

IMPACT DESIGN IN VR

**A Toolkit for Media Makers
& Mission-Driven Organizations**

TABLE OF CONTENTS

WHY THIS TOOLKIT?	3
THE ACTION LAB MODEL	4
AN IMPACT DESIGN APPROACH TO VR	5
LANDSCAPING	8
ENGAGING EXPERTS, “AUDIENCE” & EVERYONE IN BETWEEN	9
VR FOR IMPACT	10
THE SWEET SPOT	12
THEORY OF CHANGE	14
CO-DESIGN	16
DESIGNING WITH “AUDIENCE”	17
KNOWLEDGE FOR CREATIVITY	19
ISSUE BRIEFING BOOK	19
DISCOVERY WORKSHOP	21
PRODUCTION & PILOTING	23
CREATIVE COLONY	24
THE EXPERIENCES	26
MEASUREMENT MATTERS	26
PILOTING IN SCHOOLS	27
CONCLUSION	29

WHY THIS TOOLKIT?

A diverse group of young people, including men and women of various ethnicities, are captured in a moment of pure joy and energy. They are jumping and posing in an urban alleyway, with their arms raised and faces lit up with smiles. The scene is set against a backdrop of brick buildings and utility poles, suggesting a city environment. The lighting is bright and natural, highlighting the vibrant colors of their clothing and the overall positive atmosphere.

When we first started talking about an action lab that would use virtual reality as a tool against bullying, people were skeptical. Wasn't VR's reputation as an empathy machine just hype? How could some shiny new technology solve a problem that's been around forever? But soon skeptics were outnumbered by a growing list of collaborators and advisors excited to experiment.

That excitement carried the project to its completion, and we gained a lot of insight along the way. The purpose of this toolkit is to pass that insight along, and to contribute to a growing conversation around the evidence-based use of immersive media—VR specifically—for social change.

This toolkit is intended as a resource for media makers, cause-driven organizations and funders interested in using VR for impact. It provides

insights from our own experience with our VR Action Lab, as well as learnings from other efforts and questions to help guide your own explorations of VR.

THE ACTION LAB MODEL

Our VR Action Lab explored how VR could address the precipitous drop in efficacy of anti-bullying efforts in middle school and activate young people as “upstanders” (activated bystanders). The Action Lab brought together award-winning media makers with young people, practitioners, researchers, designers and other experts. It was a collaboration between Harmony Labs, Google’s Daydream Impact, Screenwriters Colony, Sensorium Works and others. It took place over nine months, between April and December 2017, and produced three VR experiences embedded in

a pilot-tested six-lesson curriculum. These will be made widely available through Google’s Trust and Safety team and other program partners.

We consider this a first iteration of the action lab model and look forward to future action labs, which will use the same rigorous, multidisciplinary approach to prototype social impact uses for emerging media technology around additional social issues.

AN IMPACT DESIGN APPROACH TO VR

We approached the challenge of using VR to inspire social change as an impact design problem. “Impact design” denotes a design process with impact as its end, which Harmony Labs applies specifically to media and information. The process includes the following stages, each of which incorporates feedback, testing, and iteration:

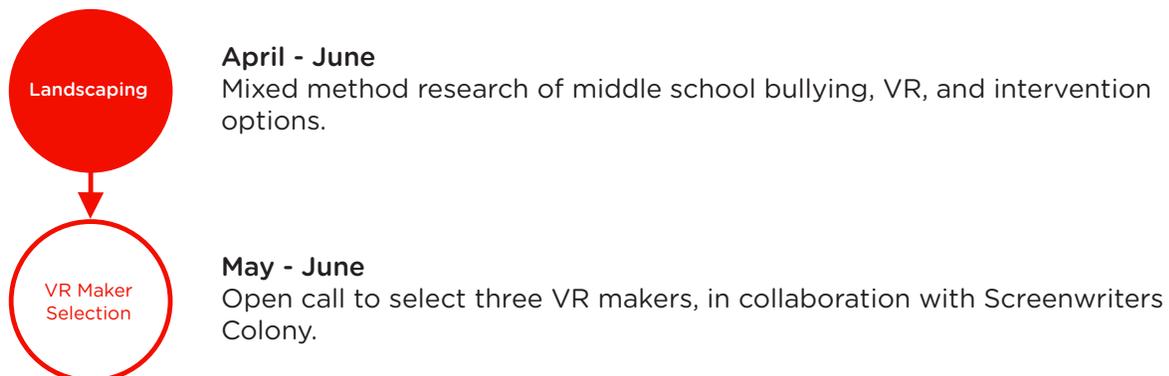
▶ **Landscaping.** We gain a deep, comprehensive understanding of the social context in which a social issue occurs, using a variety of research techniques, including media and network analysis, literature reviews, and interviews with experts and practitioners. We also explore past efforts to address the social issue, and the constraints and affordances of the medium with which we’ll be working. Through this work, our first hypotheses regarding impact

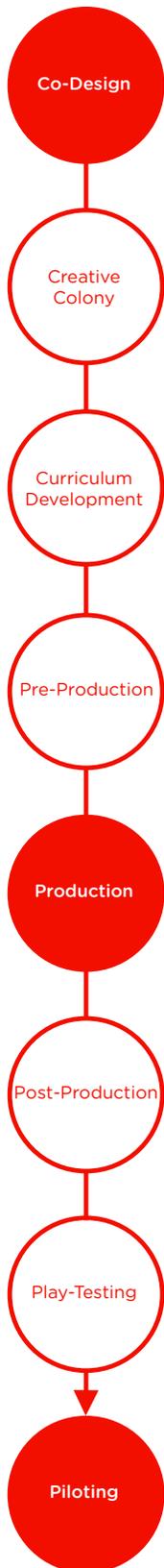
strategy and theory of change begin to emerge, which we continue to sharpen in subsequent work.

- ▶ **Co-Design.** With a working understanding of the social issue, the medium, and our strategy, we embark on a collaborative process to produce concepts for the media we’ll be creating (in this case, three VR experiences). This collaboration includes the intended audience for the experiences, as well as other kinds of experts and practitioners.
- ▶ **Production and Piloting.** With our working concepts in hand, we begin the journey of making the media, starting with scripts. Again, our intended audience has a role, as well as our production partners. And this stage sees some first tests in our intended use context, as well as a full pilot and randomly controlled trial.

Here’s a detailed timeline for how we implemented this impact design process, in the VR Action Lab:

VR ACTION LAB TIMELINE





July 13

Kicked off with a discovery workshop, a full-day immersion for VR makers in the lived experience of young people around bullying and the latest research.

August 13 - 27

Two-week retreat at Almanack Arts Colony in Nantucket to turn media concepts into scripts and production plans, aided by visiting mentors and local youth.

August-November

Learning design for accompanying curriculum integrated into the media-making process by Institute of Play.

September-mid-October

Sensorium Works led the process of casting, location scouting, and filming the experiences.

Mid-October

Each experience was shot in one day, over a period of two weeks.

Mid-October-Mid-November

Sound design, stitching, editing, coloring and visual effects completed.

October 19

Rough cuts of the experiences used in curriculum play-testing at a public New York City middle school.

Late November-Early December

The VR experiences and accompanying curriculum delivered in a randomized controlled trial to two Illinois middle schools and individual interventions with students in Nebraska.

The structure of this toolkit follows the impact design process described above. We hope it informs and inspires you to explore and experiment with VR and impact design, and we look forward to hearing about the work you produce!

QUESTIONS FOR REFLECTION

1. What are your social impact goals, and how might VR support these goals?
2. Do you have a specific group of people you're seeking to reach and specific behaviors you would like to see them engage in? How will you know success when you see it?

LANDSCAPING

Every impact design process begins with a deep understanding of a social problem and some first hypotheses regarding how to resolve or mitigate it. Using media as part of an intervention strategy also requires you to explore the unique affordances and constraints of the medium in which you'll be working. This is what we call landscaping.

The aim of landscaping is to discover a project's strategic sweet spot: the overlap between what a social problem requires for amelioration and what a media intervention can accomplish. It is a process that, by necessity, "takes a

village." No one group or organization is likely to have all the knowledge or skills it needs to single-handedly locate this sweet spot.

ENGAGING EXPERTS, "AUDIENCE" & EVERYONE IN BETWEEN

Many of us who have studied bullying and tried to prevent it are frustrated that we have not been able to. We have to look to more innovative methodologies and VR could be a powerful tool.

**Dr. Dorothy Espelage,
Professor of Psychology, University of Florida**

You may think you know everything you need to know about a social problem, but now is your chance to question and investigate long-held assumptions, in the interests of arriving at a novel, effective media invention.

If the last section left you wondering about your cause's strategic sweet spot, don't worry. You may not be an expert on all relevant aspects of the

social problem, nor an expert in VR. It is for this reason that the Landscaping stage begins by reaching out to cause and technology experts to guide you. Speak to a range of individuals. Even professionals who operate within the same field come in all shapes and sizes. Some deal with the issue on a granular level, some on a structural macro-level. Some are married to a set of practices and others are open to new methods.

Also, it is important to push beyond expert perspectives and get to know your audience, as well as other people who may be able to provide you a fresh perspective on your problem context. In the case of middle school bullying, this might mean talking to school custodians, lunch room aides, and parents.

At the early stages of this iteration of the Action Lab, we studied the subject of bullying broadly, and expanded some initial literature review and media analysis with a range of conversations. An important part of our impact design

was to make sure that we did not limit ourselves to only engagement with scholars. We engaged a range of diverse people to compile as many perspectives as possible, including educators, administrators, school coordinators, parents, young people and media makers.

To get you started on your Landscape research, the following sections provide a primer on VR for impact to help you get a better sense of whether it will be a good fit for your particular social issue.

VR FOR IMPACT

When it comes to bullying, there is so much more at stake than empathy.

**Mia Doces,
Director of New Mission Ventures,
Committee for Children**

Much of the attention generated by VR for impact has focused on experiences that raise awareness around, for example, refugees or the homeless. Ever since VR Director Chris Milk famously described VR as an “**empathy machine**” in 2015, empathy has been widely described as the main social benefit of the medium. Yet some critics dispute the effects and ethics of third-person storytelling about suffering that

is geographically or culturally distant, dismissing this type of storytelling as “**refugee tourism**.” In addition, the **tunnel vision** that ensues from seeing VR primarily as an empathy machine may obscure some of its other impact affordances and nuances, such as:

IMPACT AFFORDANCES OF VR

- ▶ **Spatial Experiences.** VR is particularly effective for creating layered spatial experiences that transport the viewer to far-flung or inaccessible spaces or times and allow the viewer to **interact with and affect** layers of an unknown or fictional space.
- ▶ **Embodiment.** Immersive experiences in VR have given humans the unique opportunity to virtually inhabit other bodies, and see the world through new perspectives. For example, to **experience the world through the perspective of an owl or an ant.** Psychologists have found **therapeutic benefits** to letting patients step into another body and counsel themselves on their problems, and VR researchers found a **decrease in bias** towards people of different ethnicities after a VR experience had the viewer inhabit bodies of different skin colors.
- ▶ **Practicing Responses.** VR allows viewers to practice responses to difficult situations that may be complicated or dangerous to act out in real life. Some studies have shown that VR experiences record like memories in the brain, and so a practiced response in VR could help the viewer react thoughtfully and productively in real-life situations. This affordance is leveraged, for example, in police training and in the therapeutic **treatment of people with phobias.**
- ▶ **Future Scenarios.** Viewers can experience future scenarios that may help them understand the consequences of current actions

or can experience potential **future life developments.** Researchers found that subjects gain a better understanding of **future desires** and the current necessity of saving for retirement when they experience in VR how badly their senior years will develop without savings.

- ▶ **Behavior Change.** VR experiences can lead to productive behavior change when viewers directly experience the social benefits or dangers of certain behaviors in VR. For example, audiences who experienced the world as a **life-saving superhero** in VR showed more altruistic behavior in real life, while audiences who were engaged in cutting down trees were **mindful of saving paper.**

VR is definitely an emerging medium, filled with both great promise and pitfalls, such as:

CHALLENGES OF WORKING IN VR

- ▶ **Expertise and Expense.** The production of successful VR experiences often carries significant costs. There are still relatively few individuals with the skills to film and edit in this new medium, and even traditional film production can be quite expensive.
- ▶ **Audience Reach and Accessibility.** Phones or stand-alone headsets are required to view a VR experience, and are not accessible in many communities. While 360° video on YouTube and mobile phone-integrated VR headsets are making

the medium more accessible, it is not yet pervasive.

- ▶ **Technological Lifespan.** As an emerging and fast-developing medium, VR advances rapidly. Experiences that are considered state-of-the-art one year may be outdated the next. The same goes for hardware.
- ▶ **Ethics.** Little is known about the psychological impact of VR and how it may affect our perceptions of authenticity and reality. Some studies have suggested that, while VR may decrease bias and

stereotypes, it may also **increase real-life bias**. Further, research warns against traumatizing or re-traumatizing viewers who practice responses to difficult situations in VR and raise the possibility of “virtual PTSD.”

The VR community is actively engaged in conversations about such unintended effects and encourages further study. For example, researchers at University of Mainz in Germany have proposed a **code of ethical conduct** for the production and use of VR.

THE SWEET SPOT

At an early stage of landscaping the field of bullying prevention, we came across a **2015 study** that described a significant efficacy gap in bullying prevention programs for middle schoolers. Despite the development and use of dozens of anti-bullying programs around the world, these programs drop to zero efficacy and may even *increase* the incidence of bullying for students in eighth grade and older. One reason for this drop-off is cynicism with regard to bullying programs. Students this age don't want to be told what to do or how to be “good.”

From previous discussions with educational innovator Mia Doces, we

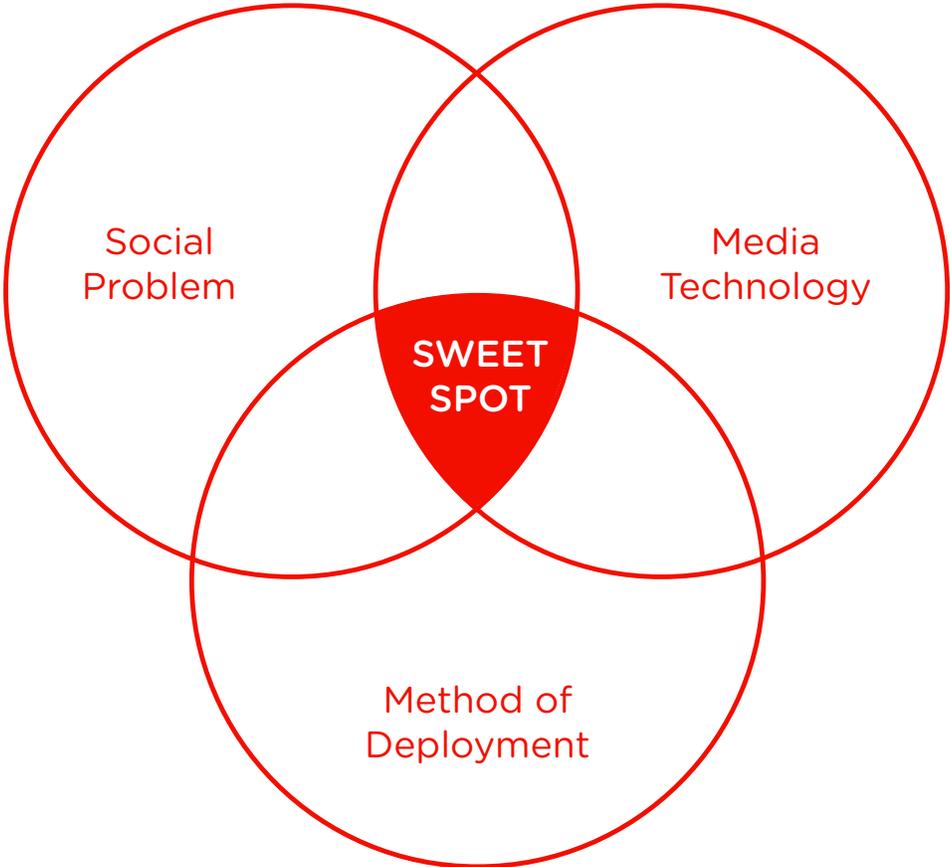
*We have been
so united by this
common mission.
It sounds funny but
every day we wake
up and we're like:
How do we solve
this? How do we
make things better?
How do we make
these projects work*

**Aleem Hossain,
Filmmaker and VR
Action Lab Maker**

knew that we could intervene with youth this age by creating a classroom curriculum. And we knew from our discussions with VR researcher, Dr. Grace Ahn, that VR could allow students to engage with bullying in new and powerful ways, particularly by providing a private space to engage with challenging material away from the judgement of peers or the “corniness” of more conventional role-play activities.

We knew we had found our sweet spot: the overlap of a social problem (the effectiveness drop-off of anti-bullying programs), our media technology (VR experiences) and our method of deployment (a curriculum designed for the classroom).

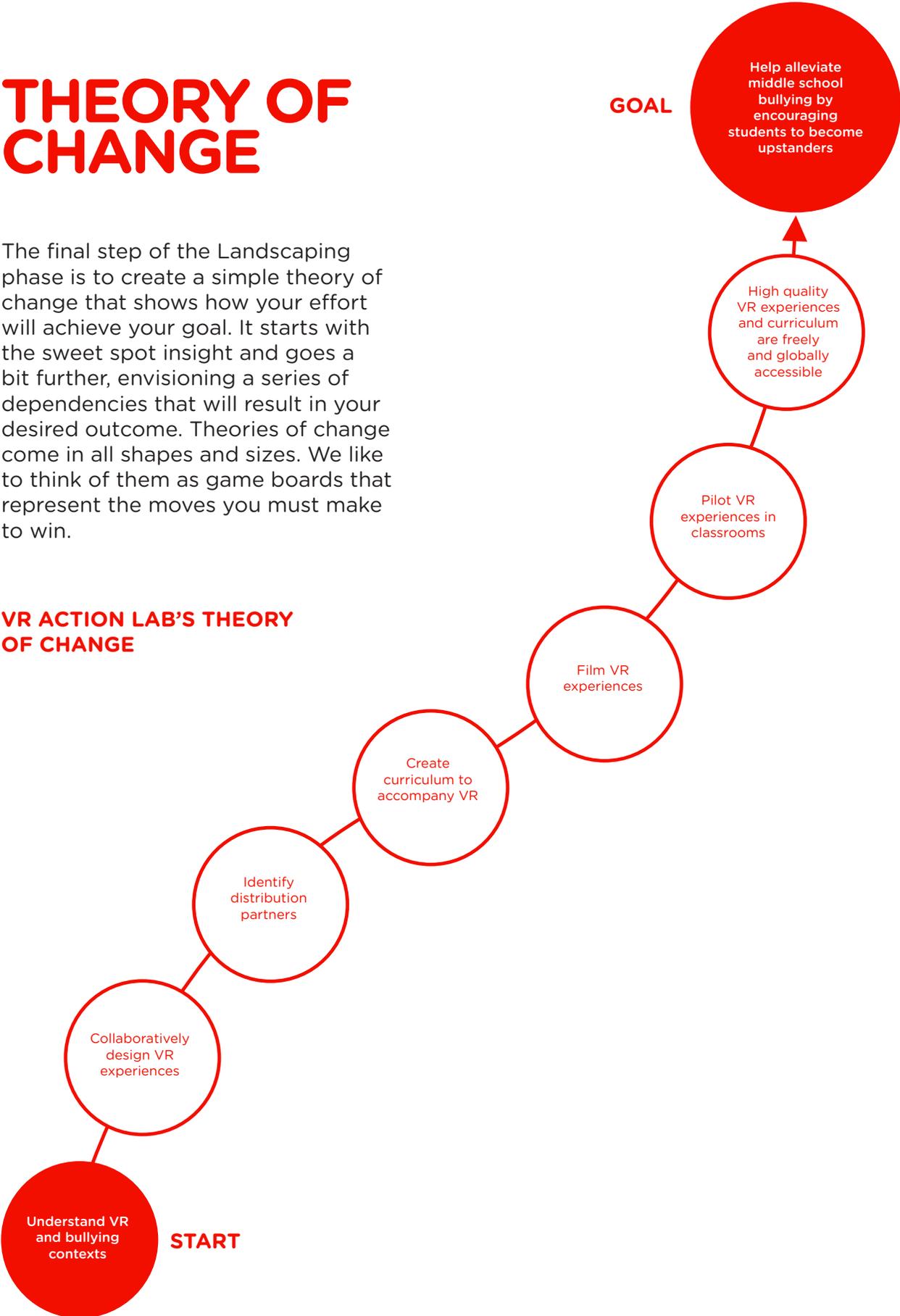
STRATEGIC MEDIA IMPACT DESIGN



THEORY OF CHANGE

The final step of the Landscaping phase is to create a simple theory of change that shows how your effort will achieve your goal. It starts with the sweet spot insight and goes a bit further, envisioning a series of dependencies that will result in your desired outcome. Theories of change come in all shapes and sizes. We like to think of them as game boards that represent the moves you must make to win.

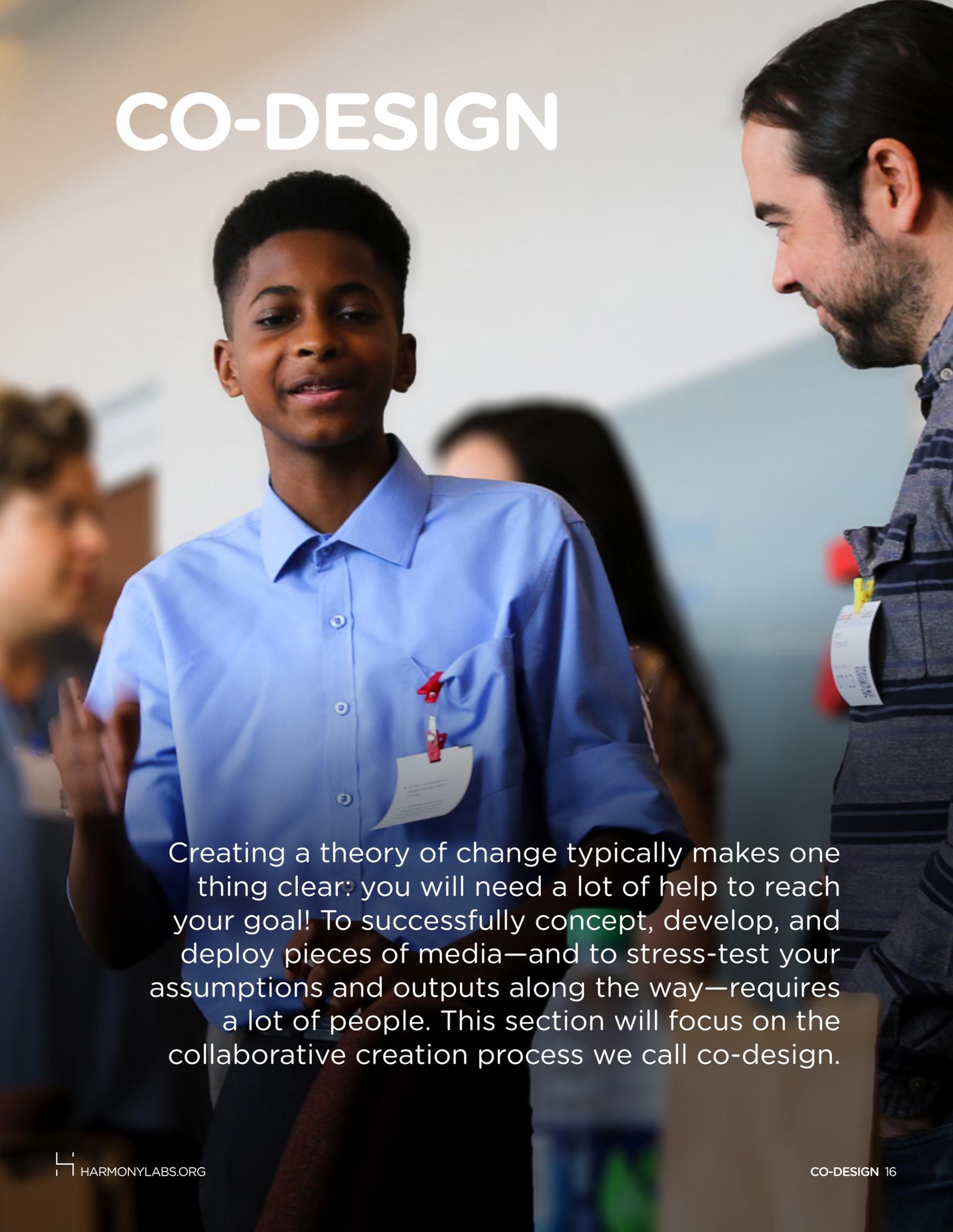
VR ACTION LAB'S THEORY OF CHANGE



QUESTIONS FOR REFLECTION

- 1.** Are you starting your exploration into VR for impact from the impact side (“I will only use VR if it advances my ultimate goal for impact”) or the VR side (“I definitely want to do a VR project and am looking for a cause that would benefit from it”)? Is VR the best medium for you?
- 2.** What are some core challenges of your social issue that the unique impact affordances of VR listed in this section might address?
- 3.** How will your intended audience receive and view your VR experiences? How will this support your social change goals?

CO-DESIGN

A young boy in a light blue button-down shirt is speaking to a man in a grey and blue striped shirt. Both are wearing name tags. The boy is gesturing with his right hand. The background is a blurred indoor setting with other people.

Creating a theory of change typically makes one thing clear: you will need a lot of help to reach your goal! To successfully concept, develop, and deploy pieces of media—and to stress-test your assumptions and outputs along the way—requires a lot of people. This section will focus on the collaborative creation process we call co-design.

Creating excellent impact VR requires a diversity of skills: writers, directors, cinematographers, editors, practitioners, researchers, and experts, as well as everyone involved on all sides of the social issue you seek to address. In the VR Action Lab, some of these roles and skill areas were covered by core project partners, while others necessitated the occasional involvement of outside advisors and consultants.

DESIGNING WITH “AUDIENCE”

Our target audience for VR Action Lab was middle school students aged 14 to 15. To achieve our goal of behavior change in this group, with improvements in the surrounding school climate, we needed to both realistically portray their experiences and speak to them in a way that respected their agency, without being patronizing or sugar-coating the problem. To ensure this, we brought about a dozen different young people onto the project as participants in different project stages. Though this will come as no surprise to those who practice user-centered design, some advocacy organizations still design

There are so many interesting people starting to get involved, and once that happens, people just think differently. . . They can approach stories that maybe I might find difficult to turn into VR, and they are able to make something magical happen.

**Nonny de la Peña,
Journalist and VR Creator,
in *Storybench***

for—rather than *with*—people involved in a particular social issue.

Yet how could we hope that our VR experiences would convince young people to become upstanders unless we understood the reasons they chose to stand on the sidelines of bullying? Our VR makers relied on the participation of teens to shape and refine their work at every stage in its development. That’s why we put quotation marks around “audience.” In this process, the “audience” was really an active participant from start to finish.

Below is a list of some of the methods we used to co-design.

CO-DESIGN METHODS

Panel, Q&A, Conversation. Middle-school students from New York City spoke about being bullied on a panel, in one-on-one interviews and through other kinds of group work at the Discovery Workshop early in the VR Action Lab creative process. Many of the stories and emotions that surfaced in this work found their way into the VR experiences.

Output Feedback: At the Colony retreat in Nantucket, in particular, young people helped workshop early versions of scripts and did some live readings and walk-throughs to ensure that the language and scenarios were authentic.

Curriculum Play-Testing: Once the experiences had been filmed and the curriculum written, both were “play-tested” by a small group of students at the public middle school Quest to Learn School in Lower Manhattan.

Don't just get something from a movie or a book. Don't write a story. Show them real-life situations, because this is real life.

**Grace del Corral,
Youth Panelist,
Discovery Workshop**

KNOWLEDGE FOR CREATIVITY

One of the most critical transfers that needs to occur in an impact VR project is the transfer of issue understanding to the creative team. For the VR Action Lab, we built in this knowledge transfer formally, through a briefing book and elements of the Discovery Workshop and Creative Colony, and also informally, by connecting our creative team to researchers and practitioners willing to provide ongoing guidance and feedback.

We've been really lucky to get to be around people who have done a lot of research.

**Mary John Frank,
Director, Choreographer
and VR Action Lab Maker**

ISSUE BRIEFING BOOK

To ensure that our diverse group of VR makers had shared knowledge of bullying definitions, dominant intervention practices, and high-potential opportunities, we compiled the most crucial insights from months of Landscaping into a 27-page briefing book. Listed below are some of its core elements.

We let the research provide guidelines and suggestions, but we were careful to not make the briefing material overly didactic. Though every issue will require a slightly different framework for knowledge transfer, the below outline may provide a useful template. In addition, you can find the briefing book on our website.

BRIEFING CREATIVES: CORE ELEMENTS

- ▶ **Definitions.** How is your issue defined and what are its observable forms? For example, bullying includes forms that are physical, verbal, and relational.
- ▶ **Ecosystem.** What is the larger context for your issue that helps explain why it exists or persists? For example, we discussed the role of schools and families in bullying.
- ▶ **Existing Interventions.** What is currently being done to solve the problem and why are these interventions insufficient? For example, how does teenage psychology explain the drop-off in effectiveness of current school-based programs?
- ▶ **Ethics for Creatives.** What are the ethical concerns that creatives should be aware of before they start developing story and character ideas for your issue? For example, our briefing book discussed unproductive gender-based stereotypes and the danger of triggering or re-traumatizing victims of bullying in a VR experience.
- ▶ **Deployment.** For your theory of change work, you have already figured out how the VR experiences will be shown to the target audience. Share this information with creatives so they can have a clear idea of how their work will be viewed. For example, we told our makers that the experiences would be viewed in middle school classes.

- ▶ **List of Further Resources.** You will come across a lot of resources in the Landscaping phase. Not all of them will work their way into the briefing book text. In addition, makers will have different modes of learning that will benefit from different types of material. Some will want to read policy papers and academic articles. Others will prefer journalistic materials, podcasts, and films. These additional resources can be listed with links at the end of the briefing book.

There's a lot of well-meaning intervention programs and curricula out there, but it's often both dull and didactic: talking at kids. The possibility of VR to BE an experience is very exciting.

**Jeremy Engle,
Curriculum Design Lead,
Institute of Play**

DISCOVERY WORKSHOP

We knew that an immersive learning experience was also necessary as a supplement to the briefing book we provided. For this reason, we brought core collaborators together for a full-day Discovery Workshop on bullying. Weeks of Landscaping had elucidated key insights and challenges, which were presented to collaborators and opened up for conversation at the Workshop. The main elements of the workshop were:

IMMERSING CREATIVES IN YOUR ISSUE

- ▶ **Creative Brainstorming:** By the end of this kind of knowledge transfer experience, creatives will begin to develop ideas about the experiences they would like to create. Take the opportunity to raise and discuss these ideas with the full project team present. For example, at our Discovery Lab, certain ideas were suggested by creatives that were productively refined by the researchers and practitioners also in the room.
- ▶ **Letting “Audience” Speak:** An in-person kick-off event is a great way to connect the “audience” to the creative team and initiate their ongoing participation in the project. At VR Action Lab’s Discovery Workshop, five teens aged 16 to 18 participated throughout the day, sharing freely with adult participants in a straightforward and respectful manner, without the need to sugar-coat taboo subjects like sexual harassment among young people.
- ▶ **Practicum on Existing Interventions:** Find a way to have creatives experience existing cause interventions. For VR Action Lab, this meant having our learning design partner share and enact existing anti-bullying curricula. Participants were able to see current methods, such as role-playing, as well as the varying levels of engagement and cynicism of youth participants.

QUESTIONS FOR REFLECTION

1. How can you engage your “audience” and integrate them throughout the creative process as co-designers?
2. How will you support issue knowledge transfer to the creatives on your team?
3. How can you make sure all team members understand the unique, issue-specific ethical challenges of creating VR for impact?

PRODUCTION AND PILOTING

Creative vision and execution are at the core of impactful media. Regardless of its social change goal, the ultimate success of a VR piece will be determined by its story and ability to connect with and move viewers. Getting production right is essential, which means continuing to integrate opportunities for feedback, experimentation, and creative refinement.

Selecting the right creatives to work on your impact media project is the first important step toward harnessing the power of the medium. For VR Action Lab, we put out an open call for creatives and selected three with very different backgrounds and skill sets: a journalist, a choreographer, and a filmmaker. This diversity of experience resulted in a rich collaborative experience. As the filmmaker in our creative mix noted, “I did not realize at the beginning how important it was that three makers with such different skill sets were chosen for this project... Each project [was] more nuanced and sophisticated than it would have been... [had we been] working on our own.”

People are trying to box virtual reality into what it is and what it isn't. It is, in my opinion, very detrimental to the state of the industry. . . The simple fact is, anything is possible. It's just a matter of . . . willpower and financing.

**Jake Sally,
Director of Immersive
Development, RYOT**

THE CREATIVE COLONY

From the project's start, the Action Lab had a clear commitment to grant the three VR makers maximum creative freedom within a limited set of social issue impact constraints. As part of this commitment, we worked with Screenwriters Colony to provide a two-week residential retreat for creatives at the Almanack Arts Colony in Nantucket. The creatives went into the colony with preliminary concepts for their VR pieces, and they exited with fully realized scripts and preliminary production plans.

Throughout the project, but particularly while at the Colony, the makers were supported by a range of

mentors and advisors to help them understand the social issue of bullying and utilize virtual reality to maximum effect. It is important to note that none of the creatives we selected had an extensive background in writing and directing for VR. We made this choice, because we were interested in seeding new talent with unique voices from various creative fields and transferring their in-depth experience to VR. The support we provided around writing and directing for VR was particularly important to our group of creatives.

SUPPORTING CREATIVES FOR SOCIAL IMPACT

- ▶ **Space for Creativity and Collaboration.** The Colony provided creatives a framework for individual productivity, as well as opportunities for group collaboration and expert guidance. Given our goals, this approach seemed preferable to simply providing creatives financial support and a deadline for their independent work. One creative noted, “The most important part has been that there was a structure . . . step by step. We have added expertise every time we needed it. It was nice to have that amount of support.”
- ▶ **Mentorship and Guidance.** To support the makers in best utilizing the unique affordances of virtual reality, we connected them with advisors and mentors who led sessions around, for instance, how to leverage space and presence in VR. Seasoned VR writers discussed the unique challenges of script-writing in VR. And bullying experts advised with an eye towards intervention strategy. Local teens were also involved, through live readings and walk-throughs.
- ▶ **Balancing Absorption and Processing.** We were careful to integrate new information gradually, so it was additive, not overwhelming. This meant scheduling group mentor sessions in the afternoon and free time to write or conduct one-on-one sessions in the morning. As one creative noted, “The creative process is not math. It’s just really extraordinary to have some masters to refer to for support, backup, giving notes and thoughts . . . I definitely got new muscles.”
- ▶ **Creative Autonomy.** Makers had full autonomy to develop their creative visions into production. As a result, the final productions range from a rap musical to a science fiction drama that depicts a bullying-free future. The only constraints were budget, timeline, technical feasibility, and its role within the larger impact intervention.

THE EXPERIENCES

Three experiences were developed for VR Action Lab, ranging in duration from three to nine minutes each:

“Stand Up” by Mary John Frank. A dance-based rap musical that tells the story of one teen who stood up for a friend.

“No Easy Answers” by Aleem Hossain. Viewers enter three alternate realities embodying ineffective institutional responses to bullying, encouraging honest conversation about bullying intervention.

“FutureCIRCLES” by Adaora Udoji. Maya and the viewer travel to a future where bullying no longer exists and learn how small actions can make a big difference.

MEASUREMENT MATTERS

Testing early and often allows the team to determine the extent to which the impact design worked as planned, and to make changes and refinements as needed. In addition, and perhaps more importantly, it contributes insights that will advance our understanding of the medium’s potential as a tool for social change.

At a minimum, we encourage you to consider using pre- and post-view testing to evaluate your VR experience’s ability to achieve some of the following audience effects, identified by researchers [Atkin and Freimuth](#):

When applying for grants, funders want to know the impact VR will have in order to justify their investment, and we don’t currently have a framework for measuring social impact. Until we can show them how to measure this, it will be difficult for independent producers to secure funding.

**David Rochkind,
Creative Director,
Ground Media**

IMPACT MEASUREMENT: AUDIENCE EFFECTS

- ▶ **Knowledge.** Change in the amount of information an individual has about a social issue, commonly known as “awareness.”
- ▶ **Disposition.** Change in how positively or negatively an individual feels about a social issue.
- ▶ **Salience.** Change in whether the individual feels the issue is important.
- ▶ **Efficacy.** Change in an individual’s belief as to whether they have the power to do something about the issue.

PILOTING IN SCHOOLS

The goal of VR Action Lab was to help alleviate middle school bullying and support students in taking skillful action as upstanders. To evaluate the efficacy of project outcomes against that goal, we collaborated with researchers to pilot the three VR experiences and associated curriculum to measure their effects on middle school students and school climates.

To evaluate the efficacy of the Lab’s virtual reality experiences and anti-bullying curriculum, the experiences will be piloted as part of the following two separate studies, conducted throughout 2017 and 2018:

PILOT 1 – THE RANDOMIZED CONTROLLED TRIAL. Dr. Dorothy Espelage, a Professor in the Department of Psychology at the

University of Florida, and Dr. Grace Ahn, an Associate Professor in the Department of Advertising at the University of Georgia, are conducting a randomized controlled trial on student attitudes and behavior change on bullying and bullying bystander intervention. The curriculum and VR experiences will be piloted in two middle schools in Illinois, involving 50 eighth grade student participants. The study will test whether students who view the VR experiences report greater knowledge of bullying and its components, lower attitudes supportive of bullying and greater willingness to intervene compared to youth who do not. In addition, changes in school climate will also be evaluated.

PILOT 2 — THE INDIVIDUAL

INTERVENTION. Dr. Sue Swearer, a Professor in the Department of Educational Psychology at the University of Nebraska-Lincoln, will test the efficacy of the VR experiences by implementing them in an existing in-school intervention program for students who are involved in bullying. Dr. Swearer’s year-round program is provided to at-risk students aged 7 to 18, at the referral of local school staff as an alternative to suspension. An average of 25-30 students go through the intervention annually. The intervention will compare the

effects of VR versus video in altering student understanding of bullying and propensity to engage in bullying.

After this initial pilot, the curriculum will be amended and translated for use by Google’s Trust and Safety Team. The potential for global access was a strong motivator for VR Action Lab. In addition, the VR experiences and curriculum will be available for free complimentary viewing and download on the Harmony Labs website, as we seek to encourage usage by existing anti-bullying programs and organizations.

QUESTIONS FOR REFLECTION

1. If you are not an organization that normally engages creatives, how will you recruit them? What networks or partnerships can you leverage? How can you bring a diversity of perspectives and voices to your issue?
2. How can you balance the constraints of your project and still maintain creative autonomy? How can you support the creatives with whom you work?
3. What are your measurements of success according to your theory of change, and how can you test them?

CONCLUSION

Social impact through media rarely just happens. Dropping a media artifact into the world and relying on its change-making potential is not likely to produce a world-changing result. But impact design is a discipline we believe everyone can develop. In fact, we believe it's a must nowadays for anyone seeking to persuade, exert influence and make change at scale using media . . . for anyone seeking to leverage the power of new immersive media for good. We hope this guide has served as a resource for you, and look forward to hearing about the fantastic success of your own impact VR projects.

ABOUT THIS PROJECT

VR Action Lab explored how VR can address the precipitous drop in efficacy of anti-bullying efforts in middle school and activate young people as upstanders. The Action Lab united award-winning media makers with young people, practitioners, researchers, designers and other leading experts to produce three VR experiences embedded in a pilot-tested six-lesson curriculum. Future iterations of the Action Lab will use the same rigorous, multidisciplinary approach to prototype additional social impact uses for emerging media technology.

VR Action Lab was a collaboration between Harmony Labs and Google's Daydream Impact, bringing together [Screenwriters Colony](#), [Sensorium Works](#), and [Institute of Play](#) with young people, university researchers, and middle-school practitioners across four states. For more information, visit [Google's Daydream Impact](#) or [Harmony Labs](#).

Special thanks to the following for their contribution to this project:

Dr. Grace Ahn, Associate Professor of Advertising, Grady College of Journalism & Mass Communication, University of Georgia, Director, Games and Virtual Environments Lab

Mia Doces, Director of New Mission Ventures, Committee for Children

Jeremy Engle, Curriculum Design Lead, Institute of Play

Dr. Dorothy Espelage, Professor of Psychology, Department of Psychology, University of Florida

Dr. Susan M. Swearer, Willa Cather Professor of Educational Psychology, School Psychology Program, Department of Educational Psychology, University of Nebraska Lincoln

JOIN US

Are you interested in conducting an Action Lab for a social issue or emerging media technology you care about? Would you like to bring the VR Action Lab's anti-bullying experiences and curriculum to your school, or include them in a film festival? Email hello@harmonylabs.org.

ABOUT HARMONY LABS

Harmony Labs is on a mission to understand media influence at scale, and to experiment with using media to support an open, resilient, democratic society.

Harmony Labs runs an accelerator that provides capital, community and other resources to individuals and early-stage companies, as they build technology that advances our understanding of media influence. And we work with media makers, publishers, tech companies, advocacy groups, researchers and others to address pervasive challenges, like detecting persuasion online or optimizing content to cross partisan divides.

Harmony Labs is a 501(c)3 based in New York City. We have partnered with and/or received funding from leading organizations like Google, The Ford Foundation, The Corporation for Public Broadcasting, MTV, Mozilla, Columbia University and the Defense Advanced Research Projects Agency (DARPA).



Except where otherwise noted, this work is licensed by Harmony Labs Inc. under <https://creativecommons.org/licenses/by-nc-sa/4.0>