



DANISH MEAT
RESEARCH INSTITUTE

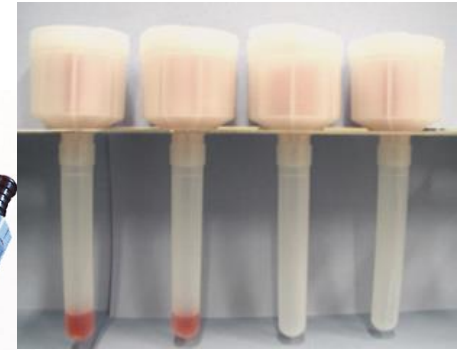
Animal welfare – Optimization and documentation

Margit D. Aaslyng, Danish Meat Research Institute
mdag@dti.dk



DANISH MEAT
RESEARCH INSTITUTE

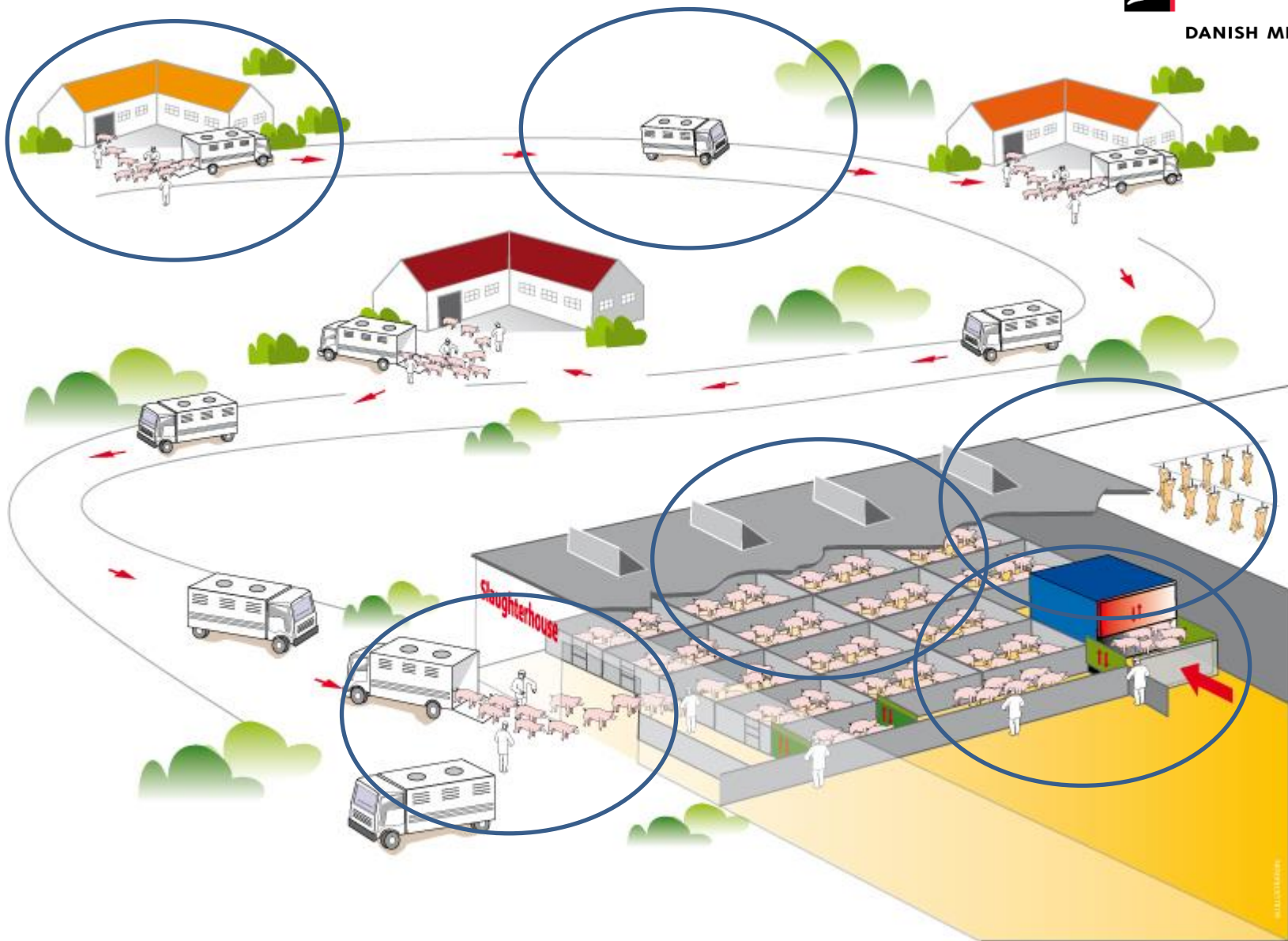
Why animal welfare?



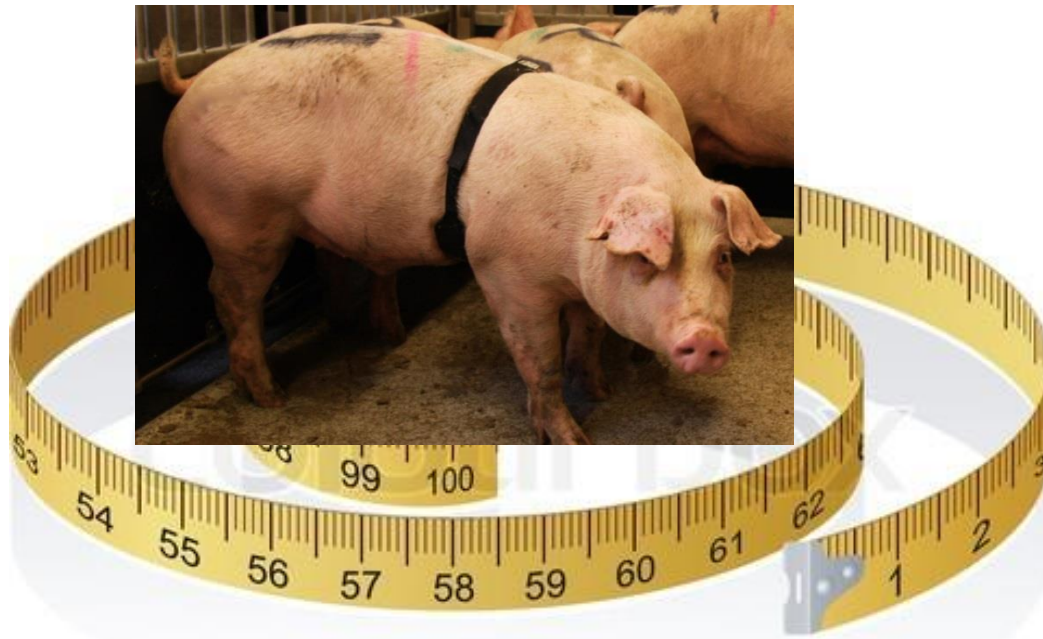
Animal welfare on the day of slaughter



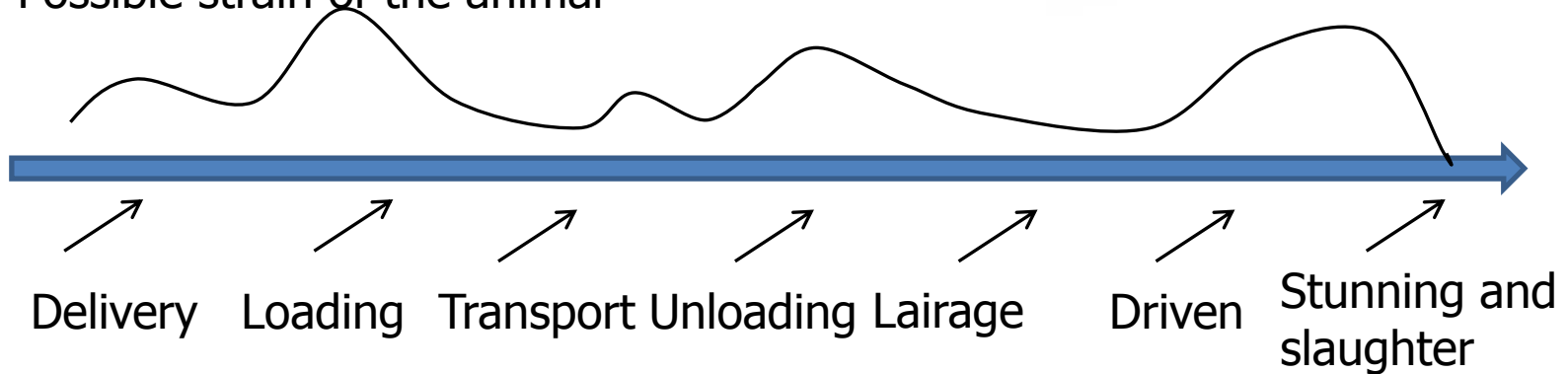
DANISH MEAT
INSTITUTE



Documentation of animal welfare



Possible strain of the animal



How to document animal welfare



DANISH MEAT
RESEARCH INSTITUTE

Behavior



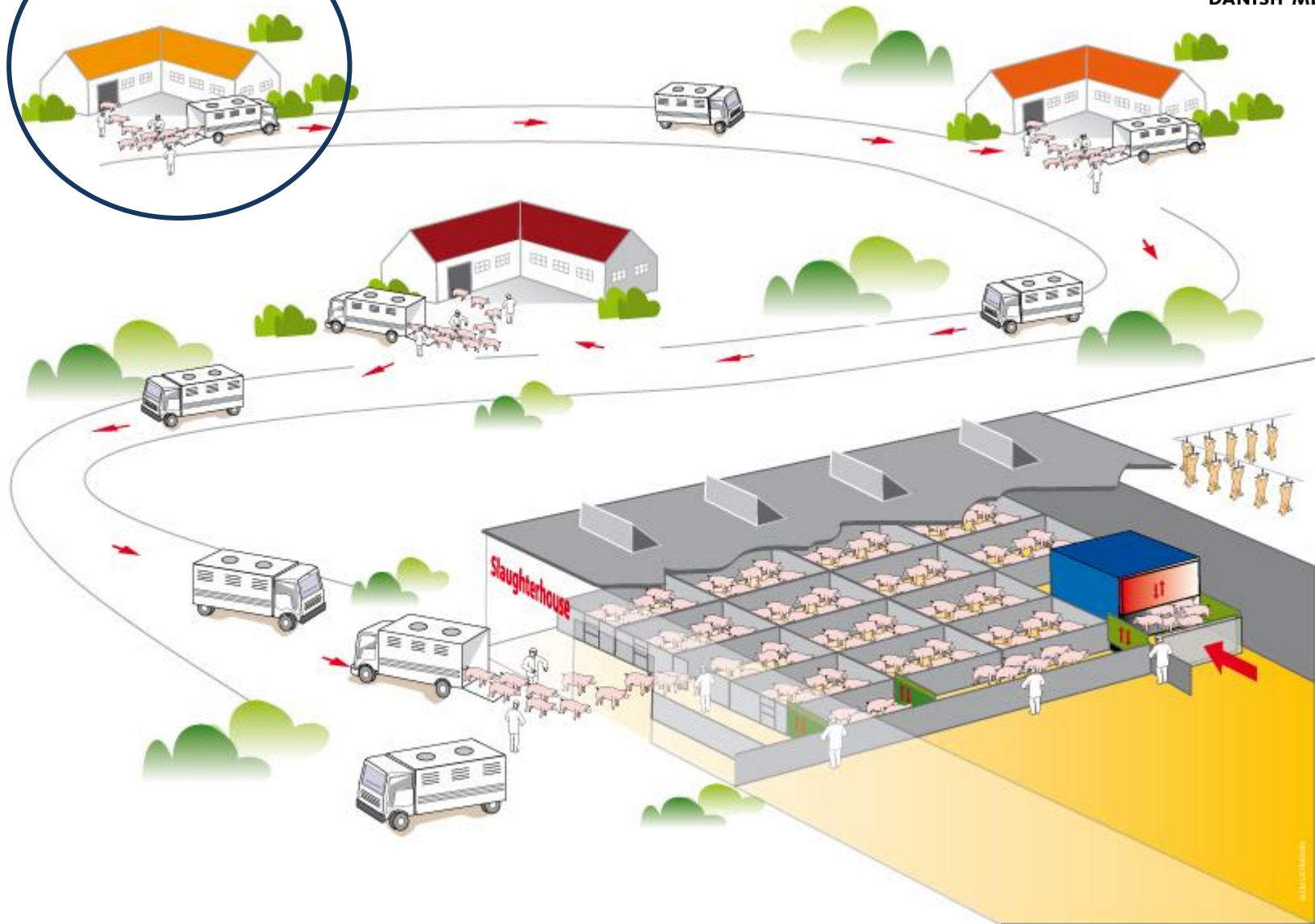
Indirect measures



- **Simple**
 - **Meaningful**
 - **Valid**
 - **(Cheap)**



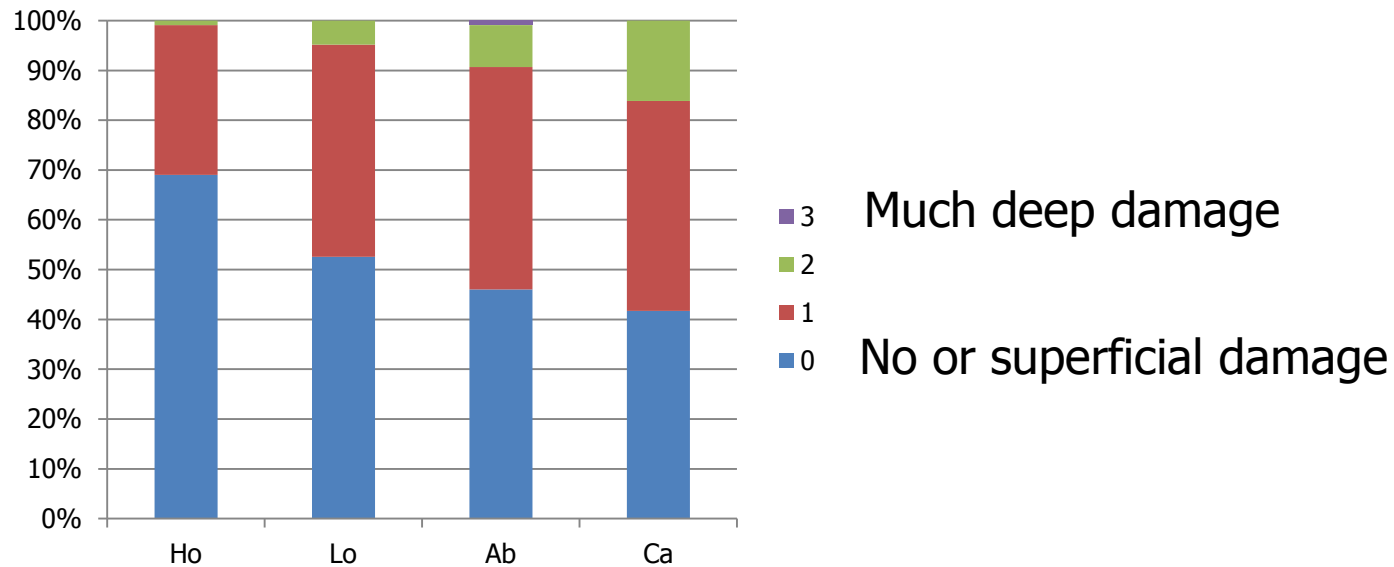
DANISH MEAT
INSTITUTE



Delivery facilities



DANISH MEAT
RESEARCH INSTITUTE



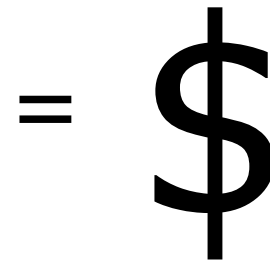
Skin damage in forepart in homeuse pen (Ho), Loading area (Lo), Abattoir (Ab) and on the carcass (Ca)

Creatin Kinase



Loading

Degree of driving
Slipping/falling
Reluctance to move



Catching



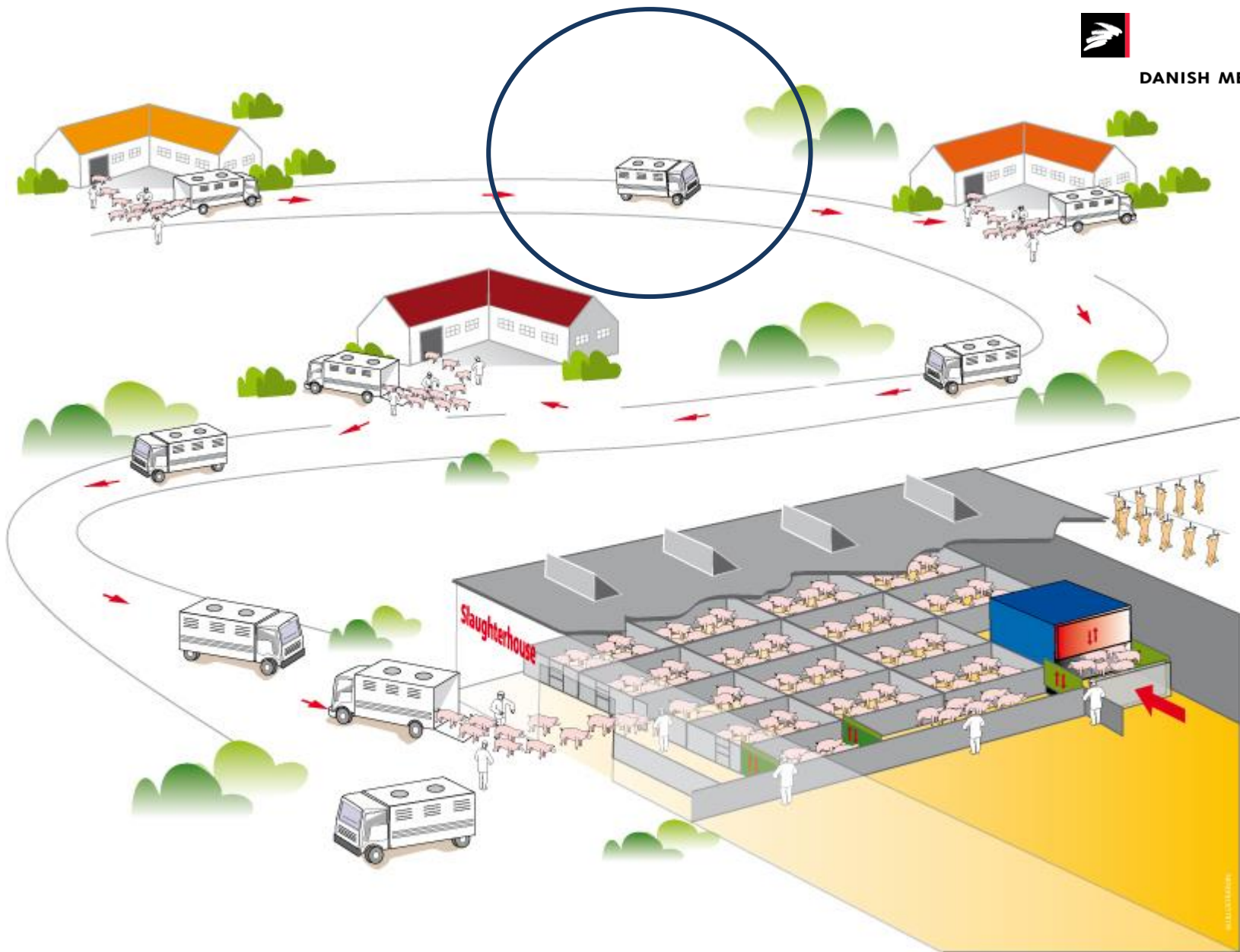
DANISH MEAT
RESEARCH INSTITUTE



= \$



DANISH MEAT
INSTITUTE



Transport



≤8 timer



DANISH MEAT
RESEARCH INSTITUTE

Motion sickness

Thirst/hunger

Temperature

Rest



Aggression

Mortality



0.0011%



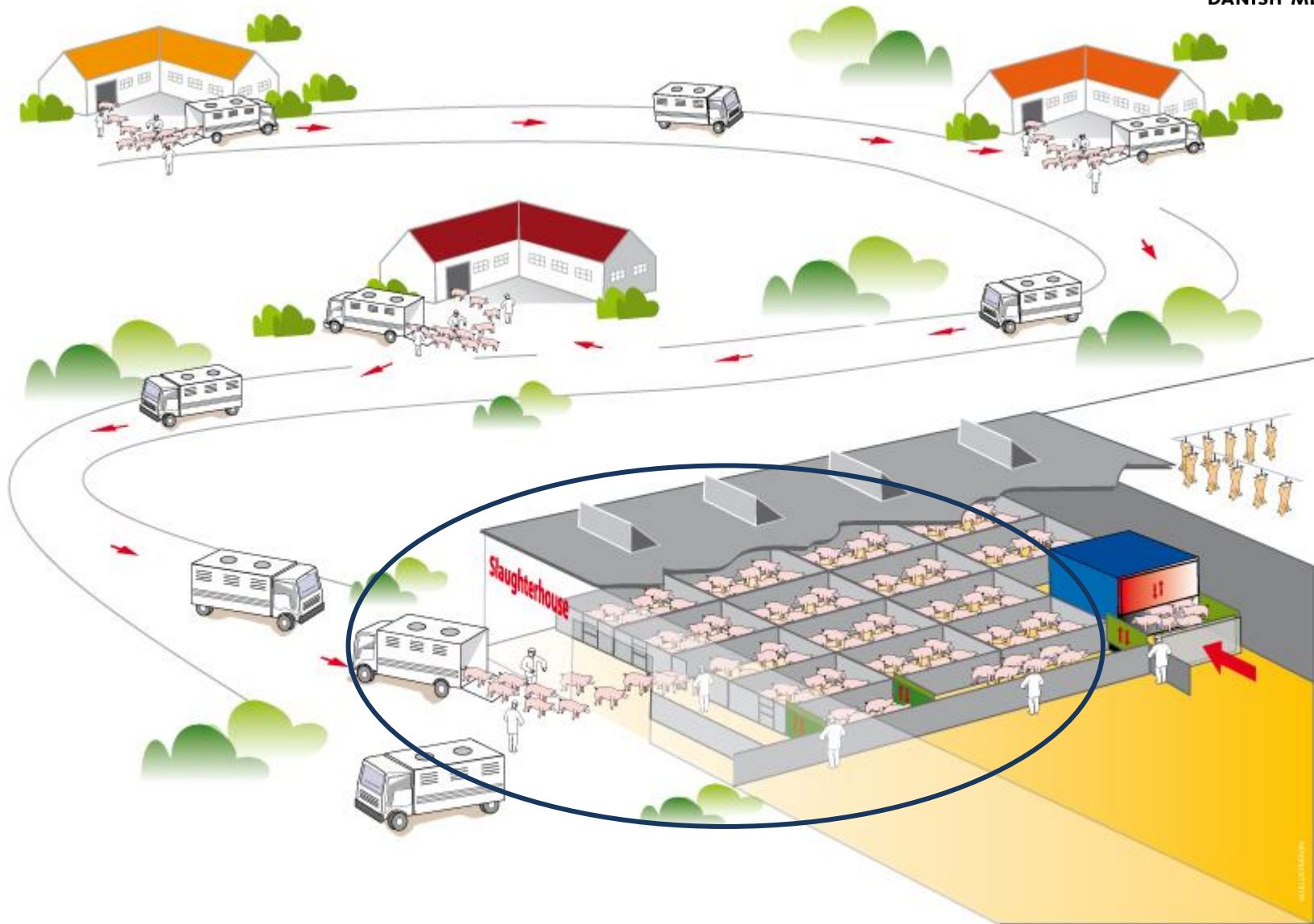
0.03-0.5%

(Averos et al 2008)





DANISH MEAT
INSTITUTE



Unloading

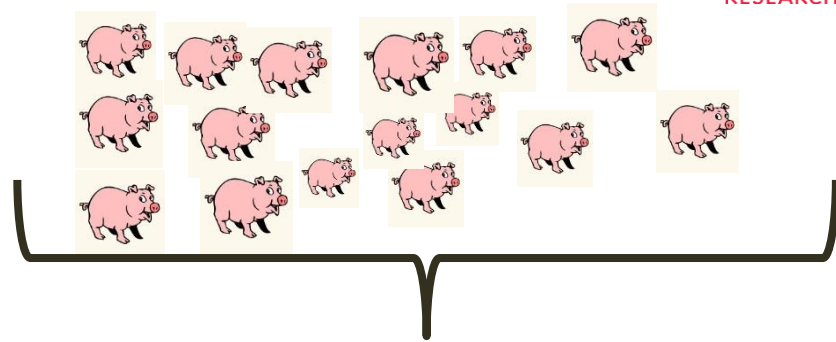


DANISH MEAT
RESEARCH INSTITUTE

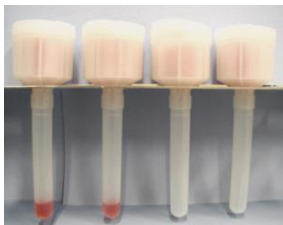
Degree of driving

Slipping/faling

Reluctance to move



15 pigs in a group



= \$

Vocalisation

Lactate
Glucose

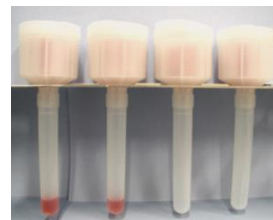
Lairage

Aggression
Time to rest



Lairage time to optimize production
or as short as possible

Aggressions increases after three hours



Vocalisation

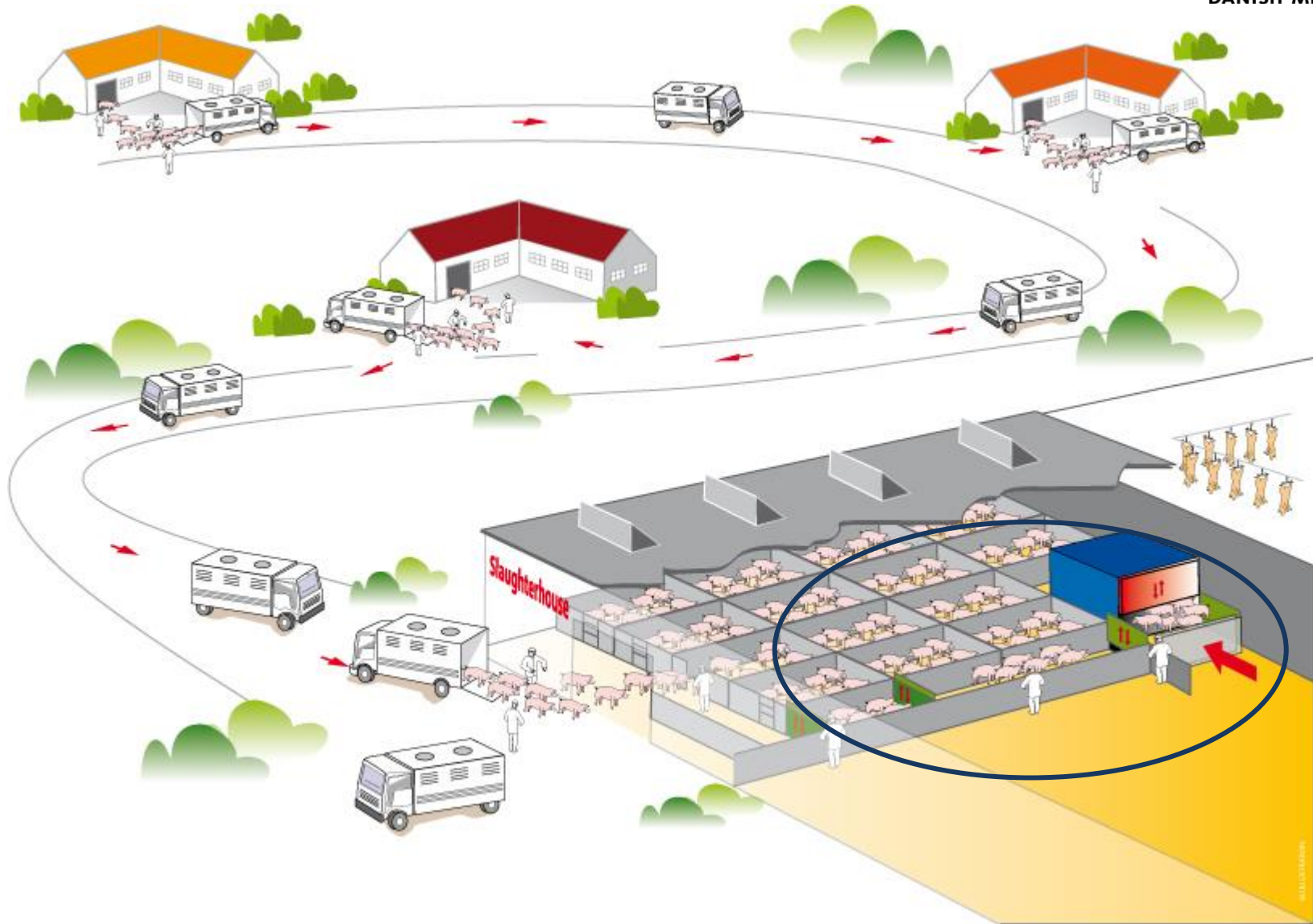
Lactate
Glucose



= \$



DANISH MEAT
INSTITUTE



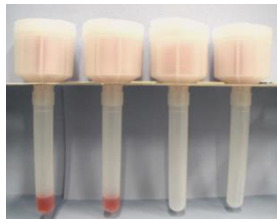
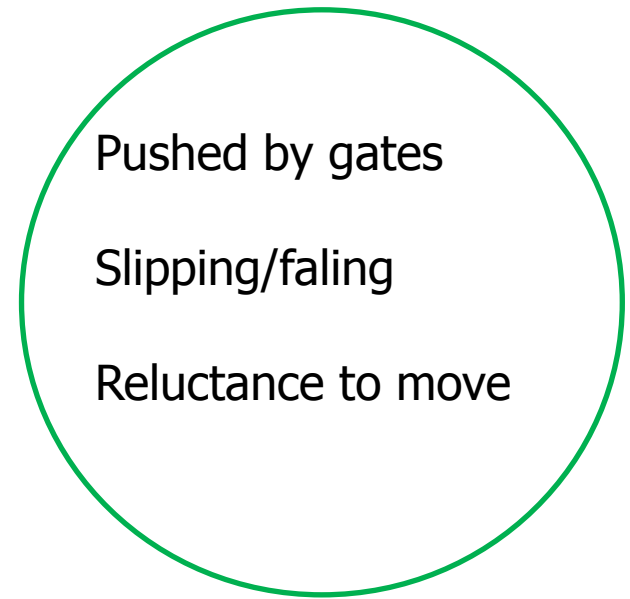
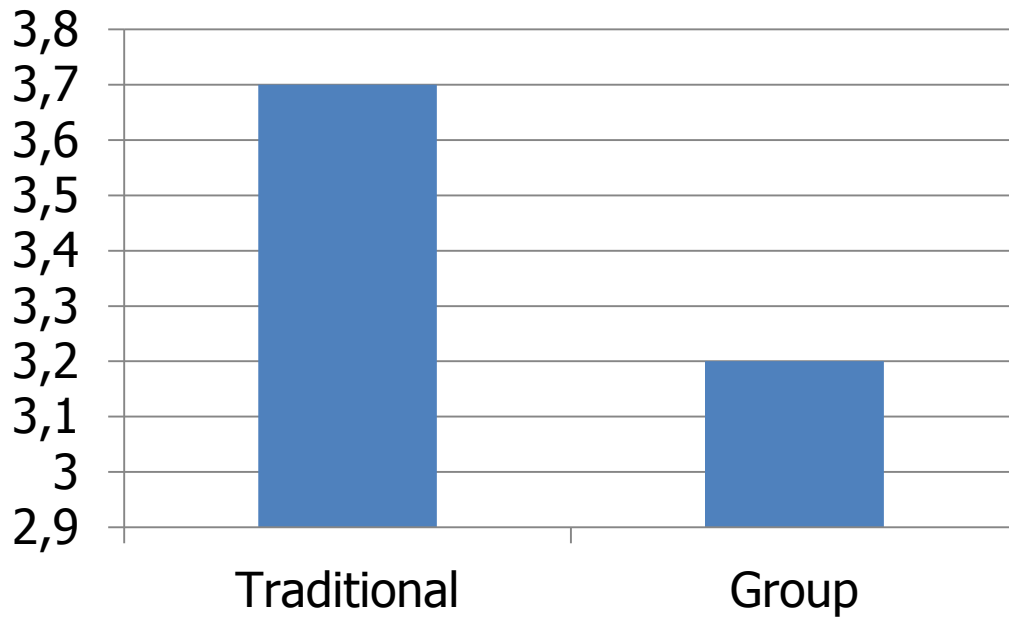


DANISH MEAT
RESEARCH INSTITUTE



Driving and stunning

% Drip loss



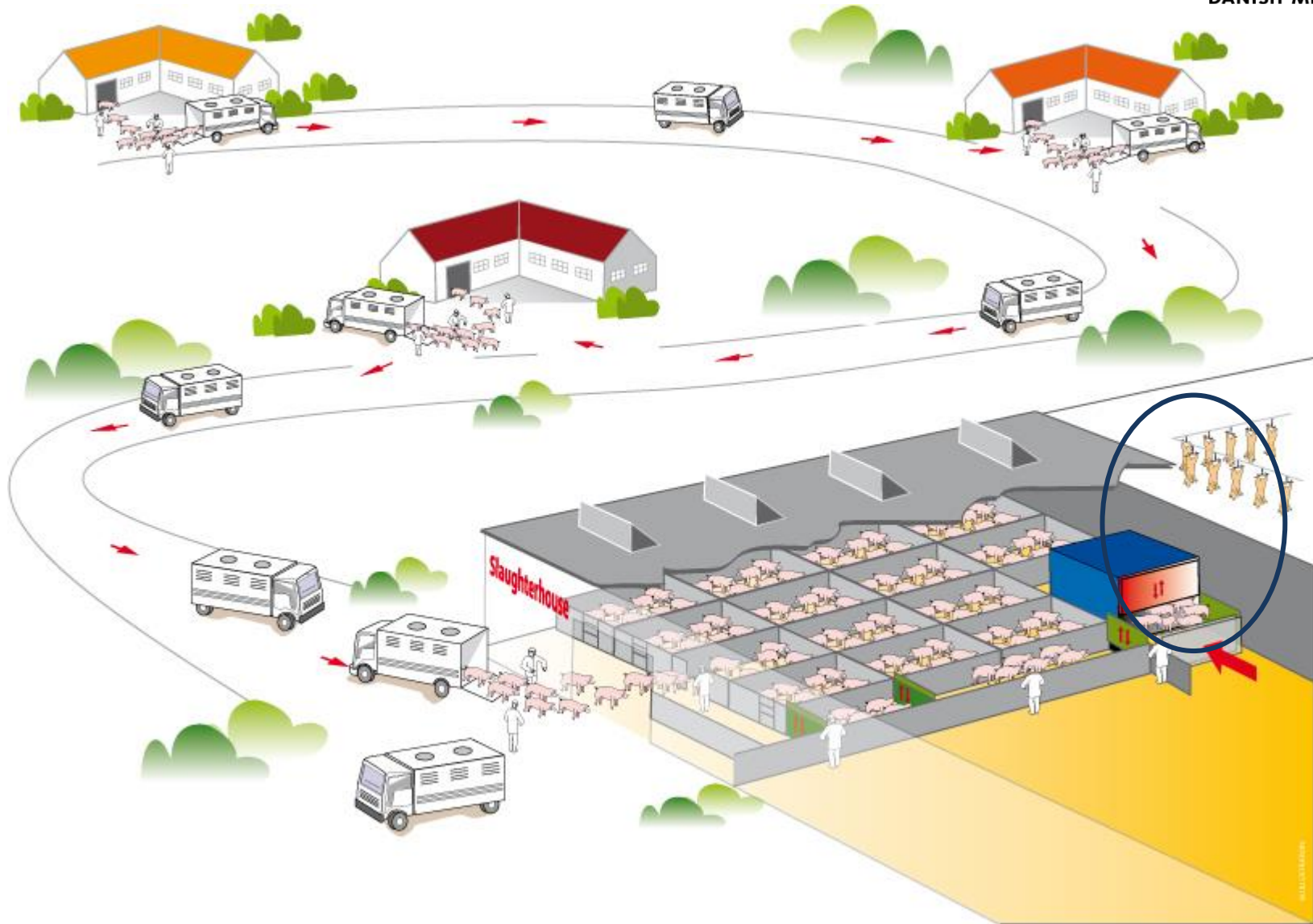
= \$

Blood temperature

Lactate
Glucose



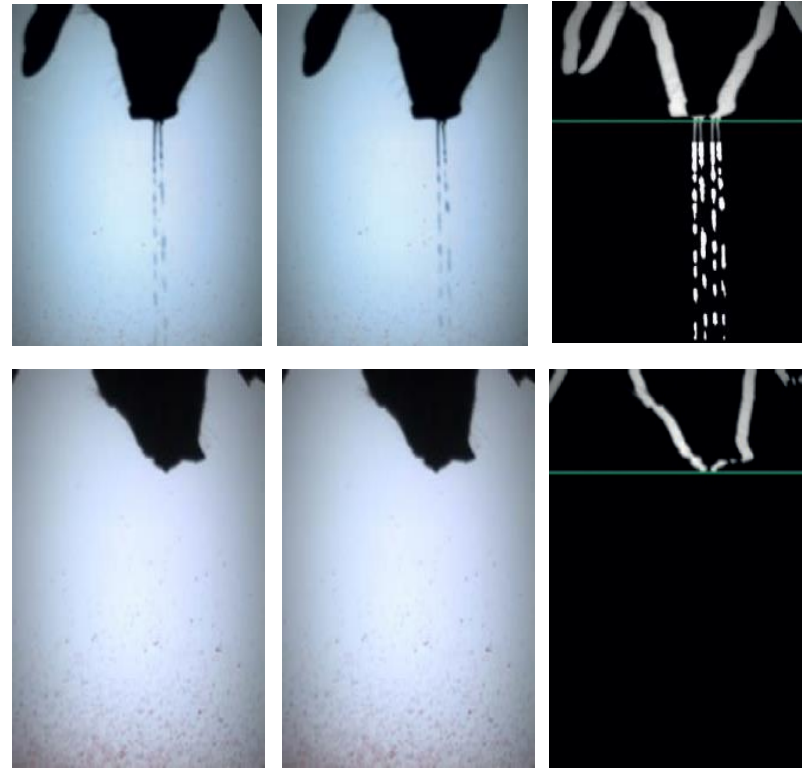
DANISH MEAT
INSTITUTE



VisStick



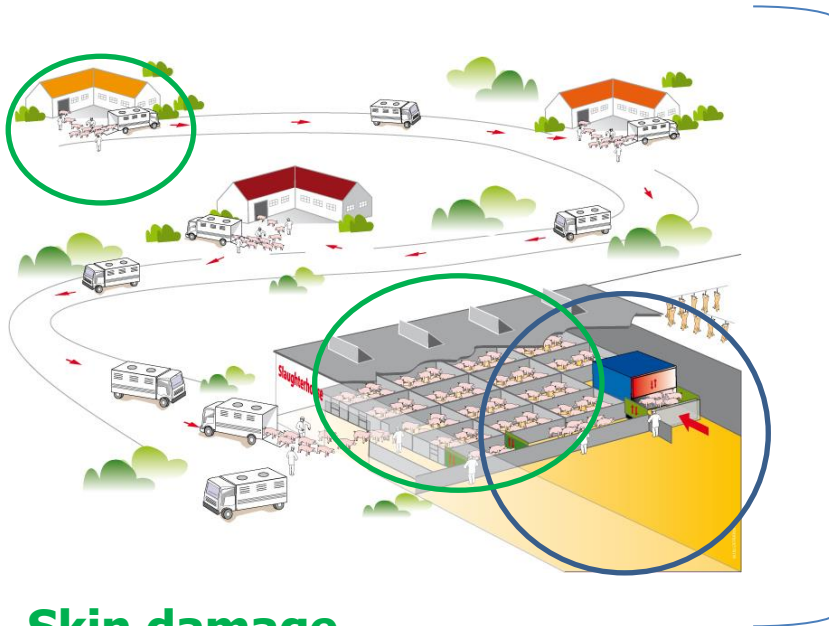
DANISH MEAT
RESEARCH INSTITUTE



Why animal welfare?



DANISH MEAT
RESEARCH INSTITUTE



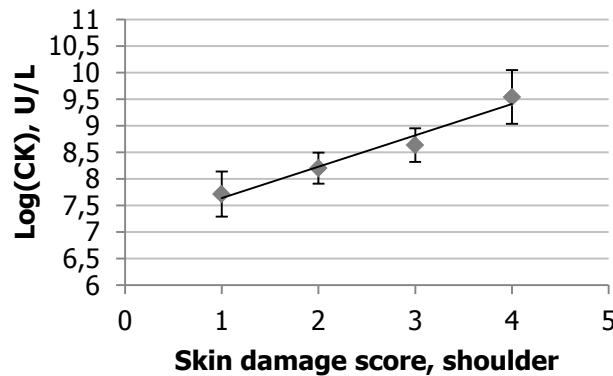
Lactate
Glucose

Uses the energy => high/low pH

Skin damage

**Accelerated energy metabolism
=> increased drip loss**

CK



Blood temperature

Lactate
Glucose



DANISH MEAT
RESEARCH INSTITUTE

it's all about innovation

