

# IT as the New Intangible Infrastructure Driving Growth and Quality of Life

Remarks at the NASCIO 2008 Annual  
Conference

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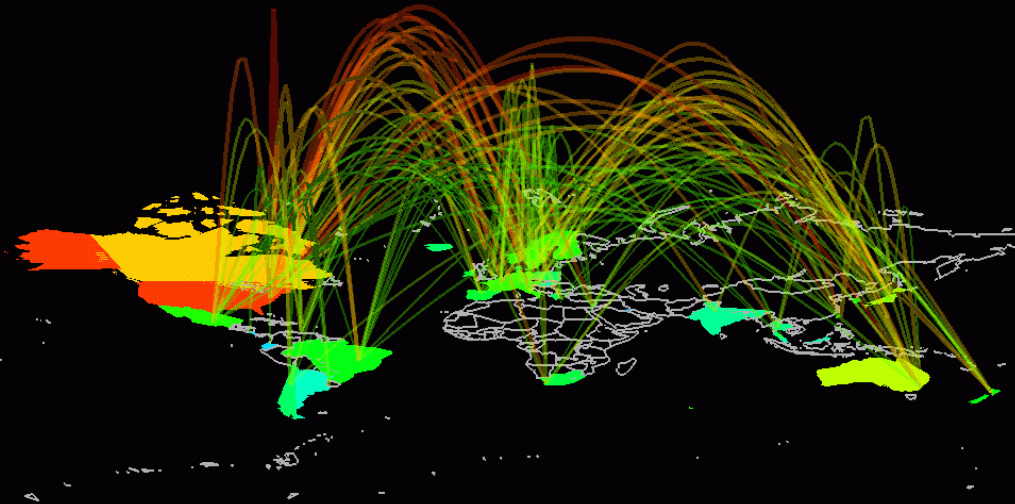
President

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# The Emerging Digital Transition: The World Becomes Alive With Information

- Phase 1: Mainframes: 1950s-1970s
- Phase 2: PC – Client Server: 1980s to mid-90s
- Phase 3: Networked Devices: 1995 to 2008
- Phase 4: Intelligent World: 2008 to ?



# The World Is Becoming Alive With Information

- We are moving from an “information desert” where information is hard to collect, especially in real time; difficult to transmit; and challenging to make sense of...



# The World Is Becoming Alive With Information

- to an “information rain forest” where information is all around us, easy to transmit, and simple to make sense of.



# Server Farms and Mainframes Are the New Industrial Complex



(vs.)



**2004 U.S. investment in new factories = \$16.3 Billion\***

**2004 U.S. investment in IT = \$ 1.1 Trillion**

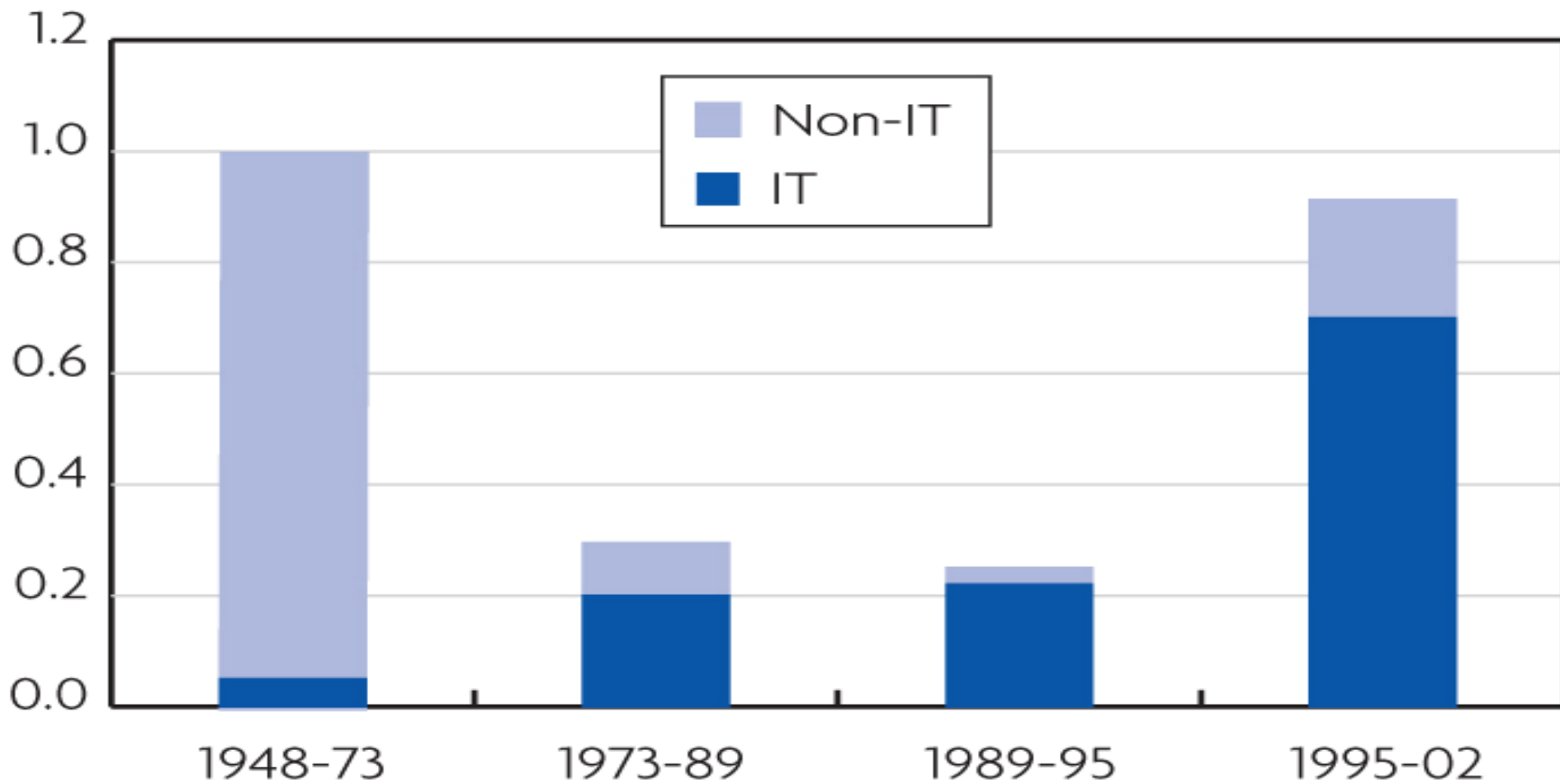
\* 'U.S. Birthrate' For New Factories is Steadily Falling, WSJ, 3/15/06

# IT Drives Nations' Productivity and Economic Growth

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- In the U.S. IT was responsible for virtually **all** of increase in labor productivity from 1996 to 2002.
- Similar, but lower effects in other nations, including Australia, Canada, Finland, France, Germany Italy, Korea, the Netherlands, Switzerland, and the United Kingdom.

# IT Drove the U.S. Productivity Turnaround



(Annual rate of total factor productivity growth)

# IT is Driving U.S. Quality of Life

- Education
- Health Care
- Environment
- Energy
- Transportation
- Government Services
- Personal Safety
- Public Safety

# Spheres of IT Applications

Internal to Gov.  
(E-gov)

External & Separate  
From Gov.  
(e.g. iTunes, eBay, etc)

External to Gov. but  
Linked to Public Missions  
(e-health, telematics)

# Infrastructure Has Always Been More than Just the “Pipes”

- Roads were important.
- But without cars, insurance, traffic signals, driving schools, civil engineering schools, car and driver registration systems, fuel distribution networks, and parking lots, the benefits would be minimal.

# Infrastructure Has Always Been More than Just the “Pipes”

- Electrical wires were important.
- But without electricity generation, standards, appliances and programs to help people use electricity, regulations on utilities, etc.) the benefits would be limited.

# Infrastructure Has Always Been More than Just the “Pipes”

- Today, wired and wireless networks are important.
- But without widespread digital take-up and literacy; standards, shared practices and systems (e.g., security, identity resources, etc.); tools (computers, sensors, software) and applications (e.g., e-health, telematics, e-gov, etc.) the benefits will be limited.

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- 1) Most of the infrastructure is either invisible, or invisible and intangible.
- 2) Much of the infrastructure is in private hands.
- 3) Most people don't recognize how important it is.

# Principles for Moving Ahead

1. Look to Digital Progress as the key driver of improved quality of life.
2. Invest in digital progress in networks, applications, and devices.
3. Do not just digitize existing problems; Use IT to find new solutions.
4. Create reusable digital content that can be shared widely
5. Partner with the private and non-profits sectors to create “Turbo-Government.”
6. Lead by example.

Thank You

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