1: Executive Summary
The Brain Industry Revealed
Neuropharmaceuticals
Cell Therapies
Neurodevices
Neurodiagnostics
Investment Risks and Opportunities
Translating Neuroscience into Neurotech
The Neurotech Market Opportunity
Key Industry Facts and Findings

2: Trends and Drivers
Converging Technology Drivers
Crossing the Blood Brain Barrier
Demographic Drivers
More People Living Longer
Social Drivers
The Lifestyle Improvement Market
Economic Drivers
Global Economic Burden of Brain-Related Illness
Rising Health Care Costs
Research Funding
US Government Research Funding
Stem Cell Funding
International Government Research Funding
Foundations Focus on the Brain
Intellectual Property Trends
Global Intellectual Property Protection
Patent Expirations
Neurotech Merger and Acquisition Activity (2005-Q12012)

3: Neuropharmaceutical Sector
Neuropharmaceutical Sector Overview
Trends in Neuropharmaceuticals
Big Pharma Scales Back
Treatments in Development and Abandoned by Indication 2006-2012
Neuropharmaceutical Partnering and Licensing
Partnering and Licensing Personnel
Partnering and Licensing Deals 2004-Q12012
Neurology Markets and Pipelines
Alzheimer’s Disease (AD)
AAMI and MCI
Epilepsy and Seizure Disorders
Huntington’s disease
Migraine
Multiple Sclerosis
Parkinson’s Disease
Sleep Disorders
Restless Legs Syndrome
Stroke
Traumatic Brain Injury
Psychiatry Markets and Pipelines
Addiction
Anxiety Disorders
Attention Disorders
Depressive Disorders
Bipolar Disorder
Obesity
Schizophrenia
Cognitive Impairment Associated with Schizophrenia
Sensory Markets and Pipelines
Pain
Retinal Disorders

4: Stem Cells and Neuroregeneration
Defining Stem Cell Markets and Players
Therapeutics
Drug Discovery Tools
Stem Cell Banking
Stem Cell Approaches
Background
The Science of Transplantion
Controlling Immune Rejection and Infection
Sources and Harvesting of Stem Cells
Embronic Stem Cells
Fetal Stem Cells
Adult Stem Cells
Stimulation of Endogenous Stem Cells
Stem Cells Scientific Hurdles
Markets and Treatments in Development
Alzheimer’s Disease
Amyotrophic Lateral Sclerosis (ALS)
Hearing Loss
Huntington’s Disease (HD)
Multiple Sclerosis (MS)
Parkinson’s Disease
Retinal Disorders
Spinal Cord Injury (SCI)
Stroke
Other CNS Diseases

5: Neurodevice Sector
Neurodevice Sector Overview
Neurodevice Markets
Regulatory Process in the US
Regulatory Process in the EU
Neurodevice Sector Trends
Investment by Major Device companies
Neurodevice M&A Activity (2005-Q12012)
Neuroprosthetic Devices
Cochlear Implants
Retinal Implants
Motor Prostheses and Brain Computer Interfaces
Neuromodulation Devices
Neuromodulation Device Clinical Trials and Recent Approvals
Deep Brain Stimulation
Essential Tremor
Parkinson’s Disease
Primary Dystonia
Severe Obsessive Compulsive Disorder
Treatment-Resistant Depression
Epilepsy
Traumatic Brain Injury and Stroke
Transcranial Magnetic Stimulation (TMS)
Alzheimer's
Treatment Resistant Depression
Migraine
Spinal Cord Stimulation (SCS)
Chronic and Neuropathic Pain
Spinal Cord Injury
Vagus Nerve Stimulation (VNS)
Epilepsy
Treatment-Resistant Depression
Obesity
Peripheral Stimulation
Assisted Breathing
Epilepsy
Fecal Incontinence
Foot Drop
Hypertension
Migraine
Neuropathic Pain
Restless Legs Syndrome
Sleep Apnea
Stroke
Urinary Conditions
Gastric Modulation and Obesity
Neurosurgical devices
Radiosurgical Devices
Neurosurgical Navigation and Equipment
Image Guided Navigation (IGN)
Intraoperative Magnetic Resonance Imaging (iMRI)
Automated Surgical Systems
Brain Monitoring
Temperature Control Systems
Neurovascular Intervention
Ischemic Stroke
Catheters, Stents and Perfusion devices
Retrieval and Protection devices
Ultrasound Thrombolysis
Hemorrhagic Stroke
Coils
Liquid Embolics
Stents
Neurosoftware
Attention Deficit Disorder
Cognition and Aging
Stress and Emotional Wellbeing
Autism
Addiction and Obesity
Pain
Schizophrenia

6: Neurodiagnostics Sector

Neurodiagnostic Sector Overview
FDA Approval and Reimbursement of Diagnostics
Neuroimaging Technologies
Computed Tomography (CT)
Magnetic Resonance Imaging (MRI)
Nuclear Medicine Imaging (PET, SPECT)
Electro-encephalography (EEG)
Magneto-encephalography (MEG)
In Vitro Diagnostics
In Vitro Diagnostics Regulatory Landscape
Emerging Diagnostics for Alzheimer’s Disease
Emerging Diagnostics for TBI
Genetic Testing and Pharmacogenomics
Protein Biomarker Assays
Pattern Recognition in Diagnostics
Emerging Diagnostics for Psychiatry
Emerging Diagnostics for Autism
Neuroinformatics
Diagnostic Software

7: Private Neurotechnology Investment

Private Investment in Neurotechnology
Venture Capital Investment Trends
Neurotech Venture Capital Investment
Investing in Neuropharmaceuticals
Investing in Stem Cells and Neuroregeneration
Investing in Neurodevices
Investing in Neurodiagnostics
Private Company Financings, 2011
Top financings 2004-2011
Leading Neurotech Investors
Leading Venture Capital Firms

8: Public Neurotechnology Investment
Investing in Public Neurotech Companies
Neurotech Stock Universe
Neurotech Initial Public Offerings
NASDAQ NeuroInsights Neurotech Index

9: Neurotechnology Research Centers
Leading Neurotechnology Research Centers
University of California, San Francisco (UCSF)
University of California, Los Angeles (UCLA)
University of California, San Diego (UCSD)
Harvard
Stanford University
Massachusetts Institute of Technology (MIT)
Columbia University
Washington University, St. Louis
University College London (UCL)
Karolinska Institutet, Stockholm
RIKEN Brain Science Institute, Japan
Places to Watch
National Brain Research Centre (NBRC), India
Neurosciences Victoria, Australia (NSV)
University of Helsinki, Finland

10: Leading Neurotechnology Regions
The Global Neurotech Economy
Nexus Ranking and Methodology
Established Neurotech Nexus’
Emerging Neurotech Nexus’
Nascent Neurotech Nexus’
Conclusions and Policy Recommendations

11: Company Profiles
Neuropharmaceutical & Cell Therapy Companies: Private
Neuropharmaceutical & Cell Therapy Companies: Public
Neurodevice Companies: Private
Neurodevice Companies: Public
Neurodiagnostic Companies: Private
Neurodiagnostic Companies: Public

12: Index