

# Region Implementing Sustainable phosphorus Management Case of Britanny in France











### **Potential for fertilizer production**

#### in Brittany

- 34 000 farms
- Area: 2.75
   millions hectares,
   62% of UAA



- On average, 60 hectares per farm
- Flocks animals:

	Cattle	Dairy Cow	Fattening pig	Sow	Poultry	Layin hen
Number	2 millions	0.7 million	3,1 millions	574 000	5 millions m <sup>2</sup> building	16,5 millions
French share		20%	56%	54%	26%	41%

 201 000 tons of nitrogen and 120 000 tons of phosphorus produced by animals



#### Context

Given the high density of farms and regulation, many farmers are driven to market organic fertilizers from manure.
✓ 1 100 farms use a treatment solution
✓ 400 000 tons per year, much of which is set on

the market in other French regions.









# Goal

- Trap N et P into the solid phase
- Improve the atmosphere quality inside the building

# Principles

 Separation of urines and faeces within the building

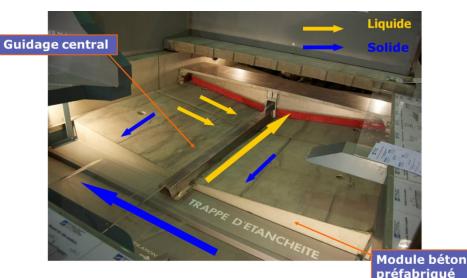
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 Pig farm without slurry: no more excrements under the animals

# TRAC

# Process

- Liquids are collected in the central gutter and continuously flow towards outside
- Solids are scrapped in the opposite direction several times per day



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Results
                                                             Building
                                                                           Emission reduction
                                 Solid
                                             Exportation
                  Liquid
Fertiliser
Volume
                   62%
                              38% (29% Dry
                                                             NH3
                                                                                  -50%
                                 mater)
                                                             N20
                                                                                  -49%
                   45%
Nitrogen
                                  55%
                                 91%
Phosphorus
                   9%
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## Conclusion

- Séparation of phase in the building is a very sustainable system
  - Efficient: 90% of Phosphorus is collected
  - Low consumption energy: Only 2kWh/T
- Chain of organic fertilizer is running
  - System on farm for simple fertilizer
  - Industrial system for high value organic fertilizer
- Improvement of soil and water quality in Britanny
- Champagne is good, because farmer fertilize with organic fertilizer from Britanny





# Thank you for your attention

