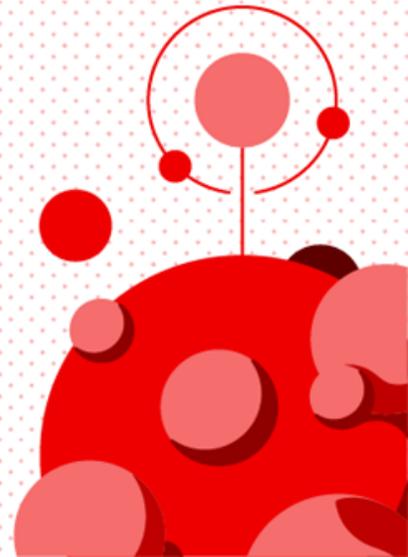# Open Tour

Connecting people and solutions
to accelerate your business
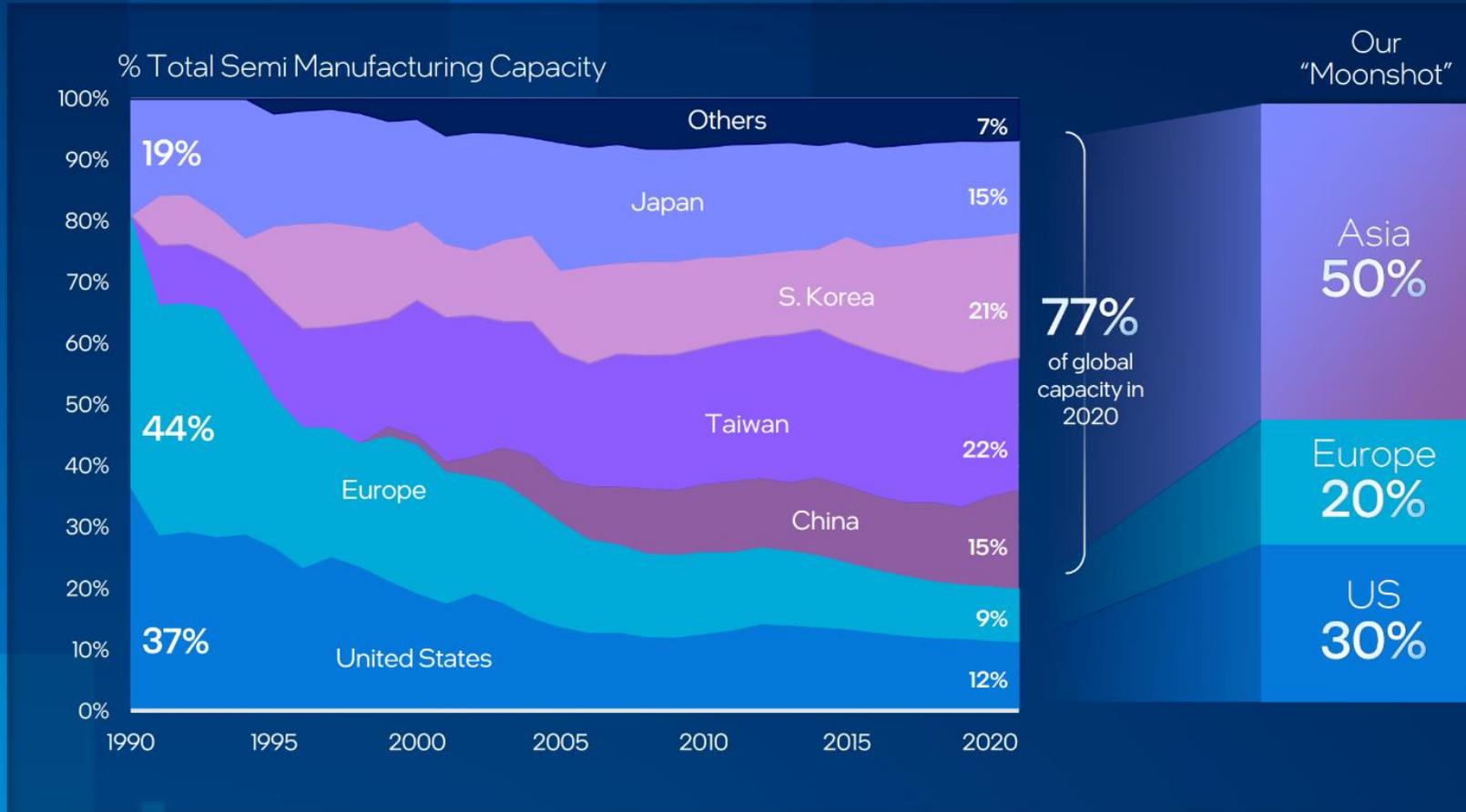
Johan Elfsson
Country Manager
Intel Sweden

Anders Huge
Director Public Sector
Intel Sweden

The world needs
more balanced and resilient supply chains

% Total Semi Manufacturing Capacity

Our "Moonshot"

77% of global capacity in 2020

Asia	**50%**
Europe	**20%**
US	**30%**

"These chips are a wonder of innovation and design that power so much of our country and enable so much of our modern lives to go on ....We need to make sure these supply chains are secure and reliable"
—Joe Biden, President of the United States

"It is not an exaggeration to say at the moment that we have a crisis in our supply chain... [it's] a national security risk and an economic security risk."
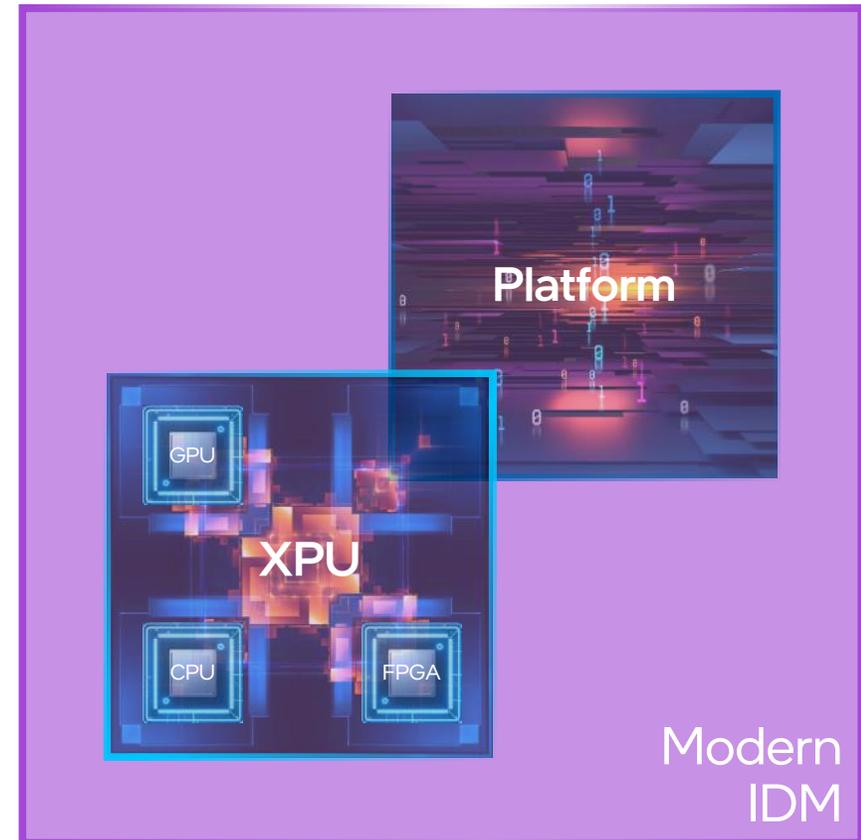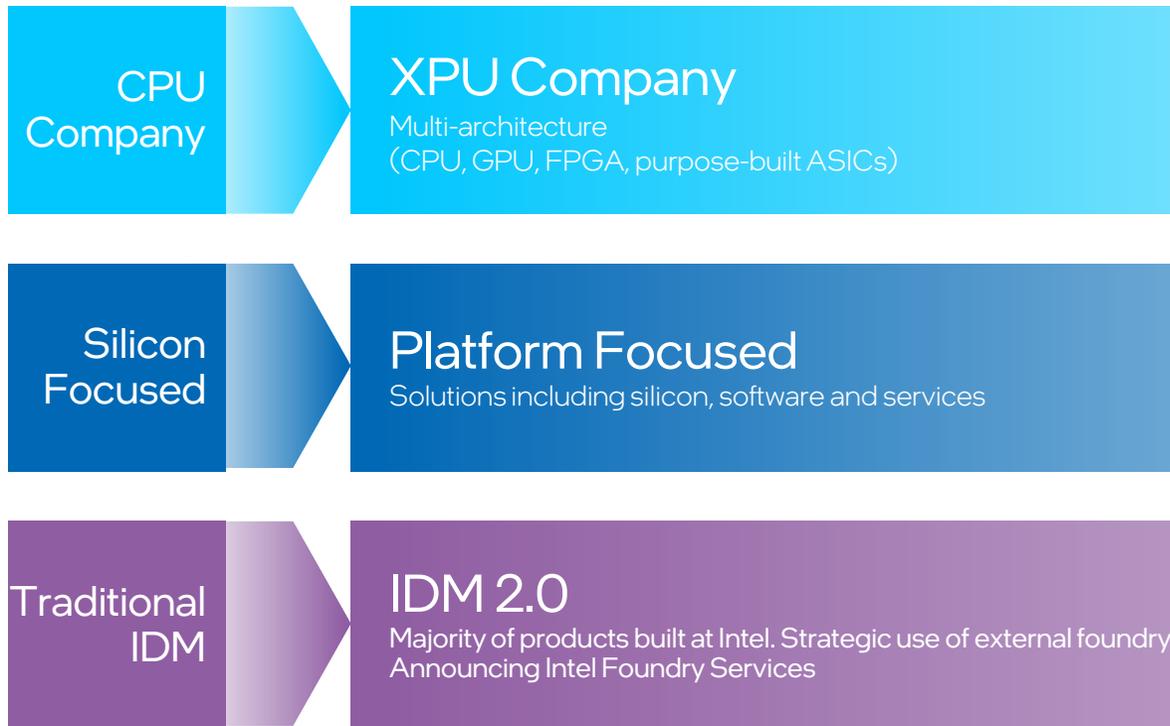*—Gina Raimondo, US Commerce Secretary, on CHIPS Act for America*

"The aim is to jointly create a state-of-the-art European chip ecosystem, including production. That ensures our security of supply and will develop new markets for ground-breaking European tech."
—Ursula von der Leyen, EU President, on the EU Chips Act

Intel's Transformation Journey

From a CPU-centered company to a multi-architecture XPU company

CPU Company → **XPU Company**
Multi-architecture
(CPU, GPU, FPGA, purpose-built ASICs)

Silicon Focused → **Platform Focused**
Solutions including silicon, software and services

Traditional IDM → **IDM 2.0**
Majority of products built at Intel. Strategic use of external foundry.
Announcing Intel Foundry Services

Platform

XPU

GPU

CPU

FPGA

Modern IDM

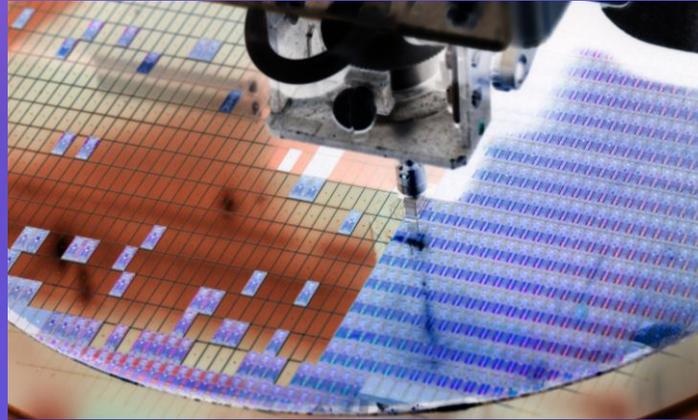# Delivering Leadership Manufacturing: IDM 2.0
Product Leadership, Supply Resilience, Superior Cost

Internal Factory Network

Intel's global, internal factory network for at-scale manufacturing
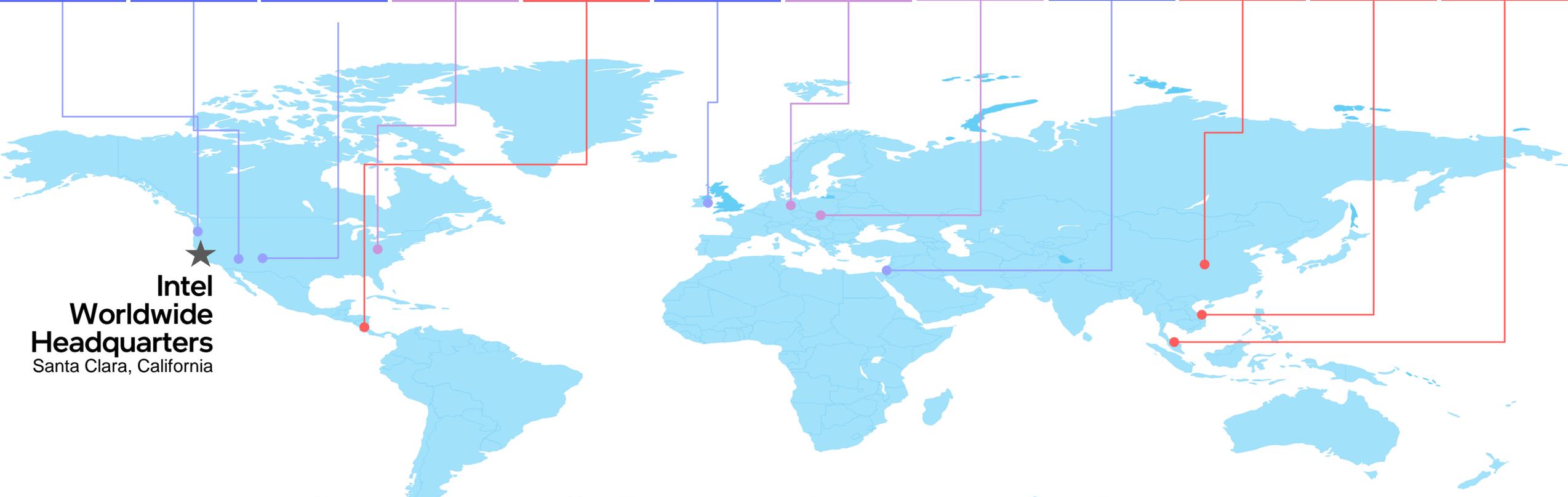
External Foundries

Expanded use of third-party foundry capacity

Intel Foundry

intel foundry services

Building a world-class foundry business, Intel Foundry Services

Leveraging Intel's leading-edge packaging & process technology & world-class IP portfolio

Oregon | Arizona | New Mexico | Ohio | Costa Rica | Ireland | Germany | Poland | Israel | Chengdu | Vietnam | Malaysia

Intel
Worldwide
Headquarters
Santa Clara, California

Geographically Diverse Manufacturing Capacity

■ Wafer Fabs ■ Assembly & Test ■ Future Site

Intel & Moore's Law : Silicon Technology

Sapphire Rapids Data Center	**Foundry**	**Foundry**		**Foundry**
Raptor Lake Client	**Custom ASIC** Networking	**Sierra Forest** Data Center		**Clearwater Forest** Data Center
Alder Lake Client	**Meteor Lake** Client	**Granite Rapids** Data Center	**Arrow Lake** Client	**Future Lake** Client
Intel 7	**Intel 4**	**Intel 3**	**Intel 20A**	**Intel 18A**
In HVM **Today**	Manufacturing Ready **Today**	Manufacturing Ready **H2 2023**	Manufacturing Ready **H1 2024**	Manufacturing Ready **H2 2024**

Between Now & 2025

* Select Products Shown. Based on internal estimates. Technology readiness timing does not necessarily indicate product production timing. Learn more at www.intel.com/PerformanceIndex.

Winning Developers and delivering better Products
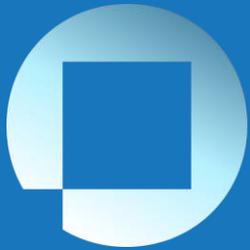
Open.	Choice.	Trust.	Enable Developers
Visit: Open.Intel			Foster Choice
			Build Confidential Compute

20
Years of Investment
Across hundreds of independent projects

#1
Linux Kernel Corporate Contributor
since 2007[1]
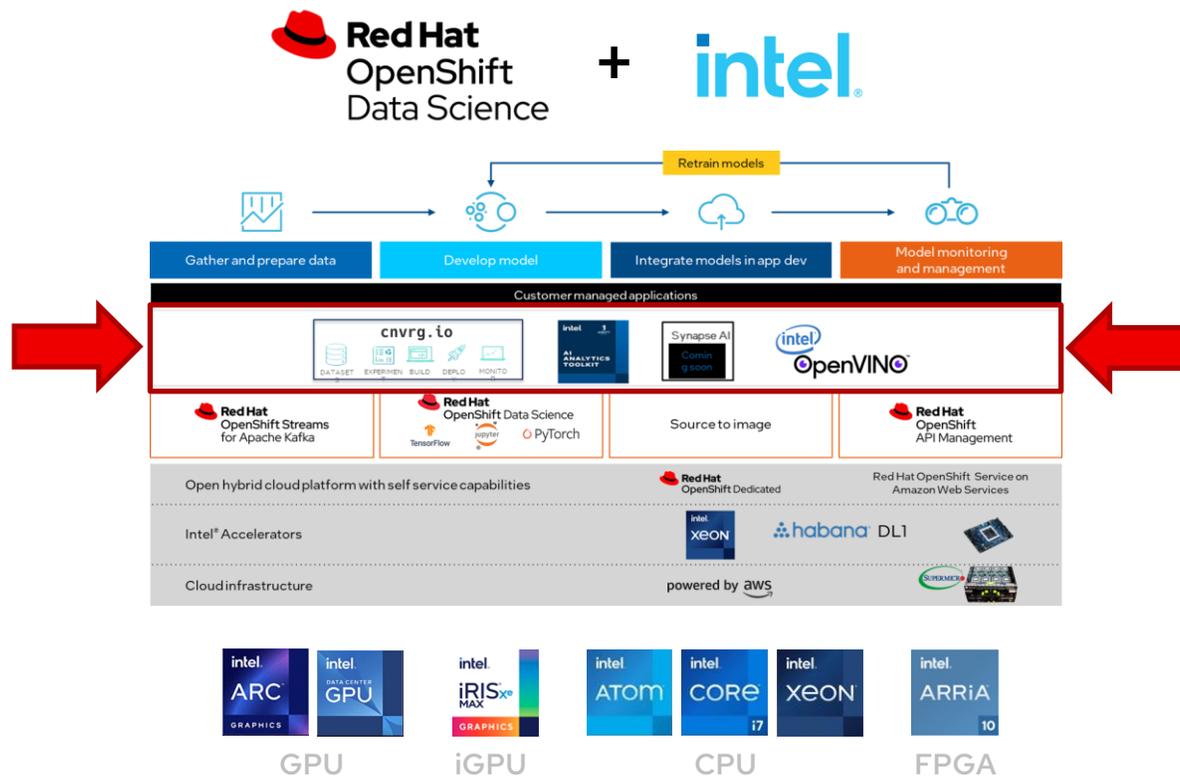
120+
Intel employed maintainers

700+
GitHub Projects

6
Architectures supported in oneAPI

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Red Hat | intel

Software Defined, Silicon Enhanced

▸ **Intel AI Analytics Toolkit** accelerates end-to-end ML and data analytics pipelines with frameworks and libraries optimized for Intel architectures

▸ **OpenVINO** toolkit accelerates edge-to-cloud, high-performance model inference

▸ **Cnvrg.io** extends Red Hat OpenShift Data Science enterprise-grade MLOps capabilities with out-of-the-box, end- to-end MLOps tooling

oneAPI

One Programming Model for Multiple Architectures and Vendors

Freedom to Make Your Best Choice

▶ Choose the best accelerated technology

Realize all the Hardware Value

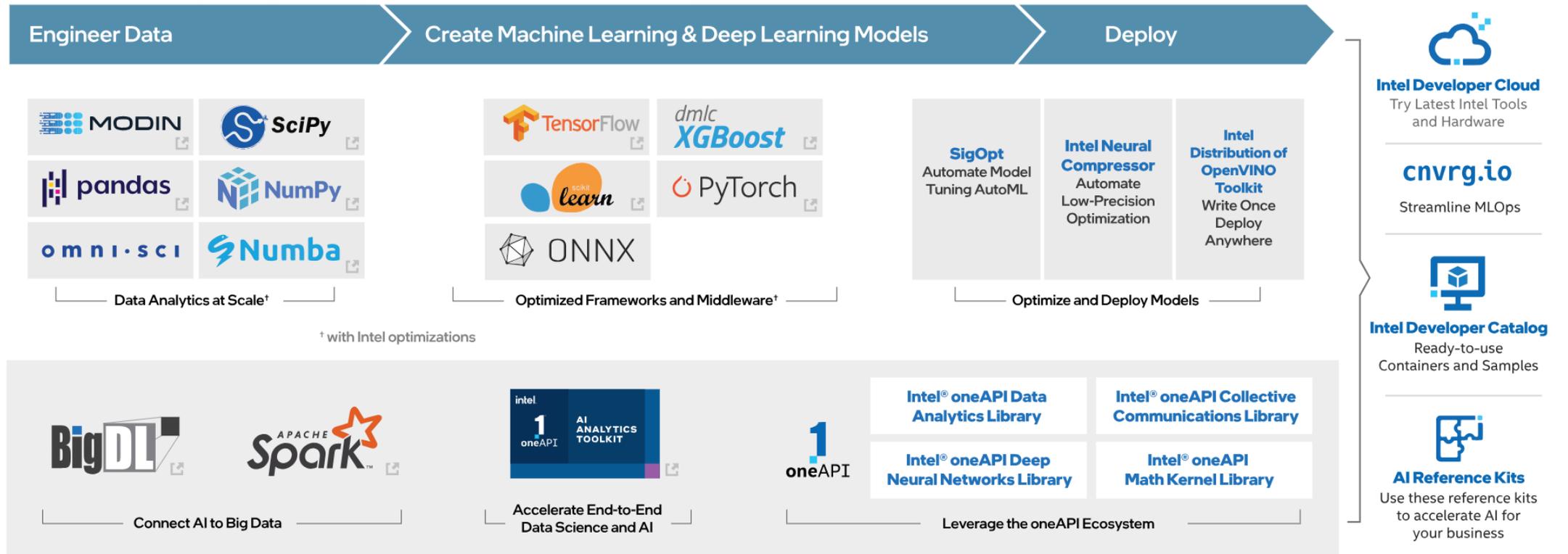▶ Performance across CPU, GPUs, FPGAs, and other accelerators

Develop & Deploy Software with Peace of Mind

▶ Open industry standards

▶ Compatible with existing languages and programming models including C, C++, Python, SYCL, OpenMP, Fortran, and MPI
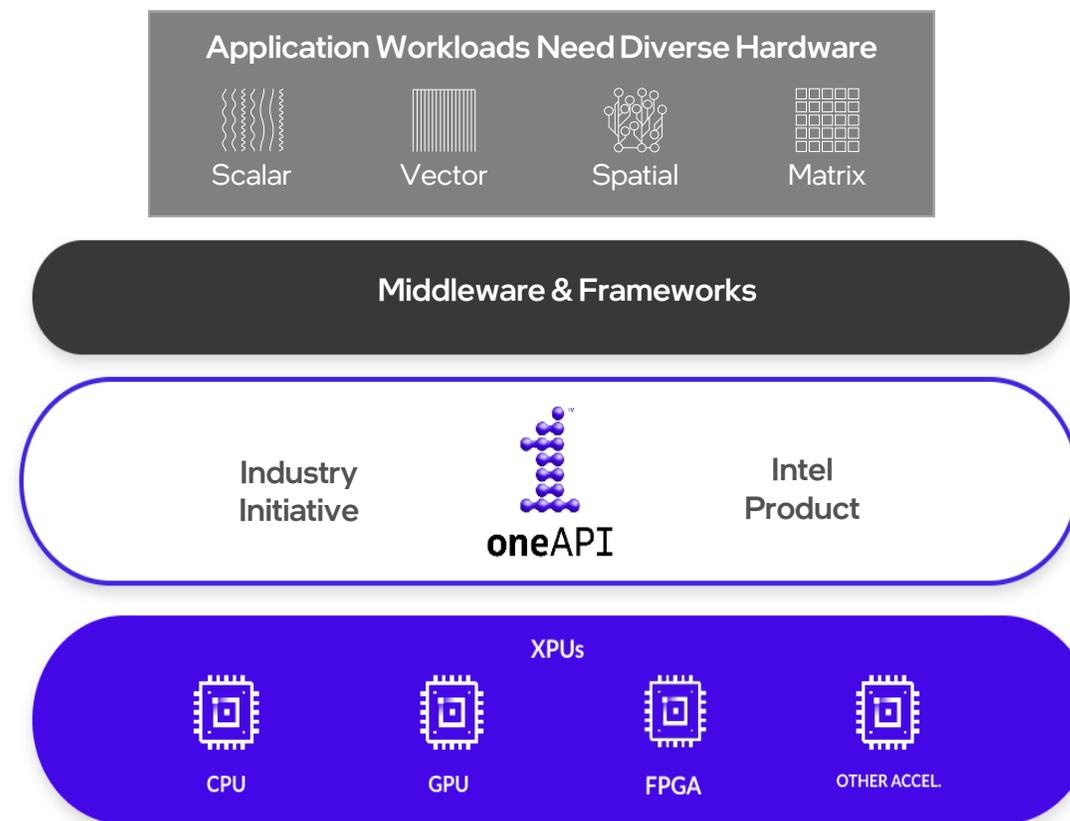
AI & Machine Learning Developer Tools

Intel optimized development tools help you prepare, build, deploy, and scale your AI

DCAI Lab i Stockholm

Intel Operators: Greater Performance, Agility and Scalability

Take full advantage of the latest compute hardware

▶ Built into the architecture of Kubernetes

▶ Expand application functionality without a revision of the OS

▶ Build, migrate, and modernize applications using Intel memory, AI and analytics operators

▶ Seven validated Intel Operators for Red Hat OpenShift can be downloaded from the Red Hat Ecosystem Catalog

Intel FPGA PAC N3000, Wireless FEC Accelerator (Intel® vRAN Dedicated Accelerator ACC100), OpenVINO and Intel oneAPI AI Analytics

Intel® AI Engines for Intel® Xeon® CPUs

Boost the performance of the entire AI pipeline

Intel® AI Engines
Intel® Advanced Matrix Extensions (Intel® AMX)
Intel® Advanced Vector Extensions 512 (Intel® AVX-512)

Intel® Security Engines
Intel® Software Guard Extensions (Intel® SGX)
Intel® Trust Domain Extensions (Intel® TDX)
Intel® Crypto Acceleration

Intel® HPC Engines
Intel® Advanced Vector Extensions 512 (Intel® AVX-512)
Intel® Advanced Matrix Extensions (Intel® AMX)
Intel® Data Streaming Accelerator (Intel® DSA)

Intel® Network Engines
Intel® QuickAssist Technology (Intel® QAT)
Intel® vRAN Boost
Intel® Dynamic Load Balancer (Intel® DLB)

Intel® Analytics Engines
Intel® In-Memory Analytics Accelerator (Intel® IAA)
Intel® Data Streaming Accelerator (Intel® DSA)
Intel® QuickAssist Technology (Intel® QAT)

Intel® Storage Engines
Intel® Data Streaming Accelerator (Intel® DSA)
Intel® QuickAssist Technology (Intel® QAT)
Intel® Volume Management Device (Intel® VMD)

Up to

10x higher

PyTorch performance for both real-time inference and training workloads with built-in Intel AMX BF16 vs. prior generation with FP32[2]
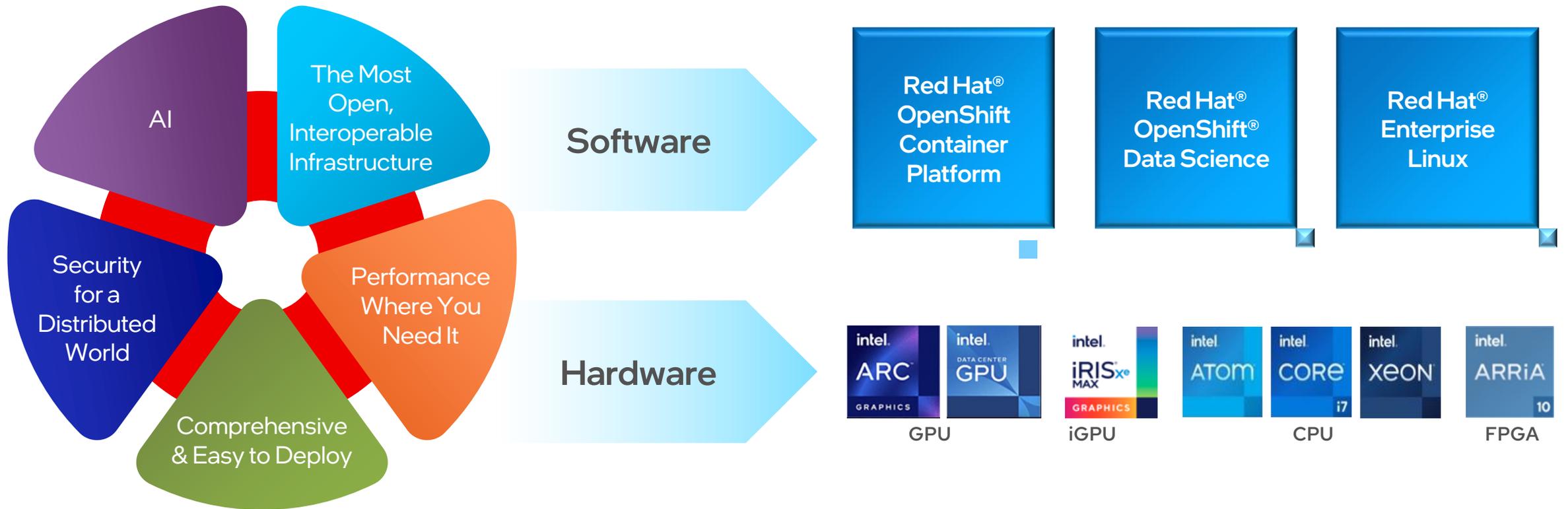
Real-Time Inference Performance

Up to

6.2x higher

real-time Natural Language Processing inference performance (BERT) on 4th Gen Intel Xeon Platinum 8480+ with Intel AMX BF16 vs. prior generation with FP32[3]

A New Digital Infrastructure Tailored for You

The Intel® solution for Red Hat OpenShift Container Platform scales for today & tomorrow

AI

The Most Open, Interoperable Infrastructure

Security for a Distributed World

Performance Where You Need It

Comprehensive & Easy to Deploy

Software

Red Hat® OpenShift Container Platform

Red Hat® OpenShift® Data Science

Red Hat® Enterprise Linux

Hardware

intel. ARC GRAPHICS

intel. DATA CENTER GPU

GPU

intel. iRIS xe MAX GRAPHICS

iGPU

intel. ATOM

intel. CORE i7

CPU

intel. XEON

intel. ARRiA 10

FPGA

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Software Defined, Silicon Enhanced

▸ **Let's get started**

- <u>Intel Ecosystem Developer Resources website: Red Hat</u>

- <u>Intel and Red Hat developer program</u>

- <u>Intel Developer Zone</u>

- <u>Intel AI Developer zone</u>

Red Hat | **intel.**

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25

Years of Partnership

Thank you!