

Increasing awareness, enabling employees to change and support this transition is important. Using Microsoft 365's digital workplace, the Fishing for Experience project aims to develop two modules for the app:

- The first module aims to determine and display the current footprint of individual employees with a few simple questions.
  - The second module is a series of challenges on the topic of footprint (F.P) reduction, which employees can select and complete independently.
- Each challenge is designed to provide employees with a tangible way to reduce their carbon footprint.

This poster briefly presents the methodology for selecting impact categories, as well as the calculation of the F.P. It follows with the second module containing challenges and concludes with mockups of the application interface.

## Methodology

- The definition of the categories was carried out according "The United Nations' Sustainable Development Goals (SDGs)"
- Further research with other online calculators were done in to select the most relevant categories (see Fig. 1)
- Emission Factors (E.F) were carefully selected for the underlying calculation model
- The model will consider those categories only for activities related to work



### Categories

- Mobility / Transportation
- Food behaviour
- Housing / Energy



## Initial Survey – Module 1

- The intention is to create an individual user profile with its monthly carbon footprint.
- Let's have an example of the calculation for a user Joe: Joe has been asked to answer the following questions regarding "How he commutes to work":

- 1.1.1 How often do you commute to work at week?
- 1.1.2 What is the distance from home to your workplace
- 1.1.3 Which mean of transportation do you use the most  
In case of own car
- 1.1.3.1 What describes your car the best
- 1.1.3.2 Days / week
- 1.1.3.3 Km
- 1.1.3.4 By car\*

$$\text{Emissions} = AD \times EF$$

$$= 0.1 \text{ Ton CO}_2\text{e / yr}$$

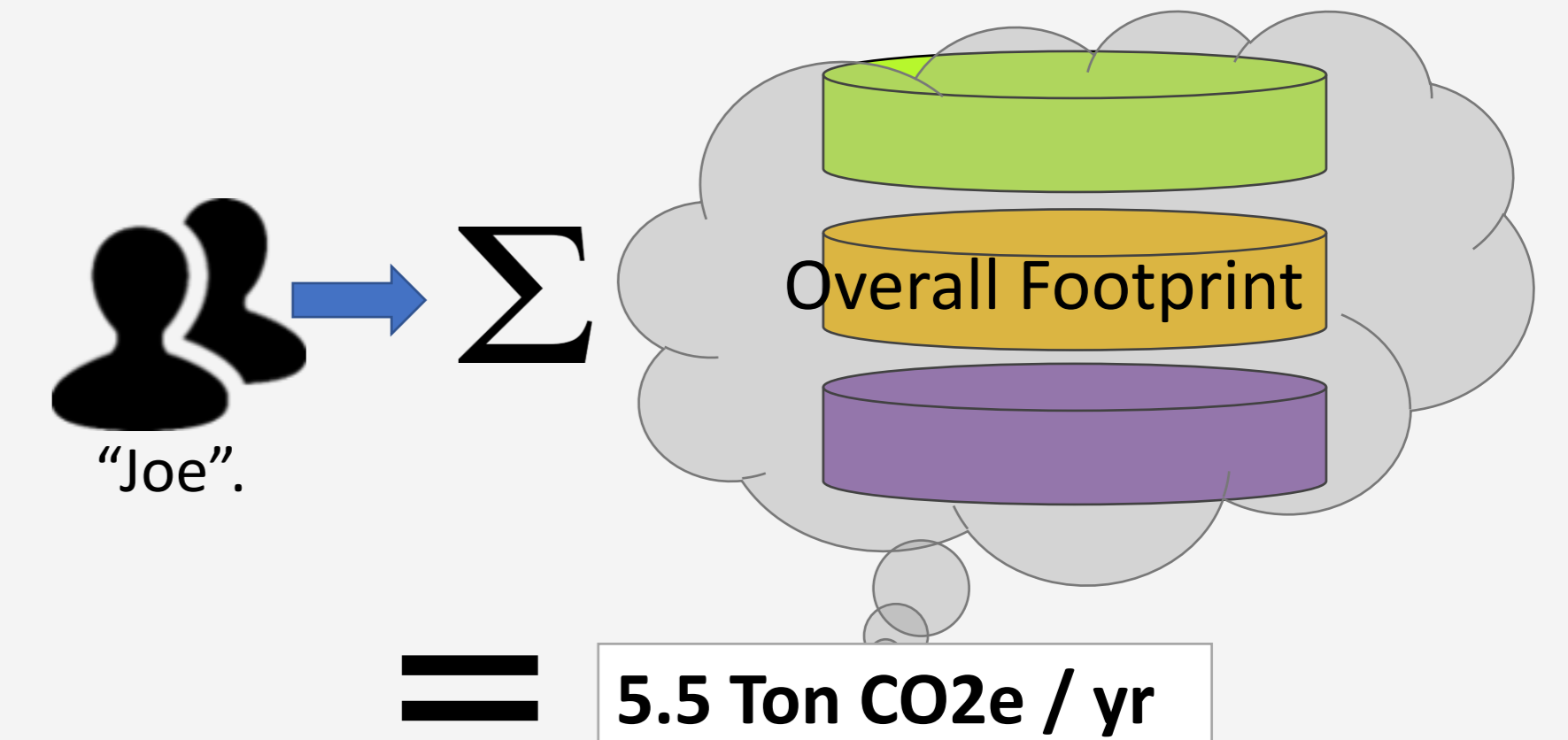
\*AD : Activity Data // Basically the answers of the user

- Same way as for transportation category, the F.P for the other can be calculated.

$$\text{Food behaviour} = 4.9 \text{ Ton CO}_2\text{e / yr}$$

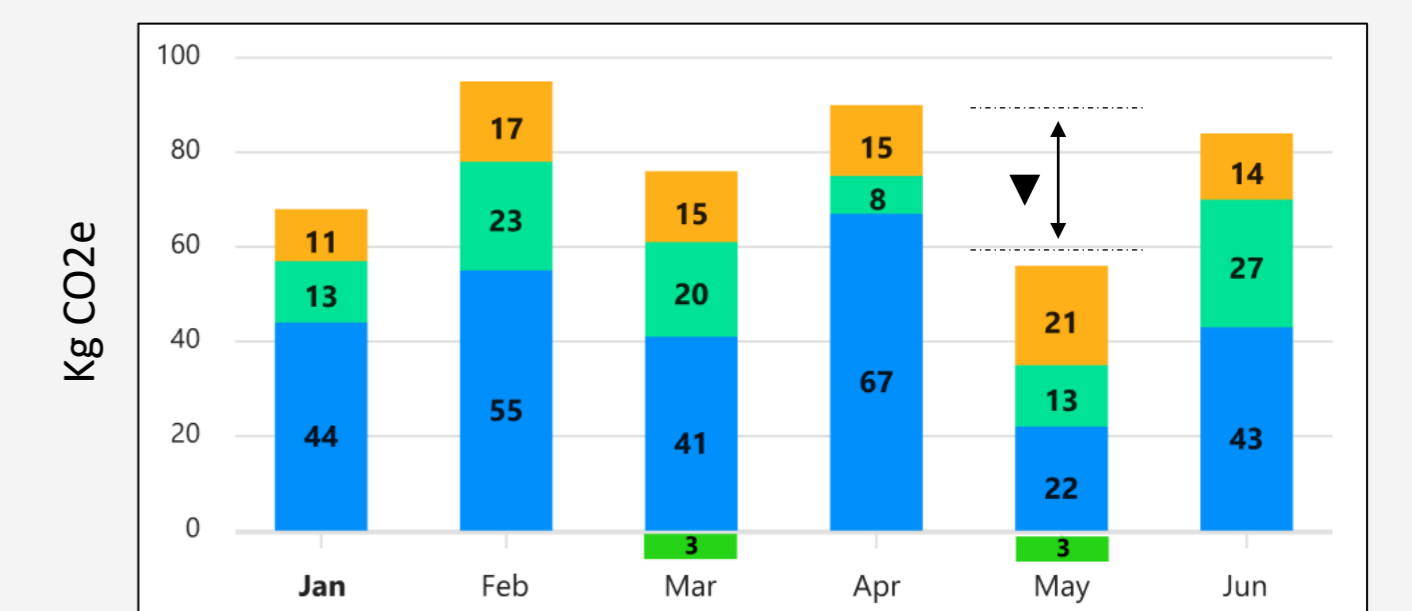
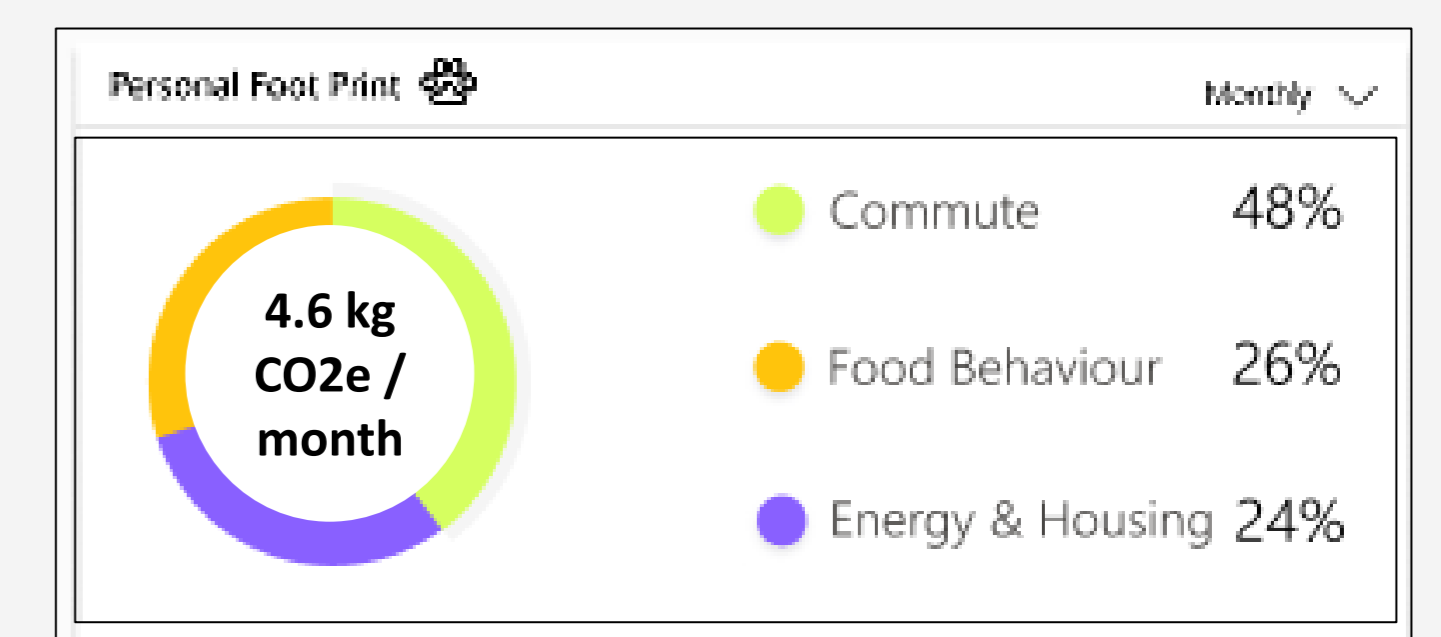
$$\text{Housing / Energy} = 0.05 \text{ Ton CO}_2\text{e / yr}$$

\*Joe chose the option of commuting to work by own car with gasoline and medium size. The E.F related to this main of transport is in the background data and correspond to 80 kg/km.



$$= 5.5 \text{ Ton CO}_2\text{e / yr}$$

The results will be displayed in the personal Teams app:



The above graph represents the monthly track of the FP.

- ▼ The user reduces the FP by accepting and completing challenges (see Module 2).

Fig (1). Categories to evaluate. Adapted from: [1 to 4]

## Challenges – Module 2

### Challenges – For You

#### Mobility / Transportation

- Use public transport for one week
- Use bicycle one day per week

#### Food behaviour

- Veggie day per week
- One week local food only.

#### Housing / Energy

- 1 more day home office
- Reduce calefaction.



"Joe".

### Mobility Footprint Impact

$$FP = \text{Distance} * \text{Days}$$

$$= 8\text{km} * (80\text{g}/\text{Day} * 2 \text{ Days} + 75\text{g}/\text{Day} * 1 \text{ Day} * 52 \text{ weeks}) * 0.000007$$

$$= 0.098 \text{ t/y}$$

$$= 0.002 \text{ CO}_2 \text{ saved yearly}$$

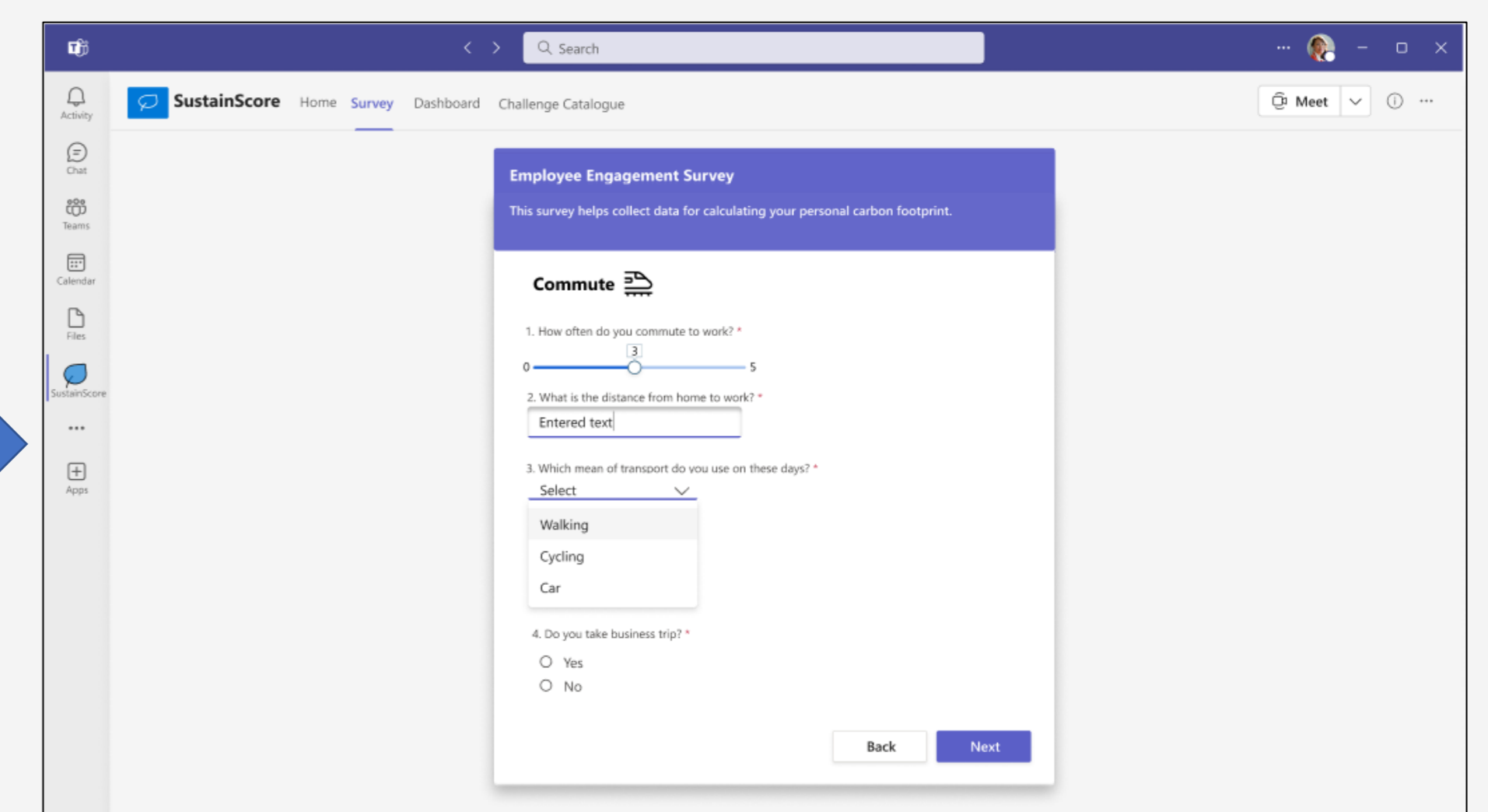
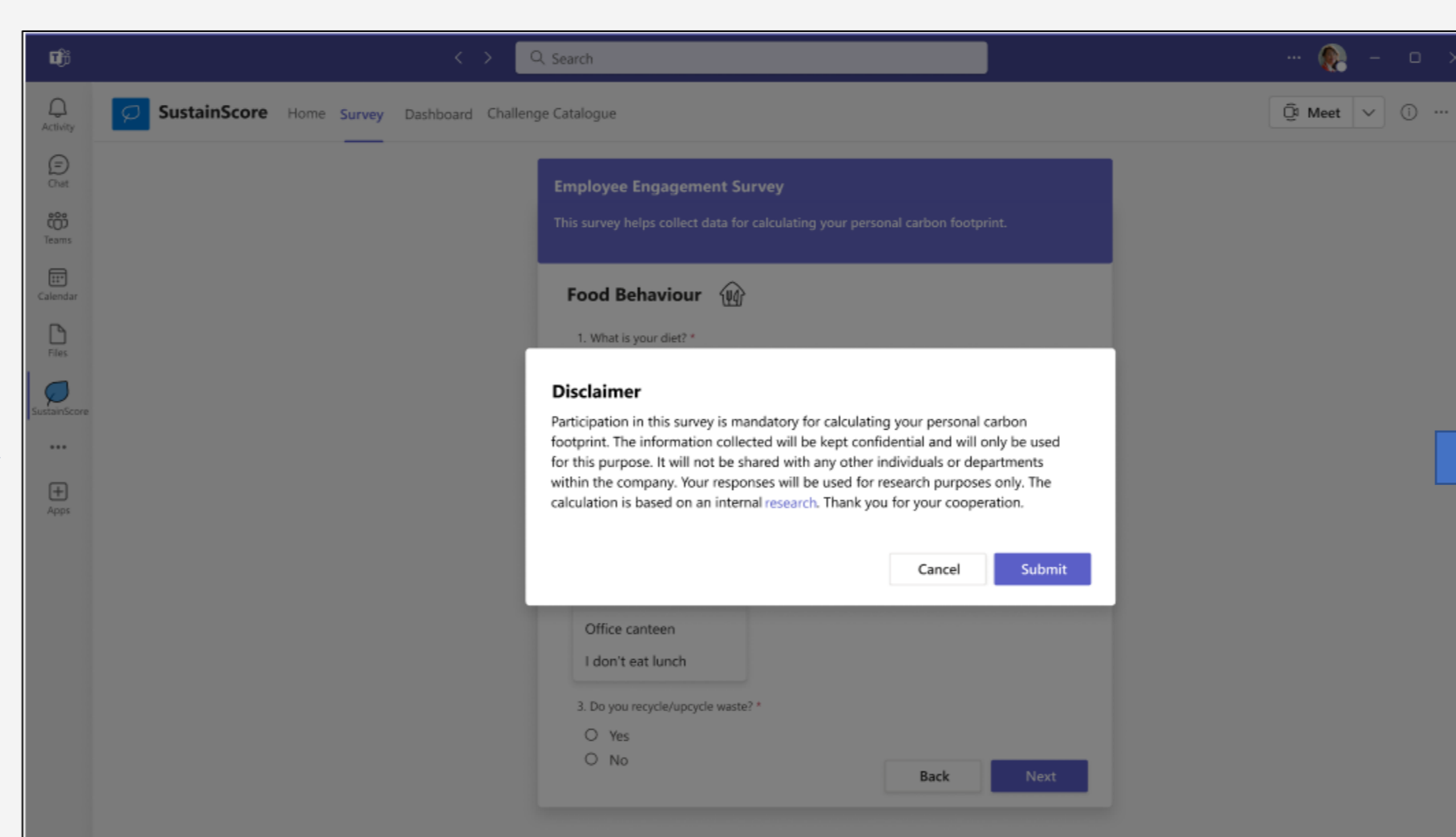
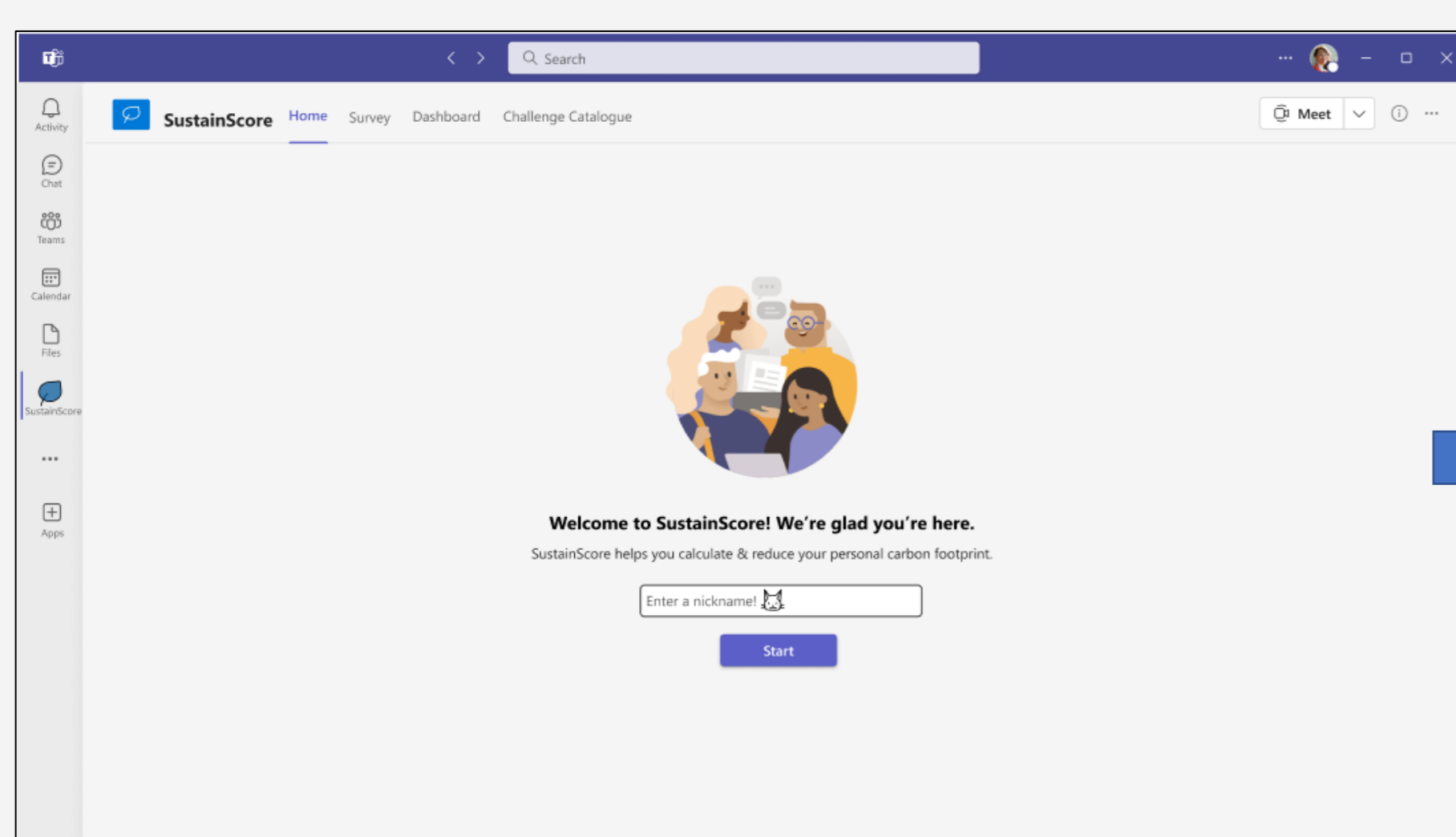
- ❖ Indirect impact or compensation
- ❖ Direct impact on the FP of the User
- ❖ With every challenge completed, a user can reduce its individual footprint for the current month.

### Challenges – For Good

- Tree planting project
- Marshland project
- Garbage collection

## App Implementation and Mockups

The following images represents a typical user experience by using the app. Starting from the homepage, followed by the data usage disclaimer and the first questionnaire for the initial calculation of the FP, and ending with the Dashboard with all possible interactions.



## Outlook

- An enhancement of the calculation quality can be achieved by using a single source or database.
- For further incentivization we were thinking of the implementation of a game currency that employees can earn and then spend on social or ecological projects. The game currency will be transformed in actual donations by the company.

### References:

1. UN (2023)
2. Clima Partner (2023) [www.climatepartner.com/de](http://www.climatepartner.com/de)
3. Footprint calculator (2023) [www.footprintcalculator.org](http://www.footprintcalculator.org)
4. Clima Hero (2023) [www.climatehero.me](http://www.climatehero.me)

