



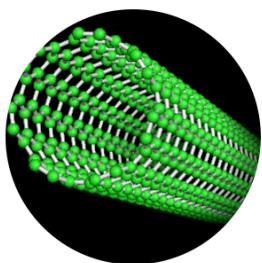
# Let's talk **UX** in scientific software

challenges, approaches, process

Facilitated by Alissa Nedossekina  
HUBzero®, Purdue University



## Open source platform for scientific collaboration



interactive  
simulation



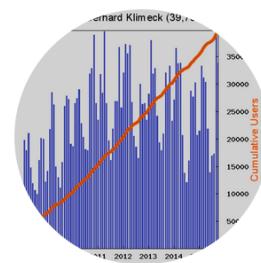
data management &  
publishing



community building



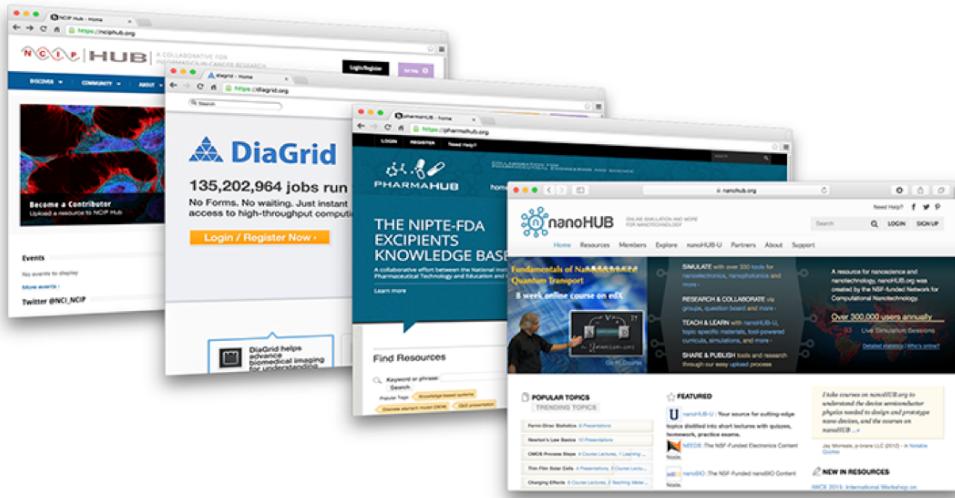
online learning



data analytics &  
impact measurement



# Open source platform for scientific collaboration



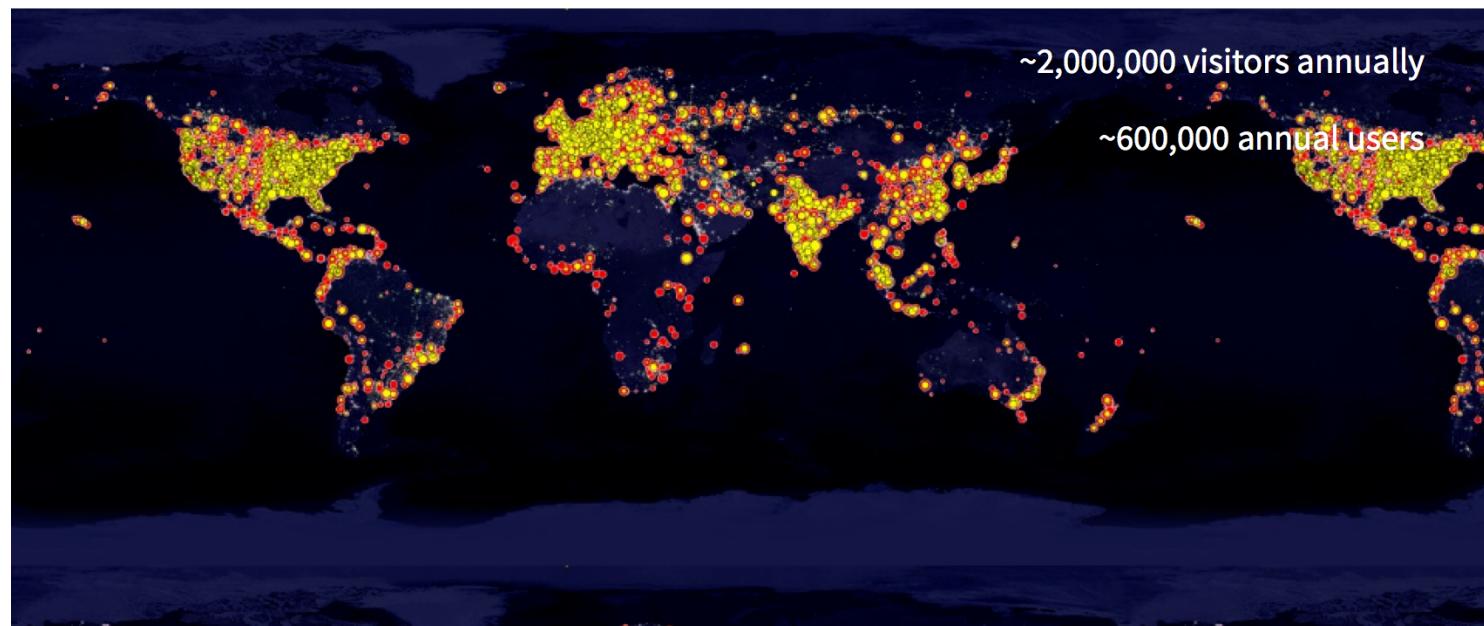
nanotechnology  
cancer research  
climate modeling  
civil engineering  
pharmaceuticals

...

60+ HUBs

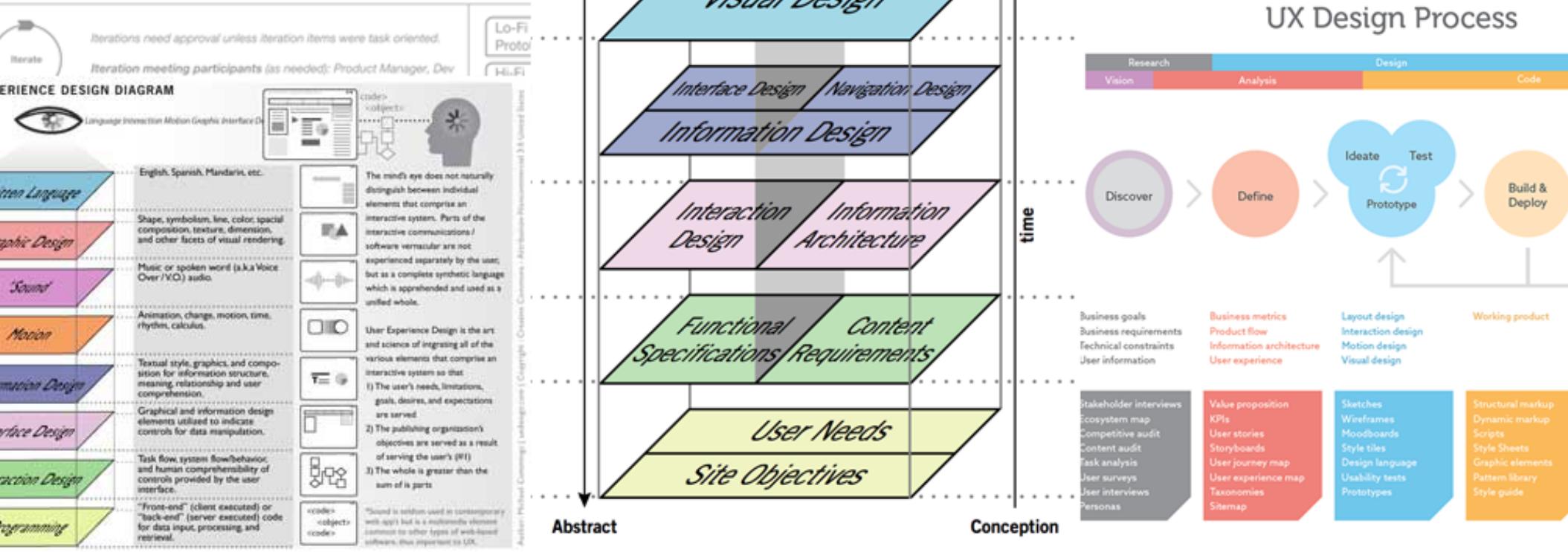
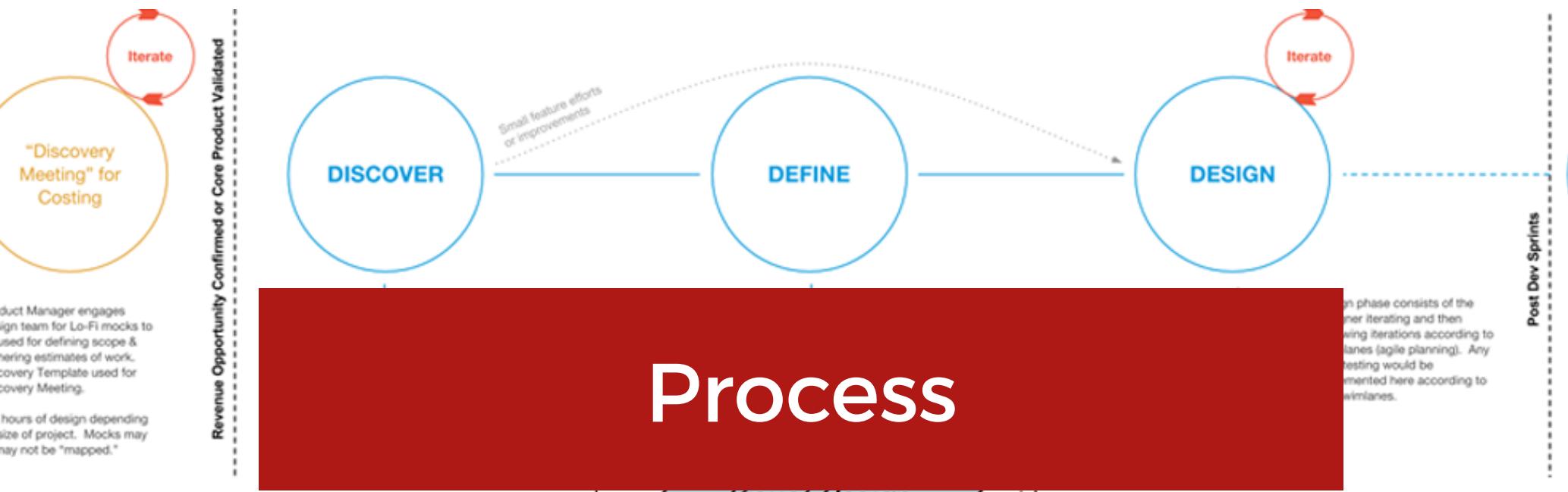


Download: <https://hubzero.org>  
Github: <https://github.com/hubzero>  
Cloud: [Amazon AWS Marketplace](#)



# User Experience

- describes person's overall satisfaction level when using your product or system
- focuses on having a deep understanding of users, what they need, what they value, their abilities, and also their limitations.
- What makes good UX? intuitive workflow, quick response time, short learning curve, pleasing UI etc.



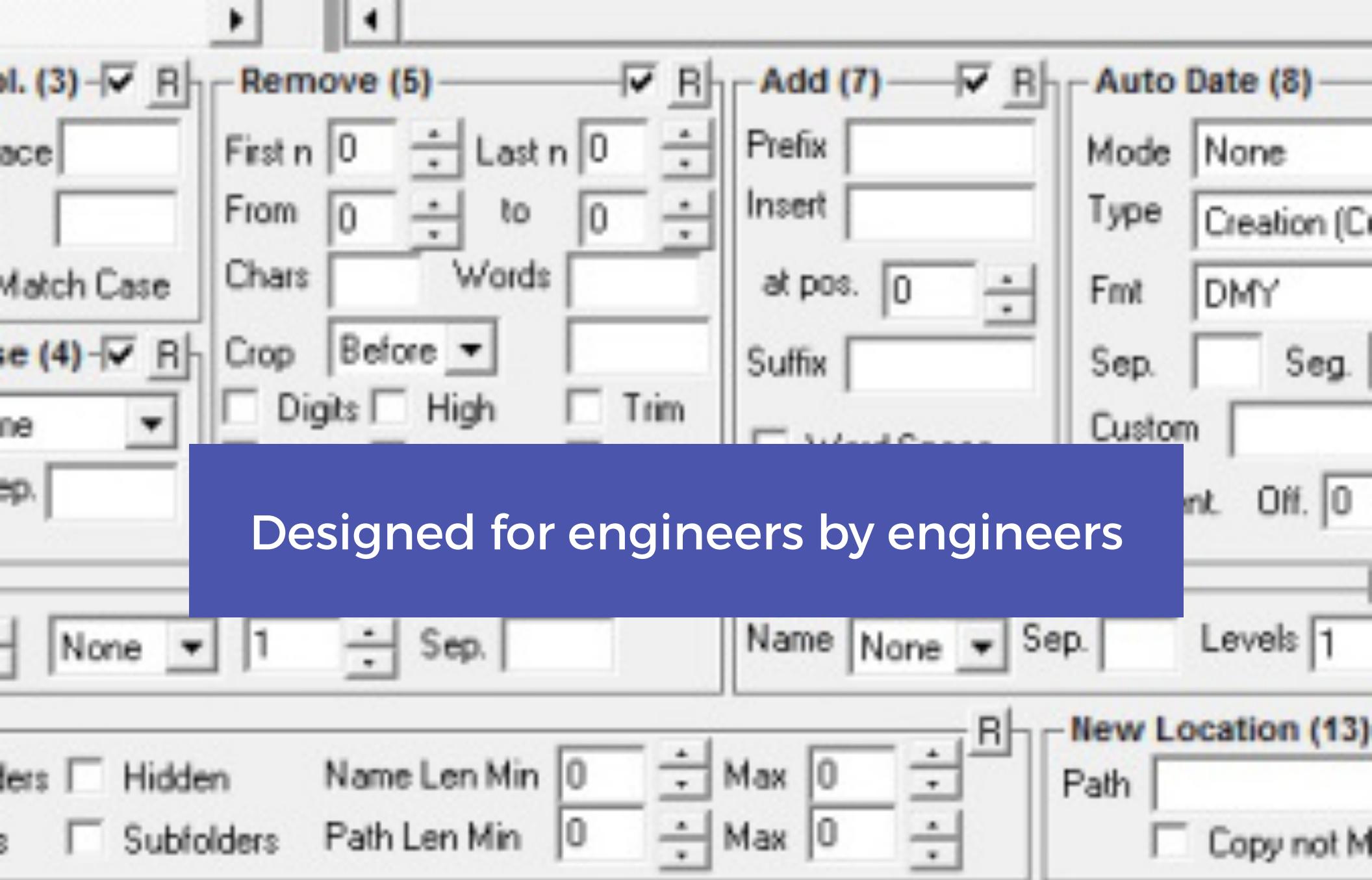
# Context: Science



# Complexity

**complex data, complex tasks  
computation time & resources  
novel tasks, novel workflows**

Designed for engineers by engineers



computers? Synchronize your files across computers with **ViceVersa PRO**. [Click Here To Find Out More](#)

# Balance

complexity | simplicity

This is hard!

# Motivation

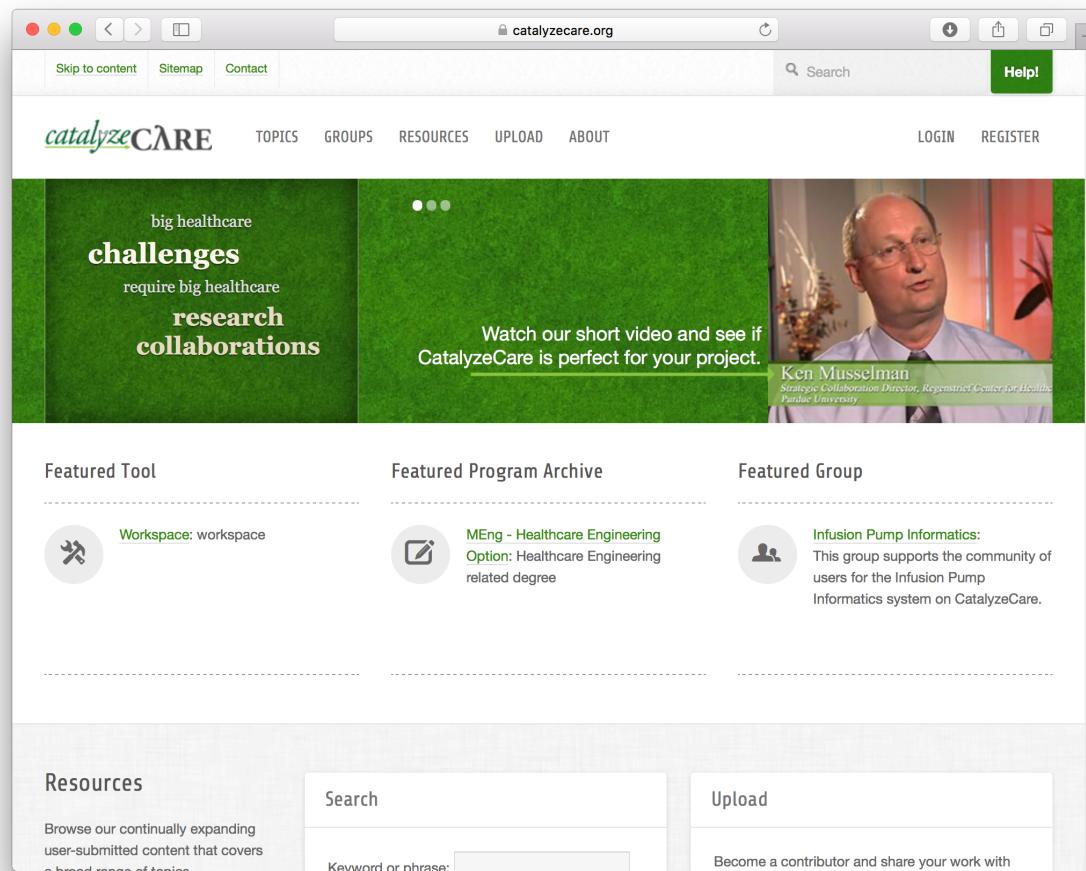
Good UX = happy users = business success  
Good UX = accelerated research = impact on humanity

# **'Big' Data = Opportunity**



# Medical Device Informatics Platform

Regenstrief Center for Healthcare Engineering, Purdue University



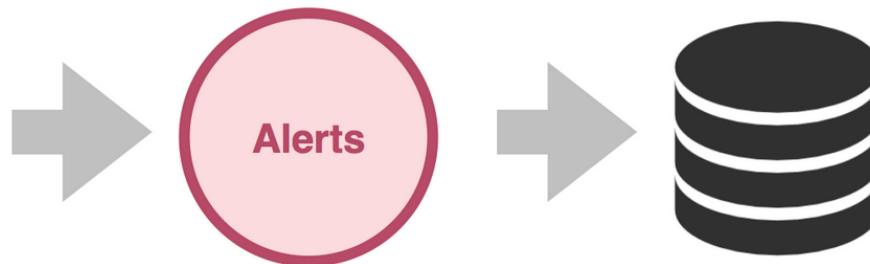
## “Smart” Infusion Pumps

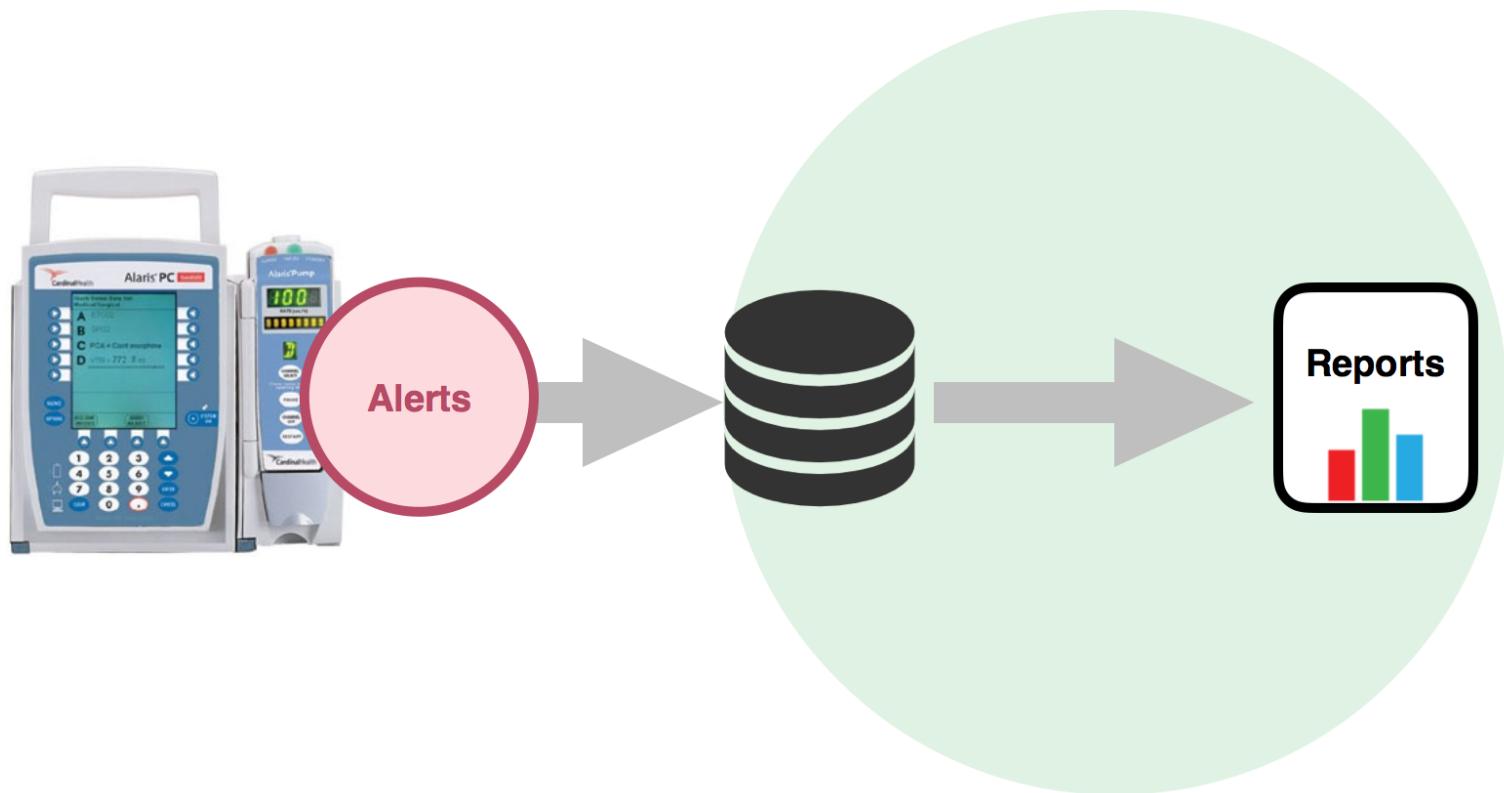




## **“Drug Library”**

error reduction software



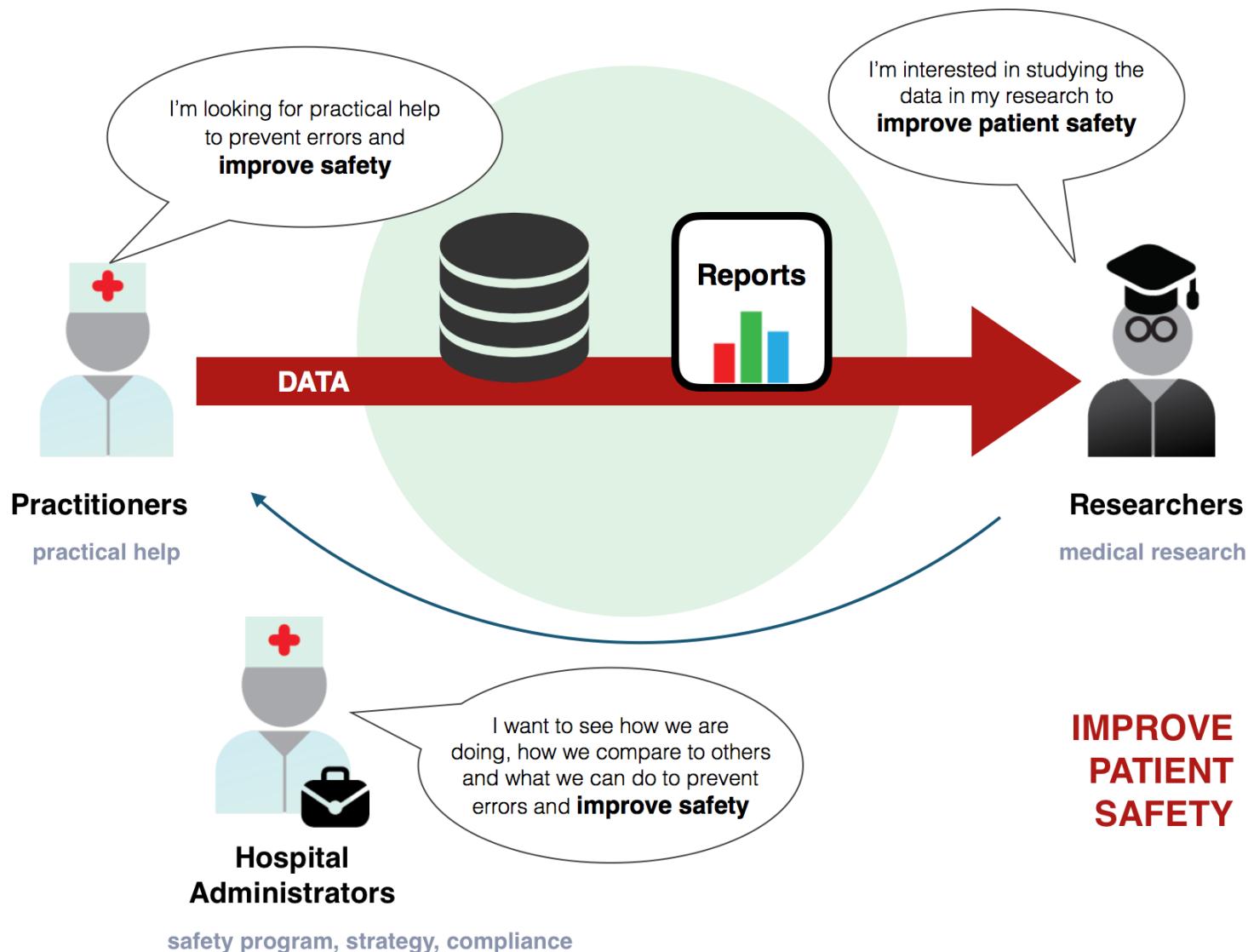


125 hospitals across 11 states, ~19,000,000 records

## Agreeing to Share Safety Data Openly with Each Other



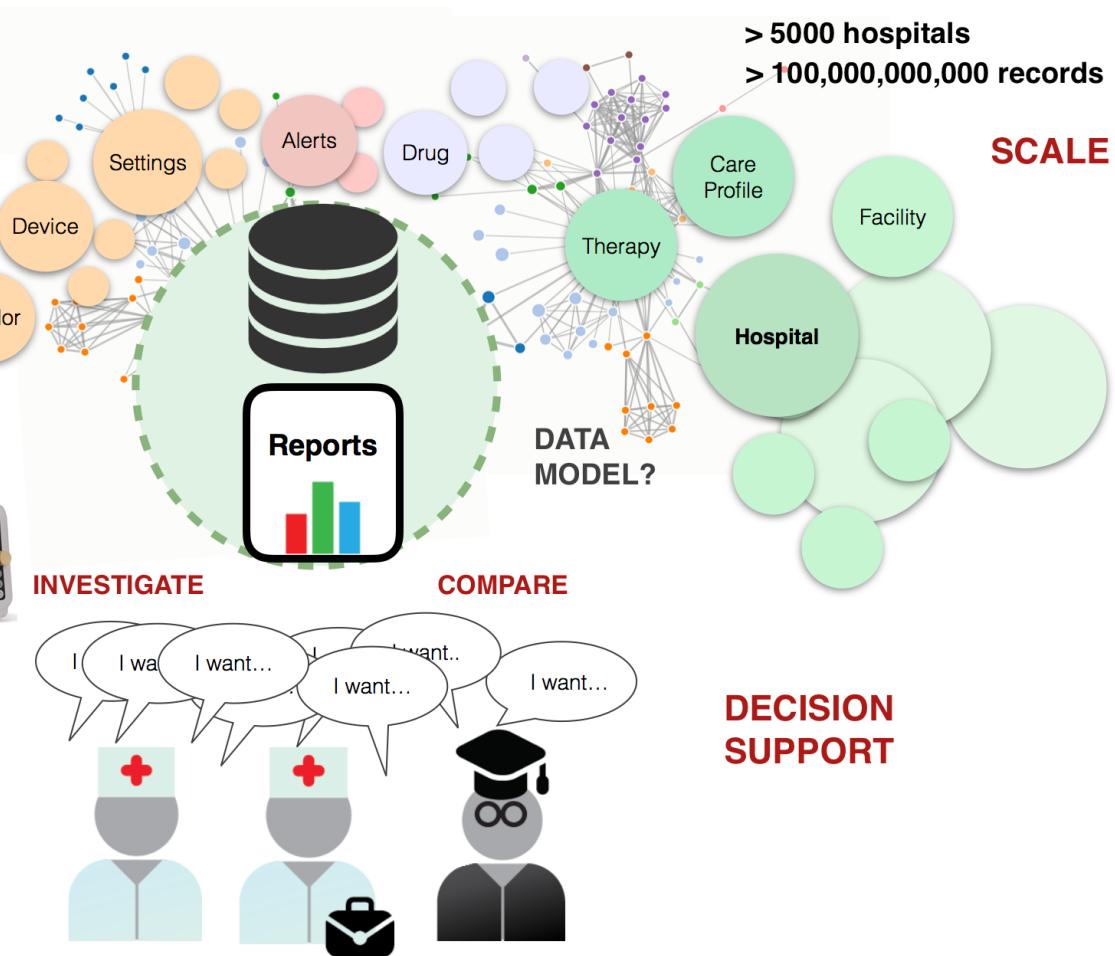
# Connecting Data Producers and Researchers



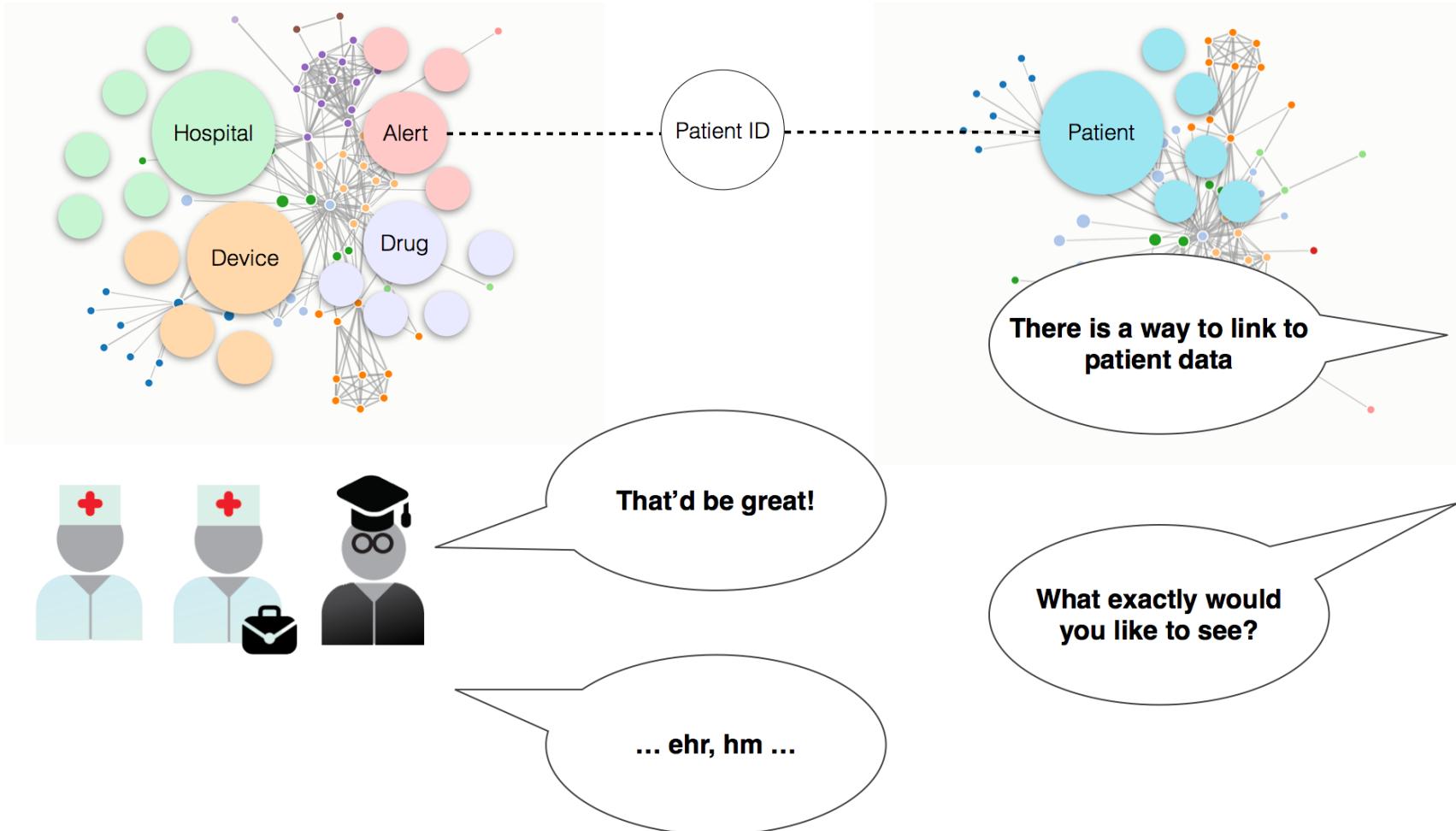
# New Platform

COMPLEXITY

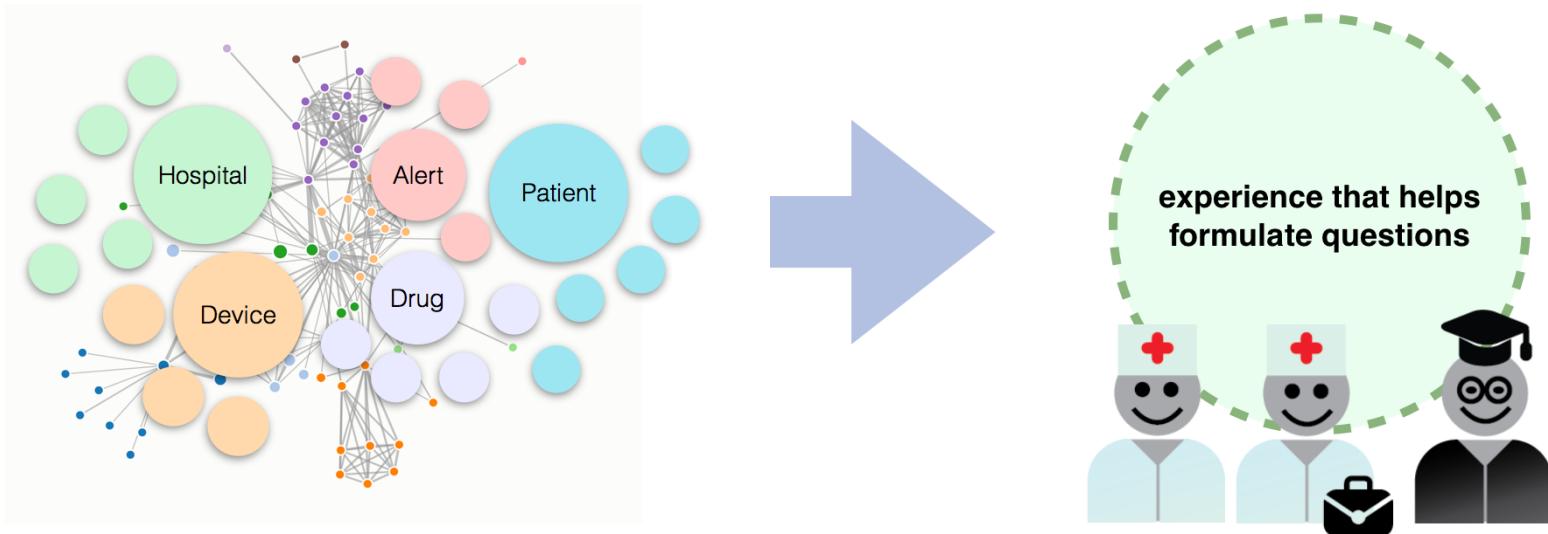
+ medical devices,  
+ vendors,  
+ alert types



# Opportunity: Link to Patient Data

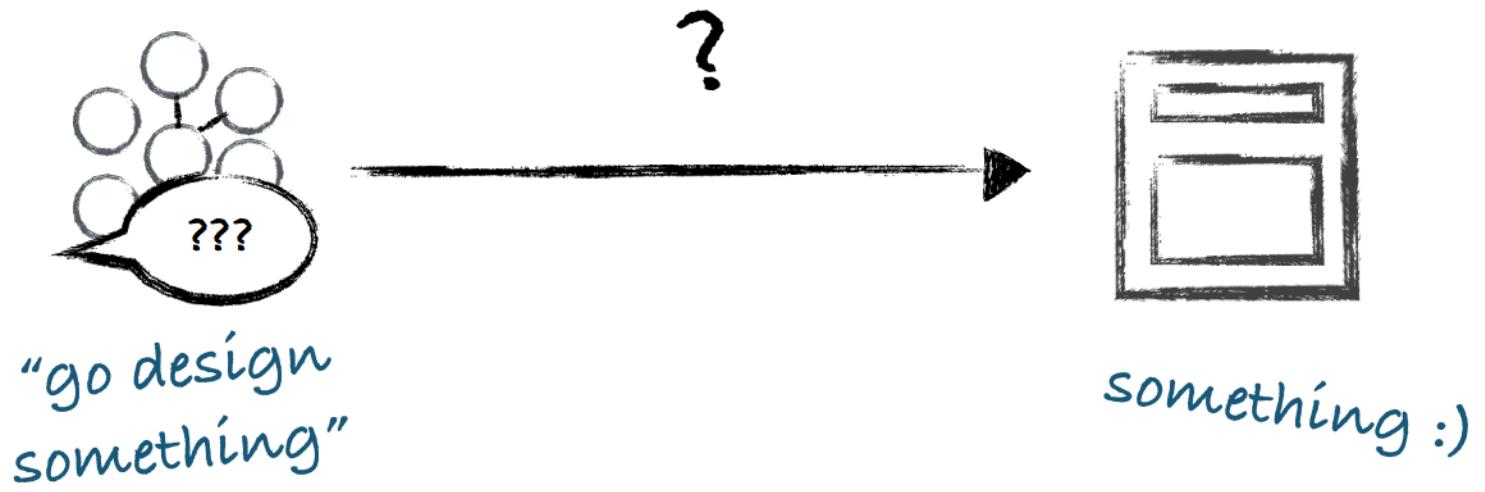


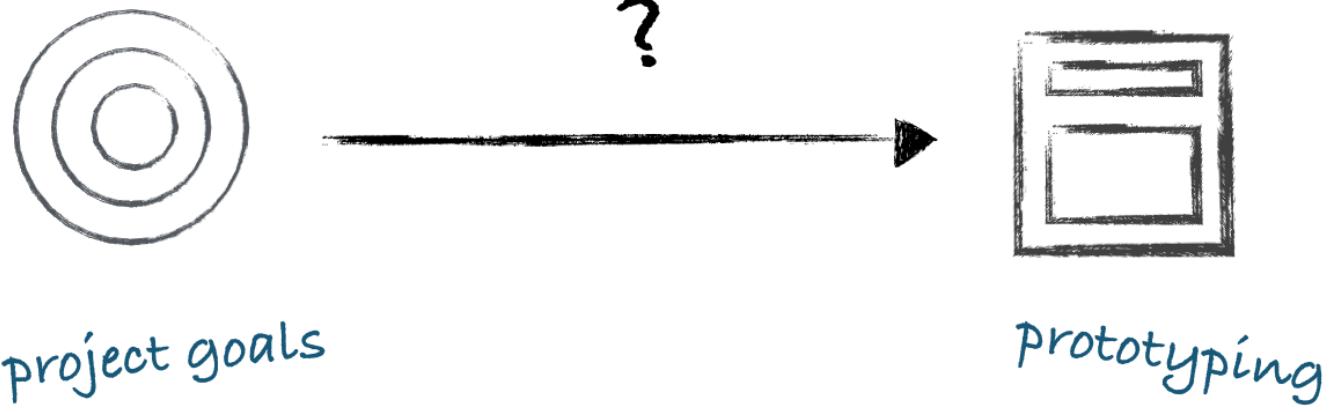
# Task for a UX Designer

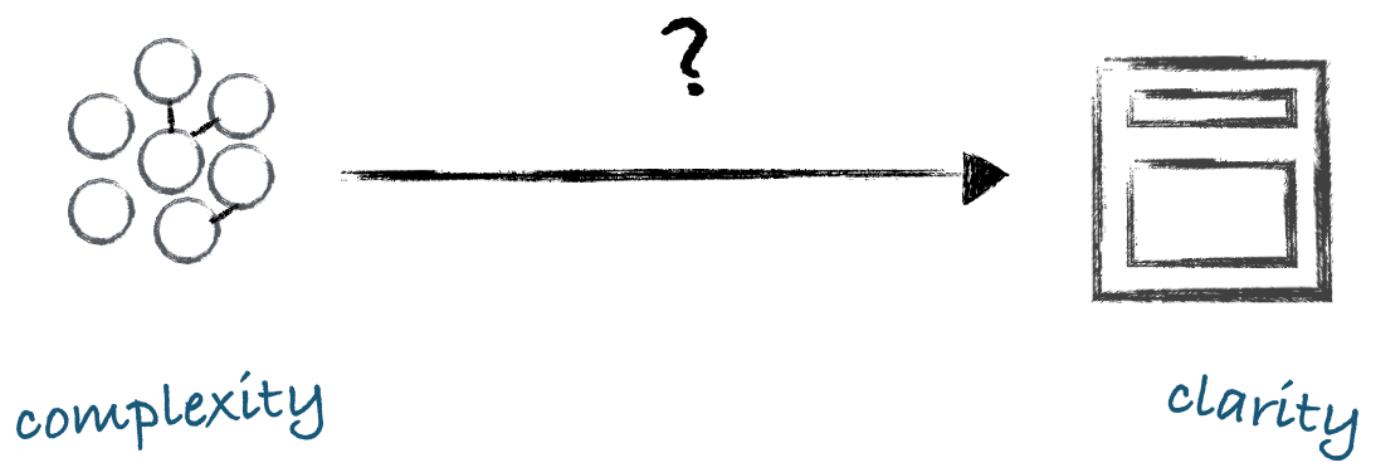




**HELP!!!**







# **Discussion**

- UXers, in your experience, in your projects:
  - What is/was hard?
  - What worked well?
- Everyone:
  - Medical device project: how would you tackle it?
  - Examples of good UX in science
  - Open resources to help UX designers
- Context: science. Focus: design process.

