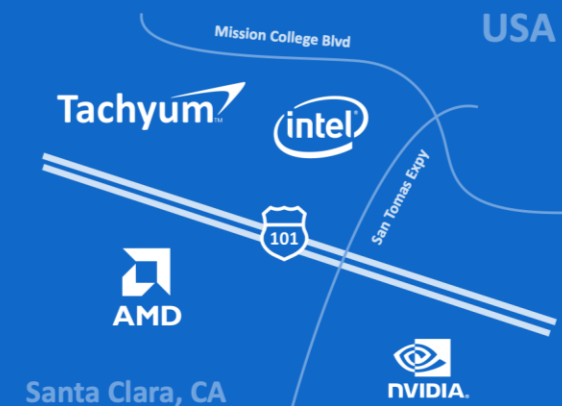




AI Supercomputers

Slavomir Matasovsky, AI Architect



Tachyum ● HENDERSON, NEVADA



World's 1st Universal Processor for Servers / AI / HPC

Server / Supercomputer / AI Chip

- For hyperscale datacenters

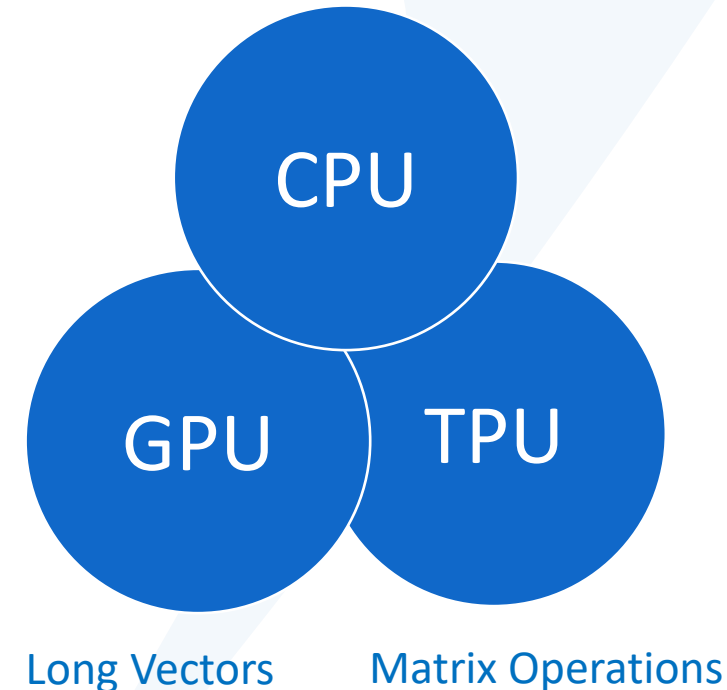
Humanity: 1st human brain sized AI

- Not only Focus on Deep Learning AI
- Also Explainable, Bio, Spiking and General AI

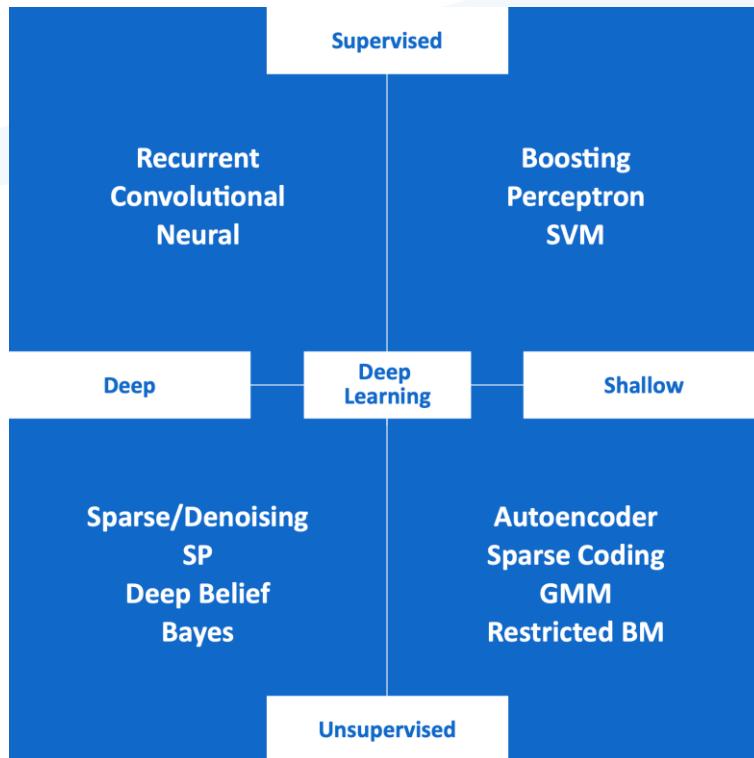
Prodigy is faster than Xeon/GPU/TPU

- Faster, 10x less power, 1/3 cost of Xeon
- Faster than NVIDIA A100 in HPC and AI

Tachyum Universal Processor is Best of



Prodigy Best Processor for AI and HPC



AI The Most Important Driver of GDP Growth

Bloomberg 2018

AI adds \$15T to the economy by 2030

Forbes 2017 AI & GDP

AI 40% productivity growth by 2035

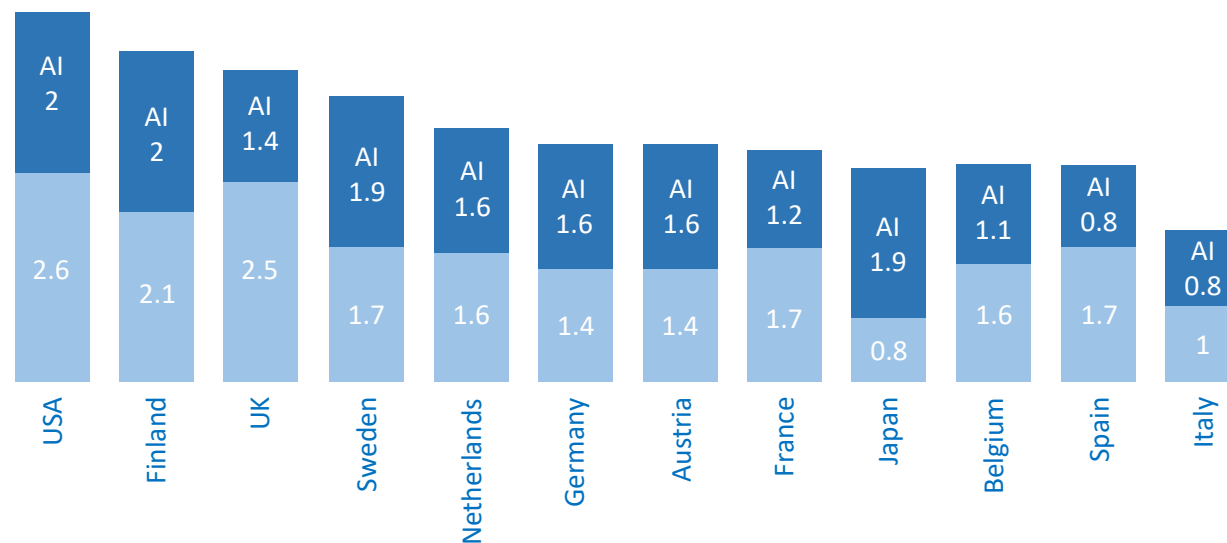
PwC 2017

AI adds 14% to GDP by 2030

Putin 2017

“the leader in AI will rule the world”

AI Almost Doubles GDP Growth (%)



Tachyum is Critical for Datacenter Growth

3% of planet's electricity today

60% more than UK

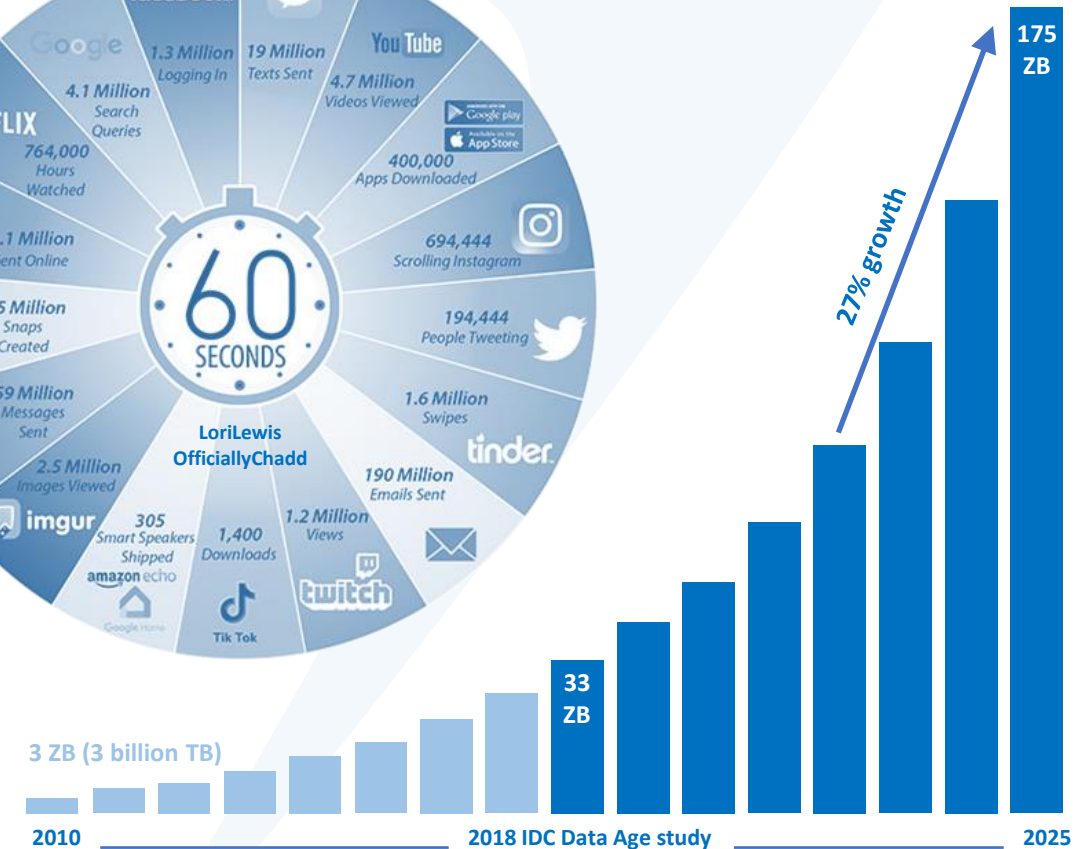
50% of the planet's energy by 2040

At 27% growth, it will be 33% by 2030

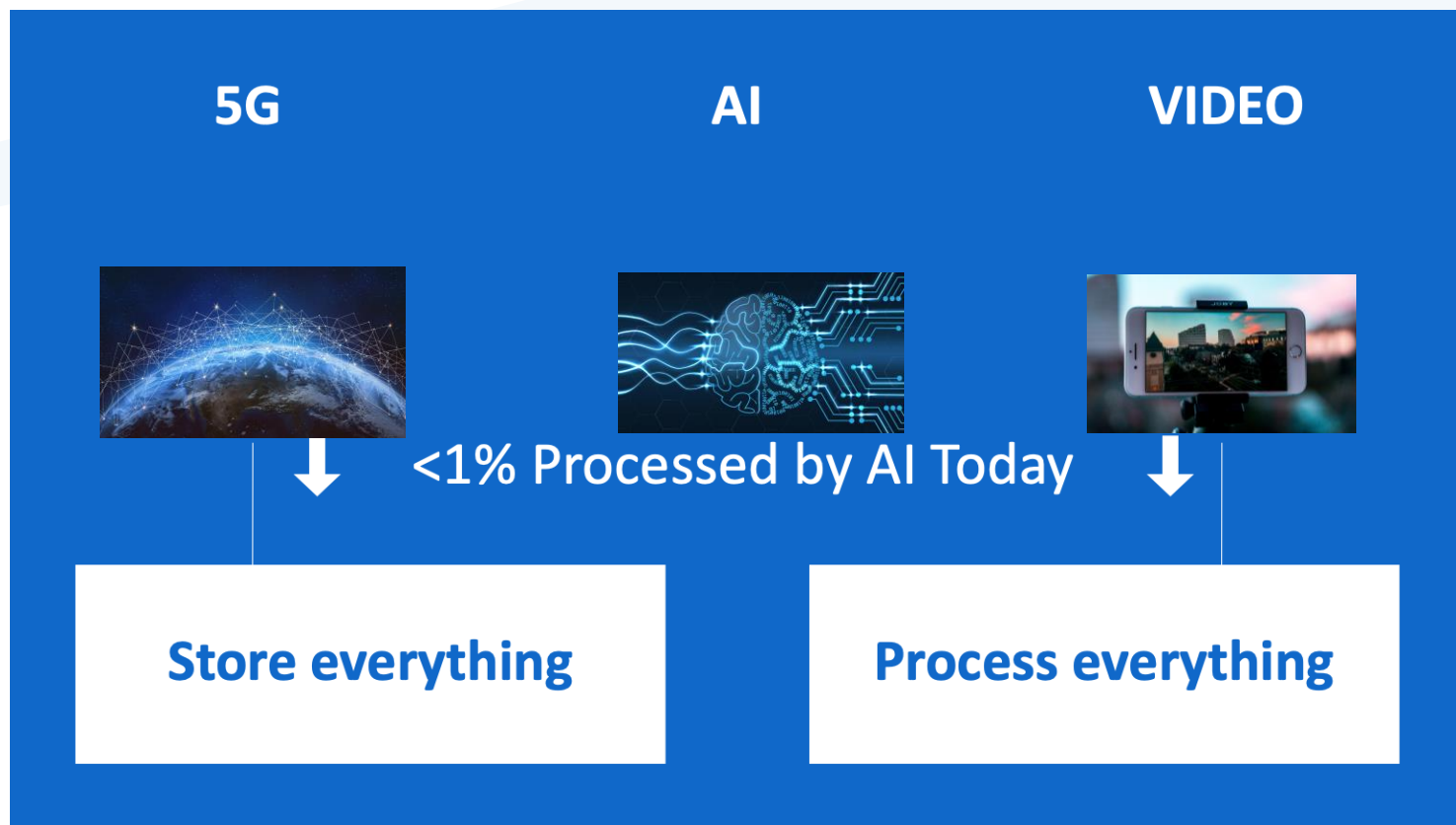
Largest CO₂ reduction impact

More than solar panels, windmills, ...

10x lower power is needed to extend current datacenter growth



Tachyum is Key for Exponential Data Growth



Bringing Superhuman Brain-Scale AI to Mainstream

\$300B worth of servers: 50% time wasted

Less than 5% of servers have AI GPUs

Universal Processor for Servers / HPC / AI

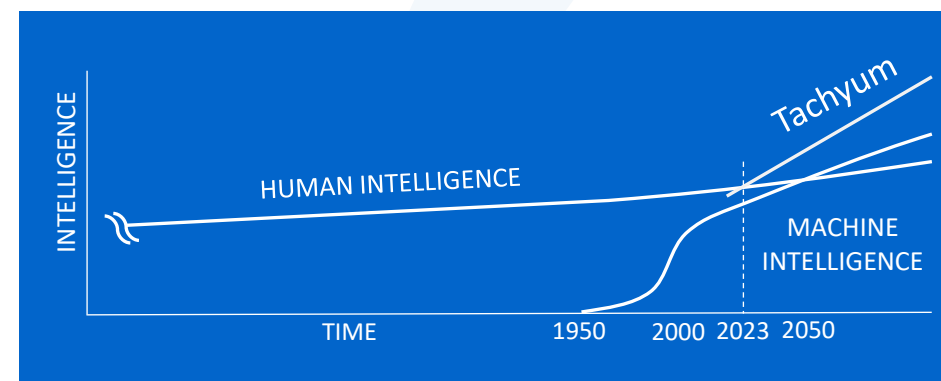
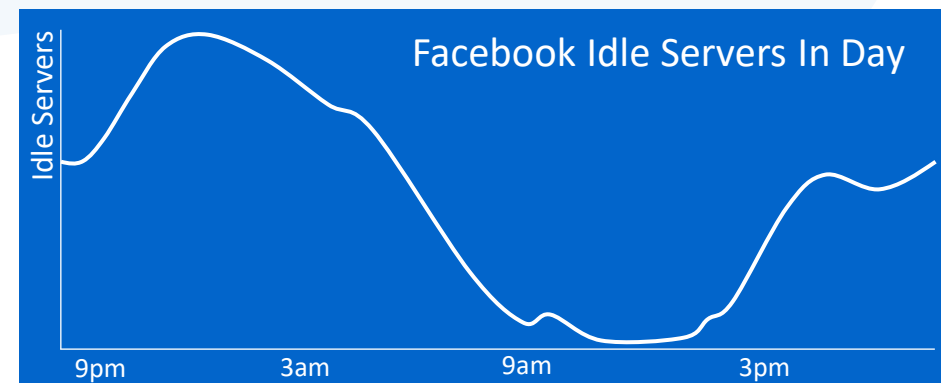
10x more AI / HPC by using idle servers

Human Brain-Scale AI Datacenters in 2023

100+ AI Exaflops with no capital expenditure

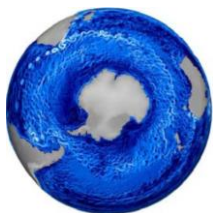
Superpowers Race to Superhuman AI

Gives fundamental edge against competitors

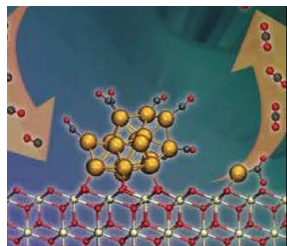


World-Wide Impact On Humanity

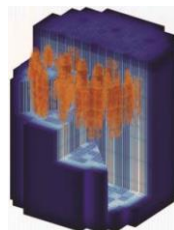
Climate change
impact
assessment



Biofuel catalyst
design



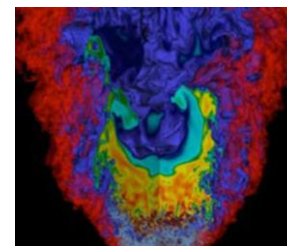
Next
generation
nuclear
reactors



Improve
efficiency
and reduce
cost



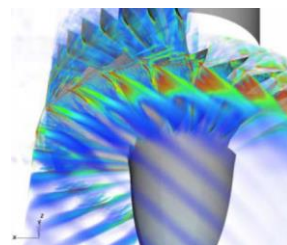
Design of low-
emission
engine



Energy and
water
nexus



Scaling carbon
capture
designs



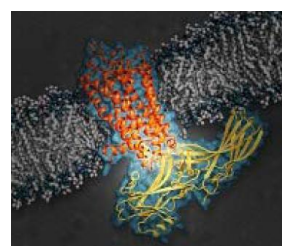
Modeling and
risk
assessment



Renewable
energy
planning



Protein
structure
and dynamics



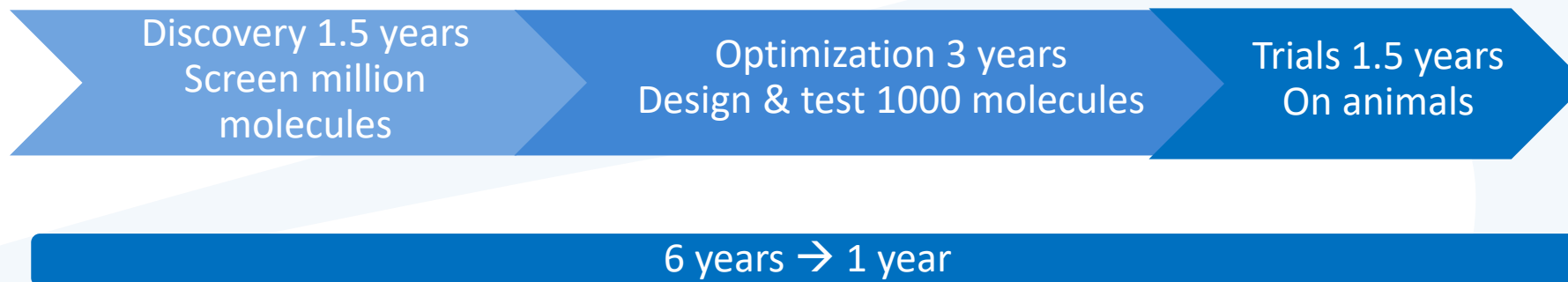
Process of
additive
manufacturing



Drugs and
vaccines
discovery



6x Faster Drugs and Vaccine Discovery



Clinical Trial

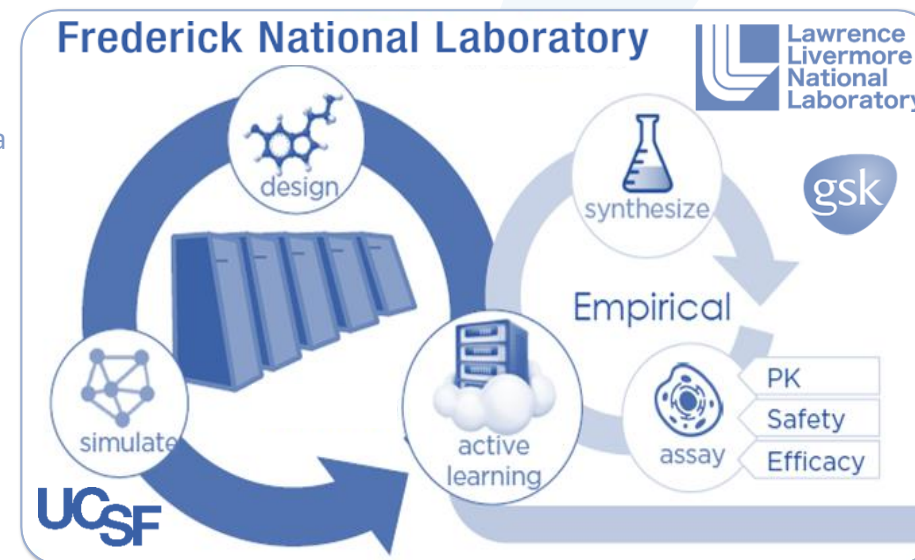
Tachyum
Low Cost HPC
Available for ALL



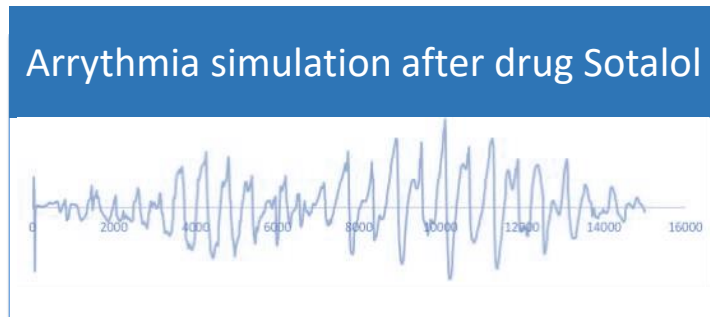
Patient's data



Personalized
Medicine



25,000 Lives To Save Per Year



\$100,000



Tachyum \$10,000

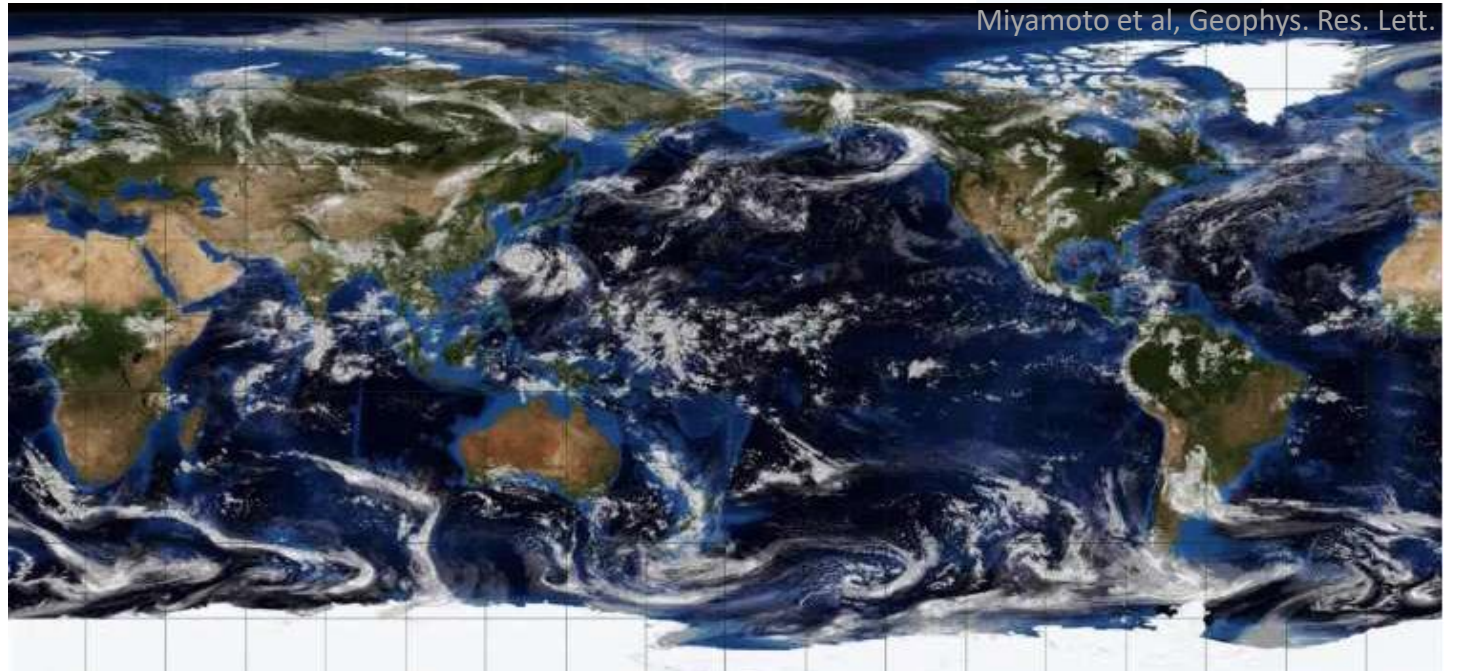
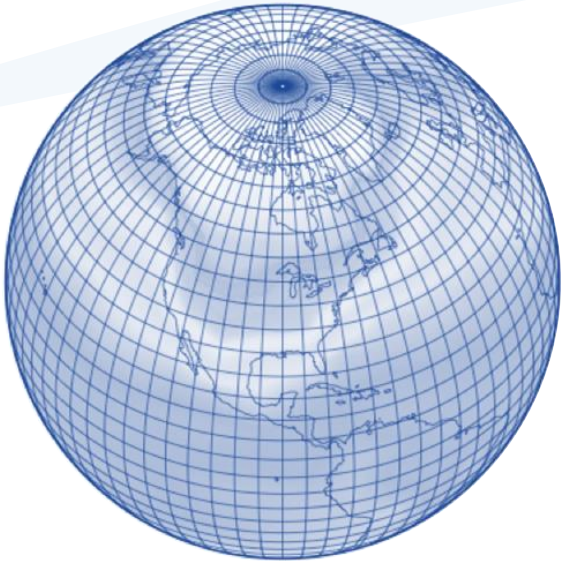


Tachyum Is
Democratizing
HPC

Key to Understand Climate Change

Existing models not accurate

Tachyum enables <1 km resolution to accurately model clouds

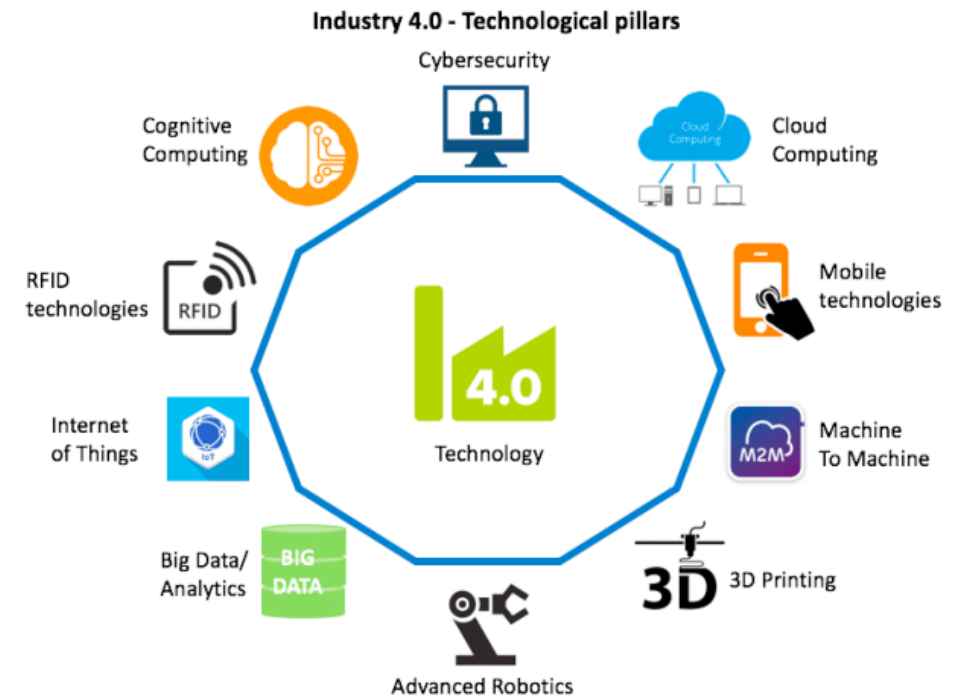


Tachyum's Prodigy Industry 4.0 Game Changer

Prodigy is the fastest, smallest and environmentally most friendly chip

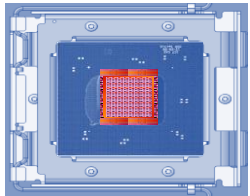
Drives transition to Industry 4.0 by enabling AI to all

Next-generation leading-edge AI CPU SoCs need to integrate high-performance IP solutions

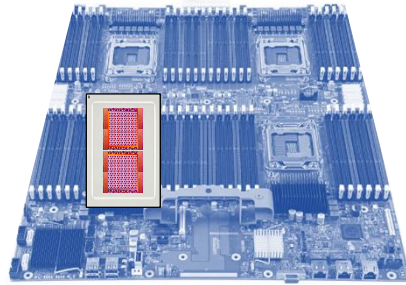


Expected Growth in Cloud / HPC / AI / Edge Chip Markets

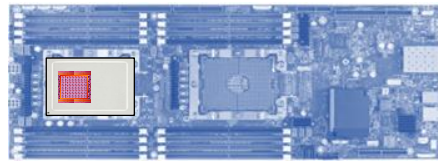
Chip SKUs
\$300 - \$9000



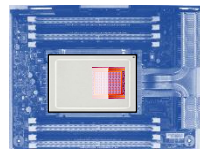
HPC/AI 4x128 cores



Mainstream 2x64 cores

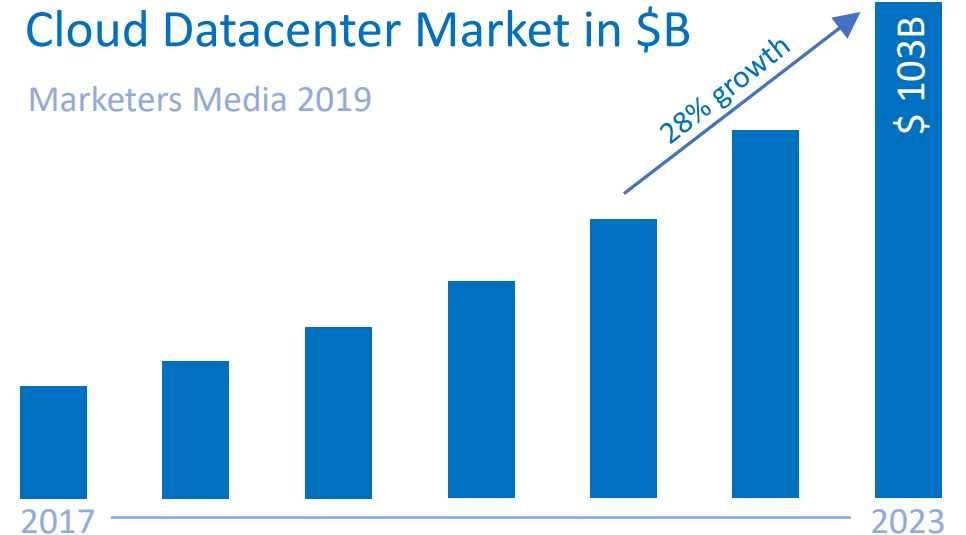


Web/Edge 32/16 cores

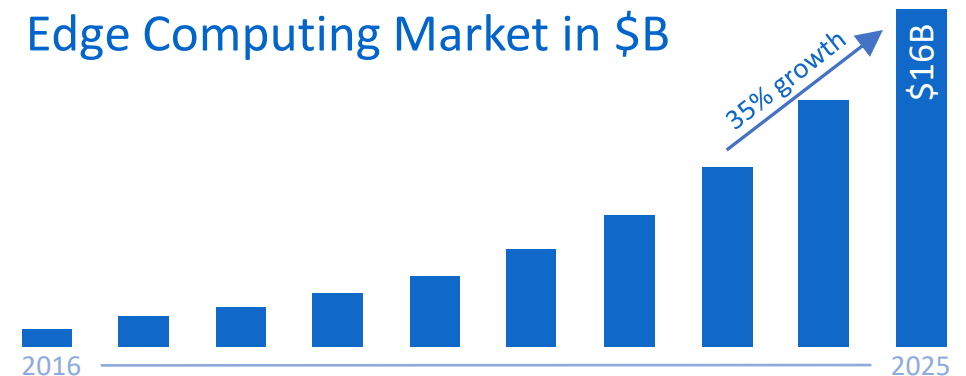


Cloud Datacenter Market in \$B

Marketers Media 2019



Edge Computing Market in \$B



Slovakia - Future Key Player for AI & HPC in EU

Supercomputers operated by Slovak National Supercomputer Center (NSC) will showcase Prodigy

- Creation of partner ecosystem: I4DI to design the world's fastest supercomputer with AI in Slovakia

Slovakia is heading to the center of digital transformation in EU and can solve the data and technological sovereignty challenges of EU

- Benefits for EU: Gaia-X, Human Brain Project (HBP), Euro Cloud, Euro HPC

Tachyum brings world class job opportunities in Slovakia



Breaking Into the Market In Big Way

- **World's fastest AI supercomputer**

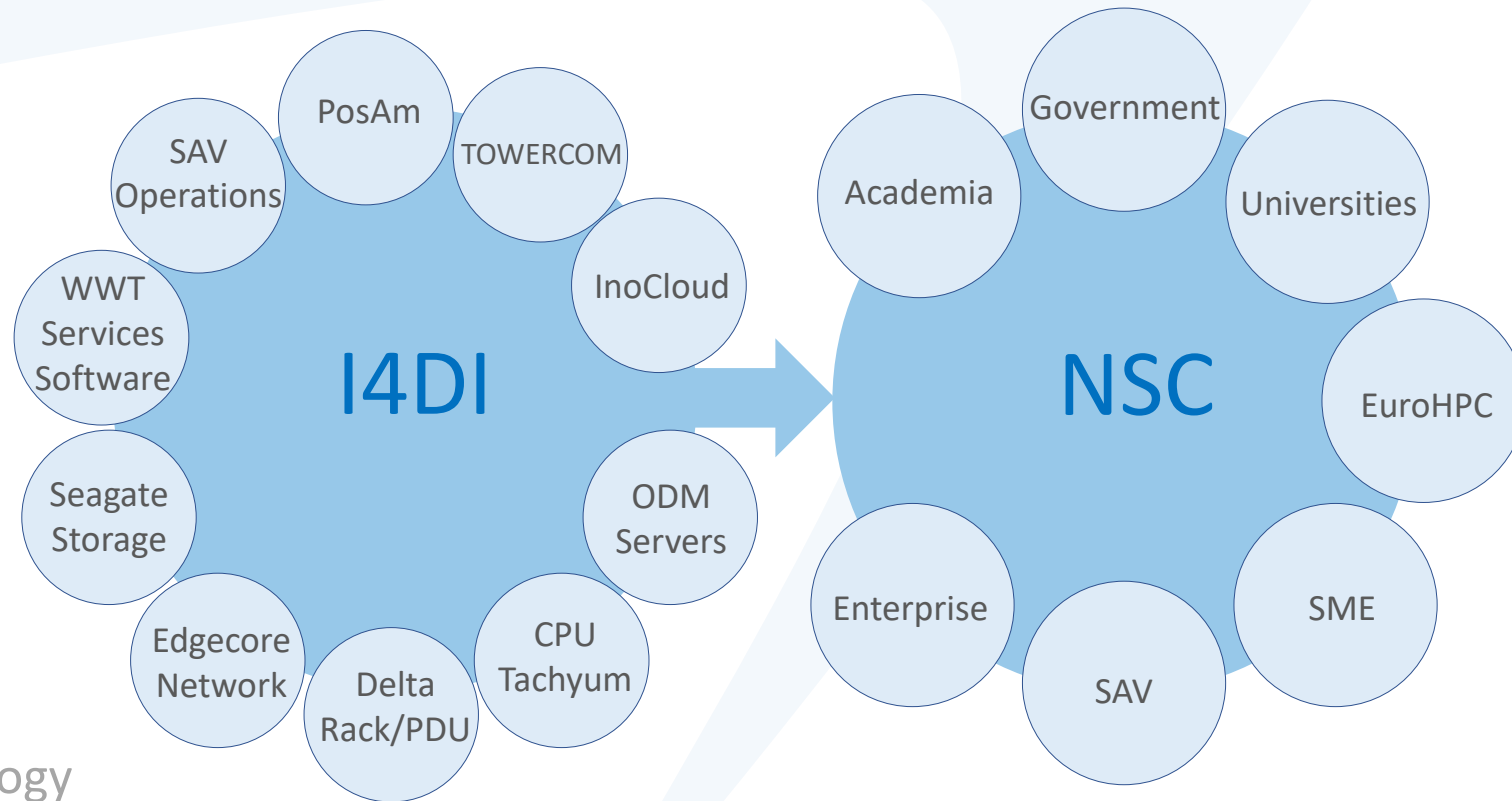
- 3x better performance per USD
- Universal Processor Value

- **Big Visible Customer**

- Showing value proposition
- Show that product is ready

- **Created partner ecosystem**

- I4DI NGO of technology leaders
- NSC operates supercomputer
- No middleman hyperscale model
- Show benefit of dual use technology



World's Fastest AI Supercomputer

NSC Slovakia Supercomputer

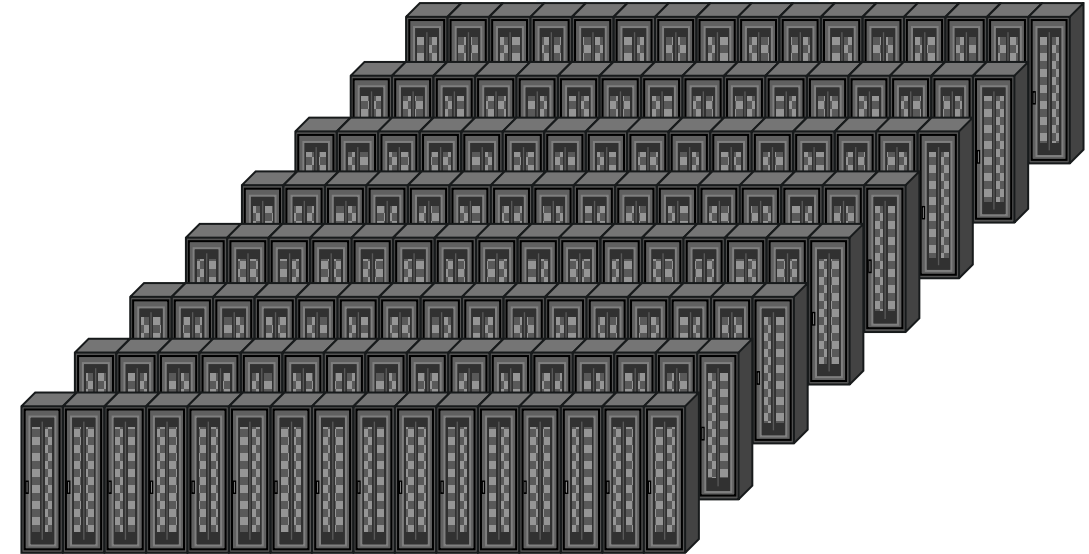
- 14 AI Exaflops, 250 DP Petaflops
- 4 PB DRAM, 250 PB storage
- 9 MW water-cooled

I4DI Is Driving Supercomputer Design

- NGO of international industry leaders
- Reference design demo in 2021

Fully operational in early 1H 2022

- Procurement in 2021
- Building selection completion in 1Q 2021



Tachyum is Critical for Slovakia and EU

EU AI is today in the hands of other countries, misaligned with EU interests

- Relying on other countries who are competitors and potential adversaries is not safe anymore
- Now, EU top priority is digital and technological sovereignty especially semiconductors

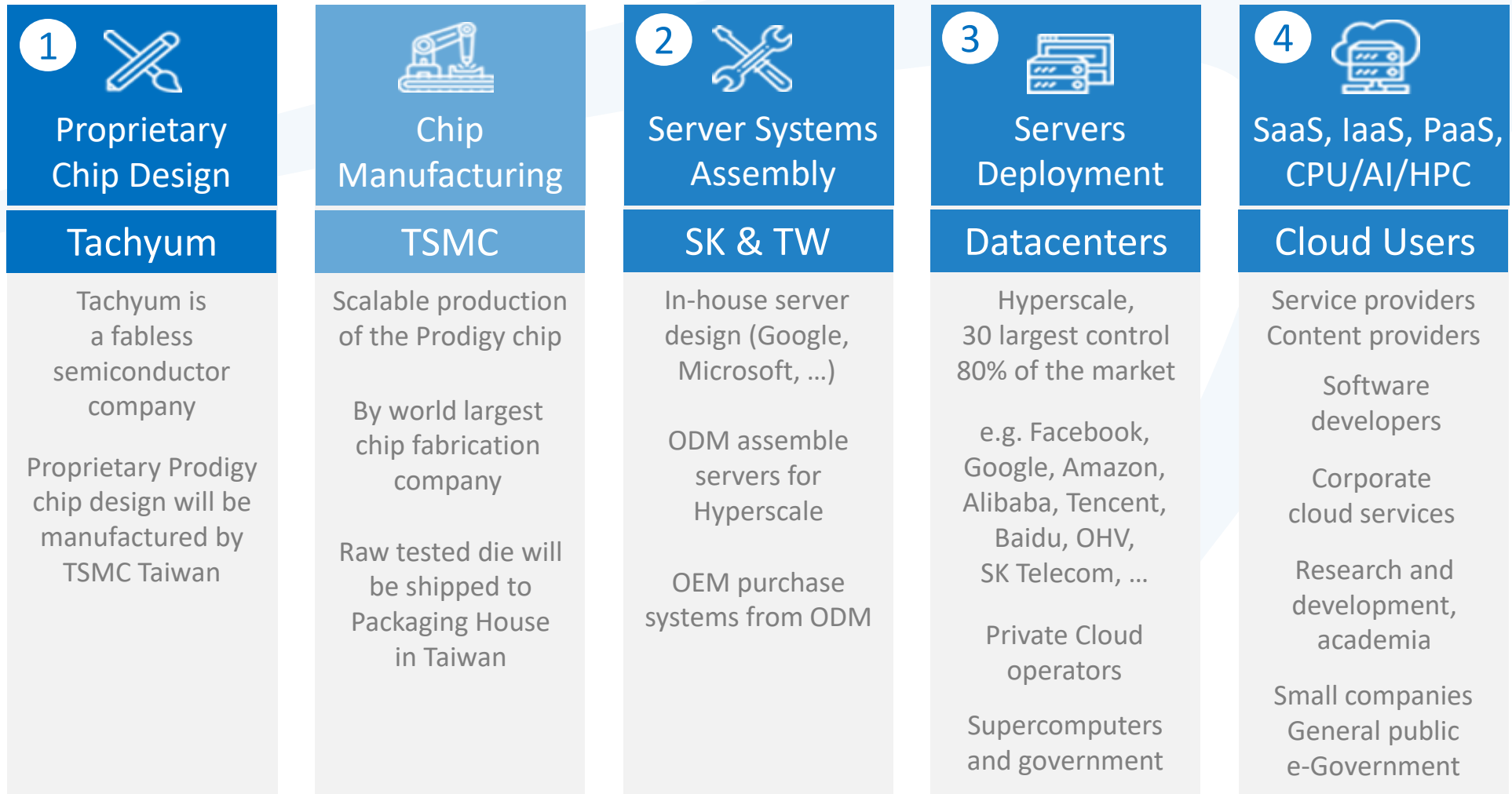
Slovakia needs to transition from cars and assembly to a knowledge-based economy

- EU consumes 30% of world compute resources, but has only 5% of world's resources
- Tachyum offers unique once-in-a-decade opportunity for Slovakia, and to fulfill EU critical needs
- Replace brain drain with brain gain by creating world class job opportunities in Slovakia

EU must turn the corner for the sake of national security

- Tachyum dual-use commercial/government chip can change IT economy and turn the corner
- Higher dual use hardware utilization will be key a economic driver of adoption of Euro Cloud & IT

Tachyum Value Chain 4 Elements In Slovakia



A photograph of a modern, multi-story office building with a glass and metal facade, situated on a city street at dusk. The building has multiple floors with large windows, some of which are illuminated from within. A large, leafless tree stands in the foreground on the left, its branches silhouetted against the sky. Several cars are visible on the street in the foreground, including a dark car in the immediate foreground and a silver car further back. The sky is a mix of blue and orange, indicating the time is either early morning or late evening. The overall scene is a typical urban setting.

Brain gain instead brain drain

Thank You!

visit

www.Tachyum.com