

Intel Capital

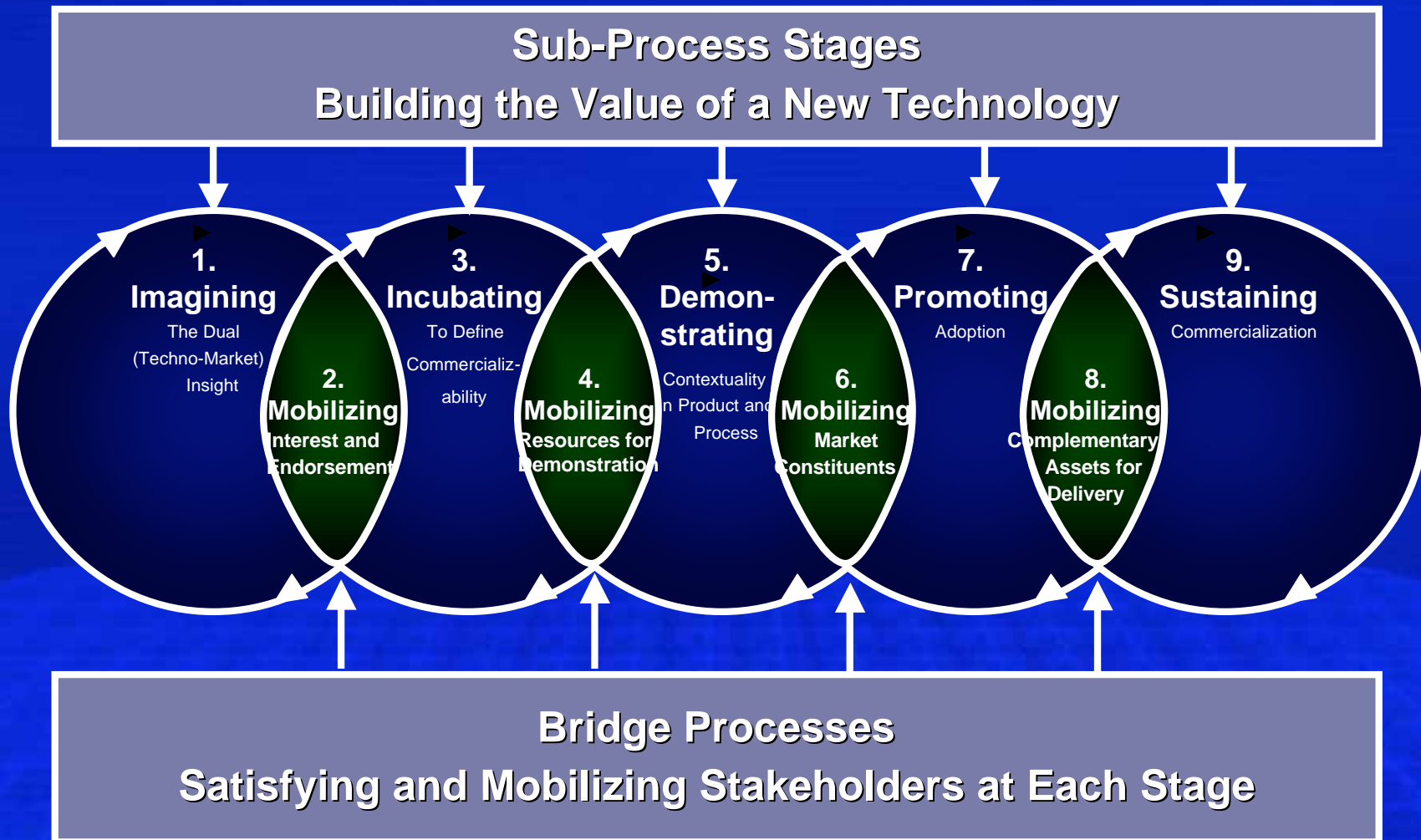
Commercializing Nano

Nanotech 2005

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intel

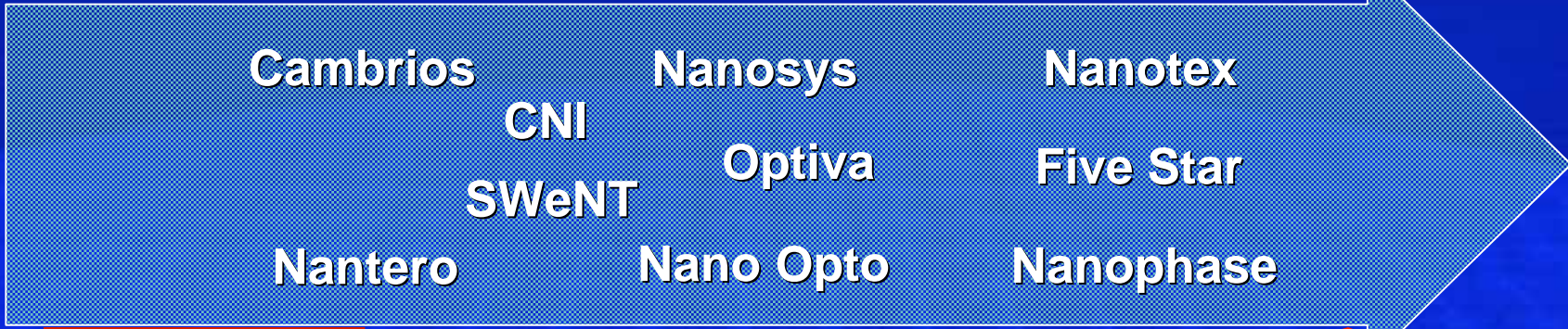
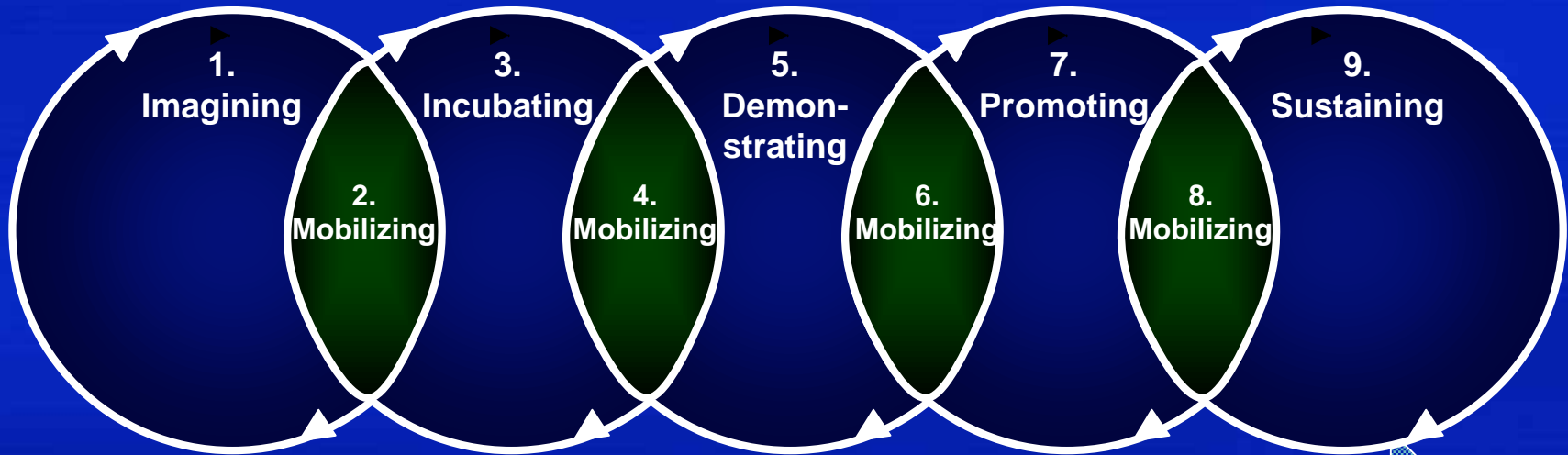
Technology Commercialization



What Inhibits / Accelerates

- **Barriers to commercialization**
 - Revolutionary new technology; not backwards compatible
 - Mobilization gets ahead of processes
- **Accelerates commercialization**
 - Improves existing product or method, may be substitute
 - Sold through existing channels with support/service
 - Technology easy to characterize
 - Targets “trivial applications”

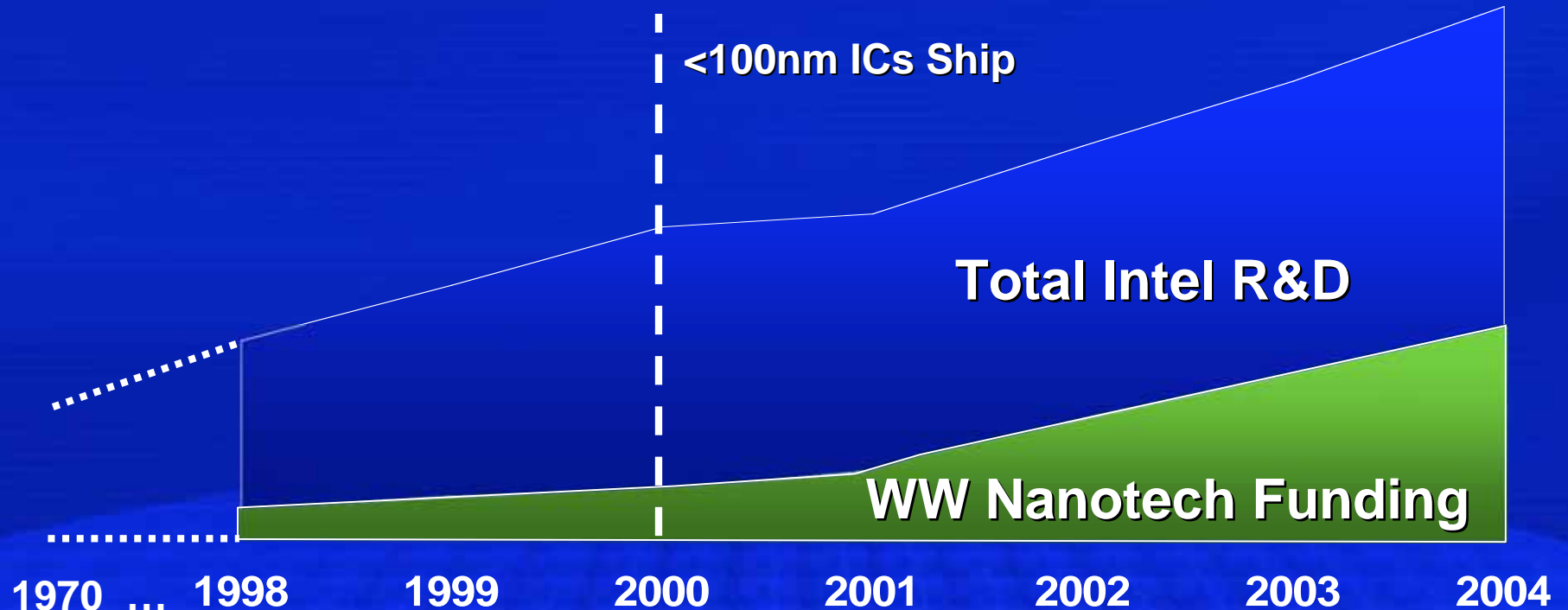
Nano Examples



Risk
Over hyped
Over accelerated

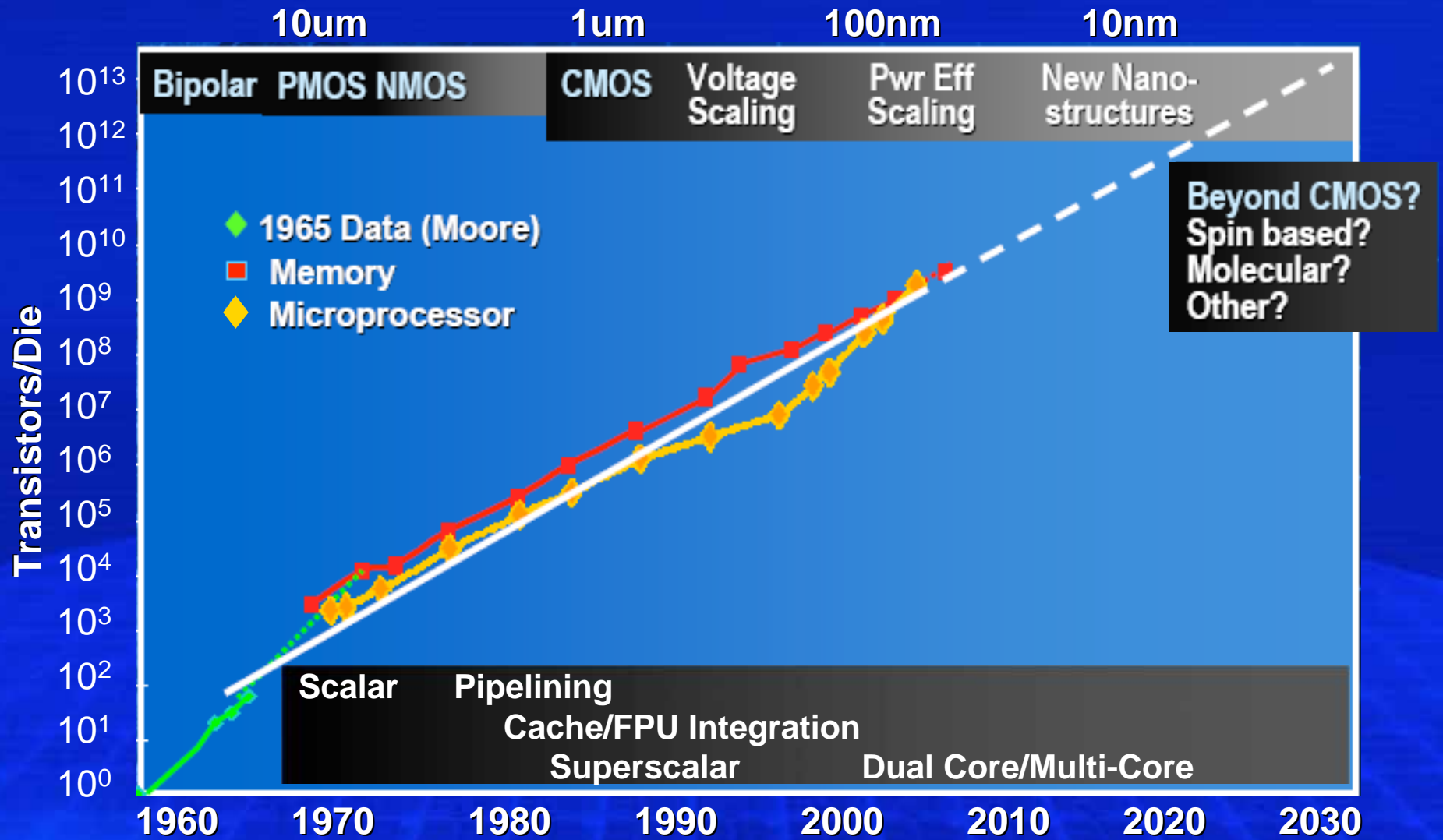
Skipping Stages

We've Reached Nano in ICs...



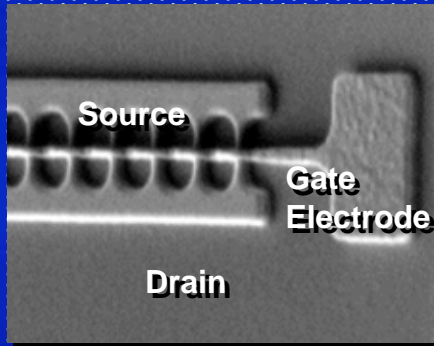
>30yrs and \$B's Invested to Reach Nano-ICs

...But We're Not Done Yet

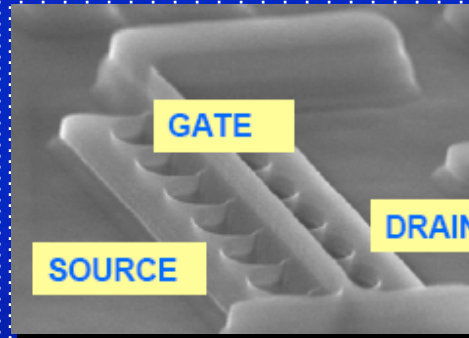


IC Nanotech Research

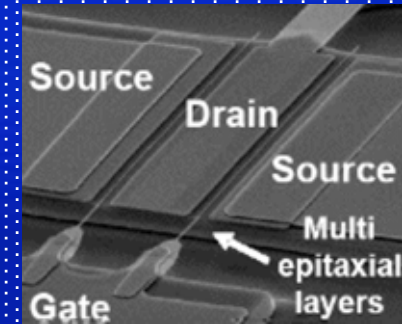
Tri-Gate Architecture



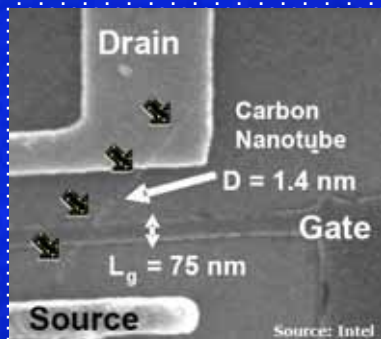
- Silicon Body
- Nanowire
- Nanotubes



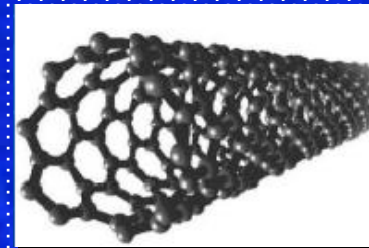
Compound Semiconductor



Carbon Nanotube



- Conducting or Semi-conduct
- Transistor
- Interconnect



Commercialization & Nanotech

- Commercialization takes time
- Skipping steps leads to failure
- Applications w/existing infrastructure may be accelerated

“For a successful technology, reality must take precedence over public relations, for nature cannot be fooled.”

- *Richard Feynman*

Intel Capital Approach

- **Look Inside**
- **Team up with Experts**
- **Think Globally**
- **Use a Strategic Lens**

Conclusions

- **Expect Nanotech winners**
...will be few and far between
- **Ambition and innovation abounds**
...but isn't sufficient
- **Entrepreneurs need clear focus**
...and partners to help you find commercial success
- **Industry needs more coordination**
...to accelerate technology commercialization

Thank You



*"Smaller, more powerful chips
allow me to have a smaller head."*