
The Urban Death Project: A Value Sensitive Design Case Study

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Abstract

In this paper we describe our process for identifying and evaluating design considerations for natural burials. Using the Value Sensitive Design methodology, we document our conceptual, empirical, and technical investigations of the Urban Death Project.

Keywords

Values, death, natural burial, stakeholder analysis, value sensitive design, VSD

Introduction

There are an average of 2.4 million funerals a year in the US, and this number is expected to increase in the coming years as baby-boomers age. [1] As cities grow more dense and open land becomes more scarce, this dilemma provides an opportunity for us to consider alternative options to our current binary options.

The Urban Death Project is proposing an alternative to traditional burial and cremation that uses the composting process to turn bodies of the deceased into soil building material. The effects of this system on stakeholders and the values that are implicated will play a large part in the public's acceptance of this practice. Over a four-week period we conducted conceptual, empirical, and technical

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investigations of The Urban Death Project while using Value Sensitive Design. Value Sensitive Design (VSD) is a three phased iterative approach that focuses on stakeholder value tensions. This paper outlines our process, presents our user research findings, lists our design recommendations, and identifies areas for future research.

Process

Value Sensitive Design (VSD) is a three phased iterative approach that focuses on stakeholder value tensions. The three phases are conceptual, empirical, and technical. Since The Urban Death Project is still conceptual and in the early fundraising stage, we decided to focus our investigation on conceptual and empirical investigations.

We began our process with brainstorming direct and indirect stakeholders, and then discussed their values. We identified several value tensions and crafted value scenarios that illustrated the tensions between them. We completed the first phase of our project by drafting three comprehensive value scenarios and defining our most important values. Lastly, we created a video that explored one of the value scenarios in depth.

The second phase of our process focused on user research. We developed three sets of interview questions for the founder of The Urban Death Project, a Funeral Director, and everyone else in the world who might die. We also created a robust 37 question survey that investigated topics like attitudes and experiences with death, planning funerals, composting habits, and receptivity to the Urban Death Project. We conducted one of the interviews and received 22 responses to our survey. We showed the video to two participants and conducted informal interviews to evaluate its effectiveness and the feasibility of the Urban Death Project in Seattle. For our deliverable we presented our research findings and developed design suggestions for the future of Urban Death Project.

The final phase of our process consisted of an in depth analysis of all policies that currently exist and affect the natural burial process. This analysis included current funeral regulations, religious freedom legislation, and composting restrictions. For this final phase our deliverable was a list of recommendations for policy changes that would enable natural burial practices.

Stakeholder Analysis

The goal of the stakeholder analysis was to identify stakeholders and the potential harms and benefits of the Urban Death Project.

Direct Stakeholders

Facility Employees
Family members of the deceased
Funeral homes/directors
People planning their estates
Deceased
People who receive the compost
The environment

Indirect Stakeholders

Estate Lawyers	Funeral homes
Public health officials	Business owners in proximity
Neighbors of the building	Casket manufacturers
People who use the compost	Funeral directors
City of Seattle	Hospitals
Washington State	Coroner or medical examiner
Various religious organizations	People get flowers/trees with human compost
The environment	City Parks
Cemeteries	Caregivers
Crematoriums	

Stakeholder Values

Spirituality	Cleanliness
Religious freedom	Health
Autonomy	Cost Effectiveness
Environmentally friendly	Efficiency
Respect	Sustainability
Nature	Accessibility
Community	Inclusivity
Ritual - Ceremony	Authenticity
Regulation	Beauty
Peacefulness	Family
Purpose	Cycle of life
Dignity	Respect

Value Definitions

After completing our stakeholder analysis, we identified eight values that applied to most or all of the stakeholders. We defined the following eight values and how they applied to the Urban Death Project.

Sustainability

Some of the key values involved in a human composting process are sustainability and conservation. Caskets and vaults use a large amount of hardwood, steel, copper, and reinforced concrete. As cities grow, there becomes less space to bury our dead. Embalming fluid containing formaldehyde, a carcinogen, seeps into and contaminates our groundwater. Cremation is often touted as environmentally-friendly, but it is not without impact, releasing significant amounts of greenhouse gases into our atmosphere. Natural burials help to solve these problems because they allow the body to be buried directly in the earth with no barriers to decomposition, but they are not very feasible for

growing metropolitan areas. A composting facility allows for people in cities to choose the eco-friendly option of giving their bodies back to nature. The compost will be used in families' gardens and city parks, helping new plant life to grow. Because less energy and resources are used, the composting process has the potential to be sustainable for many years to come and allows us to reduce the environmental impact.

Connectedness

Connectedness is another value this process involves on multiple levels. The composting process allows someone to reconnect in death with the earth and their community--it turns bodies into soil-building material which goes to families' gardens or city parks, allowing for future generations to appreciate natural beauty. Families can feel a closer connection to their loved one when they have more direct contact with the body and are the ones laying them to rest. The composting facility can hold as many as 30 bodies at one time, something that has potential to be comforting to people--you are not alone in death; it happens to everyone.

Autonomy

There are autonomy issues that arise when you have a single facility processing multiple bodies at a time. People might see their independence as being compromised if they are placed into wood chips with other bodies of the deceased. The soil-building material created from one body might mix with others', and parts of an individual's remains might be picked up by other families. You don't have much control over this. After going through the composting process, people might want additional commemoration through a

gravestone or other marker that allows for a personal memorial after death for others to visit. People can visit the building, their own garden, or even a public park where the compost was deposited, but autonomy will still be an issue for those who want a distinct physical location for their remains. On the hand, autonomy can be seen as a value that is supported by the framework of the composting facility. The facility allows for greater personalization, and people can have more control in customizing a service for themselves. The fact that you can choose which plant life your remains contribute to allows you to create a unique memorial for yourself.

Spirituality

Spiritual beliefs play a large part in people's views on death and traditions. Spiritual beliefs of some people might go against the concept of human composting, but other beliefs might support it. Spirituality can also be separate from religion, and younger generations might be more likely to embrace secular death practices. People who believe that the soul is separated from the body after death might be more accepting of a composting process, which people who maintain the sacredness of the body might see the process as disrespectful.

Ritual

Ritual is deeply engrained in our cultural practices surrounding death. Ceremonies are important to people so they can commemorate their loved ones. When death occurs, people turn to long-standing traditions and religious practices to inform their actions. A composting facility for the dead will provide a neutral, contemplative environment for many different rituals to take place. New rituals are also proposed: Families are invited to bathe and shroud their loved one's body, and

then carry their dead to the top of the facility, where they take part in the “laying in,” placing their loved one on a bed of wood chips. The facility will allow family members to build upon existing rituals and form their own, creating a more personalized memorial. Some people will feel uneasy about new rituals and stick to the familiar and traditional, opting for other methods instead.

Reverence

Reverence is fueled by love and respect for the dead. A composting facility for the deceased is divisive, because some people do not see the process as respectful. A new process upends deeply held cultural practices and beliefs, which some people find difficult to accept. Foregoing the embalming process and opting for natural decomposition might be seen as disgusting to some, and placing the dead together where they are all reduced to compost might be seen as crude and disrespectful. On the other hand, some people might view returning our deceased to the earth through a natural process as the ultimate form of respect for the dead and our environment.

Inclusivity

Inclusivity is an important value that is related to cost, location, and customization of death practices. The composting facility will be easily accessible to all who live in Seattle, and the price of \$2,500 is just a portion of what a traditional burial would cost. This will allow people from a range of incomes to opt for an environmentally-friendly burial. In addition to this, the facility will provide a neutral space for ceremonies, allowing both non-religious and religious to hold services for their deceased. While funeral homes might initially see the composting facility as direct

competition, the facility will actually employ funeral directors to oversee and assist in care. This could pave the way for lower prices and eco-friendlier practices across the funeral industry as a whole.

Authenticity

Authenticity is a central element in a composting process for the deceased. Funeral homes take care to embalm bodies, using pink-tinted embalming fluid, makeup, and restorative art to help them look like the living. This process takes place behind closed doors, and people are unable to see what death really looks like, which contributes to their fear and denial. A composting process is natural and connects death to nature’s cycle of renewal. No embalming will take place, allowing the family to view death in its authentic state and helping with the grieving process and acceptance. In a world where people already demand authenticity in the products they buy and the food they eat, an authentic death practice could gain acceptance.

Value Harms and Benefits

Our team identified six stakeholders for further analysis, and explored the potential harms and benefits associated with them. The six stakeholders we analyzed were family members of the deceased, environment, neighbors of the building, religious organizations, city parks, funeral homes, and the deceased themselves.

Family Members of the Deceased (Direct)

Harms:

- Negative connotations surrounding compost (may not be noble way to treat the person who was lost)
- Concern about where remains end up

- Hard to know how much of compost they receive is a result of the loved one
- Will not have a concrete location to visit the deceased
- The process is new and unconventional, could find scary or confusing

Benefits:

- There is a ceremony involved, performed by people close to the person
- Can receive the compost to plant in a garden
- Lower costs than most other practices
- Environmentally friendly
- The building can be a symbol/memento of their loved one
- Close location for urban families to visit

Values associated: Environmentally friendly, sustainable, cycle of life, cost effectiveness, ritual - ceremony, respect

Environment (Direct & Indirect)

Harms

- Building is another concrete footprint (less natural land)
- Energy required to power the building (refrigeration and heating)
- Less land is devoted to cemeteries and repurposed for other buildings
- Not clear about the regulations for dealing with dead bodies

Benefits

- Less chemicals in the ground from embalming practices
- Less carbon emissions than cremation
- Reduced contaminated water
- Parks would receive compost
- Part of natural carbon life cycle

- Less natural resources (wood) is used to build coffins
- People feel like they are giving back
- People feel like they are being environmentally responsible

Values associated: cycle of life, sustainability, environmentally-friendly, natural death, autonomy, respect

Neighbors of the building (Indirect)

Harms

- Increased traffic in neighborhood
- Possible protesting in neighborhood
- Against individual religious beliefs
- Negative connotations around composting loved ones
- Concerns about safety of process (by products like Methane)

Benefits

- Progressive approach to death
- Seattle is an innovative community
- Better for environment
- Accessible to natural burial in an urban environment

Values associated: Safety, privacy, sustainability, congestion, autonomy, value

Religious Organizations (Indirect)

Harms:

- Fewer people may use their services with regards to handling death
- The process may go against certain beliefs across various religions
- The building built by the UDP would compete with them for urban real estate

- Various religions could lose followers, churches lose potential members (family of the deceased not going and looking for guidance)

Benefits:

- Leaders of different religions could have opportunity to be a part of ceremonies
- Could lead to greater religious tolerance
- Some religions may actually prefer this method, compared to the methods that have become traditional today

Values associated: Spirituality, religious freedom, community, respect, purpose, cycle of life

City Parks (Indirect)

Harms:

- If some kind of health risk is detected, city parks are involved
- People might be creeped out
- Compost procedure for bodies could affect different plants in different ways. (investigate)
- City parks don't have the same kind of protection as cemeteries, could be subject to storms, city restructuring, vandalism
- City parks are public and don't have the same kind of reverence as cemeteries - people can do whatever they want here
- More maintenance and upkeep might be required for the parks

Benefits:

- City parks could be frequented more
- City parks could gain more protection through media and public awareness
- Rich compost can lead to healthy plants
- More funding could come to parks
- Parks could become more peaceful

Associated values: Community, respect, interconnectedness, sustainability, peace, beauty, cost effectiveness, purpose, cycle of life

Funeral Homes (Indirect)

Harms:

- Funeral homes could see less customers requesting traditional burials
- Funeral directors could lose jobs
- Funeral homes might be forced to lower their prices due to people requesting more affordable options

Benefits:

- The rise in natural burial practices allows funeral homes to transition to more of a service industry (visitation, services, etc.)
- Funeral homes can start offering green burial services to adapt to a changing culture
- If people start feeling more open about death, a dialogue could begin between funeral homes and the public
- Funeral homes might see more independence

Associated values: Cost, control, regulation, cleanliness, standardization, reverence

Deceased (Direct)

Harms:

- If the deceased did not specify what they wanted done with their body, the family might choose composting because it is affordable.
- Because all bodies are put into the same composting area, your family might not be receiving your specific remains (investigate this further...)
- You have no control over where your remains end up. Which city park?

- Without a headstone, how will you be memorialized?
- Transparency in what will happen to your body can be terrifying

Benefits:

- Provides an eco-friendly way to give back to the environment
- Provides a way to be memorialized in living trees, plants in the city parks
- More peace, places less burden on family in making funeral arrangements
- Affordable
- Ceremony can be customized to your preferences
- Knowledge that your family are the last ones handling your body and lying you to rest
- Can be seen as beautiful
- Transparency in what will happen to your body can be reassuring

Associated values: Spirituality, religious freedom, autonomy, environmentally friendly, respect, community, ritual - ceremony, cost effectiveness, efficiency, sustainability, accessibility, inclusivity, authenticity, beauty, peaceful, family, purpose, cycle of life

Value Scenarios

Value scenarios are brief fictional narratives that communicate important stakeholder values. Often these scenarios can represent value tensions between stakeholders or non-targeted use of a product. Value scenarios are impactful because they convey emotion and build empathy for stakeholders. The following three value scenarios were the deliverables for the first phase of our project.

Tradition vs. the planet

Dave is an environmental activist who is in the process of planning his estate. He is torn when trying to decide what he would like to happen to his body after he passes. On the one hand, multiple generations of his family have been buried in the same place and a large plot of the same cemetery has been purchased so that the family can stay together. On the other hand, he recently heard about a natural burial process in which his remains will be broken down into compost. He is interested in this process because his body would go back to the land that he loves and has nourished his soul for decades. His kids think he is a bit of a fanatic and call him a tree hugger. Because of this and the fact that they would like to have a monument that they can visit him at, Dave is concerned that his children will not honor his wishes. Dave is hoping that there could be some way that he can convince his children of the benefits of this process, while also providing them a way to feel close to him after he is gone.

Not in *this* neighborhood

Fred recently heard about a new type of funeral business that was moving into his neighborhood that composts bodies. He respects people's privacy and their freedom to choose how to be buried, however, he is not happy that the new facility will be three doors down from his house. He is concerned it will affect his property value and disrupt the general upbeat vibe of his local community. Just the thought about the fact that there would be a large number of bodies of deceased people being so close to where he lives makes him feel uneasy. He acknowledges the benefits that it may provide to the planet, but he likens it to living near a graveyard. His feelings are also similar towards what would be done with the compost after the

process is completed. Fred does not feel an urban environment is not a good place for this kind of process because of its close proximity to so many people. He is afraid more people are going to apply a negative connotation to it than a positive one.

Resilient roots

Jessie and his sister Meredith have lived their entire lives in the city of Seattle and they plan on staying there for a long time. Their mother passed away years ago, and now their father is sick in the hospital where doctors give him only a couple of weeks to live. Jessie and Meredith do not have a lot of money to use for a traditional burial or cremation of their dad when he does pass. Their father had always had a great connection to the city, and that is where their love for it stemmed. They want to both honor their father's memory and also help him continue to give back to the city they all love. They hear about the Urban Death Project and all about how the process can lead to usable compost that can be used in parks around the city. They are happy to learn that the process involves a ritual in which they will get to lay him to rest together and that the nutrients within his body will help to grow new life in the places he loved. Jessie and Meredith are also relieved to find out how compared to many other methods of burial, this process is more affordable. The building and the compost that is a result of the process will be symbols of their father that they can feel connected to and easily visit for years to come.

Video of Value Scenario

As an extension of our final project, we created a video prototype showing the environment as a stakeholder and communicating values of sustainability,

conservation, and ecologically-friendly practices. The link to our video is <https://youtu.be/AL9gqiyVL8c>.

User Research Findings

Survey

Since the topic of human composting in the context of after death care is very broad, we narrowed our scope to focus on how the Urban Death Project might be received in Seattle, the project's initial proposed location. We decided to use a survey so that we could get a wide variety of information and opinions from a larger number of people. We structured this survey to answer our research questions involving people's attitudes and rituals surrounding current death practices and how they would feel about a human composting facility in Seattle. Although our responses were limited and not representative of Seattle's population as a whole, they provide some insight into a user's thoughts and behaviors. This kind of insight can help to focus our proposed solutions and provide more well-rounded design suggestions.

Our Research Questions:

What are the attitudes of people in Seattle towards an urban facility for composting bodies?

- What are their main needs in the funeral process?
- What do they think of current funeral practices?
- What do they think of the Urban Death Project?
- What are their spiritual or religious needs in death?
- How does ritual affect urban death practices?
- What experiences have they had involving death?

- How does cost affect their choice in funeral method?
- How does sustainability affect their choice in funeral method?
- How do they feel about death?

Our target participants included anyone who lives in Seattle and is 18 or older. We received 22 responses to our survey, some of which were screened out, and 13 of these responders continued through the entire survey. Most of these responders were in the 18-24 age group.

Our Top Findings:

1. Most people see themselves as environmentally conscious and compost regularly.

A ranking of how environmentally conscious individuals are on a scale of 1-10 (10 being most environmentally conscious) was averaged at 6.73. 16 of 22 people indicated that they compost, with varying frequencies. Of those who compost, 5 people indicated that they do so "always."

2. Most people have had experience with death, but they do not have much experience planning funerals or memorial services, and most have not planned for their own death.

Most of the people surveyed indicated they have lost someone close to them (9 responses), while the rest have not (6 responses). Out of loved ones people lost, grandparents were the most common, mentioned by 5 out of 9 people. Only 3 out of our 22 people have planned a funeral or memorial service before. Most people have not done any planning for their own death- 9 out of 13 people have not planned anything.

3. Most people see a funeral as an important tradition celebrating life.

When asked about their opinions of funerals, 7 out of 13 people indicated that funerals are an important tradition, and 9 indicated that funerals should celebrate life. 5 indicated that they wanted to see the easiest option.

4. People feel okay about death and see it as a cycle of life.

When asked about their feelings towards death, answers varied. The two most popular answers were "I feel okay about it" and "it's just the cycle of life." Only one person selected "I don't ever think about it." The level of comfort people have in talking about death depends on who they are speaking with--8 out of 13 people indicated that it depends on who they are talking to, while 3 indicated yes, and 2 indicated no.

5. The majority of people surveyed want their body to be cremated and practice cremation as a tradition.

8 out of 13 people indicated they wanted to be cremated when they die. Other replies included donating organs, donating body to science, and "do not know." When asked about which traditional burial method they practice with their family, the majority of people listed cremation.

6. People value a broad range of things in after death care, but traditional funeral services like customized caskets and embalming are less important to them.

When asked about the importance of funeral services, many people marked affordability, personalization, a memorial service, and cremation as “important” or “very important” in their funeral plans. Some of the options marked as not important were customized caskets, customized vaults, and embalming. When asked about less tangible elements in after death care, people marked family participation, comfort for the grieving, a contemplative environment, and a return to nature as important. Having a physical marker or a place to visit was also marked as important.

7. Religion is not very important to many people in after death care.

Most of the people we surveyed ranked religion at varying levels of unimportance in after death care. About half marked having a religious ceremony at their funeral as “not important at all.” Spirituality, however, was marked as having varying degrees of importance. When asked about their religion, most people’s answers indicated they are atheist or agnostic, don’t identify with a religion, or consider themselves spiritual rather than religious.

8. People want more family involvement but are uncertain about home burials.

Many people indicated that family involvement was important to them, and about half agreed that families should be more involved in the funeral process, but most were uncertain that families should have the option for home burial.

9. Cost plays an average or large role in most people’s decisions, and most think that traditional funeral arrangements are too expensive.

Out of 13 people, 4 indicated that cost plays a large role in their decisions, and 6 indicated that it plays an average role. 7 out of 13 people indicated that traditional funeral arrangements were too expensive, while 5 were not aware of funeral costs at all.

10. People want family and friends at their funeral, and they don’t want sadness.

When asked about one thing they would love to see at their funeral, the people we surveyed mentioned family 3 times and friends 3 times. In the question of what they would not like to see, sadness got the most mentions, 5.

11. Most people are unaware of the harmful effects of contemporary funeral services.

When asked if they agreed that embalming and cremation had a significant impact on our environment, 8 out of 13 people selected “neutral.” However, about half did agree that space is a growing concern for cemeteries. The majority of people were uncertain about whether green burials are the most environmentally-friendly option.

12. About half would support a human composting facility in Seattle, while less would consider composting for their own bodies.

6 out of 13 people indicated that they would support a human composting facility, and 5 would consider

composting for their own bodies. Few people selected that they would not support human composting or consider it for themselves, and many selected “neutral.”

Reactions to our Video

1. What did you learn from the video?
2. What do you think of the Urban Death Project?
3. Were you aware of the environmental impact of current death practices?
4. Would you consider a natural death? Why or why not?
5. How would you feel about this in your neighborhood?

With our questionnaire we had a few objectives: discovering how effectively we conveyed the main messages of the video, discovering the interviewee’s opinion on the process we introduced, as well as gaining insight into their opinions on death practices in general. We made sure to have a mixture of open and close-ended questions so that we could gain a wide variety of information. For questions regarding the video and its content we asked close ended questions so that we could determine how effectively we told the story we wanted to as well as learning about how much people already knew about the environmental impacts of current death practices. For the other questions, we wanted to allow our interviewees to provide a wide range of potential answers so that they could stretch our thinking even more. By asking these open ended questions we were hoping to elicit responses and opinions that we perhaps had not considered or not put enough focus into.

Our first respondent was surprised by the subject matter of the video. I should have taken a moment to

prepare him for the topic of the video before beginning. His first comment was “You’re dark.” In response to the first question he said that we are locked in a binary choice and he had never questioned if there was an alternative. In response to the second question he expressed concerns about the logistics of the building and the smell. He speculated that it would be a great idea if we ever colonized space. When asked about his awareness of the environmental impact of the current practices, he said he was totally unaware. He was so shocked by the subject matter of the video; he would need to see it a second time to absorb the details. When asked if he would consider a natural death, his response was yes. He currently plans to have his body cremated because he doesn’t like the idea of burying the body and he thought that was his only alternative. He also said he would have no problem with the Urban Death Project being in his neighborhood as long as there was no smell.

The second interviewee stated that they learned a good amount from our video and that the video made them think deeper about our current practices. They had not considered the overuse of resources in both traditional burials as well as cremation. The numbers at the beginning of the video resonated with the interviewee because it made them think about how much land burying all of those people would require. The interviewee also mentioned that they had considered some of the other wide ranging effects of these burial practices before, but the video helped to put it all into perspective and raise the fact that this is something that everyone faces both directly and indirectly throughout their lifetime. This person was open to the ideas of this process and stated that they had already hoped to do something similar to this when they

passed. Various benefits of the process as well as benefits of the building itself were mentioned as well. The interviewee discussed how this process actually makes your remains useful after you are gone, rather than just being ash or a body in a box. They also saw the building as a great opportunity to show kids that death does not have to be scary and that eventually having soil containing human remains could be seen as something normal. Another interesting point that was brought up is that this person would strongly encourage their family members to have a natural burial as well. This shows that the interviewee was not only considering their own burial but the burials of those who are close to them.

Funeral Director Interview

To gain more insight into current funeral practices and to learn about the view of the Urban Death Project from an industry standpoint, we conducted an interview with a funeral director in Seattle.

He has worked in the funeral industry on and off for the past 6-7 years, at funeral homes and a crematory. He has worked in New York and California, and locally in Marysville, Washington and Renton, Washington. When asked about his various job duties, he stated that his job was preparing deceased for funerals and burial--"I went and picked them up, embalmed them, and put them in the ground." When asked about the various burial options that are available today, he responded that it's largely up to you. In the funeral industry, a funeral director serves the customers and assists them in the process. Even things like having your remains being shot into space are plausible, and if you want it, "a good funeral director will make it happen."

Some of the more common options include traditional burial with a full mortuary service, including a viewing or wake, an actual ceremony, and then a graveside service afterwards. From this funeral director's perspective, these are the less desirable burials to help with, because they last all day. Direct cremation and direct burials, which mean there is no ceremony in between the viewing and burial/cremation, are also options. He described funeral directors viewing newer options with scorn, because they take away from traditional funerals which make funeral homes money.

Costs vary widely between funeral homes, and it was difficult for the funeral director to give us estimates for certain services because they are dependent on many different factors. He said that in his experience, the average cost of a funeral was \$2,000-\$3,000, and the average cost of a cremation was \$500-\$800. The cheapest funeral service he described was cremation at \$300. As for the most expensive, he described working at a funeral home that did a funeral for \$60,000 which included a mausoleum.

After watching a video about the Urban Death Project, the funeral director answered some of our questions on this topic. When asked about his initial opinion, he said that he wasn't really sure what he thinks. To him, it sounded like another interesting idea that would need time to take off. He agreed that it was a good idea, but did not think that people were ready for it yet--"Natural burials make more sense, but people are going backward. They don't get it." When asked about problems that he anticipates the Urban Death Project having, he elaborated on this:

"People are going to need time because they don't like the idea. As great as the idea of helping the environment sounds, it's hard to believe that grandma rotting in the ground, for everyone else's sake, is as good as a traditional mortuary service where you honor the loved one in an extravagant way. It's selfish but it's true."

When asked about what policies need to be created or changed for the Urban Death Project to succeed, he didn't see anything that needed to be changed, because all you need to do is get exemptions and run everything by the EPA. Laws vary, so you need to look at the way your own municipality does things.

Information from the Founder

We did not have a direct interview with Katrina Spade, founder of the Urban Death Project. However, she provided us a list of resources for answering some of our questions and asked to post our video on her Facebook page.

The following are some quotes from various published interviews in which the founder addresses some of our questions:

What compelled you to start Urban Death Project?

Soon after she was accepted at the University of Massachusetts to study architecture, Spade began to consider her own mortality. At this point she had a family, a partner and two children, and was older than many of her peers. Watching her children grow up caused her to consider her aging and to research her options for what she can do with her body when she passes. The two conventional methods did not meet her

satisfaction. While natural burial seemed more her speed, it seemed to only be available to rural people. Further inspiration came from reading *The World Without Us* which is a thought experiment about a post-human planet. This led her to come up with the idea of humans becoming compost. "I'd rather have my last gesture be at the very least benign, or even beneficial. We are full of potential—our bodies are. We have nutrients in us, and there's no way we should be packed into a box that doesn't let us go into the earth." It then became her mission to design a solution that would allow this process to occur in urban environments. [2]

Why did you choose Seattle to begin this project?

Seattle is the perfect place to test the concept, Spade says, given our history of innovation and commitment to the environment. Plus, "We have a sense of pride in doing things differently." [3]

Where do you see this project in ten years?

She hopes to build the first facility in Seattle which can be used to develop a template that can be adopted by other communities based on their own specific needs and policies.

What policies affect the implementation of this project?

State laws vary which could lead to problems with developing a template that can be adopted by different cities. Some states have legalized alkaline hydrolysis, what can be thought of as water cremation, but in most states bodies must be buried, entombed, cremated, or donated to science. Certain pathogens can survive the

composting process, which is why livestock with certain diseases are banned from being composted. New policies similar to ones regarding sick livestock would have to be adopted for human bodies as well. Some experts recommend that compost from livestock should not be used where fruits and vegetables are grown for human consumption. This is another policy that would need to be considered, for what purposes can the compost be used? Conversations would also need to be had with the medical community and health department because of the risk of heavy metal contamination from things like dental fillings. [4]

Response to Video

After we sent the founder of the Urban Death Project our video, she posted it on Facebook with this response:

“Take a look at this video that University of Washington students made about the Urban Death Project for their Value-Sensitive Design Class. We're thrilled to have the younger set taking an interest in this work, and impressed that they are thinking about death and dying...like we all should be. Thank you Gail Thynes, Luc Johnson, and Amy Roberts!”

Policy Analysis

We researched existing policies for religious freedom, composting, building regulations, health, handling remains, and funeral regulations. We organized the policies we investigated into three categories based on geographic jurisdiction: National, State, and County (or Local).

National Policies

National policies apply to the entire United States and usually fall under Federal jurisdiction.

Religious Freedom

The First Amendment states “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.” [5]

Funeral Rule

The Federal Trade Commission, established under president Woodrow Wilson in 1914, enacted the Funeral Rule in 1984, amending it in 1994. It protects consumers by requiring that they receive information on the goods and services they can purchase from funeral providers. All funeral providers must comply with this rule. It defines goods and services in the funeral industry, specifies consumer rights, and defines parameters in which funeral industries must respect these rights and conduct business. This rule allows you to select which services you need and pay only for those services and allows you to compare prices between funeral homes. [6]

Green Burial

The Green Burial Council certifies green burials in North America. It was formed to reform the death industry regarding ecological issues.

Green cemeteries promote natural decomposition of a body and do not allow embalming fluids, non-biodegradable caskets, or permanent vaults or grave liners, which conventional cemeteries frequently require for ground stability. Many green cemeteries allow

visitors to use GPS tracking to locate a loved one's remains.

There are four levels of burials that can be certified: 1.) Conservation burial ground, a green cemetery that partners with an established conservation group, 2.) Natural burial ground, a green cemetery that engages in restoration planning and land stewardship, 3.) Low-impact burial ground, a green cemetery that uses non-toxic and energy-conserving practices, and 4.) Hybrid burial ground, which combines conventional practices with green practices like vaultless burials and land-use principles. [7][8]

Washington State Policies

Decisions After Death

Washington law determines who can make decisions about funeral arrangements after someone dies. This right goes to the following people, in order:

- An agent you name in a written document
- Your spouse or registered domestic partner
- The majority of your adult children
- Your parents
- The majority of your siblings, or
- Your court-appointed guardian [9]

Burial

Washington State law states that you cannot bury someone on private property unless you create a cemetery there and follow all licensing requirements, including establishing a \$25,000 endowment fund for ongoing care. Burying remains anywhere other than a cemetery or building dedicated for only religious purposes is a misdemeanor. Scattering and burial of cremated remains is excluded from this.

Not all cemeteries have an endowment fund to ensure perpetual care. When you purchase a plot in a cemetery, you are only purchasing a right to be buried, and a cemetery can impose restrictions on things such as type of monument, number of burials per lot, or how and when you can decorate the grave. They can also require a vault or liner.

Neither a casket nor vault is required by state law for burial. A casket will not prevent natural decomposition. You may build your own or purchase from a casket retailer. Vault dealers rarely sell to the public. The purpose of a vault or grave liner is to keep the ground from caving in and facilitate maintenance for the cemetery. It has no preservative qualities regardless of how much you spend. [10][11]

Green Burials in Washington

Four cemeteries are registered by the Green Burial Council in Washington, with locations in Goldendale, Snohomish, and Ferndale. Four funeral homes are registered, with locations in Everett, Ferndale, and Seattle. The two funeral homes offering green burial in Seattle are Elemental Cremation & Burial and The Co-op Funeral Home of People's Memorial. [12]

Cremation

It is possible to preauthorize cremation of your own remains with a funeral establishment with a written document signed in the presence of a witness. A combustible container is required for the body to be cremated, the standard being a cardboard box called an "alternative container." Before cremation, any metal is removed from the body. Some crematories will let the family witness the cremation process, which takes about two-and-a-half hours on average for an adult.

You can scatter remains in National parks (with permission of the chief park ranger), state trust uplands (with permission from regional manager), public navigable waters under state control, the Pacific Ocean and beyond the mean lower low water mark (following EPA's General Permit for Burial at Sea), and private land with permission of the landowner. [13]

Organ, Body, and Tissue Donation

If the death occurs in a hospital, they will likely ask about organ donation. The number of deaths eligible for major organ donation is only about 1%. If a viewing is planned, the organ procurement organization (OPO) will pay for extra preparation. Whole-body donation to medical schools or research can lower costs. [14]

Handling Remains

Health

Anyone directly handling human remains must wash their hands afterwards, use barrier protection for blood, tissue, and bodily fluids, not eat, drink, or smoke in room where human remains are being handled, take precautions to avoid injury, and dispose of remains properly. Everything must be immediately disinfected after contact with human remains.

Refrigeration

Funeral directors, embalmers, and others assisting must refrigerate remains upon receipt. In home funerals, an air conditioner or dry ice can be used. Refrigeration can be delayed for embalming, transporting, cremating or burying, viewing for identification for a period of less than an hour, or for accompanying the deceased for a period that does not exceed 24 hours. This includes washing, anointing, clothing, reading or singing to, praying over, and

viewing by people acting based on the directions of the deceased or the person with the right to control what happens to the deceased. A public health officer can approve additional circumstances after an evaluation of specific circumstances and public health, and recognition of religious beliefs.

Funeral Directors

In Washington State, you are not required to have a licensed funeral director to carry out funeral arrangements. If you are not using a funeral director, you must complete and file the death certificate yourself.

Embalming

Embalming only serves to slow down decomposition and does not protect public health. It is not required in Washington State, but many funeral homes have a policy requiring embalming for a public viewing. Without embalming, you can have a private family viewing for up to one hour. Remains can only be embalmed with authorization of a family member or a representative of the deceased.

Transportation

People who transport human remains must follow all guidelines for handling human remains and obtain a burial-transit permit from a local health officer or registrar. The burial-transit permit authorizes interment in a cemetery or cremation in Washington State.

Emergencies

In emergency situations, the local health officer has the authority to issue additional requirements for handling, care, transport, or disposition of human remains. They can also suspend any of these requirements. [15][16]

Medicaid and Social Security

Medicaid has a limit of \$1,500 for funeral services not including caskets, liners, or other cemetery expenses. Social security provides a \$255 death benefit for a surviving spouse. When a survivor dies, dependent children are entitled to survivor benefits. [17]

Composting Facilities

In Washington State, jurisdictional health departments issue permits for and oversee solid waste handling facilities. Washington Administrative Code Solid Waste Handling Standards states that facilities can be exempt from permitting if they meet certain requirements and operating procedures involving volume of compost created, pathogen reduction, conducting compost analysis, and submitting annual reports. These permit-exempt facilities are overseen by the Department of Ecology.

The policies in Washington Administrative Code encompass organic feedstocks, yard debris, crop residues, manure and bedding, and bulking agents, but there are no specific laws in Washington for the composting of human bodies. [18][19]

County Policies

King County Indigent Remains Program

The King County Medical Examiner's Indigent Remains Program provides cremation and burial for indigent individuals who have died in King County. It serves people whose families could not be located or could not provide proper disposition of remains. Terms and parameters for this program are defined in King County's Title 8 Health and Sanitation code.

The King County Veterans Program

The King County Veterans Program provides burial assistance for veterans. They help with costs related to the burial of any deceased indigent veteran or for the family member of a veteran who cannot cover burial expenses. The total cost of assistance may not exceed \$500, documentation is required, and there are certain rules that apply.

Design & Policy Recommendations

Policy Recommendations

Create a policy promoting transparency in traditional funeral practices.

Although Funeral Law does require funeral homes to be transparent in their prices of goods and services, it does not enforce transparent policy. It can be difficult for families to know which policies are state law and which are the funeral homes', and our funeral director interview has shown that selling full funeral packages is in the financial interests of a funeral home. Consumer guides can help elucidate this information, but not everyone knows to look for them and some might rely solely on the assistance of a funeral director. Creating a policy to impose more transparency on traditional funeral practices will be helpful for people in deciding on end-of-life plans.

Have less stringent regulations on backyard cemeteries.

As natural burial becomes more popular, laws must be reevaluated and updated to accommodate a changing society. Although the law is currently murky on where human composting stands, the current regulations requiring registration as a cemetery and an expensive endowment fund for backyard burial are prohibitive to

the natural burial movement as a whole and could slow the progress of new concepts like the Urban Death Project.

Create specific policies regarding human composting. Currently there are no policies or regulations on human composting in Seattle, and current composting policies are confusing. Human composting does not fit in with things like agricultural processes or yard waste, and a policy made regarding it could address concerns unique to human composting like human disease prevention and restrictions on the use of compost. If the Urban Death Project is successful, it will serve as a blueprint for other states to create their own facility, and policies created specifically for the process will facilitate their development.

Design Recommendations

The Urban Death Project's main obstacle will be education. When people hear about the process with no context other than current societal beliefs and practices surrounding death, it can be off-putting to them. Most of our recommendations involve different ways of educating the public on the composting procedure and promoting more awareness and acceptance of death and what comes afterwards.

Focus on the alternative death movement surrounding the Urban Death Project and find ways to create a more death-positive culture.

We live in a culture that tends to only consider death when it occurs. The rest of the time, death does not get much discussion, which contributes to fear of death. Rather than pretending that death doesn't exist, involving people in discussions about death and speaking positively about it can help to humanize death

and lessen apprehension about dying. Natural burials allow people to consider the reality of death without trying to disguise it. More family involvement and the knowledge that you are in control of what happens to your body after death can be reassuring to people. The Urban Death Project is already participating in this movement, and our recommendation is to continue this and adapt the conversation as the movement progresses.

Conduct research on what kinds of language is effective for speaking about death.

While some people might respond better to metaphors, it can be argued that using straightforward terms such as "corpse" and "dead" can help to normalize the concept of death and reduce stigma surrounding it. While we did not conduct research on this, vocabulary used inevitably has an effect on people's perceptions of an idea. Our current vocabulary surrounding death is limited and is often seen as morbid. It is up to movement leaders like the Urban Death Project to pave the way in the death conversation, and their choice in language can make a large difference in people's perceptions.

Educate people about harmful funeral practices and position the Urban Death Project as an environmentally friendly alternative.

Based on our user research, many people are not knowledgeable of the harmful effects of traditional funeral practices. If more people become educated on this, they might be more likely to consider the composting process. Most people who responded to our survey compost regularly and consider themselves environmentally-friendly, so aligning the Urban Death Project with the existing environmental movement

could help them gain supporters. Some opportunities for education include partnerships with environmental organizations, community involvement, and targeting those who already practice environmentally-conscious behaviors. These people have potential to become early adopters and can influence those around them.

Work with the current businesses, rather than compete.
The deeply entrenched system that is currently in place is going to be affected by this proposition. The people who are relying on this business for their livelihood should not be thrown to the wayside. From our interview with a local funeral director, we learned that funeral directors might look at new options for burial with scorn because their business depends on customers purchasing traditional funeral packages. Involving them in the Urban Death Project allows them to maintain some control over their business and adjust their services for changing societal values and norms.

Highlight affordability along with simplicity.
The cost of the Urban Death Project composting procedure is projected at \$2,500, much higher than the cost of traditional burial and even cremation. Our user research has shown that many people think the price of traditional burial practices are too high, and many are not even aware of cost at all. In addition to this, many people are not interested in customized caskets, vaults, and embalming, things that come in a traditional funeral package. By emphasizing the cost along with the simple, transparent process, the Urban Death Project can provide people a simpler and more affordable alternative.

Promote transparency throughout the process

Our user research shows that opinions are varied on the use of human compost in city parks. Letting people know when compost containing human bodies is being used might mitigate some apprehension towards this practice and encourage trust. Explaining that the compost will not cause people harm is essential for people to become more accepting of the composting process.

Connect with the medical community for expertise

Metals can be present in the body in the form of surgical implants. They present a problem in the composting process because they are not biodegradable. Expertise from the medical community will be helpful in determining the best course of action for collecting and disposing of these metals.

Emphasize inclusivity for the spiritual and non-religious in addition to religious inclusivity.

Our user research has shown that many people ages 18-24 are not affiliated with or do not practice a religion, and religion is less important to them overall. Religious traditions are heavily ingrained in contemporary funeral practices, which can be off-putting for people who are not religious. People will be more accepting of something that aligns with their values and allows for a customizable death experience.

Let people know it is an option, not a complete replacement for traditional funeral practices.

The Urban Death Project is not meant to be a complete replacement for other funeral practices, and our interview with the funeral director confirmed that this would be difficult to do. Although the replies to our survey came mostly from, an older age group might

have different opinions on alternative burial practices. Letting people know that the composting process will fit into an existing system and simply provide one more option will make it easier for people with dissenting opinions to accept.

Find ways to get younger people involved in the Urban Death Project.

Younger people have a lot of potential in furthering the alternative death movement. Tickets for the Urban Death Project's first fundraising event in February start at \$150, which is prohibitive for younger people and students who might want to attend. Creating more opportunities for the younger generation to learn about the project and participate in supporting it through non-financial means like social media will help the Urban Death Project's cause. By getting younger people to consider it, societal and cultural changes can begin to take place.

Discussion

Upon reflection, our team expressed different opinions on whether The Urban Death Project was a good application of Value Sensitive Design techniques. With the number of direct and indirect stakeholders and powerful values at stake, there was a lot of potential. The Urban Death Project is still mostly conceptual and early in their fundraising phase, which also makes this a great candidate for VSD analysis prior to implementation.

However, we underestimated the scope of this project. Once we began uncovering stakeholders, it became clear that it would be easy to get lost in mountains of research that could never be completed. To limit the scope of this assignment we eliminated

cultural and religious values from our analysis. By focusing on attitudes and behaviors towards composting, death, and funerals, we were able to uncover some valuable insights that could benefit future research.

Considering the stakeholders and values that are stake in the development of the Urban Death Project, creating value scenarios are powerful narrative tools that can convey the value tensions. We believe the technique we employed, using sketches, creates a more neutral environment to discuss this sensitive topic.

While the application of VSD techniques could provide meaningful insights, we were not convinced that these insights would not have been uncovered using another design methodology, such as Participatory Design. Our analysis did not reveal any profound insights that would alter to future course of the Urban Death Project. Cultural and religious practices around death are so ingrained in our society, other research techniques borrowed from Sociology and Anthropology may provide a richer understanding of ways to improve acceptance of the natural burial process.

One thing that we would have changed in our process is the order in which we conducted the phases of our project. We feel we could have focused our project more and received a wider range of opinions if we would have conducted more of the empirical phase up front. It would have also given us more time to possibly conduct more interviews and receive survey responses. By narrowing our focus through our empirical investigations, we could have had a more refined conceptual investigation. We had initially thought that our conceptual investigation should have taken the

majority of our time, but we found within the process that the empirical investigation had great potential.

Further Research

Since we had an extremely limited amount of time to research this subject, we considered several topics and methods that could benefit further research. The Urban Death project is starting in Seattle, but researching additional state and local policies for other cities where similar projects could be feasible would help Urban Death Project plan for future expansion. This research could include changes that need to be made to adhere to local and state building codes and composting laws.

As mentioned before, we limited the scope of our research by eliminating religious and cultural views of death. We determined there was already sufficient research about these topics, however additional research comparing how various religions and cultures react to natural burials could provide insights for organizations who want to improve awareness and promote alternative burial practices.

While we all die at some point, a comprehensive review of the history of death around the world could provide context for individuals who are trying to introduce the natural burial process to urban societies where individuals have limited access to nature. Understanding how and why our current practices were introduced to our society, could empower future project leaders to educate the public about how this can benefit a variety of stakeholders.

The last area that we felt warranted further study was the “creep factor” associated with human compost. Our participants did not make the same connection to

compost from animals or plants. Understanding these differences and how people perceived the soul to be connected to the compost could be an interesting discrepancy to explore.

We considered two methods of testing that could benefit future researchers on similar projects. The first was the use of Mechanical Turk for survey participants. Due to our time constraints, we were unable to get a stratified sample of participants. Mechanical Turk could recruit a larger pool of participants from around the world and a variety of cultures to provide a richer set of data to analyze. The second idea we considered was the inclusion of a Futures Workshop in additional studies. This would be one way to include various stakeholders in a meaningful conversation about our current death practices and how natural burials could become more widely accepted in our society.

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Appendix A: Founder Interview Questions

Although we did not ultimately get to perform our interview with the founder, we had prepared our questions beforehand. The links she provided us to interviews she had conducted in the past helped to answer some of these questions but if we would have been able to have a full conversation with her we were hoping to gain more insight into her motivations, her struggles, and her hopes for this project.

What compelled you to start Urban Death Project?

Why did you choose Seattle to begin this project?

How have you handled the demands and interests of various stakeholders?

What is the biggest hurdle you've had to overcome?

What has surprised you most about people's reactions?

What policies affect the implementation of this project?

What policies have shaped your decisions?

What policies would you change to be more accommodating of natural burials?

Where do you see this in 10 years?

Appendix B: Link to Survey

https://co1.qualtrics.com/jfe1/preview/SV_01z67y7T2cmqmFf