We would like to give you a small programming task to learn a bit more about your current skills in the C++, Qt, QML environment.

If you have any questions, please do not hesitate to contact us. We would estimate a processing time of about 2 days (+-1 day is no problem). It is not necessary to have a complete and perfect solution. We want to know how you approach such a problem and then try to implement your "concept".

Task

Write a program to asynchronously display camera images from a database/file system in QML.

An interface should provide the information about the images in a kind of model using C++/Qt

- Provision of a list of available images (image information including metadata (e.g. field of view, azimuth, elevation of the camera) but without the image data itself)
- Possibility for the interface to retrieve the image data asynchronously

The image data provided should then be displayed in QML.
The representation in QML should be functional. Usability and consistent design are not necessary.

Notes/Hints:

- Design a simple concept for the implementation of such a system.
- Implement the basic functionality in C++ (use of standard libraries is possible, C++14/17/20 desirable) and Qt5 or Qt6
- To display fully loaded image data, a JS callback function can be used, for example