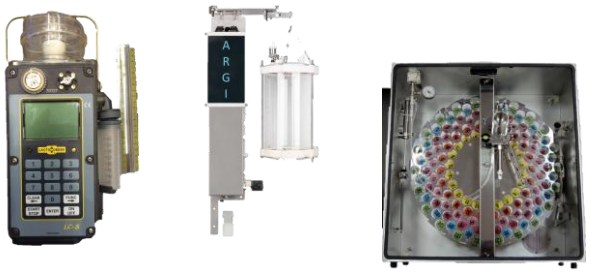
Monitoring Milk Meter

between innovation, practice and user feedback

ICAR Congres 2026

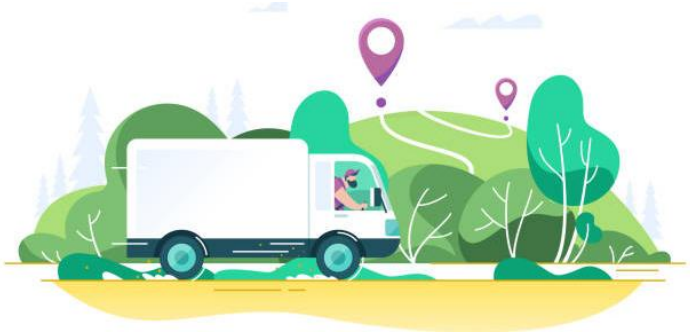
Guillaume Hamon – IDELE
David Saunier - ELIANCE


leboncoin

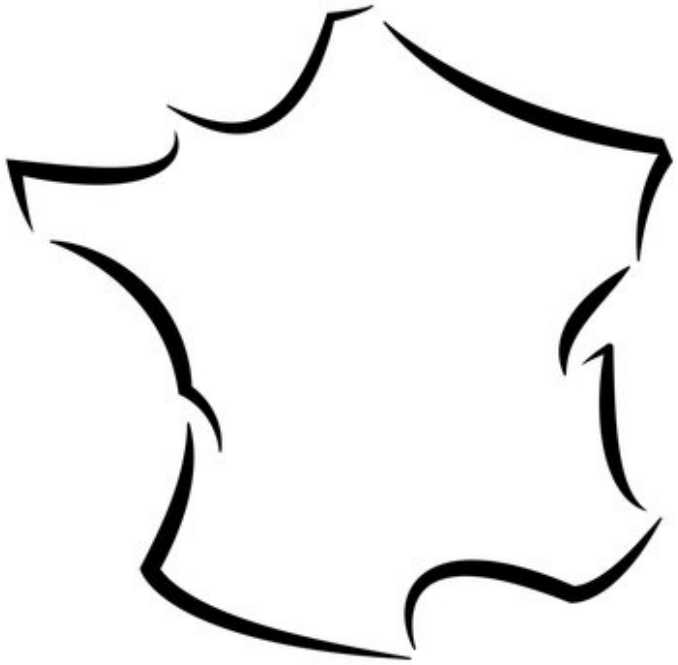

ARGI

Since ICAR 2012 congress in Cork, a work on computerized monitoring solution for deviation in electronic milk meters was presented by the Recording and Sampling Devices Sub-Committee (Allain et al., 2012).

ICAR THE GLOBAL STANDARD FOR LIVESTOCK DATA

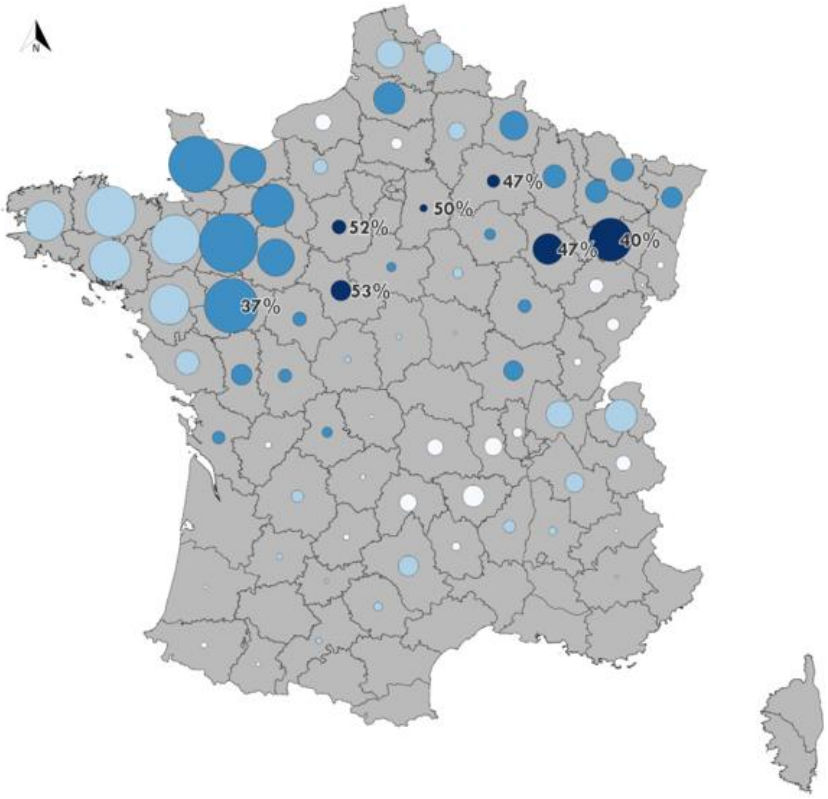


The two methods currently uses in France



Situation in France in 2025:

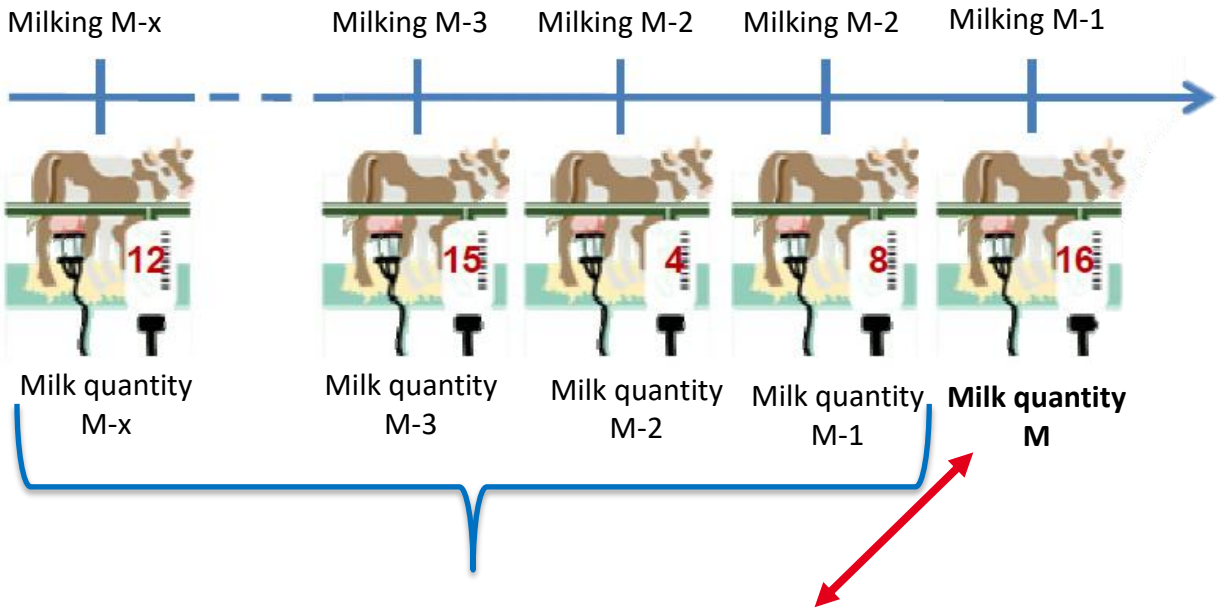
- 28 000 farms are specialized dairy farms
- 22 325 farms with official milk recording (78%)
- 1 844 079 dairy cows with official milk recording
- 82,6 dairy cows by farm



Map of the distribution of milking robots in France

Monitoring in parlour

Principle :



Monitoring in parlour

Example :

SUIVI MONITORING Détail par élevage

SEUIL D'ALERTE DE LA CONFORMITE DE L'INSTALLATION

Date de la dernière vérification conforme (VEE ou SM) :	Date d'alerte à 12 mois pour le TAV :	Date limite de conformité de l'installation :
30/04/2026	30/04/2027	30/05/2027

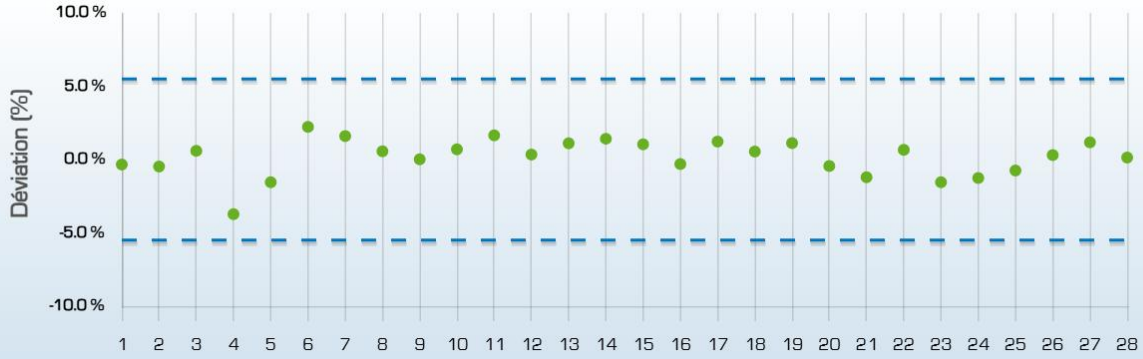
SYNTHESE MENSUELLE

Vérification	SM59	SM58	SM57	SM56	SM55	SM54	SM53	SM52	SM51	SM50	SM49
Date	30/04/2026	07/03/2026	07/02/2026	07/01/2026	07/12/2025	07/11/2025	07/10/2025	07/09/2025	07/08/2025	07/07/2025	07/06/2025
Couleur											
% CLEF NC	0	0	0	0	0	0	0	0	0	0	0

RESULTAT PAR POSTE 30/04/2026

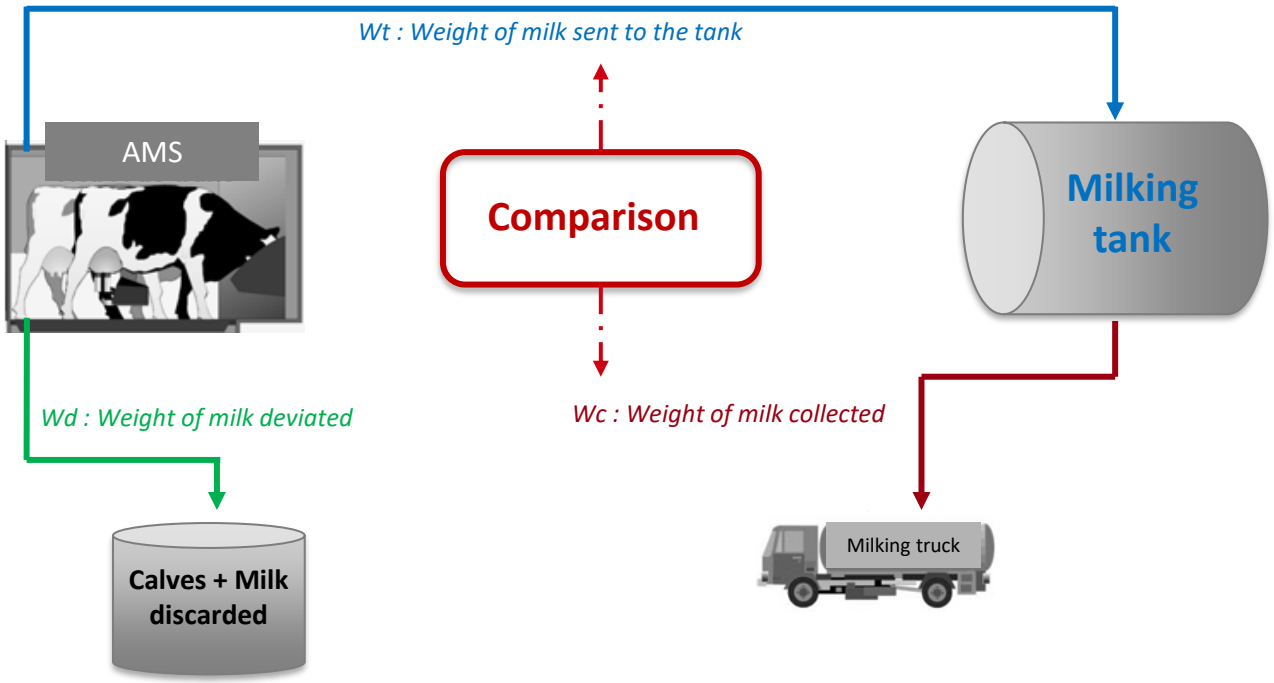
Poste	Déviation
1	-0.34%
2	-0.47%
3	0.59%
4	-3.72%
5	-1.54%
6	2.22%
7	1.60%

RESULTAT GRAPHIQUE PAR POSTE 30/04/2026



Monitoring for single-stall milking robot

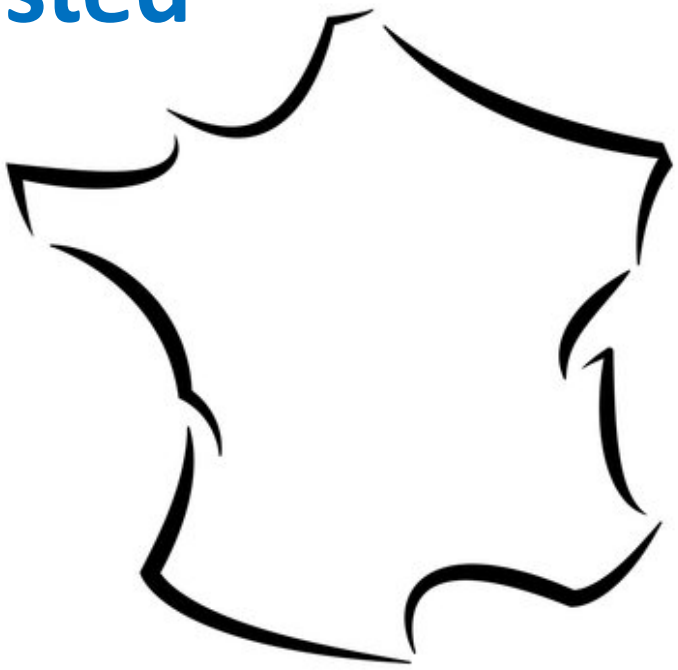
Principle :



Deviation (%) = (Wt – Wd) / Wc

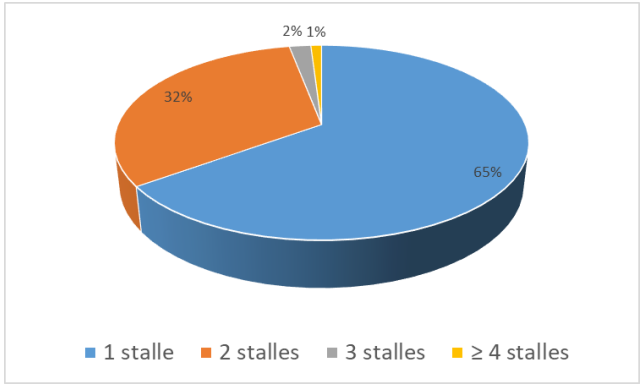
Tested in 2011 in France

A new method is being tested and deployed since 2022

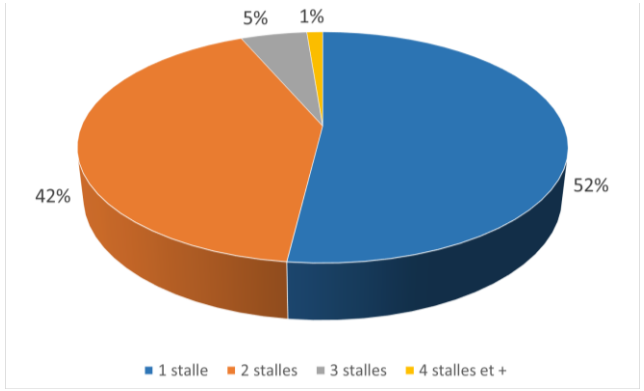


Situation in France :

- 7000 farms with milking robots
- 3500 robot farms with official milk recording
- 51% with 1 robot, 49% with 2 or more robots (Jan 2025)
- Still less and less technicians to perform the annual check of the milk meter.

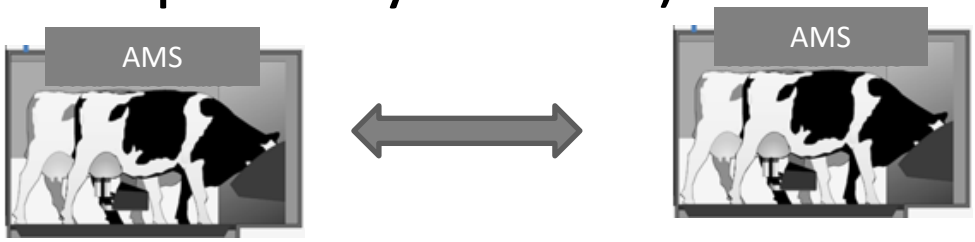


Distribution of robotic dairy farms in France in 2018

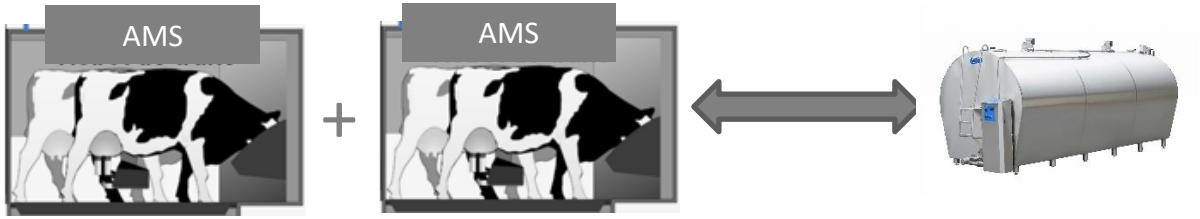


Distribution of robotic dairy farms in France in 2025

- 1. Calculation of the deviation between robot stalls (based on expected yield 24h)



- 2. Calculation of the overall deviation between the robots and the tank (data from the Dairy collection)



- 3. Synthesis of the 2 previous calculations methods

Monitoring for double-stall milking robot

Example :

SEUIL D'ALERTE DE LA CONFORMITE DE L'INSTALLATION

Date de la dernière vérification conforme (VEE ou SM) :	Date d'alerte à 12 mois pour le TAV :	Date limite de conformité de l'installation :
31/03/2026	31/03/2027	30/04/2027

SYNTHESE MENSUELLE

Vérification	SM14	SM13	VEE	SM12	SM11	SM10	SM9	SM8	SM7	SM6	SM5
Date	31/03/2026	28/02/2026	03/02/2026	31/01/2026	31/12/2025	30/11/2025	31/10/2025	30/09/2025	31/08/2025	31/07/2025	30/06/2025
Couleur											

COMPARAISON INTER-STALLES

Résultat déviation entre stalle	en kg	en %
Déviation stalle 101	39.24	0.49%
Déviation stalle 102	38.86	-0.49%
Moyenne des stalles	39.05	

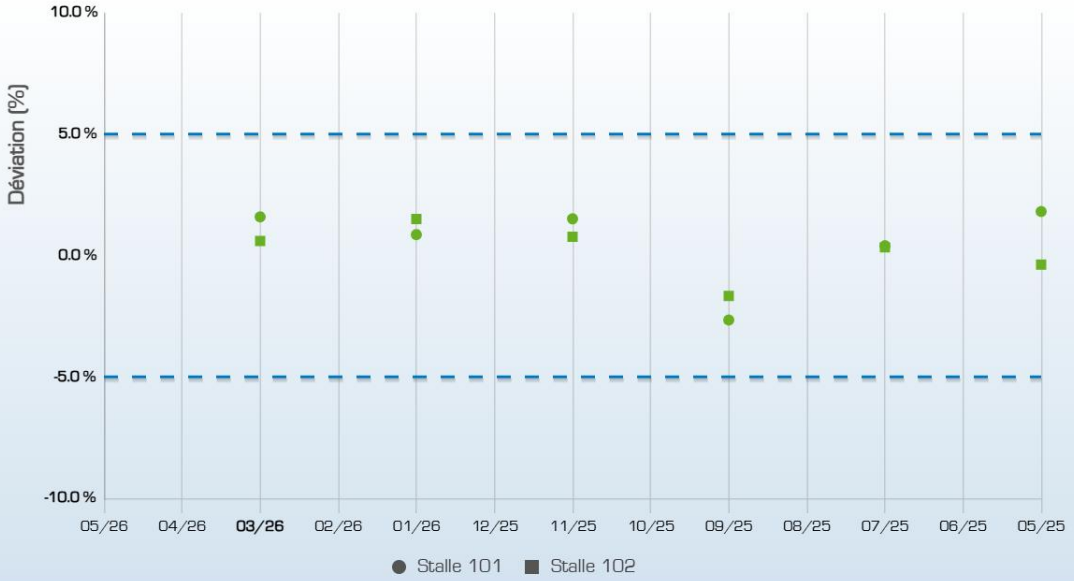
COMPARAISON LAIT LIVRE VS LAIT PRODUIT

Période	du 03/03/2026 au 31/03/2026
Lait Livré	95024
Lait Produit	96066
Coefficient	1.011

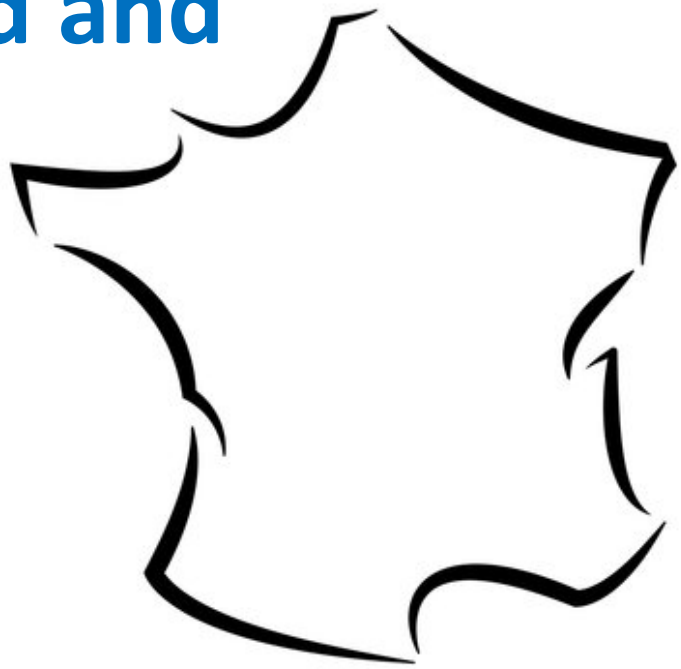
SYNTHESE DU MONITORING

		corrigé avec coeff
Résultat déviation entre stalle	en kg	en %
Déviation stalle 101	39.24	1.59%
Déviation stalle 102	38.86	0.6%
Moyenne des stalles	38.63	

RESULTATS GRAPHIQUES DE TOUS LES MONITORINGS DEPUIS LA VEE



How is the data collected and organized?



To function, we need 3 things

1

The animal milking data

2

The destination of the milk

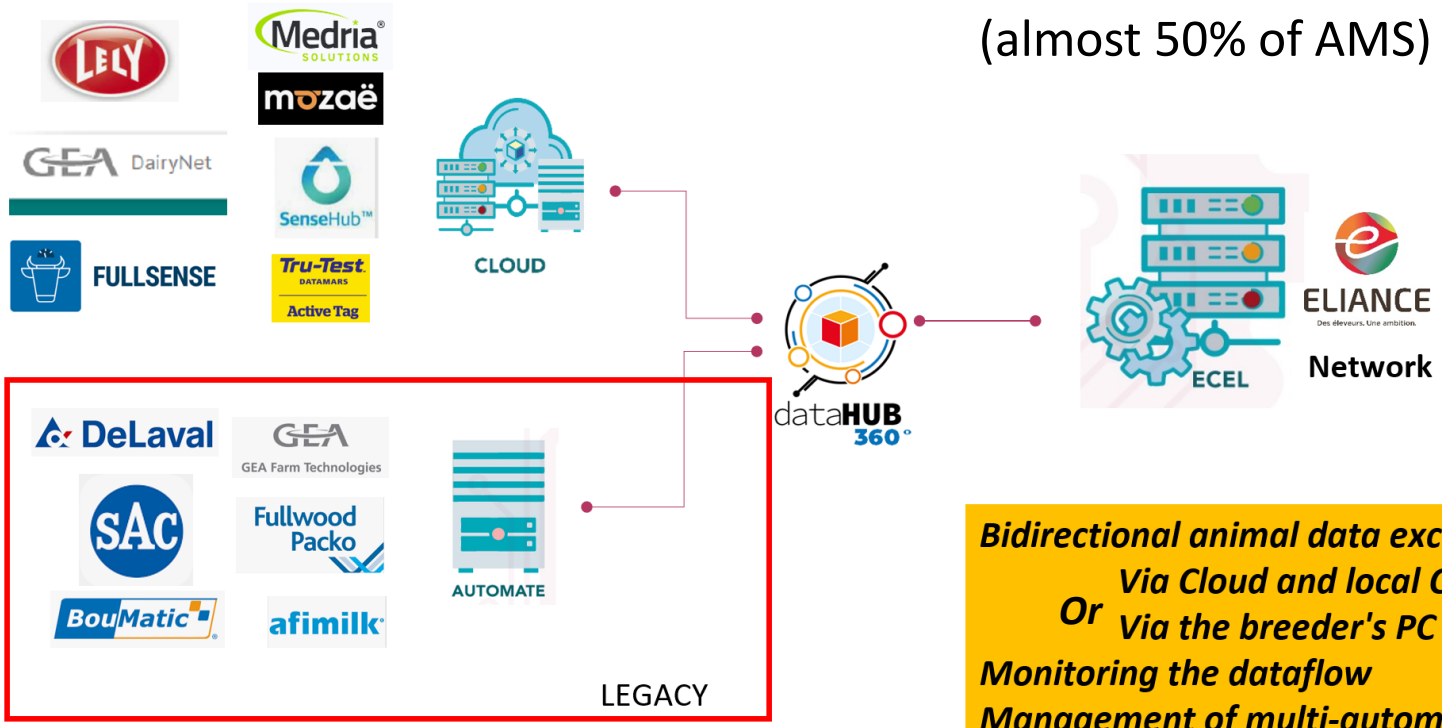
3

The volume of milk collected by the dairy collect

1 In France, we use the DataHub solution for recover the animal milking data

dataHUB 360° Concept

12 000 automates connected
(almost 50% of AMS)

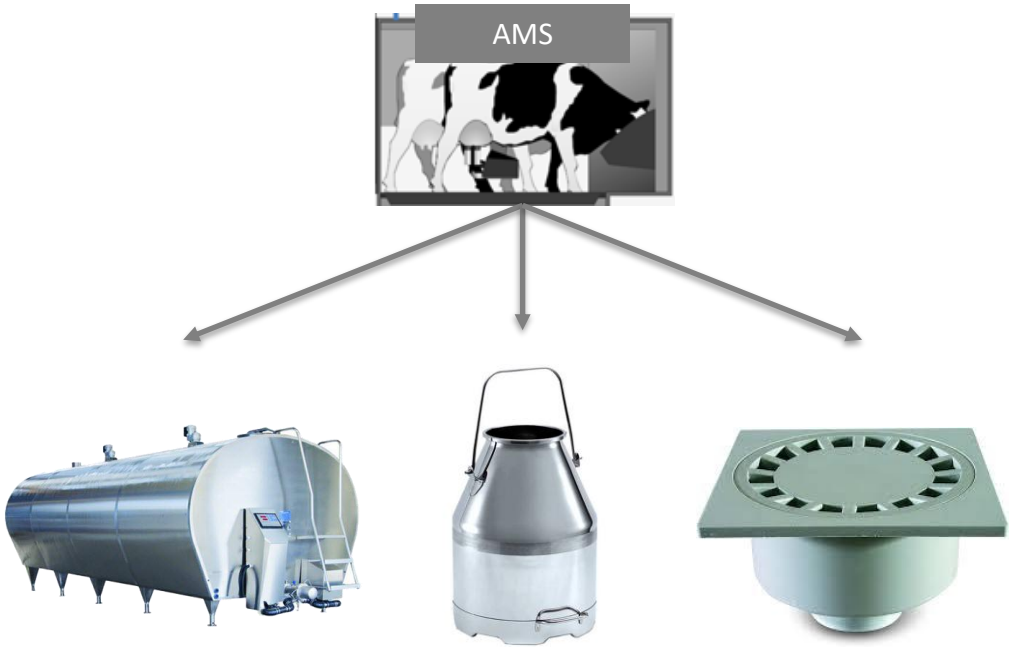


Bidirectional animal data exchange
Via Cloud and local Cloud
Or
Via the breeder's PC controller
Monitoring the dataflow
Management of multi-automate for one farm

2

Recovering missing data

Destination of milking



dataHUB 360°

By the software if the data is present in the library

By a
Data export file

3 Enter or retrieve volume of milk collected by the dairy collect

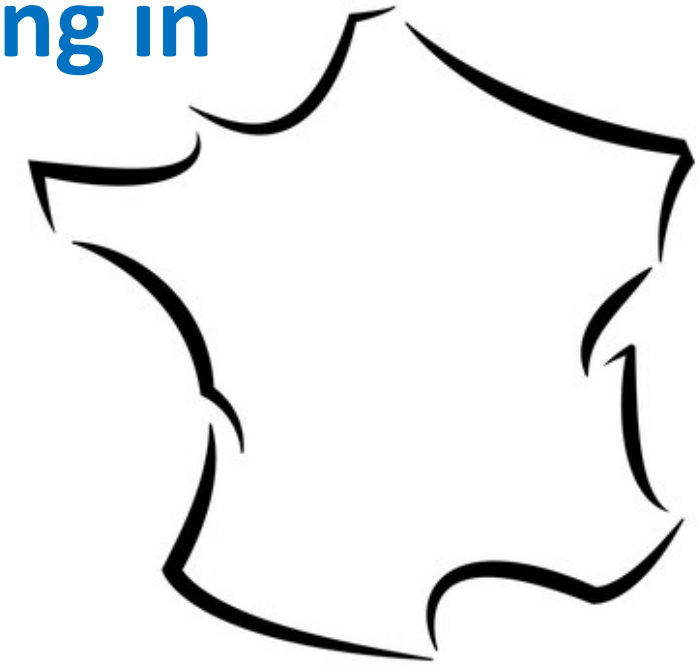
Jour	Heure de collecte	Volume en L (penser à ajouter le lait prélevé dans le tank (vente directe, transformation))	Type de saisie	Erreur retournée par le WS
01/04/2026				
02/04/2026	08:30	7 959	Manuelle	
03/04/2026				
04/04/2026	08:30	7 804	Manuelle	
05/04/2026				
06/04/2026	08:30	7 851	Manuelle	
07/04/2026				
08/04/2026	08:30	7 790	Manuelle	
09/04/2026				
10/04/2026	08:30	8 051	Manuelle	
11/04/2026				
12/04/2026	08:30	7 642	Manuelle	
13/04/2026				
14/04/2026	08:30	7 992	Manuelle	
15/04/2026				
16/04/2026	08:30	8 054	Manuelle	
17/04/2026				
18/04/2026	08:30	8 194	Manuelle	
19/04/2026				
20/04/2026	08:30	8 087	Manuelle	
21/04/2026				
22/04/2026	08:30	7 930	Manuelle	
23/04/2026				
24/04/2026	08:30	8 087	Manuelle	
25/04/2026				
26/04/2026	08:30	8 124	Manuelle	
27/04/2026				
28/04/2026	08:30	8 182	Manuelle	
29/04/2026				
30/04/2026	08:30	7 886	Manuelle	
	Total du mois en L	119 633		

We need all the collects made over a full month

+

Consumptions and withdrawals made by farmer

Key takeaways from the deployment of monitoring in France



Advantages and difficulties

- Improvement the quality of data for farmers
- Time saving
- Automatic calculations
- Better detection and efficiency of MM control
- Only travel if necessary
- Economic gain
- Alleviates constraints

- Very sensitive to dairy data
- Data is not automatically available for all robot manufacturers
- Explanation needed to accompany the deployment
- Dependent on the identification system and internet connection

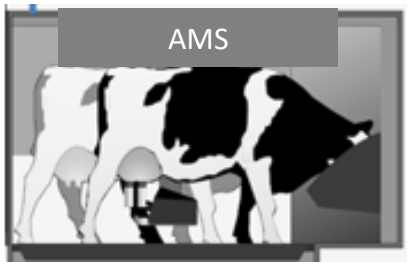
Montitoring of milk meter in France

Milking parlour

24,6 %

~ 350 parlour farms

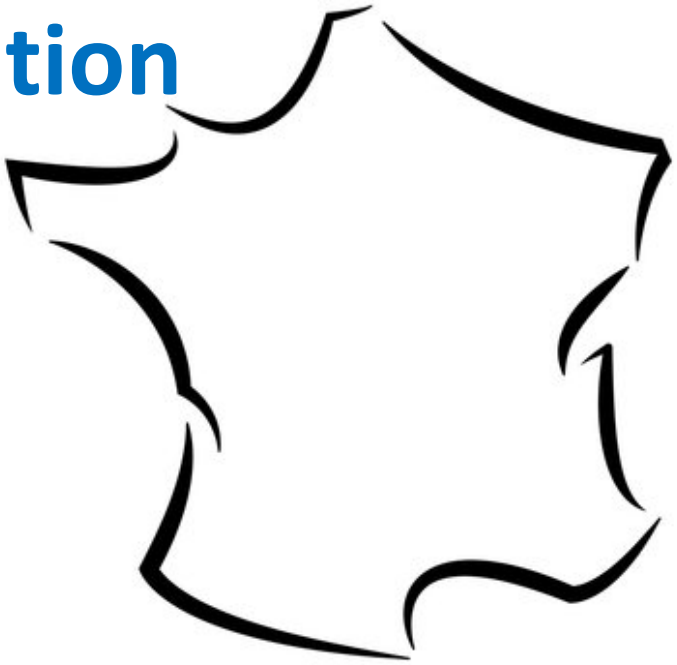
Milking robots



21,9 %

~ 700 robots farms

Thank you for your attention



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