

# All of Humanity Deserves a Seat at the Table

Submission: UN High-Level Panel on Digital Cooperation

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## Executive Summary

We are at the precipice of a global evolution. We are evolving from a purely physical to a world in which digital is pervasive. If stewarded effectively, this evolution has the power and promise to unite individuals, industries, and countries in a way that has never before been possible. With this power also comes a responsibility to curb the harms and respond to the dangers. To set a sustainable foundation of digital inclusion and trustworthy cooperation, it is imperative that all of humanity has a seat at the table.

In this submission, we have gathered the expertise and perspectives of thought-leaders across ten different industries. Based on our conversations, research, and observations, the following foundational steps must be implemented to ensure that the digital landscape of tomorrow fosters understanding and social and economic opportunity for every individual to realize their potential.

### Globally Agreed Upon Standards and Ethics

To build a strong foundation for Digital Cooperation, a cohesive set of ethics, standards and best-practices must evolve: Stewarded, regulated and refined, such rules of the road will recognize cultural diversity and sensitivities may adapt to the local context. Yet, be the context national, religious, ethnic, gender or racial, digital citizenship requires accepting personal, professional, community & global responsibilities of care.

### Education and Digital Literacy for All

Digital literacy and skill-based education must be available to every individual through their lifetime. This ensures that each person, regardless of generation, geography, and socioeconomic status, has access to the tools and technologies needed to learn, earn, contribute and thrive as citizens in the digital realm.

### Global Accessibility

Digital technology has the potential to richly, beneficially connect the world. It also runs the risk of dividing people into two camps: those who have agency and access and those who don't. To achieve global literacy, inclusion, and dignity, everyone must have reliable access to the Internet and the ability to access and filter the knowledge of the world, to derive insight for their effective contribution to humanity.

## Introduction

Digital Cooperation can have a dramatic impact while improving quality of life for people around the world. In order to bring this vision to reality in a sustainable way, we must pay rigorous attention to anticipating the associated harms and risks so we can mitigate them and respond quickly to unforeseen consequences. Institutions, all industries including agriculture, housing, health, education, security and transportation have been organized with methods and practices that reflect the historical difficulty of sharing information. Before digital technology, information had to be organized by hand, person to person. It was not feasible to get and act on information, knowledge and insights from billions of people.

Digital Cooperation has a tremendous opportunity to re-engineer Digital Supply Chains to put people at the center of the global supply chains. This is a shift from designing supply chains from the point of the large multi-national companies like McDonalds, Nestle, Unilever, General Mills, ADM or IKEA. We can now re-engineer to have individuals, families and family businesses and communities as the primary focus: As producers and consumers plugging into the supply chain, in effect a people-centered supply chain. It centrally considers the needs and aspirations of people, families, communities. Shifting focus, we can aim to expand social and economic opportunity for all. This change in perspective drives attention to setting up methods and processes, onramps for farmers, small businesses and family workshops to create global customer awareness about their offerings, learning and acquiring the skills for connecting to thrive.

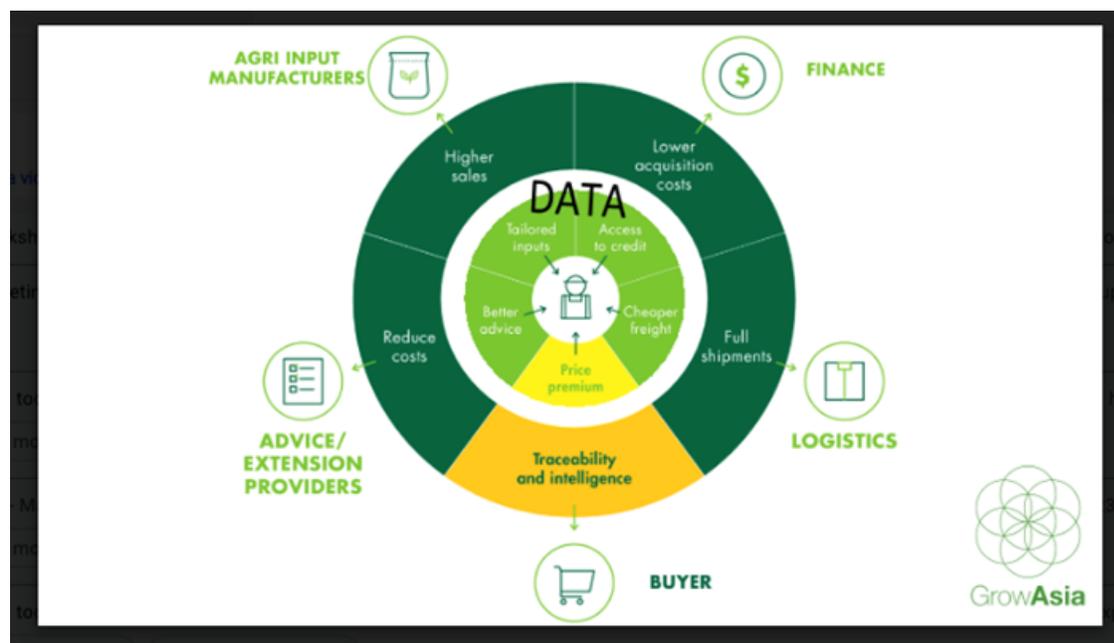


Diagram 1: Agricultural supply chain with the Smallholder farmer as central. Courtesy of GrowAsia.org

This submission explores both the current landscape and sustainable solutions to ensure that the platform of the digital supply chain is built upon a strong, ethical, and accessible foundation. This foundation consists of clearly defined ethics and standards, an education system that provides citizens of all generations the tools to understand and operate these new systems successfully, and accessibility by way of connectivity, communication, so each person has the potential to contribute to global supply chains.

## Past and Present Supply Chains

The global supply chains of today are "supplier driven" because the coordination and information tracking are driven by large companies. Transforming raw materials into the final products which the Business to Consumer (B2C) companies (eg Nestle, McDonalds, IKEA, Walmart, Amazon) store, package and assemble eventually getting to the retail outlets (physical or online) where the B2C companies make the sale to the end customer and arrange for delivery, provide refunds and accept returns (a costly time consuming and life-sapping process for both the businesses and consumers).

The unforeseen consequences of the untrammled use of social media and closed-circuit television (CCTV) in ways that are increasingly integrated across platforms has steadily infringed on the human rights of individuals. People's lifelong data trails when using Facebook, Twitter, Google, Uber, Airbnb, Amazon, Netflix, Alibaba, Tencent, Baidu, walking in London and Beijing observed by CCTV may be tracked by Surveillance Capitalism and Surveillance State(s).

Technology now is capable of upturning the supply chains so that the design of the chain goes from being supply-driven to being demand-driven. The intermediate steps have already begun with Maersk and IBM aligning ship and land transportation. [Quoting](#)

"[IBM](#) and [Danish](#) transport and logistics giant Maersk have launched their global [blockchain](#)-enabled shipping solution" [press release](#) today, August 9 2018. The new jointly developed blockchain solution revealed 94 organizations involved and 154 million shipping events already captured. The global supply chain platform has been dubbed 'TradeLens,' and its dataset is reportedly growing at a rate of close to one million shipping events a day."

The Technology giants have to get ahead of the global shift from Supply Chain to Demand Chain so that they can preserve their revenues even as the revenue sources shift from advertising to accessibility.

There is an emerging consensus amongst the big consulting firms, and the tech giants that ASEAN (Association of South East Asian Nations) may be a "sandbox" to experiment - out of the limelight of the US-China trade war, the political complexity of South Asia and South America and in parallel to the EU GDPR experiment. ASEAN is home to 660 million people and 25,000 islands which for the first time may be connected together through the Internet, in effect enabling ASEAN to "operate" as if a continent.

The UN can play a PIVOTAL role in stewarding new "rules of the road" for the digital transition from Global Supply Chain to Global Demand Chain - to assure humanity in all our messy diversity and cultural misunderstandings, survives and thrives even as the wave of digitization, seemingly inexorably, advances.

## Building a Foundation: Ethics and Standards

In order to build a strong foundation for Digital Cooperation, a cohesive and standardized set of ethics and best-practices must be in place. We identify an urgent need to define the ethics, standard measures and interoperable protocols around the concept of a quantified Social Return on Investment tied very directly to achieving the UN Sustainable Development Goals (SDG) by 2030. The UN Office for SDG Financing sees this as a very high priority so as to unleash financing for SDG's - [Corporations seek common measures](#). "When you ask ten different people what their definition of digital literacy and digital skills is, you're going to get ten different answers. There's no standard." says Melissa Sassi, Program Manager of IBM's LinuxONE Startup Program and Chair of the IEEE Digital Skills Working Group.

## Plan of Action – Digital Cooperation for Standardizing Protocols that Advance SDG’s

*Adapted from the [IEEE Standards Association](#) Framework*

The UN Sustainable Development Goals (SDG’s) are not on track to be achieved by 2030. To accelerate progress and bring digital cooperation to this intersection of social impact and finance, we recommend a joint initiative for the UN HLP DC to tap the ITU to work with the [IEEE Standards Association](#) (IEEE-SA) and the IEEE Humanitarian Activities Committee (HAC) to develop a standardizing social impact measurement framework in conjunction with professional accounting organizations like [IFAC](#) and citizen journalist agencies like [Transterra Media](#) (not exclusive to these). Building on proven track records for Technical Standardization processes like the ones that developed IEEE 801.3 we can bring protocols to the financing of SDG projects that are objective, auditable, and incorporates best practice. A joint framework has been discussed with Cisco, SalesForce and the Asia Foundation who expressed interest.

Standards are a pillar in sustainable development, as governments seek to build quality infrastructure, improve the economic and social conditions of their citizens and protect their environment as well as participate and compete in the global trade arena. Standards avoid unnecessary re-learning and build on shared aggregated experience, reducing waste, failures, and corruption in the procurement process.

The IEEE-SA and HAC are in a position, with ITU and UN interest, to help increase countries’ awareness and involvement in the development, adoption, and use of global standards for social impact funding and measurement. The IEEE’s grass roots bottom up approach connects local and industry breakthroughs to develop national, regional and international standards which allow for in-country modifications.

The IEEE Standards benefit the public sector by facilitating the ability to keep up with current technologies, provide opportunities and economic incentives, facilitate trade and economic growth, and foster global interoperability. Currently there are 1,275 active standards with another 700 standards under development.

The IEEE framework combines four pillars:

1. It is an open process allowing for open membership and open participation across industries.
2. It is consensus-based with a balance of input and requirements and rooted in collaboration
3. eTools are available for remote participation which creates inclusivity and reduces travel costs
4. It is a global community and fosters participation from around the world

Operationally - we are ready to act:

Mei Lin Fung has been named liaison to the IEEE Standards Association for Humanitarian Technology and IEEE-SA Managing Director, Konstantinos Karachalios is already connected to the UN HLP DC IEEE members. Mei Lin Fung co-founded the People Centered Internet with Vint Cerf who is a member of the UN HLP DC. Four or five other IEEE members (& interested others) on the UN HLP Digital Cooperation might form a follow-on oversight council. Mei Lin is an early pioneer of CRM – Customer Relationship Management which is now the most valuable software category in the world. She studied at MIT under future Nobel Economics prize winners Franco Modigliani and Robert Merton. Mei Lin served as Socio-Technical lead for the US Federal Health Futures project from 2011-2013.

Kartik Kulkarni is Chairman of HAC and with Mei Lin and Komal Hanamasagar has created a demonstration of a repository of projects where we can co-develop social impact measures that globally work in diverse communities, urban and rural, and for funders and NGO's with very different priorities.

<http://www.impactnetwork.vision/>  
<http://www.impactnetwork.vision/paanilao/>  
<http://www.impactnetwork.vision/seekster/>

We propose to bring a diverse set of players together (we will be making a request for Rockefeller Foundation support) at their [Bellagio Center](#) on Lake Como to kick off the Social Return on Investment IEEE Industry Connections coalition in Summer 2019. (see [UN HLP DC 1/31/19 Submission on A Case for Standardization of Social Impact Measurement and Dollar Value Quantification](#)). Creating a framework for standardizing the quantification of Social Return on Investment (SROI) can mobilize global finance – public and private and hybrids of both) in support of projects that advance the SDGs.

The project repository would be a technology component of a global human network (see [UN HLP DC 1/31/19 Submission on Campfires@Digital Frontier](#)) that we need to establish for Digital Cooperation in support of achieving the SDG's by 2030. This global network is inspired by the ideas of Douglas Engelbart, inventor of the computer mouse whose SRI Lab developed the concept of [Networked Improvement Communities, later built upon by the US Federal Health Futures 2009-2015](#).

## Digital Literacy: The Importance of Education

### A Snapshot of the Salesforce Education Platform

By Phil Komarny, VP of Innovation at [Salesforce](#) and Renzo Taal, Senior Vice President APAC at [Salesforce](#)

One of the most important things when educating people is an understanding of transferable skills. Organizations in Singapore like SkillsFuture do this well. It's all about accessibility and lifelong learning.

So, what is required is, first, easy access. And this means outside of the classroom as well. Second, is cost. If the barriers to entry are really large, that creates a huge problem and divergence. The third is relevance. Are the skillsets that they are learning relevant for them? The fourth part is the lifelong ability to learn. It means upscaling and rescaling your skill sets.

Trailhead, the learning platform at Salesforce, has the opportunity to be used as the bridge to offer contextual education to people in the constructive partners which consists of over 200,000 businesses today. Digital transformation requires a catalyst, when mobile happened, it was 'bring your own device'. Now it's 'bring your own data' with the emergence of cryptographic protocols like the blockchain. Now there is a new way to trust this digital record without any arbiter or intermediary. In terms of education, the why factor was to start to understand the talent that we need, and we don't have and how we build that capacity into our world globally to be able to meet the needs of this knowledge economy that's right here with us today.

While Phil Komarny served as the Chief Digital Officer at the University of Texas System's Institute of Transformational Learning we started with a cybersecurity and nursing because those were the two most needed professions in Texas. The Texas Workforce Commission, which consists of around 85,000 businesses were enamored with this idea that said *if you can get a way to explain how we train cyber security professionals very granularly, we'll be able to build more programs and learning experiences to facilitate the needs in the market*. To do this we created a map of the knowledge domain of Cyber Security and took apart a 132-credit degree granting course at UT San Antonio, which at the time was the #1 cybersecurity program in the United States. This knowledge map, which consisted of over 5000 discreet outcomes, across seven domains, was aligned to the way the NSA and the US Army trains our

cyber security professionals. This knowledge map, coupled with the profile of a learner which catalogs all of the outcomes of a learner's experience across it, becomes a digital Rosetta stone. Translating the knowledge and skills garnered in a soldier's military service and translating them to nomenclature that aligns with the academic environment which they enter. Educational partners like ASU, Northeastern, Harvard and University of Washington are really interested in thinking and delivering programs this way.

We are wondering what would happen if every business had a contextual education that said *this is who we are, these are our people, this is what we're made out of*. How can we show them that we could deliver that learning inside of their environment using their own data sets? Instead of using Harvard case studies, we could use things happened within the organization last week. That's where all these schools that are very entrepreneurially focused are already seeing the ways that we can be disruptive moving forward. These institution leaders are not only thinking of this in the context of their own systems but in the context of the planet as a whole.

Right now, everyone is fighting over the same 18-year-old students and that is going to change by the year 2030. These things are all coming together, and I believe that Salesforce has the opportunity to change this for the world. Or at least help put a new model for solving this into the world.

This is a way to distribute opportunity digitally. we feel that digital reputation is going to be one of the biggest topics of 2019. We're talking about validating claims on one's identity and providing the ability for people to 'own' their records, but until we have this established at a personal level, it's not going to have the impact it could. The other industrial revolutions were capitalist heavy. You needed to buy a refinery and then you needed to buy a factory. The fourth industrial revolution is all about knowledge. That's where education comes in and is critical.

## A Snapshot of the SkillsFuture Model

By Michael Fung, Deputy Chief Executive (Industry), Chief Human Resource Officer, and Chief Data Officer at [SkillsFuture](#) Singapore

SkillsFuture is an agency under the Ministry of Education in Singapore. Our mission is to ensure that the workforce is adequately skilled for economic needs and to promote lifelong learning amongst the population. I'll be making comments from a policy-making perspective.

What we're witnessing is broad-based digitalization across industries, fueled by advances in computing power, network connectivity, and data storage. This is creating new opportunities in various industries, which in turn poses threats for companies and workers who are not keeping up with the times. We have been providing policy direction and support for continual upskilling and reskilling of the workforce here in Singapore for a number of decades. With the onslaught of technologies and digitalization, we're looking at other interventions that might be needed to ensure that the companies are able to stay competitive, not just locally, but on a global basis. And also, that working professionals are able to keep themselves upskilled and up-to-date with what's needed by the industry.

The area of digital supply chain is of relevance to many different industries, as businesses rely on supply chains for production and fulfilment of goods and services. The challenge is that we have a workforce that is highly skilled within the current paradigm and has a body of knowledge that is well established and

fairly stable. But, when we look at these technological disruptions, it requires a much more flexible and agile system that supports picking up of new skills, applying those skills, and ensuring that individuals are able to do their jobs.

We have launched a number of initiatives in Singapore to increase the relevance and responsiveness of our continuing education and training system. One such initiative is to map out Skills Frameworks across 33 industry sectors which represents 60-70% of the jobs market. We've identified the major job families within each sector and established 6 levels of jobs from entry-level to management and executive for each job family. For each job we charted the technical (hard) skills required as well as the generic (soft) skills that are required. We've also identified and mapped out the emerging skills that are needed in these jobs. It's a pretty systematic approach to trying to determine what skills will be relevant for each industry. We then work with private training providers and the institutes of higher learning to design, curate, and offer a range of courses that are targeted at the technical, generic, and emerging skills. In particular, we've launched the SkillsFuture Series, which is a set of bite-sized modular courses across eight emerging skills areas. It includes topics like robotics, artificial intelligence, cyber security, digital commerce, etc. Individuals can take a range of basic, intermediate, and advanced courses based on their needs, to be able to stay up to date with these emerging skills.

The level of digital literacy that is required across the population has risen. 10 to 20 years ago, if you knew how to turn on a computer, use word processor, work with spreadsheets, and create presentation slides, you would probably be considered digitally literate. But within the next 5 to 10 years, if you don't know how to work with data, how to protect yourself against cyber threats, and how to spot fake information, you would probably be considered insufficiently literate in digital skills. We've launched a couple of initiatives in this area to support the raising of digital literacy levels for the population at large. One of them is a national program called SkillsFuture for Digital Workplaces. This is a 2-day course that aims to foster broad based awareness and understanding of upcoming disruptions and emerging technologies, and to encourage a change-oriented mindset that is required as we navigate the much more uncertain advancements in the workplace. There are also programs that target other segments, in particular the older segment of the population, with the aim of equipping them with the basic skills that will allow them to be able to navigate their daily lives, such as how to use smartphones, how to make digital payments, how to surf the internet, and so on.

In my conversations with policy makers around the world, it's clear to me that this area of upskilling and reskilling and dealing with disruptions is a major policy concern for many countries. If we look at the systems in different countries, they have been developed over time based on the historical context, the needs of the economy, and the consensus of the society. I would describe the Singapore system as being largely government-led, although we've involved companies and individuals in the design process. This gives us some strengths in addressing development issues that cut across multiple domains and industrial sectors. Artificial intelligence is a good example of something that cuts across multiple industries. So, we're able to move relatively quickly on making sure that the supply is in place to meet the projected demand. It's a strength of the system. However, a weakness of the system is the dependence on the government to lead the way. The active role that the government has played has reduced the impetus for companies and individuals to take the lead in looking at what they need to keep sufficiently skilled to meet future challenges.

In contrast, in some other countries such as Germany and Switzerland, employers play a major role in the training of their employees, through established dual-track and apprenticeship systems. I see this as a strength from the perspective that such training would naturally be relevant and timely, to meet the needs of the enterprises and the industry. A system that enables companies and individuals to champion and own their skills upgrading agenda will likely be a much more responsive and agile system. Because that's where the disruptions are felt and that's where the competitive dynamics of the industry will keep companies on the lookout for what they need. We are working toward having companies and individuals take greater ownership in the skills agenda.

*Comment by Mei Lin Fung*

Singapore's government has made a large per capita investment in its people for re-skilling – with the Skills Future being a [SingDollar\\$1 billion commitment per year for 5 years for a population of 6 million](#). Collaborating internationally to map industry transformation will likely produce more robust results.

## WHO ARE WE?

Design for Change cultivates an I CAN Mindset in children, by offering them the tools to empower them to make their world a better place. TODAY

Design for Change helps adults realize that children are NOT helpless and that they ARE making the world a better place. TODAY

## WHY IS THE I CAN MINDSET IMPORTANT?

Because children do not need permission to make the world a better place. The I CAN MINDSET equips every child to be

**AWARE** of the world around them  
**ENABLED** with the skills to take action and  
**EMPOWERED** to design a more desirable and sustainable future- TODAY!

## HOW ARE WE DOING IT



Marc Benioff CEO of Salesforce said, “the Youth can lead us”. [Design for Change](#) is a global organization that enriches educational curriculum with Design Thinking, cultivating an “I Can” mindset for children from 3 years to 18 years old. We are conceiving of hackathons with the Design for Change schools which bring technology and business professionals to work with the children. The concept is being explored

for pioneering led by Renzo Taal, SVP Salesforce and Madhu Verma, CEO of Design for Change, an enrichment program recognized by the Singapore Ministry of Education.

At the end of 2019 is the invitation to the Vatican by Pope Francis for 4000 children of Design for Change programs around the world in an interfaith gathering. Salesforce, Google and Microsoft sponsored the first Vatican Hackathon in March 2018, so bringing the children and hackathons together at the Vatican is a natural in the view of Doreen Bogdan, ITU-Development Director, who is beginning discussions with Salesforce's Renzo Taal.



International collaboration in the skills development arena from childhood to lifelong learning, if structured so that breakthroughs are shared, will accelerate the discovery of those skills which best equip diverse people to connect to thrive.

## **No Man (or Woman) Left Behind: Ensuring Awareness and Global Accessibility Across Industries**

### **Manufacturing + Clothing Awareness**

By Lara Tang, Computational 3D Fashion Designer at Chimera, 21-year-old student at [Parsons School of Design](#)

We are just at the beginning of brands and consumers realizing the importance of transparency within the digital supply chains. More and more consumers are wanting to know where their products are made and who is making the products. The problem is that the information is not readily available and, oftentimes, even the seller doesn't know. There is not a tracking system in place and a lot of the deals are being made offline. Even if a company wanted to tell you where and how your clothes are being manufactured, more likely than not, they wouldn't know. There's virtually no communication happening between, say, a tier 5 supplier and a tier 1 supplier.

When we think about the kinds of materials we are buying, it needs to be easier to take other factors into account, things like water usage, pesticide usage, and energy use in addition to the human labor.

In the future, I think that manufacturing will change to become more made-to-order and faster, contained production systems. This will allow us to more easily change the materials and techniques that are being used to make the products. A way we can use the sentiment of having a public ledger<sup>1</sup> is by making all of the information about a product as visible as we can not only to the manufacturers and designers but also relaying that to the consumers and educating them on the processes it takes to deliver the final product.

My organization is working on a dynamic costing system that shows the impact of changing from one fabric to another. It will show the consumer what the differences are environmentally and financially so that they can make a more informed purchasing decision. It's tools like that are important and need to be developed.

Another example of an organization that is addressing these issues is [KnowTheChain](#). [KnowTheChain](#) is “a resource for companies and investors to understand and address forced labor risks within their global supply chains. Through benchmarking current corporate practices and providing practical resources that enable companies to operate more transparently and responsibly.”<sup>2</sup>

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<sup>1</sup> A record of information that is available for public scrutiny. There is an [example of a Public Ledger](#) created in the Agricultural industry intended for businesses rather than consumers. It lists the entities at the end of transactions for businesses who might be at the other end of the transaction to find them. The notion of a public ledger for a product that consumers purchase is that consumers can find all the entities that are involved in the production of the end product that they purchase.

<sup>2</sup> <https://knowthechain.org/>

## Public Health Awareness

By Dan Desmond, Health Architect at [The SIMI Group](#)

Public health is part of the healthcare ecosystem but it's really the orphan stepchild. People think of public health when things have already gone awry, when there's an outbreak or an epidemic or a disaster. Then, all of a sudden, mental health is important. That's not the traditional role of public health.

Public health is reliant on data. The data they were getting slow and of poor quality. It has forced public health to be in a situation where it's always retrospective. Always reactive, never proactive.

The big question, when it comes to digital supply chains is: What data do you actually need to make an informed decision and what can we do to help people become more self-enabled?

It's essentially the transition from healthcare to health, from services AFTER people fall ill, to maintaining good health as long as possible through life. When you're looking at big picture transformations in the digital world, if people are healthy and feel that they can understand and manage their own health, if they feel like they can do that, they are much more flexible and freer to take on challenges and opportunities and also have a happier life.

In order to do that and take advantage for the digital economy, we have an interesting flip of the mentoring situation. In the past you had the experienced people mentoring all the processes and teaching to the youth. Now, the youth are more informed on how to self-educate and self-serve through the digital realm than the people who need the access - the aging populations. Take Puerto Rico, for example, a country devastated by natural disaster. How do you help those economies become self-resilient and how do you empower the youth to understand the technology to apply it and also bring along the elderly people so that they don't fear the technology and fear the information?

The most critical solutions to these issues are:

1. Everyone must have broadband capability
2. Education is not going to school, it's 24/7 connectivity. Whenever you're connected, you're educating
3. It's not just about connectivity but the right connectivity. An example is people living in rural farming areas. 5G is great for cities but it doesn't work for people in rural communities. There aren't enough people and the signals would need to be too close together.

## Food System + Agriculture Awareness

By Faye Sahai, Partner, Mira Global and Kirk Bergstrom, President of [WorldLink](#)

When people understand the story of their food, where it comes from, what the production methods were, and what's really involved, they'll make better decisions and really understand their connection to that larger food system. It's an important role to play and it seems like there is beginning to be innovation in this space. We're really trying to look at the nutrition element and looking at food as a prescription. We're trying to ensure that everyone has access to fresh foods and also that our members are educated around the subject of food.

It's a more direct awareness of impact. Right now, it's not very transparent where our food is coming from. When that information is available, we become conscious buyers and conscious consumers. When we don't understand, in real-time, what the implications of our food choices are or the distance that our food has traveled to get to us, there is no connection. Context is very important for people and the bigger picture is important. To the degree of digital supply chain for the food system can reveal that. People are not used to having a big picture look at the production to table process. The digital supply chain has the opportunity to bridge this gap and create a more connected world. Storytelling is a very key part of this too, people need to be able to see themselves in the supply chain. It's much more immediate and personal. We all bring a set of values to our food choices and food habits. Everyone is on a food journey and that journey is very influenced by our culture and family and location and upbringing.

To have that level of transparency and understand specifically how your food choices impact your health would change the way society relates to food entirely. It requires a great deal of behavioral change. Behavior change is very complicated and very personal. We were working with a patient to try to motivate her to become healthy and, even though she knew that she should be eating healthy and sleeping enough, it really ended up coming down to her own motivations. For this patient, nothing mattered until we found out that she wanted the opportunity to see her granddaughter graduate. That was very personal for her. We need to design customized food plans that are culturally sensitive and mindful of the actual individual. Behavior modification is complicated and there is no one-size-fits-all solution.

Getting wide agreement for the standards and criteria for measuring things like life cycle, What we'd like to create is a more generative system so that the food supply chain is adding something of benefit to the environment and society. Right now, we're just trying to do 'less bad'. This is the current sustainability mindset. Keeping a big picture eye on the eventual goal of building a generative and sustaining food and agriculture supply system is going to yield the greatest change.

## Youth Integration + Social Impact Volunteerism

By Melissa Sassi, Program Manager of [IBM LinuxONE](#) Startup Program and Chair of the [IEEE Digital Skills Working Group](#)

We just crossed the 50% mark of people being online. When you also think about the other 50% that is offline, how do you ensure that people who access online platforms are making good use of the internet? In the US, for example, 25 million people lack access to the internet. Of that broader percentage, 19.4 million people in rural community's lack access to the internet and that's just in the US. So, once we get people connected, how do we make sure that they are set up for financial and economic inclusion?

To create an impact within the world digital skill building, I created my own nonprofit that I fund with my salary from IBM. It is called [MentorNations](#), and is youth-led and youth-run. It's important that our young people participate in leading and building this landscape and seeing technology from a creator and a maker's perspective, and not simple a consumer or a user. I also think that it's really important that we demystify what it means to code. Not everyone is going to be a software engineer, but people need to have a greater appreciation and understanding of computer science and what it means to code and not just see a mobile application and not understand how it is built and what it does.

### Social Impact Volunteerism

I got married in my early 20's and I'm in my early 40's now. My husband and I decided to split; however, we did not decide to physically split the children with one parent or the other. My children are victims of parental kidnapping. They're safe and healthy, but in order to be a mother I had to be a mother from afar. This meant that my kids had to have access to technology, be able to understand the technology in front of them, and actually use it in a meaningful way. This was a long journey because they've been abroad for more than 10 years in a place where most of their classmates and the broader community lack access to the internet, and computers, and more so the skills to make meaningful use of these tools.

This is what fueled my desire for social impact. I became a Social Impact Volunteer through [MovingWorlds](#). They coined the term 'experteering' which means you take a professional with expertise and have them volunteer their time in another country. I did four different stints and it brought me to this point of gaining experience so that I could change my job and changed my company...my entire outlook on life that brought my desire for social impact into the corporate world - one that combined digital inclusion with youth and a professional career of advocacy together.

I think the biggest issue right now is that when you ask 10 different people what their definition of 'digital literacy' and 'digital skills' is, you're going to get 10 different answers. There's no standard. When you think about literacy, you can track it. That doesn't exist for digital literacy, and it needs to be for the future. I am the co-chair of the Digital Skills Working Group that falls under IEEE's Internet Inclusion Initiative. One of the things we're working to do is align on a standard. IEEE is one of the largest technical professional organizations in the world with almost half a million members. They have written a lot of the technical (digital) standards. So, why not work with the IEEE and bring in organizations like the World Economic Forum to standardize on a series of definitions? We're in the process with the IEEE, the [World Economic Forum](#), and the [DQ Institute](#) to put together a digital skills framework. It's the most comprehensive framework I've ever seen. Aligning on a standard is going to be critical for us to achieve a truly connected world that solves the SDGs in a cohesive fashion.

## Resilience and Rural Reinvestment

By Michael Dimock, President, [Roots of Change](#)

As the this recent [news analysis](#) from The New York Times clarifies, the rural economy across the (US) nation has been in steady decline and is now in what some economists believe is an irreversible collapse. California is no exception. Our starkest poverty, with its numerous related detrimental impacts, is found in our rural and semi-rural counties. Now climate change and its resulting heat, fire, disease outbreaks and water shortages are exacerbating the degradation.

There is great danger in this situation. One result of the loss of hope is growing support for populism and nativism that is perilously alive in America's Trumpism, the UK's Brexit battle, Italy's Five Star Movement and numerous other nations. Less visible, but perhaps more threatening to civilization as we know it is the degradation of the natural and human capital upon which our cities and suburbs depend. Over 100 million dead trees are standing like matchsticks in the Sierra and tens of thousands of homes and businesses are sited in places that will burn in the years ahead. Land subsidence and the collapse of aquifers along with soil loss and fertility degradation threaten future harvests. The lack of safe drinking water along with diabetes and preventable disease, opioid, meth and alcohol addiction, increasing suicide rates, all linked to extreme poverty and loss of hope, indicate the precarious conditions of our rural communities. They are indicators of our lack of attention to California's key to sustained abundance, which is fundamentally based on climate, soil, water and broad ecological health.

Rural regions are the key to sustainable management of resources and to building resilience. The aforementioned New York Times news analysis quoted economists focused on the traditional industrial and technology sectors. Some believe rural regions cannot hope to compete and may be a lost cause. We believe those economists fail to appreciate the possibilities for job and wealth creation related to resource management, food production, public health initiatives and repair of damaged lands. There is abundant need and numerous applications of groundbreaking technologies, and thus high paying jobs, to be generated in an effort to revitalize our rural lands and communities. Now is the time to mount an initiative to reinvest in those places and spaces upon which our future actually depends.

### *The Rural Regions Reinvestment Act*

**Goals:** to strengthen California's resilience in the 21<sup>st</sup> century by enhancing wildfire fuel and natural resource management, launch of start-up and mid-scale food and fiber processing and efforts to improve public health through robust health care, nutrition and disease prevention programs.

Investment funds would be created from multiple source: General Obligation (GO) and Revenue Bonds (RB) as well existing funds from state and federal departments and programs related to health and human services, public health, resources and agriculture. Combined the Act would seek to develop a \$5-billion-dollar reinvestment fund.

New GO bonds and existing federal and state funding programs could be used to:

- Create high-speed internet hubs and support for last mile connections to rural neighborhoods.
- Provide grants to help communities write economic development plans that focus on sustainable resource management, disease prevention, healthy food production and agri- and eco-tourism.
- Fund infrastructure for workforce development programs that create a pipeline for high school students to be guided to med and ag tech careers.
- Enhance community college, med and ag tech programs to prepare students for use of emerging technologies in the sustainable management of resources, disease prevention or production and marketing of food and fiber.
- Provide technical assistance grants for feasibility studies, training and business coaching to new entrepreneurs.

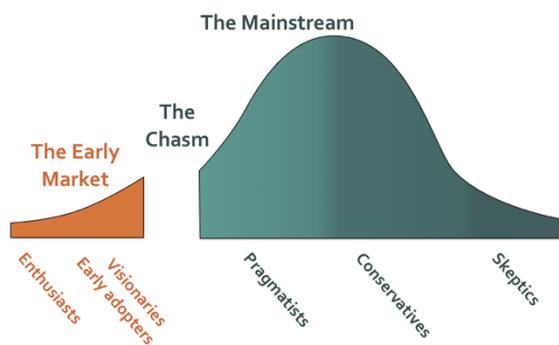
- Build or rejuvenate infrastructure that supports community cohesion and economic opportunity (e.g. covered farmers market sites, light food processing facilities, community centers with commercial kitchens and refrigeration/freezer capacity; school kitchens that develop joint powers agreements with nonprofits or businesses so they can share use of school kitchens, refrigeration and freezer spaces when schools are not operating.)
- Repair, expand or build community health clinics with emphasis on disease prevention, nutrition and mental health support.
- Support expansion of food pantries, farm gleaning, Veggie RX and nutrition incentive programs with light or technical infrastructure investments.
- Create regional labeling systems that support marketing of value-added products administered by county commissioners of agriculture.
- Provide transition grants and technical assistance to support farmers and ranchers seeking to enhance prices by becoming certified organic, biodynamic or antibiotic-free.
- Win increased amounts of USDA Rural Development funding by providing match funds to enhance competitiveness of grant applications.

Revenue bonds and existing federal rural economic development loans, could be used to:

- Offer “low and slow” interest revolving loan funds for start-up of sustainable resource management, rural community health and nutrition practices, agricultural operations and value-added food companies.
- County purchase of start-up food processing equipment to be leased to new, beginning and historically marginalized or under-resourced farmers.
- County purchase of small and mid-scale timber harvest and saw mill equipment for lease to start-up sustainable yield, custom milling operations.
- Provide low interest and long-term farm modernization loans to help farms and ranches protect water quality, reach urban markets (e.g. refrigerated trucks), on-farm processing or post-harvest handling and preservation systems.
- Build water treatments systems that support light food and fiber processing and small to mid-scale animal slaughter facilities.
- Build small and mid-scale animal slaughter facilities.
- Build commercial compost facilities and food waste reduction systems.
- Develop agritourism and eco-tourism facilities.
- Develop food hubs to support aggregation, processing, storage and shipping of food products in order to create or access existing farm to school, farm to institution and urban markets.
- Win increased amounts of US Department of Agriculture Rural Development and Community Development Financial Institutions loans by providing matching funds to enhance competitiveness of grant applications.

*Comment by Mei Lin Fung:*

Technology corporations have long known of process for gaining market acceptance for technology that disrupts<sup>3</sup> – first work with the “Early Market” visionaries and enthusiasts. The State of California is an early adopter candidate for re-engineering the Food-to-Health supply chain. The private and corporate wealth in the state can harness government incentives to try out new approaches and find the ones that work.



<sup>3</sup> Crossing the Chasm by Geoffrey Moore - <http://gosei.fi/blog/crossing-the-transformation-chasm/>

## Next Steps

There is a great deal of opportunity and possibility in the realm of the Digital Cooperation to re-engineer the global supply chain and integrate it into a streamlined Demand and Supply Chain. We propose the following actionable steps to bring the contents of this submission to reality:

1. Agree that a global standard needs to be created for digital skills, and join the IEEE, WEF, and DQ Institute in defining this standard
2. Ensure youth have a central position within all UN delegations and activities, finding initiatives like [Design for Change](#) so young people can contribute to shape a future they want to see.
3. Monitor the development of the Digital Reputation system for matching people with projects in ways that grow personal capability while increasing the success of the projects.
4. Encourage volunteerism of corporate employees around the world that involve social impact and achieving the SDGS (See [MovingWorlds](#) for a framework in which this could be facilitated)
5. Engage with the fashion industry innovating to provide sourcing information – work with leading educational institutions like Parsons School of Design, identify other groups working on this.
6. Monitor the Food-to-Health supply chain innovations by the US Department of Agriculture and technology startups. Engage UN agencies for Food and Health in the Food-to-Health movement.
7. Develop Campfires @ Digital Frontier which connect communities in networks to learn and improve together – see [Submission 1/31/19 Radhika Shah and Mei Lin Fung](#)
8. UN HLP DC join with IEEE to initiate an Industry Connections Coalition to lay the groundwork for a standardizing social impact measurement through bringing together key stakeholders – see [Submission 1/31/19 Kartik Kulkarni, Komal Hanamasagar, Mei Lin Fung](#)