a - requirements

capture and store

- capture videostreams from ip cams (existing infrastructure)

- optional for now: capture video data in other ways

  - store and forward for higher robustness, ...

--> in any case a server component that can
- receive rtsp, ... streams
- store the received data in a organized and permissioned way
is needed

- optional for now: increased data security, data lineage, ...

b - requirements

image processing

- basic zone
  - algo / sensitivity adjustable
- different ml/ai models
  - can be limited to zones
  - could be parameterized

--> zone management

- case by case

- templates for reproducibility

c - requirements

automation

- alarms

  - based on image processing
    - fighting mice
  - based on zones

- based on system state

  - missing video data

  - ...

d - requirements

view and export

- for compliance check

- for using the data in of research

- unclear

    - integrated tag managment needed?
    - managment of externally postprocessed vodeo files
    - managment of externally generated taging data
    - managment of externally generated results

e 1 - status

zoneminder ~ ZM

- can capture and store streams
- open source projekt looks not attractive
  - status of documemtation
  - status of docker
  - usability
    - handling zones (on a case by case basis) is messy
    - experienced problems with config
  - has some user/permission system
  - integrating ai/ml models is in early draft stage
    - on selected images of a stream
      - in realtime, not for postprocessing

e 2 - status

zoneminder

- some extension code for imouse exists

  - who will
    - develop it further
    - keep it alligned with a further developed zonminder open source

- unclear

  - handling of externally postprocessed streams

  - postprocessing in zoneminder

  - zone templates

  - zone managment for ai extensions

  - ...

e 3 - status

frigate ~ FG

- can capture and store streams
  - looks more active in development / attrative
  - offers a extension model
    - not sure if tis is used for the custom code
  - limited visionai model integration via frigate+ (paid) supported
  - custom code not working properly
    - custom code source not available
      - recheck license compatibility
      - existing custom code seems to integrate badly in frigate (reupload of video data)
  - not focused on research data management

e 4 - status

frigate

- tbd

f 1 - strategy

business model

- selling the retrofit hardware is not the business model

- selling a solution for handling research datails is the goal
    - options in context with open source:
        - consulting
        - freemium
        - saas
        - (managed) on premise deployment .. full service
        - premium hardware (data lineage, store&forward, edge processing)
        - premium addon services as alarms ...

f 2 - strategy

business model

- more effort needed to become a
  - data sharing platform
  - data mediator
  - data broker
  - ...

g 1 - steps forward

current situation zonminder

- zoneminder
  - seems to be working better than frigate for now
  - source for extension is available
    - works more OKish the frigate + custom extension
  - author is more responsive (sometimes)
- use zoneminder but don't invest to much

g 2 - steps forward

current situation frigate

- frigate
  - source of extension not licensed by imouse
    - effectively imouse is the sales department of the software company
  - unclear how good frigate and the custom extension can be developed together in the next years
    - already given the current bad integration of postprocessed video files
- try to get license / function / cooperation issues resolved
- deeper look technical into frigate as basis for development
  - decide go on / no go (more likely)

g 3 - steps forward

questions for the next years

- moving a open source project (like ZM/FG) into resarch data managment software direction means contributing to the project with unclear results
    - forking is possible: more freedom short term, less shared benefit long term, legacy in code and license
- how much value is in the limited/not yet working ai/ml integration of the ZM/FG
- how much value is in the limited/badly working zone managment integration of zm/fg
- how limiting are the open source projects ZM/FG for the business model / strategy (tbd)

g 4 - steps forward

serverside

- use ZM/FG as is (with so far working extensions / as usable) for data capture and storage

- work on own limited data capture and storage system for data lineage, reliability

- work on own frontend component for management of zones, models, .. for edge deployments and server

- work on own frontend component for management of video data amd metadata
  - import, export, postprocessing, tagging

g 5 - steps forward

hardware / edge

- look into edge processing for more reliabilty, reduced data size, data lineage, options for premium hardware business model (can be COTS HW with closed software)
    - see: management of edge deployment of zones, models, ..