

Center for Innovation Design Challenge & Partnership Playbook

A guide for collaborating with partners to
create relevant and inclusive experiences

OMSI

Center for Innovation Design Challenge
& Partnership Playbook

1st Edition

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Special thanks to

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Introduction





About This Playbook

The Design Challenge and Partnership Playbook is a guide for OMSI's Center for Innovation (C4I) team to develop Design Challenges. It captures the development of a whole Innovation Station, of which the Design Challenge is the anchor experience. (See pages [5](#) and [13](#) for more information about C4I and the Innovation Stations.) This tool supports keeping the process streamlined and maintaining agility. It should be updated regularly to reflect best practices. As a guide, it should be consulted before, during, and after the design challenge development process.

It will give clarity to:

- Building collaborative relationships between OMSI and community organizations
- Navigating decision points
- Aligning experience goals, resources, and practices

Partners are essential to the design challenge development process.

These pages capture processes and strategies for relationship building between OMSI and partner organizations. Partners will be able to understand and anticipate the development process, roles, and decision making opportunities, and to see how they can and will be involved.



Evolving the Museum Experience

This playbook and work captured within it were made possible in part by the *Evolving the Museum Experience: Human-centered design to inspire creative community-based solutions* (EMX) project (2018-2021) funded by the IMLS.

The goals of EMX were to:

- Create hands-on design challenges that inspire diverse youth and families to use 21st Century Skills to imagine and test solutions to real-world problems
- Integrate community input into our Center for Innovation and Statewide Outreach strategic initiatives
- Work closely with Oregon MESA for reciprocal benefits
- Create clearer, more meaningful paths through the Oregon STEAM learning ecosystem for youth and families

OMSI & Oregon MESA

OMSI's relationship with Oregon MESA has been indispensable in the development of the Center for Innovation, the Innovation Stations, and design challenges. You will see many references to them throughout the playbook. One way in which they have particularly influenced us is in weaving human-centered design into our processes so that we are centered on empathy and altruism. Because of this influence, this playbook is organized using steps of the human-centered design process.

See [Appendix A](#) for information about Oregon MESA and the OSI-MESA relationship.

Who is This Playbook For?



Museum Professionals

- To discover how partnerships with aligned organizations can lead to many opportunities, one of which is content development for hands-on design challenges
- To understand that partnerships with target audiences are essential to creating content that is relevant to target audiences
- To create shared understanding of the design process, Innovation Stations, and Design Challenges

Development Officers

- To learn how organizations with expertise and resources can integrate into the process
- To recognize the different levels of involvement available to partner organizations

Partners

- To see the phases of development
- To understand where they are to engage and to find best opportunities for involvement

Center for Innovation

OMSI is committed to working with students, families, schools, local industries, and community partners to create an ecosystem for science learning in and out of school. OMSI's Center for Innovation offers open-ended and collaborative experiences for students, teachers, and adults to explore interdisciplinary STEAM subjects. Visitors learn to apply their understanding through designing, making, and testing sustainable, creative solutions to real-world problems as identified by the United Nations' Global Goals for Sustainable Development. OMSI engages diverse audiences through co-developing experiences with them, using the arts and design as access points to STEAM content, and providing spaces to support diverse audiences in practicing and persisting in design challenges without inhibition. OMSI also partners with industry, higher education, and community partners to tell stories of innovation, feature emerging technologies, provide access to tools, and provide connections to STEAM careers. Visitors will be empowered to gain the skills, knowledge, and confidence necessary to affect positive change in their own lives, in school, and in the world.



Innovation Stations

The Center for Innovation strategy extends beyond any physical space in the museum, but is most physically conspicuous in OMSI's Turbine Hall at the two Innovation Stations. Innovation Stations are exhibit spaces where museum guests actively apply STEAM knowledge, 21st Century Skills, and design and engineering processes to explore solutions to global challenges and understand the effects of the problems and solutions at a local scale. The intention is that every 2–3 years the experiences in an Innovation Station will be refreshed to focus on a new Global Goal.

See the section “[About Design Challenges & Innovation Stations](#)” on page 13 for more details about the Innovation Stations.

Center for Innovation Guiding Principles

Target Audience

- 9–14-year-olds
- People historically excluded from STEM: people of color, girls, and people with low socioeconomic status

Content

- Frame global challenges at a local scale
- Make connections to careers and industries
- Use design and engineering processes as a means for exploration
- Support 21st Century Skills: collaboration, problem solving, critical thinking, and communication

Experience Design & Engagement

- Always humanize content through examples of lived experiences, storytelling, and keeping people in the foreground. This encourages empathy and altruism.
- Include diverse perspectives and authentic voices and images of communities and community members, especially when creating content about structural barriers and inequities that many populations face.
- Promote human-centered design mindsets: creative confidence, make [things], learn from failure, empathy, embrace ambiguity, optimism, iterate. ([IDEO.org](https://www.ideo.org/), 2015)
- Create experiences that are relevant to target audience's own lives to help empower informed action and promote a sense of self-efficacy.
- Design content for teens that is shareable, scalable, and snackable. In design, that means prioritizing experience, quotes, short videos, and images.
- All exhibit copy must be bilingual (English and Spanish) to be more welcoming and accessible to diverse audiences.





Equity Action Framework

OMSI has developed an Equity Action Framework ([Appendix B](#)) that outlines how we integrate an equity lens and activism into all aspects of our institution.

This framework is similar to the project team’s approach for creating design challenges with community partners, and it informs future Center for Innovation and Innovation Station work. It reminds us that partner involvement must be authentic and meaningful so that the resulting design challenge experience is representative and relevant to our target audience’s experiences.

Each of us has the power, authority, and responsibility to interrupt and address patterns in our systems that perpetuate inequities.

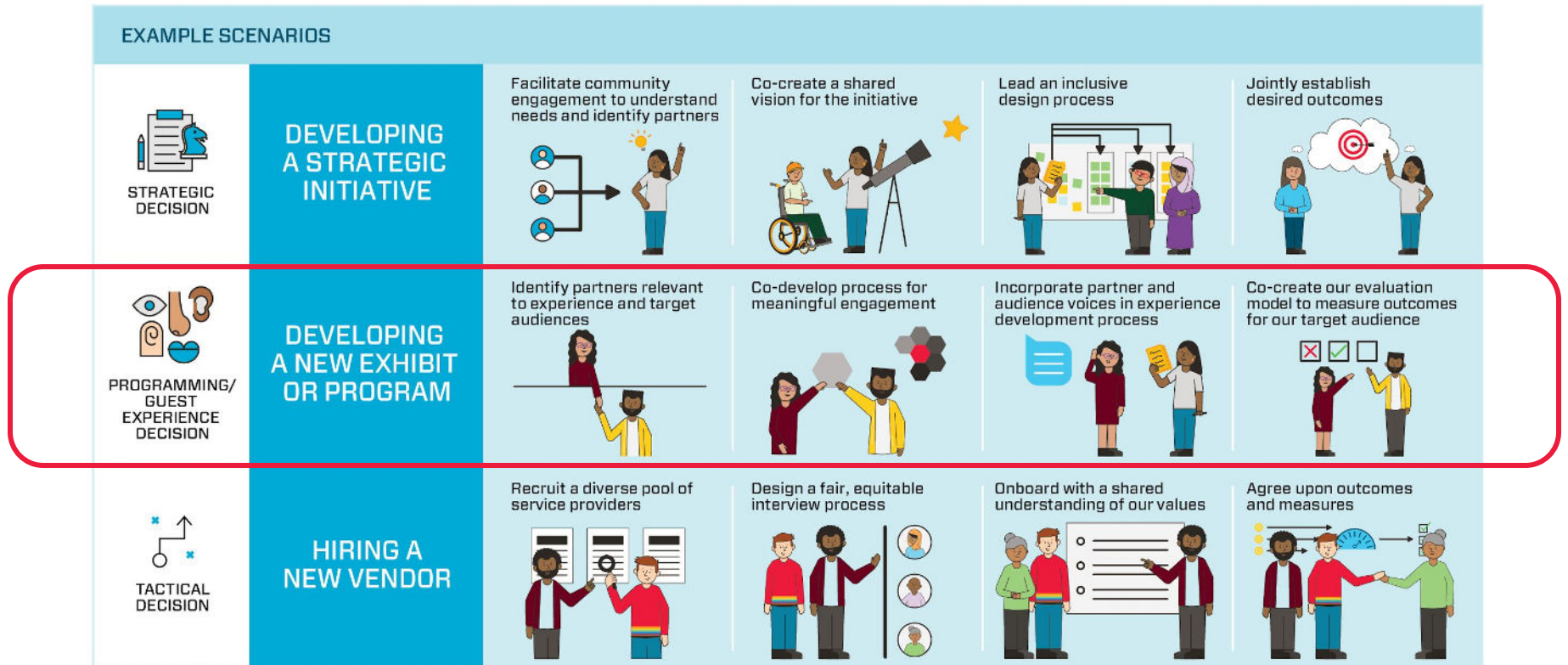
OMSI Culturally Relevant Experiences Toolkit

—an internal resource for creating culturally relevant learning experiences

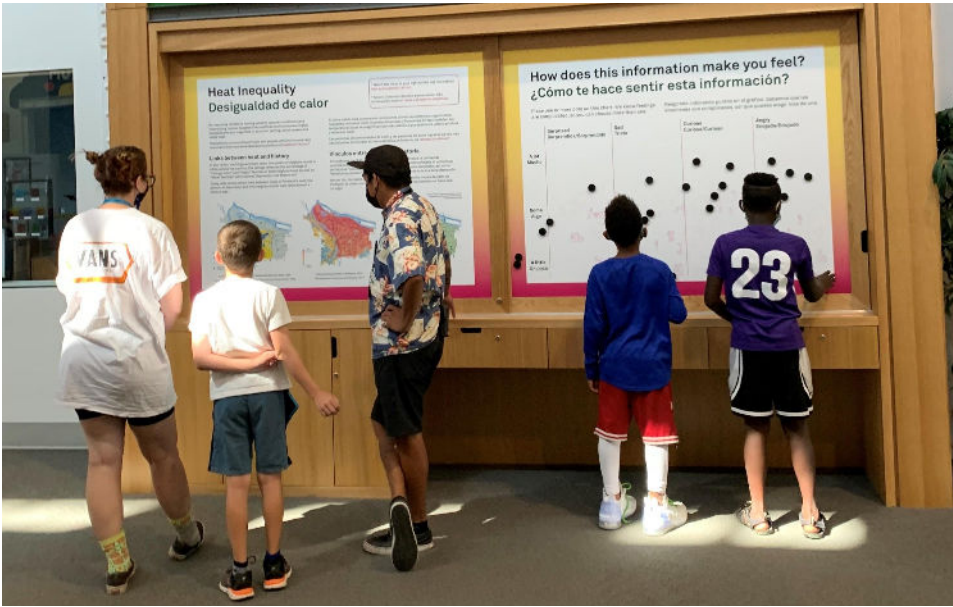
Equity Action Framework, continued

OMSI is committed to including diverse perspectives in the science learning experiences we provide and to dismantling systemic barriers by addressing disparities in our staffing, business practices, and public engagement. We lead with race. In order to advance our 20-year vision and actualize equitable learning experiences for all learners, we must reimagine our guest experience.

Currently, OMSI experiences are key engagements in Oregon’s education ecosystem for *some* learners. As we examine systems of oppression and histories of inequities, it’s imperative that we reframe our practices to create culturally relevant experiences that amplify the rich experiences diverse learners bring to STEAM learning.



In this highlight from the Equity Action Framework, design challenges for the Center for Innovation align with the description of “Developing a New Exhibit or Program”.



Partnerships & Design Challenges

OMSI's strategic priorities are based on community listening sessions, and partnerships with community organizations continue to keep community priorities at the heart of OMSI work. Since the Innovation Stations address complex social problems that affect all communities, partnership is a central piece to the Center for Innovation's success.

Partnerships happen in a myriad of ways. Although partner organizations can range in size and focus, they all share alignment with OMSI's values and strategic goals. This playbook shows a range of levels for partner participation.

See [Appendix C](#) for OMSI's 2020-2025 strategic priorities.

Community Partnerships

- Root content in challenges relevant to the community
- Create opportunities for co-developing design challenges to ensure relevance
- Provide clear integration between design challenge content and career connections



Practices for Success

Some norms that have contributed to the OMSI team's success:

- Embody the learning impacts we hope to share with the public
- Failing and sharing, learning from mistakes
- Welcome the sharing of skills and expertise within the internal team and among partner organizations
- Embrace ambiguity
- Communicate directly about roles and responsibilities connected to the timeline and deliverables
- Using “Yes, and...” and “I wonder if...” practices
- Keeping what we’ve heard from our target audience and partners at the core of design challenge development

Many of these are practiced by our partner, Oregon MESA, who highlight three of these practices in their Invention Toolkit ([page 20](#)): fail forward, encourage wild ideas, and remember the why.





Practices for success with partners

These practices buoyed our success in working with community partners, and were practiced by both OMSI and partner teams:

- Becoming comfortable communicating with partner organizations and communicating frequently
- Being flexible and adaptable to the progress of the partnership
- Paying attention to power dynamics
- Refining roles as the project progresses
- Empowering both OMSI and partner organizations to lead meetings and activities
- Knowing boundaries and declining activities beyond scope
- Asking thoughtfully for resources and graciously accepting a “no” answer
- Having a shared understanding of the story of the partnership and how and where to share the story



About Design Challenges & Innovation Stations



The Innovation Stations

The Innovation Stations are home to design challenges and also feature other experiences to explore a given problem more broadly. The multiple components work together to make the experience multi-modal and multi-layered, and provide multiple points of entry. The design challenge is the anchor experience in an Innovation Station. This suite of experiences, in combination with the physical design of the space, encourages museum guests to slow down and engage with exhibits and each other. We've often observed dwell times of over ten minutes.

See [Appendices E and F](#) for case studies of two Innovation Station exhibit experiences.



Our definition of a **design challenge:**

an open-ended, interactive exhibit experience in which visitors use objects, materials, and a test bed to design and test solutions to a given problem

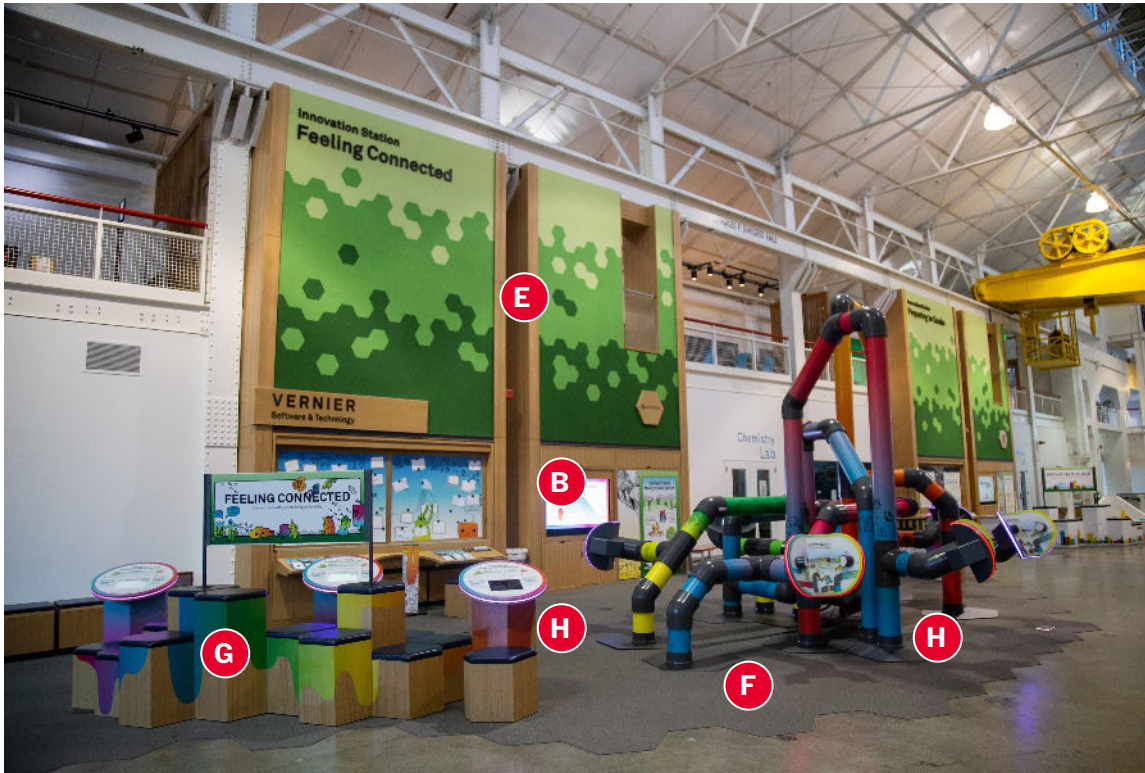
Innovation Station Features



The design of the Innovation Stations encourages museum guests to slow down and spend time interacting with exhibit content. Physical features of the Innovation Station include:

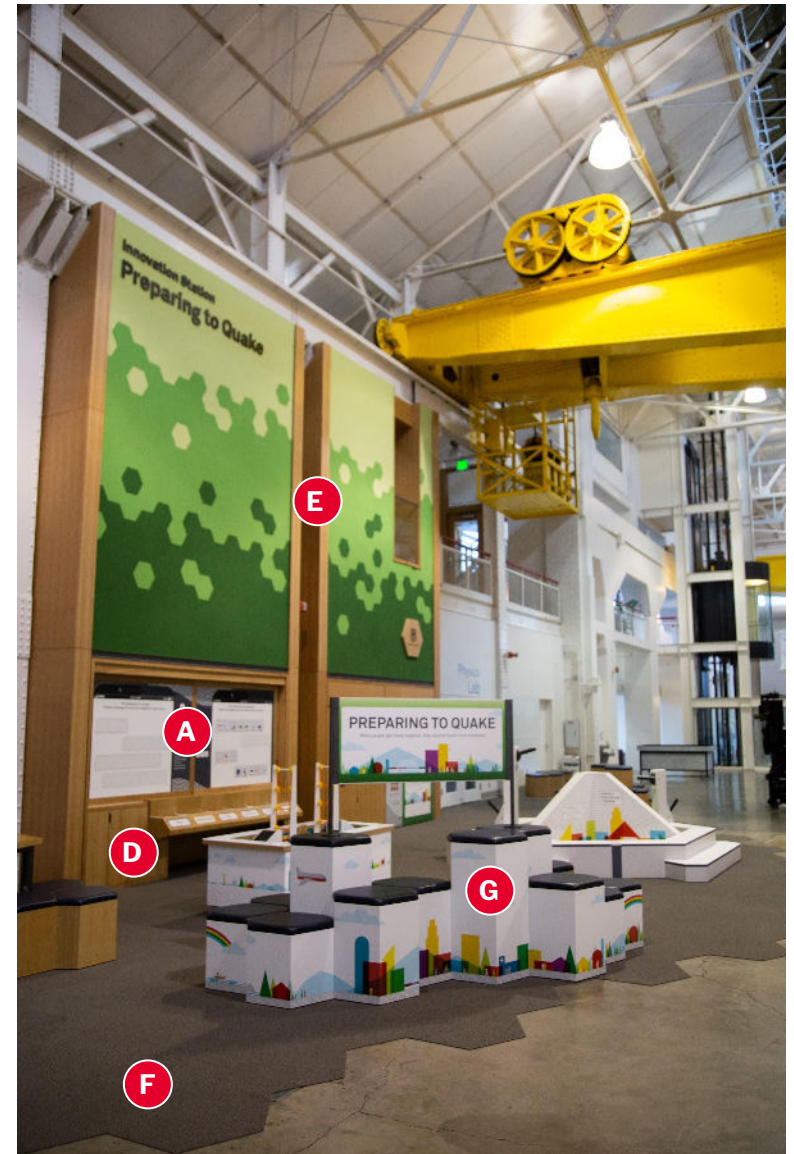
- A** Magnetic white boards
- B** Large touchscreen monitors
- C** Combination magnetic whiteboard and display cabinets on casters (shown placed in built-in wall storage)
- D** Numerous built-in storage cabinets

(continued on next page)



Physical features of the Innovation Stations, continued:

- E** Warm wood cabinetry and felt designs to attract and invite participation
- F** Carpeted floor to define space from the concrete floor of the hall
- G** Modular upholstered seating “pods” of varying heights that can be moved as needed or anchored together to be sculptural features
- H** Abundant power outlets in the floor and cabinets





The Global Goals

The Global Goals (officially known as the Sustainable Development Goals or SDGs) are the overarching theme of all of the Center for Innovation (C4I). We combine the Global Goals with the C4I vision in the big idea, “We need to work together to solve the big problems in the world.” C4I experiences frame these global challenges on a local scale by featuring local stories and presenting the problems as actionable.

At OMSI, museum guests are introduced to the Global Goals as the overarching theme in the Global Goals Hub. The Hub (photo on next page) includes panels that make high-level connections between the Global Goals and each Innovation Station’s content.

In 2015, world leaders agreed to 17 Global Goals... These goals have the power to create a better world by 2030, by ending poverty, fighting inequality and addressing the urgency of climate change. Guided by the goals, it is now up to all of us, governments, businesses, civil society and the general public to work together to build a better future for everyone.

globalgoals.org



Innovation Stations & the Global Goals

Each Innovation Station aligns with one of the 17 Global Goals. Ideally, each Innovation Station will change its Global Goal theme every 2–3 years to provide new experiences to museum guests and to explore a variety of local challenges.

The Global Goals are complex social problems, covering areas like poverty, hunger, climate, and inequality, so it's challenging to interpret the content to be accessible and relevant to a wider audience, particularly to our 9–14-year-old target audience. Partners are integral in meeting this challenge by rooting the challenges in community experiences.

Additionally, because these are systems-based problems, the OMSI team found it challenging to apply product-oriented design processes in our design challenges. Oregon MESA helped us work through this by reminding us to center our exhibit development process on the experiences of our audience and to apply constraints to help narrow our focus.

Find a table of Global Goals in the Innovation Stations to date in [Appendix D](#).

Human-Centered Design

The design challenge is rooted in the human-centered design (HCD) process. HCD differs from other engineering or design processes by its foundation in empathizing with a user. As its name states, the process centers on human experiences. This is key to C4I, which grounds STEAM knowledge in altruism and empathy.

Many versions of the process exist, but they are generally some form of Ask, Imagine, Design, Test, and Repeat, with steps to ask for and incorporate feedback from users. Oregon MESA's INVENTOR process (next page) emphasizes the inclusion of human elements. It inspired OMSI team practices during Innovation Station exhibit development, particularly keeping our target audience's interests at the heart of the concept.

Elements of the HCD process appear in Innovation Station experiences (such as the image to the right from *Feeling Connected*). For example, exhibit components may ask visitors to think about an impacted community or individual (empathize), to build and test solutions (imagine, design, test), to improve their solution and try again (repeat, iterate), or think about the influence of the challenge in their lives (reflect). However, the experiences are not about learning the HCD process. Because the core content of framing Global Goals at a local, personal level is so complex, adding HCD learning goals would compete with and detract from the primary learning objectives.



INVENTION TOOLKIT

Inventor's Mindset

- Fail forward
- Encourage wild ideas
- Remember the why

I

INTERVIEWING

and
EMPATHIZING

N

NAMING

and DEFINING
the problem

V

VISIONING

and inspiring
IDEATION

E

EXPERIMENTING

and making a
PROTOTYPE

N

ENGAGING

client feedback

T

TELLING

the
WORLD!

O

OBSERVING

your identities,
values, and biases

R

REFLECTING

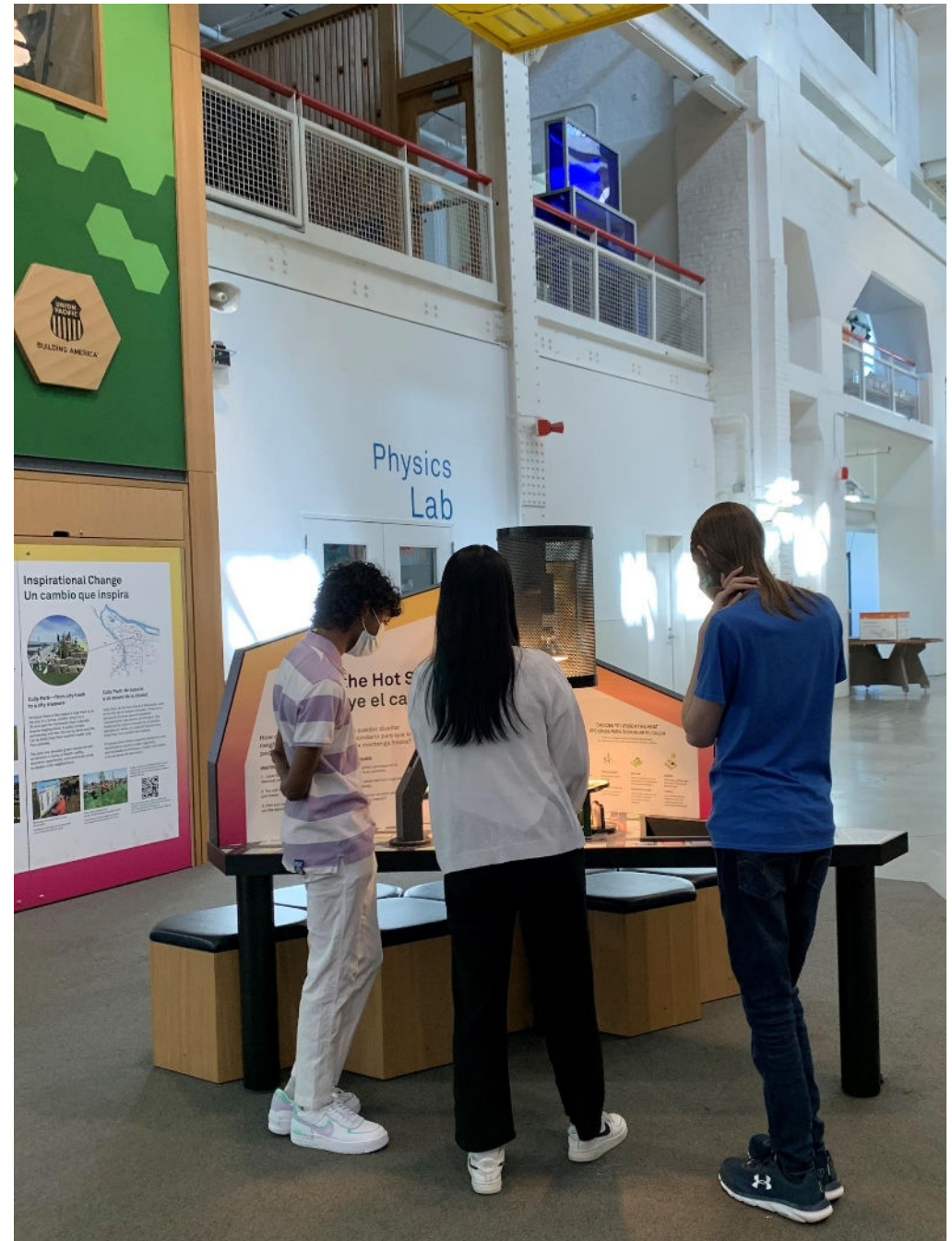
on your impact in
the service of equity

Human-Centered Design & Co-creation

Through the *Evolving the Museum Experience* grant, OMSI C4I staff had the opportunity to learn and apply the INVENTOR process through workshops with our partner, Oregon MESA. The workshops not only unified the team in our commitment to using the process, it also helped us to explore possible exhibit experiences and how to engage and represent affected communities in the exhibit process.

We entwined the INVENTOR process with OMSI's usual exhibit development phases ([page 33](#)) so that, from the start of the project, we were using a development process that engaged the audience (or client, in MESA's process) to guide and test exhibit designs. In the last year of the project, co-development included a Teen Exhibit Development Team that worked with OMSI staff to create exhibit experiences for the *Heat Inequality* Innovation Station.

Learn more about our experiences co-developing with youth in [Appendix G](#).



ASK
Laying the Groundwork with
Partnership Development



Partnerships

Before work on a design challenge can begin, OMSI must lay the groundwork of cultivating community and industry partnerships. These partnerships are key to the success of design challenge development. Partners influence all parts of the process of design challenge creation, such as choosing the topic, determining the timeline, and designing and prototyping experiences. Setting the foundation for the relationships needs to begin long before the design challenge project kick-off.

Each relationship between OMSI and a partner organization is unique. Different partners will interact with the process in different ways, and many of them will take on multiple roles. The suggestions for relationship building and participation in the design challenge process in this playbook are examples, but not an exhaustive list.

Partners engage in different ways. It is important to work with them to establish clear benefits and value from their perspective. Benefits to partners may be related to work on the project such as professional development or meeting strategic priorities, or take on other forms such as use of museum space or programs.



Relationship Building



Let the project run at the speed of trust

For C4I partnerships, developing shared understanding and cultivating relationships is as important as the partnership outcomes and deliverables. Basing decisions on the understanding of partner goals, operations, and culture and co-creating the experience development process leads to more vibrant and confident collaboration, as well as greater accountability. Refer to the [Equity Action Framework](#) for how equity practices can be built into partner relationships.



Strategies for investing in and nurturing relationships with community partners

- Attend each other's events
- Take advantage of volunteer opportunities
- Discuss and engage in programming and content outside of a specific project opportunity
- Find funding to support resources needed for collaboration, such as staff time



Strategies for helping a museum Development team to cultivate relationships with corporate partners

- Advanced knowledge of project direction; e.g., having the next Global Goal theme(s) selected three years in advance
- Clear idea of the level of participation of corporation, including time commitment
- Ideal partner organizations share alignment with OMSI's Values and Strategic Goals

Partnership Measures for Success

Once collaboration in a design challenge project has started, it's important to identify measures of success:

- From Community Partner's perspective
- From Corporate Partner's perspective
- From OMSI's perspective of Community Partner
- From OMSI's perspective of Corporate Partner

Measures of success for OMSI may include building institutional capacity:

- What are the measures for success for advancing internal initiatives (e.g., equity, climate action)?
- How does OMSI uphold and advance sustainable practices in partnership work?
- Can development of the design challenge advance any professional development goals within the team, such as technology skills, fabrication skills, or design strategies?

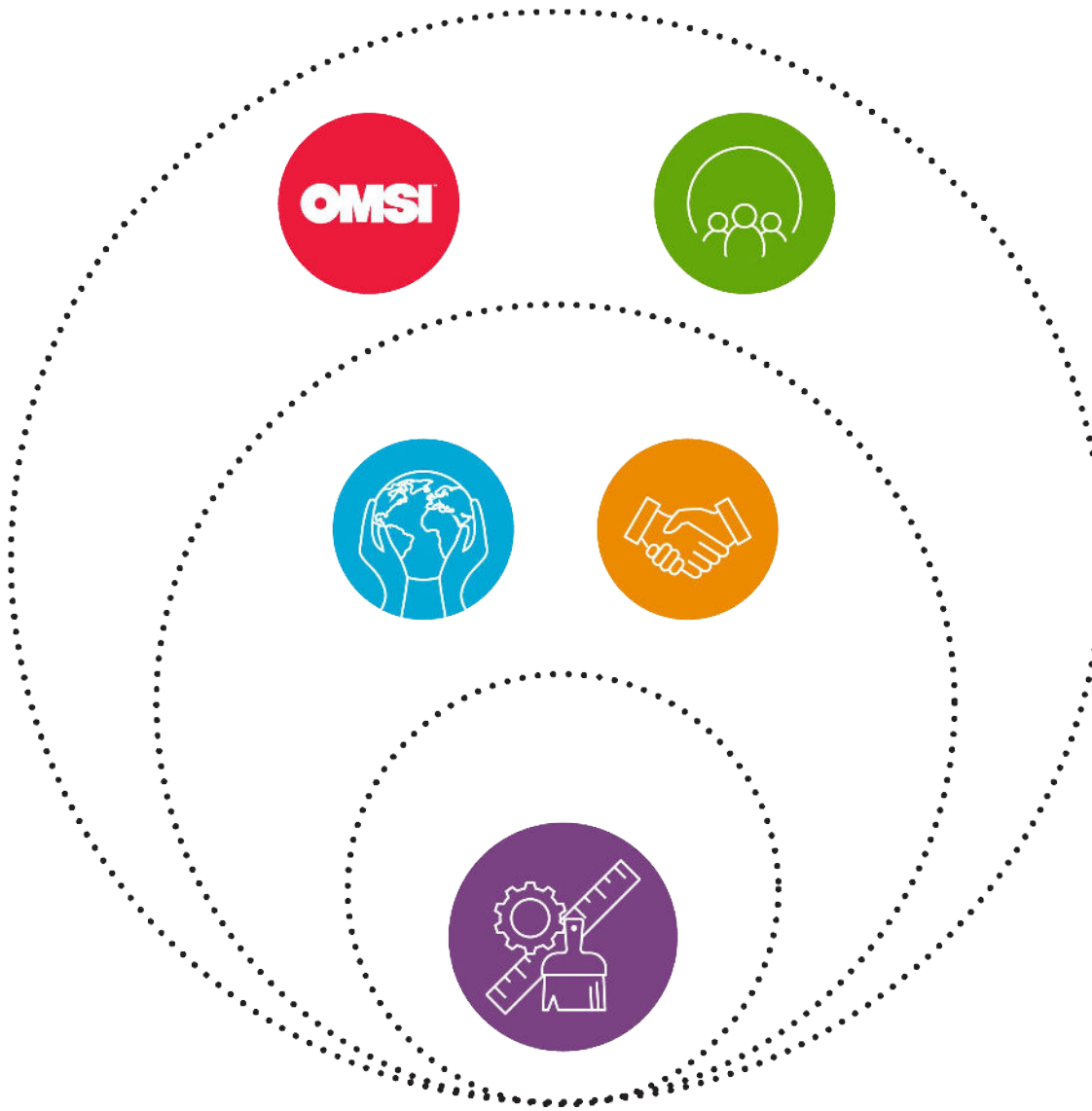


Partnerships & the Global Goals

OMSI's strategic priorities are community priorities, based on community listening sessions and input. See [Appendix C](#) for OMSI's strategic priorities.

How do we choose a Global Goal? There are two possible paths.

- OMSI may identify a Global Goal based on strategic priorities or opportunities, then discover organizations in the region that are doing work related to the goal, and cultivate relationships with them.
- OMSI may have an existing relationship or be cultivating a relationship with a partner organization and then find the opportunity to work together and select a Global Goal for a design challenge.



IMAGINE
Setting the Foundation with
Shared Expectations



Project Team Scope & Roles

Internally, the OMSI project team must have a shared understanding of the scope of the project.

- What are the measures for success of the impacts the experience has on the public?
- What is the level of change to the Innovation Station?
 - Is one component being changed, or the whole suite?
 - What is the role of existing surfaces (e.g. the magnetic whiteboard or the touchscreen monitor)?
 - What is possible within the known budget and time constraints?
 - How different should the Global Goals Hub be afterwards?
- Are there components around the hall that need to be adapted or reskinned to help tell the story?
- What is the target opening date?
- What are key milestones and who drives the deliverables for each milestone? (See the section [Design & Test: Developing the Exhibit](#) on page 33 for an overview of milestones and deliverables throughout the process.)
- Work with partner(s) to find constraints and opportunities (see next page).

Based on conversation and documentation of those decisions, create or update a scope of work that includes:

- Funding source(s)
- Roles and responsibilities for all organizations
- Contracting and payment schedule



Partner Scope & Roles

As the design challenge project begins, also establish shared understanding and confidence with partners. Keep in mind that working with community partners requires time, so plan to move at the speed of trust.

- Confirm shared interest, leadership, and mutual benefit
- Document the collective benefit of the partnership to the project:
 - How is the project strengthened by the partnership?
 - How does each organization have an opportunity to grow?
- Using the timeline and milestones, document roles and high level decision making expectations
- Determine the Partner's level of participation in the process: when and how are they involved?
 - Who at the partner organization is participating, and how to onboard them
 - Levels of involvement: passive > consultant > co-develop > partial execution of deliverables
 - To what degree (informed, participates, or leads)
 - Consider partner goals and assets
 - Refer to timeline and project milestones

The NISE Net's *Museum & Community Partnerships: Collaboration Guide* is a fantastic resource about partnerships between museums and community organizations. See

[Appendix H](#) for a link.



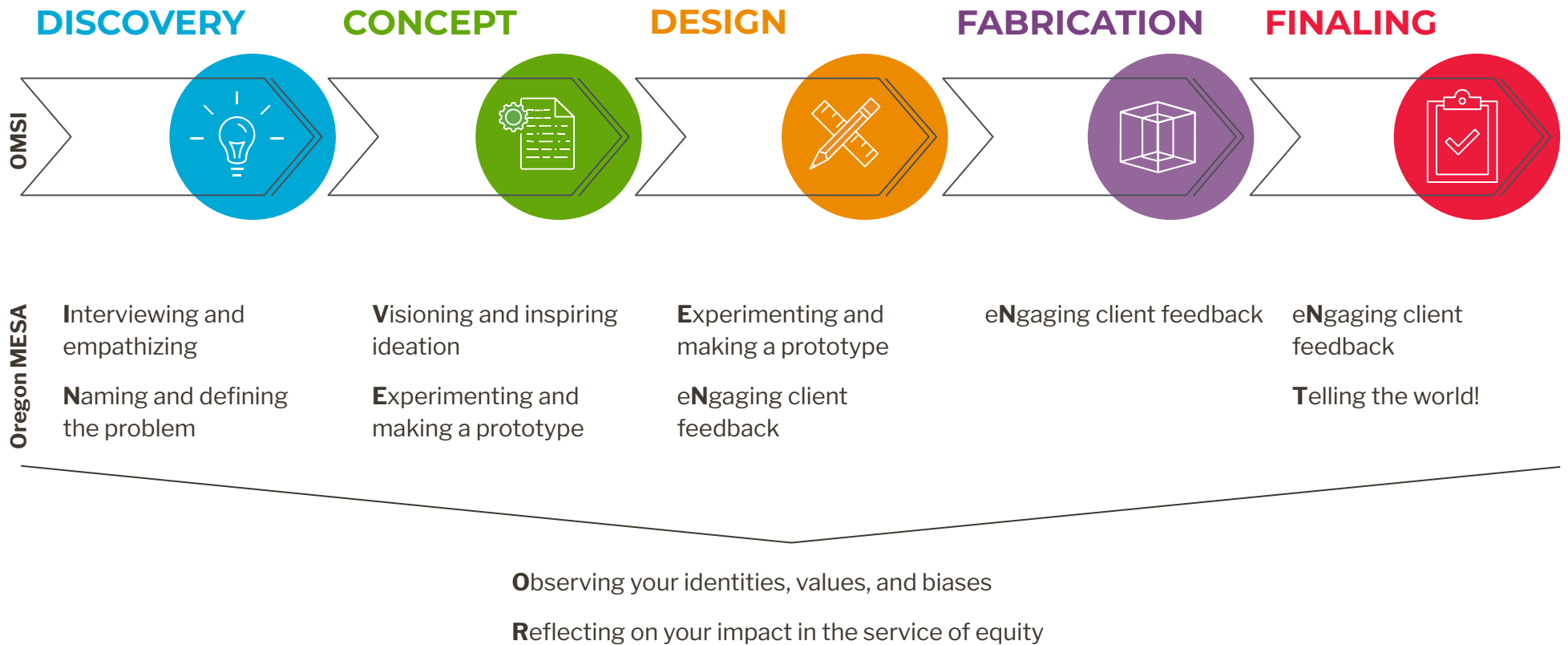
DESIGN & TEST
Developing the Exhibit



Engagement and Impact Through Experience Design

With decades of experience designing, fabricating and delivering exhibits and experiences for the public, OMSI has a defined process for developing interactive STEAM exhibits.

These phases of development are adaptive and flexible for supporting the Design Challenge development process at the Center for Innovation. The process aligns with human-centered design practices and accommodates incorporating practices like co-developing with target audiences. When put side-by-side, overlap between OMSI's process and Oregon MESA's INVENTOR process is clear.



Discovery



- Interview and empathize with target audience
- Synthesize audience research into insights & How Might We statements
- Identify Big Idea based on the Global Goal
- Develop a logic model
- Conduct secondary research on content
- Content experts or advisors help guide

How partners can be involved in **Discovery**

- Visioning workshops (e.g. human-centered design)
- Connect with target audience, content experts, or advisors
- Access to content references or data

Strategies for Choosing Innovation Station Content



- Review available Global Goals materials. This includes the webpage for each individual goal, and “Why It Matters” one-sheet for each goal. (See [Appendix H](#) for a link.) The one-sheets are particularly useful in breaking down the problem and relating it to personal experiences.
- Identify one aspect of the Global Goal on which to focus. These goals are large, complex problems, so choosing one strand of the goal is easier to connect to actual, relevant experiences and is less overwhelming for both staff and museum guests. Each goal has multiple sub-goals or targets, so this could involve choosing one target, or choosing one theme of the goal.
- Discover STEAM content that connects to the Global Goal strand. It has been easier to choose a goal first, then find science content to apply to it rather than trying to shoehorn a goal to the content.
- Explore how the Global Goal strand and the STEAM content impact the region. Partners are integral in recognizing how the content impacts their communities and our target audience.

Find a table of Global Goals in Innovation Stations to date in [Appendix D](#).

Concept



- Identify the focus of the design challenge: pick the most promising How Might We statement, finalize the Big Idea, and identify main messages
- Ideate and come up with exhibit ideas (e.g., do a design sprint)
- Choose the design challenge
 - Content: identify the client/audience, the Global Goal and social context, and the goal of design challenge
 - Design: identify technology; build and visitor-test the design challenge to inform the initial exhibit design concept

How partners can be involved in Concepting

- Review or co-create Big Idea and main messages
- Participate in design charrettes
- Target audience co-creation
- Review or co-select design challenge

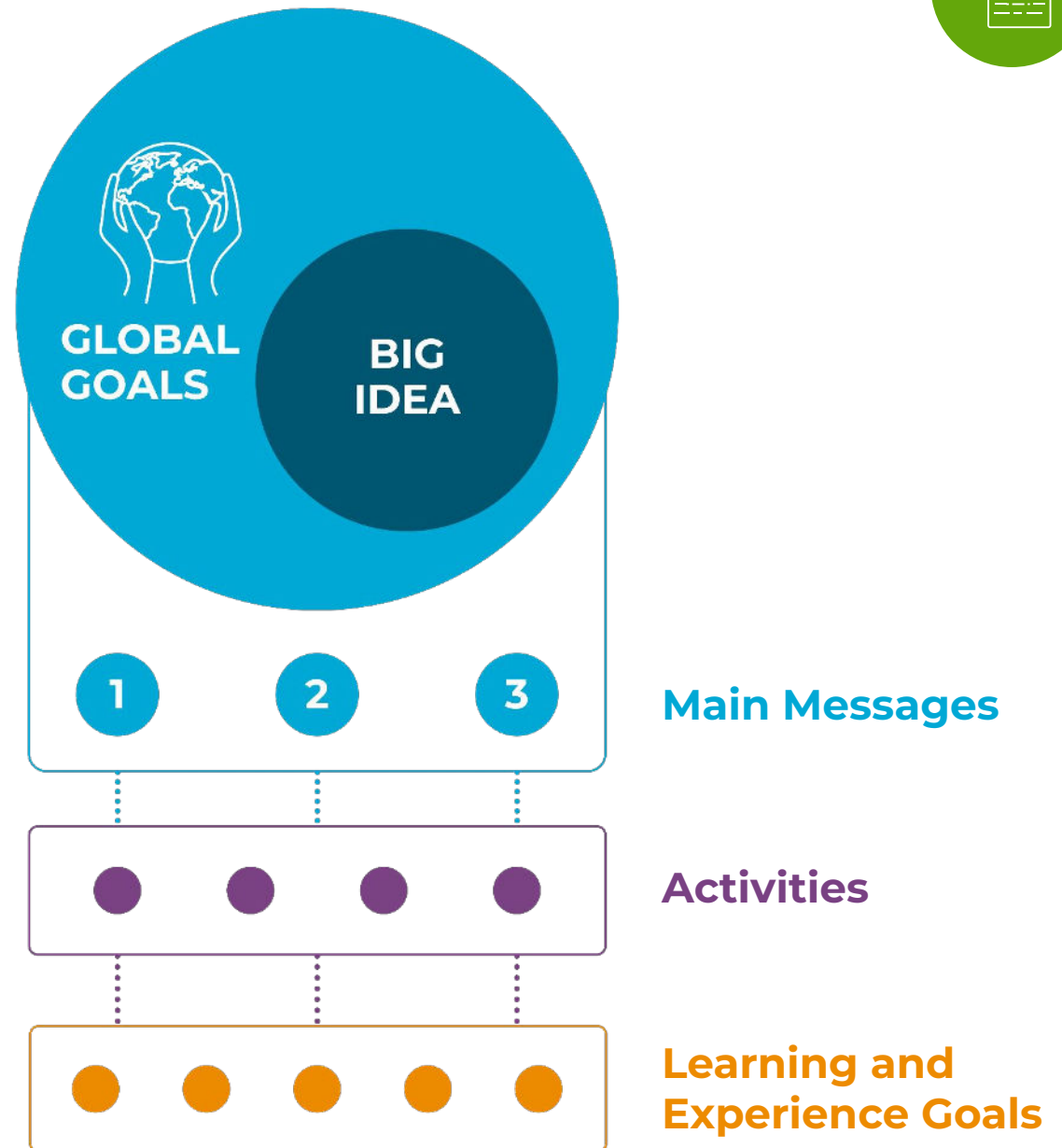
Concept



From the selected Global Goal, a Big Idea is identified. The Big Idea is a clear focus statement for the exhibit experience and design challenge.

From that Big Idea, we create specific supporting main messages. All main messages appear in the exhibit, but each component or activity may only represent a subset of the main messages.

Each activity has multiple learning and experience goals: what people will know, discover, explore, or make, and the personal impact of the experience. Different activities may share learning and experience goals.



Design



Design Development

- Update designs based on learnings from prototyping and feedback from target audience, partners, and other internal and external stakeholders
- Finalize 3D & 2D design concepts
- Proofread copy in design files
- Create construction documentation

How partners can be involved in Design Development

- Giving feedback on content and design
- Helping with access to necessary content (e.g. interviews and/or media assets)
- Including partner acknowledgement in exhibit signage





Fabrication



- Order materials, including consumables
- Build components
- Install components
- Shakedown to determine safety and functionality

How partners can be involved in **Fabrication**

- Access to tools, equipment, vendors, and/or contractors



Finaling



- Remediate as necessary
- Final evaluation and reporting as appropriate
- Create facilitation guide for education staff
- Celebrate completion!

How partners can be involved in **Finaling**

- Access to target audience for exhibit evaluation
- Share reflections and participate in project debrief
- Participate in partnership sustainability planning
- Share in the celebration!

REPEAT
Forming a Partnership Sustainability Plan





Sustainability Planning

The partnership doesn't have to end because the project has ended!

To ensure that an ongoing relationship benefits and supports all organizational participants:

- Reaffirm intention, shared commitment
- Share strategic directions and activities
- Determine how OMSI and the partner organization can support each other in the immediate and near future: list concrete opportunities and create a communication plan for possible future opportunities



Appendices



A: Oregon MESA & OMSI

Oregon MESA and OMSI's partnership began in Fall 2016 with a chance meeting at a local leadership event and a subsequent informal meeting to share information about each other's programs and missions. It was clear that there was strong synergy between MESA's curriculum and OMSI's nascent Center for Innovation strategy.

Soon after, OMSI approached Oregon MESA about joining an IMLS proposal to develop design challenges and received an enthusiastic response. While that proposal was not funded, the two organizations were enthusiastic about working together not only on a proposed project, but also as ongoing partners.

The *Evolving the Museum Experience* (EMX) proposal was approved by the IMLS in Fall 2018, launching three years of work captured in this playbook. Throughout the project, Oregon MESA supported OMSI with human-centered design workshops, access to Oregon MESA students and families for interviewing and co-developing experiences, opportunities for prototyping experiences at MESA events, and feedback on exhibit experiences. OMSI supported Oregon MESA by volunteering at MESA events, hosting and providing educational programming at MESA's in-person and virtual events, hiring MESA students for internship and co-development opportunities, and helping with educational initiatives.

As of this writing (September, 2021), OMSI and Oregon MESA are cementing plans to continue involvement and mutual support beyond the end of the EMX grant.



Mission

To provide students underrepresented in STEM fields with the skills, knowledge, and opportunities to develop their talents, explore technology-based careers, enter college, and compete successfully in the workforce.

Oregon MESA accomplishes this through their school-based invention education program—the only adaptable, prototype-driven math, engineering, and science program for traditionally underrepresented students that takes an ecosystems approach to education. Every year, MESA schools, families, businesses, and mentors work together to empower the technology-based workforce of the future.

oregonmesa.org

B: OMSI's Equity Action Framework



OMSI'S ONGOING COMMITMENT TO EQUITY

OMSI is committed to including diverse perspective in the learning experiences we provide, and dismantling systemic barriers by addressing disparities in our staffing, business practices, and public engagement. We invite community conversations so we can evolve and create opportunities for all people to reach their full potential. We are committed to leading with race.



20 YEAR VISION

OMSI, collaborating with partners, will ignite an education transformation at the intersection of science, technology and design, and weave a thriving innovation district into the fabric of Portland, that spreads opportunities across the Northwest.



2020-2025 STRATEGY

OMSI's 5-Year Strategy defines the commitments and investments we will make and the associated outcomes we expect to achieve in the next 5 years as we build toward our 20 year vision goals. Annual roadmaps will detail specific milestones along our journey.



STRATEGIC VALUES

- Our People
- Collaboration
- Accessibility & Equity

CORE VALUES

- Learning
- Creativity
- Integrity
- Sustainability

1 WE APPLY AN EQUITY LENS TO ALL OF OUR WORK



2 CONVERSATIONS LEAD TO ACTIONS

Here's how we are committed to becoming an anti-racist, multicultural, and inclusive organization.



SYSTEMIC INTEGRATION

Improving OMSI's equity-related outcomes both internally and externally through changing our systems, processes, policies, and practices.

- Guest Experience
- Staff Experience
- Partnership Development



EQUITY ACTION FRAMEWORK



CAPACITY DEVELOPMENT

Establishing shared knowledge, attitudes, beliefs and values centered in equity.

- Anti-racist institutional identity
- Knowledge & Skills for Intersectional Analysis (consider all identity dimensions of a person in relation to socio-economic systems)
- Equity-driven Teamwork



EVALUATION & REPORTING

Establishing benchmarks, measuring, and reporting on progress.

- Great Place to Work Survey
- OMSI Equity Climate Survey
- OMSI Key Outcome Indicators
- Department & Individual Goals

3 OUR LENS SCALES TO ANY SIZE DECISION

We want a culture of activism where both OMSI staff and community members identify and interrupt patterns in our systems that perpetuate inequalities.



	EXAMPLE SCENARIOS
<p>STRATEGIC DECISION</p> <p>DEVELOPING A STRATEGIC INITIATIVE</p>	<p>Facilitate community engagement to understand needs and identify partners</p> <p>Co-create a shared vision for the initiative</p> <p>Lead an inclusive design process</p> <p>Jointly establish desired outcomes</p>
<p>PROGRAMMING/GUEST EXPERIENCE DECISION</p> <p>DEVELOPING A NEW EXHIBIT OR PROGRAM</p>	<p>Identify partners relevant to experience and target audiences</p> <p>Co-develop process for meaningful engagement</p> <p>Incorporate partner and audience voices in experience development process</p> <p>Co-create our evaluation model to measure outcomes for our target audience</p>
<p>TACTICAL DECISION</p> <p>HIRING A NEW VENDOR</p>	<p>Recruit a diverse pool of service providers</p> <p>Design a fair, equitable interview process</p> <p>Onboard with a shared understanding of our values</p> <p>Agree upon outcomes and measures</p>

The cumulative effect of our actions adds up to a big overall impact.

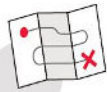


OMSI's commitment to equity is vital to achieving our 20-year goals. Our 5-year strategic plans and operations will help us systemically evolve to become an anti-racist, multicultural and inclusive organization.

At times, we may improve in some areas and regress in others. We are confident that even our mistakes will generate knowledge necessary to improve our equity outcomes over time.

C: C4I & OMSI Strategic Priorities

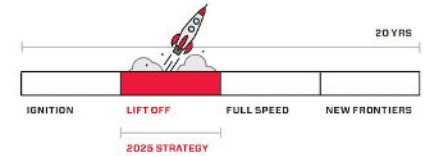
Below is OMSI's 5 Year Strategy, a part of our 20 Year Vision. The Center for Innovation is the core of the strategic priority of UN Global Goals & Local Problem Solving. It overlaps with other strategic priorities, especially Partnerships Serving Communities and Culturally Inclusive Experiences.



5 Year Strategy

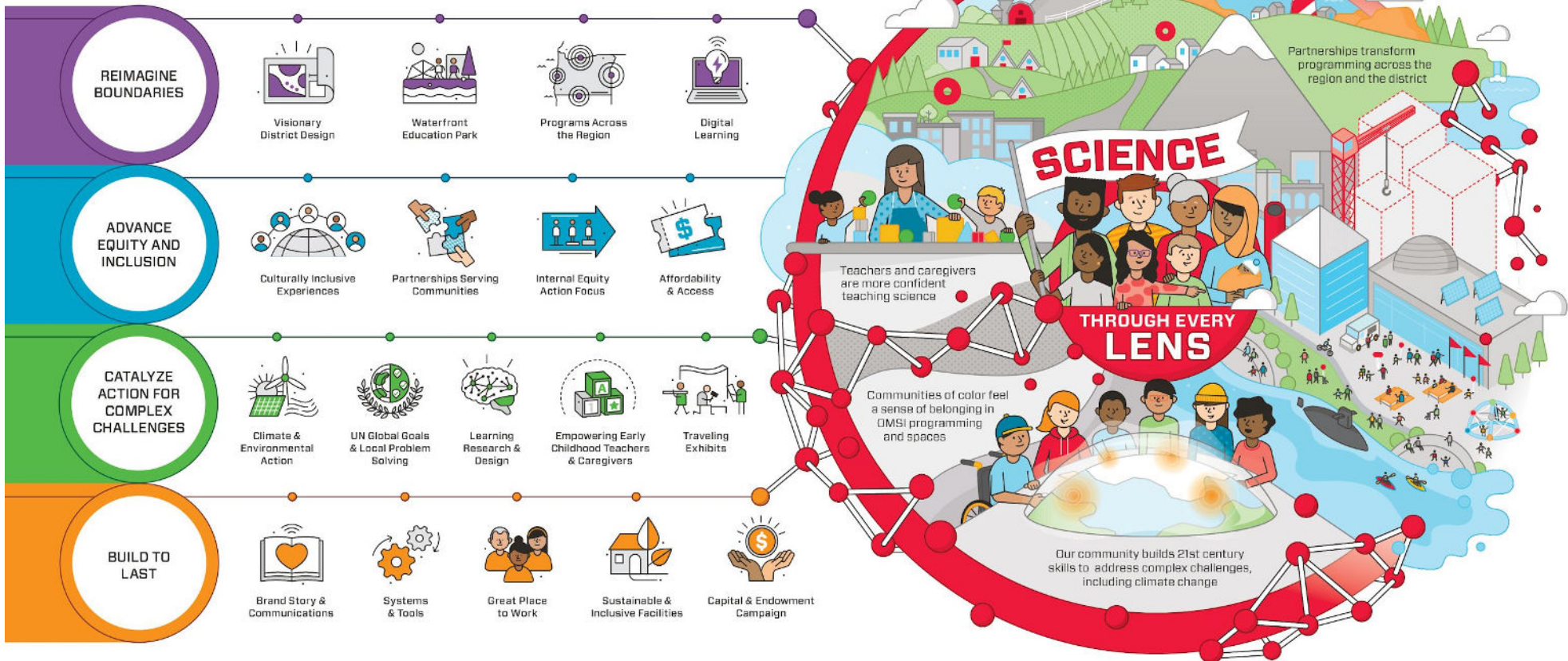
OMSI's 5-Year Strategy defines the investment choices we will make and the associated outcomes we expect in the second 5 years of our 20 Year Vision. Annual roadmaps will detail specific milestones along our journey.

This second chapter in OMSI's 20 year vision is mission critical. We're ready for "lift off," sights set on the most ambitious parts of our vision. During these five years, we will make commitments and investments that change the trajectory of science education across the region and fundamentally alter the fabric of Portland's urban core.



Strategic Priorities

Outcomes



D: Innovation Stations & the Global Goals

Below is a summary of past and current Innovation Station content. Content stems from community priorities and combines elements from the Global Goals and science knowledge to create interactive, relevant exhibit experiences.

Innovation Station Title	Global Goal & Target Focus	STEAM Content	Local Relevance
<i>Feeling Connected</i> (IS1, 2019)	#3 Good Health and Well-being Target 3.4: Reduce mortality from from non-communicable diseases and promote mental health	Communication and social health	Communities and relationships
<i>Preparing to Quake</i> (IS2, 2019)	#11 Sustainable Cities and Communities Target 11.5: Reduce the adverse effects of natural disasters	Earthquake preparedness	Impending Cascadia quake (“The Big One”)
<i>Heat Inequality</i> (IS2, 2021)	#10 Reduced Inequalities Target 10.3: Ensure equal opportunities and end discrimination	Urban heat islands	Redlining and racial housing discrimination

E: *Feeling Connected* Innovation Station Case Study

In 2019, OMSI staff attended Oregon MESA family nights at local schools where they asked adults and students about their perceptions of their communities and relationships with neighbors. Responses showed a strong desire to know more about what was happening in their communities and improve communication. From those interviews, *Feeling Connected* exhibit experiences and content were created.

In this Innovation Station, visitors experiment with verbal communication and imagine and design spaces that encourage people to get to know each other. The graphics and visual approach are playful and colorful with doodle-style characters to appeal to our target audience.

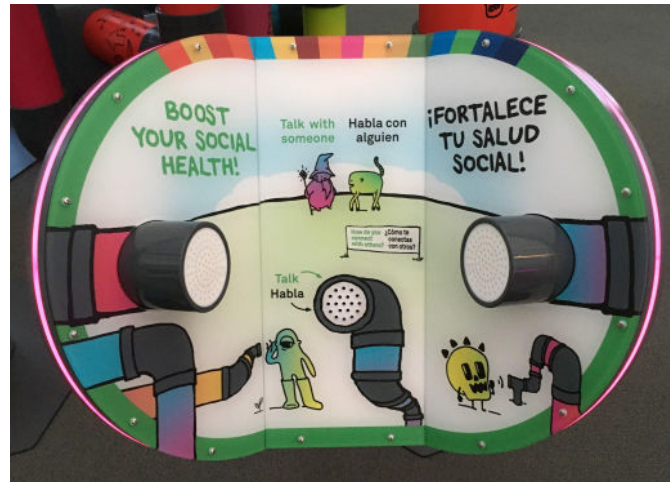
Creating this exhibit was an experiment in workflow practices for developing bilingual copy and for integrating Global Goals imagery into exhibit graphics. These practices informed the development of *Heat Inequality*.



Feeling Connected, continued

Boost Your Social Health

Visitors explore verbal communication as their voices are distorted at the receiving end of the line. They reflect on how they make connections with others.



Connections Create Communities

The large graphic and screen content shares social health research and asks visitors to reflect on their own communities and relationships.

Feeling Connected, continued

Design a Room

Visitors use Tinkercad to imagine and design a room where their friends can hang out together. This was created in partnership with Autodesk, and the Tinkercad parts library was co-created by OMSI teen interns and Autodesk interns.

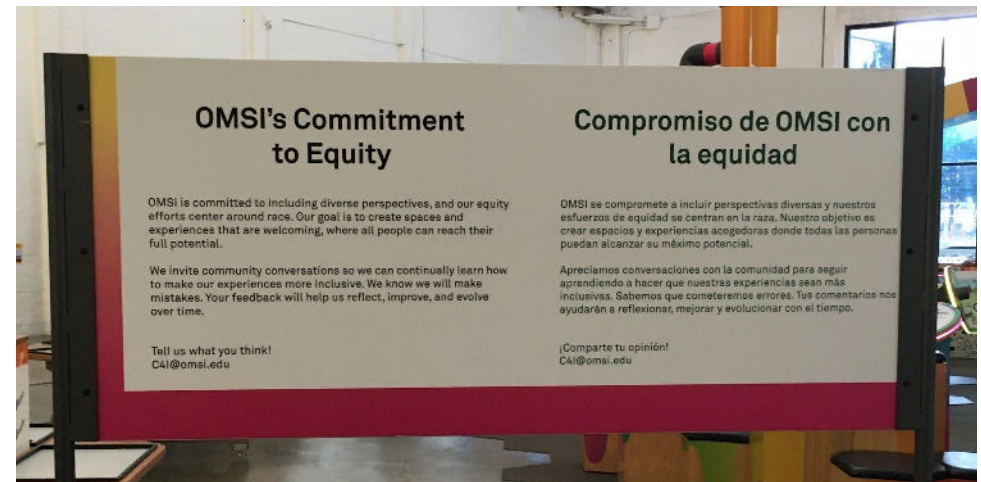
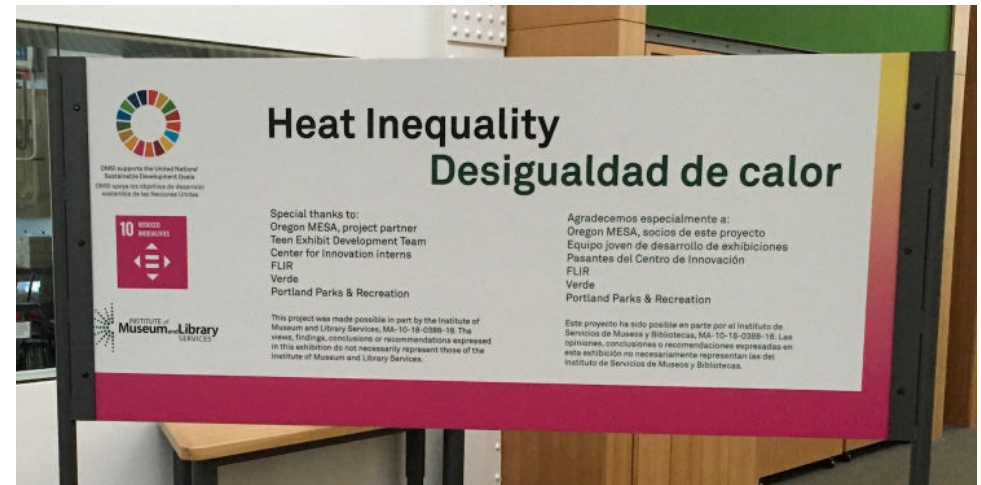


Design with Others in Mind

By inviting visitors to design a place where a group of people can do an activity, visitors empathize with the needs of others. The choices for “place,” “people,” and “do something” were selected by OMSI teen interns.

F: Heat Inequality Innovation Station Case Study

OMSI is committed to including diverse perspectives, and our equity efforts center around race. This influenced the choice of Global Goal #10: Reduced Inequalities as the design challenge theme. While planning a human-centered design training with Oregon MESA, the OMSI-MESA partnership identified urban heat islands as a relevant topic: research lists Portland as the city with the greatest heat discrepancy between historically black and historically white neighborhoods. A team of teens recruited from Oregon MESA and OMSI's teen programs co-developed the exhibit.

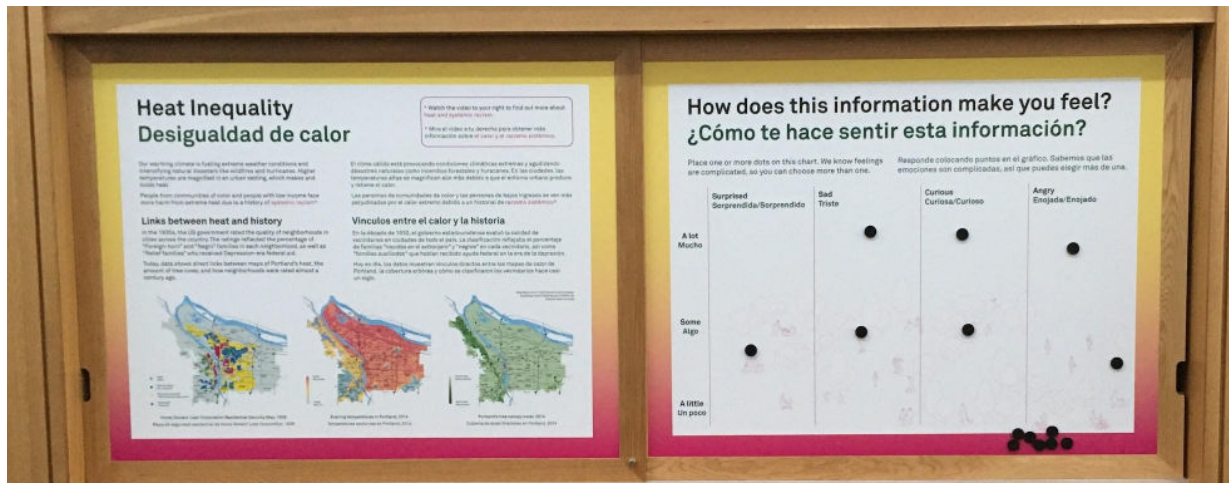


Because *Heat Inequality's* STEAM content is connected to historical racial discrimination practices, the first public display of OMSI's commitment to equity in an exhibit was created.

Heat Inequality, continued

Lessen the Hot Spots

A design challenge where visitors build and test solutions for mitigating heat hazards. A lamp shines on model homes and trees, and an infrared camera shows heat data on a screen.



Heat Inequality Explanatory Panel & Visitor Responses

Visitors compare maps of redlined neighborhoods, evening temperatures, and tree canopy cover in Portland. They understand that increasing heat disproportionately affects people of color and reflect on the personal relevance of the main messages.

Heat Inequality, continued



Redlining Video

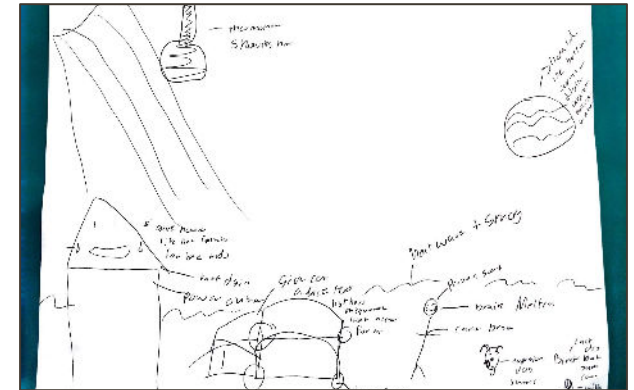
Visitors discover how historic redlining practices have an effect on heat in neighborhoods now, and the disproportionate effect on people of color and low-income communities.

Local Inspirational Story

This large graphic inspires visitors with a solution created by people in their own community, the transformation of a former landfill to a city park..

G: Co-developing Exhibits with Youth

In the course of developing design challenges and Innovation Station content, the OMSI team collaborated with our target audience and near-peers in two ways: summer internships and a Teen Exhibit Development Team (TEDT). In all experiences, the youth were valued as co-developers: their voices, insights, and opinions were valued on the same level as OMSI staff. Summer interns worked on segments of exhibits: designing the Tinkercad library and testing it with museum guests for *Feeling Connected*, and researching and developing an exhibit panel and facilitated activities for *Heat Inequality*. TEDT fully co-developed the concept and early exhibit designs for *Heat Inequality* by helping to choose the big idea and main messages, participating in exhibit design sprints, and providing feedback on exhibit designs and overall look and feel.



Recruitment

All positions were primarily recruited through Oregon MESA, although we extended the opportunity to apply to other youth-serving programs like OMSI's Teen Science Alliance and Girls Inc. of the Pacific Northwest. Recruitment for all positions required more time and communication with partners than anticipated.

Paid opportunities

The time, expertise, and opinions of the youth were valuable to the OMSI team. Interns were hired as OMSI educator apprentices and compensated through payroll. TEDT youth were compensated with Visa gift cards.

Contributing & learning

In addition to contributing to exhibit development, all youth positions had learning elements. Summer interns participated in the OMSI Science Squad program to learn science demonstration skills, and both interns and TEDT were exposed to a variety of museum and STEAM careers.

H: Other Resources

The Global Goals for Sustainable Development

www.globalgoals.org

This overview of the 17 Global Goals lists each goal's associated targets (sub-goals), recent action related to the goals, and other resources.

United Nations Sustainable Development Goals: Why the SDGs Matter

www.un.org/sustainabledevelopment/why-the-sdgs-matter

A collection of one-page documents and infographics for each Global Goal that help to give social context by listing specific examples of the challenges in the world, the importance of the goal, and suggestions for actions to take.

IDEO.org Design Kit

www.designkit.org

IDEO.org, a nonprofit design studio, collected design mindsets, methods, and case studies in their Design Kit, all of which is grounded in human-centered design. The OMSI project team referred to this resource often during discovery and concepting for inspiration for workshop, teen co-development, and other exhibit development activities.

NISE Net Museum & Community Partnerships: Collaboration Guide

www.nisenet.org/collaboration-guide

The National Informal STEM Education Network's publication about how to create and sustain partnerships between museums and community organizations.

Questions? Comments? Want to be *Feeling Connected*?

We want to hear from you, because together we can do more to create relevant, community-based interactive experiences that will positively impact people for years to come.

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