Supplement 1: Generic checklist for processing a use case

**Area A:** Population of interest

* Study design, study question
  + What is the objective of the study?
  + Which population should be studied?
  + What is the statistical unit?
  + What should the population be examined for?
  + What is the assumed status of the population?
  + XXX
* Statistical hypothesis to be tested
  + XXX
* Batch, Lot
  + What is the manufacturer's batch definition?
  + Does it make sense to adopt this definition? If not, how is the definition usefully adapted?
  + What is the production volume of the product?
  + Which parts of the production volume are relevant for the investigation?
  + XXX
* Stratification of population
  + Is the chance of being contaminated the same for all statistical units in the population?
  + If no homogeneous distribution can be assumed, does the definition of the batch or statistical unit need to be adjusted?
  + Is it possible to take this into account through the form of sampling in the study?
  + XXX

**Area B:** Food item / Matrix

* Background
  + Which product is being considered specifically?
  + Which products/parts of the product are still available and can be examined?
  + Are there any reserve samples?
  + For which target group is the product intended?
  + If relevant: How is the product classified according to Commission Regulation (EC) 2073/2005?
  + XXX
* Characteristics
  + How is the product formulated?
  + What is the nature of the food? (Solid, liquid, powder, etc.)
  + What is the pH and Aw value of the foodstuff?
  + What is the temperature of the product?
  + XXX
* Production (technique)
  + What processing steps does the product undergo?
  + What is the production process?
  + How does the flow of goods look like?
  + Which spots are potentially critical for entries/sources of errors? (Keyword: HACCP)
  + In which period of time can the suspect food have been contaminated with the agent? (Production period)
  + Which products are manufactured at the same time as the product in question?
  + Could other batches also be contaminated?
  + Were any parts of the batch(es) produced during the production period of the suspect food or any specific ingredients destroyed and, if so, when and how?
  + Did any post-treatment of the suspect food take place to eliminate the health hazard and, if so, when and how?
  + Did other voluntary actions take place and, if so, when and which ones?
  + How is the product stored?
  + Is there a risk of recontamination?
  + How is the product packaged (airtight, vacuum, inert gas...)?
  + XXX
* Traceability
  + When was the product produced? In which production period?
  + Is it possible to trace the product with all its components through the production chain and beyond?
  + Were products sourced from external producers?
  + If so, from whom were products purchased?
  + Can all the information be tracked?
    - Labelling (name, best before date, batch number...)
    - Delivery notes
    - XXX
  + XXX
* Buisness information
  + What is the size of the business?
  + What is the company structure and business processes?
  + How many employees are there?
  + What number of products is produced?
  + Does the business have any certifications etc.?
  + What investigations are carried out by the business?
  + Which foods are tested in the laboratory, how often and for which agents?
  + Are there any previous findings?
  + Which hygiene concepts are there? HACCP?
  + What are the cleaning and disinfection plans?
  + XXX

**Area C:** Pathogen

* Characteristics
  + Does the pathogen form a biofilm?
  + Does the pathogen produce toxins?
  + XXX
* Distribution in matrix
  + Does the pathogen tend to form nests?
  + XXX
* Contagiousness
  + How dangerous is the pathogen for humans?
  + Is a risk assessment possible?
  + What is the infectious dose?
  + XXX
* Epidemiology
  + How widespread is the pathogen?
  + Where does the pathogen occur?
  + How often does the pathogen occur in the matrix?
  + XXX
* Microbiology
  + What is the growth optimum of the pathogen?
  + How long does the pathogen deliberate in the environment?
  + In which foods does the pathogen survive and for how long?
  + XXX

**Area D:** Laboratory analysis / Detection method

* Method
  + Which method is suitable for detection?
  + Which method is used by the laboratory to which the sample was sent?
  + XXX
* Sensitivity
  + How accurate is the test procedure? Are there any findings on this?
  + XXX
* Specificity
  + How accurate is the test procedure? Are there any findings on this?
  + XXX

**Area E:** Legal regulations

* General
  + Which legal regulations apply?
  + What can be investigated and admonished?
  + What action will be taken (e.g. in case of detection)?
  + XXX
* Responsibilities
  + Who is responsible?
  + What instructions and flow charts are there?
  + XXX
* Sampling
  + Are there mandatory sampling procedures?
  + If so, how must the samples be taken? (Number, location, technique, type, product...)
  + Do counter or duplicate samples have to be taken?
  + XXX
* Detection method
  + Is there a legal regulation that prescribes a certain detection method?
  + If so, which one is prescribed?
  + XXX
* Limit values
  + Are there legally prescribed limit values?
  + If so, which ones and how high?
  + XXX

**Area F:** Veterinary administration

* Staff capacity
  + What can the veterinary authority contribute?
  + Which sample sizes are to be supported?
  + XXX
* Financial capacity
  + What can the veterinary authority contribute?
  + Which sample sizes are to be supported?
  + XXX

**Area G:** Statistical parameters

* Calculation method
  + What is the professional core question?
  + A: Concept of state freedom from an event
  + B: Concept of calculating a confidence interval (CI)
  + XXX
* Statistical errors
  + What inaccuracy can be accepted?
  + Alpha
  + Beta
  + XXX
* Effect size
  + Absolute error delta
  + Measures of uncertainty
  + XXX
* Prevalence (limit) or acceptance number
  + What prevalence can be assumed from a professional point of view? What is acceptable?
  + What is the maximum number of nonconforming units or the maximum number of nonconformities allowed in the sample?
  + XXX

XXX = individual addition for the respective use case