



INTEL IN ARIZONA

National Association of Counties

Jason Bagley

Government Affairs Manager

September 28, 2018

INTEL IS EVOLVING.

To a company that powers the data center
and billions of smart, connected devices

INTEL'S VISION:

If it's **smart** and **connected**, it's **best** with **Intel**.

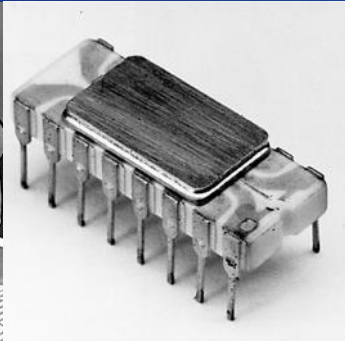
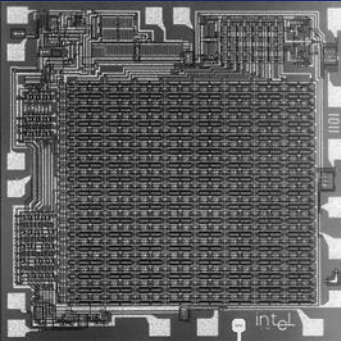
ed (110.05 k/s)
ted (118.05 k/s)
sted (121.71 k/s)
hellohello
longhorn

A full-page background image showing a view of Earth from space. The horizon of the planet is visible, with a bright light source (the sun) just below it, creating a lens flare and illuminating the scene. The text is overlaid on this image.

INTEL'S FOUNDATION: MOORE'S LAW

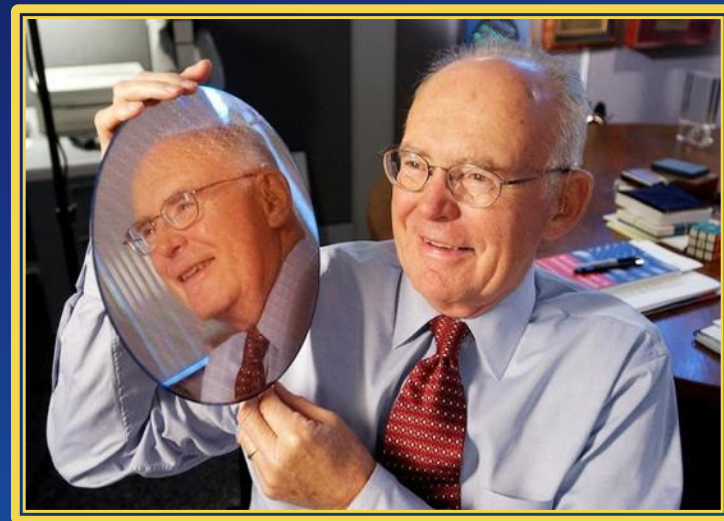
HISTORY OF INTEL

- **1968:** Intel is founded by Robert Noyce and Gordon Moore
- **1971:** World's first microprocessor
- **Now:** Innovation that expands the reach and promise of computing



EXECUTING TO MOORE'S LAW

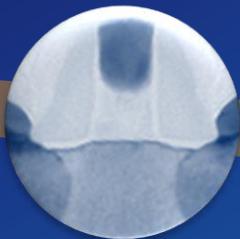
Enabling new devices with higher functionality and complexity while controlling power, cost, and size



Strained Silicon



90 nm



65 nm

Hi-K Metal Gate



45 nm



32 nm

3D Transistors



22 nm



14 nm



10 nm



7 nm

WHAT IF MOORE'S LAW IS APPLIED TO...

TRANSPORTATION?



We could travel to the sun on a single gallon

AGRICULTURAL PRODUCTIVITY?



We could feed the world's population with 1km² of land

SPACE TRAVEL?



We could travel at 300x speed of light

SI TECHNOLOGY IS BECOMING RARE

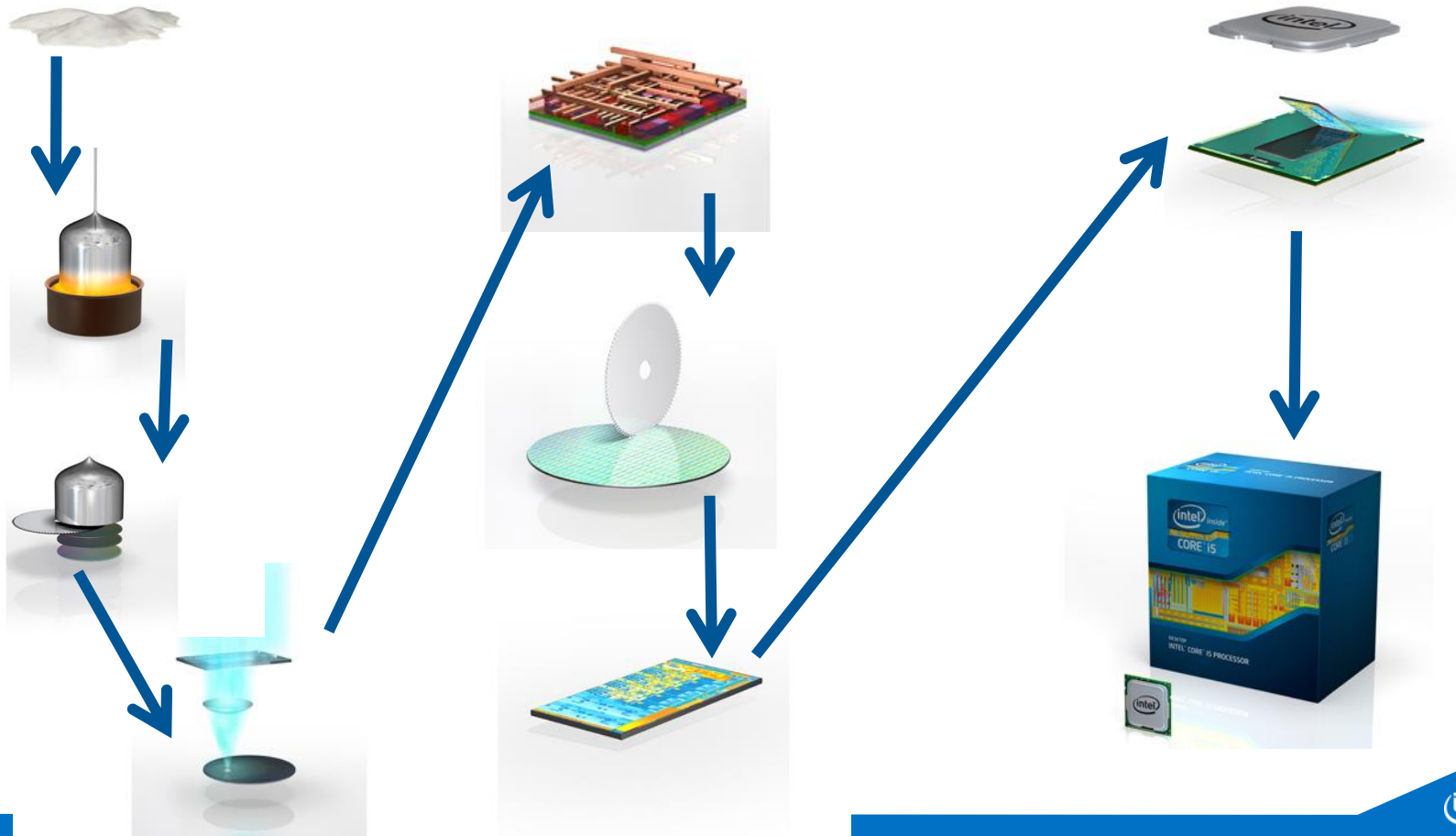
NUMBER OF PLAYERS WITH A LEADING EDGE LOGIC FAB



Other names and brands may be claimed as the property of others.

Source: Amalgamation of analyst data and Intel analysis.

What the Heck Does Intel Make?



INTEL ARIZONA

- One of the largest and most complex semiconductor manufacturing sites in the world
- Capital investment of \$28 billion in manufacturing at the Ocotillo site since 1996 (*Intel established AZ operations in 1979*)
- Manufacturing Intel's latest products
- One of the most diverse Intel sites: Manufacturing, Research & Development, Assembly Test Technology Development, Logistics, Chip Design, Marketing, Internet of Things, IT, Finance, HR, Legal
- Largest employer in Chandler, 7th largest in Arizona, largest manufacturer

INTEL ARIZONA, CONT.

- 11,000 employees - \$148,000 average total compensation
- \$1.7 billion annual payroll
- \$500 million invested in R&D each year
- \$5.3 billion annual economic impact to Arizona
- \$900 million spent with Arizona-based vendors
- \$432 million direct and indirect state & local taxes
- Intel generates more than 2X state & local taxes per employee than the average contribution made by all workers in the state
- Intel operations responsible for over 54,000 jobs in Arizona

CHANDLER CAMPUS

APPX. 154 ACRES



OCOTILLO CAMPUS

700 ACRES IN SOUTH CHANDLER



\$7 BILLION INVESTMENT IN INNOVATION

- Over next 3-4 years:
- Complete Fab42
- Create 3,000 new permanent Intel jobs
- Create 10,000 new jobs overall
- 7nm process technology
- World's most advanced semiconductor factory



JUST HOW MUCH IS \$7 BILLION?

- Fleet of 20 Boeing 747s
- 10 Hoover Dams
- 27 times around the Earth (dollar bills laid end to end)
- Counting numbers from 1-7 billion, 24 hours per day, 7 days per week, it would take 665 years
- Shopping spree—if you spent \$20 per second, it would take 4,046 days or 11 years to spend \$7 billion

HOW SMALL IS 7 NANOMETERS?

- 1 nm is 1 billionth of a meter
- Your fingernails grows 1 nm per second
- A strand of human DNA is 2.5 nm in diameter
- 7 nm is about 1/10,000th the width of a human hair
- It's like comparing a grape to the size of the Earth



INTEL SITE SELECTION

INVESTING IN THE 21ST CENTURY

- Intel sites worldwide compete against each other for investment
- Key decision points for selecting a site:
 - Availability and cost of infrastructure
 - Workforce
 - AZ site has one of the highest skilled semiconductor manufacturing employee base in the world
 - Tax treatment
 - Regulatory environment

