



CENTRO DE INNOVACION UC
ANACLETO ANGELINI

INNOVACIÓN PARA LA SOSTENIBILIDAD

GRANDES DESAFÍOS



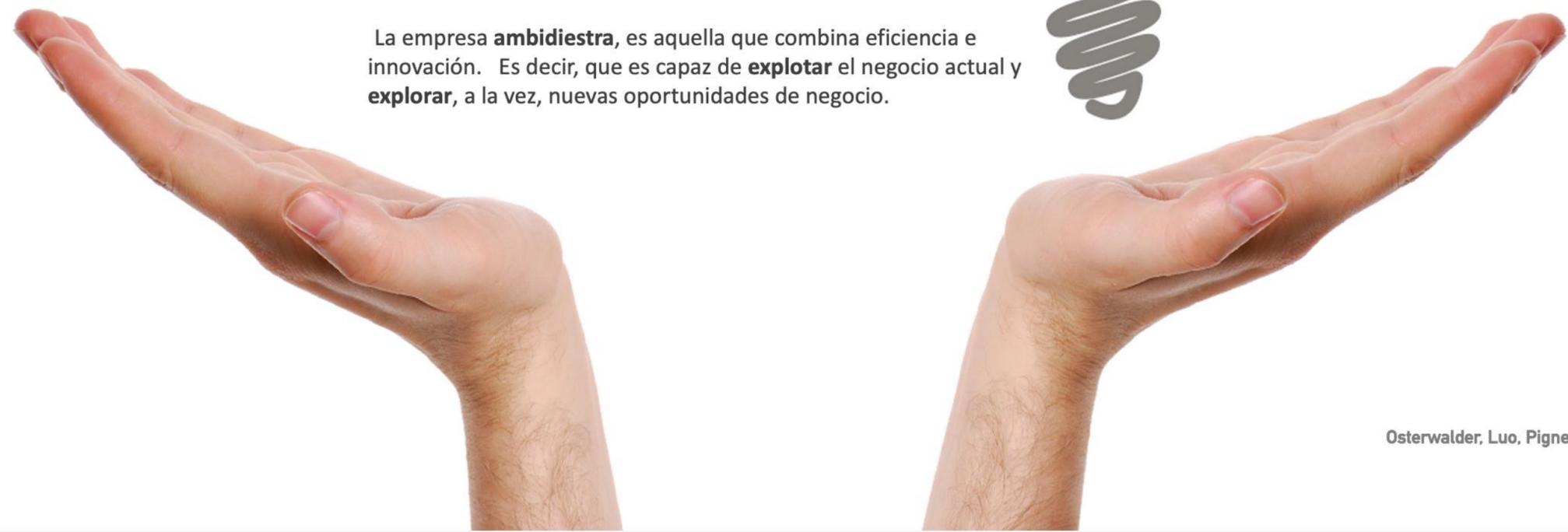
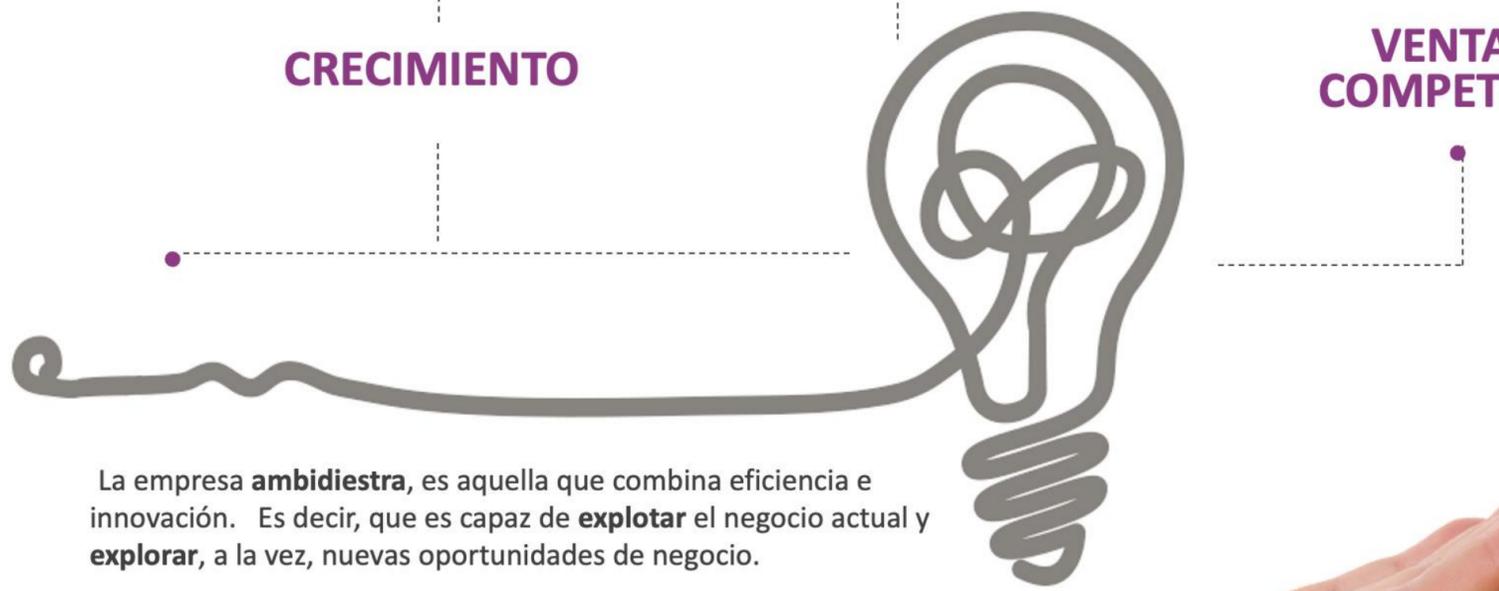


Eficiencia

Innovación

CRECIMIENTO

VENTAJA COMPETITIVA



La empresa **ambidiestra**, es aquella que combina eficiencia e innovación. Es decir, que es capaz de **explotar** el negocio actual y **explorar**, a la vez, nuevas oportunidades de negocio.

¿CÓMO
ENFRENTAR
ESTOS DESAFÍOS?

MOTORES DE TRANSFORMACIÓN

Fuerzas

INTELIGENCIA ARTIFICIAL

BIOTECNOLOGÍA

CAMBIO CLIMATICO

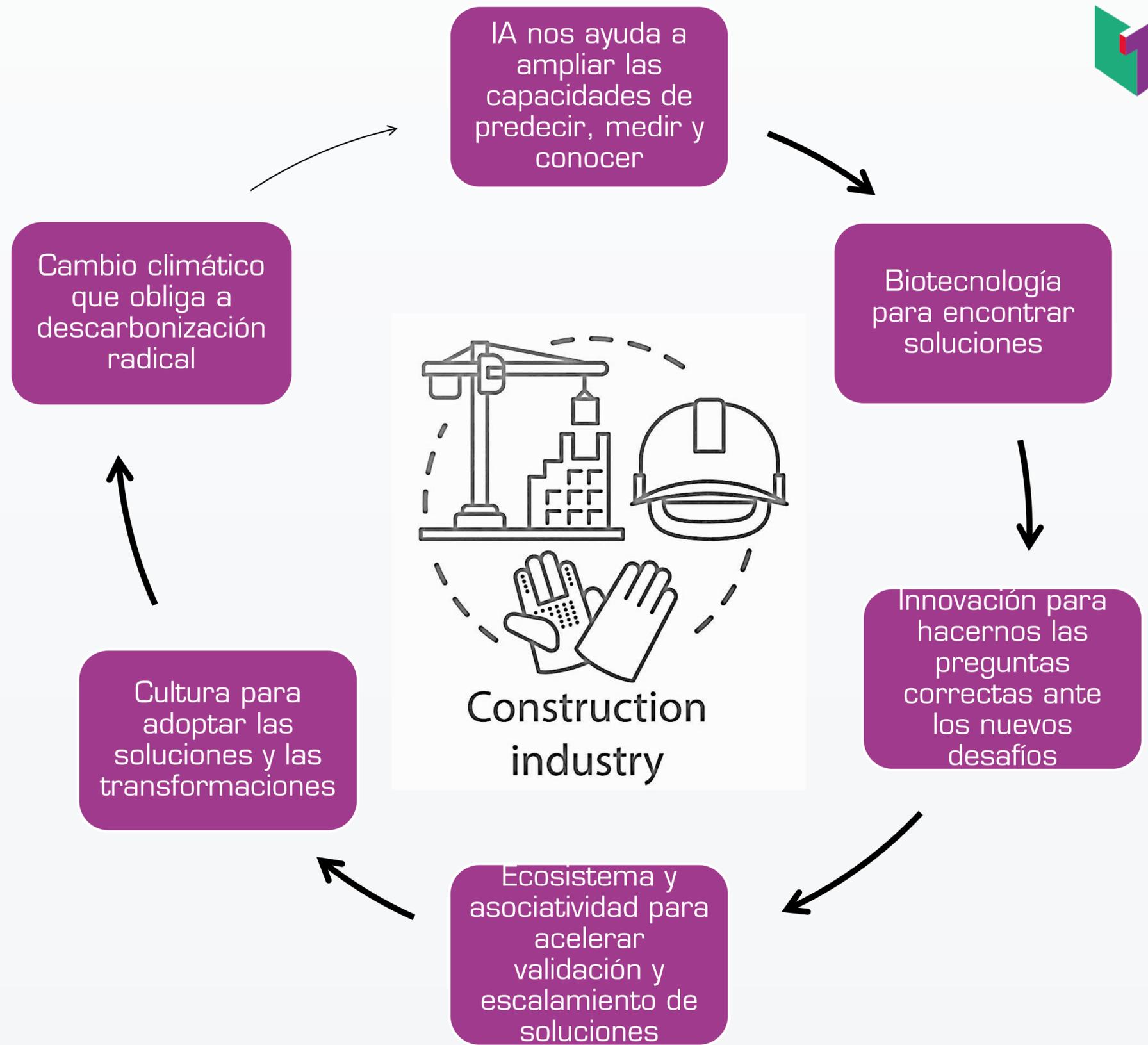
Habilitantes

ECOSISTEMA

INNOVACION

CULTURA

MOTORES DE CAMBIO & TRANSFORMACIÓN PARA EL SECTOR



INNOVACIÓN

Forbes



INNOVATION

Innovation: The Key To Unlocking The Future of Smart Construction



SAP BRANDVOICE | Paid Program

INNOVACIÓN

¿SOSTENIBILIDAD PARA LA
CONSTRUCCIÓN?

¿CONSTRUCCIÓN PARA LA
SOSTENIBILIDAD?

¿CÓMO PASAR DE GENERAR **IMPACTO** (–)?



CHILE

Sector inmobiliario y construcción son los más contaminantes en Chile

“Según datos de la ONU, el sector inmobiliario produce el 35% de las emisiones de gases de efecto invernadero a nivel global. A esto se suma que la construcción en Chile genera un 56% de los residuos sólidos industriales, convirtiéndola en la industria más contaminante del país según CONAMA, por lo que consumir menos y optimizar el uso de recursos es el modelo ideal para construir y habitar en nuestro futuro inmediato”.

INNOVACIÓN

INNOVACIÓN

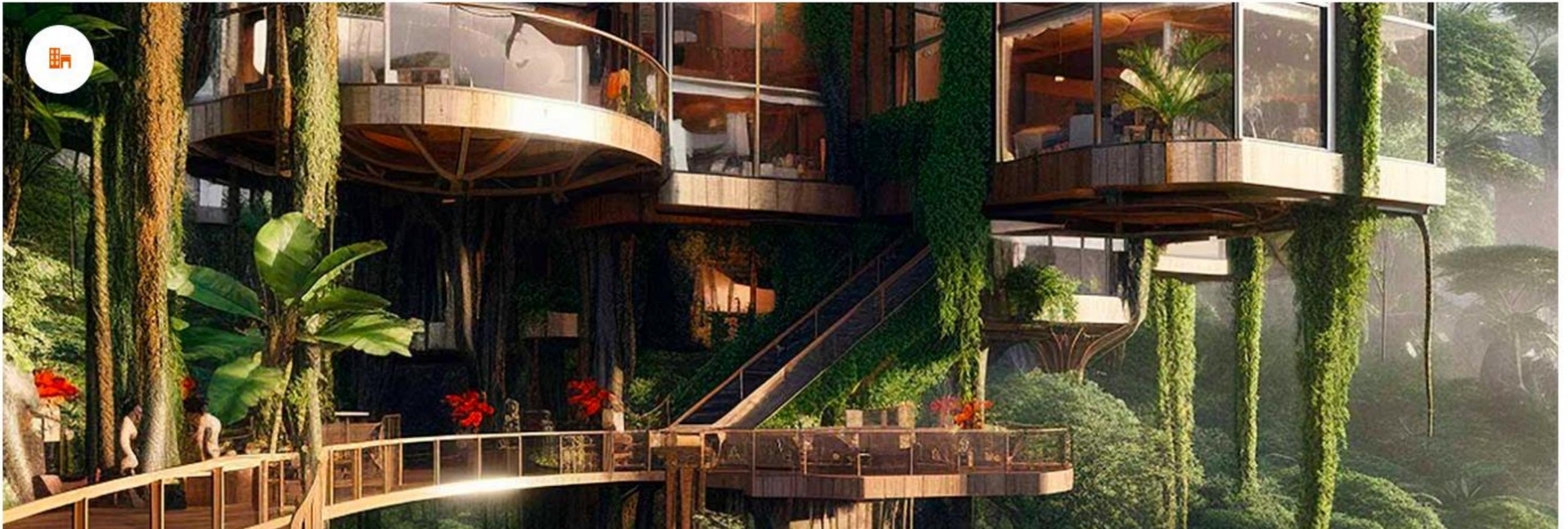
A GENERAR IMPACTO (+)



CIUDADES REGENERATIVAS

REGENERATIVE INFRASTRUCTURES TO MITIGATE THE EFFECTS OF CLIMATE CHANGE

Cities around the world are looking for ways to build regenerative infrastructures in response to the consequences of the climate crisis



BIOTECNOLOGÍA

How biotechnology could revolutionize the construction industry

March 5, 2020

Biomaterials Are Making the Building Industry More Sustainable

THE BIOTECH BOOM: HOW THE LIFE SCIENCES INDUSTRY IS DRIVING INNOVATION IN NORTHERN CALIFORNIA CONSTRUCTION

Biotechnology is a rapidly growing field that is transforming many industries, including the construction industry in Northern California. In recent years, there has been a significant increase in the use of biotechnology in the construction of commercial buildings and infrastructure projects, with companies using biotech innovations to improve the safety, efficiency, and sustainability of their projects.

Sustainable construction: Toward growing biocement with synthetic biology

Published online by Cambridge University Press: 18 August 2023



Sustainable concrete construction by microorganism and monitoring using EMI technique: A review

Krishna Kumar Maurva  , Tripti Sonker , Anupam Rawat 

Construction of concrete infrastructures is developing worldwide from the ancient period therefore; sustainable concrete is required for clean environment reason. The formation of cracks/fissures creates problems to the concrete which reduces durability of concrete structures. These cracks/fissures in concrete originate due to the natural forces viz., weathering and landslide, seismic, flooding and human interventions which affect the service life of structures. The application of microorganisms in concrete is the innovative technology for sustainable construction and self-healing of cracks. These microorganisms' bacterium produces calcium carbonate in presence of moisture and carbon dioxide. The use of bacteria in concrete consumes carbon dioxide available in the atmosphere and produces solid substances like calcium carbonate for self-healing of the cracks and develop sustainable infrastructure. Electro-Mechanical Impedance (EMI) technique is based on smart materials and used for monitoring of crack/fissures present in structures. The impedance and admittance signatures can be used for determination of the presence of damage. Admittance signature consists of conductance (real part) and susceptance (imaginary part) signature, respectively. The changes in the signature from the healthy state baseline signature indicate presence of damage in structures. The research review article is focused on microbial-based concrete and its importance related to the clean environment and sustainable construction development.

INTELIGENCIA ARTIFICIAL

APRIL 6, 2023

Adaptis' proprietary, AI-driven software enables circularity in construction

Velocity startup secures foundation with \$2M pre-seed round

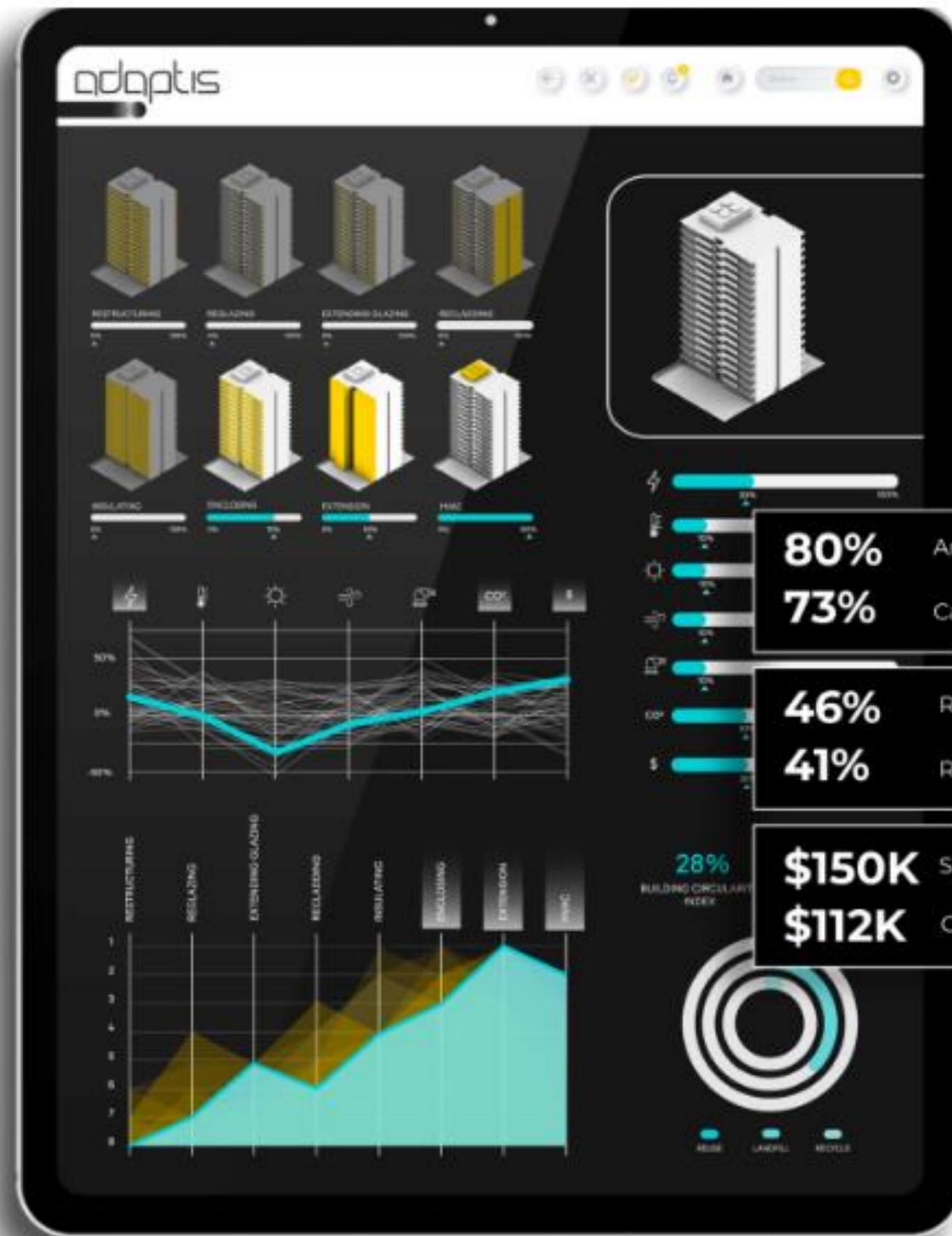
“The company’s proprietary, **artificial intelligence-driven** software, born out of University of Waterloo research, **enables circularity in construction, decarbonizing and material recycling** for existing and new multi-family housing, commercial and institutional buildings”.

Spin-Off de la Universidad de Waterloo:

<https://adaptis.ai/>

adaptis

Build Circular.



80% Annual energy use &
73% Carbon emission reduction

46% Reused &
41% Recycled components

\$150K Savings through material reuse
\$112K Carbon emission savings





Implementing Artificial Intelligence Techniques to Predict Environmental Impacts: Case of Construction Products

by  Anish Koyampambath ^{1,2} ,  Naeem Adibi ² ,  Carolina Szablewski ²  ,
 Sierra A. Adibi ³  and  Guido Sonnemann ^{1,*}  

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MEDIR Y REALIZAR LAS
PREGUNTAS CORRECTAS
ES FUNDAMENTAL

PARA LO ANTERIOR
LA ASOCIATIVIDAD
ES CLAVE



PENSAR COMO ECOSISTEMA

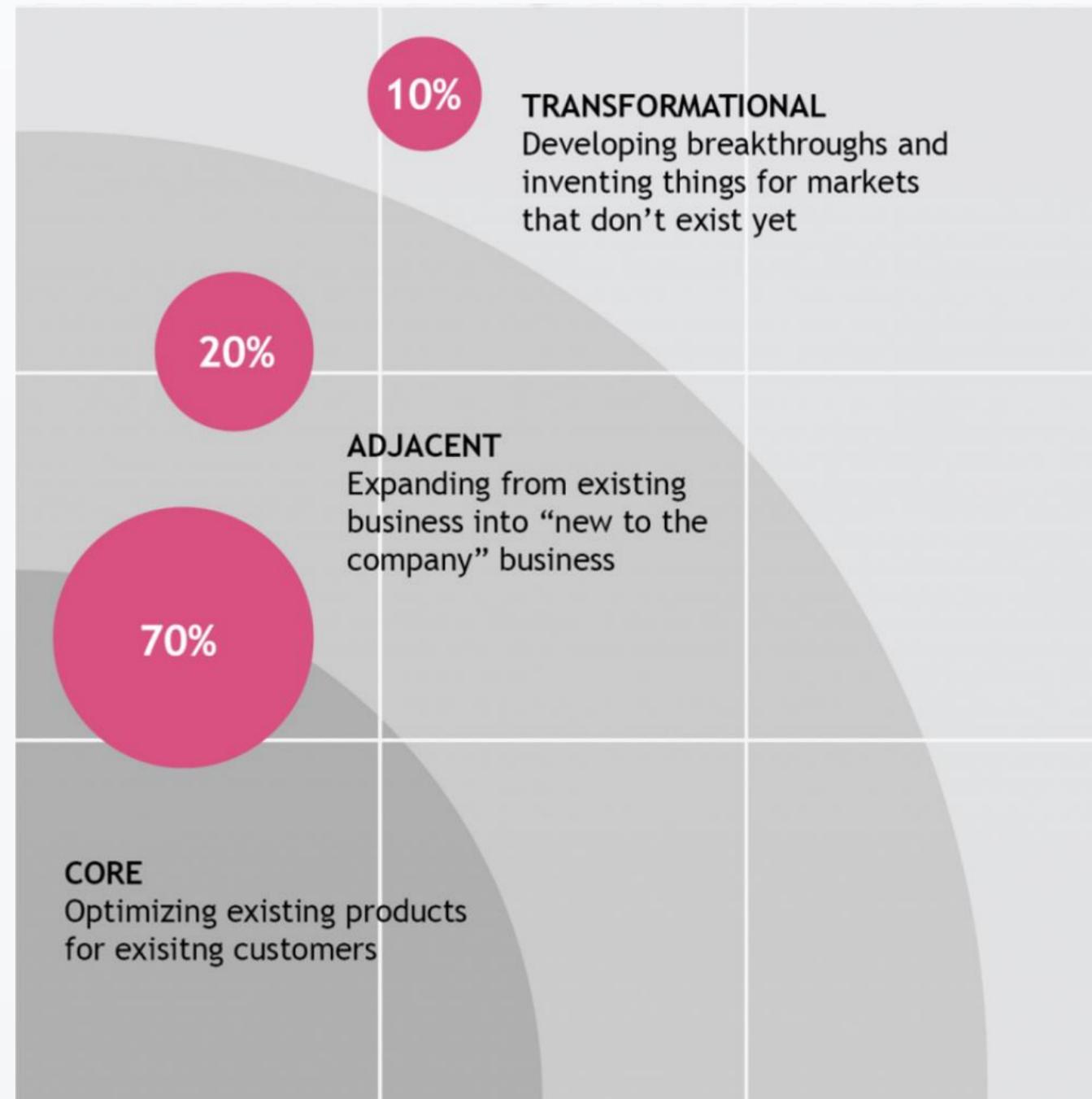
Grandes desafíos requieren articulación sofisticada

Teoría de Nodos

- En los **ecosistemas desarrollados**, existen diversos nodos
- Estos nodos deben ser **sofisticados**
- Cada nodo sofisticado tiene **especializaciones y roles**
- Los nodos deben estar **conectados** y tener flujos de comunicación
- Los nodos extienden sus capacidades para agregar valor a los otros nodos. **Existe transferencia entre los nodos**
- El ecosistema y sus nodos se comportan como un **gran organismo**
- A cada nodo, se le puede incorporar **ambidiestría** (explorar + explotar) para tener un sistema resiliente y con capacidad de adaptación

TRABAJAR EN DISTINTOS HORIZONTES

LA INNOVACIÓN SE GESTIONA EN PORTAFOLIOS CON PROYECTOS EN DISTINTOS NIVELES DE MADUREZ Y CON DISTINTOS FOCOS DE NEGOCIO Y HORIZONTES





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