LEAD 704 - The Leader's Role in the 21st Century

Week #7 – Biography Assignment

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Abstract

Juliana Rotich is Co-Founder and Executive Director of Ushahidi, a Nairobi-based tech company that specializes in developing free and open source software that aggregates and curates crisis data on real-time basis and collates the data into live, interactive maps. Non-profit, Ushahidi has helped seed the fast-growing East African tech industry and reimagined what technology can do. Rotich was named one of the "top 100 Women" by the Guardian newspaper, "Top 2 Women" in Technology and "Social Entrepreneur of the Year" in 2011 by The World Economic Forum. Rotich is a technologist and a TED Senior Fellow.

Juliana Rotich is an information technology professional who has developed web tools for crowdsourcing crisis information and coverage of topics related to the environment. Imagine using your skills to prevent violence, increase freedom of information and change the world. That is the legacy of the amazing Juliana Rotich. She was the head of East Africa Country Cluster for BASF from May to December 2018. She is also a trustee of Bankinter Foundation for Entrepreneurship and Innovation in Spain, as well as a board member of Standard Media Group and the Kenya Vision 2030 Delivery Board.

Ms. Rotich was born in 1977 in Kenya. She has a degree in information technology from the University of Missouri-Kansas City, and has worked in the IT industry for over ten years. After graduating from UMKC, she used her experience in Computer Science to give voices to thousands of people in crisis. In 2008 Ms. Rotich co-founded the non-profit company and until September 2015, she was the Executive Director for Ushahidi.

Ushahidi is an open source software application, and a non-profit technology company with staff in nine countries whose mission is to help marginalized people raise their voice and those who serve them to listen and respond better. It has been instrumental in creating Kenyan tech ecosystem, known as the Silicon Savannah, and its employees have gone on to found iHub, Akirachix, and BRCK. Ushahidi is an open-source software project that uses crowdsourced geolocation, mobile phone, and web reporting date to provide crisis reporting and information. Ushahidi is the Swahili word for "testimony." Ushahidi was first put into practice during the Kenyan presidential election crisis from 2007 – 2008; it has since been used in Chile, Japan, New Zealand, Australia, Pakistan, Tanzania and Haiti. Ms. Rotich impacts the global economy

through cultural diversity and the building of partnerships on the IT platform through Ushahidi and BRCK.

BRCK makes a connectivity device that allows users to connect to Wi-Fi anywhere in Africa simply by inserting a 3G Sim Card. The device works in more than 140 countries and can connect with up to 20 devices at a time. The BRCK itself is a durable device, meant less for people living in developed nations than for those on the go in developing nations. BRCK, a spinoff project from the team that built Ushahidi, Crowdmap, and the iHub, has also created the Kio Kit, an education kit that turns any schoolroom into a digital classroom.

BRCK is best described as a "backup generator for the internet." When it was announced, the idea if a rugged, rechargeable, mobile wifi device captured imaginations as a good way to bring robust connectivity to people in places with spotty infrastructure, particularly in developing countries. The device is the brainchild of Nairobi-based technology company Ushahidi, and was created partly out of simple frustration with dropped internet connections and power outages in the city. After a successful Kickstarter campaign last year, BRCK has now manufactured and shipped more than 1,000 units to 45 countries, many of them in emerging markets, and is catching up on the backlog of orders. Juliana, a TED Fellow and founding member of Ushahidi, tells the TED Blog that BRCK is now looking for new ways the technology can be applied, and shifting focus from hardware to community action.

In 2017, the company launched the SupaBRCK device to bring Wi-Fi to remote, off the grid areas. The weatherproof, solar-powered, all-in-one microserver has a dual-core Intel processor, a 5TB hard drive, and capability to create 100 internet connections, and comes with BRCK's Moja service, which offers free public internet. With less than one-third of Africa's population connected to the internet, BRCK's technology is a step toward bringing the whole

continent online and a boom for entrepreneurs struggling to find cheap and reliable internet access to conduct business.

As a blogger, Ms. Rotich has authored articles on Afrigadget.com, acted as Environmental Editor of Global Voices Online, and participated in the TED Global Conference in Arusha in 2007, As a public speaker, she is known for commentary on technology in Africa and voicing concerns about the loss of indigenous forest and water catchment areas in Kenya. She is a Senior TED Fellow. To help solve the lack of internet access due to blackouts in Nairobi, Ms. Rotich co-founded BRCK, Inc which produces a battery-operated modem and can run for eight hours without electricity.

In 2014, Ms. Rotich presented at the annual Design Indaba Conference in Cape Town. From 2014 until 2015, she served on United Nations Secretary-General Ban Ki-moon's Independent Expert Advisory Group on the Data Revolution for Sustainable Development, co-chaired by Enrico Giovannini and Robin Li. In 2017 Rotich participated in the W20 Summit in Berlin, Germany and took part in a panel discussion together with Chancellor Angela Merkel, IMF Director Christine Lagarde, Queen Maxima of the Netherlands, Canadian Minister of Foreign Affairs Christia Freeland, Ivanka Trump and others, representing BRCK.

In 2011, Rotich was named Schwab Foundation Social Entrepreneur of the Year in Africa by the World Economic Forum. She earned a TED Senior Fellowship and a Director's Fellowship by the MIT Media Lab. In 2011, she was one of the "World's Top 100 Women" by the Guardian. In 2013, she was awarded the Digital, Life, Design (DLD) Women Impact Award. In 2019, she was presented the German Africa Prize, awarded by the German Africa Foundation to honor "outstanding individuals for their longstanding endeavors to foster democracy, peace,

human rights, art, culture, the social market economy and social concerns" by Chancellor Angela Merkel. Ms. Rotich gave birth to her only daughter, Josie Leslick on September 12, 2002.

In 2011, Ms. Rotich obtained a prestigious award by the World Economic Forum, LLC. The World Economic Forum LLC is committed to improving the state of the world by engaging industry, government and civil society leaders in partnerships to shape global, regional and industry agendas. Based in New York and San Francisco, the World Economic Forum LLC is impartial and not tied to any political, partisan or national interests.

It is the North American subsidiary of the World Economic Forum, the International Organization for Public-Private Cooperation, headquartered in Geneva, Switzerland, under the supervision of the Swiss Federal Government. The World Economic Forum LLC's New York Office acts as the headquarters for various Industry and System Initiatives, as well as for North America and Latin America activities. The World Economic Forum LLC's San Francisco acts as the headquarters of The Center for Fourth Industrial Revolution.

It appears that a new entrepreneurial revolution is gathering in Africa, fueled by the arrival of Internet and Mobile Technology. But it is a revolution that is popping up in the most unlikely places, and mostly under the radar of business awareness. If a revolution it proves to be, Ms. Juliana Rotich will be one its cheerleaders. In between stints at MIT; the University of Missouri, and elsewhere in the U.S., Ms. Rotich is also an ICT entrepreneur herself in her home ground in the heart of east Africa in Nairobi, Kenya.

Her own track record, as co-founder of an intriguing start-up, Ushahidi, has propelled her to prominence, but more than that, she is fascinated by the entrepreneurial process itself. She wants to push that process to see lives and communities changed. "I truly enjoy bringing people

together to solve problems. Entrepreneur, facilitator, and collaborator is how I see myself." She summarizes her personal mantra for the new entrepreneur in a simple tagline: *make-fix-help*. It is a shorthand description for a philosophy that puts basic problem definition and solution through critical collaboration as a key part of the entrepreneurial thinking. In this, real problems intersect with real opportunities. It is part of a nuanced-but practical-framework that asks basic questions of how we should facilitate entrepreneurial growth anywhere in the world.

It appears that Africa is enjoying a new kind of high-tech renaissance. The continent may already be seeing a wave of entrepreneurs such as Dorcas Muthoni, who was created major ICT and e-governance companies in east Africa and been inducted into the Internet Hall of Fame. The wonderful thing about living is Africa, "Ms. Rotich points out, "is that we don't have a shortage of problems and with that, we don't have a shortage of opportunities to solve those problems." "There is just so much richness in the problems we have globally and there is so much richness in the types of solutions and the types of lessons that we could learn from each other." Given all of this, what should go in the new entrepreneurial framework? Ms. Juliana Rotich outlined her thinking process to the PCT in a recent conversation. "For me, we need a broader construct of what entrepreneurship means," she firmly states. She says she is heavily influenced by informal businesses such as kiosks and artisans in her native Kenya, arguing these demonstrate real business and market solutions. "For me, these are entrepreneurs." The tech industry is all too often self-obsessed and divorced from real market behaviors, she argues. "If we are, we shut ourselves off from some of the lessons we could learn from the entrepreneurs down the street." Platform thinking pervades her thoughts. "One of the biggest lessons from the advent of the Web is this idea that in developing platforms, you not only solve your problems but create a platform so that others can solve their problems," she proposes. But her and it's a theme

pushing wide impact that recurs in her narrative – she adds, "I find that products are difficult to scale but platforms can scale." The concept of platforms has become a subject for considerable cutting-edge thinking amongst experts – Ms. Rotich points to the blog of JP Rangaswami as a particular inspiration, but it is clear that in practical terms, open source platforms on the Web have become particularly important here.

We can learn lessons here, she suggests, particularly in the informal economy which is characterized by small chunks of goods and services. Of significant relevance to the PTC community could be a thorough examination of how small denominations of (mobile) airtime have changed lives, and what the implications are both communities and telecom providers. Of huge profile in this area is the original M-PESA mobile finance offering started in Kenya but which has fundamentally affected how we see clever ideas outside the developed world. The ideas for M-PESA were motivated by observing Africans at the street level swapping mobile airtime as a proxy from of money over 15 years ago.

After a decade of growth, M-PESA-facilitated money transfer is now used by 30 million people in 10 countries. A network of nearly 300,000 agents alone mediated cash-to-mobile transactions and payments. An MIT study confirmed that the service made a dramatic impact on households, lifting over 190,000 of them out of extreme poverty in Kenya alone. She acknowledges it is an established story, but it has much further to run. "The small denomination pay-as-you-go model has really increased adoption of technology, particularly for mobile phones," she affirms. "But now in learning from informal markets, there are major new businesses extending the same model, in terms of both scale and impact, in a different way."

The same model has created M-KOPA Solar to provide wide-scale deployment of household-level renewable energy supplies, off-grid. Avoiding the need for customers to pay upfront, "they

have packaged it in a way that it becomes affordable." She is clearly enthusiastic about this approach and calls the resultant impact, 500,000 households in Kenya now served as "incredible." M-KOPA Solar provides home systems on an affordable mobile money payment plan, with an initial $35 deposit, followed by 365 payments of 45 cents, leading to ultimate ownership.

The company promises customers "a world-class solar home system," with the capability to power lights, stoves, phone charging, and radio/TV sets. The company now claims world leadership in pay-as-you-go renewable energy supplier to off-grid homes. These innovations are causing major socio-economic impact, she says. "There are millions of children all around Africa-the remote areas of PTC's Pacific region, such as island communities, have the same problems-with no lights to do homework by, or will suffer longer-term respiratory problems caused by black smoke from kerosene lamps." M-KOPA has eliminated kerosene in customer households while at the same time providing a better cheaper service and supporting direct ICT access. Critical to this model of the pay-as-you-go solution is a clear strategy to scale and to get into more households. "These markets are not glamorous," she says, "but they are important. She continues: "We should give them focus because they are the net big growth markets in ICT industries which see saturation in developed countries."

Alongside the issues of start-ups, development models remain too top-down, she concludes, and should be more agile and responsive. "We should be looking at the idea of seeing growth as a garden and not just in terms of the individual plants. This should take account of platform thinking and entrepreneurship," she says. The M-KOPA case, in its collaboration with M-PESA, suggests start-ups could work in clever partnerships with telcos and

cellcos on a much wider level (M-KOPA itself was co-founder by Nick Hughes, who was a prime mover behind M-PESA).

She remains optimistic that this transformed ecosystem will materialize. "Telecom and utility companies should now think of themselves as enablers and platforms," she says. "I feel that is the frontier that will help to change society." She continues: "In less than a decade, we've seen telecom companies start to think and communicate differently about the value they bring to society, they are starting to talk about collaboration, about working, about values, about innovation."

Other parts of the framework will also need thinking about. Scaling is a problem in many projects, she admits. Where an idea fails, capital is indeed wasted; lesson need to be learned here, but good may come to it. Allied to this is a development approach that is often stymied by working at the pilot-project level but getting no further. "So-called pilot-it is in technology projects remains a problem," she admits. "Here the approach should seek to do an experiment with a plan to scale that keeps iteration and additional components in mind as needed. We should be looking at what environment are we creating for people to create solutions within that particular context."

Equally, a failed approach may enable an entrepreneurial focus on what could work and provide growth beyond the early stages busines. "So, here the entrepreneur must pivot," she says. "Here, we have a bit of a difference between Africa and somewhere like Silicon Valley, although it's never easy anywhere." Ms. Rotich says this often means getting the business environment right with conductive regulatory approaches, talent flows, and seed capital funding to help entrepreneurs off the ground.

Typified by what she calls the art of the pivot, she says, is Kenya entrepreneur Ken Njoroge, who co-founded Cellulant with a credit card and an idea in 2004. Mr. Njoroge's early business concept pivoted to become a mobile commerce company than now manages, delivers, and bills for digital content and commerce services. More recently, Cellulant has been awarded a major contract by the Nigerian government to run an e-mobile registration and validation system for subsidized fertilizer payments to the country's farmers that has already had significant impact. Cellulant, now in eight countries, has a target to become a Fortune 500 player across Africa.

There are other lessons to be learnt, and the disruption created by the internet may signal future relationships and organization. "I don't think we are going back to hierarchical systems and ways of thinking. Mesh networks, such as rapid disaster relief networks after the Puerto Rico storms, show that decentralization at many levels is here to stay." These approaches are working on more than just the network level. "You can call this by different names, but I interpret them to mean making equalization possible so that more people can plug in and therefore more people can figure out different permutations of adding value. I find that extremely powerful and as a vison for our future we should continue to look for ways for decentralization to have impact and to empower people to have the tools."

Her own major startup, Ushahidi, has been both innovative and effectively decentralized itself. Ushahidi is an open-source platform enabling crowdsourced reports from Web and mobile to become a coherent information service everyone can access. Ushahidi has seen international applications as diverse as election reporting and disaster relief in Kenya, New Zealand, Japan and Haiti. Founded in 2007, Ushahidi can claim it was an anchor company that catalysed and led to BRCK, the hardware company, as well as iHub, plus other offshoots like Gearbox.co.ke.

Closer to home, she points to another emerging example, residing, perhaps improbably in the far north to Kenya, a place regarded as marginalized even within the country.

Lodwar, near Lake Turkana, is the location of Kenya's most remote tech hub. It hosts a non-profit initiative called *Learning Lions* providing high-quality IT and media training services for local youth. The remoteness of the initiative has proved to be no barrier to achievement. Ms. Rotich says she was "amazed at the sophistication of projects developed driven by hackathons and other training at the center. Ideas that have emerged from students a matter of month after their training include using drones to deliver medicine to remote communities and some solutions to weather patterns on Lake Turkana for fishermen. "Talent is universal, but opportunity is not," concludes Juliana Rotich.

The Lake Turkana initiative is a powerful reminder that there is talent in the most remote areas of the world, she says. "We ought to give the same opportunities (here) as we give in Nairobi, San Francisco, or London." There are some intriguing lessons to be learned in this experience. "No one in Nairobi would have come up with these ideas," she points out, and returns to her earlier metaphor by way of explanation. "What we should be thinking about is how we are dealing with the garden in Turkana and the garden in Nairobi, compared with what we have learned from the gardens in San Francisco and London, and that can help to tend this garden of opportunities, ideas and problems." ICT mediated entrepreneurship may, after all, be on the verge of giving Africa a much brighter future, touching millions in the process. Juliana Rotich was one of the highlight presenters at PTC '18 during the Monday Morning Keynotes on January 22, 2018.

Ushahidi, "testimony" or "witness" in Swahili, remains an innovative platform that has been more than 150,000 times in over 160 countries, crowdsourcing more that 50 million reports

from citizens across the world. Ushahidi has grown into a social enterprise with a global team of 30+ highly skilled and diverse experts from 10 different countries, building on their open source roots. Ushahidi builds technology to help marginalized people raise their voice and get the help they need. These are people during destruction due to hurricanes or earthquakes, whose human rights are threatened, and others witnessing violence, corruption, or harassment. They are also groups of people who have been excluded from conversations and decision-making in matters affecting them. Technology empowers them to be heard so those who can help can respond better.

This is how the Ushahidi Platform works:

- You can collect data in multiple ways: When people raise their voices, their stories and reports bring attention to local and global issues. Information is powerful because it informs decisions and can lead to positive change. Ushahidi collects crowdsourced data and targeted survey responses from multiple data sources. Ushahidi's aim is for platform users to interact, communicate, and collect data via the technology their stakeholders are already using, which should reduce barriers to engagement.

- You can manage the aggregated information: Information is helpful when it is properly managed so you can see it and understand the data. The Ushahidi platform allows you to organize your data using categories. You can search and filter data to easily find information that is almost relevant to you, and in turn save these custom filters and/or export them. The Ushahidi platform also allows you to limit access and permissions to functions on data using roles and permissions. All of these functions help you be more efficient to save you time and resources.

- You can visualize and analyze the data: It is important for you to understand the data visually. The Ushahidi platform displays all reports using a map, data mode and activity views. This way, you can easily see what is happening in every location and pinpoint any trends or problems. The live map can be filtered and search by time and category. The data can also be exported via CSV to be analyzed further in an external tool. Information collected manually can also be uploaded to the platform via CSV for merging of analysis.

- You will know how to respond quickly: Being able to visualize the data means you can make decisions more quickly to plan interventions, deploy needed resources, or adjust project activities to improve impact. The platform allows your team to set up workflows and assign tasks to improve program management. Finally, you can close the feedback loop by triggering automatic notifications of pertinent information to beneficiaries, stakeholders, or field staff.

Marginalized people need to raise their voice for many reasons. They may fear for their safety and need immediate help. They may have witnessed corruption, experienced a violation to their human rights, or need to hold their government accountable. They may also have been excluded from important conversations that directly affect them. But people may not always have the means to raise their voice. They may be in immediate danger, could be afraid to speak up, or just need a way to make sure their voice is heard so that they impact decisions being made that affect them.

This is why the Ushahidi platform has now been deployed by thousands of grassroots activist, first responders, development practitioners and others all over the world. This technology allows anyone with access to a simple feature phone, computer, tablet or smartphone to raise their voice, so that those serving them can listen, make better decisions,

and respond more effectively. The Ushahidi platform is powerful because it gives people the means to be active participants in solving challenging problems and advocating for change.

After violence erupted in Kenya following the 2008 election, Ushahidi served as the technology provider for Uchaguzi, a joint initiative between SODNET, Ushahidi, CRECO and Hivos Foundation, with support from the Canadian International Development Agency (CIDA), for the 2010 referendum and an election in 2013. Creco and Infonet deployed the Ushahidi platform again for two elections in 2017. Uchaguzi's strategy was to help Kenya have a free, fair, peaceful and credible election process by increasing transparency and accountability by encouraging citizens to actively keep an eye on the vote. To do this, Uchaguzi needed a platform that allowed them to share messages around the election process and flag any concerns for action such as incidents of insecurity and suspicions of corruption. Uchaguzi facilitated unprecedented collaboration between citizens, election observers, humanitarian response agencies, civil society, community based organizations, law enforcement agencies, digital humanitarians, and others to monitor elections in real-time.

Ushahidi built the data collection platform for Uchaguzi and managed the election monitoring project. The site featured customized branding and allowed people to submit information via SMS and smartphone, which could then be published by platform administrators. Ushahidi also provided in-person training for 250 volunteers on how to effectively manage, verify and publish incoming reports from citizens all over Kenya. These volunteers just a small group at first, took the time to help because they believed in the platform. Citizens had a place to be heard.

Concerned by the violence, hate speech, and protests that erupted in the United States after the 2016 election, Ushahidi worked with journalist and activist Shaun King to create

Document Hate to gather and triage reports of hate across America. Work was done with the non-profit journalist organization Propublica to bring these first-had reports to news desks. In the two weeks after the election, Ushahidi gathered, verified, and published over 400 reports of hate speech, harassment, and violence. These reports (visualized on a map) show area of violence, creating awareness to target interventions for public safety. This deployment was covered by The New Yorker, The Atlantic, The Verge, TechCrunch and countless others.

Ushahidi is recognized for bring transparency into election processes. Democracy and elections are fragile because when an electorate does not believe in the system, violence ensues to protest an outcome. This is where Ushahidi has built more trust into the system. In the next 10 years, Ushahidi wants to do more. The electoral systems around the world are not trusted. Citizens see a lack of transparency, voter suppression, bad actors hijacking social media to influence voters, and the geopolitical prestige and economic success of autocratic government. As well, the logistical challenges of voting, managing millions of people on a single day, has numerous issues that impede people's ability to vote. When there is distrust in the system, public safety and security is threatened.

Ushahidi wants to solve the problem of electoral trust and transparency to strengthen our democracies. Ushahidi has already designed solutions to improve the process, but there is more to be done. To achieve this, Ushahidi is looking to develop a machine-learning tool using training datasets from day-of election monitoring data to make the triage of election issues faster through natural lanuage processing. Ushahidi wants to integrate this work into the current software so it can be used by any campaign, government, third-party monitoring organization or citizen groups to be able to do more with less.

Right now, an Ushahidi election monitoring deployment can receive tens of thousands of reports in the first few hours, requiring massive human effort to triage and verify individually before being able to respond. With this new innovation, a small group of monitors can utilize citizen-generated data and triage it to respond in minutes. Ushahidi is also looking to integrate automated verification tools into the platform, such as image meta-data analysis, automated fact-checking, geolocation checks, and other functionality that will more quickly identify false and fake reports.

A global entrepreneur seeks out and conducts new and innovative business activities across national borders. A global business is a multinational venture incorporated in one country that has operations in one or more other countries. Ms. Rotich is a global entrepreneur and a global business-woman. As global economies shift, and we face world changing events like war on trade and conflicts that impact resources, companies are expected to do more with less.

Rather than reinvent the wheel each time a new technology or service is needed, more companies are looking to partner with like-minded businesses to help improve and drive efficiency in their own business processes and operations. Such approach is easily said, yet not so easily done, as it requires creating partnerships that go beyond paper contracts and fixed deals. This is about building relationships that form the foundations of smart business. The success (or failure) of any business relationship depends heavily on how well the partnership works. Particular effort should be directed towards ensuring the right relationships are formed. Businesses need to establish precisely what they are seeking to achieve from these relationships, in Ms. Rotich case it is expanding into new territories with

IT infrastructure. She describes Ushahidi as "much more than a piece of software: it is a global movement, a global community".

It surprised her how fast her non-profit tech company spread over the world, evolving from crisis maps to elections maps to corruption maps, and even environmental monitoring. Ushahidi has been used after Japan's earthquake in 2011 to map hazard zones, goods supplies and more, but also during the US presidential election of 2013 to report various voter issues and suppressions, or after the Oil Spill of Deepwater Horizon in 2010 to document its disastrous impact on the environment and local population. Today Ushahidi is truly a global movement: it reached 20 million people and got tested in 150 countries impacting cultural diversity and building partnerships.

Juliana Rotich states that "Ushahidi, represents her view of progress". Through that technology tool, open-source communities are enabled to solve their problems. An open-source technology actually enables anyone in the world to build upon already existing solutions, to improve and adapt them to one's specific needs whenever needed: *"I would wish to have platforms that help people to get exactly the utility they need at that special moment, to have open sources for collaboration. A community of problem solvers would be really empowering"*.

She notes that technology is merely a tool-progress comes with the people that use it for the better. Indeed, technology on its own has no impact, there need to be some kind of force levering the power of technology. Rotich said that, "social and economic progress boils down to creating economic opportunity." Of course, the basic needs need to be met, such as access to water, sanitation, education, electricity and healthcare. But what people strongly need, especially in Africa, is "the ability to work and earn a living". And entrepreneurship

holds the key for creating economic opportunities for a lot of people. It very much challenges the status quo: *"What if Africans are not merely consumers of solutions, but also creators? Entrepreneurs? Inventors?"*

People should be able to take things into their own hands. This can be enabled by specific eco-systems like the one in Nairobi she helped establish. There, a major tech hub established with different entities sharing one building: a co-working space/incubator which Juliana Rotich co-founded, two incubators (Nai Lab & mLab) a prototyping space, and more. That space is full of entrepreneurial minds and inspiring initiatives, and encourages every citizen to take part in that dynamic eco-system. This Kenyan micro-cosmos also includes Akirachix, a coding training program specifically designed for women, Akirachix is one of many hands-on approaches to empower people; it trains women on how to code, enabling them to develop a skill that is increasingly valued in the job market.

Those coding training programs are all the more interesting as they are extremely scalable: with only computers and simple tutorials available by the thousands on the internet, anyone can learn how to code. Juliana is truly a thought leader, by inspiring other by her ability of doing things in new ways and leveraging the power of technology. As founder of the open-source software Ushahidi and the incubator iHub (which spawned 170 startups and created over 1,300 new jobs in only 6 years), amongst others, she has already accomplished a lot. And she continues to lead the way for a future in which people are truly empowered.

In conclusion, according to *"Contemporary Issues in Leadership",* the first job in leadership is often getting the best out of yourself. For example, *Fortune* magazine reported a study of thirty-eight failed CEOs. All were good at the cognitive tasks – vision, strategy, ideas – but things broke down at execution. The CEO's actions did not follow their stated

intentions. When leaders know the smarter behavior, why do they get sidetracked into unwanted behavior? Personal mastery is a difficult thing; however, Juliana has masterfully shown monumental results.

Juliana has certainly broken many barriers; she is a prestigious female of global power and authority. She dominates in a primarily male industry. It is a common perception that women will steadily gain greater access to leadership roles, including elite positions. For example, university student who are queried about the future power of men and women say that women's power will increase. Polls have shown that most Americans expect a woman to be elected president or vice president within their lifetimes. Both groups are extrapolating women's recent gains into the future, as if our society were on a continuous march toward gender equality.

But social change does not proceed without struggle and conflict. As women gain greater equality, a portion of people react against it. They long for traditional roles. In fact, signs of a pause in progress toward gender equality have appeared on many fronts. A review of longitudinal studies reveal several areas in which a sharp upward trend in the 1970s and 1980s has been followed by a slowing and flattening in recent years (for instance, in the percentage of managers who are women). The pause is also evident in some attitudinal data, like the percentage of people who approve of female bosses and who believe that women are at least as well suited as men for politics.

Kouzes and Posner illustrate "The Five Practices of Exemplary Leadership". "The Five Practices of Exemplary Leadership is the model of best practices leadership that emerged from research." These five practices (not laws or principles) are:

- Model the Way

- Inspire a Shared Vision

- Challenge the Process

- Enable Others to Act

- Encourage the Heart

And even if you are not in a management position, there is really no escape. No matter what you position is, you must take responsibility for the quality of leadership people experience. No one made Juliana Rotich the leader. She took personal responsibility for doing something about a serious problem she recognized and started leading. Kouzes and Posner go on to say, "no one can make you a leader, either." "You have to take that first step for yourself. You have to be willing to take that first step for yourself. You have to be willing to take actions that others will want to follow". The truth is that you make a difference. Somewhere, sometime, the leader within may get the call to step forward, as in Juliana Rotich's case, for mankind globally.

Rosenbach, Taylor & Youndt states that social entrepreneurs as leaders are passionate and focused on the needs of their beneficiaries as their primary goals. They engage in transactional management. They organize, plan, delegate, monitor and reward. They also engage in transformational leadership, showing passion, inspiring others and building relationships. Social entrepreneurs have advantages over corporate leaders. They develop skills that are vital for successful advocacy, such as communications, transformational and transactional leadership, teambuilding and openness to new ideas and continuous learning. (pg. 269)

Juliana Rotich has taken on the challenge of changing people's lives. As the author Marianne Williamson has written: "*Our deepest fear is not that we are inadequate. Our deepest*

fear is that we are powerful beyond measure. It is our light, not our darkness that most frightens

us. Your playing small does not serve the world. There is nothing enlightened about shrinking

so that other people won't feel insecure around you, and as we let our own light shine we

unconsciously give other people permission to do the same. As we are liberated from our own

fear, our presence automatically liberates others.

Juliana Rotich has truly inspired me; I will incorporate her direct quote into my

leadership journey: "I am guided each day by these three questions: 'What are you fixing?'

'What are you making?' and 'Who are you helping?'"

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