o8t™ OMNISCIENT NEUROTECHNOLOGY

Founded in 2019, <u>Omniscient</u> (o8t) is a world leader in the field of <u>connectomics</u> - the functional mapping of the human brain. Our technology is transforming medicine's understanding of the brain – from prevention to diagnosis and treatment - for all neurological disorders, from brain tumors to depression.

We aim to facilitate the emergence of a brain economy by providing precision brain mapping solutions to a fast-growing ecosystem of clinicians, therapeutics developers, researchers and innovators.

Our mission is to improve the lives of billions through connectomics.

COMPANY PROFILE

EMPLOYEES: 110 (North America, China, Europe, Australia)

GROWTH: Already at 10 US hospitals incl. U. Miami, highest volume brain tumor center in the US

CURRENT PRODUCTS:

Quicktome Precision Brain Medicine Software – **FDA cleared March 2021**

Infinitome neuro research platform for clinical researchers

LEARN MORE ABOUT US

THE CONNECTOME ACADEMY
Provides a deeper understanding of the field of connectomics

60 MINUTES STORY
Feature on how our technology uncovers mysteries of brain disorders

OUR ROLE IN DEPRESSION TREATMENT
Short film on how our technology helps depression patients

OUR JOURNEY SO FAR
Forbes article outlining our journey as a company

MANAGEMENT TEAM

Stephen Scheeler
CEO

Dr Michael Sughrue
Chief Medical Officer

Dr Stephane Doyen
Chief Data Scientist

Rob Malcolm
Chief Operating Officer

Todd Smalley
Chief Commercial Officer

Adam Fraser
Chief Financial Officer

WHAT IS CONNECTOMICS?

Connectomics combines data science and neuroscience to map the human brain. Ability to map the human brain and break it down into more understandable components leads to better diagnosis and treatment of brain disorders, or improvements to brain performance.

THE CHALLENGE

Like genomics in 2000, connectomics in 2016 faced a translational gap. Traditional research software lacks the scale of brain scans required to rapidly bring new applications to market and scale – limiting the growth and advancement of the field.
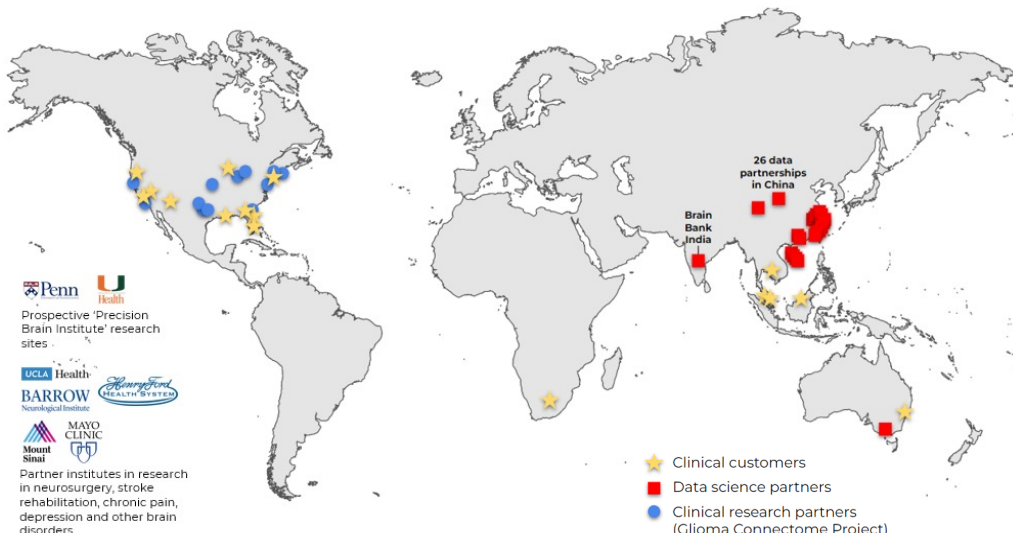
OUR SOLUTION

We developed a platform to share the world's brain knowledge and analytics capabilities, that includes:

- **Clinical grade connectomics data pipeline** to quickly, efficiently standardize and process brain scans
- **Patented, world-first brain mapping approach** that highlights abnormal connections in patients with tumors, rehab, dementia, and mental illness
- **Quicktome – FDA-cleared Personalized, Precision Brain Medicine Software;** a cloud-based application for use by neurosurgeons
- **World's most advanced repository of brain data** – global scale machine learning platform for use by third parties to develop and innovate new solutions – over 40 patents issued/pending

OUR APPROACH

Our partnerships and collaborative research with leading Academic Centers in their respective fields of specialty aim to demonstrate clinical acceptance and influence research in the connectomics field

Penn · U Health
Prospective 'Precision Brain Institute' research sites

UCLA Health · Henry Ford HEALTH SYSTEM
BARROW Neurological Institute · MAYO CLINIC
Mount Sinai
Partner institutes in research in neurosurgery, stroke rehabilitation, chronic pain, depression and other brain disorders

26 data partnerships in China

Brain Bank India

★ Clinical customers
■ Data science partners
● Clinical research partners (Glioma Connectome Project)
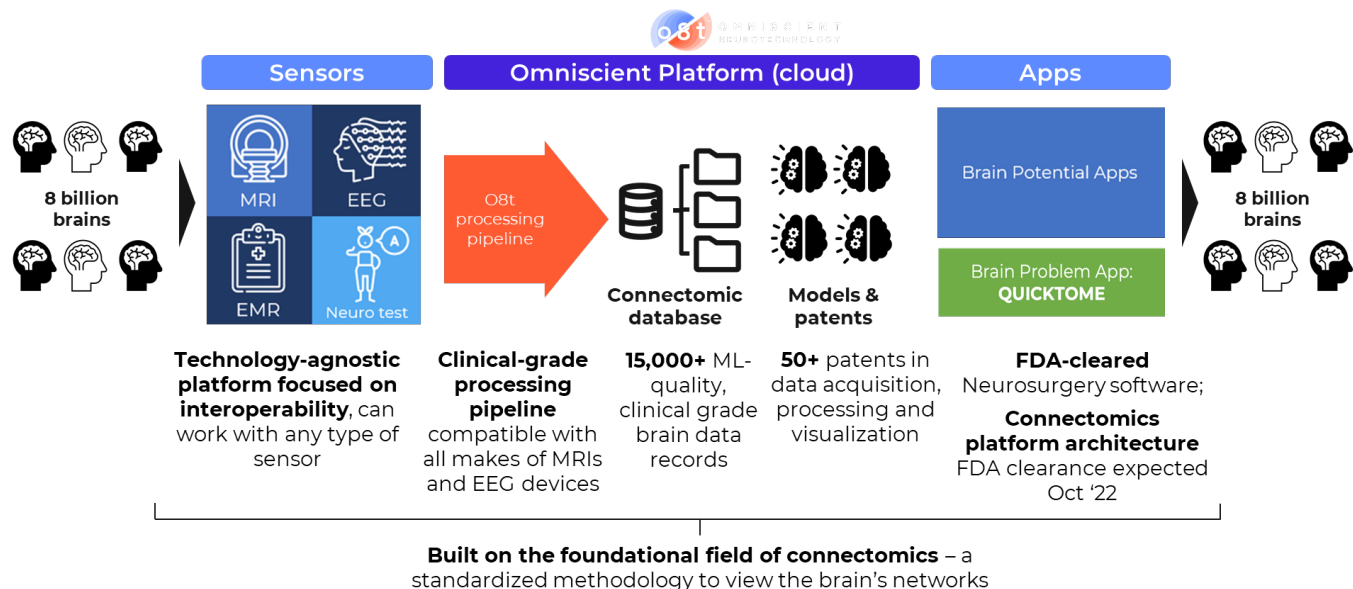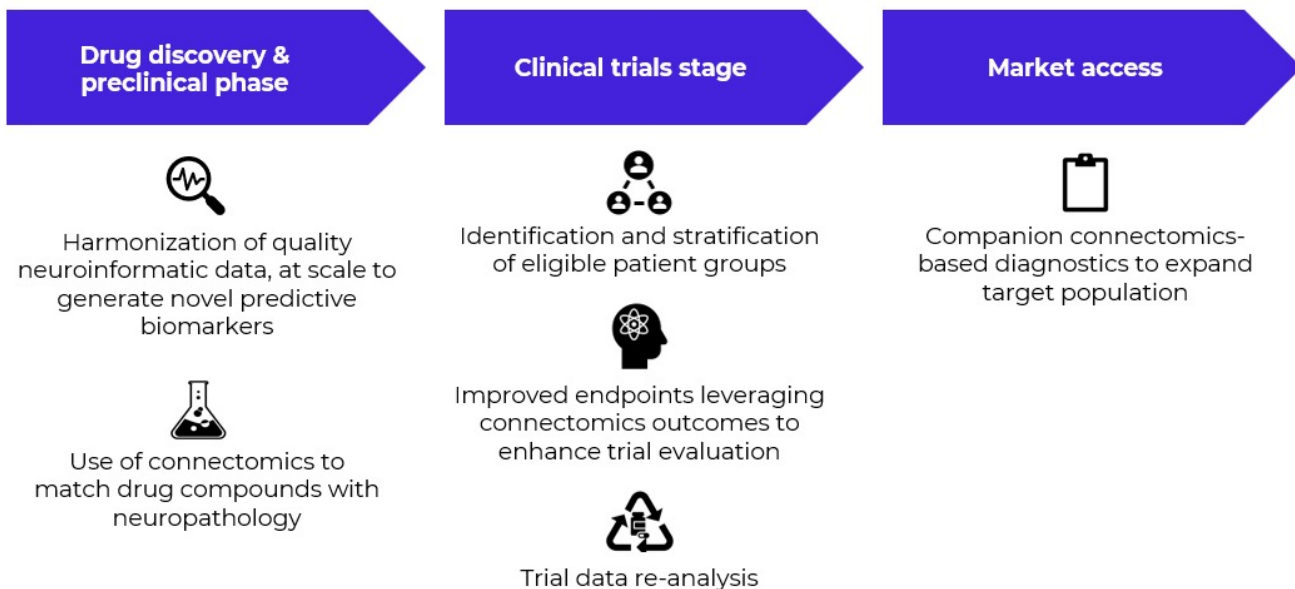
OUR TECHNOLOGY

We have developed one of the world's most advanced connectomics data processing pipeline and repository of brain data - a global scale machine learning platform for use by our own Precision Brain Medicine Suite of cloud-based applications, and for third parties to develop and innovate new solutions.

Like other omics fields, we can now create an ecosystem of ever-expanding connectomics applications, leveraging our brain data processing pipeline and machine learning models:
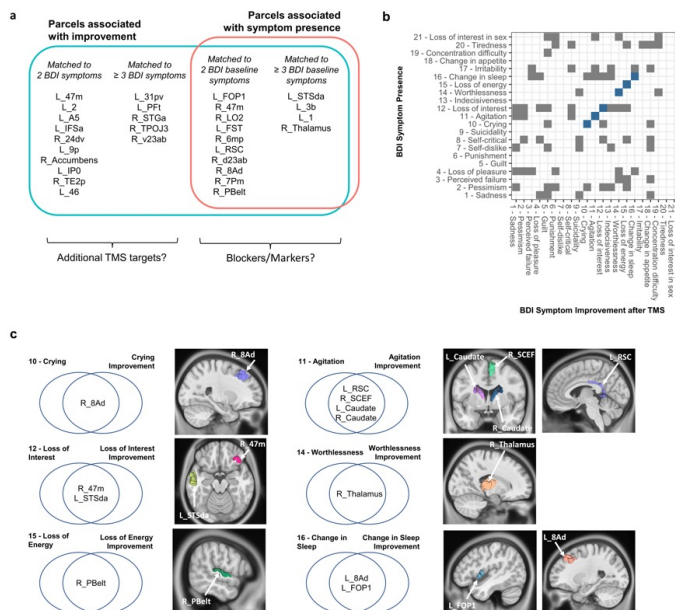

Sensors	Omniscient Platform (cloud)		Apps
8 billion brains	O8t processing pipeline → Connectomic database	Models & patents	Brain Potential Apps / Brain Problem App: QUICKTOME → 8 billion brains
Technology-agnostic platform focused on interoperability, can work with any type of sensor	**Clinical-grade processing pipeline** compatible with all makes of MRIs and EEG devices	**15,000+** ML-quality, clinical grade brain data records	**50+** patents in data acquisition, processing and visualization	**FDA-cleared** Neurosurgery software; **Connectomics platform architecture** FDA clearance expected Oct '22

Built on the foundational field of connectomics – a standardized methodology to view the brain's networks

Our technology is already transforming medicine's understanding of the brain in prevention to diagnosis and treatment for a range of neurological disorders, from brain tumors to depression.

Our connectomics processing pipeline, data repository and AI capabilities can be deployed across the phases of pharmaceutical drug development:

Drug discovery & preclinical phase	Clinical trials stage	Market access
Harmonization of quality neuroinformatic data, at scale to generate novel predictive biomarkers	Identification and stratification of eligible patient groups	Companion connectomics-based diagnostics to expand target population
Use of connectomics to match drug compounds with neuropathology	Improved endpoints leveraging connectomics outcomes to enhance trial evaluation	
	Trial data re-analysis	

EXAMPLE: CONNECTOMIC APPROACH TO DEPRESSION


Data summary:

Research partner	Monash University, Australia
Subject types	Depression (39)
Imaging data	Anatomical, functional, DWI
Demographics	Age, sex, handedness, comorbidities
Clinical scale	BDI, MADRS, HDRS
Intervention	TMS

Parcels of the human connectome were matched to items of the Beck's Depression Inventory as predictors of response to rTMS. Potential treatment targets and biomarkers were attributed based on the findings of the study.

EXAMPLE: IDENTIFICATION AND STRATIFICATION OF ELIGIBLE PATIENT GROUPS

Patient stratification based on similarities in functional brain network activity can enable improved trial design using personalised brain analytics:
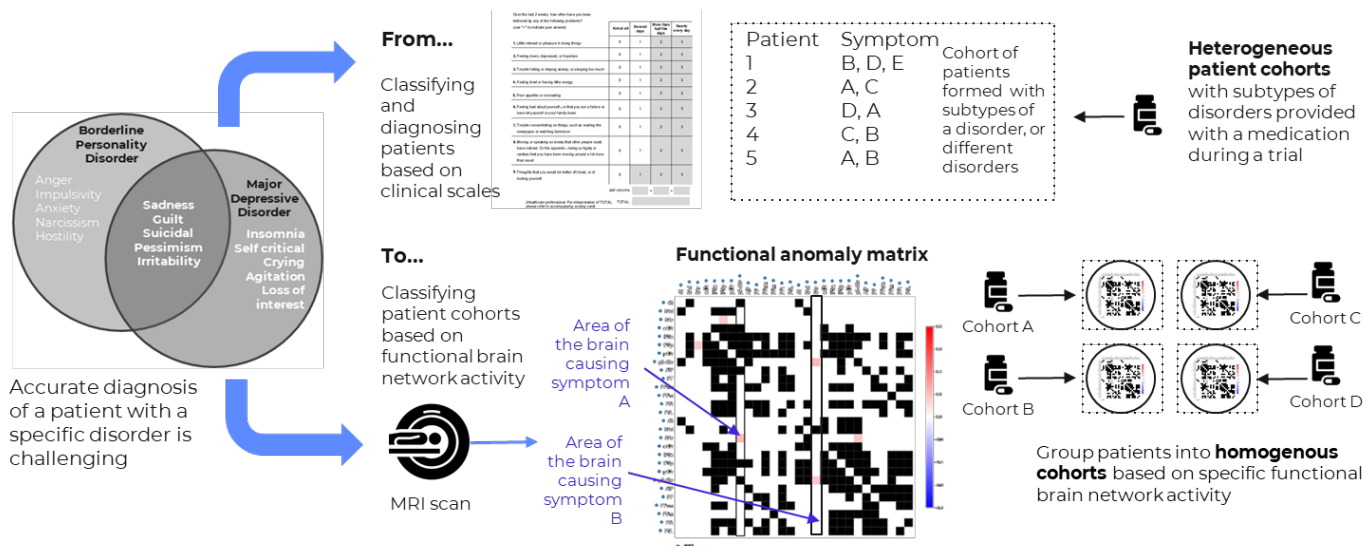
LITERATURE ON PHARMACOLOGY AND THE CONNECTOME

O8t is conducting further research and developing solutions for therapeutics in additional clinical areas on the back of a growing field of research:

A Unique Brain Connectome Fingerprint Predates and Predicts Response to Antidepressants

Differential effect of quetiapine and lithium on functional connectivity of the striatum in first episode mania

Dopaminergic modulation of hemodynamic signal variability and the functional connectome during cognitive performance

Fine-Grained Parcellation of Brain Connectivity Improves Differentiation of States of Consciousness During Graded Propofol Sedation