



ROSIN project "BLACKBOX"

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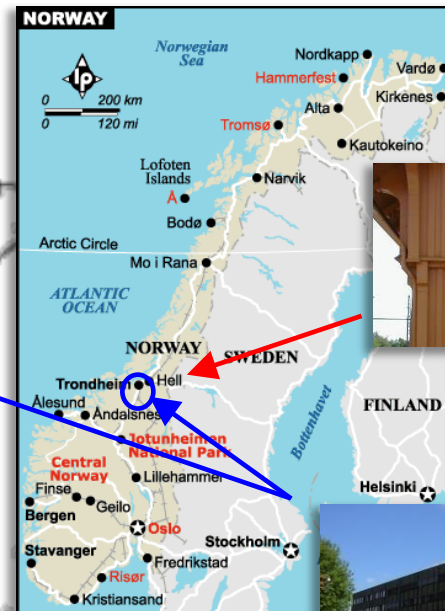
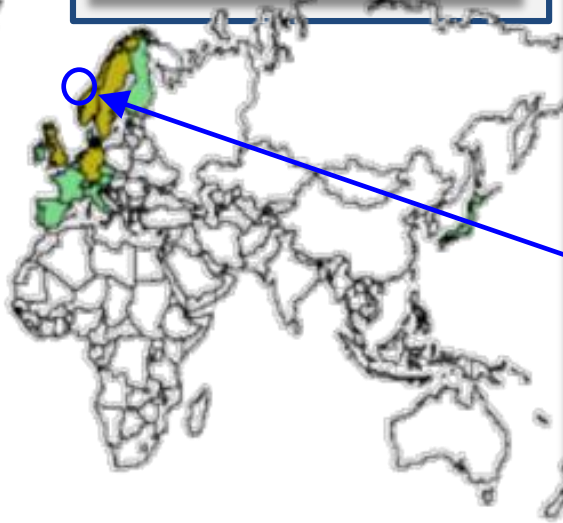


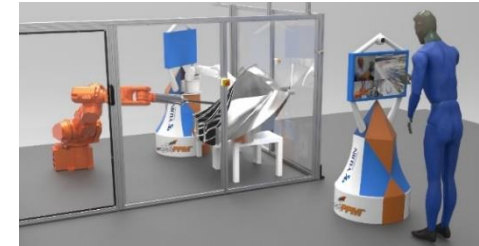
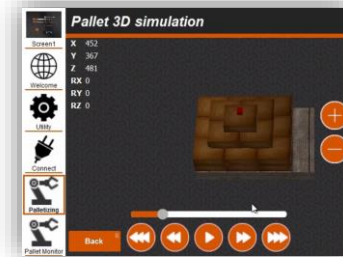


PPM Robotics AS



Trondheim, Norway





Industrial projects

- Industrial robot systems
- Feasibility studies
- Customized devices / arrangements

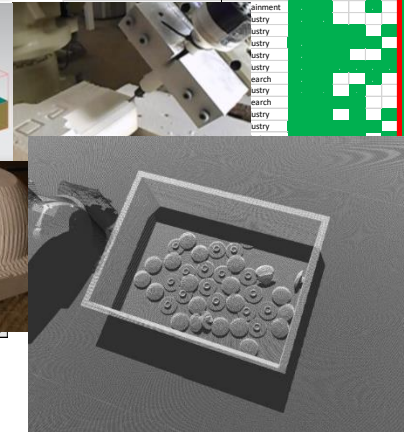
Products

- FlexGui
- Industrial robots

Research & Development

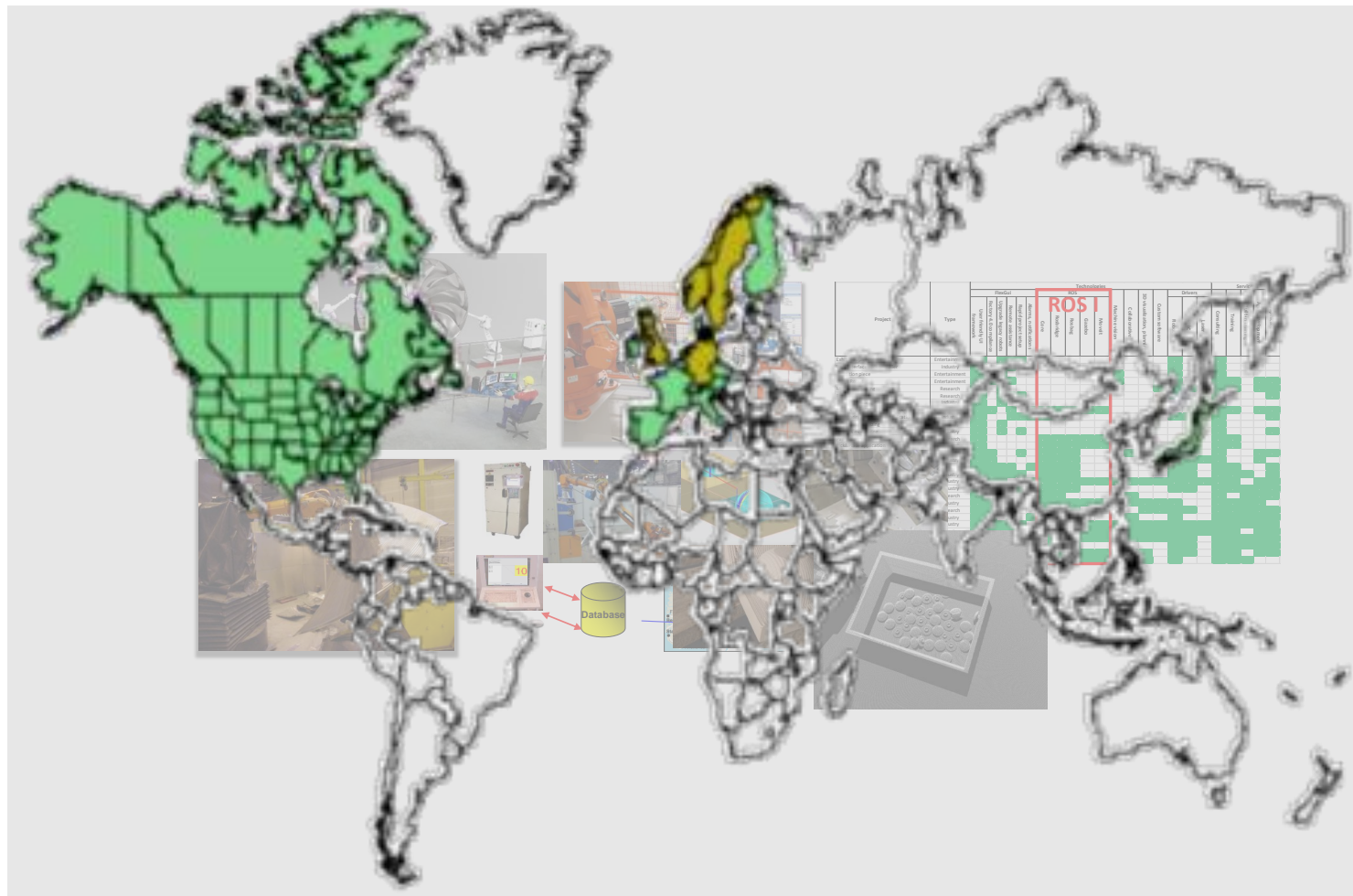
- Training
- Consultancy
- Public funded R&D projects
- Academic research and publication







Customers located over a considerable geographical area





APPLICATION:

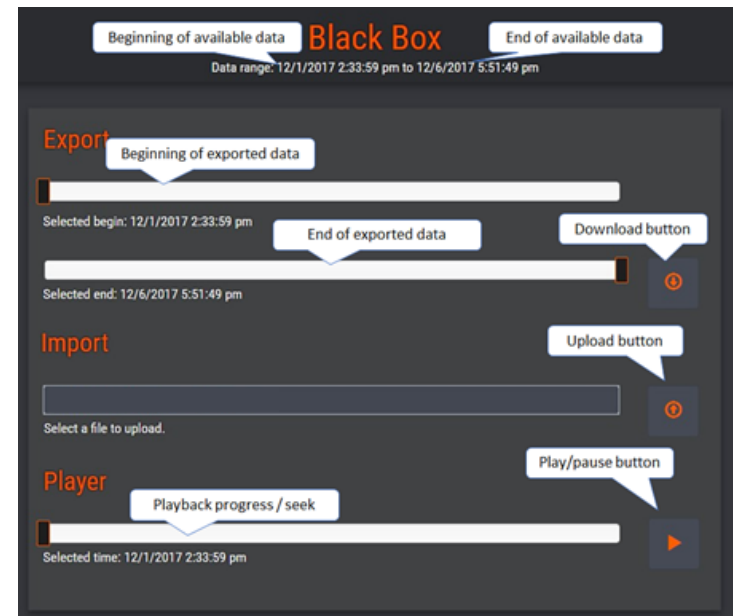
- Monitoring system with trigger based data recording, playback and reporting

BLACKBOX DEVELOPS:

- Innovative ROS based framework for developing, debugging and maintaining ROS based robotics systems
- Intuitive, user-friendly, easily customized GUI

THE FRAMEWORK IS BUILT UPON:

- Components from the project partners' previous R&D
- Existing ROS technology



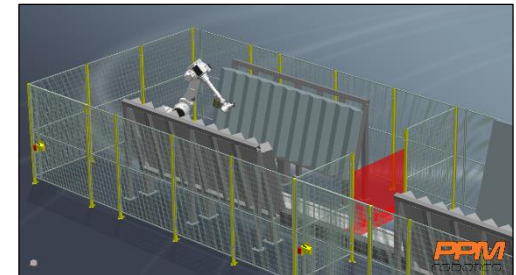


SOFTWARE AT INDUSTRIAL QUALITY LEVEL:

- BLACKBOX aims to develop a planning, monitoring and control software suite on industrial quality level, for any industrial robot applications
- Components will partly be open-sourced and uploaded to the ROS community to be further applied in R&D and industrial applications
- Documentation and training material will be made available.

INDUSTRIALLY VERIFIED AND DEMONSTRATED:

- Rainpower AS
- Contiga AS
- Nortura AS



REFERENCE PROJECT FOR ROS-INDUSTRIAL:

- International showcase to demonstrate the power of ROS on a best practice example





Components



TRIGGER MONITOR –
AUTOMATIC TRIGGER EVENT
FOR CUSTOMIZABLE
CONDITIONS



CLOUD CONTROL –
AUTOMATIC ONLINE
STORAGE FOR ROSBAG FILES



NOTIFICATION SYSTEM –
AUTOMATIC NOTIFICATION
OF THE REMOTE PARTY IN
EMAIL



EASY-TO-USE UI – INTUITIVE
UI FOR COSTUMIZATION,
CONFIGURATION AND
CONTROL



MODULAR – VENDOR
INDEPENDENT, EASILY
INTERCHANGEABLE
SUPERVISED HW
COMPONENTS



CONTROL PC AND TABLET





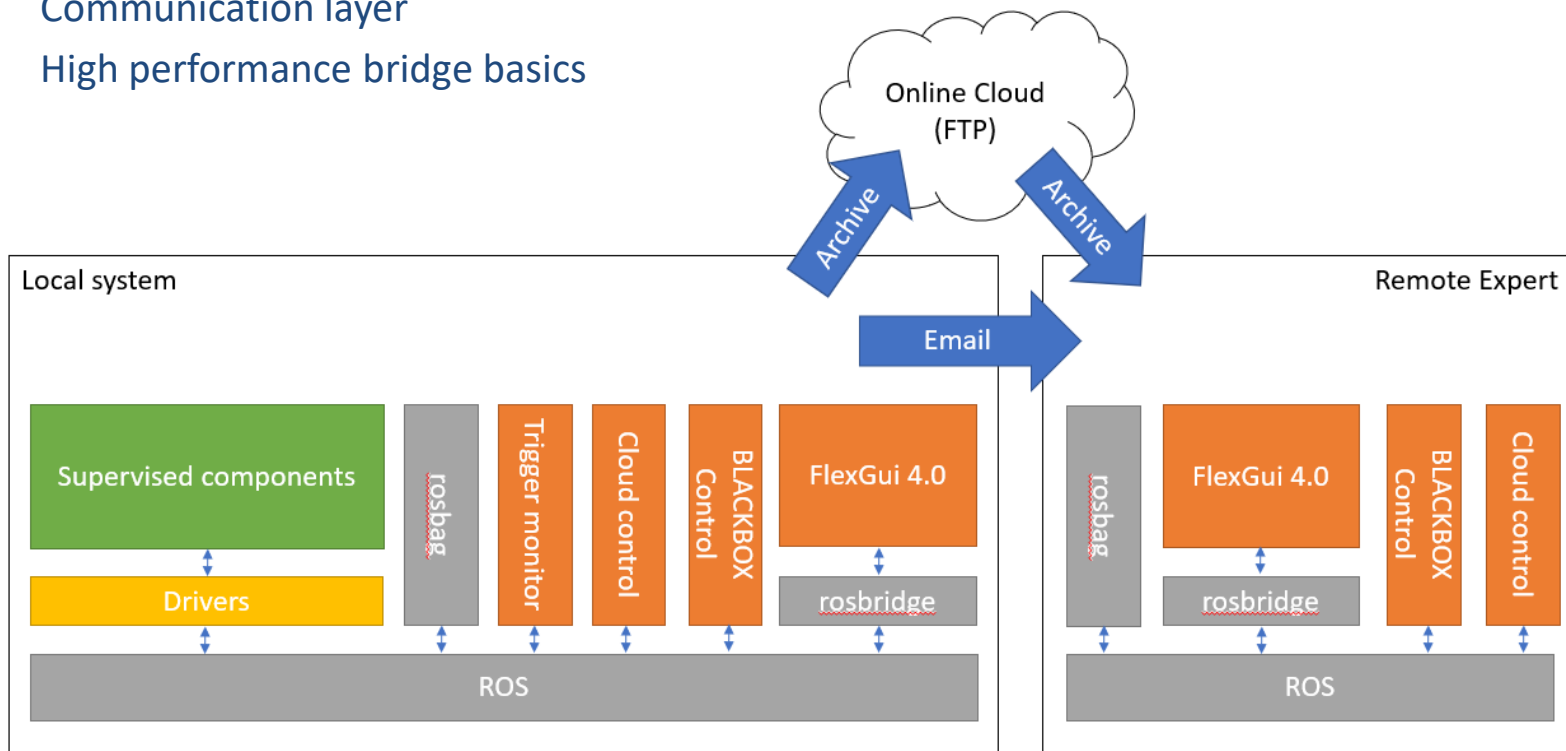
System Structure



Used ROS main components: pyros, rosbridge, roslibjs, rosnodejs, rosbag, roscpp

What we gained here:

- Data recording and playback
- Communication layer
- High performance bridge basics





- **Milestone 1 – FINISHED**
 - 2019-04 development started
 - 2019-09 development ready to submit
 - 2019-11 submitted for review
 - 2020-01 planned release of MS1
 - Trigger monitor
 - Cloud uploader
 - Rosbag control
 - FlexGui 4.0 UI
- **Milestone 2 – UNDER DEVELOPMENT**
 - 2019-09 development started
 - High performance bridge
 - Trigger monitor and cloud uploader
 - Planned finish 2020-01
- **Milestone 3**
 - Planned finish 2020-03
 - Complete release of the code, documentation and training material





Demo





CONTACT



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