



INRA
SCIENCE & IMPACT



CL!PP
Interprofession du Lapin



Arterris

Il progetto LLL e peculiarità della Francia

Laurence Fortun-Lamothe, INRA, Francia



28 mars 2019 – Fiera de Forli

Plan



- Context in France
- Living Lab Project

France : a difficult context



Consumption

-15% volume



Production

-5% AI, -7% tons

No. farms

-13 000 ♀



Sanitary crisis

VHD

Evolution virus

Cout vaccine cost

in 2017

Rabbit production in France: technical aspects

	France	Italy	Spain	Hungary
No. females	600	1000	700	1000
% all in - all out	50%	30%	30%	>80%
Fattening duration (days)	38	42-49	34-42	54
Kg live rabbit / AI / year	16	15	16	17
Live weight at slaughter (kg)	2,47	2,65	2	2,75
Age at slaughter (days)	72	80	60	80
FCR	3,34	3,7	3,55	3,5



Rabbit production in France : organisational aspects

- Organisation interprofessional = **CLIPP**
- 90% of French rabbit breeders are affiliated to an organisation of producers
 - Collective bargaining of contracts with slaughterhouses
- Veterinarians specialized in rabbit health
- International French genetic selection firms



French norm for rabbit production

One standard : NF V47.001

published in 1994 and updated in 2011

Quite scarce

→ **Maximum density on-farm:** 45 kg live animals / m² at 60 days old

→ **Slaughter age :** 60 days old minimum

→ **Maximum density during transport :** 75 kg live animals / m² in transport cages



Rabbit production in France : housing aspect

- **Majority of dual purpose cages**
- <10% welfare cages (structurally enriched cages)
- <10% Elevated pens (indoor parks)

The logo for the 3L Project features the text "3L Project" in a bold, orange, sans-serif font. To the right of the text is a graphic element consisting of a grid of horizontal lines in shades of orange and white, resembling a barcode or a stylized data visualization.

3L Project

The logo for the 3L living lab lapins features the text "3L living lab lapins" in a bold, sans-serif font. The "3L" is in a light gray color with a black outline. The word "living" is in green, "lab" is in orange, and "lapins" is in blue.

3L living
lab
lapins

Organization interprofessional (CLIPP) has chosen to support
a **participatory research project** to define a compromise
between stakeholders

36 months from 1st april 2018

3L Project : Objective

To design rabbit systems which represent an evolution, **noticeable for the well-being of rabbits and perceptible to consumers**, of the behavior and technical characteristics of rabbit housing".

=> to design **socially accepted** rabbit system



Compromise ?



Method : Living Lab

Specific method which enhance innovation

- **Users** are integrated in the research innovation **process**. Here users are : rabbit sector (farmers, breeders, feed industry, veterinarians...), consumers (distribution, consumers associations), associations for animal protection
- **Iterative** process : co-creation, test, evaluation
- At the end of the process, test of innovation in a **real context of using** i.e. in a commercial farm

Method : Living Lab

Development

Commercial
farm

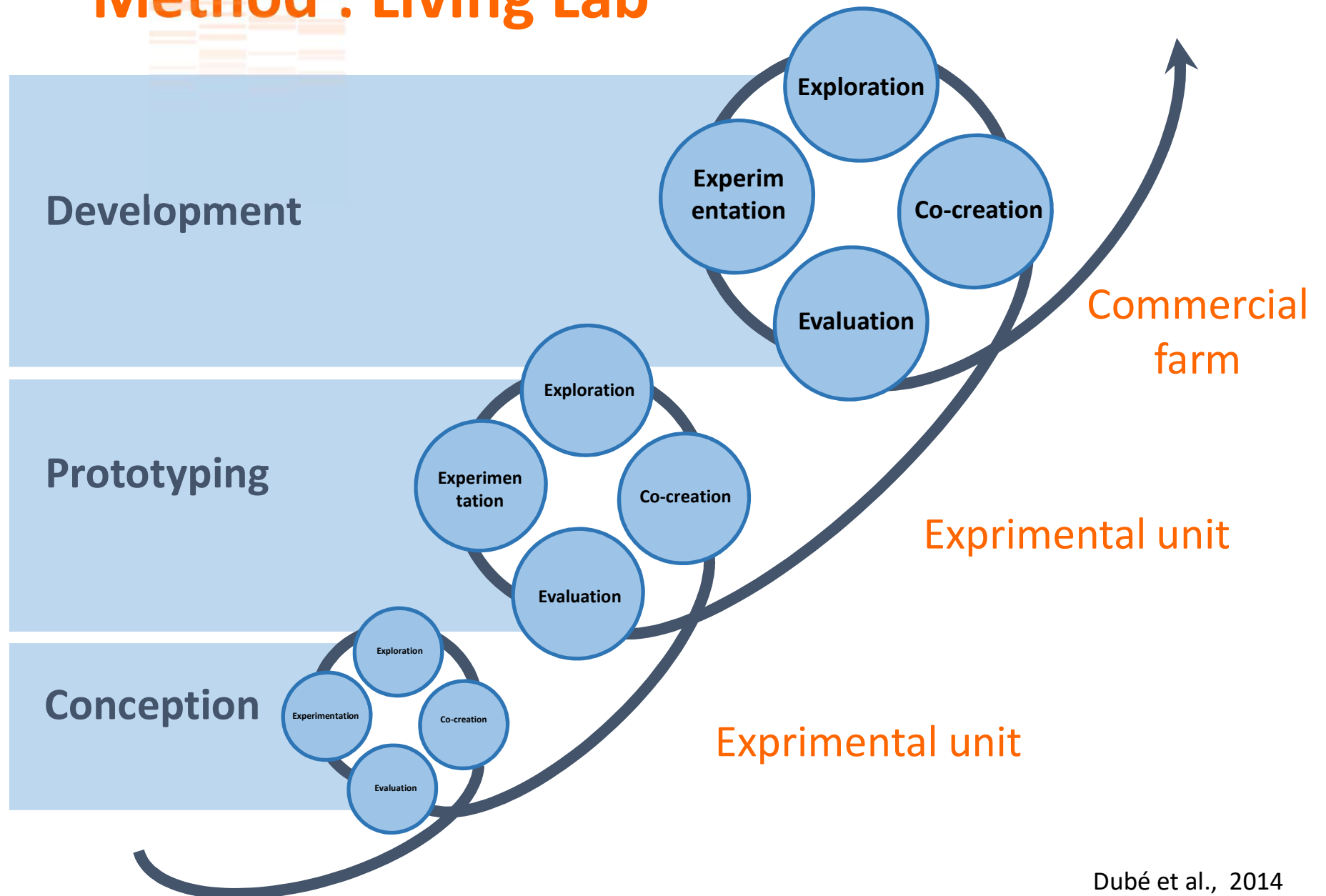
Prototyping

Experimental unit

Conception

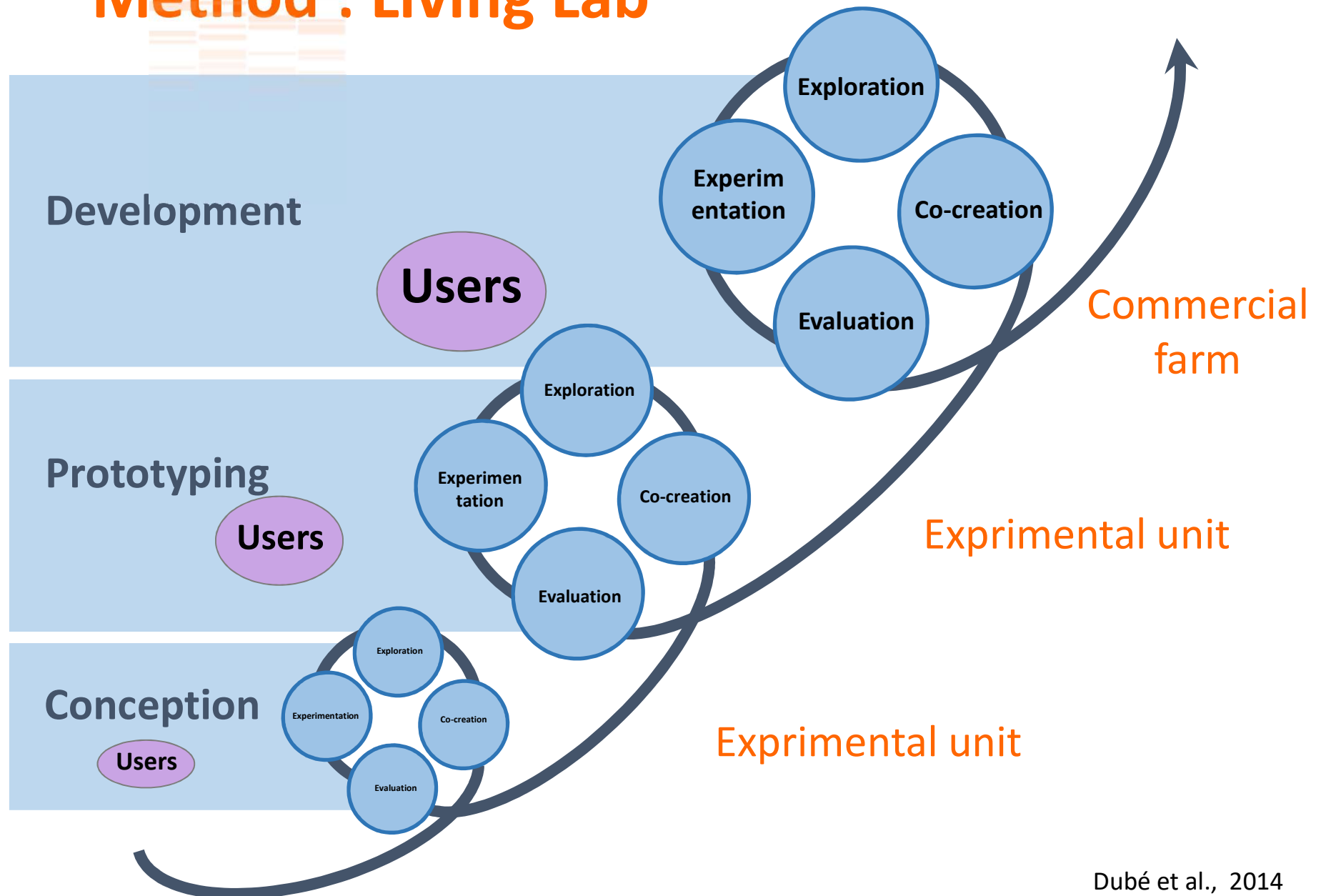
Experimental unit

Method : Living Lab

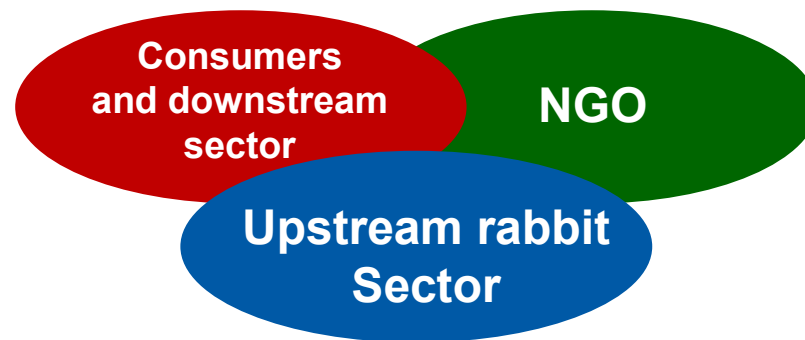


Method : Living Lab

Users are asked their opinion



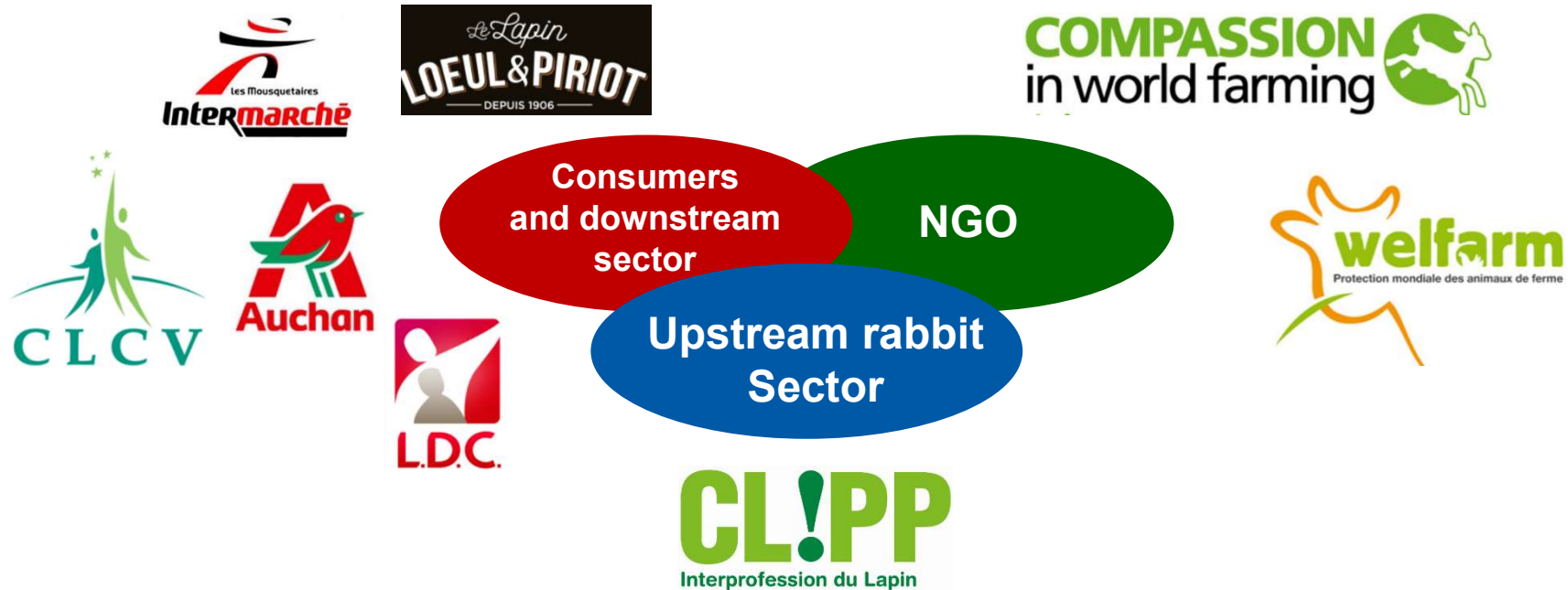
Participatory research



Participatory research: ≈ 20 persons

+ Researchers, experts

Distributors, slaughter houses,
Consumer association



Farmers, breeders, veterinarians, equipment
manufacturer, food company

Common decision on the goal to reach

What we want to improve

Expression of natural behaviors

- Gnaw
- Stand up
- Leap
- Spread
- Isolate
- Have social interactions

The comfort of animals

- Floor
- Natural light

The vitality and profitability of the sector

- Market shares
- Adaptable production
- Controlled investments



What we want to maintain

Health and hygiene of animals

- Limit injuries and downgraded rate
- Control diseases
- Limit parasitism
- Limit health hazards

Liveability of the rabbit breeder profession

- Animal monitoring and inspection
- Handling animals
- Health management
- Manure management
- Income
- Work organization
- Ergonomy at work

The accessibility of rabbit meat for the consumer

- Control of the cost of production
- Maintenance of jobs and the industry



Common decision on the goal to reach

What we want to improve

What we want to maintain

Expression of natural behaviors

Gnaw
Stand up
Leap
Spread
Isolate
Have social interactions

The comfort of animals

Floor
Natural light

The vitality and profitability of the sector

Market shares
Adaptable production
Controlled investments

Health and hygiene of animals

Limit injuries and downgraded rate
Control diseases
~~Limit parasitism~~
~~Limit health hazards~~

Liveability of the rabbit breeder profession

Animal monitoring and inspection
Handling animals
Health management
Manure management
Income
Work organization
Ergonomy at work

The accessibility of rabbit meat for the consumer

Control of the cost of production
~~Maintenance of jobs and the industry~~

What we evaluate
(quantitative or semi qualitative)

What we test



What we already done and test

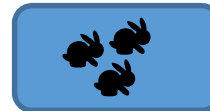
6 experiments (+ 1 pre-test)



Enrichment



Enrichment



Warren



Large groups

Consortium

agreement: no communication of results before common validation



Enrichment



Part-time group housing



Part-time group housing for sisters

Some images

Warren



Pens without top



Gnawing material



Tunnel



Warren



Sisters in group



Warren



Females in group



Large pens



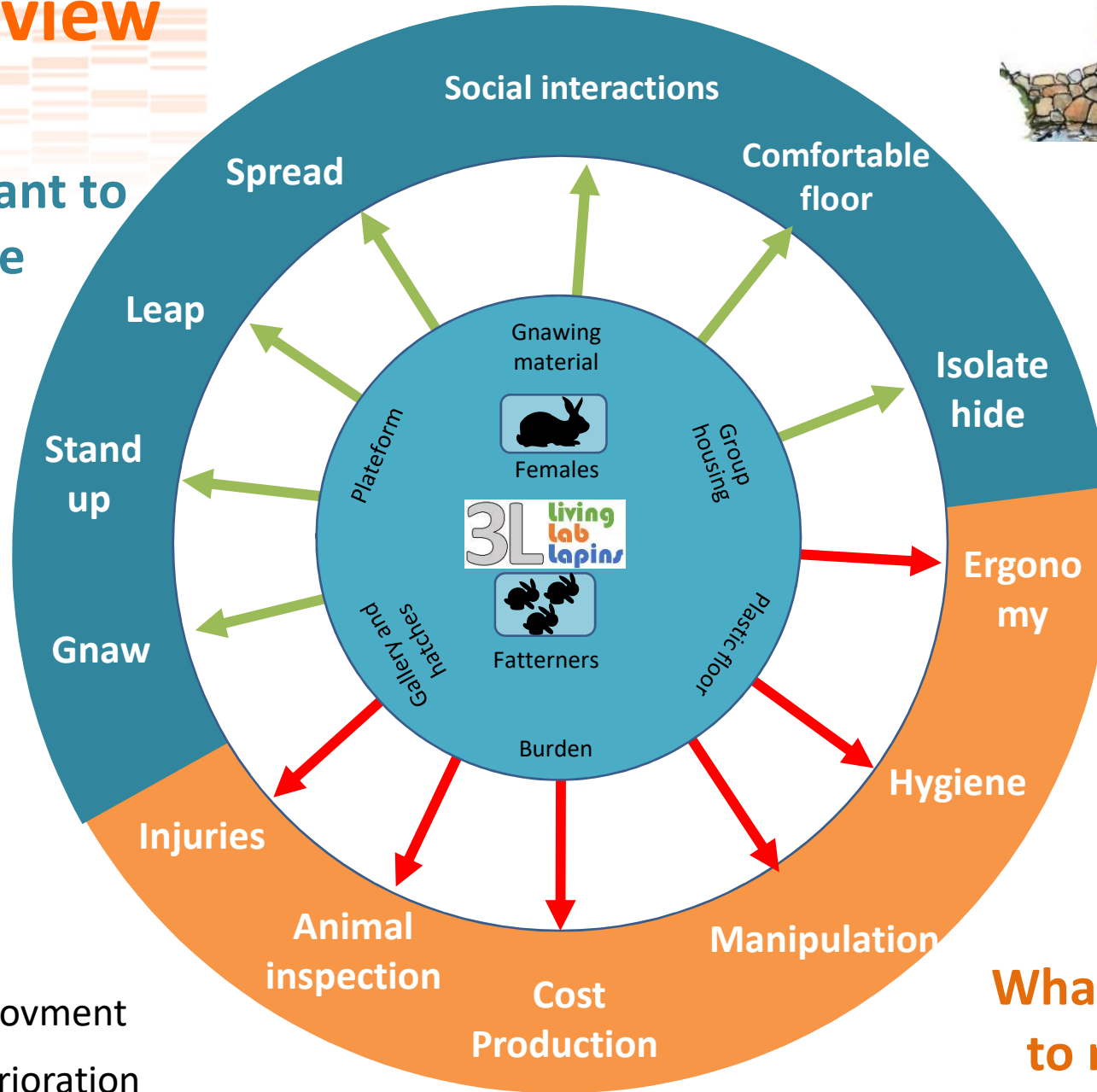
Gnawing material



Review



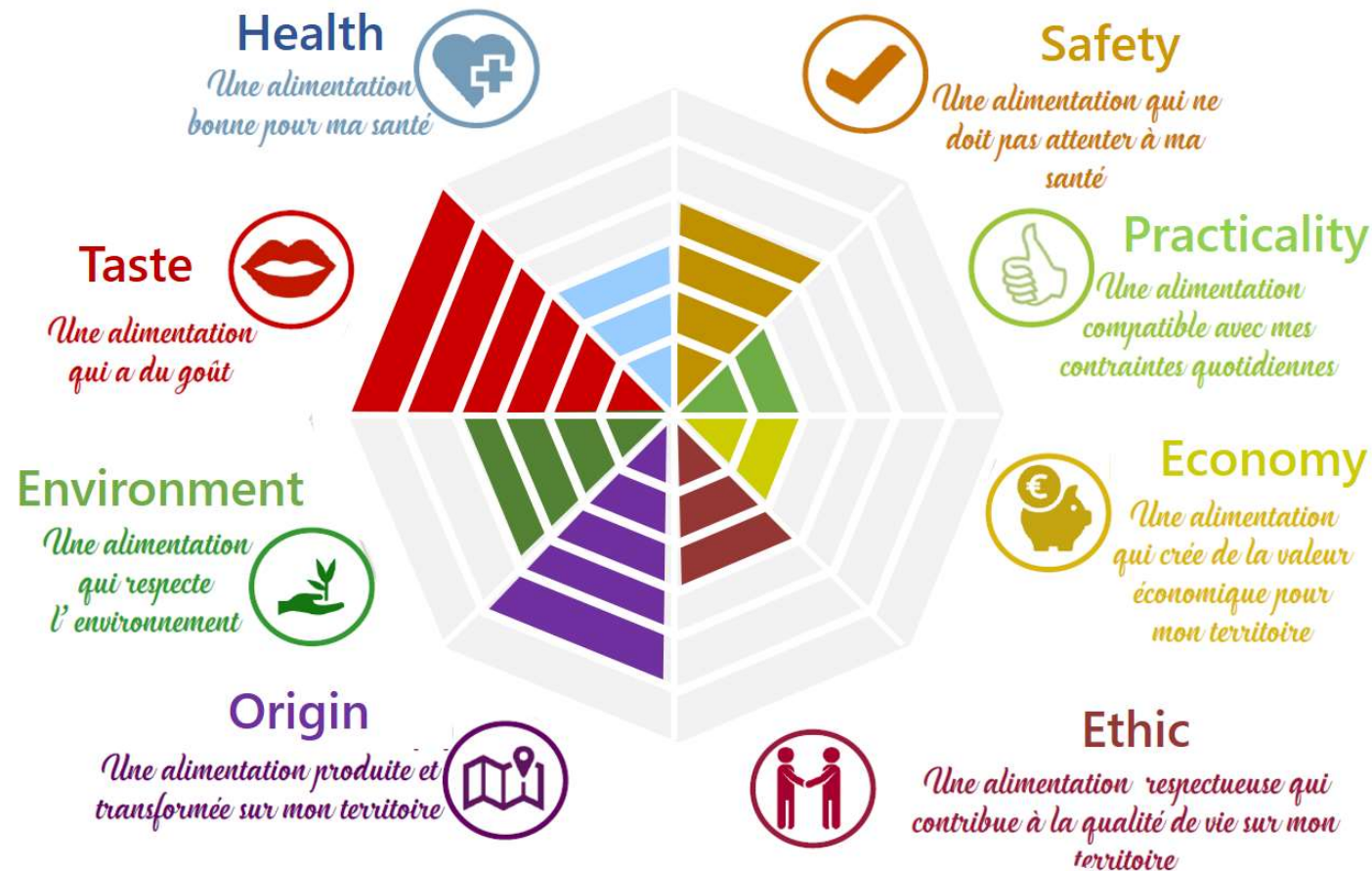
What we want to improve



What we want to maintain

Next step: collect the consumers perception

Focus group//multicriteria assesment



Next step : prototyping (2019)

Test one or two prototypes (fatteners and / or females)

In experimental unit

Large numbers of animal

With special emphasis on density/group size/surface

Performance, behavior, health, labor, cost production



Next step : scaling up (2020)

Test one or two prototypes (fatteners and / or females)

In commercial farm

Several batches

Performance, behavior, health, labor, cost production



Conclusion

- Strength :
 - collective discussions
 - to share things together makes us evolve together and to better understand each other
- Weakness
 - tense debates (NGO ↔ Sector)
 - collective project ↔ corporate strategies

I hope that this project will help France to :

- define minimum standards
- identify feasible and relevant solutions