PROCESS BOOK.

Improving the Accessibility of Medical Facilities Through Design Management

Design Management High Impact Project

Amy Ewing | Savannah College of Art & Design | Fall 2024

Cover photo was from https://www.generalcontractors.org/the-best-hospital-architects-in-the-us/ and was referenced as Baptist Health South Florida Miami Cancer Institute designed by NELSON Worldwide, LLC.

Appreciation

CONTENTS

A SECTIONED OVERVIEW

INTRO & INITIAL RESEARCH.

AMY A. EWING

INTRODUCTION.

PERSONAL BACKGROUND

As a person with a disability and wheelchair user health has become a priority. After a spinal cord injury in my freshman year of college, I have been navigating health services for almost 20 years. I have seen many lapses in medical professional's knowledge, awareness and behavior when it comes to serving the disabled population. Pursuing my design management degree, I hope to develop a more inclusive and accessible culture.

INTERESTS

Oil painting is a passion in which I received my undergraduate degree. I am an avid sports fan, and lately am looking into adaptive sports. Currently, I am volunteering in a research project for women with disabilities' gynecologic healthcare.

FUN FACT

My golden retriever, Sargent, is named after one of my favorite painters, John Singer Sargent.

PROJECT BRIEF.
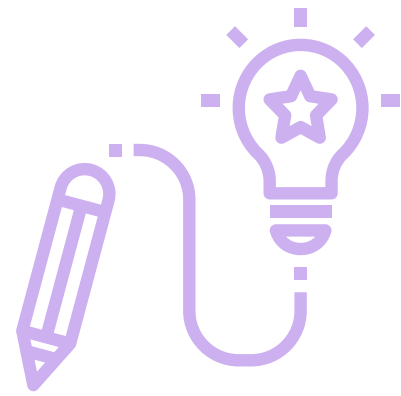
The DMGT Final Project needs to lead to innovation via creative engagement (of which design thinking is one form) on the strategic level. It is important that the project can be located within a working definition of the field and that it is clearly distinguished from projects typical for other programs. A good project "contribution" (final deliverable) could include co-creating, designing, facilitating, testing and evaluating processes for collaborative development towards innovative systems within which such things play a role.

Note that as a design manager or innovation leader – either as an internal or external consultant for instance - you might find yourself "working with" collaborative teams to help them define and address their challenges through engaging them creatively in innovating for themselves.

Research within any management field definitely follows the usual social science ethical research protocol, and so does the SCAD DMGT department. As such, please understand that any proposed work with "vulnerable" populations (children, prisoners, abused persons, or other groups of at-risk individuals) will need to be extensively reviewed with faculty.

TOPIC SELECTION.
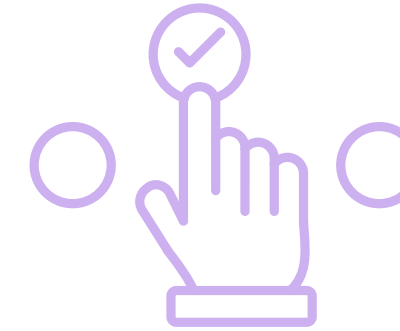
TOO BROAD

Healthcare is not optimized for people with any type of disability. This marginalized population is also statistically underserved. Access to proper healthcare has been challenging. How can we provide a medical system that increases positive health outcomes for people with disabilities?

TOO NARROW

Women with mobility-related disabilities in the United States are disproportionately receiving gynecological services when compared with able-bodied women. OBGYN offices are not accessible and do not have equipment that facilitate examination of women with disabilities. How can we make gynecological care more accessible?

JUST RIGHT

Healthcare facilities in the United States are intimidating and inaccessible for people with mobility impairments. The design of these provider spaces is not created with universal design principles and typically only meet the minimum standards enforced by government. How can Design Management aid in the design of these facilities?

THE BALL ROLLING

INITIAL RESEARCH.
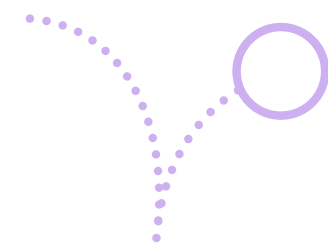
Healthcare leaves a lot to be desired when it comes to serving the disabled population. The facilities, in which much of it occurs, are ill equipped for the practice of medicine on people with disabilities (Lagu et al., 2013). The Americans with Disabilities Act was passed into law in 1990, and yet more than 30 years later, medical facilities are still not meeting its standards (Guide to Disability Rights Laws, 2023).

Upon some informal initial questioning of a well-established medical interior design firm in Atlanta, Georgia, it was stated that they do not conduct any patient research and typically rely on the medical professionals to impart the patients' needs. Further investigation proved that this lack of due diligence is not always the case in the design of healthcare facilities,

STATISTICS THAT DEMAND ATTENTION

especially among the larger international design firms like HKS, Cannon Design and Gensler. However, quite a few will claim to take this very necessary step without actually investing the money and time (Davis, 2015). Even when patient research is executed, marginalized populations tend not to be included (Allen, 2021). In fact, only in 2023 the NIH finally designated people with disabilities as a "health disparity population" thus providing them with more funding for research (Morris, 2023). People with disabilities, as a population, suffer from poorer health outcomes and one can infer that the major lack in accessibility would be a great contribution (Morris, 2023).

82%
of doctors feel they are unprepared to care for patients with disabilities
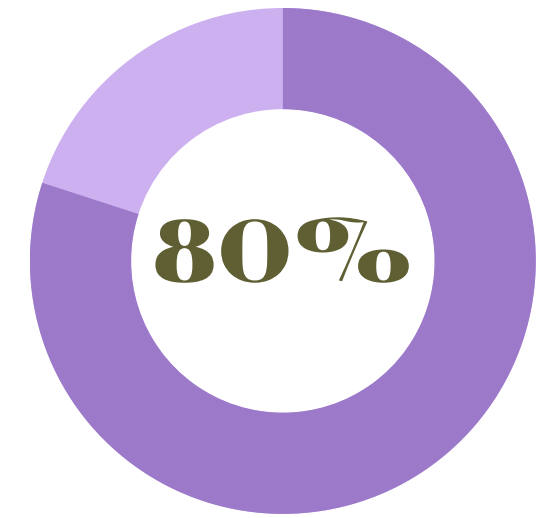
80%
of physician offices don't have accessible exam tables or scales

(Iezzoni et al., 2021)

Approximately 1 in 3 adults with disabilities delay or don't receive needed healthcare due to cost, transportation, or physical inaccessibility issues. (Krahn et al., 2015)

COMMON AREAS OF INACCESSIBILITY:

- Bathroom
- Entryways
- Parking Lots
- Sidewalks & Curbcuts
- Exam Chairs

- Exam Tables
- Specialty Equipment
- Imaging Tables
- Weight Scales
- Exam Rooms

(Mudrick et al., 2012)

A WICKED PROBLEM.

"Nothing about us without us."

- Increasing disabled population
- Research does not proportionally reflect that
- Laws and regulations mandate accessibility
- Government is not enforcing them
- People with disabilities are feeling cast aside
- Disabled population is not receiving needed healthcare
- Numerous stakeholders make change difficult

PROPOSAL & AMENDMENTS.

2

PROPOSAL.

DEFINING DESIGN MANAGEMENT

The practice of Design Management employs creative strategy to foster innovative design objectives that incorporate a human-centered focus, systems evaluations, and collaborative processes to create meaningful value and business growth.

SUBJECT OF STUDY

Healthcare facilities in the United States are intimidating and inaccessible for people with mobility impairments. The design of these provider spaces is not created with universal design principles and typically only meet the minimum standards and regulations enforced by the government.

PROBLEM STATEMENT

People with mobility challenges find healthcare facilities to be troublesome and inaccessible (Douglas & Douglas, 2004). This causes a decreased level of healthcare for the disabled population, despite its growing to new heights (World Health Organization, 2022). The strategy for creating patient care facilities does not always reflect human-centered design in relation to the handicapped (Gonzalez et al., 2023).

There are many stakeholders involved in building healthcare facilities, but very few are themselves disabled (David J. Skorton, MD, 2024). A lack of a disabled populus in the medical architecture and design fields puts those with disabilities at a disadvantage (Gissen, 2018). The onus of doing disabled-inclusive patient research is often undesignated, remitted and undervalued (The Accessibility Experience: Going above and beyond the ADA | Medical Construction and Design, 2015). When patient research is completed, it often disproportionally represents the disabled population, especially when considering patients seeking medical care are temporarily disabled (McBride-Henry et al., 2023).

The process for developing these healthcare structures tends to be linear and typically considers the patients' needs usually once and rarely twice (Clinic Design, 2024). The studies regarding patients usually occur singularly before the commencement of building takes place and at best, again before the interior is assembled (Bernhardt et al., 2021). Most of the time, medical buildings will be constructed with blind allegiance to standards and codes or Evidence-Based Design. These policies exclude outlying populations, recent technology developments and the nuances of ethnologic design (Jennifer Cunningham Erves et al., 2016).

OPPORTUNITY STATEMENT

Design Management's human-centered design methods offer innovative strategies to reform standards and systems that leave patients with disabilities avoiding visits with doctors and providers. Stakeholders such as doctors, insurance companies and other ancillary healthcare-related personnel will financially benefit from an influx of patients devoid of treatment, in some cases for many years. This will also invariably improve the health, longevity, and quality of life for valuable community members.

TARGET AUDIENCE

The target audiences for this project are the major stakeholders involved in constructing healthcare facilities and agents for change in these processes. These stakeholders include architects, interior designers, and project managers. The agents for change in the building of such facilities are financial backers as well as governmental policy makers and civil rights leaders.

PURPOSE OF STUDY

The focus of this project is using the human-centered design tools that Design Management practices supply to yield more universally designed healthcare facilities that are inclusive of those with disabilities.

SCOPE OF STUDY

This study will be examining the healthcare facilities and people with mobility-related disabilities currently within in the United States. The healthcare facilities, both inpatient and outpatient in nature, include but are not privy to hospitals, long-term care homes, ambulatory surgical centers, imaging facilities, urgent care sites, fertility clinics and medical offices. Medically related structures like some laboratories, blood banks and embryology centers are precluded because they do not directly cater to patients. The affected people within the study are individuals with a mobility hampering disability who will sometimes but not always use assistive devices like wheelchairs, walkers, and crutches. Afflictions that might cause these disabilities are amputation, paralysis, degenerative diseases, birth defects and injury. People with sensory disorders, cognitive impairments and learning disabilities will not be disallowed as subjects but must also have a mobility-affecting disability. The exclusion is not an implication or statement of any kind on the importance, severity or priority of such disabilities, but to keep a narrowed scope and focus. While people with the alternative disabilities may also benefit from the findings of this study, it should be noted that there are differences in them. Research also focused on relevant healthcare facility accommodations in relation to Design Management would be worthwhile and deserving. Accessibility will be guided by the classic universal design principles established by North Carolina State University with an added emphasis on emotional consideration.

RESEARCH METHODOLOGY

The research methodology will be mostly qualitative in nature. Upon using specifically selected research methods (listed below in Research Activities) that align with Design Management practices, human-centered data points will be collected and synthesized to generate creative solutions for them.

RESEARCH QUESTIONS

HOW CAN THE PRACTICE OF DESIGN MANAGEMENT CHANGE THE DESIGN OF MEDICAL FACILITIES SO THAT THEY CAN IMPROVE THE SAFETY, HEALTH AND LONGEVITY OF PEOPLE WITH MOBILITY-RELATED DISABILITIES?

1. How do we define the practice of design management?	2. How can we define mobility-related accessibility?	3. How do we define medical facilities?	4. How do we define people with mobility-related disabilities?
1a. What research methods facilitate design management principles?	2a. In what ways can mobility-related accessibility be improved in medical facilities?	3a. How are medical facilities designed and constructed?	4a. What criteria must a disability have to be considered mobility-related?
1b. How can design management practices foster human-centered design?	2b. What are the services for which people with mobility-related disabilities go to medical facilities?	3b. Who can forge changes in the design and construction of medical facilities?	4b. How do mobility-related disabilities effect people, especially in physical environments?
1c. In what ways have design management practices already been used to serve the disabled community?	2c. How would improved accessibility in medical facilities impact stakeholders?	3c. What design and construction codes are there to make medical facilities accessible to people with mobility-related disabilities?	4c. What effects does a mobility-related disability have on the individual's health?
1d. In what ways have design management practices served in the design and construction of medical buildings?	2d. What other factors inhibit people with mobility-related disabilities from going to medical facilities?	3d. How can medical facilities be designed and constructed with the mobility disabled's needs in mind?	4d. How are people with mobility-related disabilities affected when encountering inaccessibility?

RESEARCH MATRIX 1

HOW CAN THE PRACTICE OF DESIGN MANAGEMENT IMPROVE MOBILITY-RELATED ACCESSIBILITY OF MEDICAL FACILITIES?

	What do I need to know?	Why do I need to know this?	What specific data do I need to address this?	Where can I find the specific data?	What type of data collection methods are needed?	Who do I contact for collection of this data?	When do I need to collect this?	What will I be learning from the data?	What could be missing from this data?
1. How do we define the practice of design management?	The ways in which design management practice has historically been defined.	To provide context for my own definition.	Design management theory essays and timelines.	Peer reviewed journals, recorded lectures and books.	Reading and recording.	Librarians.	Yesterday.	The ways in which design management practices can provide insights.	My own interpretation and definition of design management practices.
1a. What research methods facilitate design management principles?	How to research and gather information on topics, like my own, using design management practices.	To collect the pertinent information that will be relative to the practices of design management.	Design management studies including processes, tools and applications.	Peer reviewed journals, books, documentaries, podcasts, blogs/websites, magazines and interviews.	Reading, recording and qualitative methods like interviewing.	Librarians, design management professors, design management professionals.	Currently.	How to research my subject in alignment with design management principles thoroughly.	Design management applications to building and construction processes.
1b. How can design management practices foster human-centered design?	The ways in which design management practices cater to people's needs and emotions.	To maintain a human-centered focus in my design management research.	Design management research findings that address physical and emotional needs.	Studies from research findings from peer reviewed journals, books, documentaries, podcasts, blogs/websites, magazines and interviews.	Reading and recording.	Librarians, Professor Hart Nair.	June 15, 2024.	Useful strategies and analogous design management practices that keep people with mobility-related disabilities central to my research.	Quantifiable data to determine the most beneficial strategies for my research topic.
1c. In what ways have design management practices already been used to serve the disabled community?	Design management practices that have helped the disabled population.	To best facilitate my primary research with disabled populations with industry standard professionalism.	Studies that use design management practices proven to be beneficial to disabled populations.	Studies from research, findings from peer reviewed journals, books, documentaries, podcasts, blogs/websites, magazines and interviews.	Reading, reviewing case studies and interviews.	Disability-related institutes, Candace Tefertiller, Nick Evans.	July 9, 2024.	What design management practices foster improved circumstances for the disabled.	The conveyance of emotions.
1d. In what ways have design management practices served in the design and construction of buildings?	Design management practices that were useful and those that have had little effect in the design and construction of buildings.	To understand why certain design management practices failed and which will best lead to significant results.	Studies that use design management practices to generate better designed and constructed buildings.	Architectural and design management projects in portfolios, studies, magazines, journals, websites, interviews and databases.	Reading, recording and interviewing.	Architectural firms, Penny Morrison-Ross and Challie.	July 9, 2024	How much have design management practices influenced the design and construction of medical facilities.	Information guarded by privacy and firms trying to keep a competitive edge.

RESEARCH MATRIX 2

HOW CAN THE PRACTICE OF DESIGN MANAGEMENT IMPROVE MOBILITY-RELATED ACCESSIBILITY OF MEDICAL FACILITIES?

	What do I need to know?	Why do I need to know this?	What specific data do I need to address this?	Where can I find the specific data?	What type of data collection methods are needed?	Who do I contact for collection of this data?	When do I need to collect this?	What will I be learning from the data?	What could be missing from this data?
2. How can we define mobility-related accessibility?	The signature qualities that one must possess to have a mobility-related disability.	To better understand the needs and preferences they need for a better quality of life.	The symptoms and disparities that make this sect unique.	From disabled people, medical research.	Surveys, reading and recording.	Disabled communities online, librarian and Dr. Stein.	June 15, 2024.	The influencing factors that make a place inaccessible for the disabled.	The minor disabilities that people do not consider "real disabilities."
2a. In what ways can mobility-related accessibility be improved in medical facilities?	What are common pain-points for people with mobility-related disabilities in medical facilities.	To help facilitate design management practices that will subvert these pain-points.	Personal experiences from the mobility-disabled community.	From disabled people, medical studies and library resources, journals, blogs, podcasts, online sources and databases.	Qualitative primary research like interviews, and surveys. Reading and recording.	Disabled communities online, librarian and Dr. Stein.	July 6, 2024.	The specific issues of people with mobility-related disabilities have that make for bad experiences in medical facilities.	The ways in which people have not yet been thought to be inaccessible.
2b. What are the services for which people with mobility-related disabilities go to medical facilities?	The service and human-related accessibility factors that people with mobility-related disabilities meet in medical facilities.	To discover how the design and construction of medical facilities can improve accessibility issues in the service of people with mobility-related disabilities.	The causes and reasons for which the mobility-disabled go to medical facilities.	Medical studies and library resources, journals, blogs, podcasts, online sources and databases.	Reading and recording.	Librarians and medical students.	June 15, 2024.	The totality of accessibility needs for people with mobility-related disabilities.	The needs of the people providing services in medical facilities.
2c. How would improved accessibility in medical facilities impact the stakeholders?	The changes that would effect the stakeholders.	The significance and value for readers.	The behavioral and emotional changes that would result from increased accessibility for people with mobility-related disabilities.	The disabled community, doctors, builders and designers, medical studies and library resources, journals, blogs, podcasts, online sources and databases.	Qualitative primary research like interviews, and surveys. Reading and recording.	Online forums, Penny Morrison-Ross, Adam Hamburger and Dr. Leslie.	July 6, 2024.	The urgency or lack thereof for design management practices in the design and construction fields.	Unanticipated results of increased accessibility in medical facilities.
2d. What other factors inhibit people with mobility-related disabilities from going to medical facilities?	All of the reasons why people with mobility-related disabilities don't go to medical facilities.	To understand the people with mobility-related disabilities who will not be effected by increased accessibility in medical facilities.	A list of inhibitors and a general sense of how many people with mobility-related disabilities they prevent from going to medical facilities..	From disabled people, medical studies and library resources, journals, blogs, podcasts, online sources and databases.	Qualitative primary research like interviews, and surveys. Reading and recording.	Christopher Reeves rescue provider, librarians and the disabled community.	July 6, 2024.	The direct influence of providing improved accessibility in medical facilities.	Unconscious reasons for not visiting medical facilities.

RESEARCH MATRIX 3

HOW CAN THE PRACTICE OF DESIGN MANAGEMENT IMPROVE MOBILITY-RELATED ACCESSIBILITY OF MEDICAL FACILITIES?

	What do I need to know?	Why do I need to know this?	What specific data do I need to address this?	Where can I find the specific data?	What type of data collection methods are needed?	Who do I contact for collection of this data?	When do I need to collect this?	What will I be learning from the data?	What could be missing from this data?
3. How do we define medical facilities?	What characteristics must a building possess to be considered a medical facility.	The scope in which the study will exist.	The purposes and qualities that comprise medical facilities.	Peer reviewed journals, books, documentaries, podcasts, blogs/websites, magazines and interviews.	Reading and recording.	Librarians.	June 15, 2024.	The uses for which medical facilities provide for people with mobility-related disabilities.	Alternate and atypical uses for medical facilities like shelter, comfort and interaction.
3a. How are medical facilities designed and constructed?	The processes and materials used to construct medical facilities.	To understand the context for which design management practices would be most useful and easily assimilated.	Project management agendas, contractors logs, architect schedules and general guidelines.	Architectural and commercial construction educational resources, libraries, databases and peer reviewed journals and articles.	Interviews, reading and recording.	Librarians, Alison Jones, Professor Purvis, Dr. Stein, Alana Shepherd.	July 6, 2024.	Opportunities for design management practices to improve the planning stages of medical facility construction.	Information that can be unflattering or reputationally damaging.
3b. Who can forge changes in the design and construction of medical facilities?	The key facilitators of constructing and designing medical facilities.	To understand who could implement design management practices in the design and construction of medical facilities.	The roles and capacities of the people in the design and construction processes.	Architectural and commercial construction educational resources, entrepreneurial reserves, libraries, databases and peer reviewed journals and articles.	Interviews, reading and recording.	Librarians, Alison Jones, Professor Purvis, Dr. Stein, Alana Shepherd.	July 6, 2024.	The people who most need to understand the value of incorporating design management principles and accessibility in medical facilities.	The ancillary subjects that are unknown influencers like family, friends and politicians.
3c. What design and construction codes are there to make medical facilities accessible to people with physical disabilities?	Codes that need changes to create improved accessibility in medical facilities.	To understand he reasons why medical facilities do not make improvements and what needs to be changed.	Laws and regulations for the construction and design of medical facilities.	Government websites and architectural regulatory organizations.	Reading and recording.	Librarian, Alison Jones, Professor Purvis.	July 6, 2024.	How to further bare minimum standards to create superior experiences for people with mobility-related disabilities.	The true value von these standards.
3d. How can medical facilities be designed and constructed with the mobility disabled's needs in mind?	Systematic changes that help could help facilitate stakeholder's buy-in to accessibility improvements for medical facilities.	To motivate key facilitators to be more inclusive and ethical.	Threats and benefits to the key facilitators' status quo.	Peer reviewed journals, books, documentaries, podcasts, blogs/websites, magazines, interviews and civil action lawsuits.	Reading and recording.	Librarians and law students.	June 15, 2024.	The disruptors that can create change in stagnant systems.	Unethical and illegal hidden causes.

RESEARCH MATRIX 4

HOW CAN THE PRACTICE OF DESIGN MANAGEMENT IMPROVE MOBILITY-RELATED ACCESSIBILITY OF MEDICAL FACILITIES?

	What do I need to know?	Why do I need to know this?	What specific data do I need to address this?	Where can I find the specific data?	What type of data collection methods are needed?	Who do I contact for collection of this data?	When do I need to collect this?	What will I be learning from the data?	What could be missing from this data?
3. How do we define people with mobility related disabilities?	The criteria that needs to be met for an individual to have a mobility-related disability.	The scope in which the study will exist.	The technical/medical definitions of "mobility" and "disability."	Medical books, journals and publishings.	Reading and recording.	Librarians.	June 15, 2024.	The physical effects of a mobility-related disability.	The nuances of the terms in everyday language.
3a. How do people with mobility related disabilities define themselves?	The ways that medical definitions differentiate from the people who have the disability.	To understand people with mobility-related disabilities' point-of-view for evaluation of needs met.	Primary source, civil rights and advocacy materials.	Any source in which a person with a mobility-related disability refers to their own disability.	Interviews, reading and recording.	Websites, law professor, disability advocate, people with mobility-related disabilities.	July 6, 2024.	The appropriate mindset and perspective needed to address people with mobility-related disabilities.	The outlier's perspectives because not everyone with a mobility-related disability defines it the same way.
3b. How do mobility-related disabilities effect people, especially in physical environments?	The ways in which an environment can improve people with mobility-related disabilities' experiences.	To understand what needs to be addressed in the design of an environment for people with mobility-related disabilities.	Grievances, observation studies and personal accounts.	Magazines, forums, lawsuits, filed complaints.	Interviews, observation, reading and recording.	Librarian, law professor, Shepherd Center, BBB and people with mobility-related disabilities.	July 6, 2024.	The specific problems in an environment that need to be addressed so that accessibility can be improved.	Non-verbal and might not be able to communicate their needs and biases in terms of "standardized" inaccessibility.
3c. What effects does a mobility-related disability have on the individual's health?	The health problems, diseases and disorders that are ailing people with mobility-related disabilities.	To understand which medical facilities people with mobility-related are frequenting and the symptoms with which they are arriving.	Medical statistics and research.	Medical books, journals and publishings.	Reading and recording.	Librarian, doctors, nurses and caregivers.	July 6, 2024.	The order in which medical facilities should be prioritized in actuating accessibility and how to better alleviate people with mobility-related disabilities' pain points.	The emotional factors that could also be affecting mobility-related disability.
3d. How are people with mobility-related disabilities affected when encountering inaccessibility?	The emotional and physical effects of inaccessibility.	To understand the repercussions of inaccessible medical facilities.	Personal accounts, medical research and statistics.	Medical books, journals publishings, books, documentaries, podcasts, blogs/websites, magazines, interviews and civil action lawsuits.	Interviews, observation, reading, listening and recording.	Librarian, doctors, nurses, caregivers and people with mobility-related disabilities..	June 15, 2024.	The drivers for mobility-related accessibility in medical facilities.	The priority with which these drivers are associated.

RESEARCH ACTIVITIES

DATA COLLECTION

Based on the research questions surveys for the key stakeholder groups will be dispensed using web-based questionnaire software. Subsequently, I will be participating in some immersive primary research. I will be participating in outpatient rehabilitation at the Shepherd Center of Atlanta, Georgia. While performing observation-based research, I will also conduct interviews within the facility and outside of it as well. While being in the vicinity and among many disabled individuals, I will prepare sensory cue activities to be done in person.

DATA PROCESSING

After collecting the necessary data, I will use the given information to create empathy maps that will convey the human-centered emotional value of the research. User profile canvases, also known as the customer profile canvas, will be completed on the identified user profiles. Lastly in my data processing I will fill-out the value proposition canvas to understand how best to alleviate the pain points of people with mobility-related disabilities.

DATA ANALYSIS

All the data will be collected and posted in individual data points. Relationships and affiliations will be hunted and collected to generate new insights. These affiliations will provide the basis for the research findings. This knowledge will be essential to the development of the value pillars at the center of the data synthesis.

DATA SYNTHESIS

Synthesis and affinitization will generate the most valuable and thorough reflections of all the data. Using design management practices like triangulation in addition to convergence and divergence, significant objectives and conclusions will be fostered. These findings will be used in the last step, ideation. Ideation will seek to resolve the research problem through Design Management specific practices.

RESEARCH SPACE

DESIGN MANAGEMENT

DESIGN OF MEDICAL FACILITIES

PEOPLE WITH MOBILITY-RELATED DISABILITIES

ACCESSIBLE MEDICAL FACILITIES

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Kim, S. (2020). Diversity in Design and Healthcare: A Personal and Professional Commitment. Design Management Review, 31(3), 38–40. https://doi.org/10.1111/drev.12239

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BluEntCAD. (2022, September 16). Healthcare Facility Design: Key Elements for Patient Care. BluEnt Engineering. https://www.bluentcad.com/blog/healthcare-facility-design/

PROPOSED TIMELINE

PROPOSAL

- Gantt Chart
- Initial Research
- Submission/Form
- Live Cand/Prop. Review
- Class Registration
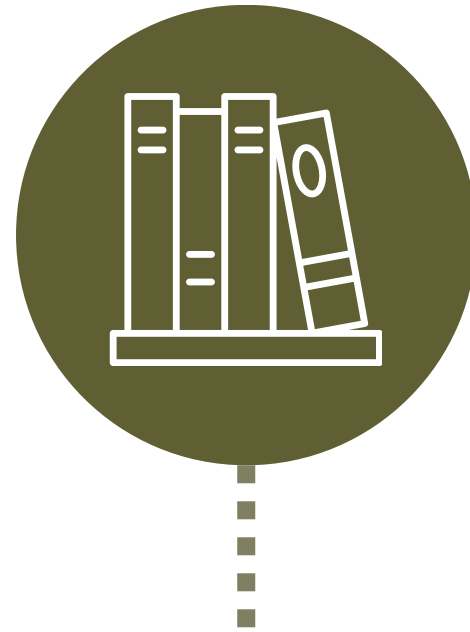
RESEARCH

- Surveys
- Immersion
- Interviews
- Sensory Cues
- Empathy Maps
- Data Point Collection

ANALYSIS

- User Insights
- Synthesis
- Ideation
- Solution Finding

DELIVERABLES

- Business Canvas
- Process Book
- Presentation
- Grad Show Poster
- Final Submission

April-May **June-July** **Aug-Sept** **Oct-Nov**

ANNOTATED BIBLIOGRAPHY

Access to Medical Care for Individuals with Mobility Disabilities. (2024, May 2). ADA.Gov. https://www.ada.gov/resources/medical-care-mobility/
(Summary) This is the government website that makes suggestions and recommendations for accessibility implementations in medical facilities. There is a lack of relevant laws and codes to enforce accessibility within these buildings.
(Relevance) The website illustrates the government's inconsistency in implementing the necessary accessibility features to make people with mobility related disabilities feel valued. It demonstrates the lack of urgency possessed by government officials to make healthcare more accessible for the disabled.

ADA Standards for Accessible Design. (n.d.). ADA.Gov. Retrieved May 11, 2024, from https://www.ada.gov/law-and-regs/design-standards/
(Summary) This is the government resource that provides the 2010 Americans with Disabilities Act Accessible Design Standards, a document providing guidance on these standards, and the 1991 ADA Design Standards themselves.
(Relevance) These are the bare minimum requirements buildings and medical facilities must abide by throughout construction. The provide inadequate access for the mobility-related disable people of the United States. There are few amendments to the regulations since 2010 even though access to healthcare facilities is clearly evident through the voices of the disabled.

Bernhardt, J., Lipson-Smith, R., Davis, A., White, M., Zeeman, H., Pitt, N., Shannon, M., Crotty, M., Leonid Churilov, & Elf, M. (2021). Why hospital design matters: A narrative review of built environments research relevant to stroke care. International Journal of Stroke, 17(4), 370–377. https://doi.org/10.1177/17474930211042485
(Summary) Provides information on the ways in which individualized patient populations are considered in healthcare facility design.
 (Relevance) While the article specifically addresses stroke patients, it is not exclusive of the disabled. Many stroke patients in fact are disabled. It shows how specific patient groups are not considered the design of hospitals.

Blair, A., Cao, J., Wilson, A., & Homer, C. (2022). Access to, and experiences of, maternity care for women with physical disabilities: A scoping review. Midwifery, 107, 103273. https://doi.org/10.1016/j.midw.2022.103273
(Summary) Multiple studies were read and reviewed to examine the maternal care experiences of women with disabilities. The authors concluded that there are multiple barriers to obtaining dignifying and quality maternal services.\
(Relevance) The importance of co-designing improvements, a Design Management tool, is justified and validated. This proves the need for and values of the qualitative research methods I will employ for my discovery.

BluEntCAD. (2022, September 16). Healthcare Facility Design: Key Elements for Patient Care. BluEnt Engineering. https://www.bluentcad.com/blog/healthcare-facility-design/
(Summary) This website gives general guidelines on how to design healthcare facilities for people with disabilities. There is also contact information for industry related professional advice.
(Relevance) This shows the techniques and practices currently used for the design of medical facilities, relevant the people with mobility-related disabilities. Opportunities for design management practices to facilitate the design process can be found here.

Clinic Design. (2024). Healthdesign.org; The Center for Health Design. http://ambulatory.healthdesign.org/clinic-design/design-process/design#:~:text=During%20the%20design%20phase%2C%20the,are%20completed%20during%20this%20phase.
(Summary) The step-by-step process of building medical clinics and supporting resources are listed in this source.
(Relevance) This process supports that there is a lack of requirement for human centered design in the medical facility construction process.

Douglas, C. H., & Douglas, M. R. (2004). Patient-friendly hospital environments: exploring the patients' perspective. Health Expectations, 7(1), 61–73. https://doi.org/10.1046/j.1369-6513.2003.00251.x
(Summary) This provides first-hand accounts from patients who were currently and recently in medical facilities.
(Relevance) Here, disabled patients reflect on their emotional state when faced with accessibility limitations. It shows that both physical and emotional needs are often unmet when receiving healthcare.

ANNOTATED BIBLIOGRAPHY

Erves, J. C., Mayo-Gamble, T. L., Malin-Fair, A., Boyer, A., Joosten, Y., Vaughn, Y. C., Sherden, L., Luther, P., Miller, S., & Wilkins, C. H. (2016). Needs, Priorities, and Recommendations for Engaging Underrepresented Populations in Clinical Research: A Community Perspective. Journal of Community Health, 42(3), 472–480. https://doi.org/10.1007/s10900-016-0279-2
(Summary) Clinical studies are often done without diversity in mind which further marginalizes special populations. Therefore, the outcomes and findings from research does not represent many minorities.
(Relevance) Disabled people are often unrepresented in studies which makes for inadequate healthcare studies which is problematic in Evidence-Based Design practices. These design process needs to prioritize inclusion to create more universally designed environments.

Gardien, P., & Deckers, E. (2023). Changing Design to Change Healthcare. Design Management Review, 34(1), 28–35. https://doi.org/10.1111/drev.12328
(Summary) This journal article explains the evolving world of healthcare and the ways in which design management can provide solutions and insights. There are three examples of design management practices used to benefit patient health. It talks about specific design challenges and a need for a multifaceted approach modern era, especially when dealing with global issues like the pandemic.
(Relevance) Design Management facilitators indicate the future benefits that could be gained in the healthcare industry via innovative strategies. Although methodologies have been formulated, they have yet to gain traction in medicine. This marks resistance to the use of Design Management practices.

Gissen, D. (2018, June 15). Why are there so few disabled architects and architecture students? The Architect's Newspaper. https://www.archpaper.com/2018/06/disability-education-of-architects/
(Summary) This article explains that there is a lack of disabled architects and architecture students. It gives reasons why this anomaly may occur.
(Relevance) This shows that the key players in the design of medical facilities have no first-hand knowledge and experience when it comes to being disabled. This may explain the misalignment of accessibility needs in healthcare settings.

Gonzalez, D., Kenney, G. M., Karpman, M., & Morriss, S. (2023, October 11). Four in Ten Adults with Disabilities Experienced Unfair Treatment in Health Care Settings, at Work, or When Applying for Public Benefits in 2022. Urban Institute. https://www.urban.org/research/publication/four-ten-adults-disabilities-experienced-unfair-treatment-health-care-settings
(Summary) Statistics and numbers are provided from a survey that explores the effects of discrimination on disabled people.
(Relevance) This is evidence that shows how insufficient healthcare facilities can affect the disabled population and its health.

Halawa, F., Madathil, S. C., Gittler, A., & Khasawneh, M. T. (2020). Advancing evidence-based healthcare facility design: A systematic literature review. Health Care Management Science, 23(3), 453–480. https://doi.org/10.1007/s10729-020-09506-4
(Summary) This resource provides studies that pertain to the design of healthcare facilities and argues why it is necessary to use evidence based design research for such designs. It discusses layouts, floor plans, and the operations that need to be considered for optimal healthcare.
(Relevance) Additional evidence pertaining to the necessity of human-centered design practices such as those used in the field of Design Management is marked here. The provides reasoning for the research I am seeking.

Inns, T., & Mountain, R. (2020). Designing 'Realistic' Healthcare Improvement. Design Management Review, 31(2), 12–19. https://doi.org/10.1111/drev.12206
(Summary) Design managers evaluate an approach to healthcare known as Realistic Medicine. At its most basic elements, it focuses on emotional and inclusionary healthcare practices. The authors provide a framework for how to incorporate this new approach in medicine into the existing system. Journey mapping, the double diamond design process and other known Design Management tools have been used to develop the necessary value proposition and encourage the pursuit of ideation.
(Relevance) The employment of Design Management research tools affords important findings to generate further research into the newly coined "Realistic Medicine." This illustrates a success in the healthcare field using Design Thinking. These are critical to study for repeated beneficial results.

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John Williams & Bridget McDougall. (n.d.). Between the Lines with FGI. Facility Guidelines Institute. Retrieved May 11, 2024, from https://www.fgiguidelines.org/podcast/
(Summary) This podcast explores the institutional standards that states and many design agencies are adopting when building medical facilities. The history and background of the creation and employment of these practices are examined. Explicit purposes for the adoption of FGI's standards are explained and detailed.
(Relevance) These alternate standards that are being adopted by states and private ventures show that federal government law is not adequate in the design of medical facilities for people with mobility-related disabilities.

Kim, S. (2020). Diversity in Design and Healthcare: A Personal and Professional Commitment. Design Management Review, 31(3), 38–40. https://doi.org/10.1111/drev.12239
(Summary) The author emphasizes the importance of diversity and inclusion in both healthcare and the sciences. Under-represented groups will not be forcible in the evaluations and methodologies that affect them. Expertise will not serve minorities as well as other more prominent populations.
(Relevance) Disabled populations are evidenced as stakeholders with little representation. Due to the lack of personnel with mobility-related disabilities in the driver seats, it could be a long time before priority is given to them.

Lidwell, W., Holden, K., & Butler, J. (2023). Universal Principles of Design, Updated and Expanded Third Edition: 200 Ways to Increase Appeal, Enhance Usability, Influence Perception, and Make … Decisions(Expanded edition). Rockport Publishers.
(Summary) An amalgamation of design research methods demonstrates the ways in which design can aid in providing rich and unexpected data. This could be tremendously useful in the exploration of methods for researching my topic and engendering critical insights with design management relevant principles.
(Relevance) Key research techniques facilitating Design Management practices are exemplified and described in detail. These approaches might provide good investigation, tactics for gathering necessary data.

McBride-Henry, K., Nazari Orakani, S., Good, G., Roguski, M., & Officer, T. N. (2023). Disabled people's experiences accessing healthcare services during the COVID-19 pandemic: A scoping review. BMC Health Services Research, 23, 346. https://doi.org/10.1186/s12913-023-09336-4
(Summary) A qualitative review of studies done regarding people with disabilities and their healthcare throughout the pandemic. It was discovered that many of the healthcare policies instituted during the pandemic were irrelevant to the disabled population. Marginalization of people with disabilities occurred and a lack healthcare was evident.
(Relevance) More ways in which disabled populations' health was disregarded. These delicate populations are made to feel rejected and unworthy. the emotions and suppositions are detailed in the studies.

Reiling, J., Hughes, R. G., & Murphy, M. R. (2008). The Impact of Facility Design on Patient Safety. In R. G. Hughes (Ed.), Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Agency for Healthcare Research and Quality (US). http://www.ncbi.nlm.nih.gov/books/NBK2633/
(Summary) This book considers patient safety to be a priority in the design of medical facilities. It provides insights on processes and necessary components for buildings to provide an environment devoid of injuries and incidents. Also within the text are steps on how to change the culture within the construction processes to prioritize patients above all.
(Relevance) A rare example of patients prioritized adequately in the design of medical facilities. Prioritization is not enough though and must be followed with appropriate action. Context for better Design Management related solutions may be found in this book.

Schreuder, E., Lebesque, L., & Bottenheft, C. (2016). Healing Environments: What Design Factors Really Matter According to Patients? An Exploratory Analysis. HERD: Health Environments Research & Design Journal, 10(1), 87–105. https://doi.org/10.1177/1937586716643951
(Summary) Patient studies reveal the most important aspects of impatient rooms in medical facilities. It is proven that calming and comforting environments can aid in the healing process. Specific design qualities and features were evaluated in relationship to the patient well-being. research and data findings concluded that "spatial comfort, safety and security as well as autonomy," where among the most influential factors to generate good health.
(Relevance) Another study which inevitably calls for more space in medical facilities, which could also benefit the disabled populations. Other features might be beneficial to other stakeholder and user groups additionally.

ANNOTATED BIBLIOGRAPHY

Singer, R. F., Dickman, I., & Rosenfeld, A. (2017). INCREASING THE PHYSICAL ACCESSIBILITY OF HEALTH CARE FACILITIES. In Centers for Medicare and Medicaid Services. https://www.cms.gov/sites/default/files/repo-new/23/Issue-Brief-Increasing-the-Physical-Accessibility-of-Health-Care-Facilities.pdf
(Summary) Details the laws and regulations concerning accessibility of healthcare facilities in the United States and under the ADA. Accessibility needs, monitoring and reporting related information, reducing financial barriers as well as awareness and training are also further delineated.
(Relevance) This resource provides proof of knowledge and awareness from the government of the problems related to accessibility in medical facilities.

The Accessibility Experience: Going above and beyond the ADA | Medical Construction and Design. (2015, May 26). Medical Construction and Design. https://mcdmag.com/2015/05/the-accessibility-experience-going-above-and-beyond-the-ada/
(Summary) The ways in which accessibility in medical construction is undervalued and under implemented. The impact that can be made on people's lives by improving accessibility.
(Relevance) Establishes the lack of specific accessibility features and medical construction.

The Program Support Center (PSC). (2022, October 31). Chapter 8. HHS Facility Design and Construction[Text]. U.S. Department of Health and Human Services. https://www.hhs.gov/about/hhs-manuals/hhs-facilities-manual/hhs-facility-design-construction/index.html
(Summary) The US department of health and human resources lays out the construction process for their facilities. The planning stages and oversight of the development regarding these healthcare facilities is an example of how the government perceives things should be done. Considerations, guidelines and regulatory rules are all delineated in a step-by-step layout.
(Relevance) The inefficient design activities show potential places for intervention of design management tools to construct more equitable spaces for the disabled to receive healthcare.

Why Aren't There More Disabled Doctors? (2024). AAMC. https://www.aamc.org/news/beyond-white-coat-podcast/why-aren-t-there-more-disabled-doctors
(Summary) The article maintains that there is a lack of disability representation in the occupation of doctors. It gives reasons why this might be the case and concludes that the profession could benefit from more disabled people joining the field.
(Relevance) Doctors who are often consulted in the design process of medical facilities, are also unlikely to have firsthand experience being disabled.

World Health Organization. (2022). Global report on health equity for persons with disabilities. World Health Organization. https://www.who.int/publications/i/item/9789240063624
(Summary) This report describes the disparities in healthcare that are Prevalent in the disabled population. It explains why health equity is important and how it can be achieved.
(Relevance) This shows the effects of inaccessible healthcare. It proves that there are negative consequences to populations that do not adequately support the health of the disabled.

U.S. Access Board—ABA Standards (enhanced single file version). (n.d.). Retrieved May 11, 2024, from https://www.access-board.gov/aba/
(Summary) These are the accessibility standards defined by the Architectural Barriers Act that define the rules and regulations for federally funded buildings. These are guidelines provided by the General Services Administration, the Department of Defense, the Department of Housing and Urban Development and the US Postal Service. These do not appear to be laws or punishable if not followed.
(Relevance) This source establishes the regulations that are already suggested but devoid of meaningful impact in their facilitation of people with mobility-related disabilities. It is further evidence that more solutions need to be ideated and implemented in the design of medical facilities.

Yasinski, E. (2022, November 13). Doctors Are Failing Patients with Disabilities. The Atlantic. https://www.theatlantic.com/health/archive/2022/11/disability-health-care-accessibility-doctors-ada/672101/
(Summary) The author gives context on the passing of ADA laws decades ago, and the continued lack of enforcement that exists. He also includes how doctors avoid offering healthcare services to patients with disabilities.
(Relevance) It gives reason and cause for inaccessible medical facilities. Furthermore, it introduces a new problem and new solution that must be addressed for the implementation of accessibility in healthcare designs.

RESEARCH PROTOCOL.

RESEARCH OBJECTIVES

- To understand the challenges of people with mobility-related disabilities face in accessing medical care.
- To explore sensory, emotional, and logistical elements that impact their healthcare experiences.
- To identify areas for improvement in healthcare journey and facility design.

TARGET AUDIENCE

- People with mobility-related disabilities.
- Healthcare providers (doctors, nurses, facility staff).
- Design Professionals

RESEARCH METHODS

OBSERVATION & IMMERSION

Objective
- To understand the challenges of people with mobility-related disabilities face in accessing medical care.
- To explore sensory, emotional, and logistical elements that impact their healthcare experiences.
- To identify areas for improvement in healthcare journey and facility design.

Procedure
- Researchers will observe participants during their appointments or interactions with healthcare facilities.
- Take notes on physical barriers, time spent navigating spaces, patient-staff communication, and emotional responses.
- No active participation from the researcher, only observation.

Data Collection
- Field notes (detailed descriptions of actions, environmental context, emotions).
- Photographs or sketches of physical barriers (if participants consent).

Ethics
- Obtain informed consent for observation, emphasizing confidentiality and privacy.

INTERVIEWS

Objective
- Explore personal experiences, challenges, and suggestions for improvement in healthcare from both patients and providers.
- Get a better idea of and a more detailed knowledge-base of the design process.

Procedure
- Conduct semi-structured interviews with people with mobility-related disabilities and healthcare providers. These questions will explore their experiences, barriers to care, emotional and physical challenges, and suggestions for improving care.
- Talk to design professionals about their creative process and the steps to incorporate accessibility. Questions will be directed towards how they were introduced to universal design, awareness of the need for it, its application, the effects on implementation of it and attitude towards it.

Data Collection
- Audio-recorded interviews transcribed verbatim.
- Analyze themes, emotions and quotes.

Ethics
- Ensure privacy and informed consent. Offer participants the option to stop the interview at any time.

RESEARCH METHODS

SENSORY CUE ACTIVITIES

Objective
•   Identify specific sensory triggers (sounds, smells, tactile experiences) in healthcare facilities that influence patient experiences.
•   Obtaining emotional perspectives on universal design, medical visits and inaccessibility.

Procedure
•   Participants will be exposed to various images (for free association) and sounds common in healthcare settings (for emotional response).
•   Ask participants to separate the images into specific category buckets and describe why they associated those images with those categories.
•   Ask the individuals how the auditory cues make them feel and whether they affect their comfort or anxiety levels.

Data Collection
•   Notes on sensory preferences, discomfort, or stress responses.
•   Participants rate auditory sensory experiences on a scale (e.g., from soothing to distressing).
•   Recording of free association verbal responses and descriptions.

Ethics
•   Ensure a safe, controlled environment for sensory exploration, with attention to any sensory sensitivities participants may have.

JOURNEY MAPPING

Objective
•   Visualize and understand the complete patient and designer journey, identifying pain points and opportunities for improvement.

Procedure
•   Participants will create a journey map detailing their experiences.
•   Focus on each stage of the journey: (Patient) transportation, entering the clinic, waiting room experience, interacting with staff, the clinical exam, exit flows and follow-ups. (Designer) education, research, consultant and stakeholder input, creative processes and building.
•   They can use drawings, diagrams, or verbal descriptions to create the map.

Data Collection
•   Completed journey maps, notes on key pain points, and areas where participants felt supported.
•   Compare maps across participants to identify common themes.

Ethics
•   Maintain confidentiality and ensure participants are comfortable sharing sensitive experiences.

RESEARCH METHODS

CO-CREATION WORKSHOP

Objective
• Gather group insights on shared experiences and discuss potential solutions collaboratively.

Procedure
• Organize focus groups consisting of multi-disciplinary professionals for a diverse co-creation.
• Use guided discussions around challenges and potential improvements in healthcare.
• Themes: accessibility of medical facilities, accessible medical equipment, communication with healthcare providers, medical and architectural education, awareness about accessibility issues and attitudes toward disability.

Moderator Guidelines
• Ensure a supportive, inclusive environment for open discussion.
• Guide the conversation but allow participants to express ideas freely.

Data Collection
• Audio-recorded discussions, transcriptions, visual chronicling and group feedback summaries.

Ethics
• Ensure informed consent and protect participant identities during group discussions.

DATA ANALYSIS

• Use thematic analysis for interview and focus group transcripts to identify recurring patterns and key insights.
• Compare observations, sensory cue responses, and journey maps to highlight areas of convergence and divergence in experiences.
• Develop categories and themes that reflect the primary barriers, facilitators, and emotional aspects of design for accessibility and healthcare for people with mobility-related disabilities.
• Using primary data insights and analysis for ideation and co-creation focus groups.

ETHICAL CONSIDERATIONS

• Obtain informed consent for all activities.
• Ensure participants' privacy and confidentiality.
• Provide emotional support resources for participants, as discussing healthcare challenges may evoke stress.

EXPECTED OUTCOMES

• A detailed understanding of the barriers to design and care for people with mobility-related disabilities.
• Recommendations for improving healthcare facility design and processes to enhance accessibility.
• Sensory-related insights that inform the design of inclusive and welcoming healthcare environments.
• An evaluation of the current state and attribution of values held in the design profession and where changes need to be made in order to achieve the desired outcomes.
• Human-centric and disability-oriented perspectives that steer focus of result driven ideation.

OBSERVATION.

3
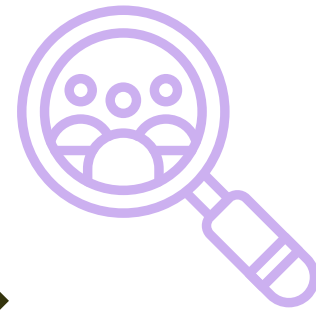
OBSERVATION.

Much of the observation that took place was photographically undocumented due to privacy concerns and HIPPA laws, unless permission was otherwise given. I received such approval from The Shepherd Center, a model institution for accessibility, as it caters to those with paralyzing injuries and illnesses, and the office of Dr. Adam Stein, physiatrist

and Chair of physical medicine and rehabilitation services and education across Northwell Health. He too, caters almost exclusively to patients with disabilities. These facilities serve as great archetypes of what all healthcare structures should look like.

Much of what was observed at other facilities was less encouraging. Handicapped parking was often full, thus requiring those with disabilities to walk long distances and wheelchair users, whose height disadvantage makes them vulnerable to being struck by cars, traveling through lots. In some rare instances, there was valet parking available, although this does not help when people have assistive technology in their vehicles. Doors to lobbies were not automatic nor did they have a button for handicap entrants. Curbcuts were often far from the doorways, making the access to entry a long trek.

Many waiting rooms had desks that were too high for wheelchair users. Sometimes the administrators behind the desk did not even bother to stand and address the person to whom they were speaking. Insurance cards and paperwork was difficult to exchange, and patients sometimes had to ask the employee to sign them in. there was often no empty spaces for wheelchair users, so they either had to ask someone to remove a chair

or place themselves awkwardly in the middle of the room, as if on display.

The threshold between one hallway and exam room was quite large and was a cause for tripping. Hallways were cramped and items sometimes had to be moved. Wheelchairs had to be moved to the hallway otherwise doors would not fully close.

(Grande Exam Table, 2023)

Exam rooms most of the time did not have an adjustable height exam table and the table was very high for the doctors' comfort. This made it extremely difficult and dangerous for wheelchair users to transfer. There were also no safety rails, nor was there space for the wheelchair to pull alongside of the table.

Bathrooms were missing grab bars. There often were not wheelchair accessible scales available. Hoyer lifts were not visible. Some nurses said they were available to assist in any transfers necessary. No office had a sliding board.

Specialty and imaging centers often claimed to have no way of providing care to overweight wheelchair users who need to be transferred and had no one to accompany them. Often people with disabilities have to travel long distances to receive specialty care. Accessible mamography machines are few and far between. Gynecologists said they will do their best to accommodate you and try to schedule times that theyhave extra hands available to assist in transfers and leg-holding.

THE SHEPHERD CENTER

Studio "apartment" for in-hospital life skills and Acts of Daily Living (ADL) practice. Side-opening oven with pull-out platform underneath keeps patients safe from dropping hot pans on themselves.

Even the doctor and medical stations are wheelchair accessible for medical staff with disabilities.

People coming from out of state are housed in newly built accessible apartments. Beds are low to the ground for easy transfers.
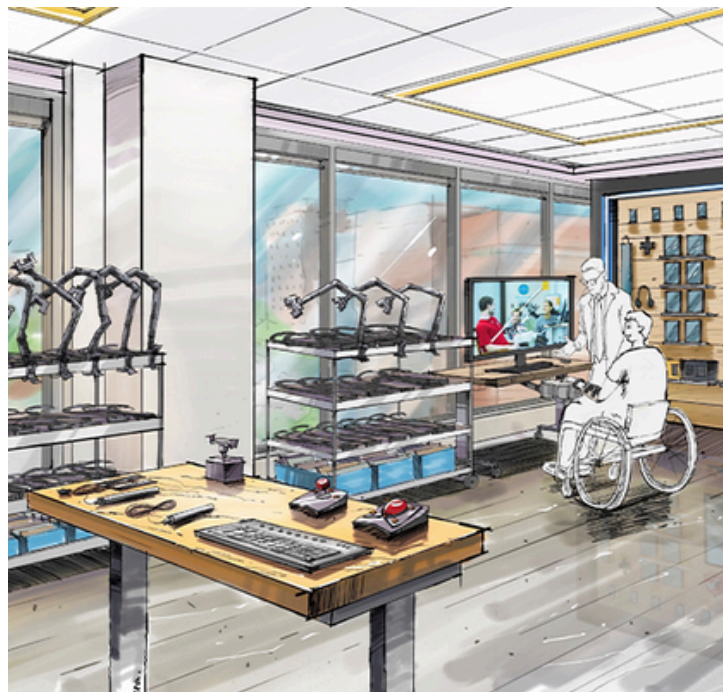
Currently being built is the Assistive Technology Center. Here patients will be able to test different products that could benefit their quality of life. Height-adjustable tables and platforms will make assistive devices accessible.

An empty patient room shows the height-adjustable and tilting bed in addition to the ceiling-mounted Hoyer lift for easy transfers.

Bathrooms and showers are universally designed for use by both able-bodied and disabled users, with space for caregiving assistance.

Chairs can be moved for transfer to the height-adjustable exam table. Extra seating for caregivers and family members accompanying wheelchair users.

Lots of room for wheelchair. Entry way is wide enough for wheelchairs, motorized and manually-operated. Chair does not have to be removed from the area. Space for wheelchair turning radius

Wheelchair accessible weight scale can be folded and stowed away to save space. The screen swivels for patient and provider viewing and would not need to be audibly announced in the instance that the instrument is in the hallway.

EXAM ROOM FOR PEOPLE WITH DISABILITIES

USER JOURNEY.

GREATER THAN THE DESTINATION

Travel to facility.

Make appointment.

Park or drop-off.

Contact & confirm accessibility.

Enter.

Exam.

Questions & medical history review.

Redress & transfer off table.

Take survey & give feedback.

Get on exam table & undress (maybe).

Urine analysis or blood drawn.

Results phone call.

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5

Find contact info.

Sign in.

Have vitals taken.

Return to desk

Travel home.

Injury, illness, need for doctor.

Exchange insurance & paperwork.

Follow nurse into exam room.

Co-pay, scripts & follow-up.

Pick-up or return to car.

Wait.

Exit.

STAKEHOLDER INQUIRY.

4

CONSEQUENTIAL ROLES

PRIMARY STAKEHOLDERS.
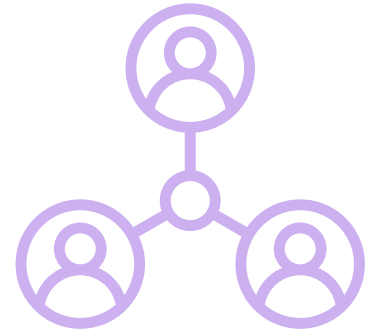
People with Disabilities

People with disabilities provide insights as to where they find the most inaccessibility in medical facilities.

Medical Personnel

Medical Personnel offer important professional understanding in terms of limitations and opportunities for change.

Healthcare Designers

Healthcare designers are the pivotal facilitators of the innovation and improvements.
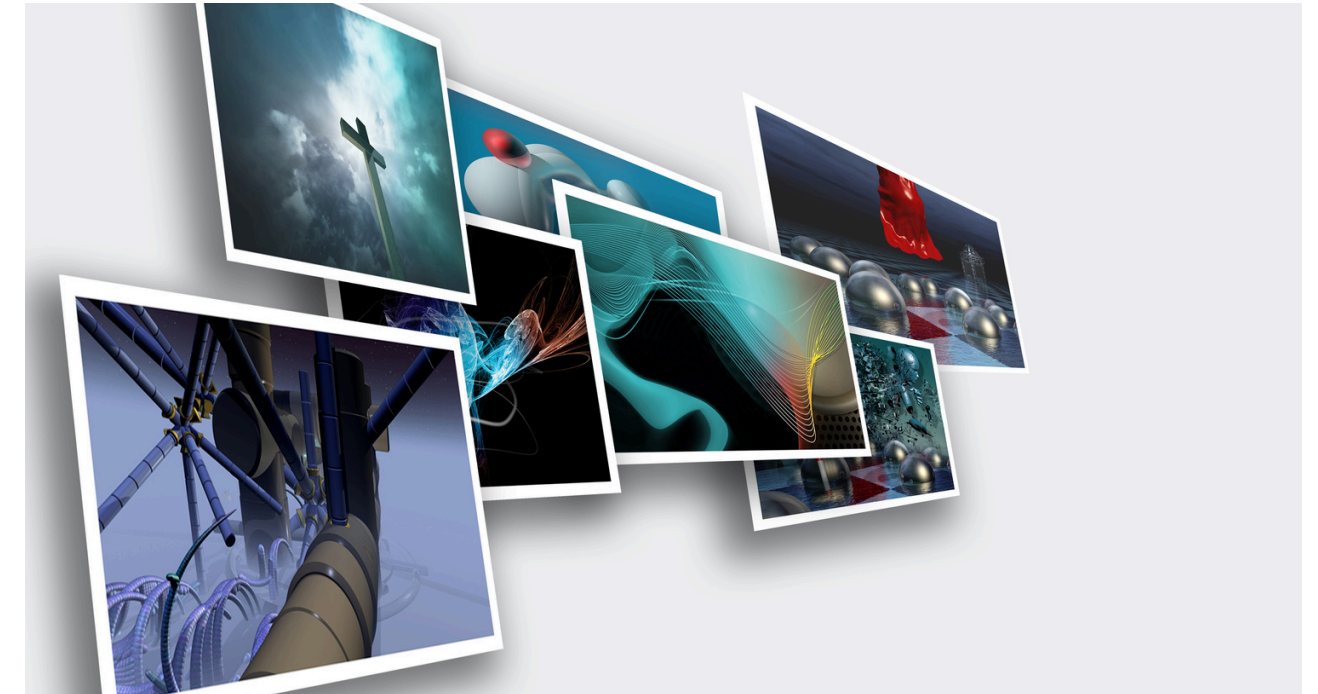
SENSORY CUES.

WHAT IS A SENSORY CUE?

Sensory cues are sensory stimuli that influence sensory systems such as auditory, visual, haptic, olfaction and gustation, created by environmental stimuli.

(Ramos et al., 2023)

THE STRATEGY

The strategy was to use visual imagery that stimulated the senses to enact a response when asked to relate said images to a positive and negative healthcare experience. The images were purposefully ambiguous and unrelated directly to healthcare. the subjects within have to use their own perceptions to create thoughtful connections.

RESULTS

The results were not ideal. In hindsight, it perhaps would have been better to limit the number of images and ask the participants to speak to each each of the individual in images instead of picking the preferred ones. It was inefficient. and time-consuming for individuals to review all of the images. even though there were some regrets, there were also some important data points that came from the exercises.

TEST
SUBJECT
#1

OBSERVATIONS

- Made associations based on what they would want o not want out of a healthcare experience rather than drawing upon a healthcare experience from memory.
- Positive traits were: colorful, fun, accessible, comforting, warm, familiar and tasty.
- Negative traits were: clinical, scary, dangerous, deadly and spooky.

Positive Healthcare Experience

Negative Healthcare Experience

TEST SUBJECT #2

OBSERVATIONS

- Participant thought of two recent healtcare experiences, one positive and one negative, for association.
- the positive experience was with healthcare provider since his/her pediatric years therefore conveying a childhood-like experience.
- The participant felt safe, secure, calm and at ease in the positive experience
- The negative experience felt expensive, confusing, calculated and made the subject, in fact, more ill.

Positive Healthcare Experience

Negative Healthcare Experience

TEST SUBJECT

#3

OBSERVATIONS

- The positive experiences the subject had were: home-like, spiritual, private, effective (with aggressive and good treatment), with experienced and kind healthcare providers, moving in the right direction, and involved pet therapy which was relaxing, fun and mood-boosting.
- The negative experiences were: nausea-inducing, had a long wait-time, felt precarious, complex, exhausting, authoritative and involved a bazaar fever-dream that was haunting.

Positive Healthcare Experience

Negative Healthcare Experience

INTERVIEWS.

FIRST-HAND ACCOUNTS

People with Disabilities

Ages: 18-56
From: New York, Georgia, Montana
Jobs: Unemployed, Social Worker, Doctor, Health Information Manager, Student, Financial Consultant, Professor, Retired
Disabilities: Fox-G1 Syndrome, Spinal Cord Injury, Hodgkin's Lymphoma, Spinal Muscular Atrophy, Congenital Hip Disorder

Medical Personnel

Ages: 44-92
From: New York, Georgia, Pennsylvania, Colorado
Jobs: Registered Nurse, Certified Personal Assistant, Medical Doctor OBGYN, Medical Doctor of Physical Medicine & Rehabilitation, Founder of Spinal Cord Injury Hospital

Healthcare Designers

Ages: 28-62
From: Georgia, New Jersey, New York, Maryland
Jobs: Project Administrator, Interior Designer, Service Design Lead, President of Architectural/Design Firm for Mental Health, Interior Architect, Vice President of Facility Services at Hospital

DATA ANALYSIS.

5

ANALYZING DATA.

UNLOCKING INTERVIEWS
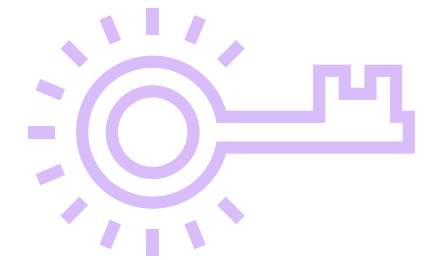
Patterns of needs can be seen from a wide variety of stakeholders in healthcare.

Architectural projects follow the prioritized expectations for the funders.

Visions and innovations in healthcare are focused on design trends that do not include accessibility.

Open innovation and its relevance in design and strategy could offer prospective solutions.

Sharing insights on medical projects and processes can incite collaborative action.

The need to connect and understand different perspectives and challenges is vital.

DIALOGUE DISECTION

- Evidence-Based Design: There is a strong emphasis on the importance of evidence-based design in healthcare facilities. This involves using research and data to inform design decisions, ensuring that the environment supports healing and positive outcomes. The Center for Health Design is highlighted as a resource for evidence-based practices.

- Patient-Centric Approach: A recurring theme is the need for a patient-centric approach in the design of healthcare facilities. The interviews express disappointment with firms that rely solely on doctors for input, rather than engaging directly with patients and other healthcare staff to understand their needs and experiences.

- Environmental Impact on Healing: The interviews discuss the positive impact of natural environments on patient healing. Features such as natural light, windows, and access to nature are associated with better health outcomes, suggesting that these elements should be prioritized in healthcare design.

- Interdisciplinary Collaboration: Successful healthcare design requires collaboration between various stakeholders, including architects, healthcare professionals, and consultants. This collaboration ensures that the design meets the functional needs of the facility while also enhancing patient care.
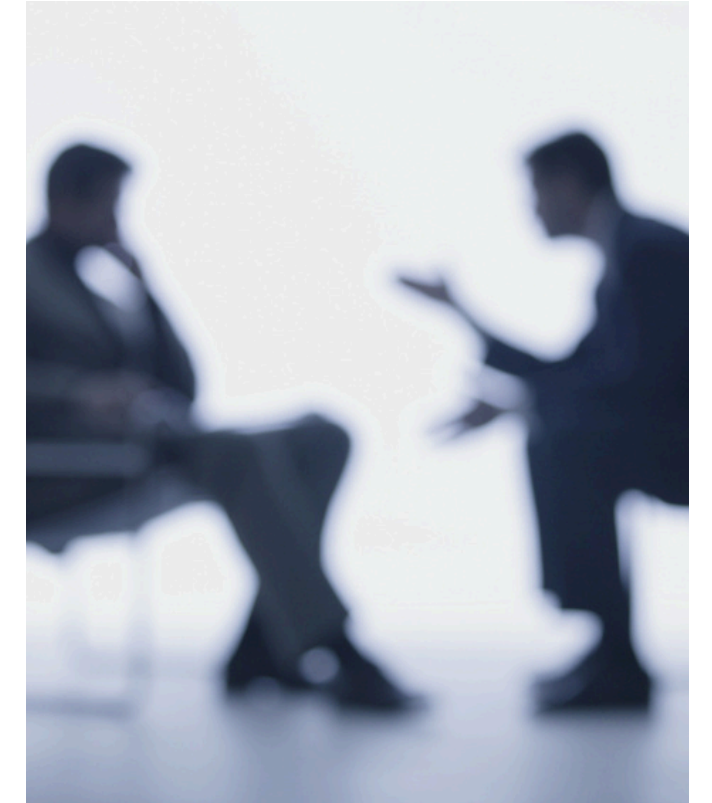
- Understanding Healthcare Systems: Designers need to have a good understanding of how healthcare systems work, including the constraints and requirements of different types of facilities like clinics and hospitals. This knowledge is crucial for creating effective and functional designs.

- Innovation and Adaptability: There is a call for innovation in healthcare design, with a focus on creating adaptable spaces that can evolve with changing healthcare needs. This includes considering future trends and technologies in the design process.

- Communication and Research: Effective communication and thorough research are essential in the design process. Engaging with various stakeholders and conducting comprehensive research can lead to more informed and effective design solutions.

THE OPPORTUNITY.

AN OPEN WINDOW
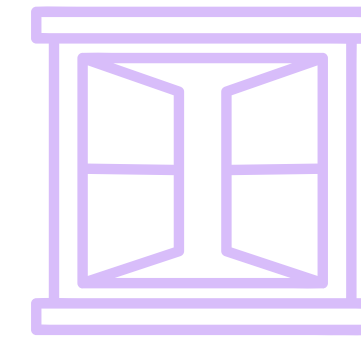
Design Management's human–centered design methods offer innovative strategies to **reform standards and systems** that leave patients with disabilities avoiding visits with doctors and providers. Stakeholders such as doctors, insurance companies and other ancillary healthcare–related personnel will **financially benefit** from an **influx of patients** devoid of treatment, in some cases for many years. This will also invariably **improve the health, longevity, and quality of life for valuable community members**.

INSIGHTS.

PERSPECTIVE GAINED

INTEGRATION

A common saying disability circles meaning that when it comes to solving problems for people with disabilities, they should be included in devising the solution. One of the fastest ways to foster more inclusivity and accessibility in a business is by hiring more disabled employees.

MODEL CLINICS

There are a collection of model clinics and institutions that have nearly perfected accessibility. They can be great resources to learn from and imitate. Specialized healthcare facilities, schools and residential buildings can serve as archetypes from which to exemplify.

EDUCATION

Incorporating accessibility in architectural and design curriculums and medical school could foster a new generation that is conscious of a world beyond the able-bodied. Having more students with disabilities enrolled in these programs will also inject disability awareness and acumen into the academic lesson plan.

AWARENESS

There is a lot of naïveté and obliviousness when it comes to disabilities, but people with disabilities shouldn't bear the sole responsibility to educate the public. Everyone should try to share their knowledge on the subject. Questions be encouraged the topic therefore the topic be openly discussed and not feared.

FEEDBACK

Embracing criticism in the interest of advancement and progression will positively benefit environments, especially those which need to increase accessibility. Adversely, people with disabilities must assert themselves and instruct others on how to best assist them, even if that is standing aside and doing nothing.

INTERACTIONS

Poor training, improper actions and disregarding people with disabilities can and should be considered inaccessibility. Additionally, there is a resounding emotional element to disability. Sensitivity can be further heightened in relation to healthcare. Common feelings can include attachment, embarrassment, and intimacy.

SYNTHESIS & IDEATION.

6

come from hope.

people need to be taught about disability too.

...where people could be outside and that benefited everybody." -CR

...added accessibility came from the consultants.

...the questions they ask, the approach that's taken have to do with getting them to see or think outside of the box" -Lisa

...pursuing initiatives to improve access and inclusion for disabled community.

BERG]'s sort of my side job." -Lisa

...fact that like accessing that imaging machine would be difficult." -Lisa

...changes to be made in the mammography case study

...a healthcare company when she went for her mammography

...determined her eligibility for a mammography

...facilities are highly emotional environments

...in hospital -MP

...facilities are often symbolic for a community

...facilities are beacons for Hope -MP

"we have evolved as a nation of people with different abilities since [the ADA] in a big way. I mean In a lot of ways they never took into account people Specifically who started off not disabled and then became disabled." -CR

There are different stages for people who become disabled.

"we follow the code kind of to the letter like that's again, there's no wiggle room there for Especially a military hospital. So definitely consultation was imperative" -CR

How do the consultants do their research and are there any PWDs working there?

Dr. V spread that knowledge and awareness, everywhere- to all of her facilities

Dr. Vickoff: chief of breast imaging.

"There's an opportunity to pursue this initiative as an organization to start improving access and inclusion for disabled patients and employees. And that's how it all started. So I guess the stars were all aligned" -Lisa

"I started talking to my counterparts and saying, you know, you know that there is, there's an opportunity here." -Lisa

"a lot of the doctors, facilities, leadership, I had connections with" -Lisa

She had a lot of connections with people who could facilitate change

It was Lisa's first mammography.

"Trust" does not seem to be discussed in the design of medical facilities

In order to feel safe one must trust those taking care of them

My experience in egg retrieval at the ambulatory surgery facility

It was hard to trust that they could take care of me properly

"The army has it figured out a little bit differently because there's a different level of obligation to the soldier." -CR

Obligation to soldiers is different than it's obligation to citizens

"So we didn't face the problems [that many pwd have] were Not necessarily the case in a military hospital at least" -CR

but as the war progressed and more and more Yeah, the warriors came home. They were very quickly funded and figured

"[Dr. V.] was all ears, all, you know, she had her full attention on it." -Lisa

"she said 'This is someone that I have to meet, I want to hear her story. I want her to walk me through exactly what happened so that we can pave the way for others. '" -Lisa

"It was, you know, taking what was the scary, you know, not so positive experience and we really turned it into something positive for future patients." -Lisa

"There was a patient and family advocacy council that was created. She's the lead for that. And that's specific to the imaging service." -Lisa

Lisa had the foresight to recognize the opportunity

She happened to have a job that interacted with multiple disciplines

The chief of breast imaging was very receptive to the criticism

Trust means feeling understood

When culture is not understood there can be a barrier in the ability to trust

Didn't know how to use the Hoyer properly or transfer me.

I felt unconvinced that the rest of the professionals were competent and could care for someone in my condition

mobility for patients needing treatment is expensive

the army provides funding for transportation services to facilitate care for at least 20 individuals every hour

Army implements a system for pharmaceutical management that involves providing soldiers with a medication 'bank' that dispenses their medicine at specific times

New technology can minimize the need for healthcare professionals

"I still work with [Dr. V.] quarterly." - Lisa

"There's been workflow changes and whatnot around that that came from that experience." -Lisa

"She's incorporated accessibility for patients with disabilities into her advocacy council." - Lisa

There was follow up that occurred to continue progress in the mammography case study.

"there's things that we can do education wise or just from an awareness perspective that I think speaks volumes when it comes to the patient experience." -Lisa

"I think that there's, there's not one approach [to education and awareness]. I think I think it has to come from different avenues and a lot of it is physicians-to-be or providers-to-be it's nursing students in the community." -Lisa

"Caregivers also ,and I hire a lot of them and they don't have much experience when they start, but they're not taught any of this in nursing school." -Lisa

Phil gets annoyed when the doctors only want him to answer- he had difficulties with speech due to illness

Phil prefers to have his mom with him at medical appointments because sometimes he has low energy

PWD don't always like sharing their sex history/status/activity with their caregivers

Going through severe disabling experiences can lead a person to be prescribed medications that cause memory lapses

The medication bank can also provide independence for soldiers

Suicide is common among those who become disabled due to trauma

The medication bank prevents substance abuse and sometimes suicide

Substance abuse is common among those who become disabled due to trauma

"[Dr. V.] is a wonderful person and physician and is always open and eager to hear feedback and to give suggestions and recommendations." -Lisa

"the Berg because that's like the core"_Lisa

"[the BERG] are the people that, are really signed up for this? Like we work together." -Lisa

Volunteers are enthusiastic and SHaRE common goals.

"equipment and physical barriers is costly" -Lisa

"[Nurses are] not taught disability etiquette in any way. So it's students, it's newly hired employees within an organization. It's staff that handle patients physically. But then it's also admin support staff." -Lisa

Nurses and caregivers aren't taught much about the disabled in school?

Phil's mom is a medical professional and knows his history better than he does

PWD don't always want caregivers to know their unhealthy habits (drugs, alcohol, etc.)

Having conversations without caregivers for at least a little bit can avoid discomfort

Asking to have a caregiver leave briefly, for patient privacy, and in case of a abuse

SYNTHESIS.

MAKING CONNECTIONS

OVER 450 DATAPONTS

APPROXIMATELY 35 THEMES

9 MAJOR INSIGHTS

PRELIMINARY IDEATION

Events

- fundraising for equipment
- awareness campaigns
- expos
- field related conferences

Education & Outreach

- school/career advisors
- curriculum revisions
- career fairs
- vocational rehab

Toolkits & Resources

- digital design toolkit
- print materials
- books or textbooks
- instructional guides

Field Team

- regulatory group
- inspectors
- on-site training

Alternate Delivery

- mobile units
- dedicated facilities
- telehealth

Equipment

- convertible wheelchairs
- autonomous chairs
- all-in-one machines

REFRAMING.

"How we see the problem is the problem."

-Steven Covey (The 7 habits of Highly Effective People, 2004)

- Original focus: the initial thought was to restructure the medical design and architectural processes to create more accessibility.
- More Design Management Practices: using lateral and design thinking exercises, the vantage point shifted.
- How Might We: coming up with the new question, "how might we create more accessibility in medical facilities?" helped to expand the scope so as not to be so limited in the solution.
- Exploring the context: viewing the problem from a broader perspective allowed for fresh, innovative solutions that were more practical than implementing new methods in existing corporations.

IDEATION.

A WORKING WALL

chair that lays flat for exams	mobile units	trailers for parking lots	laws that require the hiring of at least one employee w/physical disability	affirmative action	marketing positions in healthcare and architecture to people with disabilities	Movie for marketing purposes- Top Gun	how to make these jobs more appealing to PWD	get more PWD in schools/colleges	make colleges and programs more accessible and inclusive	teaching more about accessibility/disability in architecture and healthcare	follow a person with a disability in their med school/architecture journey to see how to make education more accessible	increase Telehealth	having a list of accessible providers

(Note: first row contains 14 items shown above)

- having a medical facility specifically for disabled people
- having accessible transportation or buses for disabled people
- autonomous wheelchairs in hospitals
- robots in hospitals that show you to your accessible stations
- guide dogs or guides
- facility dogs like Shepherd
- people with disabilities can do Telehealth
- having people be "disabled for a day" testing out their services
- having more leadership roles for PWD
- get suggestions from docs/arch. students with disabilities
- meeting with people who work in the industries about which jobs are possible to do for PWD
- recruiting efforts by schools to get more PWD
- how to incentivize schools to do this?
- tax write-offs

- notoriety
- media coverage
- how to make accessibility attractive?
- universal design principles
- non-profit team for more one-on-one recruitment efforts
- vocational rehab places increase their outreach
- better advertising- guerrilla marketing
- include something about pwd in their hippocratic oath
- consultants for people with disabilities
- teaching vocational rehabs more about the possibilities for disabled people now
- online service
- input: disability/ies and output: providers or facilities are returned
- input: complaints or reports of inaccessibility output: training videos
- output: catalogue of accessible equipment

- output: laws requiring med. fat. to be accessible
- output: certifications/badges/grades
- every medical facility owner has to take a certain course about accessibility
- insurance companies requiring training before insuring med. facilities.
- providing discounted insurance rates for those that do - like drivers licenses
- reinforcement like OSHA
- evacuation chair
- how to make builders/owners want to increase accessibility
- teaching more about universal design principle in arch/design schools
- have more PWD in inspection jobs
- virtual guide for PWD in med. fac. settings
- yelp for accessibility in med. fac.
- having a standard sheet for medical history that could be directly sent to doc. so less paperwork for PWD
- check-in should be virtual

- requirement to ask about accessibility needs when making an appointment
- check in process
- updating the ADA
- fines for people not in compliance with ADA
- safety-liability
- staff safety -to properly assist in transfers
- printed materials
- guidebook-manual-textbooks
- lawyers for non-complicit facilities

CO-CREATION

TOOLS	
Information Share	Guided Tutorial
Violation Search	Recommended Training
Job Qualification	Certification Award
Report & Support	Review Feedback
Inspector Evaluation	Profile Linker
Tax Application	Equipment Offers

ELEMENTS
Multiple Interfaces
Resource Assistance
Efficiency Oriented
Room to Grow
Law Enforcing

FEATURES	
Secure	Easy-to-Use
Accessible	Guilt-free
Customized	Anonymous
Automated	Real-Time Acting
Ai Incorporated	Multilingual

CONCEPT & CONCLUSIONS.

7

CONCEPT.

Website & Mobile App

AccessAble is an all-in-one collection of tools to engender **accessible healthcare**. A **user-friendly, guilt-free, anonymous** way to take action and become an **agent of change** for a highly under-represented, valuable **disabled population**. In fact we call AccessAble's users "**change agents**." Everyone can contribute towards AccessAble's mission of **making medicine equitable** to those with disabilities and vision of their **greater health**. This app's primary and perhaps most important purpose is **facilitating change**. By **making a report**, and detailing the specific boundaries to access. The disclosed facility will receive a **tailored plan** to, at the very least, reasonably **improve, if not completely rectify the accessibility problem**.

ACCESSABLE.
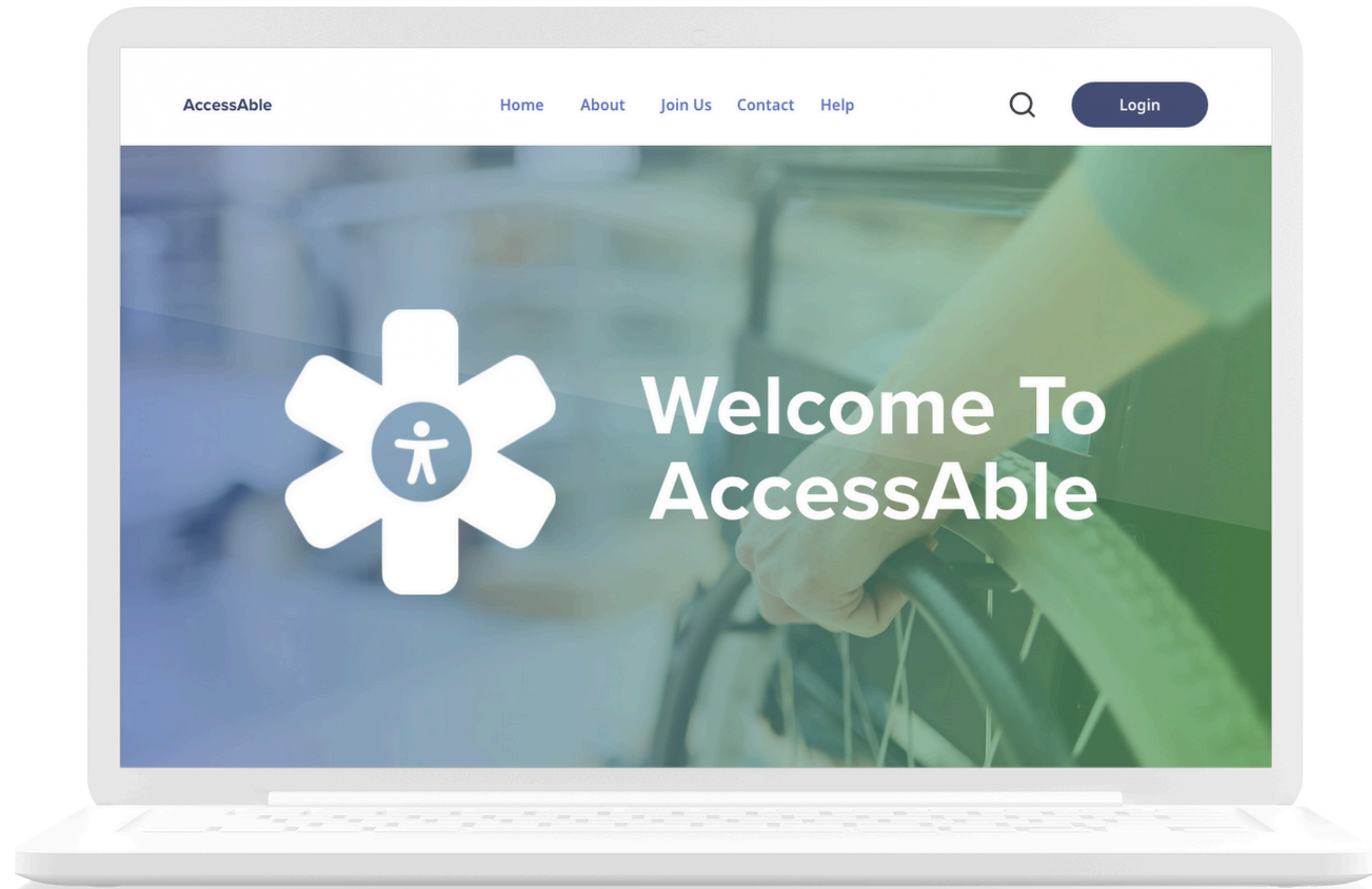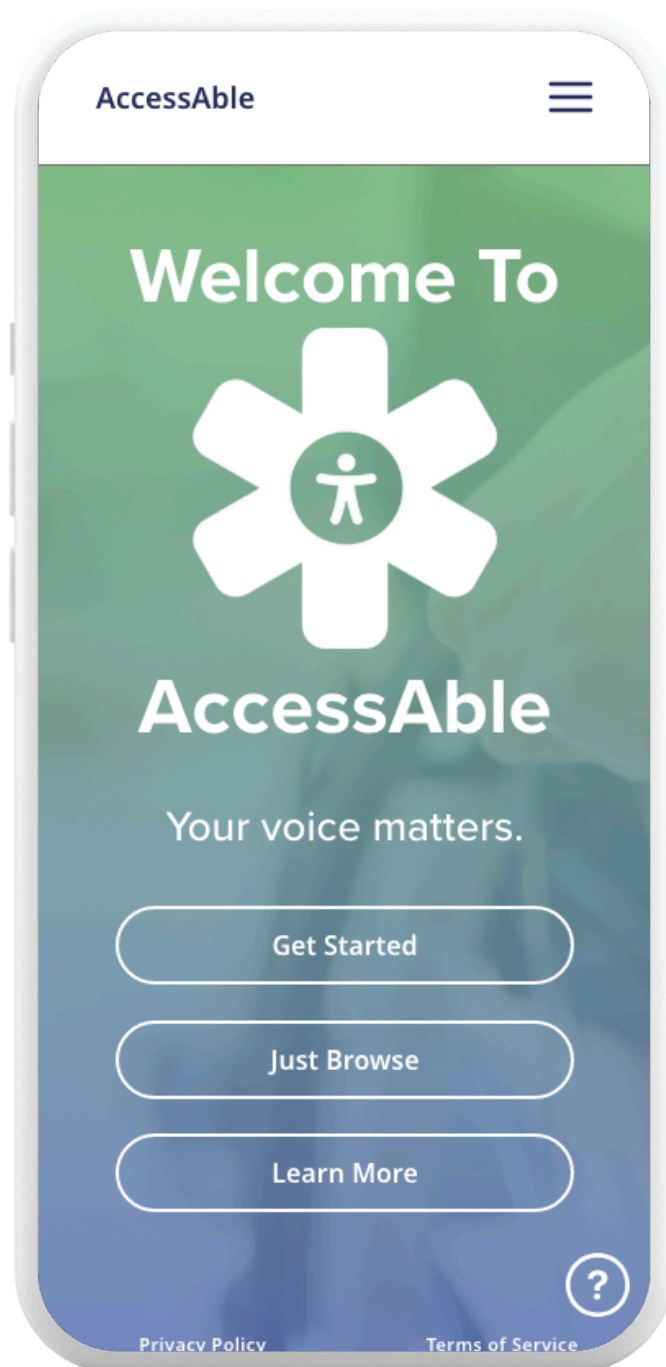
MAKING A REPORT

Screen 1 — Make A Report

Are you reporting a facility or architectural violation (i.e. lack of handicap parking, ramp or accessible medical equipment) or a service violation (i.e. inadequate assistance, unlawful care or access refusal)?

Choose violation type ⌄

Date of violation

Name of facility

Address of facility

City   State ⌄

Zip

Next

• • • •   ?

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Screen 2 — Make A Report

Within which department did the violation occur?

Department ⌄

Please choose one or more words that describe the violation.

Descriptor ⌄ ⊕

Please list the name(s) of the person(s) who committed the violation and their title/position, if known.

Name

Position ⊕

Next

• • • •   ?

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Screen 3 — Make A Report

Please list the name(s) of the person(s) who may have been a witness to the violation and their title/position if known.

Name

Position ⊕

Please describe the violation and the context within which it occurred in the text box or record using the audio button..

Description

#1 🎤

Next

• • • •   ?

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Screen 4 — Make A Report

Can we contact you regarding this report? #2

☑ No   ☐ Yes

If yes, how may we contact you? Please check all that apply.

☑ Phone   ☐ Email   ☐ App

Submit

Next

• • • •   ?

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Screen 5 — Thank You!

Your report will help ton improve the accessibility of healthcare. Congrats on doing your part!

If you have suffered distress or pain as a result of your recent experience, please click below to access support services.

#3

Support Services

To review the facility you reported, click below.

Create A Review

To return to the home page, click below.

Home

?

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MAKING A REPORT CONT.

Features such as Accessibility Setting Syncing and Adaptive Equipment Integration (which detects the accessibility settings and adaptive equipment being used to customize the website to your specific disability) make onboarding and site navigation a breeze.

#1 If hand dexterity is an issue, or even if it isn't, our ai enhanced record option can significantly limit the time necessary to make a report.

#2 Although not necessary, it is highly encouraged to login so that AccessAble can contact the "Change agent" to get any supplementary information necessary to provide the most accurate course of correction. All communication is secure and encrypted.

#3 When you're finished championing for disability rights, we want to return the favor and offer you any support services you might need as a result of dealing with inaccessibility-because we know that inaccessibility can also be synonymous with misconduct .

ABOUT THE MULTI-INTERFACE

The App will have 3 main user groups: That of the change agent, the medical facility administrator and employees and lastly is the government organization/enforcement agency and the AccessAble Employees and BackEnd Developers.

Each User Group will have a custom "home page" with appropriate tiles that coincide with their needs and whether they ate a so-called newbie or an experienced user.

While each user has their own customized homepage, there will be some "tile" or features that are common to everyone with some minor differences in each.

These are: The "Your Account" Tile where personal information, password and security settings, linked accounts, and most important your disability profile will be housed. The "About" section illustrates how the users all benefit from AccessAble, the dynamics of the operations, the origin story and AccessAble's vision for the future. The "Rights Laws & Learning" are solely information resources that are uniform to everyone. The "Violation Smart Search" will also be available to all three user groups. "Guided walkthroughs" that serve as tutorials that instruct the users how to use their own interface. And lastly the "Contact" Tile is included but will be modified for each interface.

MULTI-INTERFACE
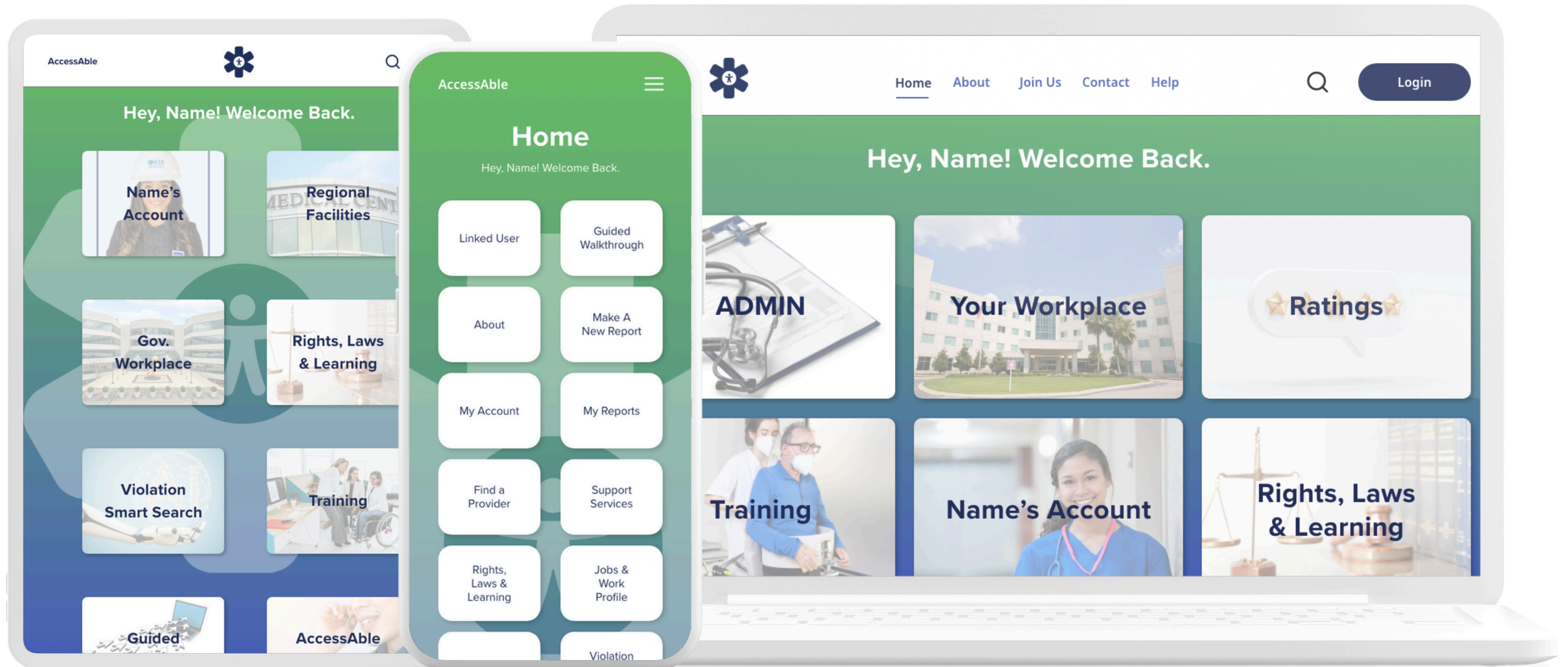
SUPER SMART FEATURES

- 24-hour AI Support Agents

- Multilingual Performance

- Voice Access Commands

- Adaptive Equipment Integration

- Automated Recommendation Delivery

- Face ID authentication

- Dictation Capability

- Violation Smart Search

- Accessibility Setting Syncing

- Smart Adjust Prioritization

Some of these features are rather common, but the original ones are as follows:

Voice Access Commands would mean having Google, Alexa, Siri as well as disability-enabled preset commands integrated not the website and app for hands-free use.

Violation Smart Search is perhaps one of the more useful and innovative tools in our app and essentially uses ChatGPT and Open Ai alongside of preemptive prompts (describing the likely context of the given situation is a medical facility, etc.) to inform the user if a description or uploaded image or video is an ADA violation, infraction or minor indiscretion.

Automated Recommendation Delivery is the Suggested course of action that is yielded once a report has been submitted. If there was missing accessible equipment like a height adjustable table, a catalogue from sponsored vendors with different price-points and features will be delivered to the ADMIN account of the healthcare facility. If a named employee did not address the patient and only made eye contact with the caregiver, that employee will receive a required training module comprised of video instruction and a short quiz that reviews communicating with pwd.

Smart adjust prioritization is an algorithm that prioritizes the urgency of the OSHA intervention and follow-up. This is calculated the quantity of reports, the severity of the incidents included in the reports, and the estimated number patients that would be affected. There would be a point in which the date of the report supersedes the algorithm so that no facility is remains at the bottom of the list.

CUSTOMER SUPPORT & SET-UP

The "Contact Us" tile will not only provide basic company information, but also the access point for AccessAble's vital, all encompassing, support system.

The government agency will have a more direct line of communication with a personal agent assigned to address any issues on their end. The ADMIN facility operators will be on the second tier of customer service direct care to assist with any IT issues. And on the third tier would be facility employees and change agents.

1 → **Government Organizational Leaders**

2 → **Government Employees & ADMIN Facility Operators**

3 → **Facility Employees & Change Agents**
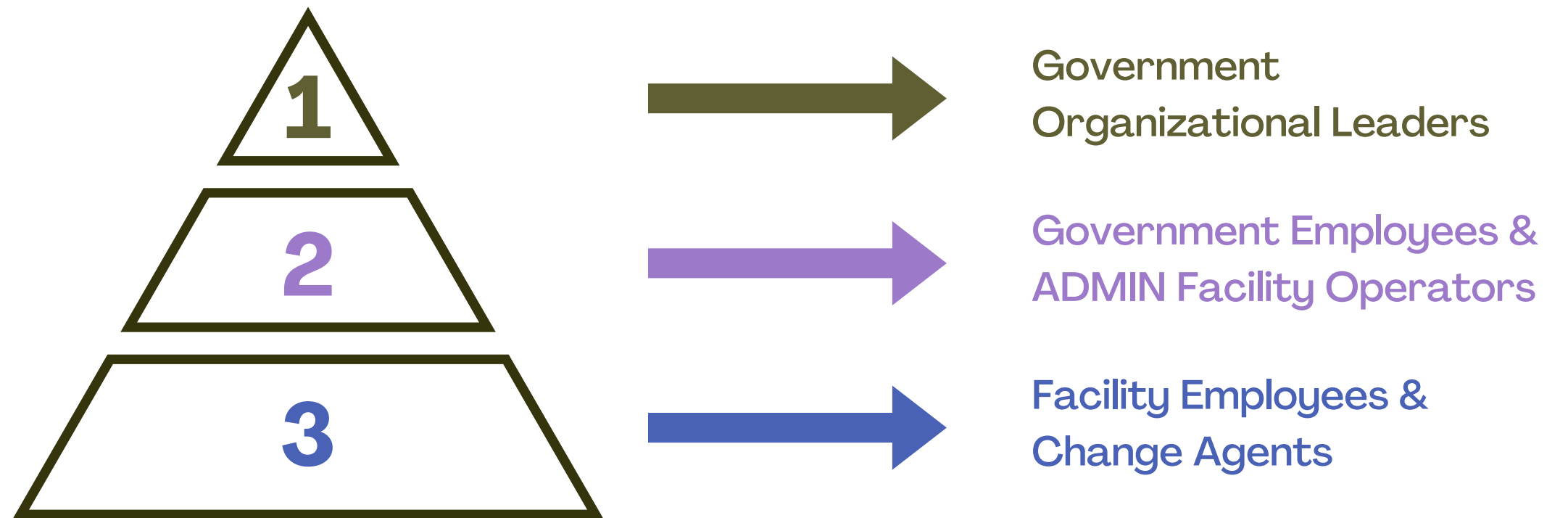
In addition to the customer support, AccessAble's set-up and registration will correlate with these three tiers as well.

The Gov. Leaders will have a much more cooperative collaborative set-up as their existence and needs are foundational. The second tier will have access to live agents trained in the enrollment on government employees and ADMIN facility operators as they serve as the mediators in AccessAble's enterprise. Lastly, Facility Employees and Change Agents (due to the large quantity and limited program functions) will have 24-hour Ai help agents accessed through the floating help button present on all their user interface screens, email support tickets and help forums, and live customer support agents provided through a help line during certain business hours, all of whom will be vetted and extremely proficient in assisting people with disabilities.

THE FLOURISHING BUSINESS MODEL (DECONSTRUCTED)

Designed for:	Entrepreneurs, venture capitalists, the government, future employees, current stakeholders, financiers, "the blank organization" & SCAD MA faculty	Designed by:	Amy Ewing, SBIZ 755 class & Professor Hardy	Date of model:	6-18 months	Today's date:	10/26/24

BIOPHYSICAL STOCKS

What ultimate stocks provide the tangible key Resources that are moved, flow, and / or transformed by this business's critical Activities to achieve its Goals?

What biophysical materials – living and non-living – are required in order to co-create value with your Stakeholders?

Guidance: As per laws of conservation of matter, all materials remain Biophysical Stocks somewhere on our single shared planet irrespective of this business's Activities (past, present and anticipated future)

- electricity and energy (fossil fuels and natural gas)
- raw materials for servers, computers, electronics
- water
- heavy/toxic metals
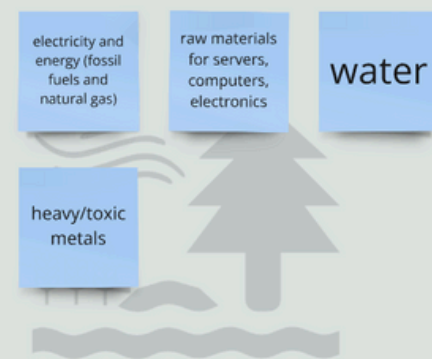
ECOSYSTEM SERVICES

Ecosystem services are processes powered by the sun that use Biophysical Stocks to create flows of benefits humans need: clean water, fresh air, vibrant soil, plant and animal growth etc.

Which flows of these benefits are required by, harmed or improved by this business's Activities?

Example: See World Business Council for Sustainable Development (WBCSD)'s Corporate Ecosystem Service Review v2.0

- fossil fuel generation
- limited resource production
- water cycle
- wind
- sun
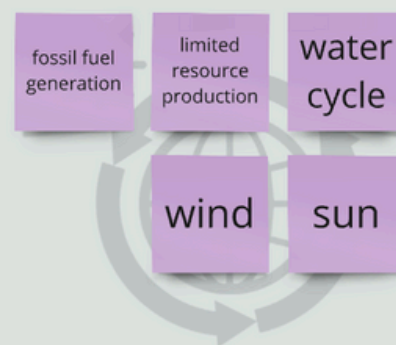
RESOURCES

What are the key tangible and intangible Resources required in order to execute this business's critical Activities and so achieve its Goals?

- smart phones
- computers
- office(s)
- AI
- cameras
- servers
- software, programming & encryption
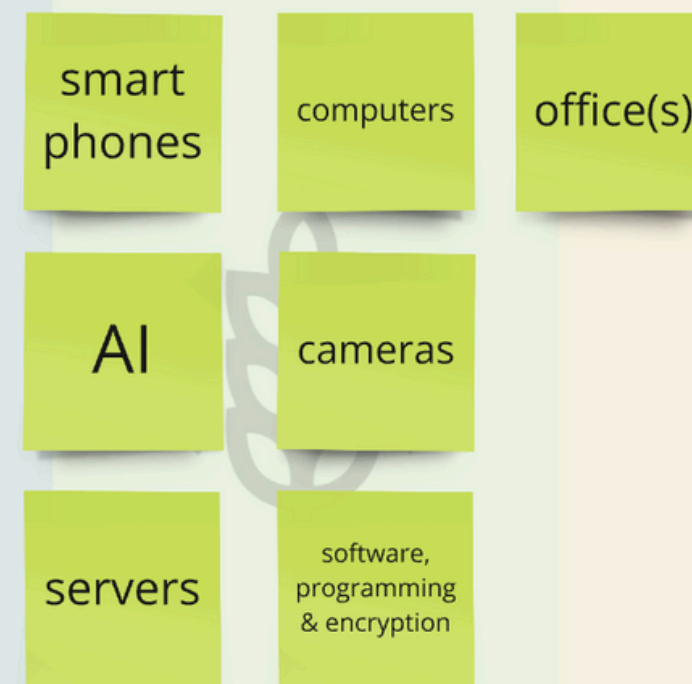
ACTIVITIES

What critical Activities does this business perform to strive to achieve its Goals?

What critical Activities enable each value co-creation or value co-destruction?

What critical Activities create and deliver each product/service?

- software/program and website development
- get apps on app store and google store for purchase
- hire an accountant for tax write-offs and benefits
- continue fundraisng
- promotion and advertising
- purchase and house servers
- make deal for portion of sales generated with equipment company
- communicate with government agencies and politicians for required support
- collaborate on writing and passing law for official grading system and badges
- find headquarter location
- create film training videos and testing

FLOURISHING BUSINESS MODEL CONT.

PARTNERSHIPS

What formal partnership agreements/ contracts are required by this business?

To which key Resources do these partnership agreements enable this business to gain preferred access? e.g. an agreement to supply raw materials

Which critical Activities do these partnership agreements ensure are undertaken for this business? e.g. an agreement to deliver the product/service

- DOJ, DOH, Access Board
- accessible equipment sellers/manufacturers
- server technicians/IT company
- grant-giving orgs
- med fac.
- IRS and state tax authorities
- disability orgs

GOVERNANCE

Which Stakeholders get to make decisions about: which Actors are legitimate Stakeholders, the Goals of this business, its Value Co-creations and its Processes?

What are the Governance arrangements for this business? i.e. which Stakeholders have the power to make decisions about what topics?

- government organizations
- Congress, policy makers, politicians
- company owners, investors
- grant agencies

VALUE CO-DESTRUCTIONS

What value is co-destroyed with each stakeholder, hindering the satisfaction of the Needs of the associated actor, from their perspective (world-view), now and/or in the future?

- inaccessibility
- lack of trust
- gov. orgs taking offense to assistance
- uncooperative or elusive med. fac. managers
- poor upkeep of hardware and technology
- miscommunication
- data/security leaks
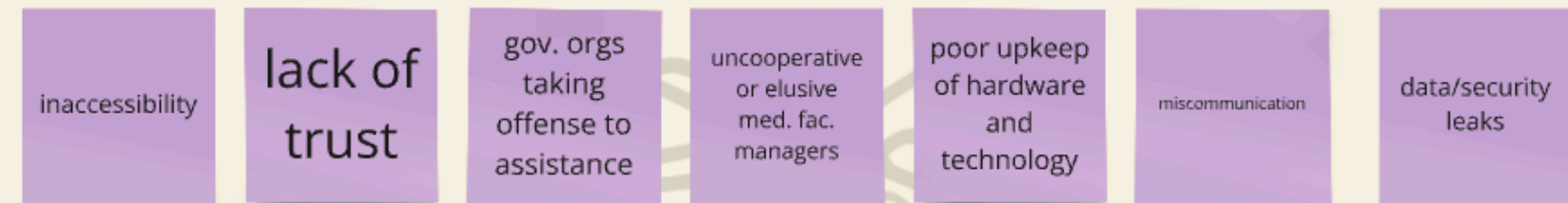
PRODUCTS / SERVICES

What does this business offer and provide to its customer, client or user Stakeholders that co-creates value with the associated Actors to better meet their Needs?

Which offers do customer, client or user Stakeholders pay the business for, realizing

- website/app, with automated/ live services and funding
- reviews photos, audio, descriptions and other inputs using AI to determine if a facility has violaed an ADA code
- immediate response to med. fac.- notified of the code violations and given accessible equipment catalogue or option to train employee(s) using provided videos and testing
- provides certification for those facilities. willing to have all employees trained and evidence of accessible facilities.
- offers counseling resources to those discriminated against
- advocates for hiring of PWD in healthcare jobs & informs of benefits

- provides an easy method for storing and giving health data to provider
- provides user with legal information and resources for those who want to use legal action
- resources such as building companies, contractors who have proven 6rack record of accessibility compliance
- provides a grade system referring to accessibility
- can find an accessible healthcare based on your specific disability

RELATIONSHIPS

What type of Relationships with each stakeholder must be established, cultivated and maintained by this business via its Channels in order for value to be co-created (or co-destroyed)?
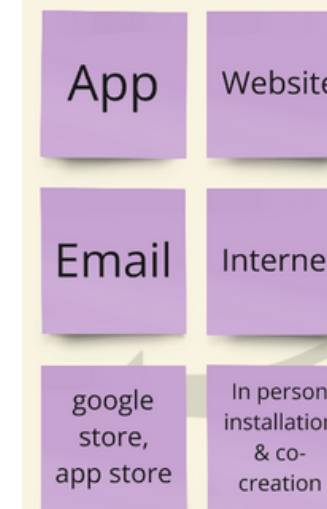
Examples: Become aware, build trust/ interest, decision making, co-create value, experience, collaborate/support, co-evolve

- politicians and policy makers
- medical associations
- disability orgs
- advocacy groups

CHANNELS

What Channels will be used by this business to communicate, interact, and to develop the required types of relationship with each stakeholder (and vice versa)?

Examples: Retail, Face-to-Face, Internet, Phone, Mail, Transport

- App
- Website
- Email
- Internet
- google store, app store
- In person installation & co-creation

NEEDS

What fundamental Needs of the Actors is this business intending to satisfy or may hinder?

Guidance: For inspiration on possible Needs review Maslow's Hierarchy of Needs or Max-Neef's Fundamental Human Needs (preferred)

- accessible quality healthcare
- checking facilities ADA compliance
- successful thriving business that provides jobs
- independence
- knowing if gov. assessors are doing their job
- accessible equiment & training
- jobs
- accessible work environment
- dignity
- comfort and ease

STAKEHOLDERS

How is each actor involved in this business?

What stakeholder roles does each actor take?

Examples: customer, employee, investor, supplier, community, regulator, financier

- PWD that cannot receive proper treatment
- disabled employees
- med fac. insurers
- Advocates, caregivers, family members, good semeritans
- government authorities like OSHA, DOJ - Civil Rights division, US Access Board and the DOH
- lawyers who want to do business with PWD
- Doctors, nurses, dentsts, PTs/OTs, nursing homes, healthcare professionals
- IRS, politicians
- Accessible medical equipment sellers
- med. fac. employees
- software engineers who design the app
- private & gov. owned/ subsidized facilities
- Disabled students without a career path
- Vocational Rehab specialists, schools, career counselors, teachers of PWD
- local citizens
- Disability organizations (Christopher Reeves, etc.)
- designers and architects
- builders, contractors
- receptionists
- Open Ai
- Accessible Equipment Vendors

ACTORS

Who and what may have an interest in the fact that this business exists?

From which groups or pools of Actors do the people come from who play the role of Stakeholders in this business?

Which individuals, groups or organizations does this business aim to reach and co-create value with to better meet those Actors Needs?

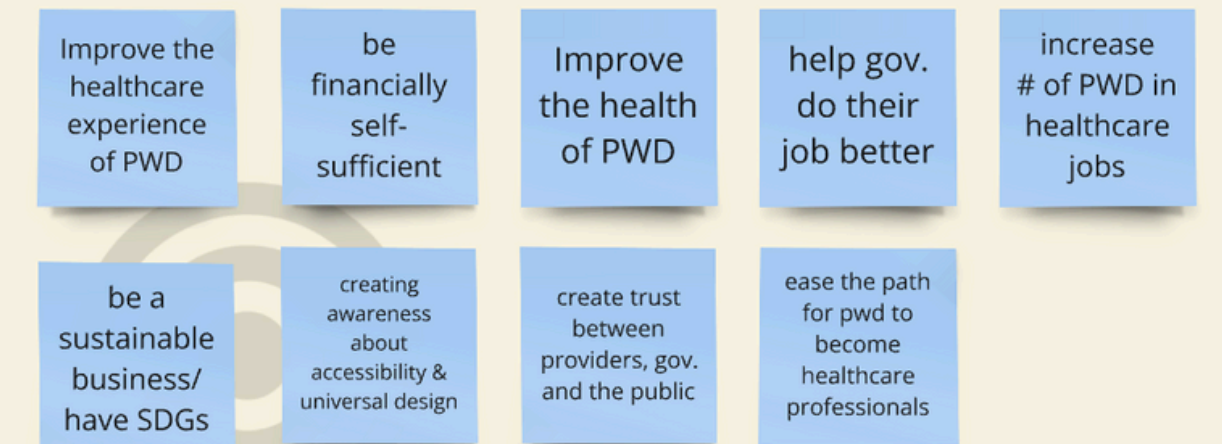Examples: Humans, NGOs, Government, Media, other life and nature (usually represented by an NGO) etc.

- disabled w/healthcare needs
- healthcare professionals & providers
- governmental authorities and regulators
- educators and students
- advertisers
- elderly community
- politicians
- insurance companies
- med staff
- medical equipment companies
- the community of the headquarters location
- community of the med. fac. locations
- advocates and caregivers
- law professionals
- monster, indeed, etc.
- local and federal gov.
- builders
- architects and designers
- universities
- vocational rehab specialists
- disability orgizations
- medical organizations
- google play & app store
- zoc doc, google business, US News Health, Healthgrades, etc.
- autonomous robotics companies?
- software & app builders
- venture capitalists & financial investment co.s
- design management and innovation professionals
- grant-giving orgs.
- accountants and cpas

COSTS

How does this business choose to measure the Costs incurred by its business model (Environmentally, Socially, Economically)?

- carbon footprint- energy watt usage
- electricity bill
- internet/phone bill
- video production
- purchasing of servers, fans and ancillary equipment
- webhosting
- rent
- employee salaries
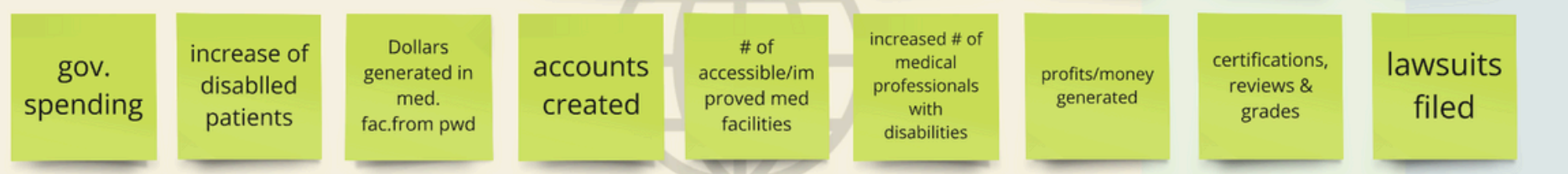- promotional budget

GOALS

What is this business's definition of success: environmentally, socially and economically?

What are the Goals that the Stakeholders have agreed align with the why/purpose/ vision they have chosen for this business (measured in appropriate units)?

- Improve the healthcare experience of PWD
- be financially self- sufficient
- Improve the health of PWD
- help gov. do their job better
- increase # of PWD in healthcare jobs
- be a sustainable business/ have SDGs
- creating awareness about accessibility & universal design
- create trust between providers, gov. and the public
- ease the path for pwd to become healthcare professionals

BENEFITS

How does this business choose to measure the Benefits that result from its business model (Environmentally, Socially, Economically)?

- app sales
- training videos watched and passed tests
- # of reports filed
- carbon neutrality
- website traffic
- accessible equipment pieces purchased
- gov. spending
- increase of disablled patients
- Dollars generated in med. fac.from pwd
- accounts created
- # of accessible/im proved med facilities
- increased # of medical professionals with disabilities
- profits/money generated
- certifications, reviews & grades
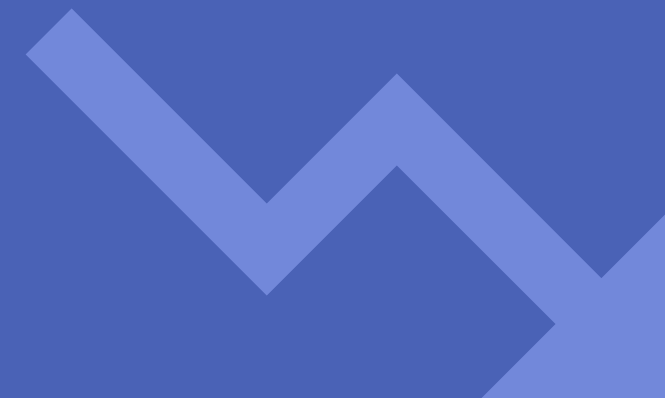- lawsuits filed

EXPECTED RESULTS

Increase

- app sales
- website traffic
- accounts created
- profits
- reports filed
- certifications, reviews & grades
- disabled patients
- accessible/improved med facilities
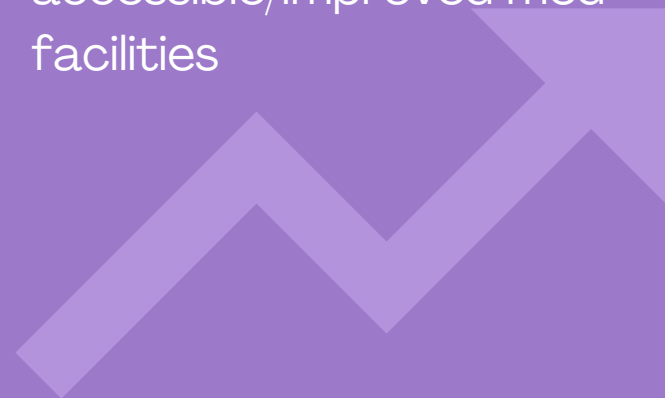
Decrease

- carbon footprint
- unemployed people with disabilities
- lawsuits filed
- gov. spending

VALUE PROPOSITION

For...

- People with disabilities, both physical and cognitive
- Advocates, caregivers, family members, good semeritans
- Doctors, healthcare professionals, and employees of non-compliant facilities
- government authorities like OSHA, DOJ - Civil Rights division, US Access Board and the DOH

Who...

- is unsure or sure that they experienced or was witness to a violation of ADA/accessibility laws
- are looking for a facility that can accommodate their disabilities
- wants to know about ADA/accessibility laws
- don't have accessible facilities or proper conduct/treatment of people with disabilities
- oversee ADA compliance and violations
- want to provide a swift and easy check-in at healthcare providers
- doesn't have a career path yet

Our...

- website/app, with automated/ live services and funding

We do this by...

- determining which violations have occurred, if any
- facilitating proper reporting of the non-compliant medical facilities
- aiding in the rectification of violating facilities (providing resources for equipment to the facility, training for employees, information about laws/violation of the laws, help for achieving compliance, financial benefits upon compliance) with a fair method based on size
- offering counseling services to those who have suffered mistreatment and trauma
- finding an accessibility match for the person with disabilities' needs
- offering a secure/non governmental place to store medical history, medications, and personal information
- Using proceeds to promote awareness of possible healthcare careers for people with disabilities

Unlike....

- gov. regulatory authorities
- yelp, google, etc.
- manual check-in at medical facilities

Our...

- app/site provides a guilt-free experience by providing the noncompliant facility time, fair warning, resources and information on how to rectify the violation before an official report
- app/service keep your information private
- app/service provide facilities with an interactive customized method for training employees
- app/site provides catalogues of accessible equipment with varying price points
- app/site provides a grading system to ensure accessibility requirement like a health inspection
- instant feedback using AI to determine accessibilities
- app/site offers an easy accessible method for check in without writing longhand, the exchange of insurance cards, etc.
- app/site offers feedback on if the facility has been reported
- app/service offers resources for lawyers if you want to pursue legal action
- app/service offers gov. authorities information on the employees that are and are not doing their job

DOWN THE ROAD

Pioneering new industries one job at a time: Matching more people with disabilities to jobs and forging new and unforeseen possibilities in specific industries.

Accessibility for other facilities and buildings: Other institutions could also be served and benefit from increased accessibility, so this app might just be a template for a number of other physical spaces and if successful why not virtual.


Cutting the fat: The projected efficiency displayed by AccessAble could also be a jumping off point for other government organizations to cut back on government excessive spending.

Children are the Future: the training modules could also be expanded upon and utilized in school settings to set the standards for accessibility in the next generations.

REFERENCE & APPENDIX.

8
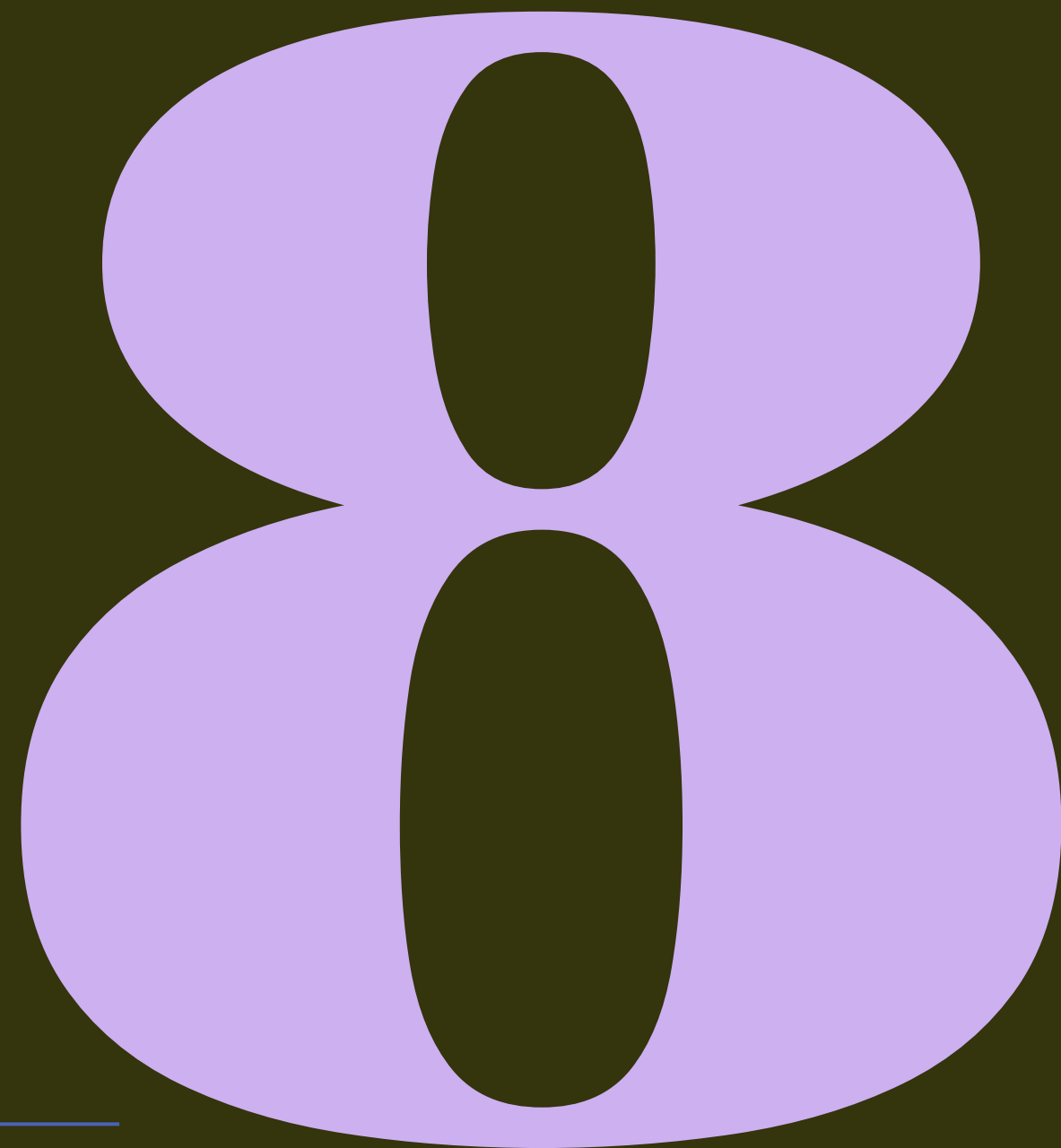
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