How Policy Makers Can Help Start-Ups Leverage Cloud-Computing

To address the issue of lack of awareness of cloud services, cloud technology should be presented early on in educational settings to promote familiarity and skills development. Photo credit: ADB.

Policies should foster vibrant start-up ecosystems, enabled by foundational technologies, such as cloud computing.

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Introduction

Start-ups are essential components of a thriving digital economy. They generate employment opportunities, attract investments, bring cutting-edge technology to emerging markets, and drive competitiveness across industries and sectors.

One of the most important drivers of a tech start-up’s success is its ability to be an early adopter of emerging technologies, and its openness to building its business through innovative applications, both in service of existing enterprises and institutions, but also as a new market entrant. Cloud computing has emerged as a foundational infrastructure for building nimble, highly scalable, and digitally enabled ventures.

A study published by the Asian Development Bank looks at cloud computing as an essential building
block for start-ups and examines the ways in which governments can develop cloud-friendly technology policies and investment strategies that enable, grow, and accelerate start-up businesses.

How does cloud computing help start-ups?

Start-ups are typically equity-funded and technology-focused organizations started by a small group of founders to search for a repeatable and scalable business model. They are lean organizations, and entrepreneurs just starting out are often cash-strapped and looking for efficient technology solutions. Cloud computing is cheaper than purchasing traditional technology infrastructure. It also allows start-ups to focus on business development, rather than on building and maintaining required information and communications hardware or network equipment.

### Cost Comparison for Developing On-Premises Solution against Cloud Solution

<table>
<thead>
<tr>
<th>Category</th>
<th>On-Premises Solution</th>
<th>Cloud Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Set-up costs</strong></td>
<td>Location costs for locating data center and server equipment</td>
<td>Hosted in the cloud and delivery over the internet means no realty, set-up, and maintenance costs, as these are in effect “rented” from the cloud service provider. These do not appear in cloud costings, as these would be considered within the cloud charges.</td>
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<tr>
<td></td>
<td>Purchasing bare-metal racks, servers, networking, load balancers, initial software purchase and licensing, wiring, power management such as universal power supply and surge protectors, cooling equipment, with capital expenditure to be amortized over the years</td>
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<td></td>
<td>Set-up and development of initial server architecture(s), networking between other data centers</td>
<td></td>
</tr>
<tr>
<td><strong>Maintenance costs</strong></td>
<td>Maintenance of physical data center, managing upgrades and updates to the physical and virtual systems (e.g., upgrading storage and security patches), management of compliance and audits of the IT environment</td>
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</table>

Provisioning of technology infrastructure is also quick and easy on the cloud. This gives new businesses more flexibility in testing ideas and/or conducting business or product pivots. This is critical since start-ups tend to foster innovation based on a fast-paced business model of succeeding or failing quickly. If the results are not favorable, the resources used can be released, and the company would only pay for the time and resources consumed. Since cloud computing allows self-service setup, start-ups can be more responsive to business disruption.

Environmental and business changes, such as the challenge posed by the coronavirus disease (COVID-19) lockdowns, have forced many new ventures to pivot or close. Cloud computing provides entrepreneurs with an agile and resilient business model. For example, lockdown measures in Malaysia
prompted StoreHub to add home-delivery capabilities to its food and beverage business management app in just 48 hours by using cloud computing. Likewise, using cloud computing ensures that business continuity plans are augmented with a strong data storage and retrieval policy.

Cloud service providers are constantly developing evolving new solutions that leverage state-of-the-art artificial intelligence (AI), machine learning (ML), and data analytics. These can be made available on the same cloud platforms that start-up companies and large enterprise companies have access to, which levels the playing field when it comes to technology access. If these solutions are enabled on their cloud systems, start-ups could have a large sandbox where they could test them with their business solutions and explore growth opportunities.

What are the barriers to using cloud computing?

Often, tertiary cities and rural areas in developing economies may be unserved or underserved by internet services, making digital services, such as cloud tools, difficult to access. Developing markets may also lack the necessary grid infrastructure, such as stable electricity supply, which is needed to help promote the use of ICT equipment. Having digital connectivity and electricity supply in place sets the foundation for cloud adoption.

Regulatory frameworks that address technology usage are relatively new. Not all countries may have rules on how data privacy, cybersecurity, and other issues should be handled, especially in the context of cross-border data transfers. Ambiguous regulations or non-existent guidance can create confusion on whether the use of cloud services is even permitted, causing many start-ups to defer the risk and select expensive on-site solutions.

Lack of familiarity with different cloud service providers and their evolving solutions may hamper the ability of new businesses to explore the potential of this technology. Start-ups may be using only limited functionalities or configurations that do not fully deploy innovative features. As start-ups focus on their business development, they may not be aware of the extent to which new cloud solutions may be able to help them innovate and stay ahead of the curve.
How can governments support their start-ups?

Design and implement enabling policies focused on digital infrastructure

Design and implement enabling policies focused on digital infrastructure that will expand reliable internet connectivity and develop secure digital identity and payment solutions. This will increase the demands for technology and cloud-based services by start-ups and other ventures.

Encourage education institutions to teach cloud-related skills

Encourage education institutions to teach cloud-related skills and leverage cloud computing platforms for student projects and services. Schools can partner with cloud service providers for students to have access to these platforms. This can improve the quality of talents available for start-ups.

Lead by example in adopting a cloud-first policy

Lead by example in adopting a cloud-first policy across all government agencies and departments, which is what the United States, the United Kingdom, Australia, Japan, and other developed countries are doing. It is a strong indicator to innovative ventures that their government is encouraging cloud adoption.

Support tech start-ups directly and indirectly

Support tech start-ups directly and indirectly by backing incubators, hubs, venture capital firms, and accelerators through cloud-ready network infrastructure and targeted incentives. For example, the Australian government offers an incubator grant that helps start-ups succeed in international markets.

Lay the groundwork for start-up expansion and growth

Lay the groundwork for start-up expansion and growth by developing international partnership agreements with other markets. Some recent examples of bilateral and multilateral agreements include the Singapore-Australia Digital Economy Agreement (SADEA), the memorandum of understanding between the Council of the Arab Economic Unity (CAEU) and the UK's Digital Government Services, and the tripartite Cooperation Agreement in 2018 between Kazakhstan's Astana Financial Services Authority (AFSA), Astana International Financial Centre Authority (AIFCA) and the Monetary Authority of Singapore (MAS). These agreements pave the way for start-ups to grow and expand by providing platforms that enable them to springboard into the global market.

Evolve context-aware data privacy and cybersecurity policies

Evolve context-aware data privacy and cybersecurity policies that inspire public confidence in digital services and consistently adapt to the fast-evolving technology landscape.

Resources


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