The truth about Data Science projects
Big Data Success Remains Elusive: Study

Just over a quarter of organizations say their big data initiatives are a success, according to a recent Capgemini study. So why are three of four unsuccessful?

Nearly eight out of ten organizations have big data projects underway, but only 27% describe their efforts as "successful," and a scant 8% as "very successful." But despite this dim view of their data-driven efforts thus far, 60% of executives surveyed recently by consulting firm
I say so, and I’m as old as dirt
Data Science is a terrible thing to waste
My conjecture. By me.

A Data Scientist can increase the probability that a project is successful by 5-10X if they approach it as a Design Thinking leader.
Yours to keep: A Design Thinking process for Data Science projects
“We’ve challenged everyone who works for us — even our lawyers and accountants — to think deeply about how design should be part of their jobs.”

CEO Brad Smith
Harvard Business Review
January 2015
"Design for Delight articulates Intuit’s approach to design thinking, based on deep customer empathy, idea generation, and experimentation. D4D provides the entire company with a common framework for building great products."

CEO Brad Smith
Harvard Business Review
January 2015
It’s a journey
Show me
Data Science new products

- One-Time Analysis
- Decision Support System
- Decision Engine
Data Science diverse customers

Consumers

Business

Engineering
The Data Scientist as Design Thinking leader
The root cause of Data Science project failure

It’s hard to get an organization to adopt a new idea
Organizations have immune responses, too
Finally. The process. Let’s go!
Design for Delight ++

- Deep Customer Empathy
- Go Broad to Go Narrow
- Rapid Experiments with Customers
DEEP CUSTOMER EMPATHY
The Data Scientist as detective
Interview
Synthesize
Personas

- **Name**
- **Photo**
- **Background**
- **Role**
- **Rationale**
- **Hopes**
- **Concerns**
As a ___________________
I want to _______________
because ________________
but ___________________
so I feel _______________

Role and 2-3 descriptive facts
Goal
Rationale
Obstacle
Emotion

Problem Statements
Environment

Data

Systems

Processes

Samples

Sketches

Storyboards

Artifact
Design Evaluation Criteria

How will we evaluate a proposed design?
Solution Evaluation Criteria

How will we evaluate an implemented solution?
GO BROAD TO GO NARROW
The Data Scientist as convener
Review ettiquette

Brainstorming Rules

• Stay on topic
• One conversation at a time
• Don’t criticize or ridicule
• Build on the ideas of others
Facilitate idea generation and filtering
Solution hypothesis

Succinct statement of the best idea

Leap-of-faith assumptions
What must be true for the idea to work?

Experiment
What rapid experiment can we do?

What we’ll learn
What will it teach us?

How we’ll respond
What will we do, either way?
RAPID EXPERIMENTS WITH CUSTOMERS
The Data Scientist as builder
Paper prototype
Algorithm testing rig
Iterate
One step at a time
Enjoy!


george_roumeliotis@intuit.com