



KPMG IMPACT Podcast

Social innovation in Taiwan with Minister Audrey Tang

Time: 26.28 minutes

Participants: Ruth Lawrence, Senior Executive, KPMG Impact, KPMG Australia and Audrey Tang, Digital Minister, Taiwan

Welcome to our KPMG IMPACT podcast.

I'm Ruth Lawrence, a senior executive with KPMG Impact, a global initiative designed to build a more sustainable and resilient future.

Before we begin our conversation today, I'd like to acknowledge that many of us listening to this, and meeting today, are actually on the land of our First Nations people. And I'd like to pay my respects to elders past, present, and emerging leaders, and recognize their continuing connection to land, waters, and culture.

KPMG Impact is highlighting the Sustainable Development Goals in our podcast, and today I have the great pleasure to speak to Minister Audrey Tang, Taiwan's Digital Minister. We're talking about social innovation in Taiwan, how we see innovation solving critical social problems, promoting economic growth, and offering new ways to address the UN Sustainable Development Goals.

Minister Tang, I've heard that you're enthusiastic about the Sustainable Development Goals. Where did that passion start?

Audrey Tang:

Well, it goes way back. When I was 6 years old, my mom co-founded, with a few other homemakers, the Homemakers' Union [Homemakers Union Consumers Co-op], which is one of Taiwan's earliest environmental protection foundations and they advocated for low carbon life, green consumption, green diet, green energy, and so on.

Around the turn of the century, we switched to a co-op lifestyle, where the Homemakers' Union Consumer Co-op did this, like, purchase to the agricultural land, that is, committed to the pollution free and low carbon way of farming, sometimes organic farming, and so on. And nowadays I cook also myself, and I make sure to use such material.

So, I mean sustainability, as far as I remember, it just runs in the family.

Ruth Lawrence:

Fantastic. So it sounds like it's been a very long journey and it's part of your DNA. What opportunities have you had to work on the Sustainable Development Goals in your current position?

Audrey Tang:

Yeah, so I often say that digital, which in Mandarin is a wordplay 'Shùzì de' also stands for plural. And plural means that we have many different values — societal values, environmental values, economic values. However, the digital technology enables these different values to make account to one another, so that we can see, actually we do share many common values around inclusion, innovation, and sustainability, of course.

So my main contribution, I guess, is to make sure that no matter if you're registered as a co-op or as a university with the Universities Social Responsibility programs, or a listed company with CSR or GRI reports and so on, all the different organization types use the same 169 as digital targets as a shared vocabulary to make accounts to one another.

And, so, on the Social Innovation database, which lists more than 500 organizations, I offer them my office hours where they can meet me every Wednesday for 40 minutes at a time for on-the-record conversation of how to collaborate with other sectors, friends, and also running the presidential hackathon, where the top five social innovation ideas gets a trophy from the president. That's a projector that projects the commitment from the president, saying: Whatever you did in the past 3 months will become presidential problems for the next 12 months as a national policy.

Ruth Lawrence:

There's a lot of information there. Can you tell us a bit more about the hackathon? How many have you had up till now?

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Audrey Tang:

Sure, yes we're on our fourth year now and each year, as I mentioned, five champions are selected. And the selection process itself, I think, is very interesting, which is only possible using digital technology, because each year we have more than 200 different ideas, each corresponding to one or more of concrete SDG [Sustainable Development Goals] goals. And then, because no jury panel is an expert in all 169 areas, we make sure we work with collective intelligence.

So, our national participation platform, the joint platform which lists more than 10 million visitors in a country of 23 million, each visitor get a 99 tokens. With this token they can vote for the SDG projects they're interested in. This is a new way of voting called quadratic voting. And this is a mechanism designed to make sure if you really like a project, you can vote more than 1 vote, but it's going to cost you more. So, with 2 votes that costs 4 tokens, 3 votes 9 tokens. So, with 99 tokens, one can vote for 9 votes, which is 81 tokens. But not 10, which would cost 100.

And then with 18 still left, people are motivated to look for some synergies with the project they just get voted, and maybe they do 4 votes, which is 16 tokens. And there's 2 tokens left and they're more motivated to look to another 2 SDG targets. And in this way we make sure we popularize the idea of synergies between the SDG targets. And people end up doing it maybe 7 and 7 and so on, so people on average vote for like 5 or 6 different goals, different targets with the 99 tokens that they have.

An the upshot is that when we select the top 20 for the incubation, everybody feel they have won, unlike the older voting methods where maybe 49% of people feel they have lost.

Ruth Lawrence:

It sounds like a very innovative voting scheme and one that we should be looking into! Can you tell us about some of the ideas that have actually come out of the hackathon and that have actually gone further? I have heard about an innovative weather platform, extreme weather event platform. Would you like to tell us about some of those?

Audrey Tang:

Certainly! So, the earliest hackathon idea[s] are now all policies that's been implemented for a while. For example, the Civil IoT Taiwan project, born out of the earlier hackathon ideas about the air pollution map and the water level map, and so on, is now a fully-fledged distributed ledger that's contributed by the civil society, for example, primary school teachers and student[s], that measures air and water quality as part of their environmental education program.

So, instead of teaching about media literacy or data literacy, with these ideas, we teach about media and data competence. Meaning that the young students they are producers and stewards of data, not just consumers of data. And with this, of course, the idea of data files, responsibility, data collisions, and so on become part of a very natural curriculum for people to contribute.

And using these systems, which enabled more accurate prediction of weather models of the, for example, water levels that causes evacuation needs, and then we send automated warnings, including earthquake warnings, and so on. That then powered, during the COVID [COVID-19 pandemic], the mask availability map, which is essentially also a distributed ledger. But instead of mapping the water or air pollutions, it maps whether some pharmacies still have masks in stock.

And, similarly, the Advanced Warning System, which runs on SMS, became the digital quarantine system which warns when people doing home quarantine left their home more than 50 meter radius. They and the local medical officer receive an automated SMS and so on.

So, I think it enable[s] us to fight the pandemic successfully without lockdowns, and fight an infodemic successfully that this information crisis with no takedowns, thanking to these public infrastructures, digital ones that has people's brought input. And people already understand the cyber security and privacy parameters of these [ideas]. We're not declaring [an] emergency state or inventing new data collection points during the pandemic.

Ruth Lawrence:

Wow, that's very interesting around the pandemic and that new software. What do you think was key for your population to actually embrace that software and use it and make it successful?

Audrey Tang:

Well, because they're related! And this is what we call a people-public-private partnership.

The people, the social sector, came up with these ideas in the first place and the public sector endorsed these ideas. Instead of beating them, we join them, right? So we embrace the best ideas that is worth spreading, worth amplifying, and the public sector supports without controlling, the data governance, for example. And because of this, the social sector could rest assured that this is not about surveillance capitalism. This is not about state surveillance, but rather this is what we call participatory self-surveillance, where people review the data for the public good only if they consent to it and also only if they understand [the] repercussions.

Ruth Lawrence:

Governments [are] not always keen to share data or decisions. Can you tell us a bit more about your radical transparency policy?

Audrey Tang:

Sure. So, this very conversation we're having, I'm doing it for recording. And we usually publish the recording as-is on the Creative Commons platforms, or make a transcript after co-editing by 10 days publish it as the public domain. And this has two effects:

The first, the people who come to me, to visit me, for a conversation or interview or lobbying, they always lobby

for the public good, for several generations down the line, because they understand it will look very bad for the upcoming generation if they lobby for something that's only good for the short term for themselves at the expense of other corners in the world. So, this is a way to make sure that the better parts of us are a part of those conversations.

And the second thing is that because people understand the 'why' of policy-making instead of just the 'what' of the resulting policies, so even if the resulting policies has mistakes, even if we did it incorrectly, and so on, the social sector has the context upon which to make better suggestions. Or in the parlance of open source development, to fork the government to take the government's plans and make a different direction, a different contribution.

So we had, for example, the opposition party's Member of Parliament doing the analysis on the mask availability and rationing, pointing out that we were too happy in the government to announce that the population center and the pharmacy distribution match almost exactly. And she said, MP said, "Actually, if you look at the rural places and correlate with the open street map, you will see that the time cost for the rural people to reach the nearby pharmacy, even though it's the same distance by helicopter, it's not the same. And by the time they reach the pharmacy, maybe the pharmacy has already closed", and so on.

So there's a bias in the data. There's a bias in the way that we analyze the data. And once this is pointed out, then our minister Chang simply said, "Legislator, teach us." And then her interpolation became the new distribution method, complete with pre-ordering 24 hour mass insulin and so on the very next day, literally within 24 hours. This would not be possible unless we publish whatever we have collected in real time.

Ruth Lawrence:

So, transparency pushing along for social good. I'm wondering about some of the partnerships that have been forged. So one of the SDGs specifically focuses on partnerships. And I'm wondering about some of the partnerships that have been forged in your work on COVID.

Audrey Tang:

Definitely, so when we talk about people-public-private partnership, we do rely on the private sector to scale out the solutions that's co-developed by the people and the government. So, for example when I mentioned the four convenience store chains in Taiwan, they have more than twice the number of stores compared to the professional pharmacies. So when they joined around March, they dramatically extended the reach for people to get PPEs. So that by the time they joined, I think we have almost half of people having access to medical-grade mask. But right after they joined, by early April, we have three-quarters of people.

And at that time, we reduced the basic reproduction value of the coronavirus. The R0 [basic reproductive number] to be under 1, and so that we've been largely COVID free ever after April. And so, without the scaling out of the distribution center, the logistics of the four convenience stores, without, for example, the Google CSR Group supporting the necessary computation powers for the initial prototype of the mask availability and so on, this would not be so quickly deployed to every corner in the Taiwanese society.

But when [the] private sector joins, we make sure that they respect the same cyber security and privacy boundaries set by the previous social sector prototypes.

Ruth Lawrence:

I know in some of your work, that, around developing social innovation, one of the first platforms was to look at values and to get values more immersed in the culture to develop social innovation. I'm wondering if you could tell us about how some of that work has led to the success of these partnerships today.

Audrey Tang:

Certainly. So, when we're looking at the common values in emerging technologies, we see a lot of potential for, for example, labeling one another. Like when, in 2015, Uber X first came to Taiwan, they said, "This would enable more efficient routing of public transportation options and so would reduce, for example, the wasteful taxi idling by" and things like that. On the other hand, there's people who said, "This is not really sharing economy. This is more like a gig economy. This will destroy the social solidarity formed by workers' unions and taxi associations and so on." And of course they all have pretty good points.

However, if we look at the core values that everyone supports, it's very apparent that everyone want a more fair meter, everyone wants proper insurance registration, not undercutting existing meters, and so on. But this is not a rough consensus readily understood by people in the more antisocial corner of social media, such as Facebook. The controversial points get far more attention in calories and clicks than the more nuanced ideas that I just outlined. So, we need to build a pro-social social media instead of the more antisocial corners of social media.

So we work with this Seattle startup, a social enterprise, now a non-profit called 'Polis', and we deployed that and showed people that if you remove the reply button but encourage people to resonate, or not, each other's feelings. Instead of jumping straight to the decisions, we just share how you feel about the Uber X situation, and after three weeks of voting just on the feelings and visualizing the common feelings, people discover that actually most of the people agree with most of their neighbors on most of the points, most of the time!

They agree to disagree on a few ideological points, like platform economy versus gig economy. But by and large we do have shared values. This is when we realized that if we build a platform that highlights the common values and rewards a more nuanced idea of inclusion and diversity, as represented by the user interface, instead of just rewarding the click-bait-like short-term attention span engagement, then we actually have a pretty good public infrastructure also on the digital rim. The Internet doesn't have to be bad for discussions; and that led to better co-creation of common values.

Ruth Lawrence:

Thank you. You've mentioned several social enterprises in our discussion already. How have social enterprises fared during the pandemic?

Audrey Tang:

They are very very important because they have, on the one side, the trust of the social sector and then the link to the private economic sector. So, they can both crowd source the best ideas and then turn those ideas to production. I think, one of the most exciting things during COVID-19 is that people are more aware that digital social innovations are also pretty good business. These infrastructure that I just mentioned about tracking PPEs, about making sure that people get the physical distancing and vaccination information correctly, and so on, are widely applicable in other domains as well.

This bot that automatically clarifies this information about PPEs could also be used to clarify other scams and disinformation as well. So we get a lot of leading companies, such as Trend Micro, the leading antivirus company, investing heavily into a new tool that just clarifies the online scams in this relation and so on.

The so-called 'MythBuster' and 'Whoscall', a leading company for online scams and detection, also developed another bot that will, when you invite it into a group chat, automatically compare incoming pictures and so on, like a virus scanner, and then show you like very fun, meme dogs and cat pictures and so on, that will have this 'humor-over-rumor' effect. So that way you laugh about it, you vent this idea of outrage and then you wouldn't share this information and wouldn't increase its basic reproduction value, but would instead share this very cute dogs message about, for example, where must you protect yourself against your own unwashed hands and so on. So, people see generally that anything that fulfills the public good and catches the public attention [or] imagination is also good business.

Ruth Lawrence:

It's taken a few years to come to this level of maturity in terms of alignment of values, in terms of the social enterprises, in terms of the ecosystem, and the development there and the maturity to serve the public good. I'm wondering if you've reflected on what have been some of the key elements that have led to this success and maturation?.

Audrey Tang:

I think just like the cute spokes dog is essential to our counter coronavirus communication campaign, the cute icons, the 17 SDGs, as well as the icons for the specific targets and very pretty colors. The 17 colors actually play a really large part, because they're quite neutral. They don't speak like it is a preference to the non-for-profits, that there's a preference for the large industries, there a preference for the state intervention.

These 17 icons show people are living happily together. People in wheelchairs, people who are young, people who have blindness or other disabilities and so on, they all look, actually quite comfortable around each other in the SDG portrayal. So, I think this iconography, more than anything, made sure that people see that we may have very different positions, just like these colors, they're so contrasting with one another; but we can also form a circle, form a ring of sorts, and then share this common space, these common values, and that let us innovate and make things better.

So reflecting on this past 5 years, I think definitely without the SDGs and this related vocabulary and iconography, it wouldn't be that easy to join up the previously very distributed sectors, and some at-odds sectors together toward a common ways.

Ruth Lawrence:

So fantastic. The actual icons playing a big part there in terms of working together and actually symbolizing where we're heading towards. I'm wondering about the Social Innovation Lab at the moment. What are the top conversations that are taking place?

Audrey Tang:

The Social Innovation Lab, which is literally my office. As I mentioned, I'm there every Wednesday and anyone who is a registered social innovator can claim 40 minutes of my time and have conversations. And I think partly because, I think of the presidential hackathons, people nowadays care much more about how to make a good business case out of a social mobilization toward a shared environmental goal.

Previously, we would have ideas that maybe just join 2 of the 17 goals together. But nowadays, I get the pitch that joins at least 3, sometimes 5 or 6 different goals together. For example, in the last year's presidential hackathon, there is this team called Circle Plus, which has already converted the Social Innovation Lab to one of their check-in points. It's like the Pokémon GO game, which you download on your phone and it shows you where are the nearby water refilling stations that you can take your bottles to check in, and then not only comment on how warm or cold or tasty the water is, and have a real conversation about [collecting] gold coins and things like that.

And then leads you to nearby walks that makes the community values, the history, and so on, apparent, just like the Pokémon GO makes the environmental characteristics apparent with the selection of pocket monsters. And then once you collect throughout those walks, then you also get automated notifications when the temperature is getting hot, like almost 40 degrees in summer around here in the recent years to remind you to drink more of this water you just collected, so that you don't suffer from heat damage.

And then, after you collect those coins, you can also spend these on the social enterprises', products, and services, and so on. And after you form a habit of checking in like 50 days in a row, then it also reviews exactly how many plastic bottles you have just saved and how much impact it has on the environment as a whole.

And so all in all just by describing their play style, this is maybe six SDGs already. So, this is what I think is very interesting is that people are thinking about partnerships with very unlikely stakeholders nowadays, and this really cheers me up.

Ruth Lawrence:

What a wonderful example with that complete interconnectedness between the SDGs. That's a wonderful example. And just finishing up now, what's on your agenda for this year? What's your big area of focus?

Audrey Tang:

This year we're going to announce to the world the National Action Plan, an open government for the administration side and open Parliament on the legislature side. And with this, we're taking the kind of cross-sectoral partnership, the social innovation-based approach, and applying it not only in the administration's work, which is what the social innovation life is about, but also in other branches in the government.

So, for example, the legislature is now thinking about ways to make sure that people can participate in the lawmaking process, not just in the rulemaking process, using the same, almost gamified way that they can understand more, as part of their, for example, Capstone projects in their high schools or in their universities.

And there's also a commitment, as part of our referendum process, our Central Election Committee just announced that this year, not only they will introduce an electronic countersignature system to augment the paper based one, but they will also double down on the deliberation process that makes sure that people share the common values despite they bringing up the pro and con referendum topics. So we can all agree on the common values before going into the referendum station to make choices this way or another, and so on.

And so I think, I'm really heartened that these ideas of common values out of different positions, an innovation based on the common values, is now taken up to other parts of the democratic process, instead of just limiting our conversations about voting, which is essentially just three bits per person every 4 years. We're now increasing the bit rates of democracy and turning democracy into a type of technology, a social technology, come to think about it. It's also social innovation.

Ruth Lawrence:

Thank you so much for your time today, Minister Tang. It's been a complete pleasure, absolute pleasure, to hear about what's happening in Taiwan, and some of those leading practices around government innovation, social innovation, and the SDGs.

Audrey Tang:

Thank you. Really good questions. I really enjoyed this conversation. Live long and prosper.

Ruth Lawrence:

Thank you so much.

My guest today has been Minister Audrey Tang, Digital Minister of Taiwan. Thank you all for listening and I hope this has given you some inspiration and a fresh outlook on how we can innovate to collaborate and work together.