

# D4GED Workshop 1, Day 2

## Real World D4G Projects

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# Mapping Your Data for Good Journey

# Mapping Our Data for Good Journey

## 10 Considerations

What kind of good are you aiming to do?

What is your Theory of Change?

What's new to you?

What is your personal contribution?

What is your relationship with those concerned?

How much time do you need?

How much time do you have?

Who are your learners?

How does the good you are aiming for relate to the subjects areas you teach?

What support can you martial?

Q1a:

What do we mean by  
“good”?

Please discuss at your table and capture high level points in the below.

Q1b:

How do we prepare  
students to tackle good?

# Preparing students to take on “good”

***Introducing ethical reasoning in tandem with technical skills***

*Linking **capable** and **responsible** practice to actual design projects in a 200-level introductory engineering class*

The screenshot shows a digital interface titled "Questions for Our Guest Mentor" with a navigation bar at the top. The main content is organized into three columns. The left column contains a "Prompts" section with a plus sign, a yellow box with a prompt about HCD PROCESS and human values, a blue box with "Clarify or Probe the Story of an HCD PROCESS:" and several questions, and a purple box with "Connecting to Human Values Questions:" and a question about human value. The middle column has a "Practicing Capably: Probing and Clarifying Process Questions" section with a plus sign, a white box with a question about deaf and blind people, a white box with a question about research work, a blue box with "Qualitative vs. Quantitative feedback" and a question about team evaluation, and a white box with a question about professor receptivity. The right column has a "Practicing Responsibly: Connecting to Human Values" section with a plus sign, a blue box with "Autonomy" and a question about DHH students, a white box with a question about system price, and a white box with "Health" and a question about screen time. The bottom of the right column shows the start of a "Qualitative Research" section.

Explorations in Human Centered Design + 13 • 1yr  
**Questions for Our Guest Mentor**  
HCDE 210 Autumn 2019

**Prompts**

+

Aim for one question clarifying or probing The HCD PROCESS & one question that connects the mentor's project to a human value.

**Clarify or Probe the Story of an HCD PROCESS:**

When did it start and end?  
Who was involved?  
What was the purpose?  
What were the key activities?  
In what ways was this project impactful? Were there setbacks?  
Were choices made that were consequential?

**Connecting to Human Values Questions:**

How does this story (or an element of it) relate the human value of...

**Health** (a person's physical, psychological, and material state of well-being)  
**Ownership** (the right of possessing an object (or information), and the

**Practicing Capably: Probing and Clarifying Process Questions**

+

What do you do with deaf and blind people? Does CART services offer Braille?

How does your research work connect to real-life orgs, like DRS?

**Qualitative vs. Quantitative feedback**

How did your team evaluate which qualitative feedback was more heavily weighted than others? How do you compare qualitative feedback points?

How receptive were professors to the tips to speak more clearly?

**Qualitative Research**

why do the research groups involve different types of people (i.e. only DHH people vs DHH and professors

**Practicing Responsibly: Connecting to Human Values**

+

**Autonomy**

How do you think DHH students having to approach the teacher to use the skrybe microphone affects the desirability of the product for them? Was it technologically feasible to explore solutions where the student can be completely autonomous (provide their own equipment and not have to contact teacher)

How does the price of this system compare with existing systems that even the poor students can afford it?

**Health**

Does staring at a screen effect the eyesight of students?

How does Skrybe account for

# Preparing students to take on “good”






## The Fairy Godmother of Ethical Interaction Design

has been listening to your brainstorm. The fairy will give you one wave of their magic wand to change any part of the system around this dark pattern.

### What can be done about Apps that track you whether you consent or not?

Nowadays it is hard to keep track of what apps you have authorized to take your data. Users don't know where the data is being sent or used for. However, often times there are apps that take information from the users without them knowing or authorizing it. How can we prevent this?

Users 	Citizens 	Policymakers 	Regulators / Enforcement agencies 	Designers 	Companies 
Users can report can read the terms and conditions to see whether or not the app they are using tracks them. Look up whether the app is reliable or not.	Citizens can advocate for laws against tracking users without their consent	Policymakers can enforce developers to ask for consent of their personal data, and state what information is being taken.	Regulators can regulate make sure which apps are transparent about their tracking requests	Designers can make it easier for users to understand what data is being taken from them and where it is being used/sent.	Companies can make it a policy that the app has to ask for consent from the user, with the ability to change their mind later

# Preparing students to take on “good”

## PREPARING FOR SEMINAR DAY

Class Presentation

Tips for Using This Framework

## THE ETHICAL DILEMMA

Briefly Describe Your Ethics Case

## THE SOCIO-TECHNICAL SYSTEM

Technical and Social Components

## ANALYSIS

Stakeholders in This System?

Assessment

Element

Issues of Accountability

## ETHICAL PRACTICE

Technical Stance

Personal Ethical Agency in Practice

## RESOURCES

Links and References

Glossary of terms

List of Human Values (from [Kahn](#) and Friedman)

### CSS 211 Computers and Society

Spring Quarter 2022

# Case Study Analytic Framework

This guide walks through the analytic framework used for each case study

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# Preparing students to take on “good”

## *UW DSSG Approach*



## University of Washington Data Science for Social Good Program Core Curriculum Areas



# Preparing students to take on “good”

## UW DSSG Approach



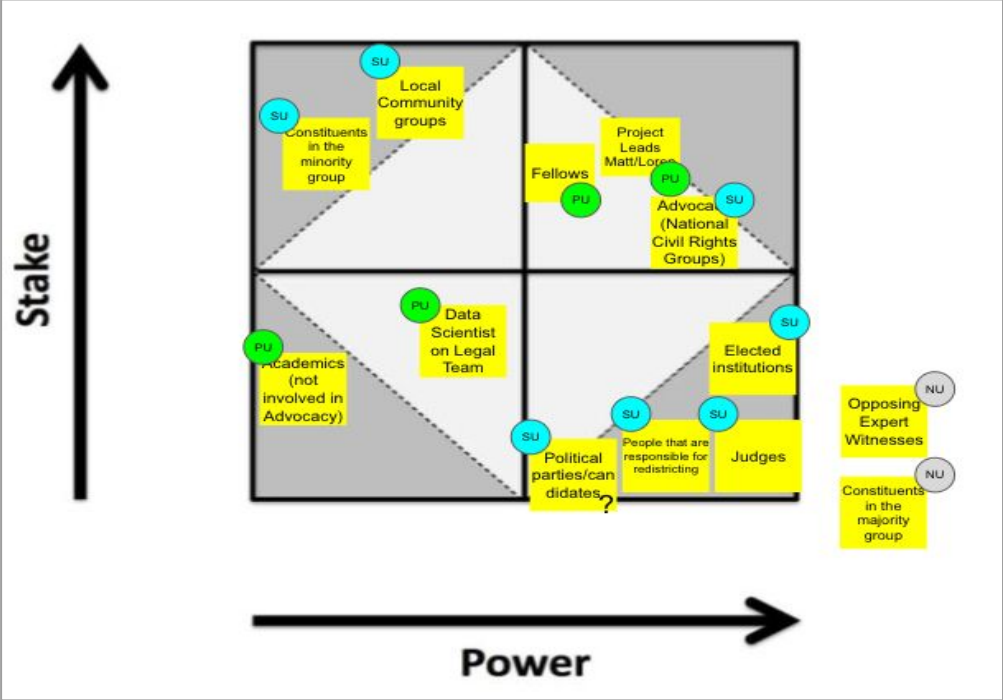
## Human Centered Design Curriculum

Activity	Detail and Rationale		
<b>Program Required</b>			
<b>Introduction to Data Science for Social Good*</b> (Week 1, Day 2)	This workshop introduces the position of the program: Ethical challenges and social complexities are inherent in DSSG work. Fellows co-examine problematic case studies and discuss as a cohort. This helps fellows to name and discuss tensions in their own DSSG work as those tensions inevitably arise during the program.	<b>Stakeholder analysis &amp; speculative ethics workshop*</b> (Week 3 or 4)	After teams have become familiar with their projects, a stakeholder analysis helps teams arrive at a shared understanding for their project’s potential impact and its relation to broader social context. A power analysis of which stakeholders can directly or indirectly shape the project and which stakeholders may be directly and indirectly impacted by the project clarifies the project’s ethical frame, helps teams to refine project goals and better communicate the role of the DSSG project in effecting change.
<b>Preparing for Stakeholder Engagement Workshop</b> (Week 2)	Picking up from the Introduction to DSSG workshop, this workshop begins a dialogue on how ethical tensions and social complexities can be addressed in DSSG work. It also introduces some additional framing on the nature of DSSG work that helps fellows orient to the Data for Good workflow. Emphasis is placed on techniques that can be applied to any DSSG project: Co-inquiry, dialogue, and complementary paths of inquiry including stakeholder engagement.	<b>Public communication via public website</b> (Week 5, 7, 9)	A key part of HCD is translating our work for multiple audiences. All teams are required to create a public website and code repository. Cross-team writing exchanges help teams to articulate their work for a public audience of their choosing.
<b>Facilitated co-design, execution and debrief of a first stakeholder engagement treated as collaborative research activity</b> (~Week 3)	The HCD mentor helps each team to design and execute an initial “stakeholder engagement.” A protocol is introduced: Teams are directed to design, conduct and reflect upon the engagement as a team. This protocol helps teams to most efficiently develop a shared understanding of the project including its ethical dimensions and social complexities. It’s simple enough that teams can use it on their own for the remainder of the program and beyond regardless of prior experience.	<b>Optional Project-Specific</b>	Teams typically elect to do more than the minimum required HCD activities, supported by the HCD mentor as requested. These may include experiential exercises such as “walkthroughs”, site visits, interviews, user evaluations, roundtables, focus groups, surveys, and more.
		<b>Integrating HCD into project work and other program activities</b>	HCD activities give fellows permission and tools to raise ethical and social considerations as they deem relevant throughout the program. We deem HCD activities a success when teams are able to raise and resolve issues on their own projects and come to a shared understanding of their project’s role in creating a social good. Discussions started in the HCD workshops and one-on-one team meetings are carried over in Career Panels, Talking Data Science guests, et al.

\*Designed and led by UW DSSG Program Director Anissa Tanweer; other activities led by Dharna Dailey, HCD Mentor

# Preparing students to take on “good”

## DSSG Stakeholder Analysis



Q2:

What kinds of complexity  
are you tackling?

# What kind of good are you aiming to do?

Data for Good problems span all of these categories and ranges

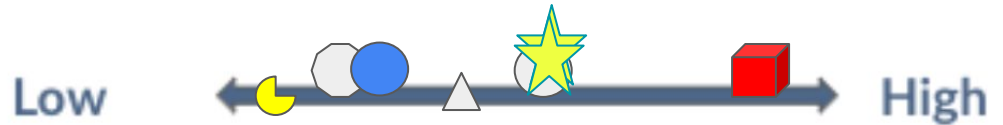
## Degree of potential impact

- Intended and unintended



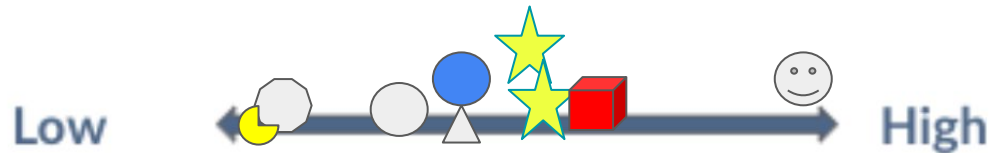
## Novelty

- Research question,
- Intervention



## Wickedness/Complexity

- Technological/Methodological
- Organizational
- Social



# What kind of good are you aiming to do?

Wickedness/Complexity

Lower



Higher

**Technological / Methodological**

Tableau Dashboard with well-understood data

Novelty/Sensitivity/Scale

**Organizational**

One Decision Maker

Multiple less-resourced orgs

**Social**

High social agreement , shared understanding of the problem

- Low social agreement / controversy
- Those impacted are not in decision makers / not shaping the project
- Concerns vulnerable, less resourced or historically marginalized groups

Q: What's working for you (or could work for you) in terms  
**Identifying & Developing  
Quality Data for Good Projects**