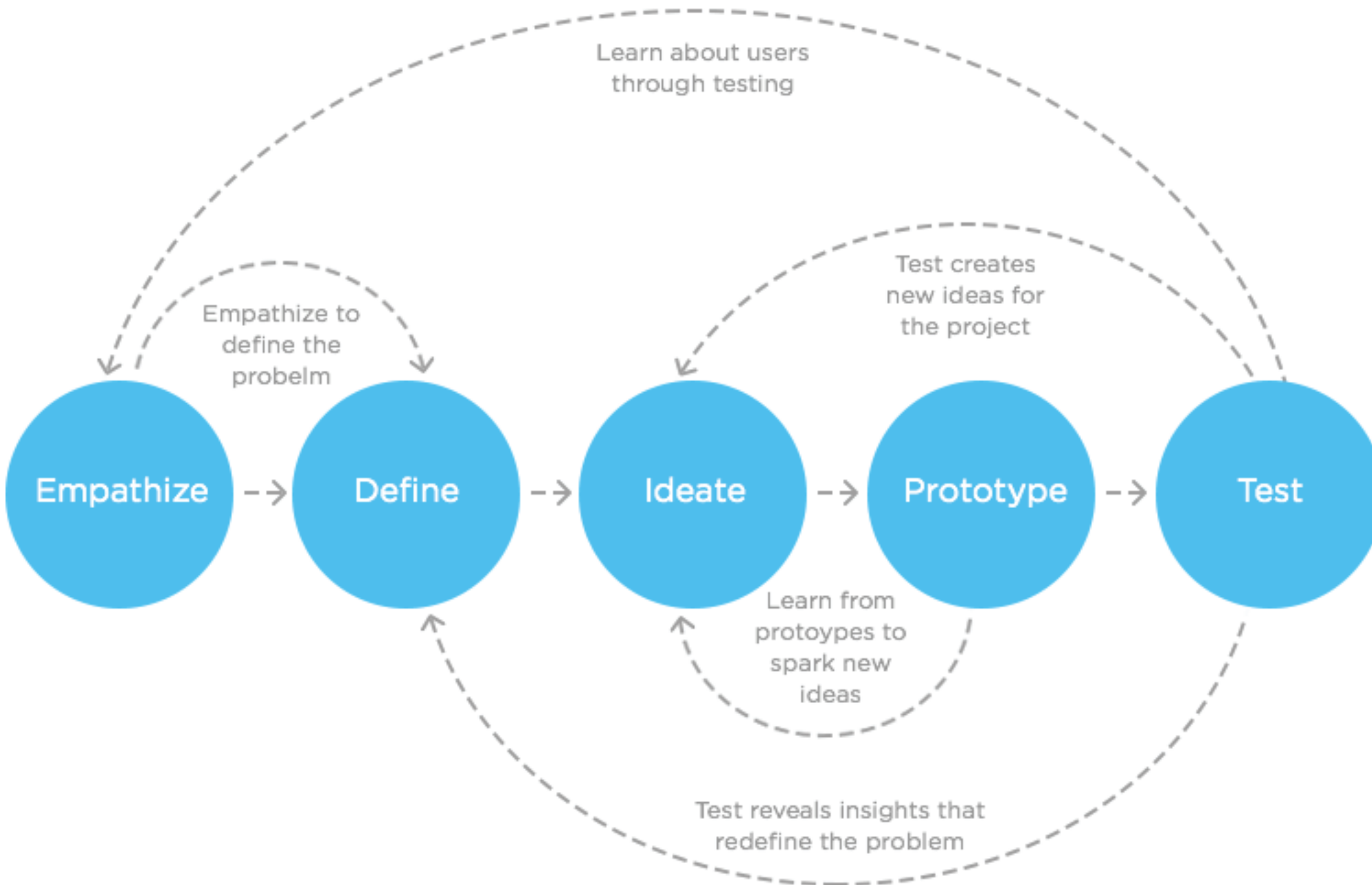




Male Contraceptive Initiative

2019 Ideation Event
FINAL REPORT



INTRODUCTION

Male Contraceptive Initiative (MCI) was founded in 2014 as a 501(c)3 nonprofit dedicated to the advancement of long-acting, reversible, non-hormonal male contraceptive options. Since 2017, MCI has granted more than \$2M USD towards research and development of male contraception, and has championed advocacy efforts in the field to ensure public support and knowledge. MCI’s approach ensures that a variety of contraceptive options have the opportunity to succeed, resulting in an eventual slate of birth control options to meet the varied needs of a diverse population.

Design thinking, or human-centered design, is a solutions-based problem-solving methodology rooted in empathizing with individuals or organizations (or, “stakeholders”) most closely affected by a particular challenge. The approach utilizes qualitative research approaches and activities to identify pain-points in order to both articulate challenges and reposition them as opportunities. The intention is to first develop a holistic understanding of a challenge before collaboratively designing potential interventions to address it. Going through this process with those most impacted by the challenge ensures that potential solutions are practical, sustainable, and valued.

Though often expressed as a linear process, design thinking’s effectiveness and value greatly increases with each application: it is at its most impactful when done in iterative cycles. The vernacular of design thinking varies, but the phases of the design thinking process are typically defined as:

- **Empathize:** Immersion in an issue or challenge to experience it from an end-user’s perspective
- **Define:** Building off the empathic insights, structure both the problem and a solution
- **Ideate:** Take the problem statement and proposed solution and craft a viable intervention
- **Prototype:** Create a tangible or even physical manifestation of the arrived at intervention
- **Test:** Re-engage with end-users to evaluate the intervention’s effectiveness

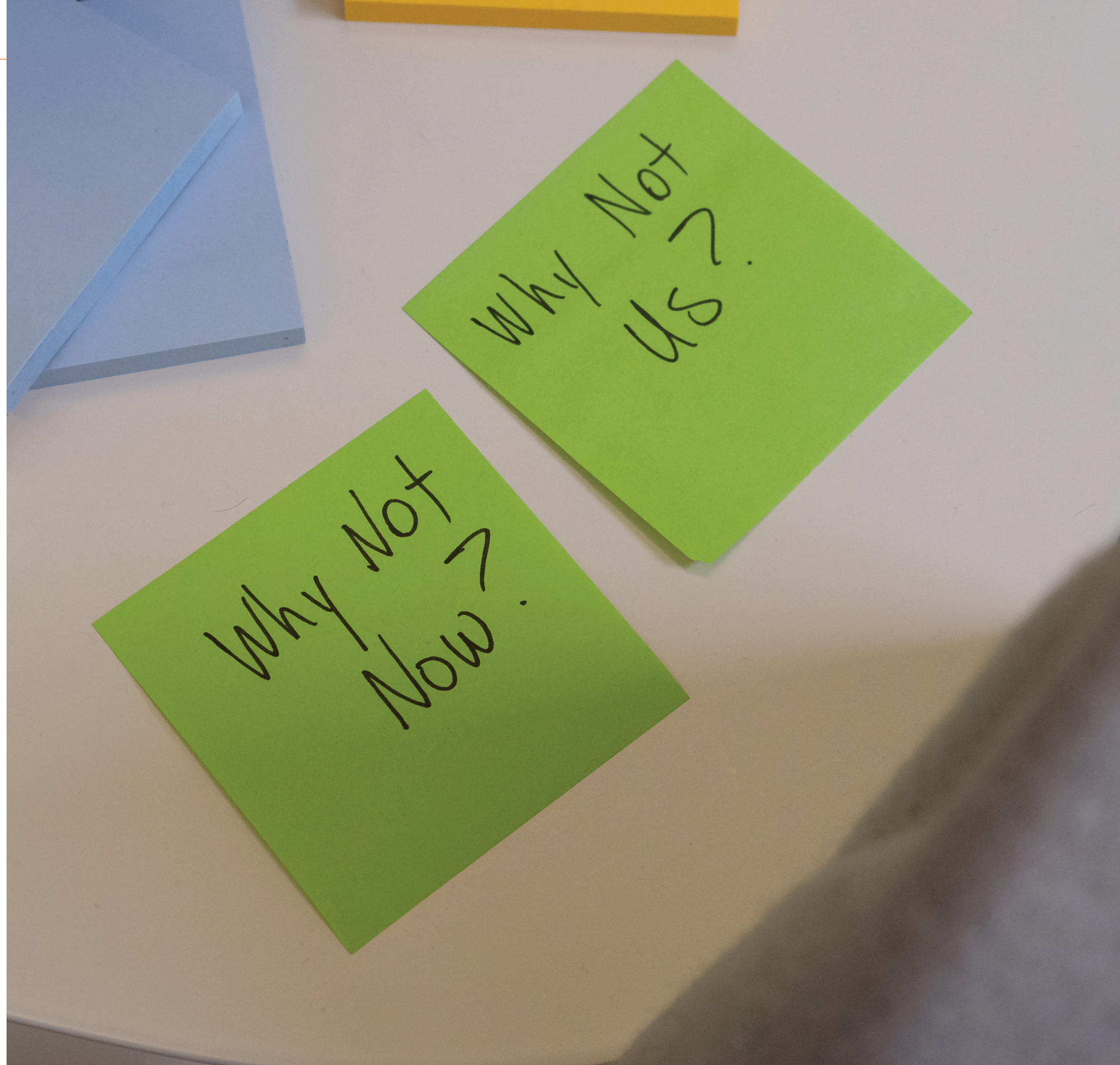
IDEO is a global design company committed to creating positive impact. From designing the first manufacturable mouse for Apple to advancing the practice of human-centered design, IDEO has long been at the forefront of creating change through design, and has tackled big problems across the spectrum of design and development.

Ideation allows the generation of different ideas in a short amount of time. By challenging smart, independent thinkers to approach problems collaboratively and with a mindset that discovers new direction, we can solve big problems with innovation.

Male contraception is a field with broad, reaching challenges that require a thoughtful cross-collaborative approach. From funding challenges to societal norms, male contraception faces hurdles that will require expertise both across and deep within the drug development pipeline. We also are mindful that some of the challenges the field is facing may have been addressed in other sectors.

For this reason, we wanted to invite leaders in male contraception, and from other fields of practice to contribute their knowledge and experience to make sure no time is wasted reinventing the wheel. Ideation is built around gathering diverse thoughts about how to address big challenges and we believe that it is this approach that will push the field of male contraception forward faster.

By bringing together experts in fields such as basic research, product development, pharmaceutical marketing, regulatory approval, design, and more, we hoped to gather unique insights into what some of the stumbling blocks might be for developing non-hormonal, reversible male contraception. Through this proactive approach, we can plan for how we might circumvent foreseeable challenges, ultimately accelerating the speed of development and getting male contraceptive products on the market sooner.



Participants

Akash Bakshi
CEO and Co-Founder, YourChoice Therapeutics

Bethany Young Holt
Executive Director & Founder, CAMI Health & Initiative for MPTs

Mark Barone
Senior Scientist, Population Council

Sabrina Martucci Johnson
President & CEO, Daré Bioscience

Paula Cohen
Professor of Genetics, Cornell University College of Veterinary Medicine

Jennifer Kiang
Senior Manager, Daré Bioscience

Simon Cook
Co-Founder & Chief Technology Officer, Eudaemon Technologies

Polina Lishko
Co-Founder, YourChoice Therapeutics

Aaron Crapster
Principle Scientist, Vibliome Therapeutics
Male Contraceptive Initiative Fellow

Elaine Lissner
Founder, Parsemus Foundation

Jason Cross
Co-Founder & Chief Strategy Officer, Rymedi

Nadja Mannowetz
Co-Founder & Chief Science Officer, YourChoice Therapeutics

Patricia Cuasnicú
Senior Scientific Researcher, National Research Council (CONICET)

Connie Moreadith
Public Health Consultant

Pamon Forouhar
Rapid Evaluator, X, the moonshot factory

Debbie O'Brien
Board Member, Male Contraceptive Initiative

Liliya Gabalev
Graduate Student Instructor, UC Berkeley
Male Contraceptive Initiative Fellow

Stasia Obremsky
Strategy Director, Rhia Ventures

Gunda Georg
Professor & Medicinal Chemistry Department Head, University of Minnesota

Stephen Palmer
President, Chief Scientific Officer, TocopheRx

Robert Goodwin
CEO, Vibliome Therapeutics

Lisa Rarick
RAR Consulting

Robert Gorkin
Co-Founder & External Research Manager, Imagine Intelligent Materials Ltd.

Gianni Renda
Deputy Chair, Dept. of Architectural & Industrial Design
Swinburne University of Technology

Pablo Visconti
Associate Professor, University of Massachusetts

Joel Segre
Early Pipeline Strategy Lead, X, the moonshot factory

Kevin Whaley
CEO, Mapp Biopharmaceutical, Inc.

Iana Simeonov
Digital Health Strategy Consultant

Wei Yan
Foundations Professor of Physiology & Cell Biology
University of Nevada, Reno

David Sokal
Co-Founder & Board Chair, Male Contraceptive Initiative



*“If you want to go quickly, go alone.
If you want to go far, go together.”*

Eunuchs to Pussyhats

A HISTORY OF CONTRACEPTION



Day 1:
Looking In



Journey to Market

Drug development can be a confusing, opaque process - even to those that are in the process of developing new products. In identifying the ways that the male contraceptive field might overcome challenges before they arise, the group first tackled the Journey to Market in order to identify where challenges lay along the pathway a drug typically takes from discovery to market introduction. One immediate learning was that the journey isn't linear, and it isn't standardized. Many participants characterized it as a "swirling vortex" where each part of the process relies on previous steps while also informing future steps. Along the development pathway, each finding is equally likely to identify a need for iteration and improvement as it is to move the process forward.

Challenges

As participants thought their way through the development pathway, they identified hundreds of small challenges that would need to be addressed, including:

- scientific hurdles, such as understanding and overcoming the blood-testis-barrier
- regulatory challenges, like how there hasn't been a male contraceptive to set precedent for approval or process
- social stigmas that may impact uptake of eventual approved methods, including the fact that contraception has historically been viewed as a female responsibility

These challenges were grouped into larger categories, and themes began to emerge around challenges that impacted multiple steps of the pathway to market.

Stakeholders

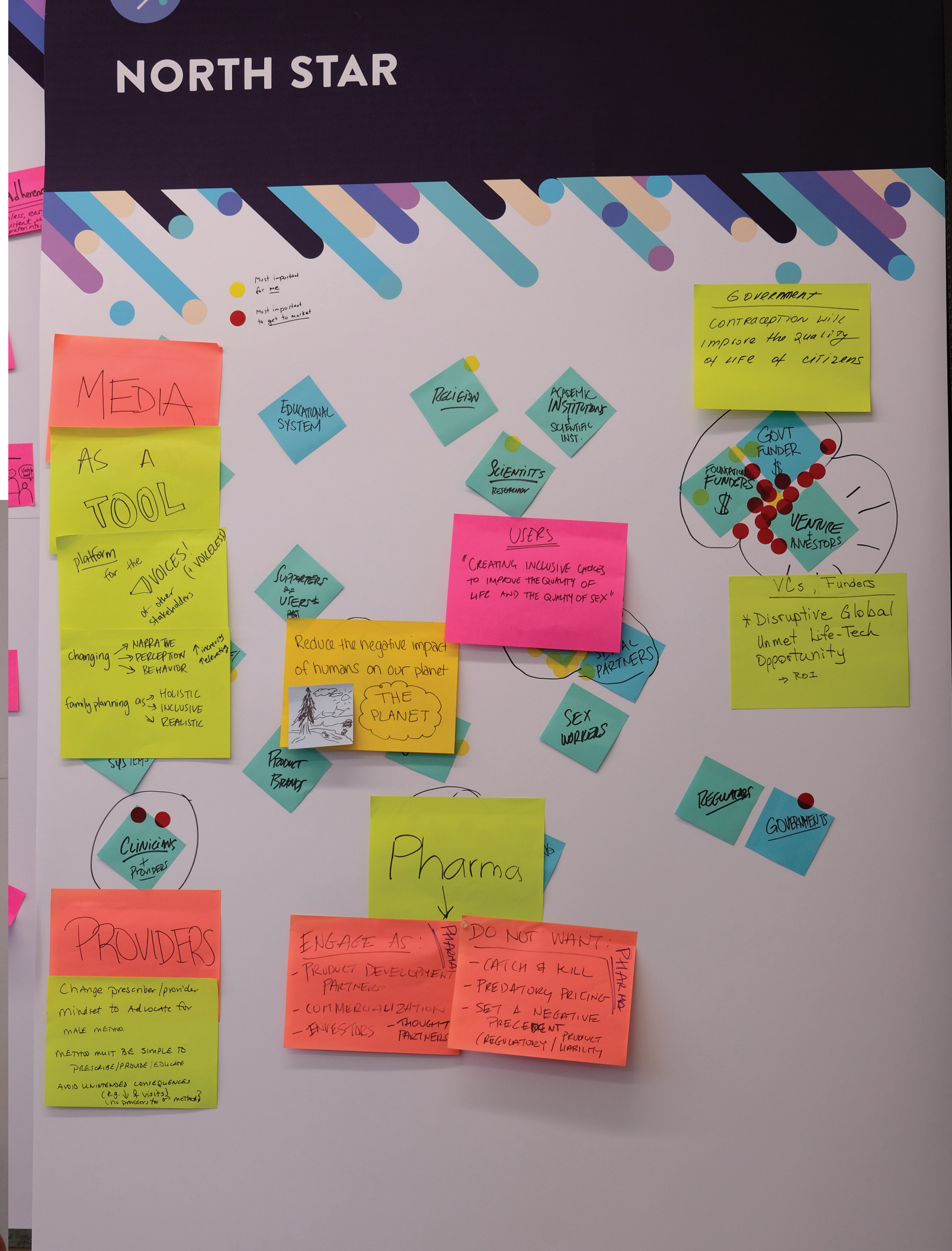
Participants also took time to identify the stakeholders that need to be engaged in order to make male contraception successful. As with the challenges, stakeholders were sometimes specifically identified, such as the Catholic Church and the pharmacy chain CVS, but broader stakeholders were also identified such as environmentalists, female partners, and media outlets. These stakeholders were grouped into larger categories that also included venture capital, governmental institutions and health systems, as well as potential users and their partners.



Identifying challenges and reframing them as opportunities

North Stars

The North Star has been a means of direction and navigation for centuries. For the purposes of this event, we sought to identify our “North Star,” or our guiding purpose. This meant having participants ask themselves two questions - “Which stakeholder is most important to me?” as well as “Which stakeholder is most important to get methods to market?” Here, participants began taking the first steps towards narrowing the focus of their purpose. Most participants selected “Users” as what was important to them, but then selected “Government and Foundation Funders / Venture and Investors.” as being most important to get methods to market.



Fauxnique

Masculinity as a concept was a frequent discussion point throughout the workshop. Is contraception inherently a female concept, or is that a societal construction? What makes a man masculine, and would male contraceptives impact that narrative? An evening activity took participants to meet Monique Jenkinson, a performance artist who uses drag to explore the ideas of femininity and masculinity. Monique is a cisgender woman, who takes on the drag queen persona of Fauxnique to explore these concepts. Participants were able to watch Monique transform into Fauxnique as she explained the process and ultimate conversion between the two personas. Afterwards, participants explored their own ideas of masculinity and femininity through discussion and physical movement.



Transitioned from Monique to “Fauxnique”

TION

U: Goals/ UN
B: Achieve SDGs

Individuals get it!
Both men + women
Traditional sp-
and fi-

lack of models for
and guidance
structure of

U: Entrepreneurs
B: Attract Funding

USER: Academics

EDUCATION

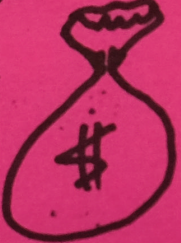
Day 2: Building

ADVOCATES
MC THE QUANT
ARGUMENT
PRIORITY MC.

Funding to
carry out
all needed
exp. & validation


IP vs coll/boi-tions

Biz
MODELS

INCENTIVES
FOR
REPRODUCTION
DEV 

B:

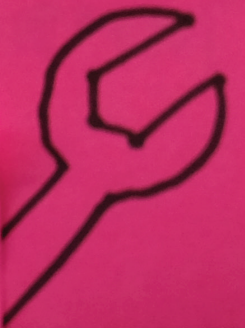
CULTURAL / RELIGIOUS
ISSUES AGAINST
CONTRACEPTION
↓
BACK IN SA
U: Everyone

DON'T FIT INTO BIZ MODELS
NEED NEW BIZ MODELS


MUST HAVE
I.P. + CONVINCED

U: RESEARCHERS + DEVELOPERS
B: ADOPT AN I.P. MENTALITY

U: SCIENCE WORKS
PT A DISRUPTIVE
GROUP MENTALITY

ACCESS
EQUIPMENT


PUBLIC
FINANCIAL SUPPORT

Hesitation
to
Use New Tools

Roundtable: Taking Products to Market

The ultimate goal of male contraceptives is getting to market: where the average person has access to products that meet their unique contraceptive needs. Even though the pathway to market can look very different between healthcare sectors, there are lessons to be learned from past experiences. Christine Winoto of UCSF, Sherya Mehta of Zenflow, and Dennis Boyle of IDEO all joined for a roundtable to discuss the experience of bringing new healthcare products to market, and how to merge human need with clinical utility.

HOW MIGHT WE??

While the first day of the event was focused on identifying challenges, the second reminded us that every challenge is an opportunity. Day Two began by shifting the focus of activities towards identifying solutions by employing the How Might We approach. “How Might We” is a way to identify opportunities inherent in every obstacle by asking a simple question with three parts: **How** is the first section - it assumes there is a solution. It starts from a place of exploration. The next section, **Might**, encourages ambiguity and optimism - the solution doesn’t have to be immediate or inside-the-box. The word also encourages the “yes, AND” mentality that fosters creativity. The final and most important piece is the **We**. The word “we” acknowledges that this is a team effort, and nobody has to go the road alone.



HMW Questions

To approach problems from a How Might We (HMW) standpoint, facilitators brought together outputs from the challenges and stakeholders activities, and with the North Stars in mind, began identifying how users might benefit from the opportunities inherent in the challenges presented. Then, facilitators began asking HMWs that could bring about concerted and sustained change that engaged key stakeholders. Some examples of HMWs included “How Might We create a support system for scientists so they can focus more on science,” “How Might We position male contraceptives in the context of great and safe sex,” and “How Might We give advocates of male contraception the quantitative and qualitative arguments for prioritizing male contraception.”

After HMWs were grouped into categories, participants selected those that they felt were most important to answer, or that they felt could accelerate the time to market for male contraceptives.

How Might We? Outputs



Concept-ing

After formulating “How Might We” questions, participants were then asked to develop concepts as a means of addressing the identified challenges. Rough concepts were developed by brainstorming dozens of new ideas with a focus on speed and quantity as a starting point. This approach results in the generation of dozens of solutions, which are ultimately pared down but provide key insights into more refined concepts.

How might we position male contraceptives within the context of great and safe sex?

Some responses included branding of eventual products with pleasure and security, or combining non-contraceptive benefits such as multipurpose prevention technologies (MPTs) or Viagra within male contraceptives.

How might we give male contraceptive advocates the evidence they need to get male contraception prioritized among funders?

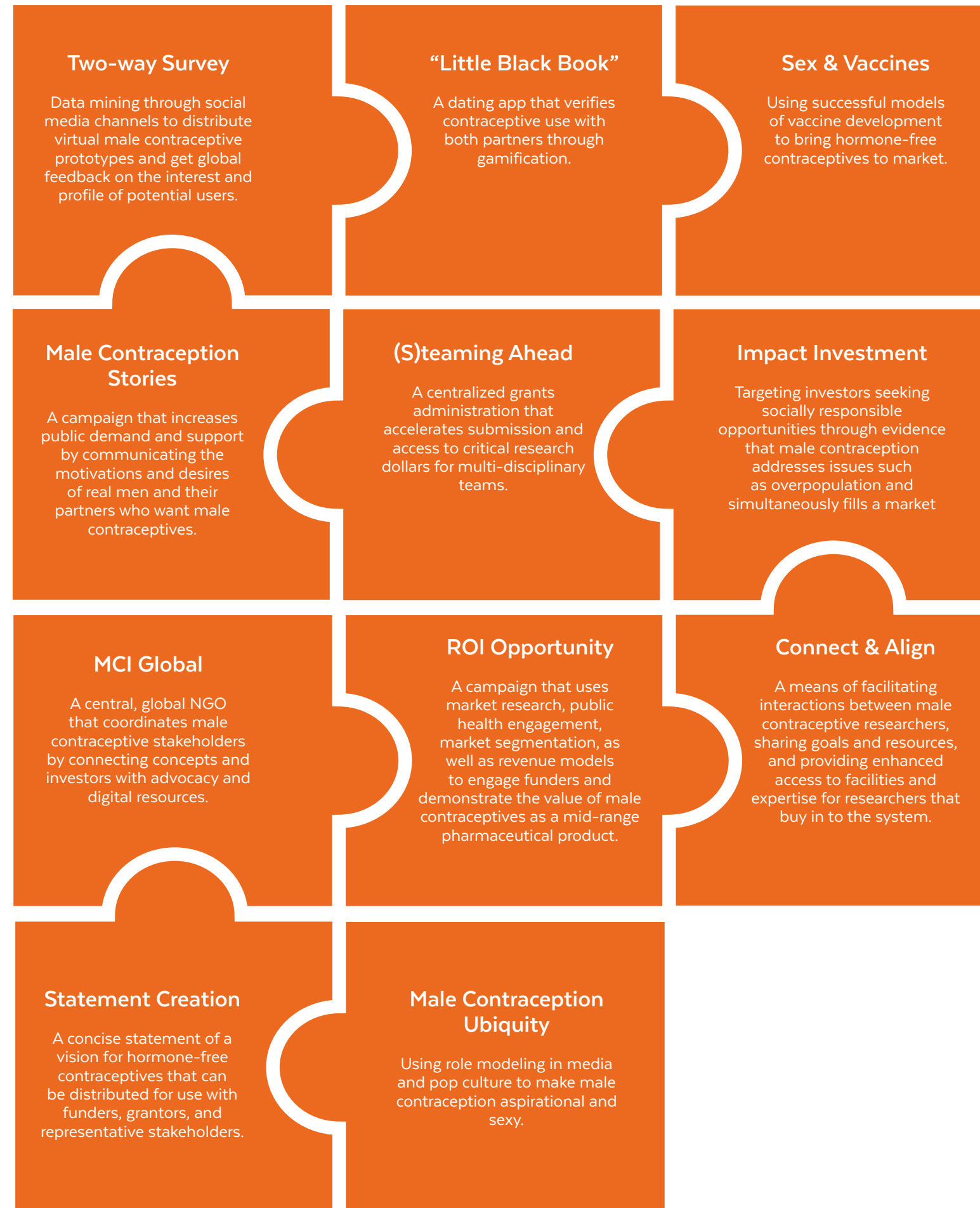
Some ideas brought together qualitative and quantitative data like peer surveys, economic analyses, and testimonials that placed the men at the center of the conversation and highlighted their needs and preferences.

These concept explorations were intended to be collaborative and exploratory. With a framework based on the concept that there is no such thing as a bad idea, the “yes, AND” mentality was apparent as other HMWs gathered ideas like partnerships with pornography distributors, male contraception TED Talk-like symposia, and petitioning for vasectomy coverage in the Affordable Care Act.

Basic concepts began to coalesce into general categories, which informed more actionable concepts to broad HMW questions. We might help everyone in the male contraceptive community to better understand the preferences, lives, and attitudes of target audiences by implementing social research programs like surveys, then communicating results with the researchers developing products, and building public outreach programs around the knowledge gained from these surveys.

Having brainstormed rough concepts and ways of tackling the HMWs, participants broke off into small groups and focused on some of the categories that were determined to be the most promising for the community to address. The concepts were intended to be descriptive, visual and to provide value to users.

Participants took these cleaned-up concepts and provided feedback as a group; improving, iterating, and adding features that would increase the value propositions for the target audiences. Ultimately, some of these concepts could see the light of day, and others provide a vision for how we might tackle big problems as a collaborative and unified group.



STIGMA +
TABOO

WRONG
NARRATIVE:

Messages around
"pleasure" to
increase interest
in taking

WE HAVE
THE PILL
FEMALE
I WOULD
TRUST M

User: Society

benefit: move forward
into new ways of
preventing pregnancy

US Govt fund
dependence
in this climate
USG

Day 3:

Moving Forward

Spokespeople

Lack of

Missi

User: gender non-conforming
people
trans people

benefit: have contraceptives
that work for their bodies

GRANT
SEEKING +
MGMT

obstacles
Funding.
Lack of Expertise

How prioritize
grant awards?

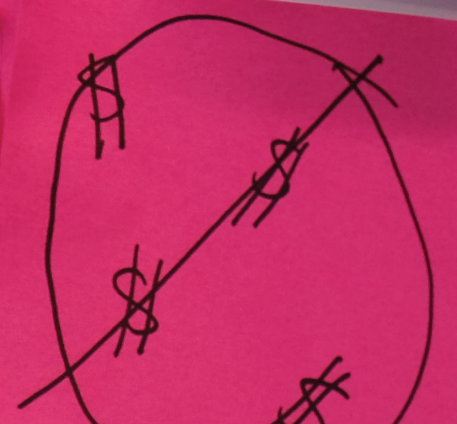
User: women

benefit: feel comfortable
with partners using
male BC

Binary
GERS

♀

\$



Gender
Representation
= Good

♂

User: Developers

BLA
NEW

Roundtable: Building a Platform

Concepts are a critical piece of the design process - they provide a jumping off point and allow thoughtful approaches to big problems that can be workshopped and modified. But eventually, concepts need to lead to action. Shalu Umapathy and Ridhi Arun of IDEO.org and Becca Carroll of IDEO's CoLab spoke with participants in a roundtable discussion about their experiences in building platforms for healthcare projects.



Collaborative Design (Platform Canvases)

Because getting male contraceptives to market is a collaborative effort, there has to be motivation for all stakeholders to remain engaged throughout path forward. Participants took thoughts from the roundtable, and built a Platform Canvas that imagined two participants - someone like them, and MCI - and designed a collaboration between them. What are the needs of each participant? What can they offer each other? What will they get out of the partnership? What are their hopes and fears? All of these items play into how MCI and others in the male contraceptive space can build collaborative relationships and encourage group thinking in a niche, small field.

Outputs

Broadly, there's a strong need for community in the male contraceptive space. Researchers are often siloed, working on projects with limited funds and time.

Bringing attention and organization to the field would allow collaboration, dissemination, and ultimately, progress.

Hopes & Fears

What dreams and hopes, but also worries or concerns come up when working on this offer?

Offer

What is that they will get?
What services or support will we be offered that address their need?

Benefits

What are they getting out of this?
Why would they want to be part of this effort?



Success Stories

A final exercise allowed participants to dream a little and get optimistic - a Mad-Libs-style activity told participants to dream of a time when one of their ideas took off. It asked them to detail when they knew a big moment in development was, and how they managed to make it happen. Optimism is key in solving any challenge, and the Success Stories gave participants a role and voice for impacting their own visions of success.

Reflection & Feedback

Before letting participants go and fly off into the world with new ideas, motivations, and relationships, they were asked to share some feedback from the event. What did they feel they got out of it? What concepts would they like to see come to life? Participants vocally asked for more networking and collaboration opportunities, and found the process of generating ideas using the HCD approach informative and useful.



Reflecting on a time well-spent together

Valley of Death

Manage the blood-testes barrier

Manage into CONTRACEPTION

90% + WEETED NONSENSE

Youngens: Culture Shifts

Why Not Now?

Why Not Us?

PLANET

BASE? BIO?

Day 4: Sense-Making

The Journey

Challenges

Lack of guidance/support
- how do we make right decisions?

Need for diversity of expertise / collaboration
cross-disciplinary - Abbi

What exp do we need to replicate?

We missing?

To Cancer Downstream Commercialization

Smaller pieces, not linear

Balance of collaboration & competition

"Least worst option"
Why do we settle for that in something so fundamental?
- Steve

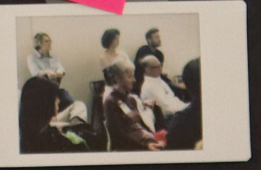
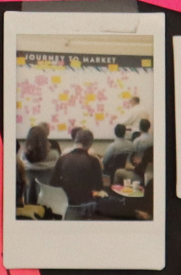
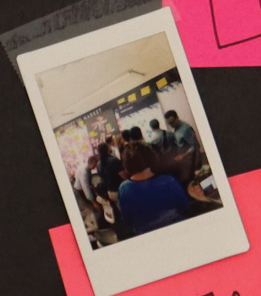
LOOK! IDEAATION @ WORK!

OMNISCIENCE

Journey to market is circular/iterative part of the challenge

Removal of academics from drug development

"We haven't articulated our purpose"
- Bonnie (?)



MAD SKILLZ

There's so much

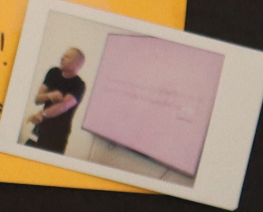
Less timeline, more a table

A lot of people don't understand why they should care about me. - folina

"Team science is the solution to all of this."
- Paula

Rock The Vote!

Hitching for Solutions!!



Journey is complex & impossible to depict or linearize

We have lots of possibilities. Many targets during spermatogenesis. Many scientific leaders have been sitting around for decades.

"I could give you 100s of targets for spermatogenesis and you'd give me 100s of reasons why they won't work"
- Paula

Design the "Valley of Opportunity" that makes unfinished science available to those looking for purpose

Successful Strategy: overlapping journeys w/ multiple stakeholders.
- D. Boyle

Humanization + storytelling around MC is critical
A human rights issue for men (repro autonomy)
How do we reach the Right to a

Where is cultural awareness in the journey since it's so important?

MC Challenge: Target identification

"The problem is not more

Only way to kill all the yern is to

GIVE ME CONTRACEPTION or give me death!!

There are greater minds

Key Takeaways & Learnings

Following the iterative process carried out by workshop participants, MCI and IDEO were able to identify nine focus areas to be addressed by the non-hormonal, reversible male contraceptive research and development community. Among these nine focus areas, six were identified as priorities. Among these six priority focus areas, three represented an overlapping theme of a need to develop a collaboration/support system for scientists.

Within these focus areas, ten specific needs for the field were identified. these needs were also narrowed down to four priority needs to address those that are most pressing, including:

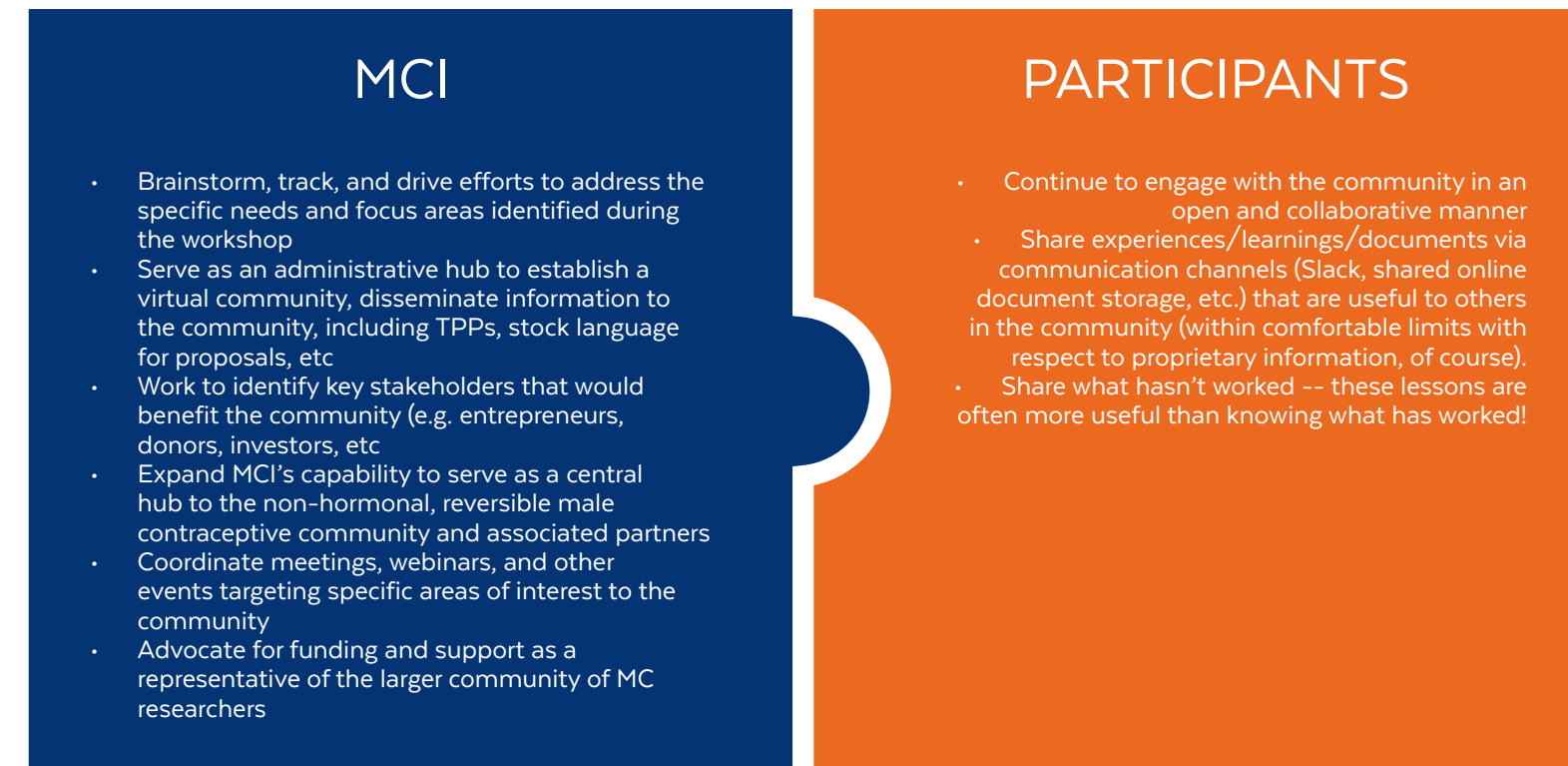
- Connect MC scientists + investors
- Facilitate “Team Science”
- Create and share a strategic vision for moving forward with MC
- Give MC advocates the evidence they need to get MC prioritized among funders



Charting a Way Forward Together

MCI is working to address the identified priority needs through a mix of short-term programs and long-term implementations. Some pilot programs are in progress, such as a campaign that raises the long-term profile of male contraceptive awareness, “Team Science” communication programs, and shared resources to present the public and personal health benefits of male contraceptives to funders.

Harnessing the energy and collaborative engagement of an event like this is inspiring, and ensuring that the energy doesn’t dissipate on return to the “real world” is an ongoing effort. MCI offered to take on the responsibility of being the centerpiece, and building a community to ensure momentum continues and facilitate continued collaboration. To support forward movement, the following distribution of roles is proposed:



We believe that if we continue working together, we can facilitate change to move the development of non-hormonal, reversible, male methods of contraception forward faster!

- Heather, Logan, Kathryn, Kevin, and the MCI Board



About

MCI's mission is to facilitate research & development of male contraceptives for people around the world and to build awareness among researchers, donors and the general public about the demand for and status of novel male contraceptive methods.

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