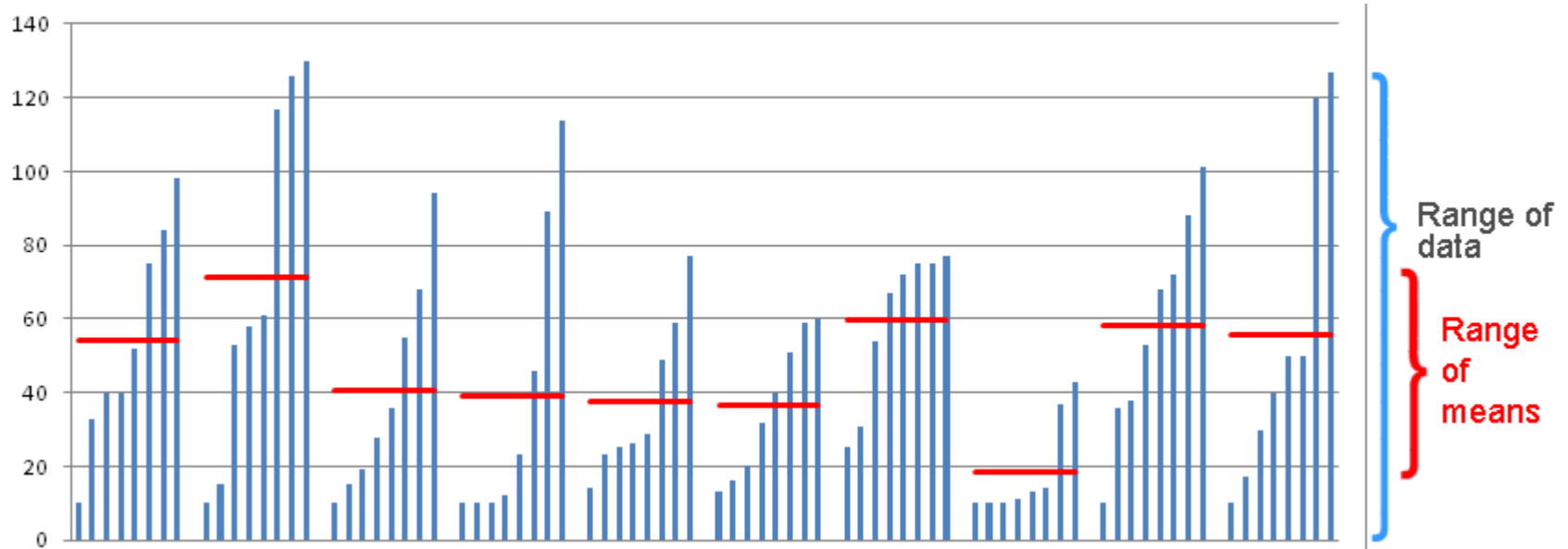
Create Your Own Poll

There are four types of survey error

- Sampling:
 - Some respondents get left out; the ones left in are somewhat variable
- Non-response:
 - The people who respond are different to the people who do not
- Coverage:
 - Some of the population is not included in the sampling frame
- Measurement:
 - Asking the wrong question, using the wrong technique



If you have variable data, you will have sampling error



Jarrett, C. (2011) "What is a confidence interval and why would I want one?" <http://www.uxmatters.com>

Avoid non-response error with a better response rate

- More respondents means fewer who do not respond:
 - Less follow-up
 - Less opportunity for them to share factors in common (but different to the respondents)
 - Statistical agencies like response rates 50%+
- BUT:
 - A low response rate may be independent of any factor
 - About 1% of people just like answering questions
 - Sample representativeness is more important than raw response rate

50%+

Dillman recommends mixed-mode surveys to avoid coverage error

- Telephone surveys have coverage problems:

- Unlisted numbers
- 'Do not call' numbers
- Cell phone-only households



- Mail surveys have coverage problems:

- New delivery points
- Shared delivery points

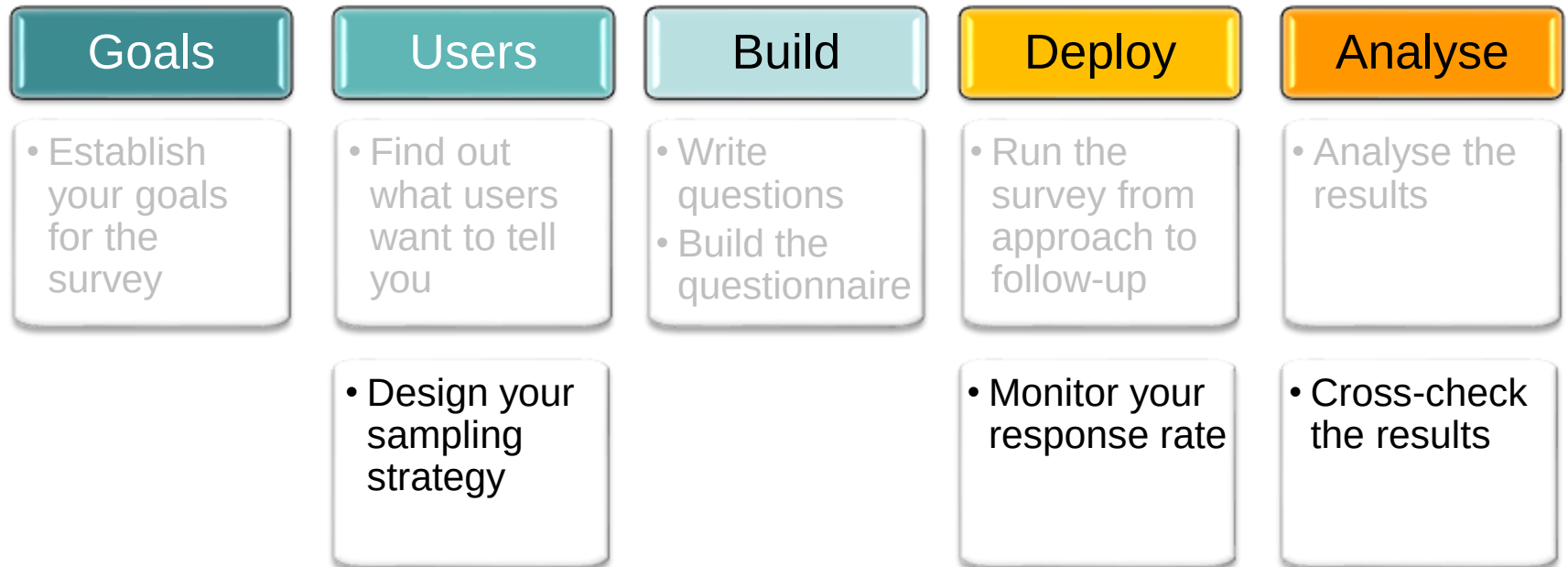


- Internet surveys have coverage problems:

- People without internet access
- No directory of email addresses
- Spam filters



Adding steps to avoid coverage, sampling, and non-response error

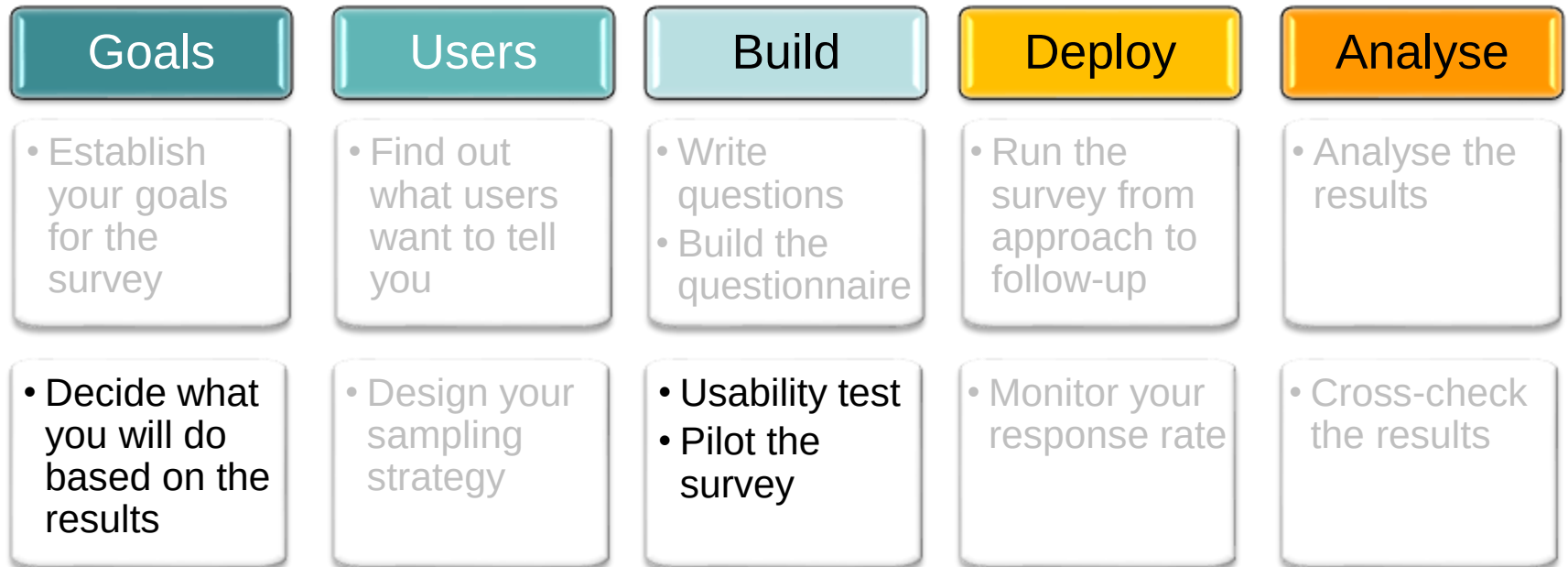


Avoid measurement error by being careful

- Have clear goals for your survey
- Make sure your users want to answer your questions
- Keep testing everything, all the time
- Make sure that you analyse the data from your pilot



Adding steps to avoid measurement error



Challenging the theory

- How many steps are practical?
- How much time do you have for a survey?
- Which of those things do you really do?
- Which might you try?



Acknowledgement and references

- Thanks to Karen Bachmann
 - Workshop started as one that we presented together in 2002 and 2003
- Books on survey design
 - Dillman, D.A., Smyth, J.D. and Christian, L.M. (2009) Internet, Mail and Mixed Mode Surveys: The Tailored Design Method
 - Very practical, informed by many years' research. Written in a straightforward style.
 - The earlier editions (1999 and 2007) are also good and you may be able to get one cheaply second-hand
 - Gilham, Bill (2008) "Developing a questionnaire" Continuum Books
 - Thin, clear and practical book that takes you through the survey process.
 - My edition is the 2000; there is a newer one in 2008 which I'm sure will be even better
 - Schuman, H. and Presser, S. (1996) "Questions and Answers in Attitude Surveys: Experiments on Question Form, Wording, and Context"
 - Thorough analysis of all the ways in which questions can be slippery, based on many years' research.

Other references

- Krosnick, J. and Presser S. (2009) “Question and Questionnaire Design” in Handbook of Survey Research (2nd Edition) James D. Wright and Peter V. Marsden (Eds).
 - <http://comm.stanford.edu/faculty/krosnick/Handbook%20of%20Survey%20Research.pdf>
 - Literature review, comprehensively referenced
- Barnum, C. M. (2011) “Usability Testing Essentials: Ready Set, Test” Morgan Kaufmann
 - Thorough but approachable book on how to do usability testing
- Groves, R. M. (2004) “Survey errors and survey costs” Wiley
 - More detail about this book here:
http://www.rosenfeldmedia.com/books/survey-design/blog/survey_book_of_the_month_may_2/

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