Transcript for The Regulatory Sandbox: A Training by Consultative Group to Assist the Poor (CGAP)

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>> Hello friends. Welcome. Thank you for joining today. You will see an image on the screen that invites you to orient yourself to the virtual space.

We will have an opportunity today for an activity that may enable you to turn on your video and audio. We invite you to have that accessible for today's session.

And we will now continue to wait until our other colleagues join us.

Furthermore, on the screen you will see a warmup poll that invites you to reflect a little bit on what we will be talking about today. Please go ahead and select those radial buttons as you join and orient yourself to the virtual space.

>> Hello everyone. Thank you for joining today. We invite you to go ahead and fill out that poll that you see on your screen. As you enter, do share your organization location and what you expect to receive from this session today.

We have some options that we will post in the chat momentarily.

Welcome and thank you for being here everyone. Just a gentle reminder we have warm up polls on the screen for you please complete. We also invite you to share your organization and location in chat as well as what you expect from this session.

On the screen, you will see how we're inviting you to manage your own audio and video. For the preliminary portion of the session, we ask you to keep those disabled but as we will have an opportunity to enable them later in the session, hopefully you will have access to those to enable. Finally we do have closed captioning for today's session. The instructions to enable closed captioning are located on the bottom right of your screen.

Hello everyone. Thank you for joining. We're at the top of the hour, but we will wait two more moments for others that would like to join the session. If you feel comfortable, we invite you to share in chat your organization and location country and what you expect from this session.

We also have a warmup poll on the screen for you to be able to fill out as we wait for colleagues to join us.

Hello and thank you for joining us. Those who are just hopping on. We're waiting just one more minute for others to join as the session gets going. In the meantime, we are inviting everyone to please share into chat your organization and location, and what you hope to learn from the session or hope to take away from the session.

We also have warm up poll on your screen that we're inviting you to engage in.

Okay everyone. Thank you. Let's get today's session started.

So, I will invite the music to please just stop for now. We are recording the session for notes purposes and for those not able to attend.

On behalf of our production team, my colleagues Gaby month Moore and Ify are in this space. They're able to provide any sort of audio or technical support in the chat should you need it.

And then we also have our two moderators for today, Paul Nelson and Allison Harrell both on the digital finance team. If you have questions, type them into chat and we will be sure to save and address them at a later time. Let's dive into the session. Paul, over to you.

>> All right. Good morning. Sorry I was unmuting my phone. My name is Paul Nelson, senior advisor. I'm excited to have Ivo and Schan here today. We worked with them a number of years. Some of you may know USAID is a funder of C gap and through work we have done through a couple other partners, we've also been involved with regulatory sandbox efforts that involved Schan. Ivo is with C gap. Some of you may know it's a leading source of insight and guidance on financial inclusion. Ivo led a range of work on capacity building with financial authorities and other initiatives. Schan Duff is VP of strategy with†‑‑ help lead the development of Kiva protocol which is in essence a new approach to credit reporting data. I'm sure Schan will provide more detail about what that means.

Here obviously we're talking about how to enable more innovation in finance, sandbox seems popular. People want to go back to their childhood, I think. Maybe for that reason it's become the most popular form seemingly of innovation efforts that financial authorities have pursued around the world. There is a critical question, do they work? Are they effective. As Ivo and Schan will discuss, they are a tool suitable for achieving certain tasks and the question is whether, whether there are other tools available to us that might be equally effective or effective in different ways given the objective we have or our partner financial authorities may have. Today, I know many of you are involved in either broader business enabling environment efforts. Some may lead work in financial seconder development, some focused on thin tech or financial inclusion.

I would just emphasize that some of the points that Ivo and Schan will talk about are applicable broadly in fostering innovation. Many regulators in different sectors and domains also think about this. Some of the methods of approach and analysis that Schan and Ivo will discuss might be relevant in those areas though they speak to the financial sector context. One thing for me I'm most curious about as someone focused on innovation and financial sector context and digital economy context is what other tools beyond sandbox are available to us and how can we as a donor and development agency develop interventions or collaborations with authorities to effectively use these tools. So that is the perspective that I'm looking at this from and will be interested in hearing your perspectives on the line. I know we have folks from USAID and other partners on the line. With that, I'll note that Allison will be paying attention to questions in chats that are made in the side bar, so don't at all hesitate to make your own comments or observations or hard questions for the hosts. Schan and Ivo will do their best to answer them. And we know that you all have a lot of experience working in these areas, so we don't want you to sit on the sideline. We want you to jump in and share your perspective.

And with that, I will hand it over to our speakers of the hour, Schan and Ivo. Thank you.

>> Thank you very much Paul for a great introduction. Also, thank you very much USAID for having us and for giving us the opportunity to share our work on regulatory sandboxes and innovation (indiscernible) with this great audience. My name is Ivo and together with Schan we have been leading the work on regulatory approaches to innovation, innovation (indiscernible) and more specifically regulatory sandboxes. I guess we're going to answer the question whether they are most popular tool. We will also attempt to answer the question whether they work. Stay tuned, we will get into that very quickly. On the next slide and maybe the one after next you will see what is (indiscernible) 90 or so minutes. We will first give an overview of the current landscape giving a taste of what is happening in the space of regulatory sandboxes around the world and what are emerging insights we see similar across different jurisdictions and then we will get into the core of the presentation really answering the question whether you need or not regulatory sandbox as a regulator or as a consultant or technical†‑‑ we will try to answer the question in a normative manner and hopefully you will find it useful. Then we will get into a more specifics on how to design a sandbox that is suitable for your needs if you decide to design a sandbox in the first place. After that we will present quickly a tool kit which should help people like you in the audience to really work either on regulatory†‑‑ we will do a team exercise where we will walk you through background information and let you discuss and share your insights through the chat and maybe even orally. So that is the packed agenda we have today as mentioned. I encourage you to use the chat to raise questions or comments or to introduce yourselves. We would like to engage with the audience, don't hesitate to really not only post questions but also argue (indiscernible) say if you disagree or share examples from your work, share the challenges you are facing because that is how we can co‑create the session. From the initial Paul I see there is quite a bit of you who have been working on regulatory sandboxes so don't hesitate to share your experience with us. Let's go directly to the (indiscernible). On the next slide, we do have definition of what a sandbox is. This definition focuses on the utility of regulatory sandbox. We say it is a tool for developing evidence about how a†‑‑ when it interacts with the live marketplace. This evidence gather can help really later ‑‑ be it coming up with a new regulatory framework. What I would like to emphasis is the focus on the utility. What it can do for regulators because we also did have another definition in our earlier paper which was focused on how sandbox looks like. That definition is still very much true and it works. But what we're trying to do in our new paper is shift from describing the sandbox and its external feature towards focusing more on what it does and how it is beneficial for regulators. Let's move on.

Next slide shows†‑‑ past five years since the launch of the UK sandbox. The tool has really become very popular and today we see pretty much all around the world in green those are sandboxes or sandbox like activities that are operational in red are recently announced and numbers obviously keep increasing the other question is how are not only where they are but how are they being used. You will see a snap shatter from our analysis we did in 2019. It's a little older but it probably does a similar story to what we find today. We analyzed 134 testing around 16 regulatory sandboxes and we just ask a couple of questions ourselves and try to find answers. One of the questions is what is the technology being tested in regulatory sandboxes around the world? You see the answer on the left where not surprisingly probably a lot is happening around block chain and crypto.

Digital ID and online distribution and then we have a multiple technology involved or other tech knowledge involved category which had a different combinations and types of technologies and answers. The other question we ask, what are the sectors or the product types that sort of benefit most from testing in regulatory sandbox. Again the most activity we found was in payments followed by wholesale and infrastructure which again related to payments and had to do with things such as instant payments, clearing and settlements for payments or for securities.

The like that sort of the back end API integration and similar solutions.

Then we have a one category that can be sort of labeled as wealth management which has advice and asset management and then the rest is spread across other product lines or sectors such as insurance, savings and other. On the bottom of the slide, you see more specific examples what we found instead being tested in sandboxes from equity card funding, block chain base, personal finance management tools, automatic credit scoring and more. This is just to give you a flavor of what is happening in the sandboxes.

And now, let's go very quickly over the next slide which, you know, it is almost like a mandatory slide really. When you talk about sandboxes, people like to hear about benefits and risks. I think I felt just the urge to really put the slide in, but I'm not going to go into details because I hope that as we go through the presentation, the benefits and risks will clearly emerge in your minds from what we are saying about sandboxes and how they work and are implemented in different countries. You will get access to the presentation so you can review them on your own. The final overview slide which is the next one that I would like to talk about before we get into a more interactive part is the question that C gap really was trying to answer from the beginning which is how regulatory sandboxes relate and maybe advance financial inclusion. Again, you're seeing date from 2019 work where we did put a sort of basic set of criteria to really assess whether innovation is inclusive or not. And then reviewed the 134 firms to see that most of them work on innovation that is not speaking directly to financial inclusion but 20†percent where working on things that were directly targeted at excluded and underserved segments. We scored them as inclusive innovation. Then we expanded the criteria to be more†‑‑ working on a product that is typically used by the excluded or underserved segment or the segment benefits from it, let's include them too. Automate credit scoring to cover people with no credit history. With that, we arrived at the aggregate number of 38†percent of innovation tested in that relatively small sample. We can take it as a proxy of the impact for now. It's been two years, maybe it's time for another round of analysis. What I would like to do next, next slide is to engage with all of you and go through this very quick true or false exercise. I have a set of claims prepared. I would invite you to use the polling function to answer whether you think the claim is true or false.

[READING]

If you think that is true, obviously true, if you don't think that is the case, then vote for false.

I don't know how long we should be waiting but I see that we have a majority of votes. The participation is slightly growing. I think we are surpassing the participation rate for many elections around the world, so I think we may just hit pause here and interestingly enough, okay, so a slight, slightly more participants think that this is a false statement but it is tight. Which is interesting. So if we go to the next slide, there is sort of an answer to the question. Not necessarily on the next slide but here we see that regulatory sandboxes are definitely a very popular tool. In fact these are numbers that are coming from a different work, it's a survey we conducted with world bank asking regulators a set of questions. We see sandboxes are the most†‑‑ innovation hubs, fintech office and so on.

Combine this with another data point and review how many inquiries from innovators are each of the innovation facilitators able to handle. Which tool is more†‑‑ sandboxes were not performing that well because they take time and after all they really designed for a relatively small sample of firms which you engage over a period of time with sandbox testing takes. Accelerator seems to be much better suited for engaging with the industry and handling the larger volumes. Let's go to the next slide.

Again, I see some questions coming. Please continue typing questions that you may have. We will have a chance to go and review them and answer them as we sort of pause in between the different sections.

The next claim is the main benefit innovators get from sand docks is improved access to funding. If you think the claim is true, hit true. Do you think that really the main benefit for innovators of a sandbox is they get better access to funding? All right. So votes are coming in quickly.

All right. Let me wait a little more. This time it is not as tight as in the previous instance.

All right. I think we can end the pole since you see that majority of you think this is a false statement. Let's see. Let's go to the next slide. Here again the survey we asked, you know, what is the main benefit that innovation facilitators offered to participants and it was guidance really that innovators get from the regulator in terms of compliance and how to become a licensed regulated institution. Funding may be the case for some sandboxes and you probably have seen reports saying that participating firms have benefited from easier access to venture capital, for example. It might be true for some, but looking at the sort of more diverse sample that is not necessarily (indiscernible).

Let's go to the next one.

I believe that†‑‑ we have two more to go. Sandboxes heighten regulatory and consumer protection risks. That is another claim you probably already come across. So regulatory sandboxes are creating a dangers or increasing the risks that customers face.

Is that true or false? Right, we're getting our (indiscernible) almost. Let's wait a little bit more.

All right. Well, I think we're there. Okay. So, it's a little tighter but still pretty clear that most of you think it is a false statement. Here I don't have really a good answer, I may disappoint. We didn't measure the risk to customers. We did inquiry about the number of complaints and there was no indication that the regulatory sandbox generates more complaints. What we found is regulators pay attention to the customer risk. Safeguards they put in place during the testing period are very much focused on consumer protection and involve things such as disclosure requirements, limiting number of clients who can participate in the sandbox, having complaint handle being mechanism so complaints are addressed properly. If sandbox may come with more risk, regulators are putting in place mitigating factors. This is an overview. Let me turn to the USAID colleagues to ask if there are any questions that we may want to address before I pass the mic to Schan.

>> Yeah. Looks like we have a couple questions coming in.

So, I think this kinda last section you touched on might address this, but I'll pose it anyways. The question is I have heard it said a regulatory sandbox is like trying to understand a tiger but studying a house cat. You can understand 95†percent of the tiger but the other 5†percent is going to kill you. How can you avoid the pitfalls of regulatory sandboxes, especially the idea that sandboxes can give regulators a false sense of security when launching fintech. You addressed some of the safeguards but I'll see if there is anything you want to add.

>> Great question and great segue to the next section deciding when sandbox is a suitable tool and when it is not. One point I will make is that because the testing is usually limited in scope and scale it indeed may run the risk you don't see how the innovation engages with the marketplace once it scales up. Regulators need to be aware and also assess the test and results with this in their mind knowing that they can only see a part of interaction between innovation and marketplace. That said, very often when it comes to any innovation, there is an unknown component that regulators somehow need to address and just make their best effort to do the risk analysis and mitigate the risks that they can foresee. There will always be an unknown component that can lead to potential harm but again we will get into that question as we go through the next section, so let's see whether there is another question or whether we should just jump into it.

>> Yeah. Maybe one more just kinda addressing some of the overview that you presented. In addition to sandboxes, could you describe some of the other types of models like you were looking at accelerators and innovation hubs. Maybe just a quick high level definition of the two.

>> Yeah. I could, but again, I'll leave it to Schan. That is part of that section.

Maybe let's not skip ahead. We can get to that in the next section.

>> Yeah. That sounds good. Okay. Maybe this one. Who has been driving regulatory sandboxes, government or innovators themselves.

>> Right. Well that is an interesting question. And I didn't mean to disappoint but I don't want to take away from Schan what he is going to present.

So, who is driving the regulatory sandboxes? You know, that is an interesting question because it really does depend. First sandbox we seen was driven by government analysis that focused on the competition in the financial market and kind of stated known truth that financial market is concentrated and not much innovation is happening and they are looking for tools to change that. That was the initial impulse.

Then a lot of the, what we see is the sense of we need to do something, you know. The world is changing, there is a lot of discussion about innovation dramatic changes in (indiscernible) to technology. You know. There are emerging fintech hubs in Singapore, London, Hong Kong and elsewhere. We want to be part of the trend. What can we do? It leads to the regulatory sandbox as one of the possible answers.

It is to say that it is often the regulator or government who wants to signal to the market and the world that they're willing to accommodate innovation and inviting innovation to the market and willing to put initiatives in place to do something. Regulators ask industry do you want a sandbox, the answer is often yes. You know, the industry would go for in I go that may sound as sort of a friendly treatment of innovation. So it's, I wouldn't say it is either or. There is sort of a consensus between industry and regulators to yeah let's try sandbox and see what happens. This is why we try to come up with a technical guide that puts framework into the thinking and provides guidance on when that decision to move ahead with regulatory sandbox may actually yield expected outcomes and when it leads to disappointment because it can't do what stakeholders expect it to do. Maybe let me stop here with the answer because this is in a way really alluding to things that we will touch upon as we go through the presentation.

I guess someone over to you.

>> Thank you all for the great commentary in the chat. As Ivo said, the flavor of the questions is what motivated us to write this tool kit. Let me just before that let me provide context. The comments are spot on. We created this tool kit that we will introduce based on several years of research and working with and supporting regulatory facilitation efforts globally with a specific focus on sandbox. As comments have noted and research shows, this is such a popular tool but it has also been sort of kinda widely (indiscernible) in many ways, the markets place side, you know, innovators thinking sandboxes were a free pass for entering the regulated space without going through the requisite licensing and compliance exercises. On the regulator side, we seen sandboxes misconstrued as a comprehensive innovation policy. The reality is somewhere in between. Paul just noted in the chat there is an interesting feature to sandboxes which is opening up a dialogue between regulators and the industry.

Sandbox is maybe one way of doing that but there are others. We will talk about those in a moment. The tool kit is really intended to be a stylized analytical approach to unpacking the circumstances under which a sandbox is appropriate on one hand and then the range of other circumstances where sandbox may not be the right approach. So the tool kit is really designed to get at that set of questions. If we can roll forward one slide please. We will see here the, you know, we start with this clear sort of normative view that sandboxes are great in this very narrow context. In the context where live testing and generation of empire call evidence or observation is really necessary to help unblock a regulatory uncertainty. And then there are beyond that circumstance there may be other tools that are better suited to achieving, you know, a set of regulatory objectives. Keep that in mind. Next slide.

What we've done is provided this stylized analytical approach to understanding whether and when a regulator or jurisdiction may need a sandbox. It should seem obvious, but we also felt asking a set of questions along the lines†‑‑ first it is just high level starting with objectives, what is the regulator trying to achieve with the sandbox. We can talk through what we see as fairly common motivations for sandboxes. Not all of which evidence a clear pathway to sandbox in any particular jurisdictions. Next we say we look at a set of regulatory barriers. And try to understand when the sandbox approach might be useful in unblocking barriers to innovation. And finally step three, this is kind of the question that came to the chat, assessing alternatives to sandboxes based on this analytical approach. We will talk through those in detail in the next few slides. Roll forward one please. Start with if you're consulting with a central bank or credential regulator and you think you want a sandbox, the first question is to say why? What is the objective you are trying to achieve with a regulatory sandbox. We hear two or three objectives commonly in the marketplace. One is regulators wanting to know more about what is happening in their jurisdiction. Again a useful and completely reasonable objective with innovation moving so quickly. We find because of the resource intensive nature and because sandbox is focused on a limbed set of firms, learning objective is not the best use of sandbox. We will talk about alternatives. The other side, there are motivations around promoting innovation in competition. SCA sandbox, the first initiative very much had innovation promotion objective in mind. There are important questions to ask if that is appropriate in your jurisdiction, not least of which whether you have a statutory mandate to promote competition. Many regulators don't. As we will see, there are other ways of promoting those objectives, innovation and competition in the marketplace that don't have anything to do or are not necessarily advanced through sandbox testing environments.

I think where it gets very interesting and sandbox might come into play is a narrower set of objectives addressing regulatory barriers to innovation. Sand boxes are a tool regulators can use to answer or clarify†‑‑ and we see that it is this intermediate category addressing barriers to innovation where sandboxes can have unique applicability.

Great. I think we have talked through this piece here, but it is worth pausing to highlight that there are these range of other alternative interventions regulators might contemplate. Other innovation facilitators might include fintech offices or even hotlines to answer basic questions from the marketplace. We see that many applications that come into formal sandbox programs are really questions about which particular licensing regime might apply to new technology, where to find relevant forms, how to pay fees. Basic questions that can be answered through a less cumbersome tool.

There are other tools available including just rule updates or policy updates and clarifications that could be easier to apply on a market wide basis than regulatory sandbox. We will return to those but to highlight, the objective setting relates to selection of the appropriate tool to encourage innovation.

Next slide please.

This is just an example of one objective stated by a stroll bank supporting their initiative.

This is a product matter. Step two is the heart of the analytical guide understanding when a sandbox can address a particular regulatory barrier to innovation. Again here there are some common barriers to innovation flagged by market participants which don't necessarily require all of the work of sandbox environment. Some might just be compliance is costly or that, you know, some regulation is just out right prohibitive of certain types of innovations in the marketplace. Again, not always clear that those particular barriers are solved in the sandbox context. You know, we've seen on the issue of costly compliance or just understanding what the right appropriate licensing regime is for new technology can be solved by something as simple as clarifying language on a website or making, you know, forms and processes more available or transparent to market participants. But it is really this intermediate category where a regulatory uncertainty can be resolved effectively through live testing is when we see sandbox having its greatest application.

So roll forward one slide please.

Terrific. So just to pause and restate the obvious, you know, not every innovation should necessarily reach marketplace and some might fail prior to even hitting the regulatory process by virtue of poor market product fit or lack of viability. We see in some of the sandbox†‑‑ whether the, their beta will get off the ground. Again, don't necessarily view those use cases as terribly appropriate for sandboxes but more focusing sandbox testing on providing a base of evidence for regulator to understand (indiscernible) that might residence regulatory concerns. Let's role forward one.

And finally sort of this is where we kinda been mentioning all along thinking about sandboxes as one of among many of tomorrow tools available to regulators when, you know, thinking about unblocking barriers to innovation. Again, we often see that, you know, or in early consultations with many jurisdictions, some regulators thinking about sandbox as a comprehensive innovation policy more broad based rule changes may be more beneficial or where more lightweight programs such a fintech offices or office hours being a first step they can use to engage with and learn from participants.

I think that might be, roll forward one slide please. And we might be ready to hand off, yeah. Next just a†‑‑ maybe we can pause for questions. Having run through that basic set of questions around whether or not a sandbox is kinda the first best tool for tackling innovation challenge we need provide in the tool kit a set of guides for understanding how to design a sandbox that is tailor made for specific jurisdictions and Ivo will run through that. Perhaps I will pause for colleagues if there are questions you would like to address in the chat.

>> Yeah. Ivo has been doing a great job responding and commenting in the chat, so let me just see if there is†‑‑ actually Ivo, anything you want to address verbally? We don't have any specific questions from section two yet.

>> First of all really thank you for all the comments and questions and sharing experiences. This is absolutely amazing. I'm really learning quite a bit about some of the initiatives. I really like that. I wonder of the question (indiscernible) have been answered to the participant satisfaction. I believe so, but we're happy to dive deeper because in addition to the other innovation facilitators like fintech offices obviously regulators have been implementing different strategies how to deal with innovation and regulatory sandbox is a process of looking for a tool. So if there are questions regarding that, please share them in the chat. We can come back to them.

>> That sounds good. I think there will be a way unanswered questions can be followed up with later. Let's move on. Thank you Ivo.

>> All right. Thank you Schan.

Let's move to the designing section. You can go to the next slide. It section is for those who decide that sandbox is something they want to do. I'm not encouraging those who don't want to have a sandbox to sign off but this is making it clear that this is the next step you decide you want a sandbox. The question we try to answer is whether there is any particular design that corresponds to a specific circumstance in which any regulatory sandbox operates.

Nerd in other words does it really matter how†‑‑ or can you take a blueprint from any other country and copy it in your own framework. The reason we ask that question is when you look at the regulatory sandboxes and there are close to 70 or over 70 of them around the world, when you look for, at them from the high level perspective, you will see that they look all alike or all alike. They have five similar design elements that they all share. They define who is eligible for testing, governance structure, they define timing for applications and test, they define restrictions and exit options. Where it gets interesting is that each of the design elements has multiple design choices you can choose from. Our question was are there any sort of external circumstances that drive those choices and are some choices better than others? We have come up with three threshold constraints as we call them which consist of the legal framework, market conditions and capacity. And which we believe are really key to determine what how to design how to design regulatory sandbox. The next slide I hope becomes clearer what I mean. Here we have a more detailed look at those design elements.

I said there are five of them. Let's go quickly through them. Eligibility criteria determines who can test in a sandbox and who cannot. There is a variety of design choices. Some sandboxes are open only to fintech startups or the new entrance. Some are open only to income bents. Some are open to a combination of the two and some are open to firms not existing financial service providers but providing a non-financial solution such as (indiscernible) companies. A great variety of what we see. The same is true for governance, how it operates, who runs it, is it a dedicated unit, a consortium if you will of units of the regulator, a small or large team, how do they communicate, who decides who gets into sandbox, who decides how the sandbox test, how the firm exits the sandbox and so forth. So we could basically go one by one and see the variety of changes that regulators have. Once you combine them across the five elements, you can arrive to different designs of regulatory sandbox. That is why we thought, well, there must be something driving those choices. There must be choices that are better for specific set of circumstances then others. What are those and how do we match them? On the next slide, I will maybe let's go to the two slides back, actually.

I want, yes. So I mentioned those, I mentioned those three threshold constraints. Maybe I should say more where I want to illustrate where the tool kit works. First legal framework, legal and regulatory flame work determines a number of things. First of all whether the regulator can put a regulatory sandbox in place.

And how far they can go in determining eligibility criteria or exit options.

One example.

I think legal framework is essentially (indiscernible) then there is a market conditions where is largely about how many innovations and innovators are operating or potentially interested in the market. Are you operating in a vibrant fintech landscape or do you see just a few innovators that are trying to do something at a small scale? Are you seeing a big interest from outside firms that want to come to your market or is most innovation local and happening locally. These are some of the market conditions. Obviously the capacity of the market to sort of absorb new innovation. And then capacity of the market is also the flip side is the capacity of the regulator to really handle regulatory sandbox. Again it is an initiative that requires certain resources attention and effort. That is regulator have enough capacity to implement regulatory sandbox initiative. When you skip to the next slide, yes, this previous one this will show you what we, can you go to the previous slide please. It will show you what we try to do in the technical guide. We basically came up with pairs of the constraints and design choices. Exactly what I mentioned at the beginning. There are better design choices driven by the threshold constraints. That is just an illustration where we compare high capacity (indiscernible) and high demand as the market conditions threshold constraint†‑‑ if you have a high capacity as a regulate tore and see high demand, you can design your sandbox as a (indiscernible) allowing innovators to apply on an ongoing basis, you create cohorts you launch in a certain period of time. Which allows you to better manage the high volume of applications and interest from the market.

You have a team that focuses on dealing with innovations, walking them through the application†‑‑ and just making sure that the sandbox really handles that high demand. You can afford to have a subject matter expert so that you can open sandbox to whatever innovation may be or whatever innovator may be coming to your sandbox instead of focusing innovation on an area you have expertise. That is something we might talk about later. Difference between sandbox that's welcome any innovation versus†‑‑ this is sort of high deem high capacity and on the opposite side of the spectrum is when the†‑‑ there is also low demand in the market for innovation facilitators. Then probably sandbox is not an option. There is no demand, no capacity. There might be other tools that may be more appropriate in those circumstances such as innovation office, for example.

Again, when you go to our tool kit, we go by sort of one by one and talk about the design choices. This is something I will quickly address. The exit scenarios.

That is one of the key design elements and it is also the one that is quite effected by the legal and regulatory framework. What can happen once the sandbox test is over? The exit scenarios that we are talking about. You see at the middle of the schematic, of the scheme is three options, test fails, test is discontinued or test is successful. I will focus on what happens when the test is successful because that is the desired outcome. Even if it is successful, there are multiple options how the if I remember can exit from the sandbox or what can happen in response. Regulate tore may decide to issue a cease and desist order. It may not be appropriate or beneficial to the market. The other option is the regulate tore may decide to grant license or other form of approval.

Under the existing licensing or authorization options. So that is almost like the smoothest scenario. Test is over, regulator sees, okay, I can license this as financial advice, for example, grant license and firm exits and operates in the mark. Where we think what we would like to see probably more as an exit scenario in the context of what Schan was talking about is where†‑‑ points to a need of regulatory change. That may mean adopting new rules or adjusting how rules are implemented or interpreted. This is a tricky one. Regulators need to know what is going to happen if at the end of the sandbox test the only option is to come up with the new rules. Before the firm can hit the marketplace.

Before the if I remember really exits from sandbox. And final scenario, it is really later finds that the innovation is completed outside of the (indiscernible) because it belongs under jurisdiction of another regulator or it is not an activity that should be regulated.

Let me pause. This is pretty much for the design section. Let's see whether there are any questions before we move on.

>> Yeah. There is one question that is distinctly related to talking through how these are designed. The question is amongst sandbox that's have actually resulted in regulatory change, I'm interested to know what they have in common. What are factors like resources, design, market update that make it likely to progress from sandbox to regulatory and legal change.

>> Uh‑huh. Yeah. Great question. It's a question that I probably haven't really paid attention to yet. Running quickly through the examples that I am aware of, I would say that one of the commonalities is first the (indiscernible) regulatory sandbox is likely to result in regulatory change. It is the expectation it will. Regulators are setting up sandbox knowing or understanding that what they want to do with sandbox is to promote a certain regulatory change. And that comes with intentionality of how the sandbox is designed and how the test is run so that it really yields insights that can be used in the regulatory change process. I can give two examples. One is the equity crowd funding regulatory sandbox in Kenya that allows equity crowd funding to test and one of the inputs that informed the regulatory framework for (indiscernible) funding there. There is another example from Malaysia†‑‑ test results were used as one input in the regulatory change process. I will understand underscore it was not the only input.

>> Great. Thank you for interest of time, we will move to Schan and there are a couple more questions we can address in the chat or in follow up.

>> Great. Thank you all. And maybe also in the interest of time, will I suggest that we skip forward in this section to slide 41.

This is just really to introduce the actual tool kit that we have created here in the guide and just to talk briefly about the structure of the instrument and then also have how we imagine particularly technical assistance providers using this tool kit in the cob text of their client engagements. If we can roll forward to the next slide.

Great. So, we will provide a link in the presentation.