LORIS (Loris.ca) is an open-source web-based multi-modal database for neuroscience research, integrating neuroimaging, biobanking, genomic, and clinical/behavioural data within a unified neuroinformatics platform.

**Interoperability and Data Sharing**
- LORIS’ NoSQL Data Query Tool allows for rapid dissemination and export to data processing pipelines
- Data selection and export tools can be customized for interoperability with any platform or pipeline including the CBRAIN® high-performance data processing portal
- LORIS’ API aims to make multi-modal insertion, querying and export seamless
- Format conversion frameworks target exportable BIDS format datasets, as well as NIFTI, MINC, DICOM

**Privacy and Security**
- Provenance and Metadata capture provide information critical to reproducibility and reliability of results. Data exploration and direct annotation of the data is enabled through pipelines, Quality Control (QC) modules, and Visualization utilities such as LORIS’ embedded BrainBrowser® software.

**Results**
- As of early 2017, national and global research groups are using Loris for:
  - over 10,000 subjects: 75,000 variables
  - 200,000 imaging acquisitions: 500 clinical/behavioural instruments
  - 20,000 scanning visits: >5,000,000 genomic and epigenomic datapoints

**Conclusion**
- As open data publishing and dissemination gains momentum, interoperable multi-modal services for hosting data assets become primary tools for scientific exploration and research.
- LORIS’ scalable capacity to align multi-modal ‘omics data with clinical and neuroimaging data can provide a pivotal platform for identification of novel biological pathways of relevance for neuroscience and the future of data management in research.