



Beyond Sticky Floors

Overcoming behavioural barriers to
utilising digital tools for women necessity
business owners



**PULSE
STORIES**

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PART 01

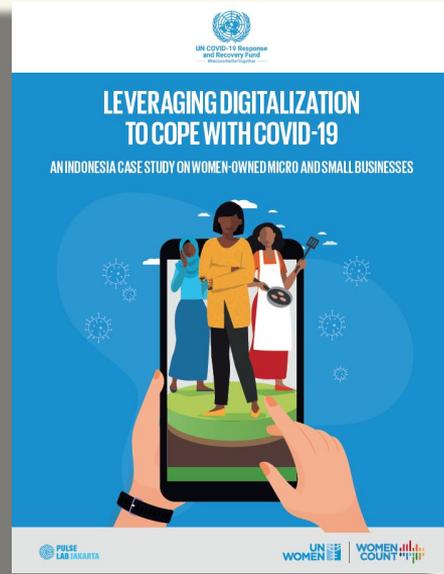
Setting the Context



The COVID-19 pandemic has accelerated digitalization among micro and small business in Indonesia.

Women business owners are at the forefront of adopting digital tools to keep their businesses afloat during the pandemic.

In December 2020, UN Women and Pulse Lab Jakarta published a joint policy research report titled “Leveraging Digitalization to Cope with COVID-19” on the gendered impact of COVID-19 on micro and small businesses (MSBs) in Indonesia. The report highlights that the use of digital tools – from digital platforms and online marketplaces, to messaging apps and social media – has become a key coping strategy in helping women to keep their businesses afloat during the pandemic. This phenomenon is especially important given that women business owners tend to have fewer coping strategies compared to men.



To access the report, click [here](#).

PROPORTION OF BUSINESSES USING INTERNET TO SELL PRODUCTS (2020)

54%

Women-owned *micro* businesses use the internet

46%

Women-owned *micro* businesses do not use the internet

68%

Women-owned *small* businesses use the internet

32%

Women-owned *small* businesses do not use the internet

Source: Statistics Indonesia (BPS)

Digitalization is not equally benefiting all micro and small businesses. For many women business owners, the barriers to utilising digital tools are behavioural.

Many micro and small businesses (MSBs) in Indonesia still experience difficulties accessing digital tools - especially in rural areas. However, we found that access in addition to affordability are not always the only issues.

For many MSB owners who have access to supporting infrastructure and are already using technology for personal needs, the barriers to utilising digital tools for their businesses are behavioural.



Women Necessity Business Owners

Policy makers often group micro and small businesses into one large category, but understanding their characteristics can help to distinguish their needs and design more effective services. Our research indicated that based on business orientation, MSBs can be divided into necessity businesses and growth-oriented businesses. For the purpose of this research, we focused on necessity business owners* because...

They make up the majority of Indonesia's MSBs.



According to The World Bank (2016), women necessity businesses make up the majority of MSBs in Indonesia.

They contribute significantly to household income.



They run their self-operated businesses from home and contribute to household income (which has become particularly significant during the pandemic).

They experience increasing challenges in using digital tools.



Due to increasing business and domestic responsibilities during the pandemic, exploring and adopting digital tools has not been easy.

They face time and mental constraints.



Time and mental constraints due to business and domestic responsibilities tend to inhibit learning opportunities.

*The women necessity business owners that we met are from the food and beverage sector. Women business owners who fall in this category often are the sole operator of their businesses that are run from home. They typically start their own business out of necessity, owing to lack of opportunities in the formal labour market (World Bank, 2016).

OUR FOCUS

Digital Tools

In this research, digital tools refer to online applications that support/facilitate business activities - which includes facilitating transaction between vendors/merchants and customers.

We are particularly interested in understanding the relationship between women necessity business owners and digital tools, including the perceptions, emotions and behaviours of women business owners who use them.

Social Media

Apps that facilitate the creation or exchange of information, ideas, interests, and other forms of expression via virtual communities and networks

Platforms

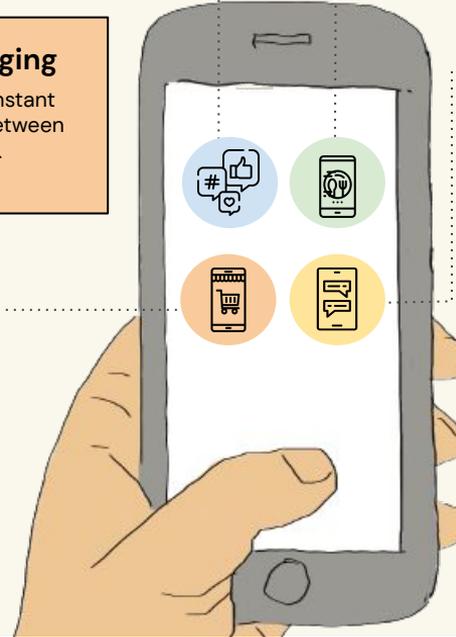
Apps that mediate work or services between service providers and customers.

Instant Messaging

Apps that provide instant chat / messaging between two or more parties.

Marketplace

Apps where vendors can come together to sell their products or services to a curated customer base.



The invisible behavioural barriers preclude women necessity business owners from unlocking the full potential of digitalization, which could help their businesses keep afloat during the pandemic, even when structural barriers (e.g infrastructure, network coverage) are no longer the salient issues.

OUR OBJECTIVE

A Deep Dive into the Behavioural Barriers

One of the key policy recommendations based on findings in the research is to *expand women entrepreneurship opportunities* through digital marketing and training platforms.

Using a **human-centered design lens**, this follow-up research aims to further expand this recommendation by articulating insights from the research on behavioural barriers to tech utilisation, and identifying opportunity areas for organizations that are providing capacity building and services for women necessity business owners in Indonesia.



How might we support women necessity business owners to overcome behavioural barriers to utilising digital tools for their businesses?

OUR APPROACH

Human Centered Design

Human centered design is a problem-solving methodology that allows researchers to empathise with the users' experience. This methodology enables the uncovering of respondents' needs, desires, pain points and experiences – to identify opportunities and solutions to address specific challenges. This is the lens we used to revisit the qualitative data that had been collected in our joint policy research with UN Women.

METHODS

In-Depth Interview

Digital Observation

TOOLS

Remote interviews conducted via various communication platforms.

Digital observation of business profiles on social media, marketplace and digital platforms.

GENDER PROFILE



24 women-owned business owners



16 men-owned business owners

DIGITAL TOOLS PROFILE

26 are platform users

05 are marketplace users

05 only use social media

04 are completely offline

FOCUS AREA: URBAN & PERI URBAN

We focused on urban and peri urban areas to better understand how behavioural barriers prevent women business owners from tapping into the opportunities of leveraging digitalization for their businesses, even when they are operating in a region where structural barriers (such as internet infrastructure, network coverage) are no longer the key limiting factors.



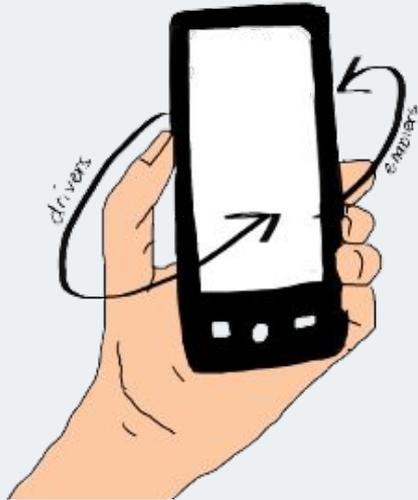
PART 02

What We Learned



Key Insight

01



PERCEPTION

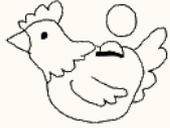
Women necessity business owners need to fully understand the risks and benefits of using a particular digital tool before deciding to sign up.

WHAT WE LEARNED

Several drivers and enablers have emerged during the pandemic that have motivated women necessity business owners to give digital tools a try.

Instant messaging apps, social media, digital platforms and online marketplaces are increasingly becoming part of women's day-to-day personal lives. Even without fully understanding the requirements to use these digital tools or their risks and benefits, a number of drivers and enablers exist that are motivating women to trial digital tools for their businesses during the pandemic.

Drivers



Financial Pressure

"The stores that usually sell my snacks have closed during the pandemic. I've got to be creative to keep money coming in, so I started trying out various digital tools for my business."



Social Norms

"During the pandemic, I see a lot of people using digital tools as part of their business. I think this is worth trying to make sure my business keeps going too."

Enablers



Low Barrier to Entry

"Signing up to use the App is quite easy. I just follow the step by step instructions and it doesn't cost me anything."



Tech Facilitators

"My children introduced me to social media. They see it as an innovative tool that can help the business reach younger customers. I thought why don't I give it a try. If I encounter any error, I go to my children for help."



Technology facilitators are pivotal in enabling women necessity business owners to adopt and use digital tools during the pandemic. They are not formal agents, but rather trusted family members or friends who are perceived as more tech-savvy.

Inspiring



Stories of their positive experiences encourages women necessity business owners to give digital tools a try.

Guiding



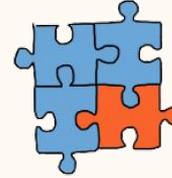
They facilitate the adoption process, by guiding women through the sign-up process, providing walkthrough of the tools' features, and showing examples.

Troubleshooting



They are able to quickly respond to women's requests for help whenever a problem arises.

Gap Filling



They can provide temporary stop-gaps to help women meet the requirements for using a digital tool, e.g. taking photos, uploading a menu.

Empathising



There's no such thing as a stupid question; no problem is too trivial. After all, they are close relatives and friends.



The role of technology facilitators are informal and temporary. This means that they typically rely on their experiences and are not able to give advice beyond what they know. In addition, they may not be available to help further down the road.

Key Insight

02



I downloaded this App after it was recommended by a friend. I thought why not? At first it seems quite easy and okay to use, then one day I could not find a way to update my price list. So that was it for me, I stopped using it.

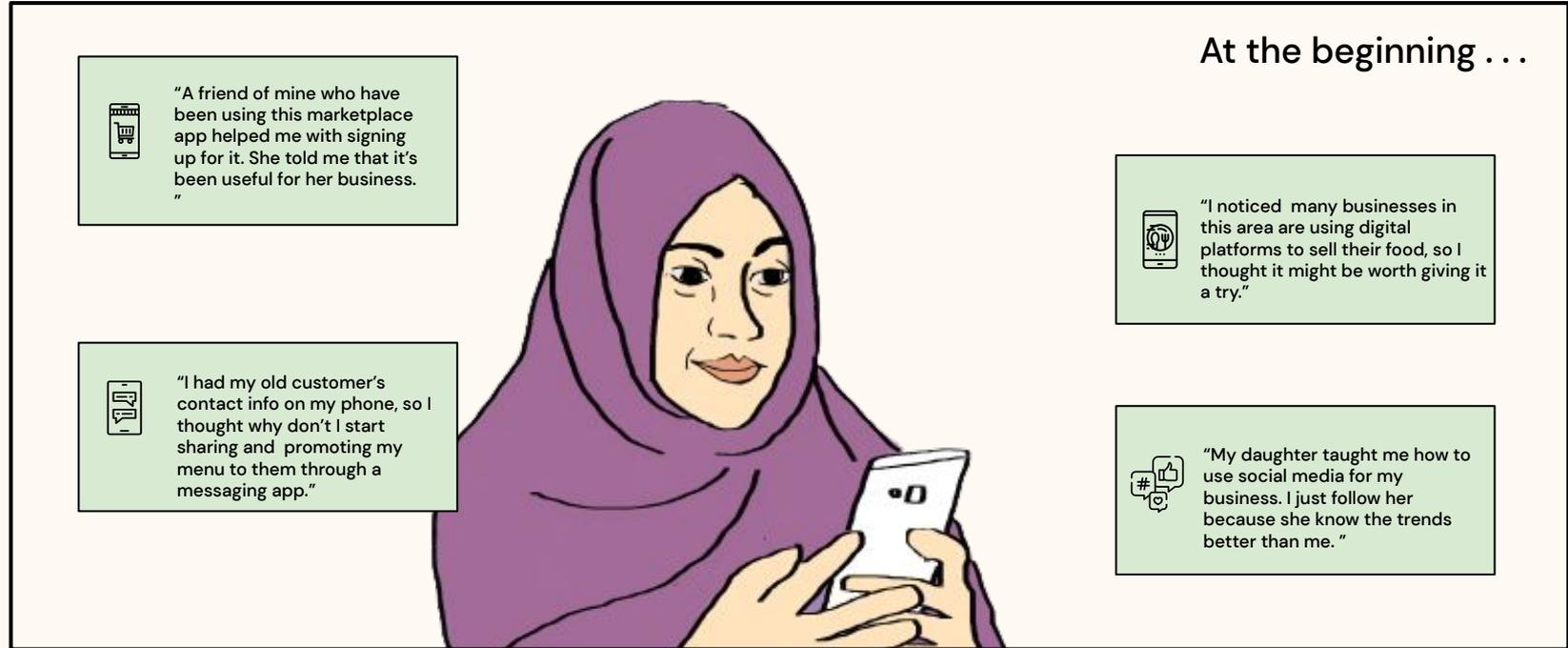
PERCEPTION

Women necessity business owners benefit from structured training on how to navigate the complexity of using digital tools.

WHAT WE LEARNED

Women necessity business owners prefer learning by trial – but not necessarily by error.

Women necessity business owners are juggling increased domestic responsibilities whilst running their businesses from home during the pandemic. Rather than spending time and energy participating in a training session, they would prefer trying out different digital tools on their own and figuring out along the way whether these tools match with their needs and current situations.



At the beginning . . .

 "A friend of mine who have been using this marketplace app helped me with signing up for it. She told me that it's been useful for her business."

 "I had my old customer's contact info on my phone, so I thought why don't I start sharing and promoting my menu to them through a messaging app."

 "I noticed many businesses in this area are using digital platforms to sell their food, so I thought it might be worth giving it a try."

 "My daughter taught me how to use social media for my business. I just follow her because she know the trends better than me."

She is quick to drop a digital tool. If she perceives that a digital tool requires too much effort to maintain or when she is stumbled upon a problem, she will stop using the tools, unless she has consistent help from a technology facilitator.



After some time . . .

 "A friend of mine who had used this marketplace app helped me sign up, she told me that it's useful for her business. I stopped using it after a few sales because I was surprised by the cut, let alone I can't have time to manage it all by myself."

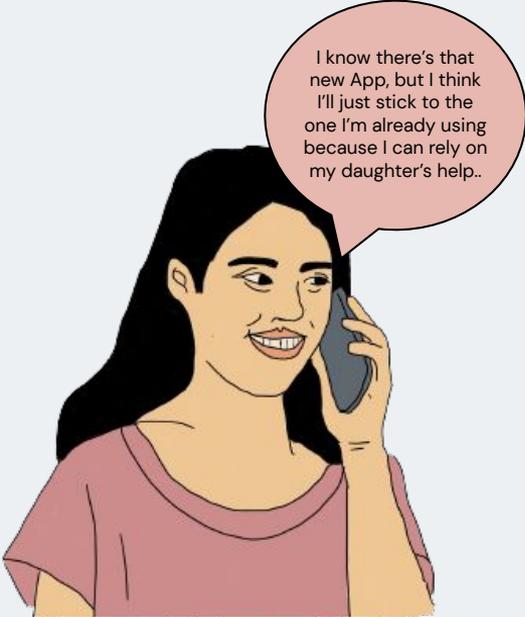
 "I had my old customer's contact on my phone, so I thought why not start promoting my menu to them through messaging app. I just need to chat them, so this is easy for me to keep doing"

 "My daughter taught me to use social media for business. I just follow her because she know the trend better than me. But, I noticed that I have to take good photos and post daily so your business will get noticed, but it's too much effort for me"

 "I saw many business in this area uses platform to sell their food, and I thought I think it's worth trying. So far it is manageable for me and really help me to reach more customers."

Key Insight

03



I know there's that new App, but I think I'll just stick to the one I'm already using because I can rely on my daughter's help..

PERCEPTION

As they get used to digital tools, the digital capabilities of women necessity business owners will continue to improve.

WHAT WE LEARNED

There exist specific behavioural barriers that inhibit women from expanding their capabilities to using digital tools for their businesses.

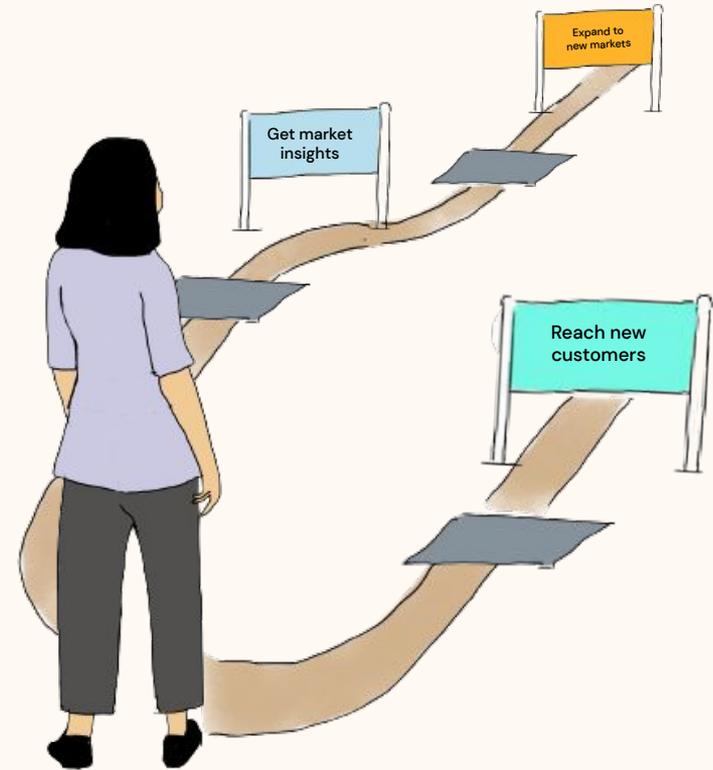
At its core, tech adoption and usage is a matter of changing habits.

Improving digital capabilities – the emotional, cognitive and physical abilities to use digital tools in ways that bring benefits – require continuous behaviour change.

Whilst many women necessity business owners are opening up to new ways of doing things due to the pandemic, they often lose motivation quickly and fall back to well ingrained and already comfortable routines. The cognitive overload brought on by the pandemic-induced stress also plays a role.

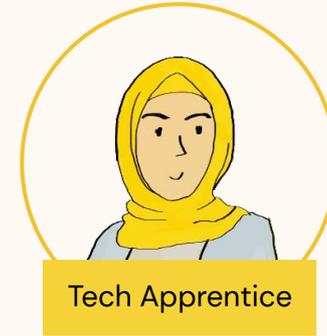
We noticed an emerging pattern in women necessity business owners' behaviour towards adopting new digital tools: depending on where they are in their digital capabilities journey, these women face specific behavioural barriers that are holding them back from growing more comfortable and skillful in using digital tools for their businesses.

This is what we mean by '**sticky floors**', which inspired the title of this report.



Digital Capabilities Journey

We identified four archetypes of women necessity business owners, based on where they are in their digital capabilities journey (the level of comfort and skills in adopting and using technology for business purposes). Each archetype has their own 'sticky floors', which again are behavioural barriers that are preventing them from growing in their digital capabilities journey.



increased digital capabilities (the level of comfort & skills in adopting and using technology)

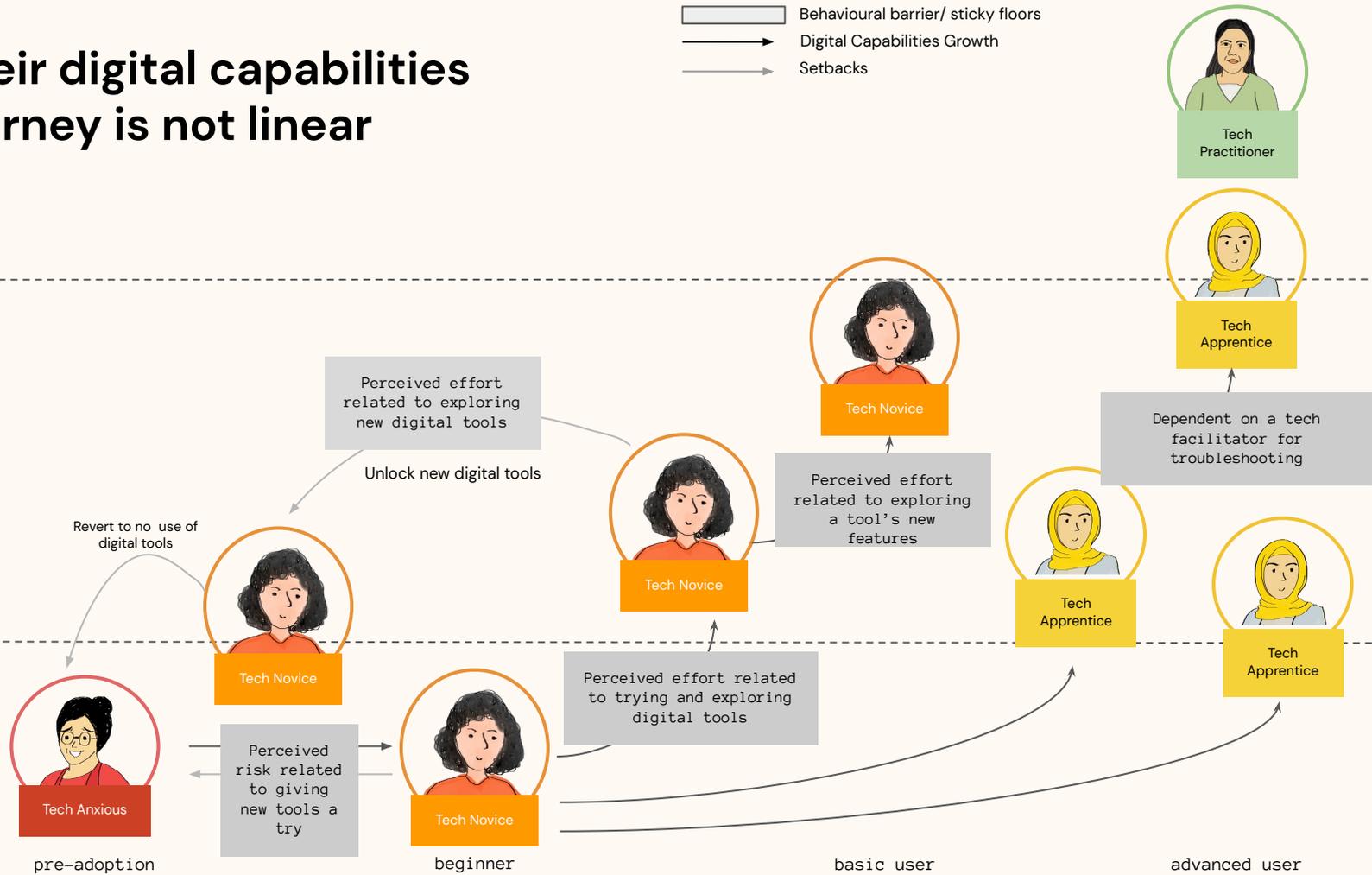
Their digital capabilities journey is not linear

Independent of tech facilitators

Partially dependent on tech facilitators

Dependent on tech facilitators

- Behavioural barrier/ sticky floors
- Digital Capabilities Growth
- Setbacks



Meet The Behavioural Archetypes & Their Sticky Floors



Tech Anxious

I am aware of potential benefits of using digital tools, but the last thing I want to do is to take unnecessary risks that could affect my business by trying the unknown.

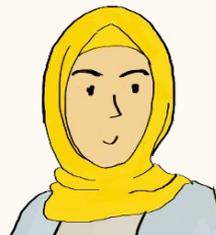
Risk Aversion



Tech Novice

I know what options are available and understand what's required, but I prefer to stick with what I'm most familiar with since doing so requires the least amount of effort.

Perceived Effort



Tech Apprentice

To survive is to adapt. Effectively using digital tools for business requires a lot of effort, but thanks to my daughter's help I'm able to learn the ropes.

Dependence on Tech Facilitator



Tech Practitioner

I am confident about using and navigating the app on my own. I have a good grasp of things and trust my ability to figure things out and solve any problem.

How can we help them overcome these barriers?

We leveraged selected behavioural economics principles to complement our ideation process, and adapted Bridgeable's [designing for behaviour change framework](#).



Behavioural economics allows us to **identify** specific decisions or behavioural barriers, as well as key moments to nudge users' outcomes – keeping in mind that each archetype faces different challenges.

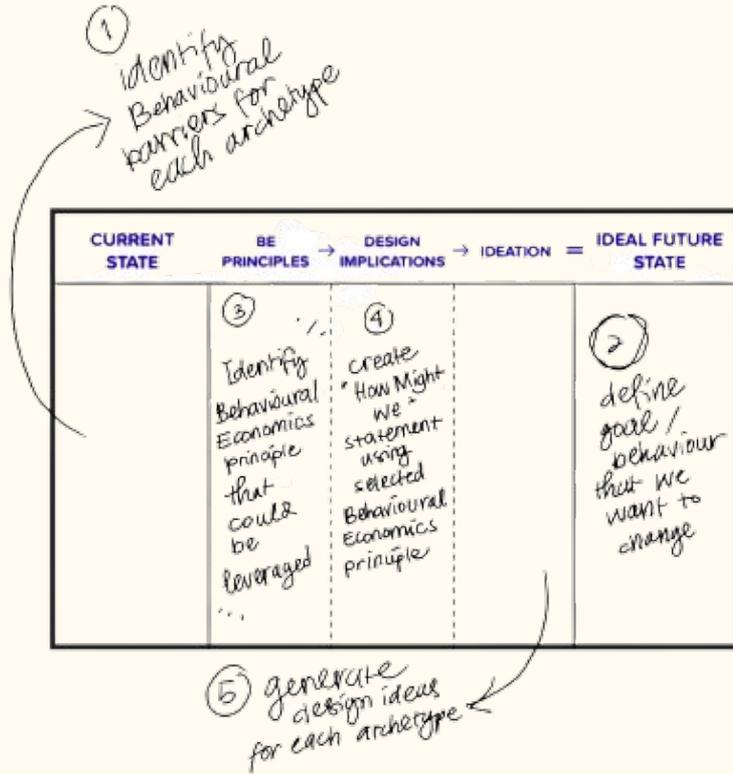


Behavioural economics could be used to boost the behavioural change framework, which could **complement a design process** by tweaking pivotal moments of decision making. In our case, behavioural economics helps us to sharpen our design solutions and tweak specific behavioural barriers that we had identified in each archetype.

PART 03

Opportunities for Design





In this section, we explore opportunities that can help women necessity business owners to overcome the behavioural barriers to adopting and using digital tools – essentially getting beyond their sticky floors – through a process that is supplemented with principles of behavioural economics (BE).

Keeping in mind that each of the archetype of women necessity business owners we identified has specific behavioural barriers, we focused our exploring ideas specifically linked to each of them.

Building upon the behavioural change framework, we chose one particular behavioural economics principle that we thought was most suitable, and from which we generated a set of design ideas. We chose to showcase this process to illustrate how principles of behavioural economics can address an archetype's specific behavioural challenge.

However, we acknowledge that in order to realize this goal, further exploration, iteration and testing are essential. We hope that the design ideas we presented here might inspire and entice you to explore the application of behavioural economics principles in your own context!

When reading through the briefs & design ideas, we suggest to do so as a:

Service Provider



Service providers are those who own and run digital services that accommodate women necessity business owners.

Example: tech companies providing a platform and marketplace for micro and small businesses

Training Provider



Training providers are those who provide training and/or learning programmes designed to empower women women necessity business owners.

Example: non-governmental organisation or government entities that provide training for micro and small businesses.

In the process of ideating design opportunities, we envisioned designing for both service and training providers who are already working with and for women necessity business owners, as well as have the ability to implement the ideas. You are most welcome however to take the ideas and adjust them to your context.

OPPORTUNITY 01 / TECH ANXIOUS



How Might We (HMW)
Help the **Tech Anxious** to
Start Using Digital Tools?



Tech Anxious

“

I am aware of potential benefits of using digital tools, but the last thing I want to do is to take unnecessary risks that could affect my business by trying the unknown.

Her Story

The Tech Anxious has never had an experience using digital tools for her business. Her main obstacle is the perceived risk likely to result from adopting these tools. Her thought process on whether to adopt digital tools is influenced solely based on her past experience, knowledge, and intuition.

She is concerned that adopting digital tools might exacerbate the issues her business is facing in the pandemic. This fear is compounded by “negative” experiences from people around her, the lack of confidence in her own ability to overcome the perceived risk, and potential hidden costs related to using the tools.

Her Sticky Floor

Risk Aversion

Her Challenge

Start Using Digital Tools

HMW Help the Tech Anxious to **Start Using** Digital Tools?



Behavioural Economics Principles for the Tech Anxious

Social Proof

Social proof refers to our tendency of wanting to be like everyone else and is heavily influenced by what we perceive everyone else is doing. In the case of the Tech Anxious, her thought process is compounded by negative stories from her immediate networks that influence her reluctance towards the use of digital tools.

Considering that she tends to follow what her peers are doing, why don't we use this channel to share positive stories instead of negative ones?

HMW amplify positive stories or experiences from her social networks about the utilization of digital tools?

HMW amplify positive stories or experiences from her social networks about the utilization of digital tools?



A Concept to Try

Neighbourhood Offline Campaign

The main barrier preventing the Tech Anxious from adopting digital tools is the existence of a perceived risk. They believe that using digital tools may put their businesses at risk, due to hidden costs, among other factors. Their beliefs are compounded by the “negative” experiences of those in her immediate surroundings (such as family members, friends, neighbours). Without looking at the other side of the coin, these “negative” experiences become the basis of their decisions.

This campaign concept works as counter narrative, by promoting positive influences from her physical and social surroundings. The application of this concept allows the Tech Anxious to directly see and hear tangible benefits and positive stories about using digital tools from her immediate surroundings. Additionally, employing an **offline** approach is better for the Tech Anxious since she still lacks experience and has a low level of trust about using digital tools.

Embedding a principle of BE into the concept

Social Proof

- Tapping into the Tech Anxious’ immediate social networks.
- Increasing the Tech Anxious’ direct exposure to positive stories from their immediate social networks.



Neighbourhood Offline Campaign

This concept can be translated into the following ideas:



Neon Box

Service providers can give a neon box for women necessity business owners who use digital tools to be displayed at their business locations. The neon box can contain a slogan or positive message of encouragement about adopting digital tools. Aside from being an expression of appreciation and a 'badge of honour' for the business owner, the neon box can also send a message to the Tech Anxious that real people around her are using and benefiting from digital tools, therefore acting as a social proof that this is a strategy worth trying.

Neighbourhood Offline Campaign

This concept can be translated into the following ideas:



Local Tech Champion

Local Tech Champion is an award given to a woman necessity business owner who has succeeded at using multiple digital tools for their business. This award can be given either by a service provider or training provider. The more local tech champions that exist, all the better because this creates an environment for the Tech Anxious in which those in their immediate surroundings are reaping the benefits of digitalization.



Regular Sharing Sessions

Regular sharing sessions can be manifested in various ways. A service or training providers can host a monthly session between existing users and non-users. The existing users can share their experiences in using digital tools for their business. This avenue allows the Tech Anxious to ask burning questions they might have in mind to the service and/or training providers as well as existing users. This strategy can be implemented by both **service providers and training providers.**



How Might We (HMW) Help the **Tech Novice** to Keep Exploring Digital Tools?



Tech Novice

“

I know what options are available and understand what's required, but I prefer to stick with what I'm most familiar with since doing so requires the least amount of effort.

Her Story

The pandemic has impacted her business, resulting in fewer sales channels due to physical distancing measures and loss of income. To cope during the pandemic, she believes it is important to adopt new digital tools, especially if signing up is free. However, she is cautious about which tools to adopt and needs to have enough clarity about how they work to help her decide.

This process sometimes demotivates and discourages her from giving new digital tools a try. Her inspiration to adopt and use digital tools comes from technology facilitators, her community and support groups, as well as from women business owners with similar background.

Her Sticky Floor

Perceived Effort

Her Challenge

Exploring Digital Tools for Her Business



HMW Help the **Tech Novice** to Keep Exploring New Digital Tools that Best Suit Her Business?

Behavioural Economics Principles for the Tech Novice

Opportunity Cost Neglect

People tend to ignore what they give up when they make decisions. In the case of the Tech Novice, whenever she becomes overwhelmed with exploring a digital tool, she tends to quickly abandon it altogether without considering the opportunities they might be forgoing.

Why don't we mitigate such tendency, by highlighting success scenarios to demonstrate what she could achieve if she's willing to continue exploring digital tools for her business?

HMW highlight success scenarios to help her consider achievements that might be possible for her business by using digital tools?

HMW highlight success scenarios to help her consider achievements that might be possible for her business by using digital tools?



A Concept to Try

Future Business Possibilities

The tech Novice is cautious when deciding which new apps to try. She believes trying out new apps could potentially add more hassle to her already busy schedule. In addition, this mindset limits her willingness to explore and use digital tools that could benefit her business.

This concept works by informing the Tech Novice of multiple alternate success scenarios that could play out based on her decisions whether to continue utilising a digital tool. These scenarios allow her to explore possible achievements **if she decides to start** exploring other digital tools other than the existing ones that she had used. Presented with more scenarios, the Tech Novice can be more informed and take into account these possibilities.

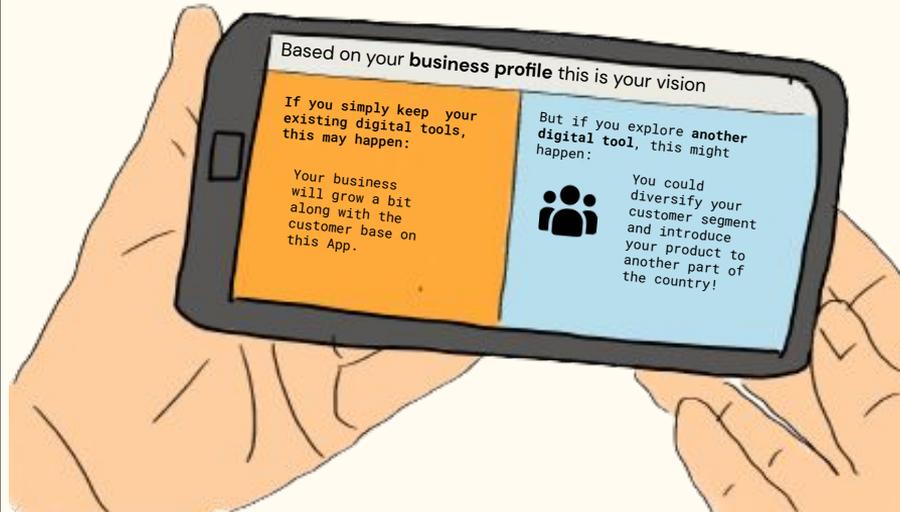
Embedding a principle of BE into the concept

Opportunity Cost Neglect

Highlighting alternate success scenarios in response to her decisions to stop using digital tools, through the channel of a motivational reminder, support group and/or sharing sessions.

Future Business Possibilities

This concept can be translated into the following ideas:

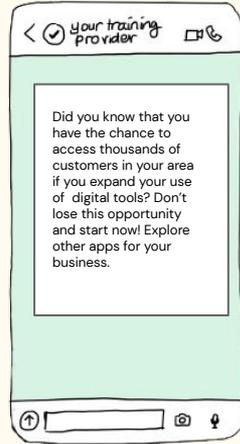


Future Visions: My Business Possibilities

Future Visions is a feature integrated on the learning programmes' websites provided by **training providers**. Through this feature, the Tech Novice could select toggles consisting of types of digital tools and play with **different** alternate scenarios (based on characteristics of the business and choice of digital tools). These scenarios could help her consider possible opportunities which she would be otherwise missing out on if she chose not to explore digital tools for her business.

Future Business Possibilities

This concept can be translated into the following ideas:



Motivational Reminder

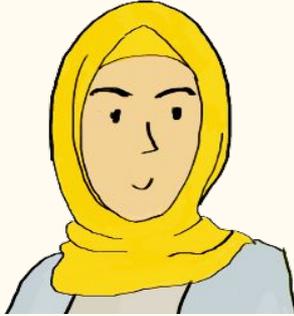
The motivational reminder is a regular message sent to the Tech Novice by a **training provider** with content focused on informing her about various alternate scenarios of success. These scenarios highlight what could actually be achieved if they decide to keep exploring various digital tools, such as business growth trajectories. The message would be sent in various formats to increase the engagement and reach such as text messages, posters, comic strips, and other interactive formats.



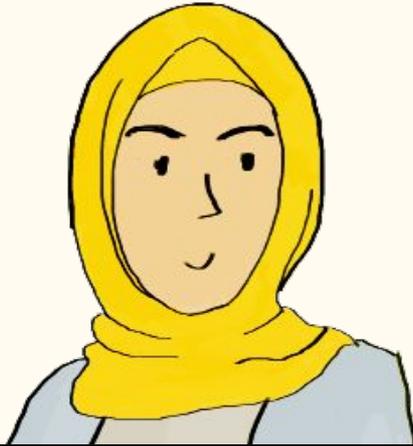
The Tech Explorer Workshop

Using the Tech Novice's existing learning habits, we could integrate the opportunity cost neglect principle by designing a workshop that aims to help the Tech Novice become aware of other possibilities or scenarios that could play out for her business if she decides to keep exploring other digital tools. The training provider is better positioned to try this idea by integrating this concept into their existing learning programmes.

OPPORTUNITY 03 / TECH APPRENTICE



**How Might We (HMW)
Help the **Tech Apprentice**
to Become Self-Reliant
When Using Digital Tools?**



Tech Apprentice

“**To survive is to adapt. Effectively using digital tools for business requires a lot of effort, but thanks to my daughter’s help I’m able to learn the ropes.**”

Her Story

The Tech Apprentice loves to explore and is not afraid to experiment with digital tools. She has had prior success in using technology, and a tech facilitator has assisted with both her business and how to use the technology. In deciding whether to adopt digital tools, she is mainly influenced by a sense of pride that comes with being in on the latest trends.

During the pandemic, she has experienced revenue loss. As a result, she believes it’s best to stick to the habit of using digital tools that can help in overcoming the challenges brought on by the pandemic. Whilst she is not afraid of exploring on her own, she tends to rely on the help of her tech facilitator, especially for troubleshooting issues. If the tech facilitator is not present, her willingness to explore and harness digital opportunities on her own becomes inhibited.

Her Sticky Floor

Dependence on Tech Facilitators

Her Challenge

Becoming Self Reliant

HMW Help the Tech Apprentice to Become Self-Reliant When Using Digital Tools?



Behavioural Economics Principles for the Tech Apprentice

Gamification

People like to play games! They will go to great lengths playing a game, even if the rewards are just points. In the case of the Tech Apprentice, they are often tempted to ask for help from their facilitators whenever they encounter an issue. This then decreases the chance of trying to problem solve on her own. Why don't we leverage gamification to give her a chance to try new tools and features without relying on others?

HMW gamify troubleshooting to develop her self-reliance?

HMW Gamify Troubleshooting to Develop Her Self Reliance?



A Concept to Try

Troubleshooting Learning Games

The Tech Apprentice is quite experienced in using the App, but has a habit of relying on the help of a tech facilitator for troubleshooting whenever a problem arise. This concept works to break such habit, by helping the Tech Apprentice to learn, become familiar with and be more prepared to deal with troubleshooting on her own.

This concept translates learning materials on troubleshooting in a gaming format. And to make the learning process more attractive, engaging, and motivating, this concept integrates gamification elements such as rewards or incentives, progression and storylines. Moreover, by converting the learning material into a gaming format, this concept can entice the Tech Apprentice to play it on her own without help from a tech facilitator. Doing so would gradually build her confidence and develop her self-reliance.

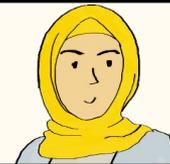
Embedding a principle of BE into the concept

Gamification

- Translating learning materials into games (or with gamification elements) with storylines, simulations, sounds and videos.
- Adding rewards and/or incentives scheme into the learning process to engage and motivate the Tech Apprentice.

Troubleshooting Learning Games

This concept can be translated into the following ideas:



Pop-Up Quiz on Troubleshooting

This takes the form of a surprise/occasional in-app game on troubleshooting. The goal is to entice the Tech Apprentice to problem solve on her own through the form of game with rewards and incentives. A **service provider** is better positioned to try this idea, as they can tailored this gaming experience to match a specific App experience.

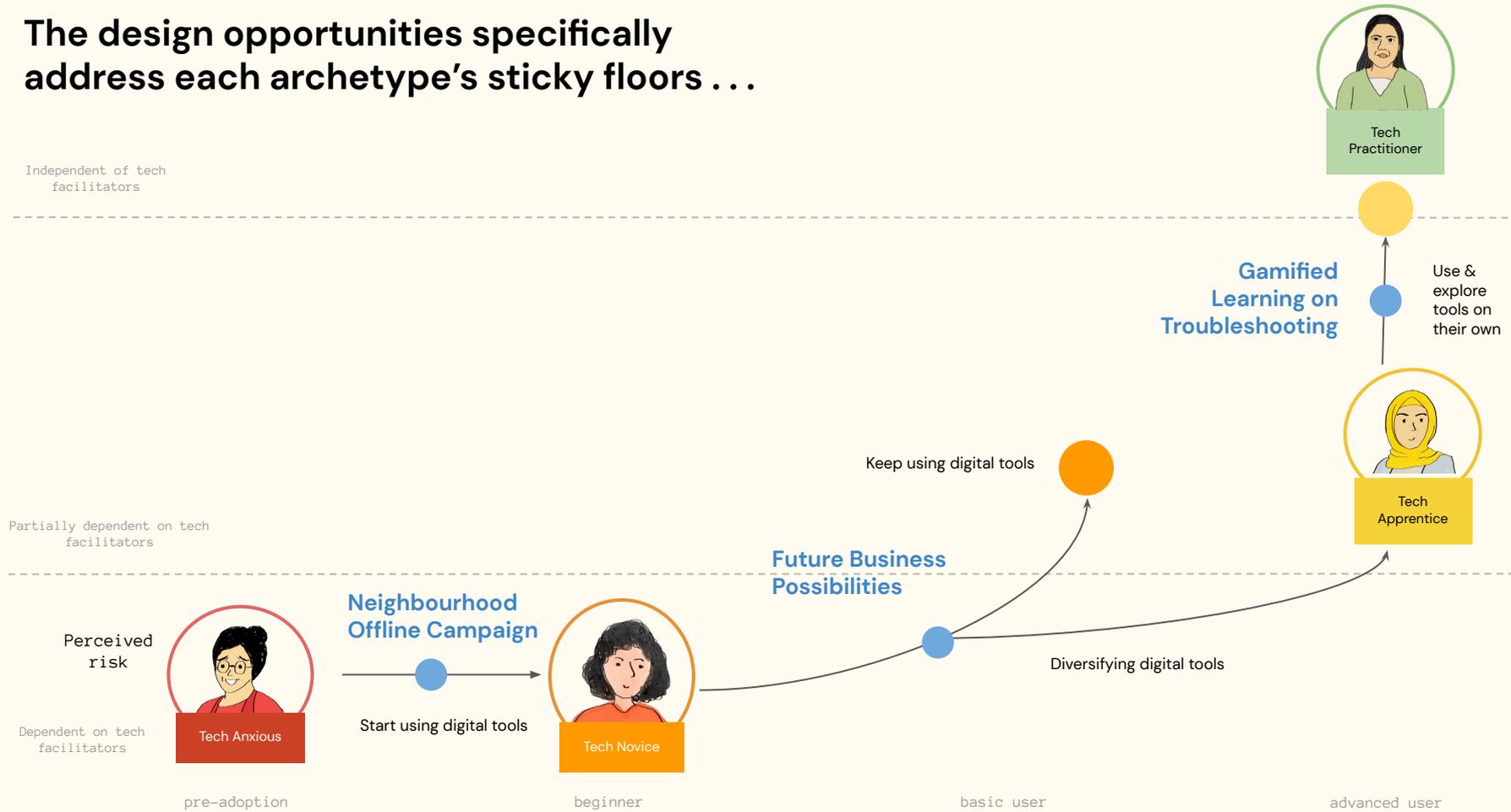


Troubleshooting Curriculum

For women necessity business owners who are already part of an existing learning programme, their business strategy curricula could be combined with **training**. **Service providers** could integrate troubleshooting games geared towards equipping women necessity business owners with technical and practical skills and gradually building their confidence to resolve issues on their own.

The design opportunities specifically address each archetype's sticky floors ...

OPPORTUNITIES FOR DESIGN



...and are intended to help them grow in their digital capabilities journey.

PART 04

Moving Forward



Moving Forward

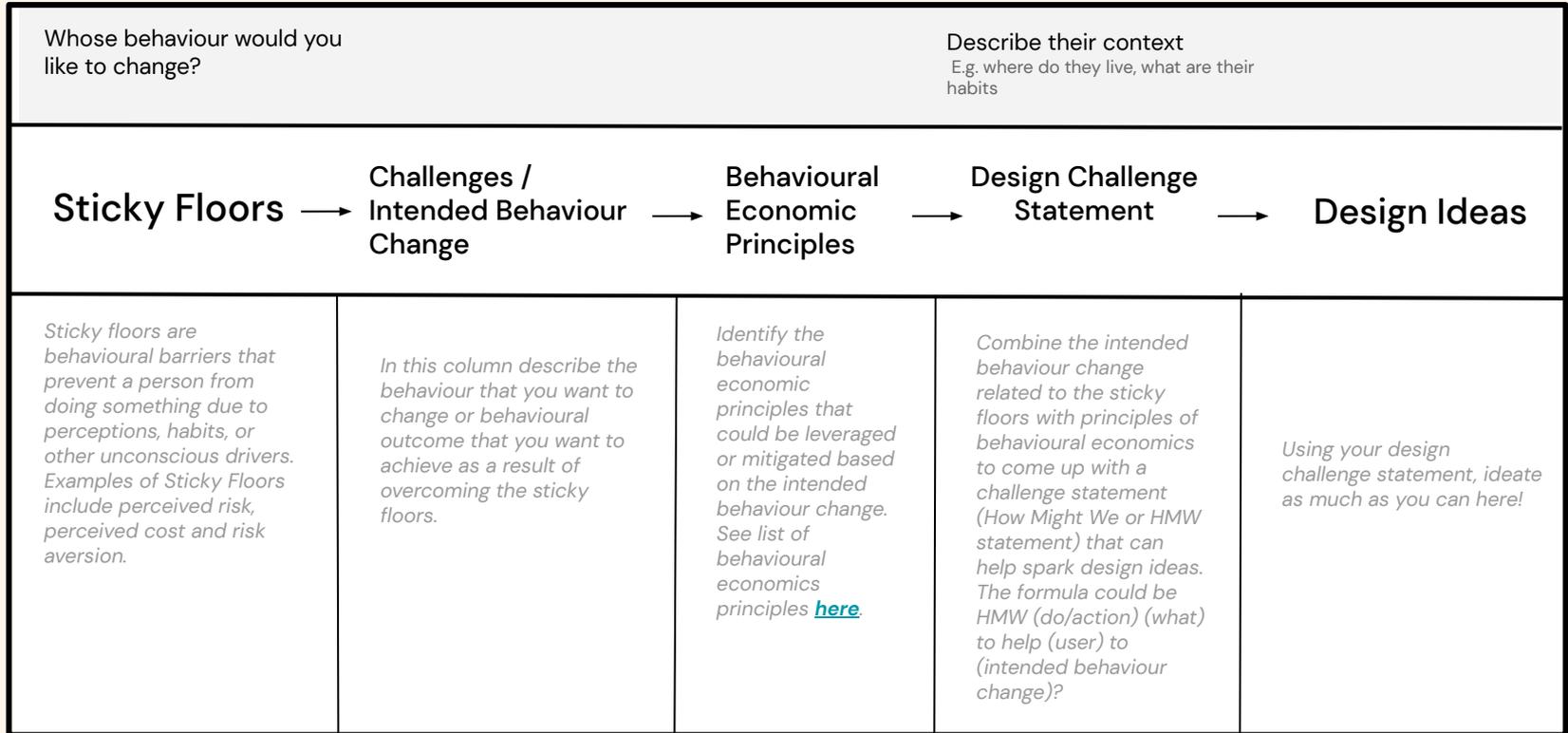
From early in the research, we decided to dive into the behavioural barriers to using digital tools to help expand women necessity business owners' knowledge of and access to technology and digitalization. Intent on designing contextualised opportunities, each concept was crafted specifically to address the sticky floors being faced by each archetype of women necessity business owners. In essence, this is intended to help these women grow in their digital capabilities journey.

In this case, we found that supplementing the process with behavioural economics principles was helpful in generating ideas to help these women necessity business owners to overcome these invisible barriers, or better put, to get beyond the sticky floors. Whilst we have selected one particular principle of behavioural economics to explore, we know that there are other principles that can be leveraged with similar goals in mind. For this reason, we would like to encourage you to further the exploration, starting with the framework that follows on the next page!

We hope this report will shed light on some of the "invisible" challenges that are inhibiting women necessity business owners from unlocking the full potential of digitalization beyond structural ones. Behavioural barriers – which we refer to as the **sticky floors** – are among the challenges that are often overlooked in the discourse on digitalization, yet they can provide insights on salient factors that are keeping women necessity business owners from reaping the benefits of digitalization. We hope that our insights and the design opportunities we presented might entice you to explore this issue further, and we would also like to extend this report as an invitation to apply this concept based on your own context!



Use this framework to brainstorm or feel free to build on ours!



MOVING FORWARD

We adapted this framework from Bridgeable's [designing behavioural change framework](#).

Appendixes

APPENDIX 01

Terminologies & Concepts

Women-owned businesses

The study adopts the following definition/criteria to identify women owned businesses which is based on the most recent National Women's Financial Inclusion Strategy: (1) survey respondents who note a business is owned by a woman; (2) sex of the owner appears in the business registration certificate or business permit; (3) there is no registration certificate or business permit, but the person with managerial responsibilities is a woman; or (4) there is joint male-female ownership of the business and decisions are made by a woman, either jointly or fully.

Women Necessity Business

A woman business owner who falls in this category is often the sole operator of the business that is run from home. She often starts the business out of necessity, owing to limited opportunities in the formal labour market (World Bank, 2016). Women necessity businesses belong in the micro and small business category.

Micro and Small Businesses

As stipulated in Law N.20/2008, the Government of Indonesia defines MSMEs according to their asset values and annual sales. Micro businesses are described as enterprises whose net assets are \leq 50 Million IDR with annual sales/revenue amounting to \leq 300 Million IDR. Small business are defined as enterprises whose net assets are between $>$ 50 Million - 500 Million IDR with annual sales/revenue amounting to $>$ 300 Million - 2,5 Billion IDR. Medium businesses are described as enterprises whose net assets are between $>$ 500 Million - 10 Billion IDR with annual sales/revenue amounting to $>$ 2,5 Billion - 50 Billion IDR.

APPENDIX 01

Terminologies & Concepts

Sticky Floors

Sticky floor is a term that is widely used in economics to describe the low mobility experienced by people who hold low paying occupations on the wage distribution scale. However, in this research, we use the term 'sticky floors' to represent the behavioural barriers encountered by women necessity business owners that inhibit them from progressing in their digital capabilities journey.

Digital Capabilities

Digital capabilities coalesces various elements, such as knowledge, skills, and attitudes. They are oriented towards changing people's behavior through a series of interventions (beyond training model) that could drive people to increase the utilization of digital tools (adapted from Women's World Banking, 2021)

Behavioural Archetype

A behavioural archetype represents a group's needs, motivations and pain points. It captures how they think, feel and act under particular circumstances.

Behavioural Economics

Behavioural economics is a field of study that uses the lens of psychological, behavioural, emotional, and social factors to understand human decision making and particularly posits that people are irrational. Behavioural Economics could be applied to complement a design process by tweaking pivotal moments of decision making to increase the design's success.

APPENDIX 02

HCD : Synthesis Process

Our synthesis process began with revisiting the qualitative data that was collected during our joint policy research with UN Women on the gendered impact of COVID-19 on micro and small businesses in Indonesia. We held several **remote** synthesis sessions to identify patterns, challenges, needs, and pain points using Human Centered Design perspectives that might contribute to design opportunities.

Step 1: Thematic Clustering to Identify Behavioural Barriers

The first step was to uncover insights on challenges faced by women necessity business owners in adopting and utilising digital tools. We noticed that the challenges that prevent women necessity business owner from utilising digital tools were more behavioural than structural – considering that our respondents live in urban and peri-urban areas with high exposure to smartphone technology and access to telecommunications. During this process, we utilized thematic clustering to uncover patterns of behavioural barriers among our respondents.

Step 2: Mapping Behavioural Archetypes

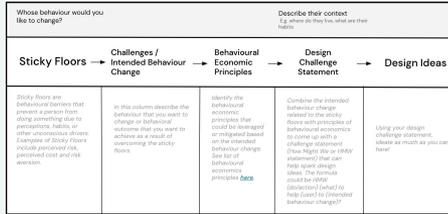
After going through the first step, we noticed emerging patterns of behavioural barriers among the respondents. We decided to further examine these patterns using **behavioural archetypes**. By mapping their level of independence (not needing external support) when using digital tools, we were able to identify four archetypes that include the: *Tech Anxious*, *Tech Novice*, *Tech Apprentice*, and the *Tech Practitioner*. However, we also found that the *Tech Practitioner* represents the ideal case within the digital capabilities journey, and therefore we decided to focus on designing opportunities for the other three behavioural archetypes. These archetypes are not meant to be an exact representation of the respondents that we interviewed, but rather as artefacts that help us making sense of the differences in needs and challenges.

Step 3: Leveraging Behavioural Economics Principles for Ideation

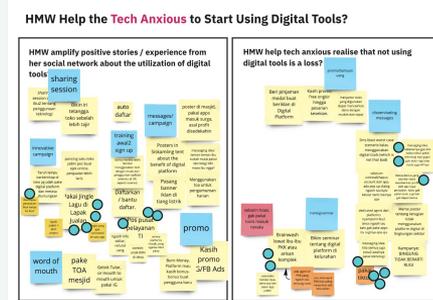
Behavioural economics is one of the behavioural change frameworks that focuses on how human behaviour is nonconscious, habitual and driven by cues in our environment, or the way in which choices are presented. We decided to leverage behavioural economics within the design process considering that the challenges faced by the archetypes are either within their perceptions or driven by habits. To help us integrate this framework within our design process we adapted Bridgeable's designing for behaviour change framework.

APPENDIX 02

HCD : Synthesis Process



The process continues by defining the most suitable behavioural economics principle for each archetype using the framework on the left. We selected one principle for each archetype, which would help us to not only break the behavioural barriers, but also create compelling design opportunities. These principles provided us with feedback on how to create a **design challenge statement** (or HMW statement). However, we acknowledge that there might be other behavioural economics principles that could potentially be leveraged other than the ones that we selected.



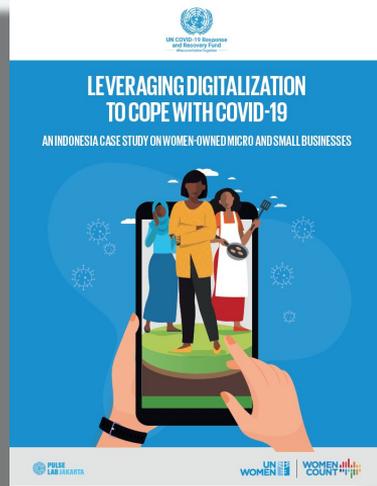
Step 5: Refining Design Ideas

After collecting design ideas from the ideation session, we then conducted a final round of synthesis. In this process, we further refined the ideas by incorporating the ideas that were collected in the ideation session. Through this process, we discovered additional insights related to each archetype's context and worked to ensure the compatibility of each idea. The design ideas presented in this report are meant to be inspirations for the public and relevant stakeholders to adopt and build upon, and are not necessarily positioned as ultimate solutions.

Step 4: Collective Ideation Session

After wrapping up our synthesis process, we organized an internal collective ideation session with members of Pulse Lab Jakarta team. The session aimed to gather actionable design ideas and feedback on our synthesis process. The 16 participants were divided into three groups – each group ideated design solutions for each archetype, using the behavioural economics principles we had identified prior to the session.

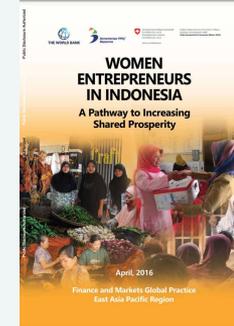
APPENDIX 03 Further Readings



Leveraging Digitalization to Cope with Covid-19: An Indonesian Case Study on Women-Owned Micro & Small Businesses



Designing for Behaviour Change Toolkit: A Guide to Using Behavioural Economics with Service Design.



Women Entrepreneurs in Indonesia: A Pathway to Increasing Shared Prosperity



Empowering Women on Journey Towards Digital Financial Capability



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This design research was only made possible with the generosity of 40 micro and small business owners across Jakarta, Bekasi, Tangerang, Malang, Yogyakarta, Medan and Makassar who shared their time to speak with our research team, providing valuable insights based on their experiences. All the quotations in this Pulse Stories are drawn from interviews, but we have used pseudonyms to protect the privacy of the respondents.

Pulse Lab Jakarta is a joint data innovation facility of the United Nations (Global Pulse) and the Government of Indonesia (via the Ministry of National Development Planning). Functioning as an analytic partnerships accelerator, the Lab operates in the problem, solution, and identity spaces. As part of its mandate, PLJ is focused on catalysing connections across the United Nations, governments, the private and development sectors, as well as civil society to support policies and action for effective development and humanitarian practice.

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