TOOLS FOR DESIGNING BEHAVIORAL CHANGE CAMPAIGNS TO REDUCE WILDLIFE DEMAND

DEFINING THE THEORY OF CHANGE

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PROVITA

Iniciativa VOLANDO JUNTOS

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PRO VITA

Iniciativa **VOLANDO** JUNTOS

ACKNOWLEGMENT

Flying Together Initiative is carried out in collaboration with:

Matt Brooks

CON TENT

FLYING TOGETHER INITIATIVE

Provita is a Venezuelan non-profit organization with more than 30 years of experience developing innovative socio-environmental solutions to conserve nature.

With the Flying Together Initiative, Provita wishes to promote alternative behaviors to the demand for wildlife, which generate sustainable living habits in the communities that coexist with these species.

The main strategy of the Flying Together Initiative is to combine social science and ecology fundamentals to design, implement and evaluate behavioral change campaigns focused on reducing demand for wildlife. Our case studies include two Venezuelan bird species threatened by illegal trafficking, the Red Siskin (*Spinus cucullatus*) and the Yellow-shouldered Amazon (*Amazona barbadensis*).

WHAT DO WE BELIEVE IN?

1. We believe in change

We believe in the potential of every person to make a change and that every individual change counts. We believe that these changes will be positive for both wildlife and the communities and audiences that make the change.

2. We believe in evidence-based actions

We promote the use of standards and protocols based on the best and most updated scientific information. We want the design, implementation and evaluation of behavior change campaigns to be a process:

- Transparent.
- Reproducible.
- Evaluable.

3. We believe in collaborative learning

We want to share what we have learned with other organizations, civil society, and decision makers in Latin America and the world. We believe that these efforts can be replicated in other endangered species.

Iniciativa
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ABOUT THE TOOLS

Through a series of tools, organized in three modules, we wish to share both the technical knowledge and the experience gained after the implementation of our campaigns.

Our tools are summaries of the state of the art in behavior change campaigns and are based on the recommendations and best practices of leading institutions in the field.

Our tools are multimedia resources (documents, forms, analysis tools) designed to provide practitioners and researchers:

MODULE 1

Concepts and strategies for integrating baseline information with planning strategies to design campaigns based on the best and most up-to-date scientific information.

MODULE 2

Practical advice on how to use your resources to implement behavior change campaigns effectively and efficiently.

MODULE 3

Tools and strategies to evaluate the impact of campaigns both in terms of species conservation and society.

The tools are not intended to make definitive statements about what works or does not work. Rather, they provide high-quality information about what is likely to be beneficial based on existing evidence.

In general, the chapters of this document are made up of 3 sections:

¿? Basic concepts

🔍 Case studies

📄 Practical recommendations

The objective of this second tool is to provide a reference for developing the Theory of Change for behavior change campaigns.

The tools are living documents that are regularly updated as new studies are published in Venezuela and internationally. Send your suggestions, ideas, and comments to: asanchez@provitaonline.org.

The technical team of the Flying Together Initiative will be more than happy to provide additional support to implement the strategies described here. You can write to us at: asanchez@provitaonline.org and coordinate a meeting to discuss collaboration opportunities.
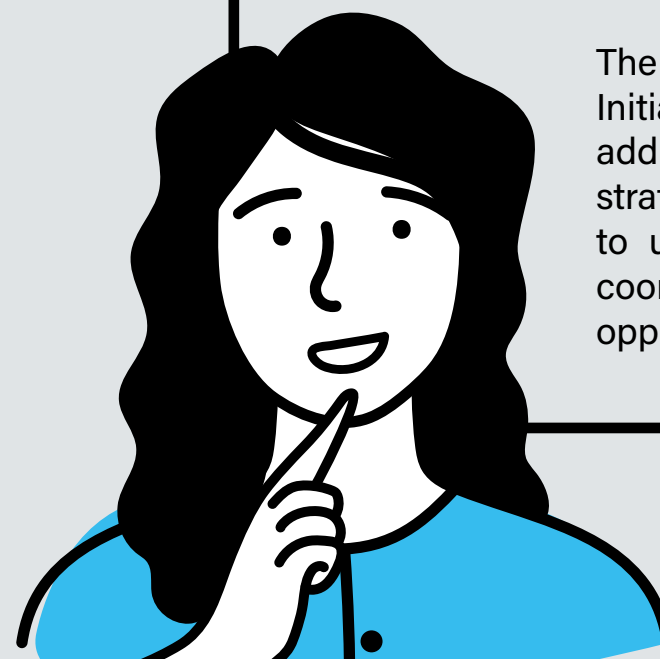
OUR CASE STUDIES:

The Yellow-shouldered Amazon
(Amazona barbadensis)

Lisandro Moran

Is listed as "Endangered" in Venezuela (Rodríguez et al. 2015).

LC VU EN CR EX

This species is included in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), so its trade is only allowed under exceptional circumstances (CITES 2020).

Currently, in the Macanao Peninsula, Margarita Island, Venezuela, where one of the largest populations of the species is found, 3 out of every 10 people have parrots in their homes. Parrot chicks are taken from nests located nearby and in most cases, given as gifts to loved ones within the same community (Sánchez-Mercado et al. 2020a, 2021).

Demand is motivated by the need for companionship and by a widespread social norm that tolerates and justifies ownership. Possession is not perceived as part of the trafficking chain and has been normalized within the community (Sánchez-Mercado et al. 2020a, 2021).

The Red Siskin
(Spinus cucullatus)

Fernando Llano

Is listed as "Critically Endangered" in Venezuela (Rodríguez et al. 2015).

LC VU EN CR EX

As it is included in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), its trade is only allowed under exceptional circumstances (CITES 2020).

Red siskins have been used in the practice of aviculture since the 1950s, either to breed them in captivity (to obtain the ancestral phenotype) or to generate hybrids since the 1950s, either to breed them in captivity (to obtain the ancestral phenotype), to generate hybrids (red canaries) or mutations (Rivero Mendoza 1983; Moreno-Sánchez & Abellán-Baños 2005; Martínez-Espinosa & Abellán 2016).

Currently, the trade in red siskins operates in a trafficking network that moves an average of 70 birds/year, which represents an important percentage of the species' scarce remaining population. This network involves at least 15 actors, operating in national and international markets. Among these actors, aviculturists in Venezuela, Brazil, Spain/Portugal (Iberian node) and the United States play an important role as the main consumers (Sánchez-Mercado et al. 2019, 2020b).

The demand for wild-caught red siskins in aviculture is motivated in part by the belief that including wild birds allows maintaining genetic diversity and safeguarding favorable reproductive behaviors in captive birds (Cardozo-Urdaneta et al., unpublished data).

01

WHAT IS A THEORY OF CHANGE (TOC)?

Illegal wildlife trafficking has generated a conservation crisis that affects more than 24% of vertebrates globally (7,638 species) (Scheffers et al. 2019). The complexity of this threat lies in the fact that in addition to the ecological factors of the species affected, the economic, social, cultural and psychological factors of the people and communities involved in wildlife trafficking must be taken into account.

To address the complex crisis of illegal wildlife trafficking, the scientific community and decision makers have combined different strategies. These strategies range from understanding demand patterns and motivations, involving local communities in the protection and monitoring of wildlife resources, developing effective and efficient legal frameworks, strengthening law enforcement, developing monitoring techniques for trafficked species and parts, among others (Fukushima et al. 2021). Regardless of the strategy you adopt, its effectiveness will depend on (Biggs et al. 2017):

- How much the actions are based on evidence (scientific or empirical knowledge).

- If these actions are supported by a valid **Theory of Change**.

The **Theory of Change (ToC)** is a planning tool, which allows you to map out the logical paths and sequences of events necessary for

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an action to lead to a desired outcome, articulating the assumptions underlying each step (Mayne 2017).

In general, a ToC consists of:
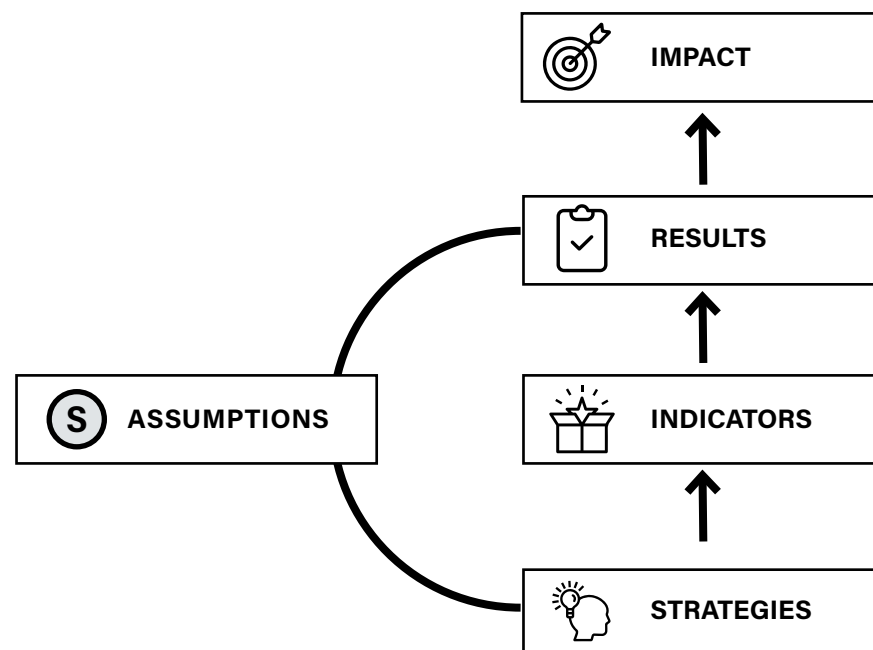
(S)	**Assumptions:** The underlying beliefs about how a project will work. Assumptions describe why an activity is believed to lead to a particular result and why one result is believed to lead to another.
(target icon)	**Impact:** Long-term effect of activities (reduction of threats, recovery of populations).
(clipboard icon)	**Results:** The short-term changes, in terms of benefits, learning or other effect that result from the activities. These short-term changes include changes in knowledge, skills, attitudes, perceptions, and behavior.
(gift icon)	**Indicators**: Deliverables (number of posters distributed, number of publications), services (number of schools visited) or benefits. (number of people trained) resulting from the activities carried out.
(head icon)	**Strategies:** The activities carried out (workshops, pamphlets, murals, meetings), when and how they are carried out.

What is a theory of change?

ToC development involves six basic steps (Rice et al. 2020):

1 Identify the main beneficiaries of the intervention.

2 Identify and articulate the desired outcomes of the intervention.

3 Define and analyze the contextual factors, conditions or events that may positively or negatively affect the desired outcomes of the intervention.

4 Formulate actions and identify and articulate the associated assumptions underpinning these actions to achieve the desired outcomes of the intervention.

5 Identify persistent and emerging problems and manage them.

6 Adapt implemented actions to improve results.

1.1 ToC FOR ILLEGAL WILDLIFE TRAFFICKING

In disciplines such as health, chemistry, it is possible to establish an experimental design (control - treatment, before - after) that allows to demonstrate causality between an action "X" and the expected outcome "Y", without the need to understand in detail what caused the success, i.e., it is possible to apply a **"black box"** approach (Rice et al. 2020).

The problem with applying the "black box" approach to illegal wildlife trafficking is that later, when you want to replicate your intervention to another audience or species, it will be much more difficult to guarantee the same results, because without understanding what made it successful in the past, you will not know how to adapt its implementation in a new context. Given the complexity of the ecological and socioeconomic systems in which traffic reduction actions are implemented and the long implementation times (Salafsky et al. 2021), having a ToC will allow you to understand what went right and why and what went wrong and how we can avoid it next time.

Bigg et al. (2017) developed a ToC to describe in a very general way the process of planning, implementing and monitoring four strategies to combat illegal wildlife trafficking (Biggs et al. 2017). In practice, however, efforts to reduce demand for wildlife rarely describe the ToC explicitly, and the vast majority only report actions and outputs, barely 25% report outcomes and only 9% their impact (Veríssimo & Wan 2018).

What is a theory of change?

One of the main challenges in developing a ToC to combat illegal wildlife trafficking is to find the right balance between:

Maintain a simple, readable and usable structure that facilitates communication, while at the same time...

Provide sufficient detail to describe the mechanism by which a given strategy will lead to intermediate results and these to the desired end result.
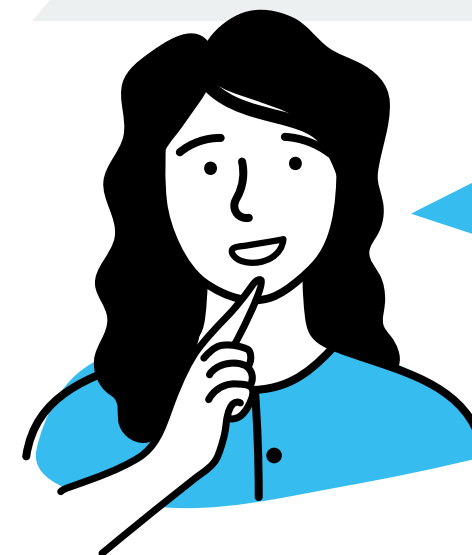
In the specific case of demand reduction strategies, the desired end result is behavioral change.

So far, the process of behavioral change within ToC has been described very generally in terms of contextual problems - high levels of poverty or lack of alternative livelihoods - or as triggering events - changes in policy or law, reduced abundance in species of concern - (Rice et al. 2020), but without defining a clear mechanism for how behavioral change occurs.
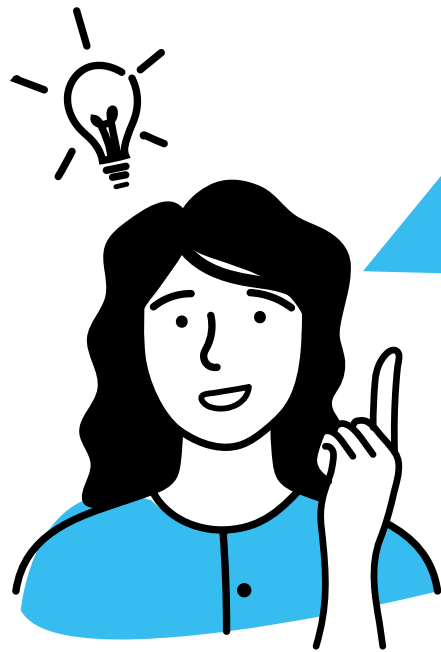
A more appropriate way to describe and evaluate the processes that give rise to behavioral change, taking into account their complexity but keeping a simple structure, is to explicitly integrate behavioral models into the ToC.

Explicitly describing how the behavioral model is integrated within our planning and evaluation process is particularly relevant to avoid misuse of concepts and tools, such as using planning tools like ToC to explain behavioral changes or using behavioral models to evaluate the impact of our interventions (Wallen & Daut 2018; Greenfield & Veríssimo 2019).

In this tool, we use the conceptual framework of Behavior-Centered Design (BCD) (Aunger & Curtis 2016) to explicitly incorporate within the ToC, behavioral models that describe the process by which the desired behavioral change occurs: reduction in wildlife demand.

What is a theory of change?
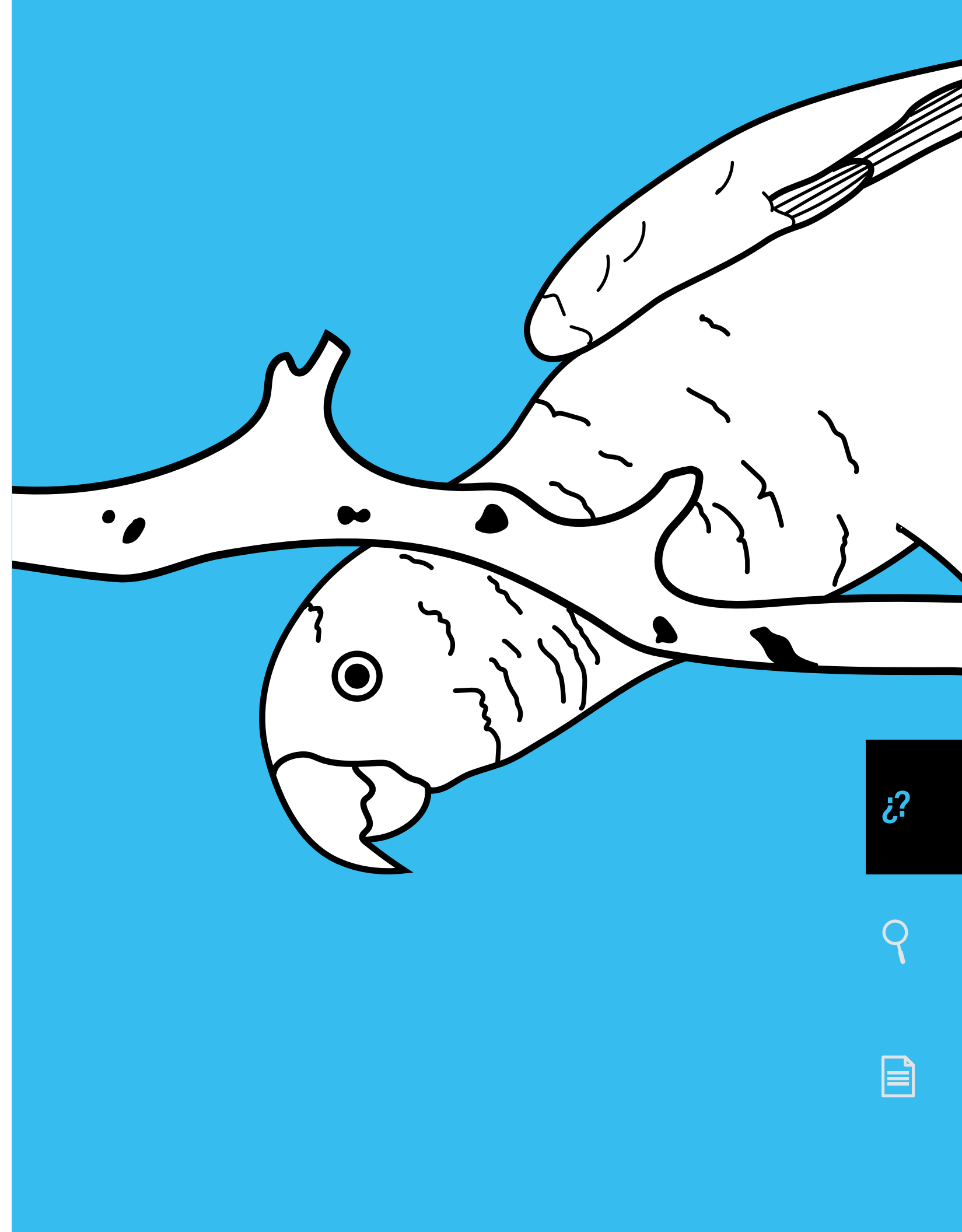
1.2 ToC FOCUSED ON BEHAVIOR

Our **behavior-focused ToC** comprises two sections:
The blue section ● describes the behavioral model.
The gray section ○ describes the ToC.

Demand reduction

INTENTIONS
Greater intention to adopt the proposed behavior

KNOWLEDGE
Audience with greater knowledge about benefits of the proposed behavior

CONTROL
Greater empowerment to overcome psychological, logistical, and social barriers that hinder adoption of the proposed behavior

ATTITUDES
Favorable attitudes towards adoption of the proposed behavior

NORMS
Greater resonance within the audience of social norms favorable to change

A1 A2 A3 A4 An

Scope
(number of accounts)
Actions
(number of interactions)

Number of events
Participants
by events

Communication campaign

Core activities

Impact   Results   Indicators   Strategies

What is a theory of change?

A. Behavioral model section

This first section (in blue ●), describes the chain of causes and effects that must occur for the behavior to change in order to produce the desired impact. In our particular case, we use as a behavioral model the Theory of Planned Behavior, TPB (Ajzen 2011). TPB proposes that the intention to adopt a behavior is a function of three components: attitudes (which in turn are influenced by knowledge), social norms which describes social influence, and perceived control which describes how the barriers and opportunities for adopting a given behavior are perceived (for more details see **Module 1 - Toolkit 1**).
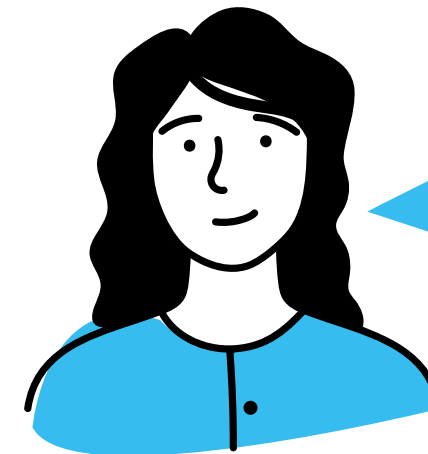
In this first section, the objective is to design an intervention that can produce the following changes:

- An audience with **knowledge** about the benefits of adopting the proposed behavior and with the capabilities and skills required to adopt it.

- Favorable **attitudes** towards the adoption of the proposed behavior.

- Increased resonance within the audience of **social norms** that promote the adoption of the proposed behavior change.

- Greater **control** of the psychological, logistical and social barriers that hinder the adoption of the proposed behavior. Alternatively, greater perception of the opportunities or factors that facilitate change.

B. Planning and Evaluation Section:

The second section (in gray ◯) describes the expected impact and the actions that must be implemented for the behavioral change to occur. This section details the assumptions under which the implemented actions are expected to generate such changes, as well as the inter-mediate results expected to be obtained.

Below, we describe how we applied the **behavior-focused ToC** approach to develop two campaigns aimed at reducing demand for two Venezuelan bird species threatened by illegal trafficking. To do so, we followed a four-step process:

1

First, it is necessary to **segment the target audience**. This includes identifying the different socioeconomic, beha-vioral and psychological realities of the different groups that make up the audience.

2

Second, define which **alternative behaviors** can meet the demand motivations, systematically evaluating the advan-tages, barriers, and impact of each of these alternatives.

3

Third, **describe the expected changes** in the behavioral components (blue section of the ToC focused on behavior).

4

Finally, we must describe the strategies, actions, assumptions and indicators that will allow us to **measure the progress of the intervention** (gray section of the ToC focused on behavior).

What is a theory of change?

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IN SUMMARY

- Developing a Theory of Change allows us to:
    - Decide what to do and how to do it.
    - Describe the process of planning and implementing an intervention.
    - Define the process of evaluation and adaptation of an intervention.
- The conceptual framework of Behavior-Centered Design allows us to develop a Theory of Change that takes into account a specific behavioral model.
- The practical process of how to design and evaluate interventions involves 4 fundamental steps:
    1. Segment the audience.
    2. Define and evaluate alternative behaviors.
    3. Describe the expected changes.
    4. Plan strategies, activities, assumptions and indicators of intervention progress and impact.

02

AUDIENCE SEGMENTATION

Segmentation allows us to identify groups of people with similar behavioral, demographic, geographic and psychological characteristics within an audience. By separating the audience into groups, we can identify whether it is necessary to define specific communication strategies for each group, with channels, messages and languages adjusted to the particularities of each group.

The ABCs of audience segmentation are:

A. Characterize groups within the audience

The first step is to identify groups based on four aspects or segmentation quadrants: behavioral, demographic, geographic and psychological.

Geographic segmentation: Where does this group of people interact? Country/region/city; rural/urban.

Psychologic segmentation: Not everyone in your audience has the same attitudes, values/beliefs. What are the differences within each group? What are their motivations, what matters to them? But also what are their attitudes, personality, values/beliefs?.

Behavior segmentation: What is this behavior like in terms of frequency, product loyalty?

Demographic segmentation: Here, you should identify groups of people based on their demographic (e.g. age, gender, ethnicity, etc.) and social (educational level, income, religion, etc.) characteristics.

Cuadrantes de segmentación

Geographic segmentation	Psychologic segmentation
Behavior segmentation	Demographic segmentation

¿?

Audience segmentation

B. Establishing priorities

El segundo paso es establecer prioridades para trabajar con los The second step is to establish priorities for working with the groups identified. Since there are budgetary, time, geographic and communicational (language differences) constraints, you will not always be able to include all the groups you have identified in your campaign.

One way to prioritize groups within the audience is to consider the impact and accessibility of each group (Braus 2011).

Impact: Refers to the effect that an audience group may have if people within it decide to stop demanding the focal species. A large group may have a high impact because of the volume of specimens they can potentially demand. However, if a small group has a high demand rate, then its impact may be high.

Accessibility: Describes how easily a group of people can be contacted (frequency of communication), taking into account not only communication mechanisms (face-to-face, online, etc.), but also geographical proximity and language barriers.

Using the criteria of impact and accessibility, we can establish quadrants of priorities.

HIGH IMPACT

LIMITED ACCESSIBILITY		HIGH ACCESSIBILITY
INCLUDE THEM LATER	INCLUDE THEM IN YOUR CAMPAIGN NOW	
DO NOT INCLUDE THEM IN	INCLUDE THEM IF YOU HAVE TIME	

LOW IMPACT

¿?
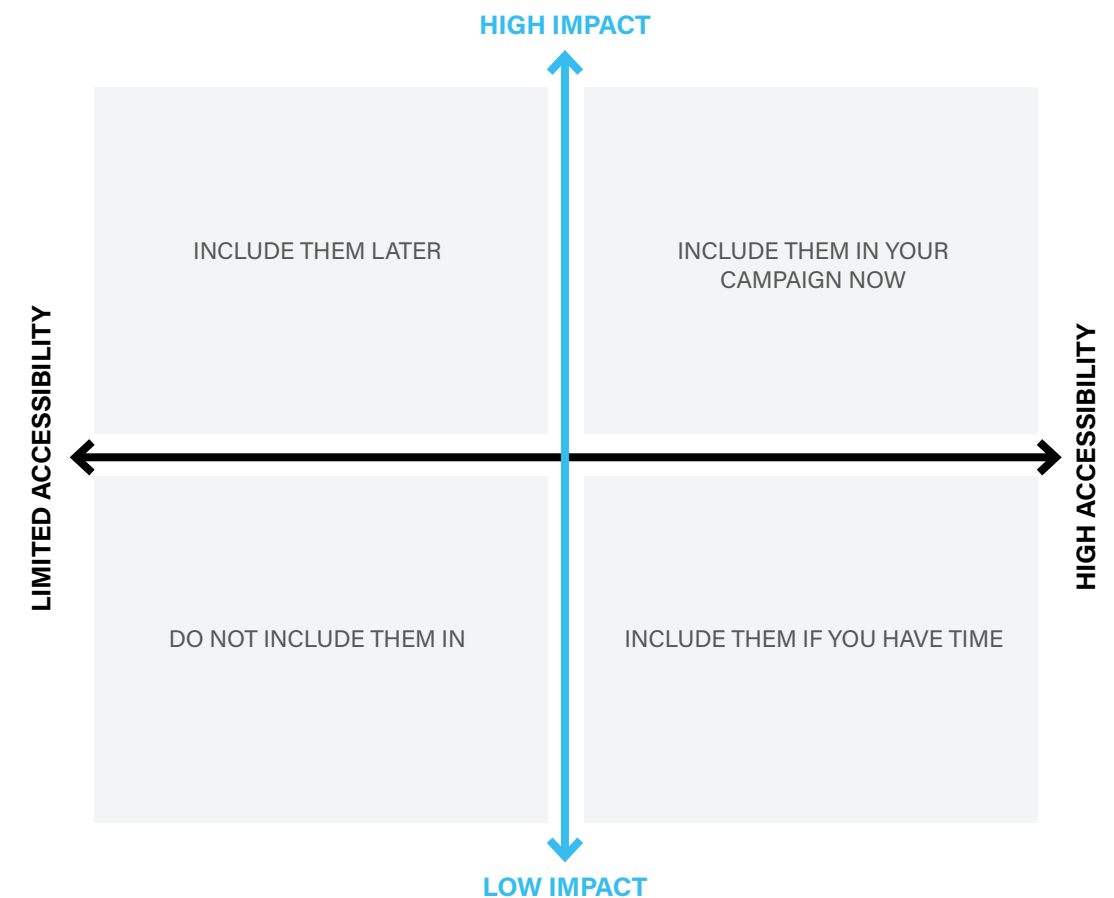
C. Building profiles

Finally, once you have identified the priority groups, we must put them in order to better appreciate their similarities and differences. In other words, we must build a profile. **Profiles** are useful to help us visualize to whom we are going to direct messages and select the most effective communication strategies. While profiles should be guided by baseline information about the audience, they should be contextualized to the local social and cultural reality. Therefore, it is advisable to discuss profiles with your local partners and allies, improve their accuracy and ensure they are appropriate and respectful (TRAFFIC 2018).

Geographic

Psychologic

Behavior

GROUP 1
[NAME]

Demographic

Geographic

Psychologic

Behavior

GROUP 2
[NAME]

Demographic

Audience segmentation

You can download **Miro's** format for this activity here
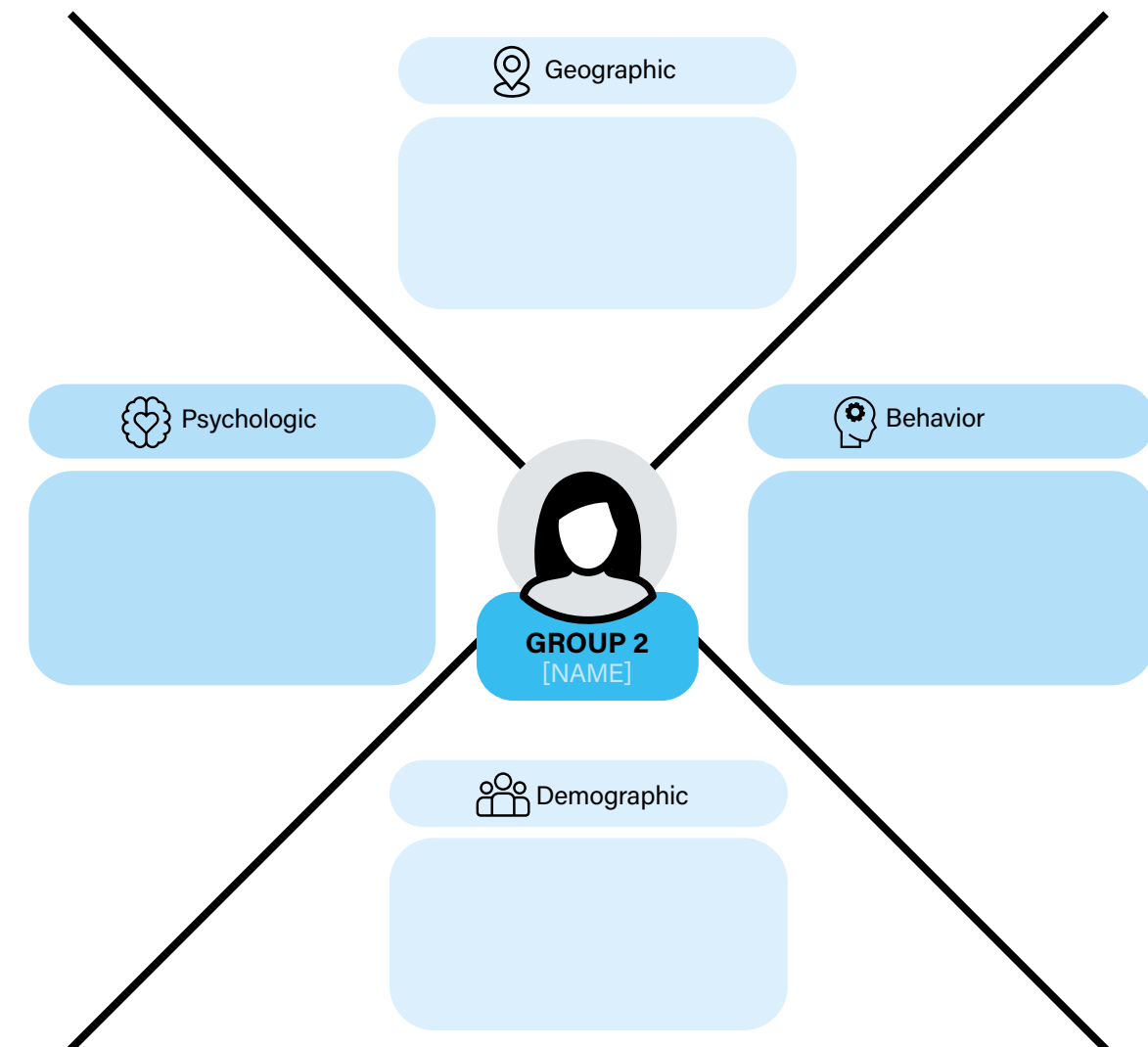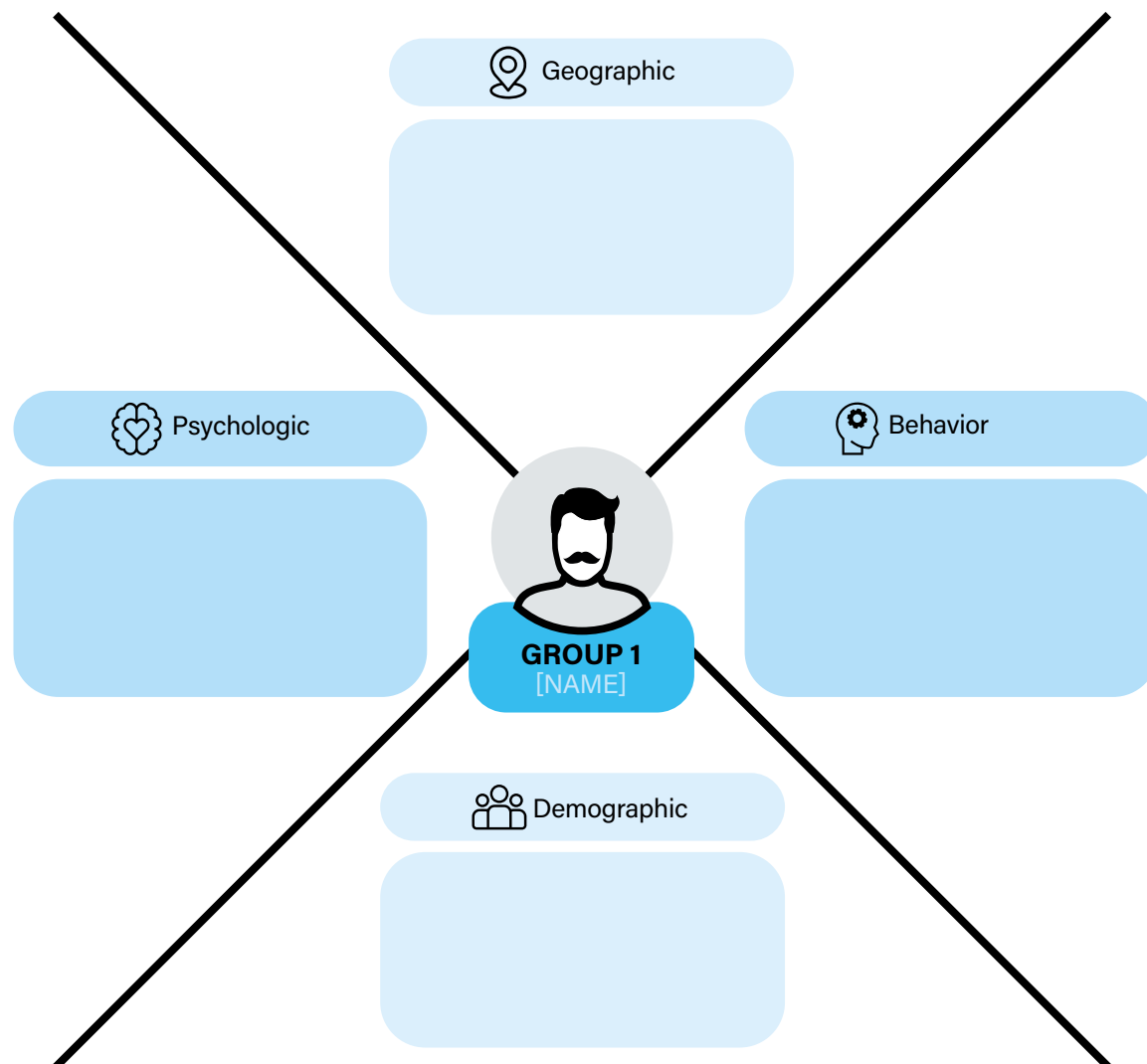
Segmenting the Audience

Yellow-shouldered Amazon
For the case of the parrot, we segmented the audience based on information compiled in Sánchez-Mercado et al. (2021).

Step 1

Characterizing groups within the audience

Affection is the main motivation for demand and the possession of individuals is not perceived as part of the traffic

There are several towns along the Macanao coast. Boca de Rio and Boca de Pozo are the largest (~12,000 inhab. each), followed by Robedal and San Francisco

Geographic segmentation

El Tunal
La Carmela
La Pared
Robledal
San Francisco
Boca de Río
Boca de Pozo
Boca Chica
Punta Arenas
El Manguillo
El Horcón
Guayacancito

Psychologic segmentation

36% prevalence of demand intention

"Parrots are part of the family" 82%

Fear of reporting 50%

"Poaching are bad boy acts" 57%

"Selling is bad" 93%

"Having parrots is good" 60%

Although there is a high prevalence of women, there are differences in age groups and educational background

Behavior segmentation

Poachers 15%

Intermediaries ¿?

Consumers 80%

OWNERS 36% intend to have one more as a gift

NON OWNERS 36% have intentions of having them

Demographic segmentation

Young people
Adults
Seniors

Unemployment 53%

Women 87%

High school 78%

Working (trader-professional) 47%

University 17%

Most of the people interviewed have the profile of consumers

CASE STUDIES:

Step 2

Identify priority groups within my audience

HIGH IMPACT

LIMITED ACCESSIBILITY

Women 87%

Consumers 80%

Boca de Río

Robledal

San Francisco

INCLUDE THEM LATER

Intermediaries ¿?

Poachers 15%

INCLUDE THEM IN YOUR CAMPAIGN NOW

Young people

Adults

Seniors

University 17%

High School 78%

Boca de Pozo

HIGH ACCESSIBILITY

DO NOT INCLUDE THEM

La Pared

El tunal

El Horcón

El Manguillo

INCLUDE THEM IF YOU HAVE TIME

La Carmela

Punta Arenas

Guayacancito

LOW IMPACT

Although all villages are equally accessible and the prevalence of parrot holding is similar among them, the larger villages were considered to be of greater impact, under the assumption that more people can be reached in the campaign

CASE STUDIES:

CASE STUDIES:

Step 3

Create profiles of priority groups

Local Macanagüero

Geographic

Large towns of Macanao (Boca de Pozo, Boca de Río, San Francisco, Robedal)

Psychologic

- Intention 35 - 40%
- Fear of reporting
- Parrots perceived as part of the family

Behavioral

- Consumers (80%)
- Parrots given as gifts to loved ones.

Demographic

- Young, adult and elderly women (20 - 64 years old)
- Housewives
- High school education
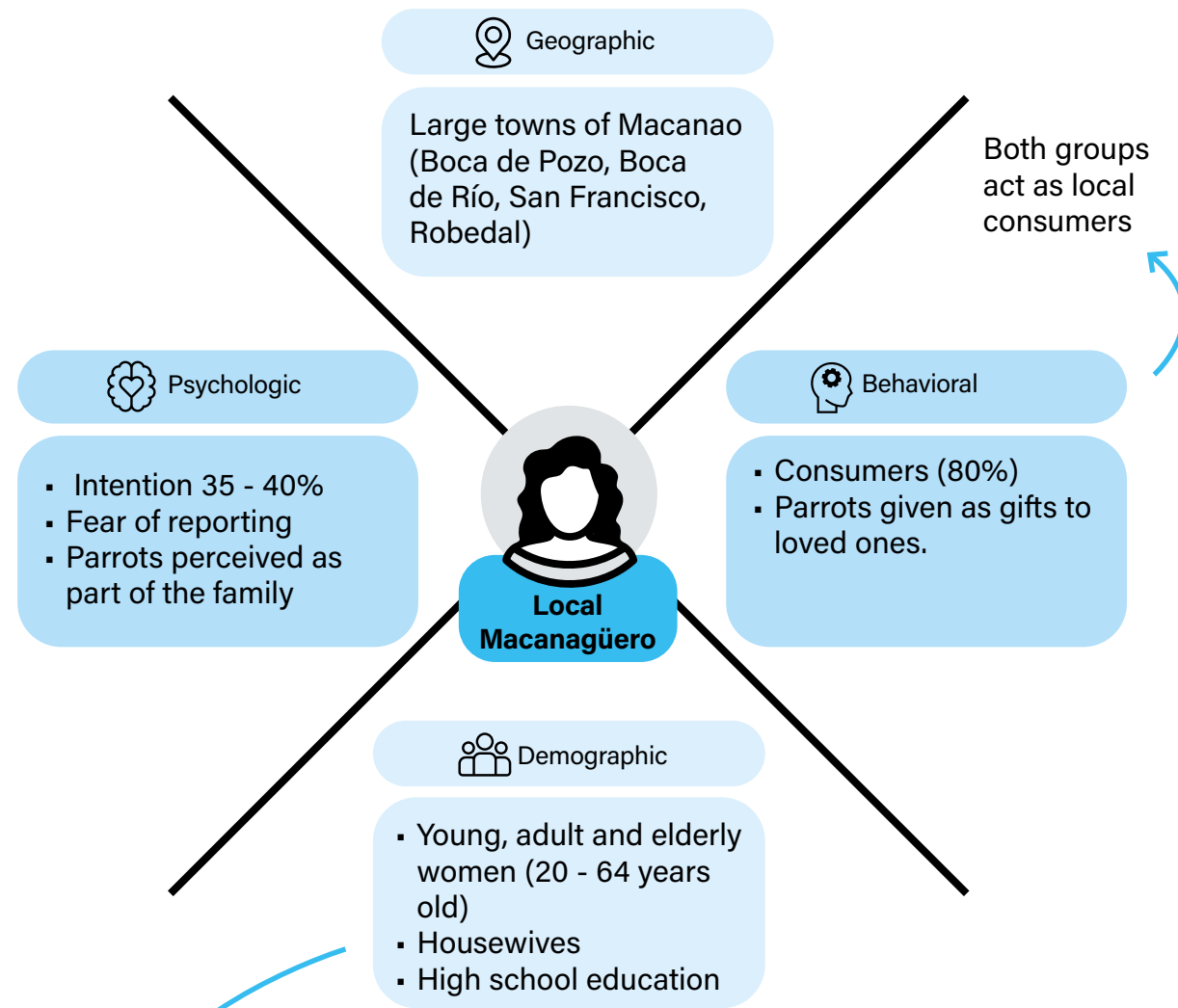
The first group, the ordinary Macanagüero, is predominantly composed of women between 20 - 60 years of age, with an intermediate level of education. This group is comparatively larger than the group of young professionals

Both groups act as local consumers

Both groups have a high demand intention, between 35% and 40% of the respondents intend to demand parrots

Professionals

Geographic

Large towns of Macanao (Boca de Pozo, Boca de Río, San Francisco, Robedal)

Psychologic

- Intention 35 - 40%
- Fear of reporting
- Parrots perceived as part of the family

Behavioral

- Consumers (80%)
- Parrots given as gifts to loved ones

Demographic

- Young and adult women and men (20 - 40 years old)
- Professionals and traders
- Technical-university educational level
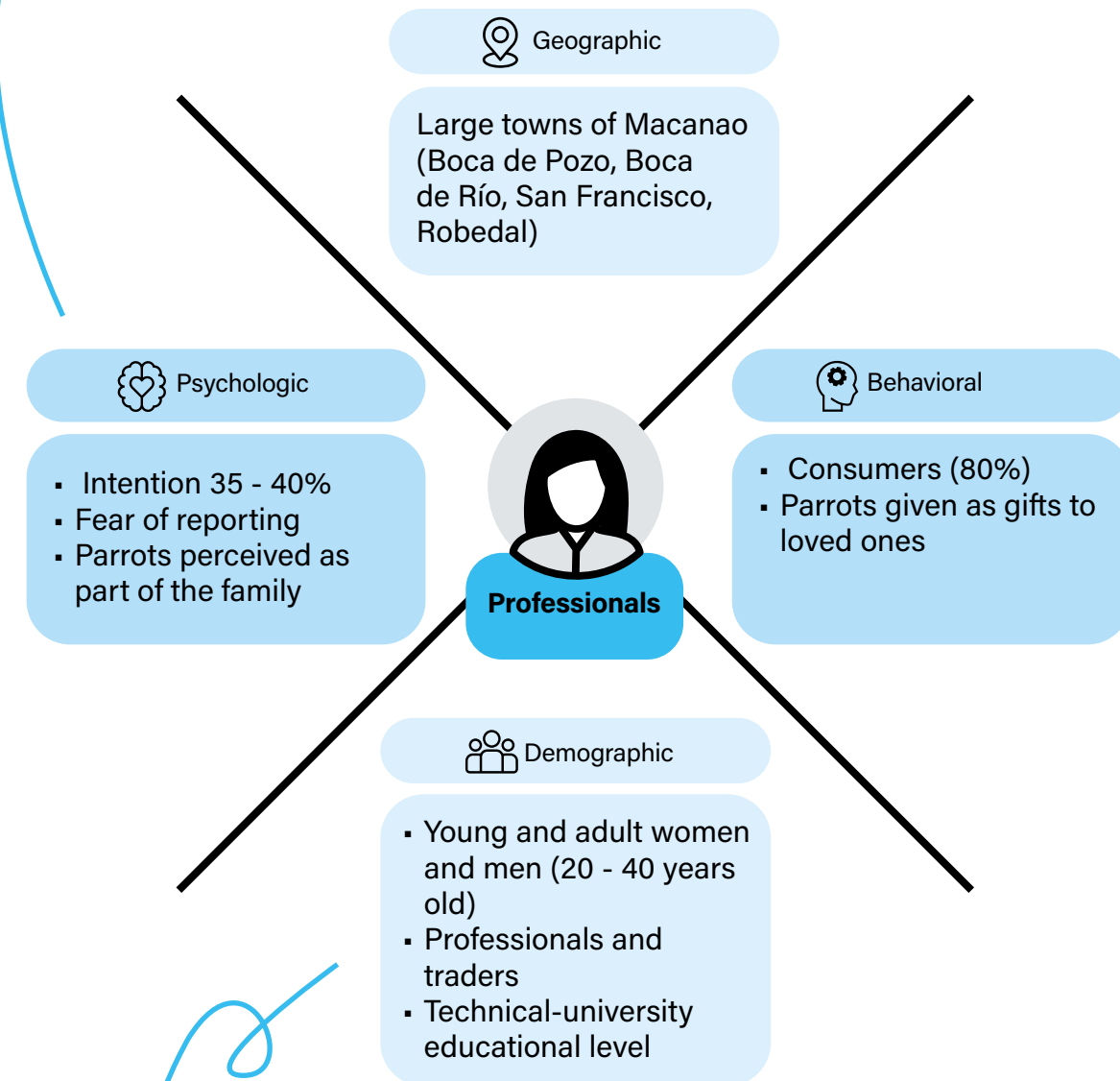
The group of young professionals is made up of young men and women (20 - 30 years old), with a higher level of education (university), and a higher level of professionalization (e.g. teachers, journalists)

CASE STUDIES:

Red Siskin

In segmenting the audience for the Red Siskin campaign, we used information compiled in the studies by Sánchez-Mercado et al. (2019) and Cardozo-Urdaneta et al. (unpublished data)

Step 1

Characterizing groups within the audience

Demand for wild-caught red siskins motivated by different beliefs

Aviculturists with an interest in Red Siskin can be very diverse geographically with groups in different regions of Venezuela. Near our borders there are groups in Colombia and Brazil and further afield in North America (United States-Mexico) and Europe, particularly Spain and Portugal

Geographic segmentation

Venezuela

Spain-Portugal (Iberian Node)

Other European countries

Internationals

West

Center

East

Southeast Asia

USA-Mexico-Caribbean

South Brazil

Colombia

Psychologic segmentation

Tradition

Genetic variability

Motivation of the claim

Costs

Knowledge

Availability

While all groups are male-dominated, there are differences in age groups and educational backgrounds

Behavior segmentation

Breeding expertise

Interest in the breeding of:

Ancestral phenotype

Experienced

Beginners

In training

None

Wild birds

Mutations

Hibrids

Demographic segmentation

Education

Age

Profesionals

Non-professionals

Young people (18-29 years old)

Adults (30–49 years old)

Seniors (50–70 years old)

Gender

Male 90%

Female 10%

We also found differences in the degree of expertise in Red Siskin breeding and breeding interest

¿?

CASE STUDIES:

Step 2

Identify priority groups within my audience

Aviculturists from America, Asia and other European countries are important because they form a large group. However, they are less accessible because we lack the right contacts in the world of aviculture

HIGH IMPACT

INCLUDE THEM LATER

- USA-Mexico-Caribbean
- Other European countries
- Colombia
- Southeast Asia
- East
- West

- Profesionals
- Non-profesionals
- Tradition
- Genetic variability
- Brazil
- Center
- Spain-Portugal (Iberian Node)
- Knowledge
- Male 90%

INCLUDE IN YOUR CAMPAIGN NOW

- Adults (30–49 years old)
- Young people (18-29 years old)
- Seniors (50–70 years old)
- Beginners
- Experienced
- In training

Within Venezuela, aviculturists in the central region are organized in working groups that are easier to convene (they are more accessible)

LIMITED ACCESSIBILITY ← → **HIGH ACCESSIBILITY**

DO NOT INCLUDE THEM

- Costs
- Availability
- Female 10%
- None

INCLUDE THEM IF YOU HAVE TIME

LOW IMPACT

¿?

CASE STUDIES:

Step 3

Create profiles of priority groups

The first profile consists of aviculturists operating in Venezuela, located in the Central-West area of the country

Venezuelan aviculturists have a behavioral profile characterized by less interest in aggregating and more interest in breeding the ancestral phenotype, while aviculturists in the Iberian node tend to aggregate and are interested in breeding hybrids and mutations

The second group consists of aviculturists operating internationally, distributed in Spain - Portugal and Brazil - Iberian node

Geographic

Lara, Carabobo, Yaracuy and Distrito Capital States

Psychologic

- Intention 37%
- Motivations tradition and availability
- Higher educational level greater intention to acquire wild-caught red siskins

Behavioral

- 43% members of aviculture associations
- Breeding approach: ancestral phenotype (birds that look like wild-caught red siskins)

Venezuelan aviculturists

Demographic

- Older male (50 - 64 years old), professional
- Language: Spanish

Geographic

Spain and Portugal

Psychologic

- Intention 29%
- Motivations tradition and genetic refreshment
- Education, age not significant

Behavioral

- 84% of members in aviculture associations
- Breeding approach: hybrids and mutations

Aviculturists Iberian node

Demographic

- Adult and older men (39 - 64 years old)
- Professionals, traders
- Language: Spanish and Portuguese

Both profiles are predominantly composed of men, with the Iberian node having a wider age range (30 - 60 years), greater access to university education, and a higher level of professionalization than Venezuelan aviculturists

The demand intention is higher in Venezuelan aviculturists than in those of the Iberian node, focused in both cases on cognitive motivations (tradition, lack of knowledge, blood refreshment)

¿?

IN SUMMARY

- First you must define your audience (see **module 1 - toolkit 1** for details on how to identify your audience), then you must segment it.

- Segmenting the audience allows us to:

    » Identify groups of people with similar behavioral and demographic characteristics.

    » Identify whether it is necessary to have specific communication strategies for each group, with channels, messages and languages adjusted to the particularities of each one.

- One strategy for audience segmentation is to identify groups based on their behavioral, demographic, geographic and psychological characteristics.

- You will not always be able to include all of your audience groups in your campaign. You must prioritize which group is most accessible and which has the greatest impact.

- Generating profiles of segmented groups will help you visualize who you are talking to. Remember to base your profiles on evidence, but also validate them with local partners to ensure they are appropriate and respectful.

03

IDENTIFYING AND EVALUATING ALTERNATIVE BEHAVIORS

3.1 WHAT ARE ALTERNATIVE BEHAVIORS?

When a behavior is rooted in habit or driven by powerful and difficult to overcome motives (tradition, cultural practices), it is often easier to supplant these motivations with an alternative behavior, rather than trying to eradicate the focal behavior (Broad & Burgess 2016).

In the context of illegal wildlife trafficking, alternative behaviors include promoting demand for (Broad & Burgess 2016):

	Example	References
Products grown by artificial propagation or bred in captivity.	Replacing the demand for wild songbirds with captive-bred specimens.	Jepson & Ladle (2005)

Identifying and evaluating alternative behaviors

	Example	References
Products of other more abundant wild species of similar utility.	▪ Antelope horn was promoted as a substitute for rhinoceros horn in traditional medicine.	Milliken (2014)
Products of other domestic species with similar utility.	▪ Replacing bush meat consumption with chicken or beef. ▪ Domesticated buffalo horn promoted as an alternative to rhino horn.	Shairp et al. (2016) Milliken (2014)
Products of inorganic or synthetic origin with similar usefulness.	▪ Replacing medicinal use of bile and bear parts with native herbal tonics.	Davis et al. (2016)

A good alternative behavior should (Rare and The Behavioural Insights Team 2019):

▪ Promote the use of products similar to the original product or behavior.

▪ Promote behaviors or products that satisfy the same fundamental motivations and desires as the original behavior.

▪ Increase the perception that the original behavior is unnecessary.

However, promoting viable alternatives is not straightforward, and care must be taken to ensure that they do not lead to counterproductive outcomes (Thomas-Walters et al. 2020; Rock & MacMillan 2022). For example, in traditional medicine, the use of herbal tonics has been promoted to reduce the demand for animal products. However, some of the promoted plants (species of the genus Coptis) are also threatened (Thomas-Walters et al. 2020). Another counterproductive outcome is the risk that demand for the "authentic" product will increase in response to marketers promoting its authenticity as something of value versus the synthetic product. Therefore, when promoting substitutes, it is crucial to monitor costs, supply, demand and preferences in traffic networks and assess whether our campaign has a counterproductive impact (Broad & Burgess 2016).

3.2 PROMOTING ALTERNATIVES

The ABCs for promoting the adoption of alternative behaviors (Braus 2011):

▪ Identify which alternative behaviors are relevant to your audience.

▪ Evaluate the pros and cons of each.

▪ Create a profile describing the selected alternative behavior.

A. Identify alternative behaviors

Discuss with your team which alternative behaviors are relevant in the social and cultural context of your audience. Remember to base your proposals on qualitative and quantitative baseline information about demand motivations and the demographic, psychological and behavioral profile of your audience.

Once you have an initial proposal of alternatives, it is advisable to discuss them with partners and the communities where you plan to

intervene. Explain why you are proposing these behaviors and discuss and agree with them whether they should consider other alternatives.

The process of assessing alternative behaviors should be as inclusive as possible. You can hold a workshop or focus groups involving professionals in conservation, sociology, communications and, most importantly, community organizations. For each alternative behavior, they should discuss:

• What is the **benefit** that the person obtains by adopting this behavior.

• What psychological, logistical, or social **barriers** people perceive to adopting the proposed behavior.

• What **solutions** can you implement to address the identified barriers and risks.

• What is the positive or negative **impact** (risk) of adopting such behavior in reducing demand, in addition to the collateral effects on other species or the ecosystem.

	Benefit	Barriers	Solutions	Impact
Alternative 1 Describe the behavior				
Alternative 2 Describe the behavior				
Alternative 3 Describe the behavior				
Alternative 4 Describe the behavior				

Identifying and evaluating alternative behaviors

B. Evaluate alternative behaviors

You can implement different strategies to evaluate alternative behaviors:

• A poll or vote, answering a specific question. For example: How do you feel about proposing the alternative behavior [name]?

• Count the number of benefits, positive impacts, barriers and risks identified and then construct a benefits + impact / barriers + risks index.

Regardless of the strategy you use, it is important to validate assessments with experts, partners and community members.

Alternative 1

Very uncomfortable ——————————— Very comfortable

Alternative 2

Very uncomfortable ——————————— Very comfortable

Alternative 3

Very uncomfortable ——————————— Very comfortable

Alternative 4

Very uncomfortable ——————————— Very comfortable

You can place a star in any position you wish.

You can place comments wherever you want.

You can download **Miro**'s format for this activity here.

C. Describe the proposed alternative behavior

Just as we did with the audience profiles, once we identify the best alternative behavior, we should generate a profile of it, outlining in summary form the benefits, impact, barriers and solutions discussed with your team and partners.

Identifies the proposed alternative behavior

Describes the benefits

Describe the barriers

Describes the solutions

Describes the impact

CASE STUDIES:
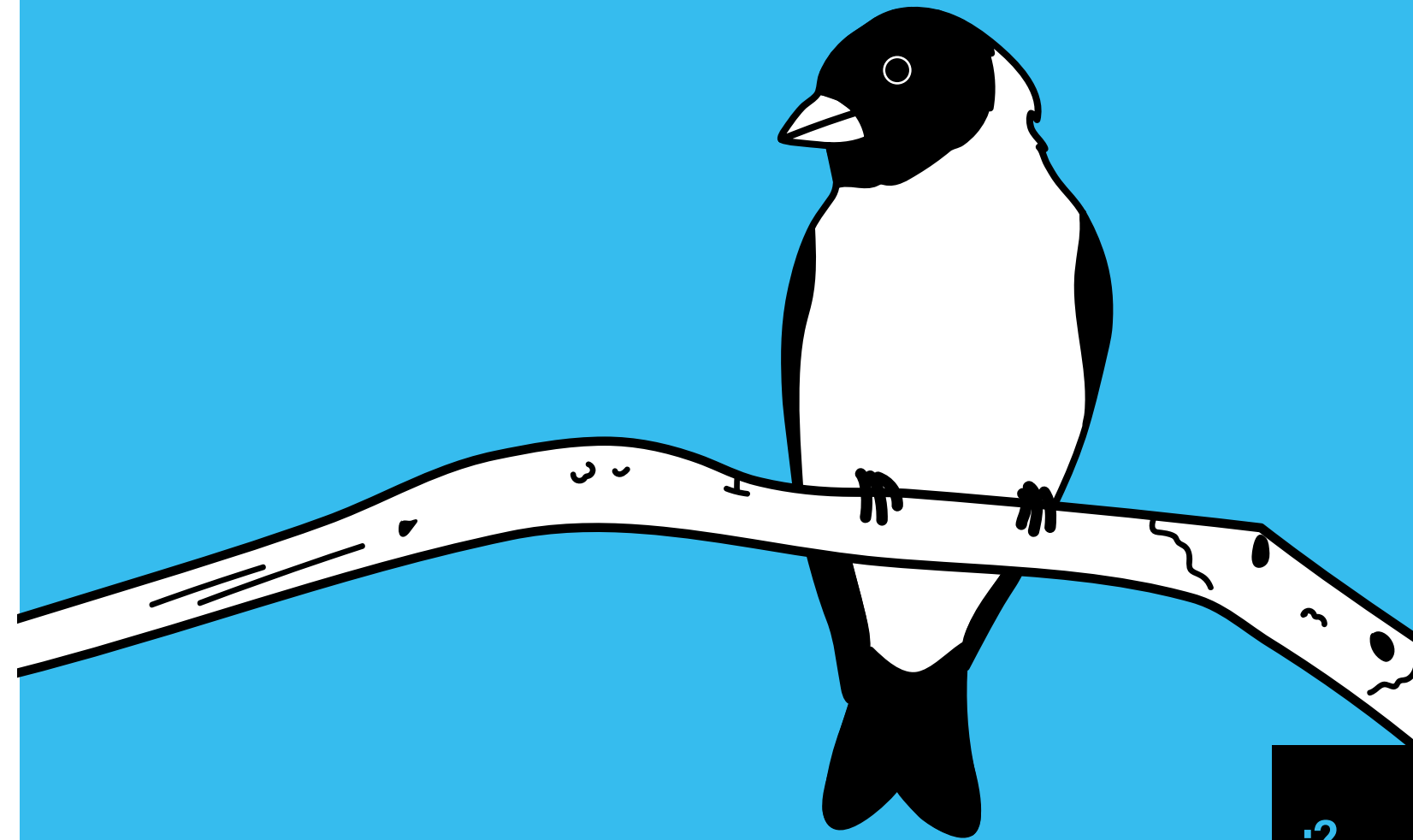
Identificando conductas alternativas

To identify and evaluate alternative behaviors to demand for Yellow-shouldered parrots and red siskins cardinals, we conducted a virtual workshop **(Pineda-Maldonado et al. 2021).** The workshop was attended by people involved in:

Yellow-shouldered Amazon Conservation Program

Red Siskin Initiative

Yellow-shouldered Amazon
(Pineda-Maldonado et al. 2021)

Step 1

Identify alternative behavior

We propose four alternative behaviors which we describe with a question in parentheses

CASE STUDIES:

	Benefits	Barriers	Solutions	Impact
Alternative 1 **Do not acquire wild birds** Why not get a dog or cat as a pet?	Dogs help you protect your home Dogs are very pleasant pets that keep you company You exercise when you walk your dog and socialize with other dog owners Dog ownership helps foster responsibility in children Dogs and cats are smart and funny	Feeding dog and cat food is costly They eat more than a parrot eats No money to buy a dog Little empathy for cats and dogs Rooting to the keeping of parrots as companions Low responsibility in pet ownership	Promote positive attitudes towards dog/cat ownership Coordinate with dog rescue centers Educating about responsible dog/cat ownership Pet food and supplies donation program with private entities	Low people with cats/dogs may still want a parrot Irresponsible ownership can lead to stray dogs/cats Dogs/cats may prey on local wildlife

¿?

CASE STUDIES:

Step 1

Identify alternative behavior

	Benefits	Barriers	Solutions	Impact
Alternative 2 **Reducing the demand rate** What if you feed your parrot well so that it lives for many years and you don't have to look for another one?	The berries are free You will have a much healthier parrot for many more years	Lack of knowledge of what the parrot should eat Expensive veterinary consultancy Difficulty in obtaining fruits and seeds Seed availability and quantity varies throughout the year Preparing a different food for the parrot requires more effort	Workshop on how to feed and maintain optimal conditions for parrots Provide information on easy, varied and nutritious recipes Search for volunteering in veterinary school or veterinary clinics Request collaboration from zoos	Demand is reduced for current owners, but not for those who do not have a parrot It can be seen as a legitimization of tenure Moral license: since I know how to take care of a parrot, then I can have more

¿?

Step 1

Identify alternative behavior

	Benefits	Barriers	Solutions	Impact
Alternative 3 **Acquire sustainable options** How about having Australian budgies instead?	They are beautiful Easy to reproduce and the chicks can be sold afterwards They are smaller and eat less	They are not as interactive or attractive as parrots Affective return/ companionship lower than in parrot They do not speak They are more expensive Birdseed is expensive and difficult to obtain Low availability: There are no pet stores in Macanao	Pet food and supplies donation program with private entities Donation program with kennels and pet stores	Low people might still want to own parrots If they escape, they could become invasive species

CASE STUDIES:

Step 1

Identify alternative behavior

	Benefits	Barriers	Solutions	Impact

Alternative 4

Participation
How about participating in outdoor activities as a way to enjoy the parrots without holding them captive?

Benefits
- Exercise, outdoor recreation
- Less work at home
- Connecting with others
- Family activity

Barriers
- Low valuation of arid ecosystems
- Little time for recreational activities
- They get bored
- They do not know what to do
- Stigmatization as parrot poachers
- Little transportation to areas of interest
- Fear/ Protection of hunting relatives

Solutions
- Increasing the positive valuation of participation
- Support with local institutions to facilitate transport
- Offer different schedules & diversity of activities: short/ long, face-to-face/ home, family/ individual
- Family activities, where children have space for mothers to attend and focus on the activity
- Provide information on what to do, how to contribute, what to do and how to do it
- Design simple, fun activities that different age groups can participate in

Impact
- Access to wild individuals
- Destabilización de las poblaciones de flora en el lugar
- Empathy and identity
- Decrease in poaching due to the presence of different activities

CASE STUDIES:

CASE STUDIES:

Step 2

Behavioral assessment

The alternatives **"Do not acquire wild birds"** and **"Sustainable options"** scored low because acquiring and feeding dogs, cats or other birds represents a high cost and the level of poverty and unemployment in the community is very high

In addition, irresponsible dog and cat ownership (abandoned animals) is high in the community, posing a public health or ecological risk (stray cats and dogs preying on native fauna)

Alternative 1

Do not acquire wild birds

Very uncomfortable — Very comfortable

Alternative 2

Reduce demand rate

Very uncomfortable — Very comfortable

The alternative **"Reduce the demand rate"** scored low because participants felt that promoting this behavior could be perceived as legitimizing or encouraging ownership. In addition, there is a risk of promoting the moral license **"since I know how to take care of a parrot, then I can have more"**

Alternative 3

Sustainable options

Very uncomfortable — Very comfortable

Alternative 4

Participation

Very uncomfortable — Very comfortable

The **"Participation"** behavior was the one with the best balance between impact, risks, benefits and strategies and the one with the highest score.

CASE STUDIES:

Step 3

Create profile of the selected behavior

Participation

How about participating in outdoor activities as a way to enjoy the parrots without holding them captive?

Among the **benefits** for the Macanagüero in adopting this behavior would be:

- Not having parrots decreases the domestic workload.
- It allows socializing by connecting with other people in the community.
- It becomes an opportunity for exercise.
- Provides an outdoor distraction.
- Generates opportunities for a family activity.

Among the **logistical barriers**, we identified that people have little time to participate in recreational activities and that it is difficult to travel to the sites of interest.

Coordination with local institutions will be key to reducing these logistical barriers, for example, by coordinating transportation for recreational activities

The main **cognitive barrier** was the audience's low level of knowledge of what, how, when and where to do outdoor activities that allow them to connect with the parrot.

This barrier can be solved with a communication campaign

Interpersonal barriers include, apathy, perception that outdoor activities are boring and uncomfortable. Fear of exposing hunting relatives or generating conflicts with them.

An alternative is to design simple, fun, attractive activities that promote the participation of different family members and different age groups (preferably weekends)

While the short-term **impact** on reducing demand for the parrot may be low, because it requires a process of internalization and new social norms on the part of the Macanagüero. We expect that in the long term these individuals will generate sufficient critical mass within their communities to incentivize the adoption of this proposed behavior (Naito et al. 2022).

A latent risk is the possibility that people will have greater access to other wildlife resources and believe they have moral license to extract these resources

CASE STUDIES:

Red Siskin
(Pineda-Maldonado et al. 2021)

Step 1

Behavioral assessment

We propose four alternative behaviors which we describe with a question in parentheses
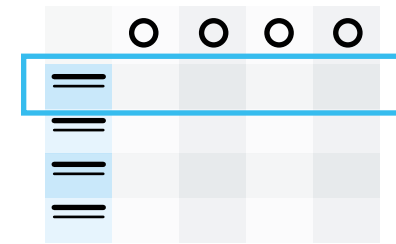
	Benefits	Barriers	Solutions	Impact
Alternative 1 **Do not acquire wild birds** How about you only accept captive-born Red Siskin?	Less zoonotic risk Participation in breeding competitions Prestige Breeding standard Genetic purity	Tradition Increased availability of wild birds Low availability of captive Red Siskin Captive red siskins are more expensive Different legal framework in each country	Training workshops to dismantle the belief of blood freshening Strengthen breeding societies to foster exchange networks Awareness campaign about threats faced by the wild populations of the Red Siskin Workshops on risk of zoonotic diseases to the campus Promote social control with banding campaigns	Reduce the consumption of wild specimens Stimulate The Red Siskin captive breeding capacities

¿?

CASE STUDIES:

Step 1

Behavioral assessment

Benefits

Barriers

Solutions

Impact

Alternative 2

Donate or give away captive birds
And, If you donate your Red Siskin to a zoo or conservation center?

Acknowledgment

Pride in donating

Reduced management costs by having fewer birds

Little capacity of the zoo and conservation center

There are no permits or transfer mechanism

The origin of the specimens is not clear

Different legal framework in each country

Anonymity is not maintained

Promote collaboration networks between zoos and conservation centers

Create protocols for exchange and management of birds in captivity with little space, etc

Safe corridors for donations

Create/ disseminate directory of allies, contacts for donations

Information campaign on what should and should not be donated

Campaign to increase positive attitudes towards breeders who donate

Indirect impact because the fact that you donate does not mean that you stop demanding

Moral license to engage in other unsustainable behaviors (breeding other wild birds)

Step 1

Behavioral assessment

Benefits

Barriers

Solutions

Impact

CASE STUDIES:

Alternative 3

Acquire sustainable options
What if you only work with hybrids red siskins or mutations?

Benefits

Recognition as an experienced breeder

Opportunity to participate in hybrids and mutations contests

Increased prestige

Barriers

Ability to distinguish hybrids and mutations from wild

Disinterest in breeding mutations/hybrids

Lack of knowledge in breeding standards, protocols, and genetic crosses

Little breeding experience in Venezuela to obtain hybrids and mutants

Low availability of hybrids and mutants in Venezuela

Solutions

Training workshops breeding hybrids and mutations

Campaign promoting the value of hybrids/mutations and encouraging the social norm (the most prestigious breeders work with them)

Strengthen breeding societies to foster exchange networks

Impact

Low: Indirect impact because the fact that you work with hybrids does not mean that you stop demanding wild

Medium: this person is expected to become a symbol of good breeding practices (including not using wild)

High: If you can convince 100% to adopt this practice, you can reduce the demand for wild-caught Red Siskin

Promote crossing of wild-caught red siskins with other species?

Breeding mutations/hybrids still requires ancestral

Step 1

Behavioral assessment

CASE STUDIES:

	Benefits	Barriers	Solutions	Impact
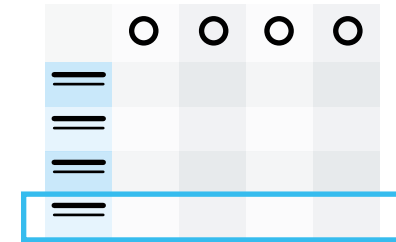
Alternative 4

Participation
What if you donate you knowledge and time Red Siskin conservation programs?

Benefits:
- Improve the image of breeders
- Opportunity to reach agreements with government/ environmental entities
- Prestige
- Public recognition of breeding expertise
- Co-author of breeding standards and good range practices in government audiences, NGOs and aviculturists

Barriers:
- Not knowing the program and how people can contribute
- Low capacity of the program to involve people
- Internal conflicts within societies and conservationists
- No anonymity
- Coordination with international NGOs/zoos is needed to offer enough activities
- Low accessibility to face-to-face and online activities

Solutions:
- Inform about participation options (what, where, how, when) using social media and aviculturists magazines
- Coordinate with other NGOs, private, etc. to establish a community-based conservation program
- Select the spokespersons based on their prestige, recognition, and their ability to reconcile
- Encourage moral norms pro-conservation of fauna in general within the campaign
- Diversify participation strategies
- Campaign to increase the positive attitudes towards breeders who participate in conservation activities

Impact:
- Indirect: participating in projects or donating knowledge does not indicate that you stop demanding
- Medium: Aviculturists are expected to become a symbol of the fight against trafficking
- Moral license to engage in other unsustainable behaviors (breeding other wild birds)

¿?

CASE STUDIES:

Step 2

Behavioral assessment
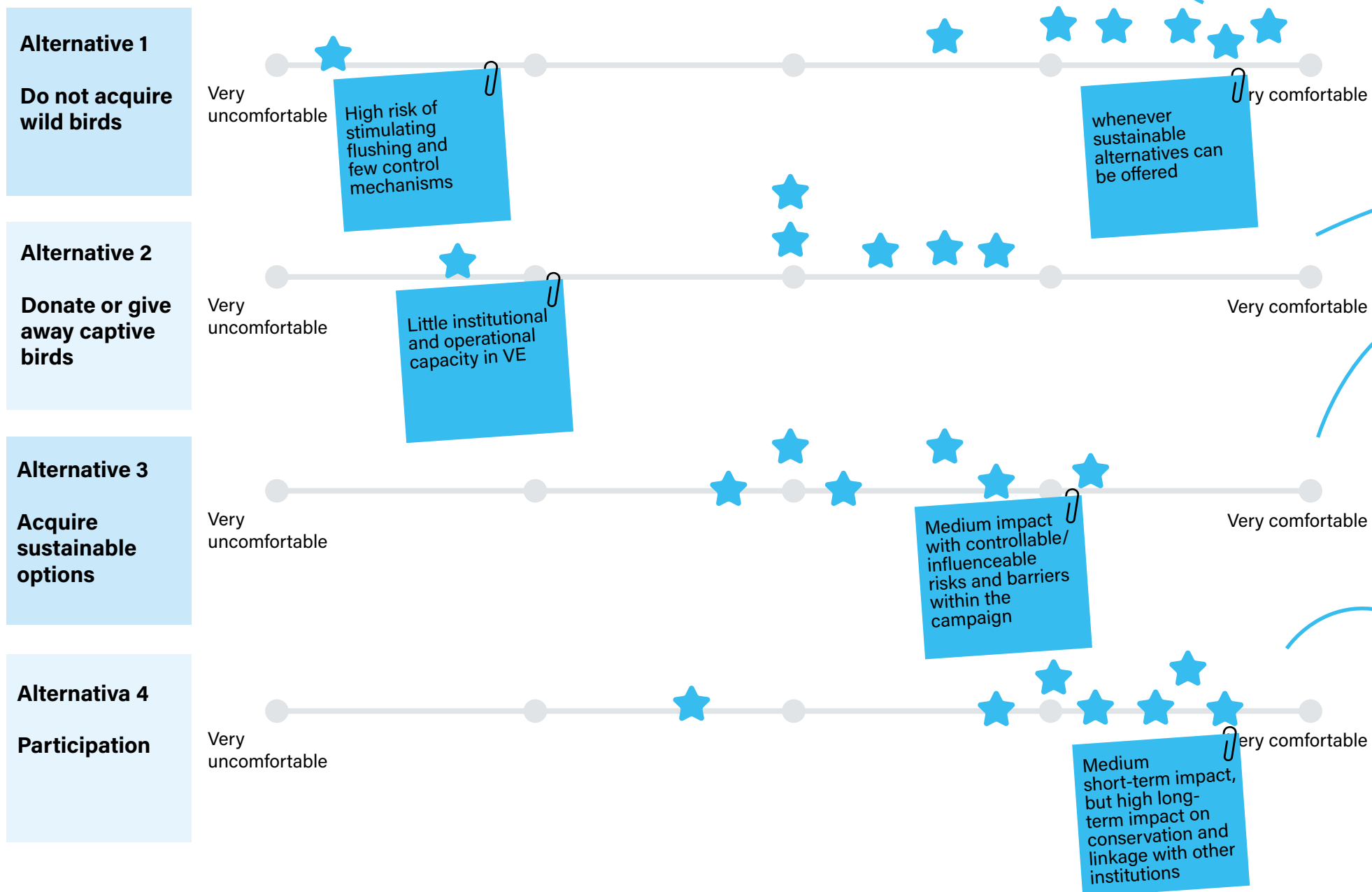
Comparatively, the **"Do not acquire wild birds"** behavior had a greater number of personal benefits, achievable in the short term and a more direct impact on demand reduction.

Alternative 1

Do not acquire wild birds

Very uncomfortable

High risk of stimulating flushing and few control mechanisms

Very comfortable

whenever sustainable alternatives can be offered

Alternative 2

Donate or give away captive birds

Very uncomfortable

Little institutional and operational capacity in VE

Very comfortable

The alternatives **"Acquire sustainable options"** and **"Donate or cede captive birds"** scored low because the participants considered that the low availability of hybrids, mutations and captive specimens in Venezuela is a major barrier to their implementation. In addition, in Venezuela we lack a legal framework that allows the donation of captive birds

Alternative 3

Acquire sustainable options

Very uncomfortable

Medium impact with controllable/ influenceable risks and barriers within the campaign

Very comfortable

Participants considered the **"Participation"** behavior to have a good balance between impact, risks, benefits and viable strategies to overcome barriers. However, it scored poorly because Provita, being a small NGO, has limited capacity to involve large numbers of people in conservation activities

Alternativa 4

Participation

Very uncomfortable

Medium short-term impact, but high long-term impact on conservation and linkage with other institutions

Very comfortable

CASE STUDIES:

Step 3

Describe the proposed alternative behavior
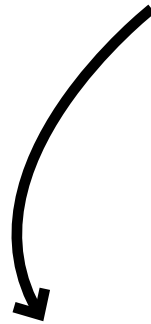
Do not acquire wild birds
How about working only with captive-born red siskins?

Among the **benefits** for the aviculturist in adopting this behavior would be:

- Increase effectiveness in the management of the breeding stock, which in turn translates into a reduction of zoonotic diseases, improvement in genetic quality and greater reproductive capacity.
- Opportunity to improve breeding standards to win competitions, which translates into prestige and recognition among peers.

Among the **logistical barriers** that may affect participation in the discussion activities, we identified limited internet access and low mobilization capacity in the group of Venezuelan aviculturists.

To overcome these barriers, we propose to coordinate, with other NGOs and local partners, support in the implementation of the activities

Among the c**ognitive barriers**, we identified a low level of knowledge among the audience of what, how and when to participate, as well as low skills in the use of online tools.

As solutions, we propose to generate a communication campaign to inform what, where, how and when the forums and discussion workshops will be held.

Last but not least, implementing conflict management strategies is necessary to navigate **interpersonal barriers** generated by internal conflicts within societies and between members, as well as conflict between conservationists and aviculturists.

A major **negative impact** (risk) is the possibility of captive operations being used to launder wild specimens. This is particularly relevant in countries with weak monitoring and enforcement capacity.

IN SUMMARY

- Promoting alternative behaviors is much more effective than simply saying "Don't demand wildlife", "Don't buy wildlife".

- An ideal alternative behavior should promote behaviors or products that satisfy the same fundamental motivations and desires as the original behavior, minimizing the risk of counterproductive outcomes.

- Identifying and evaluating alternative behaviors is a three-step process:

    1. The proposed alternative behaviors should be evaluated in four main components: benefit, barriers, solutions, and impact.

    2. Evaluate each alternative behavior qualitatively and considering the feasibility of implementing the proposed solutions.

    3. Just as we did with the audience profiles, once we identify the best alternative behavior, we should generate a profile of it, outlining in summary form the benefits, impact, barriers and solutions discussed with your team and partners.

04

DEVELOPING BEHAVIOR-FOCUSED ToC

4.1 BREAKING DOWN THE ToC

Remember the six steps to developing a ToC that we mentioned in Chapter 1?

¿?

✔ So far we have covered the first two
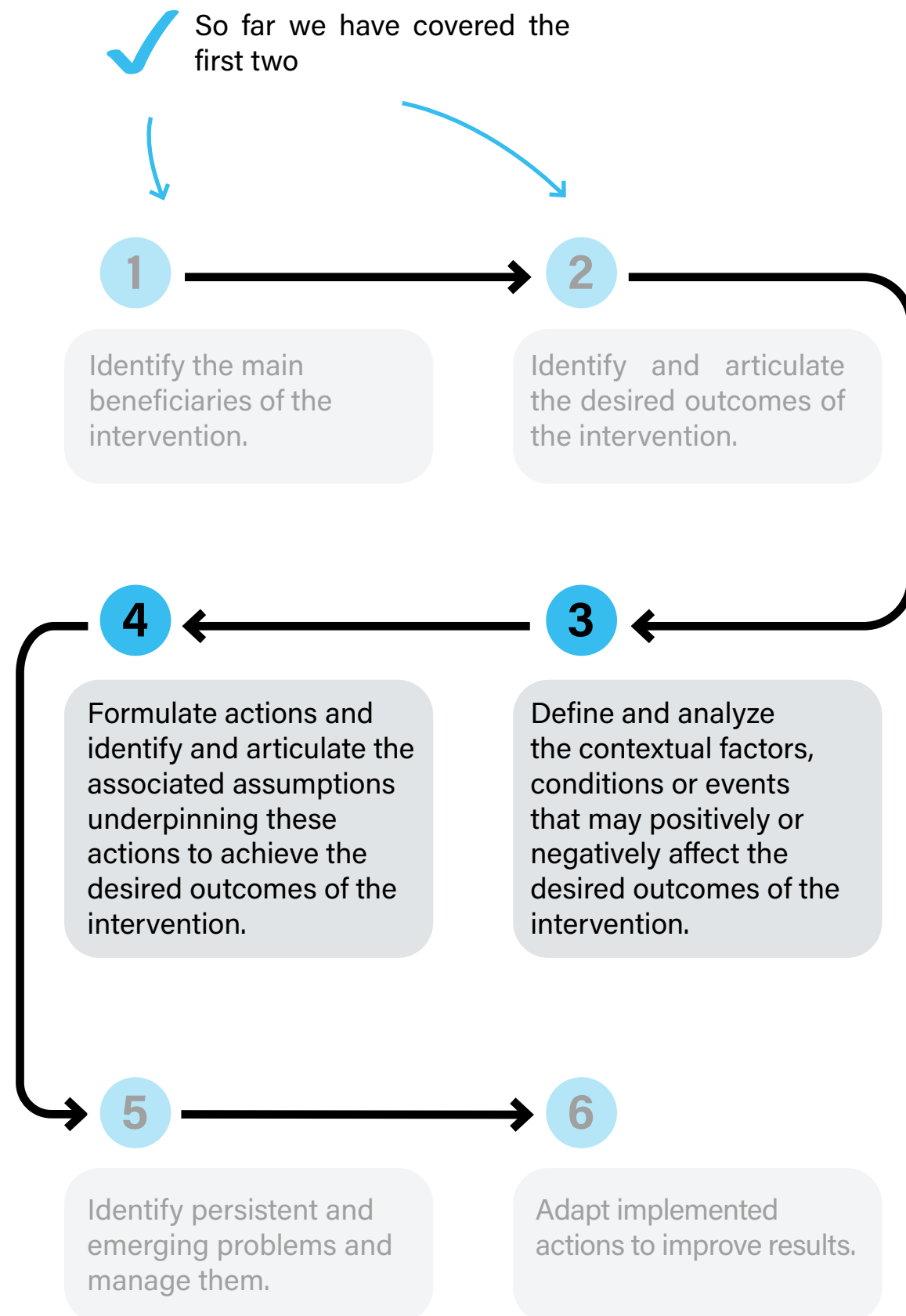
Once we are clear about the behavior we want to be adopted and by whom, the next step is to address the rest of the steps in the development of a ToC

1 Identify the main beneficiaries of the intervention.

2 Identify and articulate the desired outcomes of the intervention.

To do this, we must break down our ToC into two levels to describe changes at the behavioral level and changes that show the progress of the intervention.

4 Formulate actions and identify and articulate the associated assumptions underpinning these actions to achieve the desired outcomes of the intervention.

3 Define and analyze the contextual factors, conditions or events that may positively or negatively affect the desired outcomes of the intervention.

5 Identify persistent and emerging problems and manage them.

6 Adapt implemented actions to improve results.

Developing behavior-focused ToC

A. Changes at the behavioral level

As we mentioned in the first chapter, the description of behavioral changes must be aligned to the selected behavioral model (Hrubes et al. 2001; Miller 2017) which, in our case, is the Theory of Planned Behavior (TPB).

The TPB proposes that a person's intention to perform a behavior is the best indicator of actual behavior. Intention in turn is modulated by three types of beliefs (Ajzen 2011).

▪ Beliefs about the positive and negative consequences associated with a given behavior, which determine a person's *attitudes*.

▪ Beliefs about people's *perceived norms*, whether they are beliefs about whether or not other people approve of the behavior (what others think; inductive norms) or about what is socially accepted behavior (what everyone does; descriptive norms).

¿?

▪ Beliefs about personal or environmental factors that help or prevent you from behaving in a specific way, *perceived control*.

In the context of the alternative behavior we wish to promote in the campaign, these TPB components translate into:

Componentes

	KNOWLEDGE What information does the audience need to handle in order to make an informed decision about the proposed behavior? this includes information about the benefits, what to do and how to do it.
	ATTITUDES What attitudes should you promote in the audience that favor the adoption of the behavior you propose?
	SOCIAL NORMS On which topics do you want to increase resonance? What social norms to promote to facilitate change?
	PERCEIVED CONTROL What are the barriers that hinder change? What are the psychological, logistical, and social barriers that prevent the adoption of the proposed behavior? But here you can also think about opportunities. What things would facilitate change?

Based on the TPB model, we then propose that the following changes must occur for the desired behavioral change to occur:

Developing behavior-focused ToC

	BEHAVIOR The intention to adopt the proposed alternative behavior has increased significantly in the audience after the implementation of the campaign.	

	NOW	BEFORE
	The audience handles information about: ▪ The personal benefits of the proposed change. ▪ What to do, when to do it and how to do it.	The audience is unaware of: ▪ The personal benefits associated with the alternative behavior. ▪ What opportunities exist to adopt/facilitate the change. ▪ The concepts and tools required to adopt the proposed behavior.
	The audience has positive attitudes toward adopting the proposed behavior.	The audience has negative attitudes or is indifferent to the proposed behavior.
	▪ Higher prevalence of normative beliefs and motivations towards the adoption of the proposed behavior. ▪ Lower social acceptance of the demand for wild birds.	▪ Low prevalence of normative beliefs and motivations towards the adoption of the proposed behavior. ▪ High social acceptance of wild bird demand behavior.
	The number and magnitude of audience-perceived barriers to adopting alternative behavior has decreased significantly, while numerous and varied opportunities are perceived more frequently.	The audience perceives that there are numerous insurmountable barriers and very few opportunities to adopt the alternative behavior.

B. Intervention progress
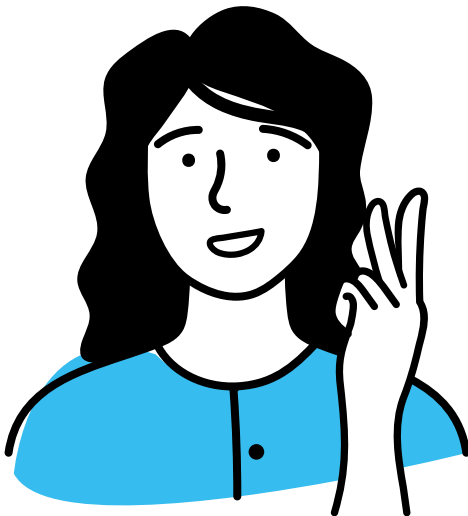
The second step is to think about how you will implement and monitor these changes. To do this, you must define your:

Developing behavior-focused ToC

1. Objectives

What is the goal you want to achieve?

2. Strategies

What activities will you implement to achieve each of the proposed changes?

3. Assumptions

Why do you think your strategy will produce the expected change?

4. Indicators

How will you measure the progress and impact of your strategies?

	DEFINITION	EXAMPLES
OBJECTIVES	It is a description of the specific result desired.	By October 2023, 60% of the audience is aware of the personal benefits of adopting the proposed behavior. By March 2023, 60% of the audience expresses a positive assessment towards the adoption of farming practices that do not promote the use of wild birds in aviculture.
STRATEGIES	They are composed of a series of activities. The activities are the processes, tools, events, technologies and actions implemented.	Communication campaign with testimonials from people describing their experience of participating in the campaign activities and the associated benefits. Generate spaces for discussion and meetings among members of the audience (forums, workshops, blogs).
ASSUMPTIONS	Your idea of how a particular strategy contributes to achieving the specific change you are hoping for.	We assume that if the messages are starred (narrated by) members of the same community, the audience will have a greater connection with the message delivered. We assume that as people become aware that there are diverse, inclusive spaces for discussion, their interest in participating in campaign activities will increase.
INDICATORS	Value metrics to measure the progress, impact or reach of your strategies.	Number of people in the audience reached with your campaign messages. Number of people with positive attitudes towards the proposed behavior. Number of people in your audience who participate in your campaign activities.

¿?

Developing behavior-focused ToC

	Knowledge	Attitudes	Norms	Control
OBJECTIVES				
STRATEGIES				
ASSUMPTIONS				
INDICATORS				

Developing behavior-focused ToC

Some recommendations:

- Convert the expected changes into objectives.

- A good objective should be results-oriented, measurable, specific practical and defined within a time frame (Byers et al. 2013).

- When defining your strategies, remember that direct experiences (workshops, outdoor activities) are more effective in changing behavior than indirect experiences (lectures, readings, seminars).

- The same strategy can help you achieve several objectives. These should be a priority.

- The same assumption may be applicable to different strategies.

- It is easy to make assumptions about what people know and feel, but assumptions are not always correct. Listening to people in their day-to-day lives can help you generate more accurate assumptions.

C. Prioritize your strategies

In the real world, we do not have the time and resources to implement all of the strategies identified, so you must prioritize. One way to prioritize your strategies is to evaluate them based on their impact and implementation effort:
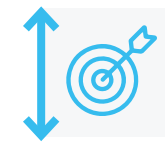
Impact: Does this strategy allow you to address changes in several or only one of the TPB components?

Effort: How much resources, time do you have to invest to implement this strategy? Do you have the technical and logistical capacity to implement it? Do you have partners to help you plan, implement, monitor this strategy?

HIGH IMPACT

DO IT	DO IT LATER
DO IT IF YOU HAVE TIME	DO NOT DO IT

LITTLE EFFORT   HIGH EFFORT

LOW IMPACT

You can download **Miro'**s format for this activity here
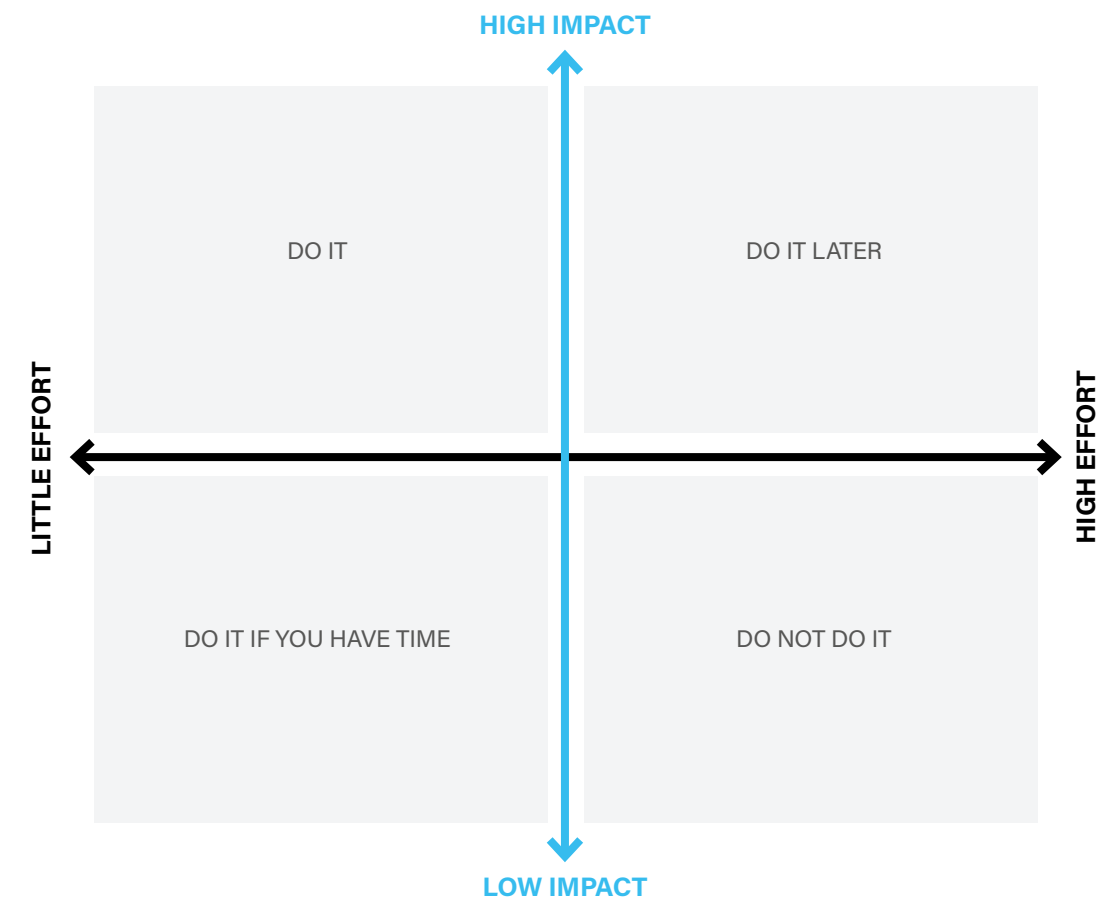
4.2 ToC IN PRACTICE

A. Build your team

How should you set up your team? Your team includes the **core team**, who will work closely with you to plan, implement and monitor campaigns, but also includes **local partners** who should be part of the discussions to get ideas, solutions and buy-in (Braus 2011).

Core team

Ideally, your core team should be as diverse, creative and interdisciplinary as you can find. Interdisciplinarity is key to developing a behavior change campaign. Having biologists, sociologists, communicators, graphic designers, statisticians and managers on your team will help you understand wildlife trafficking, the science behind it and the social and political dimensions of it.

However, working with people with such heterogeneous expertise is a challenge. Lack of a common language and disparate preferences for qualitative or quantitative approaches are problems and discussions that you will encounter frequently and that can slow down the ToC design process. Using different discussion strategies (brainstorming, problem tree, affinity mapping) will be helpful in generating consensus, creating a common language and facilitating decision making.

Local partners

Once you have assembled your core team, you should identify which individuals, institutions, or groups within the community you wish to intervene can contribute to better understand the social dynamics, contextualize the vision of the campaign, and support the planning and implementation of activities (Braus 2011).

Involving local partners is something you should do early in the planning process and then maintain during implementation. Don't make the mistake of developing the ToC on your own and then expecting local partners to simply adopt it. The process should be inclusive from the beginning to facilitate buy-in and governance.

Keep in mind:

- Identifying and engaging local partners takes time. Don't leave it to the last minute.

- Unfortunately you will not be able to engage/manage all the local partners you identify, but you can apply strategies to prioritize them.

- Create a map or diagram of your local partners and then identify stakeholders based on their role and level of involvement. This will help you define effective communication strategies with each group, identifying the most appropriate frequency and channels of communication.

In the next modules we will discuss in more detail the different strategies and tools you can use for partner management.

B. Gather evidence

Before assembling your team to develop the ToC, it is important that you have as much information as possible to hand and socialize with them about:

- The biology of the species.

- The magnitude and structure of the traffic chain you face.

- The communities you wish to intervene.

Beyond compiling the data, it is important to synthesize the information in tables, graphs and maps. The idea is to present them in a friendly and understandable way for both your core team and your local partners. Developing infographics and presentations and using them in discussion sessions prior to the development of the ToC will help you to ensure that the whole team has the same information and can intervene more effectively in the discussions.

Examples of some of the data you should have on hand are:

	DESCRIPTION	SOME SOURCES
DEMOGRAPHIC DATA	Census, income, poverty level, education level, ethnic background, politics, location of cities and towns, schools and community centers.	United Nations Human Development Index Poverty index and other economic indices
HISTORY OF CONSERVATION ACTIVITIES	What has been done and by whom. This information will help you understand the evolution of environmental problems and solutions as well as understand the governance of these problems.	What works in conservation? (Sutherland et al. 2021)
SCIENTIFIC PUBLICATIONS	Published data on species trafficking, structural, cognitive and behavioral factors that drive species trafficking.	Scopus ResearchGate GoogleScholar

	DESCRIPCIÓN	ALGUNAS FUENTES
MAPS	Species distribution, towns and cities, protected areas, watersheds, disturbances such as deforestation, fire, mining, etc. present in your study area will help you prepare the scenario. If your team does not use Geographic Information System tools, there are user-friendly tools that allow you to visualize spatial information such as Google Maps, Integrated Biodiversity Assessment Tool.	GBIF -Global Biodiversity Information Facility DIVA GIS - Country level spatial information IUCN Red List of Threatened Species Spatial data on endangered species International Convention on International Trade in Endangered Species Database - CITES Imports of wildlife and wildlife products from the United States between 2000 and 2014 Googlemaps

Developing behavior-focused ToC

CASE STUDIES:

Behavior-focused ToC to reduce demand for wild birds

Yellow-shouldered Amazon
(Pineda-Maldonado et al. 2021)

Step 1

Behavioral changes

To construct the ToC for reducing the demand for the Yellow-shouldered Amazon in Macanao, we returned to **the approved alternative behavior** sheet that we made in the case study in Chapter 4.

Participation

How about participating in outdoor activities as a way to enjoy the parrots without holding them captive?

Among the **benefits** for the Macanagüero in adopting this behavior would be:

- Not having parrots decreases the domestic workload.
- It allows socializing by connecting with other people in the community.
- It becomes an opportunity for exercise.
- Provides an outdoor distraction.
- Generates opportunities for a family activity.

Positive **attitudes** were mainly informed by the benefits of adopting the alternative behavior. Other attitudes were based on some of the barriers identified as attitudinal beliefs (boredom)

Among the **logistical barriers**, we identified that people have little time to participate in recreational activities and that it is difficult to travel to the sites of interest.

The main **cognitive barrier** was the audience's low level of knowledge of what, how, when and where to do outdoor activities that allow them to connect with the parrot.

Interpersonal barriers include, apathy, perception that outdoor activities are boring and uncomfortable. Fear of exposing hunting relatives or generating conflicts with them.

While the short-term **impact** on reducing demand for the parrot may be low, because it requires a process of internalization and new social norms on the part of the Macanagüero. We expect that in the long term these individuals will generate sufficient critical mass within their communities to incentivize the adoption of this proposed behavior (Naito et al. 2022).

The **perceived control** component was informed by identified related barriers including few alternatives for outdoor enjoyment and limited availability of transportation to sites of interest

The expected changes in **knowledge** were informed by the barriers identified in terms of lack of awareness of the benefits of the proposed behavior, as well as of opportunities to adopt it

Social norms were derived from the risks that adopting such behavior could have in reducing demand, such as reducing the perception of moral license to keep other wild birds

Step 2

Intervention progress

Taking the social norms component as an example, the resulting behavior-focused ToC would be:

By October 2023, the intention to keep parrots as pets in the treatment locations will remain at low values similar to those observed in 2022.

By October 2023, the intention to enjoy the parrot through outdoor activities will increase by 20 % compared to the baseline measured in March 2022.

SOCIAL NORMS

By October 2023:
- 30% of the audience expresses beliefs and motivations to comply with social norms related to enjoying parrots outdoors rather than keeping them indoors.
- 30% of the audience perceives that social acceptance of keeping parrots as pets is lower compared to previous years.

A7

A8

Proportion of audience with:
- Normative beliefs and motivations toward enjoying parrots outdoors rather than keeping them indoors
- Lower perception of social acceptance of parrot ownership.

Measured before and after the communication campaign and in control and treatment groups.

A **Assumptions**

A7 Social norms consistent with the social and cultural context of the audience are identified and communicated effectively.

A8 Social norms that help reduce conflicts between community members (poachers, sellers, consumers) are identified and effectively communicated.

Communication campaign promoting social and moral standards that:
- Encourage participation in recreational activities as a way to enjoy parrots.
- Discourage the keeping of parrots as pets.

CASE STUDIES:

Impact Results Indicators Strategies S Assumptions

CASE STUDIES:
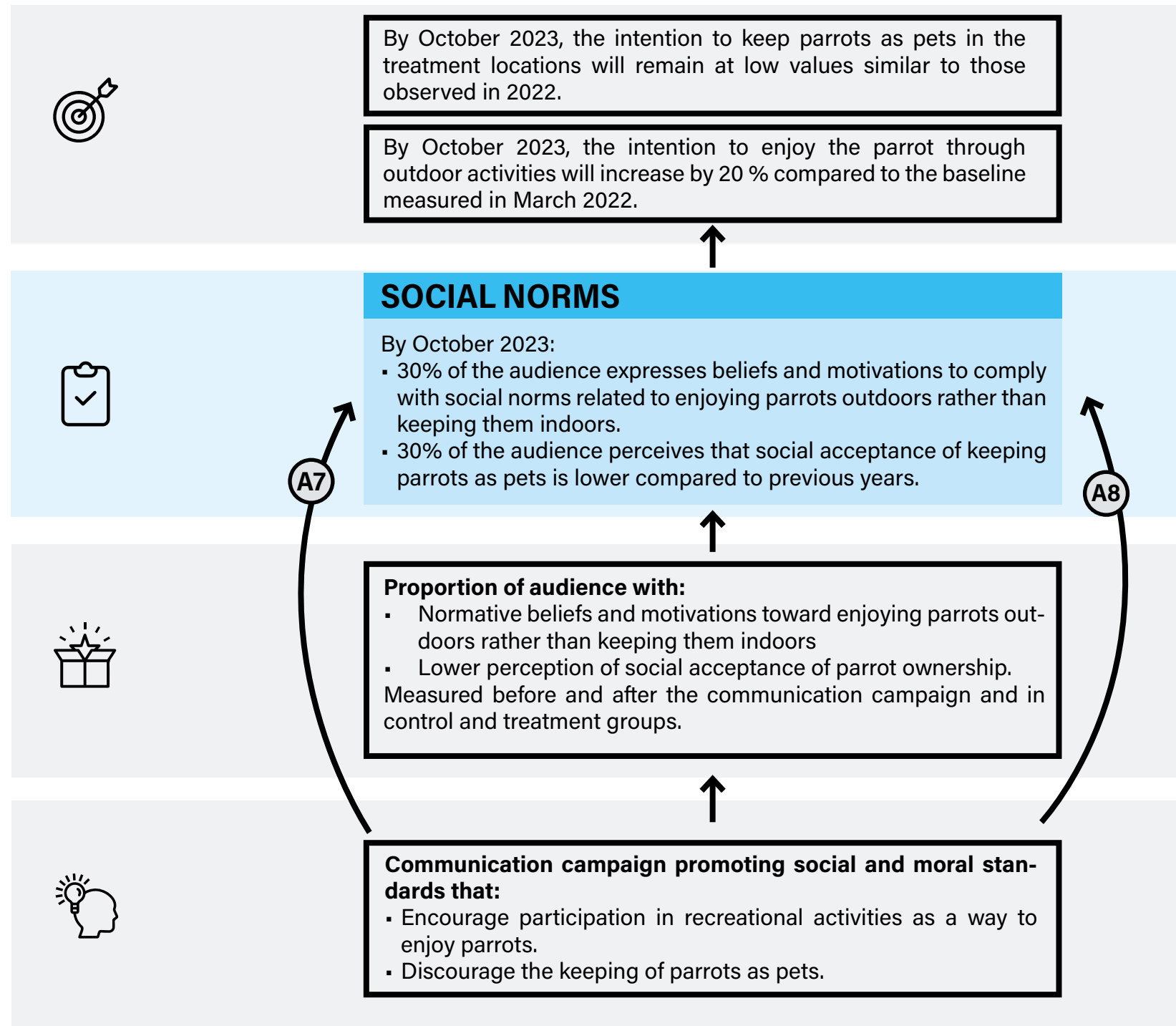
If we develop these same steps for the rest of the TPB components (knowledge, attitudes, perceived control), the ToC for the behavior change campaign focused on increasing, within the communities of Macanao, the audience's intention to interact with the parrot by participating in outdoor recreational activities instead of keeping them captive in their homes, would look something like:

Download the ToC of the Yellow-shouldered Amazon on our website

Impact

By October 2023, the intention to keep parrots as pets in the treatment locations will remain at low values similar to those observed in 2022.

By October 2023, the intention to enjoy the parrot through outdoor activities will increase by 20 % compared to the baseline measured in March 2022.

Results

KNOWLEDGE
By October 2023:
- 60% of the audience known about which outdoor activities allow them to enjoy parrots without holding them captive.
- 60% of the audience is aware of the personal benefits of participate in outdoor activities.

ATTITUDES
By October 2023:
- 30% of the audience expresses a positive attitudes towards the enjoyment of parrots through outdoor activities, rather than keeping them captive.
- 30% of the audience expresses a positive attitudes towards people who promote enjoyment of parrots through outdoor activities.

SOCIAL NORMS
By October 2023:
- 30% of the audience expresses beliefs and motivations to comply with social norms related to enjoying parrots outdoors rather than keeping them as pets.
- 30% of the audience perceives that social acceptance of keeping parrots as pets is lower compared to previous years.

CONTROL
By March 2023, 30% of the audience perceives that participating in outdoor activities to enjoy having a parrot is an accessible, low-cost, reliable, and safe option.

ASSUMPTIONS

A1 We assume that as people learn that there are fun, free and accessible alternatives for the whole family, their interest in participating in outdoor activities will increase.

A2 We assume that if the messages are starred (narrated by) members of the same community who have participated in the activities, the audience will have a greater connection with the message delivered.

A3 We assume that if we design different activities covering interests, aspirations, and capabilities of the main gender, age, and professional groups, we will be able to capture the interest of a more varied group of people, increasing the diversity within our audience groups.

A4 We assume that the team will be able to capture and interpret positive values aligned with the cultural, social, and psychological context of the groups within the audience.

A5 We assume that the team will be able to identify community leaders who have effective (low-conflict) communication and broad reach within the community.

A6 We assume that the local institutions identified will have high acceptance and credibility within the audience groups.

A7 Social norms consistent with the social and cultural context of the audience are identified and communicated effectively.

A8 Social norms that help reduce conflicts between community members (poachers, sellers, consumers) are identified and effectively communicated.

A9 We assume that the team will be able to identify places and local institutions identified will have the operational or technical capacity to support the activities.

Indicators

Proportion of people in the audience who:
- Identifies which activities they can engage in outdoors that allow them to enjoy parrots without holding them captive.
- Knows the emotional and social benefits of participating in outdoor recreational and educational activities.
Measured before and after the communication campaign and in control and treatment groups.

Proportion of audience with:
- Positive perceptions and attitudes towards the enjoyment of parrots through outdoor activities.
- Positive evaluation of people who promote the enjoyment of parrots through outdoor activities.
Measured before and after the communication campaign and in control and treatment groups.

Proportion of audience with:
- Normative beliefs and motivations toward enjoying parrots outdoors rather than keeping them indoors.
- Lower perception of social acceptance of parrot ownership.
Measured before and after the communication campaign and in control and treatment groups.

Proportion of audience with:
- Higher perception of the audience perceives that participating in outdoor activities to enjoy having a parrot is an accessible, low-cost, reliable, and safe option.

Strategies

Communication campaign that:
- Informs about the program of activities.
- Disseminate the emotional and social benefits of participate in outdoor activities.

Design a program of simple, fun, varied, and familiar activities that promote the participation of different age groups.

Communication campaign with testimonials from people describing their experience in participating in the campaign activities and the associated benefits.

Coordinate with local institutions to create awards for people who promote participation in campaign activities.

Communication campaign promoting social and moral standards that:
- Encourage participation in recreational activities as a way to enjoy the parrot.
- Discourage the keeping of parrots as pets.

Develop activities in safe spaces that are accessible and affordable for the audience.

CASE STUDIES:

Red Siskin
(Pineda-Maldonado et al. 2021)

Step 1

Behavioral changes

To construct the ToC for reducing the demand for wild-caught red siskins among aviculturists in Venezuela, Brazil, Spain, and Portugal, we used **the approved alternative behavior** sheet from the case study in Chapter 4.

How about working only with captive-born red siskins?

Among the **benefits** for the aviculturist in adopting this behavior would be:

- Increase effectiveness in the management of the breeding stock, which in turn translates into a reduction of zoonotic diseases, improvement in genetic quality and greater reproductive capacity.
- Opportunity to improve breeding standards to win competitions, which translates into prestige and recognition among peers.

Positive **attitudes** were informed by the **benefits** of adopting the alternative behavior. Other attitudes were based on some of the barriers identified as attitudinal beliefs (better breeding outcomes, prestige)

Among the **logistical barriers** that may affect participation in the discussion activities, we identified limited internet access and low mobilization capacity in the group of Venezuelan aviculturists.

Among the c**ognitive barriers**, we identified a low level of knowledge among the audience of what, how and when to participate, as well as low skills in the use of online tools.

Last but not least, implementing conflict management strategies is necessary to navigate **interpersonal barriers** generated by internal conflicts within societies and between members, as well as conflict between conservationists and aviculturists.

A major **negative impact** (risk) is the possibility of captive operations being used to launder wild specimens. This is particularly relevant in countries with weak monitoring and enforcement capacity.

The **perceived control** component was informed by the identified related barriers including low availability and high cost of captive-sourced specimens in Venezuela, perception of greater efficiency

Expected changes in **knowledge** were informed by identified barriers regarding zoonotic risks and management complications of entering wild-caught red siskins, lack of knowledge of optimal stock management without the use of wild birds, etc

Social norms were derived from the risks that the adoption of such behavior could have on demand reduction, such as, for example, the washing of wild birds inside captive flocks

CASE STUDIES:

Step 2

Intervention progress

Taking the attitude component as an example, the resulting behavior-focused ToC would be:

By October 2023, the intention to use wild-caught red siskins within the audience has remained at similarly low levels to those reported in the baseline in March 2022.

By October 2023, the intention of aviculturists to adopt captive breeding practices that reduce demand for wild-caught red siskins has increased by 20% over the baseline measured in March 2022.

ATTITUDES

By March 2023:
- 60% of the audience expresses a positive assessment toward adopting captive breeding practices and discouraging the use of wild-caught birds in aviculture.
- 30% of the audience expresses a positive rating towards breeders promoting the reduction of demand for wild-caught red siskins in aviculture.

A5

A6

A **Assumptions**

Proportion of the audience with positive attitudes towards:
- The adoption of good captive breeding practices.
- Breeders promoting breeding practices that reduce demand for wild-caught red siskins.

Measured before and after the communication campaign and in control and treatment groups.

A5 Suponemos que el equipo logrará identificar avicultores que tengan una comunicación efectiva (con bajo conflicto) y con amplio alcance dentro de la comunidad.

A6 Suponemos que los avicultores identificados tendrán alta aceptación y credibilidad dentro de los grupo de audiencia.

Communication campaign to promote positive values towards the adoption of good breeding practices using testimonials from breeders who manage their stock without wild-caught red siskins.

⊙ Impact   ☑ Results   🎁 Indicators   💡 Strategies   Ⓢ Assumptions

If we develop these same steps for the rest of the TPB components (knowledge, attitudes, perceived control), the ToC for the behavior change campaign focused on promoting, within poultry farmers in Venezuela, Brazil, and the Iberian node (Spain and Portugal), the adoption of captive breeding practices that reduce the demand for wild-caught red siskins in aviculture, would look something like:

Download the ToC of the Red Siskin on our website

CASE STUDIES:

Impact

By October 2023, the intention to use wild-caught red siskins within the audience has remained at similarly low levels to those reported in the baseline in March 2022.

By October 2023, the intention of aviculturists to adopt captive breeding practices that reduce demand for wild-caught red siskins has increased by 20% over the baseline measured in March 2022.

Results

KNOWLEDGE

By October 2022, 60% of the audience (treatment group), known how to contribute to reduce the demand for wild-caught red siskins in aviculture.

By March 2023, 60% of the audience (treatment group) will have increased their knowledge of captive breeding practices that contribute to reducing the demand for wild-caught red siskins in aviculture.

ATTITUDES

By March 2023:
- 60% of the audience expresses positive valorations toward adopting captive breeding practices and discouraging the use of wild-caught birds in aviculture.
- 30% of the audience expresses positive valorations towards breeders promoting demand reduction for wild-caught red siskins in aviculture.

SOCIAL NORMS

By August 2023:
- 60% of the audience expresses beliefs and motivations to comply with social norms related to sustainable captive-breeding practices in aviculture, focused on reducing demand for wild-caught birds.
- 30% of aviculturists who support the adoption of practices that reduce demand for wild-caught red siskins, perceive that their prestige and recognition has increased.

CONTROL

By June 2022, partnerships have been established with breeding societies to encourage participation in events/workshops, and to facilitate the evaluation of behavioral and participation indicators.

By June 2022, personal and institutional conflicts within the breeding societies (treatment societies in Venezuela, Spain, and Brazil) and their members have been identified and managed.

Indicators

Proportion of the audience that:
- Knows how to contribute to reducing demand for wild-caught red siskins.
- Correctly identifies captive breeding practices that reduce demand for wild-caught red siskins.
Measured before and after the campaign and in control and treatment groups.

Proportion of the audience with positive attitudes towards:
- The adoption of good captive breeding practices.
- Breeders promoting breeding practices that reduce demand for wild-caught red siskins.
Measured before and after the communication campaign and in control and treatment groups.

Proportion of the audience with:
- Normative beliefs and motivations towards the adoption of sustainable captive breeding practices.
- Increased perception of prestige and recognition towards aviculturists who promote the reduction in demand for wild-caught red siskins.
Measured before and after the communication campaign and in control and treatment groups.

Agreements signed with individuals and breeding federations or associations in Venezuela, Spain, Portugal and Brazil.

Number of poultry farmers in Spain, Brazil, Venezuela and Portugal who subscribe to the campaign's official Facebook page @anidandoFuturo and June-December increase in interactions with posts and audience publications.

Strategies

Communication campaign (aviculture magazines & social networks) using members of the Red de Especialistas y Avicultores Amigos del Cardenalito (ReSSAN) to promote knowledge on how each aviculturists can contribute to reduce demand.

Organize webinars and interviews with ReSSAN members to share with other aviculturists experiences on captive breeding practices that reduce the demand for wild-caught red siskins.

Coordinate with breed societies to create recognition for breeders who promote and use captive breeding practices that reduce the demand for wild-caught red siskins in aviculture.

Communication campaign to promote positive values towards the adoption of good breeding practices using testimonials from breeders who manage their stock without wild-caught red siskins.

Communication campaign to:
- Disseminate positive values and recognition to breeders who promote and use breeding practices that reduce the demand for wild-caught red siskins in aviculture.
- Promote social and moral standards (code of conduct) for good practices in aviculture.

Coordinate with breeding societies to increase the requirements of not using wild-caught birds.

Establish collaboration agreements with breeding societies and federations in Venezuela, Spain, Portugal and Brazil to increase the capacity to convene, stimulate the level of participation in events/workshops, and facilitate the dissemination of evaluation instruments.

Use inclusive and reconciliatory language when interacting with aviculturists.

A ASSUMPTIONS

A1 We assume that once informed of the effects that the demand for wild-caught red siskins has on populations in Venezuela, aviculturists will make decisions in accordance with conservation values.

A2 We assume that the ReSSAN has a wide scope and impact on the target audience groups.

A3 We assume that ReSSAN members will contribute in to developing content for the campaign.

A4 We assume that the breeding societies and federations identified in Venezuela and the Iberian node are respected and recognized among the aviculture community.

A5 We assume that the team will be able to identify aviculturists who have effective (low conflict) communication and wide scope within the community.

A6 We assume that the aviculturists identified will have high acceptance and credibility within the target audience.

A7 We assume that the team will be able to identify social norms that are consistent with social and cultural context within the audience and will be able to communicate them effectively.

A8 We assume that breeding societies identified societies will have the operational or technical capacity to support the activities.

A9 We assume that the breeding societies have the interpersonal skills for conflict management.

A10 We assume that aviculturists are willing to establish alliances once agreements are established and they are willing to maintain fluid communication.

A11 We assume that the team will be able to communicate with aviculturists using a respectful tone, in accordance with their social and cultural context.
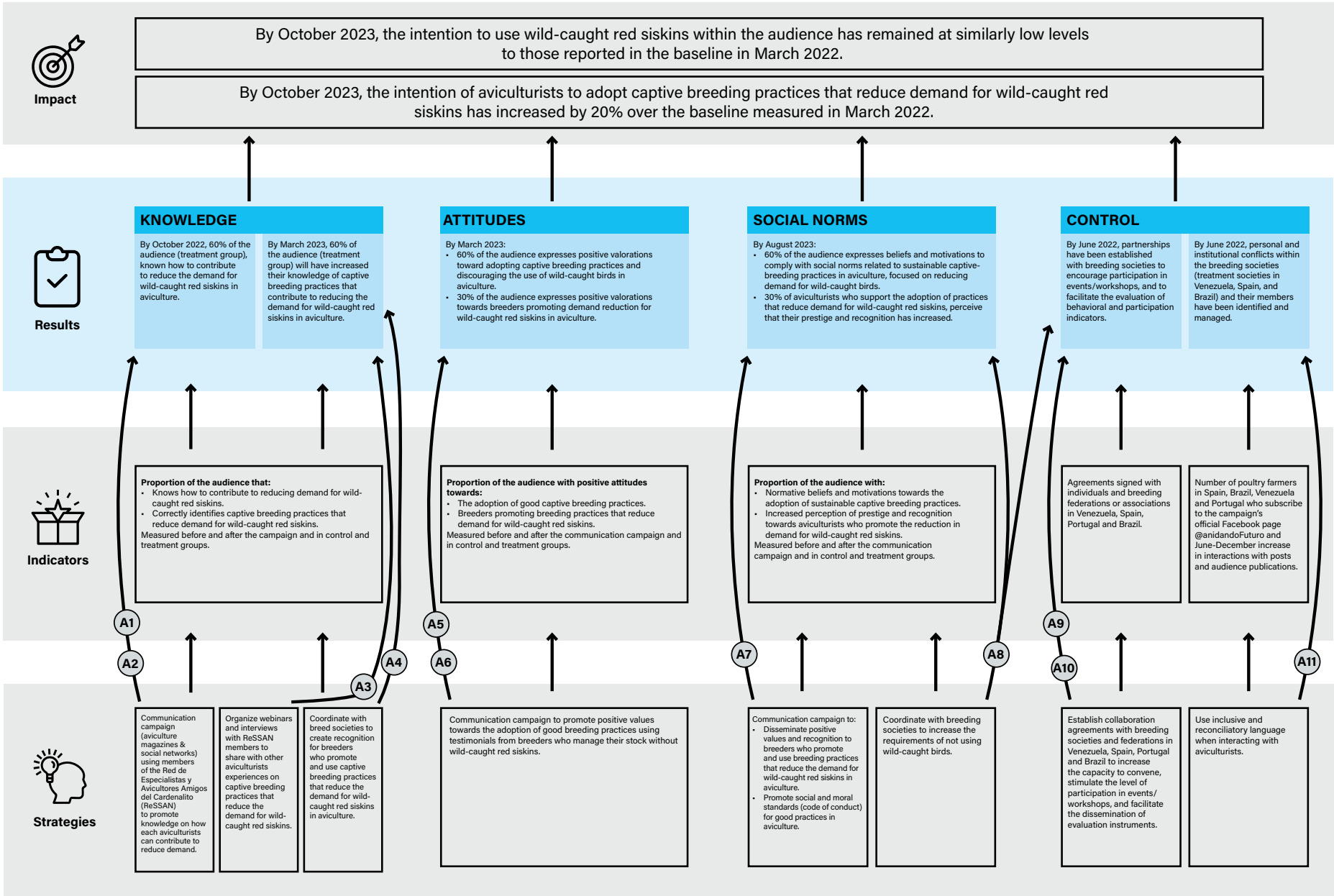
IN SUMMARY

- Describe the behavioral changes in a way that aligns with the behavioral model you selected to develop the behavior-based ToC.

- To implement and monitor behavioral changes you must define objectives, strategies, assumptions and indicators.

- Remember that a good objective must be results-oriented, measurable, specific, practical and defined within a time frame.

- Prioritize your strategies based on their impact and implementation effort.

- To implement your ToC, you must form a multidisciplinary work team and a network of local collaborators.

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