

# Innovation in Action: Impact Through Storytelling and Partnership

When:	Tuesday July 18, 2017 9:15 am
Where:	Scandinavia House 58 Park Avenue
	Room Volvo Hall - 2nd Floor
	New York, NY
Who:	Davar Ardalan, Director of Storytelling
	and Engagement at SecondMuse





# Agenda

### Introductions (10 minutes)

Agile Leadership (10 minutes)

- Keeping up with technology
- Inspiring staff
- Doing more with less

#### Collaborative Storytelling (10 minutes)

- Movement creation and Mass Collaboration (5 minutes)
- SpaceApps (3 minute)
- LAUNCH Food (2 minutes)

Discussion (10 minutes)

Emerging Storytelling Technologies (10 minutes)

- Artificial Intelligence
- Virtual Reality/Augmented Reality
- Why Development Should Engage

Discussion (10 minutes) VR Viewing and Film (15 minutes)



## Innovation in Action: Impact Through Storytelling and Networking

#### by Davar Ardalan

We live in an era that is ripe with creative ideas and agile leadership is crucial to the ability to inspire and energize staff, administer the process of innovation, and truly make a difference in addressing global challenges in dynamic and efficient ways.

Who is an agile leader? One who can adapt and inspire no matter what the circumstance. One who is bold and compassionate and eager to nurture traditional mindsets and help staff adapt and understand, for instance, the promise of new technologies. One who isn't afraid to fail fast and be transparent on what worked and what didn't in a timely manner.

We are excited about the possibilities emerging storytelling technologies bring with them and believe that innovation is best actualized when done strategically and in collaboration with value-driven networks. In this way, we are applying the same kind of innovation process to storytelling as we do to open innovation. In eight short years, at SecondMuse we have leveraged a network-centered innovation ethos to support and scale innovators and solutions in a number of key areas including affordable and nutritious food; aquaculture re-engineering; sustainable design and manufacturing; civic engagement and open data to improve communities. We've also forged partnerships with important international government agencies, renowned think tanks, influential nonprofits and academia, along with such highimpact companies as NIKE, IKEA, Intel, and Google.

"That's because today's critical issues around sustainable, resilient communities and environments implore us to work together to be better, faster, and cheaper," says Carrie Freeman, Managing Director of SecondMuse. "Networks now have the power to magnify both good and bad ideas. At SecondMuse, we've learned how to prioritize disruption: we analyze and understand the need, identify barriers to innovation, and develop the resilient support mechanisms that propel responsible change," Freeman adds.

In the last year alone, SecondMuse brought together 1000+ experts and innovators who are solving broad food, nutrition, forest and ocean management; and circular economy challenges. In New York City, we are leading a major incubator project around urban manufacturing supporting the work of 70 hardware entrepreneurs. All told, we have sourced and assessed 600+ innovations and are accelerating ~30 of them into markets this year.

So at SecondMuse, we are now applying the same approach to our storytelling work -- forging a network of like-minded organizations across a wide spectrum in digital engagement, VR and Al. One of our key activities in storytelling is to drive engagement. Our work ranges from developing storytelling strategies to incorporating artificial intelligence and machine learning in projects, implementing educational Facebook live events, Twitter campaigns, global editorial partnerships and 360°/Virtual Reality stories. Our global campaigns have reached over 95 million people on Twitter, Instagram and Facebook last year.

We understand that new technologies require us to pause, research, and hack more efficient ways to tell stories together in new and unimaginable ways. From the United Nations, to the World Bank and the Australian Aid program, development agencies are among the first, for instance, to experiment with immersive VR/AR technologies. The purpose has been to build empathy and educate local communities as they work to improve the challenging environments surrounding them. There is a commitment to understanding how new communication technologies can be accessed and leveraged by individuals in developing nations to inspire positive change, and help create bridges between otherwise disconnected human experiences.

Making Waves: Re-engineering Aquaculture in Tanzania, for instance, is a 360/VR story produced by SecondMuse in collaboration with the Australian Aid program's innovationXchange that showcases the work of several aquaculture innovation projects.

Starting in Zanzibar, we documented the SeaPoWer project that helps women seaweed farmers adapt their businesses for rising sea-level temperatures and changing environmental conditions. In Dar es Salaam, we filmed the work of The Recycler, a company that uses insect larvae as a critical ingredient in the fish meal at the Indian Ocean Aquaculture tilapia farm. By using black soldier flies to replace wild-caught fish as feed, these projects are protecting our oceans and creating jobs that fuel Tanzania's aquaculture sector. In this way, we are pushing the boundaries of both technology and immersive communications for development in the pursuit of longlasting, meaningful social impact.





This immersive film was released last month on World Oceans Day via the **Facebook page of Mission Blue** - Dr. Sylvia Earle's Ocean Conservation organization. We were also invited to preview this **VR film** at the inaugural World Oceans Festival on Governors Island on June 4. The Prime Minister of Fiji was one of the people who watched the film at the VR Pavilion.

When it comes to mass collaboration and digital engagement, one of our major projects is NASA's International **Space Apps Challenge**. Space Apps has become the world's biggest global hackathon. For the 2017 event, we had 25,000 participants from 187 cities in 71 countries engaged directly with NASA open data to design innovative solutions to global challenges in software development, citizen science, hardware, and data visualization and much more.

Teams of technologists, artists, scientists, designers, storytellers, and entrepreneurs developed solutions to some of the most pressing challenges on earth using publicly available data from NASA and other sources. This mass collaboration includes hundreds of organizations internationally contributing through data, challenges, and in-kind and financial resources. As part of our digital storytelling approach around the #SpaceApps hashtag we reached some 40 million people across Twitter and Instagram - 46.5% of whom were women.

All around us, technology is creating new and dynamic ways to share content. At this year's Wimbledon Tennis Tournament, for example, IBM's artificial intelligence platform, **Watson**, had a major editorial role -- analyzing and curating the best moments and data points from the matches, producing "Cognitive Highlight" videos, tagging relevant players and themes, and sharing the content with Wimbledon's global fans.

Intel just announced a **collaboration** with the International Olympic Committee (IOC) that will bring VR, 360 replay technology, drones and AI to future Olympic experiences. In a recent press release Intel notes, "The power to choose what they want to see and how they want to experience the Olympic Games will be in the hands of the fans."

In the context of development, future technology will change the way we interact with global communities.





Researchers at **Microsoft** are experimenting with a new class of machine-learning software and tools to embed AI onto tiny intelligent devices. These "edge devices" don't depend on internet connectivity, reduce bandwidth constraints and computational complexity, and limit memory requirements yet maintain accuracy, speed, and security — all of which can have a profound effect on the development landscape. Specific projects focus on small farmers in poor and developing countries, and on precision wind measurement and prediction.

Microsoft's technology could help push the smarts to small cheap devices that can function in rural communities and places that are not connected to the cloud. These innovations could also make "the Internet of Things devices cheaper, making it easier to deploy them in developing countries," according to a leading Microsoft researcher.

But the fact is, the non-western setting is currently the greatest challenge for AR/VR platforms. Wil Monte, founder and Director of Millipede, one of our SecondMuse collaborators says currently VR/AR platforms are completely hardware reliant, and being a new technology, often require a specification level that is cost-prohibitive to many. Monte says labs like Microsoft pushing the processing capability of machine learning, while crunching the hardware requirements will mean that the implementation of the technologies will soon much more feasible in a non-western or developing setting. He says development agencies should be empowered to push, optimise and democratise the technology so it has as many use cases as possible, therefore enabling storytellers to deploy much needed content to more people, in different settings.

"From our experience in Tonga, I learned that while the delivery of content via AR/VR is especially compelling, the infrastructure restraints means that we need to 'hack' the normal deployment and distribution strategies to enable the tech to have the furthest reach. With Millipede's lens applied, this would be immersive and game-based storytelling content, initially delivered on touch devices but also reinforced through a physical board or card game to enable as much participation in the story as possible," Monte says.

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According to Ali Khoshgozaran, Co-founder and CEO of Tilofy, an Al-powered trend forecasting company based in Los Angeles, content creation is one of the most exciting segments where technology can work hand in hand with human creativity to apply more data-driven, factual and interactive context to a story. For example, at Tilofy, they automatically generate insights and context behind all their machine generated trend forecasts. "When it comes to accessing knowledge and information, issues of digital divide, low literacy, low internet penetration rate and poor connectivity still affect hundreds of millions of people living in rural and underdeveloped communities all around the world," Khoshgozaran says.

"This presents another great opportunity for technology to bridge the gap and bring the world closer. Microsoft use of AI in **Skype's real-time translator** service has allowed people from the furthest corners of the world to connect -- even without understanding each other's native language -- using a cellphone or a landline. Similarly, Google's widely popular **translate service** has opened a wealth of content originally created in one language to many others. Due to its constant improvements in quality and number of languages covered, Google Translate might soon enhance or replace human-centric efforts like project **Lingua** by auto translating trending news at scale," Khoshgozaran says.

Furthermore, technologies like the Google Tango and Apple ARKit can provide new opportunities says **Ali Fardinpour**, Research Scientist in Learning and Assessment via Augmented/Virtual Reality at CingleVue International in Australia. "The opportunity to bring iconic characters out of the literature and history and bring them to every kid's mobile phone or tablet and educate them on important issues and matters in life can be one of the benefits of Augmented Reality Storytelling."

Fardinpour says this kind of technology can substitute for the lack of mainstream media coverage or misleading coverage to educate kids and even adults on the current development projects, "I am sure there are a lot of amazing young storytellers who would love the opportunity to create their own stories to tell to inspire their communities. And this is where AR/AI can play an important role."



A profound view of the future of storytellers comes from Tash Tan, Co-Founder of Sydney based Digital Company **S1T2**. Tan is leading one of our immersive storytelling projects in the South Pacific called **LAUNCH Legends** aimed at addressing issues of healthy eating and nutrition through the use of emerging, interactive technologies. "As storytellers it is important to consider that perhaps we are one step closer to creating a truly dynamic story arch with Artificial intelligence. This means that stories won't be predetermined or pre-authored, or curated but instead they will be emerging and dynamically generated with every action or consequence," Tan says, "If we can create a world that is intimate enough and subsequently immersive enough we can perhaps teach children through the best protagonist of all -- themselves."

Davar Ardalan is Director of Storytelling and Engagement at SecondMuse where she leads global projects around food and nutrition, circular economy, open data and ocean health. Ardalan is also the co-chair of the global VRAR Associations Stories and Audiences Committee. Prior to SecondMuse, Ardalan was an award-winning Senior Producer and Social Media Strategist at NPR News where she spent two decades as a journalist. She has been recognized with a Gracie Award from the American Women in Radio and Television, two NABJ Awards, and a shout-out in the popular comic strip Zippy.

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## About SecondMuse:

SecondMuse is a pioneering innovation and collaboration agency that empowers people to do extraordinary things. We build diverse value networks around methodized collaboration and strategic innovation that, together, transcend systemic barriers to positive change. Since 2009, SecondMuse has teamed up with high-impact partners and brands, including NASA, Intel, Google, NIKE, Inc., IKEA, the World Bank, USAID, and DFAT, to screen more than 13,000 entrepreneurs, prototype 30,000+ solutions and accelerate more than 100 companies across six continents. Eighty percent of the 125 companies accelerated by SecondMuse are active today. SecondMuse has a long history of working with Fortune 100 companies, investors, governments, and foundations around the world.



## **TERMINOLOGY and Related Links**

#### VIRTUAL REALITY

Virtual Reality (VR) is the use of computer technology to create a complete but artificial world, apart from the real world. The user experiences this realistic yet computermade environment by wearing a head-mounted display which gives dimension and a sense of physicality to the experience. Inside a headset the user sees an immersive 3D world with which they can interact. Primarily visual now, other senses are being incorporated to enhance the virtual experience, especially hearing in the form of binaural audio.



Fiji's Prime Minister Frank Bainimarama, co-chair of the 2017 United Nations Ocean Conference, immersed in SecondMuse's 360 video experience about aquaculture innovations in Tanzania.

There is also 360/VR technology that's not tethered to a computer. Using an omnidirectional camera (or multiple cameras), 360 Video or Film (also sometimes called spherical video) captures events in the real world, recording in every direction simultaneously; the footage is then stitched together and audio can be added. Finished videos can be played back on a PC, smart phone, or on a viewer.

The UN has been using VR in a project implemented by the UN SDG Action Campaign, which uses the power of immersive storytelling to inspire viewers towards increased empathy, action, and positive social change. The project supports the UN system by disseminating their content and expanding their impact in 360° video and virtual reality. The series provides a deeper understanding for those living with the most complex development challenges, catalyzing urgency for those most in danger of being left behind if the Sustainable Development Goals (SDGs) are not met.

SecondMuse has been using the unique storytelling opportunities of VR in a number of ways. Making Waves: Re-engineering Aquaculture in Tanzania is a 360/VR story produced in collaboration with the Australian Department of Foreign Affairs and Trade's innovationXchange that showcases the work of several aquaculture innovation projects — an initiative that seeks to revolutionize the aquaculture industry around the world. Starting in Zanzibar, producers documented the SeaPoWer project that helps women seaweed farmers adapt their businesses to rising sea-level temperatures and changing environmental conditions. In Dar es Salaam, they filmed the work of The Recycler, a company that uses insect larvae as a critical ingredient in the fish meal at their Indian Ocean Aquaculture tilapia farm. By using black soldier flies to replace wild-caught fish as feed, these projects are protecting our oceans and creating jobs that fuel Tanzania's aquaculture sector.



#### **Augmented Reality**

Unlike Virtual Reality, which creates its own artificial world, Augmented Reality (AR) uses computer technology to add virtual elements to the real world environment. In other words, a user views the true physical world with virtual elements added to it. This can be done on a number of platforms other than just a computer screen, including handheld devices and headsets. The game Pokemon Go, a prime example of augmented reality, was making headlines during 2016, and demonstrates the allure of adding virtual features to a real-world environment.

Around the world, development agencies are pioneering the use of immersive storytelling technologies — including 360° video, virtual reality, augmented reality, and gamification — to enrich communications and amplify existing cultural movements. Through their ability to create immersive experiences, these technologies have the power to educate and impact the way people think and behave around issues facing their communities. Through a partnership with the Australian Department of Foreign Affairs and Trade's innovationXchange, SecondMuse is exploring how interactive narratives and experiences can help restore pride in traditional eating and promote healthy food choices in the Pacific region. The project is called LAUNCH Legends.

#### Artificial Intelligence

Artificial Intelligence, or AI, is when a computer mimics a human being in the ability to learn and solve problems. It is a broad concept that primarily means machines acting in a way that humans would consider "smart." Its most visible application has been in video gaming, where a computer can take the role of a player and interact with a human. A whole host of consumer products are now making use of AI in the development of self-driving cars, the ability to understand and react to human speech, and in scientific and military simulations, among many other uses. Al is a changeable term, it evolves as the machines evolve. Fifteen years ago, optical character recognition (OCR) was considered a prime example of artificial intelligence, but today not so much since it's become so commonplace. Those are all examples of applied AI, where systems use machine intelligence to handle one specific task, But some of the most exciting breakthroughs are occurring in the area of general AI, systems that can handle any task thrown at them, that can actually think like a human being.



#### Machine Learning

Thinking like a human being is the heart of artificial intelligence. Scientists quickly came to understand that rather than programming computers with everything they need to know about human tasks and how to carry them out, it would be more efficient if we could program the machines to learn how to do it themselves. That's Machine Learning (ML). In order to do that computers need to be able to codify information the way the human brain does, and to extrapolate possible solutions from that information. That is called a neural network and is where breakthroughs are most likely to come. Machines can now compose music you might like based on your stylistic preferences and they can produce sports highlight videos without the need of human direction and editing. The possibilities are endless. SecondMuse and LAUNCH are deeply invested in the power and importance of storytelling in generating awareness of and potential solutions for a myriad of global problems. Al and ML are critical tools in that process. According to Ali Khoshgozaran, CEO of Tilofy, the power and potential of immersive storytelling is vast. "Although historically storytelling has been an exclusively human process, it is no longer the case. Incorporating the power of artificial intelligence into the editorial workflow can massively enhance how stories are discovered, created, conveyed, and consumed. The creativity of AI is also evolving, establishing the technology as one of the most disruptive forces to impact the end-to-end cycle of storytelling. From creation to consumption, understanding machine intelligence's impact on storytelling and embracing the change are critical to succeeding in the age of human-machine collaboration."

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## **Further Readings:**

#### What's Happening in Immersive Storytelling Technology

Collins, Terry. **"IBM Uses AI to Serve up Wimbledon Highlights."** CNET, July 3, 2017. Watson, IBM's artificial intelligence platform, created two-minute highlight videos of this year's tennis tournament's best moments.

Roach, John. "Al's Big Leap to Tiny Devices Opens World of Possibilities." Next, the official Microsoft blog, June 29, 2017. "Creating the intelligent edge is a step toward realizing the promise of a world populated with tiny intelligent devices at every turn – embedded in our clothes, scattered around our homes and offices and deployed to perform tasks such as anomaly detection and predictive maintenance everywhere from car engines and elevators to operating rooms and oil rigs."

Johansson, Anna. **"5 Virtual Reality Trends to Watch in the Next 5 Years."** Geektime, Apr 23, 2017. "It's exciting to think about everything that VR has in store for us, but it's important to remember that this is still a technology in its infancy...keep watching the major players, consider your investments wisely, and get ready for the VR revolution we've been promised for years."

Stein, Len. **"These Are the Fundamentals of Digital Storytelling Today."** BrandingMag, April 23, 2017. "While the basic principles of storytelling remain unchanged, how to tell a good story has changed. Emerging technologies have created new opportunities for advertisers, brands, and platforms to engage and provide new contexts in which audiences, brands, and advertisers can interact."

Jaisinghani, Priyanka. "How Virtual Reality Is the Power of Immersive Storytelling." Conscious, June 21, 2017. "Through the power of immersive storytelling, many nonprofits [including the United Nations] have started using this tool to powerfully craft a message to garner empathy, new perspectives, action and positive social change on people living in conditions of great vulnerability."

#### Dahir, Abdi Latif. **"Virtual Reality Is Giving African** Filmmakers a New Way to Explore Complex

Narratives." Quartz Africa Media, July 1, 2017. "In Africa, VR is already flourishing in the gaming industry, is being used to sell property, and is being explored as a tool for education. Once these value chains are created, the challenge will be about how much we can excel in adapting VR technology in the creative industry and beyond."

"Women in VR Presents: The Importance of Diverse Voices in Emerging Storytelling Technologies." Future of Storytelling, Conference, Oct 9, 2017. "TheFuture of StoryTelling is a passionate community of people from the worlds of media, technology, and communications who are exploring how storytelling is evolving in the digital age."

Seward, Kenneth Jr. "How Virtual Reality Can Be Used To Fight Racism And Prejudice In Society." UploadVR, Apr 29, 2017. "It's important to be able to share in the troubles of our fellow man. Shining a virtual light on certain issues can both educate people, potentially bringing about change, as well as more immediately provide vocal aid to those of us who may be suffering."

Dumas, Jacques-Pierre. **"Google VR/AR Reveals How VR Impacts Storytelling and More."** FutureFive NZ, July 7, 2017. Google believes "the future of journalism lies in VR. For the past six months, they've conducted a research study that offers insight into what makes VR a distinct storytelling medium, why it's alluring to people, and what that means for storytellers. They also partnered on this study with a team at Google called ZOO, a creative think tank for brands and agencies."

Patel, Deep. "The Trends of Gen Z: How this Company Is Using Digital Storytelling to Reach the Next Generation." Forbes, July 2, 2017. Museums and historical sites are learning that "The young, digitally literate generations want immersion, transportation and, most important, real stories about the people behind the greatest artistic and historical relics."