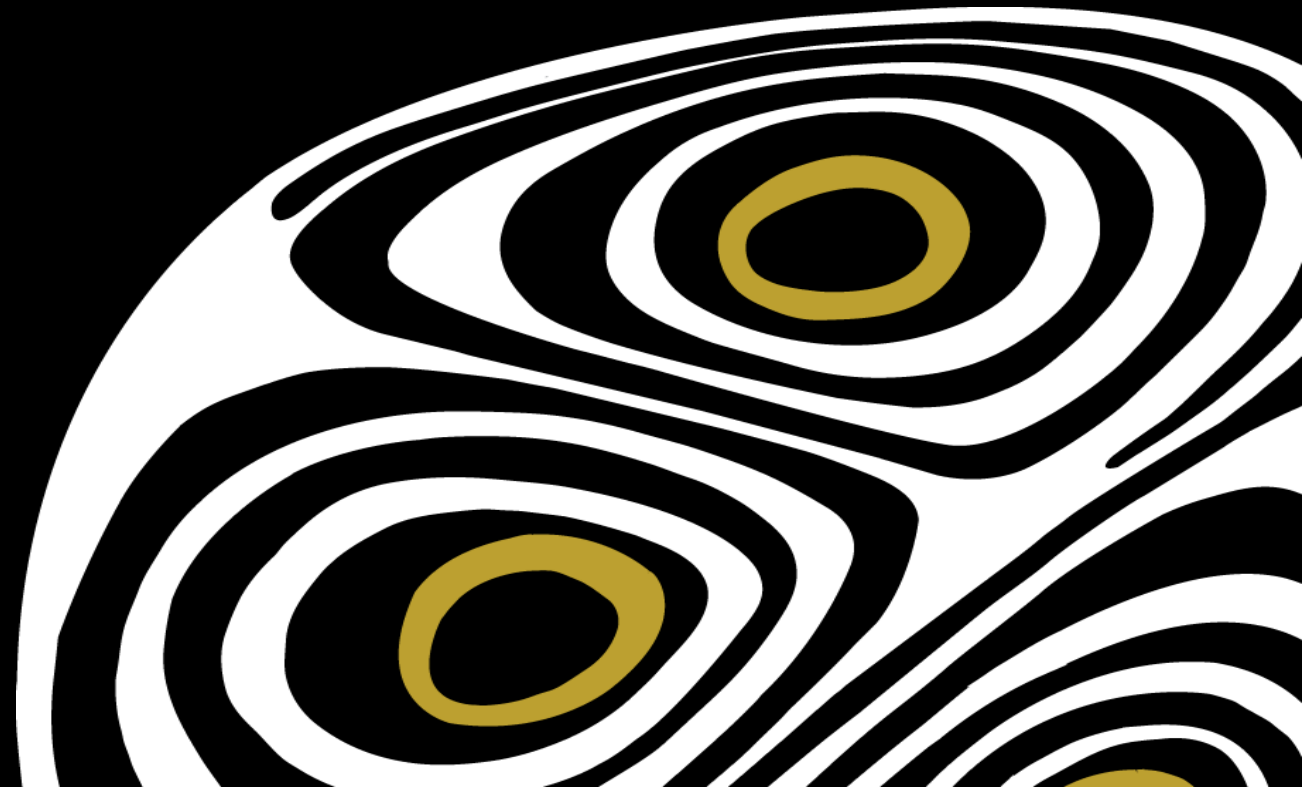


Xingu Seeds Network (ARSX)



Context

- Brazil's Forest Code and the Nationally Determined Contributions require the **country to restore 8m and 12m hectares of forest by 2030**. Accelerating the use of **Muvuca would help to achieve these goals**.
- **Muvuca** is a **restoration technique** that uses a mix of seeds for natural forest regeneration, that is both significantly **cheaper** (-63% vs traditional seedlings), more **efficient** (20x more trees can be planted per day vs traditional seedlings), and higher **impact** (1.5-12x vs traditional seedlings).

Forest Partnership: Transform the ARSX towards a sustainable business model

- Muvuca requires **an innovative, replicable, and scalable business model** to generate a huge amount of required seeds supply.
- The Xingu Seeds Network is our **best bet to demonstrate such model**. ARSX **collects seeds** in the North of Mato Grosso and **commercializes them to buyers**: its governance is innovative and is seen as a replicable and scalable model
- **ARSX** has grown significantly over the past 10 years, achieving **+12% growth p.a. in collectors** over the timeframe to reach **>500 collectors** and **£127k revenue in 2018**
- Nonetheless, it is still a **donor-dependent business** that is not yet **financially sustainable** without grant money, as financial management, streamlined operations, and improved commercialization and marketing & sales are required to turn ARSX into a successful business

Theory of change & Business model



- 1 Why is this Forest Partner (“FP”) important?
- 2 How does ARSX support forest restoration?
- 3 How does ASRX business model work?

P4F Intervention



- 4 What are the expected outcomes from the Business Plan development?

Why is this FP important? A profitable business model for seeds production is essential to accelerate restoration in Brazil through Muvuca

Muvuca requires a replicable and scalable model to generate a huge amount of required seeds supply

- Muvuca is important to speed-up and facilitate restoration in Brazil.
- However, Muvuca needs **a huge amount and highly diverse seeds**



Muvuca needs 50-150 kg of seeds/hectares with around 70 different species. Considering one seed weighs only a few grams, collecting those amount of seeds is a huge task.

- **The most effective way** to supply that high amount of seeds is **through seeds network.**
- Unfortunately, there is **insufficient active seeds networks** available and most of them are highly **dependent on grants funding.**
 - There have been instances where a donor dependent seeds network had to stop its operation after donor funding ended.
- The **only** way to make the seeds network replicable and scalable is **if it is profitable.**



ARSX is our best bet to demonstrate the feasibility of an innovative profitable business model for seeds production

- ARSX is the **most mature seed networks** in Brazil.
 - It has an innovative and robust network's governance.
 - It is supported by highly credible and respectable NGO partner, ISA.
 - It has shown positive development in the last ten years, much advanced than other existing seed networks.
- Although ARSX still operates like a non-profit entity, they **acknowledged their urgent need to transform its model** to be a business oriented model to sustain its long term operation.
- We believe there is **a potential to transform ARSX** to be an **innovative model for profitable seed business** and has identified many **potential levers** to help this transformation from four main following aspects below:
 - Cost
 - Revenue
 - Operational
 - Business management

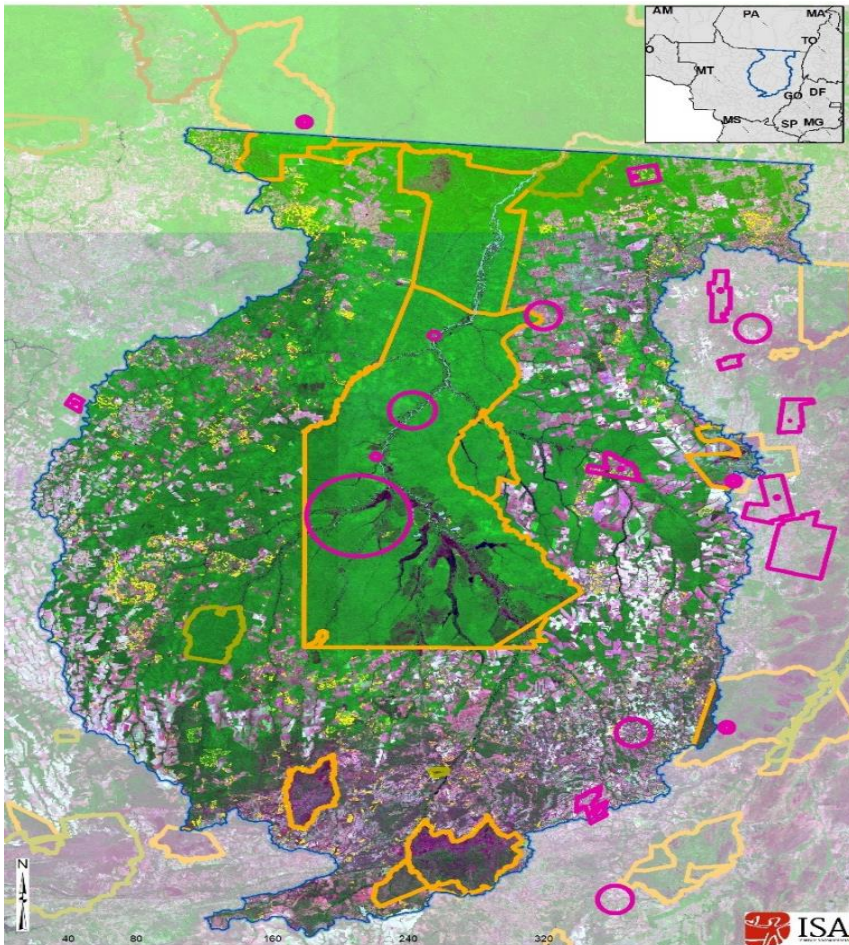




ARSX collects seeds in the north of Mato Grosso state...



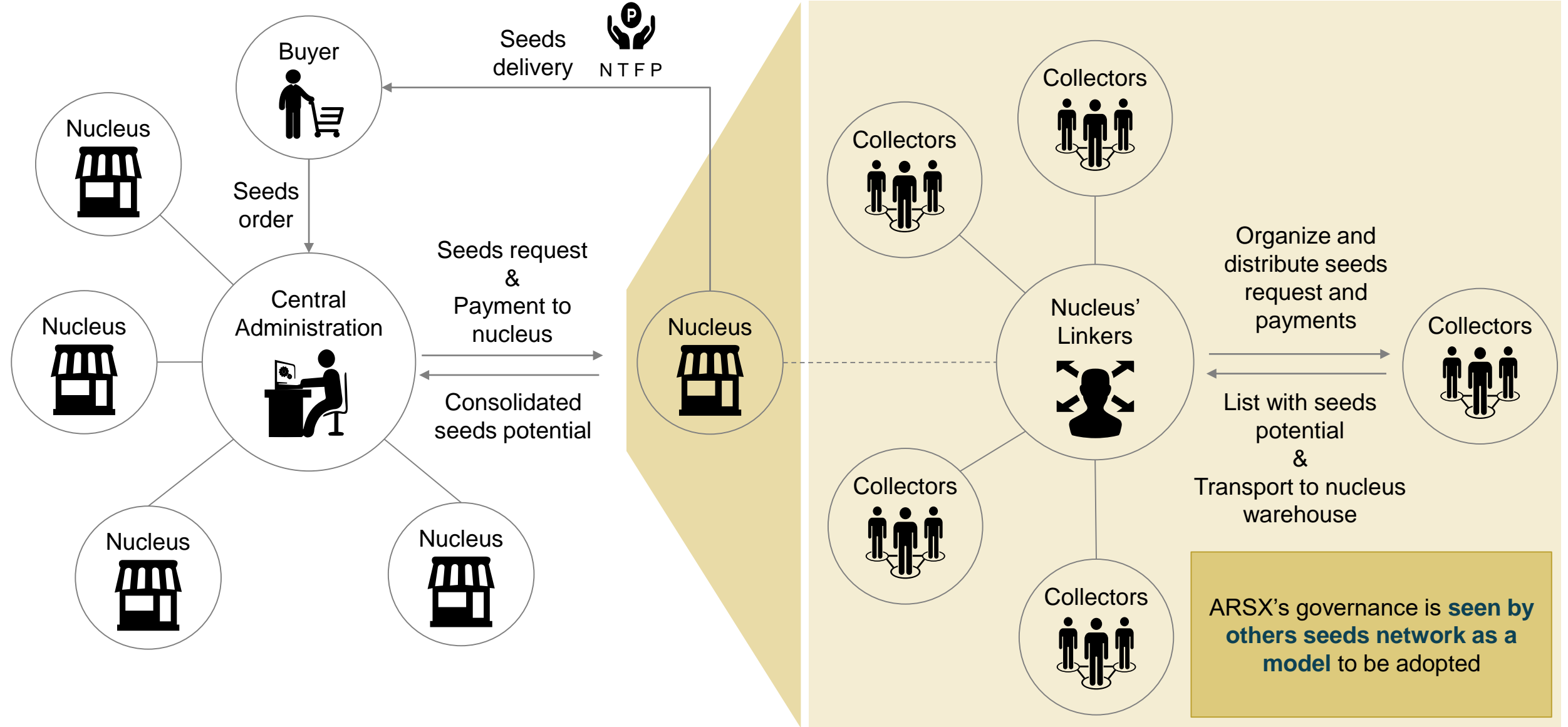
□ seeds collection areas □ Indigenous lands



...providing an answer to the lack of seeds supply for restoration

- **ARSX is a network formed by 568 seeds collectors** from:
 - 15 rural settlements,
 - 16 indigenous villages from 7 ethnicities
 - 1 sustainable use protected area (extractives reserve)
- The network was created in 2007 by ISA (an NGO) and has **produced accumulatively 200 tons of seeds from 220 native species**
- **ARSX collect seeds over an area of 700,000 hectares** in 11 municipalities the states of Pará and Mato Grosso.
- **ARSX contributed to ~6,000 hectares restoration projects** in Amazon forest and Cerrado since its creation

How does ARSX model work? ARSX features an innovative governance for seeds collection and selling that is both replicable and scalable



How does ARSX model work? ARSX features an innovative governance that can overcome many barriers in seeds collection

Muvuca seeds collection is not a simple task...



... but ARSX network structure provides an innovative solution for those barriers

It is labor intensive, but concentrated during short period of the year

- ARSX network structure can easily **aggregate new nuclei and collectors required to fulfil increased demands.**
- Seeds collection is usually **a complementary activity** that collectors perform during the collecting season.
- In this year only, ARSX has already got requests from 270 people who want to be part of their collector network.

Seeds variety and availability are prone to natural variability

- ARSX consists of many nuclei in 2 different biomes, Cerrado and Amazon, that enables it to provide **geographical dispersion** and **generating seeds from many species.**
- Several nuclei operates in various different collection areas provides a **risk mitigation against natural variability.**

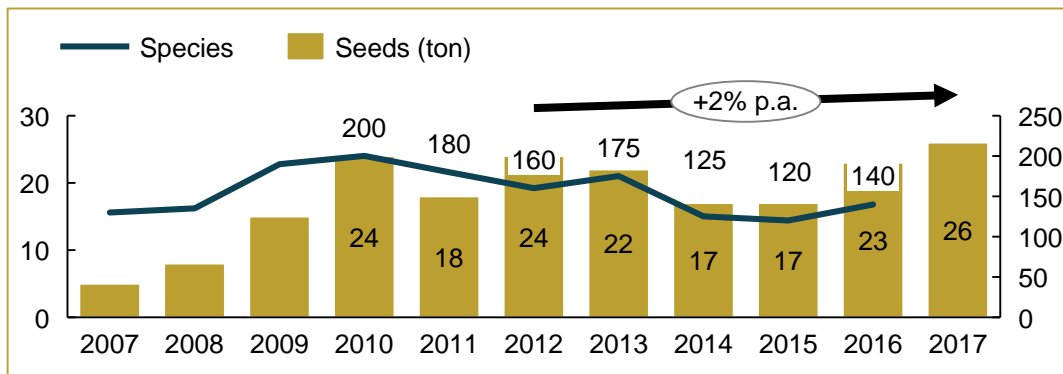
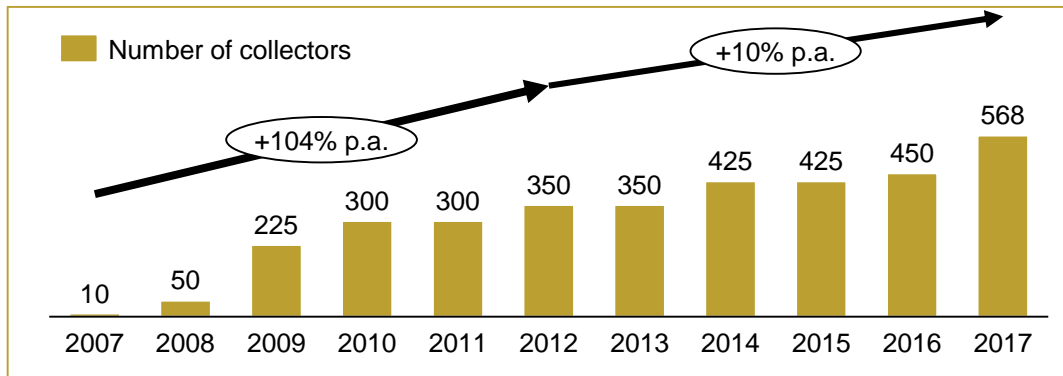
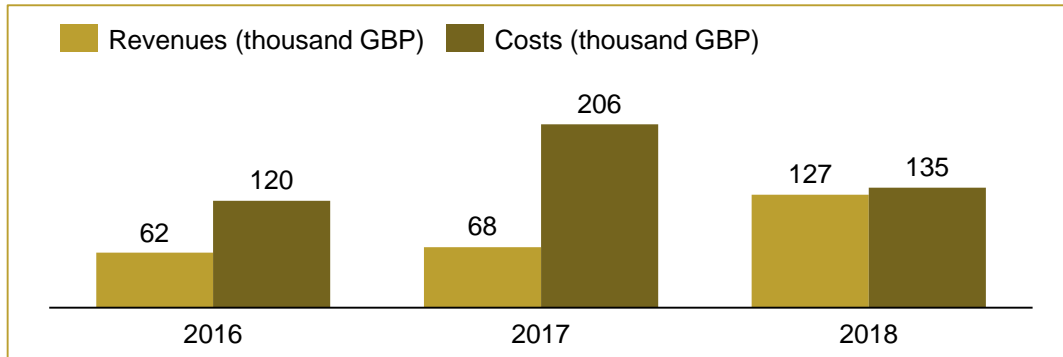
The mandatory quality control is difficult to perform

- The network provide **a shared infrastructure for quality control at different levels.**
- A first quality control is made by the collectors and checked at the seeds warehouses, where germination rate is also tested.
- Beyond that, they have a partnership with a lab owned by the Mato Grosso State University (UNEMAT) to analyse samples of collected seeds.

In addition, the network structure provides community strengthening and an alternative for deforestation related activities

How does ARSX model work? ARSX has been growing, however the initiative is still non-profit driven and grant-dependent

The seeds selling activities have been growing in the last ten years



SOURCE: ARSX



However, it's still non-profit driven and thus dependent on grants

Cost	<ul style="list-style-type: none"> Costs includes social activities that are not directly linked to the business. Most of the costs are still covered by grants.
Revenue	<ul style="list-style-type: none"> Lack of capacity to grow the revenue Focus on the production side (for the social impact).
Operational	<ul style="list-style-type: none"> Lack of efficient business-oriented operational standards
Business management	<ul style="list-style-type: none"> Lack of business management capacity Insufficient financial management, still integrated with ISA's (the NGO) Low to no reinvestment to grow the business, all revenues are redirected to collectors

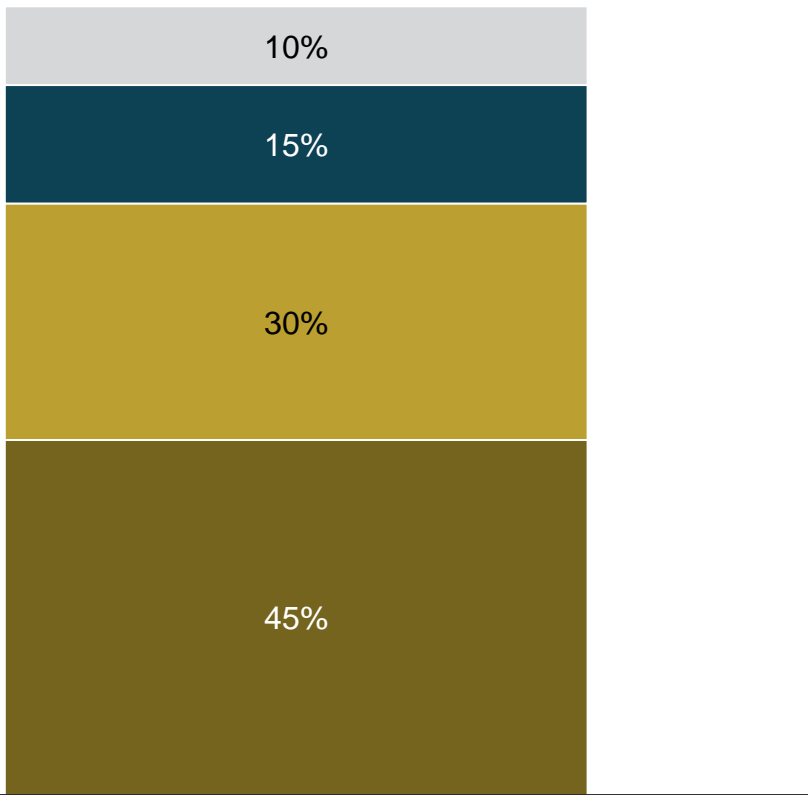
ARSX is aware of this limitation and realize that it will also **limit their long term operation sustainability as well as their impacts**.

Therefore, ARSX expressed their **commitment to transform its operation into a business oriented one**.

How does ARSX model work? Although ARSX has a strong seeds collection capacity, its demand side is underdeveloped

Sales by type of customer

Others/Retail
 Farmers group
 ISA
 Service provider



2017

SOURCE: ARSX



- Most of ARSX's production is dominated by four organizations:



- **1 group of farmers** (mandatory obligation due to Forest Code)



Instituto Socioambiental

- ISA, an **NGO** that supports ARSX



XINGU
CONSULTORIA AMBIENTAL

- **2 restoration service providers** for companies with restoration liability, especially infrastructure projects.

- While most of the retail sales are channelled to nurseries

- This small customer base indicates a potential to explore new markets

Theory of change & Business model



- 1 Why is this Forest Partner (“FP”) important?
- 2 How does ARSX support forest restoration?
- 3 How does ASRX business model work?

P4F Intervention



- 4 What are the expected outcomes from the Business Plan development?

What are the expected outcomes from the Business Plan development? Success would mean that ARSX has essential elements of profitable business and its innovative model is replicated

Transformation from a donor based organization.....

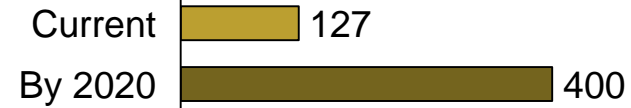
- No data about PNL
- Costs include non-business related items and mostly covered by grants
- Focus only on production
- Growth below the market
- Lack of business management capacity



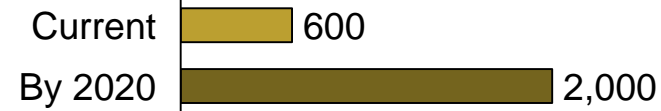
.....into a profitable business¹

- **Positive EBITDA**, financially sustainable without grants funding
- High **growth** and **expansion**, at least **3x** of current state

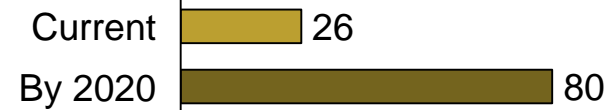
Revenue (GBP/year)



Restoration capacity (ha/year)



Seeds production (tons/year)



Once the profitable business model developed, we should **feed it into the EC initiative** and **share this innovative model with relevant stakeholders.**

¹This success scenario might be further refined based on the result of phase 1



Questions that we would like to answer



The business plan and roadmap will highlight potential levers to implement in a second phase

Cost

- How to increase the cost efficiency?

- Minimize non-business related costs

Revenue

- How to increase ARSX revenues?
- Which initiatives could add value to ARSX products? New services?
- What are the new customers/markets and how ARSX could reach them?

- Restructure pricing
- Increase customer base
- Improve marketing activities and customer experience
- Implement new sources of revenues

Operational

- How to improve operational efficiency?
- How to expand the network without compromising the current structure?
- What are organizational and governance restrictions?

- Consolidate existing nuclei
- Increase the number of nuclei and collectors
- Improve communication and seed delivery
- Create an integrated management system

Business management

- How to improve ASRX's business management capacity?

- Hire sufficient staffs with strong business background
- Professionalize financial management

Go/No-Go question for the implementation phase: is it possible to ARSX to achieve a profitable model?