The NeuroXM™ Connectome Cloud
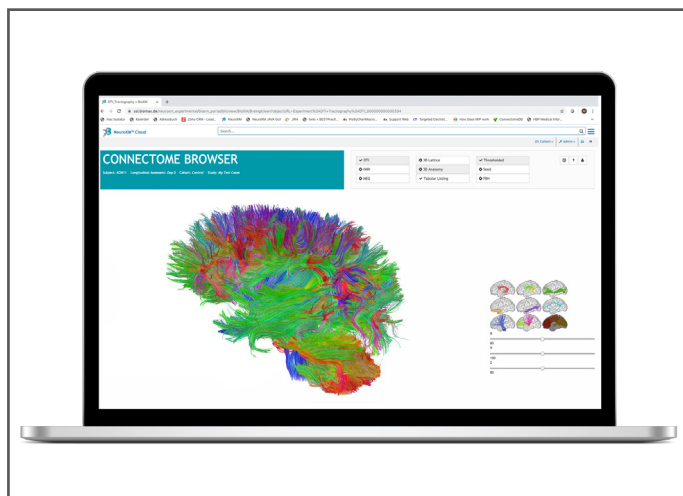

Exploring the world of connectomics
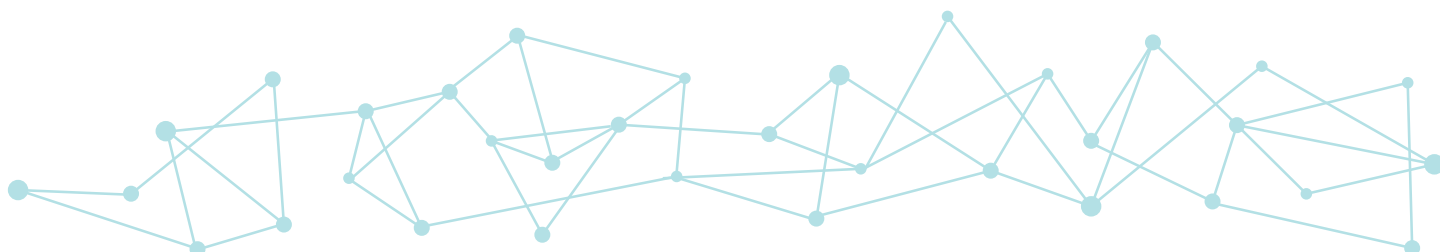
Easy access to brain connectome data

The NeuroXM™ cloud system is a novel, unique and cost-effective solution for everyone working with brain data, who wishes to gain a deeper insight into the world of Conntectomics and Transcriptomics. The NeuroXM™ cloud is a zero footprint solution that requries no hardware installations on your site.

The connectome, the complex map of our brain connections, is key to our individuality, our intelligence and personal preferences as well as our individual vulnerability to brain diseases and dementia. Clinically, impairments of the integrity of brain networks is the earliest indicator of neurodegenerative diseases and a much better predictor of cognitive decline than volumetric assessments alone. However, extracting structural and functional brain connectivity from raw images is time consuming and requires extensive expert knowledge.

With the NeuroXM™ Connectome Cloud, you have thousands of publicly available connectomes at your fingertips and the possibility to create your own connectomes with a few clicks in an easy to use web portal.

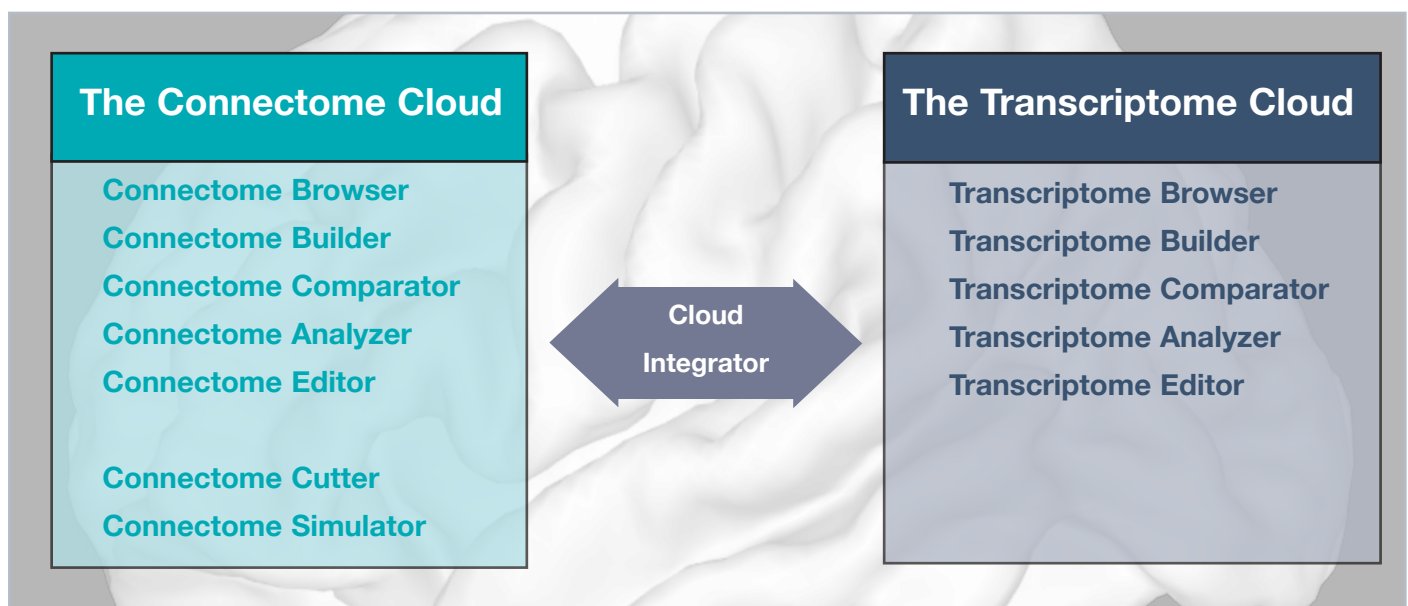*Exploring Neuroimaging Data with the NeuroXM Cloud*

The Connectome Cloud Modules

> **The Connectome Browser** allows you to explore your own and public connectome data sets from DTI or fMRI. MEG and EEG are available soon.

> **The Connectome Builder** enables you to automatically generate DTI tractography as well as fMRI time series correlations with just a few clicks.

> **The Connectome Comparator** assists you to compare full brain connectomes of multiple individuals, group averages or points in time of longitudinal assessments.

> **The Connectome Analyzer** allows you to assess network properties of your connectomes.

> **The Connectome Editor** helps you explore, analyze and compare connectivity of selected anatomical or functional subnetworks.

> **The Connectome Cutter** lets you create virtual brain lesions

> **The Connectome Simulator** helps you predict rewiring of the connectome after lesions.

Why choose the NeuroXM™ Connectome Cloud?

> The Connectome Cloud provides processed connectomes from public data bases, e.g. HCP, UK Biobank and ADNI and creates a "one stop shop" for all brain imaging modalities.

> The Connectome Cloud provides standardized automated image processing pipelines that are easy to execute by all clinical staff.

> The Connectome Cloud saves time and resources by running complete image processing workflows on Biomax servers.

> The Connectome Cloud increases interoperability and reusability by automatically documenting all processing steps as meta-data.

> The Connectome Cloud and the Transcriptome Cloud combine cross-species transcriptomics with high reslution connectomics.

The Connectome Cloud

Connectome Browser
Connectome Builder
Connectome Comparator
Connectome Analyzer
Connectome Editor

Connectome Cutter
Connectome Simulator

Cloud Integrator

The Transcriptome Cloud

Transcriptome Browser
Transcriptome Builder
Transcriptome Comparator
Transcriptome Analyzer
Transcriptome Editor

The NeuroXM™ Cloud from Biomax