

arm

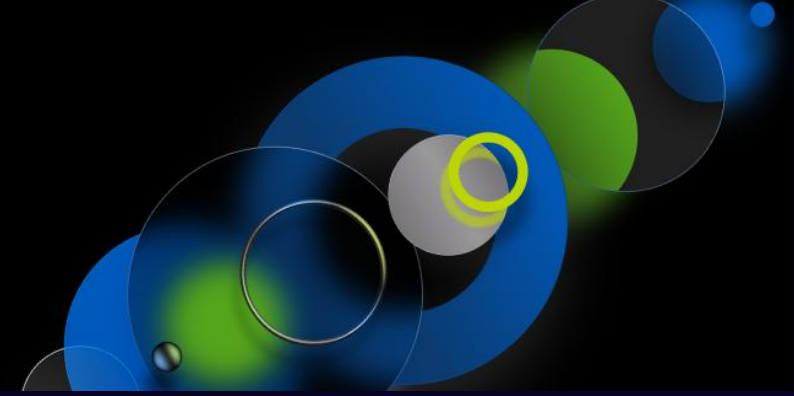
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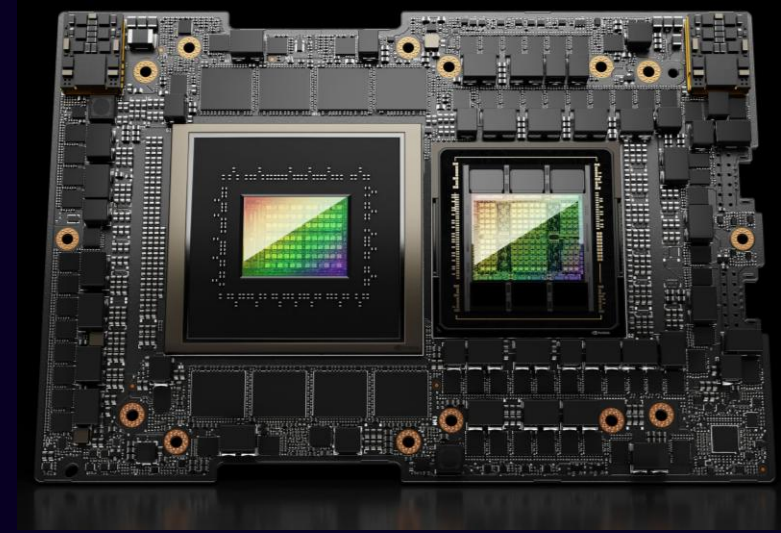
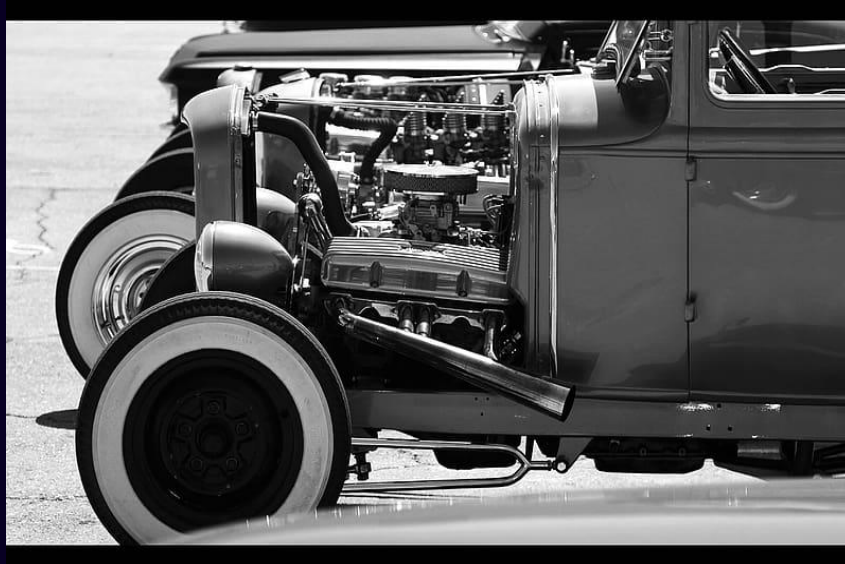


Building Europe's Edge in the Age of Chiplets

Christophe Frey
VP EU engagements

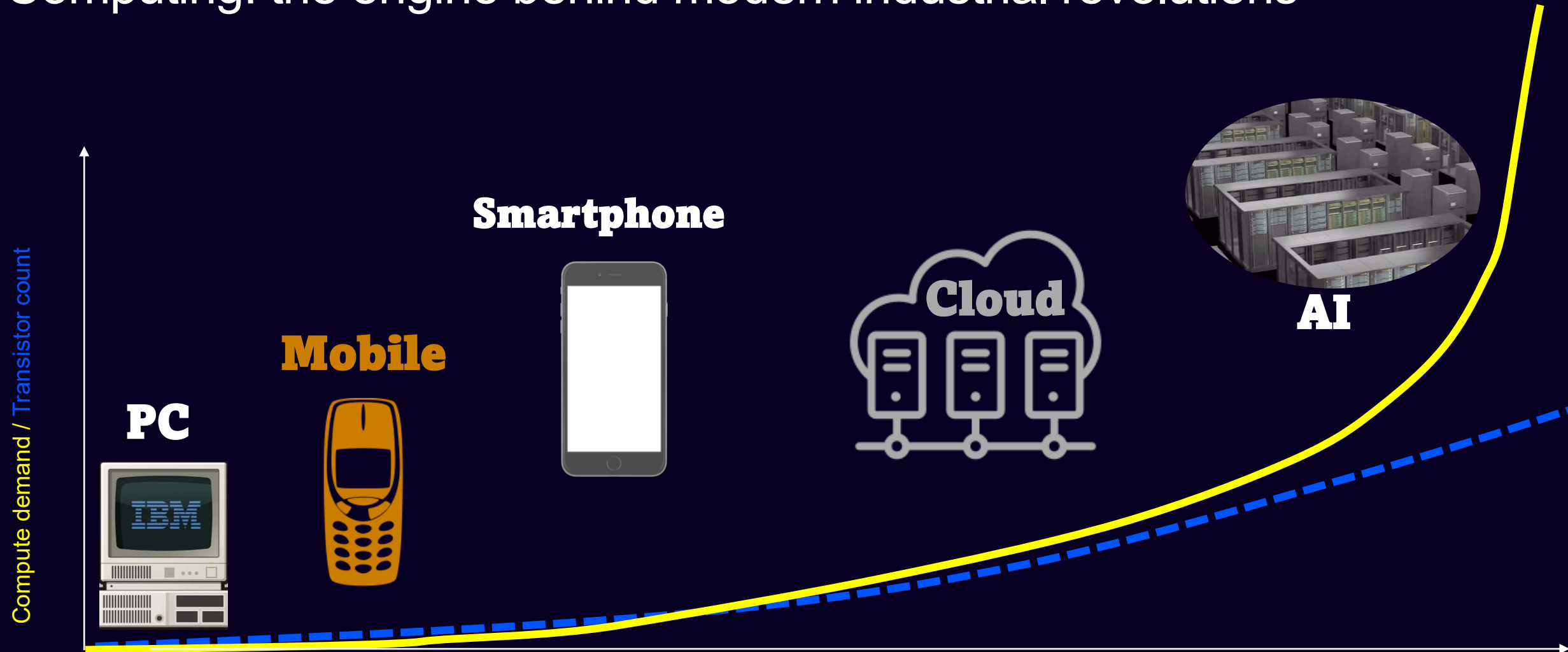
Engines of the past and of today

Each industrial revolution was powered by an engine.



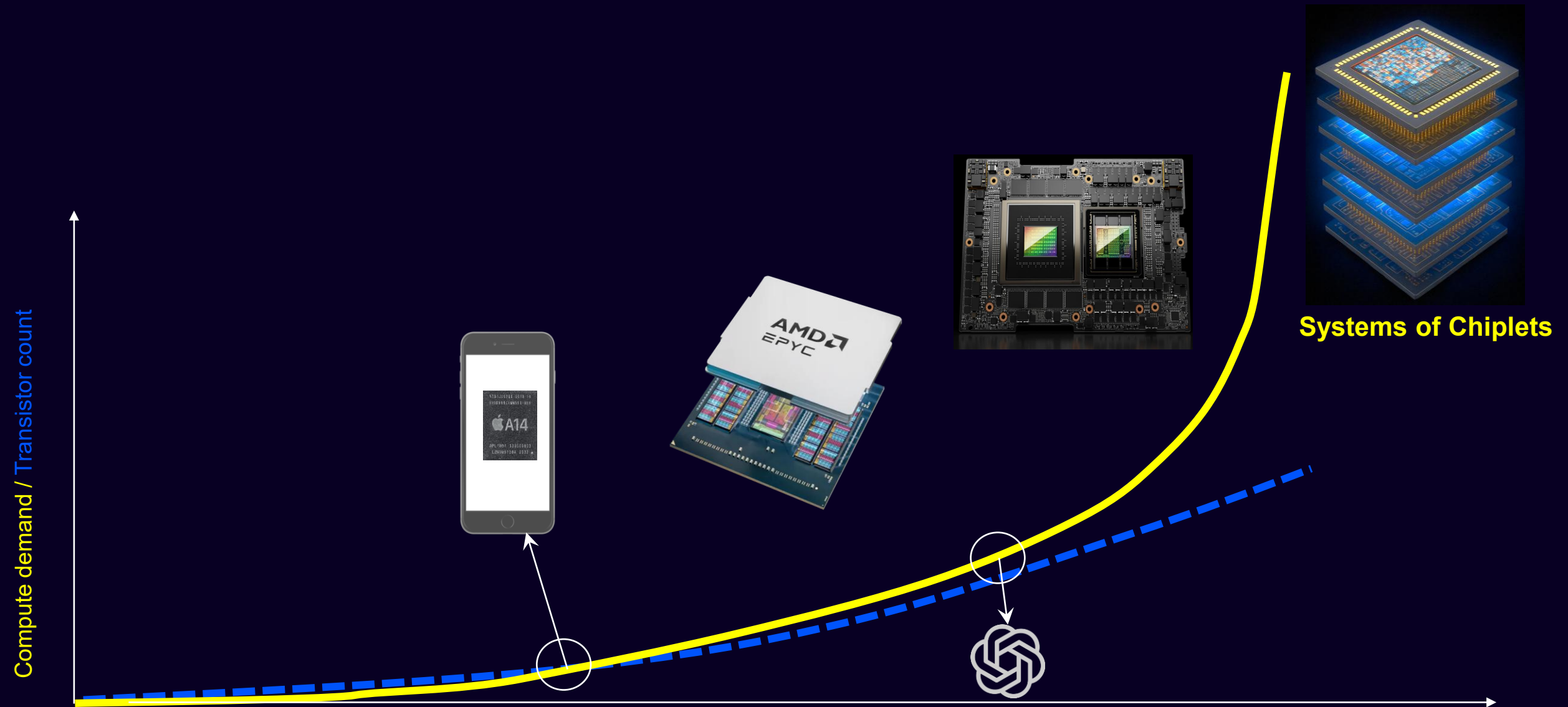
Today, the AI revolution runs on compute.

Computing: the engine behind modern industrial revolutions

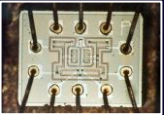
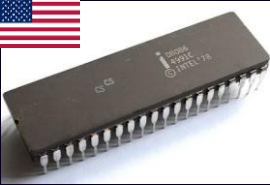


Semiconductors don't just follow **Moore's Law** anymore → they follow **compute demand**.

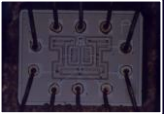
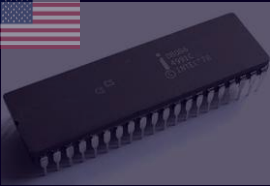
How to meet the demand?



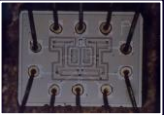
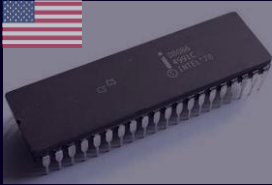
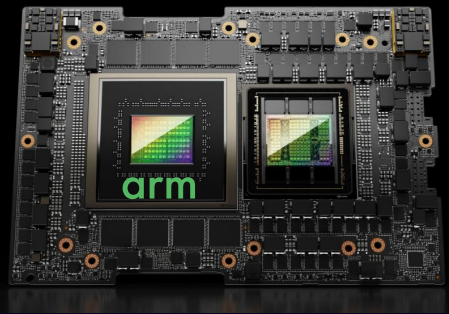
Regional leadership of computing chips

Best R&D	  
Killer Product	 
Best (compute) chip design	 
Great Manufacturing	 

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arm	1960-1980s	1990-2000s

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arm	1960-1980s	1990-2000s	2010-2020s	2030

The Road to an Open Chiplet Marketplace

Multi-vendor chiplet marketplace

- *Silicon qualification & reliability*
- *Profiles & capabilities*
- *Test & debug*
- *Software standards*
- *Mechanical, thermal & power*

Semi-custom chiplet ecosystem

- *Multi-vendor*
- *Protocol, transport & PHY standardization required for interoperability*

Today

ISS Europe
speech in March

Single vendor
Proprietary Chiplets

arm

ASML

CAN

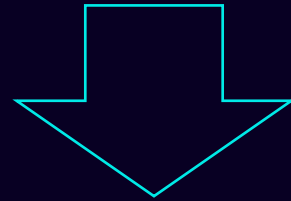


Arm Chiplet System Architecture

PHYSICAL & PROTOCOL
COMPATIBILITY

DESIGN PARTITIONING AND
SYSTEM MANAGEMENT

SOFTWARE COMPATIBILITY
WITH ARM BSA



Foundation Chiplet System Architecture

arm



OPEN
Compute Project®

From integration to disintegration

Monolithic chips cannot scale anymore

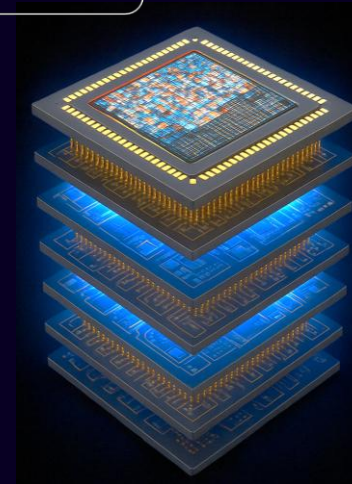
EDA vendors enabling system level design w/ digital twins

Foundries building more than transistors (interposers, photonics..)

Startups emerging with a chiplet first strategy

Partitioning : divide to conquer approach

- Better system
- More opportunities for more players... in every region in the world



Optimized data flow (photonics, 3D vias)

Optimized memory chiplet

AI accelerator chiplet

Power efficient compute chiplet

Specialized Voltage regulator chiplet

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