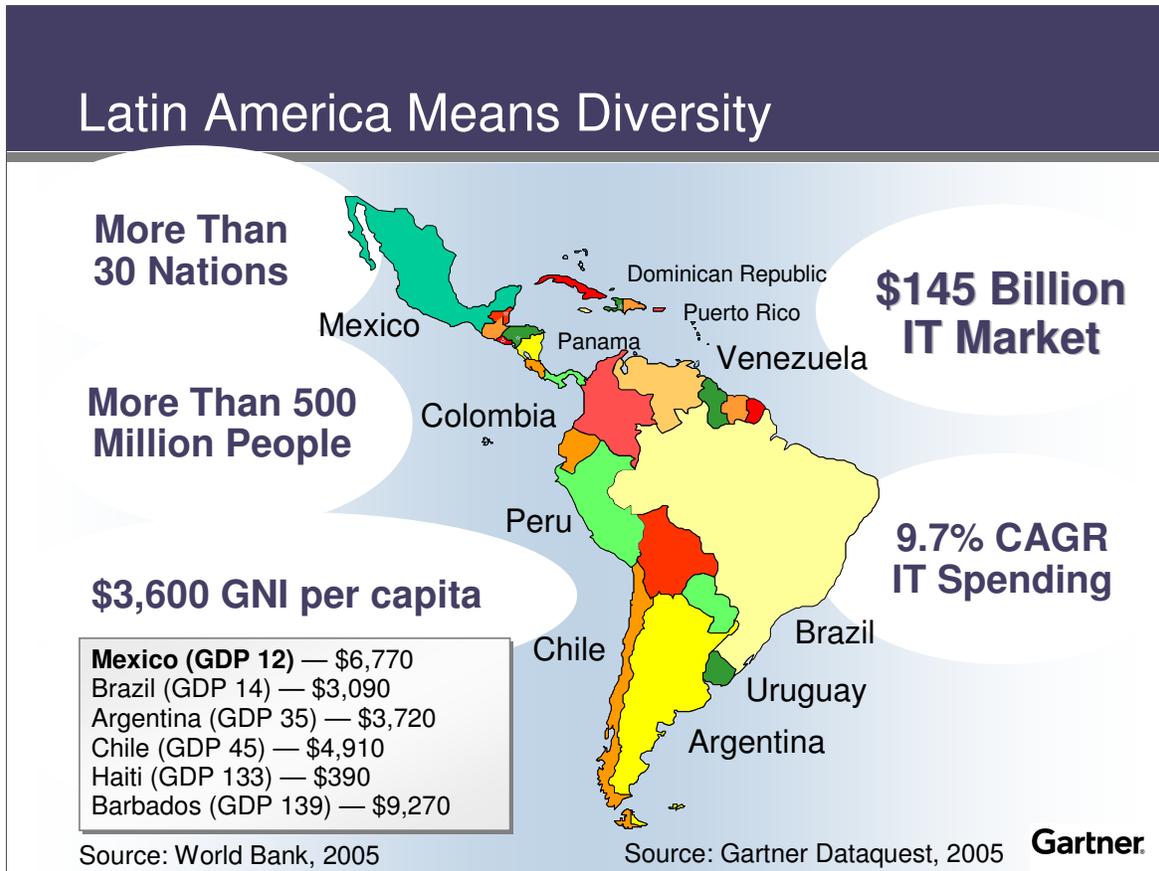

Latin America Scenario: Overcoming Challenges and Driving Growth

Gartner
IV-GESITI
São Paulo, Brazil

Waldir Arevalo

Key Issue: What are the key characteristics of Latin American IT organizations?



Source: World Bank and Gartner Dataquest

Latin America's size is impressive: More than 20 million square kilometers (8 million square miles) and a population of more than 500 million people. More than 30 countries, ranging in size from Brazil (3.4 million square miles) to tiny island states in the Caribbean, share a common origin — the Iberian peninsula — and speak two languages, with Brazil speaking Portuguese and the others speaking Spanish.

A region of geographic contrasts, each country in Latin America also shows socioeconomic contrasts that are remnants of colonial days. Diversity is everywhere. GNI (gross domestic income) per capita varies almost 20 times, from Barbados (\$9,270) to Haiti (\$390). The main countries in the region are quasi-strong and solid economies (Mexico ranks 12th in GDP and Brazil 14th) with reasonable GNI.

Despite efforts in the last 50 years, the region still has to overcome difficult challenges, such as wealth distribution, healthcare, education, unemployment and, in some areas, social unrest. Country instability is still greater than in Europe and North America — although far less than in Southeast Asia and Africa (according to the CAST — the Conflict Assessment System Tool from the Fund for Peace).

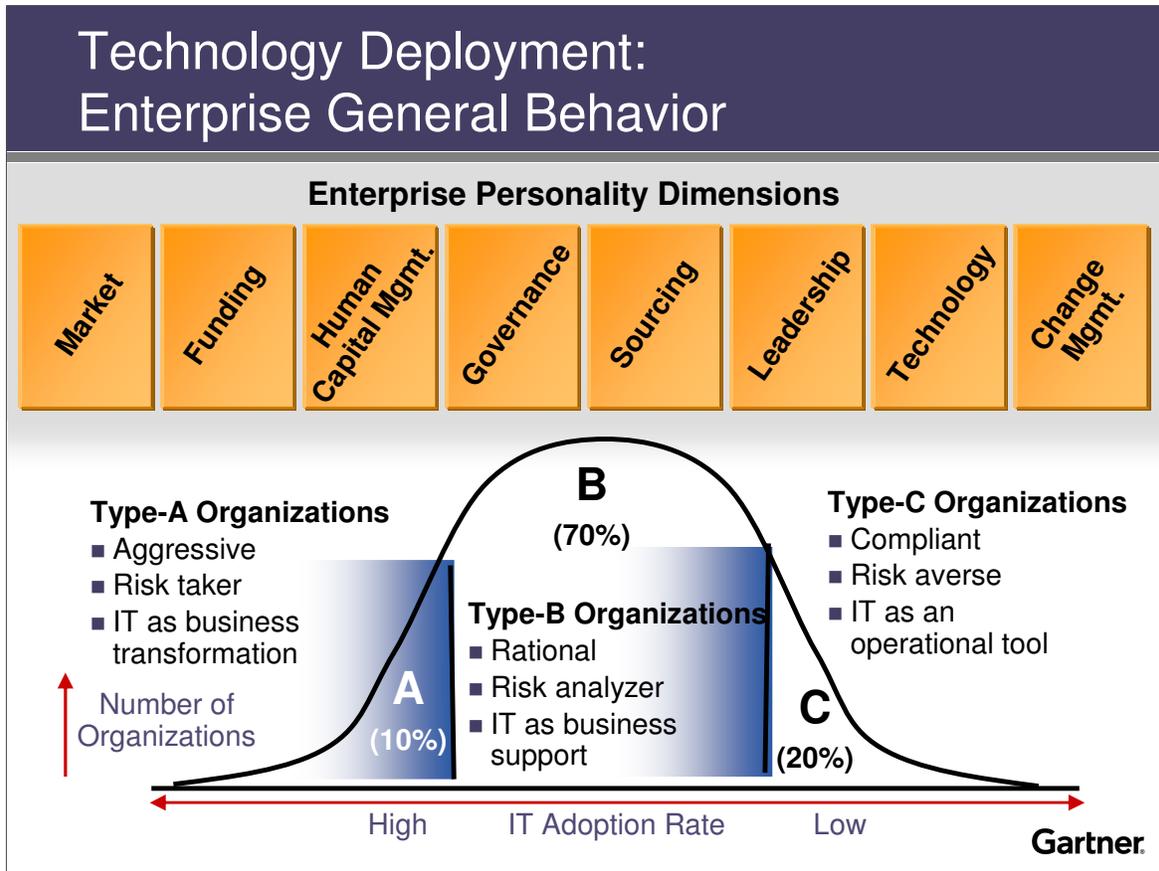
Countries in Latin America have followed a steadier course in the last 20 or 30 years, and despite well-known problems, the potential for IT growth in Latin America is great. We believe that the major issues in the region are more-focused on which segments of IT will have the greatest growth and how IT managers and CIOs can recognize the maximum ROI.

Key Issues

1. How different is the technology adoption curve (Gartner Hype Cycle) in Latin America?
2. What are the key characteristics of Latin American IT organizations?
3. What technology, business and management trends are emerging in Latin America?

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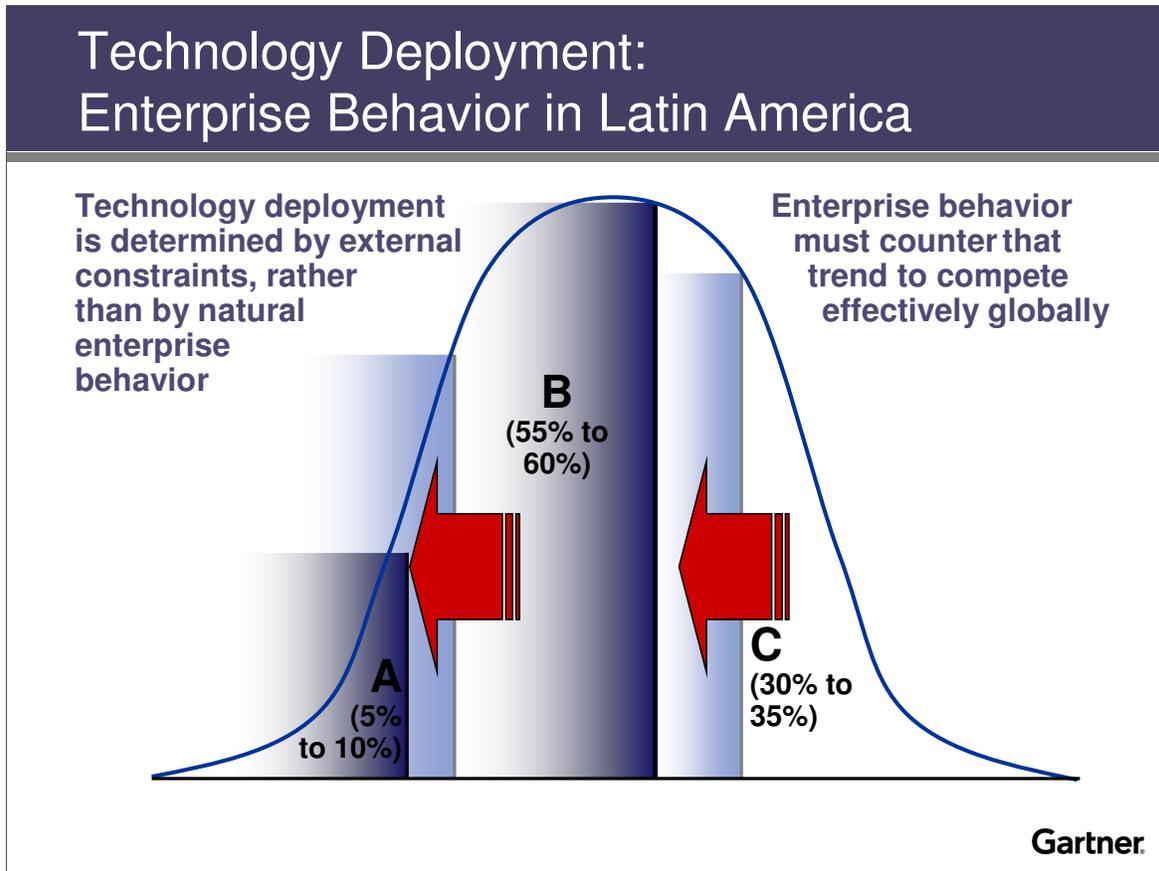
Key Issue: What strategies and tactics should Latin American CIOs contemplate for the adoption of emerging technologies?



Gartner's Type A (aggressive technology adopters), Type B (mainstream adopters) and Type C (conservative technology adopters) organization categories evaluate the profile that companies demonstrate toward technology adoption. The more aggressive the profile, the more the company leverages technology to achieve competitive advantage.

A Type A, Type B or Type C organizational profile will affect technology adoption overall — in other words, companywide choices affect the IT architecture and infrastructure. Technology adoption also must be viewed from a business process level, and it depends specifically on the business objectives the company wants to achieve with that process.

Strategic Imperative: To compete in a globalized world, understand the role of technology in your business processes and which type of enterprise you have regarding technology adoption, and act accordingly.



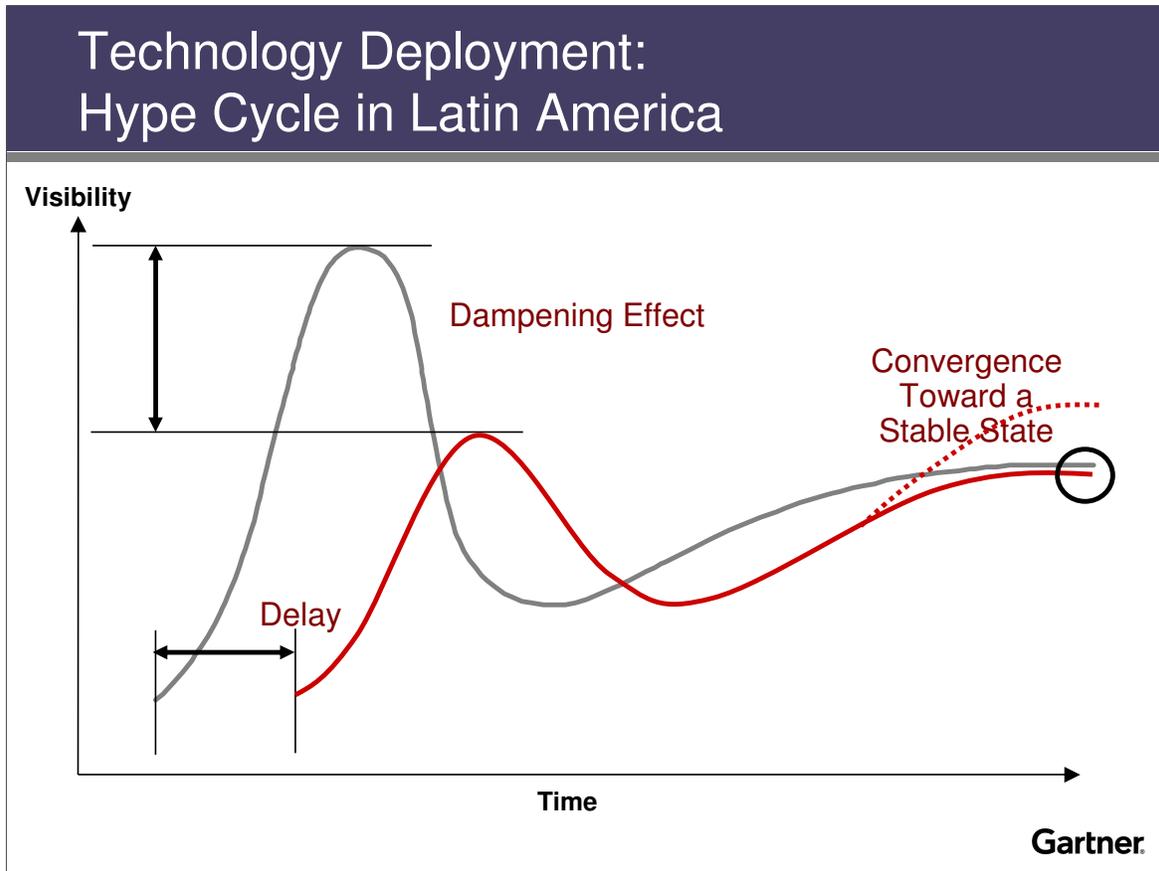
As the Latin America Hype Cycle has shown, technology adoption tends to happen later in places where the technology did not originate. Therefore, if compared with global competitors in more-developed countries, the region has fewer Type A and Type B and more Type C enterprises. Because technology adoption occurs later, enterprises tend to "drift" from Type A to Type B and from Type B to Type C.

Latin American CIOs have to factor this in when developing an IT strategy that is aligned with their enterprises' business objectives. To counter this "drift," CIOs have to develop a more-aggressive approach to technology adoption.

The alternatives are: 1) Adopt the technology at the same time as competitors, which runs the risk of difficulties and failure because the technology in Latin America is at an earlier stage of IT adoption, with a smaller market and less support; or 2) adopt a technology option that is further along in the region's Hype Cycle but run the risk of a dead end, as technology adopted in more-advanced countries makes the prevalent regional technology obsolete.

It's a tough choice to make.

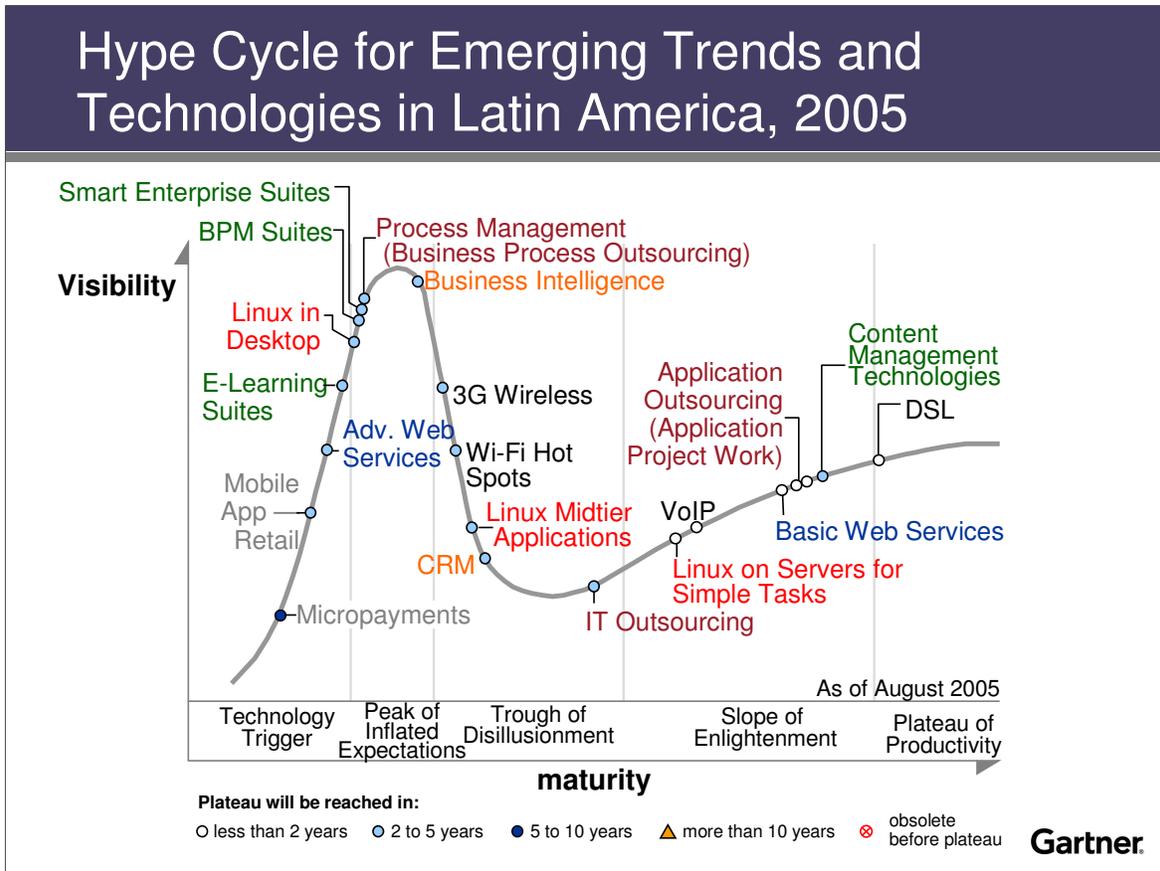
Framework



Although the technology gap is shrinking, a delay in technology adoption still hampers the competitiveness of Latin American companies, and CEOs and CIOs must effectively learn to deal with this. The gap is partly caused by limited budgets to hire and train people, and to experiment with new technology (availability is no longer an issue; every major vendor is present in major Latin American centers). Lack of expertise in the new technology is one reason in itself. It takes time for vendors to bring those resources from the places where the technology originated. The net result is a different curve of technology adoption, which can be described by a "propagation dampening" model, in which a vibration is propagated throughout a system and its amplitude is dampened as it spreads out, until it reaches a final, stable state:

- It starts later than in the places where the technology originates (initial delay).
- It never reaches the same heights as the initial Peak of Inflated Expectations (dampening effect), because technology shortcomings are perceived earlier in the secondary cycle.
- It later converges to a stable level at the Plateau of Productivity, at which point the two lines could be parallel or actually merge. For mature technologies, the ubiquity of a technology and the proficiency level of its utilization are the same in Latin America as they are in more-advanced regions. In many instances, local solutions with imported technology will achieve higher levels than in the countries where the technology originated.
- If it starts really late, the Peak of Inflated Expectations and the Trough of Disillusionment are mostly avoided.

Framework



The net result is that adoption of a specific technology in Latin America (secondary cycle) will experience an initial delay. It will not reach as high as the Peak of Inflated Expectations in more-developed countries, because technology shortcomings (and the appropriate fixes) reach the secondary cycle proportionally earlier in the cycle. Version 1.2 of any software, with patches, reaches the shelves in the United States and in Latin America at the same time. As the technology matures, both curves tend to be "parallel" (have the same inclination), the distance between the two being the difference in volume of adoption.

Some technologies may not generate a "parallel" curve, due to peculiar situations in Latin America. For instance, e-learning adoption is slower in Latin America, not because of technology but because local cultures do not favor its adoption. There may also be a heightening (or "negative dampening") effect.

See "Hype Cycle for Emerging Technologies in Latin America, 2005" (G00128063) for further information.

Action Item: CIOs looking for competitive advantage should feel more confident about adopting technologies at the peak of the Hype Cycle than their counterparts in the developed world.

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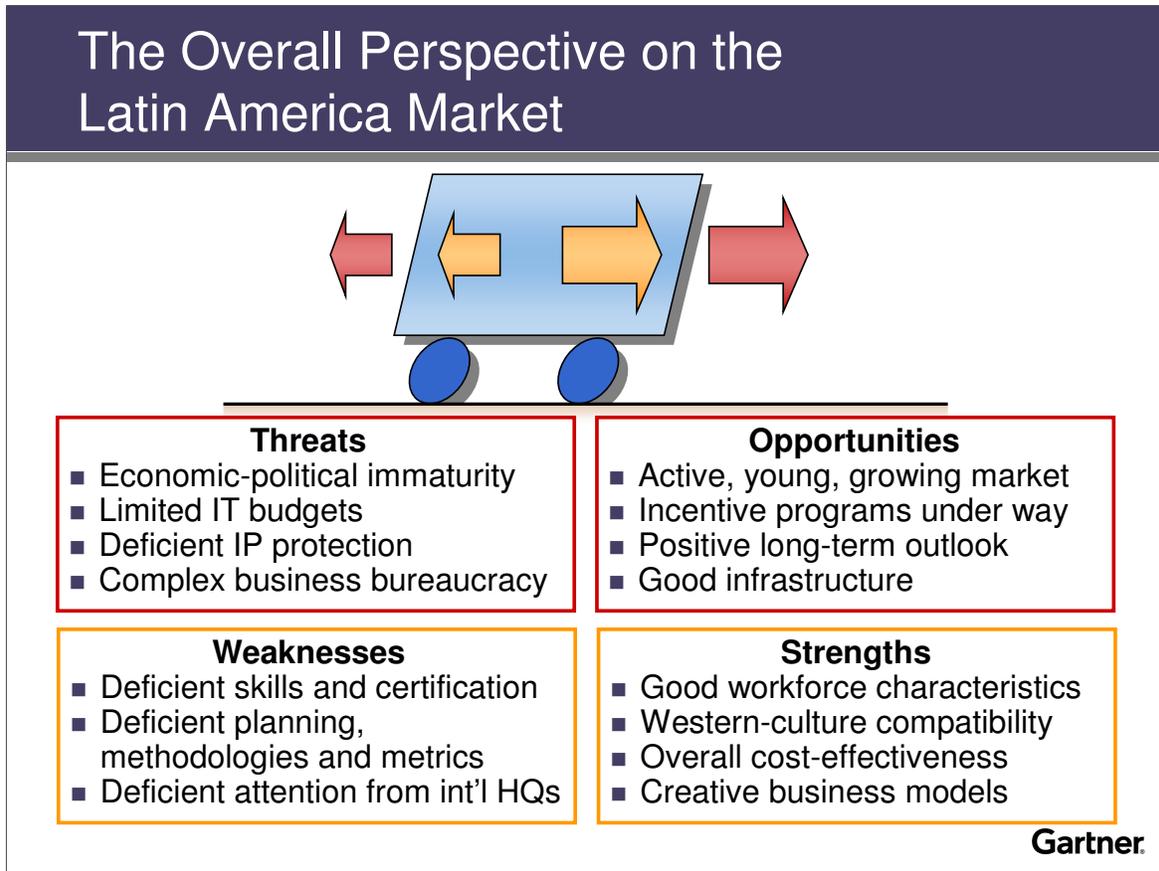


A diversity of factors will influence the IT maturity level of a country — and therefore influence the attractiveness of a country for IT suppliers. IT suppliers will weight the IT maturity level with other factors, like the economic outlook and instability index of the country. Nevertheless, without IT maturity, it doesn't matter how attractive the country may be.

IT maturity will attract a supplier to a country, and that will, in a feedback loop, boost IT utilization, which in turn increases the maturity level, creating the virtuous IT cycle. Some of those factors can be analyzed at a microeconomic level and affect individual businesses. Other factors can be analyzed at a macroeconomic level and will influence the country as a whole, and should be the object of attention of interested governments. The most-important factors affecting IT maturity are:

- Level of economic activity in the country, creating an active IT market, which in turn demands solutions and increases maturity. This places Latin America at an advantage compared with India and China; although they are global suppliers, they still don't have a well-developed internal market.
- The set of laws and regulations affecting the business of local and foreign suppliers.
- Existence of a prepared workforce.
- Existence of an educational infrastructure devoted to creating (and updating) IT professionals.

Analysis Framework



Suppliers play a critical role in the development of IT maturity and adoption in the region. Additionally, advanced governments in the region see Latin America as a potential supplier of IT services to other regions, most notably North America, with which the region shares approximately the same time zones. So, in this globalized world, governments are interested in creating an attractive business environment for suppliers for three strong reasons: 1) to support the IT-based competitiveness that local businesses need; 2) to add IT services to their export portfolio; and 3) perhaps the most-important reason, to create a high-level, well-paid workforce. Brazil and Mexico top the list, but interesting efforts are also under way in other countries, like Venezuela, Colombia, Peru, Panama and Costa Rica. Chile, although a sophisticated IT user, is a small domestic market, and Argentina, once the economic star of Latin America, is still recovering from its economic debacle of a couple of years ago.

As a matter of fact, we can perceive increased interest in the region, from both the global and local players. Global players, such as IBM, HP, EDS and Accenture, are making investments in the region, and making one of the countries (Mexico or Brazil) one of their global "hubs." Local players, after unsuccessfully trying to compete head-to-head with global players, have created "second generation" niche strategies, leveraging specific Latin American characteristics. Those strategies include focusing on the midmarket and below, attending to customization requirements unsupported by the big players, leveraging the workforce's unique and positive characteristics (empathy, creativity, flexibility and initiative), and developing local knowledge of specific verticals and business practices.

Background/Tutorial



The business environment and the technology environment are changing with ever-increasing speed — in different directions. Selecting a technology to support a business objective is like trying to hit a moving target from a moving platform. The net result is a great increase in the pressure on the IT organization.

The "good old days" when the IT organization delivered efficiency and operational excellence are in the past. Now, the IT organization also must deliver IT-related or IT-enabled innovation, flexibility, and agility, as well as meet many other objectives. Also, the IT organization must be able to effectively deal with services that cost a sizable portion of the IT budget and yet are never perceived or valued on the business side of the house, like security and compliance with regulations.

The new response from the IT organization — and from our perspective, the only one — is to become a service organization dealing with technology complexity and learning how to deliver internally competitive services, while striving to continuously deliver to the business the changing combination of services that are supplied by a changing combination of internal and external service providers. On top of all that, the Latin American CIO must appropriately manage technology maturity and adoption, and deal with an ever-constrained IT budget.

"Can anybody please point which way to go?"

Key Issue: Which technology, business and management trends are emerging in Latin America?

Top 10 Business Trends in Latin America

To what extent will each of the following business, societal or government trends impact your enterprise in 2006?	Ranking	
	Latin America	Overall
Attracting, retaining and growing current customer relationships	1	3
Improving business processes	2	1
Enterprisewide operating costs/budgets (pressure to control)	3	2
Improving enterprise competitiveness (bottom line profitability)	4	5
Expanding use of information/intelligence in products and services	5	6
Faster innovation (shorter product/service life-cycles)	6	9
Business restructuring (M&A)	7	11
Supporting competitive advantage	8	4
Concern about security breaches and disruptions to the business	9	7
Data protection and privacy	10	10

* New question for 2006

** New question for 2005

Source: Gartner EXP 2006 Survey of CIOs

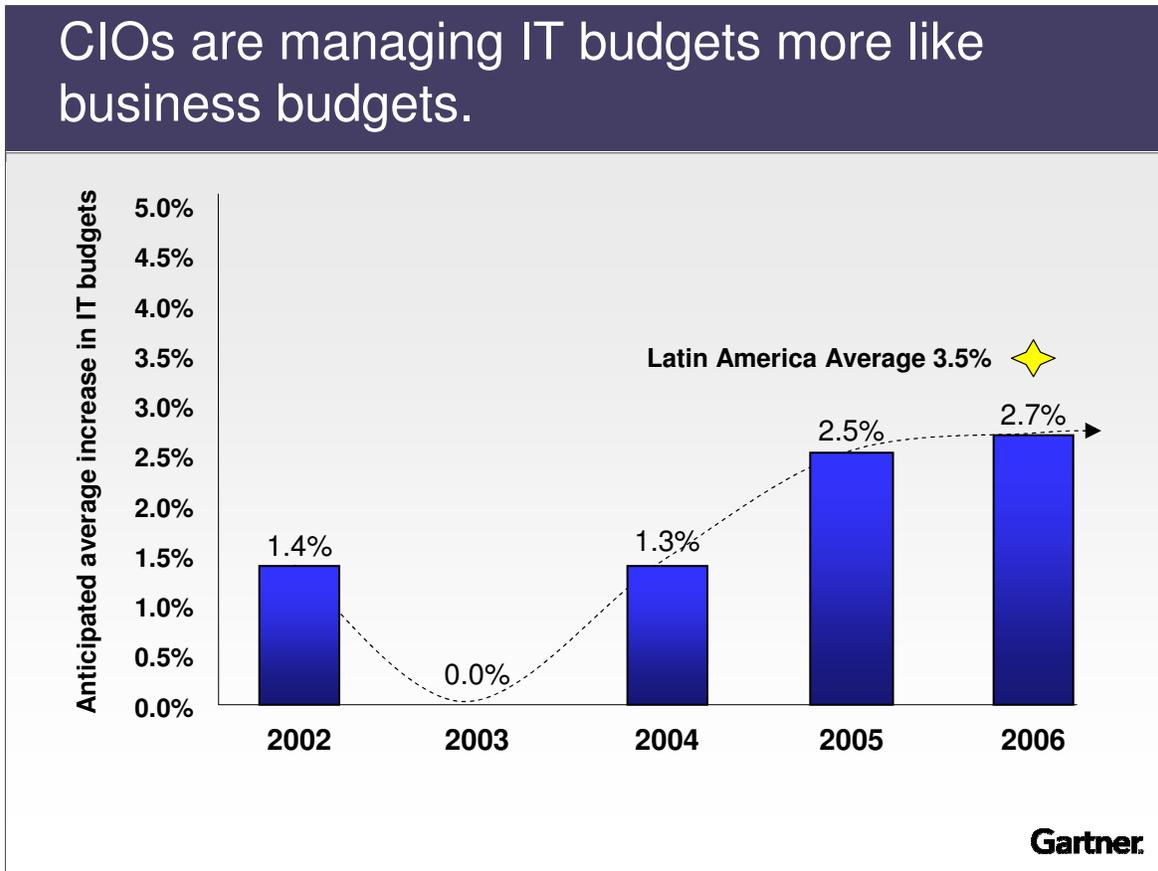
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For the most part, business trends in Latin America are in line with global trends. The worldwide trend is a bit more tactical than the Latin American agenda. Governance issues are higher on the agenda in Latin America. This may suggest a trend for Latin America to be more concerned about underlying management issues, without ignoring other issues such as security. IT's focus is shifting from budget allocation and spending to contribution and results. Controlling the budget is still important, but the focus now is more on results. The forces behind the shift include:

- Business executives who value growth more than cost containment. These executives are changing their attitudes from the unqualified "no" of cost containment to the qualified "yes" of growth initiatives.
- The completed build-out of the technology infrastructure. Now, the focus is on improving, integrating and innovating operations, using established technologies and applications.
- Initial revenue gains from automation. These gains increase operational efficiency and are part of 2005 plans and budgets. Getting more growth and efficiency will no longer rely on "low-hanging fruit."

The 2005 business trends focus on business process improvement and business intelligence as ways to do things better and faster, rather than just less expensively.

Background



Sept. 11 and other incidents have made us all too aware that we are part of a global environment, much of which we don't understand. In many cases, we are members of multinational, even "global," enterprises. Our most critical decisions during the next five years will focus on how to use IT to "force multiply" our business processes and imbue our decisions with prescience, speed, precision and global astuteness.

One perspective is unavoidable: IT can no longer be viewed as the expert domain of any one nation. Nor will our enterprises be successful if we attempt to apply the same approach to deploying IT in different regions and countries of the world. As we will see, the many parameters that affect development and the dissemination of IT will create a kaleidoscope of country personalities that rival country foods and dress in their diversity. The real-time enterprise in the global setting must operate in all time zones, all languages, all cultures, all political systems, all currencies and all markets. The approach that made an enterprise successful on its own turf must be reinvented for each IT infrastructure it creates in another corner of the world.

Strategic Planning Assumptions

A Latin America Snapshot: Some Important IT Trends

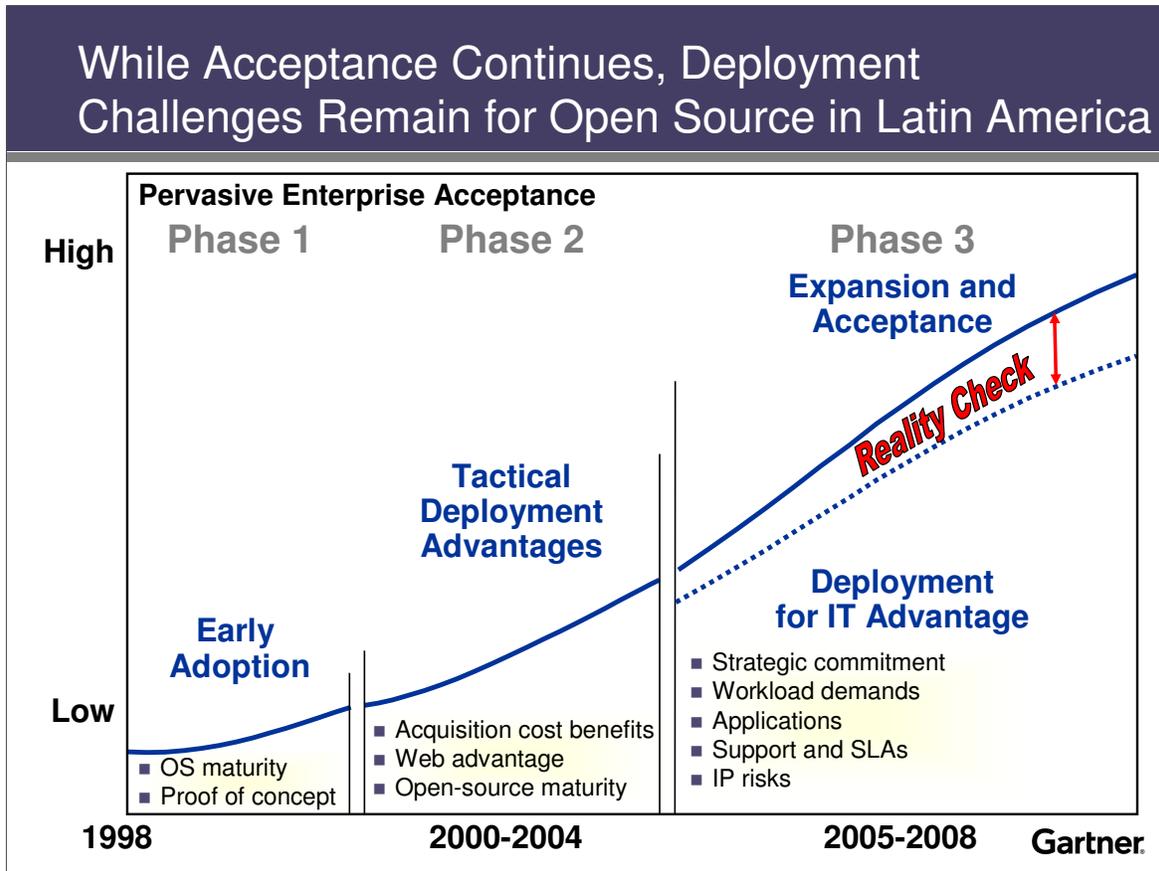
- By 2006, 80 percent of efforts to demonstrate business value in open-source adoption will fail due to poorly conceived adoption strategies (0.7 probability)
- By 2007, Latin America, notably Brazil and Mexico, will become challengers in application development outsourcing and in niche business process outsourcing (0.7 probability)
- By 2008, in Latin America, real-time financial operations driven by secure and ubiquitous electronic channels will represent 80 percent of the total number of transactions (0.7 probability)

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These trends apply to the more-developed metropolitan areas and regions in the more-developed countries. These countries account for 70 percent to 80 percent of Latin America's IT market, which is projected to reach \$145 billion in 2005, with a 9.7 percent CAGR. Regions in less-developed Latin American countries will follow these trends more slowly. For mature technologies, proficiency levels across all of Latin America will eventually converge toward the level of more-advanced centers.

Each of these Strategic Planning Assumptions will individually trigger important new niche initiatives. What is exciting is that all will be commercially viable within the same time frame. Also, as Latin America begins to move toward new technologies more quickly, these trends will be adopted at the same rate as in the rest of the world.

Strategic Planning Assumption: By 2006, 80 percent of efforts to demonstrate business value in open-source adoption will fail due to poorly conceived adoption strategies (0.7 probability).

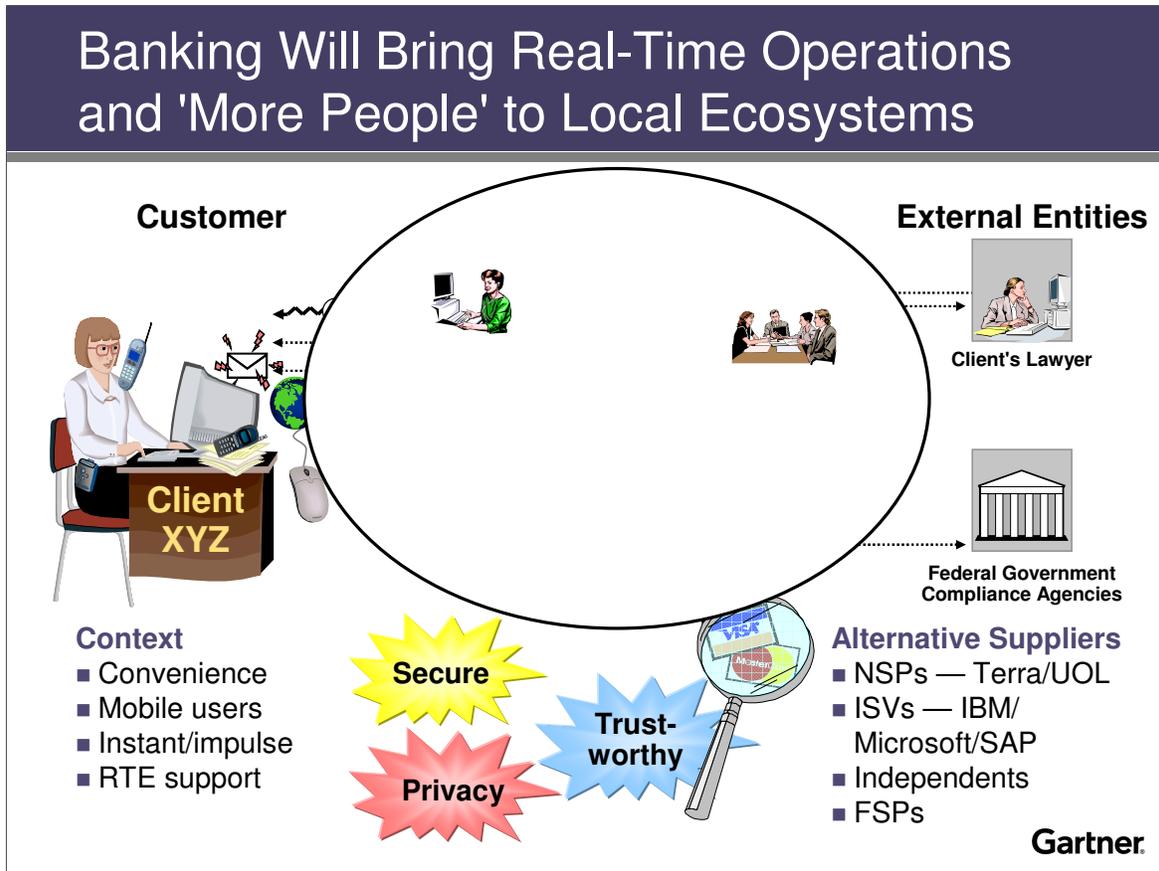


The aggressive commercial policies of giant software vendors, coupled with restricted IT budgets, will lead CIOs to turn to open-source software (notably Linux). The public sector uses more open-source software, with political considerations and regional differences influencing adoption, especially on the desktop.

This is the latest revision of Gartner's adoption curve that charts the progress and factors in accelerating Linux adoption in the enterprise. We've made a few adjustments, such as: 1) a narrower chasm to Phase 3; 2) a thinner reality-check gap as Linux matures as a proven operating-system environment; and 3) some changes to the inhibiting factors in Phase 3 (especially for complex configurations with demanding availability and recovery requirements).

More-aggressive enterprises that achieve notable successes in Phase 2 of Linux evolution should design more-far-reaching strategic plans to address the commercialization of Linux, to minimize political resistance to its further adoption. An enterprises that is less inclined to stretching the bounds, but that has had a positive experience, can continue to build out the foundation and niche roles for which it has achieved success. Lagging enterprises should avoid prematurely advancing to Phase 3 before Phase 2 is actively mined.

Strategic Planning Assumption: By 2007, in Latin America, real-time financial operations driven by secure and ubiquitous electronic channels will represent 80 percent of the total number of transactions (0.8 probability).



Technology is essential for implementation of real-time payment systems in the largest economies in Latin America: Brazil and Mexico. The consolidation of digital certification infrastructures integrated to electronic channels and payment flows will help enlarge "bankerized" segments and increase credit volumes. The extension of electronic monetary interactions to all segments produces opportunities to create more revenue for financial services providers (FSPs). IT also enables FSPs to maintain cost control and support efficient delivery of customer-need-adjusted products and services to individuals, and enhanced cash management to enterprises.

Action Item: Latin American FSPs and enterprises should increase connectivity, complete interenterprise integration, and implement document management (DM) and business process management (BPM) technologies with standardized security infrastructures. They should strengthen and extend their application integration capabilities (most notably through Web services) and address security issues raised by electronic interactions that extend beyond traditional intraenterprise and point-to-point interactions. At the same time, they must maintain a disciplined approach to business process and technology infrastructure, driven by the goal of becoming a real-time enterprise.

Recommendations

Recommendations

- ✓ IT is the key resource for businesses in Latin America: Use it
- ✓ Business-IT alignment is an elusive target: Revisit it often
- ✓ Sourcing is a broad and critical management discipline: Develop it
- ✓ Resist pressures and go beyond execution: Plan before, measure after
- ✓ IT competes with other investment initiatives: Offer attractive risk, value and timing
- ✓ Don't be conservative: Adopt change and manage it

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Exploiting IT as a strategic resource means developing a new overall approach to the problem. In Latin America, this approach can be characterized by the following attitudes:

- Alignment is an elusive target. The closer an enterprise gets to it, the more IT becomes entangled with the business, requiring better ways of alignment. This is a permanent concern.
- With current IT growth rates, the problem of skills will only grow worse in Latin America, as it will in some other regions as well. This is an added reason to develop sourcing as a full-fledged management discipline.
- As the economic and business environment in Latin America changes faster and faster, CIOs live in a permanent state of "fire alarm." They sacrifice the future to comply with immediate priorities. A professional management attitude requires more-strategic preparation and a more-mature reaction to pressures.
- IT expenditures are not expenses. IT investments must be evaluated competitively with other investments from a business perspective, and the return on that investment must be measured, closing the cycle.
- Latin American CIOs have to deal with one more change dimension: changes that derive from a crisis in the external environment. Less-conservative and more-flexible initiatives are necessary.

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