

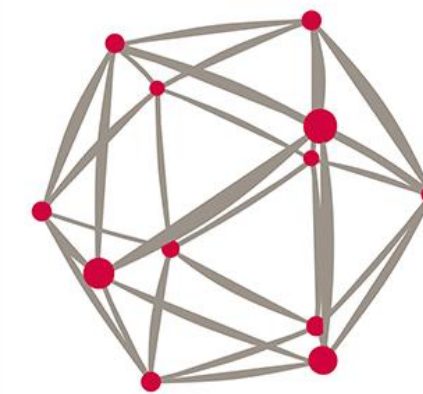
Secondment Report 2022

Impressions from the Field Research on the Potential Role of VSS and Digitalization in Curbing Food Waste and Loss (FWL)

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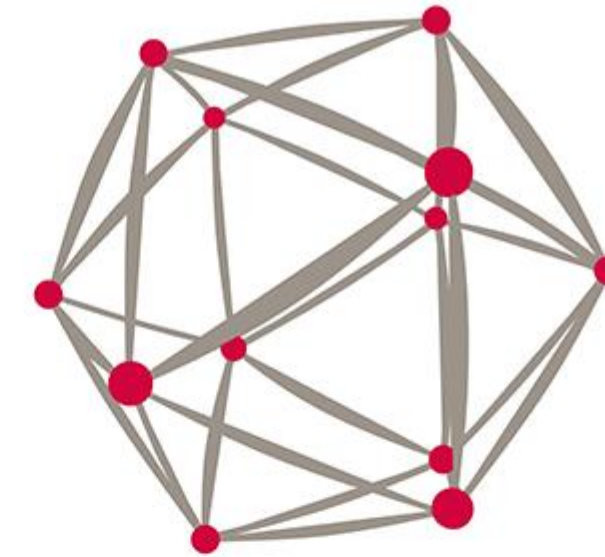
IDOS

German Institute
of Development
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Acknowledgement

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1. Background of the research topic
2. Main insights from the field research
3. Next steps and follow-up activities

- To gain contextual knowledge of the complexity of achieving food security through the reduction of food waste and loss in Brazil
- To gain insights on how digitalization can help design and implement sustainability standards in the food sector.

Visit of the **Centro De Entrenamiento *Miratus*** at the Favela bairros de Tanque in *Praça Seca* (ca. 26 km. away from *Rio de Janeiro*)

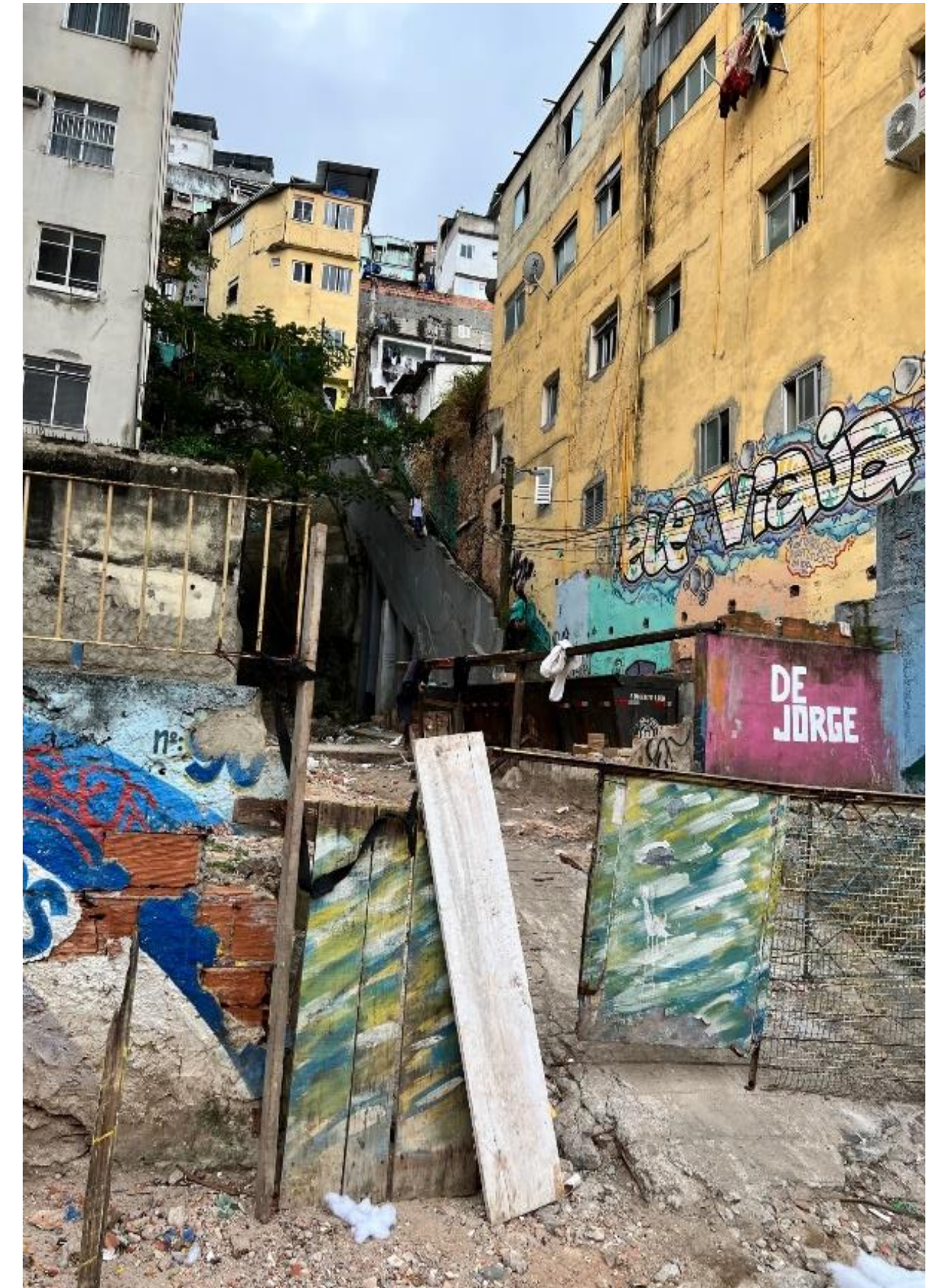
Main insights from the visit:

- Many NGOs, even sports related ones, have become sources of food for several local communities. Nexus approaches can be effective in addressing short-term food insecurities for example due to the pandemic in local communities.
- In the center, sponsors will provide for the ingredients while the parents of the children are tasked to cook, leading to more ownership and self-identification with the goals of the NGO, which in this case, is to help give Favela children perspectives for the future.



Main Insights:

- Low income households often spend more than half of their income for food
- Because many of them have irregular jobs or jobs in the informal sector, their income is not enough to have a nutrient rich food as processed foods are cheaper, also they often don't have the time and information to cook nutrient meals
- Many low income households can only buy food for the same day and it is not true that they are wasting food because they allegedly hoard food as many newspapers and politicians claim
- As they can only afford processed food, health issues such as diabetes and kidney diseases are prevalent
- Surprisingly, low income households have broad access to digital technologies, such as apps, which can be helpful to increase food security

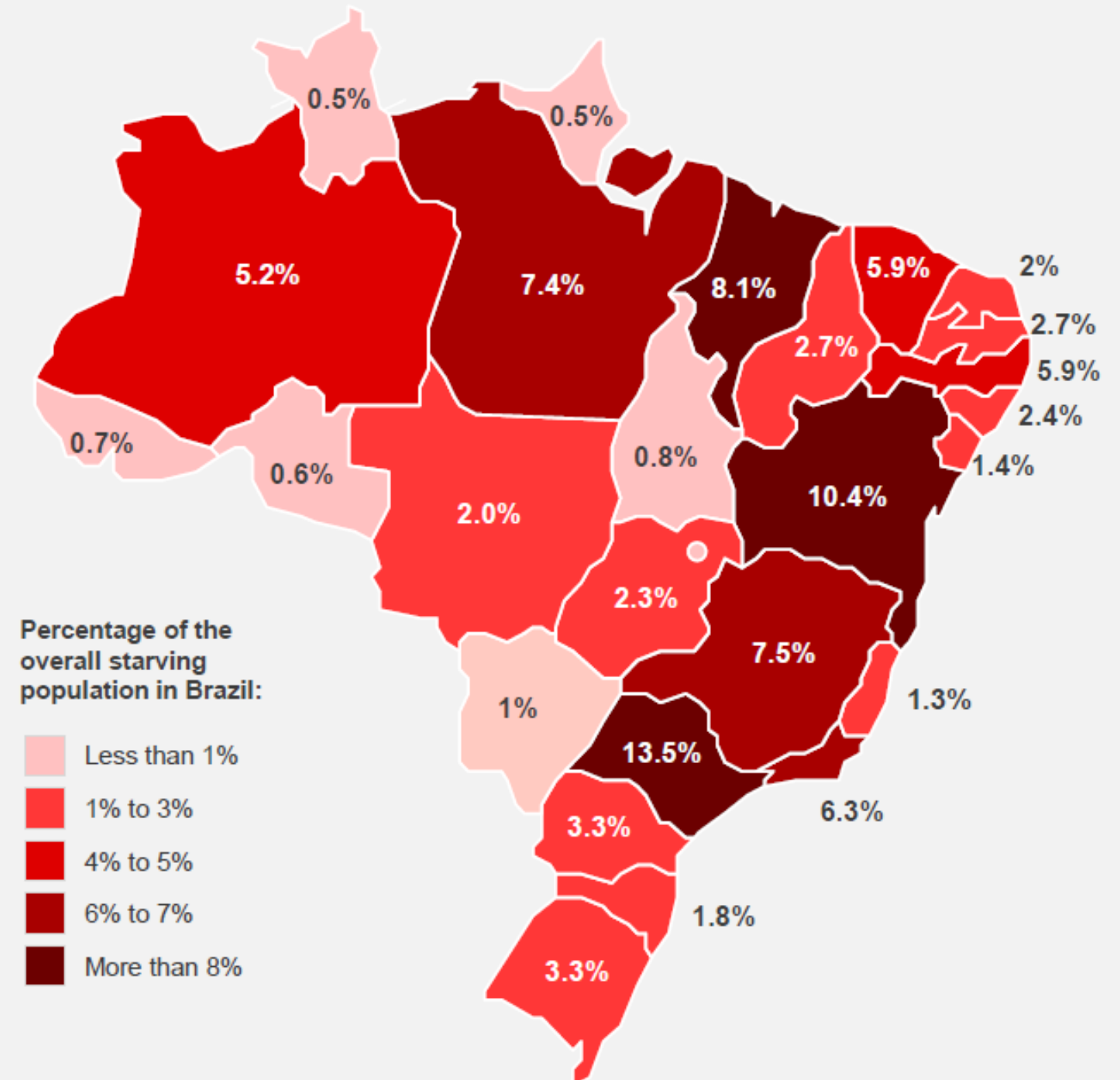


CA is a Brazilian network of scholars, NGOs and business actors promoting food security in Brazil

Main Insights:

- The extensive mapping of relevant policy instruments and private sector engagement shows that civil society is the major driver of food security in Brazil.
- The action models maps out the various social projects and private sector actions existing to support food security in Brazil.
- This mapping out offers insights on how digital technologies can complement these actions (e.g., consumer awareness, waste reduction, food technologies).

Regional outlook #1: Distribution of the starving population across Brazil
(Total starving population - 19.1 million)

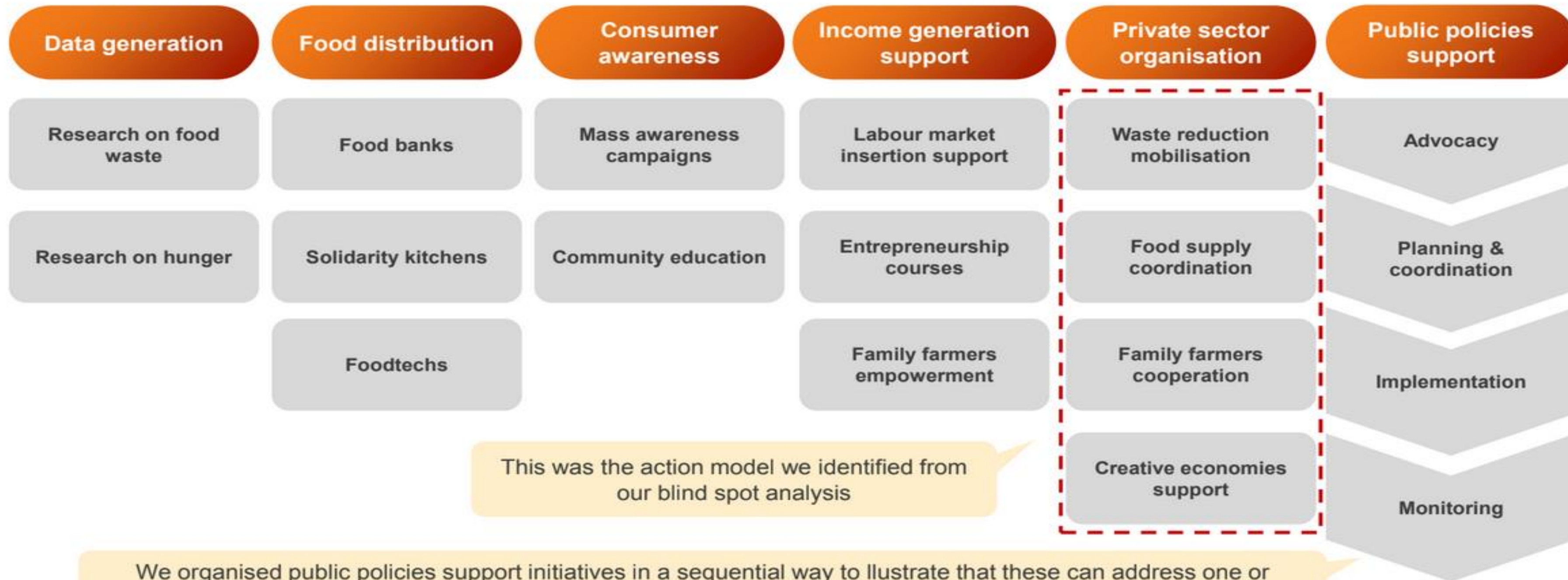


Sources: Calculations based on the distributions of population, wealth, Bolsa Família and Auxílio Emergencial programs from the following: (1) IBGE (2020); (2) Relatório VigiSAN: Insegurança Alimentar e COVID-19 no Brasil (2020); (3) Portal da Transparência (2020)

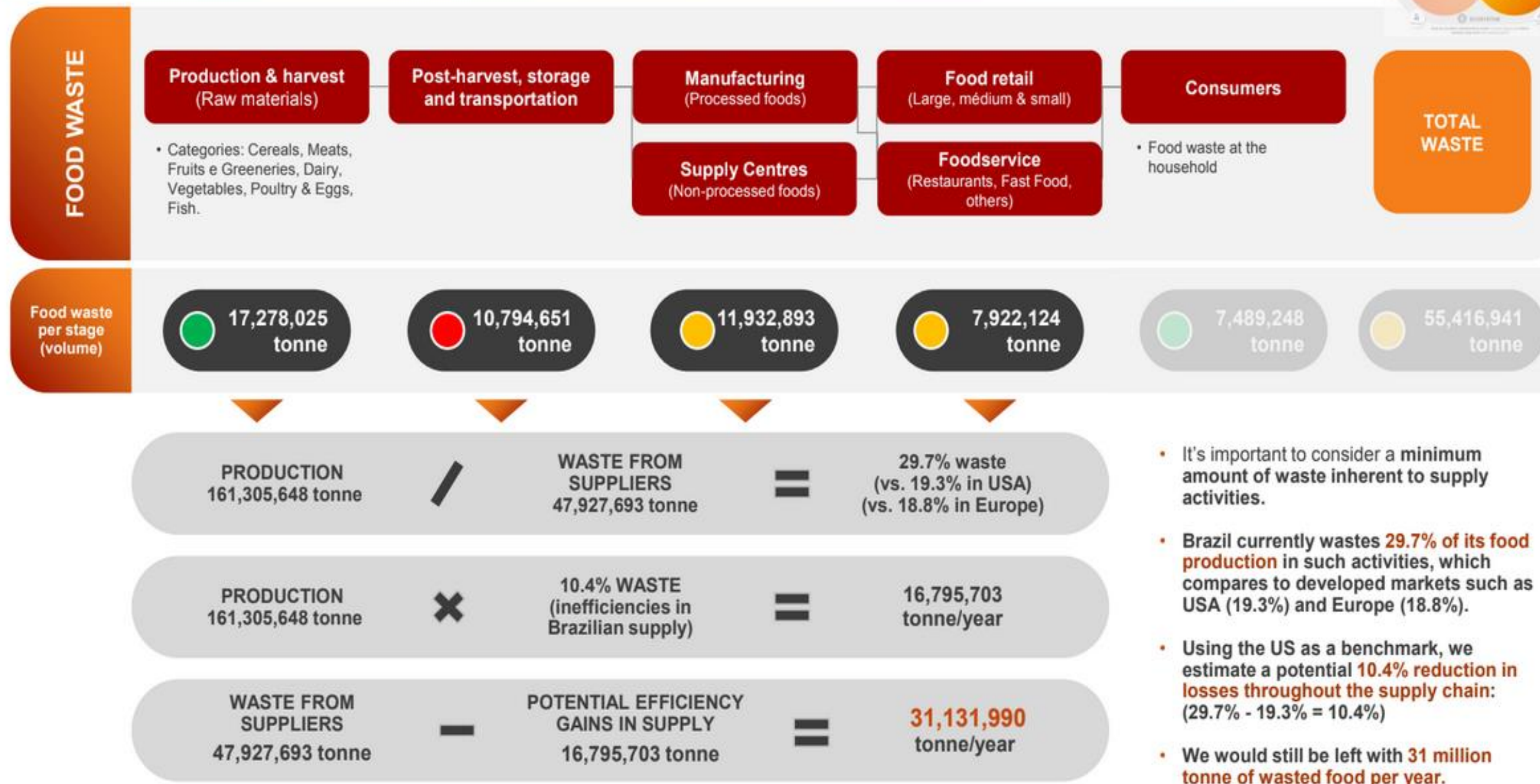
Action Models



From the initiatives we mapped, we were able to identify a few different approaches within each action model:



Food Waste Diagnosis – Food Supply Chain



Digital technologies can provide infrastructures and resources to reduce food waste by targeting problematic parts of the food supply chain. For example, most food waste and loss are generated in the production, harvest, and transportation.

Main insights:

- The leftovers are discarded because according to her it is forbidden to donate the leftovers. There is a new law issued in 2020 that authorizes the donation of leftovers and the former law says the restaurant that donate leftovers are responsible for health problems eventually caused by damaged food donated. There is a need to launch an information campaign to inform restaurants of the new law. Nevertheless, the new law is not really clear about the issue on liability.
- The restaurant minimizes leftovers through optimization methods. The restaurant throws away merely 2 to 3% of its daily amount of food.
- The restaurant does not yet use digital technology to monitor or optimize the operation include storage and transportation. All the management is done manually through written tables.
- It seems the restaurant uses classic and old methods of quality control and management but it is not clear they have internalized the use of certification as "standard" for their operation.



interview of officers from the Banco CEAGESP de Alimentos:
Thiago Oliveira (quality management), Lisandro Barreiros
(standards), Karina Campano (sustainability)

Main Insights:

- The estimated amount of daily food waste and loss (due to transportation, sub-standards) is 2 tonnes.
- The distribution company pays a huge amount for waste disposal. It would prefer to donate the consumable food waste, but more research and more dialogue with societal actors are needed.
- Less than 2% of the damaged or substandard food products are donated, because of the unclear liability issue as well as the needed work to separate those vegetables that can still be consumed from those that cannot.



Main insights:

- Food speculation by multinational companies is believed to contribute to high food prices in Brazil
- Food security is often politicized leading to uncertainty during change of administrations
- Food insecurity is part of broader context of social injustice.



Interview of Daniele Carneiro (CEO), Winnie (sustainability), Rodrigo Sardinha (Prof. and chef) and Isabela of Gastromotiva, a solidarity kitchen in Rio de Janeiro and other cities in Brazil

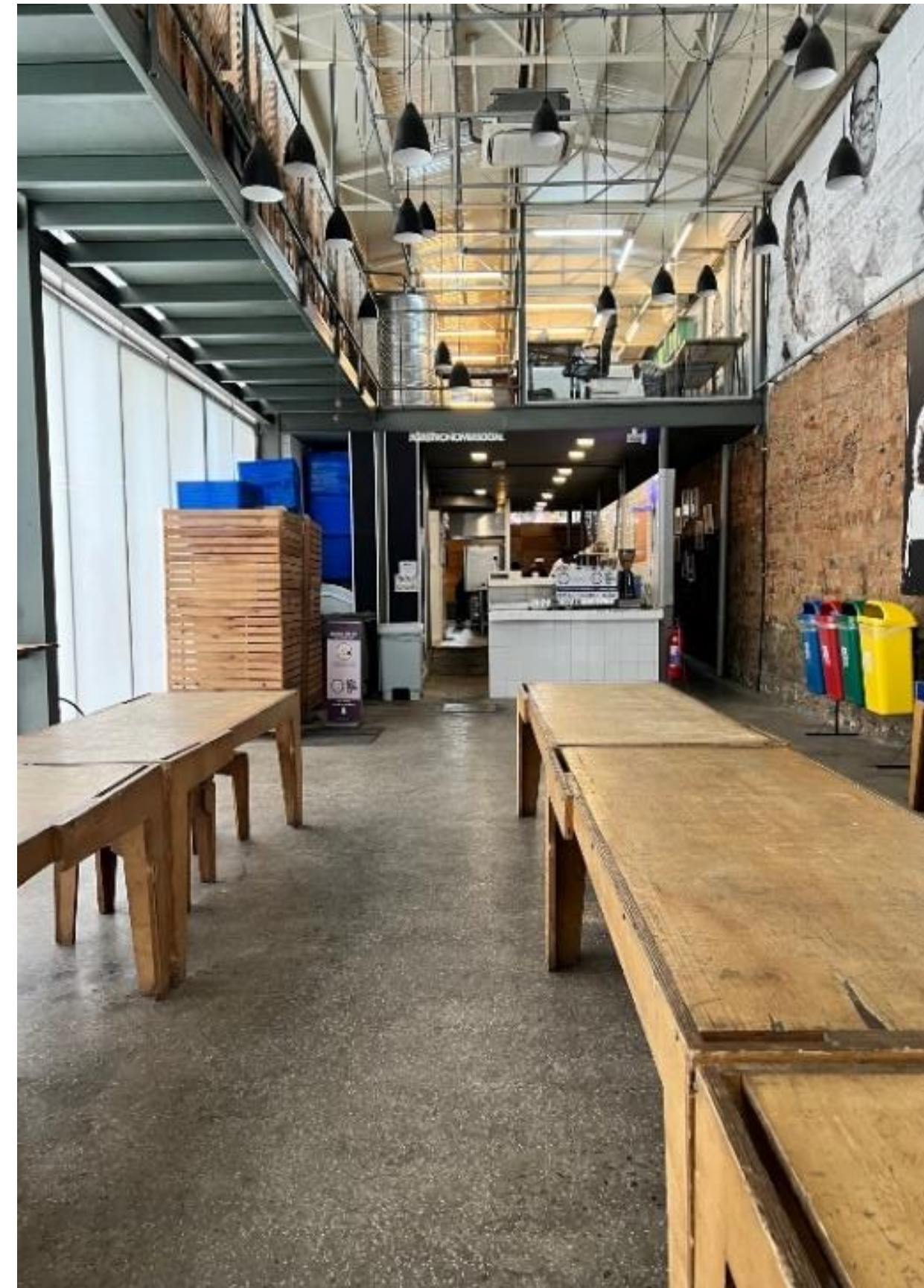
Main insights:

- Gastromotiva started as a catering company and a social business in 2006 providing cooking training courses and promoting social cooking entrepreneurship
- Serve around 90 meals to homeless people in Lapa, Rio de Janeiro, now also works as school restaurants focusing on the reduction of wastes of food, sustainability and conscious consumption



The organization uses various digital technologies:

- distance training/learning platform,
- data collecting tool
- app to collect other data related to stocks and optimization of buying,
- administrative tool (app of public relations)
- communication tool (with other NGOs),
- refeitoria (a tool to monitor the management of food in the restaurants to avoid food waste),
- cozinha social solidaria (app to collect info to be used in social kitchens and reverse logistics app)



The Lapa headquarters of Gastromotiva. Due to the pandemic, they are delivering food to the households and directly to the homeless people.

Department of Animal Science and Sustainable Environmental Agro-social Development of The Fluminense Federal University – UFF

Main insights:

- Food loss is usually related to production plus waste due to difficulties in storage and logistics including transportation, which can be improved through digital technologies
- Food production and distribution is highly complex and each city and region has its own peculiarity particularly in terms of logistics, which can be addressed through optimization technologies as well as more bottom up processes in governance
- Financing of food production is often dependent on banks. Opening the sector to other investors is key. Digital technologies can help other investors to gain more information and confidence on the food sector.

Main insights:

- The current lack of a policy framework for the reduction of food waste and loss in Brazil is a major issue
- The data on food supply, demand and food waste is disconnected to the policy world as policies are often not based on evidence, but on ideological grounds. The high food prices can be credited to the new liberal economic policy.
- INMETRO should be the government agency overseeing a potential policy framework to reduce food waste and loss
- Multinational companies tend to play fair game in Europe, but not in Brazil, which can be properly addressed through the emerging corporate social and environmental due diligence laws in Europe

- One major achievement of the trip is the **partnership with INMETRO**, which became more aware of the issues related to food waste and loss.
 - The interviewed stakeholders were keen on partnering with INMETRO and also with the other stakeholders. Interestingly, the stakeholders do not have any space or platform to exchange experiences with each other. This is an opportunity for IDOS or INMETRO to pursue in the future.
- Another opportunity is to **tap FGV to coordinate similar efforts of bringing together stakeholders**, as it is doing in other cases such as in sustainability reporting.
- Article:
 - Discussion how sustainability standards should incorporate FLW reduction and circular economy principles

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