**Tecnológico de Monterrey Challenge-Based Research Funding Program**
**Frequently Asked Questions**

## 1. WHO CAN APPLY - ELIGIBILITY

**1.1 Who can submit proposals?**
Research Model Professors from National Schools and Interdisciplinary Institutes can apply as **Principal Investigators** for this call.

**1.2 Can a professor outside researcher model participate to two projects?**
Yes, taking care to allocate a reasonable dedication time and only as part of a team. Those who can apply proposal are Professors Research Model (Principal Investigators).

**1.3 Can a professor in the research model participate to two projects?**
Yes, without exceeding 100% of your time as a Professors Research Model.

**1.4 Who can be part of the project's team?**
Team members may include:
- Full-time research professors (Research Models: 75%, 50%, 25%)
- Postdocs
- PhD students.
- Experts for specific tasks: Professors from *Tec (Vitalidad Intelectual)* and strategic universities.
- Research units from the Interdisciplinary Research Institutes can invite professors from school to develop specific tasks/products using their allocated time to do research.
- Research groups from the National Schools are allowed to invite professors from institutes to develop specific tasks/products using their allocated time to do research.
- Professor Researchers **involvement** in projects (2022) and new projects (2023) should be **less than 100%**

**1.5 I am a professor in the research model of a Research Unit (Institutes), I am interested in generating solutions to the challenges defined for the Research Groups (National Schools), am I able to submit a proposal?**
With the approval of the leader of the Research Unit, it is possible for professors in the research model to participate in projects proposed by professors from Research Groups (National Schools). Please, contact the corresponding Associate Dean of Research to review common interests and collaboration possibilities.

**1.6 How many articles should be published?**
There is no globally defined indicator, to calculate your indicator you should consider the "Reference cube for scientific productivity", productivity must be associated to each participant

**1.7 What is our definition of "Early-career researcher?**
Early Career Researchers are professors with less than 7 years after obtaining their PhD

**1.8 Can a full-time professor participate, even if they are not in the avenue of research?**
Is cannot be the one that postulates the project (project leader), but it can participate, it requires being invited by the PI to be part of the team.

1.9 How wilii the verification that we apply to other grants be?
The monitoring of the operation of the projects financed in the previous call is being carried out through SIMPLE, also, in June they are asked to deliver their evidence for the midterm review.

1.10 How is the confidentiality of projects taken care of when they are evaluated by peers?
Evaluators must agree to the terms of confidentiality before sharing any material with them.

1.11 Time project participation Call 2022
 https://app.powerbi.com/view?r=eyJrIjoiY2RhY2I2N2UtNzFjOS00N2YxLThjNGUtNmMyMDRiOWFiNmY4IiwidCI6ImM2NWEzZWE2LTBmN2MtNDAwYi04OTM0LTVhNmRjMTcwNTY0NSIsImMiOjR9

1.12 Is it a requirement that external collaborators also register on the scienceconnexion page?
Yes, all internal and external participants must be registered on the science connexion platform.

1.13 Is the number of proposals in a challenge decisive for a project to be approved?
No, since the evaluation process is meritocratic. The best proposals will be selected, regardless of the challenge or modality.

## 2. WHERE DO I HAVE TO SUBMIT MY PROPOSAL AND WHICH TEMPLATES DO I HAVE TO USE?

2.1 Where do I have to submit my proposal and which templates should I use?
1. To submit a proposal for this Call, teams (PI and participants) must create an account in **Science Connexion** platform: https://scienceconnexion.com/

2. Once logged in to the platform, identify the Challenge-Based Research Funding Program 2023 and select Apply to create your proposal registration. The Principal Investigator is responsible for the submission.

3. Review the tutorial of the platform science connexion where you will find the information required for your registration.

2.2 Where can I find additional information about the Call?
Information about the call can be found at https://scienceconnexion.com/

2.3 Will I receive feedback of the proposal I submit?
Yes: for some projects feedback will be sent during the compliance. Also, a document with feedback will be sent, after the proposal has been reviewed by all committees.

## 3. FINANCING AND DURATION

3.1 Does the Call include financing to prepare a proposal?
No, financing for the proposal's preparation is not considered in the call.

3.2 Am I allowed to use the unspent resources from the first year in the second year of the project?

Yes. In case of delay in the budget's exercise, it will be possible to request the transference of the remaining budget from the first year into the second year. However, this request needs to include technical and financial justifications. Should you have any specific inquiries, please contact the Director of Research Management, Lic. Ana Lilia Benavides (abenavides@tec.mx), the budget' transference will also require the Financial Officer's approval (Ma. Alejandra Venegas, mavenegas@tec.mx).

## 4.  ELIGIBLE TOPICS

**Research Groups' Challenges and topics (National Schools)**

| Table 1. Challenge 1. Trigger Sustainability Actions to Respond to the Climate Emergency, reduce social gaps and economic lag | | | |
|---|---|---|---|
| Topic key | Topics | Topic key | Topics |
| A – T1 | Regenerative Economy | A – T17 | Climate Resilient Development |
| A – T2 | Energy transition | A – T18 | Management, Monitoring, Policy and Law for Sustainability |
| A – T3 | Clean Technologies and Emerging Energy Sources | A – T19 | Management, Monitoring, Policy and Law for Sustainability |
| A – T4 | Zero-Net Technologies | A – T20 | Geography, Planning and Development for Sustainability |
| A – T5 | Energy and Water Security | A – T21 | Philosophical Aspects of Sustainability |
| A – T6 | Energy Storage | A – T22 | Worldviews and alternative epistemologies |
| A – T7 | Water-Energy-Food Nexus | A – T23 | Ethics, equity, climate justice, and intersectionality |
| A – T8 | Water Circularity | A – T24 | Regenerative Design |
| A – T9 | Emerging Pollutants | A – T25 | Sustainable value chains |
| A – T10 | Urban Resilience | A – T26 | Education for Sustainable Development |
| A – T11 | Circular Economy | A – T27 | Gender studies around sustainability |
| A – T12 | Circular Engineering | A – T28 | Sustainable lifestyles |
| A – T13 | Impactful entrepreneurship and innovation | A – T29 | Culture's contributions to sustainable development |
| A – T14 | Responsible/Sustainable production | A – T30 | Big Data/Data Science for Sustainability |
| A – T15 | Responsible/Sustainable consumption | A – T31 | Communication strategies and Outreach |

| | |
|---|---|
| A – T16 | Public Policy for Sustainability |

*Table 1. Research Groups' Challenges and topics, Challenge 1. Triggering Sustainability Actions to Respond to Climate Change*

| Table 2. Challenge 2. Promote the transformation of cities and communities to make them more sustainable, inclusive and prosperous | |
|---|---|
| **Topic key** | **Topics** |
| B – T1 | Design for the vulnerable (gender, poverty, marginalized communities, access to technology, early childhood, etc.) |
| B – T2 | Financial Inclusion |
| B – T3 | Smart cities |
| B – T4 | Urban Resilience: mobility, sustainable water management, air quality |
| B – T5 | Public policy, Fiscal policy, and Legislation |
| B – T6 | Foreign Direct Investment and its impact on the use of resources, mobility, and pollution in cities |
| B – T7 | Affordable, renewable, and sustainable energies |
| B – T8 | Healthy Cities |
| B – T9 | Digital Agriculture and Precision Agriculture |
| B – T10 | Biotechnology for health, food and environment |
| B – T11 | Data Sciences, Artificial Intelligence & Quantum computing applications |
| B – T12 | Nanotechnology for a better world |
| B – T13 | Cities that attract talent and investment |
| B – T14 | Cities migrating towards the knowledge economy |

*Table 2. Research Groups' Challenges and topics, Challenge 2. Changing the Cities' Paradigm towards Sustainable Communities with a Regenerative and Inclusive Culture*

| Table 3. Challenge 3. Transform and empower organizations towards digitalization the creation of shared value and responsible innovation | |
|---|---|
| **Topic key** | **Topics** |
| C – T1 | New leadership models |
| C – T2 | New company ownership models |

| C – T3 | Managing relationships with stakeholders |
|---|---|
| C – T4 | Social innovation and sustainability |
| C – T5 | Business models innovation |
| C – T6 | Strategy and Industry transformation |
| C – T7 | Creative industries |
| C – T8 | The future of work |
| C – T9 | The future of talent |
| C – T8 | The Gig Economy |
| C – T9 | Family businesses |
| C – T10 | Productivity and added value |
| C – T11 | Digital transformation & smart factories |
| C – T12 | Advanced manufacturing and intelligent logistics |
| C – T13 | The future of value chain |
| C – T14 | Models of sustainable organizations and circular economy: Responsible production, responsible consumption, innovative processes and co-design, transformation of new industries, zero-net circular economies: production and business |
| C – T15 | Data analytics to understand the behavior of people's life and consumption patterns |
| C – T16 | The impact of pandemics or generalized phenomena that promote social disruptions on youth unemployment |

*Table 3. Research Groups' Challenges and topics, Challenge 3. Transforming the Company towards responsible innovation and shared value creation*

| Table 4. Challenge 4. Promote environments for human flourishing | |
|---|---|
| Topic key | Topics |
| D – T1 | Integral Wellness |
| D – T2 | Diverse and Inclusive Communities |
| D – T3 | Social and financial inclusion |
| D – T4 | Arts as a platform for personal and social transformation |
| D – T5 | Philanthropic culture and reciprocity |
| D – T6 | A sustainable world as a foundation for human flourishing |

| D – T7 | Spirituality |
|--------|--------------|
| D – T8 | Mental Health |
| D – T9 | Financial health |
| D – T10 | Purpose in life |

*Table 4. Research Groups' Challenges and topics, Challenge 4. Promoting Human-flourishing Environments*

| Table 5. Challenge 5. Construction of a new social contract | |
|---|---|
| **Topic key** | **Topics** |
| E – T1 | Justice for all |
| E – T2 | Socioeconomic equity |
| E – T3 | Gender equity and equality |
| E – T4 | Inclusive business |
| E – T5 | Participation of women in leadership positions |
| E – T6 | Fair trade |
| E – T7 | Financial inclusion |
| E – T8 | Public policy to promote equitable and access to quality education and services, and development opportunities |
| E – T9 | Democracy, anti-corruption, and transparency |
| E – T10 | Data analytics for the development of public policy |
| E – T11 | Participation and active citizenship |
| E – T12 | The Fourth Industrial Revolution impact in the future of work |

*Table 5. Research Groups' Challenges and topics, Challenge 5. The New Social Contract Construction*

| Table 6. Challenge 6. Development of new strategies to improve human health, through early diagnostic tools and innovative therapy | |
|---|---|
| **Topic key** | **Topics** |
| F – T1 | Tolerance induction in allergic and autoimmune diseases |
| F – T2 | Identification of biomarkers in cancer |
| F – T3 | Protection of organ damage caused by ischemic and oxidative injury |

| F – T4 | Identification of biomarkers in infectious diseases |
|--------|-----------------------------------------------------|

*Table 6. Research Groups' Challenges and topics, Challenge 6. Development of new strategies to improve human health, through early diagnostic tools and innovative therapy*

## Research Units' Challenges and topics (Interdisciplinary Institutes of Research)

| Table 6. Challenge 1. Elevate learning outcomes by transforming teaching & learning to be engaging and motivating using active learning strategies and emerging technologies | |
|---|---|
| **Topic key** | **Topic** |
| C1-T1 | Evaluate educational models with an interdisciplinary and active learning approach to improve engagement and motivation in the teaching-learning process. |
| C1–T2 | Explore evidence-based enriched technology-mediated learning environments for engagement, motivation, skills development, or evaluation. |
| C1-T3 | Assess learning outcomes improvement through equitable and inclusive learning environments that promote awareness of individual differences, justice, impartiality, equity, and settings in which everyone feels welcome. |

*Table 6. Research Units' Challenges and topics, Challenge 1. Elevate learning outcomes by transforming teaching & learning to be engaging and motivating using active learning strategies and emerging technologies*

| Table 7. Challenge 2. Design effective competency-based education and lifelong learning systems to elevate learning outcomes | |
|---|---|
| **Topic key** | **Topic** |
| C2-T1 | Identify the characteristics for designing effective competency-based learning scenarios, addressing the requirements from international standards, accreditation organizations and the needs of the industry, business, and society. |
| C2-T2 | Evaluate systems, policies, and strategies to scale skills development and lifelong learning opportunities for different population and workforce segments. |
| C2-T3 | Explore the effectiveness of technological systems, using artificial intelligence and emulating real-world environments, to scale up techniques for skills development and competency assessment. |

*Table 7. Research Units' Challenges and topics, Challenge 2. Design effective competency-based education and lifelong learning systems to elevate learning outcomes*

| Table 8. Challenge 3. Design advanced materials for different applications to be net-zero emission and zero carbon footprint | |
|---|---|
| **Topic key** | **Topic** |
| C3-T1 | Smart materials for food packaging and bio-sensors with eco-friendly characteristics. |
| C3-T2 | Lightweight materials for the transportation industry. |

| | |
|---|---|
| C3-T3 | $CO_2$ based materials for multiple applications |
| C3-T4 | Biowaste products for industry and end-consumers (Circular Economy) |
| C3-T5 | Technological platforms for rapid discovery and development of materials and manufacturing processes using artificial intelligence, data science, mathematical models, simulation and robotics. |

*Table 8. Research Units' Challenges and topics, Challenge 3. Design advanced materials for different applications to be net-zero emission and zero carbon footprint*

| Table 9. Challenge 4. Creation and development of high-tech manufacturing processes to accelerate and rapidly scale-up the production of advanced materials with minimum impact in the environment | |
|---|---|
| Topic key | Topic |
| C4-T1 | $CO_2$ capture and mitigation to reduce emissions |
| C4–T2 | Clean energy generation and management |
| C4–T3 | Water recovery & reuse to ensure water resiliency |
| C4–T4 | Creation of new manufacturing process to produce advanced materials with minimum energy consumption, waste, water usage, and greenhouse emissions. |
| C4–T5 | Experimentation of synthetic techniques such as additive manufacturing and 3-D printing. |
| C4–T6 | Transformation of Industry based on technological research and public policy initiatives to accelerate the advances of sustainable materials and manufacturing |
| C4–T7 | Nearshoring for High-Tech Sustainable Manufacturing. |

*Table 9. Research Units' Challenges and topics, Challenge 4. Creation and development of high-tech manufacturing processes to accelerate and rapidly scale-up the production of advanced materials with minimum impact in the environment*

| Table 10. Challenge 5. Develop novel drugs, foods, advanced therapies, strategies and policies for early detection, prevention, and reduction of prevalence of metabolic disease and obesity in children | |
|---|---|
| Topic key | Topic |
| C5-T1 | Sustainable food production. |
| C5-T2 | Easy-to-use and cost-effective bioengineering platforms for early detection of metabolic diseases. |
| C5-T3 | Analysis of Public Policy strategies to deal with childhood obesity. |

*Table 10. Research Units' Challenges and topics, Challenge 5. Develop novel drugs, foods, advanced therapies, strategies and policies for early detection, prevention, and reduction of prevalence of metabolic disease and obesity in children*

| Table 11. Challenge 6. Reduce the prevalence of excess weight and obesity in early childhood. | |
|---|---|
| **Topic key** | **Topic** |
| C6-T1 | Effects at the multi-omics level of the usual diet and new foods in Mexican and Latin American populations with a focus on pregnancy and early childhood. |
| C6-T2 | Evaluate in vitro and preclinical models' new experimental drugs and advanced therapeutics. |
| C6-T3 | Explore the causes and impact of excess weight and obesity in early childhood and the development of prevention measures for childhood obesity. |

*Table 11. Research Units' Challenges and topics, Challenge 6. Reduce the prevalence of excess weight and obesity in early childhood*

| Table 12. Challenge 7. Propose public policy and entrepreneurship to combat excess weight and obesity | |
|---|---|
| **Topic key** | **Topic** |
| C7-T1 | Accessibility and availability of nutrients and/or bioactive molecules. |
| C7-T2 | Enhanced sensitivity of diagnosis for current platforms. |
| C7-T3 | Generate clinical protocols and probe concepts for the use of novel therapeutics in a patient with metabolic diseases and obesity. |
| C7-T4 | Special category - Synergy Grants. Interdisciplinary research projects between research groups associated with EIC and IOR to prove and demonstrate disruptive and multifaceted solutions to high-impact challenges tackling obesity. |

*Table 12. Research Units' Challenges and topics, Challenge 7. Propose public policy and entrepreneurship to combat excess weight and obesity*

| Table 13. Special category - Synergy Grants. | |
|---|---|
| **Topic key** | **Topic** |
| SG-T1 | Interdisciplinary research projects between research groups associated with EIC and IOR to prove and demonstrate disruptive and multifaceted solutions to high-impact challenges tackling obesity. |

*Table 13. Special category - Synergy Grants*

## 5. ELIGIBLE EXPENSES

5.1 Which expenses are covered by the Call's grant?
The Call may <u>not be</u> used to finance the following expenses (Not eligible expenses):
1. Payment of additional research time for professors, post-docs, students, and other Tec de Monterrey collaborators.

2.  Payment of additional benefits for professors, staff, and students, such as, meals and tuition.
3.  Expenses to attend conferences as a participant, not as a conference speaker.
4.  Memberships in professional or scientific associations.
5.  Hiring staff to manage projects or administrative activities.
6.  Exchange of financial resources between institutions is not allowed, except for contracts for the development of experimentation in university's laboratories.
7.  In case of any inquiries regarding other expenses and/or issues not foreseen in this document, contact the Director of Research Management, Ana Lilia Benavides (abenavides@tec.mx).

5.2  What type of Technology Development Expert can the Call finance?

**Services for specific tasks and products:**
Budget can be allocated to finance internal or external services to develop a solution to a tech-development problem.
The time frame to develop the specific task cannot exceed 12 months. Contract and payment must be aligned to the institutional policies established by *"TecServices Adquisiciones".*

**Experts with a fixed time contract (as Tec de Monterrey collaborator):**
Teams can contract experts with "*Fixed-term contract"*, to develop specific tasks or products required to deliver the products and outputs of the project.
The time frame to develop specific tasks cannot exceed 12 months, additionally they are not subject to renewal.  The duration of the contract cannot exceed the duration of the grant operation period.
Payment must be aligned to the institutional policies established by *"Talento".*

5.3  Are project management personnel and administrative activities financed by this Call?
Hiring staff to manage projects or administrative activities is not an eligible expense.

5.4  Are there any limitations to the funding categories?
No, but the expenses must be aligned with the eligible categories.

5.5  Have you published the data that should be used to calculate the cost of doctoral positions?
Yes, in the call document we include the tabs as annexes

5.6 Can a master's or doctoral student be hired to collaborate on the project?
As institutional support for postgraduate students, they may be hired in this call as long as they are students of Tec de Monterrey.

5.7 Who must issue and sign the letters of intent or participation of the external partners that will collaborate in the project?
an institutional representative to which the partner belongs or by the partner himself, the letter must explain his participation in the project.

5.8 A project may take less time than the allowed limit?
Yes, the activities and budget must be described on the forms.

5.9 Can professionalizing postgraduate students be included in the hiring of a doctoral or master's student?
No, only students of research programs.

5.10 Can a hired postdoc be internal or external to the Tec?
Yes

5.11 Can a project hire a postdoc and a master's or doctoral student?
If the budget allows it and is duly justified, you can have resources for both items.

## 6. TO APPLY

6.1 In which language should the proposal be written?
All proposals must be written in English.

6.2 Can I send my proposal via email?
No, only in **Science Connexion** platform: https://scienceconnexion.com/.

6.3 When and how will I know if my proposal was selected?
The date is published in science connexion platform, in the terms and conditions section.

6.4 What happens after a proposal has been selected for financing?
After the approval, the selected proposals will receive the funds at the beginning of January 2024.

6.5 How will I know that my proposal was received?
Once sent, you will be able to see the submission confirmation in the screen

6.6 Where can we find the formats and files mentioned in the call, the information sessions and their presentations?
After you enter the science connexion platform with your https://scienceconnexion.com/ account, you can find all the information related to the calls in the Regulations and Attachments/Tutorials section or in the Frequently Asked Question section.

6.7 Where can I request the intelligence report?
For Intelligence Report, please fill out the request form at the following URL before October 6th:
https://forms.gle/xpSStdEjNS3mdzjG6
      Contacts for Intelligence Report questions:
      Miriam Gonzalez (miriam.gonzalez@tec.mx)
      Nathalíe Galeano (ngaleano@tec.mx)

## 7. Documents include in the proposal

7.1 In the file "Timeline and Milestones.xlsx" in the "4. Detailed Production Table" tab. What does the column that says "Original Tec" refer to?
Original Tec, refers to a Tec professor or researcher generating an article and being the first author or corresponding author.

7.2 In the file "Timeline and Milestones.xlsx" in the tab "4. Detailed Production Table" in the column "Product", what is the difference between point 2.1 and point 3.1?
 In those in points 2, it refers to the number of projects and point 3 refers to funds.

7.3   How to declare a Doctoral Position in the Budget format?
Select the Postdoctoral Position and in the justification column include, the position is a master's or doctoral student.

7.4   If you do not yet have the names of students and postdocs, how do you register them in the Application form template?
All team members must be included. When they do not have the person's name, they can enter TBD (To be Defined) and in all formats their contribution to the project must be clear (associated activities, deliverables, dedication time, budget, etc.)

## 8.   National Scholarships Tab

**Tabulador de Becas Nacionales 2023**

| Nivel pretendido | Unidades de Medida y Actualización (UMA) | Monto correspondiente al 1 de febrero de 2023 (Se actualizará de acuerdo a la UMA vigente en febrero de cada año, durante la vigencia de la beca) |
|---|---|---|
| Doctorado | 6.0 | $ 18,922.20 |
| Maestría | 4.5 | $ 14,191.65 |
| Especialidad | 4.0 | $ 12,614.80 |

Es importante señalar que se pagan todos los meses que dure la beca, incluyendo los periodos intermedios en que tengan vacaciones.

**El primer pago incluirá la retroactividad al inicio de la beca.**

**Exclusive questions to Modalities 1 and 2**

1. Which documents must be included when submitting the application form?
   a. Application Form
   b. Research Impact Planning Canvas
   c. Project Timeline and Milestones Template
   d. Budget Template
   e. Intelligence report. Universities TOP10 in the areas of the Institute could use to propose strategic partners

2. Who should I contact if I have any questions? How can I ask questions about the Call?
Questions related to the Call for Proposals must be submitted via the following mailbox:
vmgonzal@tec.mx  and mvs@tec.mx

3. Who will be in charge of approving proposals?

The evaluation process will be carried out in three stages:

3.1 Compliance Committee. An internal team made up of finance, investigation management, and investigation intelligence experts will review, among others, that:
   - the requested formats and documentation are complete. Incomplete proposals will not proceed to subsequent evaluation stages.
   - the team members have defined specific contributions and products for the project,
   - the requested budget complies with the eligibility guidelines,
   - the productivity committed in funds, publications and technological development is in accordance with the level of development of the professors.

3.2 Technical Committee. Technical evaluation teams will be formed; these teams will be made up of at least three researchers who are experts in the topics of the challenges. The members of these committees will be researchers from outside *Tec de Monterrey*, and will be in charge of evaluating the technical quality of the proposals and its results:
   - The proposed objective represents an innovative, disruptive solution for the challenge posed.
   - The work plan and the description of the methodology reflect scientific rigor to obtain the results of the project.
   - The selected line of work has the potential to generate a relevant impact.
   - The knowledge sought to be generated is relevant and differentiated from what other research groups outside the Tec are developing.
   - The technology sought to be developed is innovative, the level of development committed is realistic to achieve in the specified time frame, and the concept has the potential to continue advancing to promote a scientific-technological based enterprise for a specific market.
   - The impact of the project can be substantive due to its technological results, scientific products, and type of solutions.

3.3 Grant Selection Committee. The team in charge of the strategic evaluation will be integrated by: Dr. Neil Hernández, Research Director of the VPI, Dr. Arturo Santos, Director of Technological Development, the members of the Research Advisory Board of the Institutes, and 1 member appointed by each National School. Considering the preliminary evaluation, the strategic evaluation board will carry out a comprehensive assessment to select the best projects that allow *Tec de Monterrey's* Research strategic vision to come to fruition by identifying the proposals with the best solutions to the defined challenges that will result in the greatest feasible scientific and technological impact *Tec de Monterrey* can achieve.

4.  Which is the grant amount for projects financed for each of the three modalities outlined in the call?

This Call for Proposals includes two modalities to develop projects from January 2024 to December 2026:

1.  **Discovery Grants: <u>Disciplinary research</u>** projects to investigate state-of-art topics to expand and develop knowledge in specific disciplines. The available funding is up to **1,000,000 MXN** per year (National Schools and Interdisciplinary Institutes). Special attention will be given to proposals submitted by **Early Career Researchers (ECRs)[2] as PI.** As main outcomes, it is expected <u>Research Papers</u> (specially Q1 / Q2) and <u>Research Proposals</u>.

2.  **Exploratory Grants: Interdisciplinary research** projects to prove and demonstrate disruptive and multifaceted solutions to high-impact challenges—funding is up to **2,000,000 MXN** per year. Research groups should propose hypotheses to create disruptive solutions to the established challenges and promote Tec de Monterrey's leadership in researching related knowledge topics (National Schools and Interdisciplinary Institutes). As main outcomes, researchers must consider outcomes from Discovery Grants (<u>Research Papers</u> and <u>Research Proposals</u>) and, additionally, <u>Research Contracts</u> with stakeholders.

5.  What is the timeframe in which the project's development will take place?

The expected starting date for the project is the beginning of January 2024. The expected project duration will be from **max three years.**

6.  Which expenses are covered by the Call's grant?
    The Call may be used to finance the following expenses (Eligible expenses):
    - Postdoctoral position
    - Doctoral position
    - Technology Development Expert by Services – External
    - Technology Development Expert by Fixed Time Contract
    - Short-term Research Stays
    - Long-term Research Stays
    - Research Stay Fellowship (only for students)
    - Internal and External Services, includes prototype development / Proof of Concept
    - Prototype
    - Equipment
    - Materials and supplies
    - Open Access journals and conferences
    - Research Travels
    - Travel expenses related to publish articles in conference.

For further information, please refer to the expenses section in the Call for Proposals document.

7.  To facilitate management of the files for the evaluation committees, the files name's must follow a specific format, according to the nomenclature outlined below. It is important to name the files as indicated below, otherwise the proposal might not be deemed eligible.

Before uploading each file, use the following key to name them:

**Name Key:**   **Unit** + **Challenge** + **File Name** + **Modality**
                **Key**    **and Topic**               **(D: Discovery Grants)**
                           **Key**                       **(E: Exploratory Grants)**

Examples:   **IFE001 - C1-T2 - Application Form-E.docx**
            **IFE001 - C1-T2 - Research Impact Planning Canvas-E.pptx**
            **IFE001 - C1-T2 - Project Timeline and Milestones Template-E.xlsx**
            **IFE001 - C1-T2 - Budget Template-E.xlsx**

For **"Unit/Group Key"** see the Call for Proposals document, Annex 3. Directory of Institutes and Research Groups (For National School, select the Group Key by referring to the group of the leader of the proposal).

For **"Challenge Key"** see tables in section 2.2 Challenges of the Call for Proposals.

8.  In the Discovery Grant, research centers abroad can be included as collaborators, also if the stays can only be done in universities or if ir also applies to foreign research centers?

If possible, as long as for the collaboration, remember that there is no transfer between institutions and for the stays, they are duly justified and contribute to the development in the Application Form

9.  Can money be transferred between years? For example, if the postdoc ti be hired for some reason cannot star the first year

If the resource can be moved between stages: The transfer can be made upon request and review of project compliance.

10. Should the partners (relevant partners) and production with members of TOP 10 Universities be included from the beginning of the resource request? Or can they arise during the project from the report obtained from the Office of Research Intelligence?

Ideally, they should be contemplated from the beginning since the activities that each member of the team will carry out throughout the project must be declared, but this does not mean that new partners may emerge during execution. The Intelligence Report makes it possible to identify those universities and researchers with whom collaboration should ideally be developed.

11. Can requests for external funds be in the last month? Could it be in a request that is open at this time? Must have obtained funds?

There must be a record through SIMPLE of the effort they are making to attract resources as a result of the operation of the Call 2022 projects. If they have already obtained funds it is an excellent indicator, but if they have not done so, at least it is required to see the reflected effort. It is important that all evidence is registered in the system, otherwise it is likely that there will be no visibility of them. What was reported from the start of the project (November 2022) to the closing of the new call (October 20, 2023) will be taken into account.

12. Can PI who have submitted external proposals during the last 12 months apply? Is it strictly necessary that the principal investigator must have made a request for funds in the last twelve months?

The PIs of the projects financed in the previous edition of the Call must demonstrate that they have at least submitted proposals to external funds, to do so they must upload the evidence to SIMPLE.

13. Should the attraction of foreign funds other than those indicated in the call be reflected from the beginning of the project?

There must be a sustainability plan through external funds beyond CONAHCYT to comply with the commitment to attract funds during the operation of the projects. To establish it, you can contact the Research Funding Directorate (Carlos Julio Gutierrez Gonzalez: carlosblanca@tec.mx / Isabel Kreiner: ikreiner@tec.mx) or you can consult funding opportunities through Pivot (http://pivot.proquest.com/).

14. Should the partners (relevant partners) and production with members of TOP 10 Universities be included from the beginning of the resource request? Or can they arise during the project from the report obtained from the Office of Research Intelligence?

The Intelligence Report helps them identify partners with whom they should seek collaboration, in case they do not have an established relationship with these partners. If they alredy have it, they must put it on the document, but if not, part of the effort in the operation of the project, if it is financed, is to establish these collaboration networks.

15. Can we order less quantity than requested? We don't need as much money as what the call offers, can we ask for less or is that the maximum to cover?

It is correct, the budget must be consistent with the activities to be executed, so resources are assigned taking care of this consistency. The amounts indicated are the limit established according to each modality. Only in modality 3, there is no budget limit, but the costs and justification of each expense associated with the project must be indicated.

16. We would not know for sure how much a data collection with a company could cost us, can we put a tentative amount and then if it is adjusted it?

It is advisable to quote the service to have a real approximation of the cost. It is allowed during the life of the project to make budget changes between items or stages if they are justified. The restriction that would be had is that, if what was requested was less than the actual cost with the project being formalized, no additional budget can be assigned to a project. For example, if I requested 1,000,000 for the entire duration of the project and my costs during the operation exceed that amount, no more resources can be assigned from the call to complete the associated expenses.

17. Can downloads be paid for research to a collaborator or the main researcher?

According to the call, payment of this type is not eligible for any collaborator.

18. Can expenses be covered for research stays for retired emeritus professors who are going to participate in the project?

Of the stays, if possible, they can even if they deem it pertinent and have a justification, finance stays of external people.

19. What is added in the "Main stakeholders" section and in "Strategic university partners"?

Regarding the Main stakeholders, they must clearly define the role of each participant or entity, in this section they can include partners, beneficiaries, users, etc. They are those involved or interested in the project or its results, but if the centers are institutions with which it is advisable to have a collaboration due to reputation, visibility of results, attraction of funds, they should be included in strategic university partners. Thar is why in this second part it is recommended that you use the intelligence report, to see who we should be collaborating with according to each topic.

20. Part of the project we are proposing is a student´s doctoral thesis. How much time will it be reasonable to put in the % dedication?

The % dedication is an indicator associated more with researchers, but for them to be able to indicate it, it is at the discretion of the PI and, in this specific case, the student´s tutor, they must consider an approximate depending on the student´s academic load. For example, if you can only commit 10 hours a week, we´re talking about 25% of your time, starting from a baseline of 40 hours a week.

21. How to calculate salaries for foreigners with reference to Annex 3 in the rules document. If for foreigners, you could exclude the cost of presentations (Fringe Benefits)?

It depends on how you are associating it with your project. The annex is a reference for hiring through the project. If you are a foreigner and are going to be hired as a collaborator, Mexican legislation must apply and benefits must be covered. If what you are thinking about is paying fees because you are associated with another institution, you must issue a receipt to prove the expense and as such you are not a collaborator of the institution.

22. For the "Products Summary" part of the proposal for Tec Challenge 2023, are the values in Annex 1 per year, per researcher? Are they handled as a recommendation, or are they a minimum?

The scientific productivity they compromise is relative. For example, it may be that this project allows the generation of 5 articles and a teacher collaborates on 3 and generates one individually. That is why in this year´s formats, you are given the option of linking several researchers in a single product.

## Exclusive questions to Modality 3

1. Who should I contact if I have any questions? How can I ask questions about the Call?

Questions related to the Call for Proposals must be submitted via the following mailbox:
carlos.tellez.martinez@tec.mx

2. What is the timeframe in which the project's development will take place?

Use the funding to scale the proposal to TRL5 level or higher in a maximum of **12 months** according to the established work plan, with its respective iterations. In case of requiring more time, an extension may be requested to the Evaluation Committee justifying the reason, and the latter will determine whether to provide the extension, as well as the conditions of the same for a maximum of **6 more months**.

3. Which expenses are covered by the Call's grant?
    The Call may be used to finance the following expenses (Eligible expenses):
    - Postdoctoral position
    - Technology Development Expert by Services – External
    - Technology Development Expert by Fixed Time Contract
    - Internal and External Services, includes prototype development / Proof of Concept
    - Prototype
    - Equipment
    - Materials and supplies

4. Which documents must be included when submitting the application form?
    a. Application Form
    b. Research Impact Planning Canvas
    c. Project Timeline and Milestones Template
    d. Budget Template
    e. TRL Calculator

5. Is this call recommended to apply for projects in Education?

Yes, when you have a more advanced level of TRL.

6. Can you participate with the development of an advanced platform that is not from the Tec?

Only projects that are the intellectual property of the Tec are supported.

## Exclusive questions to Ruta Azul

1. Which documents must be included when submitting the application form?
    f. Application Form

g. Research Impact Planning Canvas
h. Project Timeline and Milestones Template
i. Budget Template
j. Intelligence report. Universities TOP10 in the areas of the Institute could use to propose strategic partners
k. Letter signed by PI and the Regional Sustainability Leader of the corresponding campus in which their proposal would be implemented, that shows a first contact was established between the PI and the campus (see Annex II. Letter template).

2. Who should I contact if I have any questions? How can I ask questions about the Call?

Questions related to the Call for Proposals must be submitted via the following mailbox: msgradilla@tec.mx and sandra.reyes@tec.mx

3. Which is the grant amount for projects financed for each of the three modalities outlined in the call?

This Call for Proposals includes three challenges to develop projects from January 2024 to December 2025:

| Challenge 1. Water Challenge | |
|---|---|
| Aid to achieve the goals of Ruta Azul by 2025 in water consumption and circular water management with the implementation of technologies, strategies, or processes for saving or reusing water in the infrastructure and operations of the campuses and with the development of scenarios or models that aids us to minimize our water footprint. | Ruta Azul Goals to 2025:<br>▪ To reduce our water consumption by 20%<br>▪ To achieve circular water management in our operations. |

| Challenge 2. Waste Challenge | |
|---|---|
| Aid to achieve the goals of Ruta Azul by 2025 in waste management with the development of circular economy strategies applied to the management of organic and inorganic waste generated on our campuses or in their surrounding communities, for its integration into value chains or other production processes. | Ruta Azul Goals to 2025:<br>▪ That 100% of our campuses have a sustainable waste management model.<br>▪ To prevent 40% of our waste from reaching landfills. |

| Challenge 3. Challenge in sustainable mobility | |
|---|---|
| Support to achieve the goals of Ruta Azul by 2025 in reducing greenhouse gas emissions with the implementation of logistics systems, models, and sustainable mobility projects for the transfer of our students, teachers, collaborators and other possible allies to our campuses and surroundings. | Ruta Azul Goals to 2025:<br>▪ To reduce our greenhouse gasses emissions by 50% |

4. What is the timeframe in which the project's development will take place?

The expected starting date for the project is the beginning of January 2024. The expected project duration will be from **one years.**

5. Which expenses are covered by the Call's grant?
   The Call may be used to finance the following expenses (Eligible expenses):
   - Postdoctoral position
   - Technology Development Expert by Services – External
   - Technology Development Expert by Fixed Time Contract
   - Short-term Research Stays
   - Internal and External Services, includes prototype development / Proof of Concept
   - Prototype
   - Equipment
   - Materials and supplies
   - Open Access journals and conferences
   - Research Travels
   - Travel expenses related to publish articles in conference.

6. To facilitate management of the files for the evaluation committees, the files names must follow a specific format, according to the nomenclature outlined below. **It is important to name the files as indicated below, otherwise, the proposal might not be deemed eligible.**

   Before uploading each file, use the following key to name them:

   | **ame Key:** | **Unit Key** | **+** | **Challenge (Water, Waste or Sustainable_Mobility)** | **+** | **File Name** | **+** | **Ruta Azul** |
   |---|---|---|---|---|---|---|---|

   Examples:     **IFE001 - Water - Application Form - Ruta Azul.docx**
                      **IFE001 - Waste - Research Impact Planning Canvas - Ruta Azul.pptx**
                      **IFE001 - Sustainable_Mobility - Project Timeline and Milestones Template - Ruta Azul.xlsx**
   For "Unit/Group Key" see Annex III. Directory of Research Units (Institutes) and Research Groups (Schools).

7. How to pay for a PhD student if the project lasts 3 years? Can I pay "in advance" or save the budget so that it covers the entire doctorate of the student?
   The budget is prepared for the entire project, there the amount assigned for each item according to each year is declared. The financing would correspond to the 3 years that participants in the project.