

MISSION UNSTOPPABLE:

Engaging New Audiences & Shifting Culture Through Storytelling



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OBJECTIVE

MISSION UNSTOPPABLE is a media franchise that puts a spotlight on women who lead inspiring careers in science, technology, engineering, and math (STEM). The Raben Group set out to evaluate the philanthropically-funded franchise's ability to inspire the next generation to consider STEM careers and analyze how charitable organizations might consider the approaches employed by *MISSION UNSTOPPABLE* to shift culture. Storytelling is a central tool to change culture and can be even more powerful when coupled with complementary social impact programs and initiatives. In this paper we find that by utilizing consistent mission-driven messaging through entertainment media that is psychologically rooted in storytelling theories, *MISSION UNSTOPPABLE* leverages a successful method for driving impact and narrative shifts around women leaders in STEM. This approach can be employed by philanthropic organizations and mission-driven brands in partnership with existing programming and grants to maximize impact across various issue areas.

EXECUTIVE SUMMARY

In working to create systemic change, charitable organizations should invest more in mission-driven storytelling models. The *MISSION UNSTOPPABLE* model developed by Lyda Hill Philanthropies and Litton Entertainment—an impact and issue-based television series in coordination with digital content—can serve as a blueprint for other philanthropic organizations looking to drive systemic change with an eye towards culture change.

While there is growing recognition among the philanthropic community in supporting film impact campaigns as a tool for culture and policy change, the *MISSION UNSTOPPABLE* model that utilizes a weekly television series and a robust digital content strategy is a new approach. The series and its production is the mechanism that fuels the baseline framework of digital content.



This white paper explores the quantitative and qualitative metrics of *MISSION UNSTOPPABLE* to demonstrate its efficacy in shifting the narrative around women in STEM in an effort to simultaneously drive more young girls into STEM career paths and support current female STEM leaders. The Raben Impact Entertainment team (part of The

Raben Group) conducted a series of interviews with key stakeholders associated with *MISSION UNSTOPPABLE* and within the impact entertainment and digital space. They also utilized data generated by Screen Engine/ASI, digital content data, and existing research on representation in entertainment media. The efficacy of *MISSION UNSTOPPABLE* was measured against the theories of narrative transportation and narrative accretion, as well as the Doc Society's Four Impact Dynamics.

MISSION UNSTOPPABLE is a component of Lyda Hill Philanthropies' work to increase female representation in STEM through an initiative known as [IF/THEN®](#), which works "to further advance women in science, technology, engineering and math (STEM) by empowering current innovators and inspiring the next generation of pioneers." Driven by a culture change framework, IF/THEN® proposes that "if you support a woman in STEM, then she can change the world" — if young girls see relatable women like themselves succeeding in STEM fields then they will also be compelled to explore similar paths, thereby helping to close the gender gap in STEM fields. This concept was further supported in "Portray Her: Representation of Women STEM Characters in Media," a report conducted by Lyda Hill Philanthropies, in partnership with the Geena Davis Institute on Gender in Media, demonstrating that representation in media (film and television) plays a "profound role" in how young girls think about their future career trajectories.¹ We also know the influence parents and caregivers have on their children and their children's media consumption, which is why parents/caregivers of teens are a secondary yet critical target audience for *MISSION UNSTOPPABLE*.



MISSION UNSTOPPABLE Host and Executive Producer Miranda Cosgrove and Cosmetic Chemist Cassandra Celestin

Hosted by Miranda Cosgrove and airing on CBS on weekend mornings, *MISSION UNSTOPPABLE* is a live-action, half-hour television program that reached millions of viewers nationwide during both of its 52-week seasons.

The series averaged a million viewers on broadcast each week over its first two seasons (with season three airing now) and has built a robust online presence—meeting its audience where they are on digital and social media platforms through strategic partnerships with TikTok, Twitch, and Snapchat.

Developed by a majority female team (75% of the people working on the show are women including four-time Emmy®-nominated producer, showrunner Anna Wenger), *MISSION UNSTOPPABLE* has been nominated for two Daytime Emmy® awards and has won 20 Telly Awards, one Parents' Choice Award, a 2020 Gracie Award and was featured on Entertainment Weekly's MUST List.

¹ Geena Davis Institute on Gender in Media, & IF/THEN®, an initiative of the Lyda Hill Foundation. (2021, March 30). PORTRAY HER: REPRESENTATIONS OF WOMEN STEM CHARACTERS IN MEDIA. Geena Davis Institute on Gender in Media. <https://seejane.org/research-informs-empowers/portray-her/>.

Cover photo: Bioengineering student Anjali Chadha and Mission Unstoppable correspondent Erica Hernandez

MISSION UNSTOPPABLE is rooted in Connected Learning, a framework that utilizes the intersection of personal interests, peer support, and real world relevance to drive learning. Through a targeted approach that highlights the relevance of STEM in popular and personal interests of teenage girls, as well as demonstrating the strength of the female STEM community via mentors/role models, the series demonstrates to its audience of teens and parents of teens that STEM can unlock tangible opportunities and career paths for women.

What makes this particular model so unique and effective is its approach rooted in both narrative accretion and narrative transportation:

Narrative Accretion

Ongoing and continuous messaging touch points are essential to creating culture change. Over time, an individual's interactions with the narrative can accumulate and drive a mindset shift. Unlike films, *MISSION UNSTOPPABLE* as a television series offers its audience consistent and dynamic messaging every week. This is further enhanced by the digital content messaging, as the target audience is approached via multiple touch-points with coordinated messaging about women in STEM from a multitude of different verticals, at different times, throughout each day.

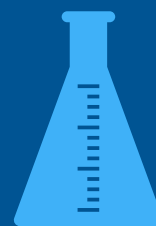
Narrative Transportation

Narrative transportation proposes that audiences can be lost in a story well told and transported to experience the narrative of the characters they are empathetically connecting with on the screen. This transportation and connection can sometimes result in changing minds and changing behaviors. *MISSION UNSTOPPABLE* is rooted in the "story well told" component through its development of high-quality and dynamic content that is thoughtfully geared towards its target audiences. By working with Litton Entertainment, a leader in educational and informational (E/I) programming, the model employed is one that understands its audiences and what they relate to. In regards to the connection to characters component, *MISSION UNSTOPPABLE* utilizes a role model approach (aligned with the IF/THEN® theory of change) to help girls understand who women in STEM are, relate to them, and be inspired to follow a path similar to them.

After watching *Mission: Unstoppable*, Screen Engine/ASI's research found:

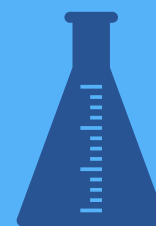
+16%

Increased Interest in STEM
Courses in High School /
University



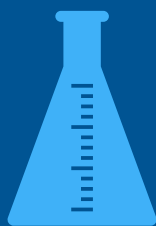
+17%

Interest in STEM Increased
among Girls



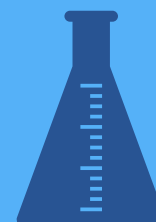
+20%

Considered STEM Careers
as "Appealing"



+19%

Considered STEM Careers
as "Creative"



Outlined below are key findings from this paper that support the efficacy of the **MISSION UNSTOPPABLE** model:

Changing Minds

MISSION UNSTOPPABLE successfully contributed to a narrative shift among its target audience of young girls by driving them to think differently about how they see themselves and their future career trajectories. Qualitative data from a panel of young girls (ages 10-15) and parents (of girls ages 10-15) that is representative of the US population², including anecdotal feedback to content, demonstrated that girls thought that the STEM careers shown were "cool" and that while they had never thought science was for them, they were now interested in pursuing careers in STEM. Additionally, quantitative data from Screen Engine/ASI's research indicates a **+20 point increase in perception that STEM careers are "appealing"** and a **+19 point increase that STEM careers are "creative."**

Changing Behaviors

Through narrative accretion—ongoing and frequent messaging—**MISSION UNSTOPPABLE** not only shifted how women and girls see STEM professionals, it also resulted in potential behavior change. Sentiment analysis conducted by Screen Engine/ASI found a **+17 point lift in agreement with the statement "I would like to have a career in a STEM field" among girls who watched the television series and/or digital content.** Further, **MISSION UNSTOPPABLE** has increased girls' likelihood to further educate themselves, with research finding a **+16 point increase in girls saying they will take courses in high school and college to help them pursue a career in STEM.**

Building Communities

By embedding **MISSION UNSTOPPABLE** into the IF/THEN® Collection, which is the largest digital asset library of photos and videos in the world and is free for nonprofit and education use, and partnering with organizations like **NASA, U.S. Women's Soccer, Clevver**, and the **CDC**, the series and its digital content have contributed to building community online, in classrooms, and through national partner networks. Dozens of national brands and organizations have promoted their female STEM representatives appearances on the show through their social channels contributing to additional engagement and reach of IF/THEN®'s and **MISSION UNSTOPPABLE**'s mission. The number of women in the STEM community is large but under resourced—the content developed via **MISSION UNSTOPPABLE** has been an essential bridge builder and conversational tool for groups like the National Girls Collaborative, a partner of **MISSION UNSTOPPABLE** and the IF/THEN® Collection.

The **MISSION UNSTOPPABLE** blueprint for change is effective, and is one that other charitable organizations should explore to advance their organizational goals. This paper explores both the qualitative and quantitative benefits of an approach that includes a television series and digital content strategy connected to larger programmatic goals, and underscores that while this model is new, it is successful in reaching new and expansive audiences with targeted messaging and information—thereby shifting long-held narratives and cultural norms. The culture change that takes place is a long-term investment that leads to systemic change and can be employed by charitable organizations as a way to increase impact across various issue areas.

² The girls surveyed were 60% Caucasian, 15% Hispanic, 15% African American, 7% Asian, and 3% other.



Physicist Dr. Olivia Castellini



Carnivore Ecologist Dr. Rae Wynn Grant

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The culture change that takes place is a long-term investment that leads to systemic change and can be employed by charitable organizations as a way to increase impact across various issue areas.

"If she can see it, she can be it."

GEENA DAVIS

MISSION UNSTOPPABLE: ENGAGING NEW AUDIENCES & SHIFTING CULTURE THROUGH STORYTELLING

INTRODUCTION

Storytelling is a central part of our lives. It is how we communicate, explore new ideas, and understand the lives of others. Compelling storytelling has the power to create an immersive experience, providing dedicated time and space to build empathy and to understand an issue or perspective more deeply. It can change the way we think and oftentimes the way we act. Stories are how we transmit and change culture.

According to the "Scully Effect," a 2018 study conducted by the Geena Davis Institute on Gender in Media, on behalf of 20th Century Fox, seeing women on-screen with careers in STEM fields, like Dana Scully from the *X-Files*, may inspire more women and girls to pursue careers in STEM.³ This was further supported in "Portray Her: Representation of Women STEM Characters in Media," a report conducted by Lyda Hill Philanthropies, in partnership with the Geena Davis Institute on Gender in Media. The report underscores the "profound role that media plays in shaping young people's aspirations and career paths" and found that "82.7% of study participants said it was important to see women STEM characters in film and television."⁴

Both studies indicated that women and girls may be influenced to explore careers in STEM as a result of positive media representations of people who look like them being successful in those fields. But there remained a gap in positive representations.

The "Portray Her" study specifically found that entertainment media reinforced negative stereotypes about STEM fields that may deter women, particularly girls, from pursuing careers in science, technology, engineering, and math. For example, STEM characters were primarily represented as white men—62.9% of STEM characters were men and 71% were white. Additionally, "43% of STEM characters were shown as sacrificing their personal life in order to work in STEM."⁵

Following the release of these findings, Lyda Hill Philanthropies was spurred to take on the recommendation of the "Portray Her" study to increase positive representations of women in STEM in entertainment media as

³ 21st Century Fox, The Geena Davis Institute on Gender in Media, & J. Walter Thompson Intelligence. (n.d.). The "Scully Effect": I Want To Believe in...STEM. <https://seejane.org/research-informs-empowers/the-scully-effect-i-want-to-believe-in-stem/>.

⁴ Geena Davis Institute on Gender in Media, & IF/THEN®, an initiative of the Lyda Hill Foundation. (2021, March 30). PORTRAY HER: REPRESENTATIONS OF WOMEN STEM CHARACTERS IN MEDIA. Geena Davis Institute on Gender in Media. <https://seejane.org/research-informs-empowers/portray-her/>.

⁵ Geena Davis Institute on Gender in Media, & IF/THEN®, an initiative of the Lyda Hill Foundation. (2021, March 30). PORTRAY HER: REPRESENTATIONS OF WOMEN STEM CHARACTERS IN MEDIA. Geena Davis Institute on Gender in Media. <https://seejane.org/research-informs-empowers/portray-her/>.

a tactic to drive more girls to pursue STEM careers and change the culture around how various professions are viewed.

Believing that "science is the answer," Lyda Hill Philanthropies has been deeply embedded in investing in science to drive transformational change at a systemic and cultural level. In order to address the culture shift that must happen to drive more women into STEM careers, Lyda Hill Philanthropies launched [IF/THEN®](#) "to further advance women in science, technology, engineering, and math (STEM) by empowering current innovators and inspiring the next generation of pioneers." The model of IF/THEN® itself is rooted in a culture change framework that focuses on elevating female professional role models in STEM fields (AAAS IF/THEN® Ambassadors) as a way to empower young girls to see that they, too, can have successful careers in STEM.

To continue to advance this culture change work and address the recommendations in the "Portray Her" study, Lyda Hill Philanthropies partnered with Litton Entertainment, a Hearst-owned production and distribution company, to develop a television series aimed at empowering female STEM innovators and inspiring the next generation of girls to explore careers in science, technology, engineering and mathematics. Litton is a leading producer and distributor of award-winning Educational/Informational (E/I) television programming for broadcast networks in addition to its work across multiple platforms. Both the founder, Geena Davis, and President and CEO Madeline Di Nonno of the Geena Davis Institute on Gender in Media, serve as Executive Producers of *MISSION UNSTOPPABLE* as well.

Hosted by Miranda Cosgrove and airing on CBS on weekend mornings, *MISSION UNSTOPPABLE* is a live-action, half-hour television program that reached millions of viewers nationwide during both of its 52-week seasons. The series has built a robust online presence—meeting its audience where they are on digital and social media platforms through strategic partnerships with TikTok, Twitch, and Snapchat. Now in

Strategic Distribution Partners

(Broadcast, Digital, Streaming, and Earned Media)



Lyda Hill with AAAS IF/THEN® Ambassadors

Philanthropic investments in mission-driven programming paired with digital extension content may be one of the most impactful methods to drive real change.

Not only is the approach rooted in science, it is also measurable with indicators that demonstrate a narrative shift, as well as perception shifts and behavior change among those who engage with the content.

its third season, the popular Emmy®-nominated series has further expanded its integrated social media strategy to continue to create a presence on new social platforms used by its audience, thereby substantially increasing the growth and success of *MISSION UNSTOPPABLE*.

Developed by a diverse, majority female team (75% of the people working on the show are women including four-time Emmy®-nominated producer, showrunner Anna Wenger; 20% Latino; and 20% identify as LGBTQIA+), *MISSION UNSTOPPABLE* has been nominated for two Daytime Emmy® awards and has won 20 Telly Awards, one Parents' Choice Award, a 2020 Gracie Award and was featured on Entertainment Weekly's MUST List.

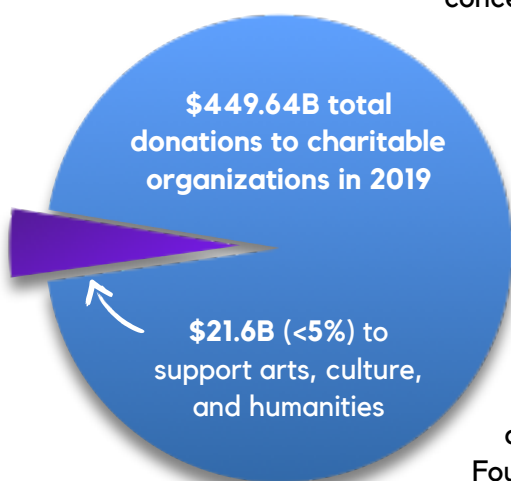
MISSION UNSTOPPABLE is rooted in Connected Learning, a framework that utilizes the intersection of personal interests, peer support, and real world relevance to drive learning. Through a targeted approach that highlights the relevance of STEM in popular and personal interests of teenage girls, as well as showing the strength of the female STEM community via mentors/role models, the series demonstrates to its teen audience that STEM can unlock tangible opportunities and career paths for women.

While there is unquestionable value in this type of storytelling model to change culture, most philanthropic dollars are often driven towards quantifiable, metrics-driven direct services such as items donated, counseling services provided, meals distributed, etc. And for many, investing in culture change—which takes time to measure—is a risky and experimental proposition. However, philanthropic investments in mission-driven programming, paired with digital extension content, may be one of the most impactful methods to drive real change. Not only is the approach rooted in science, it is also measurable with indicators that demonstrate perception shifts and behavior change among those who engage with the content.

STATE OF PHILANTHROPIC INVESTMENTS IN IMPACT-DRIVEN STORYTELLING

When talking about the power of storytelling to shift attitudes, beliefs and behaviors, Roman Vakilitabar, Founder & Chief Artist at Pathos Labs shared "How do we determine what's normal? We look around us. We look at how others respond to ideas and concepts. And from time to time, our definition of what's normative changes—ideas that were once fringe and unaccepted become accepted, and celebrated. How does this happen? Through time. What can catalyze this reaction? Flooding the narrative landscape with stories.

When stories are shared widely, they can be instrumental in normalizing ideas and concepts that are still on the edges.



"This was done before: perceptions of the LGBTQ community, to nuclear war sentiments, to reactions with drinking and driving, have all changed due to flooding of the media and narrative landscape with strategic stories."

While historically, most foundation dollars invested in entertainment storytelling have been driven towards institutions and organizations that directly support creators such as the Sundance Institute (funded by Ford Foundation, Open Society Foundations, Andrew W. Mellon Foundation, and others since the early 2000s)⁶ over the past several years, additional funders have emerged that focus specifically on supporting issue-based films and their associated impact campaigns. The Skoll Foundation has worked with its sister organization, Participant, on films such as *Slay the Dragon* and *John Lewis: Good Trouble* (both produced by Participant) that tie directly to the foundation's Effective Governance portfolio. Additionally, the Perspective Fund provides grants to impact-oriented documentary projects. Grantees include the Academy Award-nominated film *Crip Camp*, *Knock Down The House*, and *Roll Red Roll*. Chicago Media Project is also a funder of storytelling projects and has provided over \$5 million in funding supporting over 100 films.

While most storytelling investments from the philanthropic community over the past decade have centered on documentary films and docu-series, some mainstream feature film projects have found mutually beneficial partnerships within the philanthropic community. The 2020 Warner Bros. film *Just Mercy* launched a large-scale \$10 million impact campaign called [Represent Justice](https://www.representjustice.org/just-mercy-impact-report/) with investments from the philanthropy community. The campaign was supported by philanthropic donors including Annie E. Casey Foundation, Chan Zuckerberg Initiative, Ford Foundation, Open Society Foundations, The HIVE, and The Arthur M. Blank Family Foundation.⁷ Many of the donors that funded the project were first time supporters of a storytelling project; they understood that the impact campaign was directly tied to their existing criminal justice reform work.

⁶ Sundance Institute: Foundation Giving. Sundance Institute. (n.d.). <https://www.sundance.org/support/foundation-giving>.

⁷ Just Mercy Impact Report. Represent Justice. (n.d.). <https://www.representjustice.org/just-mercy-impact-report/>.

"Funders should understand that systemic change is not just about policy victories—and invest in the stories, storytelling, and communications strategies that can build narrative power among impacted communities. Shifting public demand starts with telling better, more authentic, and more cohesive stories that can overcome fear, bias, and the inertia of a harmful status quo. Funders can lead by investing in these strategies as a priority, so that more organizations can incorporate narrative and culture shifts into their work." *Daniel Forkkio, Chief Executive Officer of Represent Justice*

Select funders are experimenting and establishing programs to test new models of how storytelling can be deployed to further movements. In 2016, the Skoll Foundation, Ford Foundation, and Doc Society launched the Flex Fund to support innovative and creative projects emerging from partnerships between moving-image storytellers and social entrepreneurs. And most recently, Ford Foundation launched the International Resource for Impact and Storytelling (IRIS), a \$30 million donor collaborative, in partnership with the Compton and Skoll Foundations focused on funding organizations, research, and content in the Global South. Ford Foundation has previously invested in storytelling via its Moving Image Exploration project, in addition to its JustFilms portfolio. Cara Mertes, Ford's Moving Image Exploration project director and the leader of IRIS, explained in an Inside Philanthropy article, "We want this to be a place where donors can feel comfortable learning and experiencing and understanding this question of meaning-making and culture and progressive change."⁸

The discomfort and learning curve with philanthropic investments in storytelling remains prevalent across the field despite mounting evidence that storytelling is essential in shifting culture and engaging new audiences. As referenced above, the majority of the funding in this space supports documentary, docu-series, and some issue-focused feature films where the content produced has a short life span. It is rare for a funder to support weekly, linear programming. This is despite researching that shows meeting your targeted audience where they are with a consistent message (narrative accretion), has more power to change mindsets and behavior.

THE SCIENCE OF STORYTELLING

Karen Peterson, Chief Executive Officer and Founder of the National Girl Collaborative Project, reflected on the power of storytelling, explaining "people can see themselves in stories and they can relate to it and connect to it. **Storytelling can drive action much more intensely than just hearing a fact.** Hearing a story, you can connect to it, think about, integrate it into your own perspective. I think stories can be much more influential than numbers. Telling a story, especially hearing about people that are similar to you or doing something that you hope to do can be very influential."

⁸ Ramirez, M. (2021, August 13). Recognizing the power of storytelling, a funder collaborative backs media in the Global South. Inside Philanthropy. <https://www.insidephilanthropy.com/home/2021/7/28/recognizing-the-power-of-storytelling-a-funder-collaborative-backs-media-in-the-global-south>.

The idea that a story can change the way someone thinks and perhaps even the way someone behaves is rooted in psychology—narrative accretion theory and narrative transportation theory.

Narrative Accretion

According to the Peabody Awards, the concept of narrative accretion is “the recognition that stories—from documentaries and news to podcasts and entertainment programs—on certain subject matters add up, that the whole may often be greater than the sum of its parts. Any one story may unearth and explore important new areas, especially pressing or unseen contemporary issues and moments. But, ultimately, stories build upon and contribute to an on-going dialogue with viewers and other artists about issues, such as rape, criminal justice reform, or poverty. In sum, narrative accretion foregrounds how the accumulation of narratives is part of the process of societal growth and change. And through such accretion, the stories we carry in our heads can be powerful motivators for social action, policy change, and reform.”⁹

Narrative Transportation

“Stories are powerful because they transport us into other people's worlds but, in doing that, they change the way our brains work,” explained Paul Zak, Professor of Economics and founding Director of the Center for Neuroeconomics. Narrative transportation theory centers on the concept that when people lose themselves in a story well told their attitudes, intentions, and potentially their behavior change to reflect that story.¹⁰ Research has demonstrated that this transportation occurs as a result of the empathy that one feels for a story and/or its characters.¹¹

MEASURING THE IMPACTS OF STORYTELLING

Doc Society, a nonprofit dedicated to supporting independent and documentary storytellers, as well as the charitable organizations and nonprofits it collaborates with, has identified four impact dynamics that are recognized in the mission-driven storytelling field to measure how stories help to change minds, behavior, structures, and to build community.

The four impact dynamics are:¹²

1

Changing Minds

Building mass awareness and understanding of an issue and shifting public attitudes about how it is perceived. Connecting the dots between personal experiences and on-screen depictions. A change in perception is the first step towards behavioral change.

2

Changing Behaviors

Actively mobilizing people to do something different, not just think something different; actions could be to buy, boycott, volunteer, donate, take a class, change careers, etc.

⁹ Peabody spotlight: Focus on Social Issues. The Peabody Awards. (2021, April 26). <https://peabodyawards.com/stories/peabody-media-center>

¹⁰ Green, M. C., & Brock, T. C. (2002). “In the mind's eye: Transportation-imagery model of narrative persuasion.” In M. C. Green, J. J. Strange & T. C. Brock (Eds.), *Narrative impact: Social and cognitive foundations*. (pp. 315-341). Mahwah, NJ: Lawrence Erlbaum.

¹¹ van Laer, T., de Ruyter, K., Visconti, L. M., & Wetzels, M. (2014). “The Extended Transportation-Imagery Model: A meta-analysis of the antecedents and consequences of consumers' narrative transportation.” *Journal of Consumer Research*, 40(5), 797-817.

¹² Doc Society. (n.d.). *The Four Impact Dynamics. The Impact Field Guide & Toolkit*. <https://impactguide.org/planning/the-four-impact-dynamics/>.

3

Building Communities

Storytelling and grassroots organizing can provide the focal point around which people come together and build community, and in turn, help build the capacity of organizations within an issue area or movement so their work can go further and farther.

4

Changing Structures

Working for top down change, whether in business or politics, directly influencing law and policy in ways that improve future outcomes.

WOMEN IN STEM: WHY CULTURAL INTERVENTION IS NEEDED

While the above theories and impact dynamics can be applied across issue areas, this particular paper explores the intersection of storytelling and the gender gap in STEM.

According to the National Science Foundation's (NSF) Science and Engineering Indicators 2018 Report, The United States is the number one global leader in STEM. This ranking is based on the fact that the United States "attracts the most venture capital, awards the most advanced degrees, provides the most business, financial and information services, and is the largest producer in high-technology manufacturing sectors."¹³

And yet, half of the United States population—women—are largely left out of this equation. According to the U.S. Census, "women are nearly half of the U.S. workforce but only 27% of STEM workers."¹⁴ The stark gender gap in STEM fields is pervasive and limits the earning potential of women in the workforce. As noted by AAUW (American Association of University Women), "Girls and women are systematically tracked away from science and math throughout their educations, limiting their training and options to go into these fields as adults."¹⁵

The question of why women and girls are not pursuing STEM careers is largely rooted in cultural norms, including fear of failure and lack of role models.

Fear of Failure

In the 1980s, psychologist Carol Dweck conducted a series of studies exploring how fifth grade boys and girls "handled new, difficult and confusing material." She found that girls were more likely than boys to give up, and that girls with higher IQs and grades were even more likely to give up quickly. She found that girls doubt their abilities, while young boys see challenges as something to try to meet, even if they fail.¹⁶ This

¹³ Science & Engineering Indicators 2018. National Science Foundation. (n.d.). <https://www.nsf.gov/statistics/2018/nsb2018/>.

¹⁴ Bureau, U. S. C. (2021, January 26). Women making gains in STEM occupations but still underrepresented. The United States Census Bureau. <https://www.census.gov/library/stories/2021/01/women-making-gains-in-stem-occupations-but-still-underrepresented.html>.

¹⁵ The STEM Gap: Women and Girls in Science, Technology, Engineering and Math. AAUW. (2020, October 5). <https://www.aauw.org/resources/research/the-stem-gap/>.

¹⁶ Halvorson, H. G. (2011, January 27). The Trouble with Bright Girls. Psychology Today. <https://www.psychologytoday.com/us/blog/the-science-success/201101/the-trouble-bright-girls>.

fear of failure follows women as they age, and has been seen as a particular barrier among women pursuing STEM careers.

According to a 2013 study by Nelson, Newman & McDaniel that explored the differences in how male and female engineering students experienced fear of failure, "results indicated that females reported significantly higher fear of failure than their male counterparts. [...] As Fear of Failure may be related to self-efficacy and self-esteem, these fears may impact women in their career development and decisions."¹⁷

Lack of Role Models

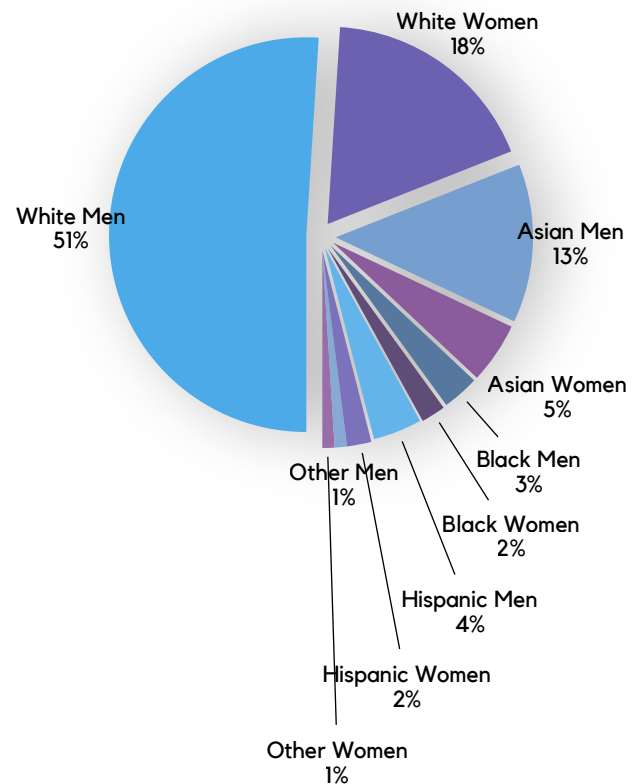
With so few women in STEM careers, there are a lack of role models for young girls with a curiosity about STEM. According to a Microsoft study, "role models have a clear positive impact on girls' perception of STEM subjects. On average, across Europe, 41% of girls with role models report an interest in STEM subjects, compared to 26% of girls without a role model." Additionally, the study found that "over half (51%) of girls with role models can imagine a career in STEM."¹⁸

As outlined in the introduction, increasing representation of women in STEM in entertainment media is an effective and important way to combat these cultural narratives and demonstrate positive role models who are successful in their fields.

Madeline Di Nonno, President and CEO of the Geena Davis Institute on Gender in Media, explained that "We want to make sure that our children can be inspired by the media that they see. Fictional content is a window into the world of work. From an economic standpoint, many of the jobs in America are driven by technology. If girls are not pursuing STEM, that's a genuine concern. Our research has shown that what happens in the world of make believe can play out in the real world. If she can see it she can be it. One of the best ways to demonstrate that is through the popular content that we're watching and seeing female characters with agency in control of their destinies and engaging in non-stereotyped roles."

Izzy Lapidus, a college student and member of the IF/THEN® Advisory Council shared, "I think that something changes when girls get to middle school—about how they view their intelligence and their confidence in math. I think there's this really important age between 10 to 13 where a lot of things change in a girl's mind about how she views herself. Having positive representations of women in STEM influencing

Demographics of People Occupying STEM Careers (2010)



¹⁷ Nelson, Krista & Newman, Danielle & McDaniel, Janelle. (2013). Gender Differences in Fear of Failure amongst Engineering Students. *International Journal of Humanities and Social Science*. 3. 10-18.

¹⁸ Girls in STEM: The Importance of Role Models. Microsoft News Centre Europe. (2018, April 26). <https://news.microsoft.com/europe/features/girls-in-stem-the-importance-of-role-models/>.



Microbiologist Dr. Dorothy Tovar



*Chemist Dr. Kate Biberdorf and MISSION UNSTOPPABLE
Correspondent Danni Washington*

that group is really important. In that younger age group, the focus is on sparking the curiosity, and as they get older, it's about retaining the curiosity. To see a woman doing this job, it's probably the first time that many folks have seen that. The most impactful audience to reach is the girl who never thought [a career in STEM] was an option. Having that exposure factor is, ultimately, what I see as the top priority of the show."

THE SCIENCE OF STORYTELLING AT WORK: THE MISSION UNSTOPPABLE MODEL

To put a human face on STEM and help drive a narrative shift forward to close the gender gap in STEM fields, Lyda Hill Philanthropies teamed up with Litton Entertainment. Litton is a Hearst media-owned production and distribution company that focuses on a variety of purpose-driven storytelling and is recognized as the gold standard in educational and informational programming for broadcast networks. ABC stations, CBS, NBC, Telemundo, and The CW air a minimum of two hours of Litton programming each week, making educational programming accessible for Americans across the country. Litton's award-winning E/I series are rooted in a science-based and results-driven model supported by theories of narrative transportation, narrative accretion, and focused on creating change within the four impact dynamics.

Narrative Accretion — Ongoing and Often

As noted, continuous messaging from various entry points is essential in order to change narratives and shift culture. The accumulation of the messages contributes to the larger dialogue and are powerful motivators for change.

When thinking about *MISSION UNSTOPPABLE* and how to utilize the series as a tool for continuous messaging through different verticals, Lyda Hill Philanthropies and Litton Entertainment employed an approach that expanded beyond linear programming into various mediums, and is inextricably linked to Lyda Hill Philanthropies' IF/THEN® program and organizational goals. Narrative accretion occurs as a result of ongoing and often repetition of messaging that girls can have successful careers in a variety of exciting and accessible STEM fields. The efficacy of *MISSION UNSTOPPABLE* achieving narrative accretion is rooted in a cross-platform model, where dynamic content is distributed across mediums occupied by core audiences, achieving mass reach, direct engagement moments, and high-frequency touch points.

Television Series

At the core of this approach is the linear nature of an E/I television series, "it's a place where anyone can go and get the frequency of that mission every week with easy access. There is power in having a designated time and place each week to engage with the message," explained Cynthia Drivas, Partnerships & Development Executive at Litton Entertainment. Unlike a documentary that an audience sees once (maybe twice), a weekly television series offers audiences the opportunity to build upon the message that they hear week after week. In this particular case, the message is that STEM is a viable and exciting career path for women, and that there are successful women with vibrant and full lives working in STEM.

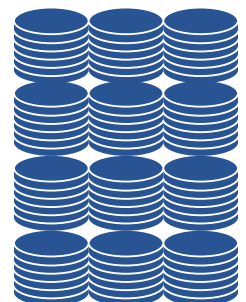
For 20 years Litton Entertainment has been a leader in developing authentic and emotionally engaging E/I content. "Our model takes research, data and on the ground work and shares it in a relatable and entertaining way that creates a personal resonance for the viewer. That's when you tap into the viewer's emotions and that is when you create change" Drivas added.

Broadly, the critical audience of *MISSION UNSTOPPABLE* includes young women and girls, as well as parents and caretakers of young women and girls (57% of viewers are female and a third of households have three or more people).¹⁹ There is a specific emphasis on reaching young girls of color and their caretakers, as the disparity is even wider for women of color in STEM²⁰ (1/3 of viewers are of color²¹). Note that the target audience for *MISSION UNSTOPPABLE* is intentionally the same as the audience for the IF/THEN® Collection, as part of the goal of this work is to utilize *MISSION UNSTOPPABLE* as an avenue to guide more people to the collection and its resources, furthering their journey in understanding how STEM careers are a positive pathway for women.

**15x MORE
EFFICIENT
CPM**
*Mission
Unstoppable*
(for production
AND media)



\$25.00 CPM
Average Cost of
Broadcast
Advertising
(not including production)



¹⁹ Nielsen NPower 9/28/20-9/26/21

²⁰ Women, Minorities, and Persons with Disabilities in Science and Engineering. National Science Foundation: National Center for Science and Engineering Statistics (NCSES). (n.d.). <https://ncses.nsf.gov/pubs/nsf19304/data>.

²¹ Nielsen NPower 9/28/20-9/26/21

The spend efficacy extends beyond production and reach of the series on broadcast, as the development of content is also very high in regards to the media investment. For example, Nielsen Research (television's buying and selling currency) has reported that the cost of broadcast advertising is estimated at a \$25 CPM (cost per thousand impressions). The *MISSION UNSTOPPABLE* broadcast CPM is estimated to be nearly 15x more efficient than the industry standard for the air time, even though the media investment also includes the cost for production of the series.

The spend efficacy extended beyond just the CPMs, as the development of content for the series has been utilized across digital, PSAs, and via access to CBS local affiliates to partner with for earned media opportunities (see below in earned media section). Content has also been repackaged for usage as a part of the IF/THEN® Collection.

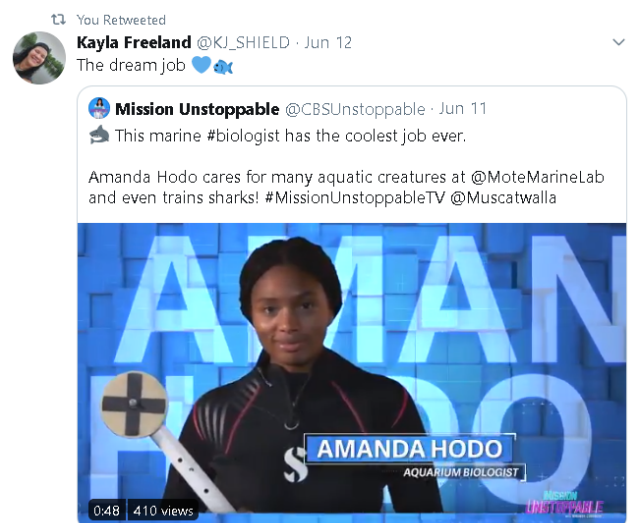
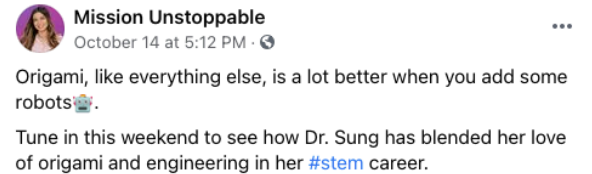
Digital + Social Media

"Never before have young girls been able to so easily SEE other women changing the world, there is power in a digital culture that allows them to imagine themselves having a seat at the table. We have before us the opportunity to use the power of social media culture to show young girls that they can change the world" said Dr. Nicole Haggard, faculty member in the Film, Media, and Social Justice program at Mount Saint Mary's University and Co-founder of the Center for Intersectional Media and Entertainment.

By extending its content beyond the television series and onto online platforms, *MISSION UNSTOPPABLE* has been able to permeate another cultural point-of-entry to share its message and incrementally reach women and girls where they are already engaging on a daily basis. *MISSION UNSTOPPABLE* and its production is the mechanism that fuels the baseline framework of digital content.

Throughout seasons one and two of *MISSION UNSTOPPABLE*, the series featured 170 women in STEM including 46 AAAS IF/THEN® Ambassadors, from a variety of organizations/institutions including NASA, Boeing, the U.S. Women's National Soccer Team, Apple, Cadillac and dozens more. These organizations helped to further promote the mission across their social media audiences.

"The back and forth between the show and the internet both supporting each other is what I think is really the power of the television show. The television show serves



as the foundation on which all our content is built," said *MISSION UNSTOPPABLE* showrunner Anna Wenger.

Recognizing that young girls are an elusive demographic to connect with, Litton and Lyda Hill Philanthropies beta-tested content across digital platforms to establish effective and resonant messaging to build a solid foundation for *MISSION UNSTOPPABLE*'s social communities. In its early stages, *MISSION UNSTOPPABLE* launched on a set of platforms, but quickly realized that in addition to crafting the content in a style and format that would appeal to its audience, they would also have to follow their audience; they expanded and evolved across new social and digital platforms. Now in season three, the dedicated digital team still continuously stays abreast of how teen girls behave and consume content and applies learned insights, adjusting strategies in real-time. This vigilant and proactive management of the series' digital platforms has been essential to the success of *MISSION UNSTOPPABLE*.



Wildlife Biologist Jaimi Butler

Elena Garcia, *MISSION UNSTOPPABLE* Community Manager shared, "We look to our Instagram audience—teen girls to college (18-21) and get ideas of what type of content they are looking for. Our audience is the best focus group, so we crowdsource ideas and learn what is resonating with our community. We are showing that STEM is accessible. We know how to translate ideas to make the content fun and more digestible to the general public. We are expanding our communities' ideas of what is possible; we always keep in mind diversity and equity when making content. We want everyone to see themselves in the content we are making. This is really important to the Gen-Z audience—to all of us—so we keep that in mind with everything we do."

The series' TikTok channel has more than 400,000 followers (as of November 2021) and has strong engagement across all of its video content. "The audience is there for the taking if you know how to lead with thought-provoking content. The most authentic way to participate on the platform is through an educational lens. How can you bring value and share new ideas with our community? When you provide that value, the engagement comes back to you tenfold," said Brett Peters, Education & Philanthropy Lead at TikTok.

MISSION UNSTOPPABLE was featured as part of TikTok's #WomenInSTEM campaign. The campaign was featured on TikTok's Discover page and #WomenInSTEM became a top trending hashtag on TikTok with over 3.2 million views of original content, resulting in 15,600 new series followers. A second TikTok hashtag

campaign branded #STEMLife has garnered 2.1 billion views of the hashtag over a 28-day span. The *MISSION UNSTOPPABLE* team's smart strategy and engaging content on TikTok has led to many unique collaboration opportunities from organizations like George Lucas Films, the U.S. Department of Education, Minecraft, and NASA.

Additionally, the team has developed an original 22-episode Snapchat order (generating 15 million full episode views in the first 10 weeks), as well as a domestic and international distribution of season one via CuriosityStream (20 million subscribers). Access to the series will be expanded with additional distribution and streaming partners within the next year.

Newer to the *MISSION UNSTOPPABLE* digital approach is engaging audiences via Twitch. The platform serves as a way for the viewers to engage more deeply by participating in conversations and asking questions of the IF/THEN® Ambassadors who join the discussions. Additionally, the platform has been very popular among the IF/THEN® Ambassadors who have participated in streams. The Twitch community is highly engaged during the triweekly streams. The debut series ranked in the top five among Twitch's "Science and Tech" category.

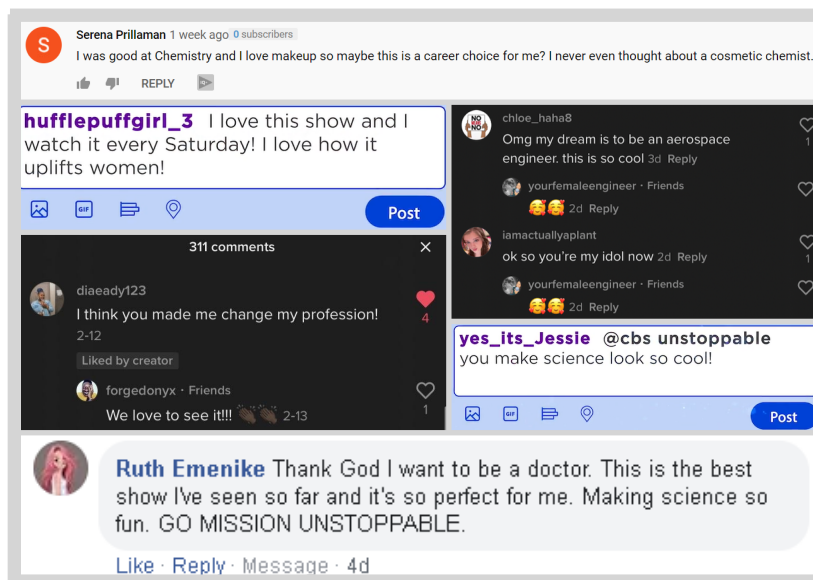
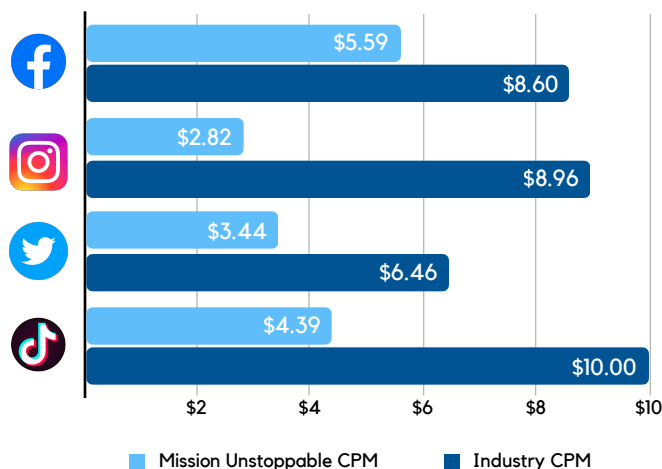
Season two had a significantly greater impact than season one in increasing engagement across all social media platforms:

- 40% increase in video views by teen girls
- 24% increase in teen girl engagements
- 32% increase in total watch hours

In developing a robust online community, *MISSION UNSTOPPABLE* employed a laser-focused strategy of which efficiency of spend was and remains a top priority. The returns on investment on social platforms have been particularly strong for *MISSION UNSTOPPABLE*. For example, CPMs (cost per thousand impressions) were most efficient for Instagram and TikTok when compared with the industry CPM standard.

"As human beings we are extremely visual and we are inherently storytellers and listeners. So

Efficient Digital CPMs
(*MISSION UNSTOPPABLE* CPM rates vs industry standards)





Nicole Small, CEO Lyda Hill Philanthropies



Neuroscientist and AAAS IF/THEN® Ambassador Dr. Lataisia Jones

you put those together and it is extremely powerful. That is why social media is so popular and has been an important vehicle for impact with young people," said Koshi Dhingra, who has developed curriculum based on IF/THEN® content and is Founder and CEO of talkSTEM, a nonprofit organization whose mission is the "development of future generations of female and underrepresented STEM leaders."

Further, as demonstrated through anecdotal online conversations, *MISSION UNSTOPPABLE* and the larger IF/THEN® initiative has been successful in permeating and contributing to a shift in conversations about women and STEM among their target audiences across various social media platforms.

Earned Media

Stories build upon stories to create an ongoing cultural dialogue on issues. Earned media has been an essential entry point for *MISSION UNSTOPPABLE* to continue to add to the narrative and amplify the stories of women in STEM. Season one of *MISSION UNSTOPPABLE* garnered 1.6 billion gross earned media impressions, a value of \$1.4 million.

When Jodi Davis was hired by Lyda Hill Philanthropies to lead their public relations work around IF/THEN®, she found that *MISSION UNSTOPPABLE* served as a premier storytelling opportunity and anchor for IF/THEN®'s mission and work. Davis noted, "When an NGO is doing any type of content, you have to have a concerted clear communications effort to break through clutter. If you have a mission-driven message, you need to make sure that content is compelling, newsworthy, and targeted to your audience."

As designed, by shining a light on the personal and authentic stories of women in STEM careers (many of whom are also AAAS IF/THEN® Ambassadors), *MISSION UNSTOPPABLE*, and ultimately the IF/THEN® mission and message, has been able to break through the clutter, earning the attention of diverse outlets such as Axios, Bloomberg, Teen Vogue, and Seventeen. Throughout the season, there is a concerted effort to pitch ambassadors to CBS local affiliates, timed to episodic airings, delivering an "always-on" earned media approach throughout each season.

"They (Lyda Hill Philanthropies) were so smart to create a TV show. It gives them a national platform for their work," said Davis.

Additionally, the series helped propel the women forward and shine a light on their work both locally and nationally. All of the AAAS IF/THEN® Ambassadors were media trained, provided with talking points, and

had individualized electronic press kits that helped to build their capacity. Dr. Jessica Esquivel, an AAAS IF/THEN® Ambassador featured on the show, said “Being a part of *MISSION UNSTOPPABLE* has heightened my awareness of shifting to meet people where they are. It pushed me to think about how to talk about science to such a young audience. I think it’s such an important skill.”

Public Service Announcements / Building the IF/THEN® Collection

Through its partnership with Litton Entertainment and CBS, Lyda Hill Philanthropies runs a series of public service announcements (PSAs) during *MISSION UNSTOPPABLE* commercial breaks. **During season one, the PSAs earned over 72 million gross views.**²² The majority of the PSAs were aimed at driving viewers to explore the IF/THEN® Collection. The IF/THEN® Collection is the largest digital asset library of photos and videos in the world and is free for nonprofit and education use. The IF/THEN® Collection is utilized by schools, museums, and after school programs and has exposed millions of people to women in STEM imagery. *MISSION UNSTOPPABLE* is the greatest ongoing contributor of new video and photo assets of women STEM professionals to the IF/THEN® Collection.

Content as a Classroom Learning Tool

“The change that charitable organizations are hoping to make through in-school or after-school programming can be augmented by content that was originally created to be distributed way out of school online or through television and streaming platforms, exponentially increasing the reach they would have through traditional avenues of working in-school and through established after-school networks. In-school and after-school avenues are wonderful and essential, but they can be two parts of a three-legged stool that also includes mass media.” - Nicole Small, CEO, Lyda Hill Philanthropies

MISSION UNSTOPPABLE has become the most powerful draw to the IF/THEN® Collection as a whole. *MISSION UNSTOPPABLE* content is now also featured within the collection. Through a partnership with the National Girls Collaborative Project—an organization collectively serving 20 million girls and working with 50,000 educators in 41 states—IF/THEN® Collection resources, including *MISSION UNSTOPPABLE*, have reached millions of girls across the country with both the content from the series and its digital extensions.

In addition to IF/THEN®’s work with The National Girls Collaborative Project and other partners to distribute *MISSION UNSTOPPABLE* as a classroom tool, the STEPS program in Engineers Ireland, a nonprofit outreach program that promotes interest and awareness in engineering to young people, embedded five *MISSION UNSTOPPABLE* episodes into their programming. During a one week period, 989 teachers, guides, and parents registered for 31,656 student participants to gain access to *MISSION UNSTOPPABLE* episodes.

NARRATIVE TRANSPORTATION — SEEING IS BELIEVING

“Everyone loves a story. It’s the way we learn language, values, the issues of our world and how to live. Most importantly, it’s how you best retain lessons, through storytelling, so much more so than reading a book or being taught a lesson. You get the relatability and understand why something matters. To couch the stories of *MISSION UNSTOPPABLE*, that are fun and sticky that have a beginning, middle and end, is a powerful way to learn,” said Bryan Curb, Chief Creative Officer, Litton Entertainment.

²² Nielsen National TV View Sept 2019-Sept 2021



Astrophysicist Dr. Burçin Mutlu-Pakdil



Ocean Explorer Dr. Katy Croff Bell

Narrative transportation leads to perspective and behavior change when viewers are engaged in a story well told and feel a connection with those on the screen. *MISSION UNSTOPPABLE* accomplishes this in two key ways:

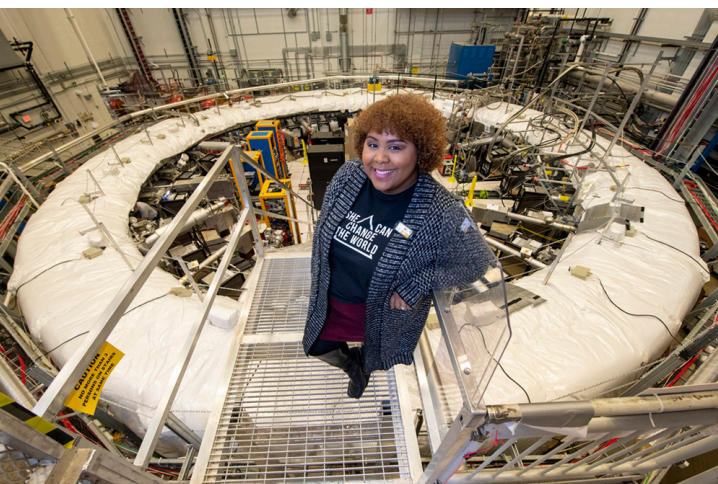
Story Well Told

The story aspect requires a sound story and narrative. By partnering with Litton Entertainment, *MISSION UNSTOPPABLE* set out to develop content that is funny and entertaining at its core. Showrunner Anna Wenger's background in comedy (she served as the former producer of "Billy on the Street" and spent six years as VP of Production at Funny or Die), informed her approach to the series' content.

The quality of the content sets this project apart. Bryan Curb of Litton Entertainment stated "We've developed a model where we create EMMY®-award winning and high audience-rated content that furthers the missions of the nonprofits, charitable organizations, and corporations we partner with and builds a dedicated audience every weekend. We've been able to revitalize weekend mornings by making content that is entertaining and mission-driven. *MISSION UNSTOPPABLE* has been so gratifying—the idea of a female-led, female-centric STEM show whose sole purpose is to foment STEM with teen girls. If the show isn't fun, funny, and entertaining with sticky topics that are attractive to a YouTube-centric crowd, we knew we would not have our intended impact. We took our cues from the type of content girls are watching online



Herpetologist Dr. Earyn McGee and Mission Unstoppable Correspondent Fig O'Reilly



Particle Physicist Dr. Jessica Esquivel

(short-form), focused on the things girls are interested in, and then showed the science behind it."

Connection with Characters

MISSION UNSTOPPABLE utilizes diverse role models to foster connections between the audience and the content in order to drive a shift in how girls think about and visualize careers in STEM.

According to the 2018 PORTRAY HER study conducted by Lyda Hill Philanthropies and the Geena Davis Institute on Gender in Media, when asked a series of questions to determine whether entertainment media influences whether girls/women choose to go into STEM, four-out-of-five survey respondents—82.7%—said that seeing girls/women as STEM characters on television is important to them.

Unfortunately, there are still far too few women in STEM featured in entertainment and media, "The narrative being told is that STEM careers are being normalized, yet normalized for who? The images and stories changing the narrative around STEM are primarily surrounding men, from shows about a group of male scientists and coders, to magazine covers of CEOs of major technology companies, or social media influencers who are male gamers, yet this narrative does not equally represent women in those fields. Of all the scientists portrayed on television, 62.9% are men. Why? It is the story of the chicken or the egg. Is it because there are less women in STEM or is it because less stories of the women who are in STEM are getting told? The answer, probably both," said Nicole Small of Lyda Hill Philanthropies.

"The primary value for *MISSION UNSTOPPABLE* is this idea of role models—many of us in the field have known for some time but it hasn't broken through that many girls don't see themselves as scientists or interested in STEM. But what can help them is seeing someone who looks like them or comes from a similar background who is fun and has a life and a family. We feel that this is close to the tipping point. If more girls can see women like them doing these things then they think 'oh maybe I can do that as well'" said Karen Peterson, of National Girls Collaborative Project.

By having the series focus on highlighting female role models in STEM who are diverse, working across a wide variety of fields, and are relatable with full lives outside of their careers, *MISSION UNSTOPPABLE* is working to transport its audience of young girls into a space in which they can see themselves as similar to the women that they see on screen. This can change in their own perceptions of who STEM professionals are and of whether they could themselves become STEM professionals one day.

According to data conducted by Screen Engine/ASI, on behalf of Litton Entertainment, narrative transportation did occur for audiences watching the series and changed their perceptions.

The series is also demonstrating that women in STEM exist and is ensuring that their stories are told. As a part of the [IF/THEN®](#) initiative, *MISSION UNSTOPPABLE* has access to the 125 AAAS IF/THEN® Ambassadors—role models who want to tell their stories to the next generation to feature across the series and in digital content.

Many of the ambassadors participate in the series because they were driven towards STEM careers through their own exposure to role models. "It's super important. One of the reasons why I was interested/got into STEM was because of the movie *Contact* with Jodie Foster. She was an astrophysicist - mind you she was looking for aliens. It was the first time I saw a woman doing science and being good at it and being an expert in the field. I've seen how important it is to see women in STEM on TV and in shows," said IF/THEN® Ambassador Dr. Jessica Esquivel.

MISSION UNSTOPPABLE's role model focus extends beyond how the series highlights women in STEM careers. Miranda Cosgrove, the celebrity host of the series, provides the audience with another role model they are already familiar with and can learn with and from. Many in the audience are fans of Ms. Cosgrove's other work and she has a relatability factor given her age and her own learning journey. "Miranda is fun, smart, and very relatable. That comes across and it's one of the reasons girls like her. She serves as a surrogate for the audience and she's learning as they learn, said Litton Entertainment Chief Creative Officer Bryan Curb.

INCREASE IN POSITIVE OUTCOMES FOR AAAS IF/THEN® AMBASSADORS

In addition to the cultural outcomes outlined above, by centering IF/THEN® Ambassadors as role models on the series and across digital platforms, the Ambassadors have directly benefited from their relationship with *MISSION UNSTOPPABLE*, thereby further advancing the goals of the IF/THEN® initiative.

For example, AAAS IF/THEN® Ambassador Dr. Jessica Esquivel, a physicist at Fermilab studying particles in magnetic fields, has been working with Lyda Hill Philanthropies since 2019, and has experienced firsthand how isolating and lonely it can be as a woman of color in STEM. She decided to apply to the ambassador program to connect with other women in STEM, as well as to hopefully inspire more girls to pursue careers in physics.

"In my field, in physics, we're at a pinnacle of realization that we need to change," said Esquivel. According to the American Institute of Physics' Demographic Profile of Physics PhDs, Class of 2019, 80% of PhDs in Physics in 2019 were attained by men and only 20% were attained by women.

Esquivel decided to participate on *MISSION UNSTOPPABLE* as she believes that, "shows like [*MISSION UNSTOPPABLE*] that highlight the lack of women in STEM fields and show those who have made it, are acting as a conduit to start talking about these things out loud and not in the shadows."

What she did not anticipate through her participation was how it has given her a larger platform and expanded her own reach. Following the airing of her episode, Esquivel has received an increase in

invitations to speak at conferences, as well as an increase in media requests. She was also invited to speak at the prestigious Ada Lovelace Festival.

AAAS IF/THEN® Ambassador Myria Perez, a Paleontologist and former Fossil Preparator at the Perot Museum of Nature and Science in Dallas, experienced a similar boost in her own career after appearing on the series with features on the Dallas Morning News and New York Times for Kids. She also received feedback from parents of girls on Instagram sharing that after seeing the show their little girls wanted to follow in her footsteps to become paleontologists. "It's exactly what we wanted to hear as we're trying to inspire young girls," she said.

Perez also said that she benefited from the program's media training and is continuing to utilize the key learnings from those trainings as she dives into a new facet of her career—science communications and outreach.

RECOMMENDATIONS + KEY FINDINGS

"MISSION UNSTOPPABLE is the type of content that we need to make change in the world. In fact, I think it's the best way to make change in the world—through representation and media. Entertaining people while they're learning is the best way for them to learn," said MISSION UNSTOPPABLE showrunner Anna Wenger.

Culture changes over the long term. It rarely shifts due to one single factor. It is the result of many different stories, multiple touch points of consistent messaging, and community building.

Utilizing the four impact dynamics, one can quantifiably and qualitatively measure the impact a piece of storytelling has on the intended audience. But as the Doc Society team has shared, "there are some things that most likely cannot be measured. When a story or experience lands in a person's heart, it can take root in unexpected and inexplicable ways—only to show up, unprompted, days, weeks, months or years later at a moment when it might count the most. That's the magic of film and other creative works."

Those anecdotal moments of magic are deeply valuable, "The real indicator that we're shifting culture is that I overhear young girls talking about the show—I was out getting ice cream and there was a group of girls talking about wanting to be marine biologists and they mentioned Miranda [Cosgrove]. Hearing the series referenced by our target audience is how I know we're making an impact," said Cynthia Drivas of Litton Entertainment.

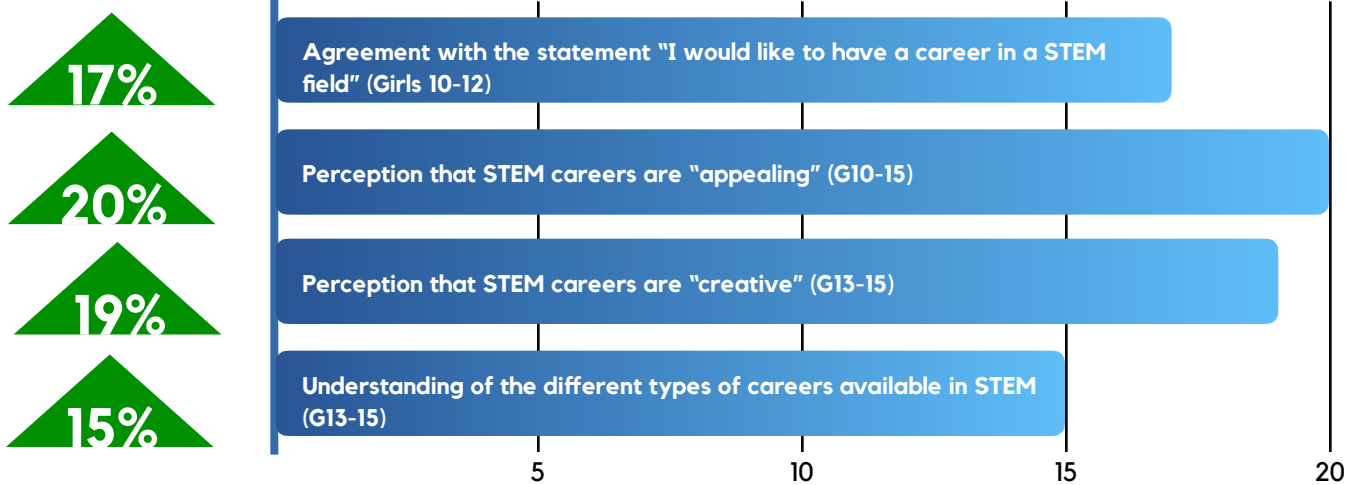
Based on the quantitative data outlined in this paper, MISSION UNSTOPPABLE has had a strong impact in the following ways:

Changing Minds

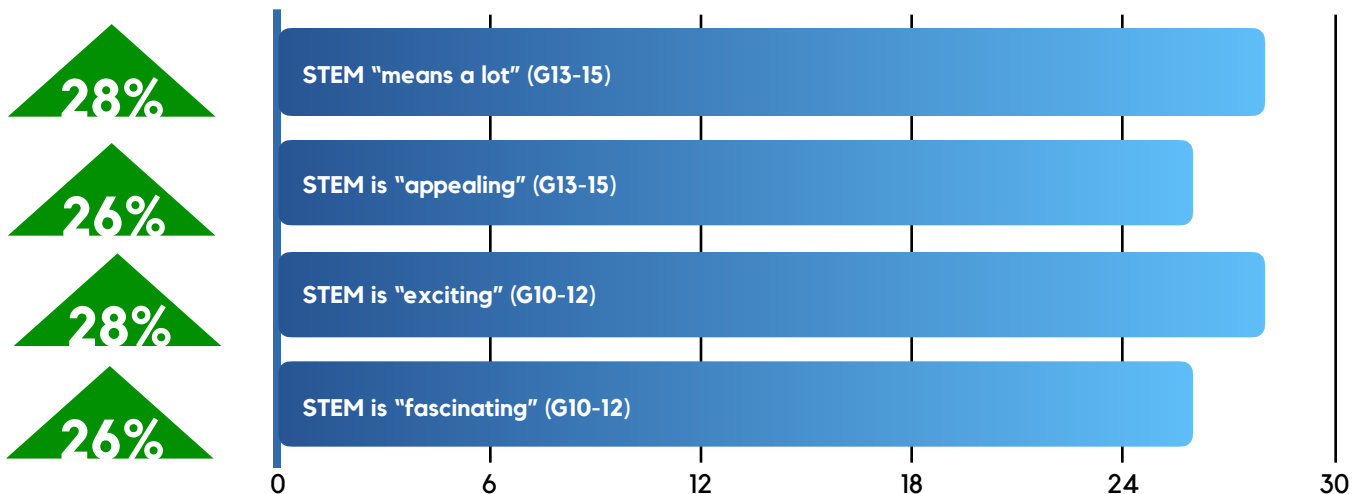
In regards to changing minds, given the mass reach of the series, MISSION UNSTOPPABLE is able to use entertainment media (specifically the television series and digital content) to reach a new, large audience and alter their understanding of who a woman in STEM is. MISSION UNSTOPPABLE is not only able to successfully shift how women and girls see STEM professionals, it is also working to adjust how women and girls see themselves, and what careers are attainable to them. Anecdotal comments across the social

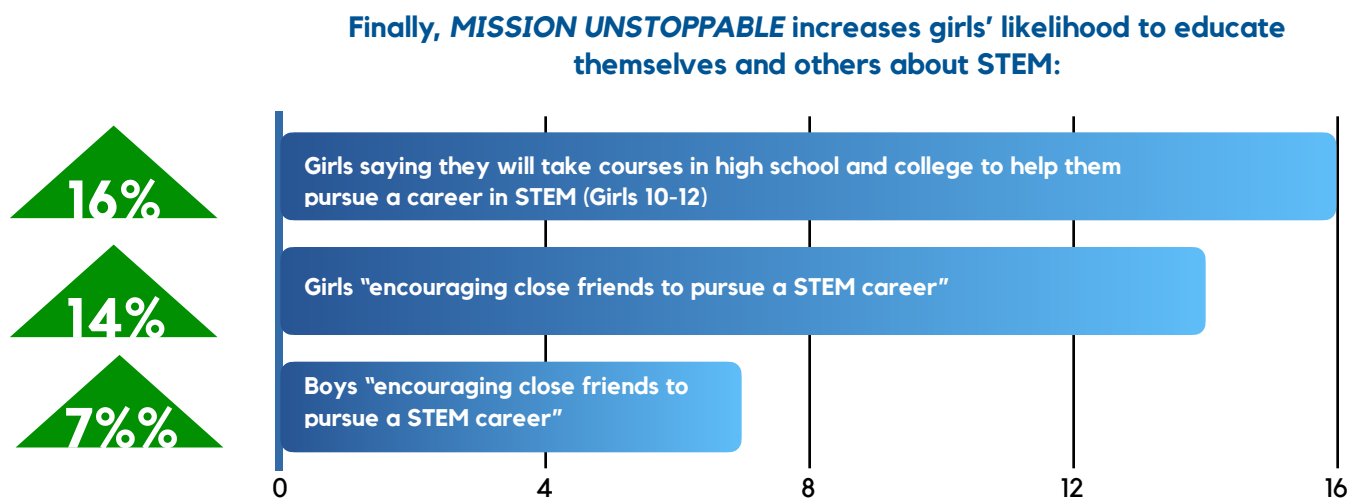
community suggest a shift in perception with comments such as, "I'm not good at science, but it interests me and watching your video opened me up to maybe pursuing immunology", "This is SO cool!!! How does someone get this job?!!!" and "I was good at chemistry and I LOVE makeup so maybe this is a career choice for me? I never even thought about a cosmetic chemist." In addition, data from Screen Engine/ASI's research indicates a **20% increase in perception that STEM careers are "appealing"** and a **19% increase that STEM careers are "creative."**

After watching *MISSION UNSTOPPABLE* girls are substantially more likely to want a career in a STEM field:



Additionally, research found that *MISSION UNSTOPPABLE* significantly increases girls' perceptions of STEM subjects. Related to engineers, girls' perceptions increased by at least +20% points for each descriptor:





Changing Behaviors

Through this coordinated approach of narrative accretion—ongoing and often messaging—*MISSION UNSTOPPABLE* is not only able to successfully adjust how women and girls see STEM professionals, it is activating girls to change their behavior.

There has been a **+17% lift in agreement with the statement "I would like to have a career in a STEM field"** and *MISSION UNSTOPPABLE* has increased girls' likelihood to further educate themselves with research finding a **16% increase in girls saying they will take courses in high school and college to help them pursue a career in STEM.**

Building Communities

MISSION UNSTOPPABLE as an educational tool in classrooms across the country and around the world is deeply important. By embedding *MISSION UNSTOPPABLE* into the IF/THEN® Collection and partnering with organizations like the National Girls Collaborative Project, **the series is able to help build capacity among the movement working to drive more women into STEM roles by providing an important piece of content to rally around.** "Much of the women-in-STEM community is under-resourced and there isn't the funding to create this type of high-quality content. Something like this, which is much more mainstream, can really make a difference in elevating STEM and elevating these women who are successful," said Karen Peterson of National Girls Collaborative. In addition, the *MISSION UNSTOPPABLE* team has built a robust and engaged community online that is learning from one another, encouraging one another, and sharing the message of the importance of women and girls in STEM careers with their extended networks.

Now in its third season, the Lyda Hill Philanthropies teams stated, "We are not surprised that our IF/THEN® theory of change is working, for it was predicated on the premise that IF we had more opportunity to reach girls where they were accessing content, and IF we signed on great ambassadors, THEN we had a good chance of interesting the next generation to be inspired by STEM careers." Lyda Hill Philanthropies' partnership with Litton Entertainment and investment in linear programming, partnered with strategic digital

extensions, has paid off. As the Lyda Hill Philanthropies team added, **"Just two years ago this was only an idea, and now we have grossed over 100 million views in the first two seasons of *MISSION UNSTOPPABLE*, been nominated for two Daytime Emmy® Awards, and won a Gracie Award... What has been surprising, in a good way, is how quickly the content is resonating and how popular it is. We used to cold call social media influencers' agents to tell them about IF/THEN®. Now, these agents are calling us because they want to associate their brand with IF/THEN® and *MISSION UNSTOPPABLE*!"**

In thinking about how the successful *MISSION UNSTOPPABLE* model could be replicated as a tool for change in other issue areas and with the support of other charitable organizations, Madeline Di Nonno, President and CEO of the Geena Davis Institute on Gender in Media, noted the importance of thinking about culture change ladder into both individual and systemic change, **"I wish people would recognize the connection between fictional media and narrative culture change and systemic change. And connecting it with efforts on the ground. People don't realize the impact that storytelling can have on impacting lives."**

Given its strong return on investment, the *MISSION UNSTOPPABLE* culture change model is one that can and should be employed by other charitable organizations as they explore new approaches to achieve their organizational goals. Compelling mission-driven storytelling gives organizations the ability to establish the narrative and build connection, empathy, and understanding with viewers. It takes data and research beyond the page and out of PowerPoints, and creates an opportunity to connect with viewers in a profound way. It is a bold, but smart and practical, approach to change—and one that will likely emerge as a new normal for charitable organizations seeking to significantly advance systemic change.

Changing Minds

MISSION UNSTOPPABLE uses narrative accretion across multiple platforms to redefine STEM professionals and show careers in STEM as accessible to women and girls.

Changing Behaviors

Using ongoing and consistent messaging, *MISSION UNSTOPPABLE* activates girls to proactively pursue an education or career in STEM.

Building Communities

Available in classrooms as part of the IF/THEN® Collection, alongside a robust and active online community, *MISSION UNSTOPPABLE* helps advance the movement with rallying content that drives more women into STEM.