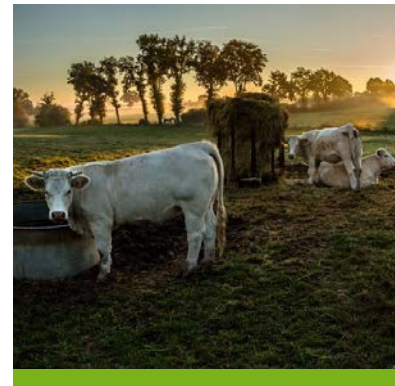




Capability analysis in case of foot-and-mouth disease epidemics in France and Tunisia



Maud Marsot, Roukaya Khorchani, Estelle Bitan-Crespi, Héli Haj Ammar, Evelyne Bouvier, François Reymann, Benoit Durand

Main contributors



Roukaya Khorchani

**Head Office of the
Veterinary Services - Tunis**



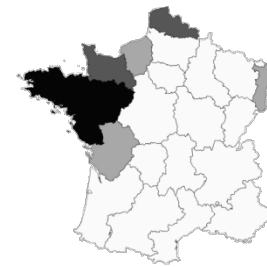
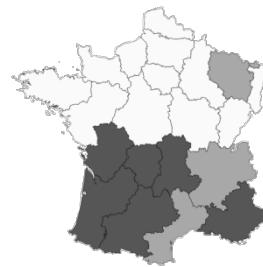
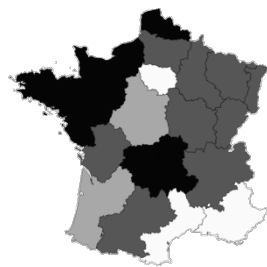
Estelle Bitan-Crespi

**General Directorate
on food safety - Paris**

Context: France vs Tunisia

Animal densities

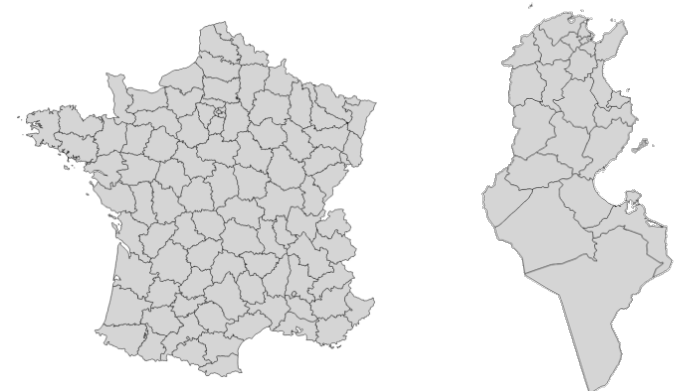
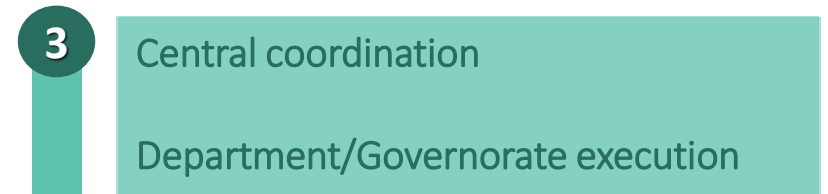
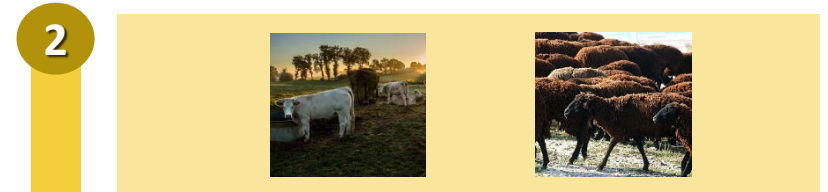
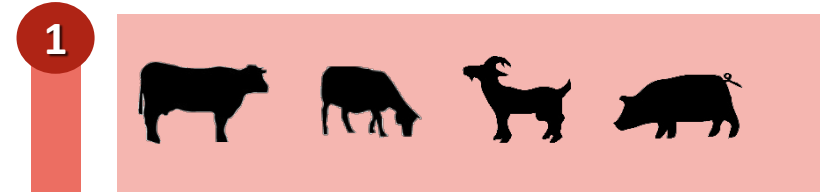
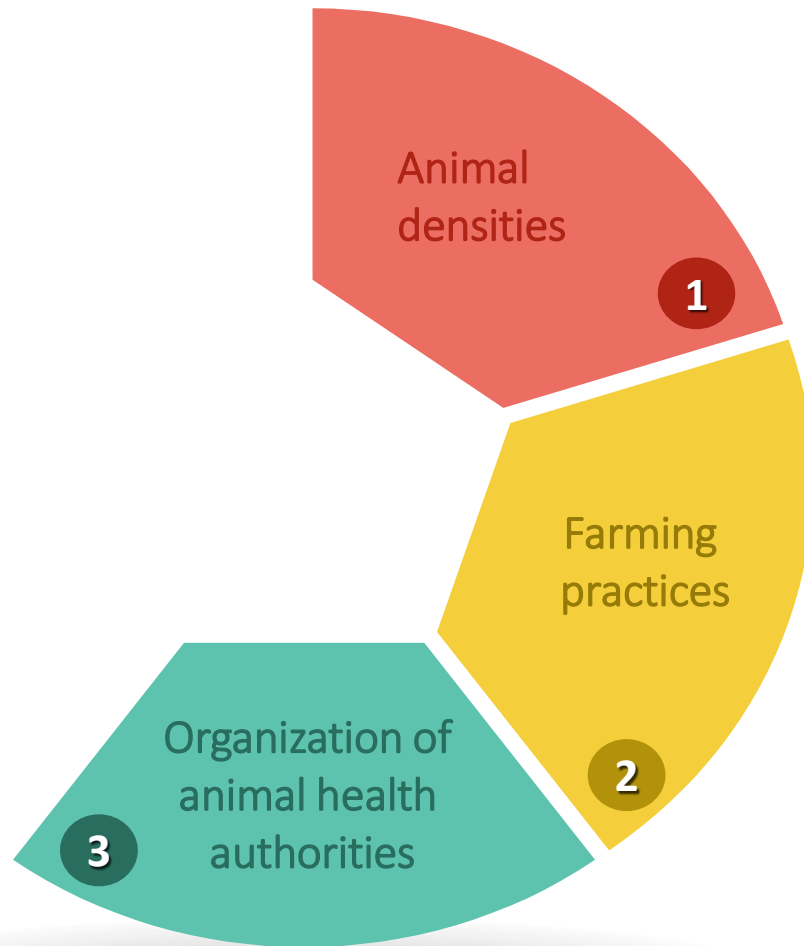
1



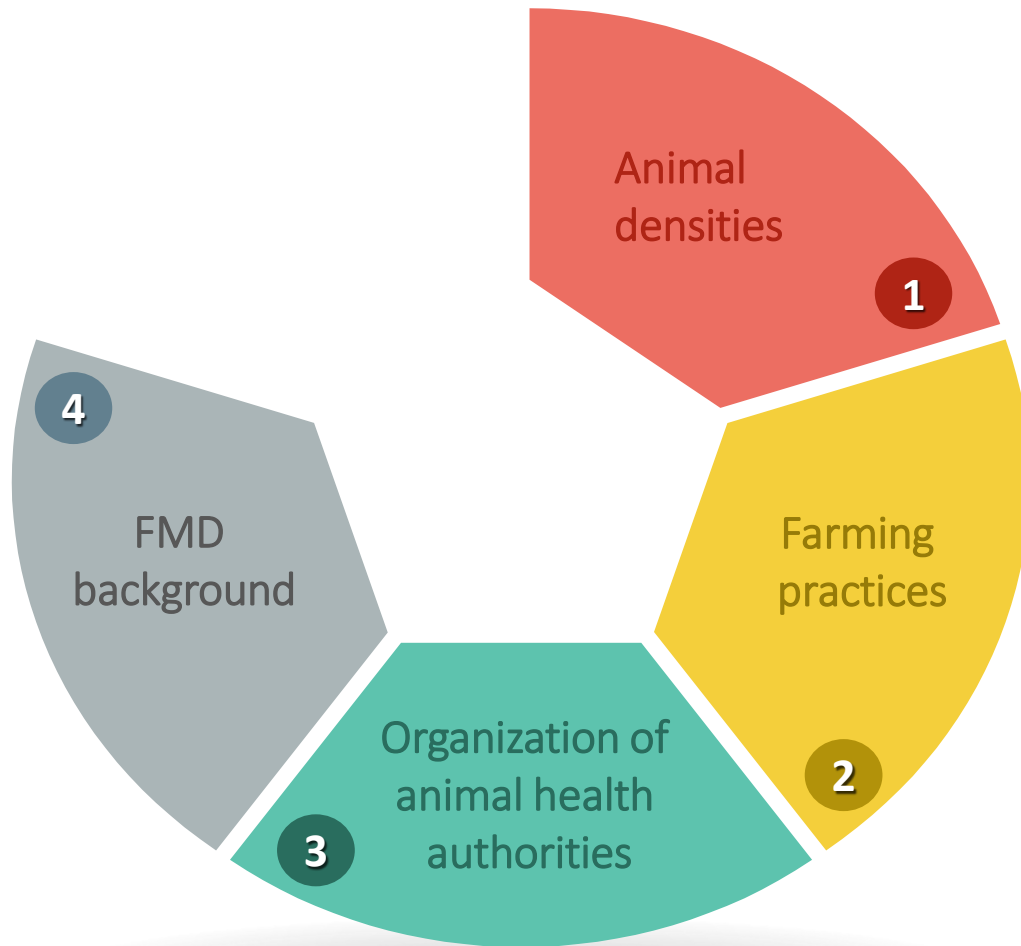
Context: France vs Tunisia

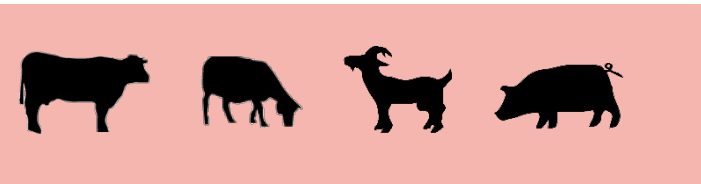
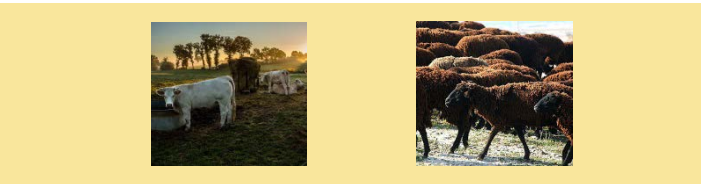


Context: France vs Tunisia



Context: France vs Tunisia



- 
- 
- Central coordination

Department/Governorate execution
- FRANCE** : FMD-FREE SINCE 2001

TUNISIA : EPIDEMICS IN 2014

Context: France vs Tunisia



- 

1
- 

2
- 3

Central coordination

Department/Governorate execution
- 4

FRANCE : FMD-FREE SINCE 2001

TUNISIA : EPIDEMICS IN 2014
- 5

FRANCE: ILLEGAL IMPORTS

TUNISIA: TRANSHUMANCE + ILLEGAL MOVEMENTS

Objectives

Contingency plans

Several control measures in case of FMD epidemics
=> Possible adaptation with the spread of the disease

Resources

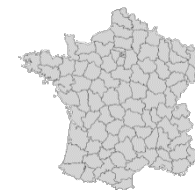
Can be a limitation to implement control measures

References : Davies 2002, Bouma 2003, Halassa 2014

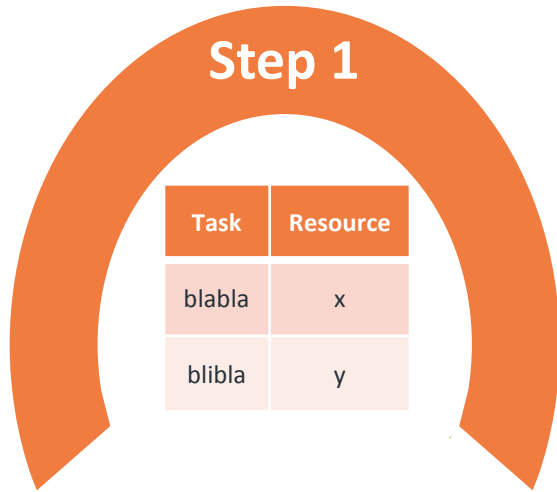


1) develop a reference grid of required resources needed to control FMD epidemics

2) illustrate the use of this tool to assess whether current human resources are sufficient to control a FMD epidemics



Methodology



REFERENCE GRID
Required resources

What ?

ORDRE DE SERVICE

MINISTÈRE DE L'AGRICULTURE, DE LA PÊCHE ET DES AFFAIRES RURALES
Direction générale de l'alimentation
Adresse : 251, rue de Vaugrard
75732 PARIS CEDEX 15

Sous-direction de la santé et de la protection animales Bureaux : Santé animale Identification et contrôle des mouvements Pharmacie vétérinaire et alimentation animale Dossier suivi par : Brigitte ARBELOT Martial PINEAU Charles MARTINS-FERREIRA Tél. : 01.49.55.84.20 / 84.59 Réf. interne : 200320	Sous-direction de la sécurité sanitaire des aliments Bureaux : Des matières premières Des établissements de production et de transformation Dossier suivi par : Benjamin LE CHATELIER Emmanuelle SOUBEYRAN Pascale PARISSOT Tél. : 01.49.55.84.28 / 84.91 Réf. interne :
--	---

NOTE DE SERVICE
DGAL/SDSPA/SDSSA/N2003-8050

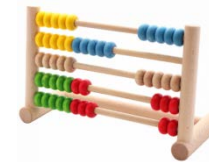
Direction Générale des Services Vétérinaires

Plan d'intervention d'urgence contre les épizooties

Who ?



How many ?



Validation

anses
agence nationale de sécurité sanitaire
alimentaire, environnement, travail

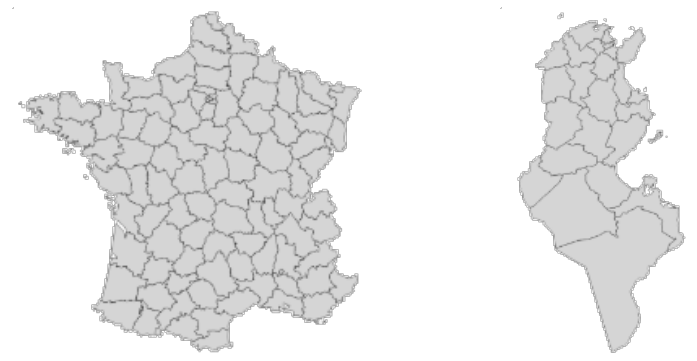
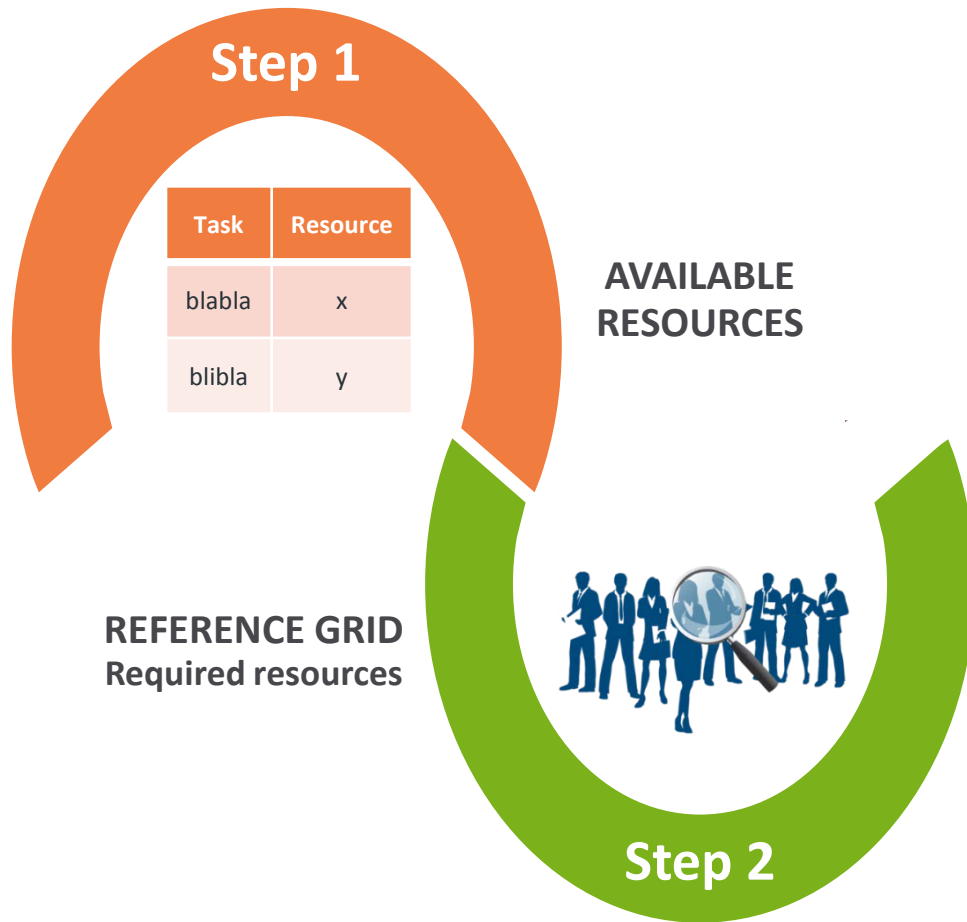


LIBERTÉ • ÉGALITÉ • FRATERNITÉ
RÉPUBLIQUE FRANÇAISE

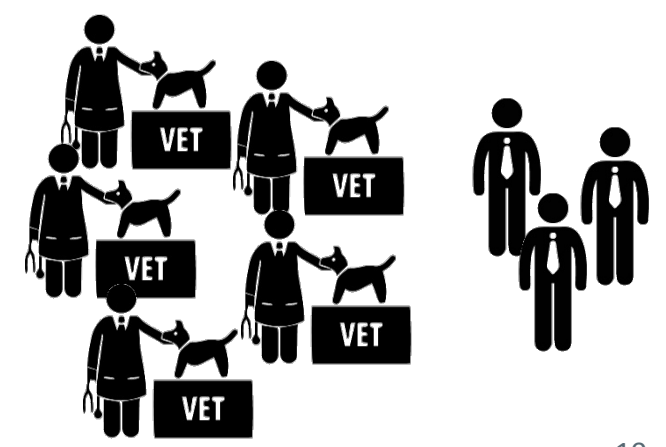
MINISTÈRE DE L'AGRICULTURE, DE LA PÊCHE ET DES AFFAIRES RURALES



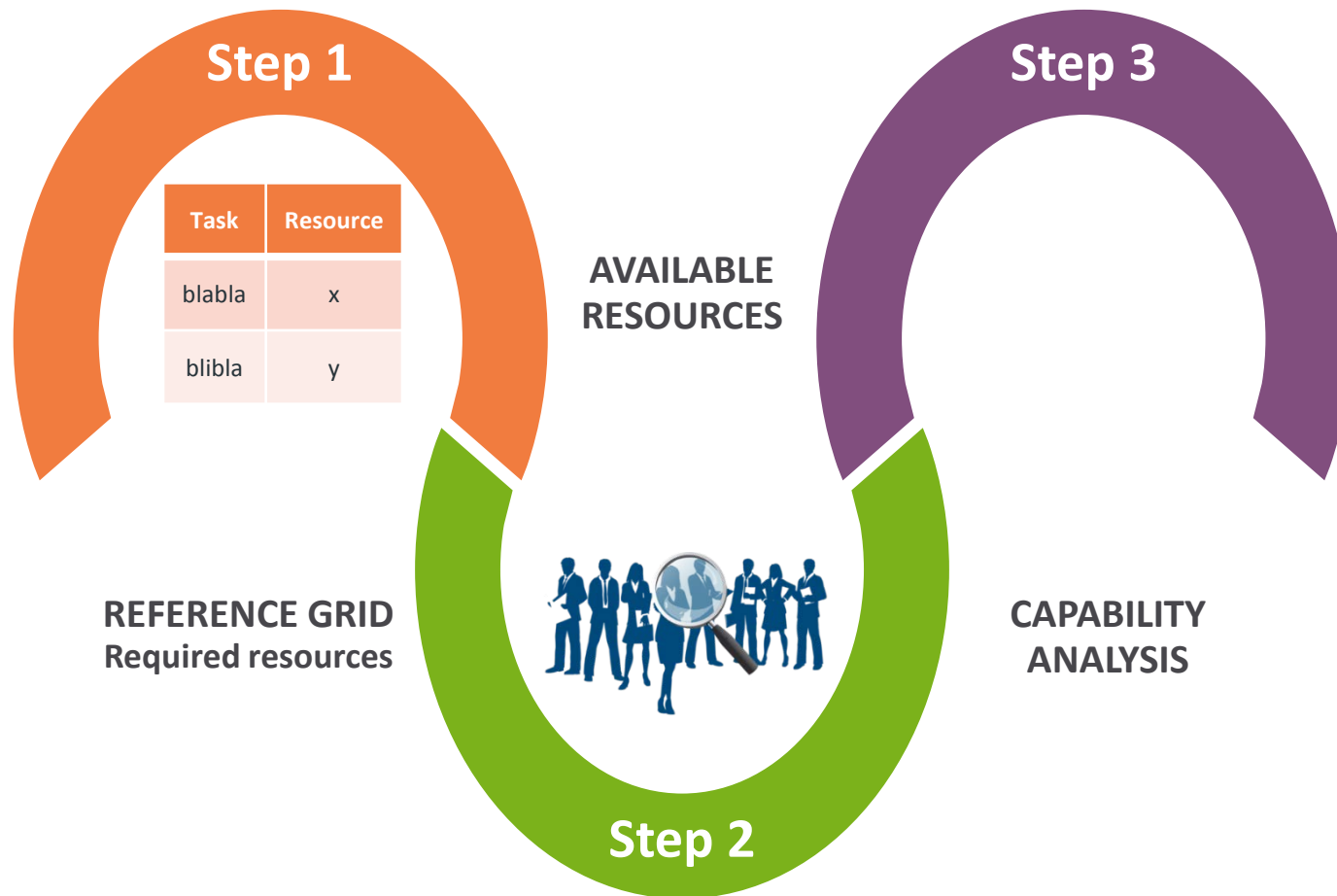
Methodology



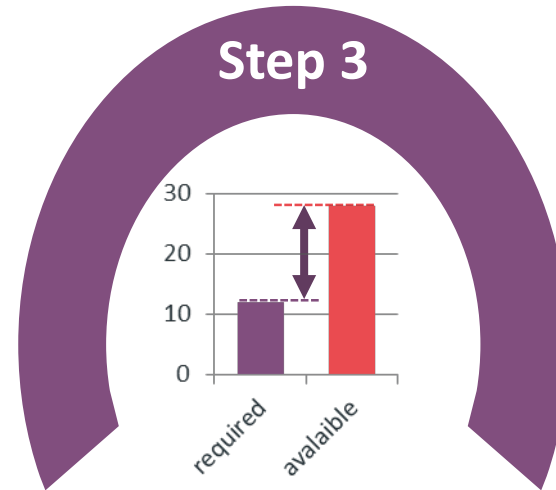
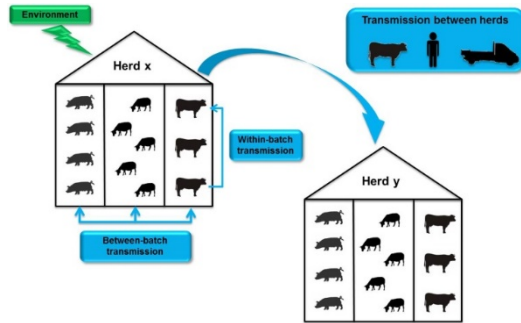
How many?



Methodology



Methodology

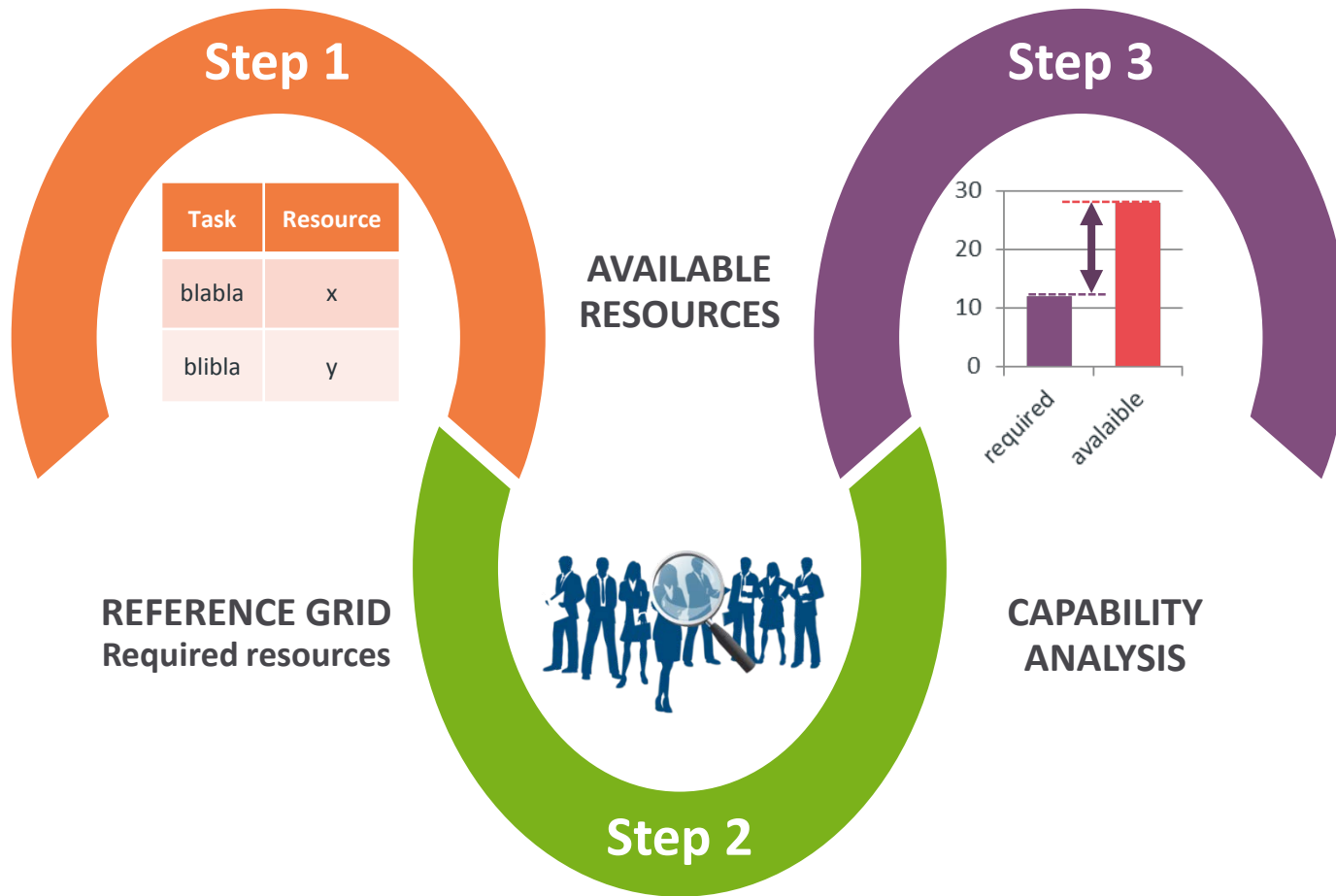


CAPABILITY ANALYSIS



8h/day

Methodology



Results – reference grid (step 1)

4 items :



✓ Detection and surveillance

✓ ~~Planning and administrative management~~



✓ Depopulation (culling, destruction of carcasses, cleaning/disinfection)



✓ Vaccination



For 50 cattle



Herd with less than 50 cattle
Herd with more than 50 cattle



For 100 small ruminants



Herd of small ruminants



For 200 porcine



Herd of cattle and small ruminants

Results – reference grid (step 1)



Task	Duration of intervention (number of hours / herd)	Human resources		
		Skill 1	Skill 2	Skill 3
Task 1				
Task 2				

Results – reference grid (step 1)






Task
Sequestration/sampling
Samples management
Outbreak investigation
Active surveillance based on clinical signs






Task
Sequestration/sampling
Samples management
Outbreak investigation
Active surveillance based on clinical signs

Results – reference grid (step 1)






Task	Duration of intervention (number of hours / herd)			
Sequestration/sampling				
Samples management				
Outbreak investigation				
Active surveillance based on clinical signs				






Task	Duration of intervention (number of hours / herd)			
Sequestration/sampling				
Samples management				
Outbreak investigation				
Active surveillance based on clinical signs				

Results – reference grid (step 1)

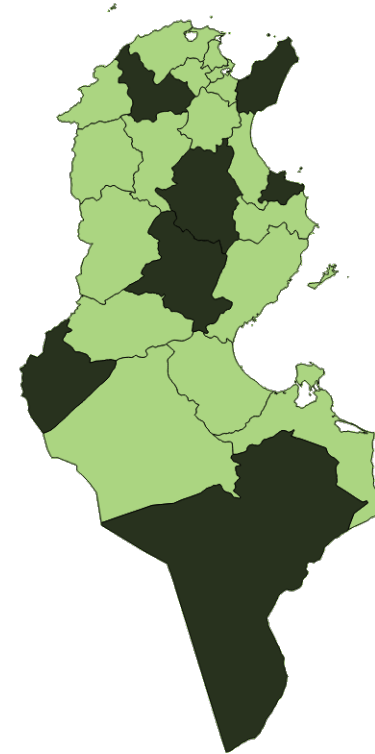
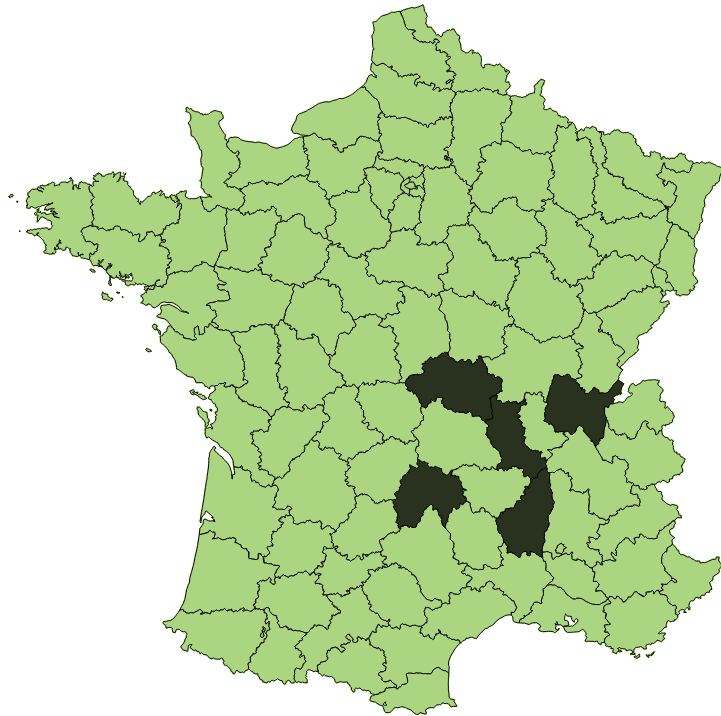


Task	Duration of intervention (number of hours / herd)			
Sequestration/sampling	4	1	1	2
Samples management	6	0	1	1
Outbreak investigation	4	0	1	2
Active surveillance based on clinical signs	2	1	0	0



Task	Duration of intervention (number of hours / herd)			
Sequestration/sampling	6	1	1	1
Samples management	8	1	1	1
Outbreak investigation	5	1	1	1
Active surveillance based on clinical signs	4	1	1	1

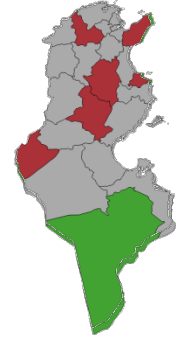
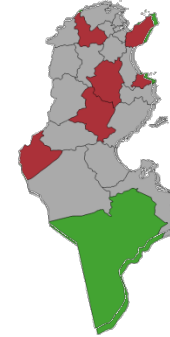
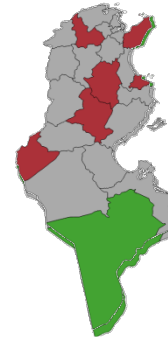
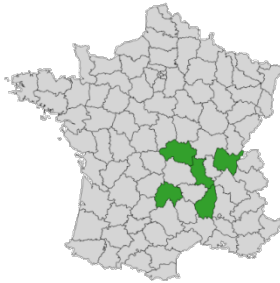
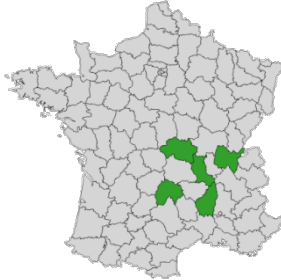
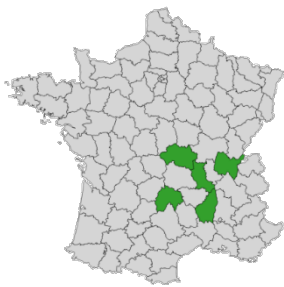
Results – available resources (step 2)



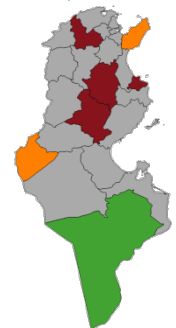
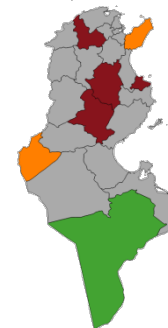
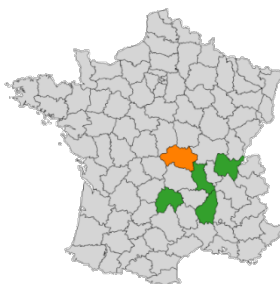
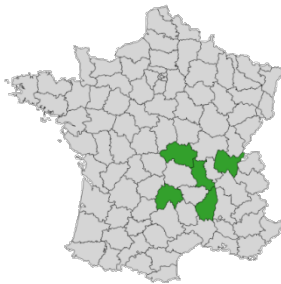
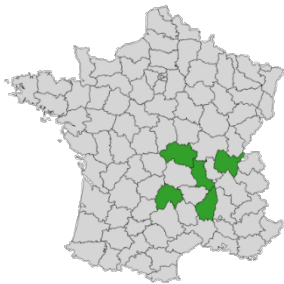
Results – capability analysis (step 3)



DETECTION
SURVEILLANCE



DEPOPULATION OR
VACCINATION



Discussion



Steering tool available

Calibration in progress



Tunisia : culling considered

France : inclusion of planning tasks



Perspectives



Work in progress

=> surveys in other departments and governorates, calibration of administrative tasks

Acknowledgements

Partners

- DGSV (Tunis)
- DGAL – MUS (Paris)
- DRAAF zone sud-est
- LR OIE FMD (ANSES)

Funding

- EUFMD
- DGAI

Colleagues

- Séverine Rautureau
- Labib Bakkali-Kassimi
- Gina Zanella

Surveys

- DDPP Loire
- DDCSPP Allier
- DDCSPP Ardèche
- DDPP Ain
- DDCSPP Cantal
- CRDA Béja
- CRDA Nabeul
- CRDA Monastir
- CRDA Sidi Bouzid
- CRDA Kairouan
- CRDA Tataouine
- CRDA Tozeur

Thank you
for your
attention!



"If good things lasted forever, would we
appreciate how precious they are?"
-Hobbes