

The graphic features a dark blue background with a white silhouette of a city skyline at the bottom. The skyline includes various architectural elements like domes, spires, and a tall column topped with an eagle. Above the skyline, a network of white dots connected by thin white lines forms a web-like structure, symbolizing digital connectivity. On the left side of the graphic, there is a vertical orange bar and a network of orange dots connected by lines, mirroring the theme of digital transformation.

Latin America 4.0: The Digital Transformation in the Value Chain

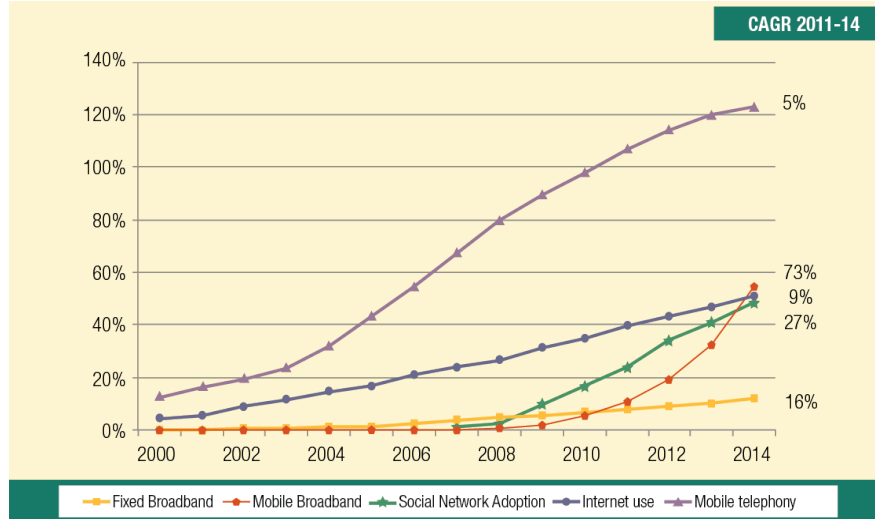
The upcoming challenge for Latin American business

gA Center for Digital Transformation

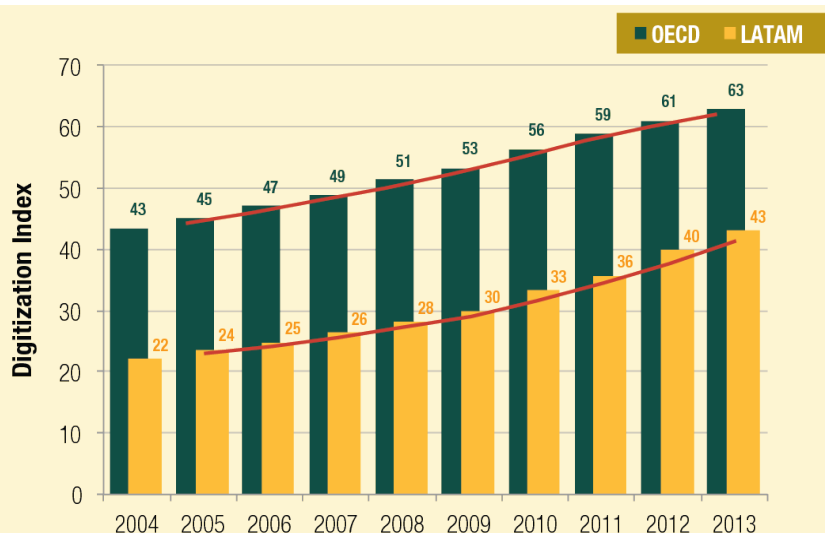
INDUSTRIAL DIGITIZATION: THE LATIN AMERICAN CHALLENGE

DIGITAL TRANSFORMATION OF THE ECONOMY REMAINS LATIN AMERICA'S CRITICAL CHALLENGE FOR THE UPCOMING YEARS

ADOPTION OF DIGITAL TECHNOLOGIES



DIGITIZATION INDEX



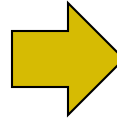
THE CHALLENGE

- A large part of growth in digitization has been driven by consumer adoption (digitization of consumption)
- So far, the contribution of digital technologies to productivity has been marginal at best
- Economic growth outlook (2015-17) for the region will be a third of the past decade
- The only option to resume growth is to accelerate the digitization of our economies (digitization of production)

THE PURPOSE OF THIS STUDY BY THE gA CENTER FOR DIGITAL TRANSFORMATION WAS TO UNDERSTAND THE NATURE OF THE CHALLENGE AND CONTRIBUTE WITH RECOMMENDATIONS

UNDERSTAND THE SITUATION

- Level of digitalization of production processes by industry
- Is the level of digitization homogeneous or are there leading and lagging sectors?
- What explains the different levels of digitization across industries and countries?
- What are the enablers and barriers faced by Latin American firms to assimilate digital technologies in production processes?
- Are Latin American businesses ready to incur the much-needed digital transformation?



PRESCRIBE

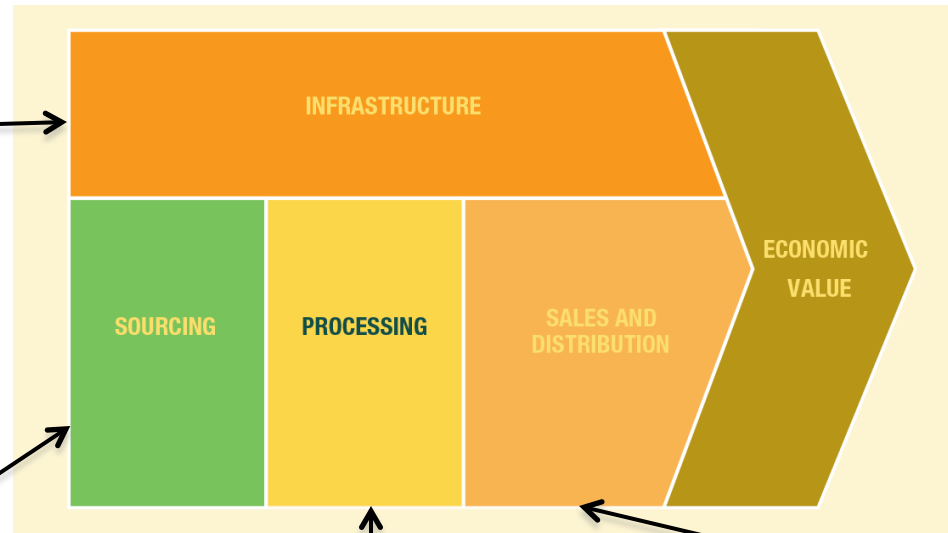
- Implications of these challenges for the management of Latin American companies
- Define what are we trying to achieve through digitization
- How do we build a company-wide willingness to transform?
- What is the incremental economic value derived from digital transformation?
- What entails to digitize all company business processes?
- How do we attract and retain the right talent?

- Face-to-face interviews with 75 Latin American corporations
- Analysis of micro-data of National Industrial Census in several countries

DIGITAL TRANSFORMATION IS THE ADOPTION AND ASSIMILATION OF DIGITAL TECHNOLOGIES ACROSS ALL STAGES OF THE ENTERPRISE VALUE CHAIN

ENTERPRISE VALUE CHAIN

- IT technology (computers, operating software, applications)
- Networks (wired and wireless)
- Fixed and mobile broadband



Digitization of the supply chain

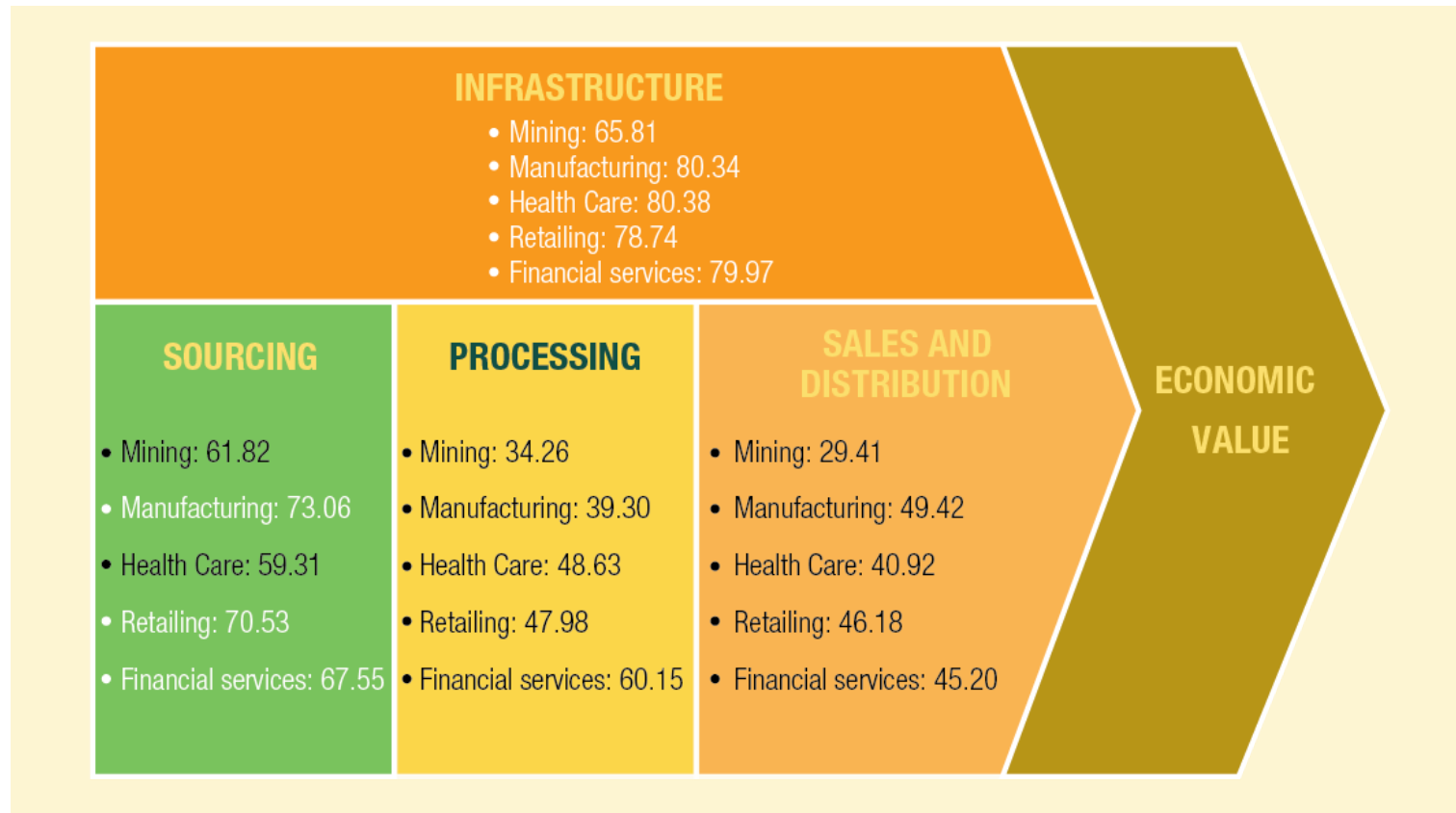
- Access to information on inputs and services
- Handling of electronic purchase orders on- line
- Use of urchase marketplaces
- Use of electronic banking

- Digitization of internal processing function through systems (e.g. ERP, CRM)
- Any digital interface with providers of outsourced functions

- Digitization of the sales function
- Transactional capability to receive orders, fulfill and provide customer care on- line

LATIN AMERICAN INDUSTRIES: DIGITIZATION BY STAGE OF VALUE CHAIN

(100-65: Advanced; 65-45: Transitional; <45: Limited)



Source: Calculated by Telecom Advisory Services LLC from National Industrial Census data

IN FACT, INFRASTRUCTURE DIGITIZATION IS HIGH ACROSS ALL SECTORS AND COUNTRIES

LATIN AMERICAN INDUSTRIES: DIGITAL TECHNOLOGIES INFRASTRUCTURE INDEX (100-65: Advanced; 65-45: Transitional; <45: Limited)

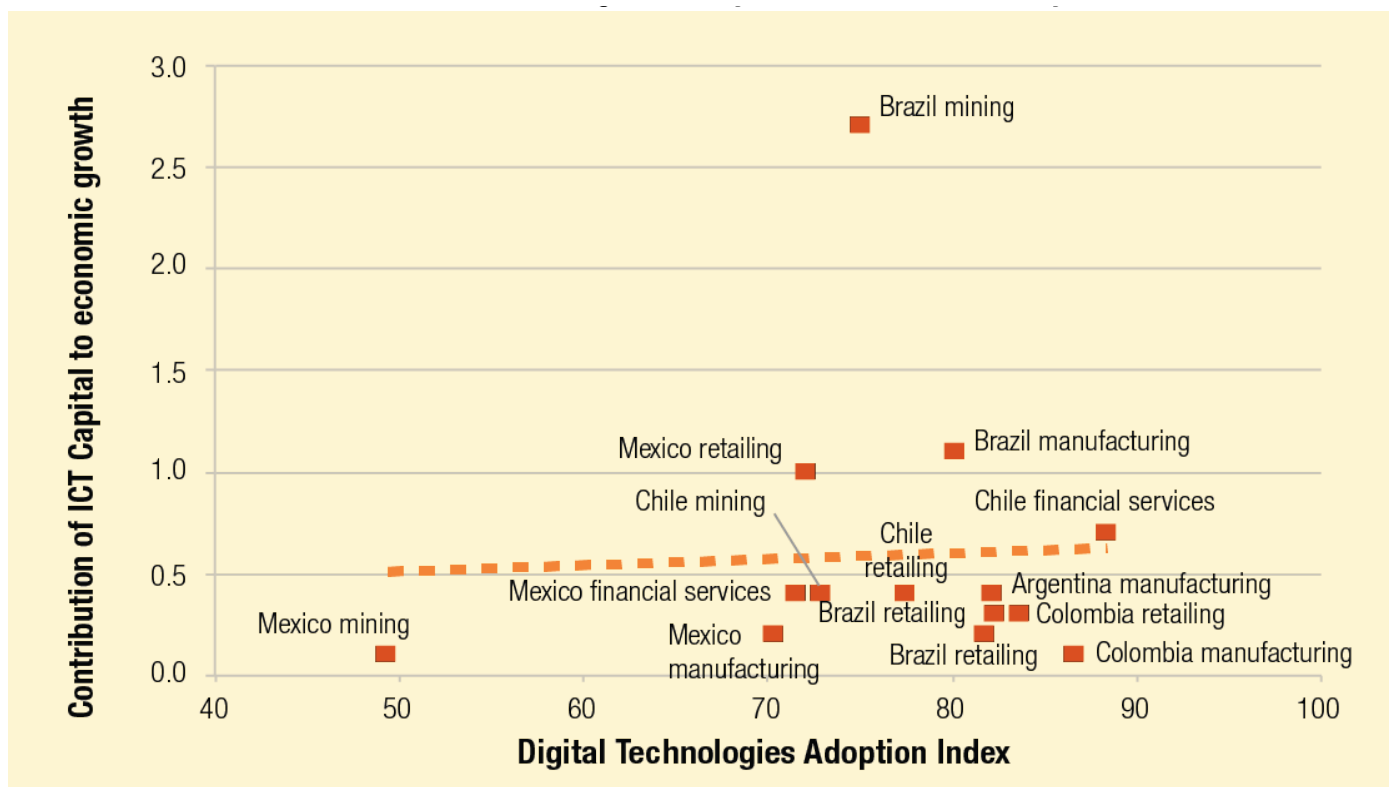
	Argentina	Brazil	Chile	Colombia	Mexico	Latin America
Mining	- - -	75.10	72.95	- - -	49.38	65.81
Manufacturing	82.19	80.22	82.32	86.59	70.40	80.34
Health	- - -	81.66	- - -	92.13	67.94	80.58
Retail Trade	- - -	81.78	77.44	83.67	72.09	78.74
Financial Services	- - -	- - -	88.39	- - -	71.54	79.97
Average	82.19	79.69	80.27	87.46	66.27	79.18

Note: The index blends indicators on computer adoption, Internet usage, and LAN deployment.

Source: Telecom Advisory Services analysis

HOWEVER, THE CONTRIBUTION OF DIGITAL CAPITAL TO REGIONAL ECONOMIC GROWTH IS LOW

LATIN AMERICAN: RELATION BETWEEN DIGITAL TECHNOLOGY ADOPTION AND CONTRIBUTION OF ICT CAPITAL TO ECONOMIC GROWTH BY SECTOR AND COUNTRY



Source: Digital Technologies Adoption Index, calculated by Telecom Advisory Services; Contribution of ICT Capital to Economic Growth, ECLAC based on LA KLMES data, cited in Katz (2015); Telecom Advisory Services analysis

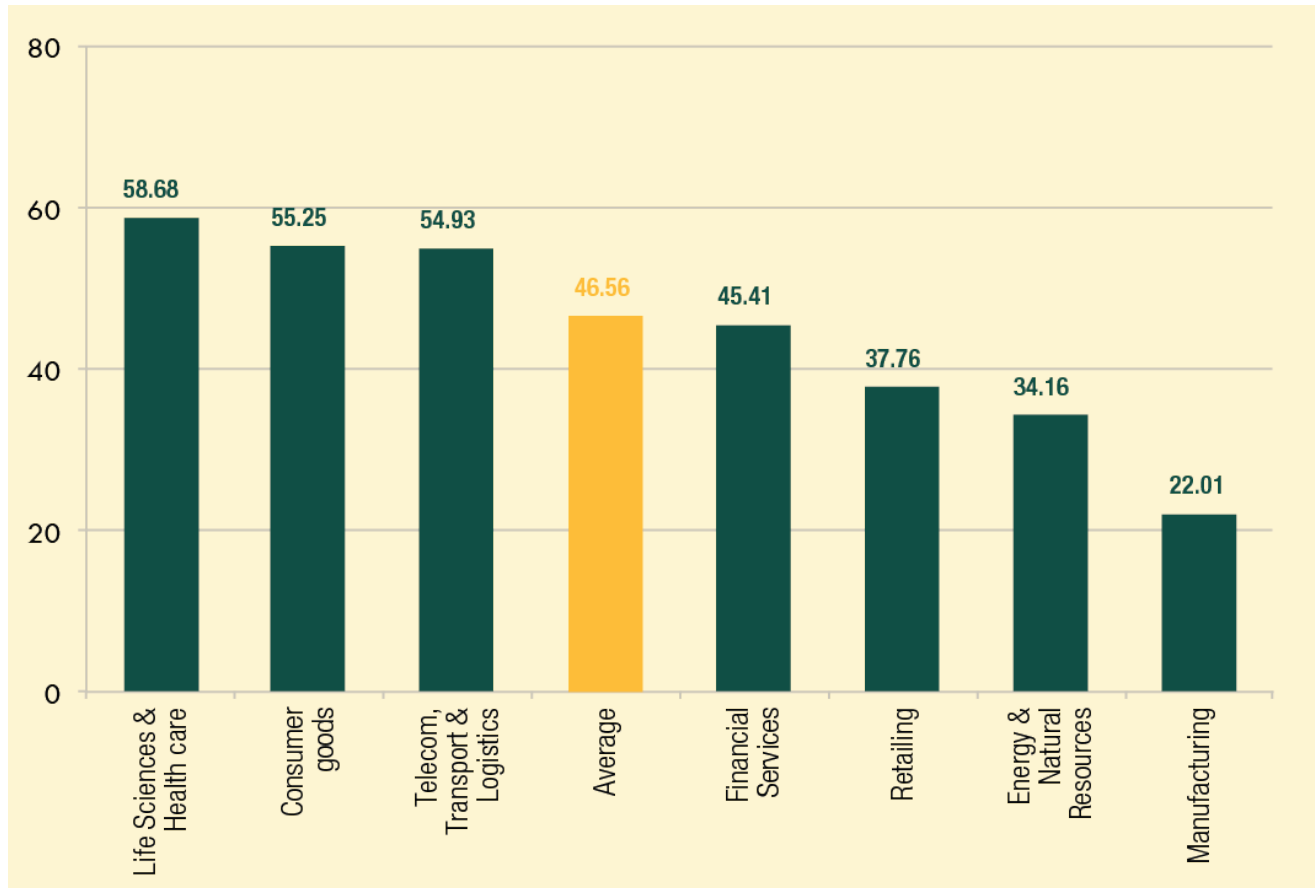
TO ACHIEVE DIGITAL IMPACT ON PRODUCTIVITY, ENTERPRISES NEED TO REENGINEER THEIR OPERATIONS, CHANGE THEIR ORGANIZATION STRUCTURES, AND ATTRACT/RETAIN TALENT

- Adoption of digital technologies does not yield neither a simultaneous nor an automatic productivity improvement
 - Initially, digital technologies are used for applications that have little impact on overall productivity
 - Beyond this, there are substantial inefficiencies arising from running manual paper-based and computerized processes in parallel, usually resulting in two separate work- streams
 - In many cases the adoption of digital technologies has been driven by technological progress (e.g. memory and processing capacity, bandwidth), rather than user capacity to assimilate them in a productive fashion
- All this equates to the need to accumulate **intangible capital**
 - The difference between the purchase price of digital technology and the value created once it has been productively assimilated by a firm
 - Intangible capital as a factor of production cannot be acquired in the market; it is rather a distinctive way a company combines its factors of production and has to be developed “in-house”

**WHY ARE LATIN AMERICAN BUSINESSES NOT
ACHIEVING THE REQUIRED DIGITAL
TRANSFORMATION?**

IN GENERAL, LATIN AMERICAN BUSINESSES DO NOT APPEAR TO BE UNIFORMLY READY TO TACKLE THE DIGITAL TRANSFORMATION CHALLENGE

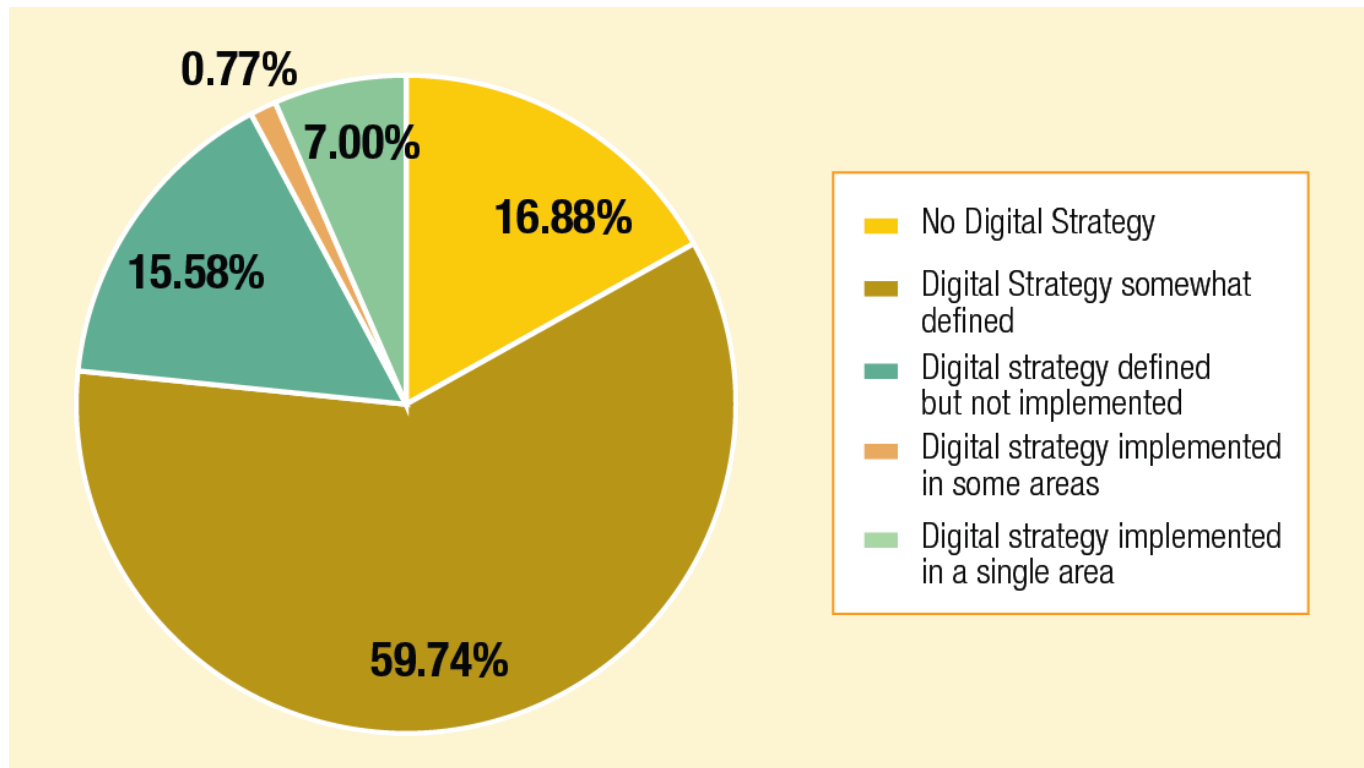
LATIN AMERICAN: DIGITAL READINESS INDEX (SCALE: 1-100)



Sources: gA; Telecom Advisory Services analysis

DIGITAL STRATEGIES, DEFINED IN A COMPREHENSIVE COMPANY-WIDE SCALE, ARE RARELY IMPLEMENTED

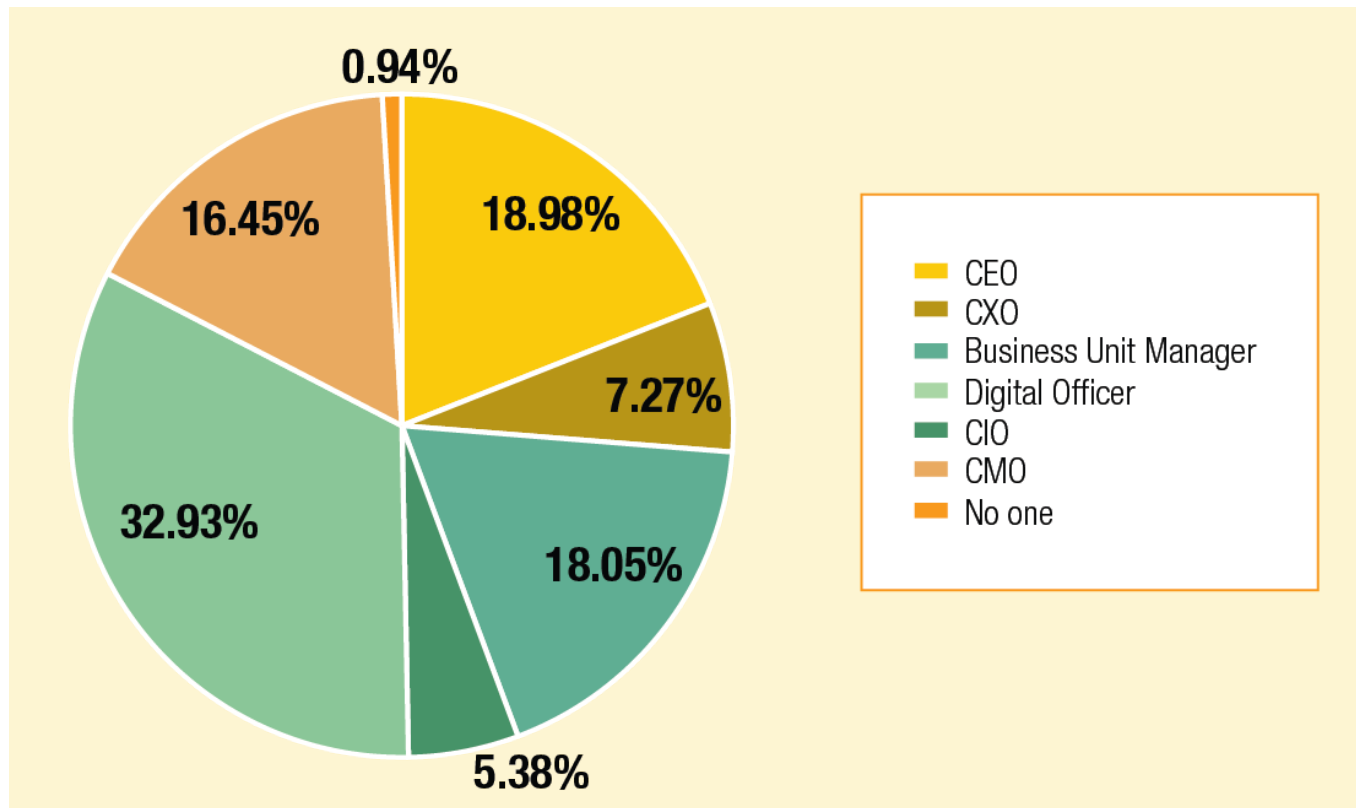
WHICH STATE BEST DESCRIBES THE CURRENT STAGE AT WHICH YOUR COMPANY IS IN TERMS OF DIGITAL STRATEGY?
(total answers: 177)



Sources: gA; Telecom Advisory Services analysis

BEYOND THE CHIEF INFORMATION OFFICER, SENIOR MANAGEMENT IS LESS INVOLVED IN DIGITAL TRANSFORMATION EFFORTS

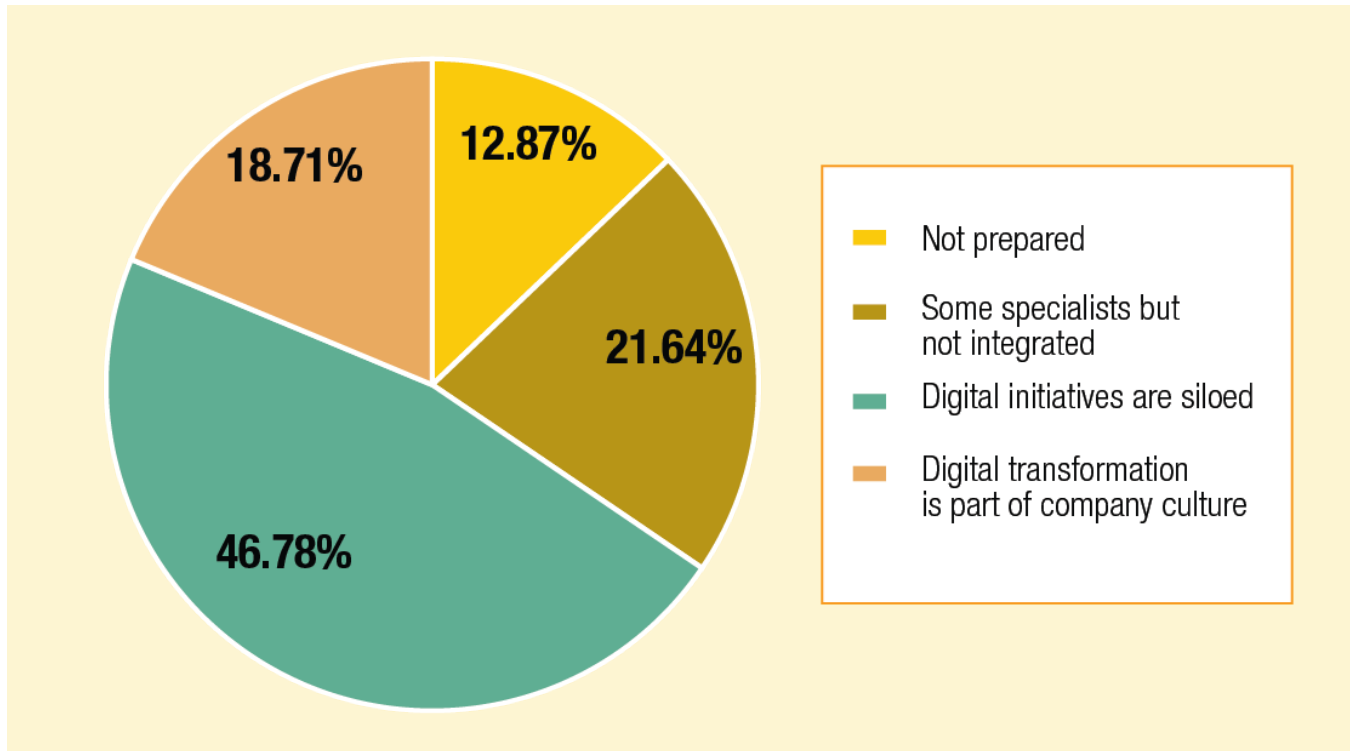
WHO DRIVES THE DIGITAL STRATEGY AT YOUR COMPANY?
(Chose more than one if apply)
(total answers: 177)



Sources: gA; Telecom Advisory Services analysis

IF DIGITAL INITIATIVES ARE BEING CONDUCTED WITHIN COMPANIES, THEY ARE MOSTLY IMPLEMENTED IN A “SILOED” WAY

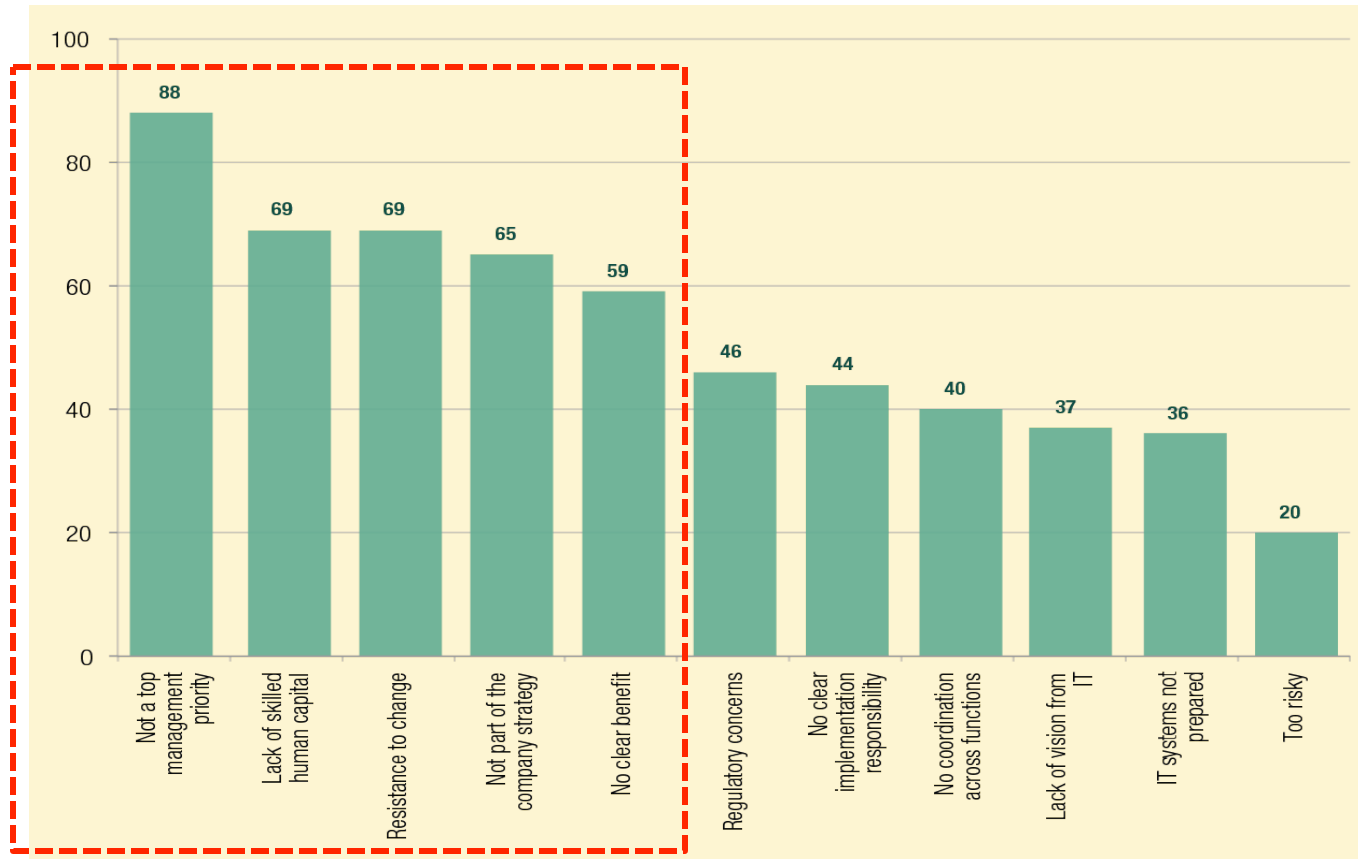
FROM THE FOLLOWING STATEMENTS, SELECT THE ONE THAT BEST DESCRIBES YOUR COMPANY’S CULTURE AND EMPLOYEE READINESS FOR DIGITAL TRANSFORMATION
(total answers: 171)



Sources: gA; Telecom Advisory Services analysis

WHEN ASKED ABOUT THE BARRIERS PREVENTING THE IMPLEMENTATION OF A DIGITAL TRANSFORMATION, EXECUTIVES MENTION PRIMARILY FIVE

WHAT ARE THE MOST IMPORTANT BARRIERS WHEN IMPLEMENTING A DIGITAL TRANSFORMATION PROJECT
(total answers: 171)



Sources: gA; Telecom Advisory Services analysis

IN SUM, FULFILLING THE GAINS RESULTING FROM DIGITIZATION DEPENDS ON AN ENTERPRISE TRANSFORMATION DRIVEN BY CRITICAL FACTORS

- While Latin American businesses have spent considerable capital in the deployment of new technologies, the expected gains in productivity have not yet been achieved
- One of the main challenges our economies face is how to accumulate intangible capital, defined as:
 - Restructuring of a business organization
 - Retooling of its business processes
 - Training of its human resources to achieve a full productive impact of digital technologies
 - Attracting and retaining the right human talent
- The readiness of Latin American businesses to achieve their digital transformation depends on a holistic vision and approach to capabilities development

THE ACCUMULATION OF INTANGIBLE CAPITAL: A CAPABILITIES PERSPECTIVE

LATIN AMERICAN BUSINESSES NEED TO DEVELOP A VISION OF WHAT THEY ARE TRYING TO ACHIEVE THROUGH DIGITIZATION

- Key question: how will sustainable competitive advantage be achieved through digital transformation?
- The development of a digital vision requires integrating four elements
 - An overarching strategic perspective of a company's competitive position and capabilities
 - A statement comprising its value proposition to the customers served,
 - The economic objectives, the position in the industry value chain,
 - The capabilities required
- The vision needs to contain a compelling long-term, enterprise-wide statement of strategic intent
- Its objective is not only to motivate and inspire employees but also to signal customers the medium to long-term direction of the company
- The vision needs to be constructed based on limited consensus building effort, through a process driven by top management

BASED ON THE VISION, A DIGITAL TRANSFORMATION PROGRAM IS BUILT AROUND SIX BLOCKS

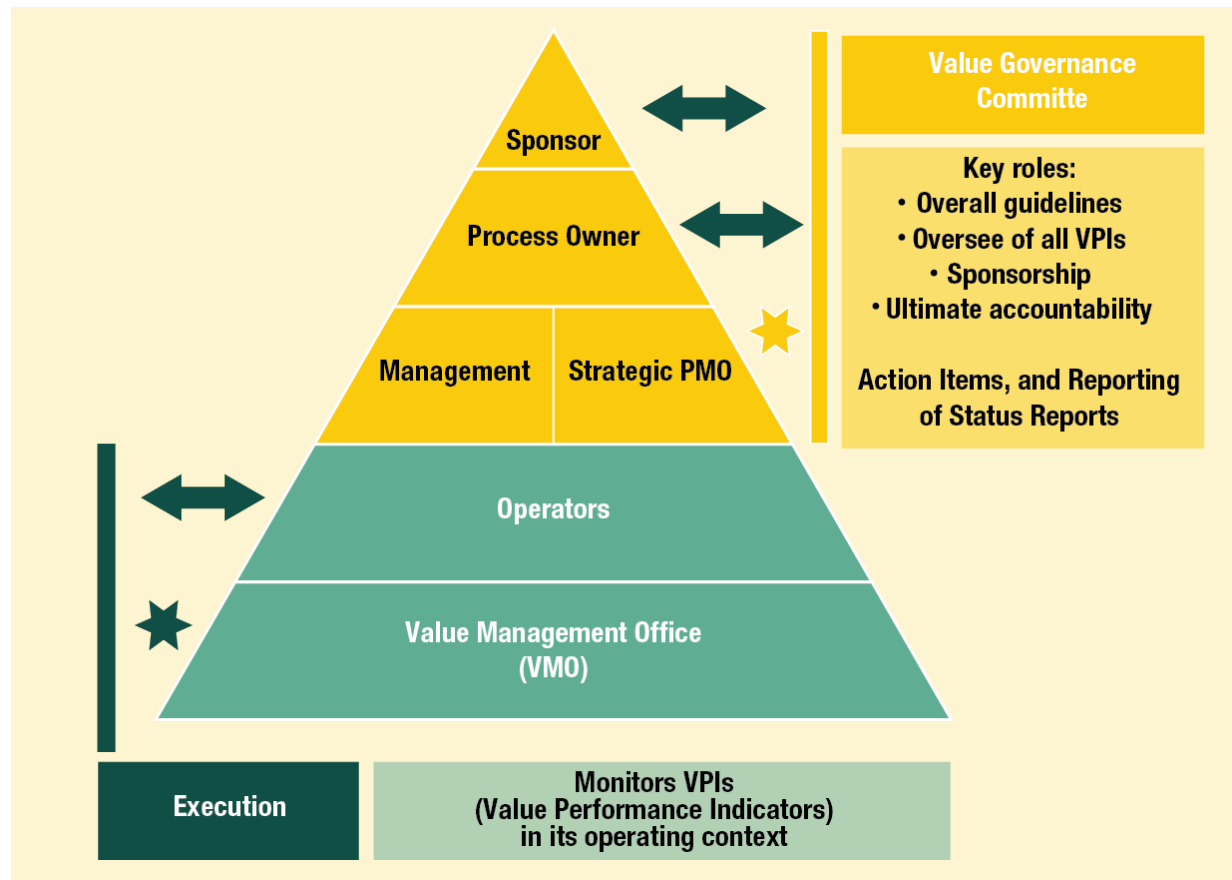
- Empowerment from senior management and buy-in from the operating executives
- Clear financial goals, such as required capital expenditures, savings to be generated from higher operational efficiencies, and incremental revenues to be achieved through productivity enhancement
- A Business Process transformation framework that maps how to incorporate digital technology in all aspects of the operating model
- Alignment of the people in the organization with the transformation goals, using communication workshops, training and change management programs, creating the incentives to ensure they become a part of the process
- An IT function capable of orchestrating the new technologies with the existing landscape of core applications, data and infrastructure
- A roadmap that includes an agenda for all the potential digital transformation initiatives that will be needed over the next several years, planning for shorter, high-impact project cycles, over a 3-5 year horizon

IMPLEMENTATION OF A DIGITAL TRANSFORMATION PROGRAM IS DEPENDENT ON THE CAPACITY TO ATTRACT NEW TALENT AND RETRAIN THE EXISTING HUMAN CAPITAL

- Flexibility: flexible professionals with solid background and ability to assimilate new technological developments
- Diversity: multiple skills, such as process innovation, digital marketing, customer experience, information technology
- New forms of collaboration and communication: multidisciplinary teams, design thinking workshops, support from change management experts
- Creative thinking and innovation: promote innovative thinking down the organizational hierarchy, collaborative and iterative method to develop and implement digital initiatives
- University and research center partnerships: link with digital platform development and economic/business thinking and teaching

GOVERNANCE MODELS OF THE DIGITAL TRANSFORMATION REMAIN A CRITICAL ENABLER OF SUCCESSFUL IMPLEMENTATION

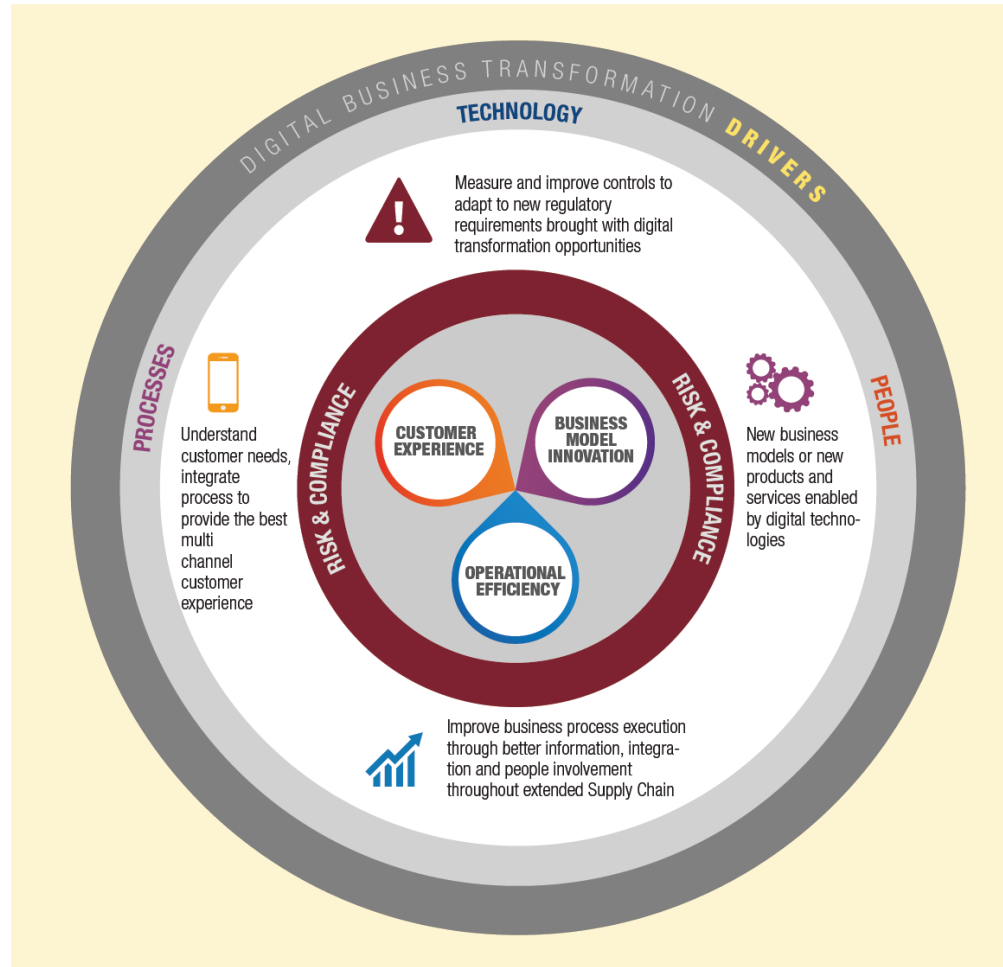
DIGITAL TRANSFORMATION GOVERNANCE



Source: gA

FNALLY, BUSINESS PROCESS DIGITIZATION IS ALL ENCOMPASSING, COMPRISING NOT ONLY TECHNOLOGY BUT ALSO OPERATIONS AND PEOPLE

BUSINESS PROCESS DIGITIZATION



Source: gA

A CALL FOR ACTION

DIGITAL TRANSFORMATION IS NOT FOR THE FAINT OF HEART

- Unless a company is born digital, the fundamental re-creation of an enterprise is an important process where business assumptions that were defined almost at the firm's inception are put into question, and a new operating model is defined
- Imitation approaches that merely copy what industry leaders have done in other environments represent a dangerous path
- Each company operating in particular competitive environments is a one-of-a-kind system that needs to find the approach to digitization that fits best
- Therefore, the reinvention of the digital enterprise is unavoidable and requires considerable effort and management leadership

* * * * *

- This task is not only necessary for the future of the business
- The sooner Latin American businesses tackle this challenge, the earlier our region will be ready to compete at parity with the industrialized world in the digital future
- Delaying digital transformation of Latin American economies is not option if we want to ensure our future growth.

The graphic features a dark blue background with a white network of nodes and connecting lines. Below this network is a white silhouette of a city skyline, including recognizable landmarks like Christ the Redeemer, the Christ the King statue, and various skyscrapers. An orange vertical bar is on the left side of the graphic.

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