Senior Studio Proposal: The Future of Work

William Zhang
RISD ID
Spring 2019

1. Project Topic
2. Design Approach
3. Interest Statement
4. Deliverable + User
5. Research
6. Adviser-Consultants
7. Timeline

1. How can individuals apply long-learned professional skills to other industries? How will the rapid automation of human mental capability affect this transition?

At the current rate of technological advancement, most physical human capabilities in labor industries will soon be copied and replaced by machines. As technologists and designers see this vision coming to reality in the next decade, many turned to the automating intelligent work - in some cases, even creative work.

As a designer, I believe it is our role to foster more inherent human skills like creativity, intuition, and empathy across the general population.

2. The design approach: between product and experiment. It is a re-interpretation of the modern Luddite, and tools to stay relevant in the age of automation.

My main project in **University of Arts Berlin (UdK)** is related to the topic of automation in non-creative work and office jobs. The project is more akin to a commercial gadget. However, the research involved still encompasses the automation topics related to this Senior Studio proposal.
When returning to Providence, I will design locally, as research resources are abundant and Unions are more accessible than the labor bureaucracies of Berlin.

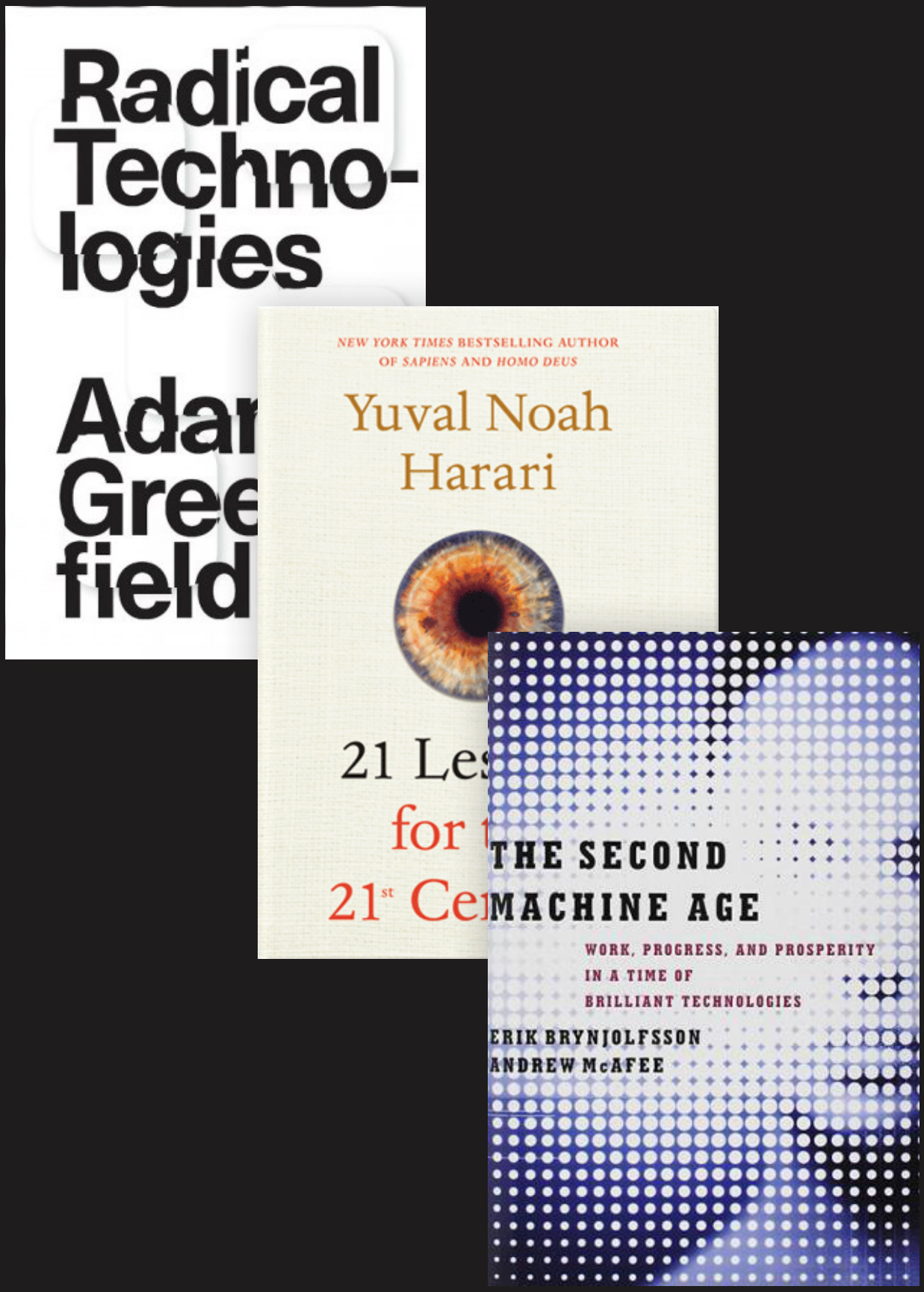
3. Interest in European Commision's research to regulate mass automation and digitalization—specifically in innovation sectors like technology.

Throughout my studies abroad in Berlin, I have engaged in many conversations with students from design (UdK), engineering (Berlin Technical U), and humanities (Humboldt U) about the prospective effects of automation in the workforce. Throughout our conversations, I've learned that the European Commission (EC) has already began researching and writing proposals for regulation. More information in the Research section.

I'm interested in the EC's descisions on issues related to technology, automation ethics, economic fluctuation, societal transformation, and the many socioeconomic intersections in the workforce. I'd like to explore how the role of designers will change.

I also have personal interest in the topic as many of my family members have jobs that will most likely be automated in the next 5 - 10 years.

Currently, I'm reading related books like Radical Technologies: The Design of Everyday Life, 21 Lessons for The 21st Century, and The Second Machine Age.


Radical
Techno-
logies
Adar
Gree
field
NEW YORK TIMES BESTSELLING AUTHOR
OF SAPIENS AND HOMO DEUS
Yuval Noah
Harari
21 Les
for t
21st Ce
THE SECOND
MACHINE AGE
WORK, PROGRESS, AND PROSPERITY
IN A TIME OF
BRILLIANT TECHNOLOGIES
ERIK BRYNJOLFSSON
ANDREW McAFEE

4.1 Focusing on workers in the labor industry, I will design a tool-set concept that reinterprets job-specific skills to be re-applied in other, or novel, careers.

For point of reference, my current project is a commercial gadget (part 4.3.) with the aim to introduce creative thinking as an activity to employees in non-creative fields. This is my niche design solution for improving performance in non-design departments.

This project stems from my interest in finding a solution for the automation of intellectual jobs.

For my Senior Studio project, I will be designing 3 products that are based on stories and experiences of 3 separate workers in different fields.

The project veers towards discursive social commentary. However, I also want to grab the attention of tech companies because they play a big role in automation, so these tools will also be functional.

Design solutions in the intersection of work and automation is both an interesting route and of social importance. Creativity, innovation, and empathy are inherently human, and design should be used to foster these qualities in areas that are unexpected - now more than ever.

4.2 Users: Labor workers in Rhode Island.

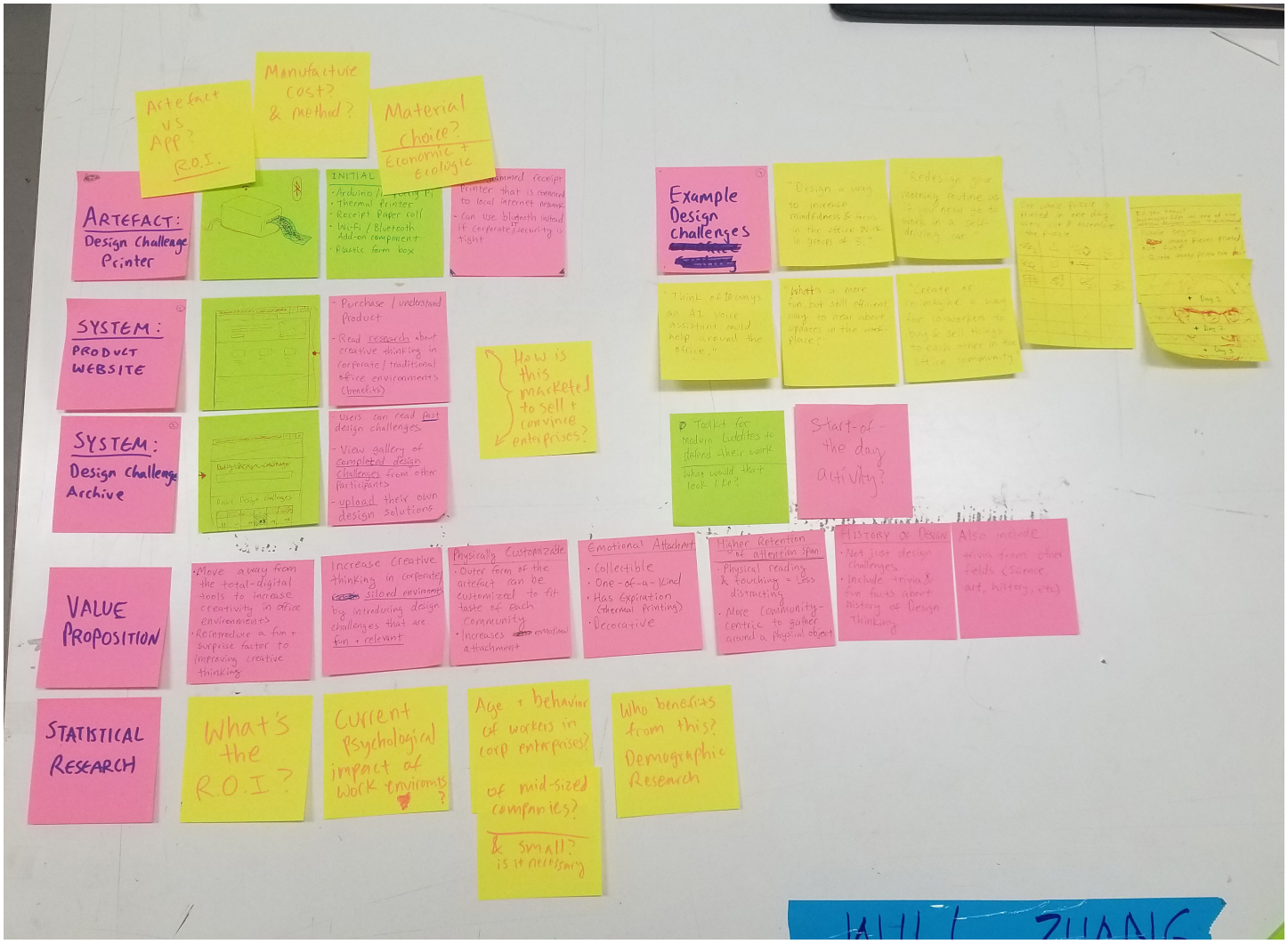
I aim to work with employees in the laborers union of Rhode Island Laborers' District Council. They are a part of Laborers International Union of North America (LiUNA). There are a total of 7 unions, but I will be focusing on 3:

1. Local 271 of Construction Craft Laborers (South Main St).
2. Local 808 of Judicial, Professional, and Technical Employees.
3. Local 1217 of Housing Authority and Police.

I will be contacting and conducting field research with workers in these Unions.

If contact and collaboration with RI Union workers fall through, I will fall back on RISD and Brown's labor and clerk workers, and Brown's two partnership labor unions United Service and Allied Workers (USAW), and Brown University Security Patrolperson's Association (BUSPA).

4.3 Open-topic Studio at UdK



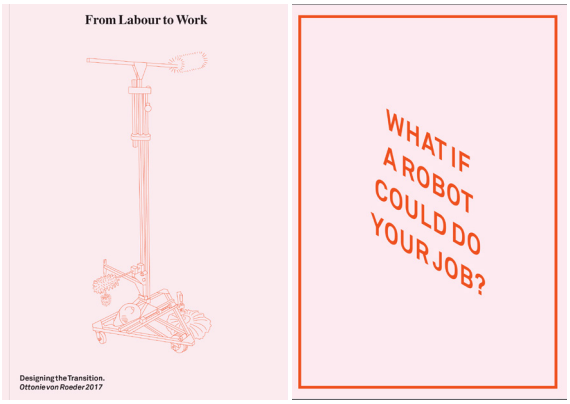
UdK Main Project: General concept outline (WIP)
The gadget is a thermal printer (receipt) that prints out a daily design challenge in the morning. Employees can do these quick design challenges to start their day, or as a team activity. It is aimed at Millenial and Gen X employees.

In addition to psychological and economic research, I am also referencing my experience working in a large, siloed corporate environment (USAA).

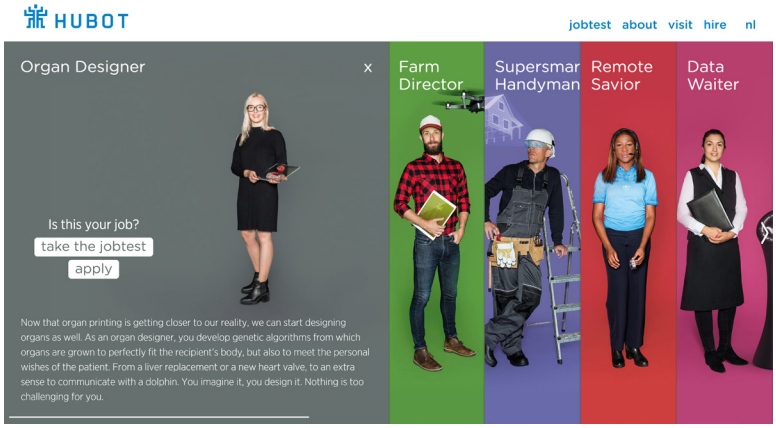
5. RESEARCH

I have not made work specific to automation, but I have completed two projects in the past involving the Providence community. One research project about Providence's open wi-fi networks, and a children's game about Design Thinking. I'm familiar with the bureaucracies, communication barriers, and privacy policies involved while working with these public organizations. Some examples are RI Office of IT, RI PPSD, and RI Office of Innovation.

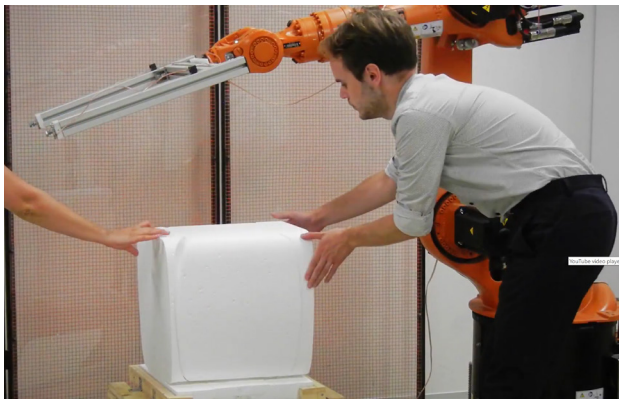
Discursive Design Concepts



From Labour to Work
Ottonie Roeder's Master Thesis. Reinterprets the value of work and envisions a future where work is a choice, and designs from the robot's perspective. Visiting Tutor (Lehrbeauftragter) for my studio.



HUBOT
NextNatureNetwork's humorous take on the creation of future jobs that recycles qualities from current-day jobs.



FABB

Designers using automated manufacture techniques to create artwork and functional designs.

Intellectual Automation Products

thegrid.io

An AI web-design platform that automatically creates websites from the content a user inputs into the web application.

iCEO

Working prototype of a software that can automate middle-management, one of the most creative administrative positions. The software is still being developed; aimed to deploy in the next 2 years.

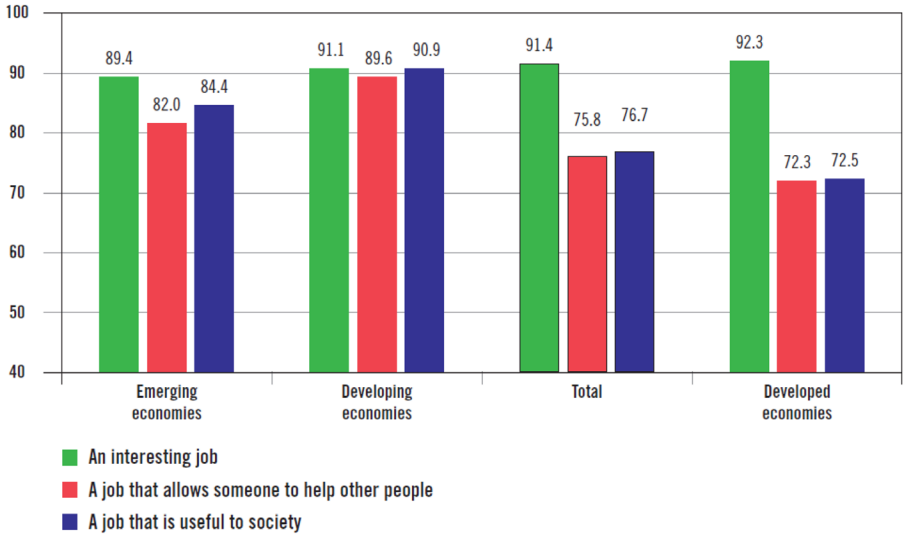
Regulations & Statistics

EC Future of Work Panel, Report

"...there are need for changes in the way that work is defined (especially for policy purposes) and distributed in society."

- *Sungheon Lee, Director of Employment Policy, Interlational Labour Organization (ILO)*

Figure 2 - Share of individuals who feel 'an interesting job', 'a job that allows someone to help other people', and 'a job that is useful to society' are important or very important characteristics in a job, 2015 (% of respondents)



Source: ILO calculations based on ISSP, 2015.

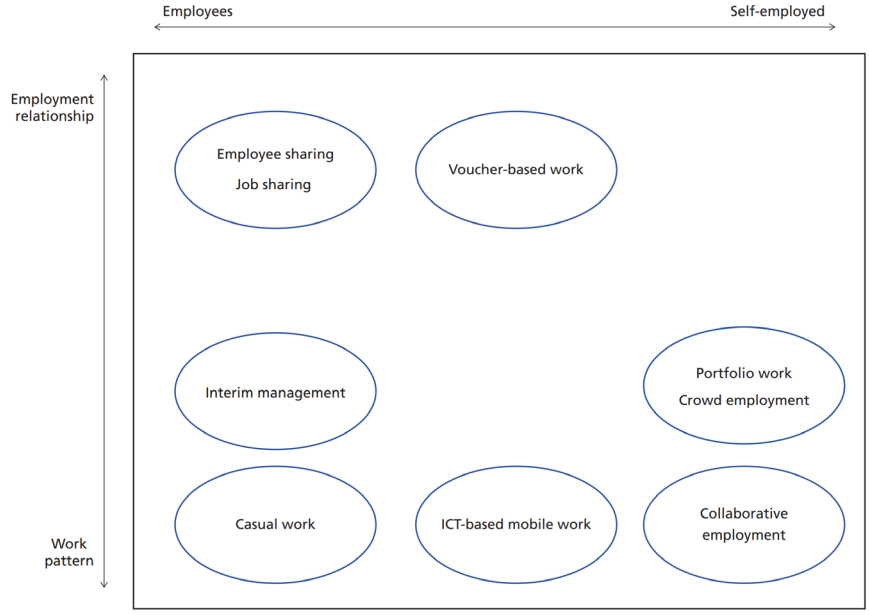
Auto Industry, Video

Detroit UAW Union workers talking about their daily struggles and grievances working for the auto industry. They share their thoughts about automation and social issues regarding the labor industry.

Eurofound: New Forms of Employment, Report

This report identifies nine general forms of employment that are new or have become increasingly important in Europe since the year 2000. Report specifically discusses direction of new forms.

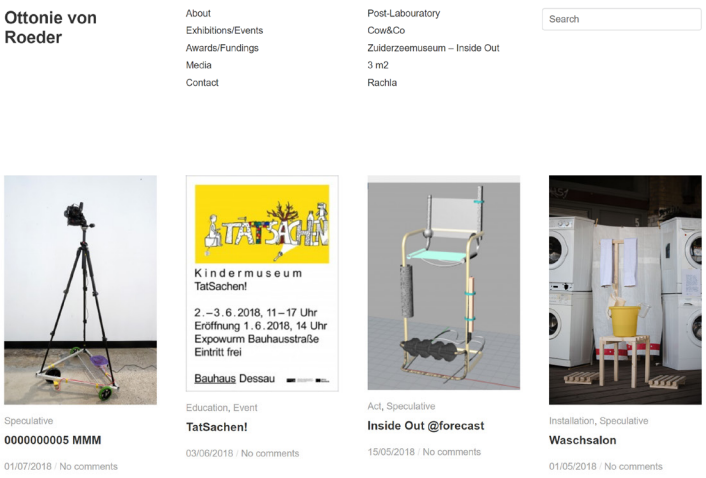
Figure 2: Classification of nine new forms of employment



SSM Seminar: Future of Work, Summary + Sources

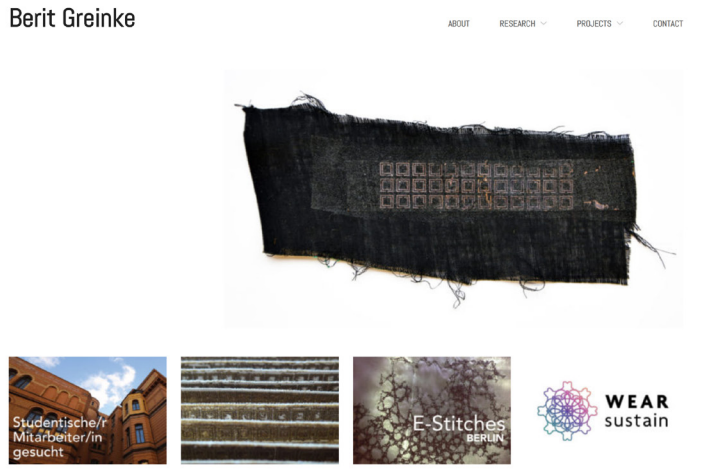
Social Situation Monitor (SSM) Carries out policy-relevant analysis and research on the current socioeconomic situation in the EU. In this seminar, multiple experts discuss the socioeconomic effects of automation and digitalization.

6. ADVISER-CONSULTANTS



Ottonie Roeder

Visiting Tutor who researched design's role in the future of work.
Informal consultation when necessary.



Dr. Berit Greinke

Technologist professor and researcher in wearable technology and the technological ethics in design.
Informal consultation when necessary.

7.1. SEMESTER TIMELINE

1.14 - 1.25 (Still in UdK)	Read US research on regulations for work automation, including conversations in RI & New England region. Research specific fields of work I will interview.
1.28 - 2.13 (UdK Finals)	Begin communicating with LiUNA office and RISD/Brown: secure shadowing or interviewing opportunities for first week of Spring semester. Ideally 1 RISD, 1 Brown, 1 LiUNA.
2.14 - 2.21	Shadow or Interview the workers in the fields I researched in January. Understand daily life and thoughts about automation. Create personas and storylines, begin empathy mapping. Document.
2.22 - 2.28	Continue shadow or Interview same workers, if possible; finish building personas. Interview or not, begin sketching & building low-fi concepts.
3.01 - 3.07	Continue making low-fi prototypes/sketches. Schedule for follow-up interivew with workers. Document.
3.08 - 3.14	Continue interviewing if unfinished. Present sketches and low-fi prototypes with workers. First round of revision. Schedule for follow-up, if possible. Document.
3.15 - 3.21	Interview workers. Second round of revision. Document. Schedule for follow-up after Spring Recess.
3.22 - 3.31	**Spring Recess.** Ideate appearance of final product/ solution, if possible.

7.2. SEMESTER TIMELINE

4.01 - 4.04 Begin making products and/or solutions from revised concepts. Focus on two at a time, work on third one on occasion. Document.

4.05 - 4.11 Continue making products and/or solutions. Refocus on the one that was not in priority the previous week. Document.

4.12 - 4.18 Continue making products and solutions. Schedule a quick check-in for next week.

4.19 - 4.25 Check-in with workers about progress, test prototypes. Make revisions. Document.

4.26 - 5.02 Finish two of the products/solutions. Present to the workers that they are designed for. Document.

5.03 - 5.09 Revise any last touches on previous two products/ solutions. Finish last product/solution. Document. Begin brainstorming final presentation.

5.10 - 5.16 Present last product/solution to the worker it's designed for. Document.
Begin making final presentation.

5.17 - 5.23 Prep and final presentation.