Report on the Results of the Week of Business Challenges, including the Winning Pilot Trial and Prototype Solutions for Each Challenge.

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1. Introduction

Work Package 9: *Business challenge week* of the Project: *Universities of Ibero-America Weaving Ties with the Business Sector – Ibero4Jobs*. The general objective of this Work Package was established to guide the actions planned for the "Week of Business Challenges":

> *"To develop a week of business challenges as a collaboration strategy between the productive and academic sectors, fostering innovation, experiential learning, and the strengthening of inter-institutional ties through the co-creation of solutions to real-world challenges."*

In this context, this week provided a valuable opportunity for university students to tackle real-world challenges coming from the productive sector, allowing them to apply their knowledge in practice while simultaneously developing new skills. This process enabled them to explore diverse perspectives, collaborate with peers from different disciplines, and gain an initial understanding of organizational dynamics and needs. Moreover, engaging with business stakeholders enhanced the students' ability to formulate innovative solutions and provided a learning experience that transcended the academic setting, thus equipping them to address the demands of contemporary professional environments.

1.1. Context of WP9 within the Ibero4Jobs Project

Work Package 9: Implementation

Work Package 9 refers to the implementation of three specific activities, that align with the project's objectives. These activities established the framework for the design of the week of business challenges in an orderly and cohesive manner, thus guaranteeing the progress needed to achieve the expected outcomes.

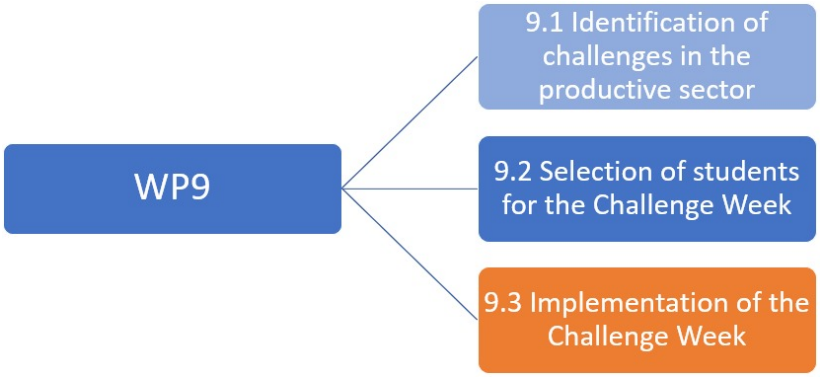

Figure 1. Structure of Package 9 / Source: Authors' elaboration

The outcomes of the activities of this work package provide a comprehensive overview of the process and the achievements of the participating institutions. Furthermore, the most

significant contributions that emerged during the implementation are highlighted, as they support both the fulfilment of the project's objectives and the strengthening of academic capacities and their connection with the productive sector.

2. Phase 1: Preparation and Design

2.1 Design of the Week of Business Challenges

The planning of the week of business challenges was led by the Universidad Autónoma de Manizales (UAM) with the contributions of the other institutions. This process enabled the adaptation of the initial proposal to the particularities of each institutional context, the establishment of shared methodological guidelines, and the definition of the operational responsibilities required to guarantee a successful week.

This co-creation process resulted in the consolidation of a joint work plan, which defined the business challenges, the accompanying methodology, activities, selection criteria for students and mentors, and the mechanisms for monitoring and evaluation. Consequently, the week of business challenges was established as a comprehensive exercise aligned with the Ibero4Jobs Project goals, ensuring coherence between local dynamics and the broader regional vision of academic-industry partnership.

Each consortium member institution designated a faculty contact responsible for managing the agreed-upon methodology and coordinating the planning, logistics, and necessary actions for the week within their respective organization, as shown in the following table

2.1.1 Delegates per Institution.

Institutional delegates were appointed in both Colombia and Mexico to coordinate and set up the activities for the week of business challenges. These representatives were in charge of organizing, planning, and ensuring the proper execution.

Table 1. Delegates per Institution

Name of delegate	University
Daniela Curiel Espinoza	Universidad Tecnológica de Nayarit
Ana Carolina Cuevas del Torre	Universidad Autónoma de Nayarit
Martín Alonso Carrillo	
Andrés Chávez Salazar	Universidad de Caldas
Sebastián Ruiz Salazar	
Luis Felipe Jiménez Arias	Universidad Autónoma de Manizales
Daniel Bedoya Gutiérrez	

Source: Author's elaboration

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2.1.2 Planning the Week of Business Challenges.

The development was based on European models transferred by the project and adapted to the regional context. The principal methodologies were defined as follows:

1. *Design thinking process* for ideation, prototyping, and validation.

2. 6W workshop for the construction and design of business challenges in collaboration with companies.

3. Business Model Canvas for arranging financial solutions for the proposed challenges

4. Pitch model for presenting the solution for the projected challenge.

These methodologies facilitated the development of a comprehensive learning process that started with the identification of real needs and problems, then passed to the conception of potential solutions, and concluded with a feasible proposals aligned with the presented business challenges.

The planning for the week of business challenges included:

- Identification of business challenges in collaboration with the productive sector, establishing priority challenges with potential companies and strategic partners. During the business challenge selection process, the potential scope of the challenges proposed for students was carefully reviewed to ensure alignment with the methodology, the established timeframe, and the expected outcomes.
- Selection and validation of the participating industries, ensuring different kinds of businesses (e.g., food, dairy, restaurant industries) and a minimum of two companies per location. There were mentors assigned for each business.
- Invitation and selection of students from all fields of study to have a multidisciplinary participation.
- The students were given some preliminary workshops about innovation, co-creation, and prototyping, totaling more than six hours of training, ensured the development of essential skills before the challenge week.
- The definition and validation of business challenge in a *brief* format was defined, with the participating companies.

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The activities for the week, includes the following:

- The sessions were organized into thematic blocks, an opening; immersion workshops and challenge analysis; ideation, co-creation, and prototyping, and final presentations and feedback.
- An evaluation and results competency evaluation system with a group of jurors (companies, faculty, institutional representatives) and clear criteria for innovation, viability, and presentation.
- Award and certificates of participation**,** designed to foster motivation and document the experience through reports and visual memory/documentation.
- Parallel spaces for networking, socio-cultural integration, and the socialization of digital tools.

The calls for proposals were launched to the university community, allowing the participation of academic programs that had not been involved in either the pilot phase or the subsequent scaling-up process. Furthermore, emphasis was placed on the importance of institutional support, the companies' time commitment, and transparency throughout the selection and evaluation stages.

During the week, students engaged in empathy exercises as well as in the definition and understanding of the business challenge. This process enabled them to adapt to the company's context, to generate different alternatives through guided creativity techniques, and to conduct preliminary and simulated validations that supported informed decision-making regarding the relevance of their proposals. Simultaneously, the Lean Startup approach facilitated rapid iteration, the development of original versions of proposed solutions, and the evaluation of their conceivable implementation.

Mentors, who provided feedback, methodological support, and strategic guidance at each phase, guided all the process. Finally, the teams presented their proposals through a pitch that synthesized the value of their solutions, the benefit for the stakeholders involved, and the opportunities for improvement identified during the prototyping and validation processes.

2.1.3 Agenda for the Week of the Business Challenges.

To achieve the established general objective and ensure the efficient development of all planned activities during the week, an agenda was designed. Working across disciplines, students effectively collaborated and devoted additional time to successfully conclude their prototypes, presenting a high level of commitment in the whole process.

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Table 2. General Agenda for the Week of Business Challenges

Day	Morning	Afternoon
Monday	Opening, presentation of the Ibero4Jobs project, the Business Challenges and companies.	Workshop 1: Understanding the business challenge and application of the 6W Canvas. Training in the design criteria of the challenge.
Tuesday	Workshop 2: Introduction to *Design Thinking* (empathy + definition + ideation).	Workshop 3: Idea generation + Roleplay to validate approaches from diverse stakeholders.
Wednesday	Workshop 4: Construction of proposals with the Business Model Canvas.	Workshop 5: Rapid prototyping tools and hypothesis validation. Teamwork.
Thursday	Mentoring + adjustment of solutions. Application of Artificial Intelligence tools to address the challenge.	Preparation of the final pitch. Focus on feasibility, innovation, and scalability.
Friday	Final pitch presentations before the academic and business jury.	Feedback, awards, group reflection, and closing ceremony. Certification of participation.

Source: Author's elaboration

2.1.3.1 *Detailed Agenda.*

A detailed agenda was also designed to facilitated the precise organization of each activity, the optimal use of time, and the timely completion of each phase of the process.

Table 3. Challenge Week Detailed Agenda

Day	Schedule	Activity
Monday	**08:00-08:30**	Registration and welcome
	08:30-09:30	Presentation of the Ibero4Jobs program
	9:30-10:30	Presentation of the companies and their business challenges
	10:30-10:45	Coffee break
	10:45-12:00	Initial group discussion on the business challenges
	14:00-14:45	Workshop: Understanding the business challenges
	14:45-15:45	6W Canvas application
	15:45-16:00	Coffee break
	16:00-17:00	Training in business challenge design criteria

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Day	Schedule	Activity
	17:00-18:00	Team analysis of the designated business challenge
Tuesday	**08:00-09:00**	Workshop: Introduction to *Design Thinking* (Empathy and Definition)
	09:00-10:00	Practical empathy exercise with simulated stakeholders
	10:00-10:15	Coffee break
	10:15-12:00	Ideation in teams (idea generation)
	14:00-15:30	Workshop: Roleplay to validate approaches
	15:30-15:45	Coffee break
	15:45-17:00	Evaluation of ideas according to challenge criteria
	17:00-18:00	Selection of ideas to be prototyped
Wednesday	**08:00-09:00**	Workshop: Business Model Canvas
	9:00-10:30	Team-based construction of the Business Model Canvas
	10:30-10:45	Coffee break
	10:45-12:00	Sharing progress with mentors
	14:00-15:30	Workshop: Rapid prototyping tools
	15:30-15:45	Coffee break
	15:45-18:00	Real-time prototyping and validation
Thursday	**08:00-09:30**	Mentoring session for prototype adjustments
	9:30-10:30	Use of AI tools in the proposed solutions
	10:30-10:45	Coffee break
	10:45-12:00	Final proposal documentation
	14:00-15:30	Pitch rehearsal with mentors
	15:30-15:45	Coffee break
	15:45-17:00	Final adjustments of the prototype and presentation
	17:00-18:00	Closing preparation
Friday	**08:00-08:30**	Getting started and setting preparation
	08:30-10:30	Team presentations (pitch)
	10:30-10:45	Coffee break
	10:45-12:00	Final presentations and jury evaluation
	14:00-15:00	Feedback from jurors and companies
	15:00-16:00	Awards and recognitions
	16:00-16:15	Coffee break
	16:15-17:30	Group reflection and lessons learned
	17:30-18:00	Official closing ceremony

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2.2 Characterization of the Participating Companies

The strategic alliance among companies, universities, and the state sector is recognized as a crucial pillar for regional development and sustainable innovation. Collaborative work among these stakeholders facilitates the articulation of efforts, resources, and expertise, thereby fostering an ecosystem that expands the capacity to address real-world problems within the productive sectors.

These synergies enhance business competitiveness through applied research, specialized talent development, and technology transfer, while simultaneously contributing to the social and economic progress of communities. In a context where open innovation and experiential learning are vital, partnerships among academia, industry, and the public sector serve as catalysts for structural change, promoting more comprehensive and scalable solutions aligned with sustainable development goals (SDGs).

Consequently, the companies involved in the challenge week, reflected the diversity and the wealth of experience that emerges through collaborative work, aimed at both individual success and collective well-being, along with the strengthening of the productive and academic environments.

The following table shows the characterization of the companies that participated in the week of business challenges in both Mexico and Colombia.

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Table 4. Characterization of the Participating Companies

Name of the company	Host University	Productive Sector	Characterization of the Company	No. of Employees/ Members	Need or Problem to be Solved
Clúster Lácteo de Caldas	Universidad de Caldas	Food agroindustry	Coordinator of associations, industries, and producers in the dairy sector in Caldas. Leading innovation and territorial identity.	30 partner entities (variable)	Develop a flagship product that combines identity, sustainability, and innovation to represent Caldas.
Fooding SAS	Universidad de Caldas	Agribusiness /natural juices	Company dedicated to innovation of citrus juices, fresh and competitive products; alliances with local producers.	22 employees	Preserving the sensory freshness of orange juice with accessible and innovative technologies for SMEs in the sector.
Normandy	Universidad Autónoma de Manizales	Food / Dairy Industry	Traditional producer of dairy products, recognized for quality and innovation; an important employer in the region.	400 employees	Designing a continuous and measurable training plan to standardize processes and strengthen human talent capacities.
La Patatería	Universidad Autónoma de Manizales	Gastronomy / Restaurant	Gastronomic SME specializing in potato dishes, with a focus on service innovation and hospitality technology.	100 employees	Redesign of the satisfaction-survey process to maximize actionable responses through digitization and targeted incentives.
Agrodesely	Universidad Autónoma de Nayarit	Processed / dehydrated foods	Family-owned business with more than 10 years of operation, dedicated to the dehydration of healthy fruits and herbal teas, seeking professionalization and expansion.	30 employees	Professionalize its organizational structure and processes to enter new markets, such as schools, consolidate its identity, and scale its value chain.

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Name of the company	Host University	Productive Sector	Characterization of the Company	No. of Employees/ Members	Need or Problem to be Solved
CATT, consultores en tecnología	Universidad Autónoma de Nayarit	Technology / ICT	A technology consultancy with more than 25 years of experience, focused on telecommunications, networks, and infrastructure, seeking to expand internationally.	25 employees	Optimize and digitize internal operations, strengthen sustainability and organizational structure, and prepare to enter new markets, including international markets.
Café de Altura de Xalisco Nayarit USRP de RL	Universidad Tecnológica de Nayarit	Agribusiness /Cooperative Coffee	A leading coffee cooperative in sustainable production, seeking to position its brand and expand national and international sales through targeted commercial strategies.	450 members	Standardize processes and develop brand identity and commercial strategy to achieve sustainability and recognition.

Source: Author's elaboration based on information provided by the participating universities

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2.3 Identification and Selection of Challenges

The following table summarizes the main business challenges addressed during the Challenge Week, highlighting the effective integration between universities and the productive sector. It reflects the diversity of impacted sectors, the precise improvement objectives, and the key actors from each participating company.

This information is essential to understand the nature of the challenges faced and to visualize the collaborative contribution to generate innovative and applicable solutions. Consequently, the strategic role of the academia-industry connection in strengthening competitiveness and regional development is clearly demonstrated.

The complete *briefs* of these challenges are in Annex 2.

2.3.1 Characterization of Challenges.

Table 5. Characterization of Challenges

Company	Challenge	Impacted Area	Challenge Goal	Title of the Company Delegate
Clúster Lácteo de Caldas	Develop a regionally representative flagship dairy product.	Innovation and product development.	Create a food product with Caldense identity and enhance the sector's competitiveness and articulation.	Clúster Lácteos Coordinator, Chamber of Commerce
Fooding SAS	Obtain orange juice that maintains sensory freshness.	R&D, operations, and quality	Develop a natural, stable, and competitive juice while preserving its aroma, flavor, and fresh color.	Commercial Manager/Production Leader
Normandy	Continuous and measurable training plan for staff.	Human talent and training	Standardize processes and strengthen human resource skills.	Director of Human Talent
La Patatería	Redesign the customer-service survey process.	Operations and Customer Experience	Increase helpful responses and automation for service-quality management.	Service Coordinator/Customer Service Manager

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Company	Challenge	Impacted Area	Challenge Goal	Title of the Company Delegate
Agrodesely	Professionaliza-tion and entry into new healthy markets.	Marketing, sales, operations	Structure the company, define marketing strategies, establish position profiles, and access the school market.	Owner or manager (family business)
CATT Consultores	Optimize internal processes to support growth and enable digitization.	Internal organization and digitization.	Strengthen the organizational foundation and technological capabilities for entry into national and international markets.	Managing Director or Owner
Café de Altura de Xalisco Nayarit USRP de RL	Standardize processes, strengthen brand identity, and position the brand.	Production, marketing, and commercial-ization.	Standardize processes, define a brand strategy, and increase sustainability and national and international presence.	Cooperative President/ Associate Leader

Source: Author's elaboration

2.4 Call for Applications and Student Selection.

The methodology of the Challenge Week included a preliminary activity related to the call for applications open to students from the participating institutions in Colombia and Mexico. As mentioned before, the call was deliberately extended to academic programs that had not participated in the pilot or the scaling process. The purpose was to broaden the project's impact within each university and strengthen the initiative's cross-cutting scope.

Each institution motivated students to participate. A campaign for awareness and dissemination was carried out from the part of the institutions, in social networks, websites, radio programs, and other communication channels. The call was accompanied by the terms of reference, which included the participation criteria, prices, work methodology, and the registration process.

Once the students were selected, each institution, introduced the methodology to them to ensured transparency, a broader coverage, and preparation for their participation during Challenge Week.

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3. Phase 2: Implementation

This phase served as the central axis of the Business Challenge Week, with students, faculty, companies, and institutional partners collaboratively developing the proposed challenges.

In this stage, the methodology previously agreed by the members of the consortium was implemented, including workshops, mentoring, co-creation spaces, prototyping, and pitch presentations, thereby ensuring a comprehensive training experience.

The universities in Colombia and Mexico adapted the logistics and interactions with its respective business network, both maintained the common methodological structure defined for WP9. This guaranteed coherence in the processes, with similarities in the procedures, and the strengthening of academia–business collaboration.

Below is an overview of the challenge week development in the Latam countries.

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3.1 Implementation of the Challenge Week in Colombia

(UAM & UCaldas)

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3.1.1 General Information.

UCaldas & UAM developed together the challenge week in Colombia, fostering collaborative work to generate innovative and practical solutions. The event took place in October, 2025.

Table 6. General Information – Challenge Week in Colombia

Category	Institutional Information
Institution / University	Universidad Autónoma de Manizales and Universidad de Caldas
Challenge Week Date	October 6–10, 2025
City / Country	Manizales, Colombia
Number of Participants	UAM: 33 students, UCALDAS: 15 students (Total: 64 students registered in the call)

Source: Author's elaboration

3.1.2 General Overview of Experience.

Students from UAM and UCALDAS worked in interdisciplinary teams to address real business challenges, strengthening links with the productive sectors.

Table 7. General Overview of Experience – Colombia

Category	Description
General Overview of Experience	Students from U Caldas & UAM addressed challenges defined by companies through workshops, mentorship, and presentations, experiential learning, collaboration, and innovative solutions were promoted.
Challenge Week Goal	The objective was to develop a Business Challenge Week as an articulated strategy between the productive and academic sectors. It also aimed to foster innovation, experiential learning, and the strengthening of inter-institutional ties through the co-creation of solutions to real-world challenges.

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Category	Description
Methodology Used	Methodologies such as *Design Thinking*, *Lean Startup*, multidisciplinary teamwork, rapid prototyping, and *pitch* presentations were applied. They incorporated creative ideation, simulated validations, and expert mentoring throughout the week.
Participation of external actors and the companies that originated the challenges.	Companies from the food and production sectors (Normandy, La Patatería, Fooding, Clúster Lácteo de Caldas) participated, along with the Luker Foundation and the Chamber of Commerce of Manizales por Caldas, as strategic allies and external actors.
Number of Selected Students, Academic Programs, and Total Number of Enrolled Students.	UAM: 33 students; UCALDAS: 15 students. The participants came from programs such as Food Engineering, Business Administration, International Business, and Systems Engineering. The teams were formed of students from different disciplines to enhance the solutions to the challenges.

Source: Author's elaboration.

3.1.3. Companies Engaged and Defining Challenges – Colombia.

The following table summarizes the companies participating in the challenge week, highlighting their characteristics, sectors, challenges, and objectives.

Table 8. Participating Companies and Proposed Challenges

Name of the Company	Brief Overview of the Company	Challenge Description	Main Objective of the Challenge
Fooding S.A.S	An agro-industrial company specializing in citrus juice innovation.	Obtain orange juice that retains the aroma, flavor, and color of freshly squeezed fruit using accessible and natural methods.	Develop an authentic, stable, and competitive juice that preserves natural freshness, benefiting both producers and consumers.
Clúster Lácteo de Caldas	A regional group aiming to strengthen the competitiveness and identity of Caldas dairy	Create a flagship dairy product representative of Caldas, integrating identity, sustainability, and	Develop an innovative dairy product that conveys the value and identity of Caldas, strengthening the

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Name of the Company	Brief Overview of the Company	Challenge Description	Main Objective of the Challenge
	products by integrating ecosystem actors.	innovation within the sector.	sector's regional competitiveness and pride.
La Patatería	A restaurant focused on potato gastronomy, aiming to innovate in the customer experience and service management through technology.	Improve the satisfaction survey strategy and channels to enhance productive responses and feedback.	Redesign the service survey flow, instruments, and channels to increase participation, gather useful data, and facilitate operational decision-making.
Normandy	Cheese and food producer with an emphasis on freshness and regional identity; engaged in technical support and mentoring.	Support the development of innovative products and the strengthening of territorial identity in collaboration with other actors in the ecosystem.	Contribute to the development and validation of new food products that highlight the quality of the territory and the best practices of the dairy sector from the region.

Source: Author's elaboration

3.1.4. Characterization of the Solutions Proposed in the Challenges Week

This following table presents the innovative solutions developed during the challenge week, highlighting the objective and type of each proposal, which reflects the commitment to continuous improvement across various sectors, emphasizing on technological, strategic, and operational advances that foster competitiveness and business sustainability.

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Table 9. Characterization of the Proposed Solutions – Colombia

Challenge Name and Company	Challenge Description	Ideation and Development Process	Proposed Solution (Pilot or Prototype)	Added Value/ Innovation	Results or Validations Obtained	Next Steps or Recommen-dations
Obtaining orange juice ***Fooding S.A.S***	Producing orange juice with the flavor, aroma, and color of freshly squeezed fruit using natural methods.	Enzymatic research, raw material selection, extraction, and preservation tests	Prototype of 100% natural juice using hydrodynamic cavitation and selected enzymes	Innovation in natural processes without additives, ensuring greater sensory preservation	Juice successfully tested for freshness and consumer acceptance, ready for commercial adjustments	Scale the process and seek alliances for industrial validation
Flagship Dairy Product ***Clúster Lácteo de Caldas***	Create an iconic, sustainable, and innovative dairy product that reinforces regional identity.	Ideation, validation of indigenous ingredients, and formalization of the value chain	"Elixir de Caldas": artisanal ice cream with biodegradable packaging and QR-code traceability	Fusion of cultural identity, tourism, and responsible consumption; sustainable packaging	Positive validation by industry experts and key stakeholders	Pilot markets and creation of an origin name
Redesign of Service Surveys ***La Patatería***	Improve the strategy to increase the rate and quality of satisfaction survey responses.	Channel analysis, short instrument design, pilot testing in rooms, and delivery	Hyper Short Survey (NPS, CSAT, CES), Table/Receipt QR Code, Digital Dashboard	Closed feedback loop, automation, and daily analysis	Projected share increase and dashboard for immediate actions	Monitoring and adjustment based on results over eight weeks

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Challenge Name and Company	Challenge Description	Ideation and Development Process	Proposed Solution (Pilot or Prototype)	Added Value/ Innovation	Results or Validations Obtained	Next Steps or Recommen-dations
Mentoring and Development ***Normandy***	Strengthen product development and sensory validation of dairy products with technical support.	Sensory validation, technological advice, and interdisciplinary support	Advice on cheese design and management of products with regional identity	Industry-academic links, continuous improvement	Validation and adjustment of prototypes and ongoing mentoring	Continue mentoring and propose quality sector–academic programs
Improve natural extraction – ***Fooding S.A.S***	Optimize extraction and preservation for high-quality natural juices.	Enzymatic research and hydrodynamic cavitation technique	Prototype juice enhanced with natural technologies	Sensory enhancement without additives	Successful stability and freshness testing	Implement at pilot to scale for commercial validation
Identity and sustainability in dairy products ***Clúster Lácteo de Caldas***	Strengthen the production chain with differentiated and sustainable products.	Product development and market analysis	"Elixir de Caldas" ice cream with responsible packaging	Traceability and cultural promotion	Positive acceptance in market tests	Brand development and origin name
Digitization of surveys ***La Patatería***	Increase efficiency in collecting and analyzing customer feedback data.	Technological implementation of digital survey systems	Digital platform with NPS, CSAT, and CES metrics	Quick response and improved operational management	Improvements in satisfaction indicators and response rate	Adjustments to incentive and communication strategies

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Challenge Name and Company	Challenge Description	Ideation and Development Process	Proposed Solution (Pilot or Prototype)	Added Value/ Innovation	Results or Validations Obtained	Next Steps or Recommen-dations
Dairy quality and mentoring ***Normandy***	Ensure quality standards and position products with a regional seal.	Technical support, validation and continuous product improvement	Joint quality sector–academy programs	Strengthening of skills and protocols	Adjusted and validated products	Continuous training and certification programs
Enzymatic techniques ***Fooding SAS***	Apply natural methods to better preserve juice throughout the production chain	Innovative enzyme assays and natural processes	Enzyme-based prototype and cavitation techniques	Preservation without preservatives	Improvement in freshness and sensory acceptance	Escalation and industrial alliances
Eco and digital packaging ***Clúster Lácteo de Caldas***	Innovation in packaging that integrates sustainability and digital connection with consumers.	Development of biodegradable packaging with digital elements	Packaging with QR for traceability and tourism promotion	Digital and environmental integration	Positive social and business impact assessment	Expand use and strengthen communication with the end consumer

Source: Author's elaboration

Note. All challenges were developed by interdisciplinary teams composed of UAM and UCALDAS students.

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3.2. Implementation of the Challenge Week in Mexico

(UAN & UTN)

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3.2.1 General Information.

UTN & UAN developed the Challenge week in September and October, to align their academic training with the strategic needs of the regional industry and services sectors

Table 10. General Information Overview – Mexico Challenge Week

Category	Institution Information
Institution / University	Universidad Tecnológica de Nayarit and Universidad Autónoma de Nayarit
Challenge Week Date	From September 29 to October 3 and from October 13 to 17, 2025
City / Country	Tepic, Mexico
Number of Participants	UTN: 36 students UAN: 30 students (Total: 66 students)

Source: Author's elaboration

3.2.2 General Description of the Experience.

During the Challenge Week, students from each university worked on finding solutions to real challenges posed by the participating companies. They applied the methodology proposed by UAM, which was responsible for this work package. This approach strengthened links between the productive and academic sectors. For this, the universities consolidated a network of strategic allies that supported the implementation of challenges. They also encouraged participants by sharing potential hiring opportunities.

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Table 11. Experience Overview – Mexico

Category	Description
General Overview of Experience	During the Challenge Week held in Tepic, students from UAN and UTN worked in interdisciplinary teams to solve real challenges posed by companies, unions, and civil society organizations convened by both institutions. To this end, they carried out the activities proposed in the methodology defined for implementing the challenges. These activities included workshops, mentorships, and presentations during morning and afternoon sessions. During the process, experiential learning, co-creation, interprofessional collaboration, and the development of innovative solutions were promoted.
Challenge Week Goal	Define real challenges from regional companies—such as strengthening the coffee value chain and professionalizing family businesses. Interdisciplinary student teams then developed innovative, viable, and sustainable solutions in line with the articulated academic-business strategy promoted during the Week.
Methodology Used	Methodologies such as *Design Thinking*, *Lean Startup*, multidisciplinary teamwork, rapid prototyping, and *pitch* presentations were applied. They incorporated creative ideation, simulated validations, and expert mentoring throughout the week.
Participation of external actors and the companies that originated the challenges	For UTN the Café de Altura de Xalisco Nayarit USPR de RL company (Cora Pacífico), dedicated to the coffee value chain, participated. In addition to this company, other external sector entities participated, such as *Consejo Empresarial de Nayarit, Mujeres Empoderadas A.C., and Instituto Nayarita de la Juventud*. Collectively, these entities shaped an ecosystem in which academic knowledge aligns with the real needs of the region. For UAN, companies in the processed food sector (Agrodesely) and the service sector (Associated Consultants in Technology and Telecommunications, CATT, from the Spanish "*Consultores Asociados en Tecnología y Telecomunicaciones")* participated.
Number of Selected Students, Academic Programs, and Total Number of Enrolled Students	UTN: 36 participating students from the following programs: Gastronomy, Tourism, Information Technology, Marketing, International Logistics, Food Engineering, Industrial Maintenance, Mechatronics, Administration, and Civil Engineering. UAN: 30 students from programs such as Law, Bachelor's Degree in Computer Systems, Communication and Media, LIBAT, Academic Unit of Accounting and Administration, Economics, Marketing, and Computer Science, who formed interdisciplinary teams.

Source: Author's elaboration

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3.2.3 Companies Engaged and Defining Challenges – Mexico.

The following table summarizes the companies participating in the week of business challenges in Tepic-Nayarit, highlighting their characteristics, sectors, challenges, and objectives.

Table 12. Participating Companies and Proposed Challenges – Mexico

Company Name	Brief Overview of the Company	Description of the Challenge	Main Objective of the Challenge
Agrodesely	This company is a family business with more than 10 years, working on the dehydration of fruits, offering quality and healthy products	How can the company exponentially enhance its identity to successfully enter new markets, such as the educational sector (schools)?	Professionalize a family business with ten years of experience that, despite its growth and positioning among consumers, requires consolidating a defined organizational structure, implementing marketing strategies and establishing clear position profiles to strengthen its management and projection in the market.

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Company Name	Brief Overview of the Company	Description of the Challenge	Main Objective of the Challenge
CATT-Associated Consultants in Technology and Telecommunications	The company offers comprehensive technological solutions, designed to adapt to the real needs of its customers, with more than 25 years of experience providing specialized services in telecommunications, infrastructure, security and software development, with a focus on efficiency, quality and personalized attention.	How could we reach new markets through the optimization of internal processes in the company?	Strengthen the foundations and organizational structure of a company that has a long history and that has managed to position itself in national markets, but at this time aims to venture into the United States of America.
Café de Altura de Xalisco Nayarit USPR de RL (Cora Pacífico)	A company dedicated to the coffee value chain, represented by a leading cooperative in sustainable production.	How can the company structure a production plan, strengthen its commercial strategy and standardize its processes to increase its sales and ensure the necessary liquidity that allows it to grow and consolidate its operation.	To propose, to interdisciplinary teams of students, a real problem of a coffee company in the region so that they develop innovative, viable and sustainable solutions that strengthen the coffee value chain, from its production to its national and international marketing.

Source: author's elaboration

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3.2.4 Characterization of the Solutions Proposed in the Challenges Week.

The solutions developed during the Challenge Week are presented below, highlighting the product and process innovations achieved by each participating company. These include original prototypes, improvements in quality and sustainability, and strategies aimed at strengthening regional identity and competitiveness in the agro-industrial and gastronomic sectors. These results demonstrate the capacity for collaboration between business and the academic sector to respond to real challenges through creativity, innovation and interdisciplinary knowledge applied to solving problems in the business sector.

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Table 13. Characterization of the Proposed Solutions – Mexico

Challenge Name and Company	Description of the Challenge	Ideation and Development Process	Proposed Solution (Pilot or Prototype)	Added Value/ Innovation	Results or Validations Obtained	Next Steps or Recommendations
Internal Optimization – CATT	Identify how the company can expand its presence into new markets by comprehensively optimizing its internal processes.	*Brief analysis, empathy map*, 6W matrix, SWOT diagnosis and design with Canva.	Design of the Organization Manual, Operation Manual, specialized software and marketing strategy.	Consolidate a clearer, more efficient and scalable administrative ecosystem.	Considered relevant, necessary and feasible by the committee.	Regional consolidation; national expansion; internationalization.
Sustainable Processes – CATT	Optimize internal processes through standardization and sustainability.	Manual focused on operational standardization, customer service and sustainability.	Implementation of a work system based on sustainable materials and practices, applicable from maintenance to technological management.	Reduce environmental footprint and foster sustainable positioning.	The company showed interest in evaluating its implementation.	Training, gradual adoption and progress toward LEED certifications.
Organizational Culture – CATT	Strengthen internal management and organizational culture to improve competitiveness.	Manual of Process Optimization and Protocol Administrative System (SAP).	Model that responds to current deficiencies, proposes practical solutions and seeks to positively impact the organizational culture.	Innovative, replicable and quickly implemented proposal.	Considered useful but complex to implement immediately.	Gradual implementation in the mid- and long-term.

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Challenge Name and Company	Description of the Challenge	Ideation and Development Process	Proposed Solution (Pilot or Prototype)	Added Value/ Innovation	Results or Validations Obtained	Next Steps or Recommendations
Identity and school access – Agrodesely	Strengthen the brand identity and professionalize the company to enter the school market.	*Design Thinking*, functional mapping, organization chart, profiles and MVP "Mango Bites."	Comprehensive strategy that combines process standardization, updating visual identity.	Scalable model that combines image, operation and product.	Assessed as feasible and relevant.	Phases: 0-3 months foundation, 4-12 consolidation, +12 expansion.
Identity and brand – Agrodesely	Reinforce identity, packaging and digital presence to compete in the healthy school food sector.	Interviews, observation, identity diagnosis and marketing.	Comprehensive model that articulates marketing, safety and organization in a clear six-month roadmap.	Scalable for family businesses without advanced technical knowledge.	Replicate a model that combines image, operation and product	NOM-251/HACCP certifications, expanded production, brand strengthening.
Digital identity – Agrodesely	Foster digital identity and online business presence for new markets.	Canva, *Design Thinking*, empathy exercises and *journey map.*	Development of e-commerce line, adjustment of visual identity, updating of social networks and creation of nutritional tables based on bromatological tests.	Migration toward a competitive and coherent digital model.	Coherent and applicable to the context	Short term: 20 kg/month (500 bags); Medium term: 100 kg/month (2,500 bags); Long term: 200 kg/month (5,000 bags).

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Challenge Name and Company	Description of the Challenge	Ideation and Development Process	Proposed Solution (Pilot or Prototype)	Added Value/ Innovation	Results or Validations Obtained	Next Steps or Recommendations
Strengthening of coffee – Café de Altura de Xalisco	Improve competitiveness through productive and commercial optimization.	Technical-productive diagnosis and comprehensive analysis of the business model.	"*Despierta el valor del café*" ("Wake up the value of coffee") prototype, based on territorial identity, sustainability, innovation and resilience to seasonality.	It integrates tradition, sustainability and regional innovation.	Recognized as a solid and transformative strategy.	Strengthen production processes, advance certifications and develop a commercial strategy to expand into new markets.

Source: Author's elaboration

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3.2.5 Face-to-face dissemination of results in Mexico.

The immersion of the project consortium members took place in Nayarit, Mexico.

During this face-to-face dissemination visit, the consortium delegates participated in the established agenda, in which a session was devoted to the presentation of results obtained during the challenges week in Colombia and Mexico.

As part of the event, testimonies were shared from faculty, students, and businessmen.

Participants highlighted:

- The main contributions included the strengthening of students' soft skills (interdisciplinary work, teamwork, leadership, and assertive communication).
- The importance of this initiative for companies, as it strengthens their link with academia, allows for the co-creation of solutions to real problems, which also offered students an authentic learning environment that familiarized them with the demands of the labor market.

4. Phase 3: Results

4.1 Measurable Outcomes

This following diagram presents the measurable outcomes generated by the business challenge week. The statistics offer a comprehensive overview of the project's scale and impact across Colombia and Mexico. Key metrics highlight the number of students and mentors impacted, the solutions and challenges defined, the extent of institutional and corporate participation, and the economic stimulus delivered, thereby underscoring the success of the collaboration between academia and the productive sector.

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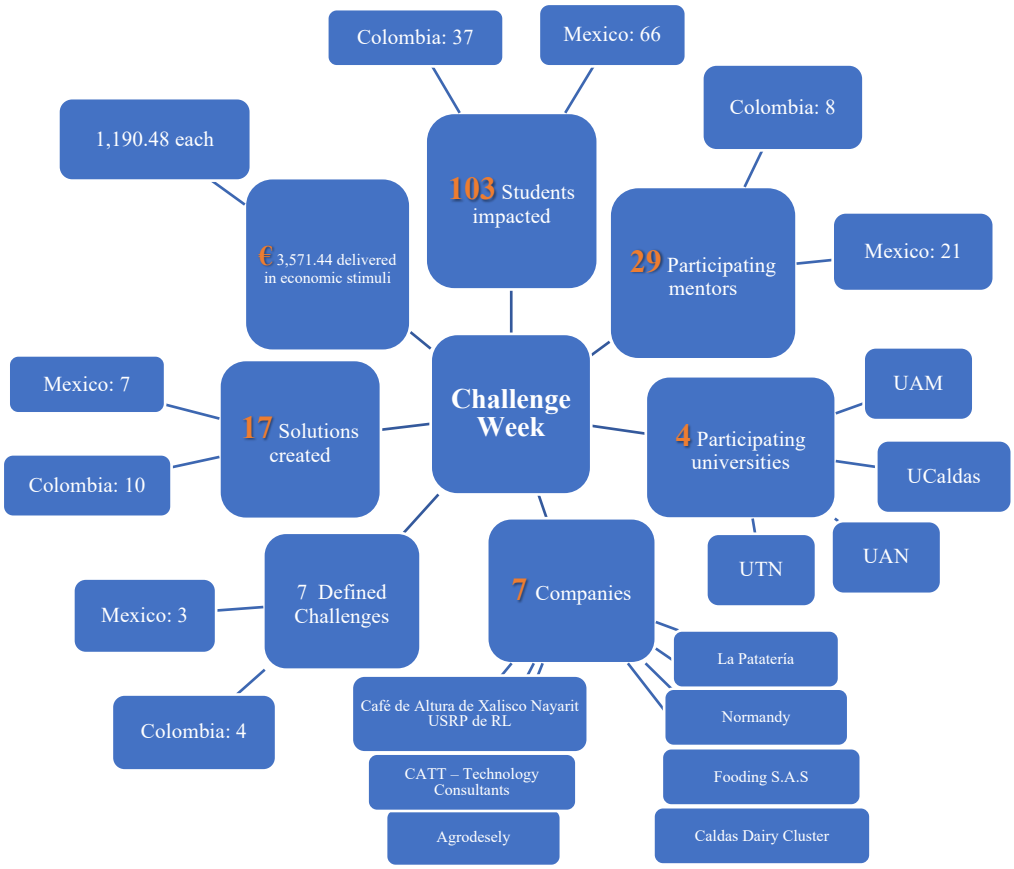

Figure 2. Challenge Week Representative Statistics

Source: Author's elaboration

4.2 Methodology used in the Assessment of the Challenge Week

The evaluation of the solutions developed during the business challenge week was conducted using a common rubric across the entire consortium, which was aligned with the objectives of WP9 and the employability focus of the Ibero4Jobs project. This rubric considered the following criteria: challenge comprehension, creativity and innovation, technical and operational viability, quality of the prototype or final proposal, quality of the presentation (pitch), and participation in the scheduled activities during the challenge week.

The evaluation process included juries who represented the companies, the faculty from partner universities, and stakeholders from Chambers of Commerce. Each team presented its solution in a structured pitch format and was assessed independently by the jurors, using the defined rubric.

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Table 14. Assessment Rubric Applied

Criteria	%	Brief Description
Understanding the Challenge	20%	Level of analysis, understanding the context and reformulation of the problem.
Creativity and innovation	20%	Originality, level of disruption and innovative approach to the solution.
Technical and operational feasibility	15%	How applicable, realistic and appropriate the solution is to the business environment.
Presentation (pitch)	15%	Clarity, synthesis, use of data, visual resources, and team communication.
Prototype or final proposal	20%	Development, added value and consistency between analysis and proposed solution.
Active participation in the Challenge Week	10%	Points earned through participation in the Challenge Week

Source: Author's elaboration

4.3 Awarding of the Winning Challenges

Awarding of the best challenges recognized the effort, creativity, and commitment of the participating students. The universities agreed to deliver awards based on the following scheme:

Table 15. Challenge Week Award

Position	Team Award
1st Place	€428.57
2nd Place	€285.71
3rd Place	€238.10
4th/Honorable Mention	€142.86
5th/Honorable Mention	€95.24
Total	**€1,190.48**

In addition to the rewards, all students participating in at least 80% of the activities during the Challenge Week received certificates of participation, recognizing the commitment, dedication and effort.

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5. Lessons Learned from the Students' Perspective

The participation of students, faculty, and members of the enterprises in the challenge week, proved to be a significant experience, as it was an innovative initiative that enriched their training for their future professional careers.

It allowed students to face real-life problems in the production sector, which strengthened their ability to integrate theoretical knowledge with professional practice. This approach to authentic contexts favored the development of critical thinking aimed at solving specific business problems, increasing their work relevance.

In addition, the collaborative and multidisciplinary dynamics promoted the consolidation of some soft skills, such as teamwork, assertive communication, active listening, situated leadership, negotiation and time management, and creativity and innovation. Students stated that these skills not only improved their performance within the challenge but also strengthened their ability to adapt to changing and highly competitive work environments.

Another significant contribution was interdisciplinary collaboration, where students from various areas worked together. This directly contributed to the creation of innovative proposals from multiple perspectives. Similarly, direct feedback from companies and mentors provided students with the opportunity to gain insight into the labor market, giving them a better outlook for their professional development.

5.1 Lessons Learned from the Professors' Perspective

The professors participating expressed that the experience enriched their pedagogical practices and strengthened their role as mediators of learning. The continuous interaction with the productive sector generated opportunities to update current trends in the market, needs and business dynamics, which has a positive impact on curricular improvement and the relevance of the subjects they teach.

Working together with students and individuals from the companies enabled professors to experiment with active methodologies such as challenge-based learning, co-creation as tools that boost teaching and enhance student motivation. Likewise, this process favored the development of teaching skills such as innovation-oriented mentoring, the management of heterogeneous teams, effective communication between sectors and the ability to accompany ideation and prototyping processes.

Likewise, the participation of universities in these scenarios contributed to strengthening academic cooperation networks. In this sense, the challenges become a strategic space to articulate the partnership with the companies from a perspective of mutual benefit.

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5.2 Lessons Learned for Companies and Associations

The participants coming from the companies and associations, recognized multiple benefits associated with their participation. First, they valued the opportunity to approach new, innovative, and diverse proposals generated by teams of students who observe companies problems from new and creative perspectives. This type of interaction favored the identification of alternatives that, in many cases, did not emerge from the internal perspective of the company.

They also highlighted that these spaces significantly strengthened the link with academia, allowing them to build relationships of trust that eventually could contribute to stablish internships, collaborative research, open innovation projects or even business training processes. This interaction contributes to regional development by connecting academic knowledge with the real needs of the business and productive sector, both in the context of Colombia and in Mexico.

Another considerable benefit was that companies became a learning context where students applied their knowledge, while organizations observed the potential of future professionals. This facilitated human talent identification processes and contributed to improving graduation profiles according to business requirements.

Finally, the companies highlighted that this type of initiative contributed to the strengthening of internal capacities by promoting reflection on their own processes, openness to innovation and the possibility of reviewing their challenges from an external and interdisciplinary perspective.

6. Conclusions and General Considerations

The Challenge Week was developed in an innovative model of university education in which interdisciplinarity was important for addressing and solving real problems from multiple perspectives. This approach demonstrated that learning based on real challenges enhances technical skills, systemic thinking and innovation capacity as well as interdisciplinary interaction and the use of updated methodologies.

This event strengthened an articulated ecosystem among universities, companies and the territory, generating tangible benefits for all actors. The participating companies made progress in solving strategic problems, as well as identified talent in future professionals, while teachers and students lived high-value training experiences. This collaborative work demonstrated that the university-business relationship is an effective way to enhance regional competitiveness by generating initiatives that impact the productive sectors, sophisticating their products and services, and increasing customer satisfaction.

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In addition, the wide dissemination and social impact of the event reinforced the perception of the Challenge Week as a significant bridge between academia and the business-productive sector.

7. Annexes

7.1 **Annex 1.** Photographs or Screenshots of the Process.
7.2 **Annex 2**. Challenge Briefs
7.3 **Annex 3**. Presentations of the Team-Developed Solutions
7.3.1 Presentations of Team Solutions to the Challenges – UAM-UCaldas Challenge Week
7.3.2 Presentations of Team Solutions to the Challenges – UAN Challenge Week
7.3.3 Presentations of Team Solutions to the Challenges – UTN Challenge Week
7.4 **Annex 4**. Testimonials from the Participants
7.5 **Annex 5**. Event Attendance Lists
7.6 **Annex 6.** Certificate of Participation (Sample)

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