What trends are reinforced or changed?
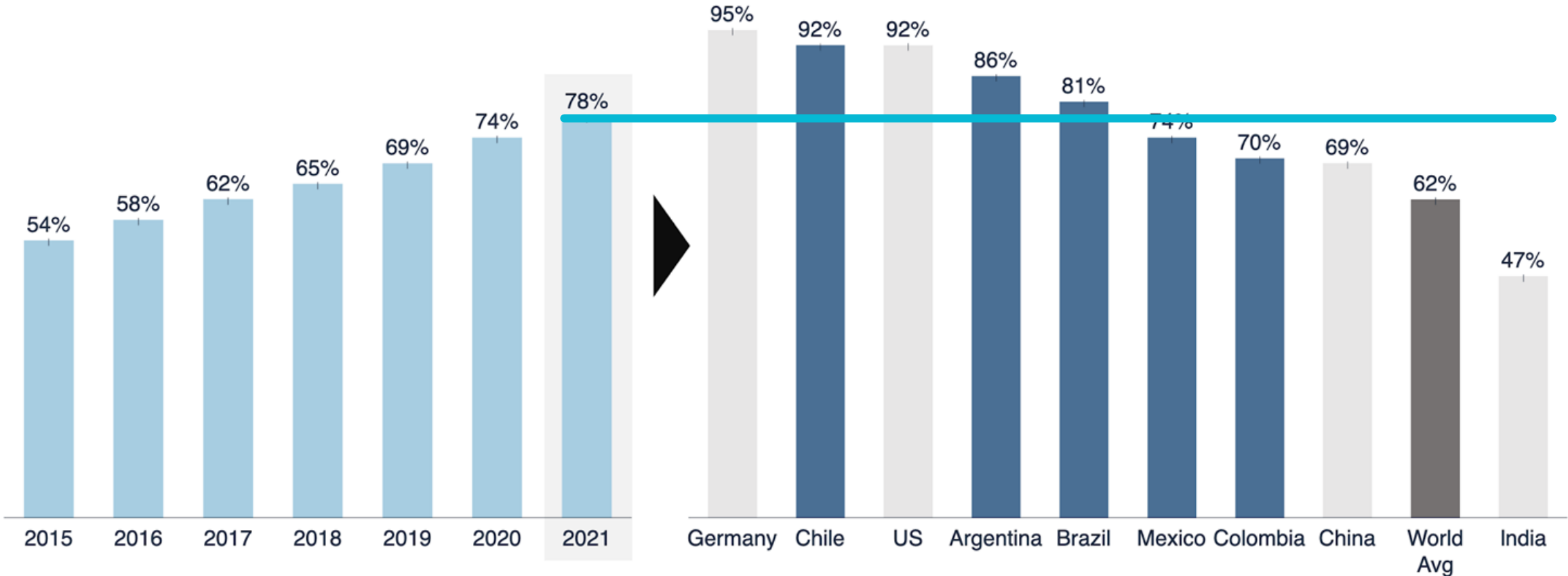
And it will come... inevitably...

When does a mega trend impact us?

Before, it took years.
Today, it can be at any time.

The new **DIGITAL** era

INTERNET PENETRATION IN LATIN AMERICA HAS SURPASSED CHINA AND INDIA AND IS APPROACHING THAT OF THE MOST DEVELOPED ECONOMIES
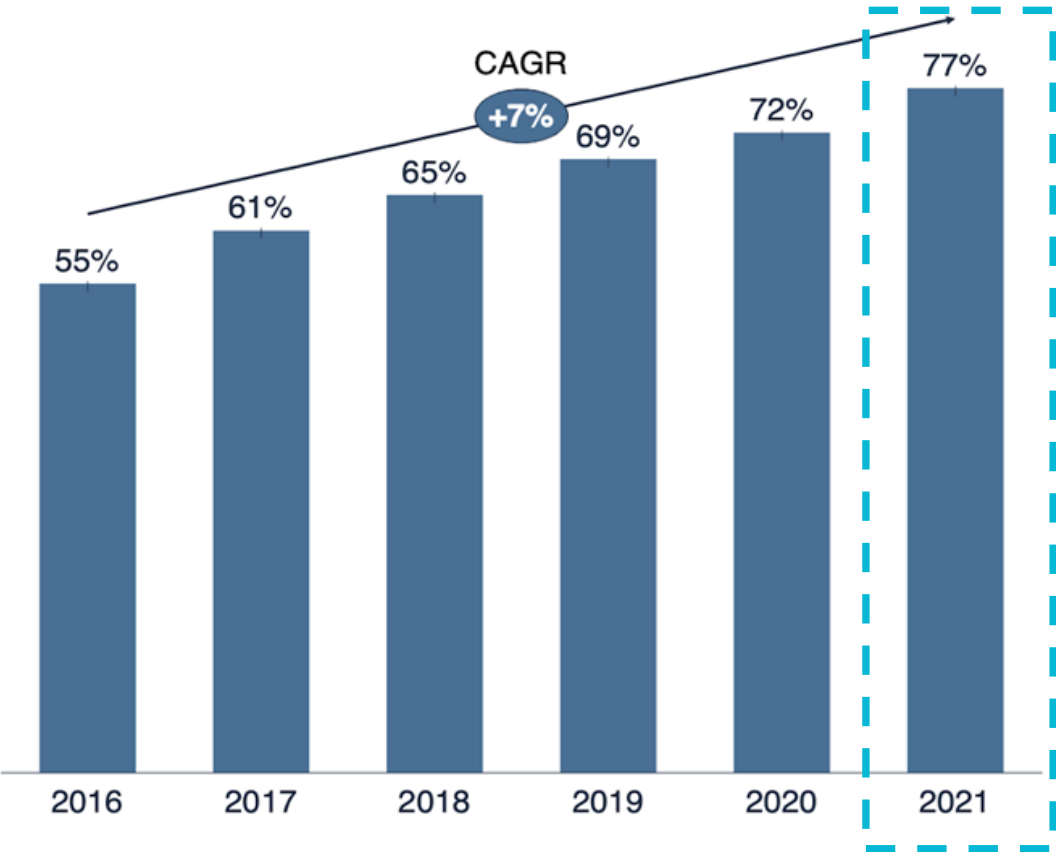
Internet penetration rate by year and region
Latin America, 2015-2021; Worldwide, 2021

Fuente: Atlantico

SMARTPHONE ADOPTION INCREASED 40% IN THE LAST 5 YEARS, MOSTLY ON ANDROID.

Smartphone adoption rate in Latin America[1]
% of total population

CAGR
+7%

2016	2017	2018	2019	2020	2021
55%	61%	65%	69%	72%	77%

Smartphone operating system market share by region[2]
% of total Android and iOS devices

■ iOS   ■ Android

Region	iOS	Android
US	54%	46%
China	24%	76%
Latin America	12%	88%
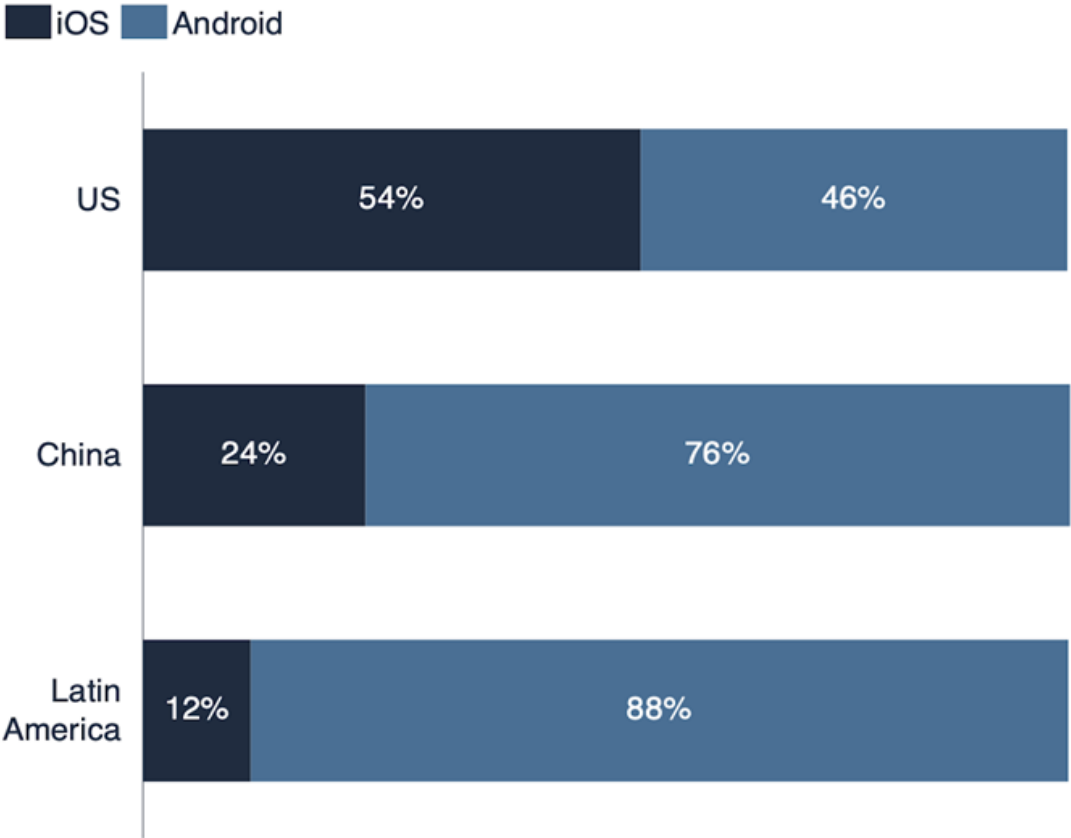
Fuente: Atlantico

# 5G IN LATIN AMERICA WILL SERVE 35% OF SUBSCRIBERS, UNLEASHING FURTHER DIGITAL TRANSFORMATION

5G has increasing relevance today to allow for digital transformation. Up to 10 times faster than 4G, 5G provides greater network security to enable the adoption of novel applications, e.g., the internet of things (IoT), AR, and VR. It also has significant social value by enhancing health systems and infrastructure.

Subscriptions by network type by region, 2021*
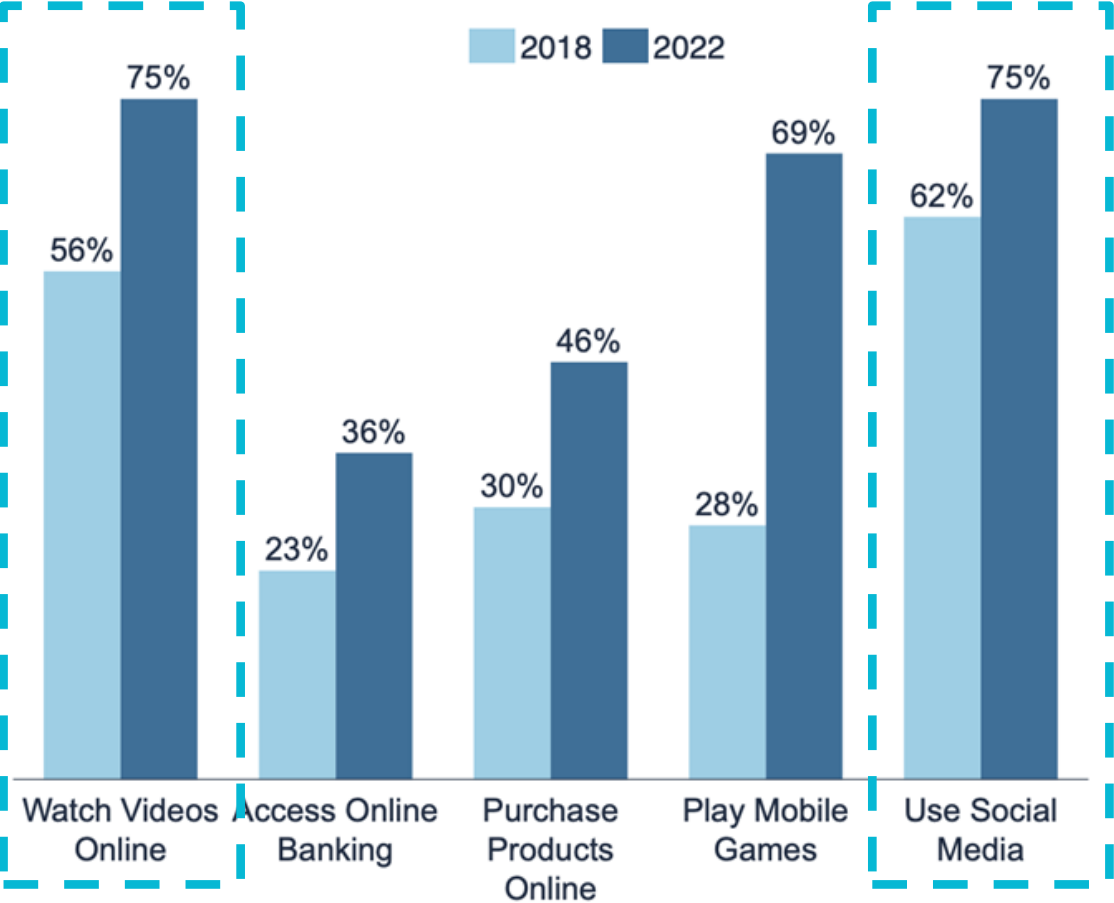% of total subscriptions
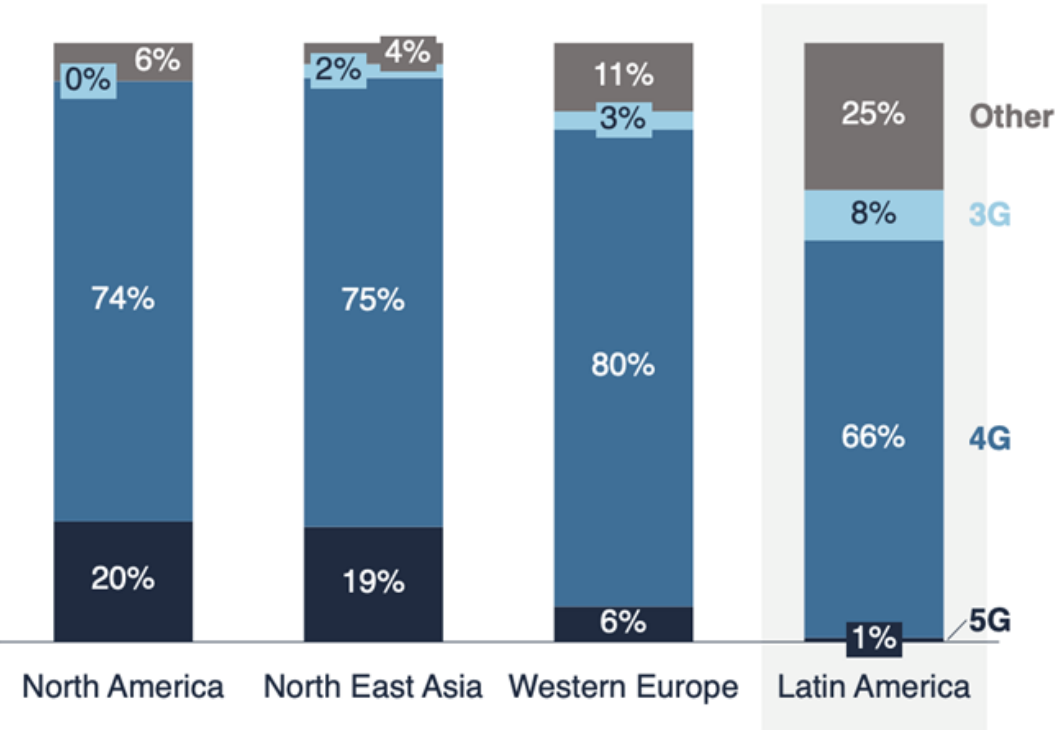
Subscriptions by network type, Latin America
% of total subscriptions
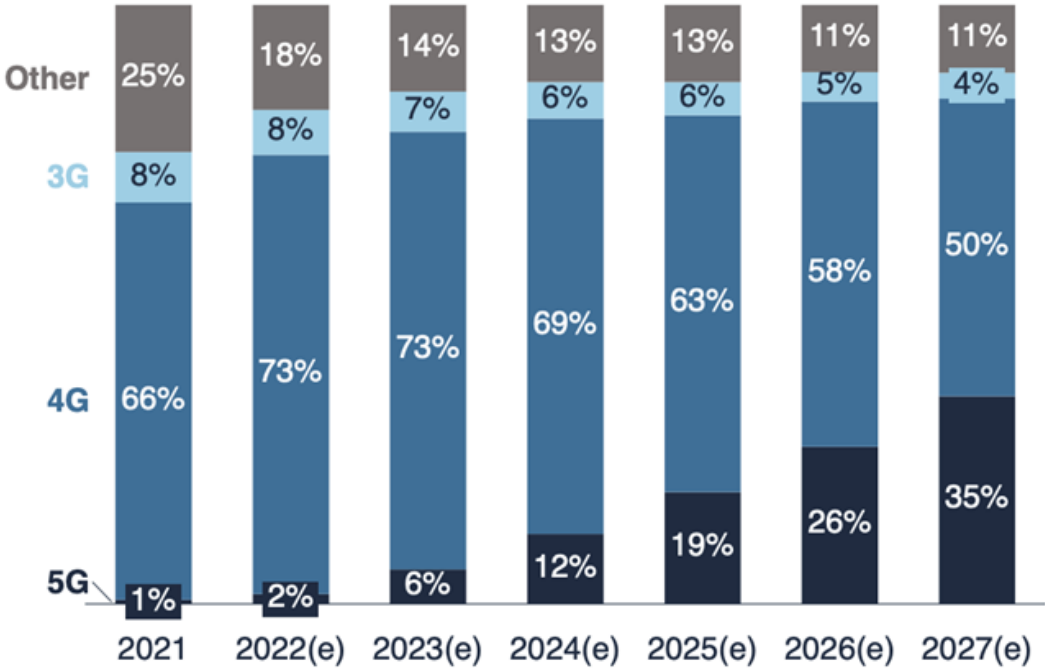
Note: (*) Subscriptions refers to lines
Source: Ericsson

DIGITAL ADOPTION HAS TRANSFORMED THE DAILY LIVES OF THE AMERICAN POPULATION.

Percentage of Brazilians who…
% of survey respondents

Legend: 2018, 2022

Activity	2018	2022
Watch Videos Online	56%	75%
Access Online Banking	23%	36%
Purchase Products Online	30%	46%
Play Mobile Games	28%	69%
Use Social Media	62%	75%

Source: We Are Social

Time spent daily by activity by country
Number of hours

	Brazil	Mexico	US	China
Using Internet	10.3	9.9	7.0	5.3
Watching TV Online	4.1	3.6	4.8	3.0
Using Social Media	3.7	3.3	2.2	2.0
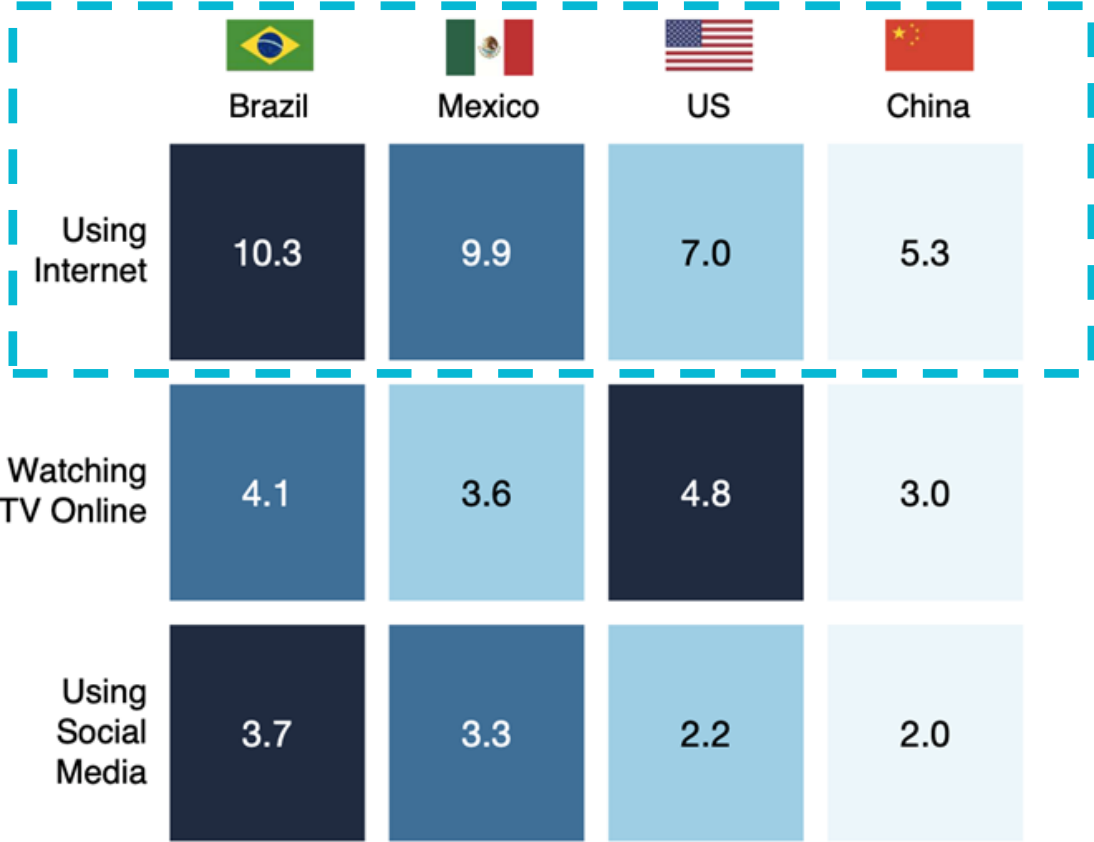
NO TURNING BACK: SOFTWARE DEVELOPERS HAVE JOINED REMOTE WORK

REVELO

Revelo is an American platform for selecting and hiring tech talent from Latin America

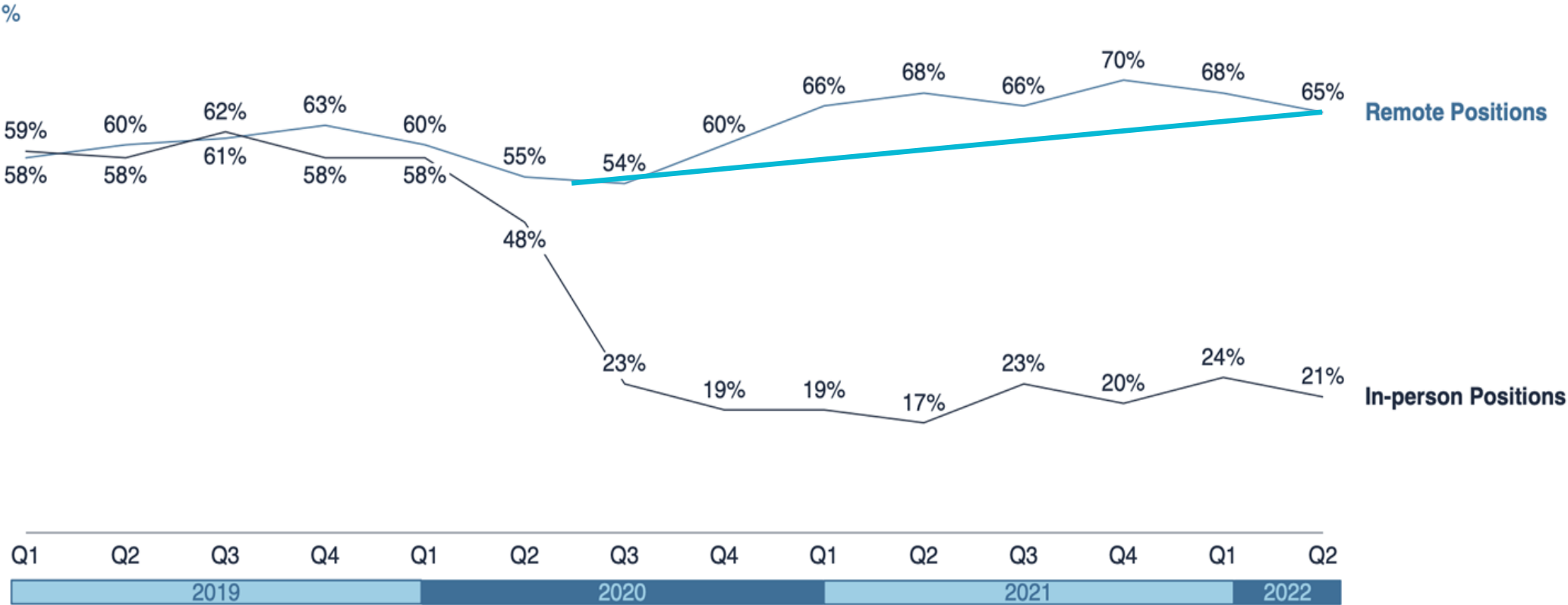**Software developer job interview acceptance rate by remote vs. in-person job position, Brazil**
%

Remote Positions

59% 60% 62% 63% 60% 55% 54% 60% 66% 68% 66% 70% 68% 65%
58% 58% 61% 58% 58%

48%

In-person Positions

23% 19% 19% 17% 23% 20% 24% 21%

Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
2019				2020				2021				2022	

Source: Revelo internal data (n = 124,000 software developers)

DIGITAL TRANSFORMATION IN LATIN AMERICA IS RAPIDLY GAINING TRACTION IN TRADITIONAL SECTORS.

Coursera learners in Latin America[1]
Millions

- 2021: 14.5
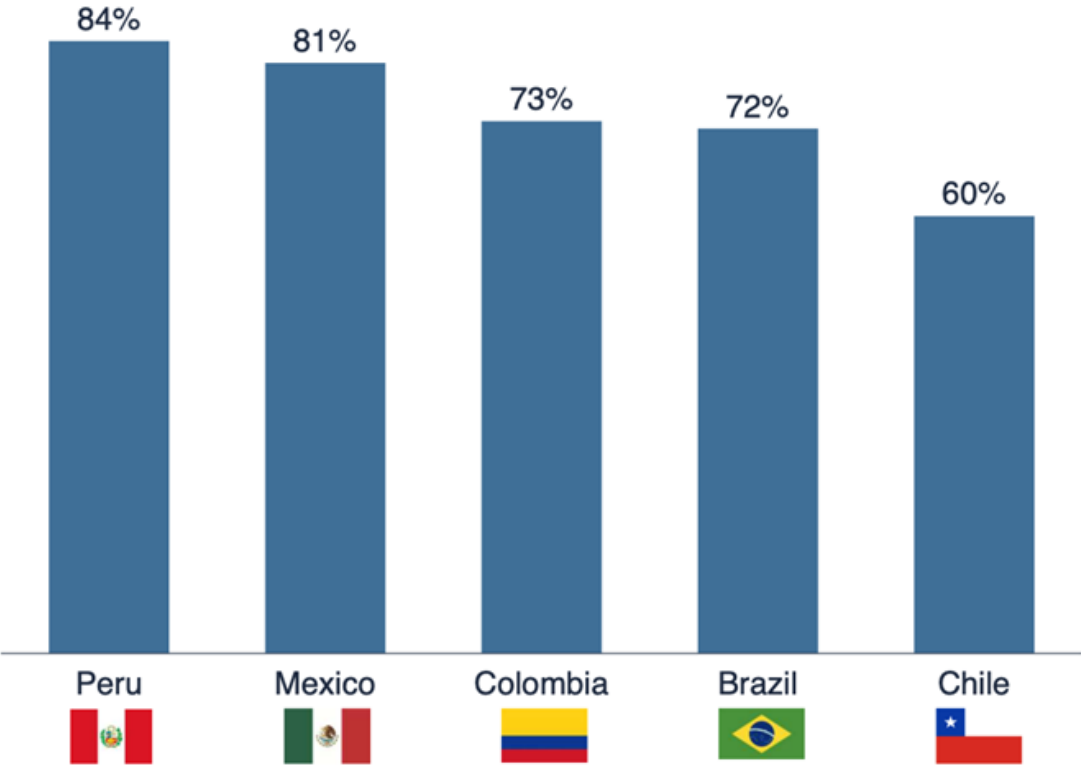- 2022: 17.9
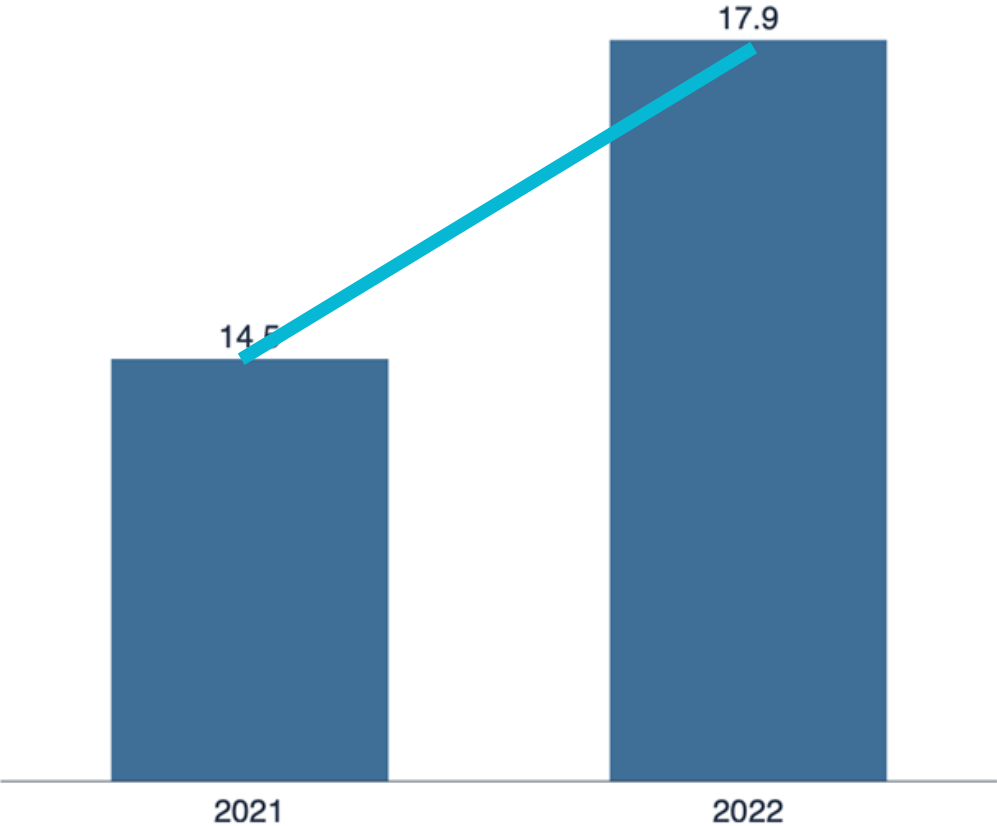
Percentage of doctors offering telehealth by country, 2021[2]
%

- Peru: 84%
- Mexico: 81%
- Colombia: 73%
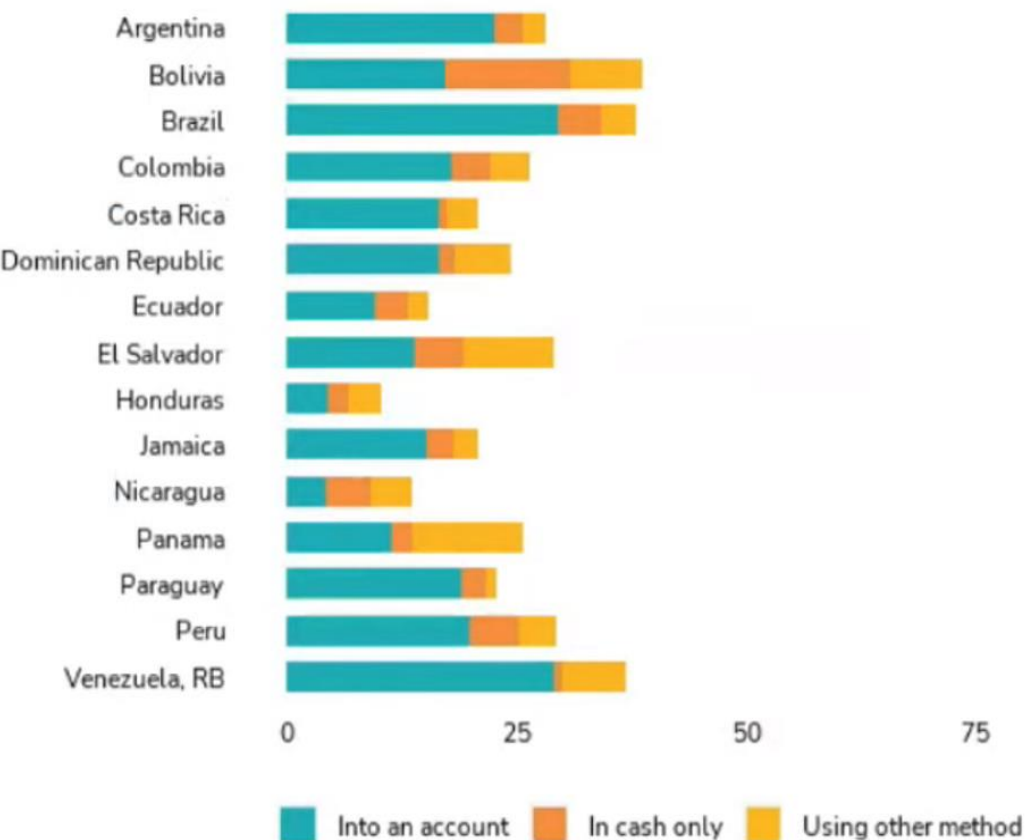- Brazil: 72%
- Chile: 60%

Source: (1) Coursera "Global Skills Report" (2021 and 2022); (2) McKinsey & Company "How Latin American physicians view the future of healthcare" (2021)

PAYMENTS, INCLUDING DIGITAL WALLETS, WERE CENTRAL TO THE FINTECH BOOM AND CONTINUE TO GROW.

Account ownership
Adults with an account (%), 2011–21

- Financial institution account only
- Financial institution account and mobile money account
- Mobile money account only

Findex 2021

WORLD BANK GROUP

E-commerce means of payments in Brazil¹*
US$ B

- 18.5 Digital Wallets
- 16.0 Cash-Based
- 13.8 Int'l Credit Cards
- 7.2 Debit Cards

14.5 14.5
12.1
9.4
4.3

2018 2019 2020 2021
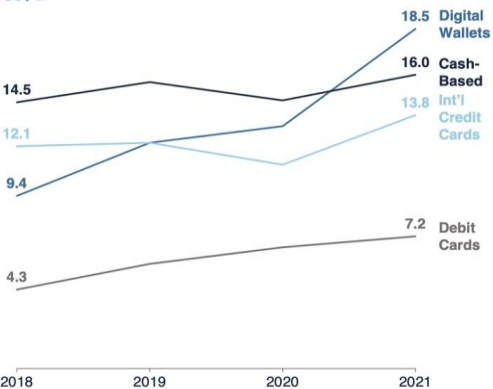
Mercado Pago wallet payers & digital account TPV²
Payers in MM and total payment volume in US$ B

mercado pago

14   14   15   17   19

$3.3 $2.9 $3.5 $5.5 $7.1

4Q20 1Q21 2Q21 3Q21 4Q21

Note: (*) Excluding domestic credit cards, bank transfers, and other forms of payment
Source: (1) EBANX, "Beyond Borders" (2022); (2) Mercado Libre Fourth Quarter 2021 Results Investor Presentation (2021)
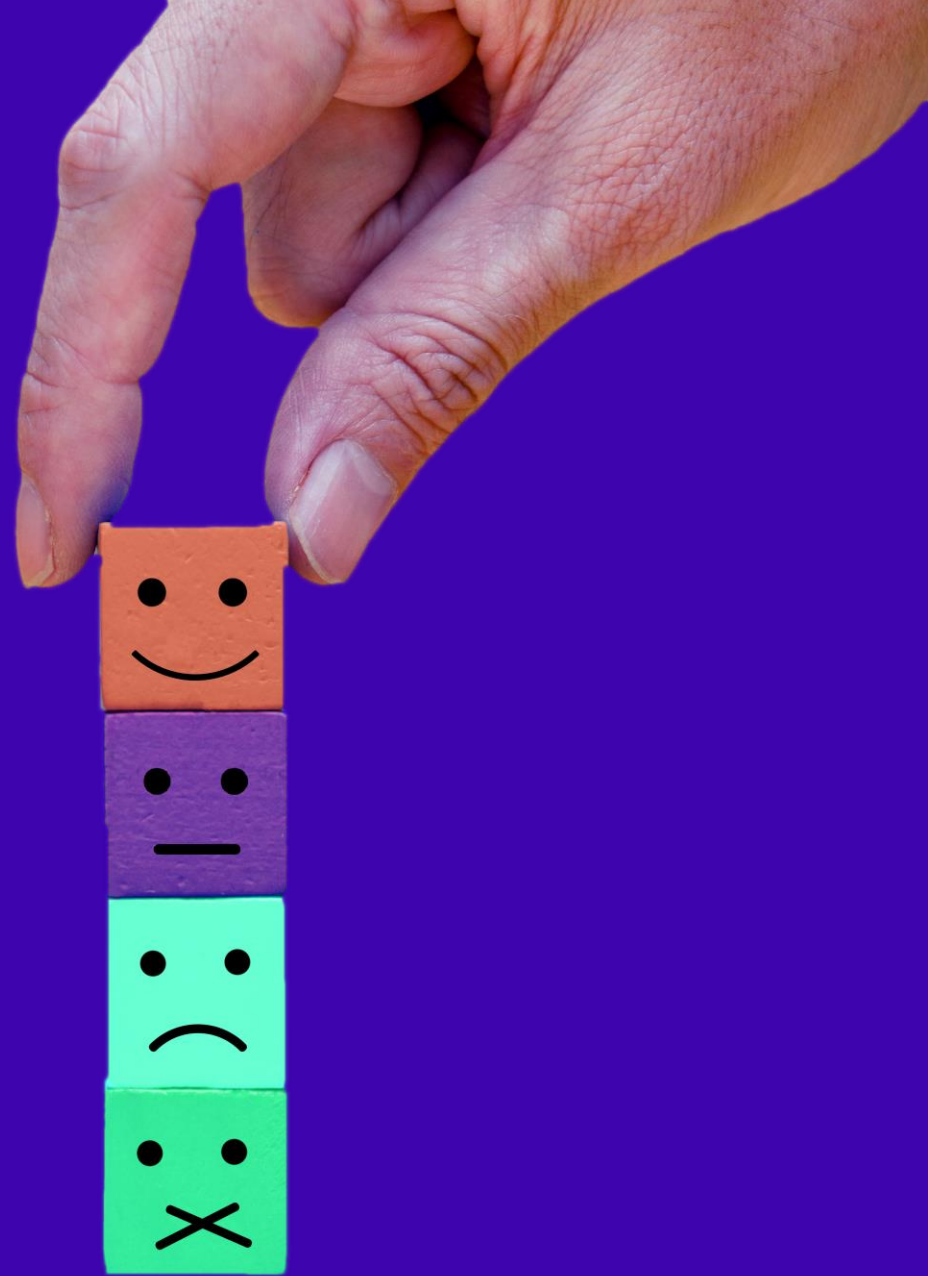
G2P payments
Adults receiving government payments in the past year (%), 2021

- Into an account
- In cash only
- Using other method

Source: Global Findex Database 2021.

THE PIRANHA ATTACK

PUBLIC EMPLOYMENT SERVICES NEED TO EVOLVE
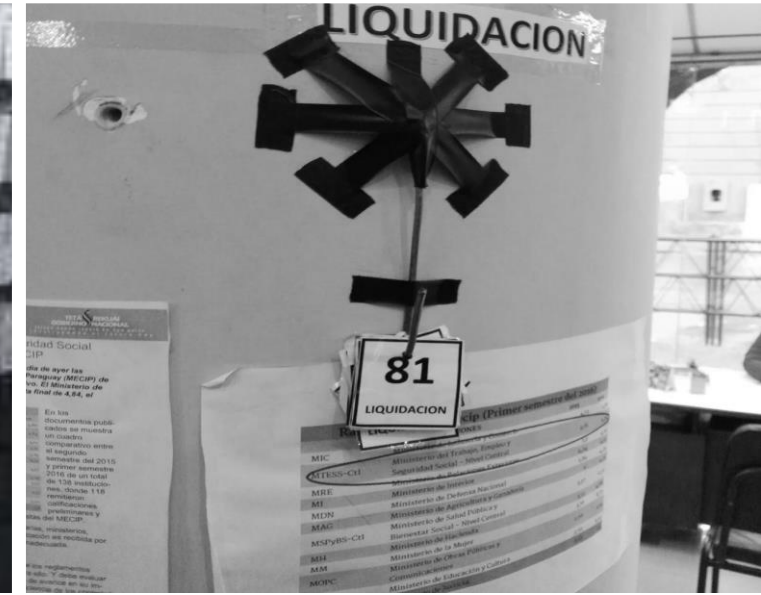
Why do services in **Ministries of Labor and especially Public Employment Services need to evolve?**

- Smarter match-ups are needed.

- Digital access needs to be accessible.

- Improved labor market information is needed.

- Roles and rows need to be eliminated.

- Active employment programs need to be better targeted.

- The systems must interoperate with other state systems.

¿Son digitales nuestros usuarios?

NIVELES DE ADOPCIÓN DIGITAL DEL USUARIO y canales para cada nivel

Nivel de adopción digital

CANALES

Usuario Digital
Usa Acceso para generar valor

Aplicación Móvil
Sitio web del SPE – autogestión
Sitio web de intermediadores privados
Web Scraping – Digitalización de newsletters
Campaign Manager

Usuario con acceso
Usa Acceso para redes sociales

Kiosco de auto-atendimiento en oficinas del SPE
Contact Center (*) para atención de Buscadores de empleo
Contact Center para concertador de SPE
(*) IVR, *teléfono*, *whatsapp*, *redes sociales*
Mail

Usuario sin acceso
Sin acceso a internet o smartphones

Oficinas del SPE
Agencias o proveedores de intermediación laboral
Oficinas de centros de capacitación laboral

DIGITAL TRANSFORMATION OF LABOR MINISTRIES

ENTERPRISE ARCHITECTURE ENABLES AND DRIVES DIGITAL TRANSFORMATION

1

WHAT MAKES A DIGITAL STRATEGY SUCCESSFUL?

Signs of a good digital strategy

- Integrated

- User-centric

- Useful for the teams

- Conventional

- Realistic

- Well-focused

Signs of a bad digital strategy

- Powered by IT

- Focuses on technology that has not yet been proven

- Not accurate

- Very long-term planning

- Reads like a wish list

2 DECIDING ON THE TECHNOLOGICAL APPROACH

The use of technology must achieve clear results.

Prioritize shutting down what is no longer useful

Ensure that each tool has a team.

Develop or buy?

Lack of in-house skills is often the number one reason why purchasing decisions are made. However, this lack of skills can also prevent you from being a smart customer for technology services.

When to develop?

- When there is a high level of uncertainty around user needs.
- When specific solutions are needed.
- In the event of few market suppliers: risk of lock-in.
- When there are internal development capabilities.

When to buy?

- When the needs are far below what the market already offers in platforms.
- When products are highly commoditized with low variability.
- When there is a dynamic market: it is easier to change supplier.

3 MAKING DECISIONS AND TAKING ACTIONS

Digital strategy should not be an all-encompassing plan
However, this strategy is an excellent place to show what will be prioritized.

What decisions have already been made?

Main ongoing programs
Existing funding commitments
Organizational, policy and regulatory changes
Past commitments - Existing contracts

The process of choosing priorities can be as important as the outcome.

| **Tangibles** | **Measurables** | **Focused on results** | **Realistic** | **Time-limited** |

MAIN ISSUES IDENTIFIED IN THE SPE

SPE Operation

- Insufficient regulation
- Diffuse provision of services
- Business management has significant room for improvement.
- Low standardization of processes
- Absence of government in the regional offices of the SPE.
- Incipient digital document management processes.
- Low adoption of state capabilities (digital identity, interoperability)

Governance and IT strategy

- Measurement of the quality of IT services.
- Backup and disaster recovery policies.
- Projects that include IT components are disconnected from the user areas.

Business intelligence and data management

- Capacity to generate timely and reliable information.
- The information is controlled by each area.
- Most of the analysis and control of the operation is performed in Excel.

Analysis and diagnosis in 7 countries of the region

MAIN ISSUES IDENTIFIED IN THE SPE

IT Best Practices

- There is no strategy for reusing components to meet similar needs.
- Lack of integration between applications.
- Lack of standard development methodology.
- Lack of personnel and tools for testing and monitoring the life cycle of applications.
- The IT function does not implement leading practices, IT processes must be built.

IT staff users

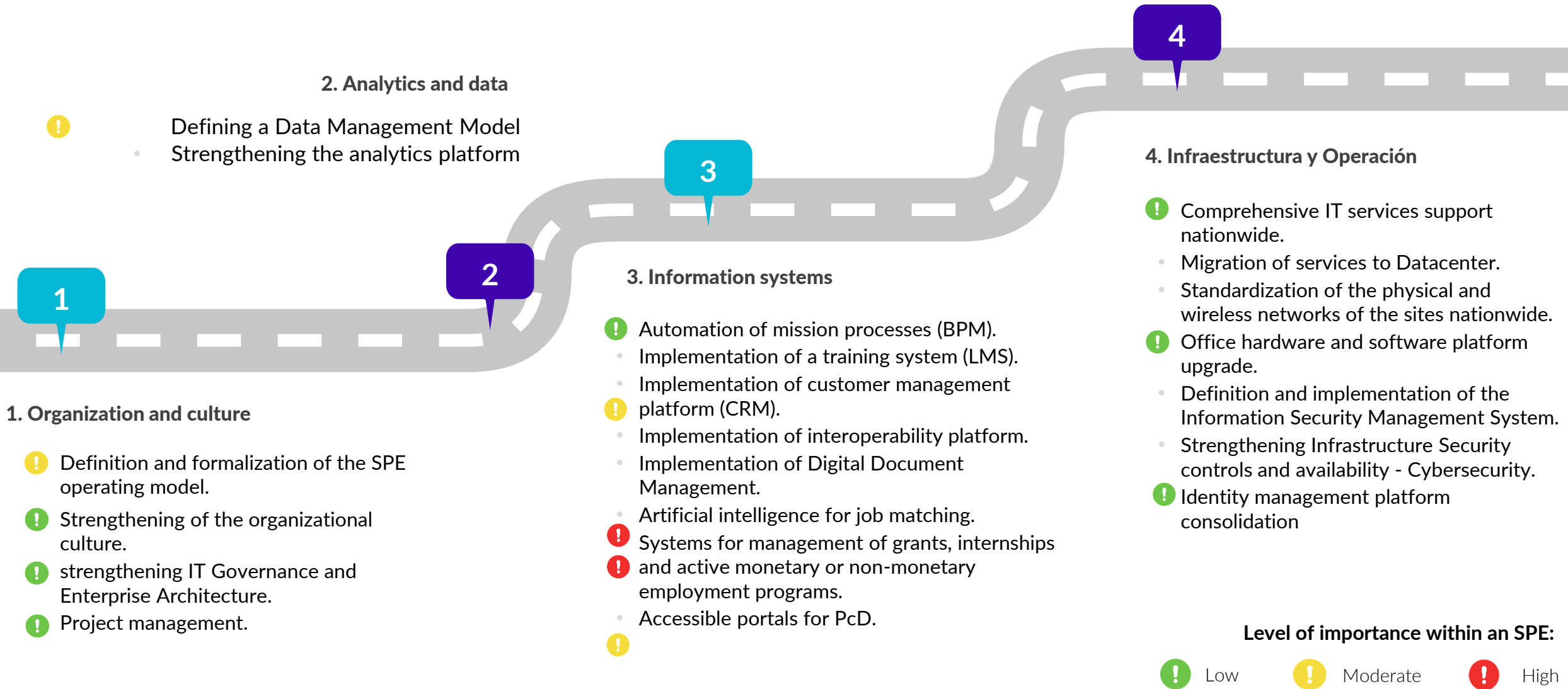- Obsolete technological infrastructure.
- The applications do not have internal or third-party support facilities.
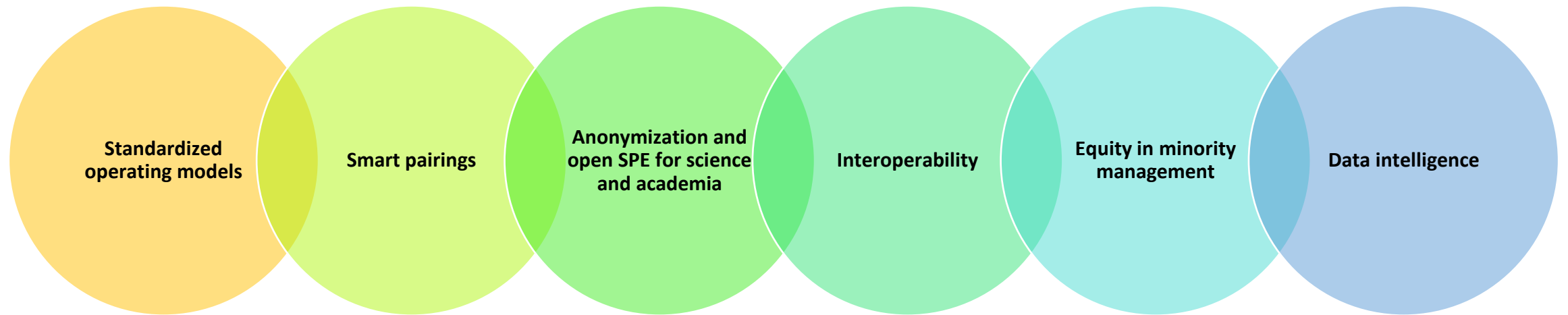- Frequent unavailability of online services

Customers

- In general, there is no established customer service.
- Omni-channel and apps, service delivery through different channels.
- Lack of customer self-management portals.

Analysis and diagnosis in 7 countries of the region

MAJOR MILESTONES IN THE SPE ROADMAP

4

2. Analytics and data

Defining a Data Management Model
- Strengthening the analytics platform

3

4. Infraestructura y Operación

- Comprehensive IT services support nationwide.
- Migration of services to Datacenter.
- Standardization of the physical and wireless networks of the sites nationwide.
- Office hardware and software platform upgrade.
- Definition and implementation of the Information Security Management System.
- Strengthening Infrastructure Security controls and availability - Cybersecurity.
- Identity management platform consolidation

2

3. Information systems

- Automation of mission processes (BPM).
- Implementation of a training system (LMS).
- Implementation of customer management platform (CRM).
- Implementation of interoperability platform.
- Implementation of Digital Document Management.
- Artificial intelligence for job matching.
- Systems for management of grants, internships and active monetary or non-monetary employment programs.
- Accessible portals for PcD.

1

1. Organization and culture

- Definition and formalization of the SPE operating model.
- Strengthening of the organizational culture.
- strengthening IT Governance and Enterprise Architecture.
- Project management.

Level of importance within an SPE:

Low   Moderate   High

OUTSTANDING SPE ISSUES IN THE REGION

56%   **94.4%**   **30X**

"All that glitters is not gold"

fAIr LAC Objectives

1. Safety and data protection

2. Transparency, explainability and accountability

3. Human-centered AI

4. Prepared and inclusive region

Biases – Equity and justice

Historical biases

Representational biases

Measurement biases

Data evaluation

Accountability

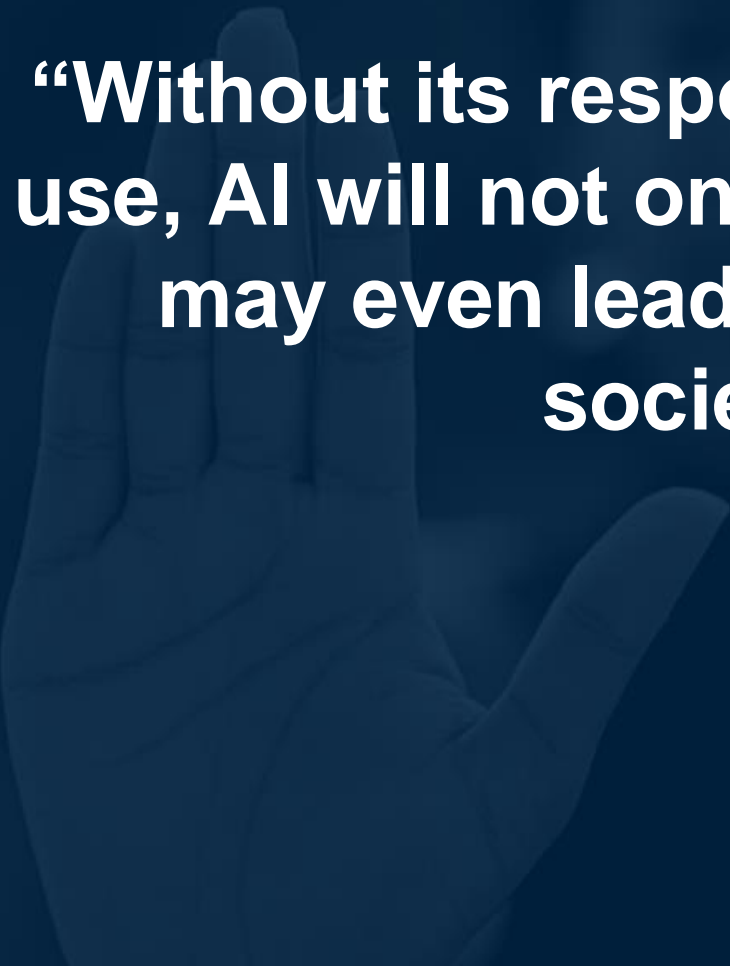Algorithmic transparency

Explainability

Implied liability

Personal data

Technical challenges

"Without its responsible and ethical use, AI will not only not improve, but may even lead to more unjust societies."

Quality and risk mitigation

fAIr LAC a la mano

Cinco herramientas que esperamos se conviertan en sus aliados en la aplicación de los **principios éticos de la inteligencia artificial** en todas las fases del proyecto

▶ Ver Video   ⊕ Resumen

fAIr LAC

fAIr LAC at hand

Example

Collaboration with Peru's MEP

Lessons learned

1

AI is more than just a technology

2

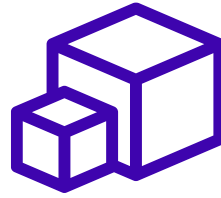The goals of AI should be the goals of society

3

We need a regulatory system to guide its responsible development.

INTERMEDIARY PLATFORMS

Data quality is hard work

One size does not fit all

Labor policies change all the time
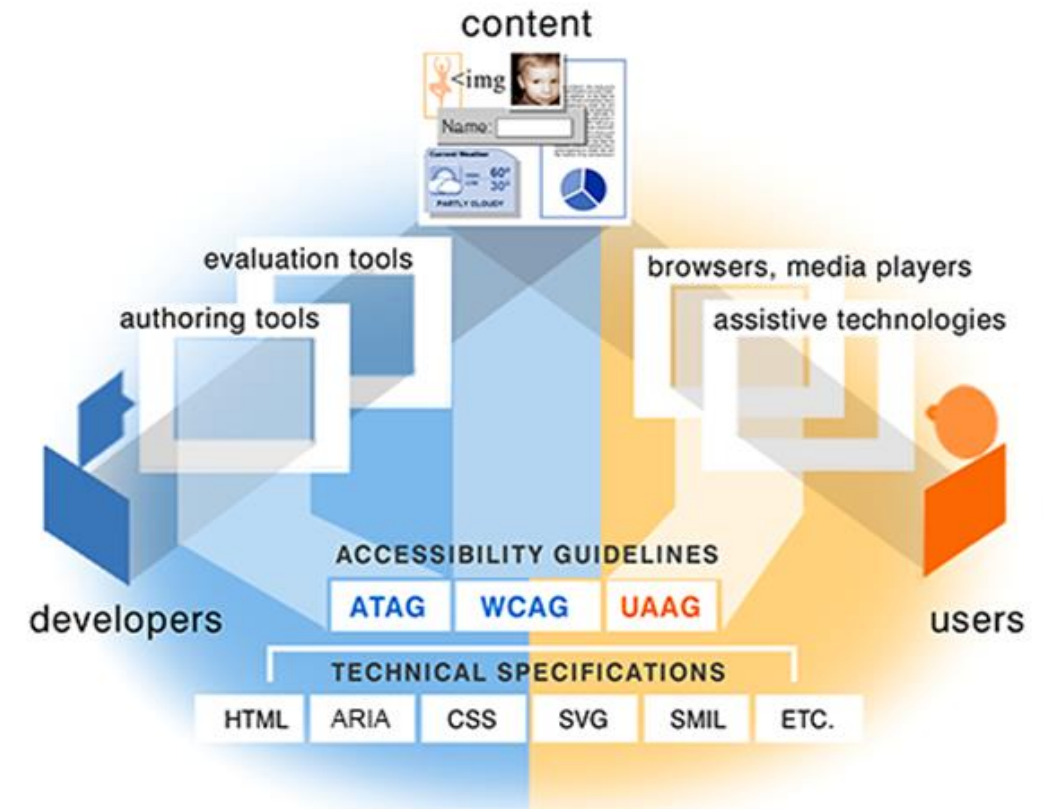
ACCESSIBLE AND INCLUSIVE PLATFORMS

Develop software and platforms where everyone can:

- Perceive, understand, navigate and interact with the Platform..
- Contribute to the Platform.

The **W3C Web Accessibility Initiative** (WAI) provides a set of guidelines that are internationally recognized as standards for web accessibility.
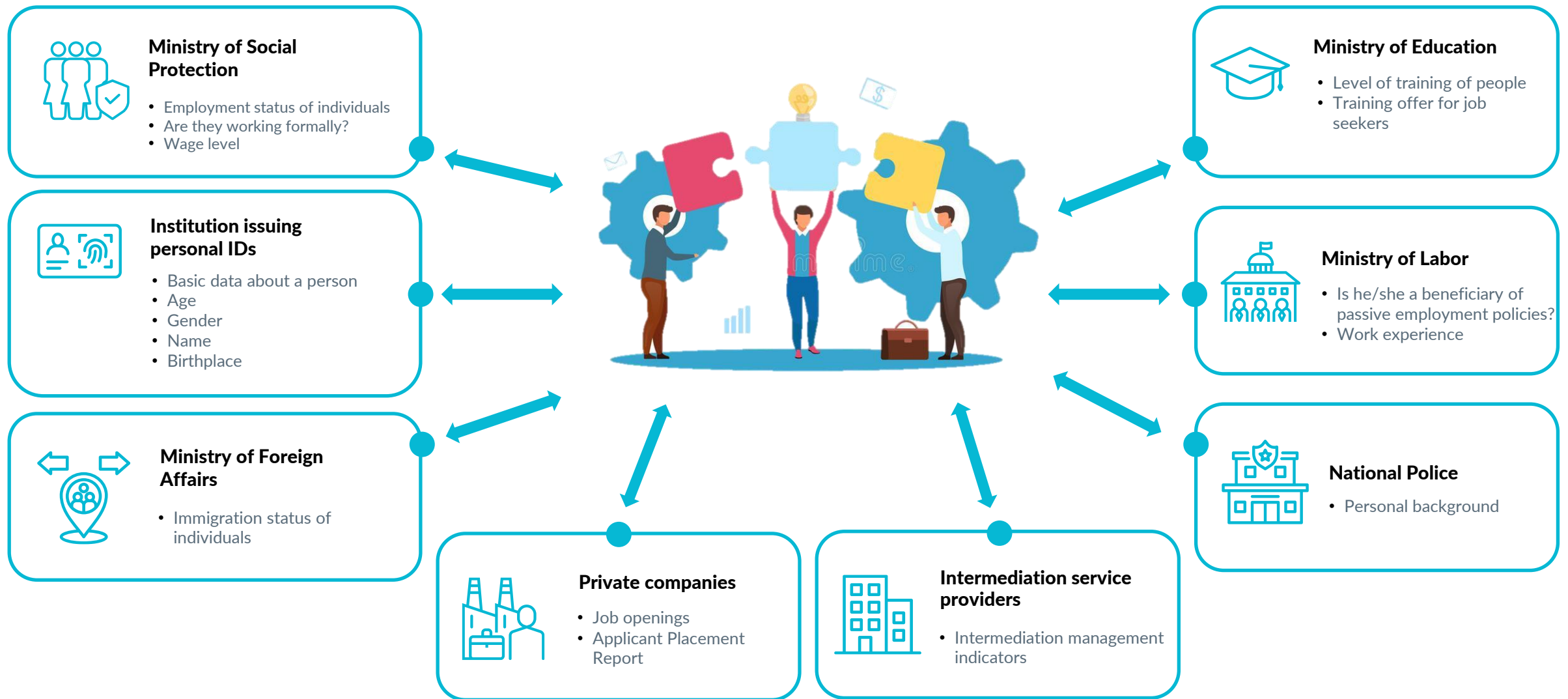
These include:

- Web Content Accessibility Guidelines (WCAG)
- User Agent Accessibility Guidelines (UAAG)
- Authoring Tools Accessibility Guidelines (ATAG)

INTEROPERABILITY
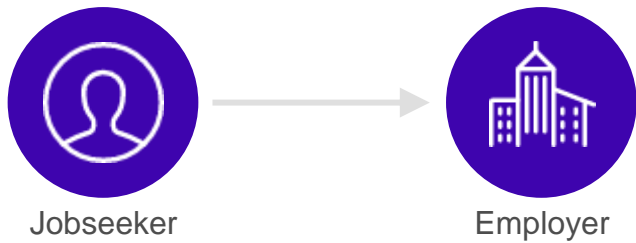
Some of the critical institutions with which a SPE should be connected are

Ministry of Social Protection

- Employment status of individuals
- Are they working formally?
- Wage level

Institution issuing personal IDs

- Basic data about a person
- Age
- Gender
- Name
- Birthplace

Ministry of Foreign Affairs

- Immigration status of individuals

Ministry of Education

- Level of training of people
- Training offer for job seekers

Ministry of Labor

- Is he/she a beneficiary of passive employment policies?
- Work experience

National Police

- Personal background

Private companies

- Job openings
- Applicant Placement Report

Intermediation service providers

- Intermediation management indicators

VALUE MATCHING

Searching

Jobseeker → Employer

Unilateral evaluation
Undifferentiated results

Matching

Jobseeker
Employer
Employer
Employer
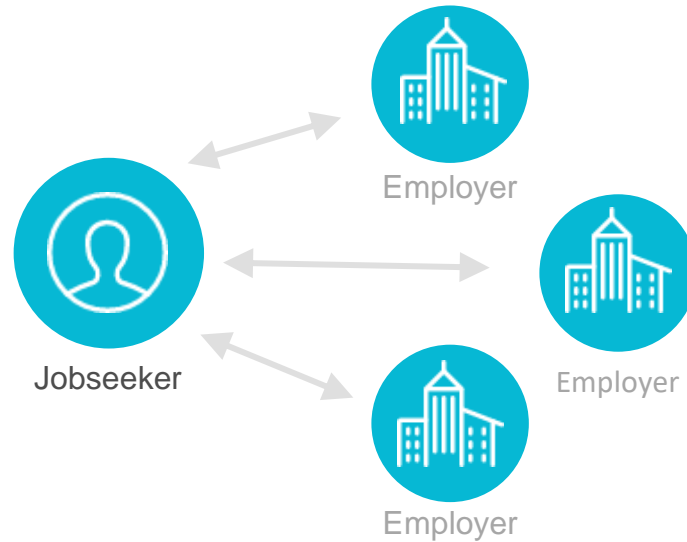
Bi-directional scoring
Ranked results

Value Based Matching

Jobseeker
Employer
Business/Market Factors
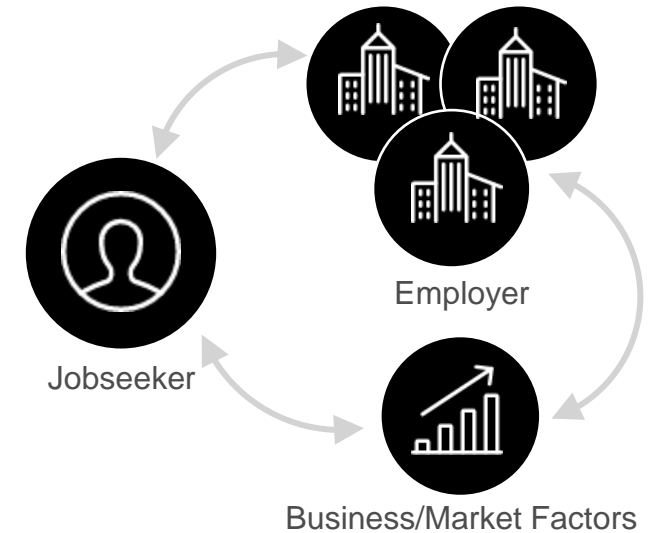
3-dimensional scoring
Optimized, ranked results

Private Employment Services

- For-profit staffing (job seeker and/or employer pays for services).

- Focused on hard-to-fill jobs (higher margin per transaction).

- The employer and the job opening are the primary focus (since they often pay).

- Primarily for job seekers with little or no distance to the labor market.

Public Employment Services

- Not-for-profit: all users receive the same support.

- More relevant and complete data on job seekers and employers is available.

- Specific target groups, customized services, counselor support.

- Primary focus on improving employability through skills enhancement and job creation.

- For job seekers away from the labor market.

LABOR INTELLIGENCE CENTER

Actions and communication

- Generation of interpreted reports
- Relevant actions resulting from the analysis
- Active program results

Data analysis

- Trend analysis, variance analysis, reporting.
- Prospective and preventive analysis
- Generation of pre-established indicators
- Internal performance indicators

Data update

- Data marts or tables for specific purposes
- Dashboards
- Enrichment with other data

Generation and cleaning of data

- ETL (Extraction , Transformation and Loading)
- External data loading
- Data cleansing (Duplications, incomplete, inconsistent data, etc.).

"**Without data you're** just another person with an opinion"

- W. Edwards Deming, Data Scientist

¿What HAVE WE LEARNED?

IS THIS A THREAT?

TRANSFORMATION ON MULTIPLE LEVELS

At the business model level

At the portfolio level with digital vision
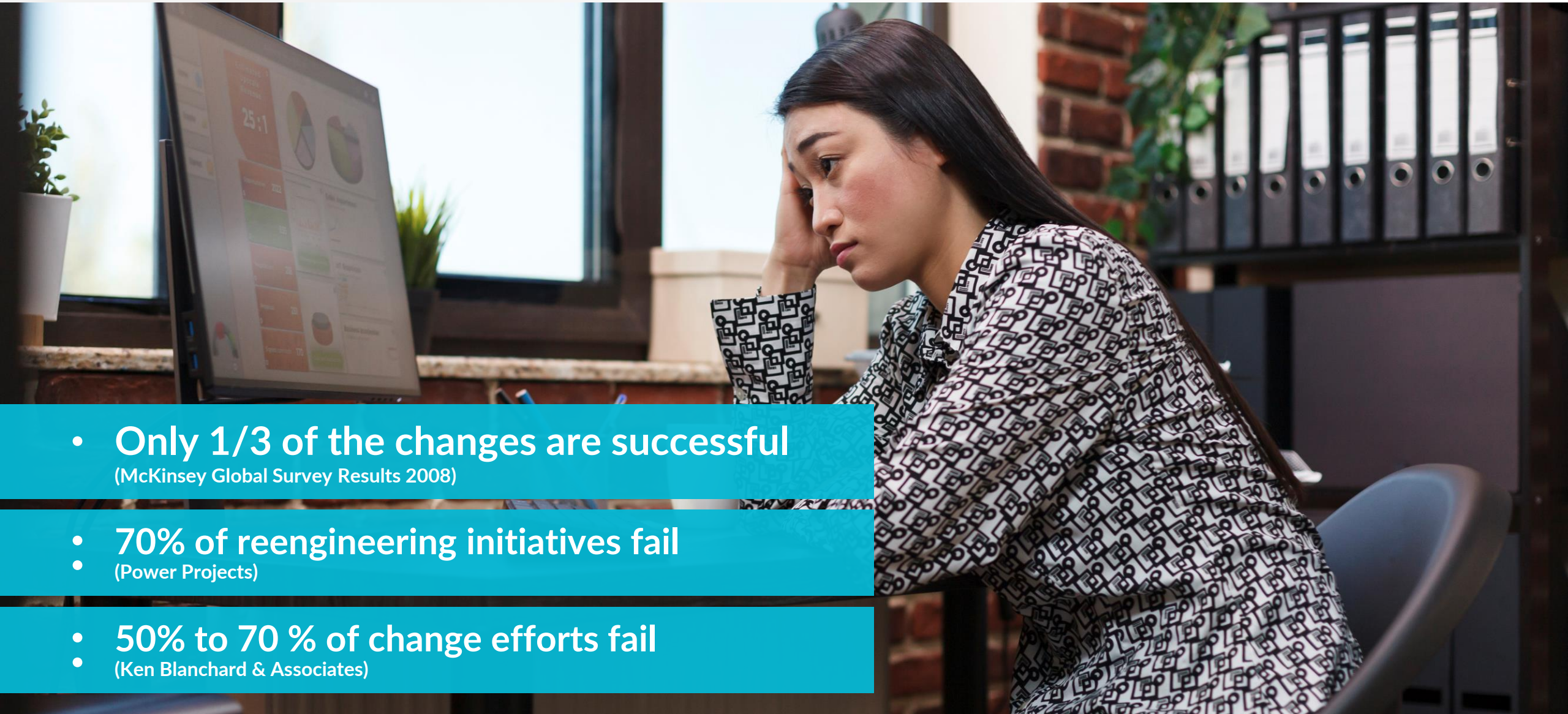
At the process level

At the systems level

Replacement and consolidation of old systems

At the individual level

HOW DOES IT IMPACT ME?

HOW MANY PROJECTS FAIL?

- **Only 1/3 of the changes are successful**
  (McKinsey Global Survey Results 2008)

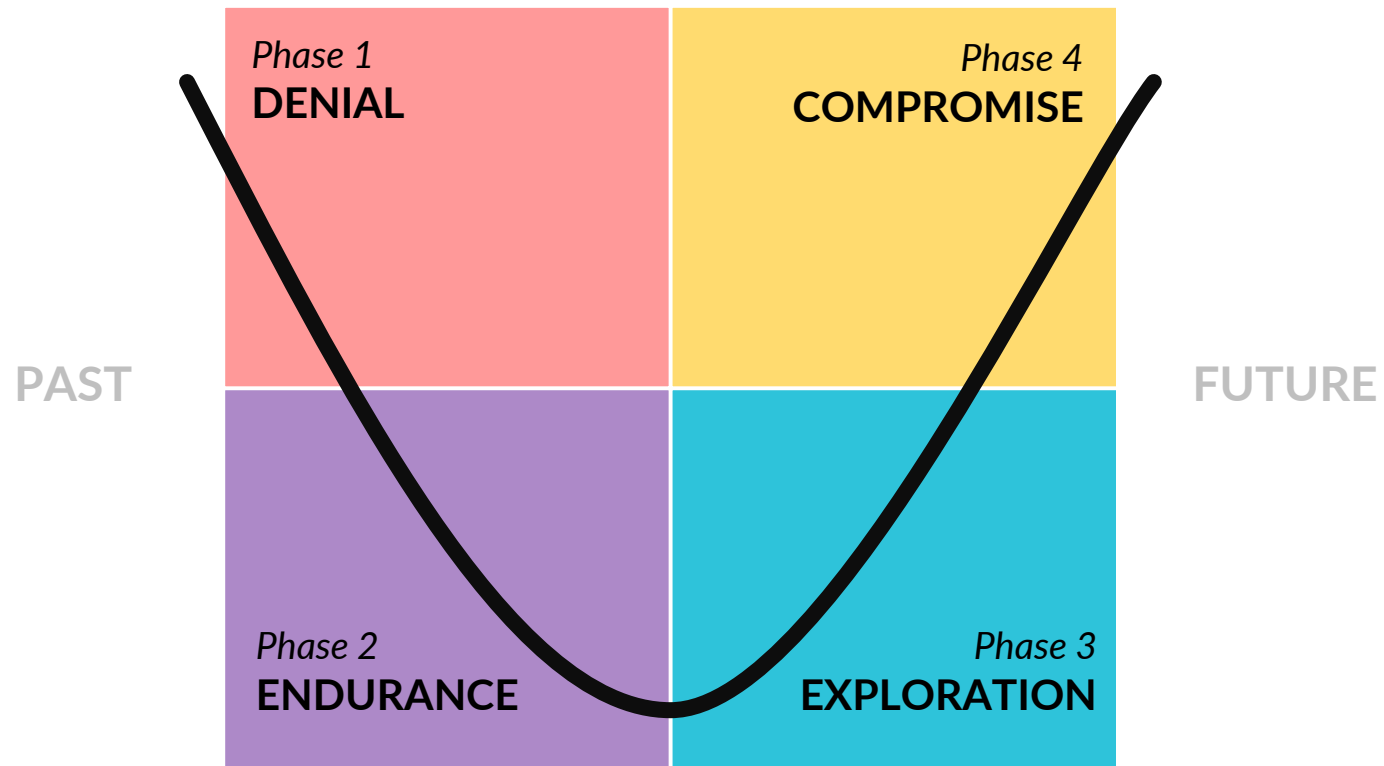- **70% of reengineering initiatives fail**
  (Power Projects)

- **50% to 70 % of change efforts fail**
  (Ken Blanchard & Associates)

The number 1 obstacle to the success of large change projects is the people within change management.

TRANSITION CURVE MODEL

Phase 1
DENIAL

Phase 4
COMPROMISE

PAST

FUTURE

Phase 2
ENDURANCE

Phase 3
EXPLORATION

Balance is key

Most people are afraid of the future, rather than excited about it.

We fear what we do not know and what we cannot predict.

We don't want to digitize our lives...

We want to humanize
the digital revolution...

The best way to create the future is to build it.

BID
Banco Interamericano
de Desarrollo

Nuevas tecnologías

Beneficios de la implem...
servicios en el marco de...
empresarial.

Manuel Urquidi
Gloria Ortega
Víctor Arza
Julia Ortega

Executive Summary

Accessible PDF

New employment technologies

The benefits of implementing services within
an enterprise architecture framework

Manuel Urquidi
Gloria Ortega
Víctor Arza
Julia Ortega

IDB

BID
Banque Interaméricaine
de Développement

Nouvelles technologies
l'emploi

Avantages de la mise en oe...
services dans le cadre d'une...
d'entreprise

Manuel Urquidi
Gloria Ortega
Víctor Arza
Julia Ortega

Sumário Executivo

PDF Acessível

Novas tecnologias para o emprego

Benefícios da implementação de serviços no
ámbito de uma arquitetura empresarial

Manuel Urquidi
Gloria Ortega
Víctor Arza
Julia Ortega

BID