CA18105

RIBMINS

Introduction to Risk-based Meat Safety Assurance System

Bojan Blagojevic | 13-June-2023 | online

cost
EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY

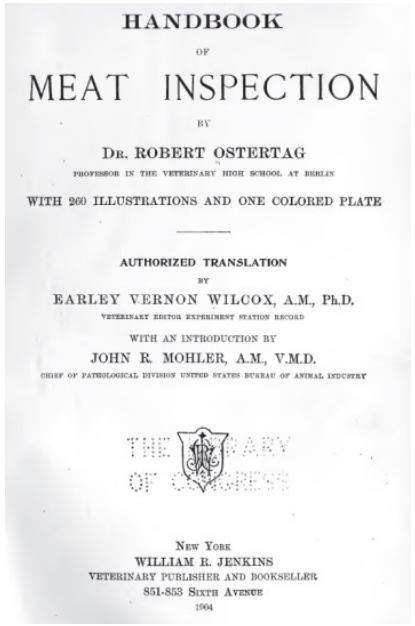
Funded by the 2020 Framework Programme of the European Union

www.cost.eu

Background - traditional meat safety system

- **Safety of (carcass) meat is traditionally assured through**:
  - ✓ veterinary meat inspection
  - ✓ end-product laboratory testing

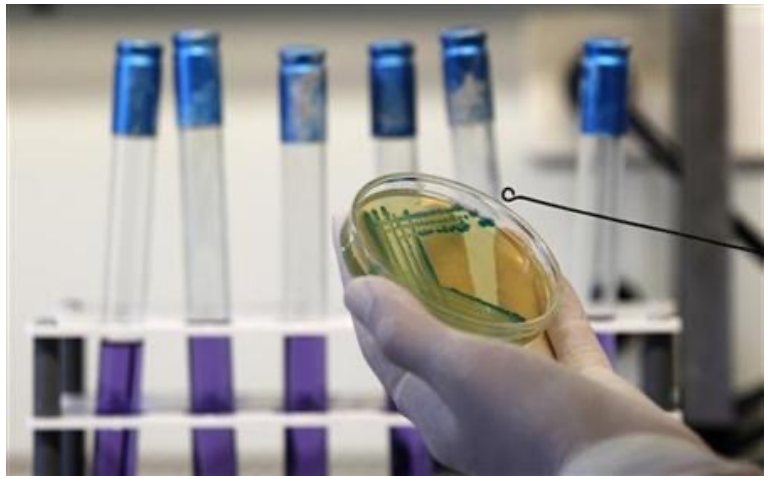
RIBMINS


HANDBOOK
OF
MEAT INSPECTION
BY
DR. ROBERT OSTERTAG
PROFESSOR IN THE VETERINARY HIGH SCHOOL AT BERLIN
WITH 200 ILLUSTRATIONS AND ONE COLORED PLATE
AUTHORIZED TRANSLATION
BY
EARLEY VERNON WILCOX, A.M., Ph.D.
VETERINARY EDITOR EXPERIMENT STATION RECORD
WITH AN INTRODUCTION BY
JOHN R. MOHLER, A.M., V.M.D.
CHIEF OF PATHOLOGICAL DIVISION UNITED STATES BUREAU OF ANIMAL INDUSTRY
NEW YORK
WILLIAM R. JENKINS
VETERINARY PUBLISHER AND BOOKSELLER
851-853 SIXTH AVENUE
1904

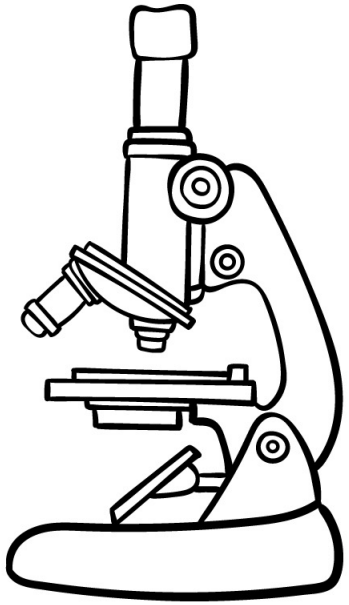
- **Veterinary meat inspection**
  - FCI analysis + AM + PM (V/P/I)
  - Targets hazards causing clinical signs/lesions
  - Invaluable contribution to public health protection from zoonoses through history

✓Successfully detects a few of public health and many AHAW hazards

✓Unsuccessful in detection of most relevant hazards today
✓Mediates cross-contamination
✓Subjective
✓Not risk-based



- **End-product testing:**
  - Microbiological, parasitological, etc.
  - Supplements meat inspection and other controls to some extent

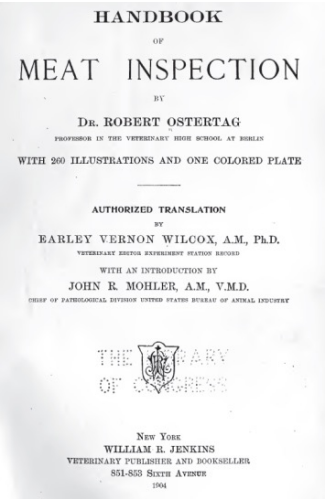


✓Provides some data for exposure assessment

✓Delayed results
✓Statistical/sampling issues
✓Relatedness only to the hazard examined for
✓Limited tests' performances (Se and Sp)
✓Not cost-effective
✓Reactive measure

Needs for modernisation of the traditional system

- ✓ Flaws of traditional meat safety assurance system are well recognised for decades
- ✓ EU food safety legislation from 2002 foresees **risk analysis** and **food chain** approach
- ✓ Initiative of the EU Commission and EFSA's work on meat inspection revision
- ✓ Main aim of modernisation of meat safety systems is to be risk-based


HANDBOOK
OF
MEAT INSPECTION
BY
DR. ROBERT OSTERTAG
PROFESSOR IN THE VETERINARY HIGH SCHOOL AT BERLIN
WITH 260 ILLUSTRATIONS AND ONE COLORED PLATE
AUTHORIZED TRANSLATION
BY
EARLEY VERNON WILCOX, A.M., Ph.D.
VETERINARY EDITOR EXPERIMENT STATION RECORD
WITH AN INTRODUCTION BY
JOHN R. MOHLER, A.M., V.M.D.
CHIEF OF PATHOLOGICAL DIVISION UNITED STATES BUREAU OF ANIMAL INDUSTRY
NEW YORK
WILLIAM R. JENKINS
VETERINARY PUBLISHER AND BOOKSELLER
851-853 SIXTH AVENUE
1904

European Commission

efsa

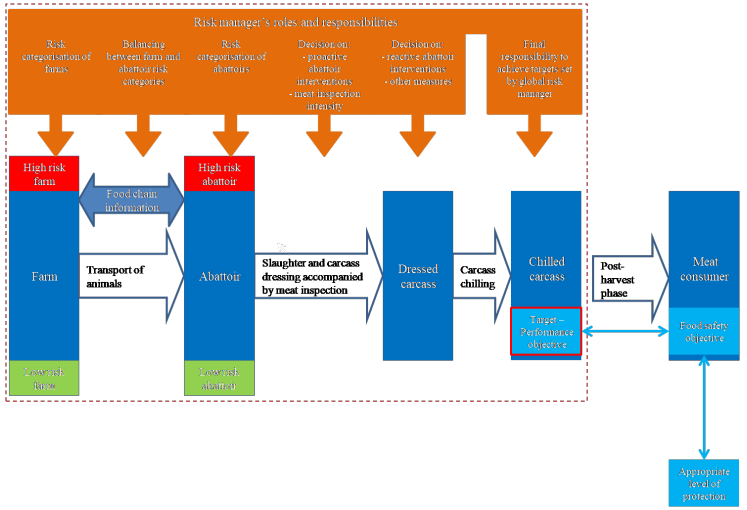
RIBMINS

EFSA's work (2011-2013)

- Priority hazards

Species	Biological hazards	Chemical hazards
Cattle	- pathogenic *E. coli* - *Salmonella*	- dioxins - dioxin-like PCBs
Pigs	- *Salmonella* - *Y. enterocolitica* - *T. gondii* - *Trichinella*	- dioxins - dioxin-like PCBs - chloramphenicol
Poultry	- *Campylobacter* - *Salmonella* - ESBL-AmpC gene-carrying bacteria	- dioxins - dioxin-like PCBs - chloramphenicol - nitrofurans - nitroimidazoles

- Generic framework of risk-based meat safety assurance system



Risk-based meat safety assurance system (RB-MSAS)

- **Risk-based:** focused on high risk meat-borne hazards in/on chilled carcasses with the aim of reducing the overall meat safety risk

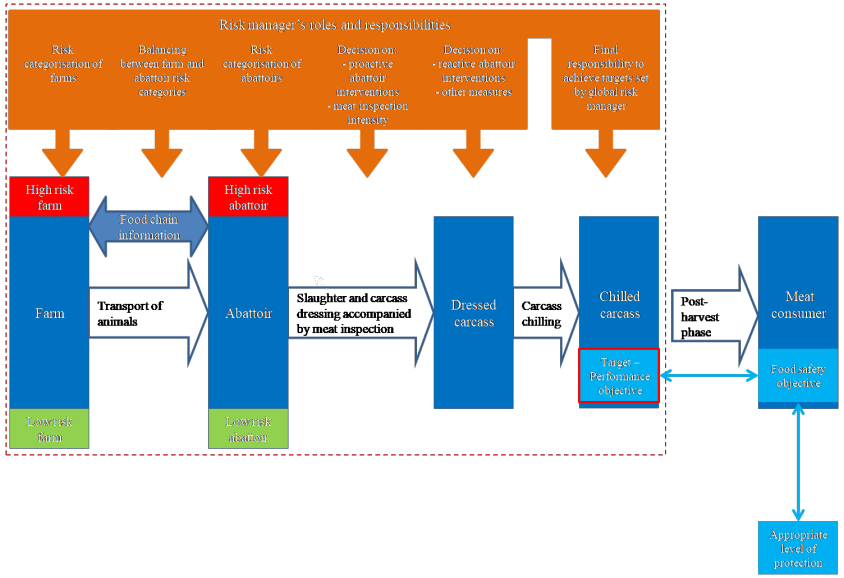
- **Longitudinally integrated:** multiple preventative and control measures along the food chain to achieve required meat safety goals

- **Flexible and dynamic:** adaptable to changes while it still fulfils functional demands

RIBMINS

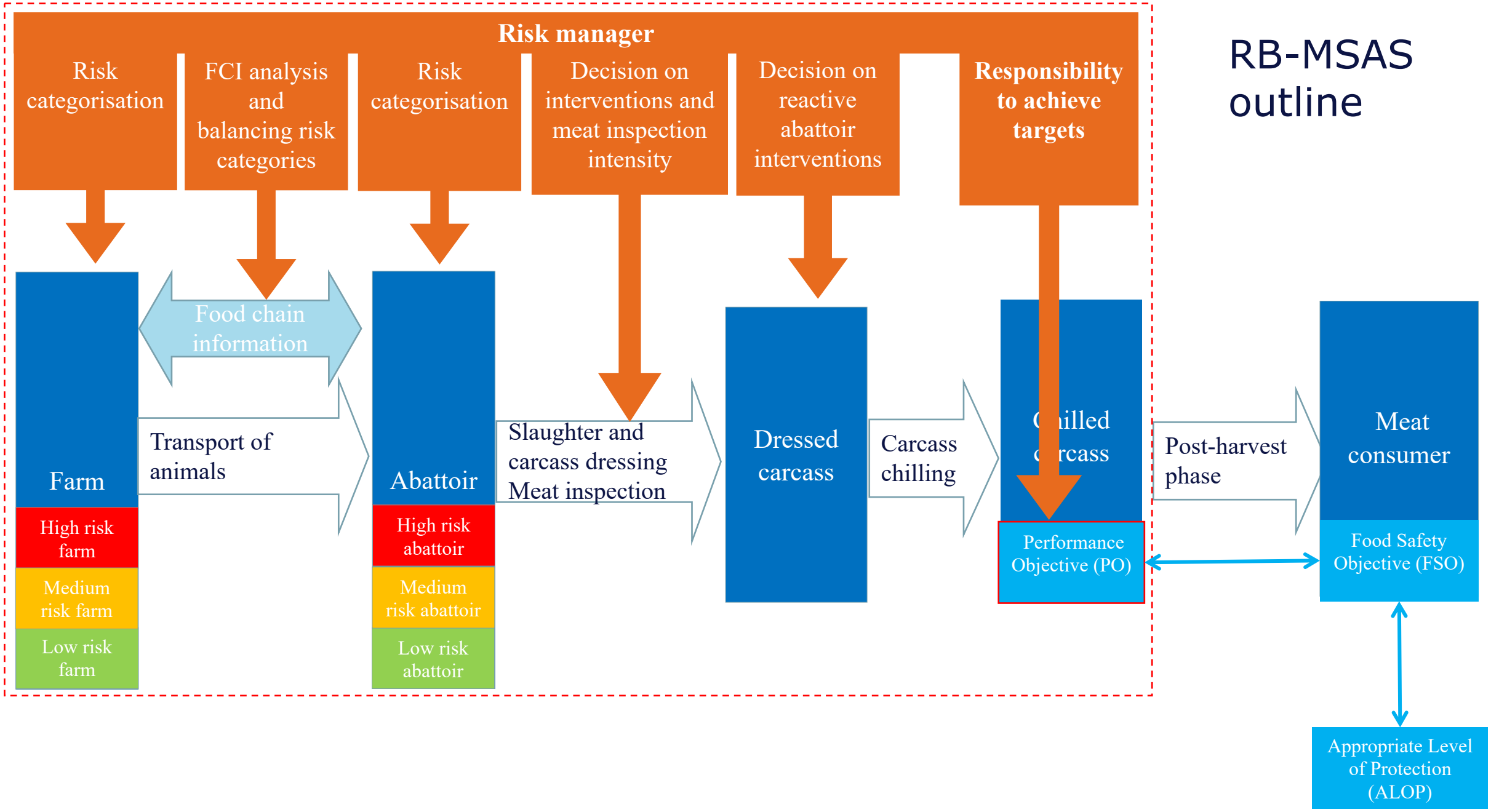
Main elements of RB-MSAS

- ✓ Risk categorisation of farms and abattoirs
- ✓ Analysis of the food chain information
- ✓ Risk-based meat inspection
- ✓ Food safety management systems assuring process hygiene of abattoirs
- ✓ Risk manager

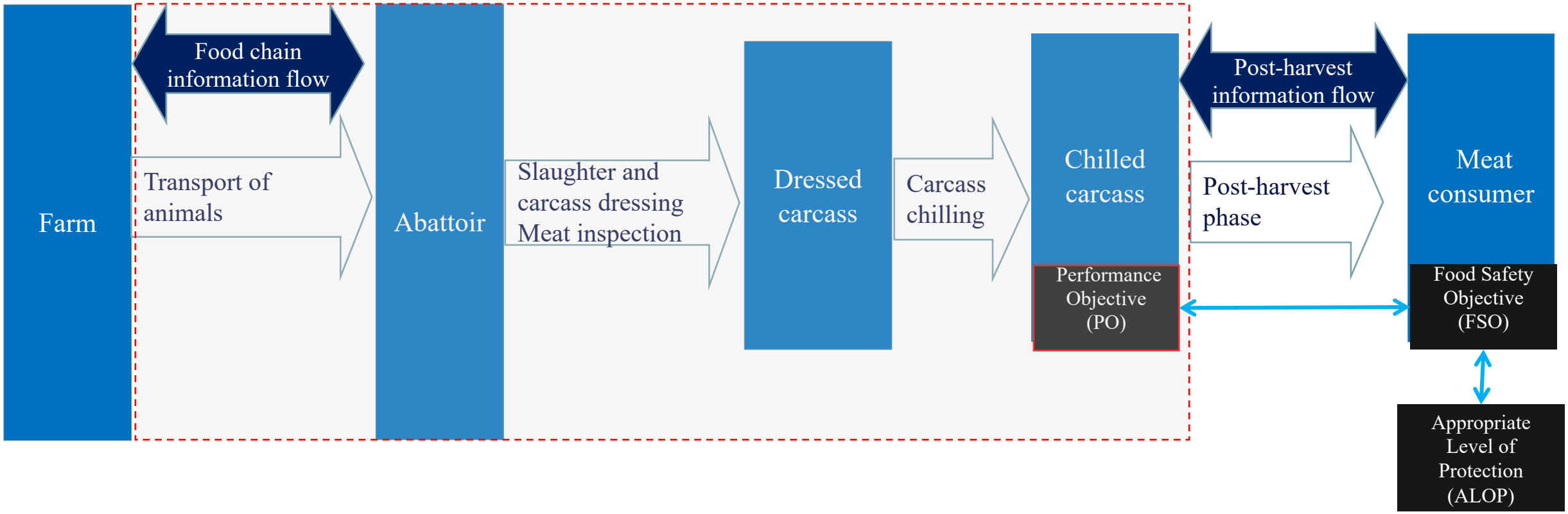


RIBMINS

RB-MSAS outline



RB-MSAS outline



Concluding remarks

- RB-MSAS: "a flexible and dynamic system comprising all control measures applied at pre-harvest and harvest phases of the meat chain that contribute to the performance objective set for chilled carcasses"
- Full development and implementation is **slow and careful process**
- Brings many **opportunities** to improve public health in a cost-effective way
- Many **challenges** are foreseen
- Intensive **research** to fill knowledge gaps and **education and training** of all participants is prerequisite of RB-MSAS implementation

RIBMINS

QUESTIONS?