



Five key insights from evaluating Coliba a recycling start-up in Côte d'Ivoire

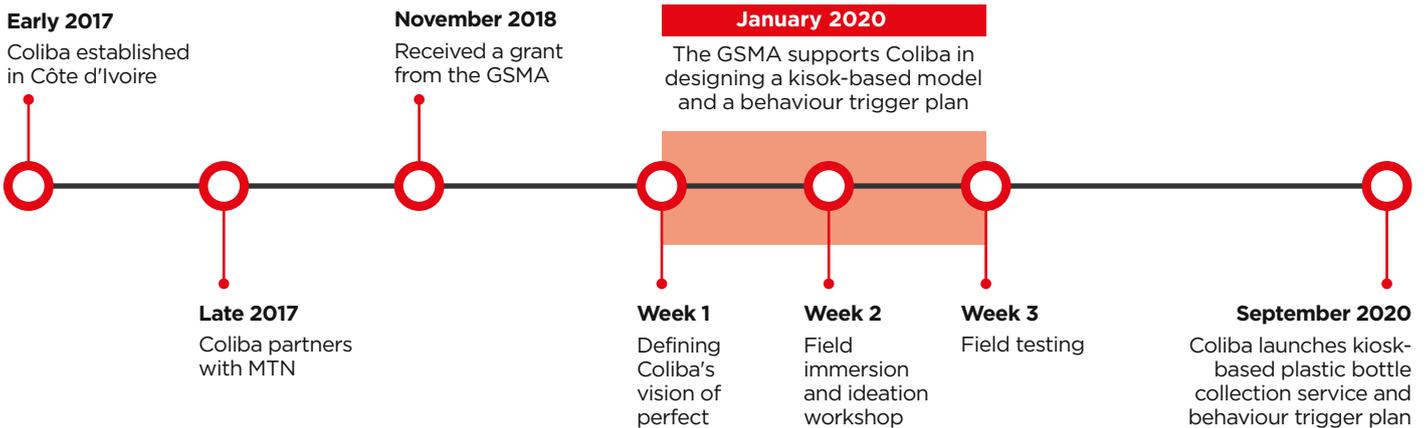


COLIBA'S JOURNEY

In 2017, Coliba first started operations in Côte d'Ivoire, joining mobile operator MTN's Y'ello start-up incubator programme. Coliba also entered into a commercial and co-branding partnership with MTN, offering Coliba users the ability to exchange reward points gained in the Coliba app with MTN data credits. In November 2018, Coliba received a grant from the GSMA Ecosystem Accelerator Innovation Fund (supported by UK Aid from the UK Government) to develop its mobile app and deploy its door-to-door plastic bottle collection service in 10 districts across Abidjan.

Figure 1

Coliba project and design thinking sprint timeline



Coliba aims to tackle three key local challenges:

- 1 Protecting the environment by preventing tonnes of plastic waste from ending up in the natural environment;
- 2 Creating a mindset change among the population by incentivising them to recycle; and
- 3 Fighting unemployment by formalising the waste picking business.¹

Coliba contributes to

Evaluation and sprint purpose

The evaluation reviewed the existing customer journey and identified customer personas, enablers and barriers to service uptake and use. The results were intended to help Coliba understand how to get consumers to regularly recycle their plastic (i.e. change behaviours) and subsequently increase the amount of plastic Coliba collected from households. The prototyping and testing sprint trialled a kiosk-based model to improve collection efficiency and educate people about recycling.

1. Find out more about Coliba in our Ecosystem Accelerator blog: <https://www.gsma.com/mobilefordevelopment/blog/meet-our-portfolio-start-ups-coliba-cote-divoire/>

Who was consulted during field immersion?



A TOTAL OF 103 PEOPLE

- 68 Street interviews
- 11 Customers (to test the customer journey)
- 5 Non-customers
- 6 Women bottle collectors (informal workers)
- 9 Coliba employees
- 4 Other value chain players

Field immersion and prototyping methods used



- In-depth interviews
- Rapid on-the-street interviews
- Focus group discussions
- Shadowing
- Participatory ranking exercises
- Moodboard reactions
- Street testing with over 1000 Abidjan locals



Evaluation insight 1:

Testing assumptions early on in the design sprint helped uncover important behaviours and attitudes towards plastic recycling that informed the rest of the design process.

During the inception phase, Coliba's team mapped out all the key assumptions underpinning the overall product strategy. These were then tested during a field immersion phase. The results were extremely eye-opening and formed the base for ideating solutions for marketing materials and product features later on in the design sprint.

True assumptions:

- ✓ People have some pride in their neighbourhoods that we could leverage;
- ✓ Existing 'cash incentive' rewards may be appealing to some segments (i.e. lower income but not upper income);
- ✓ Groups of people can be activated to recycle together (by road and building);
- ✓ Customers don't know that recycling in Abidjan exists, so they don't do it; and
- ✓ Knowledge about recycling is low and it is therefore not a priority.

False assumptions:

- ✗ People may feel recycling is 'beneath them';
- ✗ Waste/recycling is either viewed as overwhelming or the Government's problem, rather than something an individual can handle;
- ✗ Customers don't know what bottles can be recycled;
- ✗ Customers are discouraged by non-recyclable bottles not being collected; and
- ✗ The reward system is enough to encourage customers to start gathering/collecting bottles.

Certain assumptions, such as whether youth are better positioned to be eco-advocates or whether the lack of digital literacy is a potential barrier, could not be verified and will need to be revisited. It is important to note that sometimes it may not be possible to test all the assumptions, or initial assumptions may no longer be true, so it is important to test for them periodically.



Evaluation insight 2:

Users are not a single homogenous group. Users have different identities, and treating them with empathy and truly attempting to understand their life experiences helped the team understand how the product will need to address different types of customers, for instance, across low and high resource settings.

The field immersion revealed how the needs, preferences and practices differed across a range of socio-economic and gender contexts. This was portrayed through the use of personas of users and potential users from low and high resource settings, to understand their lives and identify opportunities for the product to respond to specific needs.



PERSONA 1

Customer in high resource setting



Key insights

- Late 30s-40s, married, with kids;
- Employed and has a housekeeper;
- He knows Coliba through his workplace;
- He considers recycling is good for the environment;
- He uses Coliba's app and schedules collections but the housekeeper stores the bottles and deals with Coliba's collectors; and
- The housekeeper used to sell the bottles and keep the money but now she has been instructed to give them to Coliba.



PERSONA 2

Customer in low resource setting



Key insights

- Mid 30s-40s, single;
- Employed;
- He knows Coliba through a MTN advert;
- He uses Coliba's app because he cares about the environment and thinks recycling is important;
- The space on his phone is limited, so he considers deleting it and either redownloading it when he needs Coliba or calls them; and
- He used to sell and give the bottles to informal waste collectors or throw them in the trash.



PERSONA 3

Non-customer in very low resource setting



Key insights

- 30s-50s, married, with kids;
- She runs a stall/small business;
- She has never heard of Coliba;
- She doesn't know what recycling is; and
- She sells or gives away used plastic bottles to informal collectors, or throws them away.



Evaluation insight 3:

It is important and strategic for tech-led social enterprises to understand social norms and incorporate traditional agents (informal waste collectors in Coliba's case) in their strategy. This is often better than competing with traditional agents, reinventing the wheel or leaving them behind in the push to digitise.

While Coliba's team were aware of women working as informal waste collectors, the evaluation helped dive deeper into their network, ways of working, and points of strength and pain. The predominantly female informal waste collectors were well integrated in the communities, offered regular door-to-door pick-ups and most importantly, offered households cash in return for plastic. On the other hand, they struggled to maintain enough cash flow to pay households as they had to pay for the transport of the bottles to the market, and if unsold, pay separately for their storage. They also suffered from the physical strain of carrying the bottles and walking, and often had to discard a number of bottles if too dirty or damaged, resulting in losses. Ultimately, it seemed strategic for Coliba to consider working with the network of informal waste collectors, leveraging the social capital they had with the community, whilst potentially alleviating some of their pain by integrating them into a formal economy.



PERSONA 4

Non-customer
and informal
waste
collector



Key insights

- 30s-50s, married or single with kids;
- She's worked as a bottle collector for over 15 years, buying bottles door-to-door or taking them from outside people's homes, and selling them to juice sellers;
- She works because she needs to provide food and education for her children;
- She doesn't trust private companies and is loss-averse; and
- She is not concerned with the environment.



Evaluation insight 4:

Asking people about their life priorities and preferences (instead of making assumptions) helped inform the design of a rewards scheme that was grounded in evidence, increasing the likelihood of uptake.

During the field immersion phase, the priorities and preferences of the users were explored to assess the appeal of Coliba's rewards scheme. Users were asked three questions, using a mix of ranking, scorecard and moodboard testing methods. This showcased that the preferred rewards were vouchers for food, restaurant meals or utility payments. It also allowed the team to learn that people ranked religion as a top priority (which could be factored into a future awareness strategy). They associated recycling with the feeling of a 'clean' environment over other moods such as pride, spirituality, community or power.





Evaluation insight 5:

Prototyping and testing the solution was a low-cost and efficient process, including a kiosk-based bottle collection model and marketing materials. It helped the team uncover important insights around the user journey, such as which communication materials appealed to users the most, what could make queueing more comfortable, and what incentives they preferred.

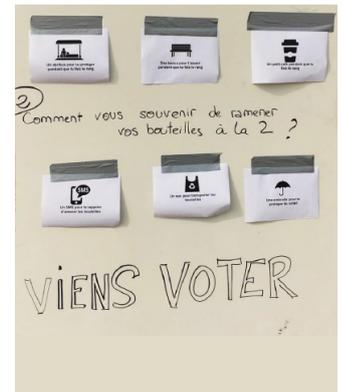


The findings from the field immersion helped to ideate a new kiosk-based model that would enable more efficient bottle collection whilst influencing positive behaviour change. This involved defining a user journey, specifications of the kiosk and marketing materials to trigger adoption, which was then prototyped and tested over three days. The team set up their prototype kiosk on a busy cross-road in Abidjan, resulting in a footfall of over 1000 people during the testing phase.

Key learnings from the field immersion

People queuing to deposit their plastic bottles were quizzed about what would make queuing more comfortable. A majority said having shade to protect them from the sun would be most important (over other options such as benches to sit on or a café to buy a tea or coffee from).

When asked about the best way to remind people to bring their bottles for donation, most said they would prefer to receive an SMS reminder (over other options such as a shopping bag to transport the bottles or an umbrella to use during queuing).



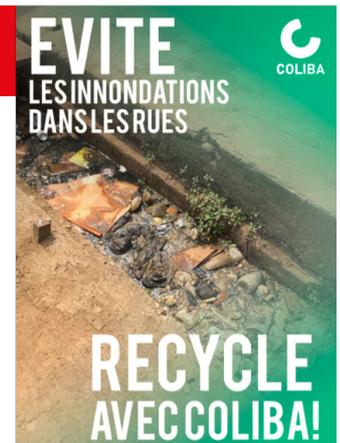
People were also asked to indicate their interest between two poster options. Most preferred #2 to #1 as they found the photo to be more provocative, made people worry about the impacts of an unclean environment on their kids and linked better to Coliba's branding.

1



Translation: "Do you know where your juice bottles come from?"

2



Translation: "Prevent flooding in the streets - recycle with Coliba"

The top three evaluation recommendations

1



Start-ups should leverage networks and social capital built by the traditional informal economy, where possible.

There is an opportunity for recycling companies to leverage the networks and social capital built by traditional agents employed in the informal waste economy and explore ways to work with the informal sector. This can help create efficiency gains for any start-up, for instance, faster onboarding of communities, cost savings on the set up and running of a waste collection service, as well as increased social impact by the formalisation of jobs for informal waste collectors. This ensures that informal waste collectors, one of the most vulnerable segments of society, are not left behind.

2



Prototype early and frequently as new features are added and the product is iterated. Prototyping can be achieved with everyday items and doesn't need to be costly.

Contrary to popular belief, prototyping does not have to be expensive, time-intensive or limited to initial product development. In Coliba's case, very simple techniques and materials (such as a fold-out table and some printed pages) were used to prototype and test features of their kiosk-based model, and obtain critical learnings in under a week.

3



Check your assumptions. This is a critical first step in designing any behaviour change plan, including influencing behaviours towards the environment.

Mapping assumptions and testing them with users was critical for Coliba to discover the baseline attitudes and behaviours that their behaviour change campaign should address. For instance, they discovered that contrary to initial assumptions, people did not consider waste recycling to be the Government's problem but actually an individual's responsibility. It also emerged that the problem was not a lack of recycling practices but a lack of awareness that the bottles they were donating to informal waste collectors were ending up back in the sewers after being reused a couple of times. Accordingly, it was recommended Coliba adjust its awareness-raising strategy to focus on educating people about the overall lifecycle of a plastic bottle and the merits of recycling with Coliba.



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The views expressed do not necessarily reflect the UK government's official policies.

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