

Unlocking the Benefits of Cloud Computing For Emerging Economies

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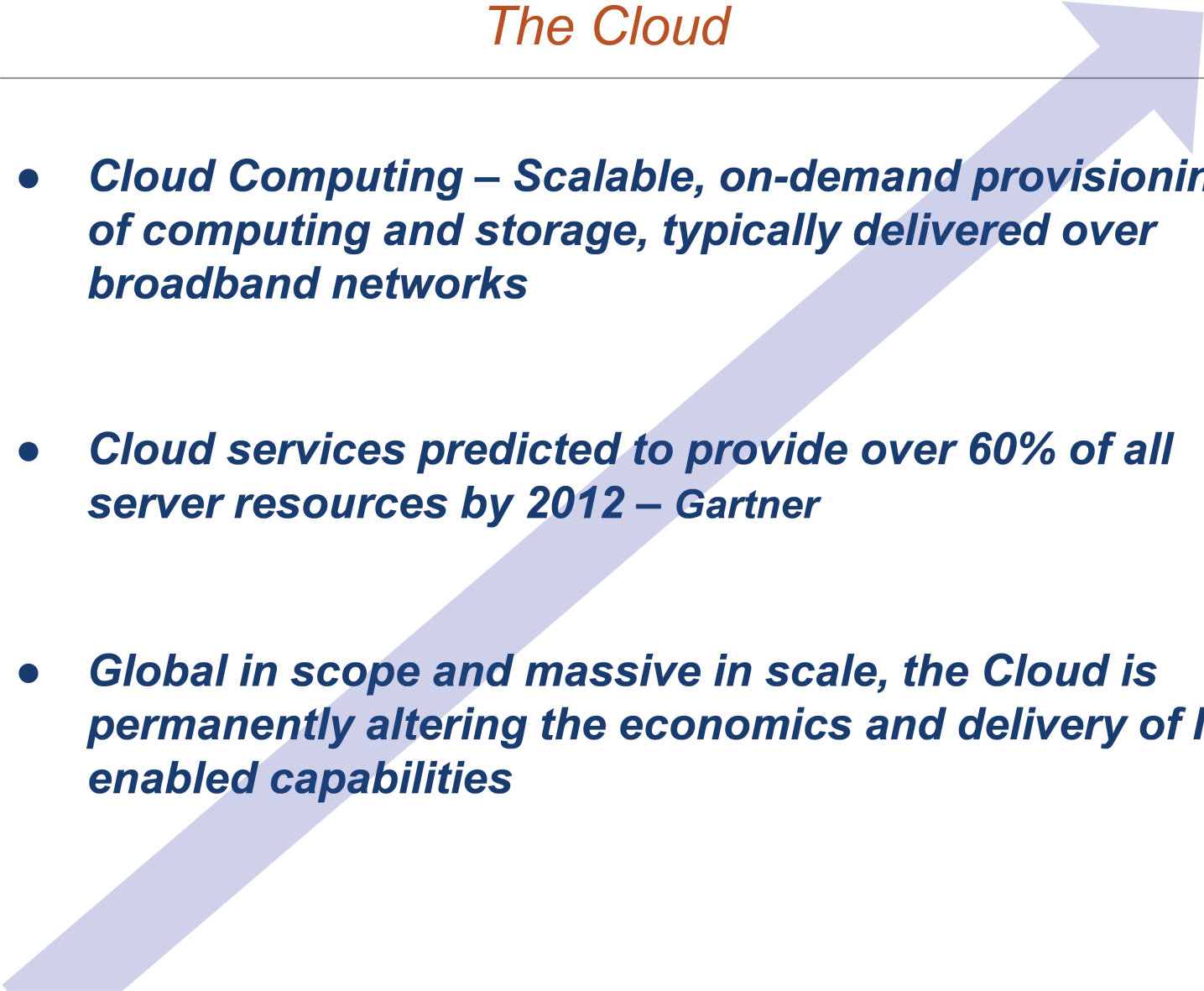
The Research

- *A view of the overall trends in Cloud Computing with a special focus on international and global cloud services*
- *An analysis of policy implications of the Cloud, both in regards to enabling it and the capabilities and benefits it can generate*
- *Three country studies from the Global South examining how the Cloud is changing the way people and governments work and examining privacy and security issues*
 - *Studies in India, Mexico and South Africa*

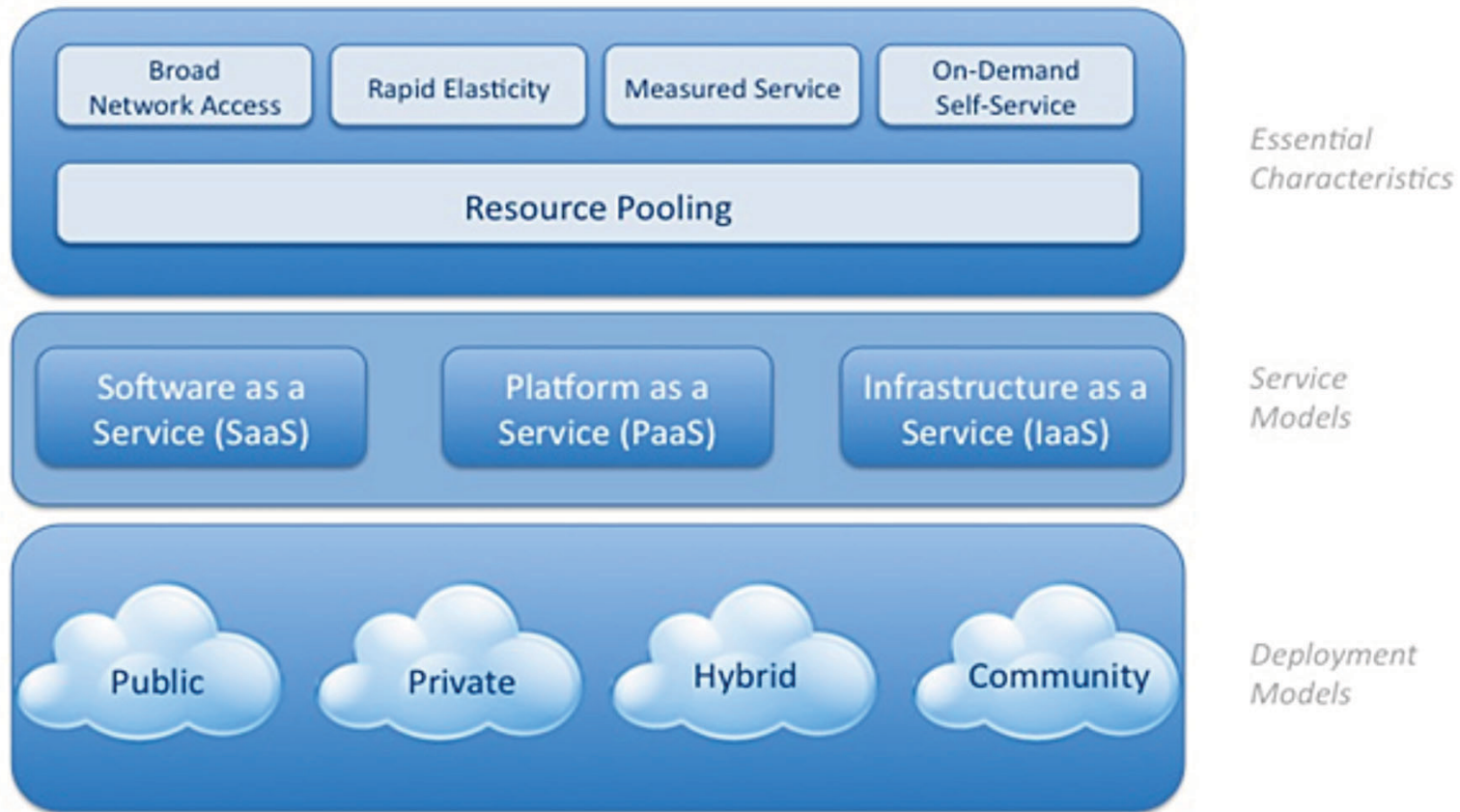
The Big Picture: What The Cloud Means for Economic Growth

- *The Cloud is central to global competitiveness because goods and services are becoming more ICT intensive—and it is already being deployed*
- *The Cloud is vital to being competitive in South-South commerce – the fastest growing share of trade and investment and the future home to most of the world's middle class*
 - *Cloud creates high value-added commerce*
- *Cloud Computing strengthens SMEs, stimulating job creation*
 - *And it levels the field for technology suppliers in the Global South, allowing near parity in content and services economics with traditional suppliers*
- *The Cloud accelerates broadband growth because it creates new demand for broadband*

The Cloud

- ***Cloud Computing – Scalable, on-demand provisioning of computing and storage, typically delivered over broadband networks***
 - ***Cloud services predicted to provide over 60% of all server resources by 2012 – Gartner***
 - ***Global in scope and massive in scale, the Cloud is permanently altering the economics and delivery of IT enabled capabilities***
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The Cloud Principal Elements and Attributes



Why The Cloud Needs Scale and Scope

- ***The Cloud leverages three technology trends***
 - Moore's law on microprocessors
 - Rapid and continuous improvements in storage price performance
 - The ever increasing speed of fiber optic networks
- ***The Economics of The Cloud are driven by massive scale***
 - Typical data centers of 500,000 to 1 Million Sq. Ft
(One even has its own train station @Tokyo Data Center)
- ***Distributed and interconnected they can respond quickly to shifts in location and time of demand and distribute peak loads***
- ***This requires Cloud Hosting Centers in the Global South and interconnected via multiple submarine and terrestrial fiber optic networks***

Why The Cloud Needs Scale and Scope Plus Free Movement of Data

- *Because The Cloud is inherently distributed and interconnected it only performs well with the free movement of data across national boundaries*
- *Restricting free data flow threatens to limit the benefits of Cloud services to those who need them the most to compete*
- *We have, for years, moved sensitive financial data across national boundaries*
 - *Credit card charges and wire transfers*
- *Technologies exist to address the majority of data privacy concerns and protect citizen's data*

What The Cloud Means for Economic Growth

- ***The Cloud has the potential to lower the barriers to access to ICT capabilities for businesses and citizens around the world***
 - It can fundamentally improve the integrity, quality and speed of the delivery of government services. Mexico's e-government portal www.gob.mx, moved to the cloud in 2011, lowering costs as it doubled the number of users to over 100 million
- ***It gives SMEs in the Global South functionally the same ICT capabilities as many Fortune 50 firms***
 - And it does it at similar unit and transaction costs. In South Africa small firms with under 100 employees have full CRM functionality via Cloud delivered Salesforce.Com

What The Cloud Means for Economic Growth

- ***Global in scope and massive in scale, the Cloud is permanently altering the economics and delivery of IT enabled capabilities.***
 - In India a study showed that move to Cloud based systems would reduce a typical firm's IT costs by 1/3rd and a direct marketing firm increased transactions by 100 times in 3 years, moving to the Cloud to help them scale and respond to peak demand...without making costly capital investments

Policy Lessons From The Country Case Studies

- ***It takes an explicit vision to achieve the potential of ICT for economic and societal goals***
 - This must include a commitment to both the development of human capital and widely accessible economic broadband services
- ***It takes a Global ICT network to achieve full national benefit from Cloud Services***
 - Including the free, unrestricted flow of information
 - Flexible placement of facilities
 - Infrastructure development in an open competitive market, and
 - Leveraging the open and voluntary system of Internet/ Web standards setting to sort out questions of interoperability

Policy Lessons From The Country Case Studies

- *A national strategy for addressing legitimate policy concerns about the privacy and security of user information works best within a framework of global principals and policy approaches consistent with competitive markets and flexible implementation strategies that can cope with rapidly changing technologies, including:*
 - Flexible location of data
 - Global compatibility of privacy and data security rules

And governments should embrace internationally recognized principles for Internet data privacy and security that draw on existing policy precedents.

Thank You
