





IDC FutureScape: Worldwide IT Industry 2018 Predictions – Latin America Implications

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IDC Latin America

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Q&A

Con el equipo de "IDC Predictions Latin America 2018"



IT Industry: Worldwide Drivers

- ✓ Accelerating DX: Technology-centric transformation altering business and society
- ✓ Pace of change: Technology capabilities enable sustainable change at the speed of digital business
- ✓ DX delta: Leaders and disruptors widen performance gap
- ✓ Human versus machine: The impact of AI and automation
- ✓ Sense, compute, actuate: The new data-centric paradigm
- ✓ Platform disruption: Unleashing digital innovation's power for scale
- ✓ Cyberthreats: Theft, ransom, and cyberattack on the rise
- ✓ Shifting economics: Changing value structures and the rise of digital capital
- ✓ The future workforce: Global demand for digital talent
- ✓ Innovation impasse: Legacy systems constraining transformation

For additional details on the above drivers, please refer to report #US43171317 IDC FutureScape: Worldwide IT Industry 2018 Predictions.

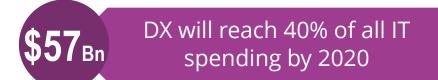




IT Industry: LatAm Situation Analysis

- During 2018, Latin America will slowly start to emerge from a two-year adjustment to the end of the commodity boom of the prior decade.
- Digital transformation (DX) has created an increasingly global marketplace in which Latin American companies feel the pressure to keep moving forward at a frantic pace. Digital disruption is pushing Latin America's largest and most successful companies to transform.
- During 2018-2020, Latin America will turn the digital corner and GDP will quickly 'digitize'. The digital economy will steadily become just 'the economy'.
- The staggering pace of current technological innovation is only escalating the sense of urgency. Entry of global 'digital-natives' is lighting a fire under the mostly digital-immigrant corporate space of Latin America to become digital-natives.
- To transform, companies will not only need to master technology and algorithms. They will also need to master data and talent.





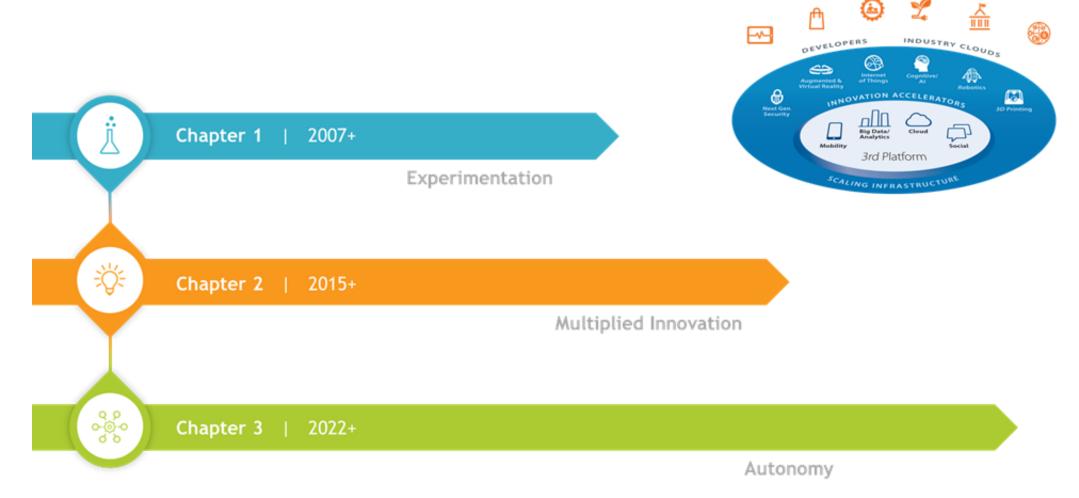








3 Chapters of the 3rd Platform Era



Source: IDC, 2017



Digital Transformation

The Second Chapter: Multiplied Innovation for the DX Economy



Innovation & Data

Pace of innovation

increases

Product are tailored to industry and use case with rapidly scaling ability to deliver value

000

Offerings are more modular for effective partner



The consumer & Tech

Products

& Skills

sales

Tech-enabled augmented skills that make people and jobs more effective

Personalized experiences prevail as tech moves into more facets of every day life

The tech experience is highly immersive and natural - voice adoption accelerates

Lower prices points fuel widespread adoption



Competitive Landscape



Plataform wars develop

loT is a gamechanger

Strides made in Al. and AR/VR

Platform-based competitive enviorment scalability is a key success factor

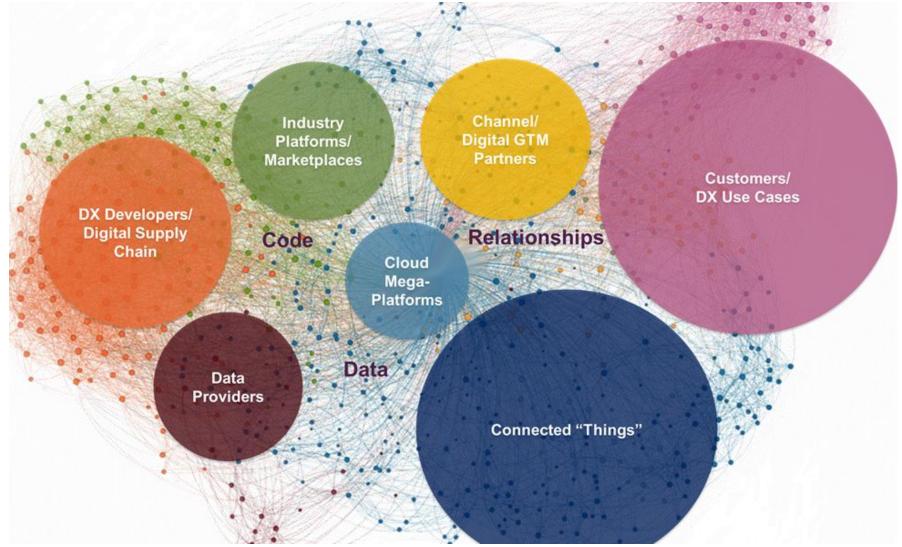
Disruption accelerates as a new rules emerge Data as a Service & shared pools of data expand business models and reduce time to decision

> More than ever data is used for differentation and competitive advantage





Becoming a Digital Native Enterprise: Digital Innovation Network

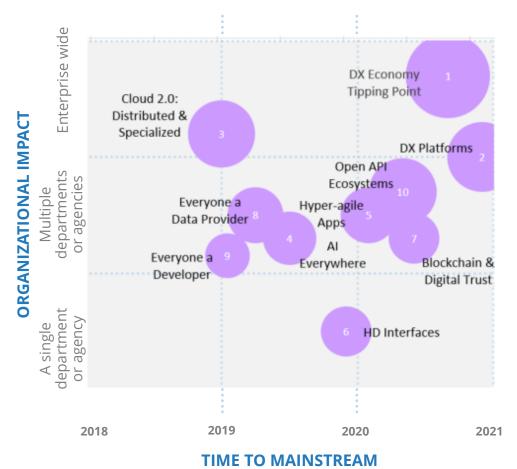




IDC FutureScape:

DC FutureScape

IT Industry Worldwide & Latin America Implications



- By 2021, at least 40% of Latin America GDP will be digitized, with growth in every industry driven by digitally-enhanced offerings, operations and relationships; by 2021, investors will use platform/ecosystem, data value, and customer engagement metrics as valuation factors for all enterprises
- By 2020, 40% of large enterprises in Latin America will have fully articulated an organization-wide digital transformation (DX) platform strategy, and will be in the process of implementing that strategy as the new IT core for competing in the digital economy
- By 2021, enterprises' spending on cloud services and cloud-enabling hardware, software and services in Latin America will more than double to over \$11 billion, leveraging the diversifying cloud environment that is 10% at the edge, 15% specialized (non-x86) compute, and over 80% multicloud
- By 2019, 30% of digital transformation initiatives will use Al services in Latin America; by 2020, 50% of commercial enterprise apps will use Al, over half of consumers will interact with customer support bots, and over 40% of new industrial robots will leverage Al
- By 2019, enterprise apps will shift toward hyper-agile architectures in Latin America, with over 50% of application development on cloud platforms (PaaS) using microservices and cloud functions (e.g., AWS Lambda, Azure Functions), and over 70% of new microservices deployed in containers (e.g., Docker).
- By 2021, human-digital (HD) interfaces will diversify, as 10% of field-service techs and 15% of infoworkers use augmented reality, nearly 50% of new mobile apps use voice as a primary interface and 20% of consumer-facing Latin America Top 3000 Companies will use biometric sensors to personalize experiences
- By 2021, 20% of the Latin America Top 3000 will use blockchain services as a foundation for digital trust at scale; by then, 25% of top global transaction banks, nearly 30% of manufacturers and retailers and 20% of healthcare organizations will use blockchain networks in production
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- Improvements in simple ("low-/no-code") development tools will dramatically expand the number of non-tech developers over the next 36 months; by 2020, these nontraditional developers will build 20% of business applications in Latin America and 30% of new application features (40% by 2027).
- By 2021, more than half of the Global 2000 with Latin America presence will see at least 20% of their digital services interactions come through their open API ecosystems, up from virtually 0% in 2017 amplifying their digital reach far beyond their own customer interactions

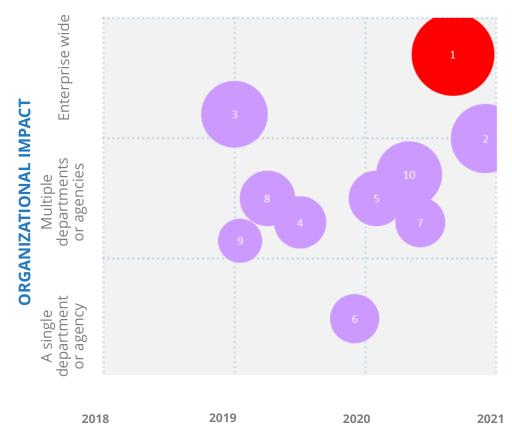




Prediction #1: Digital Economy Tipping Point

By 2021, at least 40% of Latin America GDP will be digitized, with growth in every industry driven by digitally-enhanced offerings, operations and relationships; by 2021, investors will use platform/ecosystem, data value, and customer engagement metrics as valuation factors for all enterprises





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Note: The size of the bubble indicates complexity/cost to address. Source: IDC, 2018



8



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IT Impact

- Digital transformation (DX) will rise to the top of CEOs' and line of-business (LOB) executives' priority lists
- The urgency to digitally transform will drive an increasingly large portion of ICT spending. By the end of 2019, DX Spending will increase 54% from 2017
- Low currency valuations make the opportunity for M&A in Latin America even more enticing, requiring digital roadmaps and expected penetrations a required due diligence metric

Business Impact

- Business unit heads and their staff will have to deal with organizational and cultural changes around a DX strategy
- Business unit heads must appreciate and embrace technologies, or face replacement

Guidance for Technology Buyers

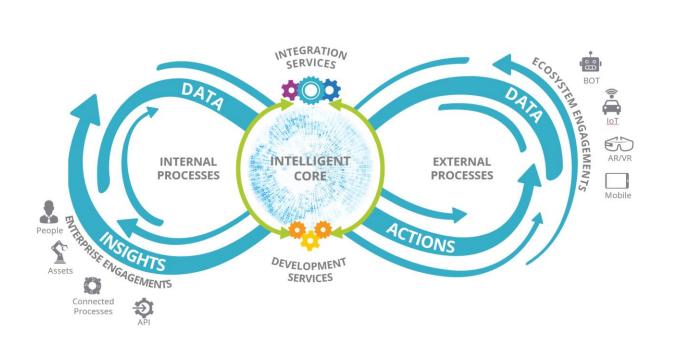
- IT leaders must partner with business to deliver value beyond the narrow confines of traditional IT priorities and investment models
- Time is short. The IT organization must quickly move to a digital-native model over the next three years (see the following nine predictions)
- Strategy must be drawn against a global benchmark. A borderless marketplace is the competitive landscape of the DX economy

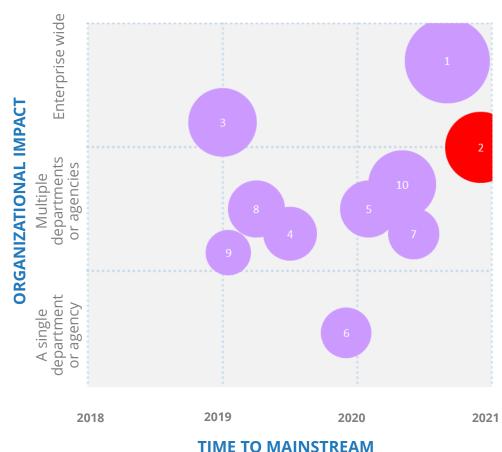




Prediction #2: DX Platforms

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IT Impact

- The ultimate goal is an integrated platform where the new 'intelligent core' at the heart of the DX platform is the foundation for sustainable digital innovation
- CIOs will need to understand that the architecture that they define to underpin the data-driven DX platform strategy will be key for long-term success
- Tech leadership should focus on 'scale' as the underlying design principle for this platform

Business Impact

- The DX Platform should be seen as a key enabler for key business outcomes and priorities being laid out by the board (and hopefully being driven by the CEO)
- A digital Dream Team will span IT, digital and business teams

Guidance for Technology Buyers

- DX platforms are meant to cut across all workflows and business processes, evolving/transforming old IT to new digital capabilities
- The key differentiator for the organization will be the algorithms, code and models that sit within the intelligent core
- Ensure that all layers of the enterprise platform (from infrastructure to software) are sufficiently open to allow interoperability with other members of the ecosystem (partners, suppliers and vendors)

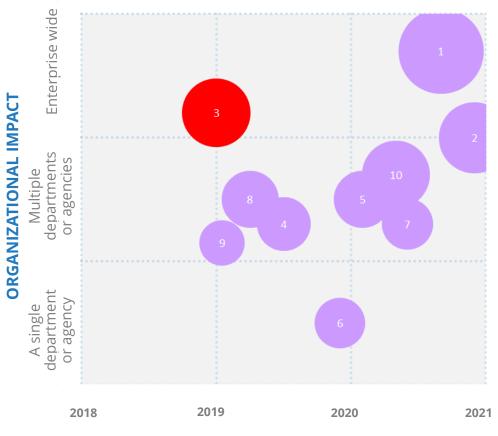




Prediction #3: Cloud 2.0 – Distributed and Specialized

By 2021, enterprises' spending on cloud services and cloud-enabling hardware, software and services in Latin America will more than double to over \$11 billion, leveraging the diversifying cloud environment that is 10% at the edge, 15% specialized (non-x86) compute, and over 80% multicloud





TIME TO MAINSTREAM





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IT Impact

- Management and integration of resources across cloud platforms will become critical technical capabilities at IT organizations driving DX
- Leading IT vendors will emerge around four platform "galaxies": megaplatforms, enterprise application platforms, cloud integrators/managers, and industry clouds

Business Impact

- The emergence of "cloud at the edge" will open up vital opportunities, but also new requirements for IT planning and management
- Adopting the cloud is no longer primarily about economics and agility. It is becoming enterprises' most critical, and dependable, source of sustained technology innovations

Guidance for Technology Buyers

- Focus early on developing a structured integration framework across cloud platforms
- Get involved in the early stages of creation of new digital services to leverage large numbers of "edge" IT assets (e.g., hospitals, mines, transportation hubs, and factories), especially in high-latency geographies
- Cloud vendors represent not just their offerings, but also large partner/innovators ecosystems assess the scope and strength of their ecosystems

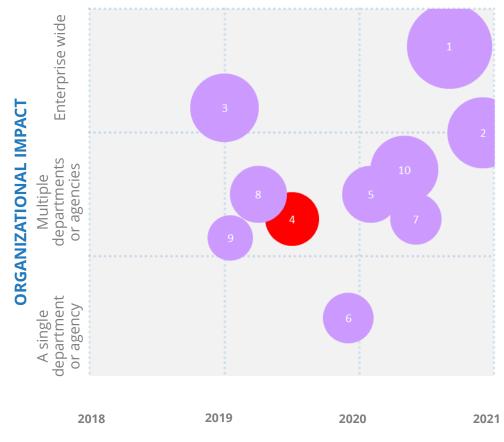




Prediction #4: Al Everywhere

By 2019, 30% of digital transformation initiatives will use AI services in Latin America; by 2020, 50% of commercial enterprise apps will use AI, over half of consumers will interact with customer support bots, and over 40% of new industrial robots will leverage AI





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IT Impact

- Digital services and apps without "Al inside" will fall behind competitors' pace of innovation
- IT will need to invest in technologies to ingest, profile, validate and cleanse (and store) multiple streams of high volume data that feed machine learning and cognitive apps
- The IT organization will be the first in self-use AI

Business Impact

- Al adoption deserves an inter-disciplinary and cross-business-unit strategy
- Talent, both AI engineers and data scientists, will be needed

Guidance for Technology Buyers

- CIOs must create and continuously enhance an integrated enterprise digital platform that will enable new operating and monetization models. (see Prediction 2)
- Ensure the availability of API management tools that interface with data feeds for AI-powered applications and services
- Define robust privacy and security rules for cognitive computing apps

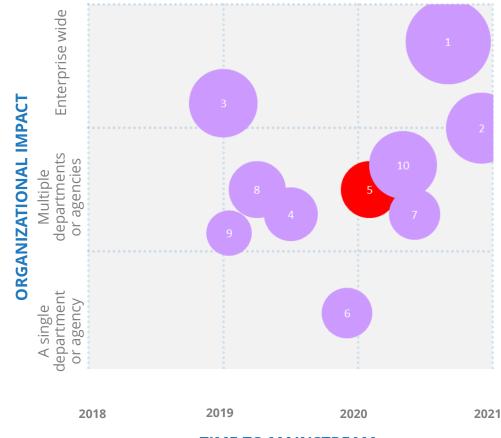




Prediction #5: Hyperagile Apps

By 2019, enterprise apps will shift toward hyper-agile architectures in Latin America, with over 50% of application development on cloud platforms (PaaS) using microservices and cloud functions (e.g., AWS Lambda, Azure Functions), and over 70% of new microservices deployed in containers (e.g., Docker).





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IT Impact

- New types of applications leveraging IoT and analytics will need a modern application architecture that uses microservices and application architectures
- The move to container technologies requires an upgrade of IT skills in the organization, and may introduce an open source approach and culture
- Use of hyper-agile architectures in Latin America will accelerate the movement from an isolated and ad-hoc cloud to a widespread and cloud-first strategy

Business Impact

- Agility in innovation as a driver for DX will demand heavier use of cloud infrastructures
- The ability to explore new apps leveraging emerging digital capabilities enabled by IoT, AI, virtual reality/augmented reality (VR/AR) and blockchain will be easier and faster

Guidance for Technology Buyers

- Cloud native computing has evolved quickly, and deploying a microservice-architected, container-packaged application in a PaaS environment should be a target for most IT organizations.
- Application developers and operations teams will need to develop effective container management strategies
- Function computing is still in its infancy, with lacking interoperability causing a lock-in buyer-beware caution

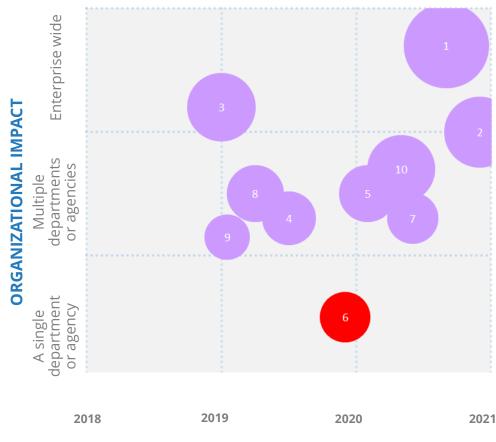




Prediction #6: HD Interfaces

By 2021, human-digital (HD) interfaces will diversify, as 10% of field-service techs and 15% of infoworkers use augmented reality, nearly 50% of new mobile apps use voice as a primary interface and 20% of consumer-facing Latin America Top 3000 Companies will use biometric sensors to personalize experiences





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IT Impact

- AR, voice and biometric sensing are all complex technologies that promise to revolutionize business processes, but they represent significant challenges for IT
- Shifting to new interfaces requires users to negotiate an often steep learning curve, so expect complaints along with praise

Business Impact

- Very quickly investment in digitization of commercial human-digital experiences will accelerate. In the retail space alone, IDC predicts investment in AR/VR and AI technologies in Latin America to reach US\$150 million in 2019
- Quick experimentation in 'test markets' must lead to rapid, widespread incorporation

Guidance for Technology Buyers

- AR technologies (and suppliers) are still in early deployment stages. Accordingly, IT should build close relationships with AR vendors
- Research and trial all available voice-powered platforms (Alexa, Google Assistant, Watson, Bixby, Siri, Cortana, etc) not all platforms will produce the same results across the board
- Organizations should conduct a risk assessment to identify risks (and perceived risks) associated with biometric data and devices

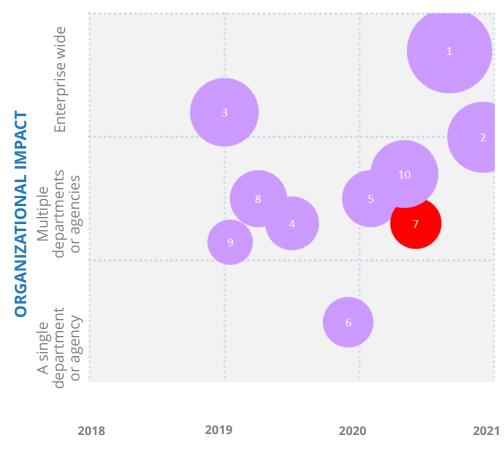




Prediction #7: Blockchain and Digital Trust

By 2021, 20% of the Latin America Top 3000 will use blockchain services as a foundation for digital trust at scale; by then, 25% of top global transaction banks, nearly 30% of manufacturers and retailers and 20% of healthcare organizations will use blockchain networks in productionon





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IT Impact

- Organizations will need interconnectivity with various ledgers of others in their industry ecosystems (e.g., for manufacturers: retailers, wholesalers, and suppliers)
- As blockchain-based business networks and transactions become more widespread, organizations not participating in blockchains will be at significant speed and cost disadvantages
- Early adopters have the opportunity to establish very strong positions over the next 36 months

Business Impact

- Delivering digital trust will be the biggest driver for blockchain in the Latin America region
- Business unit heads need to gain an understanding of blockchain, its capabilities and limitations

Guidance for Technology Buyers

- Investigate various blockchain consortiums for potential peers and partners to help get your organization started
- For first entrants, first use cases should already be identified and pilots should at least be in planning stage
- For slower-moving DX travelers, 2018 is the time to develop scenarios about how your organization would most profitably use blockchain as a service

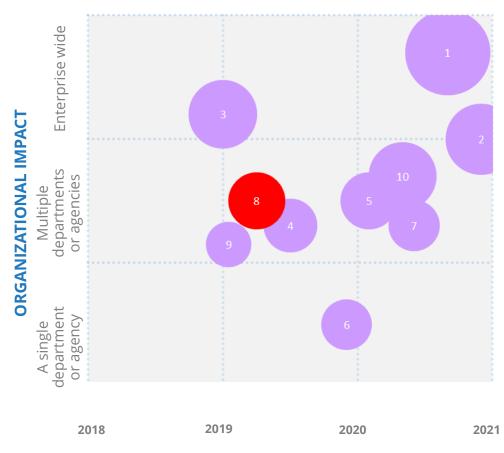




Prediction #8: Everyone a Data Provider

By 2019, 10% of large enterprises in Latin America will generate revenue from data-as-a-service - from the sale of raw data, derived metrics, insights, and recommendations - up from 3.5% in 2017











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IT Impact

- In Latin America DaaS (Data-as-a-Service) will have the greatest impact for companies in advanced stages of DX where data monetization becomes key for Omni Experience, Information and Business Operations transformation
- Expect tightened controls and governance policies and procedures (including addressing data sovereignty and customer privacy issues) as the DaaS trend evolves
- Customers will begin to view DaaS as an integral part of the purchased product or service

Business Impact

- Business units that are keen to turn data into commercial offerings must partner with IT and/or relevant ecosystem partners
- For many businesses and their managers, data monetization is a completely new business and skill set that requires learning and experimentation

Guidance for Technology Buyers

- Successful external monetization of data will require not only the technical capability to aggregate, store, and process data, but also for packaging, pricing, and distribution, as well as understanding data sovereignty laws and privacy regulations.
- Seek partnerships with existing dedicated DaaS providers or preferred analytics and information management vendors
- Establishing a critical mass of external data feeds is a crucial ingredient for maximizing the accuracy and value of your AI-based digital services and solutions.

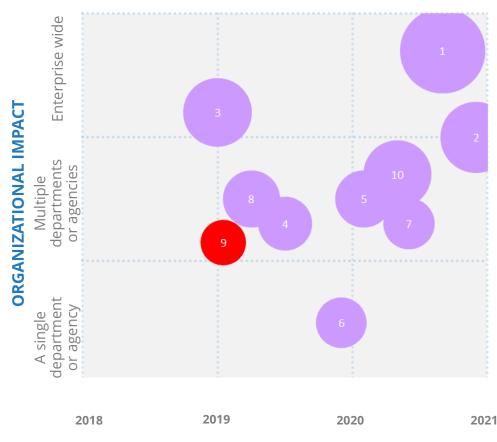




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Improvements in simple ("low-/no-code") development tools will dramatically expand the number of non-tech developers over the next 36 months; by 2020, these nontraditional developers will build 20% of business applications in Latin America and 30% of new application features.





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IT Impact

- Supply and demand for the best talent will intensify the need to address labor, innovation speed, and compliance
- IT will need to take responsibility for creating an infrastructure that allows for the dissemination of information and training-related materials regarding low code/no code apps within the organization
- IT will need to mature processes for ensuring low code/no code apps comply with the organization's security and HR protocols

Business Impact

- Organizations will be able to meet situational business requirements and reduce time to market without involving IT (e.g., changing the layout of an app or report via drag-and-drop features or extending functionalities via third-party API – Application Programing Interface – calls)
- Organizations should ensure IT will take over ownership of a low-code/no code app once it reaches critical mass

Guidance for Technology Buyers

- Integrate API-based data into low code/no code applications, particularly if the data originates from company databases and systems.
- Designate an application owner to govern best practices around usage for each low code/no code application.
- Define protocols and procedures for usage of low code/no code applications such as the number of concurrent users, role-based access privileges, identity and security

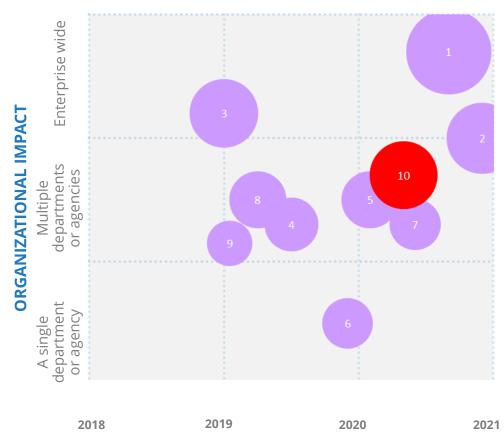




Prediction #10: Open API Ecosystems

By 2021, more than half of the Global 2000 with Latin America presence will see at least 20% of their digital services interactions come through their open API ecosystems, up from virtually 0% in 2017 - amplifying their digital reach far beyond their own customer interactions





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IT Impact

- Developing a successful open API digital ecosystem is not a "project"; it is a new business mode
- API management solutions and platforms will be an essential new ingredient for supporting open API ecosystems

Business Impact

- External APIs will allow enterprises to accelerate their innovation by expanding their products and services
- Enterprises without aggressive, open API-based digital distribution strategies (and operations) will stunt their own growth

Guidance for Technology Buyers

- Building a successful API ecosystem requires strong internal processes and IT/digital platforms, and skills to understand how to incorporate
- APIs and innovations will go hand-in-hand for many organizations
- Partner with technology experts (consultants, ISVs, integrators) that understand the technologies and can speak to the industry language



DC FutureScape

Predictions at a Glance – Latin America Implications

- 1. Digital economy tipping point. By 2021, at least 40% of Latin America GDP will be digitized, with growth in every industry driven by digitally-enhanced offerings, operations and relationships; by 2021, investors will use platform/ecosystem, data value, and customer engagement metrics as valuation factors for all enterprises
- **2. DX platforms.** By 2020, 40% of large enterprises in Latin America will have fully articulated an organization-wide digital transformation (DX) platform strategy, and will be in the process of implementing that strategy as the new IT core for competing in the digital economy
- **3. Cloud 2.0: Distributed and specialized.** By 2021, enterprises' spending on cloud services and cloudenabling hardware, software and services in Latin America will more than double to over \$11 billion, leveraging the diversifying cloud environment that is 10% at the edge, 15% specialized (non-x86) compute, and over 80% multicloud
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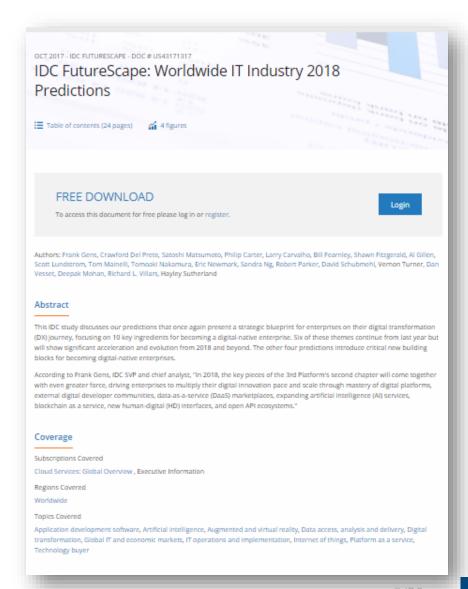
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Learn More!

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(IDC #US43171317)



Please send in your questions for our panel of





experts

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Consulting & Strategic Solutions,

Vice President, IDC Latin America



Carlo Dávila
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