

# Designing for everyone

DESIGN MATTERS  
2023 MX



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Founders & Directors

@openn\_inclusivedesign







El pr  
del jaguaro

**Características generales**

**Distribución geográfica y hábitat**

El jaguaro es un felino que habita en las selvas tropicales de América del Sur y Central. Su distribución geográfica se extiende desde el norte de Colombia hasta el sur de México, pasando por Venezuela, Guayana Francesa, Guayana, Surinam y Brasil.

**Características físicas**

- 1. Pelaje: Rojo amarillento con manchas negras.
- 2. Tamaño: El macho adulto mide entre 1,20 y 1,50 metros de longitud.
- 3. Peso: El macho adulto pesa entre 60 y 100 kilogramos.
- 4. Vida media: Entre 10 y 15 años.
- 5. Estado de conservación: Amenazado de extinción.



**Características de su especie**



### Biogeografía

#### Distribución d

**L**a Tierra es hasta ahora el único planeta que tiene vida, misma que existe en el mar y en el cielo, pero la diversidad que vemos no es fortuita sino el resultado de la evolución de la Tierra y la constante interacción tanto en el tiempo como en el espacio.

Desde la década de los 70 del siglo XX, la biogeografía ha experimentado un renacimiento. Hoy en día, el planeta Tierra es considerado un sistema complejo y dinámico, donde la vida y el ambiente interactúan constantemente.

Un pescador  
que parte...

## Museums and Education context in Mexico

- Mexico City is **one of the city's with most museums in the world (roughly 170)**.
- Half a million visitors to museums each month in Mexico City, **93% of them Mexicans**. This represents 0.1% of Mexico City's population and 0.6% of the country's population.
- **Mexican students performance are the worst ranked among OECD countries**.  
Critical reading, math and science skills are poorly reported, 41% of Mexican students do not reach the basic level reading comprehension skill, and 55% do not achieve a basic level of math skills.



1964



2019







Carnivora

Megafauna  
de la Edad  
de Hielo

Edad de Hielo

EVOLUCIÓN DE LA VIDA





**How can we make the MNHCA  
more inclusive?**

**Diferente región... clima, flora y fauna similar**

La zona costera tiene diferentes climas húmedos, a veces de alta humedad, debido a que gran parte del tiempo se encuentra rodeada por el agua. Los ecosistemas terrestres y acuáticos están muy influenciados por el clima, la humedad y la proximidad al agua. Esto se refleja en la gran variedad de especies que habitan en esta zona.

Los paisajes y ambientes son similares por sus costas húmedas, por ejemplo, en Arica, se encuentran un conjunto de especies, en particular, de aves marinas y aves acuáticas, así como mamíferos marinos como ballenas y delfines.









MIÉRCOLES 6 DE JUNIO DE 2018

13 hs. - Es sencilla mente espectacular Fabian y se abuelo  
de Capitan Gomez Resas

FANTASTIC PHYLOGENETIC TREE ON COMPUTER & KÖPPEN-BEIGER CLASSIFICATION  
SYSTEM - IT TAKES A SCIENTIST 7 TO UNDERSTAND! WOW! THANKS FOR NOT DUMBING  
IT DOWN, -T. THASON, BOTANIST AT LARGE we don't understand you

EXCELENTE MUSEO, MUCHA VARIEDAD. ☺

Mistly Mastly postly Moibly

Hi? = I? from Japan

Que bonito les quedó! Muchas felicitades

Llegamos tarde Dichy y Dan. ♥

No me odies por fa ñ Dichy y Dan x2 ♥

Jueves 7 de Junio 2018

ana

Evolución humana

Una mirada a nuestros orígenes

**D**urante millones de años, el hombre ha estado evolucionando. Desde sus ancestros más antiguos, los homínidos, hasta el ser humano moderno, el proceso de evolución ha sido constante. Este proceso ha permitido que el hombre se adapte a diferentes entornos y desarrolle habilidades únicas. En este espacio, exploraremos los hitos más importantes de nuestra historia evolutiva, desde los primeros homínidos hasta el ser humano moderno.





**Un museo de visita 2018**  
MUSEO NACIONAL DE LAS CULTURAS

Durante mayo y junio el Museo Nacional de las Culturas presenta una muestra de su colección

**Museo Nacional de las Culturas**

### Los Inuit

Instrumentos y herramientas

Desde el descubrimiento de los primeros vestigios de la presencia humana en el territorio que hoy ocupa el Estado de Baja California Sur, se ha ido descubriendo y estudiando la vida de los habitantes que en su momento llegaron a este territorio. Entre ellos se encuentran los Inuit, quienes llegaron a este territorio hace unos 10,000 años. Los Inuit son un pueblo que vive en el norte de Canadá y en Groenlandia. Son un pueblo que vive en el Ártico y que ha desarrollado una cultura única y adaptada a las condiciones climáticas de esta zona.

Museo de Historia Natural **JUNIO 2018**

**SALAS RENOVADAS**

Registra los cambios de las salas de exposición

**ESTAMOS RENOVANDO ESTE MUSEO**

El Museo Nacional de las Culturas está renovando sus salas de exposición para mejorar la experiencia de los visitantes. Durante este mes de junio, se estarán mostrando los avances de esta obra.

**¡MÁS NOS TOCA HACER HISTORIA!**

NAUTIC



La evolución

Quinta extinción masiva al final del Cretácico (hace ca. 66 millones de años)



Comparte invitado:  
**¡Bienvenido!**  
a las salas interactivas del  
Museo de Historia Natural

Te pedimos atender las siguientes  
indicaciones:

- 1. No tocar ni acercarse a los animales.
- 2. No hacer ruidos ni gritos.
- 3. No comer ni beber en las salas.
- 4. No fumar ni consumir alcohol.
- 5. No utilizar celulares ni cámaras.
- 6. No utilizar bastones ni objetos punzantes.
- 7. No utilizar zapatos de tacón.
- 8. No utilizar maquillaje excesivo.
- 9. No utilizar perfumes.
- 10. No utilizar joyas pesadas.
- 11. No utilizar ropa que cubra el cuerpo.
- 12. No utilizar ropa que cubra el cuerpo.

AGRADECIMOS TU COOPERACION

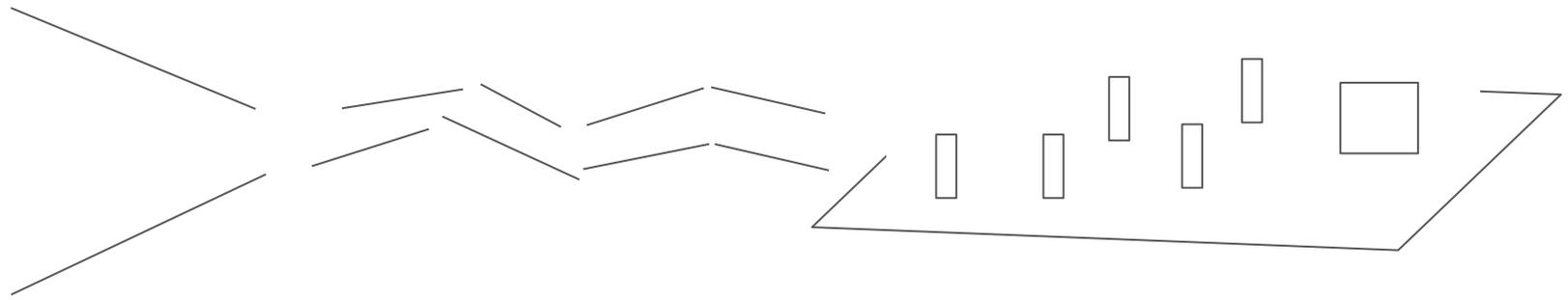
Por tu seguridad y la de los animales.







PLANNING	WELCOME	START	NAVIGATION	ROOM EXPLORATION	ATTENTION TO AN OBJECT	EXIT
Purpose	Entrance	Zones	Distribution	Path/ Tour	Language	Memorability
Motivation	Payment	Signage	Sections	History	Elements identification	Learning
Location	Events	Starting point	Maps	Information	Visibility	
Previous information	Tours		Guides	Behavior	Sounds	
Opening hours	Signs		Information modules	Guides	Comprehension	
Access	Regulations			Activities	Learning	
					Support material	



<b>DISABILITY</b>	<b>PLANNING</b>	<b>WELCOME</b>	<b>START</b>	<b>NAVIGATION</b>	<b>ROOM EXPLORATION</b>	<b>ATTENTION TO AN OBJECT</b>	<b>EXIT</b>
<b>Hearing</b>	80%	80%	100%	100%	100%	70%	100%
<b>Visual</b>	20%	0%	0%	0%	0%	0%	0%
<b>Mobility</b>	100%	90%	90%	70%	60%	70%	100%
<b>Cognitive</b>	10%	30%	0%	0%	50%	50%	10%

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<b>Cognitive</b>	10%	30%	0%	0%	50%	50%	10%



**How can the MHNCA be more inclusive with visitors with visual impairments?**





## ACCESO A SALAS

Inicio de Fila

### Museo de Historia Natural

Administración General del Patrimonio del Distrito Federal

#### Tabla de Costos

Asociado de martes a domingo y festivos: 10:00 a 17:00 horas

Descripción	Adultos	Juveniles	Infancia
Entrada General	\$100.00	\$50.00	\$25.00
Exposición permanente	\$100.00	\$50.00	\$25.00
Exposición temporal	\$100.00	\$50.00	\$25.00
Exposición interactiva	\$100.00	\$50.00	\$25.00
Exposición multimedia	\$100.00	\$50.00	\$25.00
Exposición audiovisual	\$100.00	\$50.00	\$25.00
Exposición de arte	\$100.00	\$50.00	\$25.00
Exposición de ciencias	\$100.00	\$50.00	\$25.00
Exposición de historia	\$100.00	\$50.00	\$25.00
Exposición de geografía	\$100.00	\$50.00	\$25.00
Exposición de biología	\$100.00	\$50.00	\$25.00
Exposición de geología	\$100.00	\$50.00	\$25.00
Exposición de arqueología	\$100.00	\$50.00	\$25.00
Exposición de antropología	\$100.00	\$50.00	\$25.00
Exposición de etnohistoria	\$100.00	\$50.00	\$25.00
Exposición de etnografía	\$100.00	\$50.00	\$25.00
Exposición de etnología	\$100.00	\$50.00	\$25.00
Exposición de etnobotánica	\$100.00	\$50.00	\$25.00
Exposición de etnozoología	\$100.00	\$50.00	\$25.00
Exposición de etnomatemática	\$100.00	\$50.00	\$25.00
Exposición de etnomúsica	\$100.00	\$50.00	\$25.00
Exposición de etnoarquitectura	\$100.00	\$50.00	\$25.00
Exposición de etnoarte	\$100.00	\$50.00	\$25.00
Exposición de etnocine	\$100.00	\$50.00	\$25.00
Exposición de etnoteatro	\$100.00	\$50.00	\$25.00
Exposición de etnodanza	\$100.00	\$50.00	\$25.00
Exposición de etnomúsica	\$100.00	\$50.00	\$25.00
Exposición de etnoarquitectura	\$100.00	\$50.00	\$25.00
Exposición de etnoarte	\$100.00	\$50.00	\$25.00
Exposición de etnocine	\$100.00	\$50.00	\$25.00
Exposición de etnoteatro	\$100.00	\$50.00	\$25.00
Exposición de etnodanza	\$100.00	\$50.00	\$25.00

**Recomendaciones:**

- Se prohíben llevar al interior del museo: armas, explosivos, drogas, alcohol, bebidas azucaradas, comida, jugos, refrescos, bebidas calientes, etc.
- Se prohíben llevar al interior del museo: mascotas, animales, plantas, etc.
- Se prohíben llevar al interior del museo: bicicletas, patinetes, etc.
- Se prohíben llevar al interior del museo: vehículos, etc.
- Se prohíben llevar al interior del museo: herramientas, etc.
- Se prohíben llevar al interior del museo: equipos de sonido, etc.
- Se prohíben llevar al interior del museo: equipos de video, etc.
- Se prohíben llevar al interior del museo: equipos de fotografía, etc.
- Se prohíben llevar al interior del museo: equipos de grabación, etc.
- Se prohíben llevar al interior del museo: equipos de comunicación, etc.
- Se prohíben llevar al interior del museo: equipos de transporte, etc.
- Se prohíben llevar al interior del museo: equipos de almacenamiento, etc.
- Se prohíben llevar al interior del museo: equipos de procesamiento, etc.
- Se prohíben llevar al interior del museo: equipos de salida, etc.

Los precios son por persona y no incluyen el transporte al museo.  
Cualquier duda o comentario, comuníquese al teléfono 55 53 46 11 11.  
CopaMUSEO-CDMX

Documentos de información y regulaciones del museo.

**Marketing and Motivation**



**Navigation**



**Interaction with the space (exhibition)**



**Interaction with the object (exhibit)**

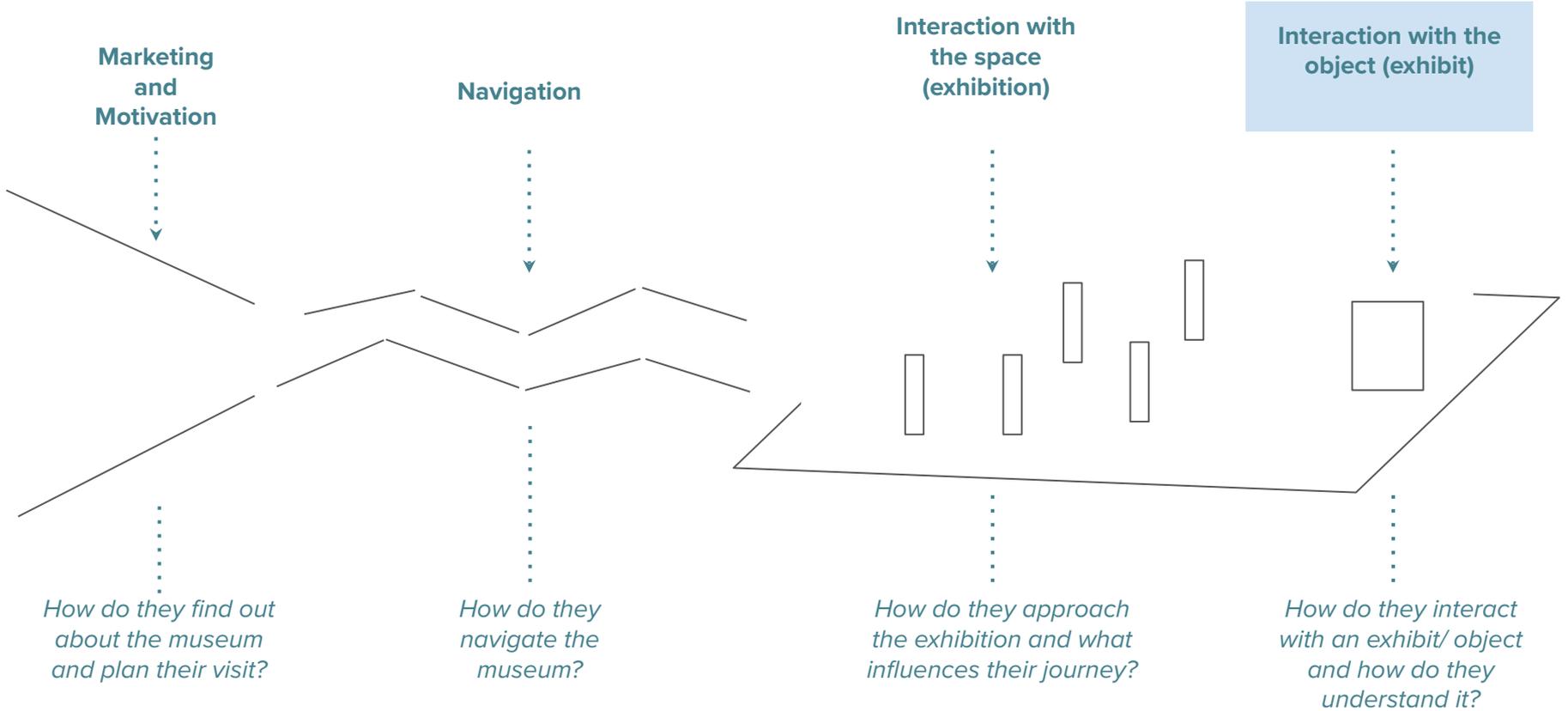


*How do they find out about the museum and plan their visit?*

*How do they navigate the museum?*

*How do they approach the exhibition and what influences their journey?*

*How do they interact with an exhibit/ object and how do they understand it?*



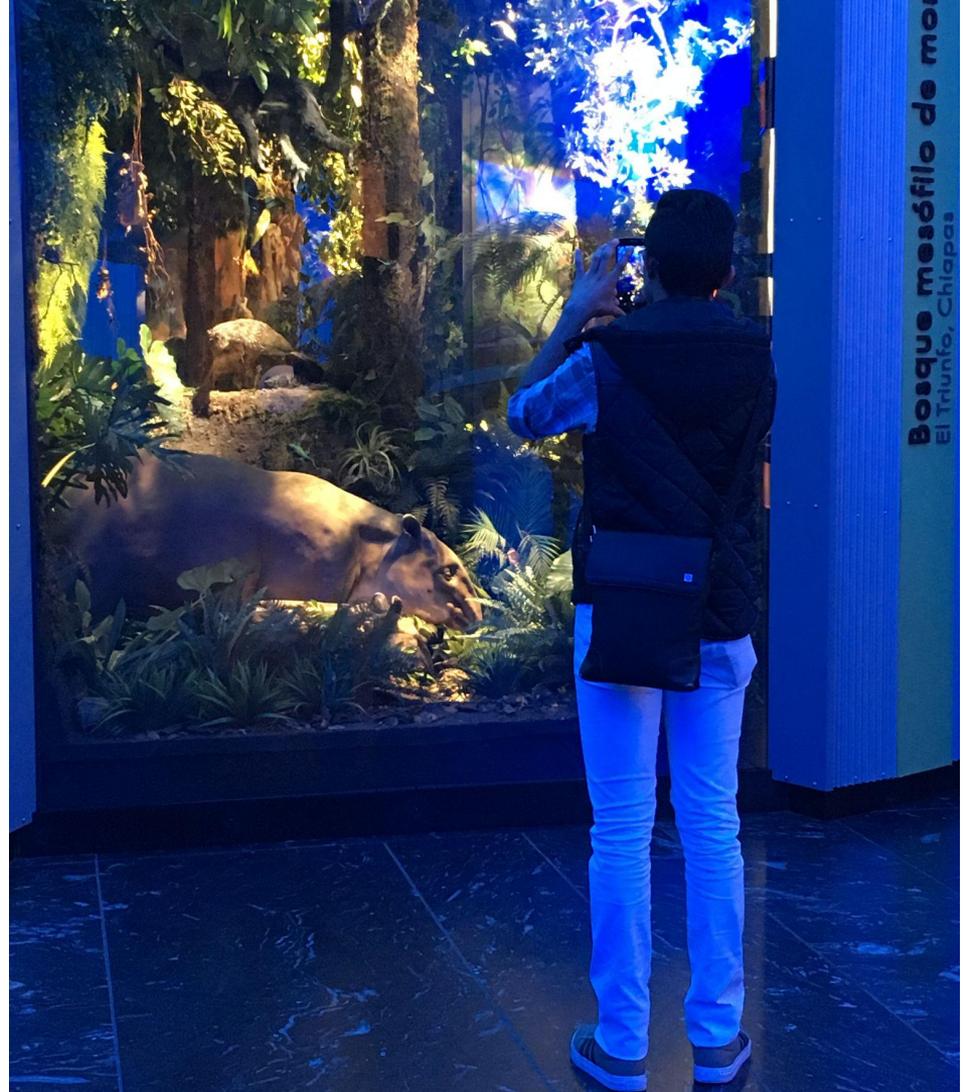
## Choosing a specific section:

### MEGADIVERSE MEXICO

This section: Megadiverse Mexico, aims to communicate the country's richness and explain what some of its protected natural areas are like.

Megadiverse= term to signal countries that concentrate the largest amount of endemic species (species that do not live elsewhere), vascular plants and vertebrate animals.







NO TOCAR

# Laguna costera Marismas Nacionales, Nayarit

Las lagunas costeras son ecosistemas de agua dulce o salada que se encuentran en la zona de transición entre el mar y el continente. Estas lagunas son importantes por su biodiversidad y por ser un hábitat para muchas especies de aves, peces y plantas. En Nayarit, las lagunas costeras son un recurso natural muy valioso y están protegidas por el gobierno estatal y federal.

Estos ecosistemas son ricos en diversidad biológica y ofrecen servicios ecosistémicos importantes como la purificación del agua, la regulación del clima y la protección de las costas. Casi todas las lagunas costeras están unidas a los manglares, como los de Marismas Nacionales.

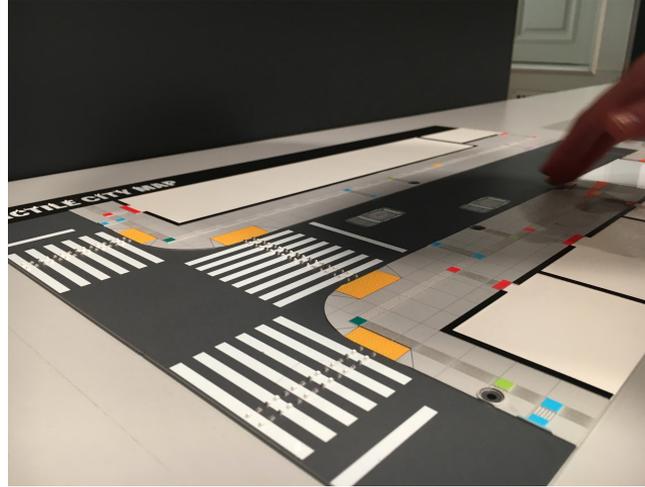


## Co-design!



**3 different  
sessions for all  
12 participants**

## References for concepts



## Sensory Appetites

Color and shape can amplify taste and smell. A bulbous lollipop tastes extra sweet. We associate red with the smell of cherries and brown with the smell of chocolate, spice, or tobacco. Designers stoke our appetites and craft our memories by associating flavors or smells with textures, patterns, and colors.

## Sensory Materials

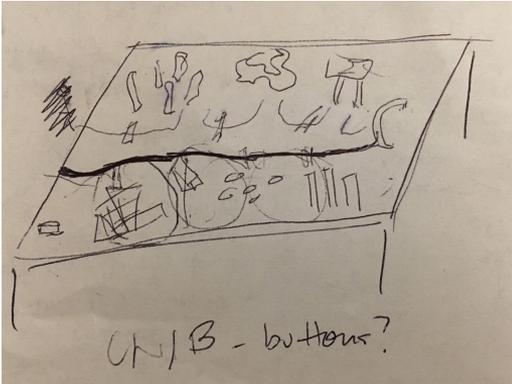
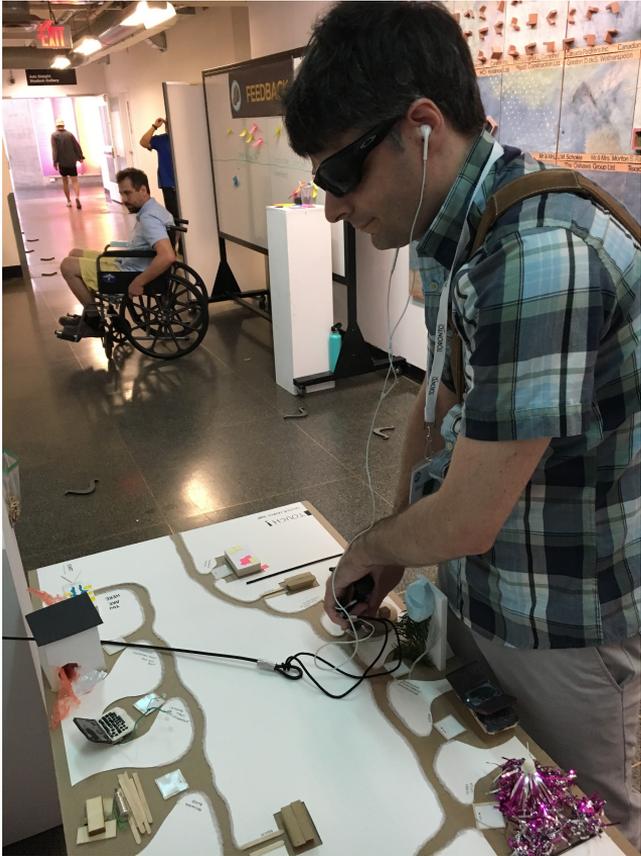
Products are designed with materials meant to influence our emotional and physical responses. Materials have shape, texture, hardness, and weight. A substance can be hot or cold, fuzzy or slick. A glass vessel or a slab of metal makes a distinctive sound when plunked or pinged. Visible textures applied to flat surfaces entice viewers to touch the world with their eyes. New materials sense and react to their environment.



## References for translation concepts



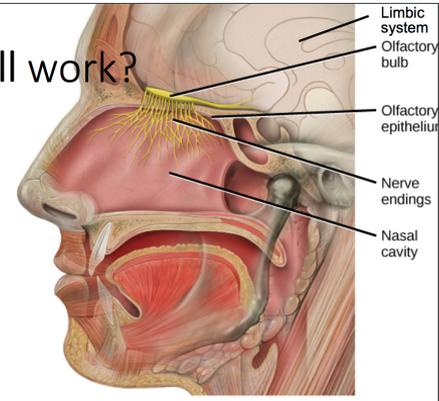
References for translation concepts



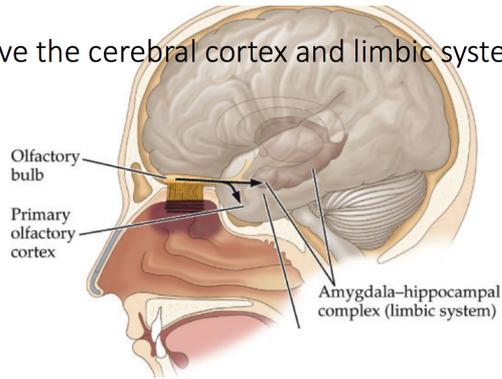
## Gustation and Smell

- Both use chemoreceptors
  - most primitive senses
  - translate chemical stimuli into action potentials that our nervous system can make sense of
  - taste buds & nasal passages detect molecules in food and the air around us- strongest at birth

## How does smell work?



- Both involve the cerebral cortex and limbic systems



## Types of Icons in Audio

	Auditory	Visual
<b>Spearcon:</b>		6 inches deep
<b>Auditory Icon:</b>		
<b>Symbolic earcon:</b>		

## Prototyping Sound

- Using your body
- Using the world around you

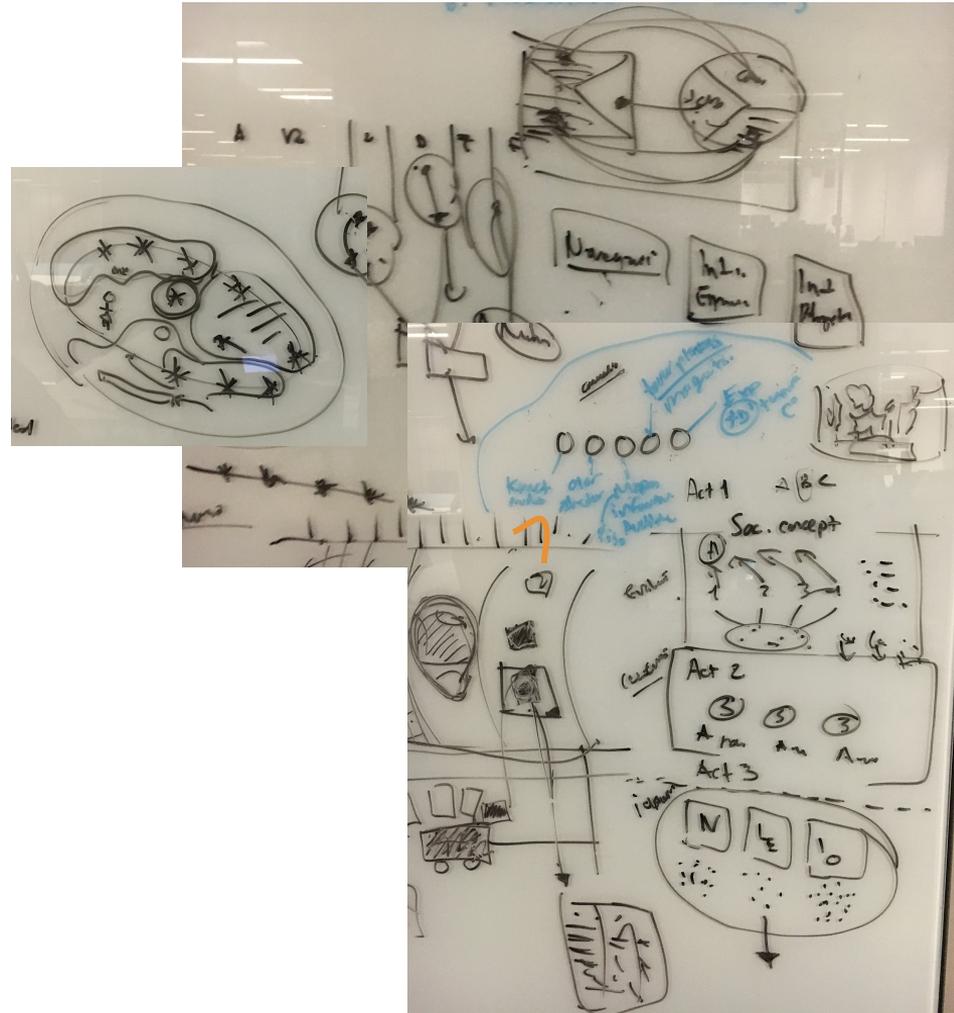
How might we avoid obtaining basic ideas only?

How might we understand the deeper needs for a translation?

## Sacrificial Concepts

*Sacrificial concepts are early, raw, potentially flawed concepts made visual/physical and used as a medium for creating reaction, response, and discussion among users and design teams.*

***We don't spend a lot of time on the concept itself, so that's how it's being sacrificed.***



# Official plan for Co-design: protocol, activities, groups

## To Do's and list of materials

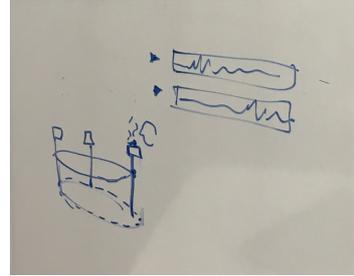
- Acabar guía
- Hacer proto audios
- Probar equipo/ dejarlo listo
- Revisar checklist
- Reconocer/ensayar taller

- Rotafolios
- Post-its
- Plumones (varios)
- Cámaras - fotos - video - 2 min
- Grabadora - audio - 2 min.

- Prototipos**
- Audifonos aislantes
  - Computadora → (Grabar audios)
  - Olores
- Materiales para prototipos**  
(ninguno)

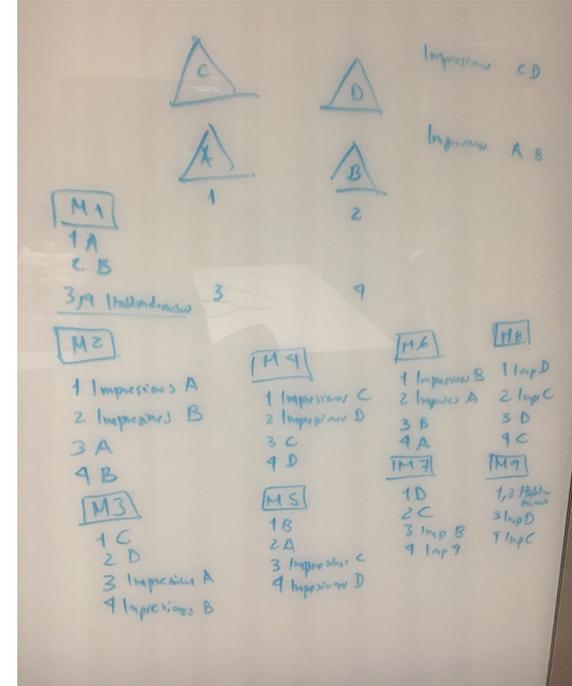
## Sacrificial Concepts

- Solista**
- P1 = Kinect** - audifonos  
- grabar cada sonido
- Bosque**
- P2 = Olor** - aromatizantes  
- estaciones - orden  
- holders
- Desierto**
- P3 =** Mapa informativo  
- Texturas para cada uno  
- audifonos bt  
- info grabado
- Brasero**  
**Sup...**
- P4 =** Magrepa fácil  
- plásticos, etc...
- Busque**
- P5 =** Experiencia 4D  
- spray difusor  
- tocan  
- ventilador...



- A - Kinect
- B - Piso
- C - Olor
- D - Magrepa
- D - 4D

## Teams Rotation plan



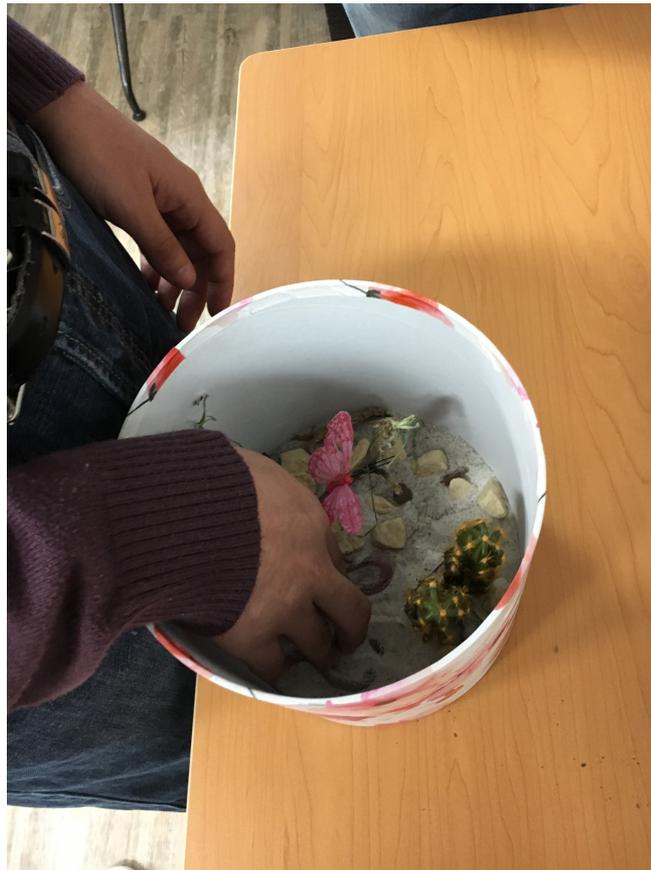
## Preparing concepts



## Sacrificial Concept 1

### Touch mini diorama

- Desierto de cactáceas. Tehuacán, Puebla. **(Dessert)**



## Sacrificial Concept 2

Smell elements from  
a region

- Bosque de coníferas  
y encinos.  
Bassaseachic,  
Chihuahua. **(Forest)**



### Sacrificial Concept 3

Move and hear as if you were inside diorama: as they virtually touched an element, they hear its sound (animal or plant)

- Selva tropical húmeda.  
Montes Azules, Chiapas.  
**(Jungle)**



## Sacrificial Concept 4

Step on, and hear different information  
on each texture

- Bosque mesófilo de montaña. El Triunfo, Chiapas. **(Forest)**



## Sacrificial Concept 5

Multi-sensory experience:  
hear environment and feel  
textures, humidity and  
movement

- Pradera de alta montaña.  
Volcán Popocatepetl,  
Puebla. **(Prey)**



# Prototyping



Share ideas for other territories



# Co-design DEBRIEF

Immediate findings learned from their prototypes

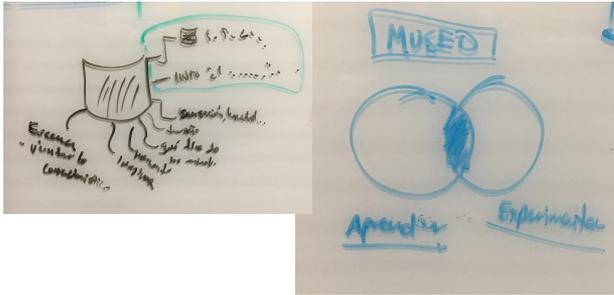
No to un todo  
 La historia no les dice nada si es artificial  
 Magenta no es relevante que sea pequeño 1

- Les gusta que cuente una historia
- To car los mantiene engaged 1
- Buscan tener control
- El tacto es el medio que prefieren para tener control 1
- Audios debe estar bien ambientado
- También, en palabras conversacionales 1
- Lenguaje más accesible, menos técnico, más descriptivo
- Fin tacto con pie tiene que relacionarse con el audio 3
- El tacto con los pies desde algo que se relaciona con el audio 3
- La construcción por ejemplo en la forma 1 - (brazos más - resistentes)
- Una experiencia que inspire a la siguiente
- Baja visión, mayor concentración en el contenido visual
- Olas relacionadas a reacciones
- Exploración por objetos 1
- Interacciones adoc a los objetos
- Tipos de vegetación por tipo de día
- No quieren volver

= Importante tenerlos sentir los límites de espacio 2

- Les gusta explorar, pero no les gusta la inmediatez 2
- Si no les dices por dónde se pueden mover, no se atraen
- Les da control de lo que quieren saber
- Una guía para el importante 3
- El toque es el único que debe info 3
- El tacto en los pies es un momento control puntos 3
- El olor los atrae mucho más a la realidad 1
- No les gusta volver al olor 4
- La suma de toda las elementos los hace sentir mejor la experiencia en el taller por todos los elementos 4
- Sentir en el lugar aparte calor 5 tipos
- Al estar en un sitio hay un explote y ellos muestran los otros
- El diferencial para ir a un museo a ver una obra es exponerse en los otros sentidos
- La potencial del sonido tiene que ser más atractivo 5

1 Magenta 2 Audios 3 Toque 4 Olor 5 10



REAL FOREST: Subject			DIORAMA: Translation of subject		PROPOSAL: Translation of subject	
AFFORDANCES	SIGNIFIERS	ACCESS	SIGNIFIERS	ACCESS	SIGNIFIERS	ACCESS
<b>-Humidity</b>	-Water/wet environment -Ground texture	Touch Smell	-Water effect in diorama with light reflection	See	-Soft humid ground of the model -Audio about the humidity levels and the additional name “Cloudy Forest”	Touch Hear See
<b>-Temperature</b>	-Wind -Cloudy sky	Touch See	-Additional title of diorama “Cloudy Forest” on label -Temperature range written on label	See	-Audio about the temperature range written on label	Hear
<b>-Freshness</b>	-Air -Plants odor	Smell See	-Light reflecting on plants and scenery setting	See	-Smell of fresh plants through hole -Audio with sounds of wind and water	Smell Hear
<b>-Color</b>	-Light showing colors	See	-Colored elements in diorama	See	-Color of plants on the model	See
<b>-Plants</b>	-Texture of plants -Sound of plants with wind -Smell of plants	See Touch Hear Smell	-Plants replicas in the diorama -Text about some plants written on label	See	-Plants replicas on the model -Audio about the vegetation and plants found -Smell of the plants through hole	Touch Hear Smell See
<b>-Animals</b>	-Sound of animals -Shapes of animals	Hear See	-Animals replicas in the diorama -Sounds through speakers -Text about some animals written on label	See Hear	-Animals replicas on the model -Audio with sounds of animals -Audio about the animals	Touch Hear See

## Definition...

Conflict between trying to make an existing exhibit accessible vs. creating an inclusive exhibit from scratch:

**When translating an object, will we be making the object accessible/ translating it as it is?**

**or will we create a whole new experience for that object?**

## Making the association for accessible interaction

### We should translate the Forest, not the Diorama of the Forest!

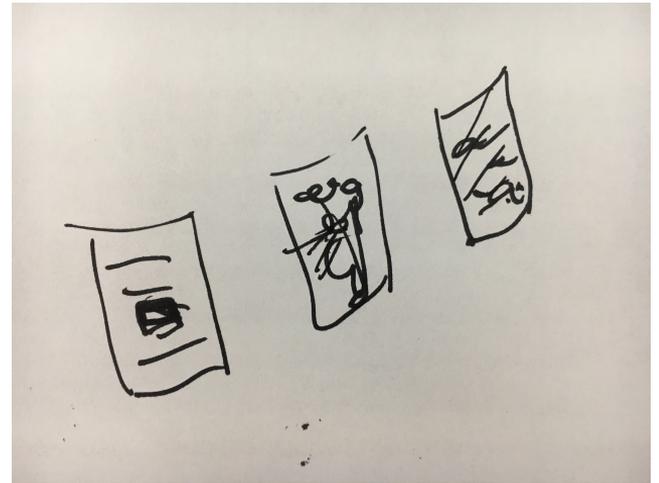
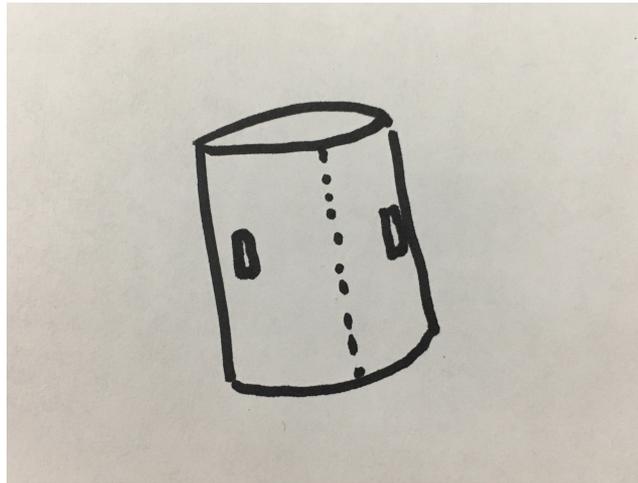
If the affordance is “Humidity” what signifiers will make a user feel humidity?

What signifiers did users prototype as the most functional and why?

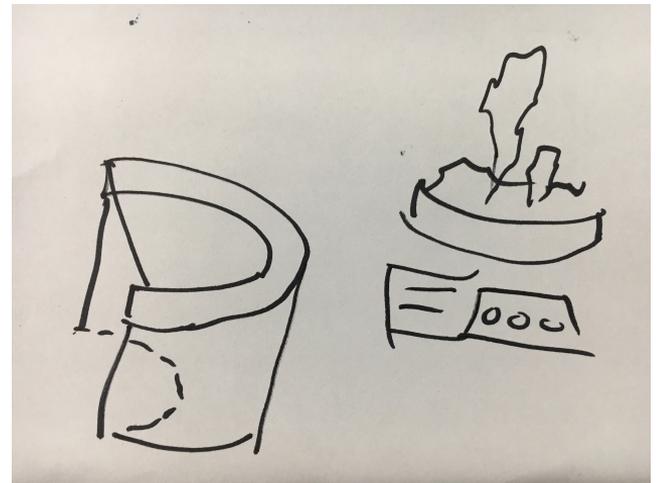
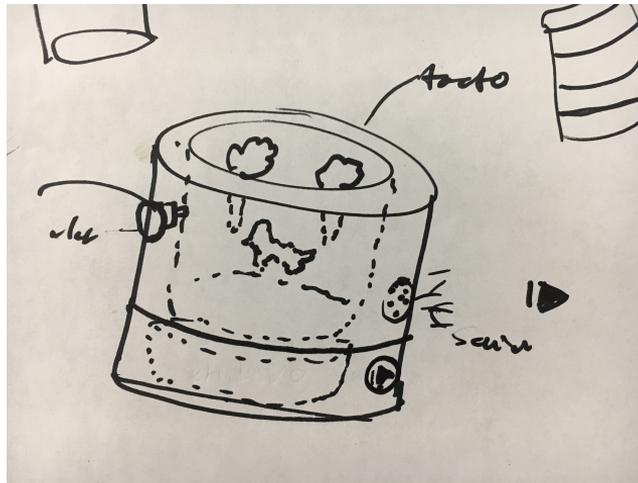


## Sketches for final prototype

The shape of the diorama?



Transporting the diorama?



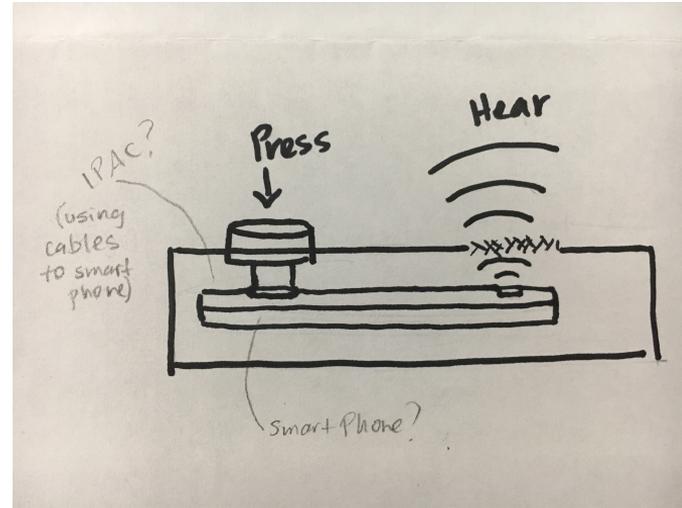
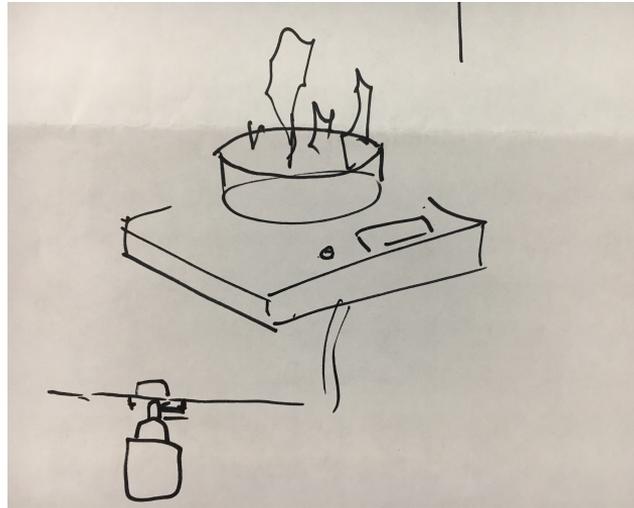
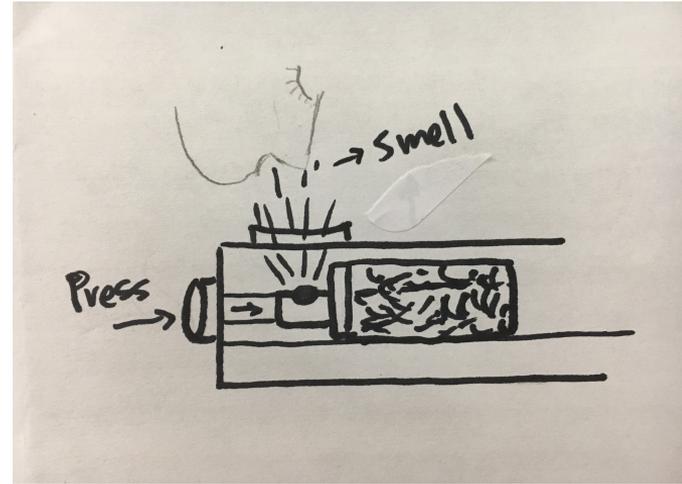
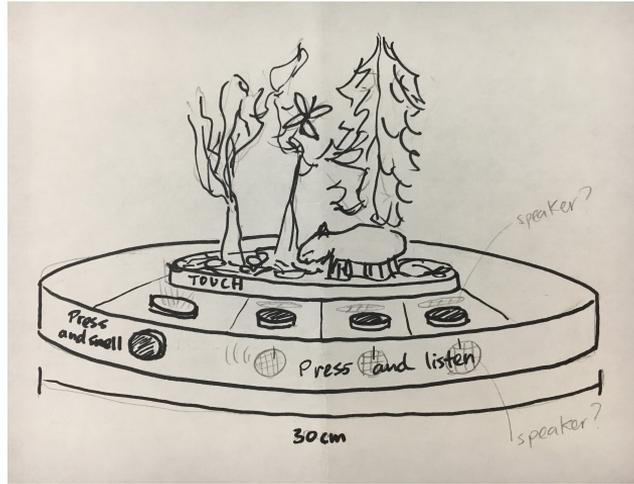
# Final prototype

Iteration after synthesis

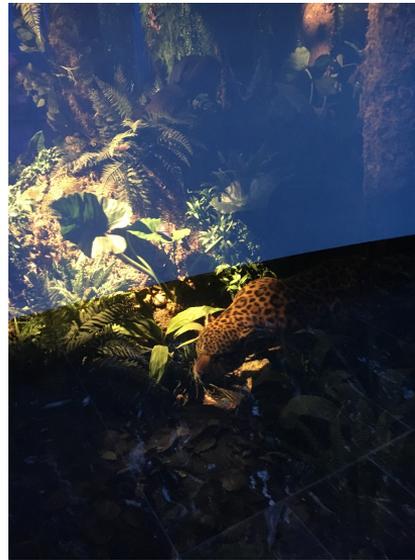
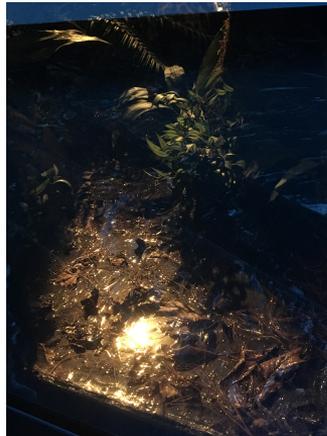
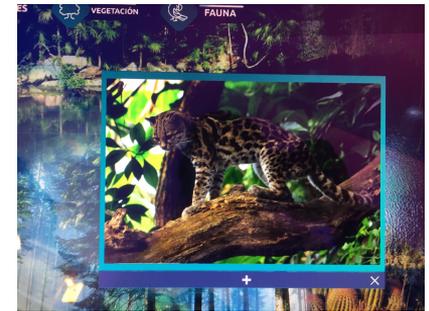
Laser-cut pieces: what material is easier to put together?

What level of programming?  
Touch button and hear

How to dispense smell?



## References for prototype's content



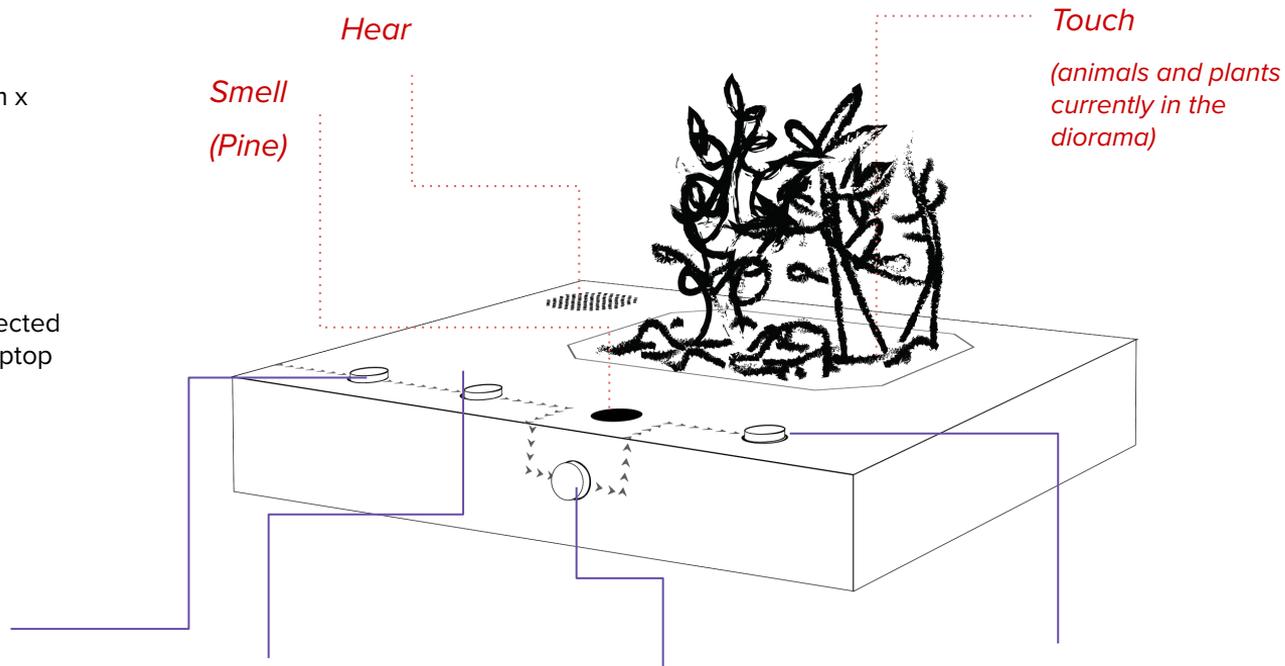
## Mountain Mesophilic Forest: Accessible Diorama



Size:  
50cm x 40cm x  
6cm

Material:  
MDF

Interior:  
Cables connected  
to external laptop



Press to hear:

Introduction

*“Hola esta es una representación del diorama del Bosque Mesófilo de montaña que puedes tocar, oler, y presionar los botones para escuchar...”*

Press to hear:

Info. card

*“Los bosques nublados... (lo que está escrito en el diorama actualmente)”*

Press to hear:

Plants

*“Las plantas que se pueden encontrar en este bosque son...”*

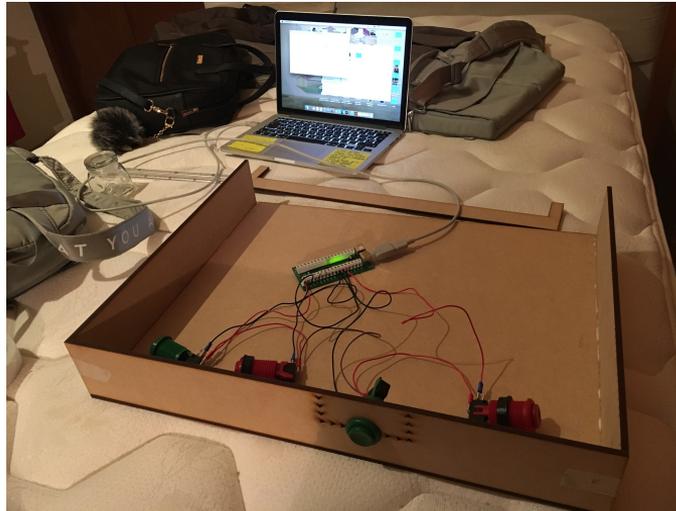
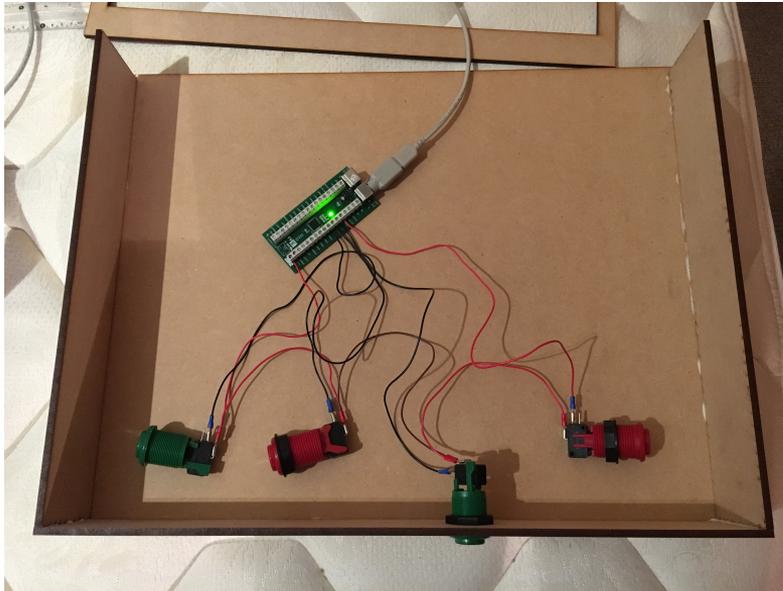
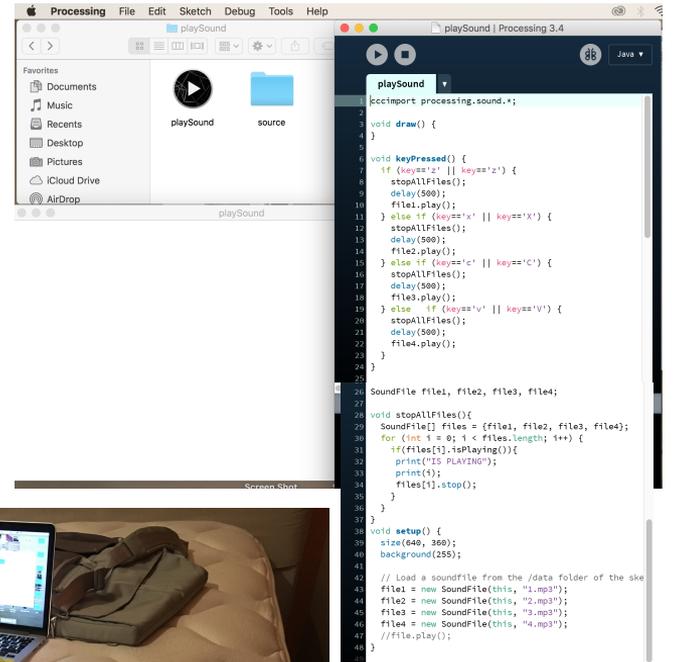
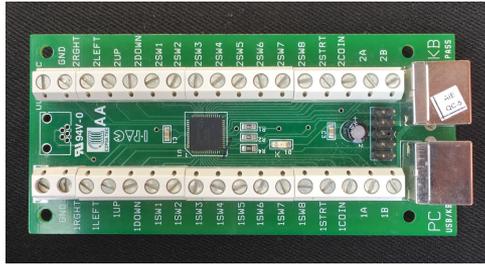
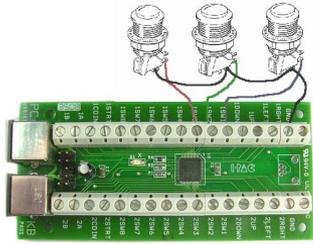
+Acércate a oler ¿a qué huele?

Press to hear:

Animals:

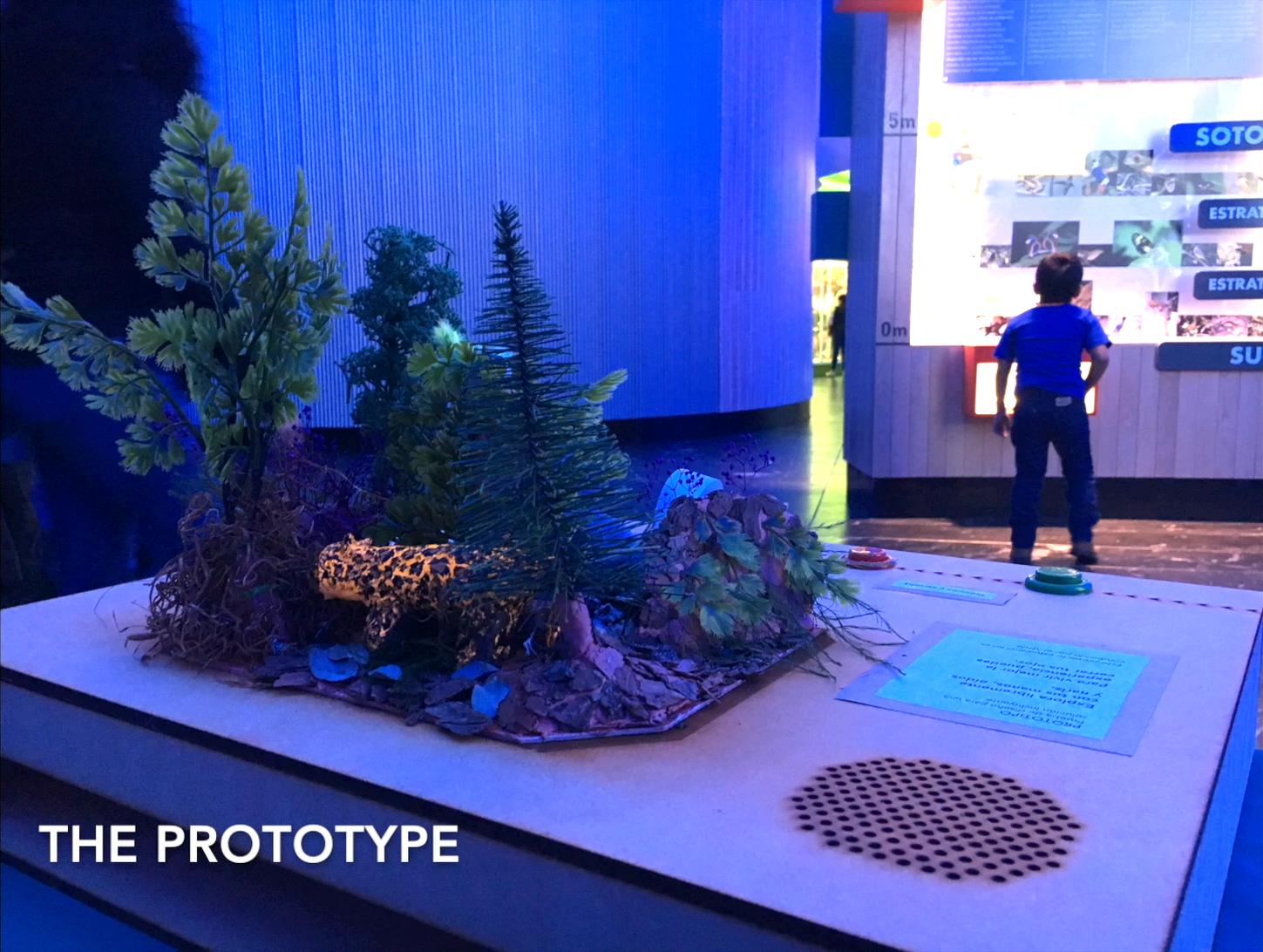
*“Los animales que se pueden encontrar en este bosque son...”*

# Building the electronics



# Building tactile representation





THE PROTOTYPE

## Some relevant findings to be adjusted:

**The first introductory audio worked perfectly**, it automatically helped visitors engage with the translation and invited them to start exploring.



## Some relevant findings to be adjusted:

**Visually impaired visitors didn't detect the tactile linear guide**, so hardly none of them found the button on the front side, neither they understood the sequence.



**They didn't find the lead to open the olfactory hole**, they skipped it thinking it was part of the surface, and felt unsure if they could open it because they thought they might break something.



## Some relevant findings to be adjusted:

**The audios were too long for visitors that could see, but long enough for blind visitors.**

Visitors wished the interesting facts were translated too, because it's what they wished they learned about.

E.g. smelling coffee or touching coffee grains...



## Some relevant findings to be adjusted:

When visitors started touching the tactile representation, most of them pressed the buttons on the way accidentally.



## Some relevant findings to be adjusted:

**HEIGHT:** tall participants had to bend too hard to reach the smell dispenser.

Visitors on a wheelchair had a hard time reaching out for the tactile representation and their chair wouldn't let them interact comfortably.

Most children were able to touch comfortably, but some shorter children had to be carried by their parents to reach.



## Some relevant findings to be adjusted:

**Having the tactile version of the diorama with all the elements in the same place did not allow users to explore each element thoroughly with their hands.**



## Other considerations

**We realized hygiene should be taken care of when having tactile interactions.**

Consider offering hand sanitizer at the beginning of the exhibition. This is important because there will be many people touching around.

The same for the smell dispensers, they should be designed so that noses don't have direct contact with the glass.



## TRANSLATION DESIGN POST USER TEST

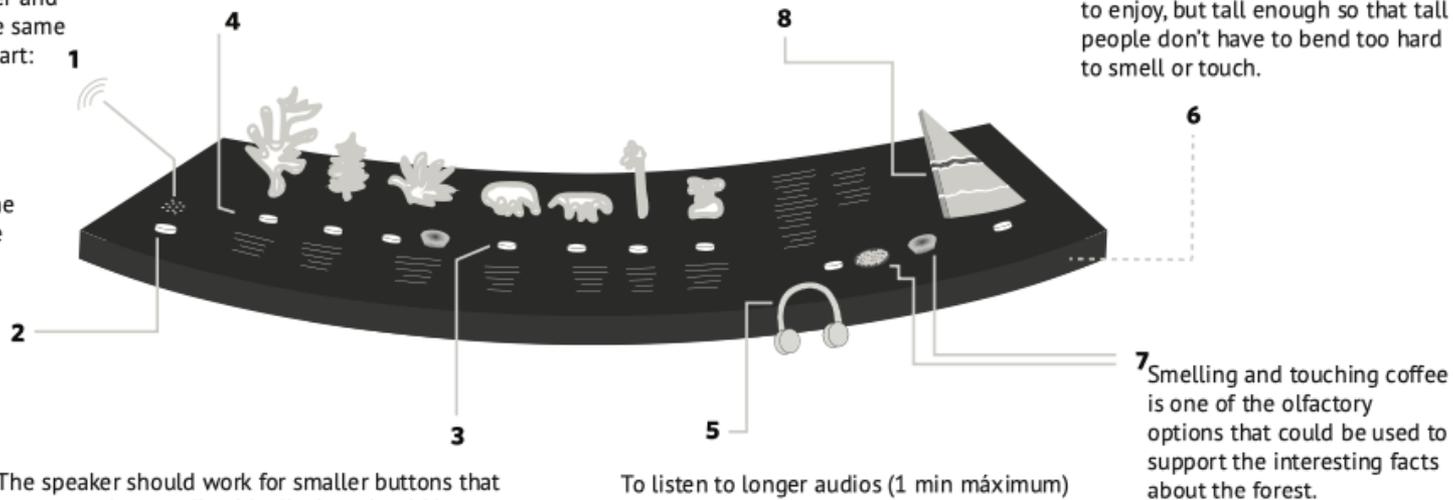
To be installed permanently next to the diorama, it would need to have an audio, through a speaker, inviting people to get closer and start interacting with it, the same audio instructing how to start: "touch the button".

There should be one button only closer to the edge of the platform that introduces the translation, like the audio from the first button that worked so well: "This is a representation of the first diorama..."

There should be enough space between buttons, smell dispensers and the tactile representation. There shouldn't be more than one row of elements so that people don't have to reach further and accidentally press buttons on the way.

Touching a model that represents the change in altitude of this region showing the forest in contrast with the sea level and textured to represent the cliffs.

Height: this is challenging, it should be short enough for children to reach and people on a wheelchair to enjoy, but tall enough so that tall people don't have to bend too hard to smell or touch.



The speaker should work for smaller buttons that have very short audios, ideally they should be next to the element (animal or plant) they are touching or smelling to learn about it. The audio then could combine information about that element with the sound that element naturally emits. E.g. "Rooaar! the Jaguar in the humid forest is very hard to find and is the only carnivore."

To listen to longer audios (1 min maximum) with more explanation, it is best to provide headphones. This information should contain only interesting facts with friendly language. E.g.: "did you know this forests are the principal generators of the famous south coffee? Next time you enjoy a cup of coffee remember it comes from the Humid Forest from Chiapas..."

Smelling and touching coffee is one of the olfactory options that could be used to support the interesting facts about the forest.

REAL FOREST: Subject			DIORAMA: Translation of subject		PROPOSAL: Translation of subject	
AFFORDANCES	SIGNIFIERS	ACCESS	SIGNIFIERS	ACCESS	SIGNIFIERS	ACCESS
<b>-Humidity</b>	-Water/wet environment -Ground texture	Touch Smell	-Water effect in diorama with light reflection	See	-Soft humid ground of the model -Audio about the humidity levels and the additional name “Cloudy Forest”	Touch Hear See
<b>-Temperature</b>	-Wind -Cloudy sky	Touch See	-Additional title of diorama “Cloudy Forest” on label -Temperature range written on label	See	-Audio about the temperature range written on label	Hear
<b>-Freshness</b>	-Air -Plants odor	Smell See	-Light reflecting on plants and scenery setting	See	-Smell of fresh plants through hole -Audio with sounds of wind and water	Smell Hear
<b>-Color</b>	-Light showing colors	See	-Colored elements in diorama	See	-Color of plants on the model	See
<b>-Plants</b>	-Texture of plants -Sound of plants with wind -Smell of plants	See Touch Hear Smell	-Plants replicas in the diorama -Text about some plants written on label	See	-Plants replicas on the model -Audio about the vegetation and plants found -Smell of the plants through hole	Touch Hear Smell See
<b>-Animals</b>	-Sound of animals -Shapes of animals	Hear See	-Animals replicas in the diorama -Sounds through speakers -Text about some animals written on label	See Hear	-Animals replicas on the model -Audio with sounds of animals -Audio about the animals	Touch Hear See

# Roadmap of Interventions for Inclusion at the MNHEC

Less effort

More effort

FIELD OF ACTION	SHORT TERM	MEDIUM TERM	LONG TERM	
DIFUSION AND DRIVERS	<p>Information about accessibility in the museum on the internet</p> <p>Broadcasting of inclusive practices in the museum</p>	<p>Audio on website introducing the museum</p> <p>Advertising and awareness creation through inclusion organizations</p>	<p>An accessible website for the museum</p> <p>Accessible coordinates and instructions to get to the museum</p> <p>Audio signage at the Chapultepec Forest that helps get to the museum</p>	<p>Higher impact</p> <p>Lower impact</p>
NAVIGATION	<p>Indicators where the restrooms are</p> <p>An inclusive feedback section for visitor comments</p> <p>At the entrance, a welcoming audio to confirm we arrived at the right place, like the Torre Mayor building that has an audio reproduced every time it senses people approaching saying "Welcome to the Torre Mayor"</p>	<p>Interactive tactile map at the entrance</p> <p>Museum app for iphone that gives them what orientation information they might need, and where they are</p> <p>Special guides for cane users</p> <p>Create a consistent system that allows visitors to find the same elements across each section</p> <p>A system that informs about the crowd numbers in each section (similar to Six Flags with information as to how many people in each game's line</p>	<p>Tactile floors at key junctions</p> <p>Each vault with its own personality or identification system using sound, color, and so forth</p> <p>0342015: regulation norm that determine accessibility in the Work Environment by the Mexican Secretary of Work</p> <p>Informative pamphlet in braille</p> <p>Mobile carts available for anyone who wants to ride to each section instead of walk</p>	<p>Higher impact</p> <p>Lower impact</p>
INTERACTION WITH EXHIBITION ROOM	<p>Staff training and disability sensitization</p> <p>Special group tours using objects they can touch</p> <p>Special tours using an inclusivity cart like the AGO</p> <p>Inclusive activities where vision impaired patrons can interact with other visitors</p>	<p>Specialized staff that can help describe the environment and objects</p> <p>Inclusive conductive thread</p> <p>Ways in which they can have an individual cultural experience without a third-party interfering their learning possibilities</p> <p>An inclusive patriotic policy, enacted through</p>	<p>Beacons</p> <p>Inclusive signage</p> <p>Audio tour</p> <p>Clear change of floor textures indicating change of sections</p> <p>Changes in light, temperature or sound effects</p>	<p>Higher impact</p>



## Takeaways

- **Designing for the extremes** truly improves the experience for everyone
- Codesign is key= Identify the problems together and ideate solutions **together**
- **Diverse groups** come up with the best solutions
- **Simplest solutions** are the most effective
- Inclusion and accessibility **doesn't require additional investments**



Thank you

