



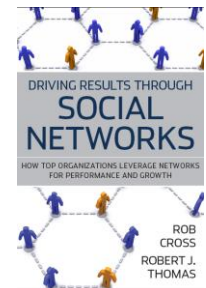
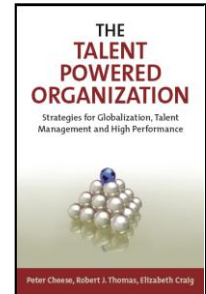
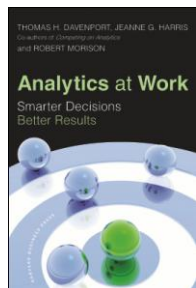
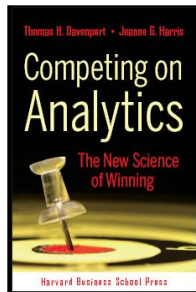
Institute for  
High Performance

# China's Pragmatic Path to Cloud Computing

Allan E. Alter, Research Fellow

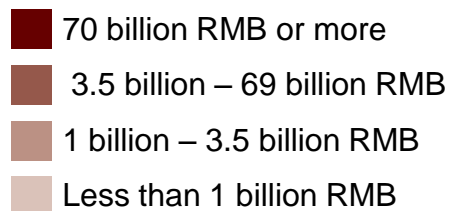
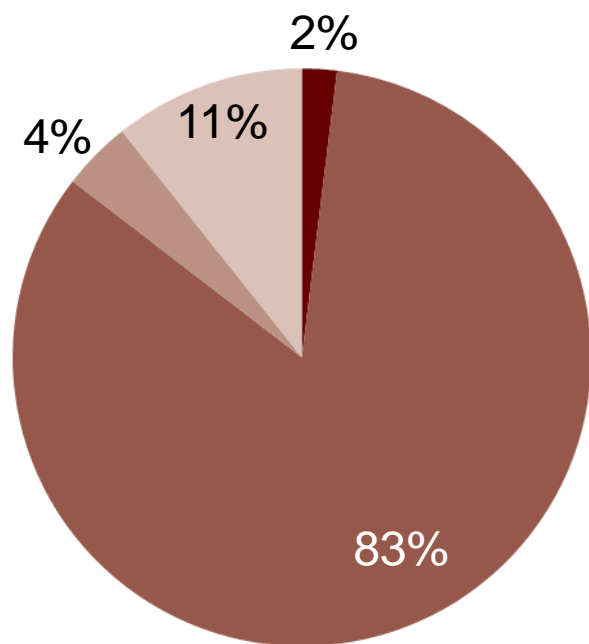
# Accenture Institute for High Performance: a “Think and Act” research organization

- Bold ideas, actionable insights, client relevance
- Rigorous research, cited and published in top media

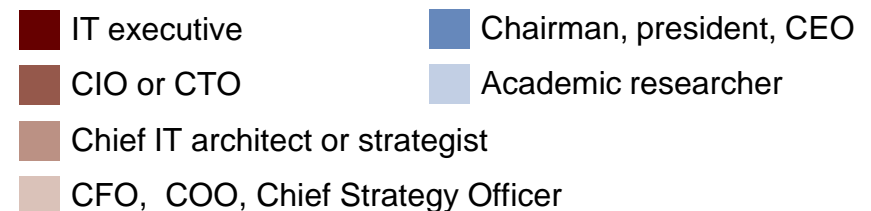
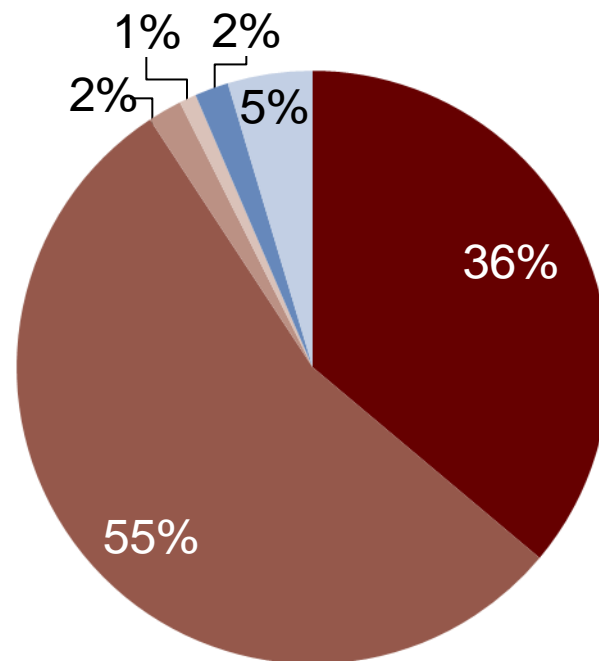


# China cloud survey respondents

## By company size



## By job title





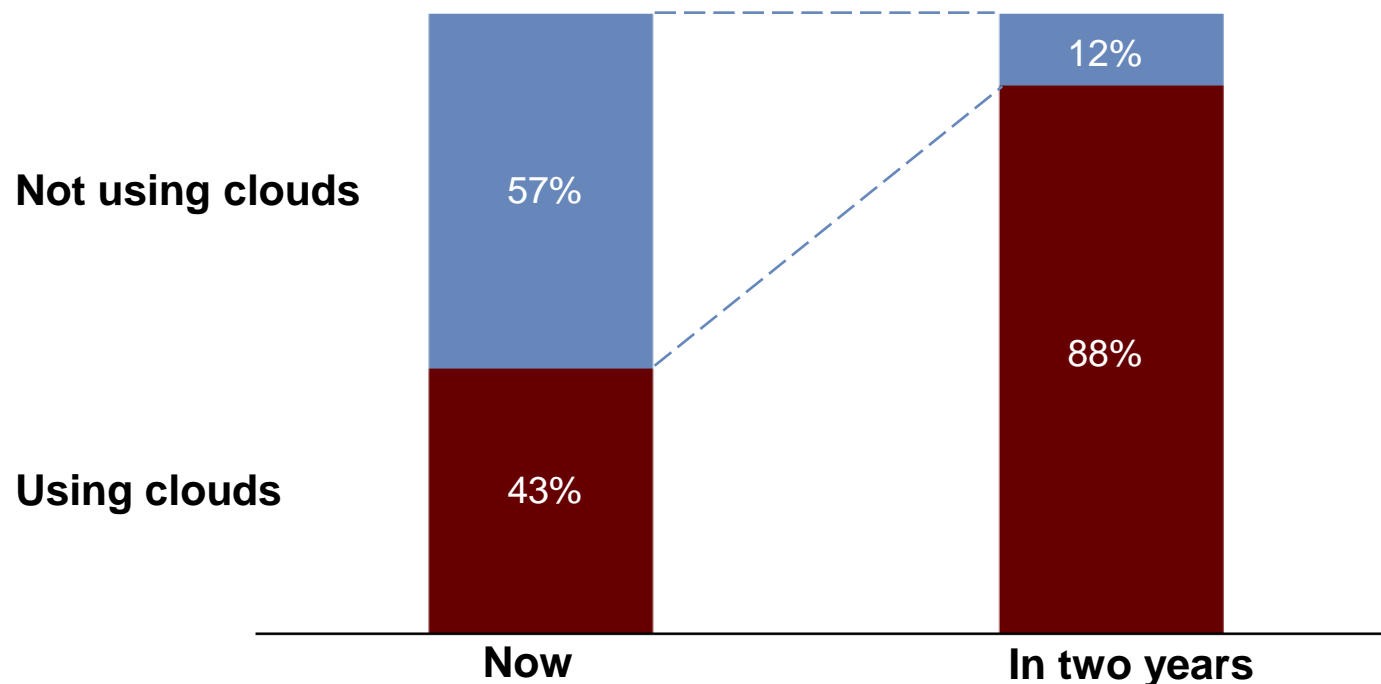
# Survey questions



- Adoption
- Spending
- Sources
- Use
- Concerns
- Accelerators and inhibitors
- Variances

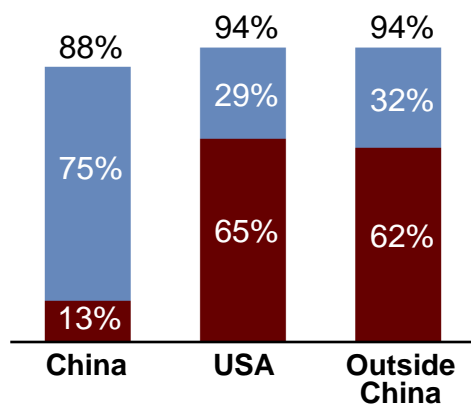
# Cloud use is growing in China

In the next two years, many more large Chinese organizations will start to use, test or experiment with cloud computing.

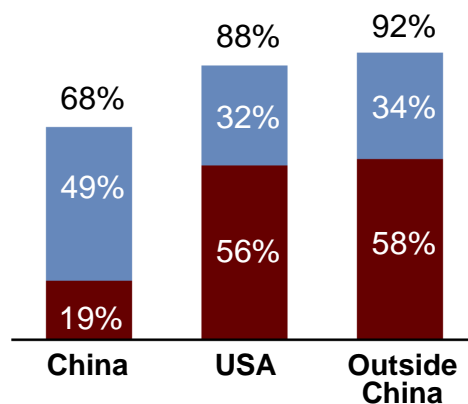


# Adoption in China is slower than in the U.S. and other countries.

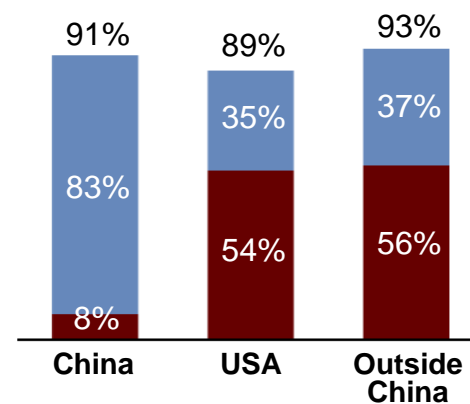
## Software as a service



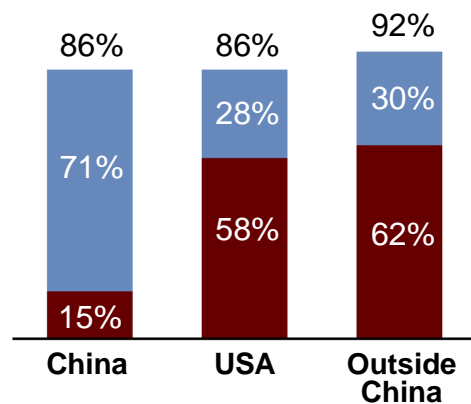
## Infrastructure as a service



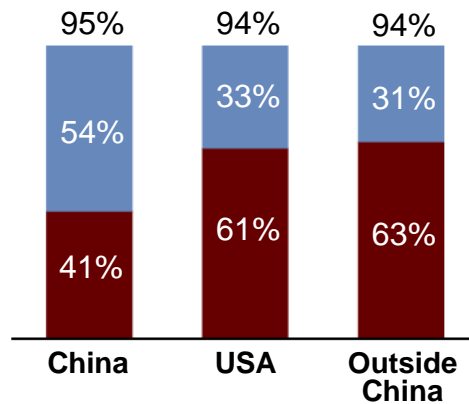
## Platform as a service



## Process as a service



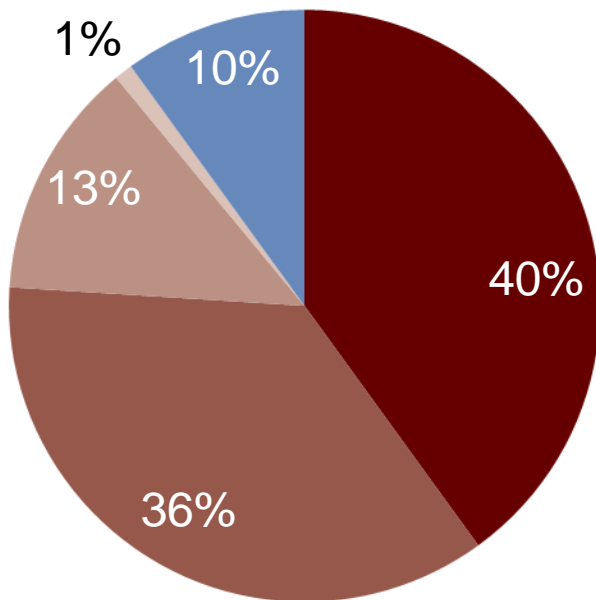
## Private cloud platforms



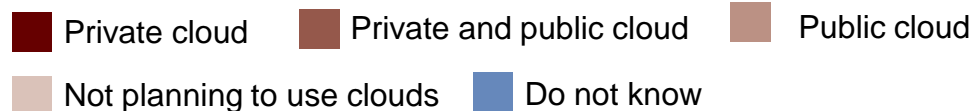
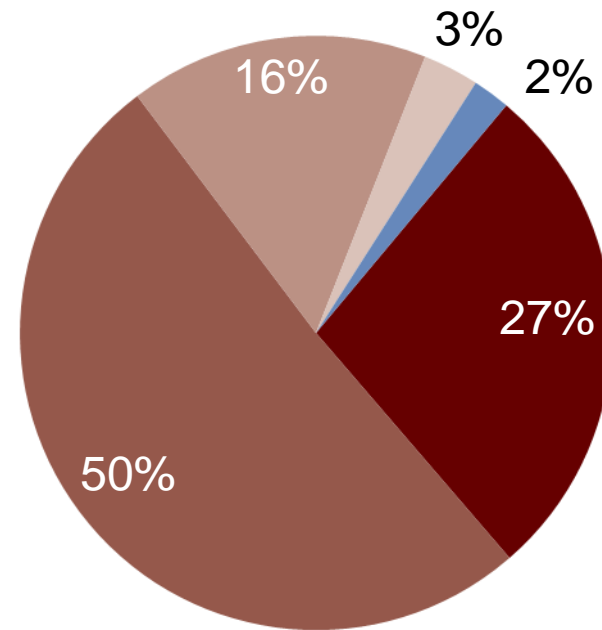
Testing, piloting or investigating  
Using

# Private cloud adoption will move faster than public clouds in the next two years.

**China**

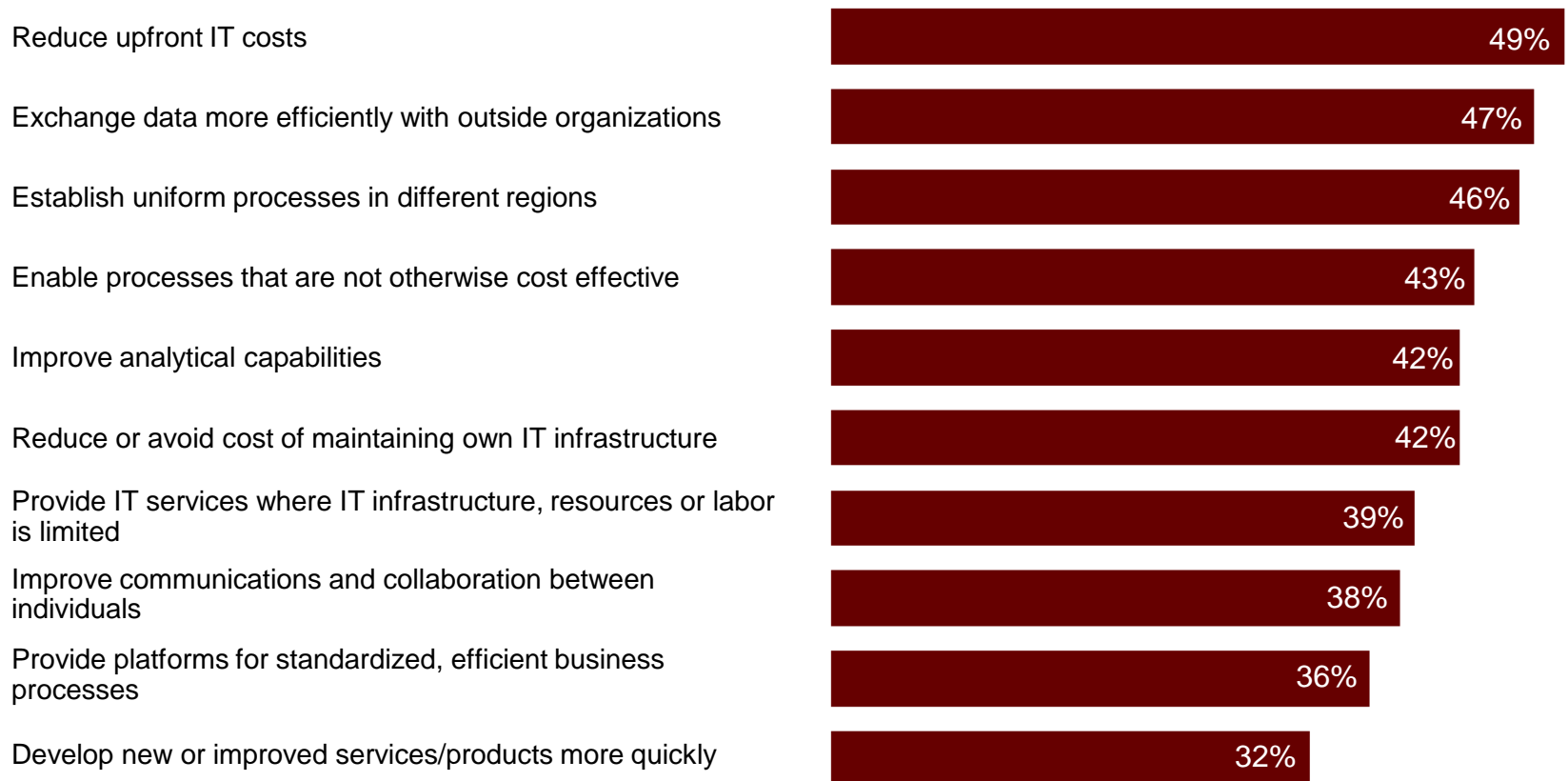


**Other Nations**



# Many drivers for cloud computing activity in China

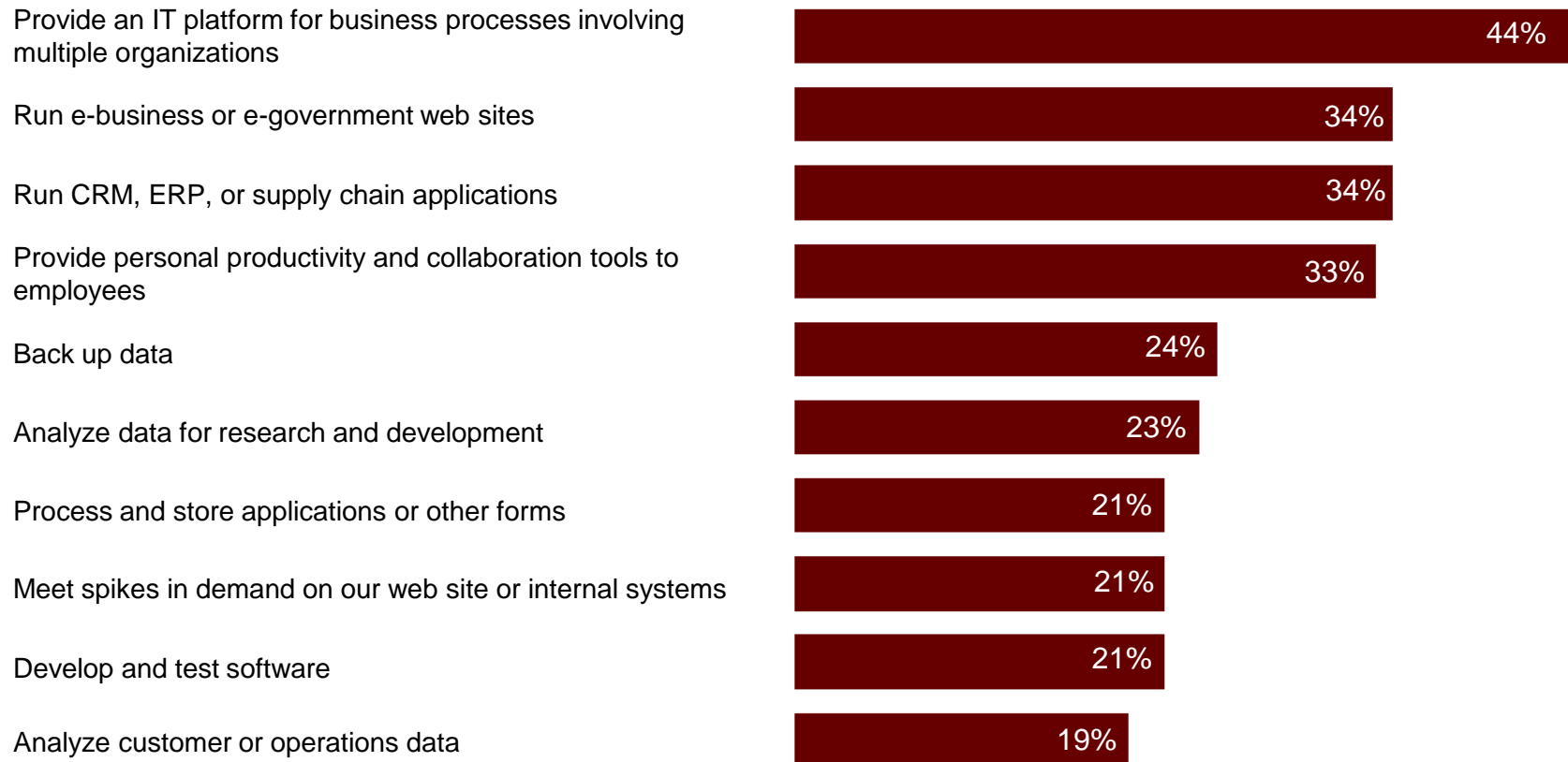
## Percentage responding “very important” or “important”





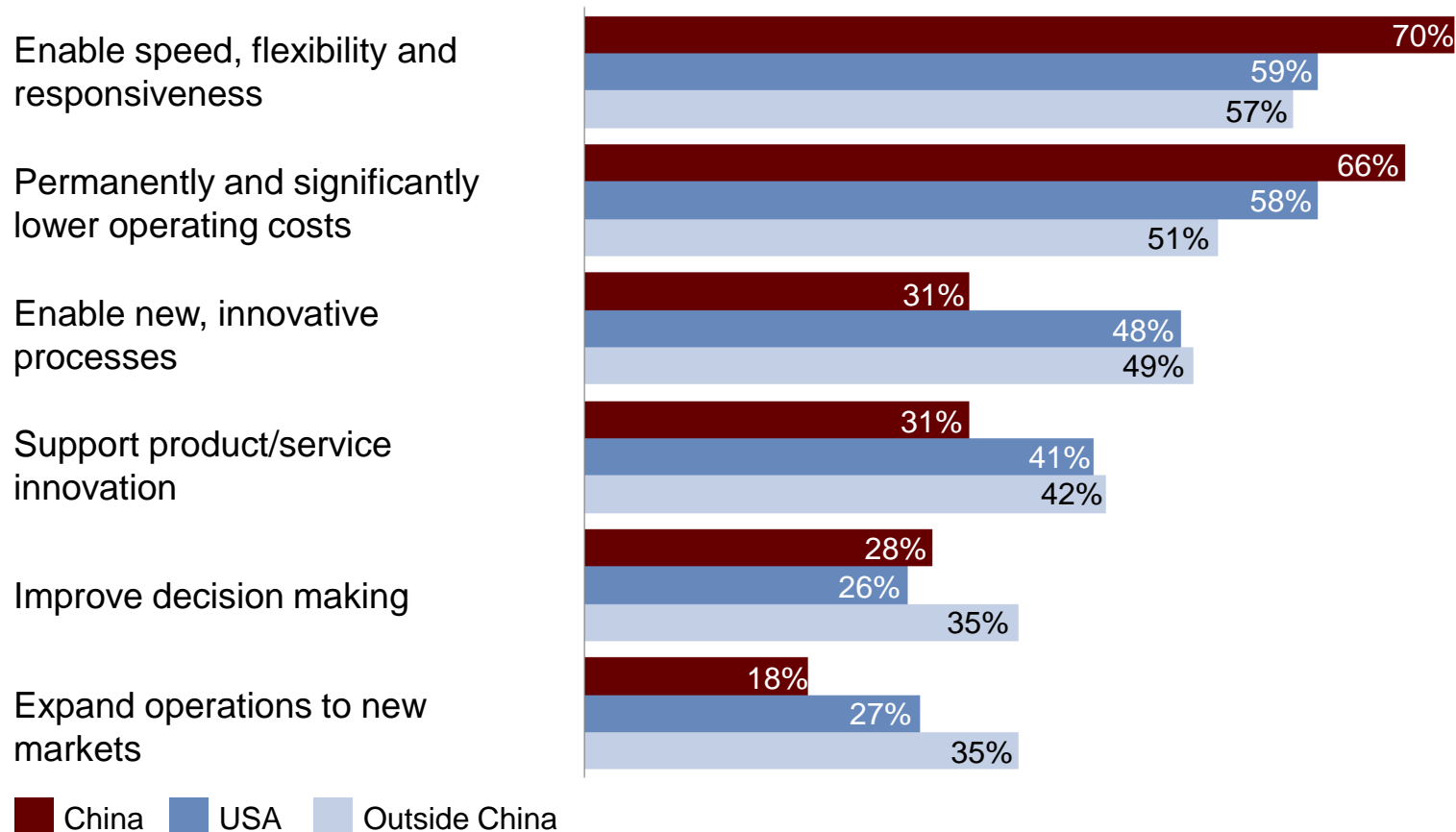
# Putting clouds to work: platforms, operations, collaboration

## Uses for cloud computing in next 18 months



# Long term benefits: savings, speed and flexibility

## Cloud computing's greatest potential in next five years



# Characteristics of Chinese cloud computing leaders

- See cloud computing's potential for innovation and process improvement.
- Exploring many potential benefits from cloud computing.
- Further along in deploying virtualization; more likely to outsource IT.
- Believe cloud computing is important for China.
- More open to using foreign cloud providers.



# Reasons for caution

## **Lack of knowledge about cloud computing**

- 21 percent of Chinese IT executives describe their level of knowledge as either advanced or expert.

## **Security concerns**

- 89 percent express a high degree of concern about data security privacy and confidentiality.

## **State of the cloud market**

- 56 percent would consider obtaining cloud services from their current IT or telecommunications vendors, and only 14 percent would definitely or probably do so.

## **Technical constraints**

- 14 percent of Chinese companies in our study had extensively or moderately virtualized their servers.

## **Government guidelines**

- 51% say unclear policies on cloud computing are a major impediment.



# Recommendations

## Government Leaders:

- **Support:** Continue establishing local cloud computing centers and partnerships, and encouraging new cloud providers.
- **Improve:** Increase the speeds and availability of China's broadband infrastructure.
- **Regulate:** Establish clear guidelines and standards for cloud security, reliability, and service provider certification.
- **Use:** Set example for industry by using cloud services in government.

## Senior IT Executives:

- **Learn:** Become well educated about cloud computing technology, requirements, risks and benefits.
- **Influence:** Win executive support by presenting evidence about cloud benefits and ROI.
- **Solve:** Identify technical and security issues, and develop plans to resolve them.
- **Innovate:** Seek out and develop innovative ways to use clouds.



# Recommendations

## Senior Business Executives:

- **Analyze:** Conduct a careful analysis of costs, savings and benefits.
- **Assign:** Decide who should be involved in cloud computing decisions, and what their responsibilities are.
- **Lead:** Make sure cloud computing receives focused thinking, planning and follow-through from IT and business executives.
- **Sponsor:** Provide necessary financial, management and human resources support.
- **Choose:** Carefully select and evaluate cloud providers.

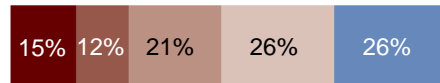
## Cloud Computing Industry Leaders

- **Assure:** Gain trust through service level agreements, stringent security standards, and studying clients' business requirements.
- **Offer:** Provide a broader range of cloud services,.
- **Cooperate:** Participate in establishing industry clouds.
- **Publicize:** Provide the public with examples of successful cloud computing adoption in China and other nations.

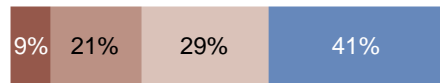
# The world is beginning to use cloud computing

## China

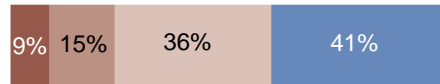
Private cloud platforms



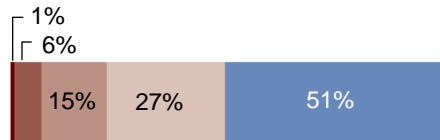
Process services



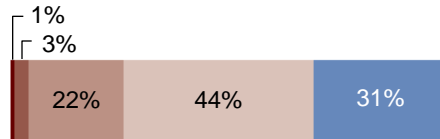
Software Services



Infrastructure services

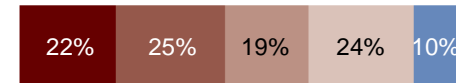


Platform services

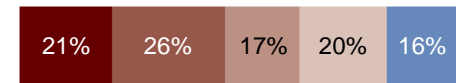


## Other Nations

Private cloud platforms



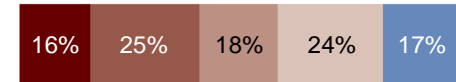
Process services



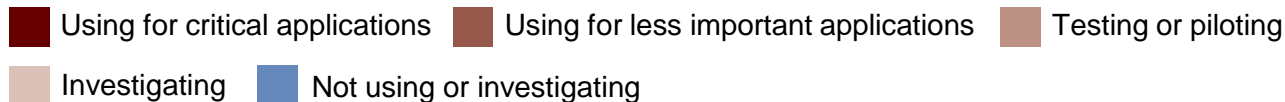
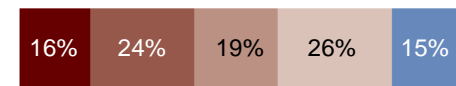
Software services



Infrastructure services



Platform services



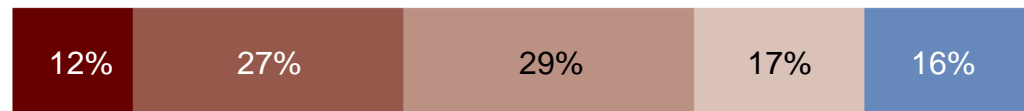
# A critical mass of executives believe cloud computing will affect strategy

## Level of agreement

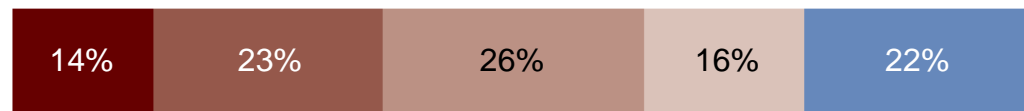
Cloud computing could provide my company with a lasting competitive advantage



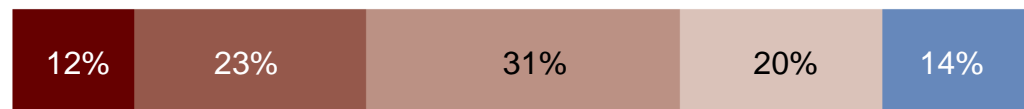
Cloud computing will make it easier for established companies to enter our market and compete against us



Cloud computing could make our company vulnerable to competition from small or start-up companies



My organization will need to adopt cloud computing, whether or not it provides competitive advantage



■ To a very large extent ■ Substantially ■ Somewhat ■ Slightly ■ Not at all

# How “cloud experts” are using cloud computing and services

<b>Uses of cloud computing within next 18 months</b>	<b>Advanced/ Expert</b>	<b>China</b>
Backing up data	47%	24%
Providing an IT platform for processes involving multiple organizations	45%	44%
Running CRM, ERP, or supply chain management applications	42%	34%
Providing personal productivity and collaboration tools to employees	41%	33%
Developing and testing software	40%	21%
Storing and archiving large files (e.g., video or audio)	37%	14%
Analyzing customer or operations data	34%	19%
Supporting projects (e.g., conducting surveys, engineering prototypes, etc.)	34%	9%

# How “cloud experts” are using cloud computing and services (cont.)

<b>Uses of cloud computing within next 18 months</b>	<b>Advanced/ Expert</b>	<b>China</b>
Running e-business or e-government web sites	33%	34%
Analyzing data for research and development	32%	23%
Meeting spikes in demand on our web site or internal systems	32%	21%
Processing and storing applications or other forms	32%	21%
Running data intensive batch applications (e.g., data conversion, risk modeling,	28%	10%
Sharing information with the government or regulators	24%	7%
Providing consumer entertainment, information (e.g., music, social networks)	20%	16%



# Users seek government action

<b>Steps government must take if cloud computing is to be widely adopted</b>	<b>Outside China</b>	<b>China</b>
Establish cloud security and data privacy standards	54%	69%
Establish technical standards for cloud computing	48%	64%
Certify cloud service providers	44%	66%
Establish and enforce minimum requirements on uptime, recovery time, etc.	42%	53%
Collaborate with other governments and reduce the complexity of compliance requirements	34%	39%
Provide incentives for replacing existing systems with cloud-based systems	33%	23%

# Users seek government action (cont.)

Steps government must take if cloud computing is to be widely adopted	Outside China	China
Offer an accessible national cloud (a cloud built by the government for use by companies and agencies)	31%	27%
Loosen restrictions on customer or employee data crossing borders	31%	23%
Subsidize cloud infrastructure build out	30%	31%
Provide free access to broadband Internet	30%	25%

# A tipping point



# Thank you



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