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Richard Kohl, Center for Large-Scale Social Change
Good morning everyone. Thank you so much for coming here in person today for this event. My name is Julie McCarty and I'm a knowledge management specialist here in the Bureau for Food Security. I have been tasked with getting this great seminar set up as a webinar and so I just wanted to let you all know that we have at least 40 people joining online, USAID staff and implementing partners from around the world. And so that's what the microphones are for. It doesn't feed into the room, per se, but this is so that all of our online colleagues can join us. And so when we get to the Q&A portion I ask that you please just use the microphone that we pass around so that they can hear your questions. That's pretty much the basics.

To those of you online thank you so much for joining. We are recording this session so if you've like to review it at a later date or pass it on to your colleagues you can do so. And if you're joining online also please us know who you are in the chat box and we'll be engaging with you there.

I'll go ahead and pass this on to Julie Howard who will be getting us kicked off.

Thanks, Julie. And thanks to Julie and team for getting this special webinar set up in this room. We don't usually have webinars out of this conference room; it's usually downstairs so it's been a lot of extra effort on their part. So thanks to that team.

My name's Julie Howard, I'm the chief scientist in the Bureau of Food Security. And it's great to welcome you all here, both you here in the room and you here online to a special seminar on scaling up agricultural technologies and results. So I just want to give you a couple minutes of background before introducing our speakers for today.

Many of you know a little over a year ago Administrator Shah gave a speech to the CGIR directors and board chairs at the International Food Policy Research Institute here in Washington. During the speech he focused on the low rate of agricultural technology adoption in sub-Saharan Africa and many other countries where he works, at very low rates of adoption of improved seeds and fertilizer.
He challenged us, he challenged the CT system, he challenged all our implementing partners to look at how we can change the way we're doing business so that we can pretty dramatically scale up the impacts of available agricultural technologies and innovations so that we can improve the lives of farmers in communities where we're working.

So over the past year we have been working very, very hard with our missions to actually think through and work through how would we go about changing the way we do business in this fundamental way to have pretty dramatically-scaled impacts. And fortunately we haven't been alone in this quest and we've been lucky enough to work with two of the thought leaders in this field: Richard Kohl and Johannes Linn, who are going to be speaking with us today.

They are two of the leading researchers and practitioners in this new and evolving rapidly evolving field of scaling, not only scaling agricultural technologies but scaling the impact across all sectors. So we're delighted that they're here to speak with us today. Let me give you a little bit of background on them before turning over.

Johannes Lind is going to kick off with a few introductory remarks. He is a senior fellow in the Global Economy and Development Program at Brookings. Before then he was a vice president, several divisions of the World Bank. He was the first -- the founding director of the Wolfensohn Center at Brookings. And in that position began, developed, implemented one of the first research programs on scaling, working with the World Bank, working with IFAD, the International Fund for Agricultural Development and other partners. So he will talk to us first about how our scaling efforts sort of fit in the global context -- who else is thinking and working on scaling?

And then we will turn over to Richard Kohl, who is the founder and principal of the Center for Large-scale Social Change based in San Francisco. He has been working on strategic thinking, process and systems analysis and thought partnership and training to support scaling up of high impact innovations in agriculture and many other sectors.
So we are going to have Richard and Johannes speak to us for about the next 35 to 40 minutes. We're going to open up for questions at that time, both online and here, open up for questions at about 9:45. At 10 o'clock, as you all know, the administrator will have his town hall from 10:00 to 11:00, so many people -- we'll break at 10:00 to allow who need to go to that to leave and we will continue our discussion online here from 10:00 to 10:30 and for those of you who many remain in the room who want to continue with questions for Richard and Johannes. So Johannes over to you.

*Johannes Lind:* I think I'm wired up -- am I okay? [Inaudible]. Thank you for ______ to talk to you. 
______________.

[Off mic conversation]

All right, we'll start again. I'm Johannes Lind and good morning, good afternoon, good evening, midnight. Great pleasure to be with you today. I must say the fact that USAID is picking up under the leadership of the administrator and Julie in this context, particularly pushing forward the agenda with her team is fantastic news for us, who have been working for a bit, a few years actually on the scaling up agenda.

Brookings, as Julie mentioned, has had a program for the last six to seven years looking at scaling up in development, especially among the development systems institutions. We've been working with others like Richard, who has been part of our teams at times but has his own program. And there are others out there who worked on this topic. But in general so far they've been, in terms of series analysis and engagement ____ few, but was seen, as I will mention, quite a actually wave of interest in this topic. And with this I'm sure there'll also be more analytical work and support capacity will be built.

Now what we found in our work is that the real challenge isn't that there's no scaling up, in fact all of you, probably in your own programs, or as you look around the last few decades of development can point out from very wonderful examples of a successful scaling up. Think about the green revolution, think about the less plateau program in China. Think about the Green Carmine Bank or many others.
What we feel and what we've learned is the real problem is that scaling up is not being done and pursued systematically by the institutions who develop and implement and support development programs. Instead what you find the prevailing factors is actually ______ short-term interventions, one-off interventions, pilots -- which I would like to often refer as pilots to nowhere because in fact nothing happens after you finish with your pilot; there's no real serious evaluations, no serious building on the experience and then replicating and scaling up.

If there were more scaling up, and especially more systematic scaling up we believe that in fact the development impact of action on the ground, of aids, supported programs and so on, could be much more significant than it has been. It's always interesting to observe that somewhere around 75 percent of all aid-assisted projects and programs are rated satisfactory during evaluations. But then if you look in the natural analysis of the impact of aid you find the impact tends to be quite negligible.

So the question is where is the disconnect? I think the disconnect is because too many of our interventions are one-off, are short-term pilots to nowhere, and the challenge we all have is to now systematically over time figure out a way to move from successful pilots, successful interventions to replicate and scale up.

The good news is that actually I think we've learned quite a lot about what successful scaling up means. We have a central framework of analysis looking back and of supporting analysis looking forward that can help in programming, and there's now -- and that's the second point ______ good news: there's much more greater recognition in the development community that scaling up is mission critical as actually IFAD put it. Scaling up is mission critical.

We've been working with various institutions now -- and I'll quickly summarize because I think it's indicative of the fact that you guys aren't alone in grappling with this challenge of scaling up. With IFAD our work's been most intensive; we've now worked with them for four or five years, trying to systematically integrate scaling up into their institutional DNA if you wish. I think some progress is being made.
We've worked with IFAD, with the World Bank, with Heifer International and with IFAD on scaling up on agriculture. And of course we're working with you guys now. We've worked with UNDP and African Development Bank on integrating scaling up into the ______ program and strategies. We've worked with USAID and GIZ in developing guidelines for the staff to how actually do the scaling up in their operations. We worked with USAID, not _____ but another group on scaling up _____ programs with __________ -- with USAID and African Development Bank we worked on scaling up in fragile states which is, by the way, a topic which I think is very important indeed because in fragile states it may be more difficult scaled up but it's just as essential if not even more so.

We've worked with JICO on the interface between public/private sector, in scaling up, on incentives for scaling up and south-south cooperation for scale of impact.

In short I only mention this because it shows you, I hope, that there's actually a lot of interest in this agenda, and as you look around now on the ground I think you'll find increasingly partners will be working with you on the scaling up agenda. Now Richard will talk a lot more about the whys and the hows and the whats that are involved in the scaling up, what we've learned.

In conclusion I just want to say that I'm delighted you're all thinking about this issue and addressing it. I'm hoping that it'll become mission critical for USAID also, the scaling up agenda, not just in agriculture but actually I would hope across the board and not just as a one-off sort of short-term interest of this particular administration and this particular administrator but actually a long-term agenda that USAID takes on board because I think only then will it make a real difference. Thank you.

Richard Kohl: Hello. I'm thrilled to be here. I've been working on scaling up for about ten years, first with [audio break] Systems International that some of you are familiar with, and then out on my own. And we can talk more about that later.

I just want to make it clear those that we're talking about we're talking about the scaling up. I think there's a tendency -- the World Bank ______ to actually organize a major conference in 2005 in Shanghai and there's a two-volume set if
you have trouble sleeping at night -- take a look at that. They're each about 500 pages. I read the whole thing and I tried to think about what is in common of all these studies? The only thing I could come up with is a definition of scaling up that would encompass everything that was in those two volumes was scaling up means doing more.

I'd like to refine that a little bit more -- no pun intended -- because that's not what we're talking about here. There's a tendency also to seek a scaling up of ____ quantitative: "Now we're reaching 2,000 farmers; in three years we're going to be reaching 4,000. Now we're reaching 50,000 hectares are covered with this rice variety; double that, triple that --" some quantitative _______.

And certainly what I would globally put those things under, whether it's hectares, farmers, demographic groups, locations, however you want to slice it, that I'll call reach is a key element of scaling. It's necessary but it's far from sufficient.

I want to make it clear that at least for the rest of this morning, and for those of you I'm going to be working with the next few days, scaling also includes scaling impact. There is a marked tendency, as we go to scale, for impact of decline. And there's a close relationship between ______ the jargon fidelity, which is that especially now -- and I also welcome this -- that there have been a dramatic increase in the rigor or monitoring and evaluation, even to the point of using RCTs in some of our programs; we now have a pretty good sense of what we did that caused these outcomes but when we go to scale there's a tendency to be output driven, the 4,0000 people, as opposed to saying, "Are we actually replicating the program, the model, the intervention, the innovation, whatever you want to call it in the same way we did it at small scale?"

There's a tension with that because often if we are moving to new locations, or in this particular context different agro ecological zones, different demographic groups for example from highland upland farmers from lowland farmers or whatever these social contexts or institutional contexts may change and we may have to somewhat adapt the program to work effectively in those areas.

So one of the key tradeoffs in scaling up is between fidelity to what we know works at small scale and adaptation to what works at large scale.
The third part of scaling up in addition to reach and impact is equity or coverage. There's a tendency to use existing pathways -- what do I mean by pathways? For example the government agricultural extension system, NGOs that are providing technical assistance, the private sector value chain that provides inputs or outputs, upstream or downstream from farmers. Those are all pathways.

What we heard -- for those of you that are aware there was a glee for this Feed the Future scaling up in both Bangkok and Addis and it was quite remarkable to me that one of the women who presented who runs a seed company in India says the potential market for her seed is 46 million people. But it's too expensive for her to deliver to 26 million of those because they're too small, they have too low of an income to buy her seed and they're too far away. It would take someone a half a day or a day to go to the little tiny village by bicycle or motorcycle.

The point of that anecdote is that if we use existing pathways what tends to happen is we reproduce the inequities that already exist in service delivery. In other words right now people who have money or purchasing power tend to get their goods and services and people who don't don't. But I think we're in the development business and the end of poverty alleviation business, so in a sense one of the key challenges is how do we scale up when the existing pathways we have tend to be biased to replicating the inequities in access that already exist?

I've already outlined there's a tradeoff between fidelity and adaptation and between scale and impact and the last one is cost. We don't have infinite resources. Whether the ultimate scale that we're talking about will be financed by the private sector in the sense that farmers will pay for goods and services or by public sector funding or some combination of social enterprises, etc., etc. We do have some sort of challenge of unit cost. Can farmers afford these seeds? Can this fit within the ag extension budget? Whatever the budget constraint is -- and obviously in terms of impact and scale, especially reaching the poorest of the poor who are often remote there's a tradeoff between cost.

I guess since I know not everybody is an American but since many people have been exposed to American culture I like to call this the Apollo 13 problem. For those of you who haven't seen the movie they get 99 million miles to the moon, they're almost there, they life support system breaks and they have to fix it within 36 hours, which is before they can get back to the Earth.
They put a bunch of engineers in a room and they say, "This is what they've got on board; you have 36 hours to come up with a fix." This is not best practice; this is optimizing within the given constraints. So in scaling up we have a number of constraints. We have this is the model and the impact we want to have, this is the scale we want to reach, these are the existing pathways, organizational capacity in particular, to deliver to the population we want to reach, and last but not least there are financial constraints and human resource constraints.

Often the existing capabilities of those pathways and organizations at scale do not match what the model or the innovation required at small-scale. It's one thing to have a contract or an RFP for a COP and an implementer which you know, they're budgeted for three, four years or a few million dollars; what they can do is not necessarily the same as what a large-scale system can do. And similarly the financial resources may not be similar. So how do we achieve scale with impact, within the constraints that we have? That's the challenge that we all face.

Just one last word on that: some of you may have heard of this mythical place in American culture called Lake Wobegon, okay? So at scale one of the things I love and hate about USAID programs is that you hire the best people to run and they do a fantastic job. The problem is I'm never sure whether we're testing the efficacy of a model or the efficacy of a really good COP and five team members who are great problem solvers. What I think we may be testing is that if you get a team like that and you give them $5 or $10 million for five years they will produce results no matter what happens. Those people are above average.

The only place where you can work at scale, where everybody is above average is Lake Wobegon, where all the children are above average. But at scale by definition when you go from five or ten or fifty people implementing to thousands of people implementing, for Statistics 101 is that we are working at average, right? Those are the people. So can it be implemented by the existing system maybe with some capacity and capability-building. But experience shows that the larger the gap between what you need to do to strengthen that system to deliver at scale the more time and effort and resources it takes.

So some of the IFAD programs Johannes referred to especially in Africa have in fact built those systems but they've often occurred over two or three project life cycles, over a 10 or 15-year period. And so especially in this case where we're often talking about at least trying to get the critical mass I think is the jargon
we're using for scaling in often a one or two or three year period to some extent the amount of system building we can do in that period is very limited.

The last point I'd like you to take away -- I'm trying to give the big picture when we'll get in as many details as we'll have time for -- is that in my opinion there are basically three issues that come up as the major challenges in scaling. First is incentives for motivation. I'm using that word in the broadest sense of the word. You can use -- what do you call it, politics -- if you work in the public sector we can call it politics, both policy makers political parties but also internal bureaucratic politics. Who is going to do this? What's the political interest of the various stakeholders and why would they get on board? If we're working with a value chain what's the business case for the private sector to get involved? Are they going to make money? Is this their target market? What's the risk? They're making those evaluations. Farmers: why should they buy into this model? If we don't align incentives in all those sectors, public, private, the beneficiaries or participants themselves -- and in my opinion the interface in particular between often frontline service delivery, people providing agricultural machinery services, people selling seeds, people providing agricultural extension and the farmers themselves and probably the wholesalers who are buying from the farmers or retailers, that nexus in particular, if all those people don't see it in their interest to do, quote-unquote, the right thing, then this doesn't work. And that's where often breakdowns occur.

Particularly one of the big challenges we have working in anti-poverty and agriculture is we can see as experts objective need but that doesn't necessarily translate into felt need or actual demand by farmers or others. So often it's not just a question of supplying services or seeds or technology, etc. but it's actually generating demand. And spreading demand, not just for the critical mass but how do we go beyond that?

The second one I've already alluded to is implementation capacity at scale. We all know that government systems are weak; I often alluded to the fact that often private sector systems don't have an incentive to deal with the poor, despite the trendiness of the portion at the bottom of the pyramid. As we know how from microfinance the portion at the bottom of the pyramid only goes down to about $5 a day, or if we're lucky $4 or $3 but not $2 or $1, which is I think the real target population.
And last but not least the fiscal constraint: how do we do all of this in a way that's affordable?

So one of the things I really want to emphasize and I think you've already picked up on it is that Julie referred to doing a new kind of business, and I think one of the challenges if we're scaling is that it's very difficult to do scaling within the programmatic model. I've worked with USAID programs and other donor programs in the past on scaling; often scaling doesn't even get thought of until year three, four, five or even the last six months. In other fields global health they often talk about research into practice, so we've done something two, three, four years; now in the last six months we're going to put up a nice 5, 10, 20 pages glossy with the picture of the smiling kids and the farmers and the wheat and then we're going to hold a two-day seminar and then everybody's going to come and everybody says wow, this is great and we're going to integrate this into our strategy and six months later it's in the national agricultural strategy or health strategy or education strategy and we declare victory and go home.

Research into practice in my opinion as Johannes alluded to also stands for Rest in Peace, which is this program has now died and we've buried it, we did a nice burial and it's in the national strategy but when you come back five years later there is nothing there. So in addition to reach, impact and equity the fourth dimension of -- yes, scaling up takes us into the fourth dimension for those who like that, is sustainability, which is what happened, two, three, five, ten years ago after we're there.

For me sustainability has three different aspects. First is political. Again, I'm sure this never happens at USAID or the U.S. government -- I'm American by the way -- but in other countries when administrations change, when secretaries change, when ministers change their political incentive is to do something completely different. One of the challenges in scaling up is the easiest way to scale up usually, whether it's public sector or private sector pathway is to find one or more champions who have power, influence, decision makers, access to resource.

The problem with that is when those champions disappear what happens next, especially if the next champion or the next person that slot actually wants to do something different? How do we build long-term political sustainability?
Secondly is what I call organizational sustainability or capacity. Often if the rest in peace program isn't done a better version of the rest in peace program is we've piloted this in -- pick your poison -- three districts, three blocks, 5,000 people, this _____ population, we will help actor X, maybe it's the public sector, scale it up. So we're going to provide training for let's say 5,000, 10,000 ag extension workers or whoever the delivery system is. In many countries turnover is dramatic, of who these people are.

What'll happen is two three five years later -- you pick the number 10, 20, 30 [audio break] -- as I was saying several years later there'll be substantial turnover in human resources and if we haven't built training capacity then actually those people will not have access to this program. And that's doubly important and I want to throw this out as a challenge is my question to all of us is we're scaling up at least in this particular forum agricultural technologies. But are we scaling up a particular technology, a version of rice, a version of access to certain types of pumping technologies or irrigation technologies, deep fertilizer placement, or are we scaling up the ability to adapt and adopt innovative technologies? What if there's a new version of rice in three year? Can the supply chain, the seed producers, etc., etc. bring that to their country, adapt it to local conditions and sell it to the farmer? Or are we going to come back in 20 years and yes, it went to scale but they're still using the same seed variety that they were using 20 years ago and we have to run another project every ten years every time there's a technological innovation because the system itself is not capable of implementing that. That's two dimensions of organizational sustainability is the ability to learn and change, either updating curriculum, adapting and constantly innovating adapting new technologies or developing new human resources, etc., etc. And the last is financial sustainability which is of course the issue of when the donor money goes away whether it's USAID or others what happens and I think you're all familiar with that one.

One of the other issues I want to highlight on is not only is it different from programs because we need to think about -- I mean projects are more programmatic approach -- are we building systems which might take over one, two, three project cycles but there's a difference in project management for normal project management through scaling up.

Scaling up is almost always non-linear and iterative. One of the things I've emphasized is the ability to make political and organizational roadblocks in the scaling up and the fact that you need to address that. One of the things I would hope you would take away from this talk is that it's actually helpful to think about
scaling from the beginning and start with the end in mind, which is something I'm borrowing from a close colleague, a woman named Ruth Simmons who's done a lot of work from scaling and global health and has co-authored a framework on scaling up which has been published by the WHO. I can give you that reference, it's also in the slides at the end of the slide.

The point about starting with the end in mind is that we want to think about which pathway are we going to scale up through from the beginning so that we can test in that pathway and also we can start to mobilize those stakeholders to buy in, have ownership and support this early in the process. It's another thing -- that's the rest in peace problem is we've gone off and done this by ourselves for five years, or as I like to say no, we got permission and we talked to all the stakeholders in year one and they signed off. And then we do our own thing and we come back and say, "Look what we did for the last four years."

We don't want them to sign off; we want them to sign on. We want them involved in the process so that in year three four five it's their program, it's not our program. Often we need to consider the Apollo 13 problem which is iterating on this may be an effective program but is it politically supported and is it aligned with political incentives, political priorities, policy priorities, whoever the relevant stakeholder is and how do we adapt that over time?

Secondly there tend to be winners and losers in scaling up which is not usually the case at small-scale projects. What do I mean by that? You innovate a new seed variety; well who is supplying the old seed variety? Do those people lose money? You bring in new technology of new pumps, new irrigation systems, etc., etc. Who has the vested interest in the existing technology? My background by the way is in economic history and development there's a long history in many countries of technology not being adopted because the efficiency gains are offset or too widely dispersed while the losers from the change in asset values are able to politically block what happens. We had to think in advance who are the potential losers.

I'll give you an example. I've worked a lot as Julie alluded to not just in agriculture but health. I've seen a lot of innovations; the big thing these days I think in many developing sectors is using community health workers or what I call cash shifting which is if we haven't got an agricultural extension worker who's professional trained, has a master's in agronomy and blah blah blah, we
teach a local villager, a local farmer to delivery because that gives us better human resources and access.

Well how are the existing agricultural extension workers going to handle that? Are they thrilled that somebody with a tenth grade education is taking their job? Do they see that as a supplement to them or as a threat? Particularly in health with the use of community health workers local doctors and nurses do perceive it as a threat which is often ironic because they refuse to work in the poorer areas where the services are needed but the fact that somebody with a tenth grade education is giving injections and maybe even setting bones in a poor village means that that's taking away from the prestige and power of doctors and I'm speaking from experience where I've actually seen medical associations block the scaling up of very powerful and important interventions in India and other because they perceived it as a threat to their vested interest.

The question also is whose job is scaling up? Is it USAID's? Is it the government's? Is it the farmer's association? And often there's a tendency for nobody to be in charge precisely because scaling up is almost always a multi-stakeholder process. There's the vertical from the national to the state to the district to the county to the village whatever the administrative ______ there's often horizontal, right? We're getting the public sector involve, private sector, other donors, farmer's associations, okay? Whose job is that to get all those people aligned? It's a little different than a project mentality.

The other challenge of whose job -- and this is a really interesting challenge I find is often -- I've alluded to this before -- you have to adapt the model is it goes to scale. Who makes that call? Is it USAID? Is it the people who invented the technology at the research institution or some university in the United States or in country? Is it the farmers themselves? Is it the private sector if they adopt it? Remember, we're trying to get fidelity. Are they adopting it because they're dumbing down or are they adopting it because actually that's what makes it more effective? Very difficult sometimes to make that distinction.

Scaling up as you can imagine if you're building systems capacity if you're doing political advocacy or marketing to the private sector etc. takes resources, it's not simply an afterthought that we can do in the last six or twelve months of our project it often takes and entire project unto itself two three five years and we said from the IFAD experience sometimes two or three projects. And the scales
that it takes if you can have a scaler upper -- by the way if somebody could come up with a better term for that I'd really appreciate that -- okay I often call it an intermediary role, there's small-scale there's large-scale whose job is it to go from small to large takes a different skillset: it takes advocacy, marketing skills, boundary spanning convening power -- can you get all the stakeholders in the room? What's the skillset to align incentives? That's not usually a degree in agronomy or veterinary science or for that matter even though we talk the talk most economists talk a lot about incentives but I'm not sure they know how to do it in the field. So how do you actually do that in practice?

I'm running out of time so I'm just going to go over a few things. There's a lot of different ways ____ types of scaling up and the couple of distinctions I want to make is between horizontal and vertical which is horizontally you can think about like from farmer to farmer versus vertical can be top down so it's the government or somebody else sort of tries to roll this out. Often they go together which is who's going to run the farmer to farmer, and you can also think about it as demand or supply driven which is and managed or not managed.

One of the types of scaling up we all love but it doesn't always happen is farmers see the guy next door or the woman next door implementing a new thing and they spontaneous do it. So that would be a horizontal, demand-driven, spontaneous. Unfortunately that best case often doesn't happen and scaling up has to be managed, somebody has to push it, so actually has to go out and talk to the farmer, supply-driven, and that often requires a vertical component. So which mix or match of these types is actually important or going to work in the context we're working?

The framework that Johannes and a colleague of his, Anna Hartman developed which I'd like to put in my two cents on is what we call the driver spaces and pathways. That's the one we're going to be using for Feed the Future and scaling up. But I think it's not a sectorally specific model it's a generic model. The notion is we have an innovation and we have a vision of scale and we talked about that: reach, impact, equity, sustainability and the question is how do we get there. In order to get there first of all there has to be space for scaling up. I'm not going to have time to go through all of the spaces but we talked about this from a financial space is there money in the budget for this if it's public sector pathway or are there private sectors who have the financial resources or can farmers afford to pay? Organizational capacity who's going to deliver this? Who's going to deliver the seed? Who's going to provide the agricultural extension services? Who's going to deliver the machinery services to farmers
and not just the front line but what's -- all the way back up the value chain -- does that exist?

The policies. Are policies aligned? One of the things that we discovered in Bangkok for those who were there is that in many countries governments either heavily subsidize or provide for free existing varieties of seeds. So if we're thinking about scaling up through a private sector pathway how can that compete with free seeds even if the new seeds are significantly more powerful and effective and have a higher yield etc.? Is the rate of return high enough to offset the free or subsidized seeds? And in several countries the answer to that is no. I also work for example -- I'm sure some of you have heard of this, you know, the new cook stove revolution. I think every university I've been to in the last five years has got a cook stove that somehow works in a village in rural developing countries, okay? In many countries kerosene or carbon or charcoal is subsidized and they can't roll out the cook stoves because of distortions in the energy market. So is there a policy space to scale this up and etc."

Political space we talked about. And that can include both the political parties through vested interest and multi-stakeholders are incentives aligned? And last but not least is there a partnership space? Very difficult even with the resources of USAID to scale up by yourself. So who else do we need to engage in this and are those partners available or their interest? If this space exists already that's great but often it doesn't in which case space has to be created. That's part of an intermediary function that somebody has to fill. USAID project, an intermediary organization that's collective effort, the multi-stakeholder partnership with the government or other donors etc.

In order to create that space and to move this scaling up agenda along we have drivers. I've already alluded to some which is who's going to be the champion, what incentives are there that we can leverage already? Can we align with policies or private sector incentives? Is there demand that we can take into -- or what's going to drive the scaling up process? And how can we monitor that to make sure we're on track and I want to emphasize the importance of monitoring because monitoring -- because scaling up is political monitoring actually feeds back into the advocacy and marketing effort. It's not simply for due diligence and accountability for the money we're spending but actually having things like scorecards, like we're at 4,0000 farmers, we're at 10,000 farmers, so that various -- basically monitoring is part of your advocacy effort.
And so one of the things that we want to do is actually add indicators to our monitoring system that we can use, call it what you want: strategic communication, media outreach, marketing advocacy to build support, generate critical mass and momentum for scaling up.

So in my remaining few minutes this is how I usually think of what scaling up looks like. Okay first of all is it scalable? For me often the question is not so much thumbs up thumbs down but do we make it more scalable? I'll flash a slide that gives you some of the criteria in a minute but we won't really have time to talk about it. What's the model? Okay. We all like to think we're scaling up technologies but technologies don't exist in a vacuum. They're embedded in social systems, in delivery systems etc. and particularly as Johannes alluded to I think about models or innovations as having a what and a how. Actually because of the work I've done with IFAD and Johannes and Brookings on agricultural scaling one of the most important issues trying to be addressed is how do we innovate agricultural extension services since many public sector systems are broken or ineffective or have limited scope and one of the problems with those systems as I'm sure you all know is that the tendency is ____. I'm an agricultural extension agent, I am a genius and have all the knowledge, that you are an ignorant, stupid farmer and let me tell you what you need to do. You need to buy 200 kilos of fertilizer for your _____ and 30 kilos of seed and all this kind of stuff and the farmer says well actually I only have enough money to do half of that. Okay so what's the best way for me to spend my money? And the answer is if you're not going to take my advice and do it right that just confirms my opinion of you being stupid, ignorant and dumb.

Not surprisingly that isn't very effective so just if we get agricultural extension agents to have new updated knowledge doesn't necessarily -- it's not what they say it's how they say it. Are they client-driven or are they supply-driven? And one of the interesting innovation that IFAD has scaled up at least in Peru and a few other places is creating a private sector market for agricultural extension services where they train local people to be providers, they give grants for local communities and then the communities hire them. If these agricultural extension workers don't deliver they never get more work. So it forces a different process of being client-centered, demand-driven, sensitive to farmers' concerns as opposed to talking at them which tends to characterize traditional service providers so it's not simply that they have different or better knowledge but they actually work differently.
We found the same thing in health. Teaching doctors and nurses new technology is great but if a woman comes in for family planning services is shamed and humiliated by the service provider she doesn't come back. So -- and that's also true in education. Often the most important innovations in education are pedagogical. It's not the curriculum that changes it's how teachers teach it. And teaching and scaling up these invisible, these tacit, intangible elements tend to get dropped at scale because it's easy to monitor the quantity stuff the technology stuff, the qualitative process intangible stuff is much harder.

What's the small-scale context? So the next question we ask is given this innovation what does it take to do that? What are the capabilities required organizationally? To replicate the model we have to replicate the ability to deliver that model. We want to back out or reverse engineer from the model component the components to what does it take to do it so we can make sure we can replicate or reproduce those at scale. What was the external environment? Is it male or women farmers? Do women farmers have power? Do they have access to economic assets? If we're going from a place where women can get access if they microfinance to a place where they don't that is a key environmental and systemic thing. I know we all do results frameworks or logical frameworks in our models but somehow in the 30 or 40 years since they've been invented there's a tendency for the assumptions column to somehow drop off the picture, okay? In scaling up we can't do that because these external assumptions that make our logical chain work effectively are key. We train farmer or extension worker to do something and that's the output and therefore they adopt the technology that's the outcome only works if these external assumptions hold. You move to a new place where those assumptions don't hold we don't have anything. So being sure in what those are.

Goals we've already talked about. Analyzing the spaces we've talked about. And then choosing roles and pathways. So given the spaces and this is the iterative part is ideally we'd like to have this model scaled up but these people can't -- this large-scale system can't do it and so maybe we need to either change the model or change the pathway. And so what I'm going to go to is a graphic I think might be helpful.

[Off mic conversation]

*Julie Howard:* We do have a couple of questions from online. Suzanne Poland's here in VFF, asked what are the pros and cons of starting at scale rather than scaling up? And
then Evan Meyer with USAID Nepal asked how do you work with donor systems in scaling up to incorporate as you describe non-linear and iterative systems within donor linear systems?

**Adam Reinhart:**
I'm Adam Reinhart from USAID's Office of Food for Peace. My question is about sort of farmer-driven stuff, the horizontal which I think is far more powerful than the other one. I really appreciate what you've said about incentives; I've certainly worked in my own project development to install those in every project that we do, get incentives right, follow the ability for donors to do everything, which is not enough money, there's not enough of us in the world.

So the part where you were talking about sort of the very heavy focus on the implementers when in fact the only way we're ever going to really get to scale is by having one farmer or one person teach another person and so what we're trying to do now in Food for Peace we're trying to do what I like to refer to as self-transferring, self-financing mechanisms so not only do they pay for themselves but then they move of their own accord. I've been trying to work with our implementing partners to figure out how to sort of install these models that then grow and have a life of their own outside of the donor community altogether. And there's some examples of this in the world, the regreening in Sahel is one of my favorite examples of it where we've seen this happen -- very very limited donor involvement in the beginning and they may be slow but they're slow and steady.

**Paul Randolph:**
Paul Randolph, I'm the director of East Asia and Pacific Asia Bureau at USAID. Thank you very much for the presentation I think you've packaged stuff that fits you really well. My question is in your research and analysis now that there's a lot of discussion of mobile technologies and how we can use IT and other solutions have you looked at that? Is there any evidence to show you it can be used to help in the scaling process?

**Richard Kohl:**
Well thank you for the great questions. Taking them from the top starting up scale is expensive. First of all one of the questions I almost get is when should you start scaling or thinking about scaling and I guess the short answer to that is after a proof of concept. I do think that there's something to be said for okay we're going to work in three village or ten districts or whatever it is whatever small-scale looks like and say does this work at all or not and then build in scaling from there. I also think that scaling is a learning process; it's often done in a phased way particularly if you're scaling in situations where you do think
changes in context will be occurring in other words we're going to move from -- as we move from this district or this province or this region to others or from this population to others we're going to be learning things and I often like to think of scaling often as for those of you who are familiar with it is spider plant sort of sending out the shoots to the new areas, testing to see if it works in those new areas and then sort of using those as centers of excellence or demonstration projects, etc.

There are some cases however where starting at scale can make sense and that's particularly true with economies of scale. So for example one of the projects I worked on is a micro insurance project. Okay micro insurance projects actually don't work unless you have sufficient numbers to defray the risk as we're learning in the Affordable Care Act. And so often you have to start at significant scale to do that.

The other advantage of that is that you do get buy-in by the large-scale players from the beginning. The problem is that you often aren't -- there's a tendency not to have learning at large-scale and to fix mistakes and making mistakes at that scale can be very expensive.

So I think the tension is yes, by starting a large-scale we can get buy-in and ownership and we're also testing in the large-scale system so the issues of politics and implementation capacity that I alluded to to some extent are built in from the start, the problem is that those types of things tend to be past dependent in the sense that you make a mistake at large-scale -- and this is the problem at large-scale that turns out it's not working it's not so easy to fix it after the fact; it's much easier to fix it as you go to scale.

Linear and non-linear, boy that's a tough one. I think that -- this is really going to be a challenge. I think one of the things we really have to think about is whether the old ways of doing business are going to work. On the one hand I think a challenge -- I think one of the great things about USAID and other donors is increasingly internal accountability. We're going to deliver to 50,000 farmers this year or 500,000 hectares or whatever the numbers are in the next five years. But if we're scaling with partners we lose control, we can't hit those targets by ourselves. We aren't completely responsible. And we may have to adjust them if the partners aren't delivering. So how do we build into our systems I think the current heavy emphasis on accountability and delivery which I think is great on the one hand and the fact that as we're scaling and working with multiple partners
we're no longer in control. And this ownership issue is key and I think that's the balance we have to achieve.

I think another place where this shows up, by the way, is monitoring and evaluation which is I think monitoring and evaluation for scale are very different than monitoring and evaluation for accountability. There are very few projects that I know generate the kind of accounting data we need particularly for scaling for the private sector. Your accounting systems aren't driven to say, "What's the unit cost and how much money can I make on delivering this seed?" They're driven for, "Did I hit the budget targets on infrastructure, short-term PA, overhead, etc. etc. etc. That's not what a private sector person wants to see. So how do we generate that?

The next question was from you, sir, which was the importance of farmer to farmer. I think that's exactly right, I mean to the extent that we can do that that's fantastic. And that leads me to two comments. One is often when I see a model documented they never document the incentives and how they address them. In other words how did you get farmers -- no not get that's the wrong word but what is it that farmers actually saw? I was just working in China for IFAD last year, almost about nine months ago and one of the things I wanted to scale, believe it or not, is guinea pig ranches. And they don't use them for pets. So why did other farmers -- [audio break] -- why did the other adopting farmers do it? It turns out that what they saw in the originating farmer was not the guinea pigs and all that; they saw that she was buying new clothes, a new car and a new house and they said okay if she's got new consumer power what is it she's doing? And as much as we would like to think that this kind of dissemination works spontaneously sometimes creating peer to peer learning groups or facilitating that process, creating farmer networks which I know the Senegal project is doing and others are creating some of the institutional framework to allow that spontaneity to occur can be helpful.

And I think we haven't fully analyzed why farmers ______ seem to be better to sort of catalyze the kind of demand driven scale we're talking about versus demonstration projects versus farmers networks of why some of these things tend to work better in some situations than others. But I agree with you 100 percent but I think we can be a little more scientific about how actually do you catalyze and one of the criteria for scaling that we know which I didn't have a chance to look at is that scaling needs to be credible, observable and relevant. Prove that it works, not just because it's statistically significant _____ an agronomist but we
know it works, what does the farmer have to see? Can he observe that and is it relevant to his or her needs? So can we actually try to help get them there?

Just because I'd like to give others a chance to respond I'm going to pass on the mobile technology and maybe Johannes or Emma could take a minute.

Female: [Inaudible].

[Off mic conversation]

Johannes Lind: Sorry, let me start with the question on pros and cons of starting at scale. In thinking about scaling up we actually think about two possible types of errors. One is you don't scale up what works. The other is you actually do scale up or put at scale the wrong thing or you do it in the wrong way. Now my alma mater, World Bank, has actually a long history of scaling up in the wrong way and doing things at a large scale that haven't necessarily and properly tested but take a long time to prepare, years, and by the time you get to do it the situation has changed even though the program or project you're supporting is now perfectly designed for the conditions two or three years ago. And in the meantime prepares -- the beneficiaries actually haven't seen any benefits and therefore in a way have walked away and gotten disenchanted.

So there are real risks of trying to go in at large scale with something that hasn't yet been proven where you actually don't know what is the model and whether it works. You don't really know whether the institutions are there and you actually miss an opportunity to get the buy in of both the potential beneficiaries, the political stakeholders as well as your partners.

So I think in many cases it's probably better to start small, or at least start in a way so you can properly test the model. A perfect example of this is the conditional cash _____ program in Mexico that took five to ten years to build from model to the national stage and actually it's been written up very nicely as a case study. So in the end you have a national program but you built up rather carefully over time.
Times of course -- and this is the final comment on this question I think Julie likes to remind us: we've already done all this testing and so on. So let's not start from the beginning again just because we have a mindset well we've got to start a new model but actually make sure you look at the evidence of where it's worked, how it's worked and what the various components of successful scaling up may be and then move right in. I think that's what Julie I think is hoping in many of the programs, but you already have a lot of experience. You've actually done a lot of testing, you've done a lot of pilots; now just build on those and systematically figure out a way to go relatively quickly over the next two to three years to scale.

The only point I would add, make sure whatever you do it's number one sustainable and number two, to extend the scale you reach out to two or three years that you actually have built up a mechanism that takes you to an even larger scale because in most cases you probably won't have reached the 100 percent of optimal scale that you are ideally aiming for.

The other point on the question of -- so the farmer-driven approaches. I think that's actually a wonderful half way that for certain cases will work beautifully but we've worked with IFAD on a program in Peru, Highland Development Program which is exactly that. It was basically farmer-driven, it was a pathway that incorporated key elements and over 30 years actually has done a remarkably good job in pursuing that. The regreening example that you mentioned is another case that actually I think is not as far along but various aspects of this have actually been written up by one of our colleagues in IFAD policy brief that do take very active focus on key elements of the scaling up pathway conditions that we talked about, for example communication outreach. In this particular case of regreening that we reviewed communication and different forms of communication were absolutely critical

Which leads me to the final point: mobile technology. Obviously mobile technology can have -- and I think you guys have probably _____ USAID further along than many others, IFAD for example has not yet I think really done a lot of work with this but in rural credits, in rural market information and in disseminating information about technologies and providing for feedback from what actually works and gathering information for monitoring evaluation from the ground up that's reliable that's current and up-to-date I think that is tremendous potential and it links directly with pathways for scaling up that where the ICT dimension can and should feed into.
Richard Kohl: A couple of things that Johannes had just brought up that provoked some additional thoughts on my part. One is often even though we talk about scaling up technologies we're actually -- that's not really true; ________ talked about _____ -- many of the technologies we're scaling up are not things that are all that new. In fact one of the challenges of scaling up is not ____________ innovations up but often stuff that's been on the shelf five, ten, twenty years that isn't being widely used or disseminated and actually the innovation on the ground is often in the delivery system. How do we get it out there? It's often difficult -- you don't want to be testing delivery systems at large-scale; you really want to see how it works.

The other piece is in terms of this farmer to farmer piece, which is that's great for certain types of things that Johannes said but a lot of the work that we're doing here is embedded in value chains that often includes strengthening other parts of the value chain. Most of the time farmers are not capable of doing it themselves. If finance is missing, if seed supply is missing, if monopsonies or multiple layers of buyers on the downstream side is adding very little of the value both to farmers that's not something that farmers can spread. And so to the extent -- what do you want to call the value chain or part of the spaces of spaces and drivers or maybe can call value chains of space, I don't know, if scaling up requires some of that system strengthening or filling in some of the missing pieces of the value chain then that's something that farmers simply can't do, or -- unless you're talking about organizing farmer's associations and farmer's networks -- but again then somebody has to do that.

So I think as Johannes said there is a limited set, and an important set, of innovations that can go to scale that way but not only does that process need to be often facilitated but other parts of the system simply aren't amenable to that kind of challenge.

Julie Howard: Any other burning questions [audio break] ________?

Judy Payne: I'm Judy Payne, USAID ICT advisor for ag. I just wanted to mention that I'll be giving a webinar in our scaling series on many used of ICT beyond mobile as well.to help in our scaling processes.
Julie Howard: Good advertisements are permitted. Okay.

Jim Yasmin: I’m Jim Yasmin, Bureau for Food Security. You know, we're talking -- this is a - - the focus is on poverty alleviation and raising the numbers of smallholder farmers using certain technologies, but we also have to remember that we're dealing with value chains, the end market intermediaries of which in many cases would like to see fewer farmers. I'm intrigued by Dr. Kohl you being an economic historian. If you look at some of the value chains in the U.S., for instance the dairy industry in the U.S. about 30 years ago we had 250,000 dairy farmers in the U.S. We're now down to about 65,000. Yet if you go to the dairy case in any supermarket we have more products and the costs of those products is equal to or less than it was 25 years ago.

That's really -- that was a process that involved adoption of technologies at farm level but it also involved fewer farmers, more capitalized farmers, more efficient farmers. Aren't we going to see the same process in the countries that we're dealing with in the sectors that we're dealing with in some of these countries?

Julie Howard: Wow, scaling and structural transformation all in one question. Yeah, I know you both are up to that. Any other questions? Okay, anything from the online and then we'll turn it back to you all while you think about structural transformation quickly?

Female: Brian _____ with USAID Zambia asks: "How do you truly know if a scaling model works? Do we have to do a rigorous impact evaluation of the model first or are just a few years of good results enough?"

Johannes Lind: The question on the structural transformation. I lost my train of thought. Sorry.

Richard Kohl: So the impact evaluation is a tricky one, and especially because we don't live in a perfect world. And so it depends who you talk to. If you talk to Esther ________ we need a randomized control trial and we don't want to move until we get the results -- those of you who don't know Esther is a co-founder of Poverty Action Lab.
On the other hand often particularly when you're working in partnership with policymakers in the country policymakers have a certain timeline and often there's also a certain window, in other words this issue's going to be hot for two, three five years, I mean things are fatty in international development and you often can't wait five or ten years for the best results to come in so you need to move.

On the other hand has Johannes alluded to we don't want to make five-point errors; we don't want to scale up stuff that doesn't work. So I'm not trying to avoid the question but I think the short answer is it depends. And what does it depend on? I think if there's urgency in terms of political priorities in other words this minister, this window, there's a funding opportunity here we have to move and we can't wait. And I think the short answer is if you've got enough to show that it's promising and maybe some midterm reviews or something like that then I think you've got to go with what you've got but I wouldn't stop the evaluation. And I'd want to see those final results, and despite the fact that a few minutes I said it's often difficult to change course once you're at scale if your final evaluations are showing something different. On the other hand if you have the time I do think that actually having a rigorous data is important.

What I think is more important though, what I'd really like to emphasize is we don't want to just know that something works; we want to know why it works and where it works and how it works for scaling. And that's for several reasons. First of all, when was the last time you read an evaluation that said, "This worked really well but it worked because there were certain external conditions that were present. And if those are not present in other places that we go at scale this will not work." I've probably read 1,000 evaluations in my life and I have never seen that in an evaluation in term of what's the role of external context?

So in this particular area there are agricultural machinery services that were available. Those were a key environmental factor. There's access to seeds. There's a wholesale market, etc. etc. Sometimes we know that stuff intuitively but it's never documented.

So I think for scaling part of the role of evaluation is not simply impact but it's also external environment. Similarly we've been talking off and on about incentives. Okay. What are the incentives and how do we replicate those incentives? Sometime it's monitoring and supervision.
One of the things that we make big mistakes at in scaling is yeah, I have one supervisor for every three community agricultural extension workers. Is that really scalable? And what happens if you don't have that kind of supervision? Okay, or we have pay for performance, okay, if you get paid by the number of farmers you deal with. Well, most government system in developing countries if it's a public sector worker don't use pay for performance and that would be a huge change. So how can we document these invisibles of tacit elements of how things work, especially on the incentive side. Or why are farmers adopting it? What was clear, credible, observable, and relevant to their needs?

And last but not least as I alluded to sometimes we need to adapt these things so we don't want to document the activities actually, we want to be clear in what the principles or the outputs were because we want the activity that will achieve that goal in a different context may be different. So we want to be very clear on what these are.

And last but not least, and I know it's a long list, is that we often need to simplify the model. Complex models are really hard to scale. The more the moving pieces the more difficult and often the more stakeholders that are involved which multiply the stakeholder coordination, incentive alignment and stuff geometrically.

So if somebody says, "This is great. You did this ten-component model at $5,000 a farmer at small-scale but we only have the capacity and the finances to do a five-component $2,000 a farmer; which ones do you choose? Very few of our evaluations provide disaggregated impact evidence and cost evidence to allow us to make informed decisions. I know that costs extra money but that's another reason for starting at small scale so we can actually say yes, these are the deluxe model, the Cadillac model, the gold-plated model is the ten elements but the core are these three, four, five, six, seven for which we can get 80 percent of the impact for 50 percent of the price, or hopefully something like that.

**Johannes Lind:** On the value chain question and how do we make sure, in fact we have the smallholder farmers involved in our work with IFAD we found that IFAD actually has a real problem here. It is aiming to support mature and scaled value chains in its countries. But at the same time as it does so one finds that actually the particular ______ poorest smallholders and women smallholders are not actually effectively
integrated or even worse, as value chains mature are actually almost systematically excluded.

And so the challenge for IFAD is -- and I suspect ______ for you in your work, is how do you get especially subsistence, the large numbers in some countries still subsistence farmers, to the point where they actually can be farmers that are attractive, if you wish, to the value chain operators in terms of the reliability of supplies in terms of the quality of what they support and provide and so on. This is going to be I think the crucial area for engagement of organizations like IFAD, like yourselves, is to make sure this particular transition from subsistence small-holder farmer to actually commercial farmers who can participate in the value chain if that happens.

The longer-term issue that Julie referred to I think that particularly is from where I sit at least is likely to be the issue from middle income countries I worked quite a lot in Kazakhstan. Kazakhstan still has 40 percent of the population in rural areas; 20 percent I think of the population's actually in agricultural activities. Well Kazakhstan is an upper middle income country. Twenty years from now, when it wants to be among sort of the top 30 actually developed countries that structure is no longer going to be valid.

So the question for Kazakhstan in most middle income countries today that still have a sizeable population in smallholder agriculture is how do effectively transfer not how to keep them there but how to through successive if you wish upgrading of the human capacity of these people to actually help them make the transition to non-agricultural and ultimately non-rural and urban occupations. I think that is something where a pathway approach and the longer-term thinking approach will be absolutely essential because unless you have that in mind, if you just sort of focus on keeping people on the farms you're not likely to have the right sort of model of change for that particularly country.

And so I think your question's absolutely right and it has that sort of more short-term how do you get people out of subsistence into commercial farming for the lower income countries and for the middle income countries how do you manage that long-term transition from rural to urban, from agriculture, sort of more traditional agriculture to modern capital-intensive agriculture.
Richard Kohl: If I could have a word on that. Having done a lot of work in Southeast Asia we increasingly see that feminization of agriculture with a successful urbanization of countries like obviously China, Vietnam and others you have lots of prime age males who now work in urban industrial sectors leaving, and if you go to these areas you basically only see women with children or of child-bearing age than people under 18 and over 60 or 55 or whatever in the country. Often, and one of the things I'm really pleased with in the Feed the Future program is gender is not simply a box that is checked but is taken quite seriously is that women can often have challenges or issues in terms of access to finance, ability to buy land or own land or transfer land, especially in countries like Vietnam and China and to some extent Cambodia which have, coming out of -- well not coming out of -- still to some extent in a community, or recently communist system land markets and other asset markets are not really well-developed so the type of transition that you were talking about often requires the development of missing markets that don't exist and particularly referring to the IFAD work ______ specializes in targets in marginalized indigenous peoples. And as Johannes was alluding to often those people, the rising tide doesn't lift their boats; they are too far away, they don't speak the language, they're too poorly educated, the transportation and communication links are too poor that they can't get locked in to yet address the market. And particularly in Vietnam that's been a huge challenge, I mean Vietnam has had amazing success in commercializing agriculture and getting large percentages of the agricultural population involved in the market but that's not been true for particularly ethnic groups and similarly one of the differences in China as I alluded to every single province that IFAD has a partnership with the government in is what they call autonomous provinces which has the majority ethnic population. And those people often live in very mountainous or jungle areas where the market doesn't penetrate very well, it's majority female farmers, access to finance, markets, transportation is weak or doesn't exist and so I'm sure we know from the global ______ of economic history of the inexorable shift out of agriculture but it's not always ______ that that's completely inexorable for all of the population and particularly the bottom that we want to address so I think we need to -- but I think your point's well-taken.

Julie Howard: Well thanks everybody for those good questions. Unless there are other great ones right now why don't we turn back to you, Richard, and let you go through some of your case examples. And on this structural transformation question I just wanted to add, you know, thinking about what [audio break] Richard said is we're not trained to a specific technology, we're actually through a scaling process building human capacity, you know, increasingly a business capacity, capacity to identify opportunities and sort of figure out, you know, how best to utilize them. I think that's increasingly a cross-sectoral skill, right? So once you train communities, once you train farmers into how to recognize an opportunity
you're also sort of training them, you know, to recognize, "Well, what are the ladders you may want to use to get out of the sector one of these days?"

So I think that is in essence about human capacity and about skills development at a core, _____ scaling. So Richard let's turn back to you to _______.

Richard Kohl: Actually Julie since I only thought I had a half hour I dropped the examples from my slides. I could speak to those spontaneously. But let me -- I didn't really get a chance to talk about some of the sort of lessons. Some of this will be sort of repeating things but I guess I was always told tell them what you're going to say, say it and tell them what you said.

So first of all I think a key issue is identifying pathways, and identifying pathways as early as possible. This is the Apollo 13 problem: how are we going to get to large -- if this works, if we can prove the concept if the pilot project works, the innovation is successful how are we going to get to scale? Are we going to deliver this to the private sector? Are we going to deliver it through the public sector? Are we going to try some mixed public-private partnership or through farmer's organizations, etc., etc.? And what does that look like, in terms of how do we create that space? If we want to go through the private sector we need to make sure that we're collecting the data that allows us to make a business case. When was the last time -- well maybe I'm just ignorant because I obviously don't have universal knowledge, but most of the projects I've worked with aren't collecting data to say, "How profitable is it to do this activity?" That's not what USAID projects do, usually, they deliver. They produce outcomes and outputs, they deliver -- you know, we increase farmer yield. But was it profitable to deliver those seeds? Would it be profitable for somebody else to do that? What does it take to do that? Or same question: is this aligned with the policy priorities that the ministry of agriculture system is going to do with it? Is it within their capabilities? Do they have agricultural extension service? Do they have the training? Do they have the research stations? Do they have the innovation capabilities that are necessary to do this?

So let's think about -- to begin with -- this is why it's iterative, right? We're having something that works, you want to deliver to this population but this population is served by these actors, these pathways, these organizations, how can we iterate between what works and what can be delivered and strengthening the system? So in sense that was a circle that I didn't get a chance to go over is we have here an innovation, right? It achieves certain results and it has certain
implementation requirements. We want to deliver it at this scale, with this impact.

So does this space exist to deliver this at that scale? Are there organizations that can do it? Is financing available, whether that's private sector incentives, the affordability of the farmer or the public? Are the politics aligned and the rest of the ecosystem or in this case the value chain? And what's the pathway that is the best to get this scale, this impact of this model?

My experience is that when we do this we tend to do these in isolation. We have a model, we know it's scale and we know who we want to work with but we never ask whether the model's aligned, if a system is aligned. What do I mean by that? Do these pathways have the capability to deliver this innovation? Do they have the capacity to deliver at this scale? The answer to that is usually no, actually, regardless of what we'd like to think. And in that case how do we align this now that we have some choices? If we simplify the model so it's aligned with the existing capabilities or what we could do reasonably in terms of capacity building, yeah, okay, that gets us aligned here but then often our impacts we have to be more modest in our impact goals. Okay?

Or conversely we say we want to do the fully monty, the whole program in its complexity and its high impact but only a limited set of actions to deliver that in which case we have to be more circumspect in what scale we can deliver at. Okay.

So in total we have these spaces and things aligned in terms of this model with the requirement to implement it at that scale with the organizations and pathways -- we don't have a coherent scaling up strategy; we have a mess. And I guess my opinion is one of the principle breakdowns in scaling up is not so much that we don't have good innovations -- and sometimes it's not even that we have ambitions at scale is that we really haven't aligned this so that we have realistic goals and pathways and models that can get us where we want to go. Because I know particularly some of the people online are in the process of doing this; that's really key.

I've emphasized but I want to reemphasize the importance of having an intermediate organization and leadership to manage and coordinate this scaling
up process which is creating those spaces if it doesn't exist and driving the process. Okay this means who's going to do the demonstration marketing? Who's going to bring the private sectors on board at scale, all this?

One of the things we were talking -- so put on my economist hat -- often parts of the value chain are lumpy. So at small-scale we persuaded this supermarket chain to buy the farmer's products, but we want to go to four other places. Does that supermarket chain work in those four other places or do we need to engage four other people? Or if we're going to double the size the existing buyer can't handle that ______. Okay so we actually have to put in places parts of the system elsewhere. Often we need to improve cost efficiency. With all due respect what USAID can afford or what makes sense for you guys may not necessarily fit within the ________________. And again this is the Apollo 13 model, or starting with the end in mind. What is the domestic budget constraint? Is it $500 a person? Or if a farmer's going to pay for it it's $20 for seeds? Is seed costs more than that it's not going to work. So this is where we need to align the market incentives and financing.

If the multi-stakeholder partnership -- who is going to coordinate those partners? Why are they going to be in partnership? What's in it for them? Building organizational capacity, strengthening the ecosystem in the value chain, and as I said, monitoring both the fidelity on the one hand and adapting to local conditions. So whether we're going to -- Arapo, one of our implementing partners or through some other mechanism whoever does this, whoever fulfills that intermediary role and it could be more than one organization needs to do all these things and have the skills and resources to do them. Okay and this is a partial list.

So I guess I just want to repeat the conclusion is that there are multiple pathways to scale up, there is no one right way. Horizontal versus vertical, through the farmers, through the private sector, what does it depend on? It depends on the characteristics of the intervention itself. What does that require to implement? And then we have to compare the characteristics of the intervention as a model with existing capabilities to see where is there a best match. In some cases the best match will be with the public sector or the private sector, or farmers, the farmer's organizations and sometimes it'll be a mix. This component is a really good fit here. Okay, so getting -- and then it's a question of a scale. Well these organizations have the right capabilities to implement this program but can they implement to that scale? Okay so iterating between the requirements of the
program, the organizational capacities and the target scale is how you come up with a successful pathway and scaling up strategy.

Okay and as I said the four, the principal challenges are aligning the incentives and the politics -- and this is both vertical and horizontal, multiple organizations and from federal or national level all the way down, making sure there's effective organizational _______ capacity and that the unit of production and delivery cost versus the financial constraints fit.

So I think that's pretty much what I've got to say -- well okay, that's not true. I lead three-day scaling up training workshops but that's what I've got to say in an hour and a half. So thank you.

**Julie Howard:** Well I think __________ -- why don't we give a hand to Johannes and Richard please. Okay I think, you know, what I take away from these conclusions is some excitement, Richard and Johannes because I think we're starting to see in a number of our Feed the Future programs we're seeing the germs of takeoff and some promising I think accidental perhaps intermediary organizations on the ground. You know, who are starting to do many of the things that you've characterized for us here. So our question now is how to fan the flames, fan the incentives, I guess, in those countries and also -- sorry for the mixed metaphor --

**Richard Kohl:** Oh now I’m starting to see a pattern: feed the future, fan the flames [crosstalk] - -

**Julie Howard:** Okay don't go too far with that. And also how do we extend good things that are happening in our Feed the Future programs and the value chain approach I think and how Feed the Future has brought to these programs -- how do we extend those lessons to other Feed the Future countries so we can have that flame fanning and intermediary organization take off in a wider number of places.

I'd also like to introduce Gary Young. Gary is here. Gary has taken over from Andy Levin the job, the wonderful job of scaling team leader. And then we have others with us: Laura Schrigg there, okay, Judy Paine -- who else is with us from our scaling team? Okay John Colton, right. Okay. So -- and several others who are not with us today.
So thanks again and please stay tuned; we have a special scaling page on our Feed the Future Agrilinks website where we put all of the resources from our two recent scaling glees. We'll also have this webinar and many other delightful resources that Gary and Julie and team are shepherding forward. Thank you.

[End of Audio]