**Scaling the innovation mindset.**

**Introduction.**

Hi, there.

Saman here again from Google Cloud.

In the last module, we explored business and technical challenges that organizations face on their Cloud adoption journey.

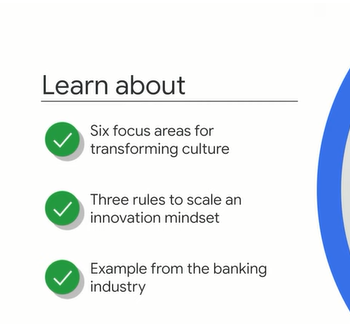
In this module, we'll look at a third challenge, culture change.

At Google, we believe an organization's culture plays a key role in their ability to embrace change and adapt with new technologies.

In this module, I'll start by exploring six focus areas that Google thinks are vital to transforming culture with an emphasis on culture of innovation.

Next, I'll explore three simple rules that help organizations scale the innovation mindset.

Then I'll apply the three rules in a real-world example from the banking industry.





Finally, I'll cover some questions to help you reframe the way you approach your work and how you can adopt an innovative mindset.

Now, regardless of the position you're in, you can use these questions to help you identify innovative opportunities with the Cloud.

Let's get started.

**Focus areas for culture transformation.**

When you see Cloud as a tool to do things the way you've always done them, you risk vanishing into irrelevance.

Using Cloud to do new transformative things means embracing wholesale change.

This change may involve radically rethinking business practices, structures, and even business models so you can better serve your customers globally.

Since forming in 1998, Google has grown from a few guys in a garage to an international organization with over 100,000 employees worldwide.

Along the way, we've done a lot of thinking about how to maintain an innovation mindset, the same mindset that enabled Google's founders to build the Google search engine in the first place.

We've also spent a lot of time helping other companies embrace and nurture an innovation mindset and learn from their experiences too.

We've categorized the learnings by six focus areas that contribute to the successful culture transformation.

They are foundational to creating a fast moving, customer-centric and future-proof business that optimizes its use of Cloud technology.

These focus areas are talent, environment, structure, strategy, empowerment, and innovation.



We need an entirely separate course to cover the details of each focus area.

For this course, I'm going to briefly present each area before focusing on innovation and how it relates to digital transformation.

Talent refers to a holistic view of the people that make up an organization and contribute to innovation.

It covers the entire life cycle from attracting, to hiring, to nurturing, to retaining, to celebrating, and growing the talent.

The ability of people to thrive (*prosperar*) in an organization, especially during major changes, is connected to the work environment.

Environment, our next focus area, means more than just a workspace.

Every program, every perk or service should be designed to enable a culture of innovation and efficiency and ultimately lead to job satisfaction and overall well-being.

That brings me to the next focus area, structure.

Structure is a blueprint for how certain programs and tasks are grouped and how people managing them are led toward a common goal.

Essentially, structure is how a business organizes itself.

For example, how an organization establishes its hierarchy and management levels, and forms teams, and how people access information are all part of an organization structure.

Strategy is how you align people to your organization's purpose or mission.

It is the direction you set, how you measure progress, and how you adapt to new information to achieve your vision.

Next is empowerment.

Empowerment means enabling employees by giving them access to relevant information and encouraging them to use it to take initiative to solve problems and improve the business.

Certain degrees of autonomy, independence, and responsibility can increase motivation, which is central to creating a culture of innovation.

Lastly, innovation is central to embracing new technology.

So let's look at this in more detail.

Innovation, at its core, is about doing something in a surprising new way or discovering something entirely new that adds value.

Whether you're rethinking an existing process or creating a totally new product, innovation involves creativity and ingenuity.

Creating a culture where people can innovate is foundational to embracing meaningful change, adapting to and optimizing new technologies, and most critically, maintaining a competitive advantage in a fast moving world.

However, innovation can't be owned or ordained (*ordenar*), but you can create the environment and the right conditions for innovation to evolve organically.

**The fuel for innovation is a balance between freedom and constraint. (*El combustible para la innovación es un equilibrio entre la libertad y la restricción.*)**

At Google, we strive (*esforzamos*) to give employees the right amount of creative freedom and psychological safety so innovative ideas can scale.

Google typically follows three rules to foster and scale a culture of innovation.

We'll cover these in the next video.

**Scale the innovation mindset.**

In the previous video, I mentioned that Google has established three simple rules that govern its day to day business practice and help to nurture and skill a culture of innovation.

They are; focus on the user or the customer, think 10x or generate big ideas, and finally launch and iterate, which is often referred to as continuous learning.

These principles weren't created by Google.

Every company focuses on their customers.

Every company expects its employees to be bold and to generate big ideas.

Where Google differs, however, is in the way it implements these principles to scale the innovation mindset.

We'll look at each one by one.

Let's start with focus on the user.

Focus on the user as a business practice may sound common.

How often have you heard customer-first?

But for us at Google, this focus has two dimensions.

First, users aren't limited to paying customers or people outside our business.

Our employees are also our users.

Next is user expectation.

You need to clearly understand user expectation to think about how you can add value for them.

This is because with the digital age, everyone has become connected globally via multiple devices.

Everyone has acquired the same expectations when engaging with companies.

Here's an example of what I mean by focusing on your customers and their expectations.

When airlines first started offering WiFi on-board their planes, it seemed new and revolutionary and it differentiated in airline companies offering.

Now, it's expected.

Notice that as soon as your customers become exposed to something new that makes their lives easier, it doesn't take long for it to become an expectation.

User expectation, though, can mean a variety of things.

To help you narrow down the scope of users expectations, consider the following focus areas; access, engagement, customization, and communication.

For each focus area, ask yourself, what is the user or customer expect.

By answering the question, you'll make important discoveries about where to invest your efforts.

Let me give you a few examples.

When it comes to access, users expect faster and easier services with always on capabilities that can be accessed anywhere.

In terms of engagement, users are looking for sources of valued content.

They expect up-to-date reliable content from multiple fields of expertise.

From this, you can then learn that engaging multiple fields of expertise in the process of product development is also crucial for your business success.

Next, when it comes to customization, users expect that a product or service seamlessly adapts to their individual needs and preferences.

Finally, users expect to be able to communicate with service providers through a two-way feedback channel.

This means that the company also engages in conversation.

The same is true for your employees.

When assessing what they expect when it comes to communication, you'll discover that they expect their contributions to matter and that their input has a positive impact on the evolution of a product or the company.

To meet their expectations, two-way dialogue is needed between teams and between employees and their leadership.

Take a moment to think, who is your user?

With innovation in mind, is there room to drastically improve or reinvent your products or services by examining your user's expectations?

Now, at first, this level of focus on the user might seem like a bad business decision.

What about ensuring that the business is making a profit?

Believe it or not, there is a different way to look at the problem.

I'll give you an example.

One of Google's primary business models is built around ad sales.

In the past, when users went to Google's site to search for information, they would see company bought ad space on either side of the search window.

By applying the first rule, focus on the user, Google decided to update its user interface design.

This involved removing the ads and showing more information for some search results in order to provide a better user experience.

At the time, 87 percent of Google's revenue came from ad space sales.

This might have seemed like an irresponsible decision.

But Google focused on the user and made the changes anyway because its mission isn't to sell ad space but to organize the world's information and make it universally accessible and useful.

Coupled with the capabilities of the Cloud, Google actually discovered that an improvement in the user experience didn't negatively affect its revenues.

In fact, users have more insight now than they ever did before when they type in just a few letters.

Let me give you an example.

Last Sunday, I was deciding between pasta and sushi for dinner.

I can make pasta, but not sushi, and I was really craving sushi.

At 8:40 PM, I used Google Search and typed in fuki, the name of a local sushi restaurant.

I didn't type the word sushi because geolocation knows I live in Palo Alto and so the search retrieves fuki sushi in Palo Alto.

Immediately, I have a tremendous amount of information.

Photos of the restaurant and the restaurant's hours.

I see its location on maps, which shows how long it will take to get there.

I see in orange font that the restaurant closes soon.

A bar chart generated via Google Map's aggregated user data indicates how busy the restaurant is and tells me that the average wait time is 30 minutes.

At the time of my search, it was 8:40 PM and the restaurant closed at 9:00.

So I knew I wasn't going to get sushi.

This is amazing.

I type in four letters into the Google search bar, and within moments, I know I'm cooking pasta.

Users find this functionality useful so they keep coming back.

Eliminating ads for some searches and using sponsored links instead turned out to be very profitable for Google.

Focusing on the user can help any organization leverage new technologies as they undergo a digital transformation.

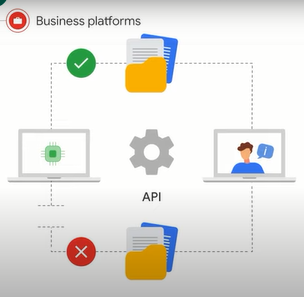
Focus on the user is good practice to help you remember what ultimately matters most, achieving your mission, why you exist, not how you operate.

Let's move on to the next rule, think 10x.

**Modernizing business platforms and applications.**

In the last video, we covered the first focus area for modernization.

Let's now look at the next two.

**Business application platforms** are essentially about enabling integration between systems and granting users the correct access privileges in an organization and beyond. For example, suppose a company uses a third party platform for managing parts of customer data, customers who have purchased a premium support package should be prioritized by the partner in that region, application processing interfaces, commonly known as APIs are technical tools that enable integration between applications. 

In this case, the company uses an API to integrate their partner portal application with the customer information platform.

They configure it so that the partner can only access certain information and other information remains protected.

We'll talk about business application platforms in a later module.

Now, let's look at **application modernization**.

The term application is widely used to refer to programs and software that enable people to preform various digital tasks. Apps on smartphones are one example. Another example is the software you use to create documents, spreadsheets and presentations.

Today's customers expect instant access to services wherever they are.

An organization's ability to develop and launch applications is central to their success in today's competitive market. But organizations must embrace the importance of speed and innovation without compromising security.

**One way to realize this is through developer operations or DevOps.**

**DevOps is a set of practices that aim to increase software delivery velocity, improve service reliability, and build shared ownership among software stakeholders. (***DevOps es un conjunto de prácticas que tienen como objetivo aumentar la velocidad de entrega del software, mejorar la confiabilidad del servicio y crear una propiedad compartida entre las partes interesadas del software***.)**

We explore application modernization, including DevOps and a lot more detail in another course, understanding Google cloud security and operations.

Let's now look at how organizations can leverage data to enable digital transformation.

**Unlocking the value of data.**

Leveraging data relies on being able to capture, store, and structure it in such a way that you can make informed business decisions with it. (*Aprovechar los datos depende de poder capturarlos, almacenarlos y estructurarlos de tal manera que pueda tomar decisiones comerciales informadas con ellos*).

Data is no longer only about retrospective insight, it also includes real time insight, smart predictions, and intelligent action.

Imagine you're working in a traditional large enterprise.

Lots of offices around the world, tons of documents, spreadsheets, and files, varying platforms and applications, assets and materials in various languages, and a global customer base, the wealth of available data is enormous.

Some data, like financial data, is easy to capture because it already lives in spreadsheets.

Other data is harder to capture, like content that is spread across PDF and forms or social data.

How your customers engage with you across social media platforms, for example.

Another challenge is storage and data management.

After you've captured data, how do you store it in such a way that you can gain insights from it?

With the right platform, organizations can generate instant insights from data at any scale.

Instead of analyzing data for retrospective insight, you can leverage data in real time to continually improve your service.

For example, organizations can use stream analytics tools to instantly capture consumer behavior on their website and respond in a more targeted way in real time.

When an organization has captured data and has systems in place to continue capturing it at scale, the possibilities are endless.

With machine learning and artificial intelligence, or ML and AI, you can generate insights from data both past and present, and you can also perceive, predict, recommend, and categorize data in new ways.

For example, ML enables large equipment manufacturers to schedule predictive maintenance with greater accuracy, leading to less downtime and increased productivity.

Online retailers who use smart analytics tools can ingest real time behavior data while also leveraging ML to surface the best suggestions for particular users.

With every click that the user makes, their website experience becomes more and more personalized.

ML and AI are leading to significant advancements in medicine as models trained to analyze images can identify various abnormalities to a high degree of accuracy.

These are just a few examples.

We'll explore many more in upcoming modules, along with the security, privacy, compliance, and ethical implications of leveraging data.

**Using a new built-in security model.**

One aspect of digital transformation that permeates all others is security.

Security in the Cloud requires new ways of thinking.

Traditionally, IT security models focused on keeping threats out. (*Tradicionalmente, los modelos de seguridad de TI se centraban en mantener alejadas las amenazas*).

They built an on-premises perimeter that individuals required access to in order to gain entry.

That model works when all hardware and systems were controlled and managed centrally and employees came into the office to do their work.

Now, employees want to create, share, and access information virtually.

In an increasingly global workforce, businesses need to grant access to applications and relevant data with a high degree of security.

Businesses can now do this with security built in when moving some or all of their data and infrastructure to the Cloud.

In the Cloud, the best practice for security is called a **Shared Responsibility Security Model**.

In this model, **the Cloud provider is responsible for the physical infrastructure like the undersea cables, data centers, the personnel to manage the hardware and software, and businesses are responsible for controlling data and resource access.**

This means that businesses need to think carefully about appropriate governance and policies for granting and restricting access to information and applications.

Compliance with regional regulations is also part of security and governance.

These regulations govern where data is stored and how it's managed.

Security in the Cloud is multifaceted and complex, and we'll cover it in a lot more detail in another course, Understanding Google Cloud Security and Operations.

These are just a few of the security concerns that any organization must take into account as they undergo digital transformation.

Up to this point in the module, we examined key business and technical challenges that organizations face as they undergo digital transformation.

These challenges include culture change to encourage innovation, updating IT infrastructure, modernizing business platforms and applications, and capturing, storing, and leveraging data, and finally adopting a built-In security model.

These challenges are complex, and in many cases, mission-critical for businesses to overcome in the Cloud era.

In the next video, I'll cover how Google Cloud Solutions can help companies address these challenges.

**Google Cloud solutions for digital transformation.**

Google serves over one billion users worldwide across search, Gmail and other applications.

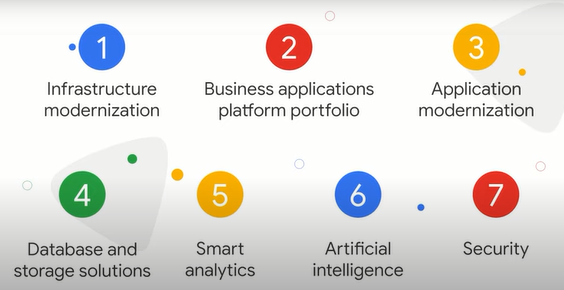
Google takes what it has learned from serving billions of users and creates Google Cloud products and solutions available to organizations around the world.

Now customers can build their own applications and manage their own workloads on the same infrastructure that Google Cloud runs to achieve their mission and serve their users.

We've grouped the products and services into solution pillars to match many organizations transformation journey.

In fact, these groupings are based on how different types of customers have already used and benefited from Google Cloud solutions.

The solution pillars are infrastructure modernization, business applications platform portfolio, application modernization, database and storage solutions, smart analytics, artificial intelligence, and security.



A common first step for digital transformation is moving parts of a traditional IT infrastructure to the Cloud.

The goal would be to make modifications with minimal impact to end users or customers, learn from the updates iteratively and ultimately meet the demands of the Cloud era.

Google Cloud and its partners offer flexible infrastructure modernization approaches from re-hosting customer's existing IT to re-platforming.

This means using new platforms and applications to enhance what you can do.

When organizations have moved some or all of their workloads to Google Cloud, they can then leverage the innovation built into Google Cloud technology to create new business value.

We cover more details about the specific products and services in another course, the value of infrastructure and application modernization with Google Cloud.

Now another challenge businesses face is **modernizing their business platforms** to enable better information flows and more secure access to systems and applications.

With Google Cloud Business Application platforms portfolio, organizations can securely unlock their data with APIs, automating processes and creating applications across Clouds and on premises without coding.

Tools in this pillar, such as Apache, API Management and Cloud Endpoints, build and automate business workflows while migrating and modernizing apps as they move to the Cloud or between Clouds.

Businesses can better serve their users through application modernization.

The tools within this pillar help businesses develop and run applications anywhere.

Businesses can both modernize legacy apps and build new ones, which helps them achieve higher return on investment and innovate faster.

Let's look at data and digital transformation.

Google Cloud database and storage solutions include tools that help businesses migrate and manage enterprise data with security, reliability, high availability, and fully managed data services.

Examples include **Cloud Spanner, Cloud SQL, and Fire store**.

The smart analytics portfolio helps businesses generate instant insights from data at any scale with a serverless fully managed analytics platform.

**BigQuery** is an industry leading example of a serverless data warehouse solution.

**Looker** is a business intelligence platform that provides a unified service to access the truest (*más verdadera*), most up to date version of your company's data.

We cover more on these and other tools in another course, innovating with data and Google Cloud.

Google Cloud, artificial intelligence tools are built to enhance innovation and improve productivity by integrating seamlessly into a company's existing workflow and products.

Google Cloud's comprehensive security solutions cover all aspects of protecting your business in this digital era.

In fact, businesses can detect, investigate, and protect themselves against online threats before attacks result in damage or loss.

These solutions also reduce the time it takes to identify threats.

It might be difficult to determine what solutions you need and how to prioritize your cloud adoption challenges.

To help organizations optimize their cloud adoption Google Cloud has developed the **Google Cloud Adoption Framework.**

This best practice guide provides a framework to assess where an organization is in its journey and what it should do next.

Refer to the linked reading or the direct link to the website for more details.

https://Cloud.google.com/adoption-framework.

Now throughout this module, I covered the business and technical challenges and the solutions that enabled digital transformation.

In the next module I will look at the role that culture plays in overcoming these business and technical challenges.

In particular, all examine how organizations can foster (*alentar*) and scale an innovation mindset to create fresh breakthrough (*descubrimiento*) experiences for customers.

**Quiz. Digital Transformation with Google Cloud.**

1. To help you narrow down the scope of your user’s expectations, which focus areas should you consider? Select the correct answer. (*Para ayudarlo a reducir el alcance de las expectativas de su usuario, ¿qué áreas de enfoque debe considerar?*)

Access, Engagement, Customization, Communication

Integrity, Communication, Consistency, Engagement

Access, Engagement, Communication, Reliability

Communication, Price, Availability, Accessibility

2. According to Google’s culture of innovation business principles, what does “*Think 10X” mean*? Select the correct answer.

Fundamentally rethink business problems and solutions by a factor of 10.

Reserve 10 percent of all company resources or budget for innovation.

Make 10 changes that will positively impact the customer experience.

Explore solutions that would yield 10 percent improvements.

3. Which three business principles does Google recommend to ensure transformational outcomes? Select the correct answer.

Focus on the user, think 10X, launch and iterate

Bias toward action, think 10X, launch and iterate

Think 10X, perfect first, focus on the user

Focus on the user, think 10%, and freedom to innovate

4. Talent, Environment, and Empowerment are three focus areas that Google has identified as foundational to organizational transformation. What are the other three focus areas? Select the correct answer.

**Structure, Strategy, Innovation**

Management, Strategy, Creativity

Management, Tactics, Innovation

Structure, Tactics, Creativity

5. Timothy owns and operates an organic food delivery service. Timothy must first define his company’s mission. Which of the following mission statements best focuses on the WHY and not the HOW, providing clear direction? Select the correct answer.

Deliver seasonal produce reliably

Connect farmers and consumers through fresh produce

Increase delivery fleets using the Internet of Things (IoT)

Increase produce sales monthly