



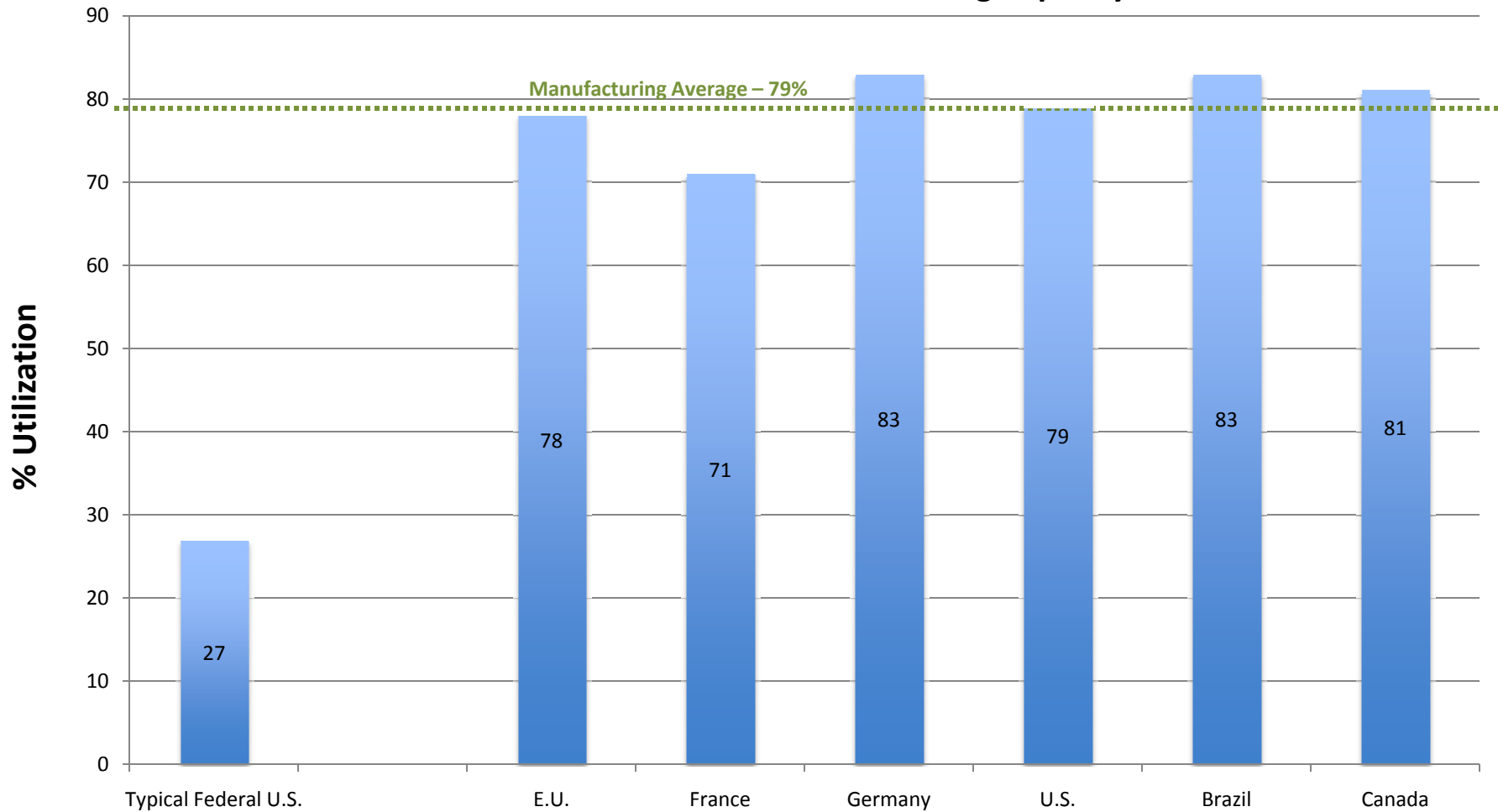
Federal Cloud Computing Strategy

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The Case for Change

Manufacturing Capacity Utilization



Typical Federal U.S. Government Server

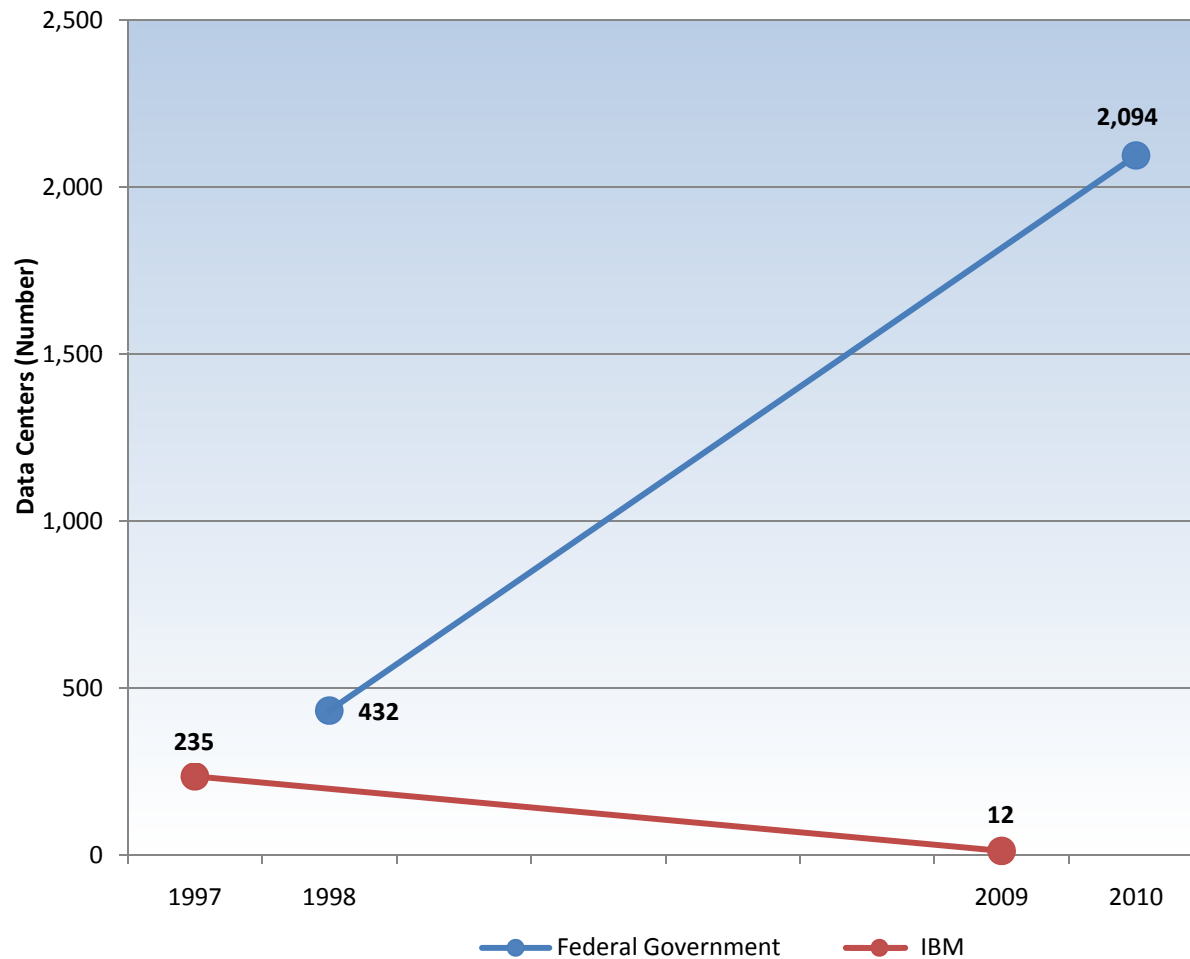
Source: Agency Data

Sources: Board of Governors of the Federal Reserve System
Eurostat (Data for E.U., France, & Germany)
Central Bank of Brazil
Statistics Canada





The Case for Change



Efficiency

- Low asset utilization (server utilization < 30% typical)
- Fragmented demand and duplicative systems
- Difficult-to-manage

Agility

- Years required to build data centers for new services
- Months required to increase capacity of existing services

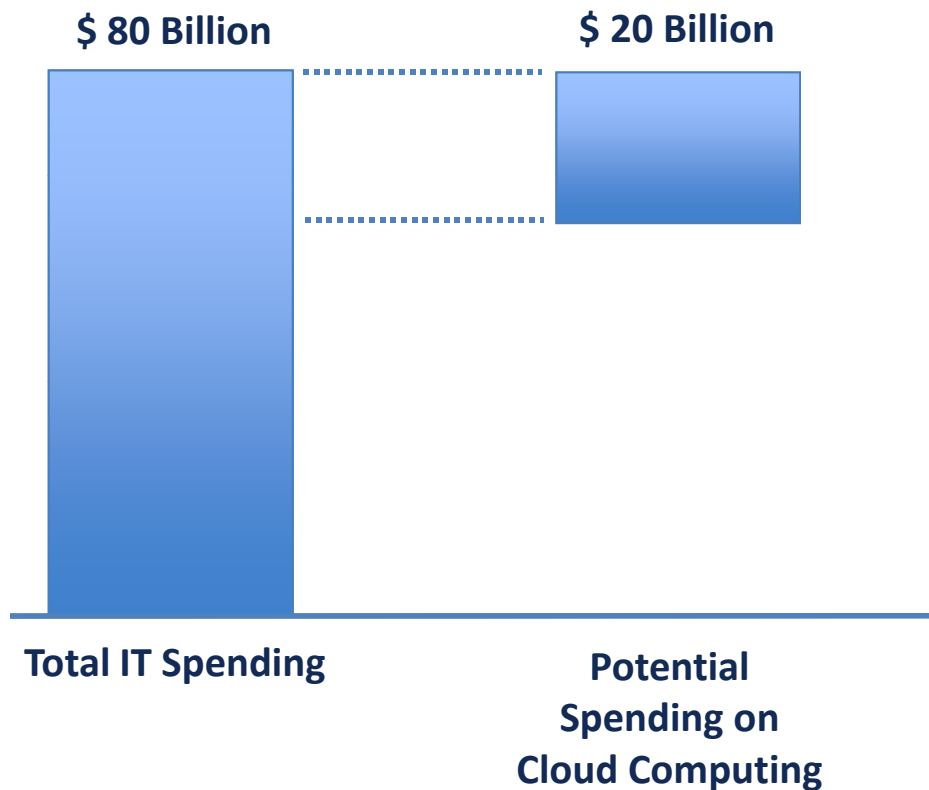
Innovation

- Burdened by asset management
- De-coupled from private sector innovation engines
- Risk-averse culture





Federal Government Cloud Computing Potential



Efficiency

- Improved asset utilization
- Aggregated demand and accelerated system consolidation (Federal Data Center Consolidation Initiative)
- Improved productivity in application development, application management, network, and end-user

Agility

- Purchase “as-a-service” from trusted cloud providers
- Near-instantaneous increases and reductions in capacity
- More responsive to urgent agency needs

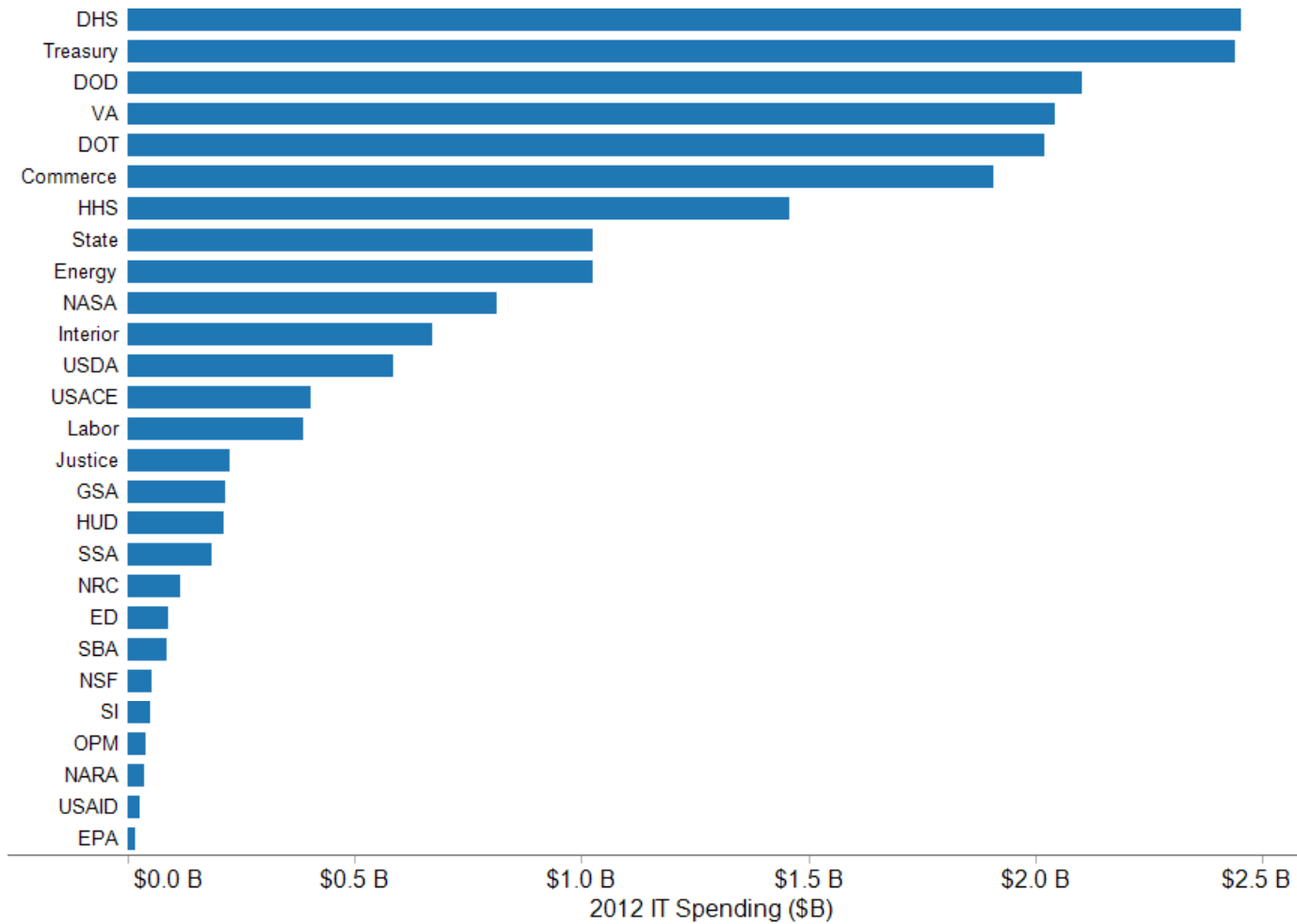
Innovation

- Shift focus from asset ownership to service management
- Tap into private sector innovation
- Encourages entrepreneurial culture
- Better linked to emerging technologies (e.g., devices)





Potential Spending on Cloud Computing by Agency





Early Adopters



HHS

Electronic Health Records (EHS)

- Reduced time to go live from 1 year+ to 3 months
- Supports more than 100,000 Primary Care Practitioners



GSA

Cloud Email Migration

- \$15 M savings
- Migrating 17,000 users
- Eliminating redundant infrastructure at 17 global locations



Dept of Defense

Army Experience Center (AEC)

- Implementation cost 1/20 of estimate to upgrade legacy system (\$54 K vs. \$1 M+)
- Reduced recruiter workforce required to handle the same workload



Recovery Accountability & Transparency Board

Recovery.gov

- \$750 K savings
- Reallocate \$1 M+ to identify fraud, waste, and abuse



Dept of Defense

Air Force Personnel Services Delivery Transformation

- \$4 M annual savings
- Improved customer search times from 20 minutes to less than 2 minutes



Dept of Agriculture

Cloud Email Migration

- \$27 M savings
- Migrating 120,000 users
- Consolidating 21 fragmented email systems





Catalyzing Cloud Adoption

SECURITY

- Centralize certification and accreditation for cloud solutions
- Prioritize security controls to counter the most serious threats
- Use near real time security dashboards to facilitate continuous monitoring
- Integrate identity management

STANDARDS

- Define and evolve standards to ensure interoperability, portability, and security
- Propose and test interim standards
- Publish cloud computing business and technical use cases, a neutral reference architecture and taxonomy

PROCUREMENT

- Develop procurement vehicles to accelerate the purchase of cloud solutions
- Maximize strategic sourcing to buy cloud solutions
- Eliminate redundant and inefficient vendor certifications
- Integrate needs of State and local governments

GOVERNANCE

- Set policy and enforce budget priorities
- Align with regulatory and legal frameworks
- Drive government-wide adoption
- Collaborate with international entities





Exponential Growth in Demand

Shifting from asset ownership to service provisioning

CATEGORY	SERVICE EXAMPLES	AGENCY EXAMPLES
Collaboration	<ul style="list-style-type: none">Agency-wide email to the cloudOffice productivity tools	
Workflow	<ul style="list-style-type: none">Employment verificationGrants managementClaims processingCustomer relationship management	
Infrastructure	<ul style="list-style-type: none">Public-facing websites hosted in the cloudApplication development/testingContent deliveryVirtualized data centers	
Business Intelligence	<ul style="list-style-type: none">Data analyticsPerformance management	
Information Security	<ul style="list-style-type: none">Identity managementSecurity management services	





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