



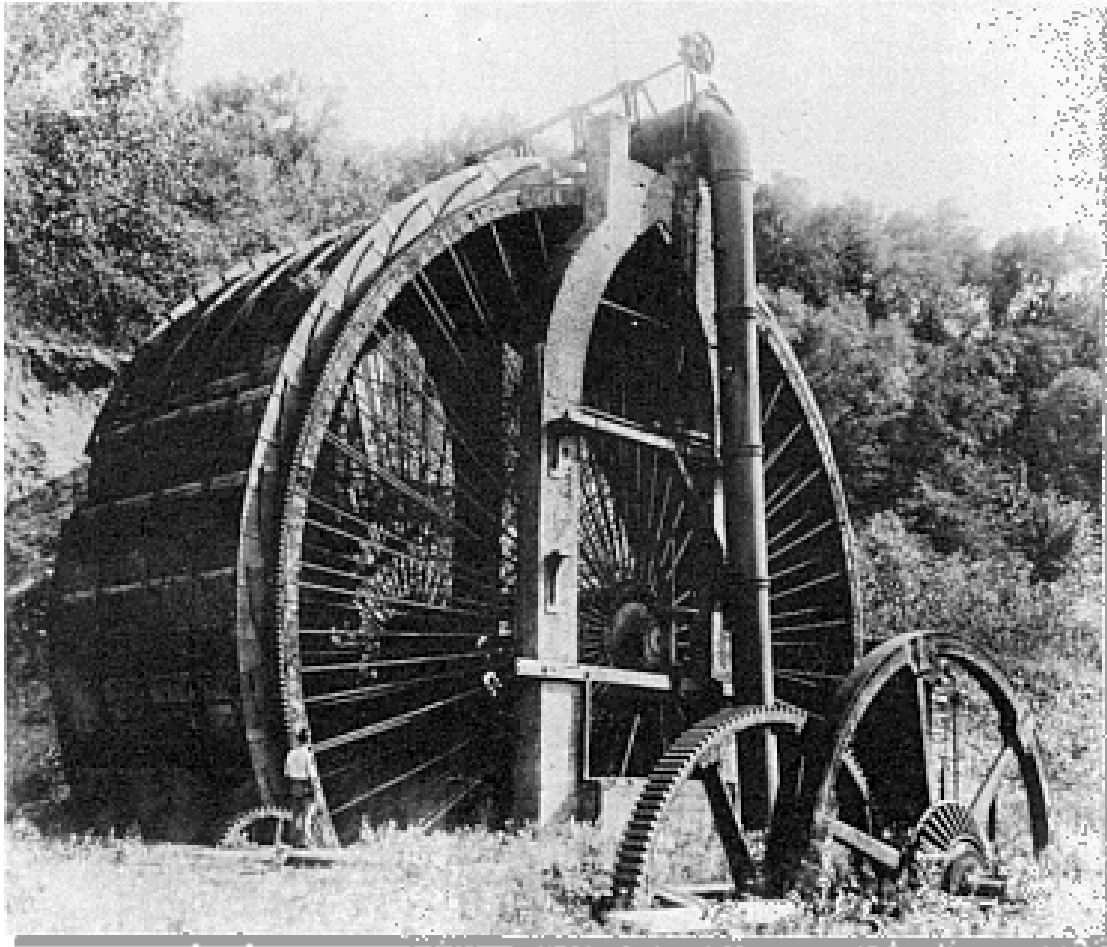
THE BIG SWITCH

Implications for Hosting Industry

Nicholas Carr

Microsoft Global Hosting Summit 2010

Burden's wheel: 1850

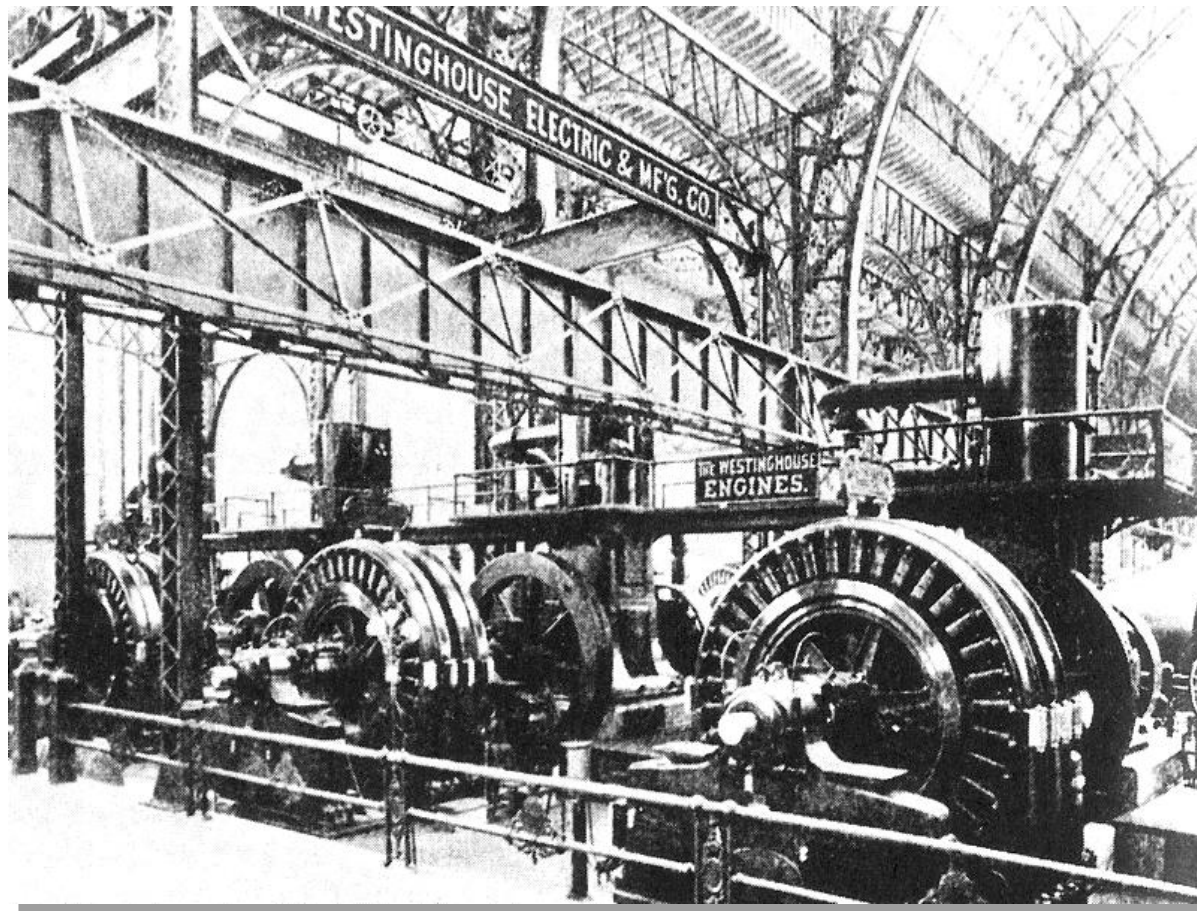


Burden's wheel: 1920



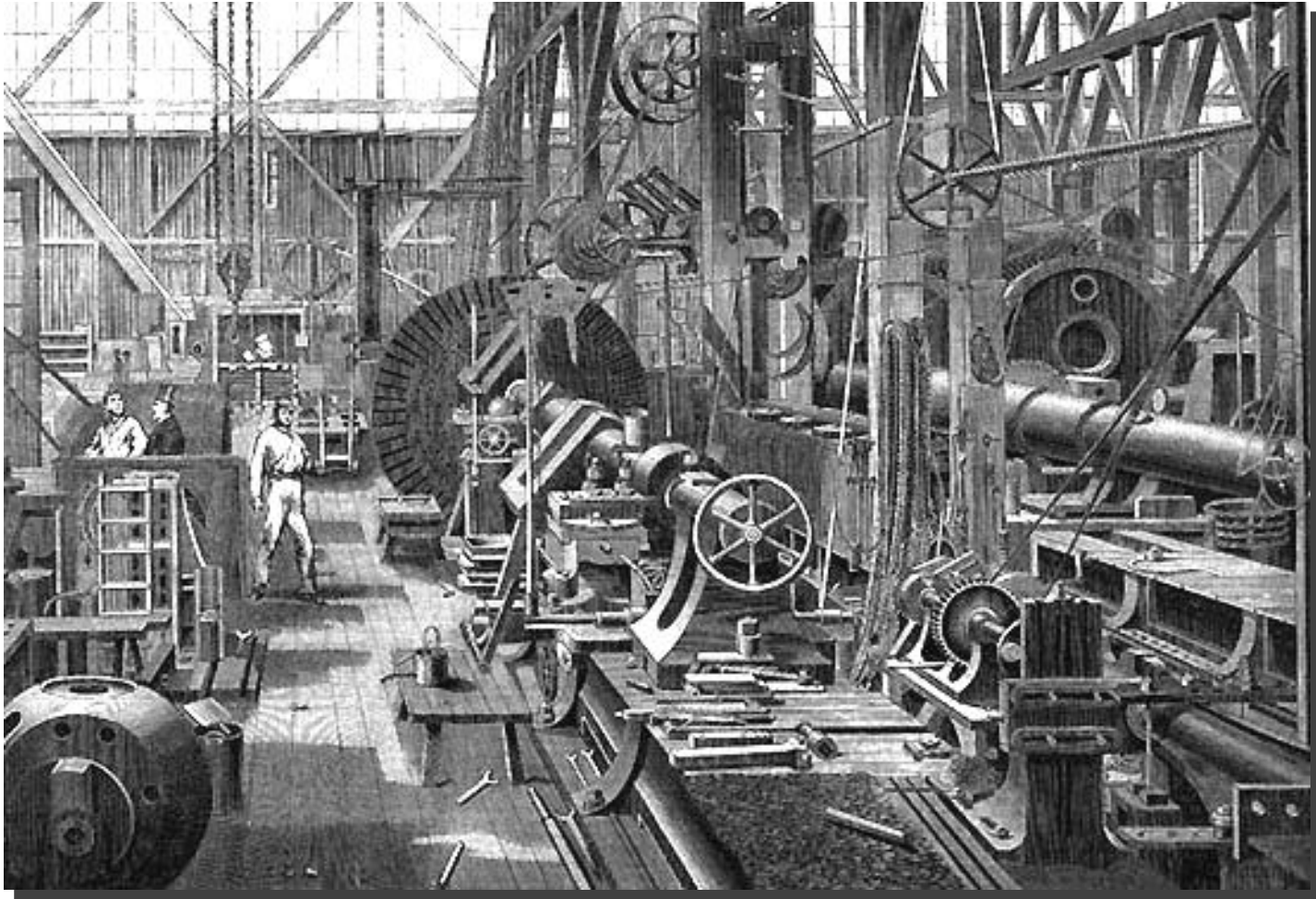
Source: Smithsonian Institution

Westinghouse's utility



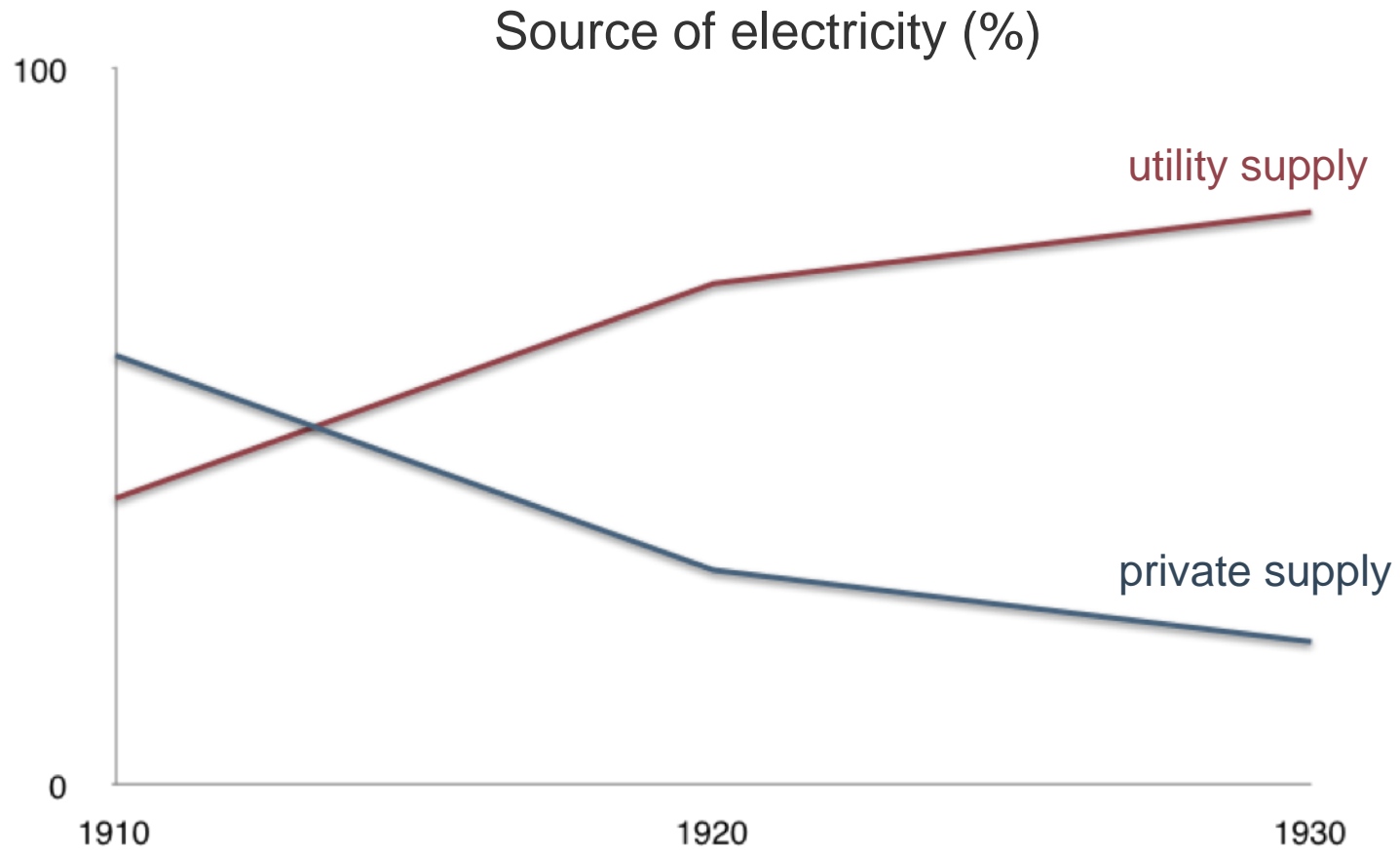
Source: Public Domain

Enterprise systems: 1900



Source: Public Domain

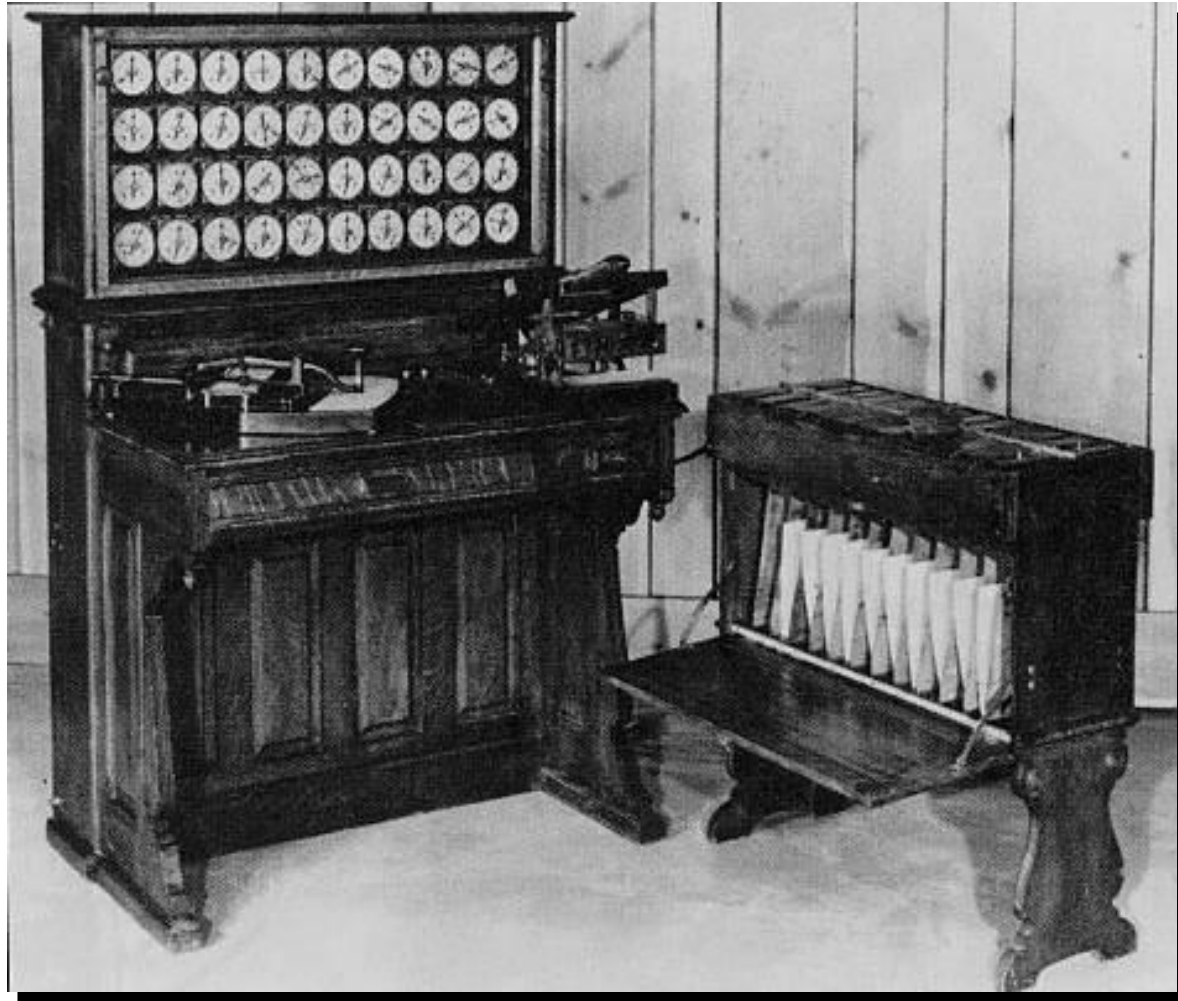
Embrace of utility power



Source: Carr, *The Big Switch*

Now it's computing's turn

Corporate data center: 1900



THE BIG SWITCH

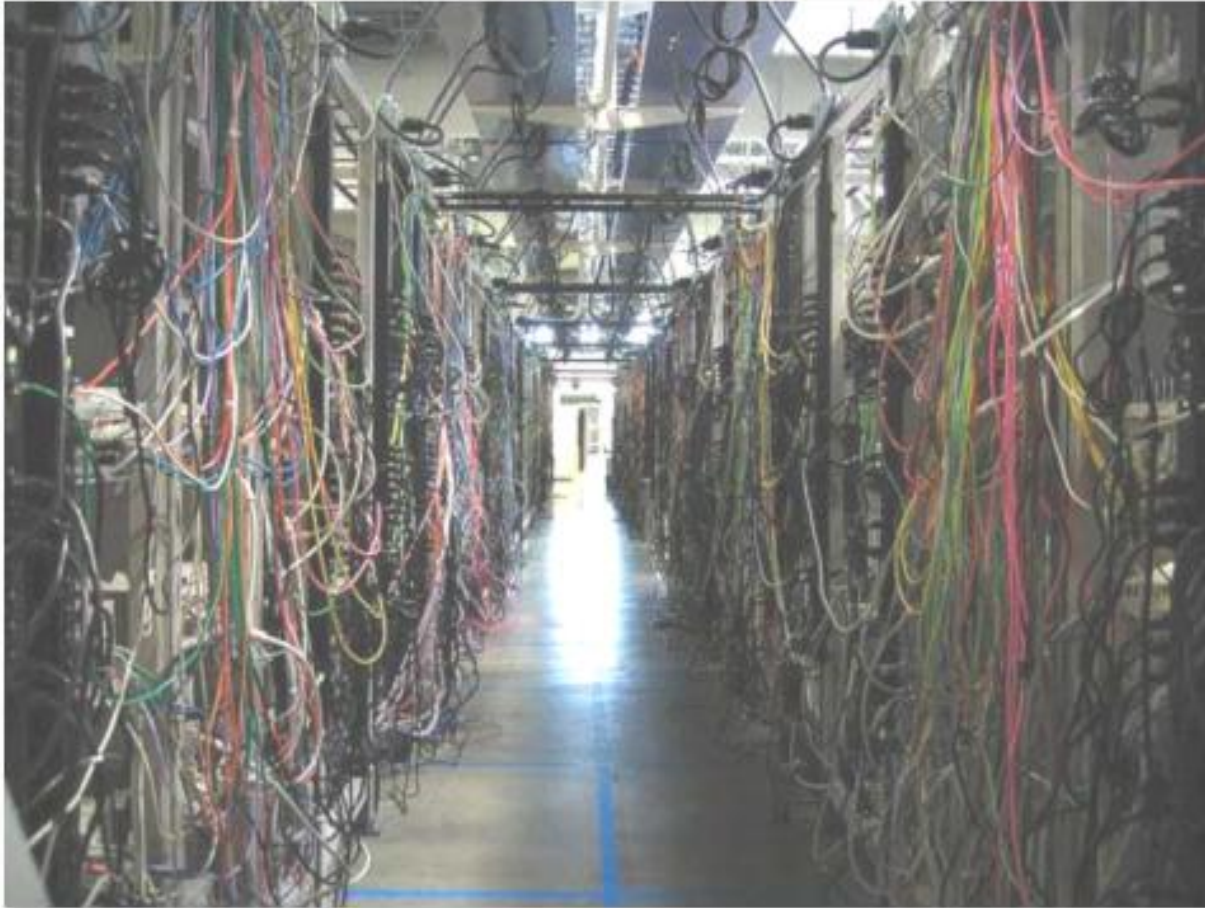
Source: Public Domain

Corporate data center: 1960



Source: Vermont State Archives

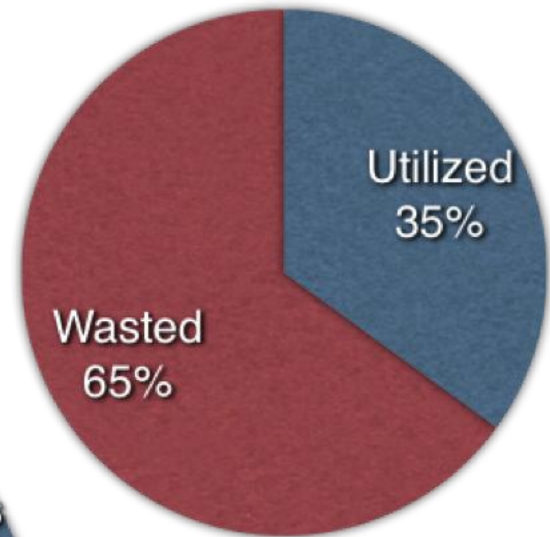
Corporate data center: 1990



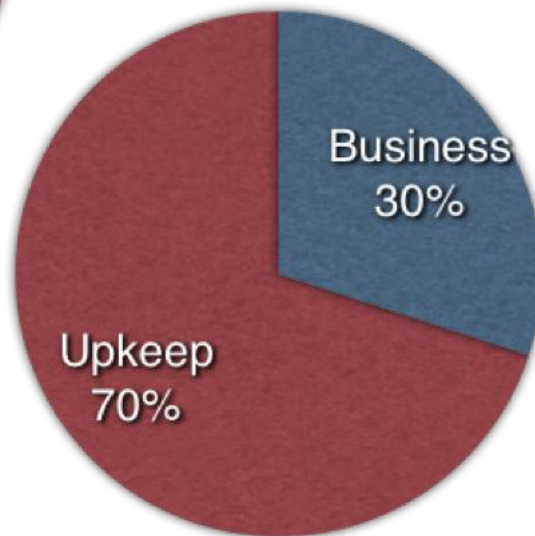
Inefficiencies of fragmentation



Server capacity



Storage capacity

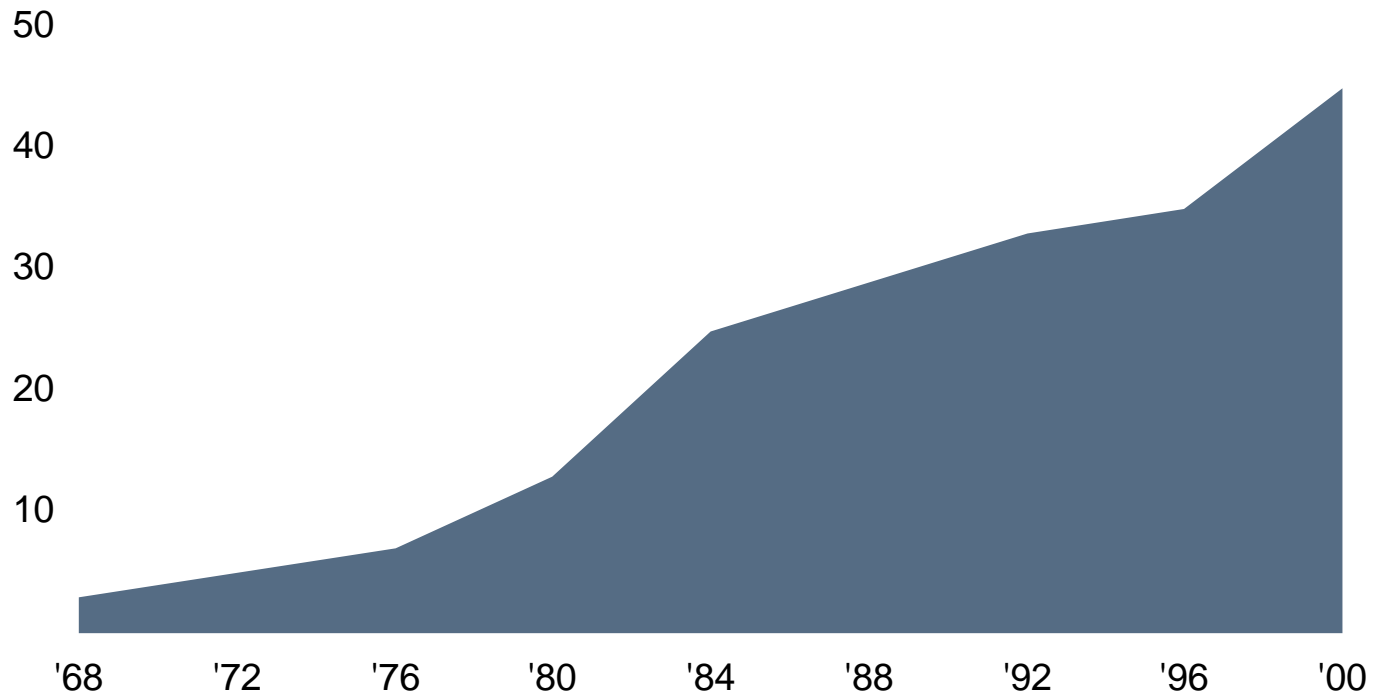


Labor

Source: Carr, *Big Switch*

The “IT tax”

IT as % of capital equipment budget



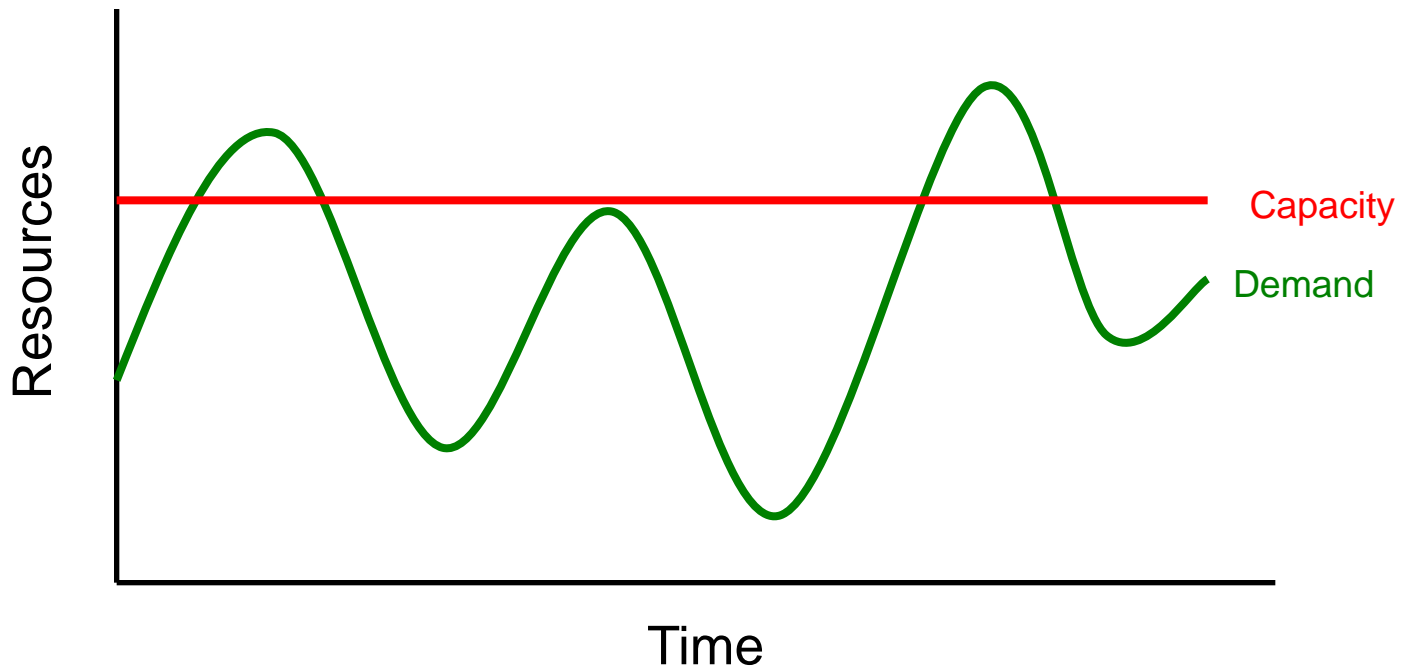
Source: US Labor Bureau

Corporate data center: 2010

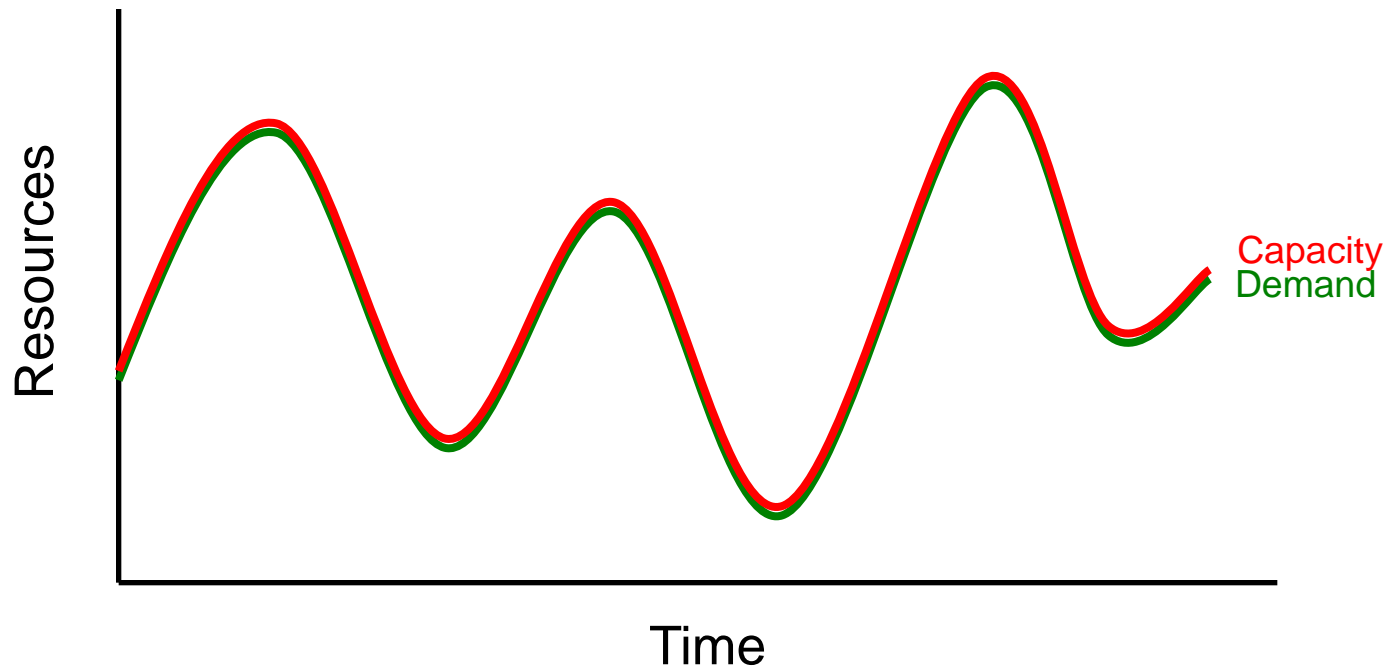


Source: Microsoft

The economics of fragmentation

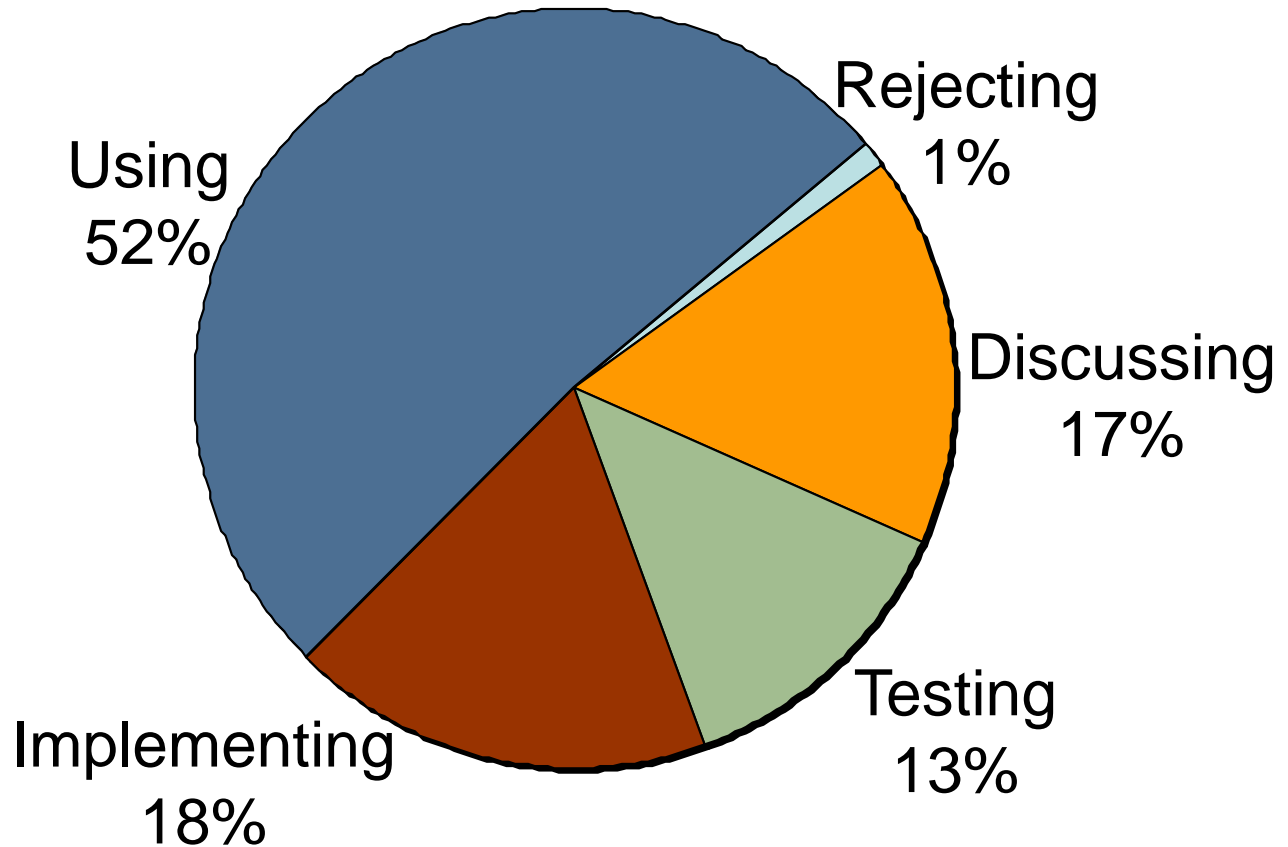


The economics of utility supply



“Cloud computing” goes mainstream

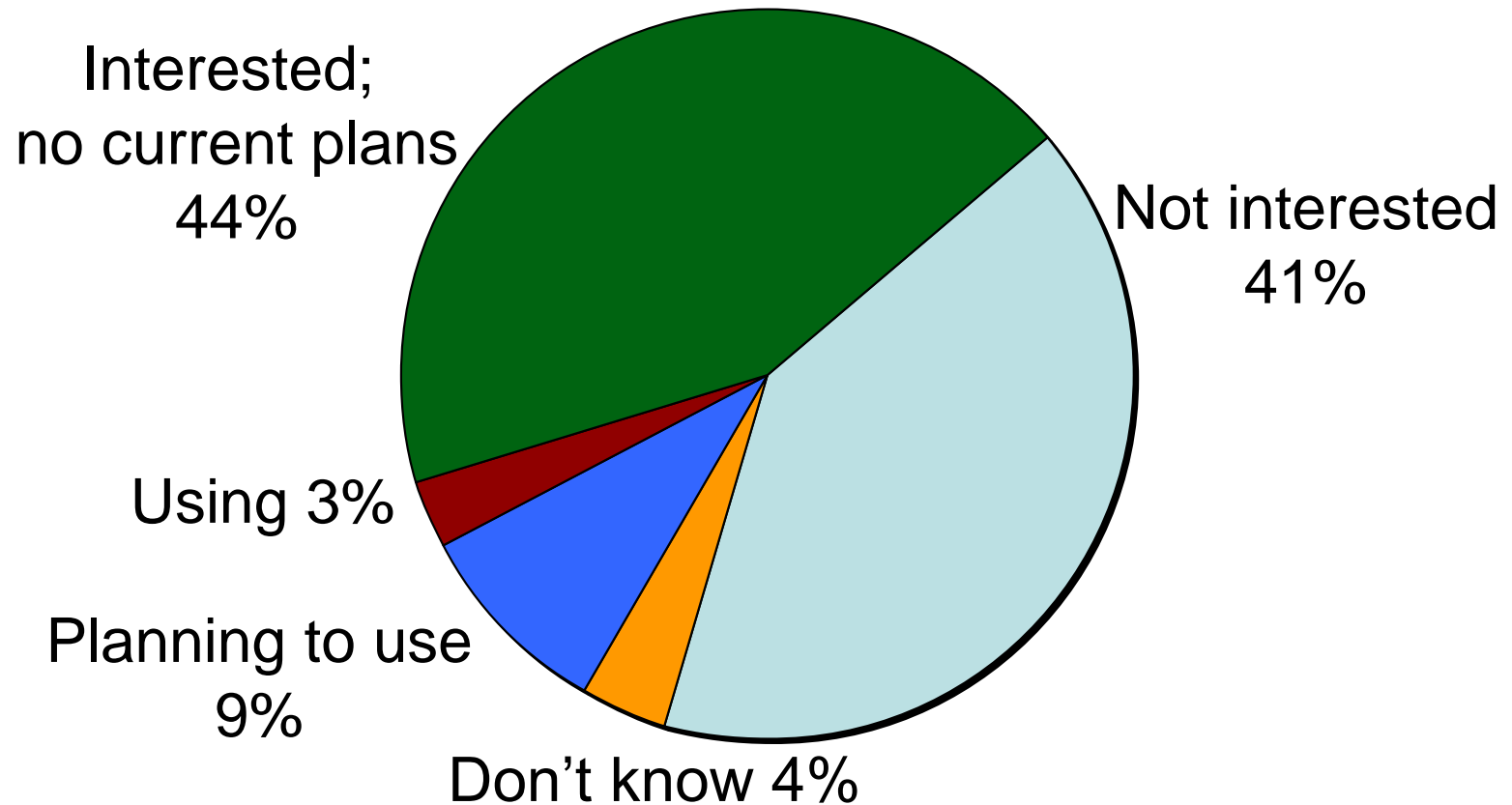
Use of any cloud service



Data: Survey of 250 international companies (median: 75k employees), July 2009, by F5 Networks
Photo: Michael Jastremski

But the market remains wide open

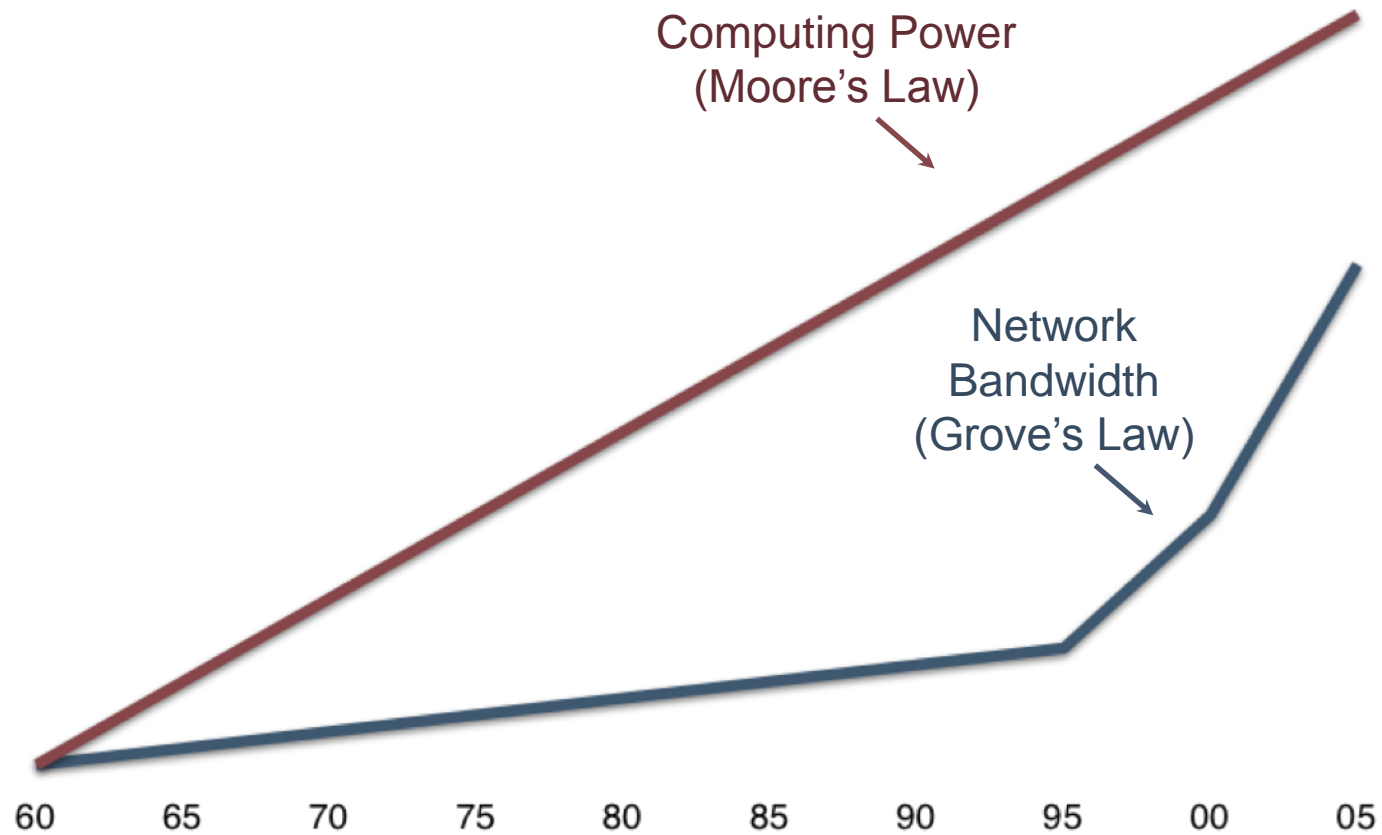
Use of cloud infrastructure



Data: Survey of 679 enterprises, Q3 2009, by Forrester

Why now?

A tale of two laws



World wide computer

“When the network becomes as fast as the processor, the computer hollows out and spreads across the network.”

– Eric Schmidt, 1993

Consumers have made the switch



Businesses are following



Models of adoption

- ✓ Cloud as model (in-house or hosted)
- ✓ Cloud as supplement
- ✓ Cloud as replacement
- ✓ Cloud as democratizer
- ✓ Cloud as business

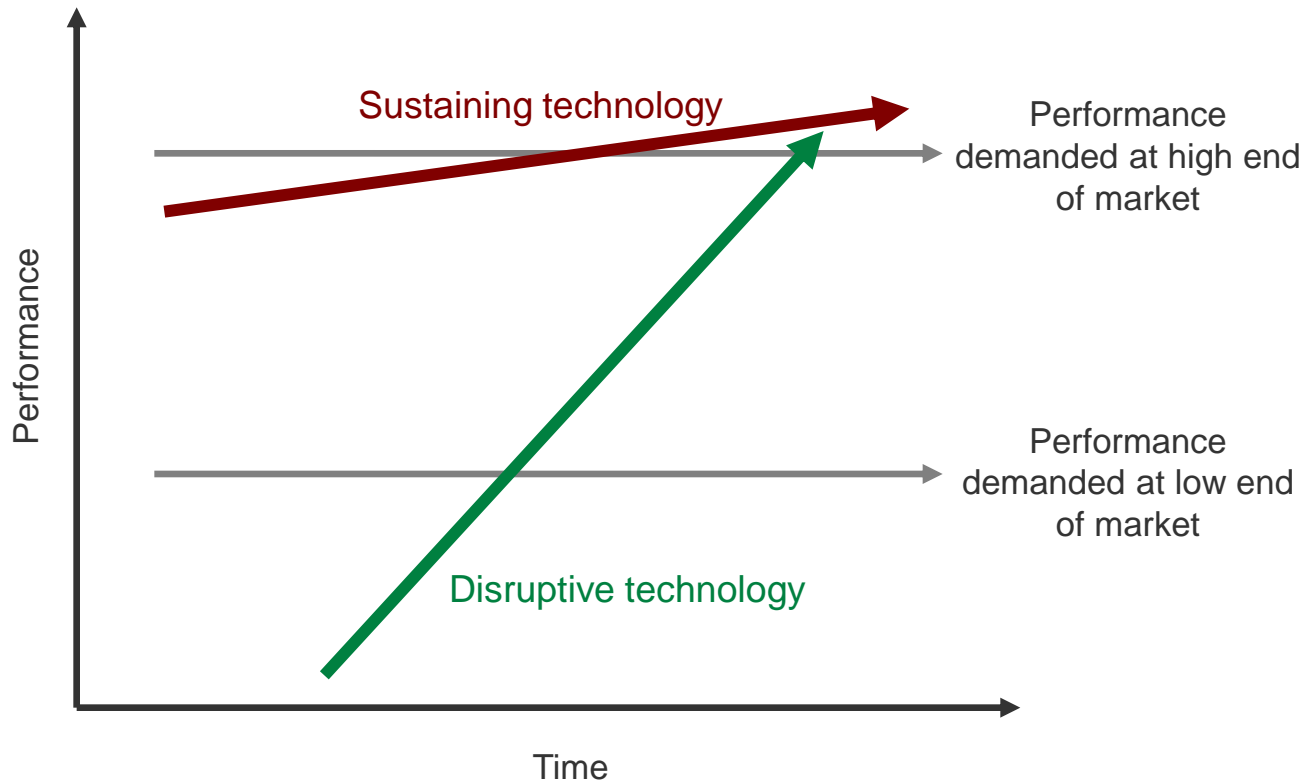
Obstacles (and opportunities)

- ✓ Capacity
- ✓ Security (data and infrastructure)
- ✓ Reliability
- ✓ Privacy and other regulations
- ✓ Standards (data portability)
- ✓ Fear of change

New competitive realities

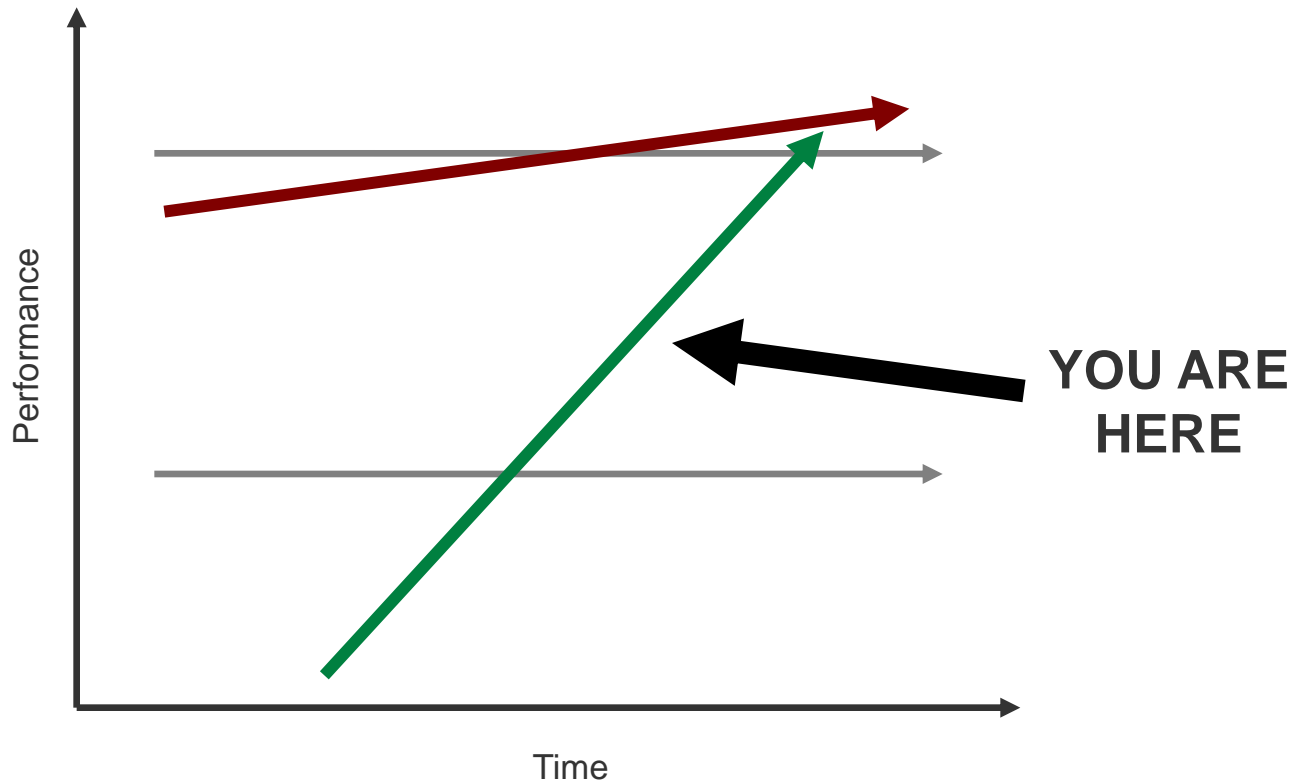
- ✓ Expansion of market
- ✓ Influx of competitors
- ✓ Redefinition of geographic market
- ✓ Transformation of industry

A classic “disruptive technology”



Source: Clayton Christensen, *Innovator's Dilemma*

A classic “disruptive technology”





**Disruptor
or
Disrupted**



Thank you!

www.nicholascarr.com