Electronic Supplementary Material 1

Table E1. Qualitative feedback on usability, functionality and experience reported in the Netherlands (NL, n=24 subjects at study onset) and Portugal (PT, timepoints T=0 and T=8 months).

Criteria		Positive aspects	Negative aspects
Usability and Design	NL	• Use of smartphone • Easy to find the functionalities in the app. • Pleasant design and clear colours. • Good font size. • Nice photo's for some meals.	• Installation of the app difficult or impossible without technical support. • Login problems, e.g. password is forgotten • Error messages while using app, e.g. while creating a meal plan. • Need to share personal information before being able to install app.
	PT		• Incomplete translation, e.g. "add ingridiente".
Meal planning	NL	• Being able to include restrictions. • Being able to choose which meals and which days to plan. • Being able to see nutritional information. • Following the plan gives the user more structure (less snacking). • Stimulates to eat more varied foods.	• Unhealthy recommendations e.g. too many sugars. • No function to choose number of people eating (partner or number of guests). • No explanation on why recommended meals are considered healthy. • Strange distasteful recommendations, e.g. taugé for snack or two different soups for diner. • Manufactured products and brand names recommended. • Incomprehensible description of ingredients to prepare meal e.g. 'uien rauw' and 'marg.' • Same diner suggestion for couple of days in a row. • Filling in restrictions take a lot of time because of too many options. • Not being able to exclude food groups completely e.g. 'tomato' (instead: tomato juice, tomato raw, tomato vegetable soup). • Not practical to prepare every meal separately and to buy list of ingredients for each meal, this causes food waste and is expensive.

	• No seasonal vegetables and meals.
	• Recommendations do not fit eating habits e.g. bread for lunch desired instead of warm meal.
	• Not really personalized, e.g. not considering taste, culture, budget.
	• No advice based on professional nutritionists and allergists.
	• Recipes are described in more detail on Voedingscentrum app.
	• Tea and water are not recommended.
PT	• Suggestions made for breakfast are not the most suitable. Example: "Toast with Serra cheese" or "Toast with ham".
	• Food restrictions. Foods added to restrictions still appear in the suggestions; existing meal plans are not updated.
	• Absence of alternatives to some suggested meals.
	• Sweets suggested for supper. The alternative was sweets with fruit.
	• App suggests 5 pieces of fruit per day.
	• No suggestions of dried fruits (nuts, hazelnut, almond).
	• Repetitions: There are days when the application suggests the same meals to lunch and dinner. Examples: duck at both meals or squids for both meals or same soup and fish for both meals.
	• Similar protein sources on the same day and several times a week (chicken and turkey).
	• Workday suggestions: The app suggests too elaborated meals during the workdays, which isn't very practical.
	• Seasonal fruits do not appear.
	• Too many breaded foods in the same week (turkey and hake filet).

Shopping list	NL	• Easy to consult and to delete ingredients from list. • Easy to send list to someone.	• Errors in opening shopping list • Very long list of ingredients • Ingredients on shopping list which cannot be bought in recommended amount.
Educational content	NL	• Nice to see tips for maintaining a healthy lifestyle.	• Educational content is specific for malnutrition while being overweight is more of an issue. • Give more easy tips that could be recommended for everyone. • Keep an eye on changing behaviour and specify the advice on that.
User Experience and Emotions	NL	• Positive motivation to think about nutrition and current habits on nutrition and physical exercises. • Motivated to contribute to development of a new app. • Surprised about the effort behind LIFANA on specifying nutritional values of each ingredient (after informing participants verbally).	• Negative first experience with LIFANA due to installation and login problems. • Frustration of errors and inaccuracy of recommendations. • Disappointment because nutrition app doesn't meet expectations: app makes me unhealthy (recipes suggest use of processed foods and sweets). • Frustration because of lack of improvement despite giving feedback. • Suspicious on purpose of test and project (e.g. sponsored by food industry?).