



Novum Nexum

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Mission Statement

Our mission is to visualize the next step in space exploration by establishing a colony on Mars. The community will need branding, interaction design, and service design to create the new, stable environment that still provides for all of the citizens' needs.

Strategy

Target Audience

The Novum Nexum community is designed to target individuals who have the desire to travel and a taste for adventure. Everyone is welcome at Novum Nexum, whether they come for a fresh start or for the adventure of a lifetime. The community is also designed to appeal to investors who want to start a new business or industry in an underdeveloped environment.

Time Frame

The Novum Nexum settlement is established in the late 2030s. The first citizens of Novum Nexum are made up of scientists, engineers, survivalists, etc. who help finalize preparations during the 2040s. The first “everyday” citizens of Novum Nexum arrive in the late 2040s-2050.

Products & Services

Community Identity
A.V.A. Navigation System
A.V.A. Packaging
Inter-planetary Communication
Personal Anatomy Screens
Food Packaging
Food Production & Distribution
Energy Production & Distribution
Energy Branding System
Water Production & Distribution
Water Branding System

Language

Adventure

exploration

pioneer

expansion

migration

inhabit

Adaptive

interaction

intuitive

intelligent

tailored

Research

sustainability

innovation

efficient

advanced

Community

accommodating

quality

professional

modern

futuristic

Data Log: Joshua Yuri

Age: 24

Gender: Male

Joshua is a mechanical engineer working on the space colony of Novum Nexum. He was a member of the first wave of colonists, who came and established the community before anyone else. His job was to create sustainable power on the planet. He achieved this goal through the use of solar panels, which are still functional and in use today for the current residents.

He originally came to reside on Novum Nexum after contacting the organization. Upon seeing his impressive track record in research and progressive energy practice, Nova Nexum offered him a residency as a station researcher on the Mars colony. This meant that he would become a permanent resident of the community, unable to ever return to earth. He had no family of his own, save his aging parents, and his job was all but properly satisfying. After weighing the factors, he decided that this was the opportunity that he had wanted all his life, and he accepted the offer.

Scenario

Joshua designed the solar panels to fold up and protect themselves whenever storms or other dangerous events pass over the colony. One day a storm does pass over and the panels operate as intended. The storm lasts for about 3 days, during which time the sun is obscured and no new power is collected. The colony runs on excess energy stored up by the panels for such events. Joshua sends a report to have updates running on the public energy monitor detailing the current conditions of the storm and reserve power. This way people know to reserve energy until the storm passes. Once the storm subsides, drones can be sent out to inspect the solar field. Finding only minimal damage, the drones return to the colony and an update is sent out to the public screens announcing that the power is once again being generated. By working with the machines at the production end of the process and communicating with the colony residents at the usage end, Joshua is able to avoid a potential energy crisis.

Data Log: May Lin

Age: 49

Gender: Female

May lived in a rural town, on a farm for most of her life. Since the time she could first walk, she was taught how to manage the many chores of the farm. When she was older, her main responsibility fell to seeding, maintaining and growing the family's crops. Despite her limited education, she was able to get a job at a horticulture lab, as a technician. Her years of experience with plants allowed her to quickly progress in her job, and eventually she become a researcher.

One day she was approached by Nova Nexum. They offered her a research opportunity if she was to come live on their colony. She would help to maintain the plants grown in the community greenhouses and conduct research on the plant life in the conditions of the Martian colony. All of her travel expenses would be paid for in government grants, and her residency at the colony could be slowly paid off through her new job.

Upon her arrival at the colony, there were only five functional greenhouses. The greenhouses are in charge of food production, and most oxygen production in the colony. Due to the increasing population of the colony, more food and resources became necessary. Through the efforts of May, the total number of greenhouses in the colony has increased to eight, enough to support the community. May currently manages one of the eight greenhouses, making sure that all the plants are healthy and taken care of. She also helps new volunteers who come in to work in the greenhouses. She teaches them about plant care and how to work the technologies associated with the job. Additionally she does research to make plants more efficient at food production.

Scenario

May has been tasked with showing a new volunteer around the greenhouse. She takes the volunteer through and tells them about how to identify the types of plants, as well as where to find the information pertaining to that plant. She also shows them how to manage the needs of the plants such as water, light and nutrition. While walking through, she notices that a plant isn't looking very healthy. She checks on it's health status and sees that it's dehydrated. She allocates more water to it and lowers the light levels so that evaporation doesn't occur as quickly. She marks will come back later to check on the plant and adjust it's settings as needed. Once the plants are mature and producing food, they can be harvested and sent to distribution. After showing the volunteer around, she has them supervised as they complete tasks around the greenhouse. After a while, they will become full volunteers and not need to have anyone oversee their work.

BRANDING

//identity

//iconography

//way-finding



activity
arrangement
bright
clean canvas
centered
clarity
color
envision
experience
feature
feeling
focus
fun
highlight
influence
imaginative
luminescence
pristine
professional
quality
radiate
vibrant
visual
vivid
well-lit
wonder

Planer

Regular

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm Nn Oo
Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz
0123456789

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Novum Nexum

Din 1451 Std

Mittelschrift

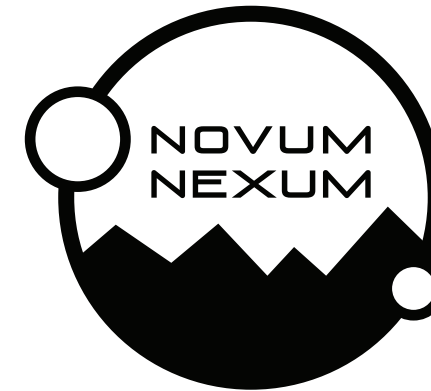
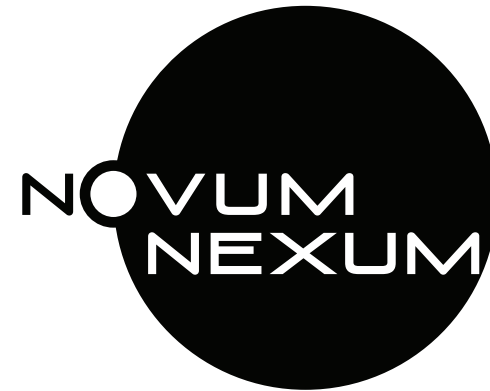
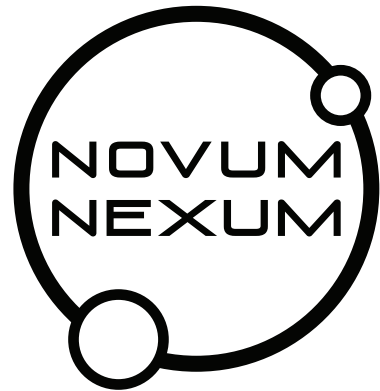
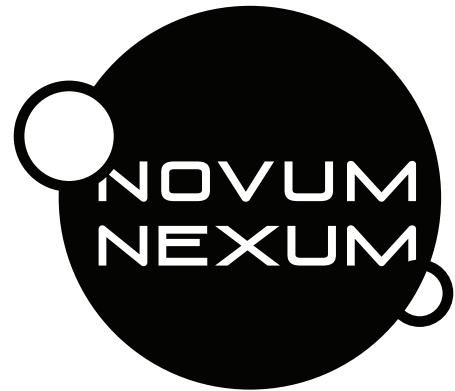
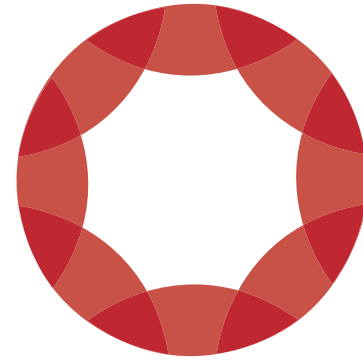
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Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz
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Novum Nexum

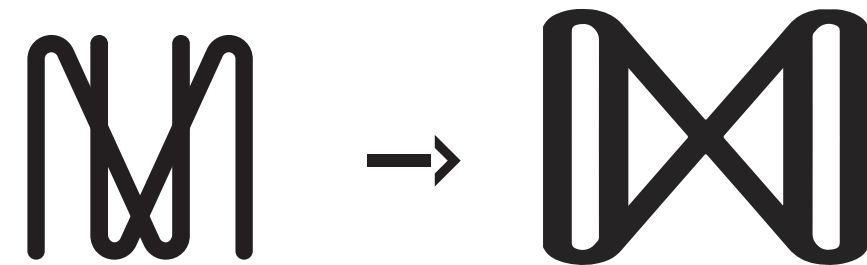
NOVUM
NEXUM

NOVUM
NEXUM



Novum
Nexum

N + N =





C: 69
M: 0
Y: 42
K: 0



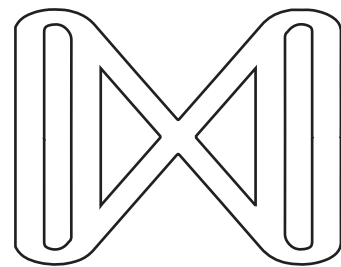
C: 100
M: 94
Y: 30
K: 18



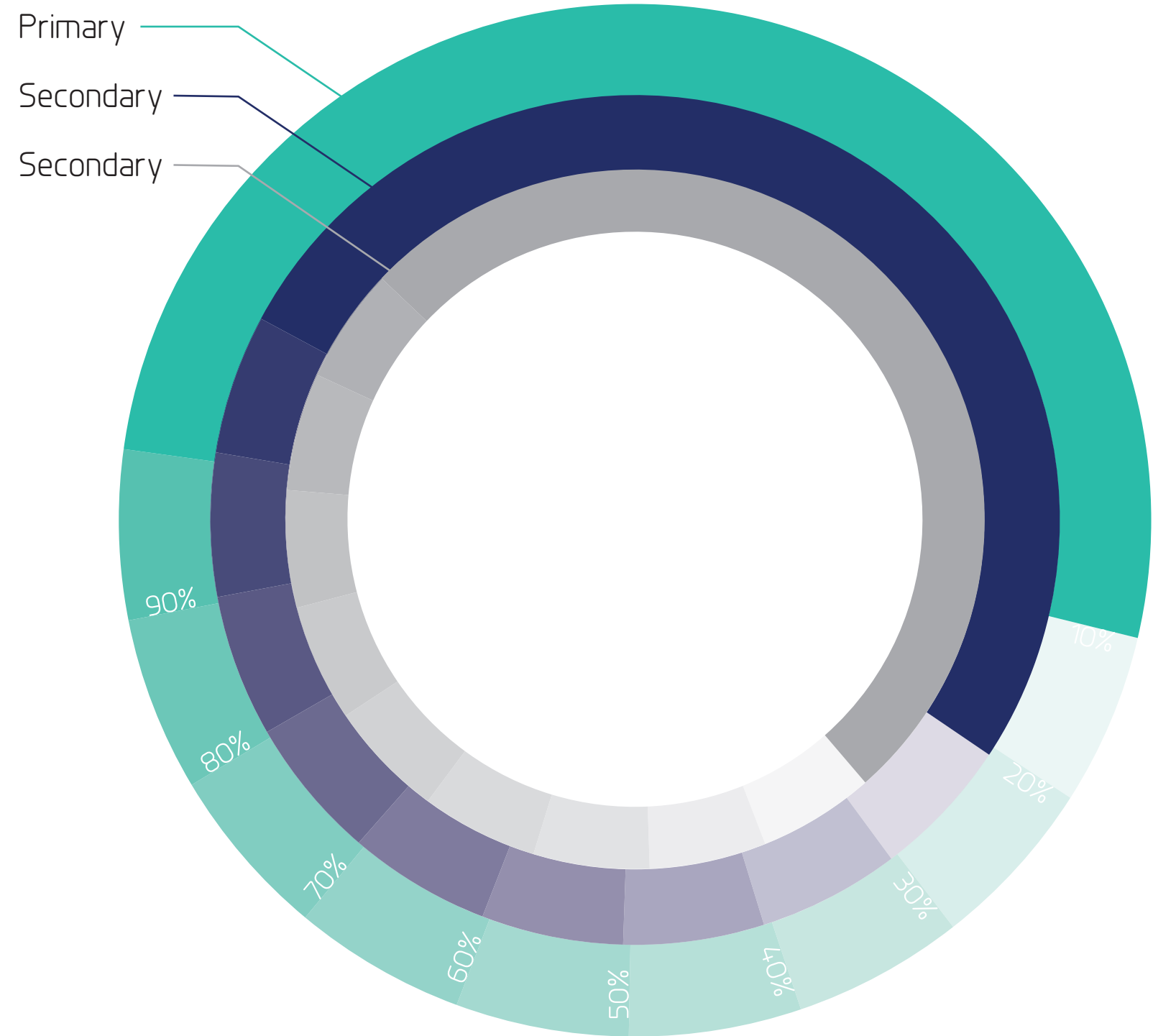
C: 0
M: 0
Y: 0
K: 40



C: 0
M: 0
Y: 0
K: 100



C: 0
M: 0
Y: 0
K: 0



Iconography

–the visual images, symbols, or modes of representation collectively associated with a specific movement.

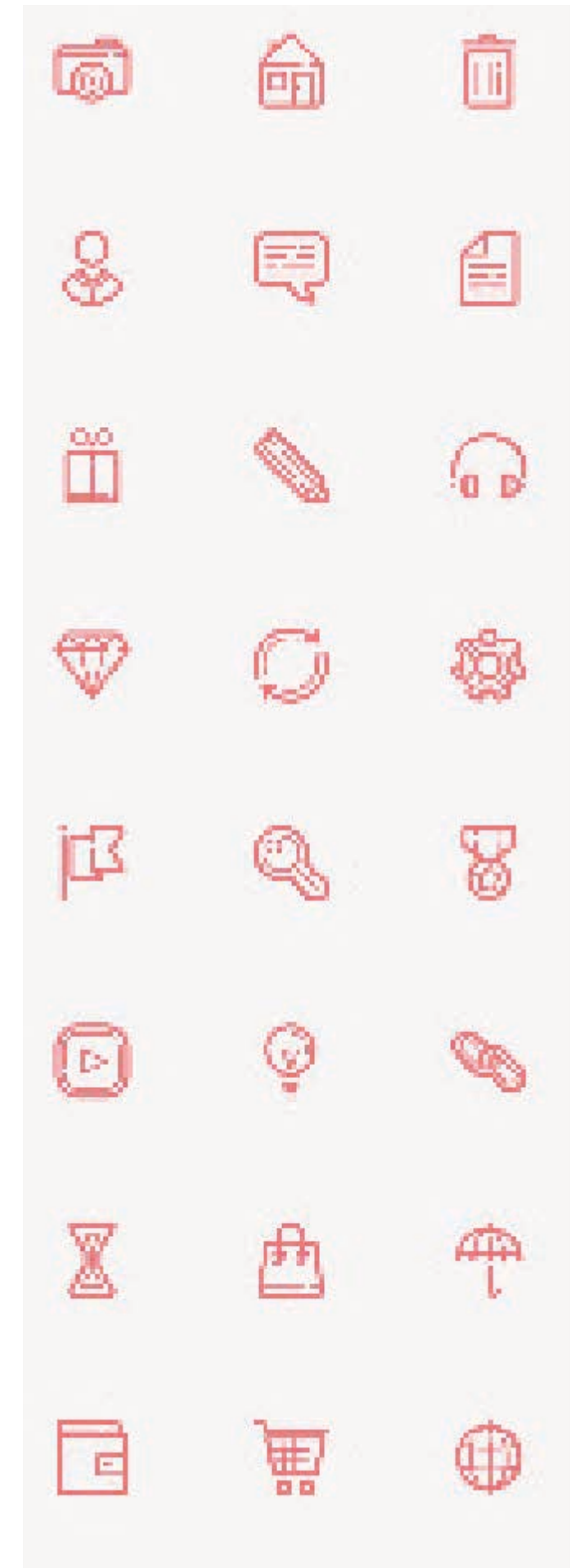
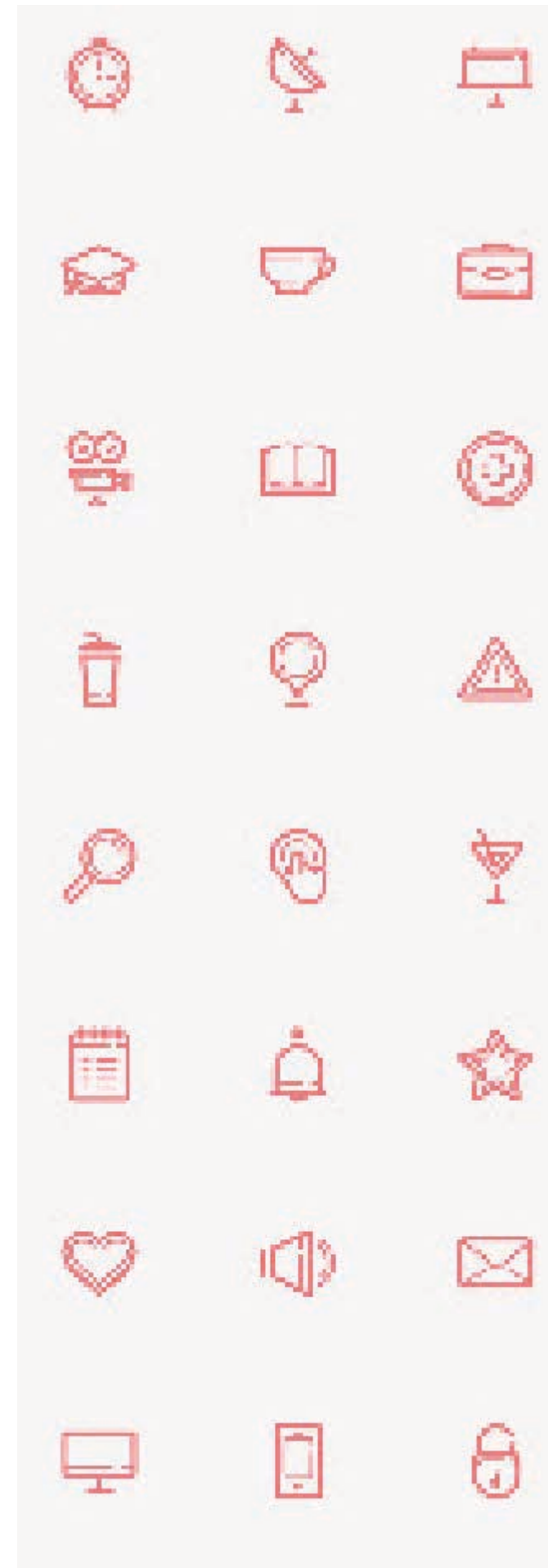
Novum Nexum has an iconography system that matches the community’s identity. The icons are simplistic, clean, informative, and are versatile. These icons are used in way-finding, social, medical, gestural, scientific, and other systems in the Novum Nexum community.

See blue icons

Existing Iconography

Novum Nexum's iconography is inspired by its identity, as well as contemporary iconography. Some icons, such as the telephone, are so engraved in users' minds that even though phones no longer appear as they do in the icon, users are still able to identify it as a phone. This is taken advantage of in the Novum Nexum iconography. Chat bubbles, battery power level, data folders, etc. appear in icons similar to today's representations.

See red icons



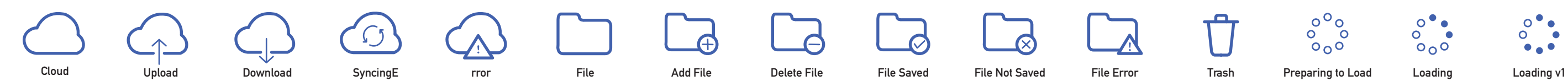
Social



Gestures



File Sharing



Medical & Scientific



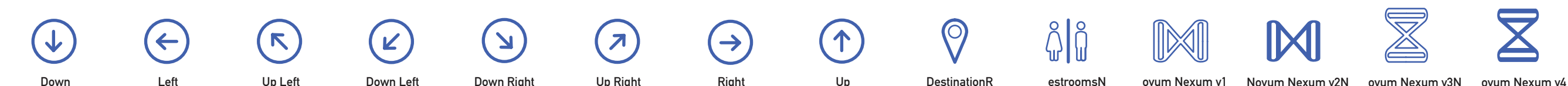
Environmental/Communal



Interface



Wayfinding



Wayfinding: holographic panels inset within the walls of Novum Nexum project information on a timed basis. As the information is about to change, the color changes and the logo rotates. Information can also be navigated by hand gestures. See iconography.



Examples of way-finding screens when recently activated

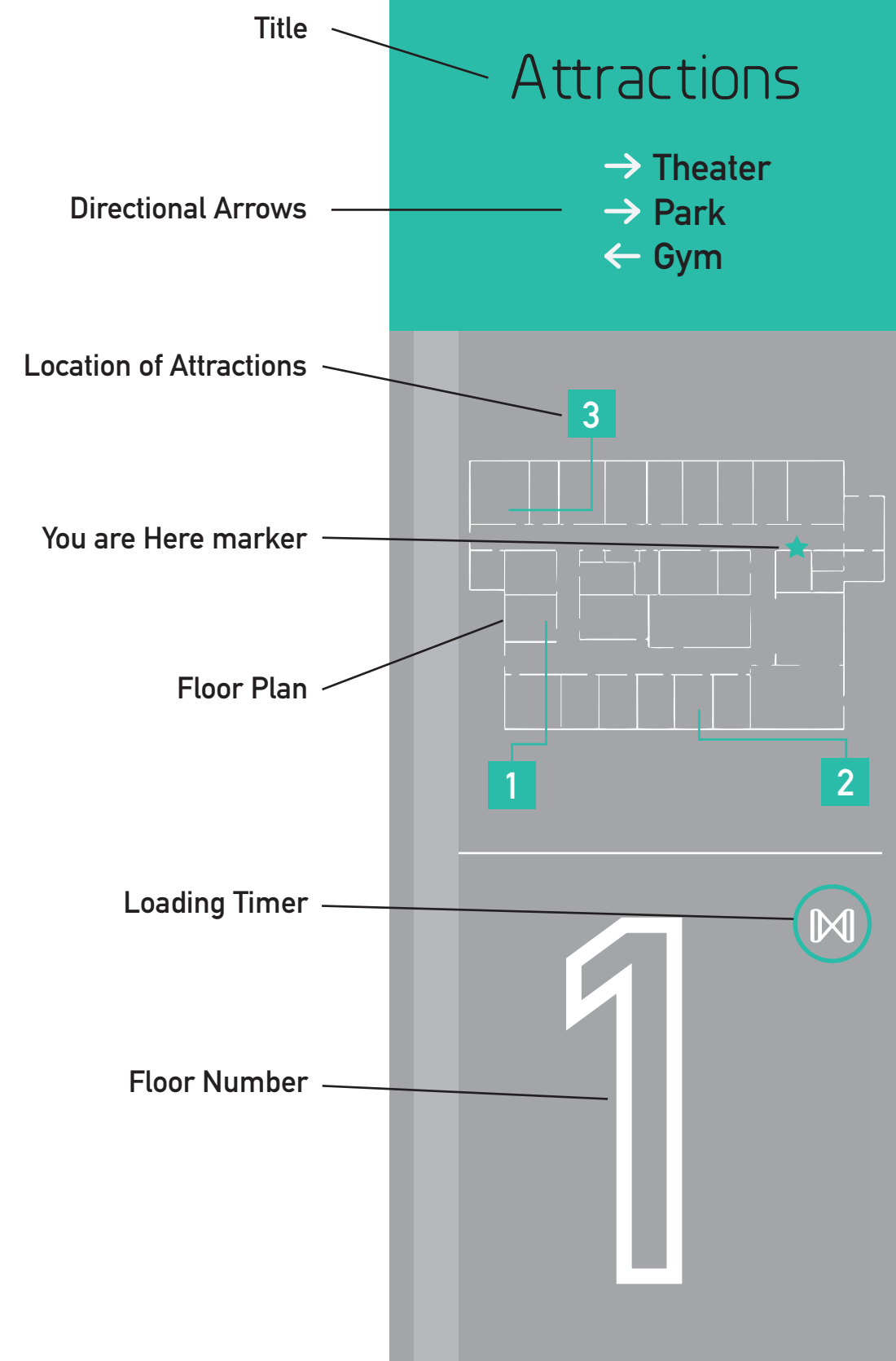


Examples of way-finding screens when about to cycle information



Loading Timer

When the screen is activated, the loading icon appears in it's starting position. As the screen remains active, the icon slowly changes color, signaling that the information is about to cycle to a new screen, or, that the screen will be going into a power-saving mode. The Novum Nexum logo within the icon rotates along with the changing colors, mimicking an hourglass.





SERVICE

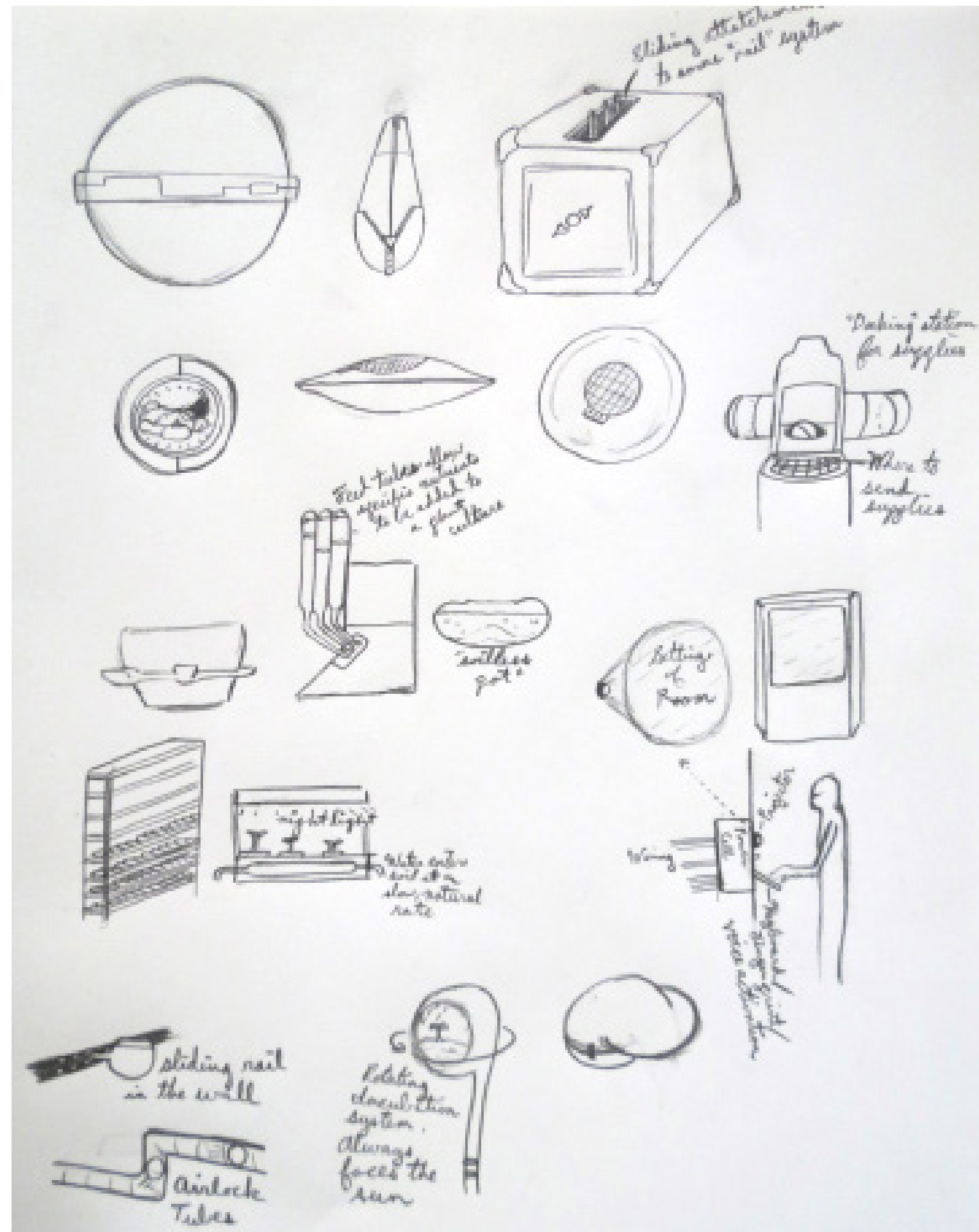
//generation

//distribution

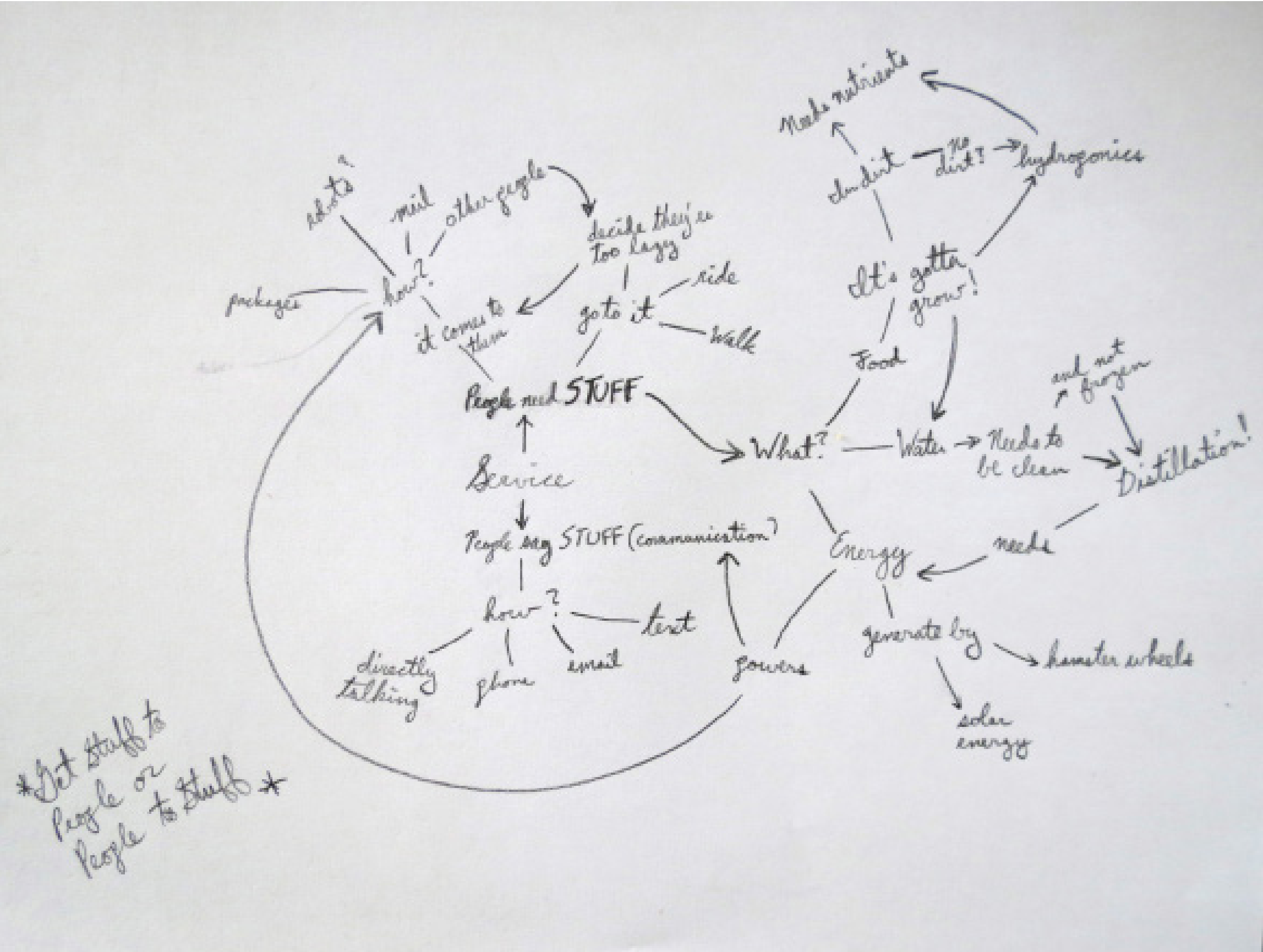
//usage

Process

Early sketches looked at ideating the devices and machines that people might have available to them. Such devices include things that assist in transportation, storage and communication. Every device has some sort of feature that makes it more useful to the colony residents and improves service to them. A few features of these initial ideas found their way into the final aspects of the colony.



A rough concept map explored how service relates to people in the colony. The core essence of this map went on to create the three major touchpoints of generation, distribution and usage across the resource elements of the colony.



1. Generation

Food & Oxygen

The main production of food will be by way of greenhouses. There will be a system of multiple green houses in the community that are maintained by workers whose specific job is dedicated to greenhouse upkeep. Responsibilities of these workers include making sure that the plants receive proper amounts of water, light and nutrients. In addition to greenhouse-specific workers, any other community member can volunteer in the greenhouse. By doing so, they can become a contributing and involved part of this system.

To assist those working in the greenhouse, there would be interfaces on the plant carrying units that will keep accurate track of the plant's health. These displays will help people to keep the plants in as good health as possible.

Aside from being used for food, a byproduct of photosynthesis is oxygen, which can be collected and circulated throughout the community. Due to the greenhouse being a contained environment, the oxygen can be isolated and collected without fear of it escaping into the Martian atmosphere.

Why Volunteer?

What would be the motivation of other community members to volunteer to help maintain the green-houses?

- It provides people with awareness of where their food comes from and how it is grown.
- Being around and growing plants could provide a sense of comfort and connectedness to Earth, for those experiencing homesickness.
- Builds better community ties by having people all working together towards a common goal.
- There are positive psychological effects to gardening.
- There's a strong sense of accomplishment in helping to grow something.
- Increases overall community efficiency.

Complications

Issue: How will soil be kept in good condition with enough nutrients to sustain the plants?

Solution: All organic waste in the community will be reused and composted to promote continued growth.

Issue: A dust storm obscures the sun, preventing the plants from receiving natural light.

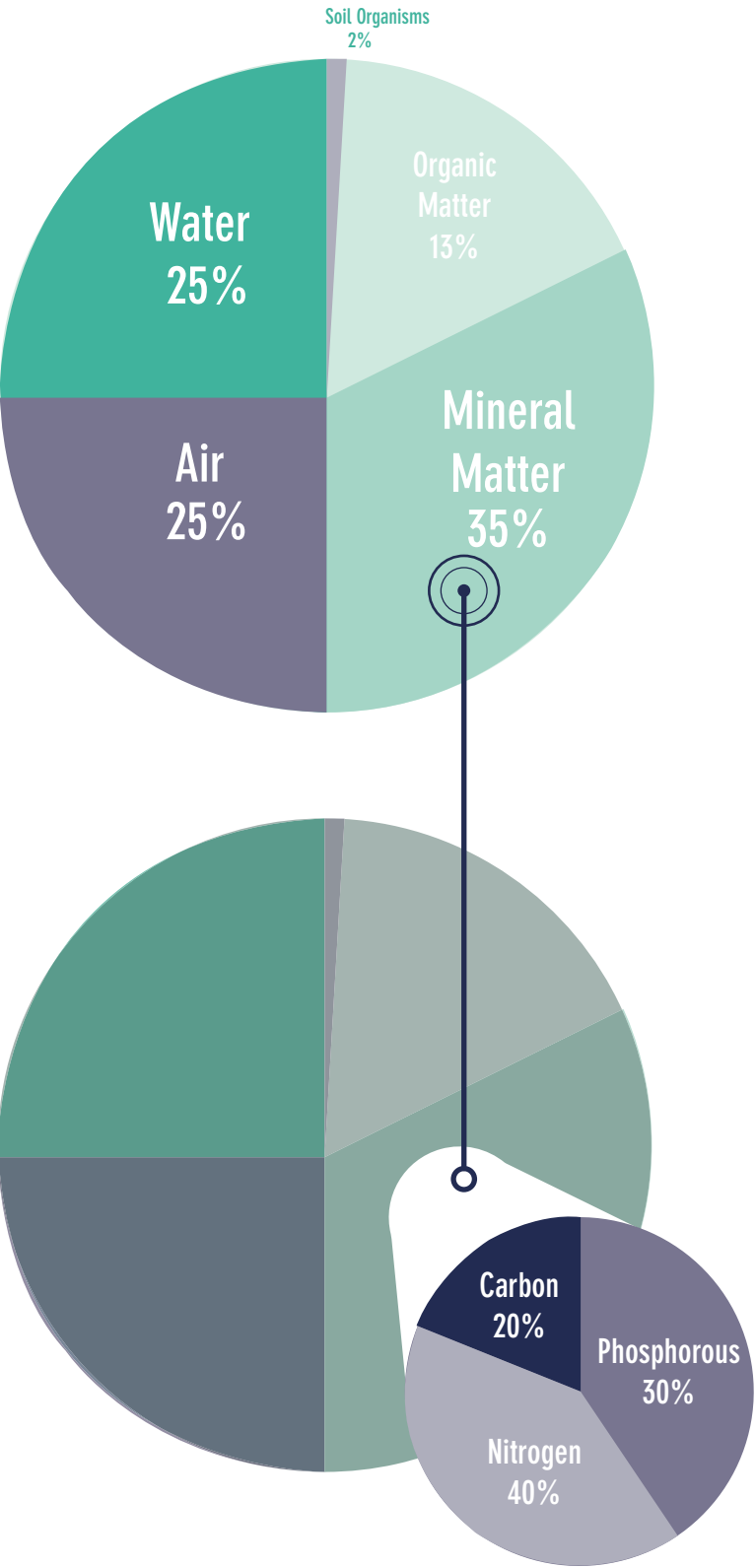
Solution: Artificial lighting can allow plants to carry out photosynthesis while the storm is going on.

Issue: Would the greenhouses be able to generate enough oxygen?

Solution: It can be assumed that the rate at which plants give off oxygen will be able to offset the rate at which humans consume it. This can be achieved by balancing the human to plant ratio based off of the rate of intake between the two.

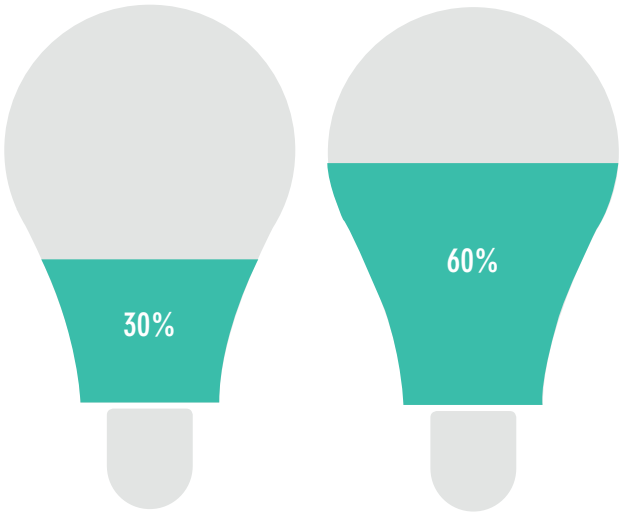
Soil Quality

Once system of the plant health reader will break down the contents of the soil. Larger components of the soil can be broken down by tapping on it's section of the diagram. This reader will show if there are any nutrient deficiencies in the soil.



Light Levels

The next area displays the levels of light that the plant is being exposed to. This can easily be adjusted by sliding the bar up or down to adjust the light exposure.



Additional Information

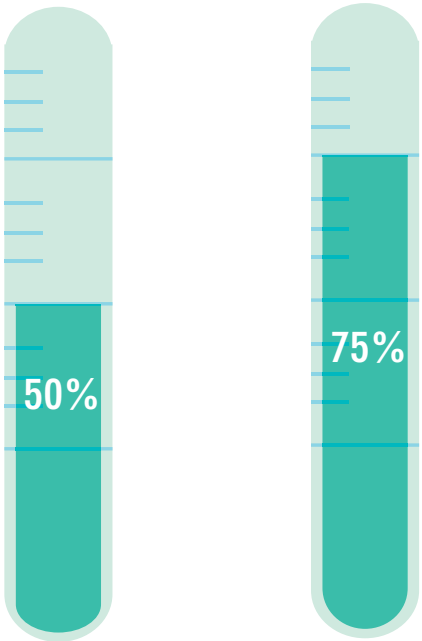
Information here labels the species as well as predicts when it will produce a crop. In the interest of oxygen, it also compares the amount of CO2 taken in from the environment and the amount of O2 put out.

- Species:
- Expected Crop Maturation
- Plant Age
- CO2 Intake:___ ; O2 Output:___

The pots can change the way in which they display their data. It can be reflected with the raw statistics shown left, or can become more visual. One example is the pot will show the water level in the form of water "filling" the pot to it's appropriate percentage.

Water Levels

Same procedure as the light levels, the water indicators can be slid up or down to adjust how much water is sent to the plants.



1. Generation

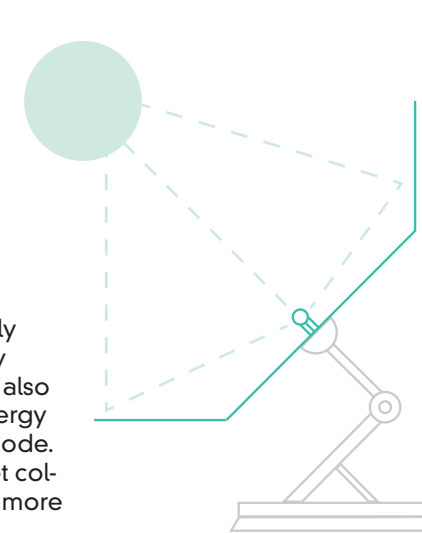
Energy

Of all the natural sources of energy available, solar power seems to be the most readily available and viable energy source on Mars. There is no consistent cloud cover, allowing solar panels to absorb the sun's energy during all daylight hours. An area of the colony would be set aside as a solar field, and seeing as Mars doesn't have too many structures already built on it, there will be plenty of room to for it. The energy collected would be stored safely back at the colony, away from the elements. This reserve power can be used at night and other times when the sun is unavailable.

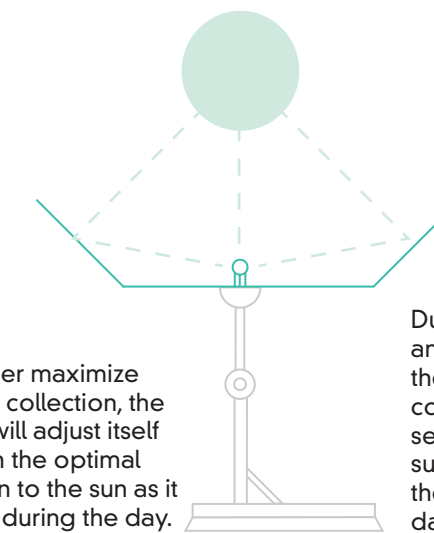
Other sources of energy were considered but either the necessary resources are not available or the maintenance would be difficult. Wind energy was considered, as Mars does have wind, but any major storms would likely damage any windmill-type device. The advantage of solar panels is that they can be easily collapsed to reduce damage from environmental hazards.

Panels

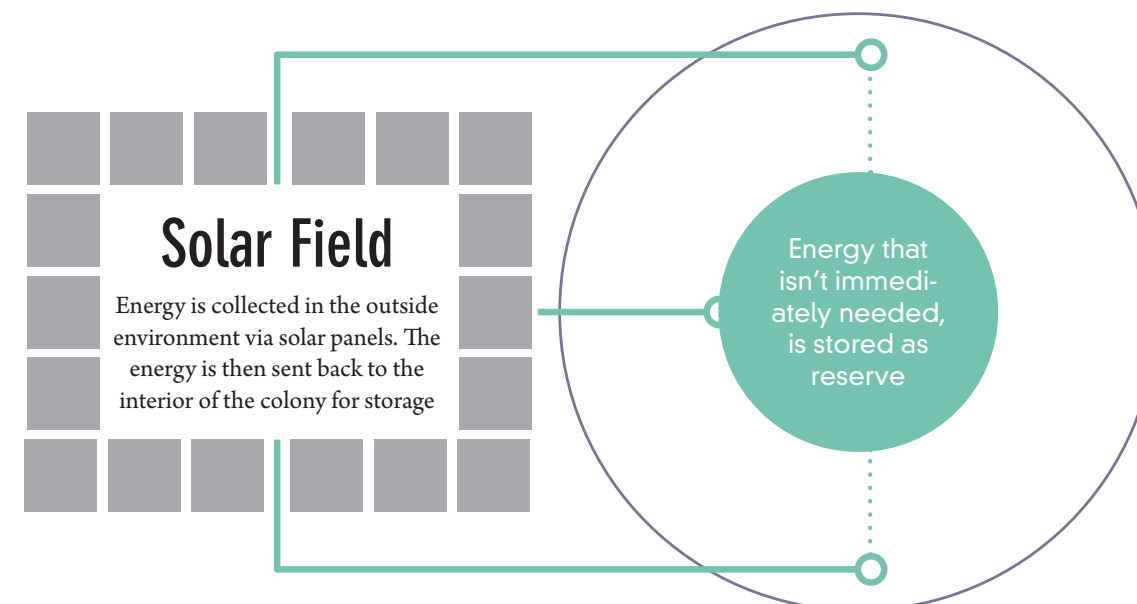
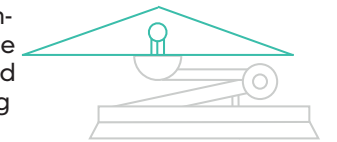
Solar panels are shaped to not only collect the energy from sunlight, but also divert it's heat energy toward a center node. This makes the net collection of energy more efficient.



To further maximize energy collection, the panel will adjust itself to be in the optimal position to the sun as it moves during the day.



During the night and during storms, the panels can condense themselves to reduce surface area and the risk of being damaged.



Complications

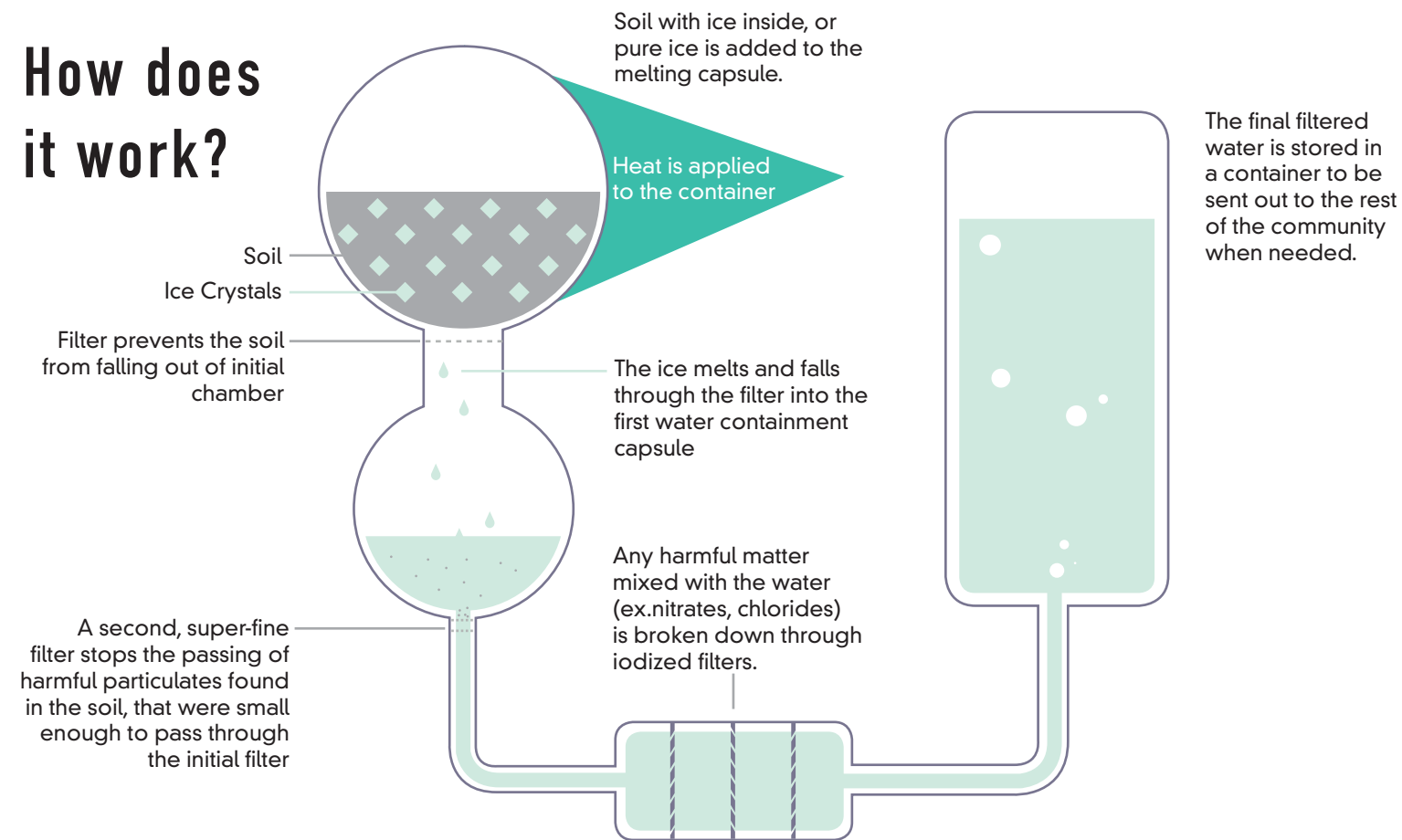
Issue: What happens when the sun is obscured for long periods of time, such as a several week long dust storm?

Solution: All power not immediately used in the community is stored. This reserve power would be able to sustain the community for the duration of an emergency.

Issue: If the solar field is exposed to the sun and elements, how will power be brought into the community? How will the equipment be maintained if something goes wrong?

Solution: Power will be brought in through electrical cables that could run either above or below ground. For a majority of repairs, rovers and drones can be sent out to maintain the panels. For more extensive repairs, there are suits available that will allow people go outside for variable amounts of time.

How does it work?



Complications

Issue: How will ice be collected in the first place?

Solution: While leaving the community is dangerous for people, due to the harsh environment, rovers and probes still have the capability of going out and bringing ice back. This reduces the risk to people and depending on the storage and efficiency of the machine, allows more ice to be brought back at one time.

Issue: What about harmful substances in the ice?

Solution: Due to the exact harmful substances of Mars not being fully known or understood, it can be assumed that the distillation method used will be able to remove harmful elements from the water. Possible methods could include boiling or filtration.

1. Generation

Water

On a planet composed almost entirely of mountains, craters and deserts, water may seem like a difficult thing to come by. However, there are ice caps at either end of Mars, as well as ice in the soil at the surface of the planet. While the very surface of these ice caps are dry ice, only frozen carbon-dioxide, everything underneath is water ice. These resources, including the soil can be collected and heated in order to melt the water inside, which can then be filtered out of the soil. Once the dirt and water are separated from each other, the water can be distilled to remove any hazardous materials from it. It is likely that the sediment found on the surface of Mars would be collected anyway, simply for research purposes. Additionally, running out of ice to melt wouldn't be a concern for a very, very long time. Just the Northern Polar Cap is 1,000 km in diameter, with a total volume of approximately 1.6 million cubic km of ice.

As with other means of resource generation, there will be those whose specific job it is to manage the production of water. Division within this would be collection of ice (from either ice caps or soil), separation of water from source and distillation.

2. Distribution

Food

After the food is grown, there has to be some way to get it to the community. The most efficient way to do this is to designate a hub that people will recognize as the location to get food. This would act as a sort of marketplace. The marketplace would have workers whose job would be to distribute food to people who come to get it, and nutritional specialists would be available to help people select the right food. Food would get to the marketplace from the greenhouses in two ways. If there are small packages that need to get there, they would be put in a safe container and sent through a compressed air tube. Larger shipments would require the use of carrier machines, that would move large quantities of food from the greenhouses to the marketplace.

Aren't Markets Old?

The question is, why is one major location of distribution the most efficient? Wouldn't it be more convenient for the air pipes and machines to take food directly to the residents? One, this would be much more expensive. The cost of connecting transport tubes to one central location is far cheaper and material efficient than connecting them to every single housing unit. It wouldn't be space efficient either. There would be so many transport tubes cluttering up the framework of the building or obstructing walking space. The other major reason is to promote community. By having people meet in a common area with a shared task, the market becomes a social hub as well as a place that someone just picks up food. It's an experience that everyone partakes in, which would otherwise be lost if people stayed in their rooms.









Complications

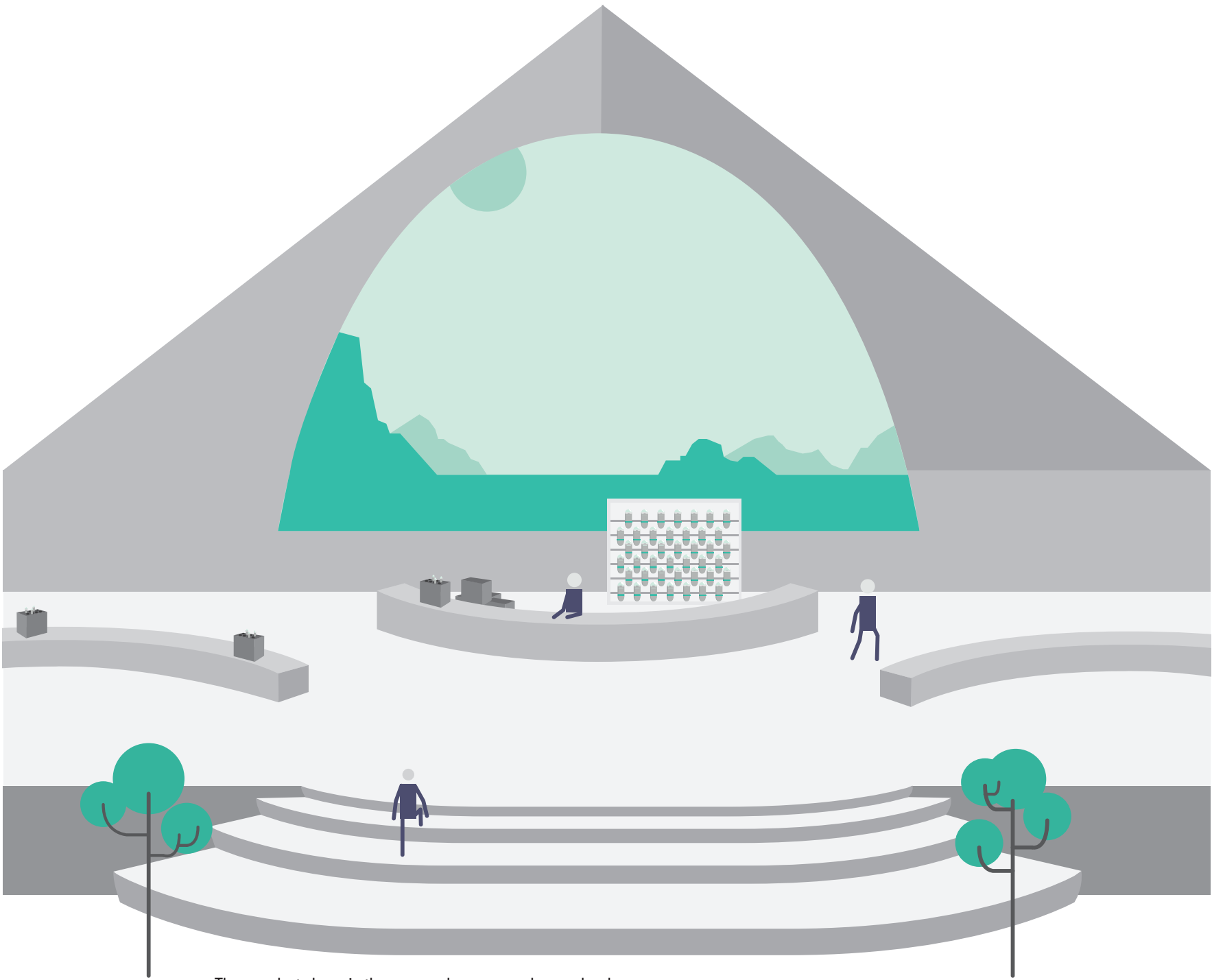
Issue: What if someone wants a particular item but it runs out when they get to the market?

Solution: People can check from a device in their room to see the stock of items the marketplace currently has. The list is continuously and automatically updated throughout the day as orders are made.

Checking Stock

While the purpose of the marketplace is to promote activity and community, there still has to be an element of convenience involved. That is why the Market Pantry is available to every resident. It is a listing of all the foods available at the marketplace. The status of the food will either be packaging, in transit, in stock or out of stock. If in stock, the quantity left will be specified, and if in transit, the estimated time of arrival will be displayed.

Market Pantry			Search...
Status	Name		Quantity
Packaging	 Zucchini	--	
In Transit (ETA: 20:17)	 Carrots	--	
In Stock	 Green Beans	10lb	
In Stock	 Sweet Potatoes	24lb	
In Stock	 Tomatoes	28lb	
In Stock	 Beets	17lb	
Out of Stock	 Eggplant	--	
			



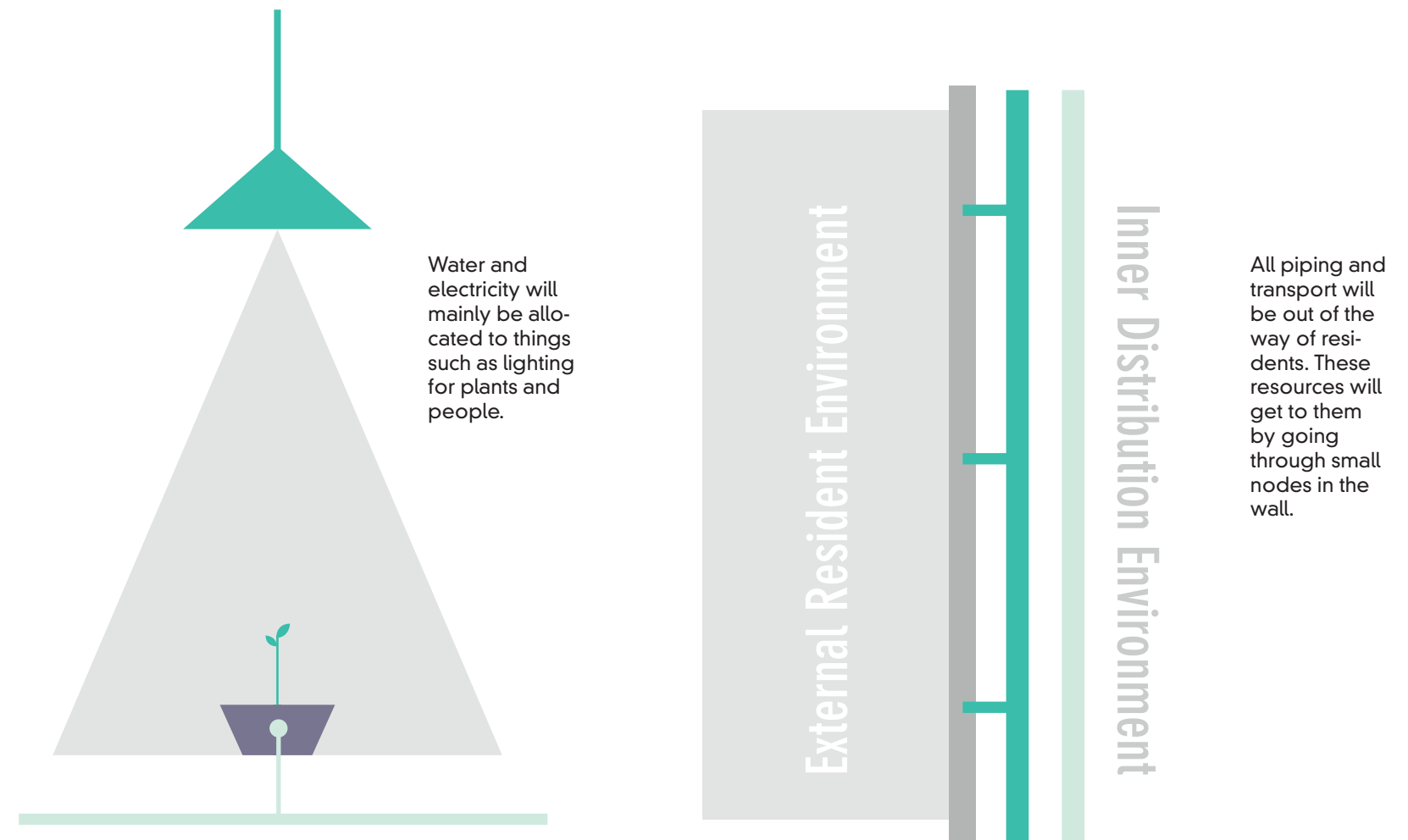
The marketplace is the area where people can look for and pick up food. Aside from the practical aspect of “grocery shopping”, there is the social, community building aspect. It additionally provides people with a place to meet and gather.

2. Distribution

Water & Energy

First off, why include the distribution of water and energy together? The principal reason being that they are distributed in a very similar way to one another. That is through piping or wiring of some sort, often behind walls out of sight. Hiding these transportation methods in itself is both a matter of safety and convenience. It is a service to hide the pipes as people tend to care more about what their resource does for them, rather than how it gets there. They would cause clutter in an environment where people need to get around and are best left to travel behind the scenes. In addition, if anything were to go wrong, it's better to have an open electric circuit or water leakage out of the way of people.

In knowing that traditional methods are used to transport these things, the question is where do they go? People need water to drink, bathe and clean things, so clearly it will go to people's individual living areas. It's also needed to keep plants alive, so it should go to the greenhouses to irrigate the plants there. The passing of water through the plants of the greenhouse also has the added benefit of filtering water as it is used to water the plants. The electricity should also go to these places as it's needed to power technologies and provide light.



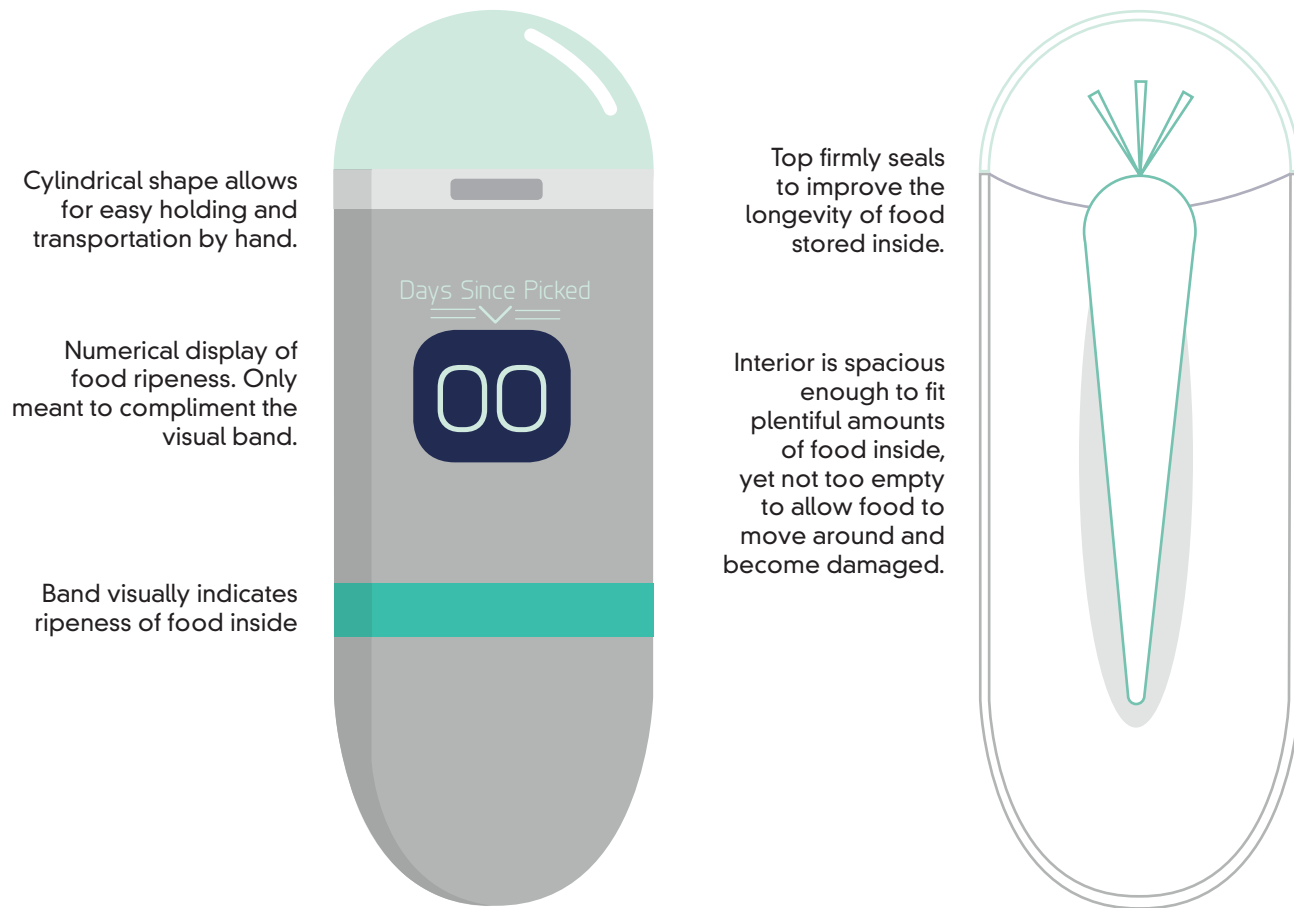
Complications

Issue: How can the water be transported most effectively?

Solution: When applicable, it would be energy efficient to angle water transportation pipes so that gravity carries it along, instead of energy being used.

Issue: What if a pipe or circuit breaks/malfunctions?

Solution: All transport systems for these will be behind the walls and infrastructure of the building. If anything breaks and needs fixing, there are walkways leading to these transport systems that maintenance workers can use. This minimizes the negative effects in the areas where people usually are.



Complications

Issue: How will a container ensure that all foods can fit inside?

Solution: One solution is to make containers large enough to fit the largest thing grown. This however leads to excess space when smaller things are put inside. Going off of this, containers could potentially be segmented, allowing for customization of the shape.

Issue: Are there normal molds and bacteria at the colony that would cause food to decompose? Are preservation devices even necessary?

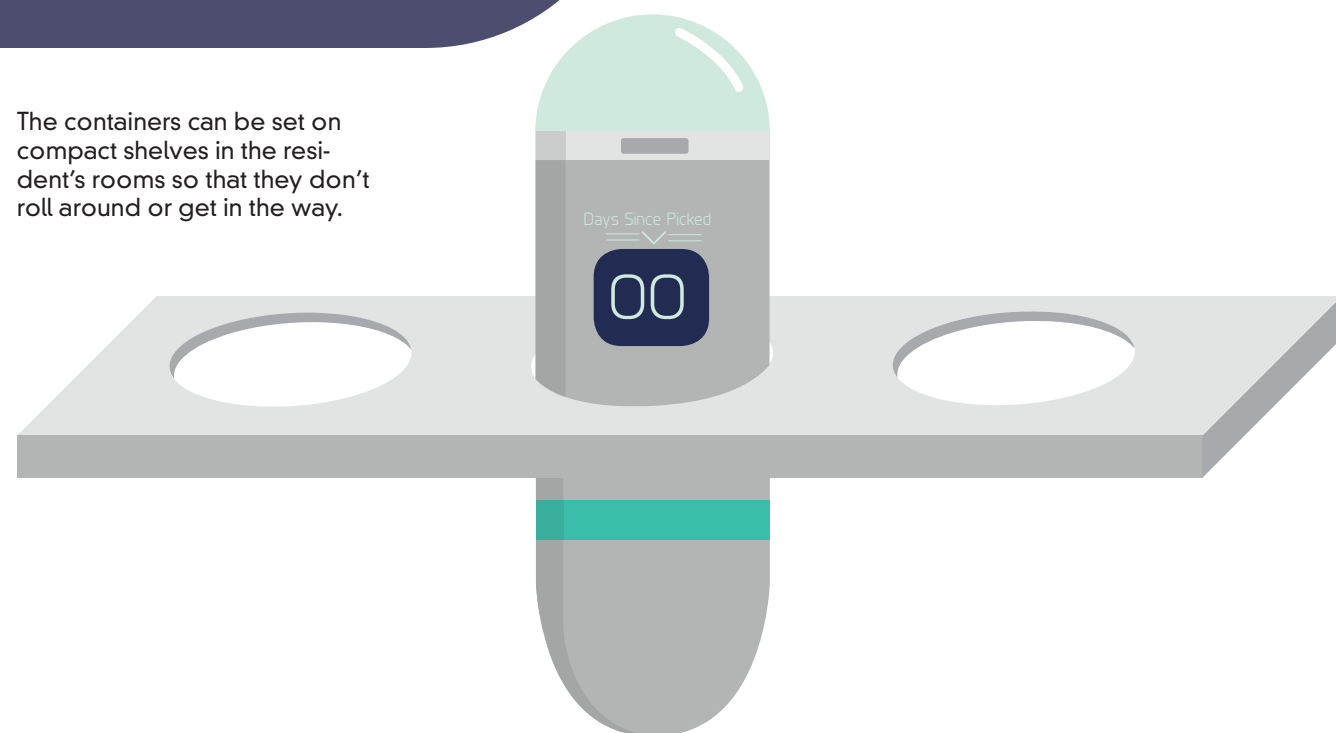
Solution: It can be assumed that because humans live in the colony, the bacterium and other organisms that have relationships with people will also be available to the plants. This makes preservation necessary but also assists in the breakdown of organic matter once it has been used.

3. Usage

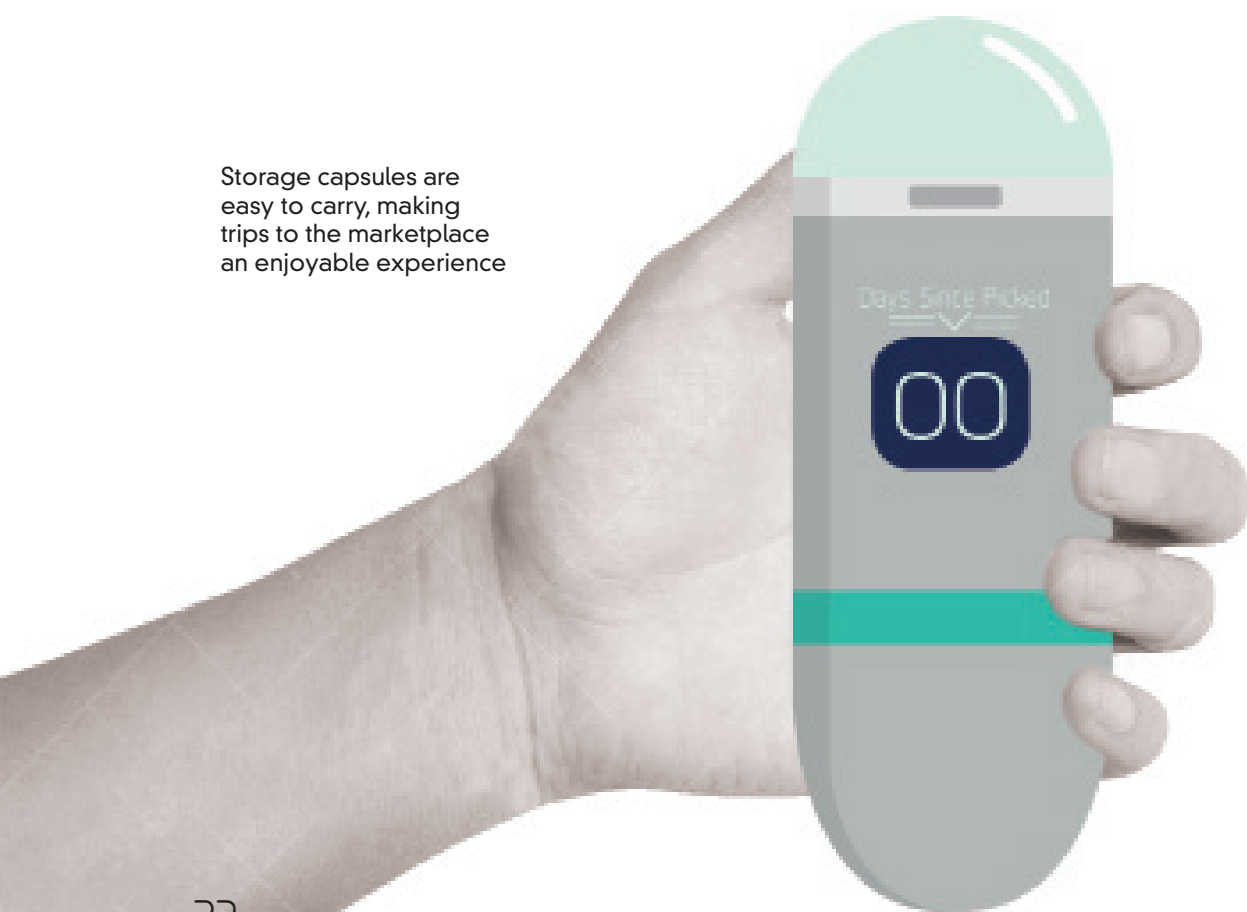
Food

Within a system where all the food has to be grown from scratch, it is very important not to waste anything. Once people get the food, there needs to be a way to ensure that as little as possible goes to waste. To do this, a packaging system will be made that not only preserves food for longer, but also indicates the condition of the food it contains. This will be indicated by a color band that slowly changes as the contents inside age. The container will be able to sense small changes in it's inner environment such as the release of gases caused by decomposition, thus indicating how fresh a food inside still is. The container is also compact to reduce the amount of room taken up by food in resident's living spaces.

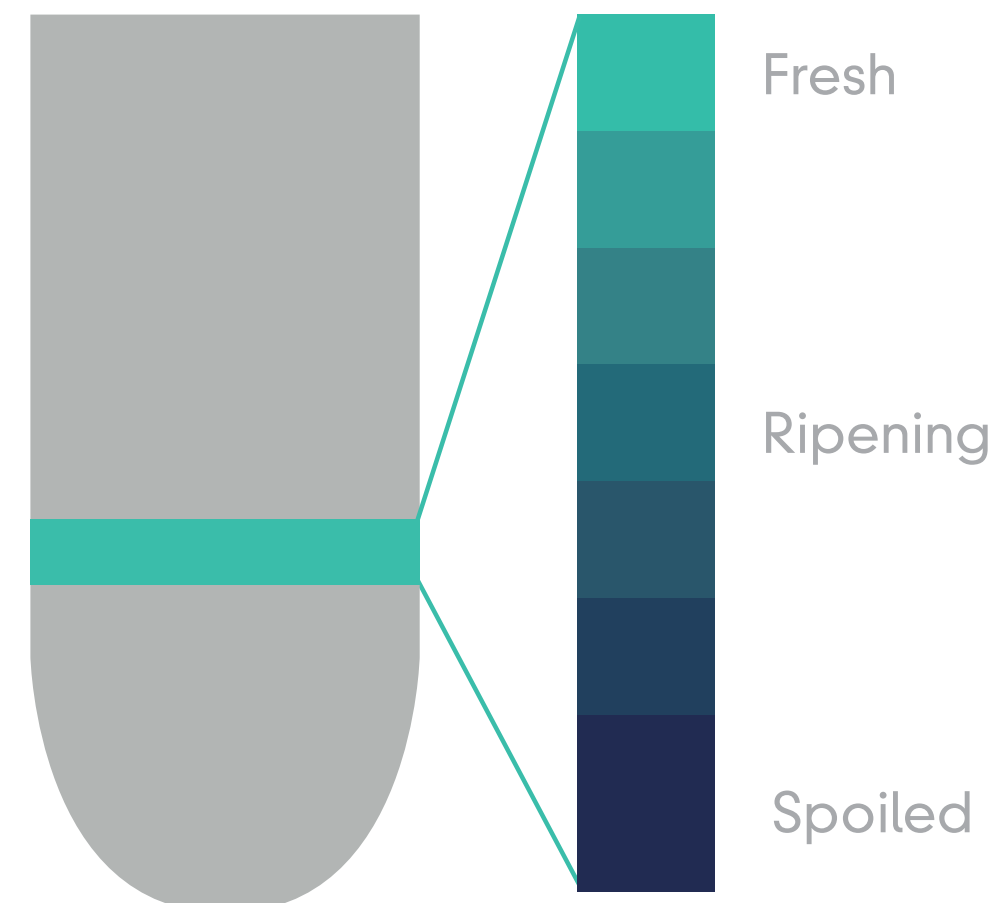
The containers can be set on compact shelves in the resident's rooms so that they don't roll around or get in the way.



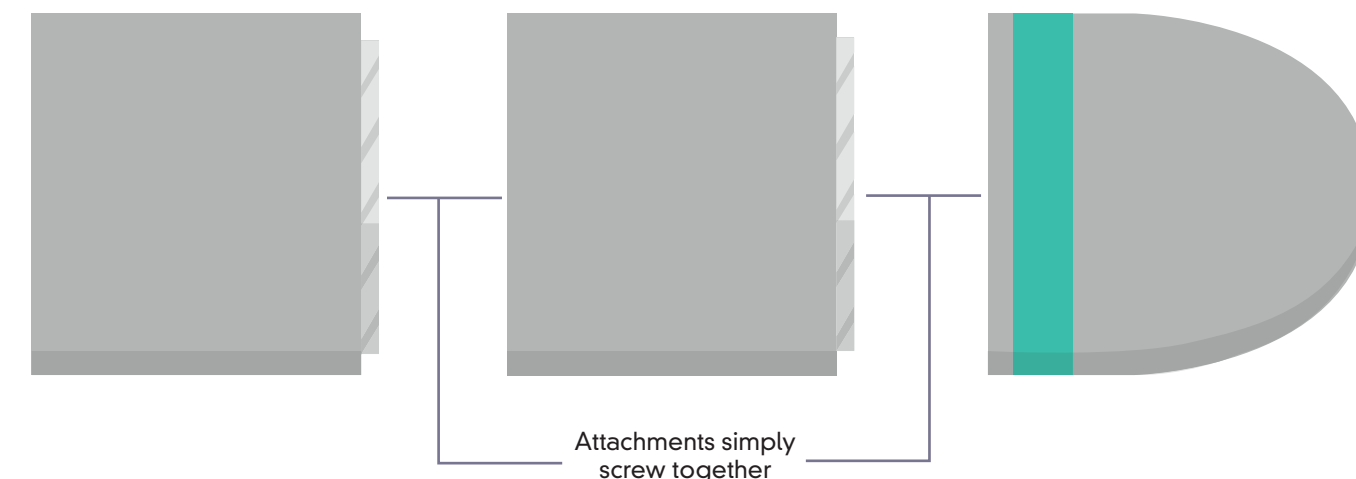
Storage capsules are easy to carry, making trips to the marketplace an enjoyable experience



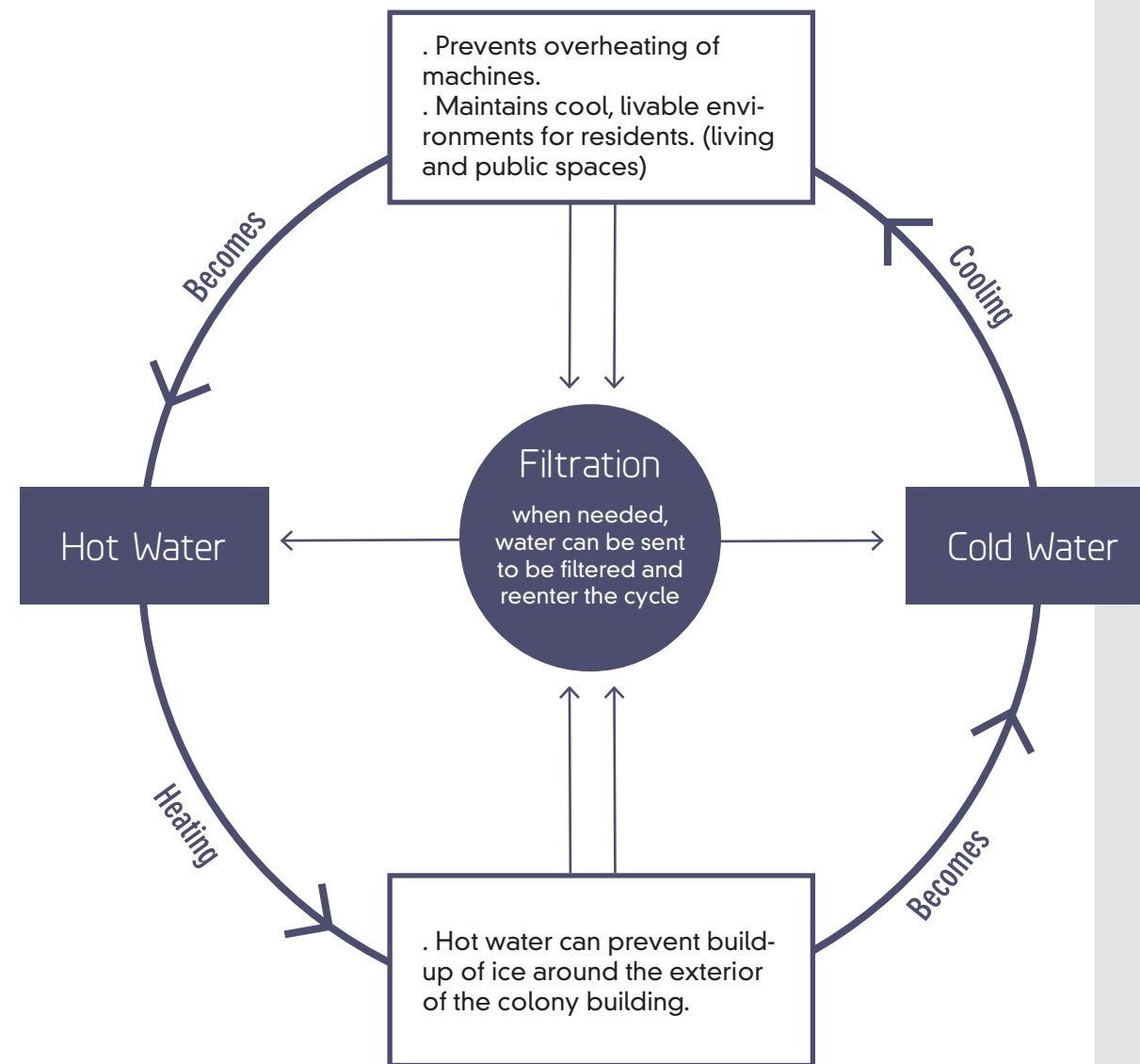
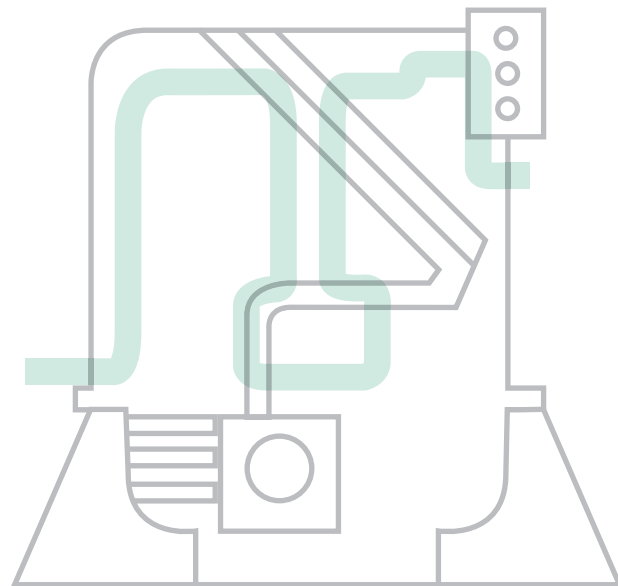
The band on the container indicates the freshness of the food. This is done by sensors in the container that can detect gases released by the process of decomposition. The more gas there is, the darker the color will get to warn of food spoilage.



To compensate for variable amounts of food, the container can have hollow attachments added or removed.



Water lines will pass through and around necessary parts of machines in order to cool them and prevent overheating.



Complications

Issue: Though it remains constant easier, water does change temperature eventually. Will it be cost effective to manage the water temperature?

Solution: The water can be allocated to where it is needed. For example, the hot water can go to the places that need to be heated, therefore slowly becoming colder, until it is able to go back to an area where it needs to cool.

Issue: Will the water become contaminated by cycling everywhere so much?

Solution: It is unlikely, but in the case that water does become contaminated, it can be taken back to it's initial filtration facility.

3. Usage

Water

Distribution describes how water gets from place to place, but what about after it gets to it's destination? There are the obvious uses for it like the need for people to drink and plants to be watered. But what other needs exists in an environment such as the Mars community?

One remarkable property of water is it's ability to maintain a constant temperature easier than air. For this reason, it is excellent at thermo-regulation. On earth, one related use of water is cooling nuclear reactors and other machines. This could be applied to Mars as an easy, cost efficient way of maintaining machine health. Having water exist decoratively in public spaces could also help to maintain the temperature of the colony's internal environment.

3. Usage

Energy

The major uses of energy in the community are to power technologies, such as the communication screens, various applications, vehicles, probes and any other entity that runs on electricity. The residents are the main consumers of electricity not just as individuals but as a community as a whole. Everything in a common, public environment is there to benefit the residents in some way. The energy to keep the lights on in the entire complex alone would be quite high. This is why it would be important for residents to be aware of their own personal energy intake as well as the community's. The problem for the usage of energy isn't necessarily how it's used, as that seems to be a no brainier, but to what extent. How aware of it are residents and how does that affect their personal usage? Therefore in each residential living space, there will be an indicator showing how much energy they've personally consumed. On a larger scale, there will be a display in a common space showing the colony's total energy expenditure.

The Importance of Feedback

It's important to note that this system isn't to chastise people or try to force a certain behavior on them. The opposite is true. This system makes people aware their surroundings, allowing them to make the most educated and well informed choice they can. Domestic energy use, most of the time, is invisible to the user. Most people have only a vague idea of how much energy they are using for different purposes and what sort of difference they could make by changing day-to-day behavior. Hence the importance of feedback in making energy more visible and more amenable to understanding and control. In certain studies conducted, it was shown that people alter their behavior more when able to compare it to something around them. This could create a positive feedback loop for resident's of the colony, in which people are using their personal goals of lesser energy consumption and using that to reach a community wide goal.

Complications

Issue: What if people don't want to view the display?

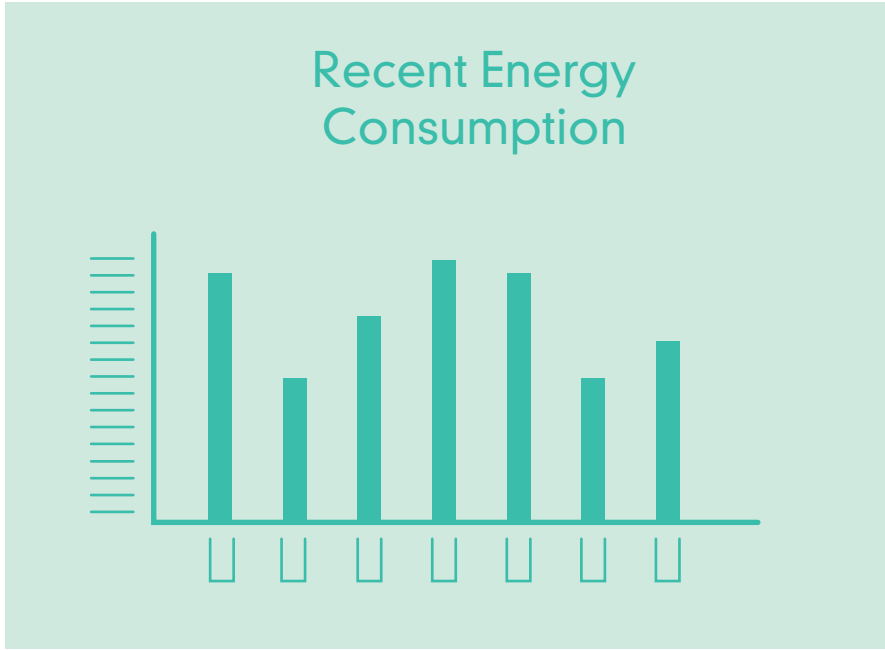
Solution: The personal display is similar to any other display available to residents. It can be turned off but is always available for viewing. The large scale community display however, is always on but is not obstructive of residents getting around.

Issue: How will residents know what about their behavior to change if their total energy consumption is what is displayed?

Solution: The total usage can be broken down into smaller categories showing what specifically used energy, how much and at what time.

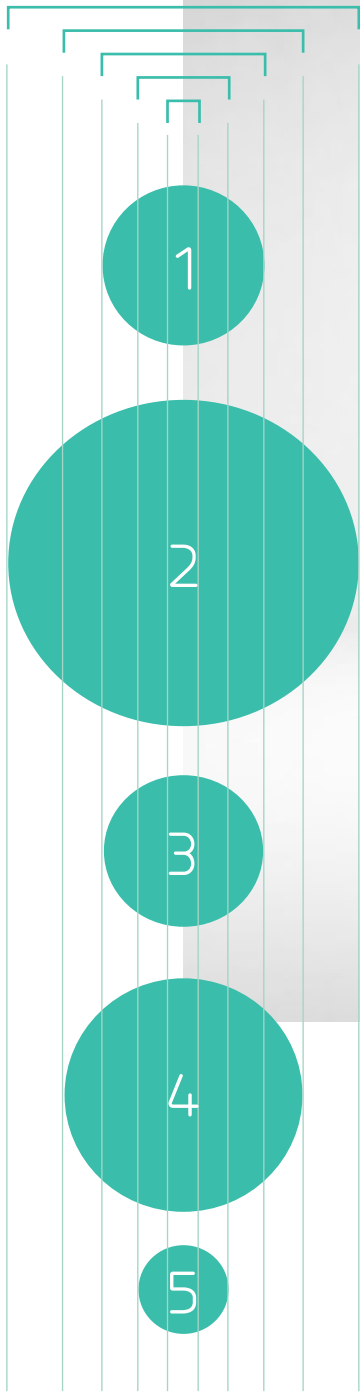
Personal Scope

Simple graphics will let people know about their specific energy consumption. They can be altered to display different types of information and to display them in different ways.



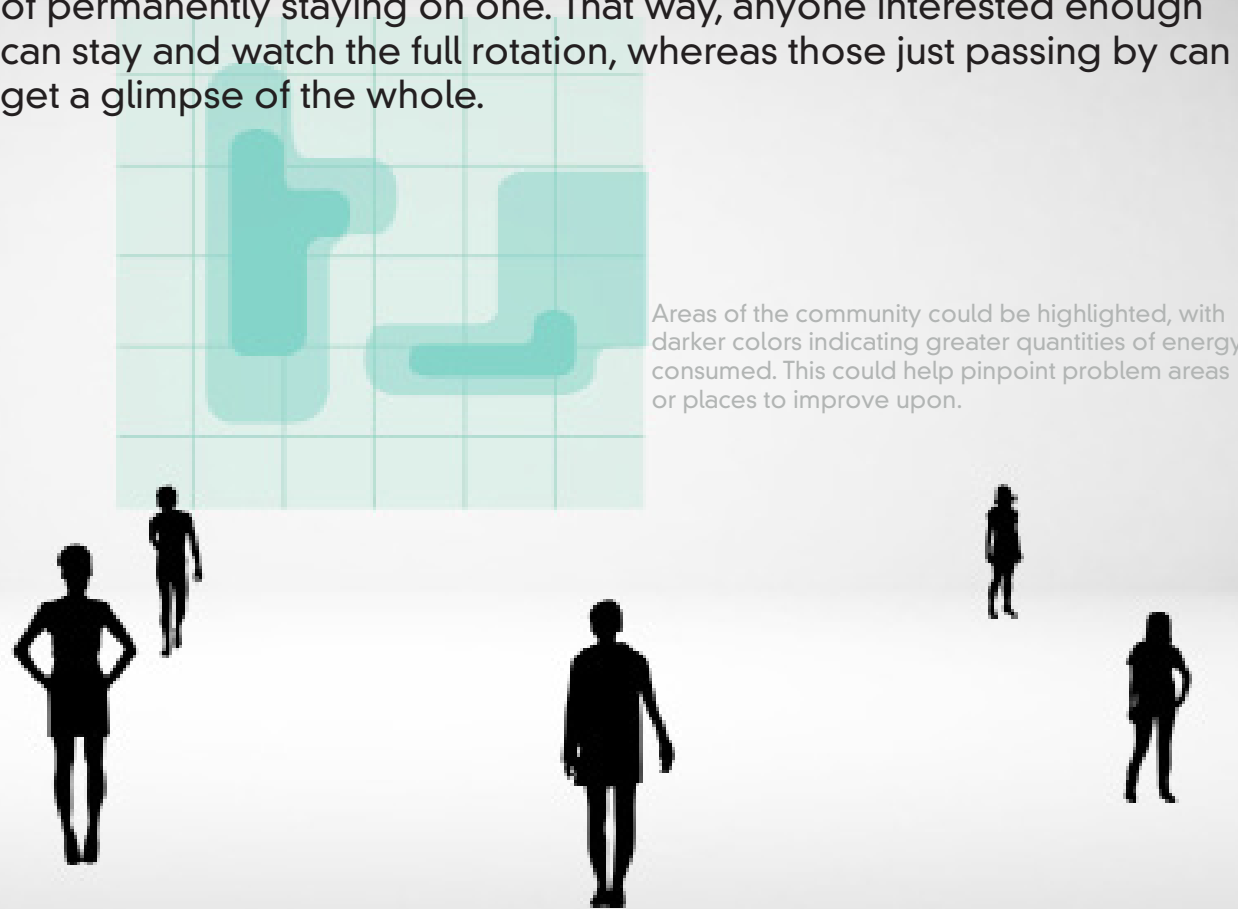
Points of the graph can be enlarged and isolated to get at more specific information such as what the energy specifically went to. This way, if a person notices that a disproportionate amount went towards one thing, they can try to modify their behavior towards that thing.

Information doesn't always have to be displayed as a bar or line graph. Different types of information can be displayed in different ways. This visualization, for example, shows multiple instances and the numerical range they fall in. Some people may understand or connect to these more effectively than a standard graph or chart.



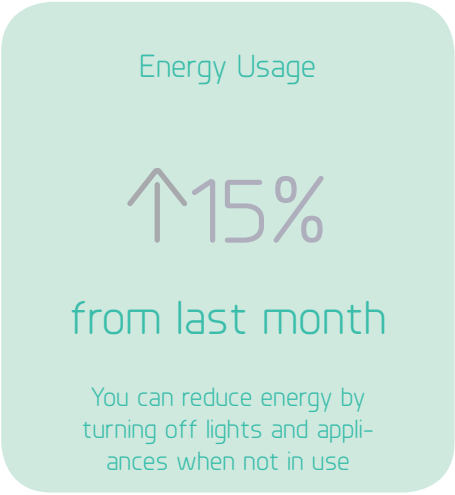
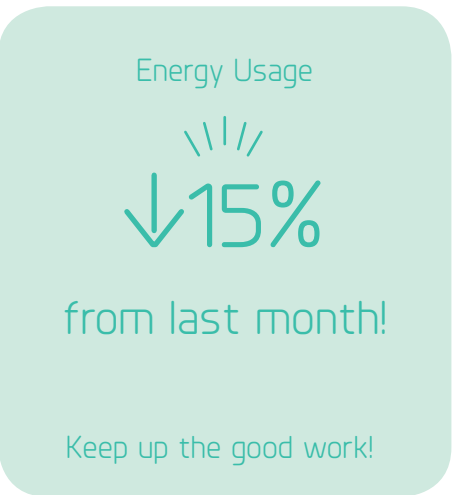
Community Scope

The community scope serves to display the cumulative data of all residents. Unfortunately, what it has in size and displaying effectiveness, it lacks the interactivity that the personal screens have. To help accommodate for this, it will move through rotations of its displays, instead of permanently staying on one. That way, anyone interested enough can stay and watch the full rotation, whereas those just passing by can get a glimpse of the whole.



Areas of the community could be highlighted, with darker colors indicating greater quantities of energy consumed. This could help pinpoint problem areas or places to improve upon.

Residents can see how the colony has done in comparison to past energy scores. A positive message accompanies a lower energy score to encourage people. There is no negative message to a high energy score, but instead tips on how to do better are given. The purpose of this is again, not to make people feel bad, but to educate.



Outside
of Colony
Building

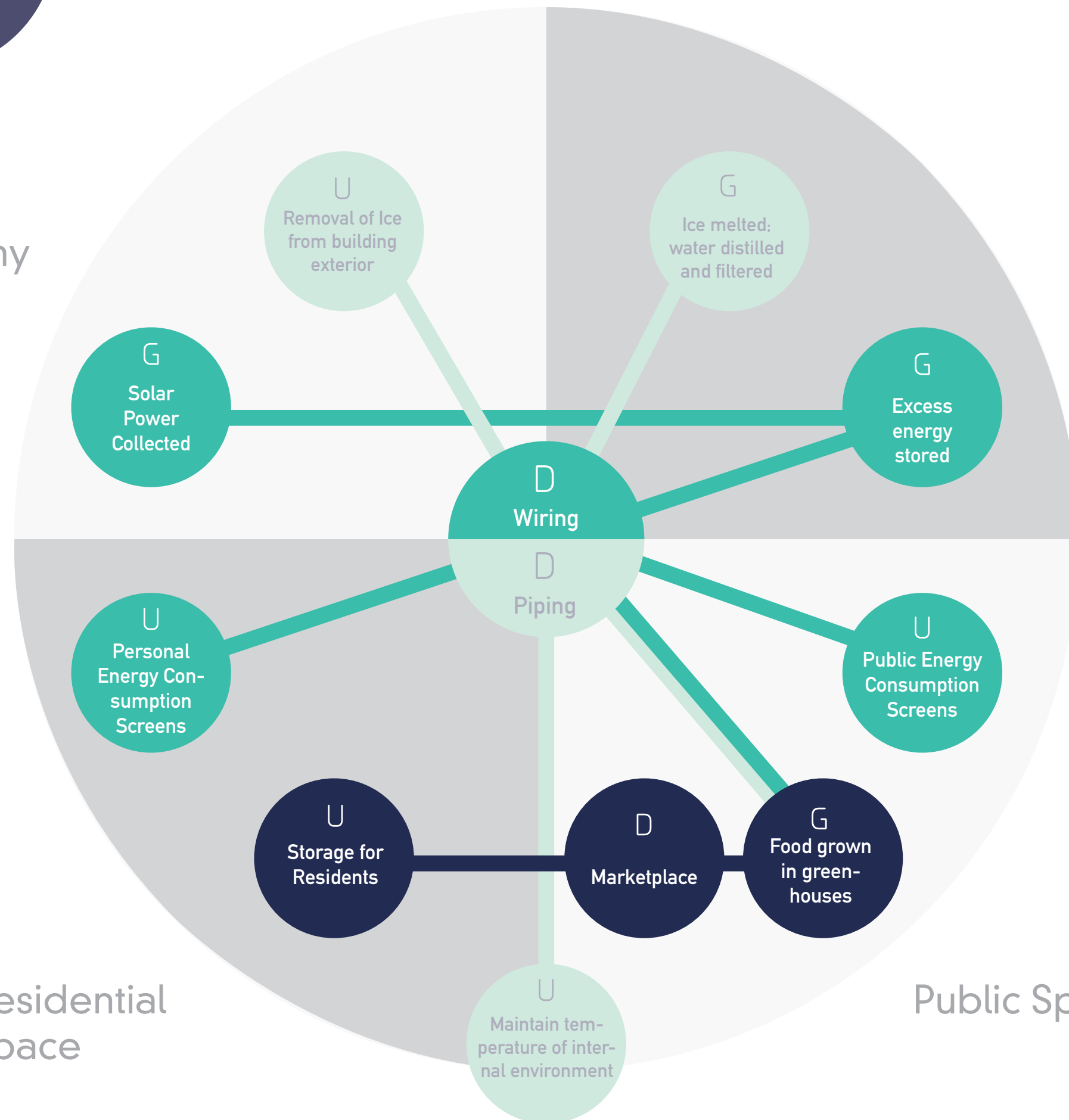
Facilities/
Workspace/
Research

Residential
Space

Public Space

G-Generation
D-Distribution
U-Usage

Energy
Water
Food



INTERACTION

//A.O.I

//A.V.A

//A.C.E.

Process

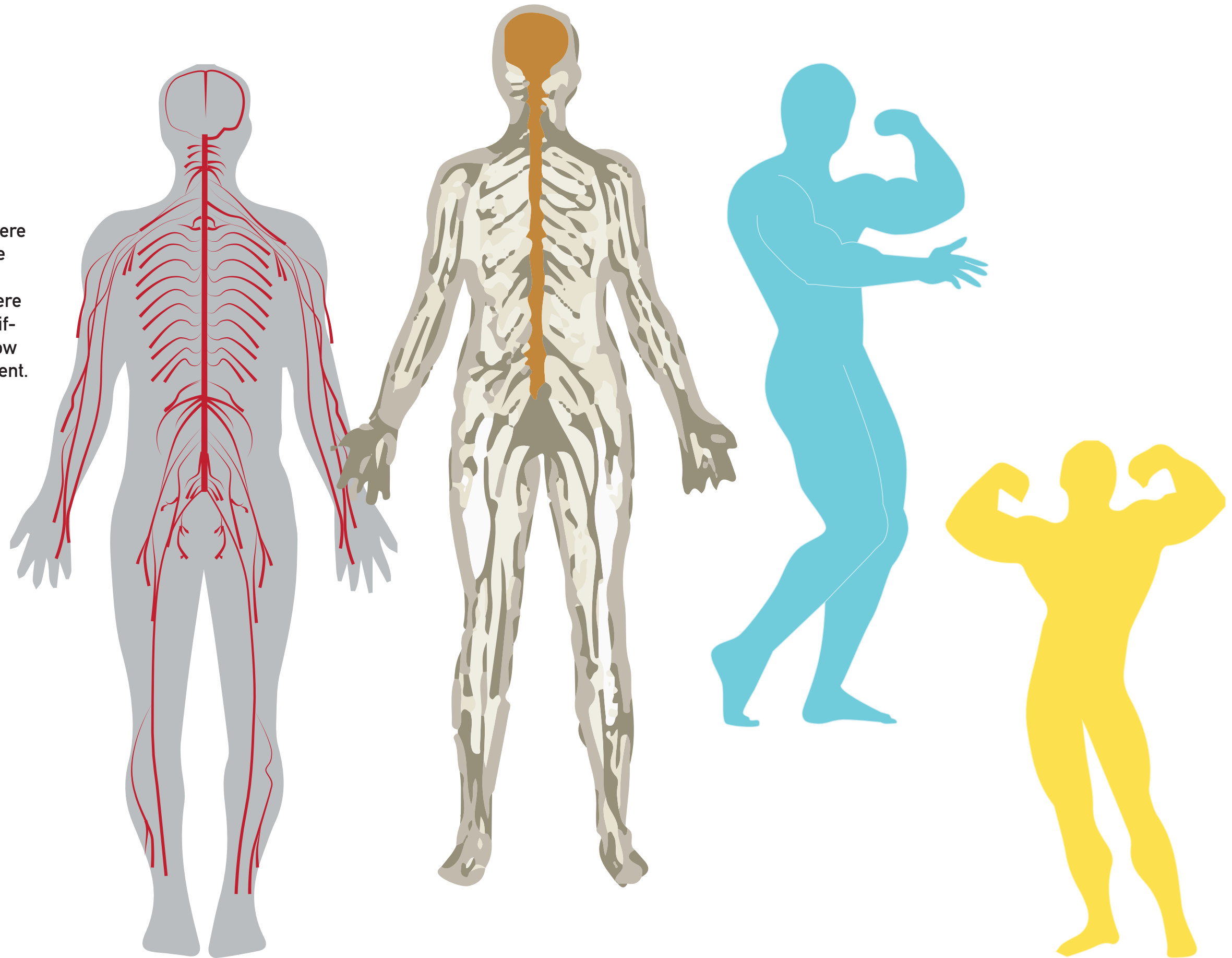


The first step in process for A.O.I. was playing with colors and arrangement. Arrangement play didn't vary much besides trying the swipe bar in different positions, but color play was very helpful. One the color palette was decided by branding the colors of A.O.I. werechosen accordingly.



Constellations were analyzed for A.V.A. to try and mimic the look within contacts. Constellation maps were more referenced than the natural visual in the sky.

After A.O.I. tasks and visuals were decided, a body visual had to be found to unify across body systems. Different vector forms were played with to see clarity and different poses were tested to show that A.O.I. mimics your movement.



A.O.I.

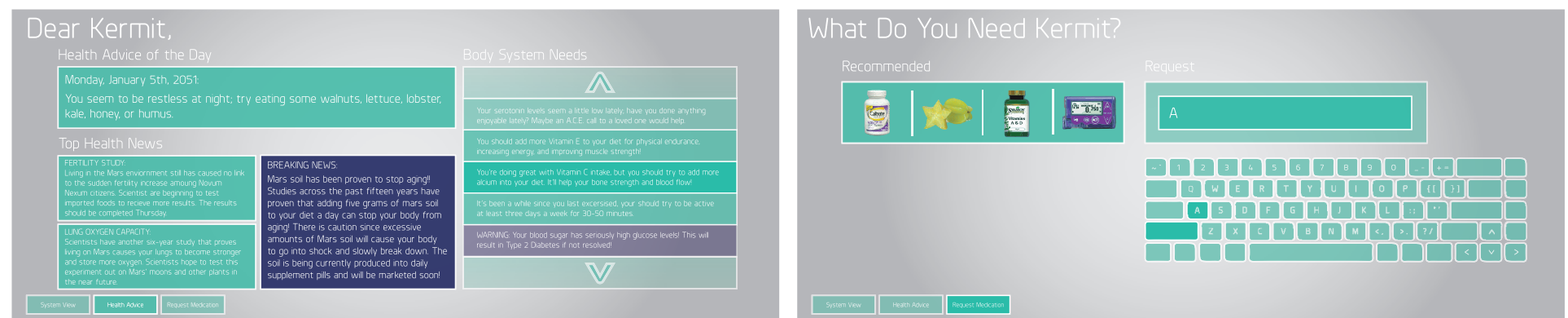
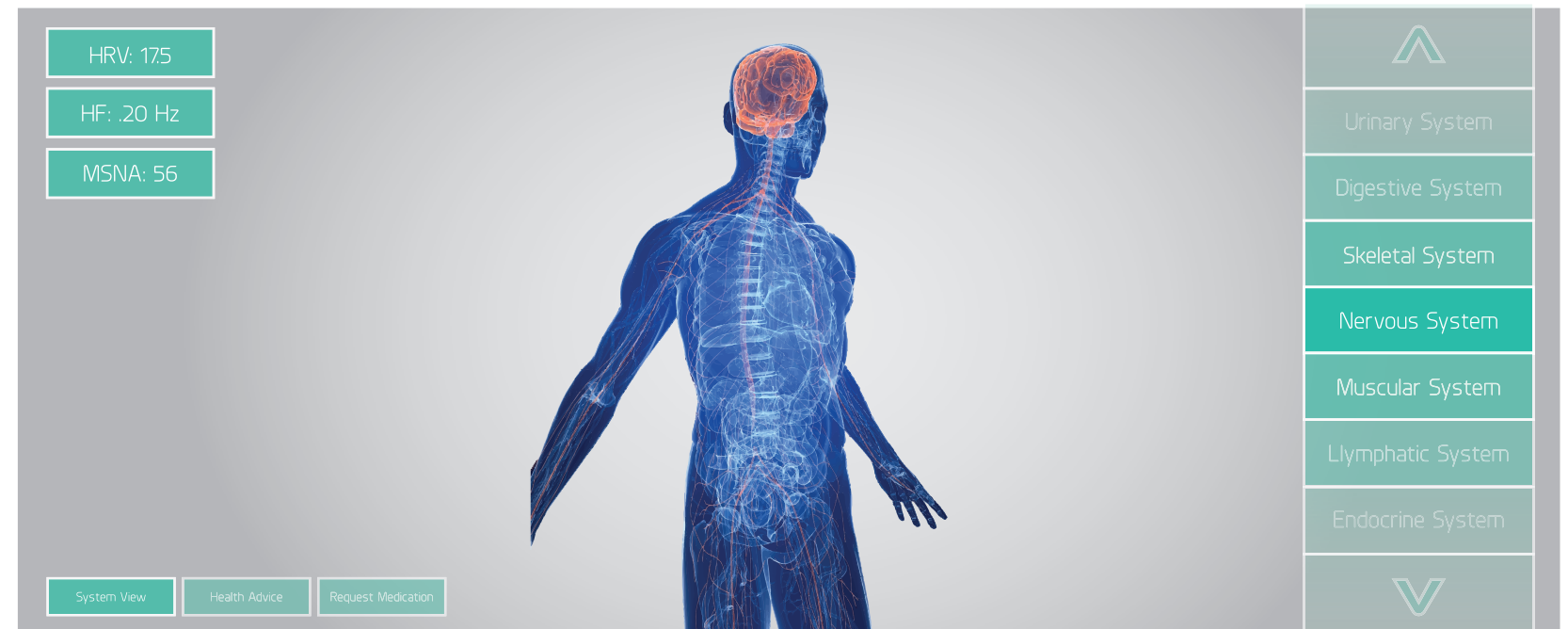
Anatomy Observation Interface

When you arrive in a new environment you need to be aware of how your body is handling, A.O.I. lets you do that.

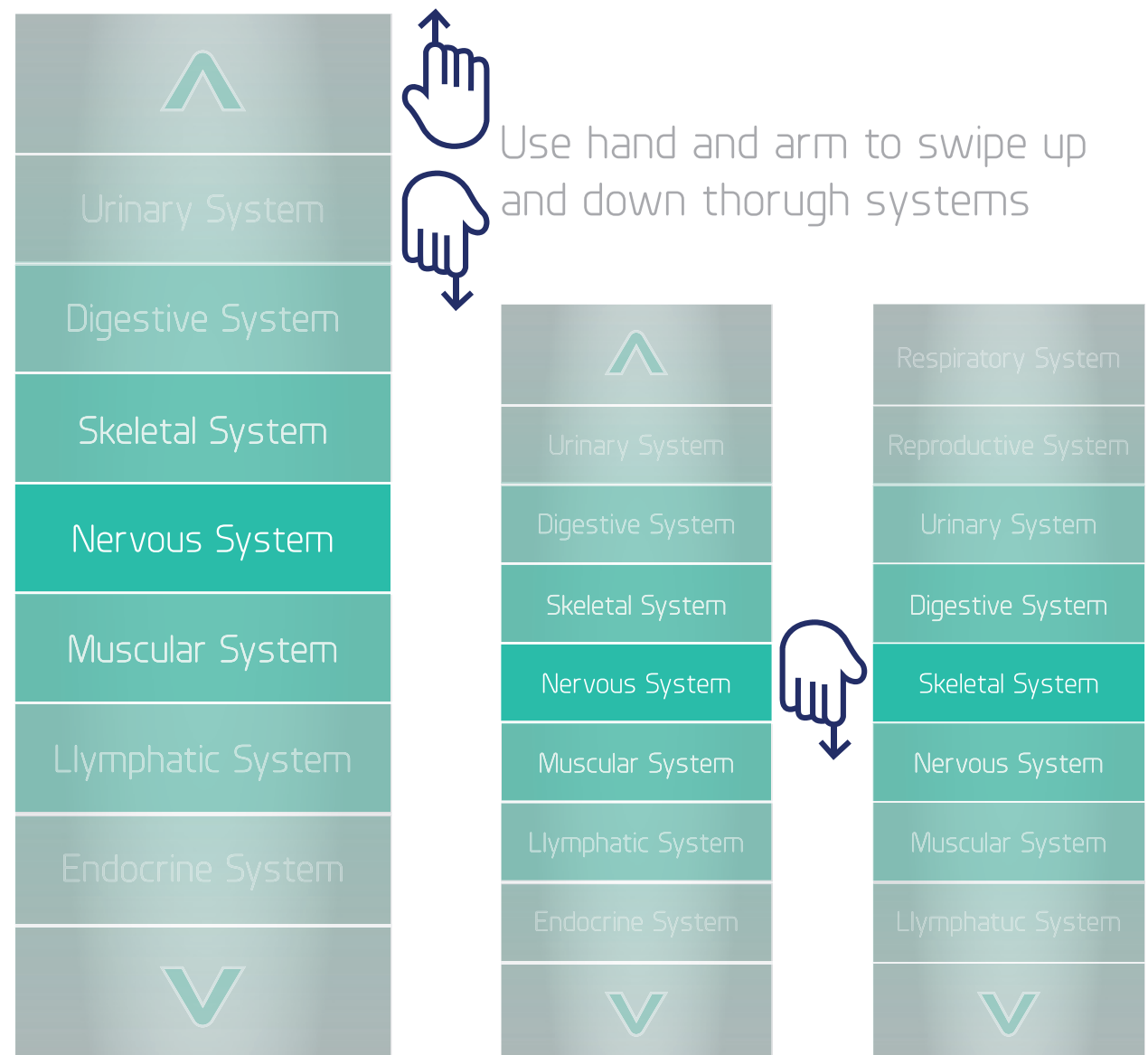
Welcome Kermit

Welcome Kermit

A.O.I. is provided in every personal room within Novum Nexum. A.O.I. is a holographic screen that will appear when called upon in your room. It's a wide screen that's slightly curved around you.

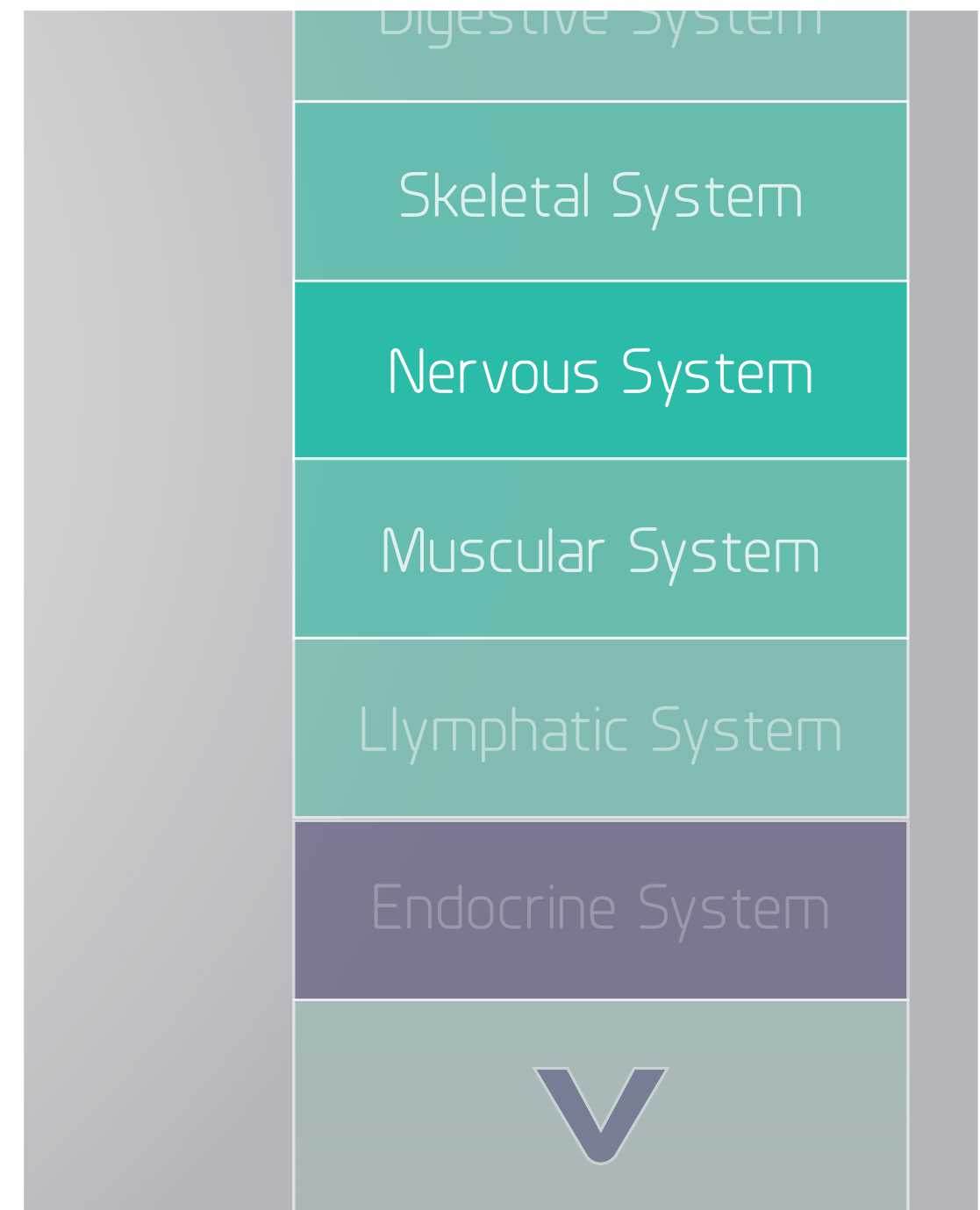


Once you're welcomed A.O.I. will automatically open to your last viewed system. The top left corner will show you details of that system, tap of them to hear what it means. The lower left corner will have the screen transition buttons to "health advice" and request medication." You can also request A.O.I. to zoom in/out views of your body systems.



Once you've scrolled all the way the arrow on top or bottom will disappear

You will be able to switch between viewing each body system with an arm swipe movement over the system navigation bar on the right. The technology in the room will constantly analyze your body and give you body facts per system; a visualization of you will mimic your movements and show strictly the opened body system.



If something is wrong the system will blink deep blue, and if severely wrong A.O.I. will automatically open, show it to you, and call an EMT. There is also an option to receive health advice from A.O.I. and request medication to be sent to you.

A.V.A.

Awareness Vision Application

A.V.A. is an application that focuses on making you aware of what's around you, especially resources.



A.O.I. is provided in every personal room within Novum Nexum. A.O.I. is a holographic screen that will appear when called upon in your room. It's a wide screen that's slightly curved around you.



A.V.A. vision with no recently delivered resources



Normal Resource Notification



A.O.I Recommended Resource Notification

As you walk through a space you will be notified of recently delivered resources and when they were delivered, this will last up to 4 days. It also ties into A.O.I. by making you aware if something your body needs has been recently delivered.

Health Warning



Navigating



Search Vision



A.V.A. is also connected to A.O.I. by keeping track of your health as your walk through the community. If a personal health risk occurs you will be notified in the same color as A.O.I resource notifications.

Search Results Vision, speak wanted result

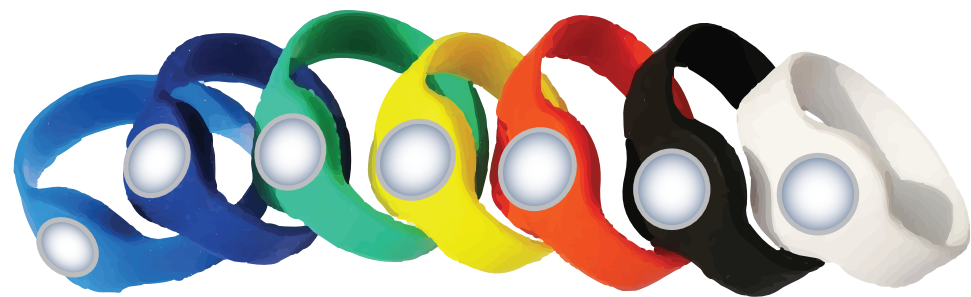


When you navigate you can search for a resource, specific location, or type of place. Everything is voice activated. Once a result is selected you will be given a path (to the left) to navigate you.

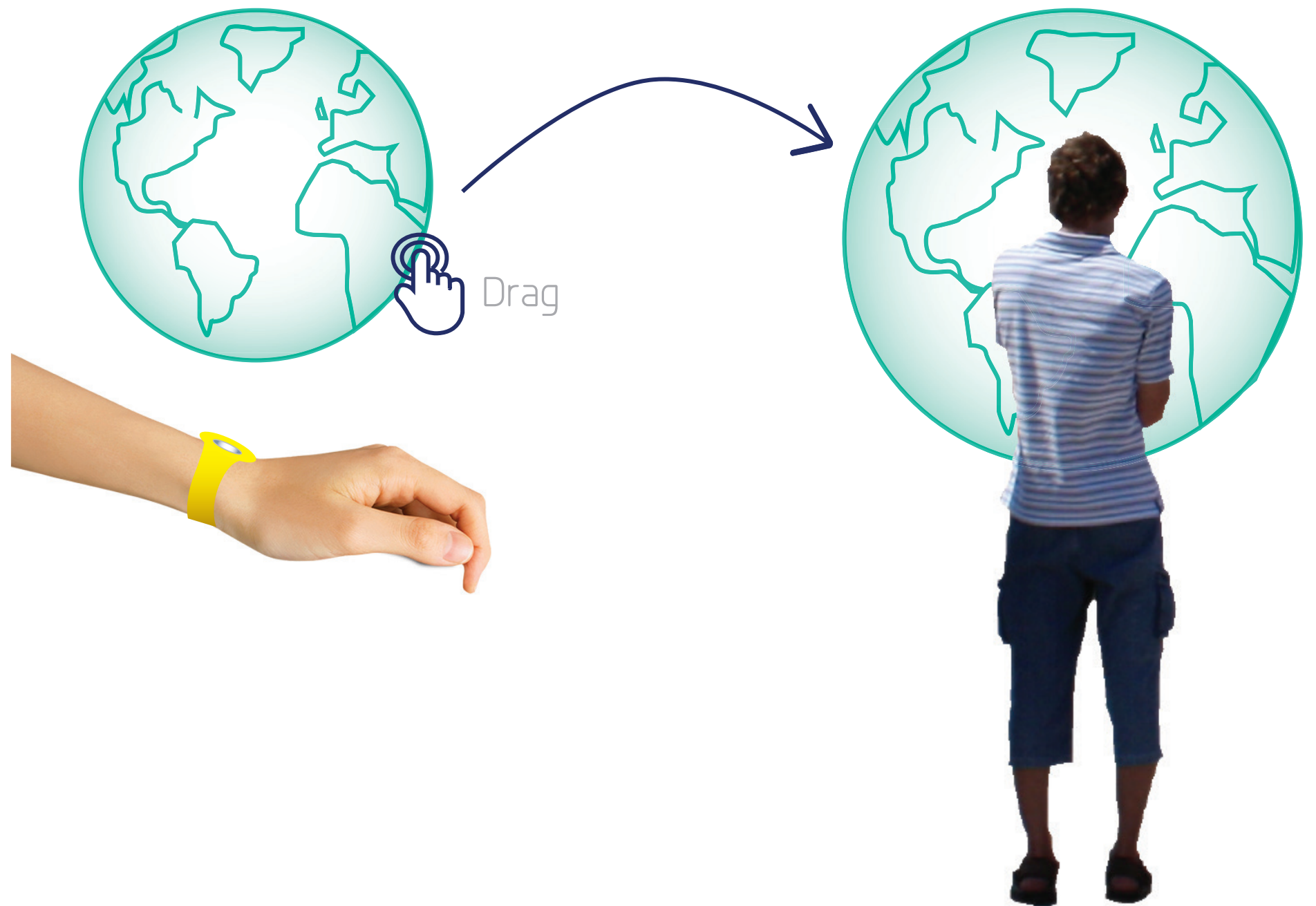
A.C.E.

Applied Communication Entity

A.C.E. is meant to provide communication to citizens of Novum Nexum, and possible in other environments.



A.C.E. Wrist Wear will be sold at Novum Nexum and on Earth as well. You can get it in different colors so it can also serve as a fashion piece (just like phone cases).



A.C.E. is a very touch-based program, but can also be controlled by voice activation. A.C.E. has a hologram appear above it in small form but you can pull the hologram into the air and enlarge it. This allows private and public interaction.



Mars



Earth



Select the location of person you wish to communicate with (swipe to other locations). Tap on device, or speak to so you can see options.



to search through contacts (use both hands for large scale)



voice activated

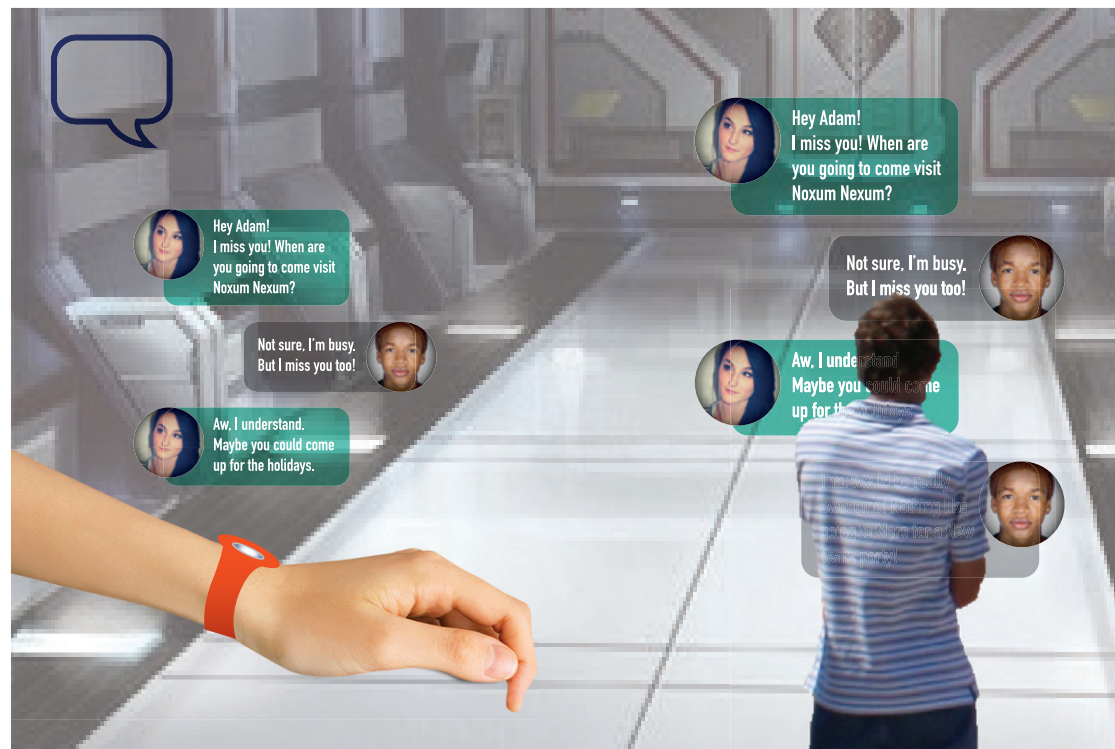
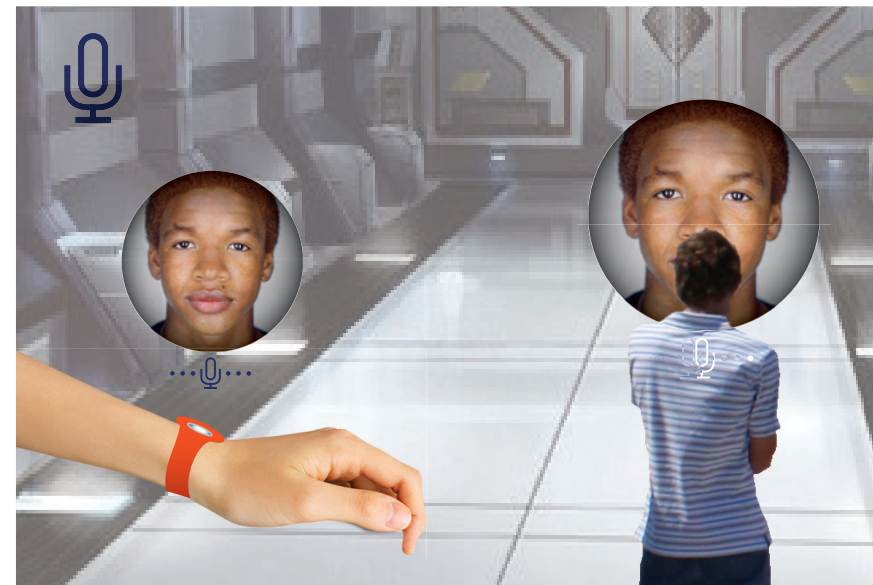


Face bubbles of most recent contacts will appear, alphabetical afterwards, and you will see smaller in the distance (kind of like stars). Activated by hand/finger movement or voice. Tap to select contact.



- Message
- Group Message
- Video Message
- Audio Message

When you select a contact his/her contact profile will show up with, your contact history, and options to communicate with him/her.



- end call by tapping video button
- end call by tapping audio button
- to go back to contact list from messages

Tapping a communication button offers a up a different options for the user. They keep strictly to their uses, no extra nuances. The goal is all that's important in the task. A.C.E. tasks still look practically the same, whether it's small or large scale.



