

DATA SCIENCE &

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**DESIGN THINKING**





**every data science problem**





DATA TELLS STORIES  
ABOUT THE WORLD



**INSIGHTFUL  
TRANSFORMATIONAL  
LIFE SAVING  
PREDICTIVE**

**MISLEADING  
UNTRUE  
COINCIDENTAL**

**DATA WILL TELL STORIES**  

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**ABOUT THE WORLD**

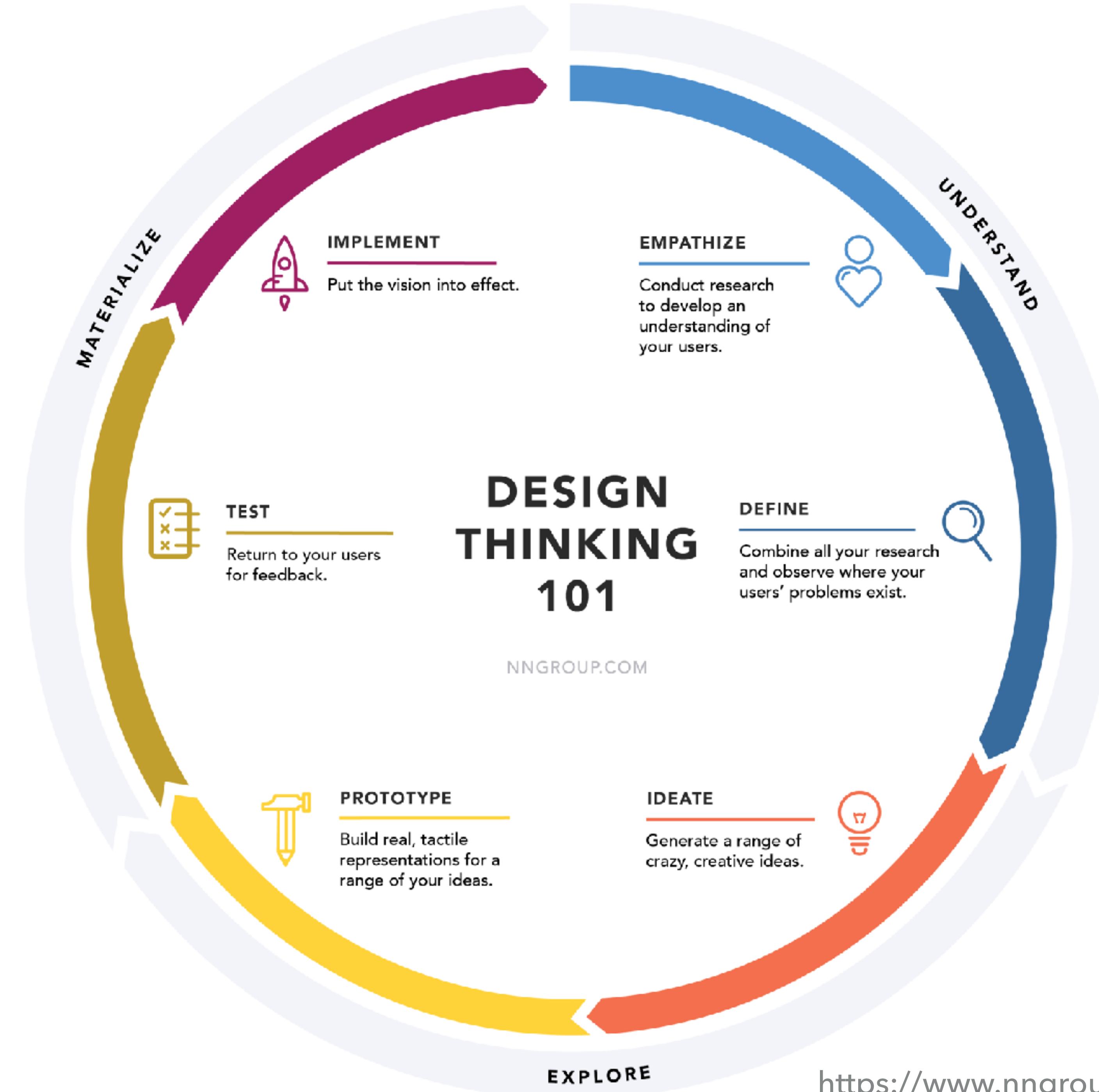
# WHAT IS DESIGN THINKING?

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# DESIGN THINKING 101

NNGROUP.COM



# WHY DESIGN THINKING + DATA SCIENCE?

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PROBLEM SOLVING NOT ONLY REQUIRES A HIGH-LEVEL CONCEPTUAL  
UNDERSTANDING OF THE CHALLENGE, BUT ALSO A DEEP  
UNDERSTANDING OF THE NUANCES OF A CHALLENGE, HOW THOSE  
NUANCES AFFECT BUSINESSES, GOVERNMENTS, AND SOCIETIES, AND  
—DON'T FORGET—THE CREATIVITY TO ADDRESS THESE CHALLENGES.

Dean Malmgren & Jon Wettersten

EMPATHY IS A FIRST STEP TO CREATING A VITAL HUMAN-CENTERED DESIGN PROCESS AND A POWERFUL BIG DATA USE CASE FOR CUSTOMER ANALYTICS. DESIGNERS HAVE TO IMMERSE THEMSELVES IN THE PHYSICAL ENVIRONMENT OF THEIR CUSTOMERS TO HAVE A DEEPER PERSONAL UNDERSTANDING OF THE ISSUES INVOLVED.

Karan Sachdeva

THE IDEA THAT PART OF THE ROLE OF ANALYTICS IS TO ANSWER TOUGH QUESTIONS IS NOT NOVEL. PART OF THE STRUGGLE FOR ANALYSTS THOUGH IS TO DETERMINE WHAT THOSE TOUGH QUESTIONS ARE...

Benjamin Alamar

...FROM A DESIGN PERSPECTIVE, THE WAY TO GET AT THE TOUGH QUESTIONS IS TO ASK THE STUPID ONES FIRST. IT IS OFTEN DIFFICULT FOR ANALYSTS TO ASK WHAT MAY APPEAR TO BE FUNDAMENTALLY BASIC QUESTIONS ABOUT THEIR INDUSTRY, BUT IT IS VITAL IN ORDER TO GAIN INSIGHT.

Benjamin Alamar



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DATA SCIENCE “SOLUTIONS”

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# AFFECT LIVES



THE BEST MINDS OF MY  
GENERATION ARE  
THINKING ABOUT HOW  
TO MAKE PEOPLE CLICK  
ON ADS.

**Jeff Hammerbacher**

(former data scientist at Facebook)



Ben's Year



YEAR IN REVIEW APP

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SOCIAL MEDIA

## Your Year In Review

Eric, here's what your year looked like!

Only you can see this



See Your Year

ERIC MEYER

# INADVERTENT ALGORITHMIC CRUELTY

## FURTHER READING ON THE WEB

- ▶ <http://radar.oreilly.com/2013/10/design-thinking-and-data-science.html>
- ▶ <http://www.ibmbigdatahub.com/blog/dynamic-duo-big-data-and-design-thinking>
- ▶ <http://data-informed.com/what-design-thinking-can-teach-analytics-professionals/>
- ▶ <https://whatsthebigdata.com/2014/02/03/design-thinking-for-dummies-data-scientists/>
- ▶ <https://data.london.gov.uk/blog/open-data-and-design-thinking-new-tools-to-tackle-social-challenges/>
- ▶ <https://uxmag.com/articles/data-marries-design-to-drive-customer-success-in-2016>
- ▶ <http://www.aacsb.edu/videos/aacsb-explores/archives/design-thinking-harvard-professor-srikant-datar>
- ▶ <https://channel9.msdn.com/Events/Machine-Learning-and-Data-Sciences-Conference/Data-Science-Summit-2016/MSDSS17>
- ▶ <http://harvardmagazine.com/2014/03/why-big-data-is-a-big-deal>
- ▶ <https://www.recode.net/2017/2/19/14660236/big-data-bullshit-college-course-university-washington>