



## A tool for farmers to self-assess the welfare of their livestock

Frank Tuytens (ILVO)

Joint conference: improving sustainability and welfare in organic poultry and pig production, 25<sup>th</sup>-26<sup>th</sup> January, 2021

## PPILOW WP 3.1 and 3.2 - Objectives

**ENABLE FARMERS TO SELF-MONITOR THE WELFARE OF THEIR BROILERS, LAYING HENS, FATTENING PIGS AND SOWS**

**WP 3.1**

SMARTPHONE APP  
DEVELOPMENT/  
REFINEMENT



**OBJECTIVE: DEVELOP/REFINE SMARTPHONE APPS FOR WELFARE SELF-ASSESSMENT BY FARMERS**

**RESULTS: EBENE® AND PIGLOW®**

**WP 3.2**

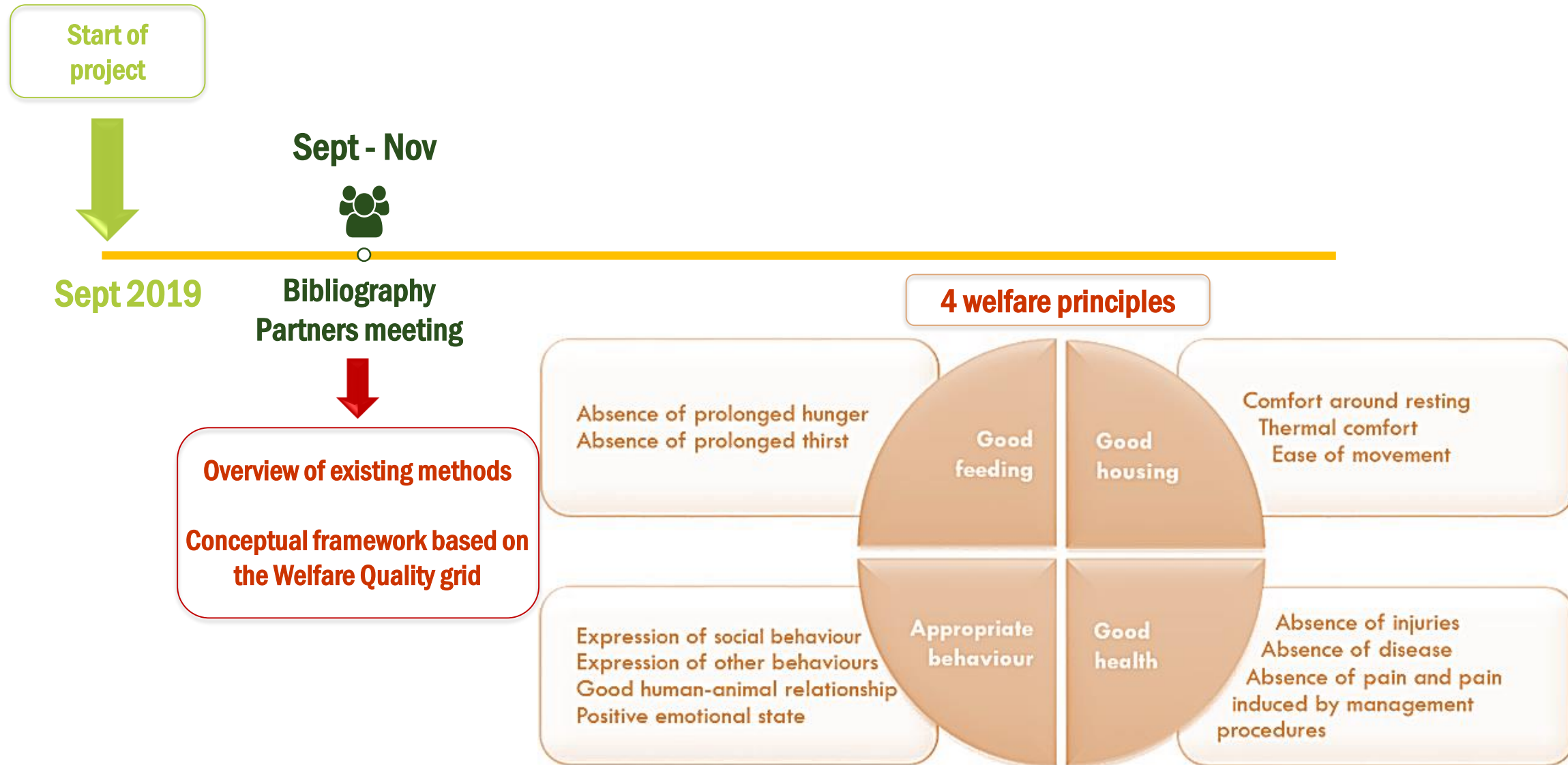
SMARTPHONE  
APPS ON-FARM  
TESTING



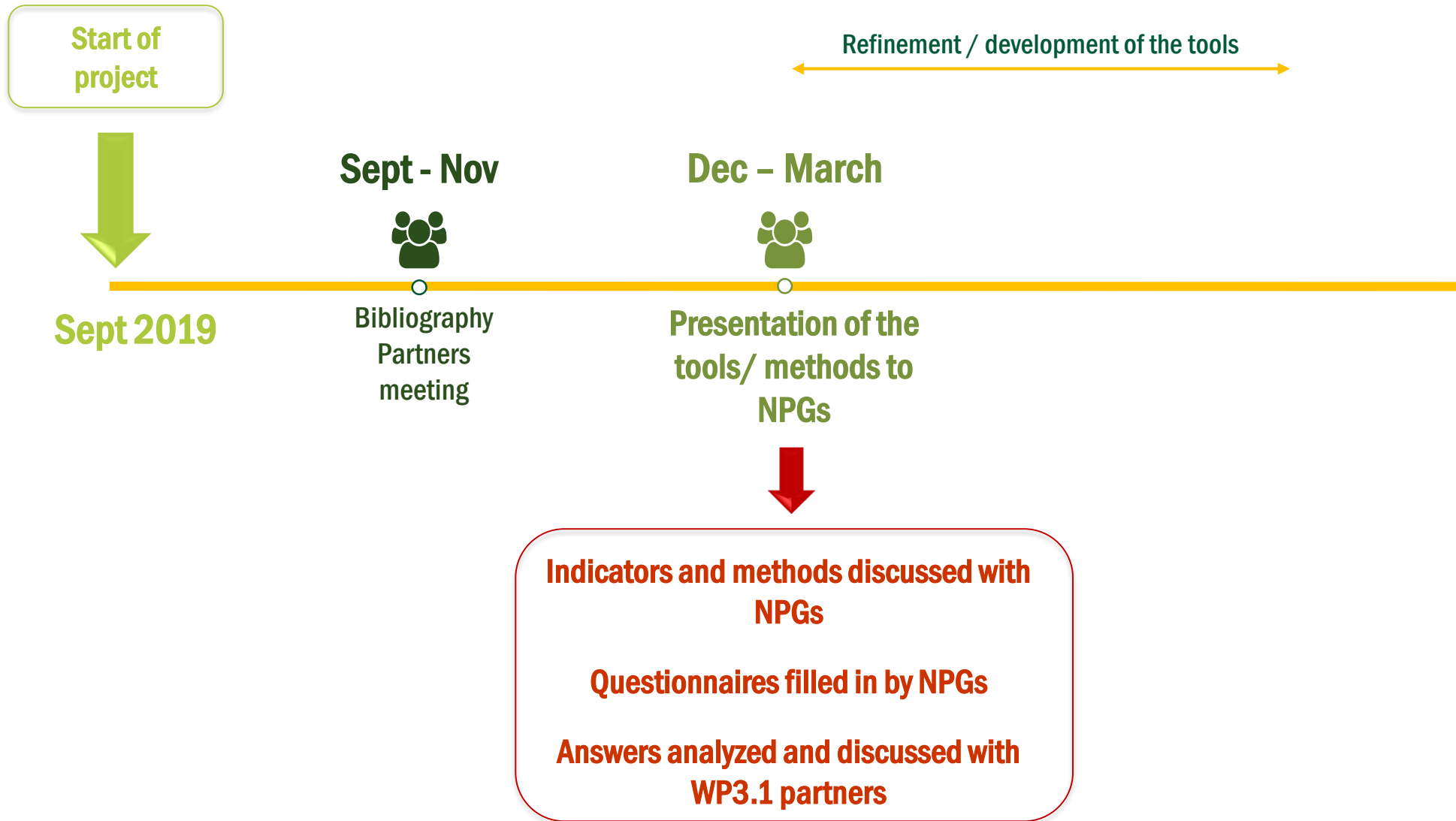
**OBJECTIVE: TEST WHETHER USE OF THE SMARTPHONE APPS RESULTS IN IMPROVED WELFARE IN PIG AND POULTRY FARMS**

**IN PROGRESS**

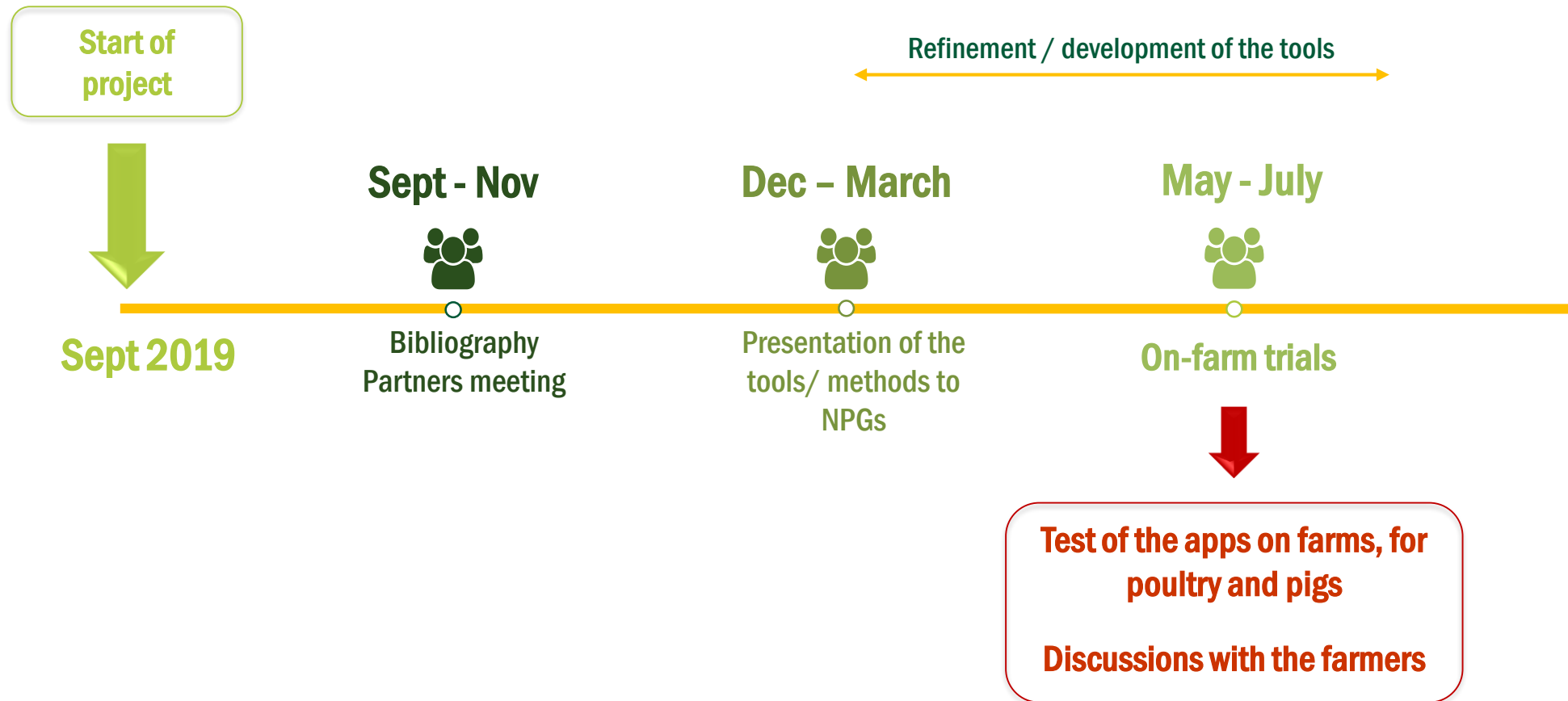
## PPILOW WP 3.1 - Development of self-assessment apps



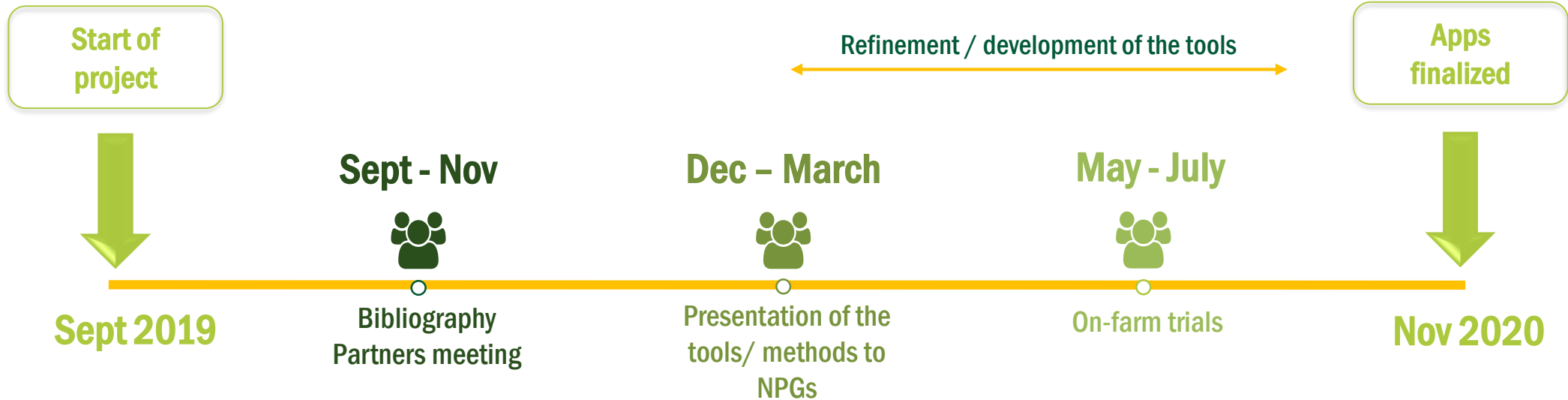
## PPILOW WP 3.1 - Development of self-assessment apps



## PPILOW WP 3.1 - Development of self-assessment apps



## PPILOW WP 3.1 - Development of self-assessment apps



PIGLOW



**Apps available on iOS and Android devices**

**Dutch, English and French languages implemented**

## PPILOW WP 3.1 – Welfare assessment

Preparation

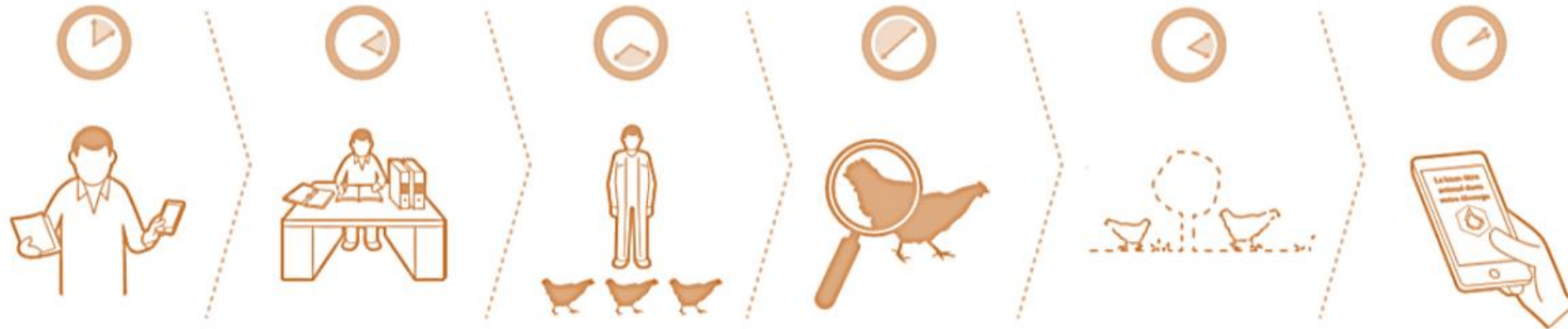
Questionnaire

Behaviour protocol

Health protocol

Free-range course  
(optional)

Evaluation of the results

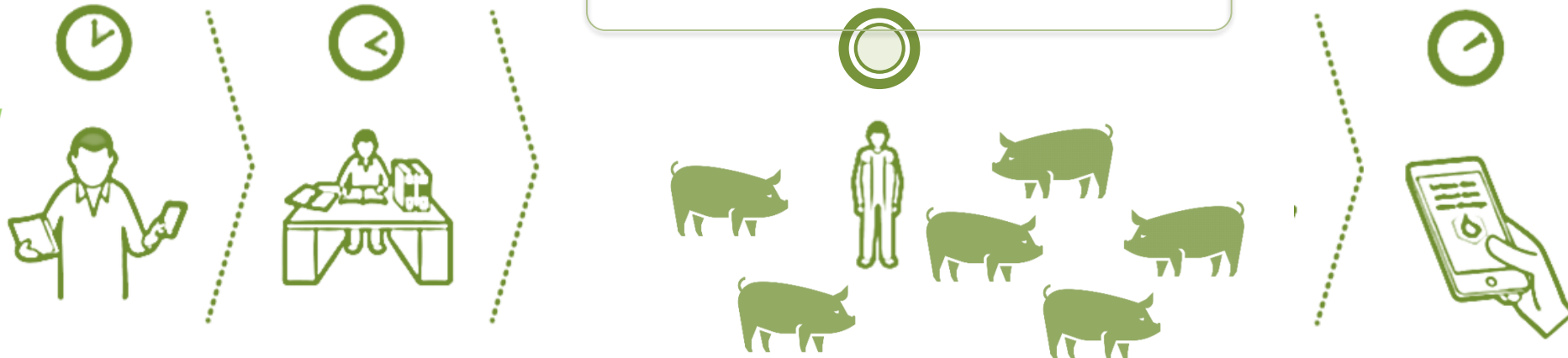


Preparation

Questionnaire

Group observations or individual observations

Evaluation of the results



## PPILOW WP 3.1 – PIGLOW group observations

### Good food

← Questionnaire

29%

Group observations  
1/5

Might some animals in the group have **difficulties accessing** good quality **drinking water** at some point in time? ⓘ

☐ Yes ☒ No

← →

### Good health

← Questionnaire

32%

Group observations  
1/5

How many pigs display **laboured breathing (pumping)**? ⓘ

⊖ 2 ⊕

← →

### Good housing

← Questionnaire

26%

Group observations  
1/5

Observe how the pigs are **distributed** throughout the pen. ⓘ

**A. huddling** (more than 50% of the pigs) ⓘ

☐ Yes ☒ No

**B. widely spread** on their **flank** (more than 50% of the pigs)

☒ Yes ☐ No

← →

### Appropriate behaviour

← Questionnaire

36%

Group observations  
1/5

Record the **time** (in seconds) it requires before the **first pig approaches and touches you** (after entering the pen)? If **no pig** touches you within **60 seconds**, end the test and continue with the next question. See the **i-icon** for info about this test. ⓘ

0:00:00

▶ PLAY

← →



## Appropriate Behaviour

### Description

confidence in humans (average approach time) [i](#)

pigs using the enrichment [i](#)

pigs with at least 15 scratches on one side [i](#)

pigs with ear lesions [i](#)

pigs with tail lesions [i](#)

## Scores

### Answers/Score

10,5 sec

16,7 %

0 %

10 %

3,3 %

## Benchmarking

### Benchmarking based on percentile [i](#)

P51

P67

P86

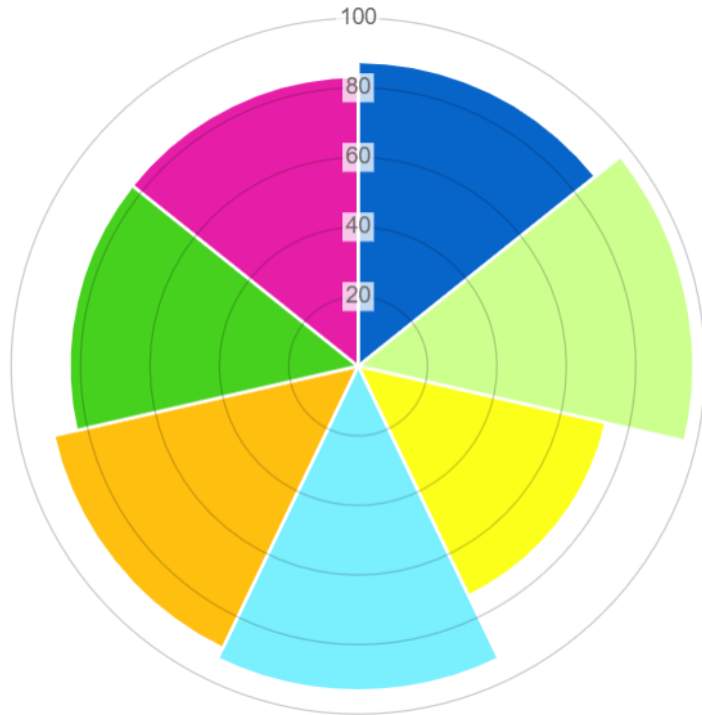
P64

P7

# PPILOW WP 3.1 – PIGLOW results

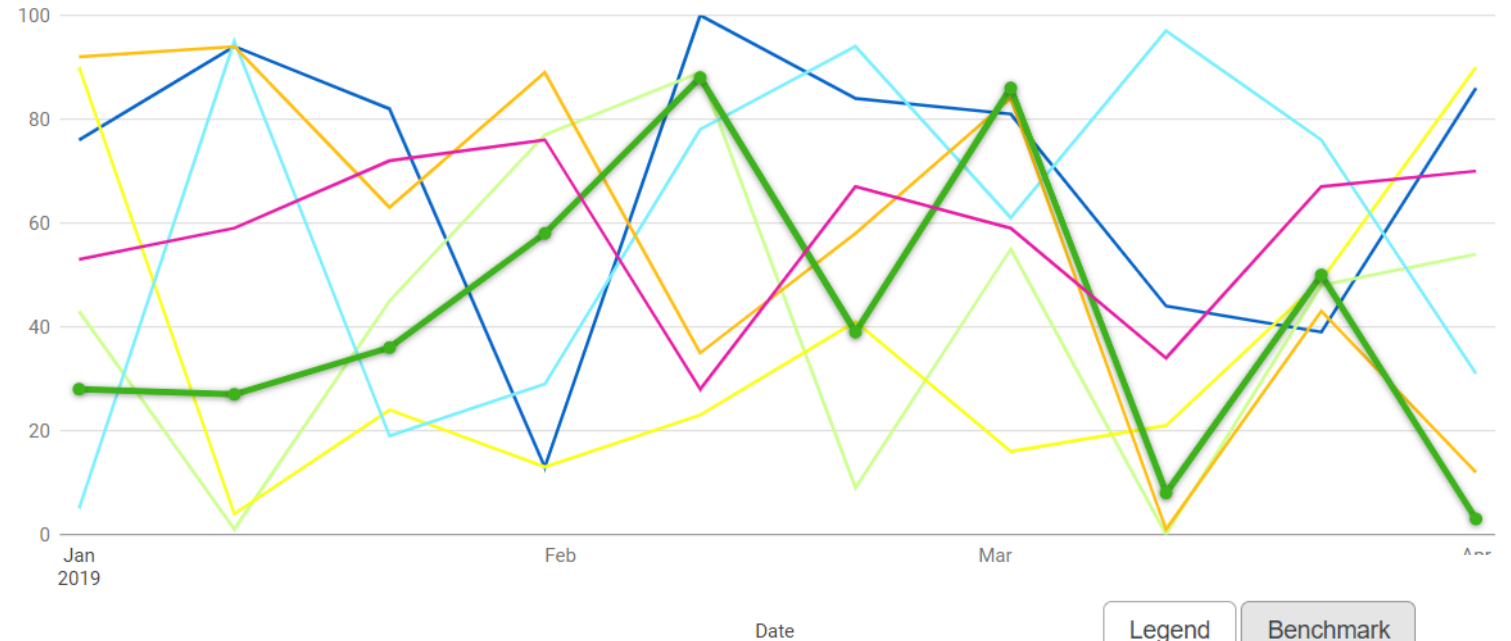
## Welfare Radar

All indicators in the welfare radar are displayed on a scale of 0% (worst possible score) to 100% (best possible score). By clicking (online) on the **i**-icon in the **legend** you will see potential risk factors per welfare indicator.



Indicators at time of assessment

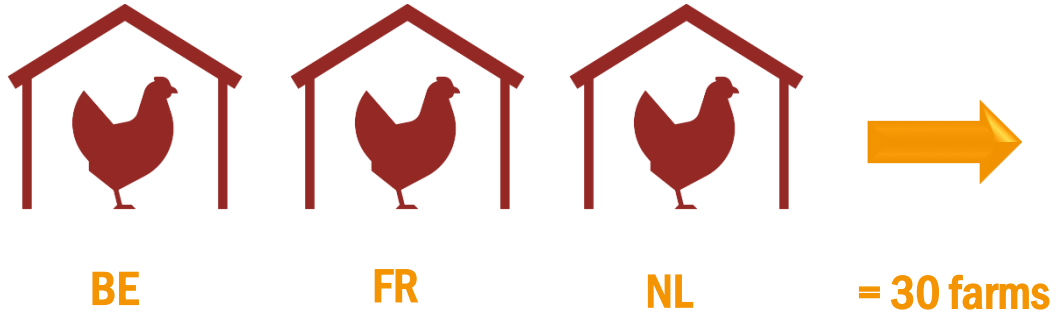
## Evolution



Evolution of indicators over time

- | Legend                                    | Benchmark |
|---|-----------|
| Confidence in humans <i>i</i>             |           |
| Absence of tail lesions <i>i</i>          |           |
| Absence of faeces/manure on skin <i>i</i> |           |
| Absence of lameness <i>i</i>              |           |
| Absence of laboured breathing <i>i</i>    |           |
| Absence of panting and shivering <i>i</i> |           |
| Absence of ear lesions <i>i</i>           |           |

## PPILOW WP 3.2 – Set-up



Period = 2 years

Assessments by farmer = 2/year

Assessments by experienced observers = 1st and last



Period = 2 years

Assessments by farmer = 3/year

Assessments by experienced observers = 1st and last

# PPILOW PARTNERS



**THANK YOU FOR YOUR ATTENTION!**



[www.ppilow.eu](http://www.ppilow.eu)

*This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°816172*



**THANK YOU FOR YOUR ATTENTION!**



[www.ppilow.eu](http://www.ppilow.eu)