



## TOD™ Project

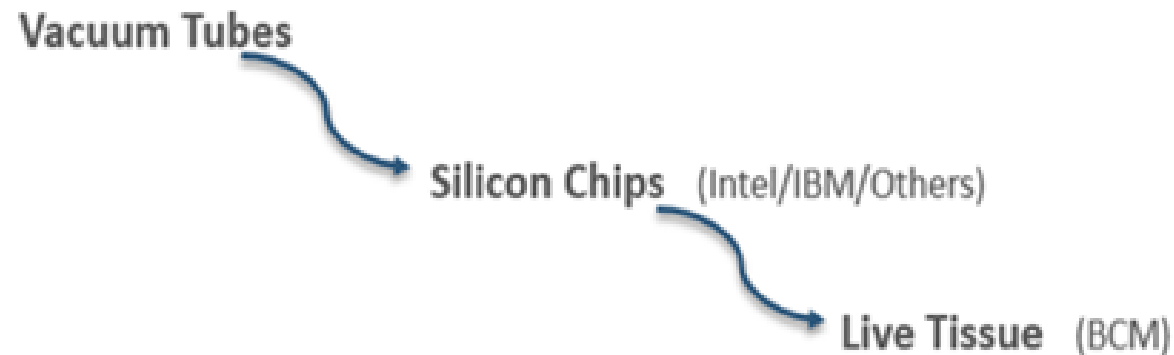
KEY ELEMENTS  
SYSTEM DEVELOPMENT  
INTEGRATION AND TEST  
OPERATIONAL SUCCESS

***“THE AGE OF TISSUE COMPUTING HAS ARRIVED™”***

# Neural Processing Is The Solution

Companies, Government Agencies, Scientific Institutions, and Leading Universities Are Moving to Neural Processing. It is the Natural Solution to Handle Highly Complex and Big Data Processing

## Next Leap Forward in Computing



# Major Companies in Neural Processing

Google, IBM, Intel, Microsoft, Qualcomm, Samsung Electronics, Amazon Web Services (AWS), OpenAI, NeuralWare, StarMind, Neurala, Clarifai, and many others

- To Our Knowledge - None are Using “Live” Neurons
- All are Using Digital Emulations of A Neuron
- None are Offering Purchase or Ownership Rights to Any Neuron Processing System

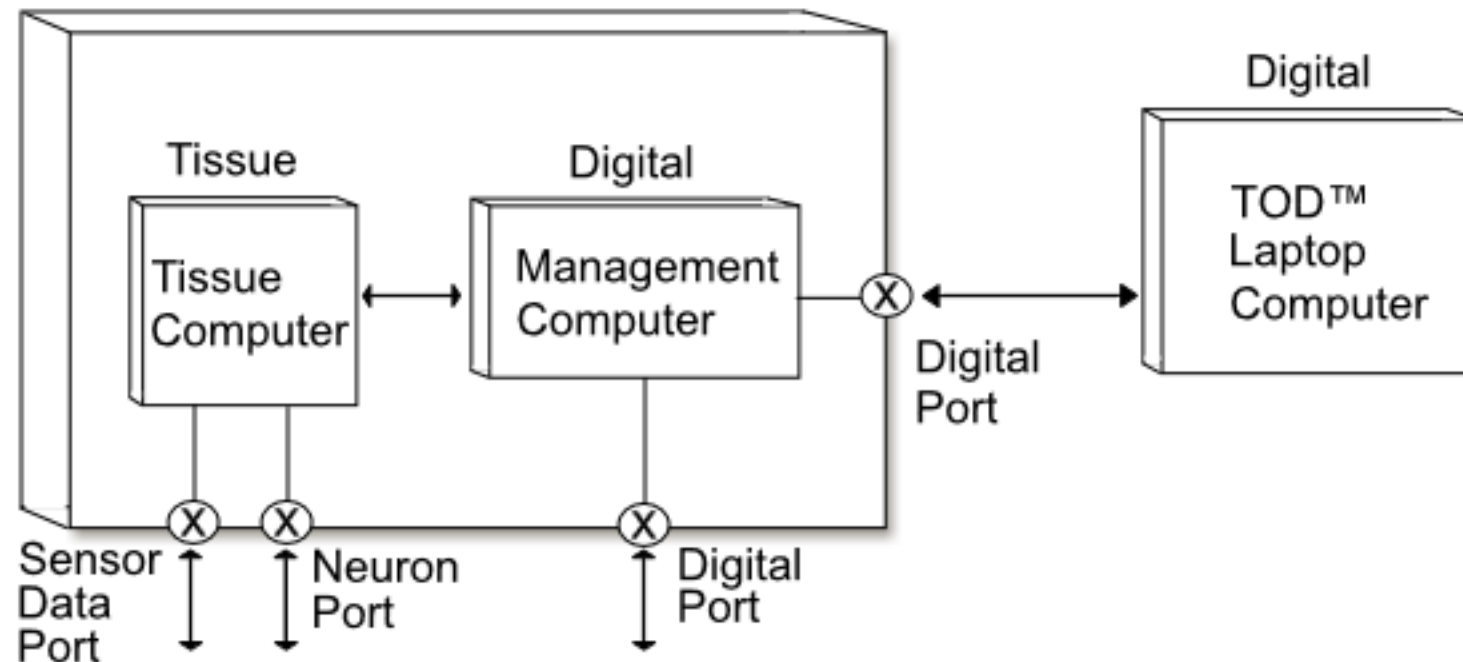
# Delivering Neuron Processing to Everyone

- ✓ 1965 - IBM Released Digital Processing, the IBM 360 – Big Success
- ✓ 2022 - BCM Releases Neuron Processing, TOD™ – Potentiality Big Success
- ✓ Nine TOD™ Models from 16 Million to 5 Billion Neurons

**“The Age of Tissue Computing has Arrived™”**

# TOD™ System Configuration

## TOD™ System Configuration



# TOD™ “Tissue” Development Activities

Tissue Computer (TC) Box

TC Disks and TC Cords

Neuron to Digital Interface (NDI) Converter

Sensor Direct Access Ports

Neuron Processing System and Application Software

Tissue Computer Manufacturing

# TOD™ “System” Development Activities

Digital Management Computer and Laptop

Digital System and Application Software

System Integration Lab (SIL)

System Delivery and Installation

TOD™ System Manufacturing

TOD™ Marketing and Sales

# Tissue Computer (TC) Box – Design

- Medically Sterile, Environmentally Sealed, Live Cell Box
- Holds From 16 To 5120 TC Disks Stacked in 3D Arrays
- Contains From 16 Million To 5 Billion Living Nerve Cells (Neurons)
- Remotely Control Internal Box Environmental Conditions
- Box Design Completely Pull and Plug Exchangeable



# Tissue Computer (TC) Box - User Maintenance

- Delivered and Operated as Sterile Environmentally Sealed Box
- Users Never Access the TC Box
- Replacement Service Containers Provided to User as Needed
- User Replaces the Fluid Containers When Notified
- Similar to User Replacing Printer Cartages
- Failed or Erroneous TC Box Exchanged for New TC Box
- BCM Service Team Performs Onsite All TC Box Exchanges

# TC Disks and TC Cords Development

- ✓ Years of Successful Design, Growth, and Delivery of Tissue Embedded with Millions of Living Cells
- ✓ Experience Includes Cell Populated Tissue Scaffolding Structures, Tissue Disks, Spinal, and Nerve Cords
- ✓ An Emerging Global Leader in ARTR™ Tissue Technology and Production Processes

# Standard and Network Branching TC Cord

## Standard TC Cord

TC Cord Section filled with Tissue  
Embedded with Neurons



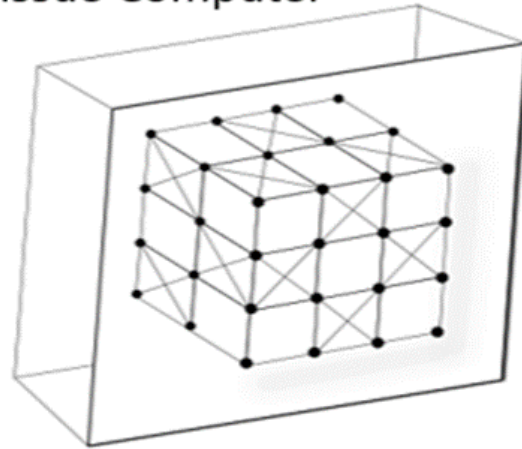
## Network Branching TC Cord

Network Branching TC Cord Section  
Internal Tissue Structure with  
Embedded Neurons Absent

# TC Processing Structure Model 48

## 48 TC Disk Programmable Cubic Array

Tissue Computer



3D Cubic Tissue  
Processing Array

Code:

- A single TC Disc
- A single TC Cord

Note: Exterior view only all TC disks are connected to at least 2 or more TC cords.

# Neuron to Digital Interface (NDI) Device

Control and Management of Tissue Computing and Neurons

Translates Neuron Pulse Patterns to Digital Data and Vice a Versa

Design Based Upon Long Established and Validated Digital to  
Neuron Communications Principals

# NDI Control Rods

Custom Designed Neuron Control Rods

Individually Identifiable and Programable

Neuron Source Triangulation and Targeting Features

User and Application Program Controls Over Each Rod's -

Power Levels, Pulse Phasing, Pulse Duration, Frequencies,

Pulse Rates, Rod-pairing, Multiple Rod Data Collection Phasing

# Sensor Direct Access Ports

Specially Designed Sensor Interface Port For Sensor Neurons

Direct Input of Sensor Data, No Conversion to Digital Format Required

Result - Massively Enhanced Processing Speeds and Throughput Capacity

TOD™ Sensor Port to Accept Real-time and Archived Sensor Data in These Formats: Optical, Audio, Video, RF, Inferred, Thermal, and Seismic

# Neural Processing System and Application Software

TOD™ and Tissue Computer are Controlled, and Managed by Digital Hardware and Software

Commercial Software is Available to Address Digital Computer Hardware

Neural Application Software Has Been Developed to Address Existing Digital Neuron Emulator Computers and Cloud Services

TOD™ Design Supports Upward Compatibility of Most Digital Neural Processing Software to TOD™ Applications

Many Experienced Groups of Open-source Neuron Processing System and Application Programmers and Coders are Available to Support TOD™



# Actual Neuron Populated TC Disk



Single TC Disk in a Petrie Dish  
TC Disk Embedded with up to  
One Million Neurons  
Ready for Insertion into Tissue  
Computer Array

# NDI and BCI Equipment Sources

- ✓ Neuralink (Elon Musk)
- ✓ Blackrock Neurotech (Peter Thiel)
- ✓ BrainGate
- ✓ Synchron
- ✓ OpenBCI - Open Source BCI Devices

BCI – Brain Computer Interface – Needs FDA Approval

NDI – Neuron Digital Interface – a Modified TC-Cord Unit

NDI Never Enters a Human, is Not a Medical Device, and NO FDA Approvals

# Neuron Software and Coding Groups

The BMTK Open-Source Group

The Izhikevich Group

The Brain Community

The TensorFlow Community

The Brainstorm's GitHub Community

The Rigbox Community

The Triton Community

The Open-Source Brain Community

The Open Neuroscience Group

The Community of NEURON Users and Developers

The arXivLabs Community

The Neuron Community on GitHub

The NengoDL User Community

# High-Volume Tissue Computer Manufacturing

BCM is Redesigning and Customizing Commercial Tissue Production Machines to Address TC Disk, TC Cord, and Neuron Processing Array Structure Manufacturing

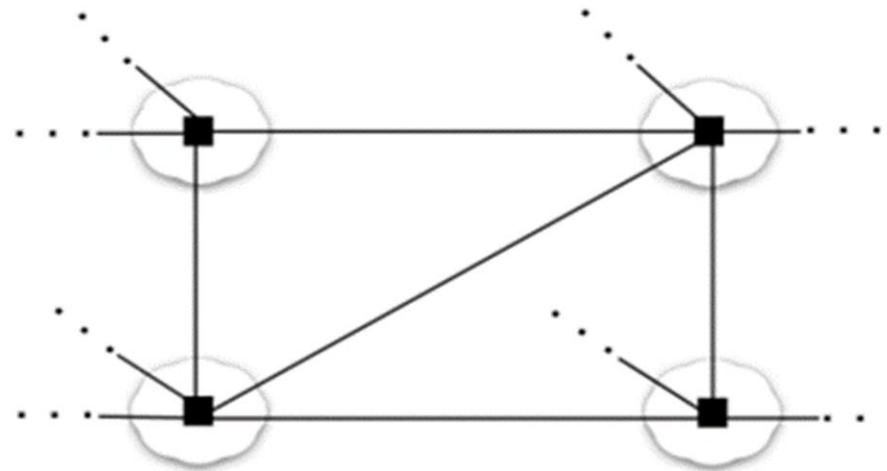
Sample element of a tissue manufacturing facility



# System Integration Scalable Quad-Pack

Initial Scalable Build  
and System Integration  
Begins with the  
Quad-Pack

## 4 TC Disk – TC Cord Linked Tissue Array



Segment of a neuron processing array

Code:

○ TC Disk

■ A TC Cord

— A TC Disk Embedded Data Port

Note: All TC disks are identifiable and programable tissue computer components addressable by the management computer operation system

# TOD™ Offers Model 5120 Supercomputer

BCM has Designed a New Class of Supercomputers. With 5 Billion Neurons, the Model 5102 Will Be Largest and Fastest Live Neural Processing Supercomputer in the World

## Supercomputers by Class

Digital

Quantum

Live Neuron

Tiantle-2

IBM Q System

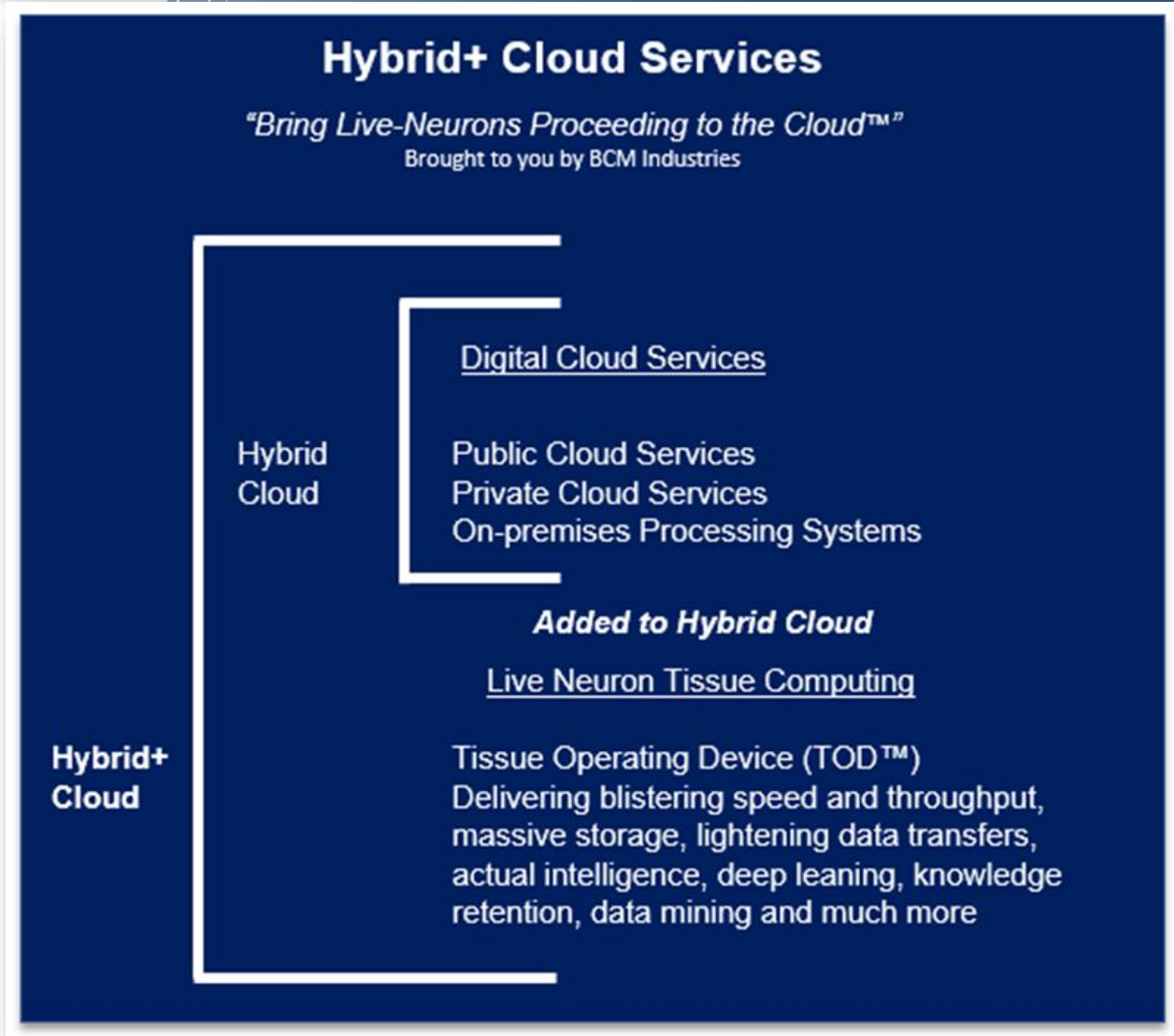
TOD™ 5120

Note: The digital and quantum supercomputers are currently in operation, the TOD™ 5120 supercomputer is in design.



# TOD™ Offers Hybrid+ Cloud Services

BCM Brings Large Scale  
Neural Processing to the  
Cloud



# Sample TOD™ Application Markets

A Few of the many TOD™ Application Markets

Medical, Science and Industrial Research

Gas and Oil Development Mapping and Analysis

Data Mining and Deep Learning

Weather Mapping and Forecasting

Video Editing, Processing and Storage

Gaming, Virtual Realty, and Entertainment

Military, Space, and Governments

Air and Ground Traffic Control

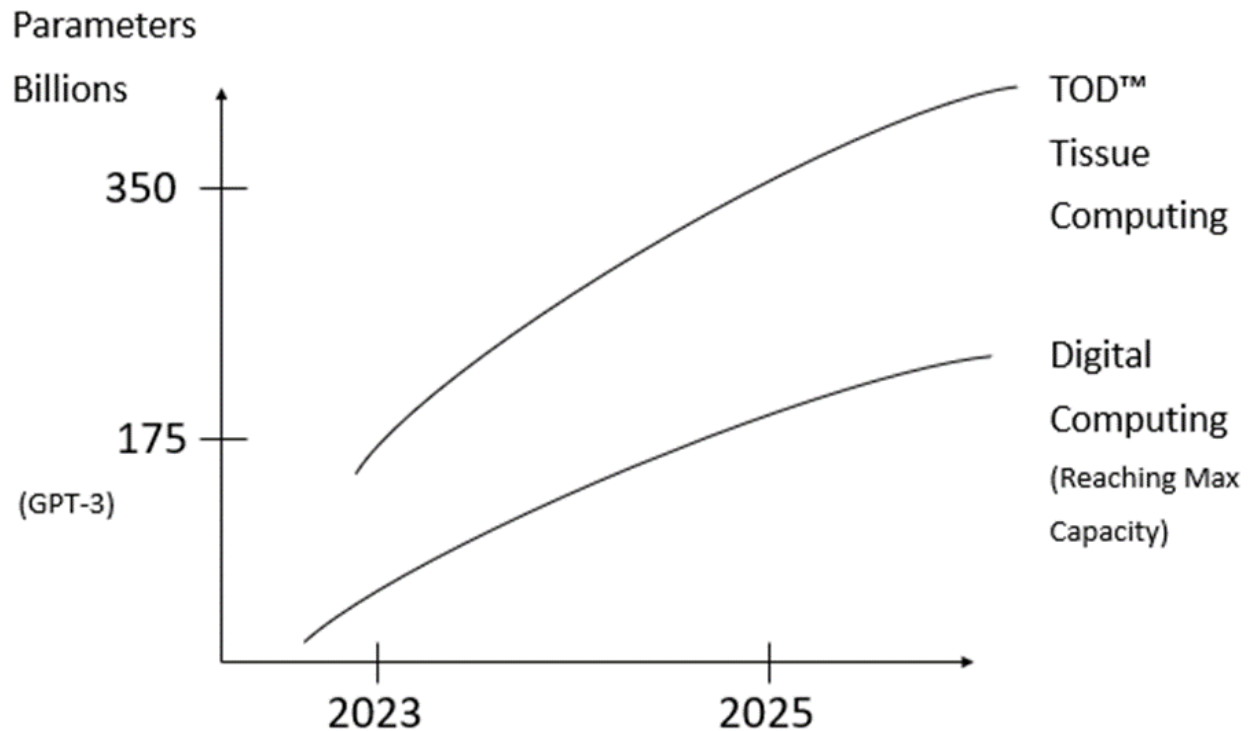
Smart Cities, Regulatory Agencies, and IoT Services

Truck, Container, Rail, and Airplane Traffic and Fleet Management



# Deep Learning With TOD™

## Deep Learning Processing Capacity



Digital Computing  
Limiting Out on  
Capacity - TOD™ is  
the Solution

# Major BCM Live Neural Processing Advancements

TOD™ Cloud Services

Hybrid+ Cloud Services

Nine Available TOD™ Models

The TOD™ 5120 Supercomputer

Digital Neuron Emulation Upward Compatibility

Intuitive Neural Intelligent Processing

# Phased System Development and SIL Schedule

SIL Functional (June 22)

Quad-Pack (IOC – July 22)

Model 16 (IOC – Oct. 22) (FSD – Dec. 22)

Model 48 (IOC – Feb 23) (FSD – April 23)

IOC – Initial Operational Capabilities

FSD – First System Delivery

SIL - System Integration Lab

# Modest TOD™ Sales Forecast

## Pro Forma Annual BCM Revenues

### Annual Total Revenues from TOD™ System Sales Only [1]

Year	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
Units Sold [2]	10	15,018	167,800	189,400	209,250
BCM Revenues (\$ billions USD)					
Totals	-	13.16	168	197	212

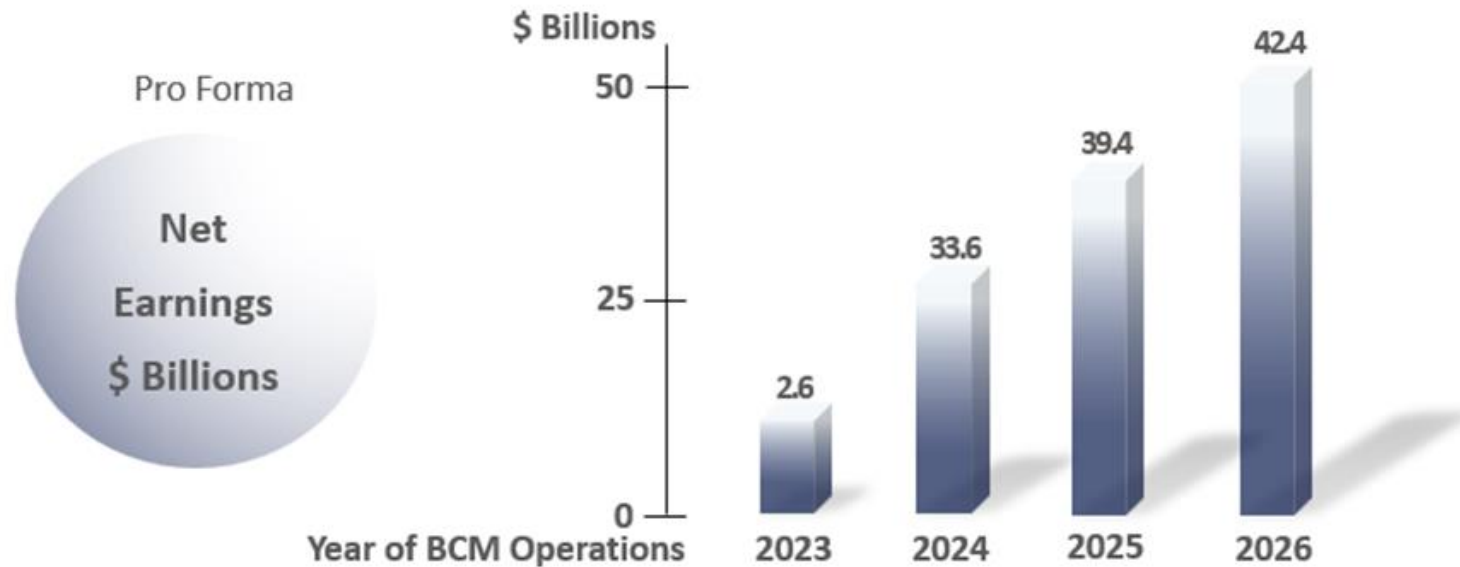
Notes:

[1] This Pro Forma is limited to only TOD™ systems and services. There is no assurance these Pro Forma will be obtained, or if obtained, that any benefits will arise. These results and data are subject to change without notice. Source data for this Pro Forma is BCM management and the BCM Business Plan, TOD™ Project, February 2022.

[2] Total global number of TOD™ systems sold during the calendar year.

# BCM Net Earning - Pro Forma

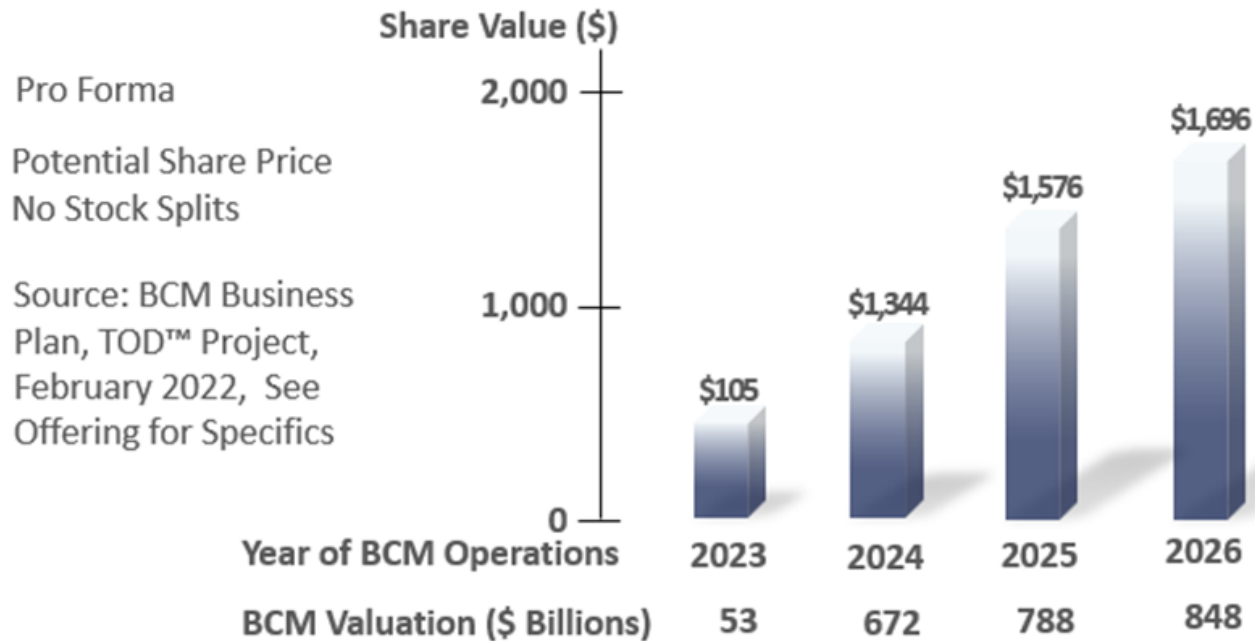
## BCM Net Earnings



Source: BCM Business Plan, TOD™ Project, February 2022, See Offering for Specifics

# BCM Investment ROI - Pro Forma

## Investor ROI



# TOD™ Development and Operations Articles

## Available Press Release Articles Plus

- Neural Processing Is The Solution
- TOD™ Project Business Plan
- Owning a TOD™ 5120 Supercomputer
- Introduction to Tissue Computing and TOD™ Briefing
- Purchasing a TOD™
- TOD™ Design Production and Service
- TOD™ Processing Applications
- History of TOD™ and Tissue Computing

“The Age of Tissue Computing Has Arrived™”



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**THANK YOU**

